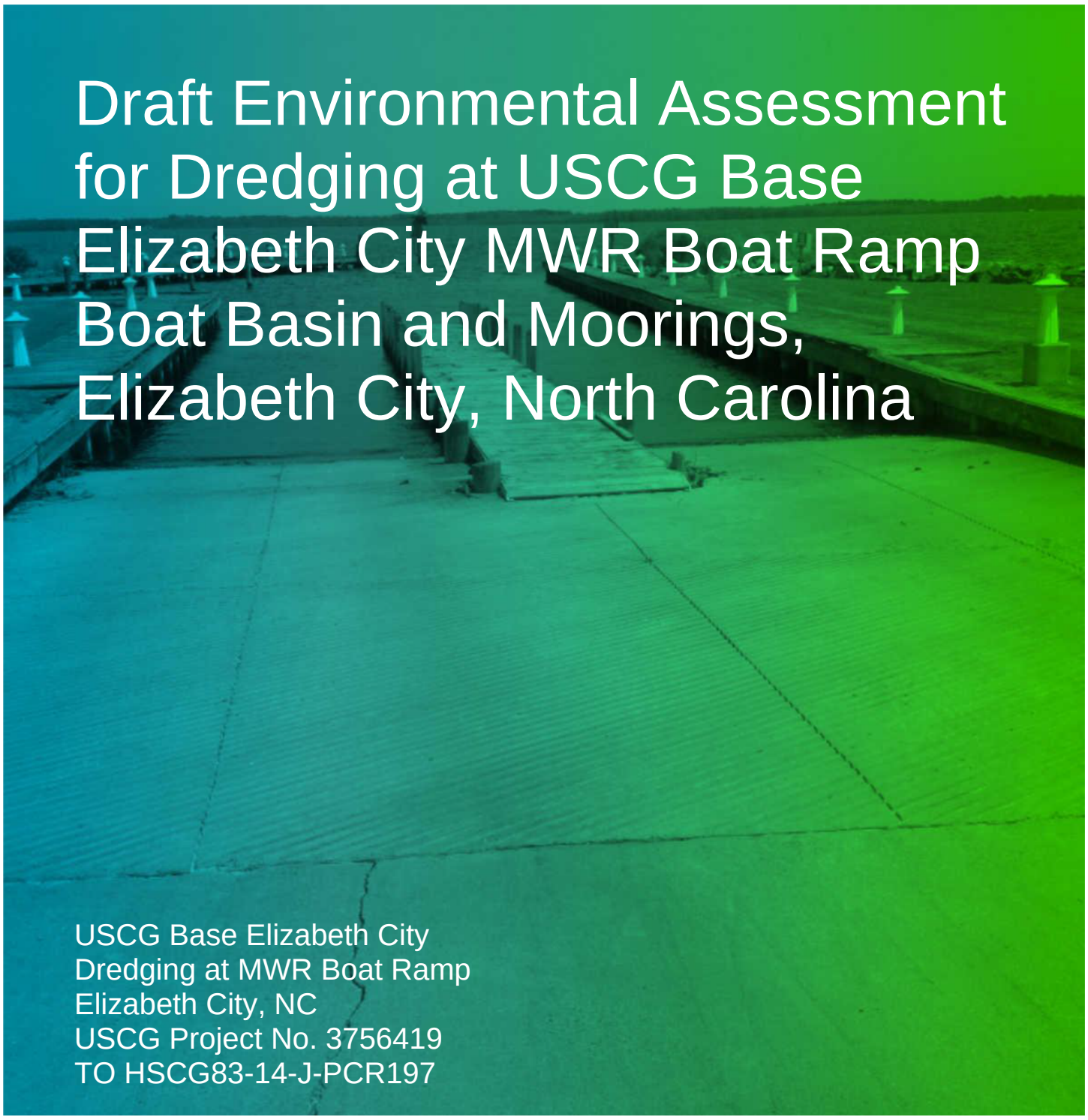
AECOM

Environment

Submitted to
United States Coast Guard
Civil Engineering Unit
Cleveland, Ohio

Submitted by
AECOM
Beltsville, MD
60321114
April 2015

Draft Environmental Assessment for Dredging at USCG Base Elizabeth City MWR Boat Ramp Boat Basin and Moorings, Elizabeth City, North Carolina



USCG Base Elizabeth City
Dredging at MWR Boat Ramp
Elizabeth City, NC
USCG Project No. 3756419
TO HSCG83-14-J-PCR197

U.S. COAST GUARD
DRAFT ENVIRONMENTAL ASSESSMENT
FOR
USCG BASE ELIZABETH CITY MWR BOAT RAMP BOAT BASIN AND MOORING IMPROVEMENTS

This USCG Draft Environmental Assessment was prepared in accordance with Commandant's Manual Instruction M16475.1D and is in compliance with the National Environmental Policy Act of 1969 (P.L. 91-190) and the Council of Environmental Quality Regulations dated 28 November 1978 (40 CFR Parts 1500-1508).

This Draft Environmental Assessment (EA) serves as a concise public document to briefly provide sufficient evidence and analysis for determining the need to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

This Draft Environmental Assessment concisely describes the proposed action, the need for the proposal, the alternatives, and the environmental impacts of the proposal and alternatives. This Draft EA also contains a comparative analysis of the action and alternatives, a statement of the environmental significance of the preferred alternative, and a list of the agencies and persons consulted during EA preparation.

9 Apr 2015
Date

Leilani
Ms. Leilani L. Woods
Environmental Project Manager

Environmental Engineer
Title/Position

4/10/15
Date

Mr. Gregory O. Carpenter
Environmental Reviewer

Chief, Environmental Compliance
Title/Position

In reaching my decision/recommendation on the USCG's proposed action, I have considered the information contained in this Draft EA on the potential for environmental impacts.

4/13/15
Date

Responsible Official

Commanding Officer
USCG CEU Cleveland
Title/Position

Table of Contents

List of Figures

List of Tables

List of Appendices

List of Acronyms

AECOM	AECOM Technical Services, Inc.
APE	Areas of Potential Effect
BMP	Best Management Practice
CEQ	Council on Environmental Quality
CZMP	Coastal Zone Management Program
CZMA	Coastal Zone Management Act
EA	Environmental Assessment
FONSI	Finding of No Significant Impact
LQG	Large Quantity Generator
MWL	Mean Water Level
MWR	Morale, Welfare and Recreate
NAAQS	National Ambient Air Quality Standards
NAVD88	North American Vertical Datum 1988
NC DCM	North Carolina Division of Coastal Management
NCDENR	North Carolina Department of Environment and Natural Resources
NC DWQ	North Carolina Division of Water Quality
NC NHP	North Carolina Natural Heritage Program
NC WRC	North Carolina Wildlife Resources Commission
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
PNC	Pre-Construction Notification
RB-S	Response Boat-Small
SHPO	State Historic Preservation Office
SPC	Special Purpose Craft
TES	Threatened and Endangered Species
USACE	United States Army Corps of Engineers
US EPA	United States Environmental Protection Agency
USCG	United States Coast Guard
USFWS	United States Fish and Wildlife Service

1 Project Justification

1.1 Introduction

AECOM Technical Services, Inc. (AECOM) completed this Environmental Assessment (EA) on behalf of the United States Coast Guard (USCG). The EA evaluates the potential environmental impacts associated with the proposed dredging of the boat basin and moorings at the Morale, Welfare, and Recreate (MWR) Boat Ramp at the USCG Base Elizabeth City in Pasquotank County, North Carolina. The EA was performed in accordance with: National Environmental Policy Act (NEPA) of 1969 (Section 102[2][c]), as implemented by the Council on Environmental Quality (CEQ) regulations (40 *Code of Federal Regulations* parts 1500-1508); *Procedures for Considering Environmental Impacts* (Department of Transportation 1979, rev. 1982, rev. 1985) Order 5610.1C; and USCG Policy *NEPA: Implementing Procedures and Policy for Considering Environmental Impacts*, COMDTINST M16475.1D (USCG, 2000). NEPA requires the assessment of environmental consequences of Federal actions that may affect the quality of the human and natural environment. Based on the potential for impacts described herein, the USCG will either publish a Finding of No Significant Impact (FONSI) or prepare an Environmental Impact Statement.

The USCG Base Elizabeth City is located approximately 3.5 miles southeast of Elizabeth City, along Weeksville Road / Highway 344 (formerly Highway 34), on the south shore of the Pasquotank River in Pasquotank County, North Carolina (**Figure 1**). The geographic location of the MWR Boat Ramp is latitude 36° 16' 14.72" north and longitude 76° 10' 40.31" west. The MWR Boat Ramp can be approached by water from the northeast or by land via Moukawsher Drive along the shoreline. Moukawsher Drive can be accessed from Consolidated Road on the south end of the Base.

The MWR Boat Ramp is located on the north end of the Base's shoreline, in a portion of the river tidal flats. The MWR Boat Ramp consists of a two-lane concrete ramp with a concrete pavement approach and a launch dock centered in the boat ramp. Rubble mound stone breakwaters project approximately 100 to 125 feet from the shoreline on both sides of the launch ramp to form a protected harbor area for launching and retrieving boats. Timber docks line both sides of the boat basin. Mooring piles are in place along the west timber dock. The MWR Boat Ramp is utilized by Base military personnel for launching privately-owned recreational boats, and for launching USCG vessels stationed at the Building 43 moorings. **Figure 2** is an aerial photograph of the boat ramp, boat basin, and moorings. Photographs of the MWR Boat Ramp are included in **Appendix A**.

1.2 Purpose and Need Statement

The purpose of this project is to dredge the boat basin and moorings to a required depth below mean water level (MWL) at the MWR Boat Ramp due to changing conditions at the site. Water depth in the boat basin and moorings is reduced by natural sediment deposition and by heavy winds from the north, which push water from the boat basin and down the Pasquotank River. This wind effect decreases the depth of the water and hinders the USCG's ability to utilize the boat ramp for both operational missions and recreational purposes. According to the USCG personnel at Base Elizabeth City, the sustained winds can result in lowering water levels as much as 2 to 3 feet. Recent sounding data measured at the MWR Boat Ramp indicates that depth to sediment is as shallow as 4 feet MWL while the draft, the vertical distance between the waterline and the bottom of the hull, for the Response Boat-Small (RB-S) vessels is 3 feet 3 inches. Together, these conditions create inadequate clearance depth for launching Special Purpose Craft (SPC) and RB-S vessels. As a result, the USCG is routinely forced to launch their vessels at a public boat launch a number of miles upriver, which results in up to an hour delay for mission response. The USCG proposes dredging the MWR Boat Ramp to a maximum depth of 8 feet below MWL. MWL corresponds to elevation -0.44 North American Vertical Datum 1988 (NAVD88). Therefore, dredging will proceed to -8.44 feet NAVD88.

1.3 Alternatives Considered

In order to provide the sufficient mooring depth for the MWR Boat Ramp, the following alternatives were considered and either dismissed or evaluated in this EA.

1.3.1 Alternatives Considered and Dismissed

Alternatives that would not allow the USCG Base Elizabeth City to safely use the boat launch and moorings were considered and dismissed because the operational missions of the USCG Base Elizabeth City could not be safely and efficiently executed. Alternatives considered and dismissed included: 1) Acquiring alternative vessels that would require less clearance depth for launching was considered and dismissed because the USCG has no plans for such changes; 2) Discontinuing use of the MWR boat ramp as a boat launch for their search and rescue vessels and having to launch their vessels at a public boat launch several miles upriver was considered and dismissed because this results in up to an hour delay for mission response; 3) No longer allowing military personnel to use the boat ramp for recreational purposes was considered and dismissed because the boat ramp is used in conjunction with on-site cabins, mobile home units, recreational vehicle stations, and various other recreational facilities available to USCG personnel and their families; and, 4) Constructing a new boat ramp along the Base's shoreline was considered and dismissed because this is not a feasible option due to the financial investment and that a new boat ramp would still need to be constructed along the shoreline of the Pasquotank River for the USCG's use. This would result in new dredge work in an undisturbed area, more significant and longer duration of impacts, and inevitably maintenance dredging will be required in the future. Therefore, this is not a practical long-term solution.

1.3.2 Alternatives Considered for Evaluation

No Action: This alternative would have the USCG continuing to use the boat basin and moorings in its current condition.

Alternative A: Dredge to a Maximum Depth of 8 Feet: This alternative proposes mechanical dredging of accumulated sediment at the boat basin and moorings area to a target depth of 8 feet below MWL. The MWR Boat Ramp is a previously dug man-made basin and the proposed dredging will occur entirely within the previously disturbed footprint of the boat basin and moorings. However, the USCG has no record of the as-built drawings indicating the original dredge depth. While the dredging required for the original construction of the MWR Boat Ramp likely disturbed the sediments to a depth proximate to the proposed dredge depth, the exact depth of the original dredging is not documented. The dredging of the boat basin and moorings will remove sediment accumulated since the MWR Boat Ramp was initially constructed. MWL corresponds to elevation -0.44 NAVD88; therefore, dredging will proceed to -8.44 feet NAVD88.

Approximately 755 cubic yards of sediment will be dredged from the boat basin and moorings. During the proposed dredging activities, the dredge area will be closed with an impermeable floating turbidity curtain with a weighted bottom edge. The dredge material will be deposited on barges, dewatered from the barge within the turbidity curtain, transported by barge to an unloading site, offloaded to trucks, and transported by truck to the licensed East Carolina Regional Landfill in Aulander, North Carolina for disposal. Formal approval for disposal of the dredge material at the MWR Boat Ramp has been received from the East Carolina Regional Landfill. Design drawings for the proposed alternative are in **Appendix B**.

The proposed dredging project will only temporarily impact open waters (an area totaling approximately 0.18 acres) and will occur entirely within the existing boat basin limits (limited to an area approximately 150 feet from the shoreline).

1.4 Area of Potential Effect

The area of potential effect (APE) includes both on-shore and off-shore portions of the MWR Boat Ramp (see **Figure 2**). The APE also includes access roads to the MWR Boat Ramp and land transportation routes to the landfill. The landfill where the sediment will be disposed of was included in the APE for evaluation of cultural

resources. The landfill was not included in the evaluation of other impacts since the disposal of sediment at the landfill is consistent with the current and licensed use of the landfill.

2 Summary of Environmental Impacts

This section evaluates the significance of environmental impacts of the proposed project on the physical, natural, socioeconomic, and cultural environment. CEQ regulations (40 *Code of Federal Regulations* 1508.27) define "significance" in terms of the *context* of the action and the *intensity* of the impacts. The context considers society as a whole, the affected region, the affected interests, and the locality. The intensity of impact refers to the severity of an impact, and the following factors are considered:

- Beneficial and adverse impacts
- Public health and safety
- Unique geological characteristics
- Controversial nature of the action
- Uncertain effects
- Precedent-setting actions
- Cumulative impacts
- Historic landmark impacts
- Impacts to endangered or threatened species or their habitat
- Potential for violation of Federal, state, or local environmental standards

The duration of the impacts are also considered. Temporary impacts are reduced early in the project, short-term impacts occur during the life of the project and long-term impacts exist after project completion.

2.1 Physical Environment

2.1.1 Geology, Topography, and Soils

Affected Environment: The USCG Base Elizabeth City is situated on the south shore of the Pasquotank River, which connects to the Albemarle Sound, and is part of the Intercostal Waterway. The MWR Boat Ramp is located on the north end of the base's shoreline, in a portion of the river tidal flats. Grain size analysis conducted on three sediment samples indicated that the sediment material consists of 4.4 to 6.8 percent fines (passing a # 200 sieve). Pasquotank County is located within the North Carolina Coastal Plain, and the geology of the area consists of undivided surficial deposits of sand, clay, and gravel of the Quaternary period. According to the Natural Resources Conservation Service Soil Survey maps, the area immediately adjacent to the dredge area consists of Udorthents loamy soils on zero to two percent slopes.

Anticipated Impacts: The 'no action' alternative will have no impacts on the physical environment. Proposed dredging of the MWR Boat Ramp will remove sediment from the boat basin and moorings to depths of up to 8 feet below MWL. Potential impacts associated with soil erosion are not significant because land areas will not be disturbed outside of already developed areas, and dredged sediments will be deposited onto a barge prior to transport to an unloading site.

Mitigations and Conclusions: The dredging of the area affects only sediment accumulated within the boat basin and mooring area due to natural deposition and lower water levels. The dredging will not have significant impacts to the local geology and soils because of the small area and volume of sediment. No mitigation is necessary.

2.1.2 Climate and Air Quality

Affected Environment: Average temperatures in Elizabeth City range from a minimum of 31 degrees Fahrenheit in January to 89 degrees Fahrenheit in July. The mean annual temperature is 61 degrees. The area receives approximately 49 inches of precipitation a year. According to the information from the State Climate Office of North Carolina, the average wind speed at the Coast Guard Air Field in Elizabeth City for 2014 was 8.9 miles per hour. Pasquotank County has good air quality, with air quality index values below 50 since 1999. An air quality index of 50 or below represents good air quality with little potential to affect public health.

The United States Environmental Protection Agency (US EPA), under the requirements of the 1970 Clean Air Act as amended in 1977 and 1990, established primary and secondary standards for six airborne pollutants or criteria pollutants: carbon monoxide, nitrogen dioxide, ozone, particulate matter, lead, and sulfur dioxide. The primary standards, known as National Ambient Air Quality Standards (NAAQS), are intended to protect public health. The secondary standards are intended to protect public welfare and account for air pollutant effects on soil, water, visibility, material, vegetation, and other aspects of general welfare. The North Carolina ambient air quality standards include all of the NAAQS plus a standard for total suspended particulate matter and particulate matter with a diameter of ten microns or less. For each pollutant, NAAQS has two designations: attainment areas that meet the NAAQS and non-attainment areas that do not meet the NAAQS. Currently, Pasquotank County is considered in attainment for the NAAQS and North Carolina Department of Environment and Natural Resources (NCDENR) Standards.

Anticipated Impacts: The ‘no action’ alternative will have no impacts on climate and air quality. Emissions caused by dredging and transporting the sediment by truck are too minor to have a significant effect on climate or air quality currently present from area activities due to the brief work period (estimated two weeks) and small quantities of sediment removal (estimated 40 truckloads). Future operation of the modified boat basin and moorings area would not contribute additional air emissions beyond current levels.

Mitigations and Conclusions: The dredging of the boat basin and moorings area will not have significant impacts to the local climate and air quality. Therefore, no mitigation is necessary.

2.1.3 Noise

Affected Environment: Existing noise levels in the vicinity of the MWR Boat Ramp are typical of those normally associated with nearby land uses, commercial and recreational vessels on the Pasquotank River, and USCG activities. The primary sources of noise at the site are vehicular traffic, boat traffic on the river, aircraft traffic, wind, and waves. These noises are loudest during daylight hours, during the summer tourist season, and during storms.

Anticipated Impacts: The ‘no action’ alternative will have no significant impacts on noise. For the dredge alternative, heavy equipment and construction activity noises would result from dredging and transport of the dredged material to the landfill by barge and truck. There are no residences within 1,500 feet of the project and truck traffic will be routed though commercial areas. The noise from heavy equipment and construction activities would repel nearby fish, birds, and other wildlife. Fish and wildlife would likely relocate to a nearby habitat when the dredging activities begin, and will likely return after these activities are completed. These impacts are not significant because the noise will be consistent with other noise in the area and the dredging is short-term.

Dredging is expected to occur during the normal operating hours at the site. Noise is attenuated over distance according to the inverse square law, whereby each doubling of the distance, starting at 50 feet from the source, reduces the decibel level by 6 decibels. Dredging activities are also considered a temporary intrusion of noise. The impact of the project on noise is not significant because the noise will be consistent with other sources of noise nearby, the noise will be short-term, and there are no nearby residences.

Mitigations and Conclusions: During dredging activities, contractors should comply with all applicable federal and state laws on noise/hearing protection and abatement. No additional mitigation measures are proposed.

2.1.4 Hazardous Materials and Hazardous Waste

Affected Environment: Currently, the USCG Base Elizabeth City is identified as a Large Quantity Generator (LQG) of hazardous materials under Resource Conservation and Recovery Act regulations (US EPA ID No. NC2690308232). A LQG generator is defined as any entity, other than a household, that generates 1,000 kilograms (2,220 pounds) of hazardous waste or one (1) kilogram (2.2 pounds) of acutely hazardous waste per calendar month. The types of wastes generated are consistent with the Base operations involving materials utilized in the maintenance of vehicles and boats, buildings and industrial activities including paints, paint removers, petroleum, oil, lubricants, greases, solvents, car and boat engine batteries, and fluorescent lamps. Hazardous and non-hazardous wastes are collected and stored at several satellite collection points. Wastes including used oil (motor oil, lubricants, and grease); universal wastes (fluorescent lamps and used batteries); blast media, and paint waste. A 90-day hazardous waste storage area is used to store collected materials prior to final off-site disposal.

Anticipated Impacts: There would be no anticipated impacts from the 'no action' alternative. For the proposed dredging, the excavated sediment material is not characterized as a hazardous waste. Fuel and other petroleum products contained within the dredging/construction equipment could be released during the onsite activities (via leaks or accidents). However, these releases are not anticipated to be significant.

Mitigations and Conclusions: While releases from the dredging/construction equipment are not anticipated to be significant, the contractor should submit a spill prevention and response plan to the USCG covering all regulated materials brought to the project site. The plan should indicate how the contractor would manage their petroleum storage and respond to petroleum releases, and to releases of any other regulated materials or substances brought to the project site.

2.2 Natural Environment

The site was inspected by an environmental scientist from AECOM on May 7, 2014. A photographic log of the MWR Boat Ramp was completed during the survey and is included in **Appendix A**.

2.2.1 Terrestrial Environment

Affected Environment: The USCG Base Elizabeth City is located in the coastal plain of northern North Carolina along the southern shore of the Pasquotank River, and the MWR Boat Ramp is located at the north end of the Base's shoreline. A large portion of the Base is covered in grass areas that are maintained by mowing, while the shoreline is predominantly developed with roadways, paved parking lots and buildings.

Anticipated Impacts: There would be no anticipated impacts from the 'no action' alternative. For the proposed dredging, since the impacts are limited to the boat basin and moorings area, no impacts to the terrestrial environment are anticipated for this preferred alternative.

Mitigations and Conclusions: The dredging of the boat basin and moorings area will not have significant impacts to the terrestrial environment because no special terrestrial resources are present. No mitigation is necessary.

2.2.2 Water Resources and Aquatic Environment

Affected Environment – Surface Water: The USCG Base Elizabeth City is bordered to the east/northeast by the Pasquotank River. Storm water from the developed portions of the Base flows to storm drain catch basins and drainage ditches, which discharge to the Pasquotank River. Storm water runoff from undeveloped portions of the Base is allowed to infiltrate into the soils and allowed to naturally runoff via sheet flow into Pasquotank River.

Anticipated Impacts: There are no anticipated impacts from the 'no action' alternative. Minor impacts to aquatic vegetation and water resources will occur from the dredging activities. However, based on review of the North

Carolina OneMap Habitat Map, the project area is not located in the vicinity of a designated submerged aquatic vegetation area. Additionally, no threatened and endangered aquatic plant species are recorded in the proposed project area. It is anticipated that aquatic vegetation will become reestablished in the dredged area following the completion of the dredging activities. Minor impacts to fish species will also occur from the dredging activities. According to the United States Fish and Wildlife Service (USFWS) species list for Pasquotank County and the North Carolina Natural Heritage Program (NC NHP) species list for the Elizabeth City quadrangle, two federally-listed endangered species of fish (i.e., Shortnose sturgeon and Atlantic sturgeon) may be present in the proposed project area. The fish in the area will temporarily move during the dredging activities. It is anticipated that the fish will return to the area following the completion of the dredging activities.

