

PUBLIC NOTICE

US Army Corps of Engineers New York District Jacob K. Javits Federal Building New York, N.Y. 10278-0090 ATTN: Regulatory Branch

In replying refer to: Public Notice Number: NAN-2019-01150-EMI Issue Date: June 15, 2021 Expiration Date: July 15, 2021

The New York District, Corps of Engineers has received an application for a Department of the Army permit pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) and Section 404 of the Clean Water Act (33 U.S.C. 1344).

- APPLICANT: Nassau County Department of Public Works
- ACTIVITY: Install a new sewer force main, using horizontal directional drilling, from the Long Beach Water Pollution Control Plant (WPCP) to the Bay Park Sewage Treatment Plant (STP); conduct aquatic habitat restoration and enhancement activities
- WATERWAY: Hempstead Bay (Reynolds Channel, Hog Island Channel, East Rockaway Channel, Broad Channel, Swift Creek) and adjacent wetlands
- LOCATION: City of Long Beach & Town of Hempstead, Nassau County, New York.

A detailed description and plans of the applicant's activity are enclosed to assist in your review.

The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

ALL COMMENTS REGARDING THE PERMIT APPLICATION MUST BE PREPARED IN WRITING AND EMAILED TO Christopher.W.Minck@usace.army.mil TO REACH THIS OFFICE BEFORE THE EXPIRATION DATE OF THIS NOTICE, otherwise, it will be presumed that there are no objections to the activity.

Comments submitted in response to this notice will be fully considered during the public interest review for this permit application. Comments provided will become part of the public record for this permit application. All written comments, including contact information, will be made a part of the administrative record, available to the public under the Freedom of Information Act. The Administrative Record, or portions thereof, may also be posted on a Corps of Engineers internet web site. Due to resource limitations, this office will normally not acknowledge the receipt of comments or respond to individual letters of comment.

Any person may request, in writing, before this public notice expires, that a public hearing be held to collect information necessary to consider this application. Requests for public hearings shall state, with particularity, the reasons why a public hearing should be held. It should be noted that information submitted by mail is considered just as carefully in the permit decision process and bears the same weight as that furnished at a public hearing.

The activity for which authorization is sought herein is not likely to affect any Federally endangered or threatened species or their critical habitat, including piping plover, red knot, roseate tern, Atlantic sturgeon, Kemp's ridley sea turtle, leatherback sea turtle, green sea turtle and loggerhead sea turtle. The Governor's Office of Storm Recovery (GOSR), as the lead federal agency made a not likely to adversely affect determination for piping plover, red knot and roseate tern, pursuant to Section 7 of the Endangered Species Act (ESA) (16 U.S.C. 1531), In a letter dated August 20, 2020, the United States Fish and Wildlife Service (USFWS) concurred with GOSR's determination for National Marine Fisheries Service (NMFS) ESA-listed species. On August 24, 2020, NMFS concurred with GOSR's not likely to adversely affect determination.

The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act (Public Law 104-267), requires all Federal agencies to consult with the National Oceanic and Atmospheric Administration Fisheries Service (NOAA/FS) on all actions, or proposed actions, permitted, funded, or undertaken by the agency, that may adversely affect Essential Fish Habitat (EFH). The proposed work, fully described in the attached work description, could cause the disruption of habitat for various lifestages of some EFH-designated species as a result of a temporary habitat modifications and increased turbidity during construction. However, the GOSR, acting as lead federal agency, determined that the site-specific adverse effects are not likely to be substantial because it is expected that fish populations would avoid the area of disturbance. In a letter dated January 22, 2021, NOAA/FS concurred with GOSR's determination that the adverse effects of this project on EFH would not be substantial and provided conservation recommendations to minimize or offset adverse impacts on EFH.

A Phase IA Historical Documentary Report and Archaeological Assessment was completed for the proposed project. No historic properties, including archaeological and/or historic resources, will be affected by this undertaking. Pursuant to Section 106 of the Historic Preservation Act, the Governor's Office of Storm Recovery, as the lead federal agency, consulted with the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) for the project's potential effects on the historic properties. In a letter dated February 4, 2020, the OPRHP concurred with the GOSR's determination that no historic properties, including archaeological and/or historic resources, would be affected by this undertaking. Presently unknown archeological, scientific, prehistorical, or historical data may be lost by work accomplished under the required permit.

Reviews of activities pursuant to Section 404 of the Clean Water Act will include application of the guidelines promulgated by the Administrator, U.S. Environmental Protection Agency, under authority of Section 404 (b) of the Clean Water Act and the applicant will obtain a water quality certificate or waiver from the appropriate state agency in accordance with Section 401 of the Clean Water Act prior to a permit decision.

Pursuant to Section 307 (c) of the Coastal Zone Management Act of 1972 as amended [16 U.S.C. 1456 (c)], for activities under consideration that are located within the coastal zone of a state which has a federally approved coastal zone management program, the applicant has certified in the permit application that the activity complies with, and will be conducted in a manner that is consistent with, the approved state coastal zone management program. In a letter dated February 26, 2021, New York State Department of State issued a Coastal Zone Management Concurrence with Consistency Certification, F-2020-0750, for the proposed work.

In addition to any required water quality certificate and coastal zone management program concurrence, the applicant has obtained or requested the following governmental authorization for the activity under consideration:

New York State Department of Environmental Conservation Tidal Wetlands Permit

The applicant has stated that they have avoided, minimized and mitigated for impacts proposed to the maximum extent practicable by utilizing horizontal directional drilling, replanting temporary disturbance areas with native vegetation, and implementing sediment and erosion controls.

It is requested that you communicate the foregoing information concerning the activity to any persons known by you to be interested and who did not receive a copy of this notice. If you have any questions concerning this application, you may contact Christopher Minck of this office at <u>Christopher.W.Minck@usace.army.mil</u>.

In order for us to better serve you, please complete our Customer Service Survey located at http://www.nan.usace.army.mil/Missions/Regulatory/CustomerSurvey.aspx.