During dredging and dewatering activities, there is potential for sediment from the dredging area to be temporarily suspended in the water column of the Pasquotank River. Since the project is confined to a small area, the extent of impact is anticipated to be limited to the immediate area of the dredging activities.

Mitigation and Conclusions: The sediment removal alternative is proposed to remove approximately 755 cubic yards of material. The dredging will be performed from a floating plant and not from land based operations. The sediment will be temporarily stored on a barge in the Pasquotank River for dewatering. Best Management Practices (BMPs), such as an impermeable floating turbidity curtain, will be used to keep the sediments from leaving the dredging area and entering the main channel of the Pasquotank River. The curtain will be a full depth floating design with weighted bottom edge, and it will remain in place in accordance with permit conditions or for a period of 48 hours after completion of dredging, whichever occurs longer. The dredge material will be dewatered on the barge within the turbidity curtain. The sediment material has been tested and characterized as non-hazardous material; therefore, the proposed project will not cause the degradation of water quality. Appropriate permits will be obtained for the discharge for the dewatering process, if required. Other appropriate BMPs, such as controlling the rate of dredging, that are required by Clean Water Act permits will be used in the dredge area, as needed, to minimize the amount of silt that becomes suspended. All water quality BMPs required by permits will be adhered to. Additionally, to avoid potentially adverse impacts on life cycles of anadromous fish, the proposed project is expected to occur outside of the anadromous fish spawning moratorium (February 15 to June 30).

2.2.3 Floodplains and Costal Zone

Affected Environment: The dredging location is in the Pasquotank River and by definition is in the floodplain. The project is also located in the Coastal Management Zone and within a North Carolina Division of Coastal Management (NC DCM) area of environmental concern.

Anticipated Impacts: The 'no action' alternative will have no impacts to floodplains and the coastal zone. The USCG determined that the project is consistent with the Coastal Zone Management Act (CZMA) and North Carolina's Coastal Zone Management Program (CZMP). AECOM, on behalf of the USCG, prepared and submitted a Federal Consistency Determination (see documentation in **Appendix C**) to the NC DCM on January 12, 2015. In a letter dated March 19, 2015, the NC DCM concurred with the determination stating "DCM has reviewed the submitted information pursuant to the management objectives and enforceable policies of Subchapters 7H and 7M of Chapter 7 in Title 15A of the North Carolina Administrative Code and concurs that the proposed Federal activity by the US Coast Guard is consistent, to the maximum extent practicable, with North Carolina's certified coastal management program." A copy of the NC DCM concurrence letter is included in **Appendix C**.

Mitigations and Conclusions: The dredging will not have significant impacts to floodplains, and no floodplain mitigation is necessary. The project is consistent with the CZMA and North Carolina's CZMP, and no mitigation is necessary.

2.2.4 Wetlands

Affected Environment: Reviews of the USFWS National Wetlands Inventory Map and the North Carolina Coastal Wetlands Map were completed to determine the potential presence of wetlands. The site was inspected to verify

the maps and to determine if any wetlands existed on the MWR Boat Ramp APE. The USFWS National Wetlands Inventory Map did not identify wetlands in or near the project APE. However, the northern and northwestern portions of the project APE as well as the remainder of the Pasquotank River are classified as Estuarine and Marine Deepwater (E1UBL) habitats. The North Carolina Coastal Wetlands Map indicated that there are no coastal wetlands in or near the project APE. No wetlands were observed during the inspection of the MWR Boat Ramp.

Anticipated Impacts: The 'no action' alternative will have no impacts on wetlands. For the dredge alternative, no wetlands exist in the APE and there will be no wetland impacts.

Mitigations and Conclusions: Wetlands will not be affected and no mitigation is necessary.

2.2.5 Prime and Unique Farmlands

Affected Environment: The Farmland Protection Policy Act (7 U.S.C. 4201, et seq.) is intended to preserve prime farmland for agricultural purposes whenever possible. The project is located within the Pasquotank River, which is not prime or unique farmland.

Anticipated Impacts: The 'no action' alternative will have no impacts on prime and unique farmlands. For the dredge alternative, no prime or unique farmlands exist in the dredge area or on-shore at the USCG Base Elizabeth City; therefore, there will be no impacts to prime or unique farmlands.

Mitigations and Conclusions: Prime and unique farmlands will not be affected and no mitigation is necessary.

2.2.6 Threatened or Endangered Species

Affected Environment: A list of State and Federally-listed rare, threatened, and endangered species (TES) that are recorded from within the APE and/or surrounding area was obtained online from the USFWS Threatened and Endangered Species and Species of Concern for Pasquotank County and the NC NHP Heritage Data Search for the Elizabeth City Quadrangle. **Table 1** summarizes the TES recorded from the online searches. The table also lists the species status, habitat requirements, and if the habitat is present at the project site. In addition, a NC NHP Information Request on the distribution of State-listed TES, a USFWS Section 7 Consultation Request for Federally-listed TES, and a National Marine Fisheries Service (NMFS) Section 7 Consultation Request for the sturgeon species were completed by AECOM (see documentation in **Appendix D**). At the time this report was prepared, a response had not been received from the NMFS.

Table 1 – Summary of Records of Federal and State Rare, Threatened, and Endangered Species

Species (1, 2)	State Status (1)	Federal Status (2)	Habitat (1, 2)	Habitat Present
Bald Eagle (*Haliaeetus leucocephalus*)	T	BGPA	Mature forests near large bodies of water (for nesting); lakes and sounds (for foraging)	Yes
Red Knot (*Calidris canutus rufa*)	-	P	Migration stops along the Atlantic coast; principally found in marine and estuarine habitats; main food source is horseshoe crab eggs	Yes
Shortnose Sturgeon (*Acipenser brevirostrum*)	E	E	Anadromous species that prefers near shore marine, estuarine, and riverine habitat of large river systems; migrate periodically into faster moving fresh water areas to spawn	Yes
Atlantic Sturgeon (*Acipenser oxyrinchus*)	SC	E	Anadromous species; migrate from estuarine and marine waters into freshwater in the spring and early summer to spawn; spawn in moderately flowing water in deep parts of large rivers; sub adults and adults live in coastal waters and estuaries	Yes

Species (1, 2)	State Status (1)	Federal Status (2)	Habitat (1, 2)	Habitat Present
American Eel (*Anguilla rostrate*)	-	FSC	Catadromous species; mature eels migrate from brackish and freshwater habitats in streams, large rivers, and estuaries to the ocean to spawn. Larvae develop in the ocean and the eel migrates upstream to estuaries and freshwater habitats as it matures	Yes
West Indian Manatee (*Trichechus manatus*)	-	E	Warm waters of estuaries and river mouths	Yes
Grassleaf Arrowhead (*Sagittaria weatherbiana*)	-	FSC	Fresh or brackish marshes, stream banks, and wet depressions	No
White Doll's-daisy (*Boltonia asteroides var. glastifolia*)	SR-O	-	Clay-based Carolina bays, marshes, savannas	No
Slender Blue Iris (*Iris prismatica*)	SR-T	-	Bogs, marshes, and wet powerline clearings	No
Winged Seedbox (*Ludwigia alata*)	SR-P	-	Interdune ponds, marshes	No

State Status:

E = Endangered

T = Threatened

SC = Special Concern

SR-O = Significantly Rare – Other

SR-P = Significantly Rare - Peripheral

SR-T = Significantly Rare - Throughout

- = Not listed by NC NHP in Elizabeth City quad

N/A = Not Applicable

Federal Status:

E = Endangered

T = Threatened

FSC = Federal Species of Concern

BGPA = Bald and Golden Eagle Protection Act

P = Proposed

- = Not listed by USFWS in Pasquotank County

N/A = Not Applicable

(1) Source: North Carolina Natural Heritage Program, Heritage Data Search (accessed September and November 2014) at http://www.ncnhp.org/web/nhp/database-search. State Listed species are terrestrial and aquatic species within approximately one mile of the site.

(2) Source: U.S. Fish and Wildlife Service, Endangered Species, Threatened Species, Federal Species of Concern, and Candidate Species for Pasquotank County (accessed online September and November 2014) at http://www.fws.gov/raleigh/species/cntylist/pasquotank.html

Anticipated Impacts: The 'no action' alternative will have no impacts on threatened or endangered species. Based on site observations and habitat requirements, there is a potential for listed species protected under the Endangered Species Act to be impacted by the proposed action under the dredge alternative (i.e., Shortnose sturgeon and Atlantic sturgeon). The USFWS Section 7 determination concluded that the preferred alternative to dredge the boat basin and moorings "is not likely to adversely affect any federally-listed endangered or threatened species, their formally designated critical habitat, or species currently proposed for listing."

However, the USFWS response recommended the following actions to mitigate impacts to aquatic resources:

- "[T]he Service is concerned about the potential impacts the proposed action might have on aquatic species. Aquatic resources are highly susceptible to sedimentation. Therefore, we recommend that all practicable measures be taken to avoid adverse impacts to aquatic species, including implementing directional boring methods and stringent sediment and erosion control measures. An erosion and sedimentation control plan should be submitted to and approved by the North Carolina Division of Land Resources, Land Quality Section prior to construction. Erosion and sedimentation controls should be installed and maintained between the construction site and any nearby down-gradient surface waters. In addition, we recommend maintaining natural, vegetated buffers on all streams and creeks adjacent to the project site."

The NC NHP responded to USCG's request letter the "NC NHP database does not show any records for rare species, important natural communities, natural areas, or conservation/managed areas within the proposed

project area." However, the NC NHP database shows element occurrence records for the Shortnose sturgeon, Atlantic sturgeon, and Slender Blue Iris within one mile of the project site. The element occurrence records for Shortnose sturgeon and Atlantic sturgeon "are located in Albemarle Sound and North Carolina coastal waters (including Albemarle Sound), respectively." The element "occurrence record for Slender Blue Iris is from Hogs Creek in Pasquotank County." Impacts to the remaining State-listed species are not anticipated because suitable habitat is not present in the APE.

Mitigation and Conclusions: To avoid potentially adverse impacts on life cycles of anadromous fish (i.e., Shortnose sturgeon and Atlantic sturgeon), the proposed project will occur outside of the anadromous fish spawning moratorium (February 15 to June 30). Additionally, to avoid potential impacts to aquatic species, an impermeable floating turbidity curtain with a weighted bottom edge will be used to keep the sediments from leaving the dredging area and entering the main channel of the Pasquotank River. AECOM contacted the North Carolina Division of Land Resources, Land Quality Section to inquire about submitting an erosion and sedimentation control plan for the proposed project. The North Carolina Division of Land Resources, Land Quality Section stated that since the only work on-shore will be the loading of dredged material into trucks for transport to the landfill, which is not anticipated to disturb more than one acre of land, a state-approved erosion and sedimentation control plan is not required. However, erosion and sediment controls will be installed and maintained between the off-loading site and nearby down-gradient surface waters by the contractor.

2.3 Socioeconomic Environment

2.3.1 Land Use and Zoning

Affected Land Use and Development Environment: The USCG Base Elizabeth City is located approximately 3.5 miles southeast of Elizabeth City, along Weeksville Road / Highway 344 (formerly Highway 34), in Pasquotank County, North Carolina. Land records indicate that the Base sits on an approximately 748-acre parcel, owned by the USCG. The Base is located on the south shore of the Pasquotank River, which connects to the Albemarle Sound and is part of the Intracoastal Waterway. The MWR Boat Ramp is located on the north end of the Base's shoreline, in a portion of river tidal flats. The Base can be accessed either from the main gate off Weeksville Road on the north end of the Base, or from a second entrance off Consolidated Road on the south end of the Base. The MWR Boat Ramp can be approached by water from the northeast or by land via Moukawsher Drive along the shoreline.

The USCG Base Elizabeth City is classified as "Institutional & Public" in recent (December 2011) Pasquotank County land use plans. The surrounding areas to the west, south, and southeast are classified as "Agricultural"; small areas classified as "Forestry" and "Commercial" are also present to the west and south. The area to the north-northwest of the Base is classified as "Elizabeth City Planning Jurisdiction." The Elizabeth City land use plan (December 2011) depicts the area to the north-northwest of the Base as "Undeveloped," "Low Density Residential," "High Density Residential," and "Public & Institutional".

Anticipated Impacts: The 'no action' alternative will have no impacts land use and zoning. The proposed depth improvements for the MWR Boat Ramp will not affect land use, zoning, existing or future development patterns, or city-approved land use and development plans because there will be no changes in land use.

Mitigations and Conclusions: The project will not affect land use and zoning. No mitigation is necessary.

2.3.2 Socioeconomic Environment

Affected Environment: The USCG Base Elizabeth City is located in Pasquotank County, North Carolina. According to United States Census Bureau data, the county supported a population of 39,981 residents in 2013, with a median age of 36.3 (2008-2012) and a mean household income of $60,713 (2008-2012). The County racial mix in 2013 was estimated at about 58.1 percent white and 37.8 percent black or African American, with about 4.4 percent of Hispanic origin.

According to the 2008-2012 American Community Survey 5-Year Estimates, the unemployment rate in Pasquotank County was 8.1 percent, which is above the statewide average of 6.6 percent. Educational, health

care, and social assistance services accounts for 28.5 percent of all jobs in the county, which is above the statewide average of 23.4 percent. The county also supports retail trade (12.6 percent); arts, entertainment and recreation, and accommodation and food services (10.1 percent); construction (6.9 percent); and manufacturing (6.6 percent).

Anticipated Impacts: The 'no action' alternative will have no impacts on the socioeconomic environment. The proposed depth improvements are not expected to have a material impact (adverse or otherwise) on the existing socio-economic environment. In total, it is anticipated that statistics reflective of the current socio-economic condition of Elizabeth City and Pasquotank County will be unchanged by the proposed alternative.

Mitigations and Conclusions: The project will not affect the socioeconomic environment and no mitigation is necessary.

2.3.3 Community

Affected Environment: The USCG Base Elizabeth City was built in 1940 and consists of over 100 buildings which have been constructed over the lifetime of the Base. The Base is the largest USCG Air Station in the nation, and contains a number of commands including Air Station Elizabeth City, Aircraft Repair and Supply Center, Aviation Technical Training Center, Support Center Elizabeth City, and Small Boat Station Elizabeth City. Base Elizabeth City provides a variety of mission support services to units and personnel, including administration and personnel management, health care services, supply, procurement and warehousing, industrial services, facilities maintenance, computer/electronics support as well as morale and recreational services. Base Elizabeth City coordinates and provides regional mission support activities within the Coast Guard Fifth Coast District. Since 1995 the Air Station has averaged over 360 search and rescue missions each year.

Anticipated Impacts: Given the apparent need for dredging, the 'no action' alternative would be expected to have an impact on the community. During wind-induced periods of low water and due to sediment deposition, there is inadequate clearance depth at the MWR Boat Ramp for launching USCG SPC and RB-S vessels. As a result, the USCG is routinely forced to launch their vessels at a public boat launch a number of miles upriver, which results in up to an hour delay for mission response.

The dredging activities proposed at the MWR Boat Ramp are not expected to have long-term adverse impact on the existing community. Short-term impacts, including removal of dredge material by barge and truck, would be localized and are not anticipated to be significant. Construction activity will be similar to any construction project in the area. Any damage that occurred to the roads as a result of the project would be repaired by the contractor conducting the work.

Mitigations and Conclusions: Construction activities should be limited to normal working hours. Truck traffic will be along existing public and government owned roadways. With these standard mitigation measures the project should have minimal to no impact on the community.

2.3.4 Infrastructure/Utilities

Affected Environment: Entry to the Base can be gained from either Weeksville Road through the main gate on the north end of the Base, or from Consolidated Road through the secondary gate on the south end of the Base. Access to the MWR Boat Ramp, located on the north end of the Base's shoreline, is via Moukawsher Drive along the shoreline. The access roads to and from the Base are improved (concrete/asphalt). Utilities associated with the MWR Boat Ramp include a storm sewer outfall west of, and outside the west rubble mound breakwater (not within the protected harbor area) and underground electric. The utilities associated with the MWR Boat Ramp are remotely located from the proposed dredging area.

Anticipated Impacts: The 'no action' alternative will have no impacts on infrastructure or utilities. The proposed project will have no adverse impact on existing, operational infrastructure, or utilities. Underground utilities will be identified and avoided or restored after dredging. Existing roads between the site and the East Carolina Regional Landfill (1922 Republican Road, Aulander, Bertie County, North Carolina) are capable of supporting heavier truck traffic for disposal of the dredged material as long as the contracted hauler adheres to the State load limits (80,000 pounds for four or more axles). Any impacts from trucking will be minimal and short-term.

Mitigations and Conclusions: The project will not affect infrastructure. No mitigation other than standard construction practices to identify, avoid, and restore infrastructure is necessary.

2.3.5 Public Service/Public Health and Safety

Affected Environment: The North Carolina Wildlife Resources Commission (NC WRC) tracks information on boating safety, including accidents and fatalities. For 2013, state reports indicated that about 50 boating accidents occurred per 100,000 registered boats, up slightly from 2012 levels (48.79 accidents per 100,000 registered boats). Fatal boating accidents were down slightly since 2012, decreasing from 7.43 to 5.58 fatal accidents per 100,000 registered boats. Clearly, the ability of USCG personnel to perform their work and achieve their mission is dependent on their ready access to all available seaworthy vessels, with harbors and moorings of sufficient depth to support mission requirements. Other public safety (fire, police, health care) are provided by the City and local hospitals.

Anticipated Impacts: The 'no action' alternative will have adverse impacts on public service, health, and safety because the ability of the USCG to carry out search and rescue missions from the USCG Base Elizabeth City will be impaired by shallow water at the boat basin and moorings. The proposed depth improvements will facilitate USCG operations, and these operations promote public service, health and safety. The proposed dredging will not affect local fire, police, and health care services.

Mitigations and Conclusions: The project will have no adverse impacts to public service, health and safety. No mitigation is necessary.

2.3.6 Recreational Resources

Affected Environment: According to the NC WRC, the number of boats registered in-state has steadily decreased from 2009 to 2013, decreasing from 368,004 to 304,658. For Pasquotank County, the number of registered boats has decreased proportionally from 2,033 boats in 2009 to 1,707 registered boats in 2013.

Anticipated Impacts: Under the 'no action' alternative USCG response times might increase if alternative harbor facilities are required, which could impact recreational use. Additionally, the MWR Boat Ramp is used by Base military personnel for launching privately-owned recreational boats. The 'no action' alternative will also have adverse impacts on recreational use of the boat ramp by military personnel. The proposed depth improvements will not adversely impact recreational resources, but rather have a positive effect.

Mitigations and Conclusions: The project will not adversely affect recreational resources and no mitigation is necessary.

2.3.7 Environmental Justice

Affected Environment: Federal guidance indicates that environmental justice concerns may arise from impacts on the natural and physical environment, such as human health or ecological impacts on minority populations, low-income populations, and Native American tribes, or from related social or economic impacts. According to the United States Census Bureau data for Elizabeth City, the estimated 2013 population was 18,266 residents with a median age of 31 years and a racial makeup that is less diverse than the county or state as a whole. Racial breakdowns for 2010 identified a 0.4 percent Native American presence in Elizabeth City, which is less than the county or state as a whole.

US EPA records were evaluated using the Environmental Justice View web-tool. According to the web-tool, the nearest Superfund sites are located in Portsmouth and Suffolk, Virginia, and the nearest Brownfield sites are located in Hampton, Virginia and Williamston, North Carolina.

The dredging operation itself would only be expected to generate short-term impacts, related to noise and truck activity. With roads in close proximity to the site, trucks will not need to navigate through residential areas to reach disposal sites.

Anticipated Impacts: The 'no action' alternative will have no impacts on environmental justice. The proposed project will have no adverse impact on any potential environmental justice area as this concept is currently applied.

Mitigations and Conclusions: The project will not affect environmental justice and no mitigation is necessary.

2.4 Cultural Resources

Section 106 of the National Historic Preservation Act requires that impacts from federal undertakings on archaeological and architectural resources (i.e., cultural resources) that are listed or have been determined eligible for listing in the National Register of Historic Places in the APE, be taken into account in project planning. If adverse effects result, Section 106 requires that mitigation measures mutually agreeable to the lead agency and the relevant State Historic Preservation Office (SHPO) be implemented. The USCG provided a project-specific informational letter to the North Carolina SHPO dated July 18, 2014 that summarized the results of a literature search and background review of recorded cultural resources for the proposed actions at the USCG Base Elizabeth City, requesting their concurrence with the findings.

2.4.1 Prehistoric and Historic Context

Affected Environment:

Archaeological Resources: No archaeological investigations have been completed in the APE. There are no National Register-listed or -eligible, or potentially eligible (according to the SHPO Study List) terrestrial or underwater archaeological sites located within or immediately adjacent to the APE. No shipwrecks have been recorded in the MWR boat ramp and moorings APE and no historic properties have been recorded at the East Carolina Regional Landfill.

Architectural Resources: No historic architectural surveys have been completed in the APE. There are no historic architectural resources located within or immediately adjacent to the APE. Three historic architectural resources have been identified within one mile of the APE, including one site that has been Determined Eligible and two potentially eligible sites on the SHPO Study List. The Thrun Hall Barracks is a site that has been determined National Register-eligible in 2010 and is located inland from the MWR Boat Ramp, approximately three-quarters of a mile to the southeast of the APE. The Thrun Hall Barracks were subsequently photo documented and demolished upon the SHPO's approval. The John Hollowell House (PK0972) and the C.W. Hollowell House (PK0474) are on the Study List and are located inland from the MWR Boat Ramp, approximately one mile to the south-southwest of the APE.

Anticipated Impacts: The 'no action' alternative will have no impacts on cultural resources. In a letter dated August 19, 2014, the North Carolina SHPO concurred with AECOM's findings, stating "We have conducted a review of the project and are aware of no historic resources which would be affected by the project. Therefore, we have no comment on the project as proposed." The consultation letter submitted by AECOM and the North Carolina SHPO concurrence letter are included in **Appendix E**.

Mitigations and Conclusions: No cultural or historic resources will be affected by this project and no mitigation is necessary.

2.5 Summary of Potential Impacts

A summary of the potential impacts is presented in **Table 2**.

Table 2 - Summary of Potential Environmental Impacts

Potential Impacts	No Action Alternative	Dredging Boat Basin and Moorings at MWR Boat Ramp

Potential Impacts	No Action Alternative	Dredging Boat Basin and Moorings at MWR Boat Ramp
Geology, Topography, Soils	None	Not significant. Approximately 755 cubic yards of sediment will be removed from the boat basin and mooring at the MWR Boat Ramp launch area. The sediment will be disposed of at a licensed landfill (East Carolina Regional Landfill).
Climate and Air Quality	None	Not significant. There will be minor and short-term emissions from dredging equipment and trucks similar to any construction project.
Noise	None	Not significant. Short-term impacts to commercial areas and nearby residences. Wildlife will likely relocate to a nearby habitat during the dredging.
Hazardous Materials	None	Not significant. Short-term potential accidental releases from construction equipment will be effectively mitigated by requirement for contractor's spill prevention and response plan.
Terrestrial Environment	None	Not significant. No changes proposed. Short-term construction staging limited to USCG property paved parking areas.
Water Resources and Aquatic Environment	None	Not significant. Short-term and local minor disturbance of benthic habitat. Sediment re-suspension and transport will be effectively mitigated by construction practices and BMPs. The dredge material will be dewatered on the barge within the turbidity curtain. The sediment material has been tested and characterized as non-hazardous material; therefore, the proposed project will not cause the degradation of water quality.
Floodplains and Coastal Zone	None	Not significant. Minor increase in flood storage. The proposed project is consistent with the CZMA and North Carolina's CZMP.
Wetlands	None	No impact. Wetlands not present.
Prime and Unique Farmlands	None	No impact. Farmland not present.
Threatened or Endangered Species	None	Not significant. Short-term and local minor impact to aquatic habitat. Threatened or endangered species present within the project APE (i.e., Atlantic sturgeon and Shortnose sturgeon) will likely relocate to nearby habitat during the dredging, and dredging will not be performed during the moratorium. The USFWS Section 7 determination concluded that the preferred alternative to dredge the boat basin and moorings "is not likely to adversely affect any federally-listed endangered or threatened species, their formally designated critical habitat, or species currently proposed for listing.
Land Use and Zoning	None	No impact. No change in land use or zoning.
Socioeconomic Environment	None	No impact.
Community	None	Not significant. Short-term increase in truck traffic through commercial areas consistent with current traffic.

3 Statement of Environmental Significance

The dredging of the boat basin and moorings, to an 8-foot depth below MWL, is required to support the USCG Base Elizabeth City and its missions. The missions include search and rescue, environmental protection, and law enforcement. These missions are essential to public safety, recreational vessels, and commercial navigation.

Any impacts from the proposed dredging to the terrestrial, aquatic, and human environment would be localized and temporary and are not significant.

4 Summary of Mitigations

During construction activities, contractors should comply with all applicable federal and state laws on noise/hearing protection and abatement. Construction is expected to occur during the normal operating hours at the USCG Base Elizabeth City. Standard construction practices to identify, avoid, and restore infrastructure should be implemented. Truck traffic will be routed along existing roadways to the licensed East Carolina Regional Landfill in Aulander, North Carolina for disposal. Formal approval for disposal of the dredge material at the MWR Boat Ramp has been received from the landfill. Truckloads will be covered prior to transport and dredge material will be required to pass a paint filter test prior to disposal and landfill acceptance. To ensure the proposed dredge depth is not exceeded, pre- and post-dredge soundings will be taken by a registered surveyor to verify the sediment depth.

The dredging contractor will submit a spill prevention and response plan to the USCG covering all regulated materials brought to the project site. The plan will indicate how the contractor will manage their petroleum storage and respond to petroleum releases, and to releases of any other regulated materials or substances brought to the project site. The contractor will complete a daily report for each day of the onsite dredging activities. The daily report will document the weather; work hours; work in-place; inspections and tests conducted, and their results; dimensional checks; equipment and material checks; the mobilization and demobilization of construction equipment; materials delivered to the site; and any other pertinent noteworthy event.

The dredging will be performed from a floating plant and not from land based operations. BMPs, such as an impermeable floating turbidity curtain, will be used to keep the sediments from leaving the dredging area and entering the main channel of the Pasquotank River. The dredge material will be dewatered on the barge within the turbidity curtain. Appropriate permits will be obtained for the discharge for the dewatering process, if required. Other appropriate BMPs, such as controlling the rate of dredging, that are required by Clean Water Act permits will be used in the dredge area, as needed, to minimize the amount of silt that becomes suspended and transported downstream. All water quality BMPs required by permits will be adhered to.

Since the only work on-shore will be the loading of dredged material into trucks for transport to the landfill, which is not anticipated to disturb more than one acre of land, a state-approved erosion and sedimentation control plan is not required. However, erosion and sediment controls will be installed and maintained between the off-loading site and nearby down-gradient surface waters by the contractor. Additionally, to avoid potentially adverse impacts on life cycles of anadromous fish, the proposed project will occur outside of the anadromous fish spawning moratorium (February 15 to June 30). Required permit(s) may also specify BMPs or mitigation measures. Contractors will be required to comply with these permit conditions.

5 Regulatory Requirements

The CZMA requires that Federal agency activity within or outside the coastal zone that affects any land or water use or natural resource of the coastal zone shall be carried out in a manner which is consistent to the maximum extent practicable with the enforceable policies of the approved State management programs. The preferred alternative, dredging the boat basin and existing moorings is not anticipated to adversely affect the coastal zone resources of North Carolina's CZMP other than as evaluated elsewhere within this EA. AECOM prepared a Federal Consistency Determination, which was submitted on January 12, 2015, seeking concurrence from the NC DCM. A copy of the NC DCM concurrence letter (Consistency Determination #CD15-004; NC DCM Project #20150003) is included in **Appendix C**. Compliance with applicable federal environmental regulatory requirements and Executive Orders pertaining to air, water, noise, biota, floodplains, wetlands, coastal zone, waste management, transportation, and cultural and historic resources, etc. is a requirement of contractors working on this project, which have been discussed and presented in this EA. In addition, AECOM, on behalf of the USCG, completed a Joint United States Army Corps of Engineers (USACE) and North Carolina Division of Water Resources (NC DWQ) Pre-Construction Notification (PCN) Application. A copy of the PCN Application is included in **Appendix F.** A response letter from the NC DWQ (Request for Additional Information; NC DWQ Project # 14-1039) is included in **Appendix F**. At the time this report was prepared, the actual permits had not been received from the regulatory agencies (USACE and NC DWQ) because the agencies declined to process the joint permit application until this Draft EA is published.

AECOM, on behalf of the USCG, submitted a special waste profile and laboratory analytical data to Republic Services and was approved by the East Carolina Regional Landfill to dispose of the dredge material from the project at the existing landfill. A copy of the Special Waste Department Decision is included in **Appendix F**.

The project will not affect state-designated environmental areas or wetlands. The project will not affect historic or cultural resources.

6 Public Involvement

During the preparation of this EA, several federal, state, and local agencies and organizations were consulted. In addition to consultation letters discussed in this EA, the USCG will submit this Draft EA to the state and federal agencies and organizations consulted during its completion for review. In addition, copies of the Draft report will be made available to the local community for review at the East Albemarle Regional Library, Pasquotank County Branch. A notice will be placed in the *Daily Advance* to inform the community about the availability of the Draft EA. Coordinating agencies and the public will be provided a 30-day review period and encouraged to provide comments.

After receiving and considering all comments on this Draft EA from the public and coordinating agencies, the USCG will issue a Final EA and, if applicable, a Finding No Significant Impact (FONSI). As provided by NEPA and as referenced in COMDTINST M16475.1D, the FONSI for the preferred alternative will be made available to the public for a period of not less than 30 days before the final determination is made and the action is implemented. Any necessary consultations and permits will be conducted and obtained during this period. No on-site activities related to the preferred alternative will be initiated until the environmental review process has been completed.

7 Conclusion

Two alternatives were considered for evaluation in this Draft EA: no action and dredging to a depth of 8 feet below MWL. The Draft EA was performed in accordance with NEPA, *Procedures for Considering Environmental Impacts* (Department of Transportation 1979, rev. 1982, rev. 1985) Order 5610.1C, and COMDTINST M16475.1D.

Based on the results presented in this Draft EA, the preferred alternative is dredging sediment to a depth of 8 feet below MWL and transporting the sediment via truck for disposal at a licensed landfill. The potential adverse environmental impacts presented during this evaluation can either be prevented or reduced to insignificant levels using the mitigation measures presented in this Draft EA. The results of this Draft EA indicate that implementation of the proposed action will not cause significant changes in the quality of the human and natural environment, supporting a preliminary FONSI.

8 Persons and Agencies Contacted

Ms. Allison Weakley, NCDENR, North Carolina Office of Land and Water Stewardship, North Carolina Natural Heritage Program, 1601 Mail Service Center, Raleigh, North Carolina 27699

Ms. Anne Deaton, North Carolina Division of Marine Fisheries, Habitat Protection Section, 3441 Arendell Street, Morehead City, North Carolina 28557

Mr. Daniel Govoni, Federal Consistency Coordinator, NC DCM, 400 Commerce Avenue, Morehead City, North Carolina 28557

Mr. Josh Pelletier, USACE, Washington Regulatory Field Office, 2407 W. 5th Street, Washington, North Carolina 27889

Ms. Maria Dunn, NC WRC, 1721 Mail Service Center, Raleigh, North Carolina 27699

Mr. Patrick McClain, North Carolina Division of Land Resources, Land Quality Section, Washington Region, 943 Washington Square Mall, Washington, North Carolina 27889

Mr. Pete Benjamin, USFWS, Raleigh Field Office, Post Office Box 33726, Raleigh, North Carolina 27636

Ms. Renee Gledhill-Earley, North Carolina Department of Cultural Resources, State Historic Preservation Office, 4617 Mail Service Center, Raleigh, North Carolina 27699

Mr. Robert Tankard, North Carolina Division of Water Resources, Water Quality Regional Operations Section, 943 Washington Square Mall, Washington, North Carolina 27889

9 References

Department of Transportation. *Procedures for Considering Environmental Impacts.* Order 5610.1C, Washington, D.C.: Office of Environment and Safety, 1979, rev. 1982, rev. 1985.

Elizabeth City Climate Data, 2014. Accessed online August 2014 at http://www.usclimatedata.com/climate/elizabeth-city/north-carolina/united-states/usnc0204

Natural Resources Conservation Service. Web Soil Survey, 2014. Accessed online October 2014 at http://websoilsurvey.nrcs.usda.gov/app/HomePage.html

NCDENR, Division of Air Quality, 2014. Accessed online August 2014 at http://daq.state.nc.us/planning/attainment/

NC NHP, Heritage Data Search, 2014. Accessed online September 2014 at http://www.ncnhp.org/web/nhp/database-search

North Carolina OneMap, Geospatial Portal, various data maps, 2014. Accessed online October 2014 at http://www.nconemap.com/

North Carolina State Historic Preservation Office, Division of Historical Resources, 2014. HPOWEB GIS Map Service, accessed online June 2014 at http://gis.ncdcr.gov/hpoweb/

NC WRC, North Carolina Report of Boating Accidents and Fatalities, 2014. Accessed online August 2014 at http://www.ncwildlife.org/Boating/LearnResources/Publications.aspx

Pasquotank County, Planning Department. Advanced Core Land Use Plan, 2011. Accessed online November 2014 at http://www.co.pasquotank.nc.us/landuse.htm

State Climate Office of North Carolina, http://www.nc-climate.ncsu.edu/windrose.php?state=NC&station=KECG (accessed February 2015).

USA.com, source: US EPA, Pasquotank County Air Quality, 2014. Accessed online August 2014 at http://www.usa.com/pasquotank-county-nc-air-quality.htm

United States Census Bureau, data for Pasquotank County and Elizabeth City, North Carolina, 2014. Accessed online February 2015 at http://quickfacts.census.gov/qfd/states/37/37139.html

USCG, NEPA: Implementing Procedures and Policy for Considering Environmental Impacts. COMDTINST M16475.1D, Washington, D.C.: USCG, 2000.

USCG, Boat Station: Station Elizabeth City, n.d. Accessed online June 2014 at http://www.uscg.mil/d5/staElizabethCity/

USFWS, Endangered Species, Threatened Species, Federal Species of Concern, and Candidate Species for Pasquotank County, 2014. Accessed online September 2014 at http://www.fws.gov/raleigh/species/cntylist/pasquotank.html

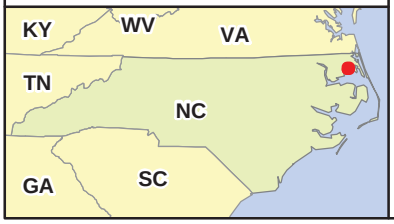
USFWS, National Wetlands Inventory, Wetlands Mapper, 2014. Accessed online September 2014 at http://www.fws.gov/wetlands/Data/Mapper.html

Figures

Figure 1 – Site Location Map

Figure 2 – Aerial Photograph

Map Location



Site Location Map

MWR Boat Ramp
USCG Base Elizabeth City, North Carolina

Elizabeth City NC Topographic Quadrangle (1983)

0 1,000 2,000 Feet

June 2014

60321114

Figure 1

AECOM Environment
701 Corporate Center Drive, Suite 475
Raleigh, NC 27607
Phone: (919) 854-6200
Fax: (919) 854-6259
Web: http://www.aecom.com

Scale: Not To Scale	(Source: Google Earth© 2014)	**Dredge Site - Aerial Photograph** US Coast Guard Base Elizabeth City – MWR Boat Ramp Elizabeth City, NC	AECOM **Figure 2**
			www.aecom.com

Appendix A.

Photographic Survey Log

PHOTOGRAPH LOG

Facility Name:	Site Location:	Project No.
United States Coast Guard	MWR Boat Ramp – USCG Base Elizabeth City, NC	60321114

Photo No. 1	Date: 05/7/14

Direction Photo Taken:

North

Description:

View from the southern side of the shore (concrete pavement approach) of the concrete ramp, docks, navigation aids, and light pedestals.

Photo No. 2	Date: 05/7/14

Direction Photo Taken:

Northwest

Description:

View from the concrete pavement approach along the southern shoreline.

PHOTOGRAPH LOG

Facility Name:	Site Location:	Project No.
United States Coast Guard	MWR Boat Ramp – USCG Base Elizabeth City, NC	60321114

Photo No. 3	Date: 05/7/14

Direction Photo Taken:

South

Description:

View looking south of the concrete ramp, docks, light pedestals, and mooring piles.

Photo No. 4	Date: 05/7/14

Direction Photo Taken:

North

Description:

View at the end of the concrete ramp of the docks, light pedestals, and mooring piles.

PHOTOGRAPH LOG

Facility Name:	Site Location:	Project No.
United States Coast Guard	MWR Boat Ramp – USCG Base Elizabeth City, NC	60321114

Photo No. 5	Date: 05/7/14

Direction Photo Taken:

South-Southeast

Description:

View of the man-made beach located southeast of the MWR Boat Ramp.

Photo No. 6	Date: 05/7/14

Direction Photo Taken:

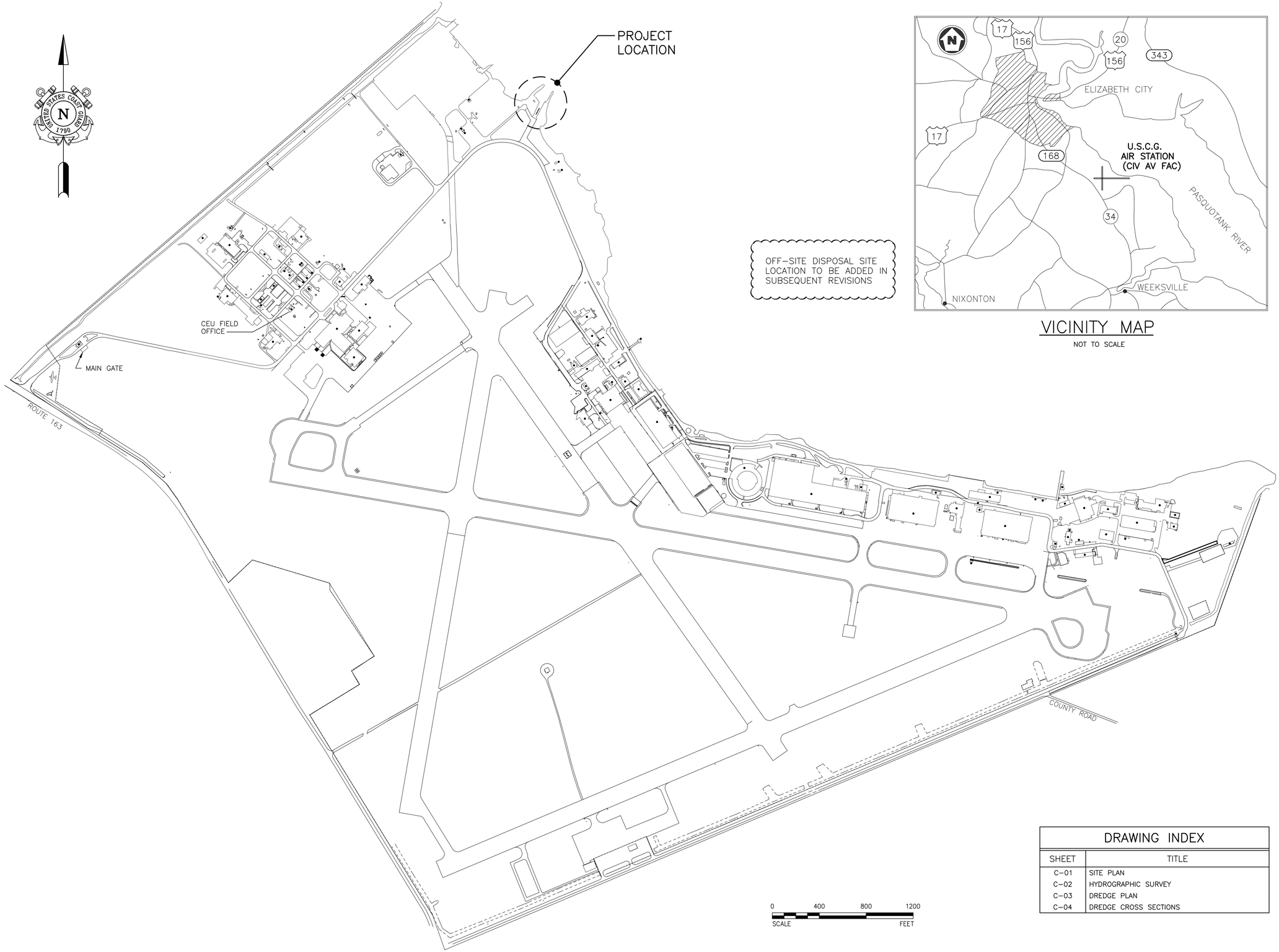
North

Description:

View of the navigation aids at entry to the protected harbor area. Note two timbers low to water surface in the entry-way.

Appendix B.

Proposed Alternative 35 Percent Design Drawings



OFF-SITE DISPOSAL SITE LOCATION TO BE ADDED IN SUBSEQUENT REVISIONS

VICINITY MAP

NOT TO SCALE

DRAWING INDEX

SHEET	TITLE
C-01	SITE PLAN
C-02	HYDROGRAPHIC SURVEY
C-03	DREDGE PLAN
C-04	DREDGE CROSS SECTIONS

USCG CEU
CLEVELAND, OHIO
(216) 902-6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199-2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C01.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP

SCALE: AS SHOWN PLOT SCALE: 1:1

SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL
SITE PLAN

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

P.R. CARROLL, CDR. — APPROVING OFFICER
DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257-D
DISCIPLINE/SHT NO	
C-01	SHEET 1 OF 4

LEGEND

8.2 (TYP) – DEPTH MEASUREMENT (SOUNDING) REFERENCED TO MEAN WATER LEVEL (MWL)

−10 (TYP) – CONTOUR ELEVATION REFERENCED TO MWL

(+2.5) (TYP) – SPOT ELEVATION (ON PIER & SHEET PILE)

(TYP) – UNDERGROUND UTILITY VAULT

(TYP) – CONCRETE MATERIAL

(TYP) – RIP–RAP

(TYP) – WOODEN PIER / BULKHEAD

(TYP) – UTILITY VALVE

(S) (TYP) – SANITARY SEWER MANHOLE

(E) (TYP) – ELECTRIC UTILITY MANHOLE

(TYP) – LIGHT PEDESTAL

(TYP) – LIGHT

(TYP) – INFORMATIONAL SIGN

(TYP) – CAMERAL POLE

(TYP) – MARINE PILING

(TYP) – MOORING DOLPHIN

0 20' 40'

HORIZONTAL SCALE

N 929,300 N 929,400 N 929,500 N 929,600 N 929,700 N 929,800 N 929,900

E 2,892,700 E 2,892,800 E 2,892,900 E 2,893,000 E 2,893,100 E 2,893,200 E 2,893,300

RIP–RAP (SEE NOTE 8)

MOORING DOLPHIN (3 PILINGS) (TYP.)

INFORMATIONAL SIGN

MARINE PILING (TYP.)

CONCRETE PAD & ELECTRIC MANHOLE(S)

ELECTRIC UTILITY VAULT

LIGHT (TYP.)

CHANNEL MARKER (RED #2)

CAMERA POLE

PASQUOTANK RIVER (FLOW)

GRASSY AREA

TIMBER MOORING PILES (7)

STREET LIGHT

CHANNEL MARKER (GREEN #1)

CONCRETE ACCESS/EGRESS ROADWAY

APPROXIMATE LIMITS OF SUBMERGED CONCRETE RAMP

WOODEN PIER

WOODEN BULKHEAD

LIGHT PEDESTAL

CUT OFF TIMBER PILES

INFORMATIONAL SIGN (NO SWIMMING)

INFORMATIONAL SIGN (STAY OFF ROCKS)

SEE NOTE 9

CONCRETE RAMP

WOODEN BULKHEAD

LIGHT (TYP.)

LIGHT PEDESTAL

INFORMATIONAL SIGN (NO SWIMMING)

RIP–RAP (SEE NOTE 8)

POWER PEDESTAL

GRASSY AREA

INFORMATIONAL SIGN (STAY OFF ROCKS)

BATHYMETRY NOTES

1. BATHYMETRIC SURVEY DATA WAS COLLECTED ON MAY 07–09, 2014 BY GAHAGAN & BRYANT ASSOCIATES OF NC, PLLC. (GBA) AND IS EXPRESSED IN FEET BELOW MEAN WATER LEVEL (MWL).
2. HORIZONTAL DATUM IS IN REFERENCE TO THE NORTH CAROLINA STATE PLANE GRID COORDINATE SYSTEM NORTH AMERICAN DATUM OF 1983 (NAD83).
3. VERTICAL DATUM IS IN REFERENCE TO MEAN WATER LEVEL (MWL). MWL IS 0.44 FEET ABOVE THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

MWL
0.44'
NAVD88
5.94'
−5.50'
USGS GAUGE #0204382800

4. MWL ESTABLISHED FROM USGS WATER LEVEL GAUGE #0204382800 LOCATED ON THE PASQUOTANK RIVER. GAUGE DATUM = −5.50' NAVD88, MEAN GAUGE HEIGHT = 5.94' (FEB 06 – SEP 08)
5. BATHYMETRIC DATA DEPICTED ON THIS PLAN IS REPRESENTATIVE OF A LARGER DATA SET & WAS CORRECTED IN REAL TIME VIA REAL TIME KINEMATIC (RTK) TIDES.
6. EQUIPMENT USED

VESSEL:	GBA "SEA MINNOW"
ECHO SOUNDER:	ODOM CV100
HORIZONTAL POSITIONING:	RTK 5700
BASE STATION:	TRIMBLE R8 SET UP ON NGS MONUMENT "S 176 RESET"
ROVER:	TRIMBLE R6 USED FOR UPLAND SURVEY

7. THE INFORMATION DEPICTED ON THIS PLAN REPRESENTS RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.
8. RIP–RAP LIMITS ARE APPROXIMATE. SPORADIC RIP–RAP PIECES ARE PRESENT IN SURVEY AREA AND ARE NOT SHOWN FOR CLARITY.
9. LIMITS SHOWN DEPICT THE TRANSITION FROM A COMPACT SUBSTRATE TO A SOFT MATERIAL, POSSIBLY THE SCOUR STONE PROTECTION LIMITS.