For more information on New York District Corps of Engineers programs, visit our website at <u>http://www.nan.usace.army.mil</u>.

FOR AND IN BEHALF OF Stephan A. Ryba Chief, Regulatory Branch

Enclosures

WORK DESCRIPTION

The applicant, Nassau County Department of Public Works, has requested Department of the Army authorization to install a new sewer force main, using Horizontal Directional Drilling (HDD), in and under Hempstead Bay (Reynolds Channel, Black Banks Creek, Hog Island Channel, East Rockaway Channel, Broad Channel, Swift Creek) and adjacent wetlands, from the Long Beach Water Pollution Control Plant (WPCP) in the City of Long Beach, to the Bay Park Sewage Treatment Plant (STP) in the Town of Hempstead, Nassau County, New York. The project is part of the overall Rebuild By Design - Living with the Bay storm resiliency initiative.

The work would involve the following:

Force Main HDD

Construct via HDD, a new 24-inch High Density Poly-Ethylene (HDPE) force main in a 36-inch-diameter steel casing for a total distance of approximately 11,500 linear feet (approximately 2.25 miles) beneath jurisdictional waters beginning at the Long Beach WPCP and terminating at the Bay Park STP. The force main would be constructed a minimum of 25 feet below the existing grade of the waterways (from South to North the areas include: Reynolds Channel, Black Banks Creek, East Rockaway Channel, and Swift Creek) with a minimum of 25 feet of coverage as measured from the top of the force main to the existing grade. The force main would be installed in three segments extending from the Long Beach WPCP on Long Beach to the Bay Park STP on the mainland. The HDD would begin in upland at approximately latitude/longitude 40.593179°, -73.667930° and would terminate in upland at approximately 40.623270°, -73.664349°.

Two (2) permanent air vents would also be installed, each with a footprint of approximately 217 square feet, in wetlands, including one (1) vent in South Black Banks Hassock and one (1) in Pearsalls Hassock. The construction areas would be enclosed with sheet piles and dewatered, with return water released into Waters of the United States (WOTUS).

Activities associated with the installation of the force main would result in a total of approximately 0.01acre of permanent impacts to WOTUS as a result of the two (2) air vents, and a total of approximately 4.151 acres of temporary impacts to WOTUS as a result of casing and pipe laydown, assembly, and pullback areas, open cuts and backfill at air vents and drill sites, and barge landings.

Equipment and materials staging areas, and equipment access routes in WOTUS would include raising the elevation with stacked marsh mats, with no rock or sand fill proposed. Temporary side-casting of fill material from HDD excavation activities would occur in either upland or within the temporary construction impact areas. The side casted material would be used to restore contours or would be hauled off-site by barge for upland disposal. All disturbed areas would be restored to pre-existing conditions following the completion of each construction phase, including removing mats and side-casted material, and re-planting with native vegetation.

At the barge landing locations, temporary mats would be installed in WOTUS to aid in access to the work areas. It is expected the barges would rest on the mudflats during low tides.

Pearsalls and Black Banks Hassocks Enhancement and Restoration

Black Banks Hassocks:

Enhance and restore approximately 0.153-acre (6,690 square feet) of open water by excavating approximately 6,890 cubic yards of material from an existing tidal channel to lower its elevation by approximately two feet, to a depth ranging from 1.2 to 1.7 feet NAVD88. Excavated material would be placed into adjacent uplands. Install 12-inch diameter coir logs around the perimeter of the area, as needed, to stabilize the shoreline. Enhance and restore approximately 1.282-acre (55,857 square feet) of low marsh and approximately 0.677-acre (29,406 square feet) of high marsh by removing existing *Phragmites australis* and replanting the area with appropriate native low marsh species (*Spartina alterniflora* and *Distichlis spicata*) and high marsh species (*Spartina patens, Distichlis spicata*, and *Iva fructescens*).

At the outlet of the tidal channel, place a total of approximately 66-cubic yards of rock for a breakwater berm, below the plane of Spring High Water (SHW) in an area approximately 10-foot wide by 40-foot long by four-foot deep on the south side and five-foot wide by 10-foot long by four-foot deep on the north side, in order to stabilize the shoreline.

Pearsalls Hassock:

Enhance and restore approximately 3.16 acres (137,758 square feet) of low marsh and approximately 0.014 acres (621 square feet) of high marsh by installing rows of two (2) to four (4) 12-inch diameter coir logs between the planes of MLW and Mean High Water (MHW) around the perimeter of the existing tidal channel to create a marsh sill. Place a layer of clean sand on existing mudflats, below the plane of SHW, on the east and north sides of the tidal channel as a planting medium and replant the area with appropriate native low marsh species (*Spartina alterniflora* and *Distichlis spicata*) and high marsh species (*Spartina patens, Distichlis spicata*, and *Iva fructescens*).

Clean sand for use in the Pearsalls Hassock enhancement and restoration activities would be transported across Reynolds Channel from Long Beach using either a work barge or a hydraulic pump.

Additional Work Not Requiring DA Authorization:

A temporary timber trestle, approximately 200-feet long, would be constructed across the open water channel (Black Banks Creek) between South and North Black Banks Hassocks to suspend the casing and HDPE pipe above the channel for pullback of Segment 1 of the casing/pipe through the HDD borehole.

The stated purpose of this project is to enhance coastal resiliency and improve water quality in the Western Bays.

NASSAU COUNTY DEPARTMENT OF PUBLIC WORKS

LONG BEACH CONSOLIDATION FORCE MAIN PERMIT APPLICATION

JANUARY 2021



ARCADIS U.S., INC.

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NEW YORK

LOCATION MAP

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7.	 ARGADIS. SEE SHEET 12 FOR A FULL ACCOUNTING OF ANTICIPATED IMPACTS BY RESOURCE TYPE, AND SPECIFIC TO ACTIVITY TYPE. 		
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REFER TO THE GENERAL NOTES ON THE KEY PLAN (FM1).

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REFER TO THE GENERAL NOTES ON THE KEY PLAN (FM1).

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	CONSULTANTS HAZEN PARCADIS A JOINT VENTURE SEALS 100% DESIGN DRAFT SUBMITTAL DO NOT USE FOR CONSTRUCTION							
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Page 18 of 33





SCALE: 1" = 10'

SCALE: 1" = 40'



OTES

- LOCATIONS SHOWN ARE APPROXIMATE AND REFLECT CONDITIONS AT THE TIME OF DATA COLLECTION AS NOTED BELOW FOR EACH SOURCE OF INFORMATION.
 CONTRACTOR SHALL ESTABLISH AND MAINTAIN SURVEY CONTROL DURING THE
- PERFORMANCE OF WORK.
- TOPOGRAPHIC CONTOURS DERIVED FROM USGS 2014 LIDAR, CONVERTED FROM NADB3 UTIL ZONE ISN TO NADB3 NEW YORK STATE PLANE LONG ISLAND, VERTICAL DATUM NAVD88.
- 4. WETLAND BOUNDARY AND DELINEATION SAMPLE POINTS COLLECTED BY ARCADIS IN SEPTEMBER AND OCTOBER 2019.
- THE SITE BOUNDARY IS LOCATED ENTIRELY WITHIN THE ZONE AE SPECIAL FLOOD HAZARD AREA BASED ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP NUMBER 36059C0306G, EFFECTIVE 9/11/2009.
- INSURANCE RATE MAP NUMBER 36039003068, EFFECTIVE 9,11/2009. INFORMATION RELATED TO SUBSURFACE CONDITIONS SHOULD BE CONSIDERED APPROXIMATE AND SHOULD NOT BE RELIED ON AS A COMPLETE DEPICTION OF CONDITIONS. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS INCLUDING ABOVE-GRADE AND SUBSURFACE FEATURES WHETHER OR NOT SHOWN ON THESE DRAWINGS OR OTHERWISE DESCRIBED IN THE CONTRACT DOCUMENTS PRIOR TO INITIATING WORK.
- INITIALING WORK. 7. CONTRACTOR SHALL PROMPTLY NOTIFY THE OWNER AND ENGINEER UPON DISCOVERY, AND BEFORE CONDITIONS ARE FURTHER DISTURBED, OF PHYSICAL CONDITIONS AT THE SITE WHICH DIFFER MATERIALLY FROM THOSE INDICATED IN THE CONTRACT DOCUMENTS.
- THE CONTRACT DOCUMENTS. WORK AREA ASSUMED THE MAXIMUM LIMIT OF POTENTIAL DISTURBANCE TO ALLOW FOR FLEXIBILITY IN THE FIELD AND TO AVOID HAVING TO REQUEST A PERMIT MODIFICATION. TEMPORARY DISTURBANCES TO REGULATED WETLANDS ARE EXPECTED TO BE LESS THAN THE EXTENT SHOWN. AREAS OF DISTURBANCE WILL BE MINIMIZED TO THE EXTENT POSSIBLE.
- 9. EXISTING SHORELINE MAPPED THROUGH INTERPRETATION OF EXISTING AERIAL PHOTOGRAPHY AND BATHYMETRY.
- 10. UPLAND AREAS WITHIN WORK AREA ASSUMED TO BE REGULATED AS NYSDEC TIDAL WETLAND ADJACENT AREAS.
- TIDAL WETLAND ADJACENT AREAS. 11. TIDAL WETLAND ADD ADJACENT UPLAND AREAS WITHIN WORK LIMITS ARE DOMINATED BY COMMON REED (PHRAGMITES AUSTRALIS). TIDAL WETLANDS ARE PREDOMINATELY NON-NATIVE HIGH MARSH HABITATS AS DESCRIBED IN THE MITIGATION PLAN (ARCADIS 2020). ALL AREAS WITHIN THE WORK LIMITS WERE PREVIOUSLY IMPACTED BY DREDGE DISPOSAL ACTIVITIES. 12. EXISTING SHORELINE IS SHOWN AT ELEVATION 0.000'. MEAN LOW WATER IS ASSUMED TO BE AT ELEVATION 0.190'. DUE TO THE SMALL DIFFERENCE BETWEEN THE ELEVATIONS, THE SHORELINE IS USED TO DEPICT THE LOCATION OF BOTH FLEVATIONS
- ELEVATIONS.
- LELVA HONS. 13. TIDAL LELVATIONS ARE BASED ON NOAA TIDAL STATION ID 8516661, BAY PARK, NEW YORK. SPRING HIGH WATER = 2.109', MEAN HIGH WATER = 1.774', AND MEAN LOW WATER = 0.190'. DUE TO SCALE OF DRAWINGS A CONTOUR RESOLUTION OF 1-FOOT IS SHOWN. AS SUCH MEAN LOW WATER IS DEPICTED AS 0', SPRING HIGH WATER AND MEAN HIGH WATER ARE DEPICTED AS 2'. HIGH WATER INSET PROVIDES SITE SPECIFIC REFERENCE AT FINER TOPOGRAPHIC SCALE.

<u>Legend</u>	
ADJACENT	AREA

DELINEATED WETLANDS		
2014 EXISTING TOPOGRAPHIC CONTOUR (1' INTERVAL)		
WORK AREA (LIMITS OF POTENTIAL DISTURBANCE)	LOD	LM-20
WETLAND DELINEATION SAMPLE POINT	+	

WETLAND	FLAG	LOCATION

EXISTING LOW MARSH WETLAND WITHIN LIMITS OF POTENTIAL DISTURBANCE	
EXISTING HIGH MARSH WETLAND WITHIN	

LIMITS OF POTENTIAL DISTURBANCE
EXISTING UPLAND WITHIN LIMITS OF POTENTIAL DISTURBANCE

,		
SHORELINE/MEAN	LOW	WATER
(SEE NOTE 12)		
(

- APPROXIMATE MEAN HIGH/SPRING HIGH WATER (SEE NOTE 13)
- VEGETATION REFERENCE PLOT
 - SEE HIGH WATER INSET
 - THIS PAGE





D

Aquatic Resource Nam

HM-24

LM-19

LM-20

OW-2

AA S

E2EM1

52EM1

E2EM1

E1UBL

N/A

wardin Code LOD Acreage LOD Square Feet Fill Volume (CY)