USCG CEU
CLEVELAND, OHIO
(216) 902–6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199–2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C02.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP
SCALE: AS SHOWN	PLOT SCALE: 1:1

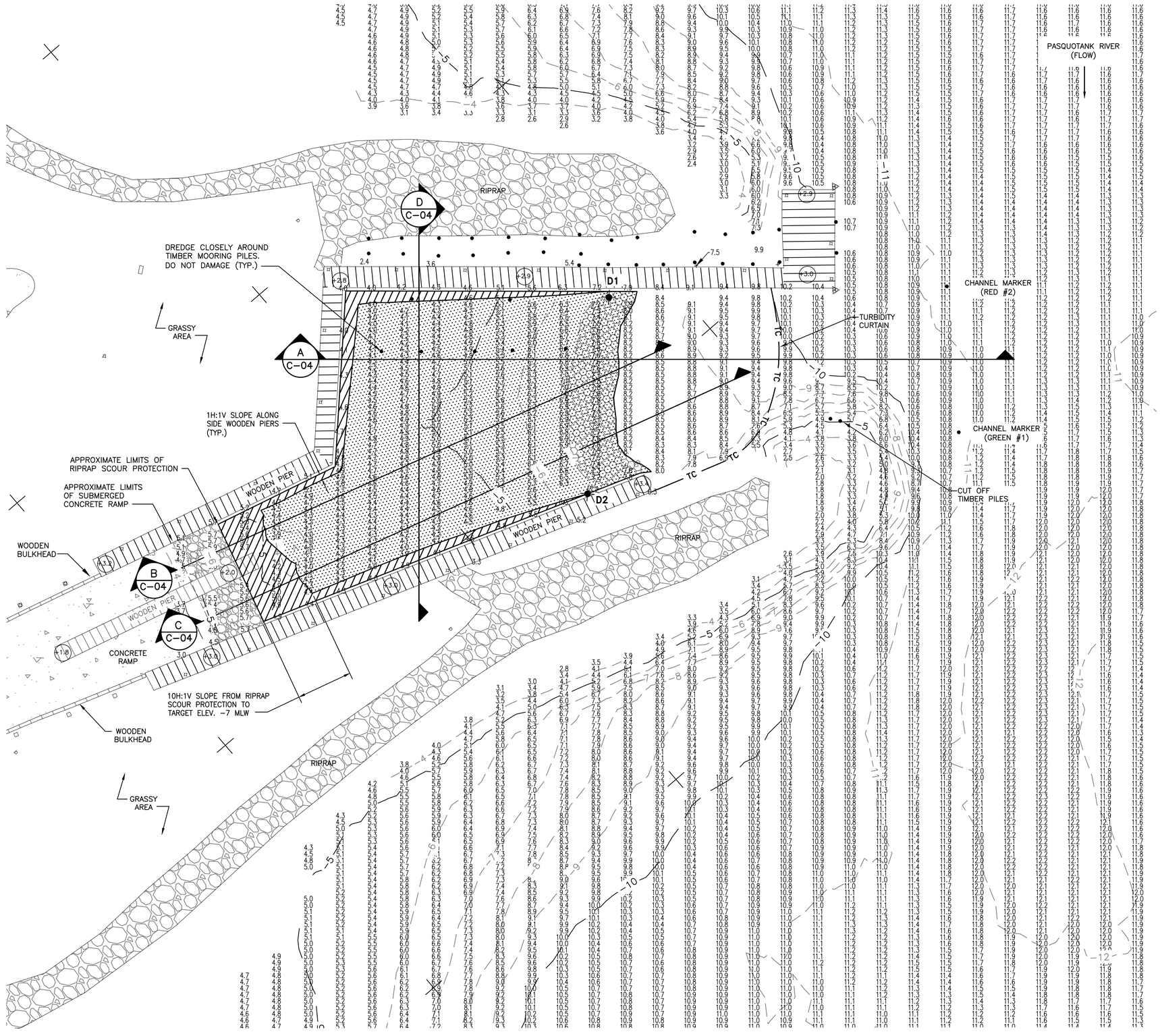
SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL
HYDROGRAPHIC SURVEY

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

P.R. CARROLL, CDR.
APPROVING OFFICER — DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257–D
DISCIPLINE/SHT NO	
C–02	SHEET 2 OF 4



LEGEND:

- EXISTING CONTOUR (5' INTERVAL)
- EXISTING CONTOUR (1' INTERVAL)
- DREDGE COORDINATE POINT & ID
- 11.3 — DEPTH MEASUREMENT (SOUNDING) REFERENCED TO MEAN WATER LEVEL (MWL)
- −10 — CONTOUR ELEVATION REFERENCED TO MWL
- +2.5 — SPOT ELEVATION (ON PIER OR STRUCTURE)
- EXISTING CONCRETE MATERIAL
- EXISTING RIPRAP
- PROPOSED DREDGING TO TARGET DEPTH −7 MWL
- PROPOSED OVER-DEPTH DREDGE TO −8 MWL
- PROPOSED DREDGE SIDE SLOPES (SLOPES VARY – SEE PLAN)

NOTES:

1. 0.0 MWL FOR PASQUOTANK RIVER = −0.44' NAVD88
2. THE TARGET DREDGE DEPTH FOR THIS PROJECT IS −7 FT MWL. OVER-DEPTH DREDGE IN THESE AREAS SHALL NOT EXCEED −8 FT MWL.
3. CONTRACTOR SHALL USE METHODS AND EQUIPMENT THAT PROTECT THE PIER STRUCTURES FROM DAMAGE. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE.
4. CONTRACTOR SHALL DREDGE AT A 10H:1V SLOPE AT THE LAUNCH RAMP STARTING AT THE END OF THE RIPRAP SCOUR PROTECTION.

DREDGE COORDINATE TABLE

DREDGE ID	NORTHING	EASTING
D1	929382.66	2831869.00
D2	929337.45	2831913.52

- **COORDINATES ARE IN** NORTH CAROLINA STATE PLANE GRID COORDINATE SYSTEM, FEET (NAD83).

0 16 32 48
SCALE IN FEET

USCG CEU
CLEVELAND, OHIO
(216) 902-6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

UNITED STATES COAST GUARD 1790

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199-2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C03.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP

SCALE: AS SHOWN PLOT SCALE: 1:1

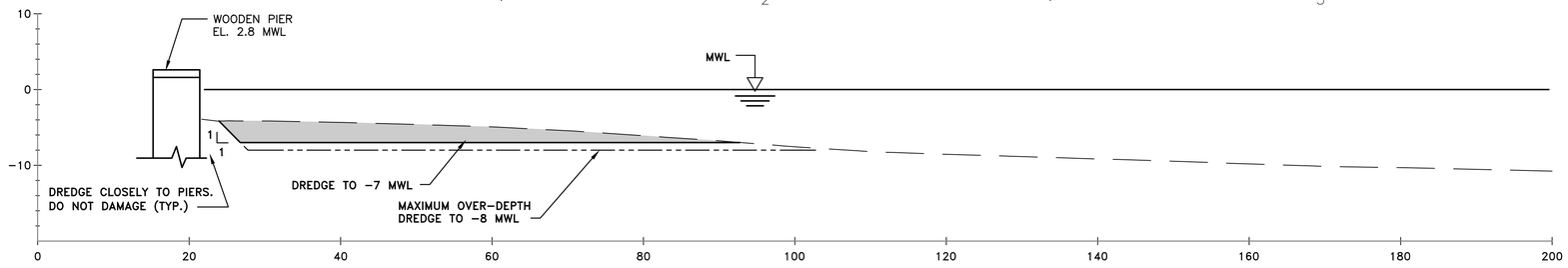
SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL
DREDGE PLAN

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

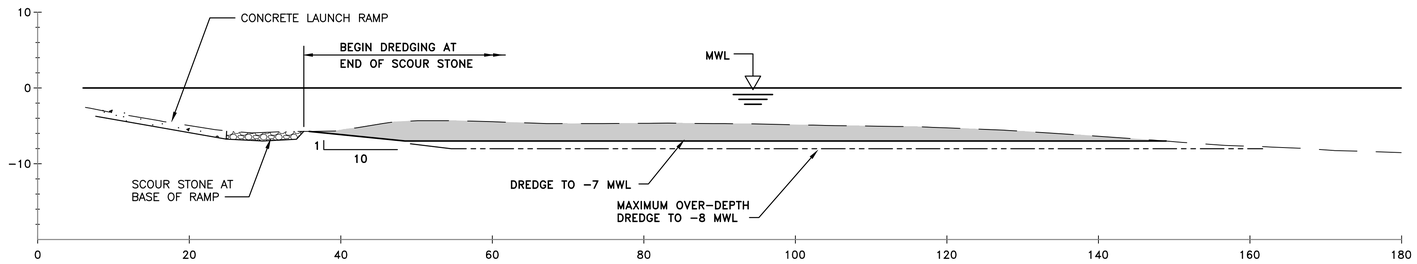
P.R. CARROLL, CDR.
APPROVING OFFICER — DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257-D
DISCIPLINE/SHT NO	SHEET 3 OF 4
C-03	



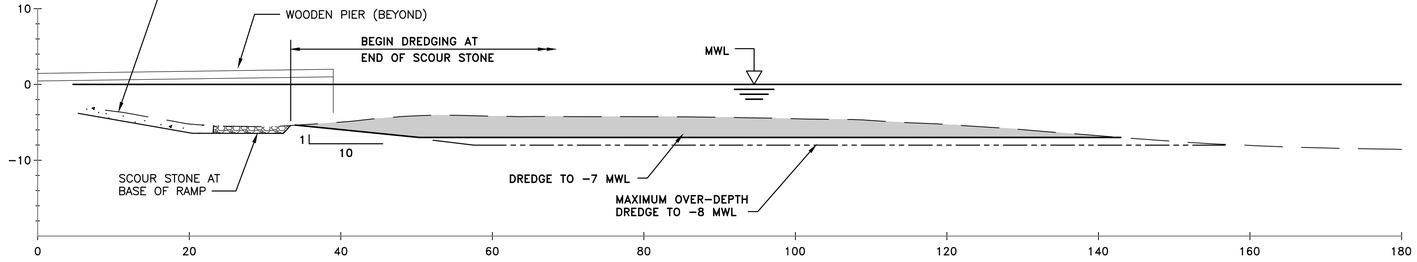
SECTION A C−04

FEET 0 10 20



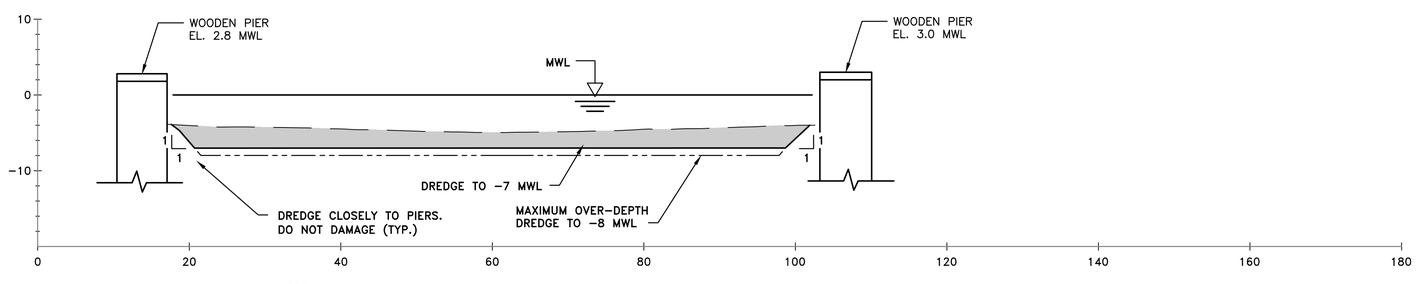
SECTION B C−04

FEET 0 10 20



SECTION C C−04

FEET 0 10 20

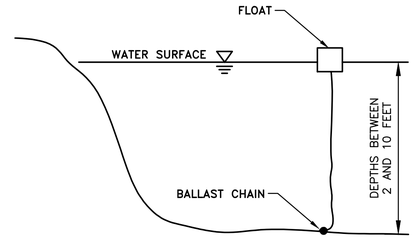


SECTION D C−04

FEET 0 10 20

LEGEND

- EXISTING TOP OF SEDIMENT
- PROPOSED BASE DREDGE ELEVATION
- MAXIMUM OVER−DEPTH DREDGE



TURBIDITY CURTAIN DETAIL

NOT TO SCALE

USCG CEU
CLEVELAND, OHIO
(216) 902−6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199−2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C04.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP

SCALE: AS SHOWN PLOT SCALE: 1:1

SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL

DREDGE CROSS SECTIONS

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

P.R. CARROLL, CDR. — APPROVING OFFICER

DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257−D
DISCIPLINE/SHT NO	
C−04	SHEET 4 OF 4

Appendix C.

Coastal Zone Federal Consistency Determination

U.S. Department of Homeland Security

United States Coast Guard

Commanding Officer
United States Coast Guard
Civil Engineering Unit Cleveland

1240 East Ninth Street
Room 2179
Cleveland Ohio 44199-2060
Staff Symbol: ER
Phone: (216) 902-6219
Fax: (216) 902-6277
Email: Gregory.O.Carpenter@uscg.mil

11000

Dan Govani
Federal Consistency Coordinator
North Carolina Division of Coastal Management
400 Commerce Avenue
Morehead City, NC 28557-3421

Dear Mr. Govani:

In accordance with the federal consistency requirements of the Coastal Zone Management Act, 16 USC § 1456, and applicable regulations, 15 CFR § 930.36, the United States Coast Guard (USCG) is submitting this correspondence to fulfill State agency coordination requirements. The USCG proposes to complete maintenance dredging of the boat basin and moorings at the Morale, Welfare and Recreate (MWR) Boat Ramp at the USCG Base Elizabeth City located at 1664 Weeksville Road, Elizabeth City, Pasquotank County, North Carolina. The geographic location of the MWR Boat Ramp is latitude 36° 16' 14.72" north and longitude 76° 10' 40.31" west.

The USCG, Civil Engineering Unit (CEU) Cleveland, Environmental Section conducted a coastal zone management Federal consistency review of the proposed project and determined that the activities will be undertaken in a manner consistent, to the maximum extent practicable, with the enforceable policies of North Carolina's approved coastal management program.

This correspondence provides your office with a proposed project description provided in Enclosure (1). The basis of the coastal zone determination is summarized in Enclosure (2). The proposed project Site Location Map and other supporting figures are presented in Enclosure (3). Enclosure (4) contains the Dredge Plan. In accordance with State guidance, the USCG has enclosed 15 CDs of this submittal in PDF format (Enclosure 5).

The USCG requests your written concurrence with our consistency determination. If you have any questions, please contact Ms. Leilani Woods of my staff at (252) 335-6847. Alternatively, you may contact Ms. Jennifer Jones with our design firm (AECOM) at (919) 239-7150.

Sincerely,

Gregory O. Carpenter
Chief, Environmental Compliance
By direction of the Commanding Officer

Encl: (1) Proposed Project Description
(2) Basis of Determination

(3) Figures 1-9
(4) Dredge Plan – Existing Features
(5) 15 CDs of this USCG Consistency Determination Submittal

Cc: Ms. Leilani Woods, Environmental Engineer, USCG Civil Engineering Unit Cleveland
Ms. Jennifer Jones, Environmental Project Manager, AECOM

ENCLOSURE (1)

PROPOSED PROJECT DESCRIPTION

Enclosure (1)

PROPOSED PROJECT DESCRIPTION

The U.S. Coast Guard (USCG) proposes to complete maintenance dredging of the existing boat basin and moorings at the Morale, Welfare and Recreate (MWR) Boat Ramp at the USCG Base Elizabeth City located at 1664 Weeksville Road, Elizabeth City, Pasquotank County, North Carolina. The facility location is shown on the Site Location Map in Enclosure (3) Figure (1). The Dredge Plan, which depicts the dredge limits, is provided in Enclosure (4).

The MWR Boat Ramp is located on the north end of the Base's shoreline, in a portion of the river tidal flats. The MWR Boat Ramp consists of a two-lane concrete ramp with a concrete pavement approach, and a launch dock centered in the boat ramp. Rubble mound stone breakwaters project approximately 100 to 125 feet from the shoreline on both sides of the launch ramp to form a protected harbor area for launching and retrieving boats. Timber docks line both sides of the boat basin. Mooring piles are in place along the west timber dock. Navigation aids are located near the entrance to the boat basin. The project area is bounded by a timber dock, a breakwater and the Pasquotank River to the north; a timber dock, a breakwater and the Pasquotank River to the east; a launch dock, boat ramp and grass covered shoreline to the south; and a timber dock, a breakwater, and grass covered shoreline to the west followed by the Pasquotank River.

The MWR Boat Ramp is utilized by Base military personnel for launching privately-owned recreational boats and for launching USCG vessels stationed at the Building 43 moorings. The purpose of this project is to dredge the boat basin and moorings to a required depth below mean water level due to fluctuating conditions at the site. Water depth in the boat basin and moorings is often reduced by heavy winds from the north, which push water from the boat basin and down the Pasquotank River. This wind effect decreases the depth of the water and encumbers the USCG's ability to utilize the existing boat ramp for both operational missions and recreational purposes.

The MWR Boat Ramp is a previously dug man-made basin and the proposed dredging will occur entirely within the previously disturbed footprint of the boat basin and moorings. However, the USCG has no record of the as-built drawings indicating the original dredge depth. While the dredging required for the original construction of the MWR Boat Ramp likely disturbed the sediments to a depth proximate to the proposed dredge depth, the exact depth of the original dredging is not documented. The proposed project represents the first maintenance dredging of the MWR Boat Ramp since its construction. The construction date of the boat ramp is unknown.

The proposed project involves mechanical dredging of the boat basin and moorings to a maximum depth of 8 feet below mean water level (includes one foot over dredge depth). Mean water level corresponds to elevation -0.44 North American Vertical Datum 1988 (NAVD88). Therefore, dredging will proceed to -8.44 feet NAVD88. The calculated dredge volume for the MWR Boat Ramp is 755 cubic yards of sediment. The proposed dredging project will only temporarily impact open waters (an area totaling approximately 0.18 acres) and will occur entirely within the existing boat basin (limited to an area approximately 150 feet from the shoreline).

The USCG has completed a pre-design hydrographic survey, sediment and elutriate sampling and analysis, and disposal site determination for the MWR Boat Ramp. Major items of work that

PROPOSED PROJECT DESCRIPTION

will be involved in the maintenance dredging of the MWR Boat Ramp boat basin and moorings at Base Elizabeth City and off-site disposal of the dredged material include the following:

1. An approved registered surveyor will perform Pre-dredge and Post-dredge (before and after) soundings of area to be dredged including side slopes. Drawings will be prepared showing the before and after sounding data. Soundings will be taken within 15 days prior to the start of the dredging and within 3 days after completing all dredging. Soundings will be taken at maximum 10-foot spacing along transects spaced no greater than 10 feet on center across the proposed dredge area (including side slopes). Progress soundings or sweepings will also be taken behind the dredge as the work progresses.
2. The registered surveyor will calculate the dredge quantity based on the before and after soundings. The boat basin and moorings will be dredged to a maximum depth of 8 feet below mean water level (includes one foot over dredge depth). Additional dredging may be necessary to remove any shoaling or sedimentation that has occurred since the May 7 to 9, 2014 hydrographic survey included in the Design Drawings, and the "Before" hydrographic survey.
3. The dredging will be accomplished using mechanical means. The dredging will be performed from a floating plant and not from land based operations. The dredge material will be deposited on barges, dewatered from the barge within the turbidity curtain, transported by barge to an unloading site, offloaded to trucks, and transported by truck to the approved East Carolina Regional Landfill in Aulander, North Carolina. The dredge sediment material has been characterized as a non-hazardous waste and has been approved for disposal at the East Carolina Regional Landfill.
4. Prior to commencing dredging operations, the proposed area for dredging will be enclosed with an impermeable floating turbidity curtain. The curtain will be of a full depth floating design with weighted bottom edge. The turbidity curtain will remain in place until dredging operations are completed and the final contracted depths have been verified. The turbidity curtain will remain in place in accordance with permit conditions or for a period of 48 hours after completion of dredging, whichever occurs longer.

Preliminary review indicates the dredging of the boat basin and mooring area will require approval from the Unites States Army Corps of Engineers (USACE) and the North Carolina Department of Environment and Natural Resources (NCDENR) Division of Water Resources (DWR). The USACE and DWR have simplified the permitting process by allowing the submittal of a joint permit application to both agencies. The joint permit application was submitted to the USACE and DWR on September 24, 2014.

The dredge material will be disposed of at the East Carolina Regional Landfill located at 1922 Republican Road in Aulander, Bertie County, North Carolina. The landfill is approximately 63 miles from Base Elizabeth City. This landfill is a licensed and approved Subtitle D landfill permitted to accept special waste. Formal approval for disposal of the dredge material at the MWR Boat Ramp has been received from the East Carolina Regional Landfill.

ENCLOSURE (2)

BASIS OF DETERMINATION

BASIS OF DETERMINATION

North Carolina Administrative Code
Title 15a, Chapter 7, Coastal Management
Subchapter 7H – State Guidelines for Areas of Environmental Concern

Management Objectives

1. Section .0205 Coastal Wetlands

The USCG reviewed the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory Map which did not identify wetlands in or near the project site. However, the northern and northwestern portions of the project site and the remainder of the Pasquotank River are classified as Estuarine and Marine Deepwater (E1UBL), as shown in Enclosure (3) Figure (3). The USCG reviewed the North Carolina Coastal Wetlands Map, which indicated that there are no coastal wetlands in or near the project site, as shown in Enclosure (3) Figure (2). The proposed project will not have an effect on coastal wetlands, and is therefore consistent with this management objective.

2. Section .0206 Estuarine Waters

The proposed project site is located in the estuarine waters of the Pasquotank River, Elizabeth City, Pasquotank County as shown in Enclosure (3) Figure (1). The proposed project will not impact the biological, social, aesthetic, and economic value of estuarine waters. The proposed project is consistent with the management objectives in this rule because this project will prevent shoaling in the boat basin and moorings and will perpetuate social, recreational, and economic values.

3. Section .0207 Public Trust Areas

The proposed project will not be detrimental to the public trust rights and the biological and physical functions of the estuary or open coastal waters. Interference with the use of the channel will be minimized during dredging activities. Dredges will be shifted or moved or dredging operations will be interrupted to accommodate the movement of vessels and floating equipment, if necessary. All spoils will be deposited and dewatered on the barges. The dredging and dewatering operations will be conducted within an impermeable floating turbidity curtain. The proposed project is consistent, to the maximum extent practicable, with the management objectives of public trust areas.

4. Section .0208 Use Standards

The proposed project is in conformance with the general and specific use standards of this section, and is therefore consistent with this management objective.

5. Section .0209 Coastal Shorelines

The project site is located adjacent to the estuarine shoreline and entirely within the Pasquotank River, as shown in Enclosure (3) Figure (2). There are no High Quality Water/Outstanding Resource Water Management Zones at the proposed project site as shown in Enclosure (3) Figure (4). Furthermore, the proposed project does not involve development or construction within the coastal shoreline. The proposed project will not have an effect on estuarine and public trust shorelines, and is therefore consistent with the management objectives of coastal shorelines.

6. Section .0300 Ocean Hazard Areas

The proposed project is not located along the Atlantic Ocean shoreline and contains no ocean hazard areas. Therefore, the proposed project is consistent with this management objective.

7. Section .0400 Public Water Supplies

The proposed project site is located in the Pasquotank River Basin (sub basin 30-01-50). The portion of the Pasquotank River where the project site is located (Index #: 30-3-(12)) is classified as "SB", which is described as "Primary Recreation, Salt Water". The proposed project site is not located within a small surface water supply watershed or public water supply field. The proposed project will not have an effect on public water supplies, and is therefore consistent with this management objective.