55321.2

435.6

3049.2

435.6

113256

172497.6

N/A

N/A

34

N/A

N/A

34

1.27

0.01

6.67

6.61

2.6

3.95

APPROXIMATE MEAN HIGH/SPRING

 $\mathbf{A}^{\mathbf{PT6}}$

HIGH WATER (2.0')

PT4

42-28

-31b

— 31 a

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3

35

-36

37

70

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urbance Width (FT)

3.7

3.4

490

13

57

11

451

Cut Volume (CY) | Disturbance Length (FT) | Dist

494

48

85

469

2754.27

1.93

74

6

3373

6219.2

SP14💃

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—∕LM—19́



NOTES:

- 1. REFER TO EXISTING CONDITIONS DRAWING FOR BASE MAP NOTES AND GENERAL CONDITIONS.
- CALVENT SHORE CONDITIONS PRELIMINARY AND IS SUBJECT TO CHANGE BASED ON CONTRACTORS MEANS AND METHODS. ACTIVITIES SHALL BE LIMITED TO WITHIN THE WORK AREA/LIMITS OF DISTURBANCE SHOWN.
 CONTRACTOR SHALL VERIEY THE PRESENCE AND LOCATION OF ALL
- ABOVEGROUND AND UNDERGROUND FEATURES WITHIN THE WORK AREA. FEATURES MAY BE PRESENT THAT ARE NOT SHOWN ON THE DRAWINGS.
- CONTRACTOR SHALL COORDINATE WITH APPROPRIATE UTILITY COMPANIES FOR CONTRACTOR SHALL CONDINATE WITH AFFORMATE OTIGIT COMPANIES FOR TEMPORARY BRACING, REMOVAL, RELOCATION, AND/OR REPLACEMENT OF ANY UTILITY POLES, GUY WIRES, UNDERGROUND UTILITIES, AND OVERHEAD WIRES THAT ARE NEAR OR WITHIN THE WORK AREA OR THAT MAY INTERFERE WITH THE IMPLEMENTATION OF THE WORK.
- THE IMPLEMENTATION OF THE WORK. 5. EROSION AND SEDIMENTATION CONTROLS SHALL BE INSTALLED PRIOR TO INTRUSIVE ACTIVITIES. SILT FENCE SHALL BE INSTALLED AROUND PERIMETER OF IMPORT MATERIAL STOCKPILES TO PREVENT MIGRATION OF MATERIAL FROM THE WORK AREA. EROSION AND SEDIMENTATION CONTROLS SHALL BE MAINTAINED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. 6. TO THE EXTENT PRACTICAL, MATERIALS SHOULD BE DELIVERED DIRECTLY TO THE POINT OF FINAL PLACEMENT. CONTRACTOR SHALL DETERMINE THE NEED FOR TEMPORARY STAGING AND STOCKPILING AT THE TIME OF CONSTRUCTION.
- CONSTRUCTION.
- CONSTRUCTION. ANY CLEARING OF VEGETATION WITHIN WORK AREAS WILL BE PERFORMED IN THE APPROVED WINDOW OF DECEMBER 1 AND MARCH 15 IN ORDER TO MINIMIZE IMPACTS TO WETLAND VEGETATION AS WELL AS STATE AND FEDERALLY PROTECTED SPECIES.
- FEDERALLY PROTECTED SPECIES.
 8. CONTRACTOR TO FINALIZE ACCESS POINT ONTO BLACK BANKS HASSOCK AT TIME OF CONSTRUCTION. ALL EFFORTS TO BE MADE TO MINIMIZE DISTURBANCE TO REGULATED WETLANDS.
 9. BEST MANAGEMENT PRACTICES (INCLUDING BUT NOT LIMITED TO SILT FENCES, STRAW WATTLES) WILL BE IMPLEMENTED BY CONTRACTOR AROUND THE PERIMETER OF WORK AREAS TO PROTECT ANY DOWNGRADIENT, AND ADJACENT REGULATED WATERS AND WETLANDS. FINAL SELECTION OF BEST MANAGEMENT RAD EROSION CONTROL PERMIT.
 10. FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL, PLEASE SEE DRAWINGS CD-001 AND CD-002 OF LONG BEACH CONSOLIDATION FORCE MAIN PERMIT DRAWINGS.
 11. FOR MEAN HIGH WATER AND SPRING HIGH WATER SEE HIGH WATER INSET ON DRAWING WR-101. FOR MEAN LOW WATER SEE NOTE 12 ON DRAWING
- ON DRAWING WR-101. FOR MEAN LOW WATER SEE NOTE 12 ON DRAWING WR-101

LEGEND	

DELINEATED WETLANDS	
WORK AREA (LIMITS OF POTENTIAL DISTURBANCE)	
SILT FENCE	
TURBIDITY CURTAIN	Θ
2014 EXISTING TOPOGRAPHIC CONTOUR (1' INTERVAL)	
SHORELINE/MEAN LOW WATER (SEE NOTE 11)	· · · ·
APPROXIMATE MEAN HIGH/SPRING HIGH WATER (SEE NOTE 11)	
MITIGATION AREA (91,956 SQ. FT.)	
UPLAND GRADING AREA	
STAGING AREA	
TURBIDITY CURTAIN SEE DETAIL 1 ON DRAWING WR-108	/

SUITABILITY OF SHORELINE TO ACCESS VIA BARGE. IF CONTRACTOR DETERMINES THAT SHORELINE IS NOT SUITABLE TO ACCESS VIA BARGE, THEN A TEMPORARY MARSH MAT ROAD WILL BE INSTALLED TO THE SITE FROM THE DRILL LOCATION.