8. Section .0505 Coastal Areas that Sustain Remnant Species

The location of the proposed project site may affect, but is not likely to adversely affect, threatened and endangered species associated with the estuarine habitat of the Pasquotank River. As shown on the NC OneMap Habitat Map in Enclosure (3) Figure (5), there are no significant natural heritage areas in the vicinity of the project site; however, the project site is identified in a natural heritage element occurrence area. Reviews of the NC OneMap Habitat Map; the North Carolina Division of Marine Fisheries (DMF) Anadromous Fish Spawning Areas (AFSA) map for the Albemarle Sound area (Enclosure (3) Figure (6)); the DMF Fishery Nursery Areas map (Enclosure (3) Figure (7)); the National Oceanic and Atmospheric Administration Environmental Sensitivity Map for the Elizabeth City Quadrangle; and the South Atlantic Fishery Management Council's Essential Fish Habitat (EFH) Map (Enclosure (3) Figure (8)) indicate that the proposed project site is located within AFSA waters and in an area of EFH; however, the project site is not located in the vicinity of a designated submerged aquatic vegetation area, a primary nursery area, or an EFH-Habitat Area of Particular Concern.

A review of the USFWS federally-listed species present in Pasquotank County, the USFWS Critical Habitat Mapper, and the North Carolina Natural Heritage Program (NHP) listed species for the Elizabeth City Quadrangle along with their habitat requirements was performed. Several state and federally-listed rare, threatened and endangered species occur in Pasquotank County. According to the online resources there are three federally-listed species identified within Pasquotank County with potential habitat in the project area (Shortnose sturgeon, *Acipenser brevirostrum;* Atlantic sturgeon, *Acipenser oxyrinchus;* and West Indian manatee, *Trichechus manatus*). Additionally, one federally-listed proposed threatened species (Red knot; *Calidris canutus rufa)* was identified within Pasquotank County and one state-listed threatened species (Bald eagle; *Haliaeetus leucocephalus*) was identified within the Elizabeth City quadrangle.

Review of the online USFWS Information, Planning, and Conservation (IPaC) System indicates that only two of the endangered species (i.e., Shortnose sturgeon and Atlantic sturgeon) and the proposed threatened species (i.e., Red knot) should be considered in an effects analysis for the proposed project. No critical habitats exist within the proposed project area.

The USCG is in the process of preparing an Environmental Assessment (EA) for the project, and pursuant to the requirements of the National Environmental Policy Act (NEPA), the USCG will be consulting with the USFWS, NHP, DMF, the North Carolina Wildlife Resources Commission (WRC), and the National Marine Fisheries Service regarding the presence of natural resources that may be potentially affected by the proposed project.

Measures will be taken to avoid or minimize adverse impacts to natural and biological resources. The proposed dredging project will only temporarily impact open waters (an area totaling approximately 0.18 acres) and will occur entirely within the existing boat basin (limited to an area approximately 150 feet from the shoreline). The dredging will be performed from a floating barge and not from land based operations. Prior to commencing dredging operations, the proposed area for dredging will be closed with an impermeable floating turbidity curtain. The turbidity curtain will remain in place in accordance with the permit conditions or for a period of 48 hours following completion of the dredging, whichever occurs longer. The dredge material will be dewatered on the barges within the turbidity curtain, transported by barge to an unloading site, offloaded, and transported by truck to an approved landfill. The dredging will be limited to the area indicated on the Dredge Plan presented in Enclosure (4).

Based on the project size and location and nature of the proposed work, the USCG does not anticipate significant adverse impacts to federally-listed species. To avoid potentially adverse impacts on life cycles of anadromous fish, the proposed project is expected to occur outside of the anadromous fish spawning moratorium (February 15 to June 30). Therefore, the USCG concludes that the proposed project may affect, but is not likely to adversely affect, any federally-listed threatened or endangered species or their habitats. Additionally, since the proposed dredging will occur entirely within the previously disturbed footprint of the boat basin and moorings and the dredge depth is expected to be proximate to the original dredge depth, the project is not expected to have an adverse effect on any unique habitat conditions that would impact the continued survival of threatened and endangered native plants and animals. The proposed project is consistent, to the maximum extent practicable, with this management objective.

9. Section .0506 Coastal Complex Natural Areas

The proposed project should not have an effect on:

a. Natural conditions or the sites that function as key or unique components of coastal systems.
b. The interactions of various life forms including sites that are necessary for the completion of life cycles, areas that function as links to other wildlife areas (wildlife corridors), and localities where the links between biological and physical environments are most fragile.
c. Designated coastal complex natural areas.

As shown on the NC OneMap Habitat Map in Enclosure (3) Figure (5), the project site is not located in a designated submerged aquatic vegetation area or a significant natural heritage area. According to the habitat map, the project site is identified in a shellfish growing area. However, review of the NC DMF Shellfish Harvesting Area Closure Map (Enclosure (3) Figure (9)) indicates that the project site is located in a portion of the Pasquotank River where shellfish harvesting is prohibited (i.e., permanently closed). Additionally, there are no state parks, state natural areas, or state recreation areas at the project site. There are no national wildlife refuges, forests, historic properties, historic landmarks, national natural landmarks, no wild and scenic rivers, or other fragile areas at the project location.

The proposed project site is located within a portion of the Pasquotank River designated as an AFSA (Conservation Planning Tool Rating of 8). To avoid potentially adverse impacts on life cycles of anadromous fish, the proposed project is expected to occur outside of the anadromous

fish spawning moratorium (February 15 to June 30). To avoid potentially adverse impacts to water quality, the proposed area for dredging will be closed with an impermeable floating turbidity curtain with a weighted bottom edge. The dredge material will be dewatered on the barges within the turbidity curtain and the turbidity curtain will remain in place in accordance with the permit conditions or for a period of 48 hours following completion of the dredging, whichever occurs longer. Therefore, the proposed project is not expected to have an adverse effect on designated coastal complex natural areas and is consistent, to the maximum extent practicable, with this management objective.

10. Section .0507 Unique Coastal Geologic Formations

The proposed project will not have an effect on any unique geologic formations, and is therefore consistent with this management objective.

11. Section .0509 Significant Coastal Archaeological Resources

The USCG has determined that there are no National Register-listed or –eligible, or potentially eligible (according to the North Carolina State Historic Preservation Office [NC SHPO] Study List) terrestrial or underwater archaeological sites located within or immediately adjacent to the proposed project site. No previously identified shipwrecks or other underwater archaeological resources have been recorded in the proposed project site area.

The proposed dredging activities will not create any subsurface disturbance that could affect terrestrial archaeological resources, if present. Dredging will not be staged on the shore, and all dredged sediment will be loaded onto a barge. Although maintenance dredging has not been previously conducted for the boat basin and moorings, the actions required for the original construction of the two-lane concrete ramp, launch dock, wooden piers, boat basin, and associated moorings have undoubtedly disturbed the sediments to a considerable depth. Due to the extent of prior subsurface disturbance in the proposed project site, it is unlikely that intact, significant underwater archaeological resources would be present and retain integrity. Therefore, the USCG has determined "No Historic Properties Affected." The USCG consulted with the NC SHPO regarding the determination and received concurrence from the NC SHPO which includes comments from the Office of State Archaeology.

The proposed project will not have an effect on any significant coastal archaeological resources, and is therefore consistent with this management objective.

12. Section .0510 Significant Coastal Historic Architectural Resources

The USCG has determined that there are no National Register-listed or –eligible, or potentially eligible (according to the NC SHPO Study List) historic architectural resources located within or immediately adjacent to the proposed project site. Three historic architectural resources have been identified within one mile of the proposed project site, including one site that has been Determined Eligible and two potentially eligible sites on the SHPO Study List. The National Register-eligible site was photo documented and demolished in 2013 upon the SHPO's approval. The two potentially eligible sites on the SHPO Study List are located inland, approximately one mile from the project site. Therefore, the USCG has determined "No Historic Properties Affected." The USCG consulted with the NC SHPO regarding the determination and received concurrence from the NC SHPO.

The proposed project will not have an effect on any significant coastal historic architectural resources, and is therefore consistent with the management objective.

13. Section .0600 - Development Standards Applicable to All AECs

The proposed project will not contravene or violate any Federal, State of North Carolina, and local rules, regulations, laws, or requirements. The proposed project will not cause pollution to the state shellfish waters, and will not have an effect on airspace activity or noise pollution associated with airspace activity. Therefore, the proposed project is consistent with the management objectives of development standards applicable to all AECs.

Subchapter 7M - General Policy Guidelines for the Coastal Area

Policies for Projects Outside Areas of Environmental Concern

1. Section .0200 - Shoreline Erosion Policies

The proposed project will not have an adverse impact to shoreline erosion in the area, and is therefore consistent with the shoreline erosion policies.

2. Section .0300 - Shorefront Access Policies

The USCG Base Elizabeth City facility is a fenced and gated Federal facility that restricts public access. Since public access is already restricted, the proposed project will not have an adverse impact on the accessibility of the facility's shorefront to the public. Therefore, the proposed project is consistent with the shorefront access policies.

3. Section .0400 - Coastal Energy Policies

The USCG facility and the proposed project are not associated with the development of energy facilities and energy resources. Therefore, the proposed project is consistent with the coastal energy policies.

4. Section .0500 - Post-Disaster Policies

The proposed project does not involve construction; therefore, pre-disaster planning is not required. This proposed project is therefore consistent with the post-disaster policies.

5. Section .0600 - Floating Structure Policies

The proposed project will involve the use of a floating plant and barges; however, the floating plant and barges are not considered "floating structures" as defined in Section .0602 since they will not be inhabited or used for commercial purposes for more than 30 days. Therefore, the proposed project is consistent with the floating structure policies.

6. Section .0700 - Mitigation Policy

The proposed project will not have an adverse impact to coastal lands or waters which would require mitigation, and is therefore consistent with the mitigation policy.

7. Section .0800 - Coastal Water Quality Policies

The proposed project will not cause the degradation of water quality so as to impair traditional uses of the coastal waters. No hazardous materials or petroleum products are expected to be discharged at the project location. The proposed project does involve in-water dredging that will generate waste sediments; however, the dredge sediment material has been characterized as a non-hazardous waste and has been approved for offsite disposal at a licensed and approved Subtitle D landfill permitted to accept Special Waste (East Carolina Regional Landfill). Therefore, this proposed project is consistent with the coastal water quality policies.

8. Section .0900 - Policies on Use of Coastal Airspace

The proposed project does not involve aviation or coastal airspace resources, and is therefore consistent with the coastal airspace policies.

9. Section .1000 - Policies on Water and Wetland Based Target Areas for Military Training Activities

The proposed project is not involved with military training activities, and is therefore consistent with this coastal policy.

10. Section .1100 - Policies on Beneficial Use and Availability of Materials Resulting from the Excavation or Maintenance of Navigational Channels

The proposed project includes in-water dredging that will generate sediments requiring disposal; however, the material will not be dredged from the navigation channel. Furthermore, previous sediment sampling indicates low concentrations of metals and polynuclear aromatic hydrocarbons may be present. Therefore, the proposed project is consistent with this coastal policy.

11. Section .1200 - Policies on Ocean Mining

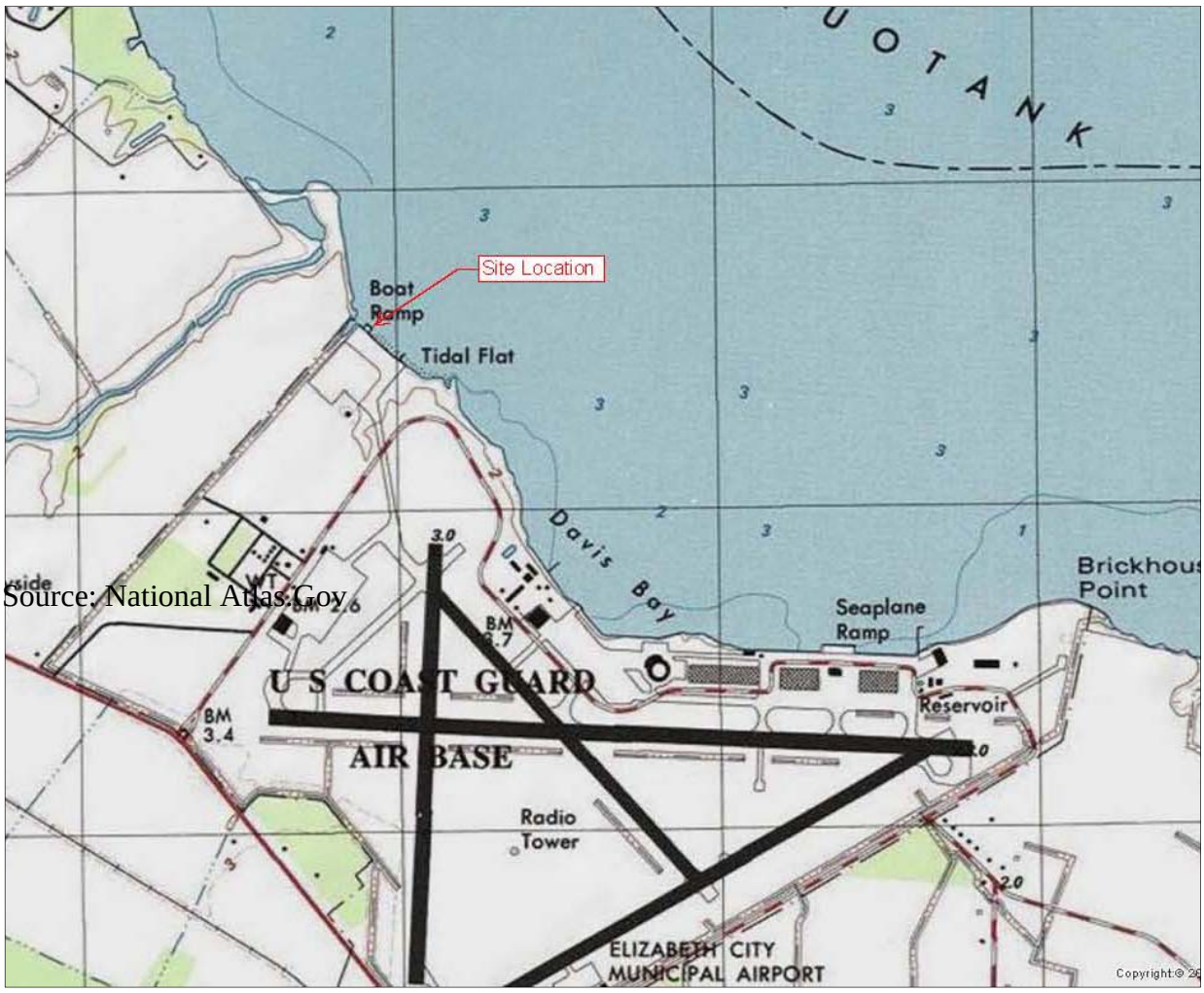
The proposed project does not include any mining activities, and is therefore consistent with the ocean mining policies.

Conclusion

The USCG conducted a coastal zone management Federal consistency review of the proposed project and determined that the proposed project will not have any significant impacts to the coastal resources. Therefore, the proposed project is consistent, to the maximum extent practicable, with the enforceable policies of North Carolina's federally approved coastal management program.

ENCLOSURE (3)

FIGURES 1 – 9



Source: National Atlas.Gov

Figure (1): Topographic Map – 1983
Elizabeth City, NC Topographic Quadrangle

Enclosure (3)

Figure (2): North Carolina Coastal Wetlands Map

Enclosure (3)

Figure (3): USFWS Wetlands Map

Enclosure (3)

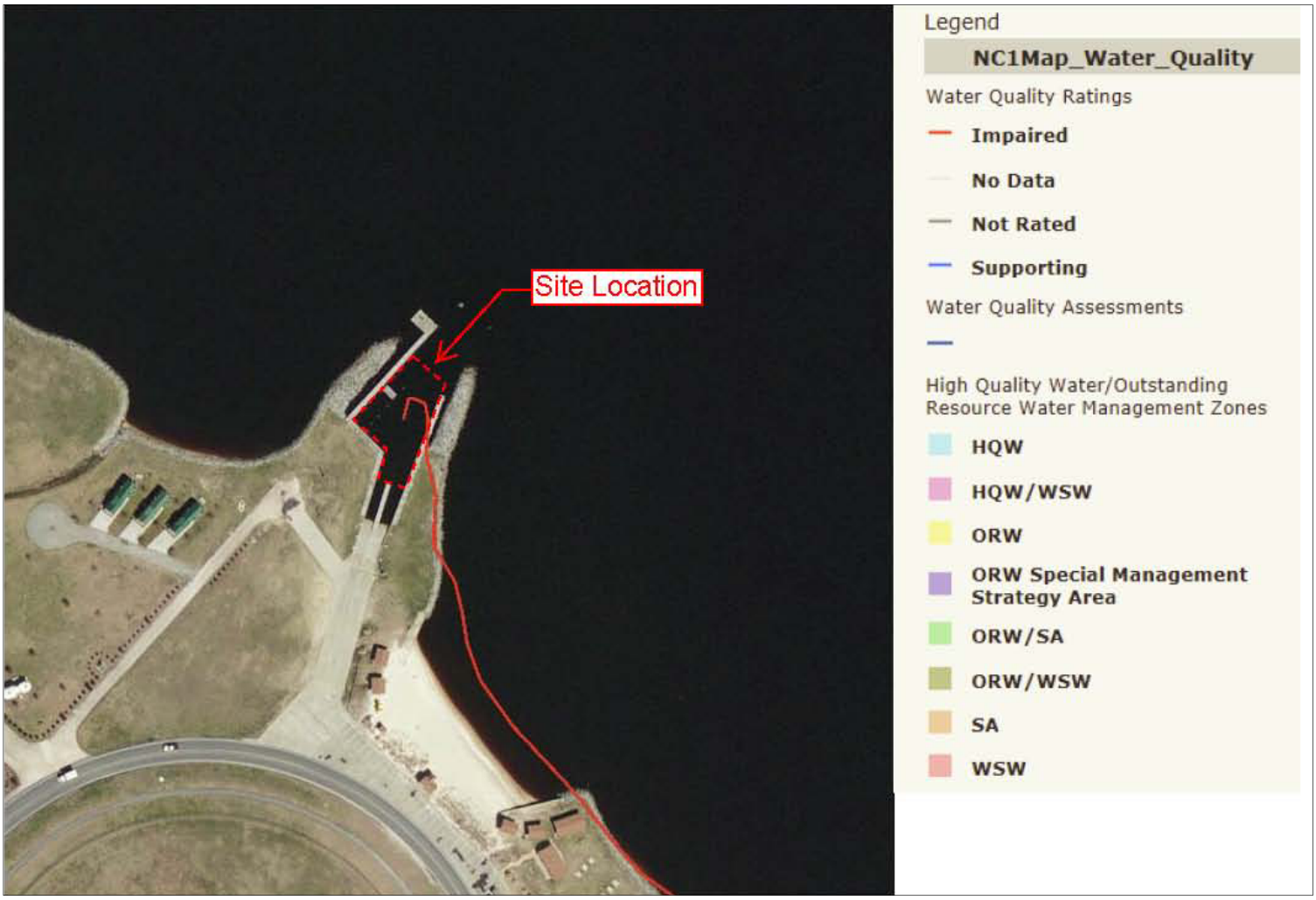


Figure (4): NC OneMap Water Quality Map

Enclosure (3)

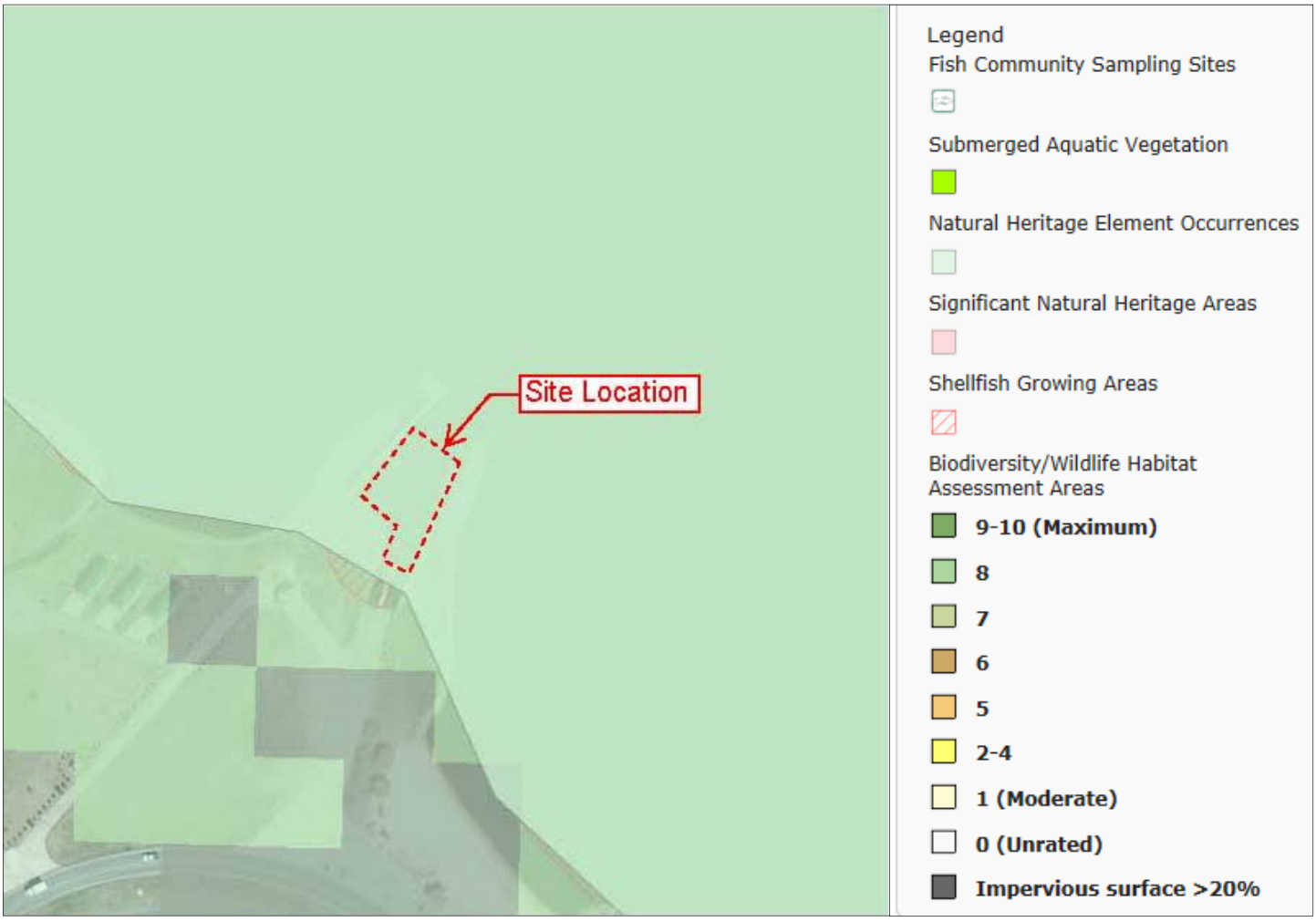


Figure (5): NC OneMap Habitat Map

Enclosure (3)

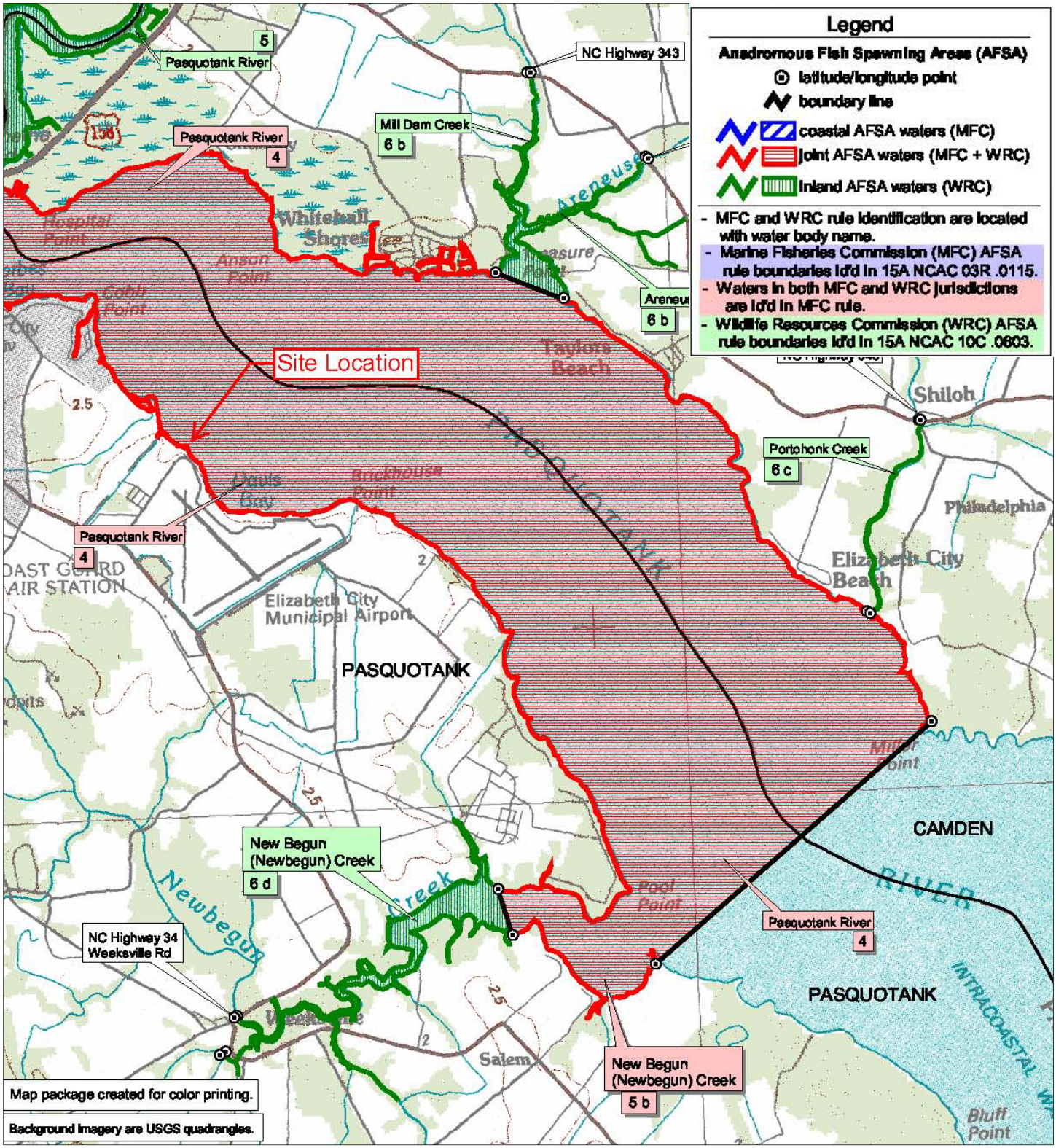


Figure (6): NC DMF Anadromous Fish Spawning Areas Map

Enclosure (3)

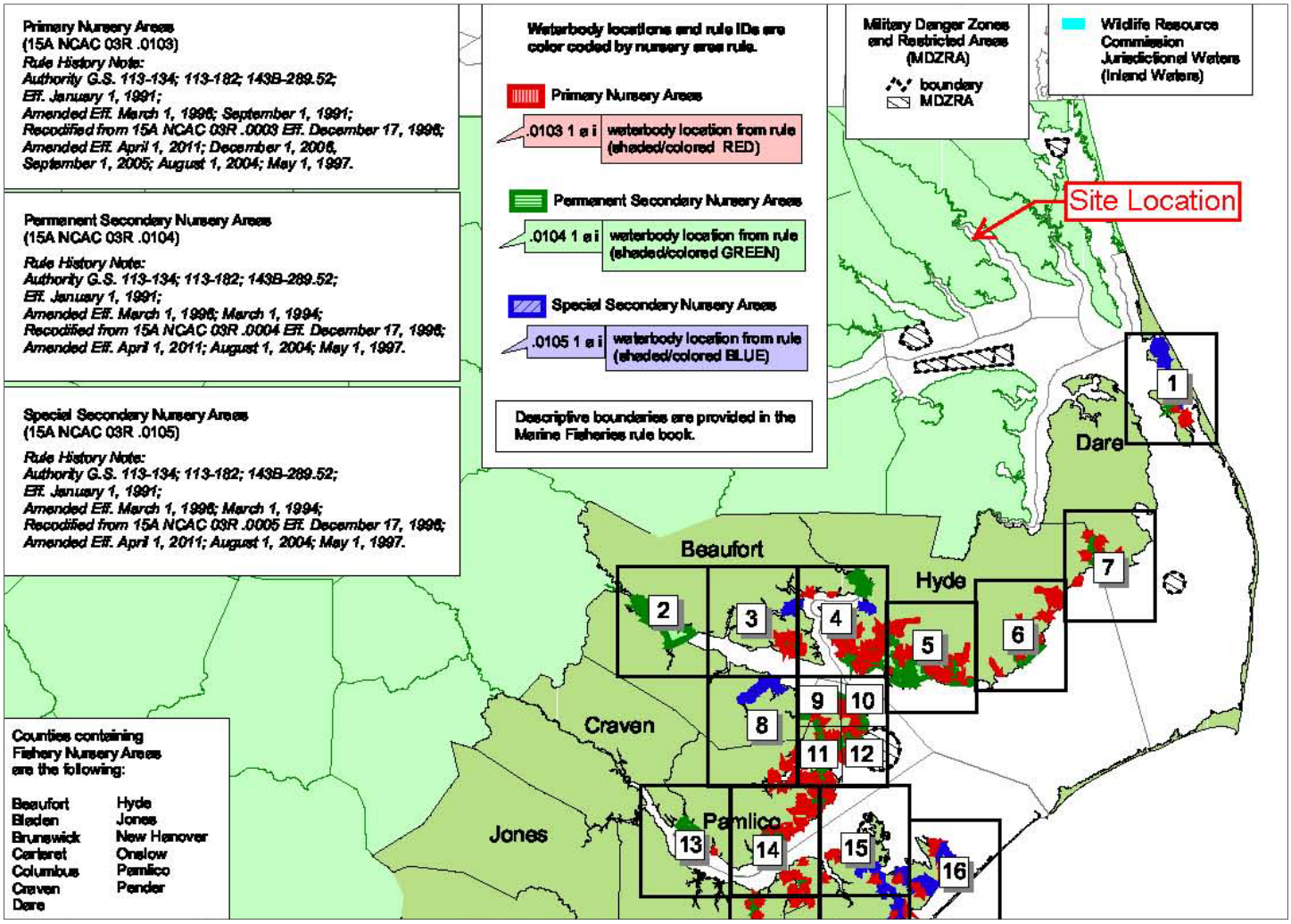


Figure (7): NC DMF Fishery Nursery Areas Map

Enclosure (3)

Figure (8): SAFMC Essential Fish Habitat Map

Enclosure (3)

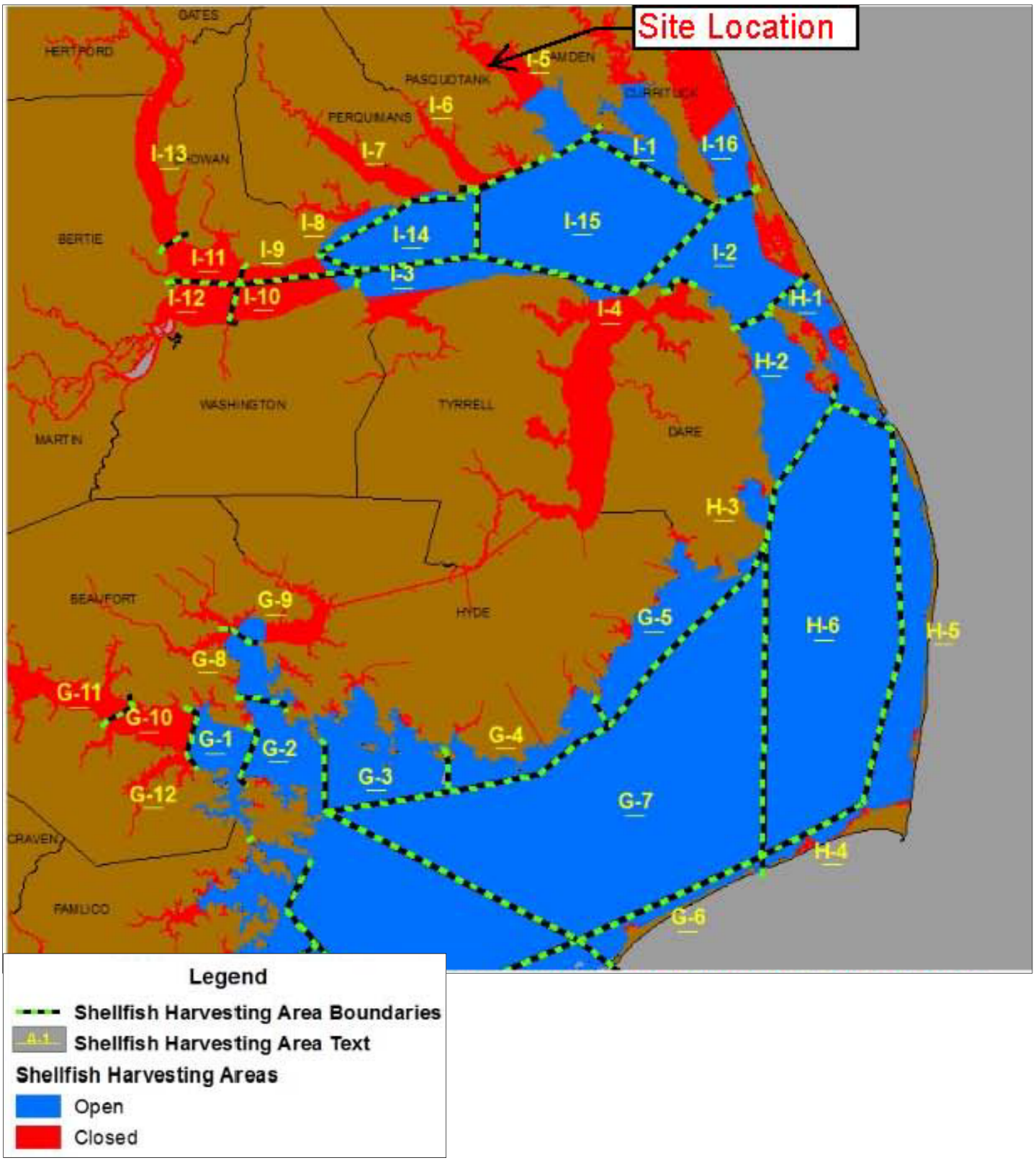


Figure (9): NC DMF Shellfish Harvesting Area Closure Map

Enclosure (3)

ENCLOSURE (4)

DREDGE PLAN – EXISTING FEATURES

FIGURE (10): DREDGE PLAN

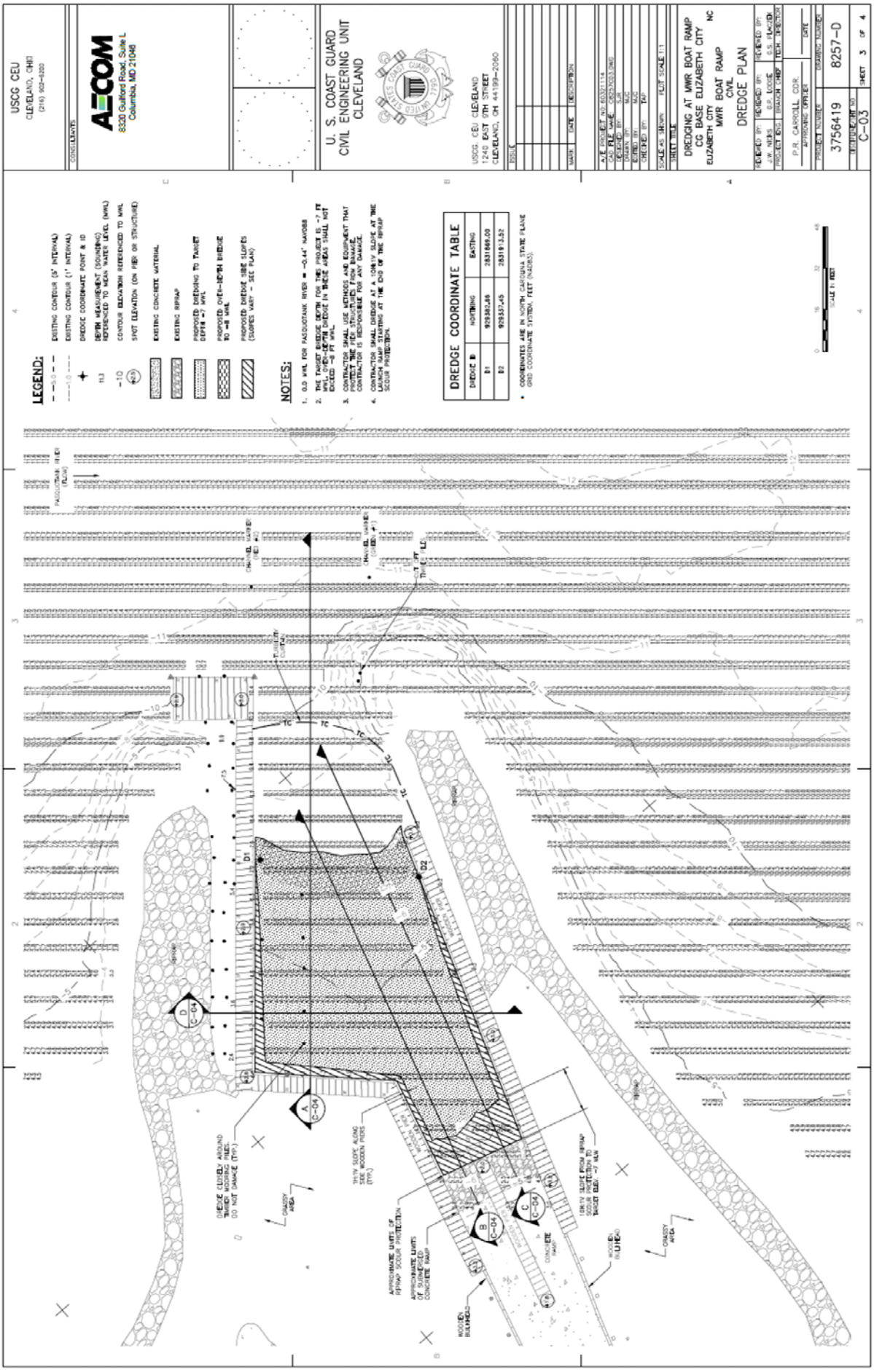


Figure 10: Dredge Plan

Enclosure (4)

Appendix D.

Consultations with State and Federal Agencies

AECOM
701 Corporate Center Drive, Suite 475
Raleigh, NC 27607

919.854.6200 tel
919.854.6259 fax

October 30, 2014

Ms. Allison Weakley
NC Office of Land and Water Stewardship
NC Natural Heritage Program
1601 Mail Service Center
Raleigh, NC 27699-1601

Subject: U.S. Coast Guard Base Elizabeth City – Dredging at MWR Boat Ramp, Elizabeth City, North Carolina

Dear Ms. Weakley:

The U.S. Coast Guard (USCG) Civil Engineering Unit Cleveland is in the process of preparing an Environmental Assessment (EA) for proposed maintenance dredging of the boat basin and moorings at the Morale, Welfare and Recreate (MWR) Boat Ramp at the USCG Base Elizabeth City. The USCG Base Elizabeth City is located approximately 3.5 miles southeast of Elizabeth City, along Highway 34, on the south shore of the Pasquotank River in Pasquotank County, North Carolina (**Attachment A**). The geographic location of the MWR Boat Ramp is latitude 36° 16' 14.72" north and longitude 76° 10' 40.31" west.

The MWR Boat Ramp is a previously dug man-made basin and the proposed dredging will occur entirely within the previously disturbed footprint of the boat basin and moorings. However, the USCG has no record of the as-built drawings indicating the original dredge depth. While the dredging required for the original construction of the MWR Boat Ramp likely disturbed the sediments to a depth proximate to the proposed dredge depth, the exact depth of the original dredging is not documented. Therefore, the USCG has elected to conduct an EA to address National Environmental Policy Act of 1969 requirements. The EA will determine whether or not there is potential for significant impact to the human and natural environments. Following completion of the EA, the USCG will either file a Finding of No Significant Impact or prepare an Environmental Impact Statement. This letter provides the North Carolina Natural Heritage Program (NC NHP) with information on the boat ramp construction, existing environment, and proposed action in advance of issuance of the EA for this project. The USCG would appreciate any comments the NC NHP may have for consideration in preparation of the EA.

The MWR Boat Ramp is located on the north end of the Base's shoreline, in a portion of the river tidal flats. The MWR Boat Ramp consists of a two-lane concrete ramp with a concrete pavement approach, and a launch dock centered in the boat ramp (**Attachments B and C**). Rubble mound stone breakwaters project approximately 100 to 125 feet from the shoreline on both sides of the launch ramp to form a protected harbor area for launching and retrieving boats. Timber docks line both sides of the boat basin. Mooring piles are in place along the west timber dock. Navigation aids are located near the entrance to the boat basin. These consist of a red dayboard with a solar-powered red beacon, and a green dayboard. The MWR Boat Ramp is utilized by base military personnel for launching privately-owned recreational boats, and for launching USCG vessels stationed at the Building 43 moorings.

The purpose of this project is to dredge the boat basin and moorings to a required depth below mean water level at the MWR Boat Ramp due to changing conditions at the site. Water depth in the boat basin and moorings is reduced by heavy winds from the north, which push water from the boat basin and down the Pasquotank River. This wind effect decreases the depth of the water and

encumbers the USCG's ability to utilize the existing boat ramp for both operational missions and recreational purposes. The project involves mechanical dredging of the boat basin and moorings to a maximum depth of 8 feet below mean water level (includes 1 foot over dredge depth). Mean water level corresponds to elevation -0.44 North American Vertical Datum 1988 (NAVD88). Therefore, dredging will proceed to -8.44 feet NAVD88. The calculated dredge volume for the MWR Boat Ramp is 755 cubic yards of sediment. The proposed dredging project will only temporarily impact open waters (an area totaling approximately 0.18 acres) and will occur entirely within the existing boat basin (limited to an area approximately 150 feet from the shoreline). The 35 percent civil site plan entitled, "Dredging at MWR Boat Ramp: CG Base Elizabeth City" illustrates the location and specifications of this proposed dredging project (**Attachment D**).

During the proposed dredging activities, the dredge area will be closed with an impermeable floating turbidity curtain with a weighted bottom edge. The dredge material will be deposited on barges, dewatered on the barges, transported by barge to an unloading site, offloaded to trucks, and transported by truck to the East Carolina Regional Landfill in Aulander, North Carolina for disposal. Formal approval for disposal of the dredge material at the MWR Boat Ramp has been received from the East Carolina Regional Landfill.

The USCG has reviewed the U.S. Fish and Wildlife Service (USFWS) Threatened and Endangered Species and Species of Concern for Pasquotank County and the NC NHP listed species for the Elizabeth City Quadrangle along with their habitat requirements. Table 1 is a list of rare, threatened and endangered species documented to occur in Pasquotank County and the Elizabeth City quadrangle where the project site is located (**Attachment E**). The USCG also reviewed the USFWS Critical Habitat Mapper and the online USFWS Information, Planning, and Conservation (IPaC) System.

According to the online resources there is one state-listed endangered species identified within the Elizabeth City quadrangle (Shortnose sturgeon; *Acipenser brevirostrum*) with potential habitat in the project area and two additional federally-listed endangered species (Atlantic sturgeon; *Acipenser oxyrinchus* and West Indian manatee; *Trichechus manatus*) identified within Pasquotank County with potential habitat in the project area. One state-listed threatened species (Bald eagle; *Haliaeetus leucocephalus*) was also identified within the Elizabeth City quadrangle with potential habitat in the project area. Additionally, one federally-listed proposed threatened species (Red knot; *Calidris canutus rufa)* was identified within Pasquotank County. Review of the IPaC System indicates that only two of the endangered species (i.e., Shortnose sturgeon and Atlantic sturgeon) and the proposed threatened species (i.e., Red knot) should be considered in an effects analysis for the proposed project. No critical habitats were identified within the proposed project area.

The USCG requests that the NC NHP provide any additional information or potential concerns regarding the presence of threatened and endangered species or other significant natural resources that may be potentially affected by the maintenance dredging of the boat basin and moorings at the MWR Boat Ramp. Any comments or recommendations that your agency may have for avoiding potential impacts associated with this project would also be appreciated. We would appreciate receipt of your written approval within 30 days of this letter; this will help us maintain the overall schedule for this project.

If you have any questions, please contact Jennifer Jones (AECOM) at (919) 239-7150 or Leilani Woods (USCG) at (252) 335-6847.

Yours sincerely,

Jennifer Jones
Environmental Task Manager

Ron Johnson
Senior Biologist

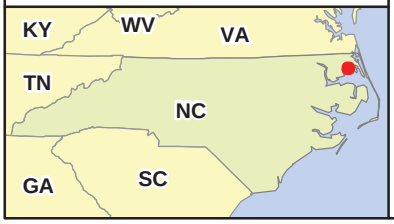
Cc: Ms. Leilani Woods, Environmental Engineer, USCG Civil Engineering Unit Cleveland
Mr. Greg Carpenter, Environmental Project Manager, USCG Civil Engineering Unit Cleveland

Attachments:
(A) Dredge Site - Location Map
(B) Dredge Site - Aerial Photograph
(C) Dredge Site - Ground-Level Photographs
(D) Dredge Site – 35% Plan
(E) Table 1 – Listing of Rare, Threatened and Endangered Species
(F) References Cited

ATTACHMENT (A)

DREDGE SITE - LOCATION MAP

Map Location



Site Location Map

MWR Boat Ramp
USCG Base Elizabeth City, North Carolina

Elizabeth City NC Topographic Quadrangle (1983)

0 1,000 2,000 Feet

June 2014

60321114

Figure 1

AECOM Environment
701 Corporate Center Drive, Suite 475
Raleigh, NC 27607
Phone: (919) 854-6200
Fax: (919) 854-6259
Web: http://www.aecom.com

ATTACHMENT (B)

DREDGE SITE – AERIAL PHOTOGRAPH

Scale: Not To Scale	(Source: Google Earth© 2014)	**Dredge Site - Aerial Photograph** US Coast Guard Base Elizabeth City – MWR Boat Ramp Elizabeth City, NC	AECOM **Attachment B**
			www.aecom.com

ATTACHMENT (C)

DREDGE SITE – GROUND-LEVEL PHOTOGRAPHS

PHOTOGRAPH LOG

Facility Name:	Site Location:	Project No.
United States Coast Guard	MWR Boat Ramp – USCG Base Elizabeth City, NC	60321114

Photo No. 1	Date: 05/7/14

Direction Photo Taken:

North

Description:

View from the southern side of the shore (concrete pavement approach) of the concrete ramp, docks, navigation aids, and light pedestals.

Photo No. 2	Date: 05/7/14

Direction Photo Taken:

Northwest

Description:

View from the concrete pavement approach along the southern shoreline.

PHOTOGRAPH LOG

Facility Name:	Site Location:	Project No.
United States Coast Guard	MWR Boat Ramp – USCG Base Elizabeth City, NC	60321114

Photo No. 3	Date: 05/7/14

Direction Photo Taken:

South

Description:

View looking south of the concrete ramp, docks, light pedestals, and mooring piles.