Tie = C:\TMPro/APSTP-Long Beach\CAU\DWGs from Klamicelli 2020-12-01\Black Benks\Cl-DWC\C-06 CRADINC PLAN Soved by Efbets



Hazen ARCADIS LEGAL ENTITY: MALCOLM PIRNIE, INC A JOINT VENTURE	5
SEALS DO NOT USE FOR CONSTRUCTION	
COUNTY OF NASSAU, NEW YORK DEPARTMENT OF PUBLIC WORKS LONG BEACH WPCP CONSOLIDATION FORCE MAI	N
NO. DATE ISSUED FOR E	BY
COPYRIGHT: 2020 HAZEN AND SAWYER/ ARCADIS A JOINT VENTURE	/
DATE: JANUARY 2021 PROJECT NO.: 30001615.00040 FILE NAME: SECTIONS & PROFILES DESIGNED BY: D. PARTRIDGE DRAWN BY: K. IAMICELI CHECKED BY: T. STEINER SHEET TITLE	
BLACK BANKS RESTORATION – CROSS SECTIONS SHEET 1 (WR–104)	
IF SHEET IS LESS THAN 22"x34" IT A REDUCED PRINT, SCALE ACCORDING	IS LY.
SHEET550F65	

Pag	e	24	OŤ	3





NOTES:

- 1. TIDAL ELEVATIONS ARE BASED ON NOAA TIDAL STATION ID 8516661, BAY PARK, NEW YORK. SPRING HIGH WATER = 2.109', MEAN HIGH WATER 1.774', AND MEAN LOW WATER = 0.190'.
- HIGH MARSH AND LOW MARSH AS SHOWN ON THESE CROSS SECTIONS REPRESENT PROPOSED CONDITIONS.

EXISTING WETLANDS TIF INTO -EXISTING 8 GRADE 8 SPRING HIGH WATER = 2.109'PROPOSED STONE (TYP.) GRADE MEAN HIGH (SEE DETAIL 3 ON WR-108) WATER = 1.774 \cap EXISTING -GRADE MEAN LOW -PRIMARY WATER =CHANNEL 0.190' EL. 0.88' 0+00 0+50 1+00

NOTE: EXISTING GRADES IN THIS LOCATION ARE APPROXIMATE AND THE DESIGN INTENT IS FOR THE PROPOSED CHANNEL MOUTH TO ALIGN WITH THE EXISTING LOW POINT.





NOTE:

1. PRIMARY, SECONDARY, AND TERTIARY CHANNEL WIDTHS TO BE 4'. MINOR CHANNEL WIDTH TO BE 2'.



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	сс СО1	DUNTY OF DEP, PUE LONG NSOLID,	NASSAU ARTMEI BLIC W BEACH ATION	, NEW YO NT OF ORKS H WPCF FORCE	rk MAIN
	NO.	DATE	ISSU	ED FOR	BY
	COPYR DATE: PROJE FILE N DESIGI DRAWN CHECK SHEE	IGHT: 20. AR ICT NO.: IAME: IVED BY: N BY: KED BY: T TITLE	20 HAZEN CADIS A <u>JANUARY</u> <u>300016</u> <u>SECTION</u> <u>D. PART</u> <u>K. IAMIC</u> <u>T. STEIN</u>	AND SAW JOINT VENT 2021 15.00040 S & PROF IRIDGE CELI IER	YER/ URE
	F C	BLAC REST ROSS SHE [(W	CK E ORAT S SE ET 2 DETAI 'R—1	BANKS ION CTION AND LS 05)	S NS
	IF SI A REI	HEET IS L DUCED PF	ESS THA RINT, SCA	N 22"x34 LE ACCOR	' IT IS DINGLY.
	S⊢	IEET	56 0	F <u>65</u>	_
Pad	<u>e 2</u>	501	33		







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DIV/GROUP: MD DB: K.DAVIS LD: K.DAVIS PIC: S.INSALACO PM: G.BRAUN TM: J.MURRAY LYR: ON=";OFE="REF Beach(CAD/DWGs from Klamicelli 2020-12-01\Black BanksI01-DWG(G-09 PLANTING DETAILS AND NOTES.dwg LAYOUT: 9

OWCs

CITY: SYRACUSE, NY C G:\TMProj\BPSTP-Long B ELISE Fie = &\TuProj\BPSTP-Lon

6	Hazen
	ARCADIS
9L. 1V	A JOINT VENTURE
6" 2H: IV 5H: IV ELEV=1.7'±	
BACKFILL TO BE COMPRISED OF EXCAVATED MATERIAL FROM DEPTHS GREATER THAN 12" BELOW THE SOIL SURFACE	
	SEALS DO NOT USE FOR CONSTRUCTION
ARRY STONE INAL IS SOUND, DURABLE, FREE OF ARACTERISTICS THAT STONE WILL NOT DISINTEGRATE SHALL HAVE A MINIMUM SPECIFIC GRAVITY OF 2.5, SHALL BE FREE OF DIRT, DEBRIS, AND DELETERIOUS L-GRADED, FROM SMALLEST TO LARGEST SIZE. THE OT BE LESS THAN ONE-THIRD THE LENGTH OF THE NDARD SPECIFICATIONS SECTION 733-22A RIPRAP CHES.	
AVY ARMOR STONE. CONTRACTOR SHALL SUBMIT TO ENGINEER FOR REVIEW AND CONSIDERATION T OF ARMOR AND/OR FILTER LAYER THICKNESS MAY RNATE. DARD SPECIFICATIONS SECTION 733-23A BEDDING	
OF BREAKWATER BERM.	
CALE 3	COUNTY OF NASSAU, NEW YORK DEPARTMENT OF PUBLIC WORKS
	LONG BEACH WPCP CONSOLIDATION FORCE MAIN
HER HIGH WATER (MHHW) / SPRING H H WATER (MHW)	
WATER (MLW)	NO. DATE ISSUED FOR BY
	COPYRIGHT: 2020 HAZEN AND SAWYER
	ARCADIS A JOINT VENTURE
	PROJECT NO.: 30001615.00040
DWER LOW WATER (MLLW)	FILE NAME: RESTORATION DETAILS DESIGNED BY: D. PARTRIDGE
	DRAWN BY: K. IAMICELI
HIGH MARSH HABITATS RELATIVE TO - ELEVATIONS WILL BE VERIFIED IN	SHEET TITLE
THE RESTORATION AND MITIGATION	
IY.	BLACK BANKS RESTORATION –
PROVIDED ON DRAWINGS WR-104 ILOGICAL BENCHMARKS PRESENTED .AN (ARCADIS 2020). NATIVE PLANT HIGHER THAN EXPECTED BASED OF PLANT COMMUNITY ELEVATIONS ATIONSHIP OF NATIVE PLANT	RESTORATION DETAILS (WR-108)
	IF SHEET IS LESS THAN 22"x34" IT IS A REDUCED PRINT, SCALE ACCORDINGLY.
	SHEET <u>59</u> OF <u>65</u>