Photo No. 4	Date: 05/7/14

Direction Photo Taken:

North

Description:

View at the end of the concrete ramp of the docks, light pedestals, and mooring piles.

PHOTOGRAPH LOG

Facility Name:	Site Location:	Project No.
United States Coast Guard	MWR Boat Ramp – USCG Base Elizabeth City, NC	60321114

Photo No. 5	Date: 05/7/14

Direction Photo Taken:

South-Southeast

Description:

View of the man-made beach located southeast of the MWR Boat Ramp.

Photo No. 6	Date: 05/7/14

Direction Photo Taken:

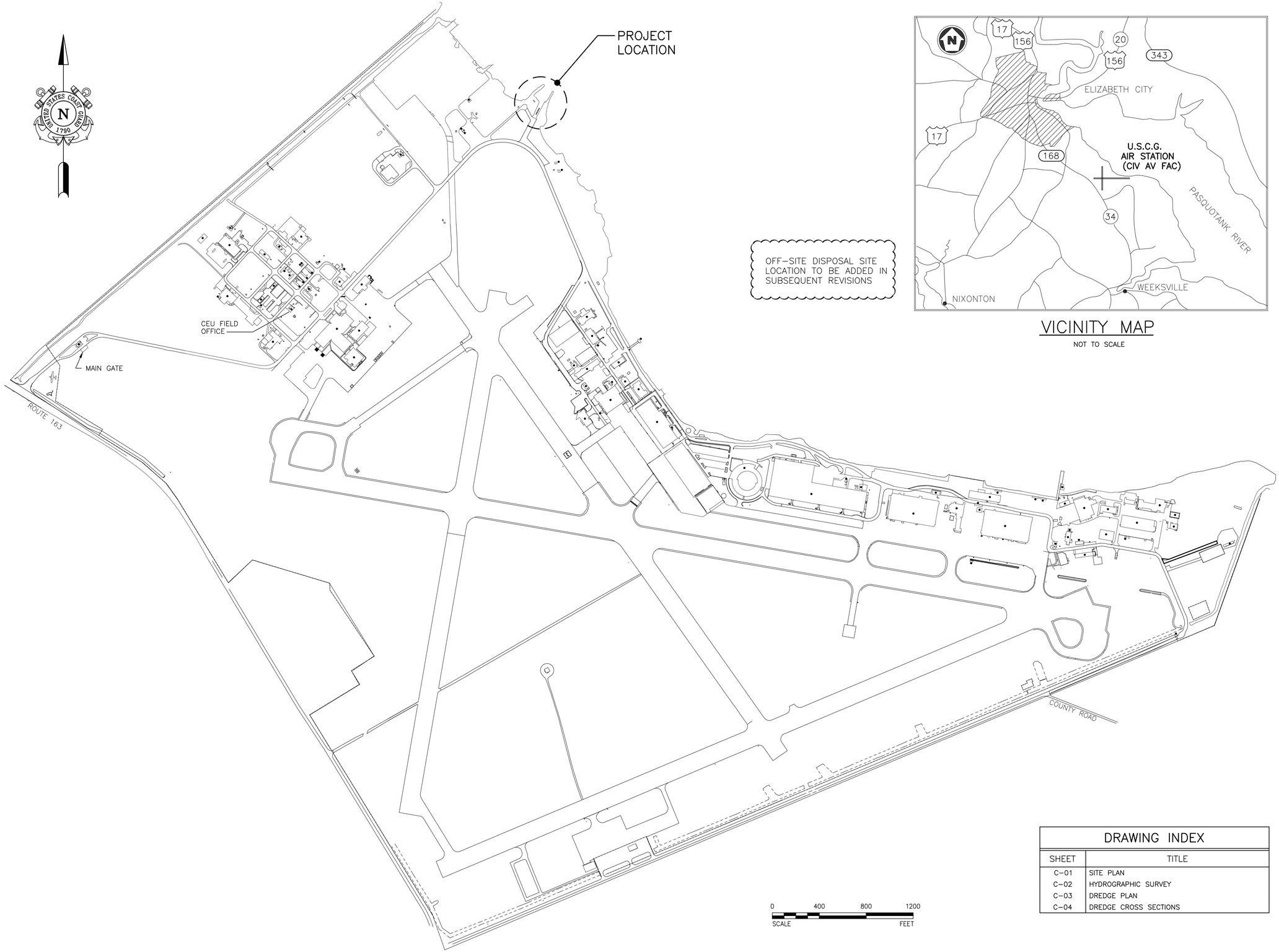
North

Description:

View of the navigation aids at entry to the protected harbor area. Note two timbers low to water surface in the entry-way.

ATTACHMENT (D)

DREDGE SITE – 35% PLAN



OFF-SITE DISPOSAL SITE LOCATION TO BE ADDED IN SUBSEQUENT REVISIONS

VICINITY MAP

NOT TO SCALE

DRAWING INDEX

SHEET	TITLE
C-01	SITE PLAN
C-02	HYDROGRAPHIC SURVEY
C-03	DREDGE PLAN
C-04	DREDGE CROSS SECTIONS

USCG CEU
CLEVELAND, OHIO
(216) 902-6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199-2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C01.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP

SCALE: AS SHOWN PLOT SCALE: 1:1

SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL
SITE PLAN

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

P.R. CARROLL, CDR. — APPROVING OFFICER
DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257-D
DISCIPLINE/SHT NO	
C-01	SHEET 1 OF 4

LEGEND

8.2 (TYP) – DEPTH MEASUREMENT (SOUNDING) REFERENCED TO MEAN WATER LEVEL (MWL)

−10 (TYP) – CONTOUR ELEVATION REFERENCED TO MWL

(+2.5) (TYP) – SPOT ELEVATION (ON PIER & SHEET PILE)

(TYP) – UNDERGROUND UTILITY VAULT

(TYP) – CONCRETE MATERIAL

(TYP) – RIP–RAP

(TYP) – WOODEN PIER / BULKHEAD

(TYP) – UTILITY VALVE

(S) (TYP) – SANITARY SEWER MANHOLE

(E) (TYP) – ELECTRIC UTILITY MANHOLE

(TYP) – LIGHT PEDESTAL

(TYP) – LIGHT

(TYP) – INFORMATIONAL SIGN

(TYP) – CAMERAL POLE

(TYP) – MARINE PILING

(TYP) – MOORING DOLPHIN

0 20' 40'

HORIZONTAL SCALE

N 929,300 N 929,400 N 929,500 N 929,600 N 929,700 N 929,800 N 929,900

E 2,892,700 E 2,892,800 E 2,892,900 E 2,893,000 E 2,893,100 E 2,893,200 E 2,893,300

RIP–RAP (SEE NOTE 8)

MOORING DOLPHIN (3 PILINGS) (TYP.)

INFORMATIONAL SIGN

MARINE PILING (TYP.)

CONCRETE PAD & ELECTRIC MANHOLE(S)

ELECTRIC UTILITY VAULT

LIGHT (TYP.)

CHANNEL MARKER (RED #2)

CAMERA POLE

PASQUOTANK RIVER (FLOW)

GRASSY AREA

TIMBER MOORING PILES (7)

STREET LIGHT

CHANNEL MARKER (GREEN #1)

CONCRETE ACCESS/EGRESS ROADWAY

APPROXIMATE LIMITS OF SUBMERGED CONCRETE RAMP

WOODEN PIER

WOODEN BULKHEAD

LIGHT PEDESTAL

CUT OFF TIMBER PILES

INFORMATIONAL SIGN (NO SWIMMING)

INFORMATIONAL SIGN (STAY OFF ROCKS)

SEE NOTE 9

CONCRETE RAMP

WOODEN BULKHEAD

LIGHT (TYP.)

LIGHT PEDESTAL

INFORMATIONAL SIGN (NO SWIMMING)

RIP–RAP (SEE NOTE 8)

POWER PEDESTAL

GRASSY AREA

INFORMATIONAL SIGN (STAY OFF ROCKS)

BATHYMETRY NOTES

1. BATHYMETRIC SURVEY DATA WAS COLLECTED ON MAY 07–09, 2014 BY GAHAGAN & BRYANT ASSOCIATES OF NC, PLLC. (GBA) AND IS EXPRESSED IN FEET BELOW MEAN WATER LEVEL (MWL).
2. HORIZONTAL DATUM IS IN REFERENCE TO THE NORTH CAROLINA STATE PLANE GRID COORDINATE SYSTEM NORTH AMERICAN DATUM OF 1983 (NAD83).
3. VERTICAL DATUM IS IN REFERENCE TO MEAN WATER LEVEL (MWL). MWL IS 0.44 FEET ABOVE THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

MWL
0.44'
NAVD88
5.94'
−5.50'
USGS GAUGE #0204382800

4. MWL ESTABLISHED FROM USGS WATER LEVEL GAUGE #0204382800 LOCATED ON THE PASQUOTANK RIVER. GAUGE DATUM = −5.50' NAVD88, MEAN GAUGE HEIGHT = 5.94' (FEB 06 – SEP 08)
5. BATHYMETRIC DATA DEPICTED ON THIS PLAN IS REPRESENTATIVE OF A LARGER DATA SET & WAS CORRECTED IN REAL TIME VIA REAL TIME KINEMATIC (RTK) TIDES.
6. EQUIPMENT USED

VESSEL:	GBA "SEA MINNOW"
ECHO SOUNDER:	ODOM CV100
HORIZONTAL POSITIONING:	RTK 5700
BASE STATION:	TRIMBLE R8 SET UP ON NGS MONUMENT "S 176 RESET"
ROVER:	TRIMBLE R6 USED FOR UPLAND SURVEY

7. THE INFORMATION DEPICTED ON THIS PLAN REPRESENTS RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.
8. RIP–RAP LIMITS ARE APPROXIMATE. SPORADIC RIP–RAP PIECES ARE PRESENT IN SURVEY AREA AND ARE NOT SHOWN FOR CLARITY.
9. LIMITS SHOWN DEPICT THE TRANSITION FROM A COMPACT SUBSTRATE TO A SOFT MATERIAL, POSSIBLY THE SCOUR STONE PROTECTION LIMITS.

USCG CEU
CLEVELAND, OHIO
(216) 902–6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199–2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C02.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP
SCALE: AS SHOWN	PLOT SCALE: 1:1

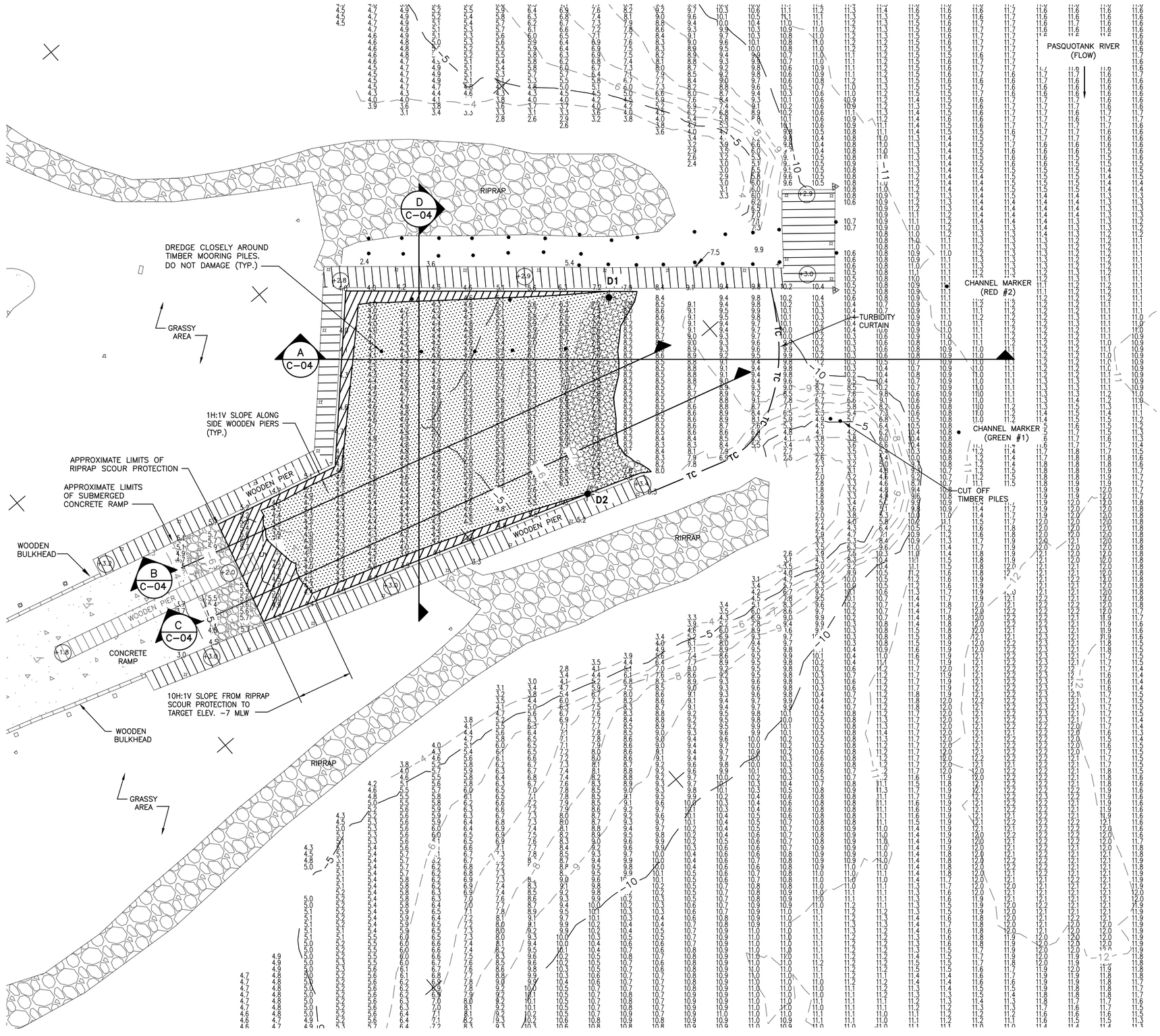
SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL
HYDROGRAPHIC SURVEY

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

P.R. CARROLL, CDR.
APPROVING OFFICER — DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257–D
DISCIPLINE/SHT NO	
C–02	SHEET 2 OF 4



LEGEND:

- EXISTING CONTOUR (5' INTERVAL)
- EXISTING CONTOUR (1' INTERVAL)
- DREDGE COORDINATE POINT & ID
- 11.3 — DEPTH MEASUREMENT (SOUNDING) REFERENCED TO MEAN WATER LEVEL (MWL)
- −10 — CONTOUR ELEVATION REFERENCED TO MWL
- +2.5 — SPOT ELEVATION (ON PIER OR STRUCTURE)
- EXISTING CONCRETE MATERIAL
- EXISTING RIPRAP
- PROPOSED DREDGING TO TARGET DEPTH −7 MWL
- PROPOSED OVER-DEPTH DREDGE TO −8 MWL
- PROPOSED DREDGE SIDE SLOPES (SLOPES VARY – SEE PLAN)

NOTES:

1. 0.0 MWL FOR PASQUOTANK RIVER = −0.44' NAVD88
2. THE TARGET DREDGE DEPTH FOR THIS PROJECT IS −7 FT MWL. OVER-DEPTH DREDGE IN THESE AREAS SHALL NOT EXCEED −8 FT MWL.
3. CONTRACTOR SHALL USE METHODS AND EQUIPMENT THAT PROTECT THE PIER STRUCTURES FROM DAMAGE. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE.
4. CONTRACTOR SHALL DREDGE AT A 10H:1V SLOPE AT THE LAUNCH RAMP STARTING AT THE END OF THE RIPRAP SCOUR PROTECTION.

DREDGE COORDINATE TABLE

DREDGE ID	NORTHING	EASTING
D1	929382.66	2831869.00
D2	929337.45	2831913.52

- **COORDINATES ARE IN** NORTH CAROLINA STATE PLANE GRID COORDINATE SYSTEM, FEET (NAD83).

0 16 32 48
SCALE IN FEET

USCG CEU
CLEVELAND, OHIO
(216) 902-6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

UNITED STATES COAST GUARD 1790

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199-2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C03.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP

SCALE: AS SHOWN PLOT SCALE: 1:1

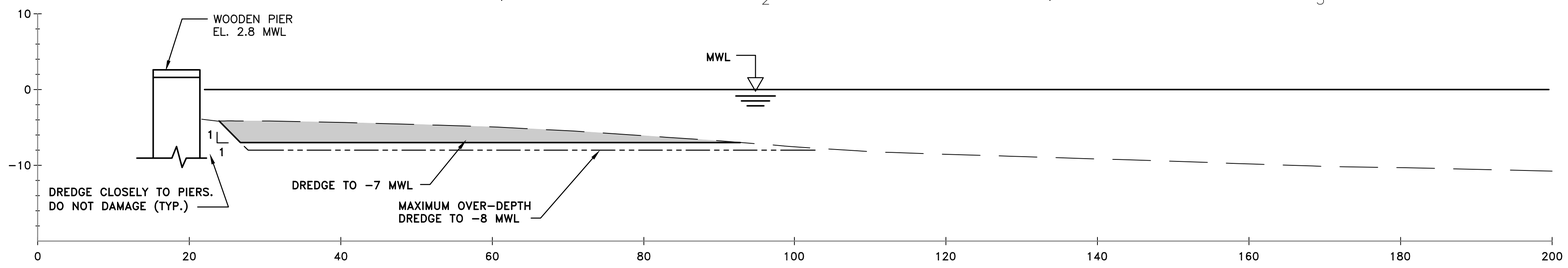
SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL
DREDGE PLAN

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

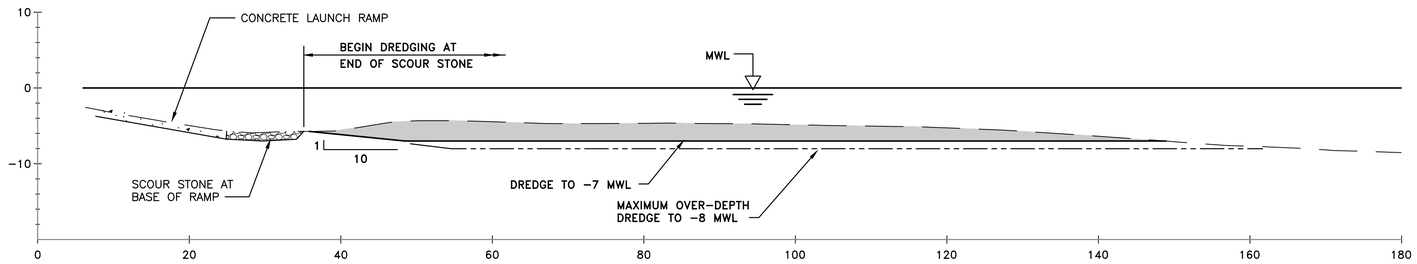
P.R. CARROLL, CDR.
APPROVING OFFICER — DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257-D
DISCIPLINE/SHT NO	SHEET 3 OF 4
C-03	



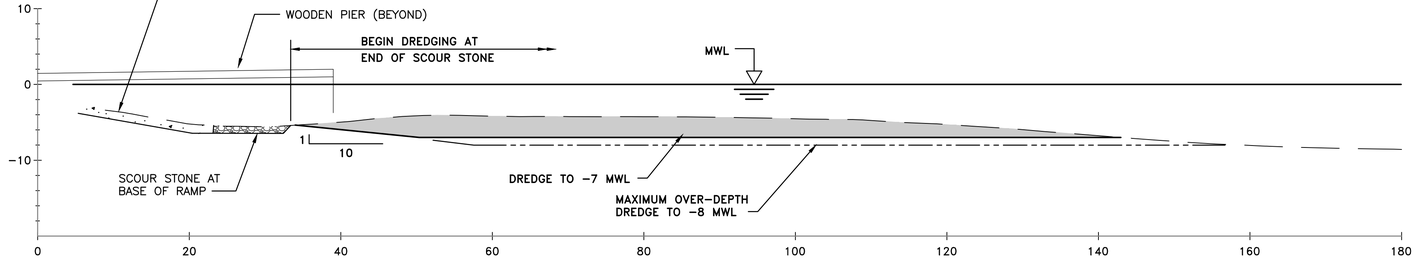
SECTION A C−04

FEET 0 10 20



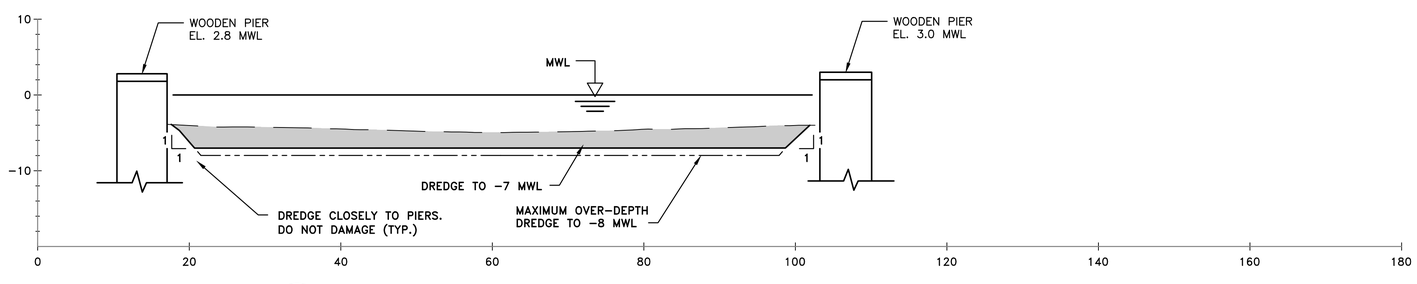
SECTION B C−04

FEET 0 10 20



SECTION C C−04

FEET 0 10 20

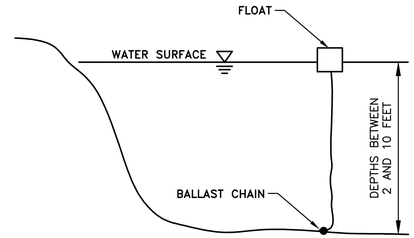


SECTION D C−04

FEET 0 10 20

LEGEND

- EXISTING TOP OF SEDIMENT
- PROPOSED BASE DREDGE ELEVATION
- MAXIMUM OVER−DEPTH DREDGE



TURBIDITY CURTAIN DETAIL

NOT TO SCALE

USCG CEU
CLEVELAND, OHIO
(216) 902−6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199−2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C04.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP

SCALE: AS SHOWN PLOT SCALE: 1:1

SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL

DREDGE CROSS SECTIONS

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

P.R. CARROLL, CDR. — APPROVING OFFICER

DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257−D
DISCIPLINE/SHT NO	
C−04	SHEET 4 OF 4

ATTACHMENT (E)

TABLE 1 – LISTING OF RARE, THREATENED AND ENDANGERED SPECIES

Table 1 - Rare, Threatenened and Endangered Species, Natural Communities, and Special Habitats Listed by the Natural Heritage Program in Elizabeth City Quadrangle and US Fish and Wildlife Service in Pasquotank County

Taxonomic Group	Scientific Name	Common Name	State Status	NCNHP Search by USGS Quadrangle	Federal Status	Federal Record Status	Listed in Pasquotank County?	Habitat
Species								
Bird	*Haliaeetus leucocephalus*	Bald Eagle	T	Historical	BGPA	*Current	yes	mature forests near large bodies of water (for nesting); lakes and sounds (for foraging) [nesting sites only]
Bird	*Calidris canutus rufa*	Red Knot	-	-	P	*Current	yes	migration stops along the Atlantic coast; principally found in marine and estuarine habitats; main food source is horseshoe crab eggs
Fish	*Acipenser brevirostrum*	Shortnose Sturgeon	E	Current	E	*Current	yes	anadromous; prefer nearshore marine, estuarine, and riverine habitat of large river systems; migrate periodically into faster moving fresh water areas to spawn
Fish	*Acipenser oxyrinchus*	Atlantic Sturgeon	SC	Current	E	*Current	yes	anadromous; migrate from estuarine and marine waters into freshwater in the spring and early summer to spawn; spawn in moderately flowing water in deep parts of large rivers; subadults and adults live in coastal waters and estuaries
Fish	*Anguilla rostrata*	American Eel	-	-	FSC	*Current	yes	catadromous; mature eels migrate from brackish and freshwater habitats in streams, large rivers, and estuaries to the ocean to spawn. Larvae develop in the ocean and the eel migrates upstream to estuaries and freshwater habitats as it matures.
Mammal	*Trichechus manatus*	West Indian Manatee	-	-	E	*Current	yes	warm waters of estuaries and river mouths
Vascular Plant	*Sagittaria weatherbiana*	Grassleaf Arrowhead	-	-	FSC	**Historic	yes	fresh or brackish marshes, streambanks, and wet depressions
Vascular Plant	*Boltonia asteroides var. glastifolia*	White Doll's-daisy	SR-O	Historical	-	-	-	clay-based Carolina bays, marshes, savannas
Vascular Plant	*Iris prismatica*	Slender Blue Iris	SR-T	Historical	-	-	-	bogs, marshes, and wet powerline clearings
Vascular Plant	*Ludwigia alata*	Winged Seedbox	SR-P	Historical	-	-	-	interdune ponds, marshes
Habitats								
Natural Community	-	Mesic Mixed Hardwood Forest (Coastal Plain Subtype)	N/A	Current	N/A	-	-	-
Natural Community	-	Nonriverine Wet Hardwood Forest (Oak Flat Subtype)	N/A	Current	N/A	-	-	-
Natural Community	-	Peatland Atlantic White Cedar Forest	N/A	Current	N/A	-	-	-
Natural Community	-	Tidal Swamp (Cypress-Gum Subtype)	N/A	Current	N/A	-	-	-

Notes

1. Current record - there is at least one record for the element in the region that has been seen recently.
2. Historical record - either the element has not been found in recent surveys in the region; or it has not been surveyed recently enough to be confident they are still present; or the occurreence is though to be destroyed.
3. *Current record - the species has been observed in the county within the last 50 years.
4. **Historic record - the species was last observed in the county more than 50 years ago.