Page 28 of 33



- 1. LOCATIONS SHOWN ARE APPROXIMATE AND REFLECT CONDITIONS AT THE TIME OF DATA COLLECTION AS NOTED BELOW FOR EACH SOURCE OF INFORMATION.
- 2. CONTRACTOR SHALL ESTABLISH AND MAINTAIN SURVEY CONTROL DURING THE PERFORMANCE OF WORK. 3. TOPOGRAPHIC CONTOURS DERIVED FROM USGS 2014 LIDAR, CONVERTED FROM NAD83 UTM ZONE 18N TO NAD83 NEW
- YORK STATE PLANE LONG ISLAND, VERTICAL DATUM NAVD88.
- WEILAND BOUNDARY AND DELINEATION SAMPLE POINTS COLLECTED BY ARCADIS IN SEPTEMBER AND OCTOBER 2019.
 THE WORK AREA IS LOCATED ENTIRELY WITHIN THE ZONE AE SPECIAL FLOOD HAZARD AREA BASED ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP NUMBER 36059C0306G, EFFECTIVE 9/11/2009.
- C. INFORMATION RELATED TO SUBSURFACE CONDITIONS SHOULD BE CONSIDERED APPROXIMATE AND SHOULD NOT BE RELIED ON AS A COMPLETE DEPICTION OF CONDITIONS. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS INCLUDING ABOVE-GRADE AND SUBSURFACE FEATURES WHETHER OR NOT SHOWN ON THESE DRAWINGS OR OTHERWISE DESCRIBED IN THE CONTRACT DOCUMENTS PRIOR TO INITIATING WORK.
- 7. CONTRACTOR SHALL PROMPTLY NOTIFY THE OWNER AND ENGINEER UPON DISCOVERY, AND BEFORE CONDITIONS ARE FURTHER DISTURBED, OF PHYSICAL CONDITIONS AT THE SITE WHICH DIFFER MATERIALLY FROM THOSE INDICATED IN THE CONTRACT DOCUMENTS.
- 8. WORK AREA ASSUMED THE MAXIMUM LIMIT OF POTENTIAL DISTURBANCE TO ALLOW FOR FLEXIBILITY IN THE FIELD AND TO AVOID HAVING TO REQUEST A PERMIT MODIFICATION. TEMPORARY DISTURBANCES TO REGULATED WETLANDS ARE EXPECTED TO BE LESS THAN THE EXTENT SHOWN. AREAS OF DISTURBANCE WILL BE MINIMIZED TO THE EXTENT POSSIBLE
- 9. CONTRACTOR TO FINALIZE ACCESS POINT ONTO PEARSALLS HASSOCK AND SHOWN FOR PURPOSES OF PERMITTING DRAWINGS AS APPROXIMATE LOCATION. ALL EFFORTS TO BE MADE TO MINIMIZE DISTURBANCE TO REGULATED WETLANDS.
- 10. EXISTING SHORELINE MAPPED THROUGH INTERPRETATION OF EXISTING AERIAL PHOTOGRAPHY AND BATHYMETRY. 11. TIDAL ELEVATIONS ARE BASED ON NOAA TIDAL STATION ID 8516661, BAY PARK, NEW YORK. SPRING HIGH WATER = 2.109, MEAN HIGH WATER = 1.774, AND MEAN LOW WATER = 0.190. DUE TO THE SCALE OF DRAWINGS A CONTOUR RESOLUTION OF 1-FOOT IS SHOWN. AS SUCH MEAN WATER IS DEPICTED AS 0. SPRING HIGH WATER AND MEAN HIGH WATER ARE DEPICTED AS 2'. HIGH WATER INSET PROVIDES SITE SPECIFIC REFERENCE AT FINER TOPOGRAPHIC SCALE.

L	EGEND_	
	DELINEATED WETLANDS	
	2014 EXISTING TOPOGRAPHIC CONTOUR (1' INTERVAL)	
	WORK AREA (LIMITS OF POTENTIAL DISTURBANCE)	
	WETLAND DELINEATION SAMPLE POINT	+
_	WETLAND FLAG LOCATION	•
•	SHORELINE/MEAN LOW WATER (SEE NOTE 11)	,,,,
	APPROXIMATE MEAN HIGH/SPRING HIGH WATER (SEE NOTE 11)	_
	VEGETATION REFERENCE PLOT	-
	EXISTING HIGH MARSH WETLAND WITHIN LIMITS OF POTENTIAL DISTURBANCE	
	EXISTING LOW MARSH WETLAND WITHIN	* * * *

- LIMITS OF POTENTIAL DISTURBANCE
- EXISTING SALT PANNE WETLAND WITHIN LIMITS OF POTENTIAL DISTURBANCE
- EXISTING SANDY BEACH WETLAND WITHIN LIMITS OF POTENTIAL DISTURBANCE





- Total *HM = High Marsh
- LM = Low Marsh
 - OW = Open Water SP = Salt Panne
 - SB = Sandy Beach
 - AA = NYSDEC Tidal Wetland Adjacent Are

3.83

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						IF SI A REI	HEET IS L DUCED PF	ESS THAN	22"x34" ACCORD	IT IS INGLY.
		ò	e	ю'	160'					
			GRAPHI	C SCALE		s⊦	IEET	60 OF	65	-
					Dog	<u> </u>				

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INTERFERE WITH THE IMPLEMENTATION OF THE WORK.



TURBIDITY CURTAIN

SEE DETAIL 1 ON DRAWING WR-108

EROSION AND SEDUMENTATION CONTROLS SHALL BE INSTALLED PRIOR TO INTRUSIVE ACTIVITE: FENCE SHALL BE INSTALLED AROUND PERIMETER OF IMPORT MATERIAL STOCKPILES TO PREVE MIGRATION OF MATERIAL FROM THE WORK AREA. EROSION AND SEDIMENTATION CONTROLS S MAINTAINED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. MATERIAL WILL BE DELIVERED DIRECTLY TO THE POINT OF PLACEMENT. STOCKPILING IS ASSUMED NECESSARY ON HASSOCKS, HOWEVER, MEANS AND METHODS OF STOCKPILING TO BE DETERMINED BY CONTRACTOR.

TURBIDITY CURTAINS SHALL BE INSTALLED AT MOUTHS OF ALL CHANNELS WHERE PROPOSED WORK IS TO OCCUR.

CONTRACTOR TO FINALIZE ACCESS POINT ONTO PEARSALLS HASSOCK AND SHOWN FOR PURPOSES OF 8. PERMITTING DRAWINGS AS APPROXIMATE LOCATION. ALL EFFORTS TO BE MADE TO MINIMIZE DISTURBANCE TO REGULATED WETLANDS.

BEST MANAGEMENT PRACTICES (INCLUDING BUT NOT LIMITED TO SILT FENCES, STRAW WATTLES) WILL BE IMPLEMENTED BY CONTRACTOR AROUND THE PERIMETER OF WORK AREAS TO PROTECT ANY DOWNGRADIENT, AND ADJACENT REGULATED WATERS AND WETLANDS. FINAL SELECTION OF BEST 9 MANAGEMENT PRACTICES AND LOCATION WILL BE CONSISTENT WITH A FINAL SEDIMENT AND EROSION CONTROL PERMIT.

FOR ADDITIONAL INFORMATION ON EROSION AND SEDIMENT CONTROL, PLEASE SEE DRAWINGS CD-001 10.

AND CD-002 OF LONG BEACH CONSOLIDATION FORCE MAIN PERMIT DRAWINGS. FOR MEAN HIGH WATER AND SPRING HIGH WATER SEE HIGH WATER INSET ON DRAWING WR-201. FOR 11. MEAN LOW WATER SEE NOTE 11 ON DRAWING WR-201



APPROXIMATE MEAN HIGH/SPRING HIGH WATER (SEE NOTE 11)

MITIGATION AREA (86,764 SQ. FT.)

5.



CONTRACTOR TO DETERMINE FINAL

ACCESS POINT MAY VARY SLIGHTLY ALONG THIS NORTHERN SHORELINE

DELINEATED

INSTALL TEMPORARY TIMBER

MATS OR SIMILAR ALONG PRIMARY ACCESS ROUTE TO

MINIMIZE DISTURBANCE

APPROXIMATE MEAN

HIGH/SPRING HIGH WATER (2.0')

WETLAND BOUNDARY

50'x60

LOCATION TO ACCESS VIA BARGE

DUE TO EXISTING CONDITIONS.

OF PEARSALLS HASSOCK.









Pag	e 32	2 01	33

4.	THE HABITAT SUBSTRATE USED TO RESTORE THE
	MARSH SURFACE WILL CONSIST FRIMARILI OF
	SAND AND WILL BE AMENDED WITH SPENT
	MUSHROOM COMPOST MATERIAL, OR SIMILAR
	MATERIAL, TO OBTAIN A TARGET TOTAL ORGANIC
	MATTER CONTENT OF 6% IN THE POST-REMEDY
	HABITAT LAYER. THE RATIOS OF SAND AND
	SPENT MUSHROOM COMPOST ARE PRESENTLY
	ESTIMATED TO BE 79% AND 21% (BY DRY
	WEIGHT), RESPECTIVELY. FINE (0.10- 0.25 MM)
	TO MEDIUM (0.25-0.5 MM) SAND WILL BE USED.
	THE DOMINANT DADTICLE CITE (70%) WILL DE
	THE DUMINANT PARTICLE SIZE (70%) WILL BE
	FROM 0.10 TO 0.5 MM IN DIAMETER.

- 3. EXCAVATION AND BACKFILL LIMITS BASED ON EXISTING DATA. EXTENTS SUBJECT TO CHANGE BASED ON FIELD CONDITIONS.
- 2. CONTRACTOR SHALL PERFORM PRE-CONSTRUCTION SURVEY TO DOCUMENT EXISTING CONDITIONS.

- GENERAL NOTES: 1. UNLESS OTHERWISE NOTED EXISTING GRADE BASED ON USGS 2014 LIDAR.

LEGAI		RCAD MALCOLM PIRNIE, T VENTUR	IS INC. E		
SEALS	DO N COP	IOT USE FOR NSTRUCTION			
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NO.	DATE	ISSUED FOR	BY		
COPYR	IGHT: 20:	20 HAZEN AND SAWY	ER/		
DATE: PROJE FILE N DESIGN DRAWN CHECK SHEE	ARI CT NO.: IAME: NED BY: I BY: ED BY: T TITLE	CADIS A JOINT VENTU JANUARY 2021 30001615.00040 G-07 CROSS SECTIONS D. PARTRIDGE K. IAMICELI T. STEINER	B		
-	PEARSALLS RESTORATION- CROSS SECTIONS (WR-204)				
IF SH A REE	HEET IS L DUCED PF	LESS THAN 22"x34" RINT, SCALE ACCORE	IT IS INGLY.		
SH		63_0F_65_	-		

High Marsh Wetland Planting					
Scientific Name	Common Name	On-Center Spacing	Area (acres)	Density (stems/acre)	Total to Plant
Disticilis spicata	Saltgrass	2	0.014	10890	152
Spartina patens	Saltmeadow Cordgrass	2	0.014	10890	152
va frutescens Jesuit's Bark 15 0.014 194 3					
Note: Herbaceous species will be planted with 2" plugs. Shrub species to be a minimum of 3-gallon container.					

Low Marsh Wetland Planting						
Scientific Name	Common Name	On-Center Spacing	Area (acres)	Density (stems/acre)	Total to Plant	
Spartina alterniflora	Smooth Cordgrass	1.5	3.16	19360	61178	
Disticilis spicata Saltgrass 4 3.16 2723 8605						
Note: Herbaceous species will be planted with 2" plugs.						

Upland Transistional Grassland Seed Mix Specifications To Be Applied at 40 Lbs/Acre				
Proportion of Seed Mix (%)	Scientific Name	Common Name		
18	Elymus virginiqus	Virginia Wildrye		
17	Schizachyrium scoparium	little Bluestern		
15	Festuca nuora	Creeping Red Pesque		
15	Andropo gonigerancii	Big Bluestern		
10	Serghastrum nutans	ndian Grass		
6	Chamaeorista fasciculata	Partridge Pea		
6	Faricum virgatum	Switch Grass		
3	Besmodium panic J'atum	Panicledleaf Tick Trefoll		
3	Verbena hastata	Blue Vervain		
2.5	Asti epias tuberosa	Butter fly Milloweed		
:	Rudbeckie hirte	Black Eyed Susah		
:	Helenium au; umnale	Common Sneeseweed		
1	Aster pilosus	reach Aster		
1	Solidago juncea	Early Goldenrod		
C.5	Agrostis perennas	Upland Bertgrass		

LEGEND

2014 EXISTING TOPOGRAPHIC CONTOUR (1' INTERVAL)	
PROPOSED CONTOUR (0.5' INTERVAL)	
WORK AREA (LIMITS OF POTENTIAL DISTURBANCE)	
HIGH MARSH HERBACEOUS PLANTING (621 SQ. FT.)	
LOW MARSH HERBACEOUS PLANTING (137,758 SQ. FT.)	22222
LOW MARSH HERBACEOUS PLANTING WITHIN MITIGATION AREA (86,764 SQ. FT.)	202203
MARITIME MEADOW (UPLAND) PLANTING (8,077 SQ. FT.)	
OPEN WATER/TIDAL CHANNEL WITHIN LIMITS OF POTENTIAL DISTURBANCE	
SHORELINE/MEAN LOW WATER (SEE NOTE 7)	

APPROXIMATE MEAN HIGH/SPRING HIGH WATER (SEE NOTE 7) APPROXIMATE EDGE OF OPEN WATER

MITIGATION AREA (86,764 SQ. FT.)

HIGH MARSH PLANTING

HIGH MARSH PLANTING

5. F. T. ----

APPROXIMATE MEAN HIGH/SPRING HIGH WATER LINE (2.0')

6	
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	LEGAL ENTITY: MALCOLM PIRNIE, INC.
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	COUNTY OF NASSAU NEW YORK
	DEPARTMENT OF
	PUBLIC WORKS
	LONG BEACH WPCP
2 Proventing the second	CONSOLIDATION FORCE MAIN
OTES:	
REFER TO EXISTING CONDITIONS DRAWING FOR BASE MAP	
NOTES AND GENERAL CONDITIONS.	
. RESTORATION LIMITS SUBJECT TO CHANGE BASED ON ACTUAL LIMITS OF DISTURBANCE (E.G. ACCESS PATH AND	
STAGING AREA DISTURBANCE). EXTENT SHOWN HERE IS	NO. DATE ISSUED FOR BY
CONTRACTOR ASSUMED TO MINIMIZE IMPACTS TO EXISTING	
AREAS OF PROTECTED LOW MARSH VEGETATION SHALL NOT	COPYRIGHT: 2020 HAZEN AND SAWYER/
REQUIRE PLANTING.	ARGADIS A BOIRT VERTORE
. CONTRACTOR SHALL PERFORM CHANNEL WORK IN THE DRY.	DATE: JANUARY 2021
THE PROCESS OF ADAPTIVE MANAGEMENT WILL BE USED	PROJECT NO.: 30001615.00040
MAINTENANCE ACTIVITIES AND CORRECTIVE ACTIONS WILL	FILE NAME: <u>G-08 PLANTING PLAN</u>
BE IMPLEMENTED AS APPROPRIATE THROUGH THE DURATION OF THE REQUIRED MONITORING PERIOD TO	DESIGNED BY: D. PARTRIDGE
ADDRESS RECOMMENDATIONS MADE THROUGH THE ADAPTIVE MANAGEMENT PROCESS. RECOMMENDED	CHECKED BY: T STEINER
MAINTENANCE ACTIVITIES OR CORRECTIVE ACTIONS MAY INCLUDE ADDITIONAL RE-GRADING, PLANTING, AND/OR	
SEEDING, OR CONTROL OF INVASIVE/EXOTIC SPECIÉS	
SPECIES WILL BE ACCOMPLISHED THROUGH SPOT SPRAYING	
PHYSICAL REMOVAL, AS NECESSARY. THE FREQUENCY OF	PEARSALLS
CONTROL EVENTS WILL BE ESTABLISHED THROUGH DATA COLLECTED DURING MONITORING EVENTS. HERBICIDE	RESTORATION-
CONTROL PROGRAM WILL BE CONDUCTED BY A CERTIFIED	PI ANTING
PESTICIDE APPLICATOR.	PLAN
. REFER TO DRAWING CR-108 FOR SITE RESTORATION NOTES	
	(VVK-ZUS)
. REFER TO DRAWING WR-204 FOR SITE SPECIFIC DETAILS.	
. FOR MEAN HIGH WATER AND SPRING HIGH WATER SEE HIGH	IE QUEET IS I FOR THAN DOT 74" IT IS
SEE NOTE 11 ON DRAWING WR-201. FOR WEAK LOW WATER	A REDUCED PRINT, SCALE ACCORDINGLY.
	SHEET 64 OF 65
GRAPHIC SCALE	

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