State Status:

E = Endangered
T = Threatened
SC = Special Concern
SR-O = Significantly Rare - Other
SR-P = Significantly Rare - Peripheral
SR-T = Significantly Rare - Throughout
- = Not listed by NCNHP in Elizabeth City quad
N/A = Not applicable

Federal Status:

E = Endangered
T = Threatened
FSC = Federal Species of Concern
BGPA = Bald and Golden Eagle Protection Act
P = Proposed
- = Not listed by USFWS in Pasquotank County
N/A = Not applicable

ATTACHMENT (F)

REFERENCES CITED

References Cited

North Carolina Natural Heritage Program, Heritage Data Search, 2014. Accessed online September 2014 at http://www.ncnhp.org/web/nhp/database-search

North Carolina OneMap, Geospatial Portal, 2014. Accessed online October 2014 at http://data.nconemap.com/geoportal/catalog/main/home.page

U.S. Fish and Wildlife Service, Critical Habitat Portal, 2014. Accessed online September 2014 at http://ecos.fws.gov/crithab/

U.S. Fish and Wildlife Service, Endangered Species, Threatened Species, Federal Species of Concern, and Candidate Species for Pasquotank County, 2014. Accessed online September 2014 at http://www.fws.gov/raleigh/species/cntylist/pasquotank.html

U.S. Fish and Wildlife Service, Information, Planning, and Conservation System, 2014. Accessed online October 2014 at http://ecos.fws.gov/ipac/

North Carolina Department of Environment and Natural Resources
Office of Land and Water Stewardship

Pat McCrory
Governor

Bryan Gossage
Director

John E. Skvarla, III
Secretary

November 13, 2014

Ms. Jennifer Jones
AECOM, Inc.
701 Corporate Center Drive, Suite 475
Raleigh, North Carolina 27607
Jennifer.Jones@aecom.com

RE: US Coast Guard Base – Dredging at the Morale, Welfare, and Recreate (MWR) Boat Ramp
Elizabeth City, Pasquotank County, North Carolina

Dear Ms. Jones:

Thank you for the opportunity to provide information from the North Carolina Natural Heritage Program (NCNHP) database for the proposed project referenced above. The NCNHP database does not show any records for rare species, important natural communities, natural areas, or conservation/managed areas within the proposed project area. Within one mile of the proposed project area, the NCNHP database shows element occurrence records for the following rare species:

SCIENTIFIC NAME	COMMON NAME	ELEMENT OCCURRENCE STATUS*	ACCURACY	STATE STATUS*	FEDERAL STATUS*
Acipenser brevirostrum	Shortnose Sturgeon	Current	Very Low	E	E
Acipenser oxyrinchus	Atlantic Sturgeon	Current	Low	SC	E
Iris prismatica	Slender Blue Iris	Historical	Very Low	SR-T	---

* For status definitions, please see the Help document at http://www.ncnhp.org/web/nhp/database-search.

The occurrence records for Shortnose Sturgeon and Atlantic Sturgeon are located in Albemarle Sound and North Carolina coastal waters (including Albemarle Sound), respectively. The occurrence record for Slender Blue Iris is from Hogs Creek in Pasquotank County.

Please note that although the NCNHP database may not show records for rare species within the proposed project area, it does not necessarily mean that they are not present; it may simply mean that the area has not been surveyed. The use of Natural Heritage Program data should not be substituted for actual field surveys if needed, particularly if the project area contains suitable habitat for rare species.

Feel free to contact me at 919-707-8629 or Allison.Weakley@ncdenr.gov if you have questions or need additional information.

Sincerely,

Allison Weakley

Allison Schwarz Weakley, Conservation Planner
NC Natural Heritage Program

AECOM
701 Corporate Center Drive, Suite 475
Raleigh, NC 27607

919.854.6200 tel
919.854.6259 fax

October 29, 2014

Mr. Pete Benjamin
Field Supervisor
U.S. Fish and Wildlife Service
551F Pylon Drive
Raleigh, NC 27606

Subject: U.S. Coast Guard Base Elizabeth City – Dredging at MWR Boat Ramp, Elizabeth City, North Carolina

Dear Mr. Benjamin:

The U.S. Coast Guard (USCG) Civil Engineering Unit Cleveland is in the process of preparing an Environmental Assessment (EA) for proposed maintenance dredging of the boat basin and moorings at the Morale, Welfare and Recreate (MWR) Boat Ramp at the USCG Base Elizabeth City. The USCG Base Elizabeth City is located approximately 3.5 miles southeast of Elizabeth City, along Highway 34, on the south shore of the Pasquotank River in Pasquotank County, North Carolina (**Attachment A**). The geographic location of the MWR Boat Ramp is latitude 36° 16' 14.72" north and longitude 76° 10' 40.31" west.

The MWR Boat Ramp is a previously dug man-made basin and the proposed dredging will occur entirely within the previously disturbed footprint of the boat basin and moorings. However, the USCG has no record of the as-built drawings indicating the original dredge depth. While the dredging required for the original construction of the MWR Boat Ramp likely disturbed the sediments to a depth proximate to the proposed dredge depth, the exact depth of the original dredging is not documented. Therefore, the USCG has elected to conduct an EA to address National Environmental Policy Act of 1969 requirements. The EA will determine whether or not there is potential for significant impact to the human and natural environments. Following completion of the EA, the USCG will either file a Finding of No Significant Impact or prepare an Environmental Impact Statement. This letter provides the U.S. Fish and Wildlife Service (USFWS) with information on the boat ramp construction, existing environment, and proposed action in advance of issuance of the EA for this project. The USCG would appreciate any comments the USFWS may have for consideration in preparation of the EA.

The MWR Boat Ramp is located on the north end of the Base's shoreline, in a portion of the river tidal flats. The MWR Boat Ramp consists of a two-lane concrete ramp with a concrete pavement approach and a launch dock centered in the boat ramp (**Attachments B and C**). Rubble mound stone breakwaters project approximately 100 to 125 feet from the shoreline on both sides of the launch ramp to form a protected harbor area for launching and retrieving boats. Timber docks line both sides of the boat basin. Mooring piles are in place along the west timber dock. Navigation aids are located near the entrance to the boat basin. These consist of a red dayboard with a solar-powered red beacon, and a green dayboard. The MWR Boat Ramp is utilized by base military personnel for launching privately-owned recreational boats, and for launching USCG vessels stationed at the Building 43 moorings.

The purpose of this project is to dredge the boat basin and moorings to a required depth below mean water level at the MWR Boat Ramp due to changing conditions at the site. Water depth in the boat basin and moorings is reduced by heavy winds from the north, which push water from the boat basin and down the Pasquotank River. This wind effect decreases the depth of the water and

encumbers the USCG's ability to utilize the existing boat ramp for both operational missions and recreational purposes. The project involves mechanical dredging of the boat basin and moorings to a maximum depth of 8 feet below mean water level (includes 1 foot over dredge depth). Mean water level corresponds to elevation -0.44 North American Vertical Datum 1988 (NAVD88). Therefore, dredging will proceed to -8.44 feet NAVD88. The calculated dredge volume for the MWR Boat Ramp is 755 cubic yards of sediment. The proposed dredging project will only temporarily impact open waters (an area totaling approximately 0.18 acres) and will occur entirely within the existing boat basin (limited to an area approximately 150 feet from the shoreline). The 35 percent civil site plan entitled, "Dredging at MWR Boat Ramp: CG Base Elizabeth City" illustrates the location and specifications of this proposed dredging project (**Attachment D**).

During the proposed dredging activities, the dredge area will be closed with an impermeable floating turbidity curtain with a weighted bottom edge. The dredge material will be deposited on barges, dewatered on the barges, transported by barge to an unloading site, offloaded to trucks, and transported by truck to the East Carolina Regional Landfill in Aulander, North Carolina for disposal. Formal approval for disposal of the dredge material at the MWR Boat Ramp has been received from the East Carolina Regional Landfill.

The USCG has reviewed the USFWS Threatened and Endangered Species and Species of Concern for Pasquotank County and the North Carolina Natural Heritage Program listed species for the Elizabeth City Quadrangle along with their habitat requirements. Table 1 is a list of rare, threatened and endangered species documented to occur in Pasquotank County and the Elizabeth City Quadrangle where the project site is located (**Attachment E**). The USCG also reviewed the USFWS Critical Habitat Mapper and the online USFWS Information, Planning, and Conservation (IPaC) System.

According to the online resources, there are three federally-listed endangered species identified within Pasquotank County with potential habitat in the project area: Shortnose sturgeon (*Acipenser brevirostrum*), Atlantic sturgeon (*Acipenser oxyrinchus*), and West Indian manatee (*Trichechus manatus*). Additionally, one federally-listed proposed threatened species (Red knot; *Calidris canutus rufa)* and one protected species under the Bald and Golden Eagle Protection Act (Bald eagle; *Haliaeetus leucocephalus)* were identified within Pasquotank County. Review of the IPaC System indicates that only two of the endangered species (i.e., Shortnose sturgeon and Atlantic sturgeon) and the proposed threatened species (i.e., Red knot) should be considered in an effects analysis for the proposed project. No critical habitats were identified within the proposed project area.

The USCG requests that the USFWS provide any additional information or potential concerns regarding the presence of threatened and endangered species that may be potentially affected by the maintenance dredging of the boat basin and moorings at the MWR Boat Ramp. Any comments or recommendations that your agency may have for avoiding potential impacts associated with this project would also be appreciated. We would appreciate receipt of your written approval within 30 days of this letter; this will help us maintain the overall schedule for this project.

If you have any questions, please contact Jennifer Jones (AECOM) at (919) 239-7150 or Leilani Woods (USCG) at (252) 335-6847.

Yours sincerely,

Jennifer Jones
Environmental Task Manager

Ron Johnson
Senior Biologist

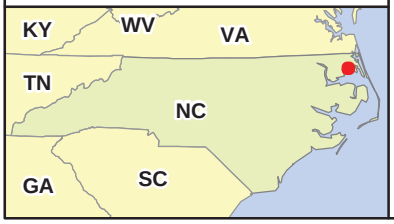
Cc: Ms. Leilani Woods, Environmental Engineer, USCG Civil Engineering Unit Cleveland
Mr. Greg Carpenter, Environmental Project Manager, USCG Civil Engineering Unit Cleveland

Attachments:
(A) Dredge Site – Location Map
(B) Dredge Site – Aerial Photograph
(C) Dredge Site – Ground-Level Photographs
(D) Dredge Site – 35% Plan
(E) Table 1 – Listing of Rare, Threatened and Endangered Species
(F) References Cited

ATTACHMENT (A)

DREDGE SITE - LOCATION MAP

Map Location



Site Location Map

MWR Boat Ramp
USCG Base Elizabeth City, North Carolina

Elizabeth City NC Topographic Quadrangle (1983)

0 1,000 2,000 Feet

June 2014

60321114

Figure 1

AECOM Environment
701 Corporate Center Drive, Suite 475
Raleigh, NC 27607
Phone: (919) 854-6200
Fax: (919) 854-6259
Web: http://www.aecom.com

ATTACHMENT (B)

DREDGE SITE – AERIAL PHOTOGRAPH

Scale: Not To Scale	(Source: Google Earth© 2014)	**Dredge Site - Aerial Photograph** US Coast Guard Base Elizabeth City – MWR Boat Ramp Elizabeth City, NC	AECOM **Attachment B**
			www.aecom.com

ATTACHMENT (C)

DREDGE SITE – GROUND-LEVEL PHOTOGRAPHS

PHOTOGRAPH LOG

Facility Name:	Site Location:	Project No.
United States Coast Guard	MWR Boat Ramp – USCG Base Elizabeth City, NC	60321114

Photo No. 1	Date: 05/7/14

Direction Photo Taken:

North

Description:

View from the southern side of the shore (concrete pavement approach) of the concrete ramp, docks, navigation aids, and light pedestals.

Photo No. 2	Date: 05/7/14

Direction Photo Taken:

Northwest

Description:

View from the concrete pavement approach along the southern shoreline.

PHOTOGRAPH LOG

Facility Name:	Site Location:	Project No.
United States Coast Guard	MWR Boat Ramp – USCG Base Elizabeth City, NC	60321114

Photo No. 3	Date: 05/7/14

Direction Photo Taken:

South

Description:

View looking south of the concrete ramp, docks, light pedestals, and mooring piles.

Photo No. 4	Date: 05/7/14

Direction Photo Taken:

North

Description:

View at the end of the concrete ramp of the docks, light pedestals, and mooring piles.

PHOTOGRAPH LOG

Facility Name:	Site Location:	Project No.
United States Coast Guard	MWR Boat Ramp – USCG Base Elizabeth City, NC	60321114

Photo No. 5	Date: 05/7/14

Direction Photo Taken:

South-Southeast

Description:

View of the man-made beach located southeast of the MWR Boat Ramp.

Photo No. 6	Date: 05/7/14

Direction Photo Taken:

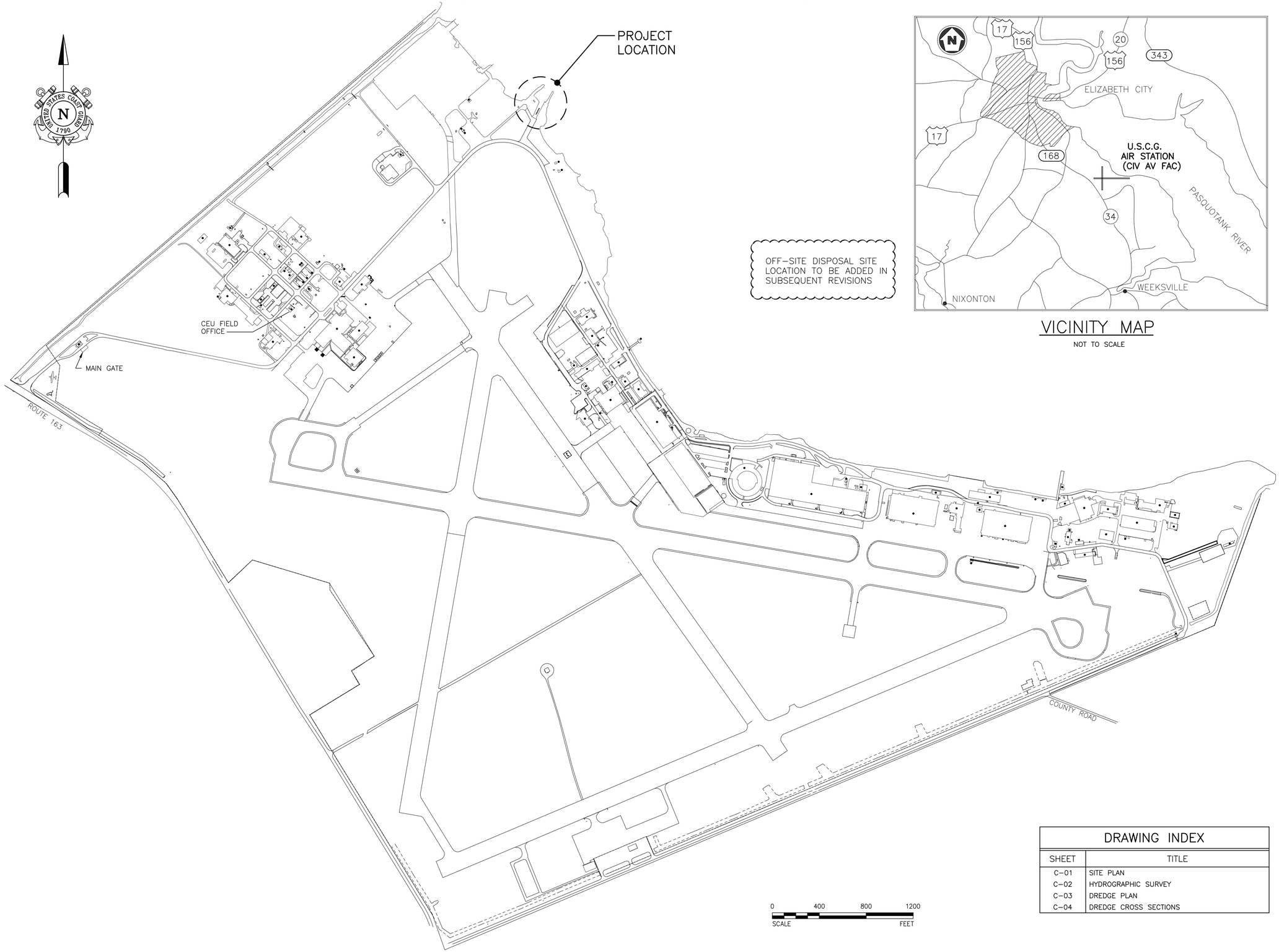
North

Description:

View of the navigation aids at entry to the protected harbor area. Note two timbers low to water surface in the entry-way.

ATTACHMENT (D)

DREDGE SITE – 35% PLAN



OFF-SITE DISPOSAL SITE LOCATION TO BE ADDED IN SUBSEQUENT REVISIONS

VICINITY MAP

NOT TO SCALE

DRAWING INDEX

SHEET	TITLE
C-01	SITE PLAN
C-02	HYDROGRAPHIC SURVEY
C-03	DREDGE PLAN
C-04	DREDGE CROSS SECTIONS

USCG CEU
CLEVELAND, OHIO
(216) 902-6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199-2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C01.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP

SCALE: AS SHOWN PLOT SCALE: 1:1

SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL
SITE PLAN

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

P.R. CARROLL, CDR. — APPROVING OFFICER
DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257-D
DISCIPLINE/SHT NO	
C-01	SHEET 1 OF 4

LEGEND

8.2 (TYP) – DEPTH MEASUREMENT (SOUNDING) REFERENCED TO MEAN WATER LEVEL (MWL)

−10 (TYP) – CONTOUR ELEVATION REFERENCED TO MWL

(+2.5) (TYP) – SPOT ELEVATION (ON PIER & SHEET PILE)

(TYP) – UNDERGROUND UTILITY VAULT

(TYP) – CONCRETE MATERIAL

(TYP) – RIP–RAP

(TYP) – WOODEN PIER / BULKHEAD

(TYP) – UTILITY VALVE

(S) (TYP) – SANITARY SEWER MANHOLE

(E) (TYP) – ELECTRIC UTILITY MANHOLE

(TYP) – LIGHT PEDESTAL

(TYP) – LIGHT

(TYP) – INFORMATIONAL SIGN

(TYP) – CAMERAL POLE

(TYP) – MARINE PILING

(TYP) – MOORING DOLPHIN

0 20' 40'

HORIZONTAL SCALE

N 929,300 N 929,400 N 929,500 N 929,600 N 929,700 N 929,800 N 929,900

E 2,892,700 E 2,892,800 E 2,892,900 E 2,893,000 E 2,893,100 E 2,893,200 E 2,893,300

RIP–RAP (SEE NOTE 8)

MOORING DOLPHIN (3 PILINGS) (TYP.)

INFORMATIONAL SIGN

MARINE PILING (TYP.)

CONCRETE PAD & ELECTRIC MANHOLE(S)

ELECTRIC UTILITY VAULT

LIGHT (TYP.)

CHANNEL MARKER (RED #2)

CAMERA POLE

PASQUOTANK RIVER (FLOW)

GRASSY AREA

TIMBER MOORING PILES (7)

STREET LIGHT

CHANNEL MARKER (GREEN #1)

CONCRETE ACCESS/EGRESS ROADWAY

APPROXIMATE LIMITS OF SUBMERGED CONCRETE RAMP

WOODEN PIER

WOODEN BULKHEAD

LIGHT PEDESTAL

CUT OFF TIMBER PILES

INFORMATIONAL SIGN (NO SWIMMING)

INFORMATIONAL SIGN (STAY OFF ROCKS)

SEE NOTE 9

CONCRETE RAMP

WOODEN BULKHEAD

LIGHT (TYP.)

LIGHT PEDESTAL

INFORMATIONAL SIGN (NO SWIMMING)

RIP–RAP (SEE NOTE 8)

POWER PEDESTAL

GRASSY AREA

INFORMATIONAL SIGN (STAY OFF ROCKS)

BATHYMETRY NOTES

1. BATHYMETRIC SURVEY DATA WAS COLLECTED ON MAY 07–09, 2014 BY GAHAGAN & BRYANT ASSOCIATES OF NC, PLLC. (GBA) AND IS EXPRESSED IN FEET BELOW MEAN WATER LEVEL (MWL).
2. HORIZONTAL DATUM IS IN REFERENCE TO THE NORTH CAROLINA STATE PLANE GRID COORDINATE SYSTEM NORTH AMERICAN DATUM OF 1983 (NAD83).
3. VERTICAL DATUM IS IN REFERENCE TO MEAN WATER LEVEL (MWL). MWL IS 0.44 FEET ABOVE THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

MWL
0.44'
NAVD88
5.94'
−5.50'
USGS GAUGE #0204382800

4. MWL ESTABLISHED FROM USGS WATER LEVEL GAUGE #0204382800 LOCATED ON THE PASQUOTANK RIVER. GAUGE DATUM = −5.50' NAVD88, MEAN GAUGE HEIGHT = 5.94' (FEB 06 – SEP 08)
5. BATHYMETRIC DATA DEPICTED ON THIS PLAN IS REPRESENTATIVE OF A LARGER DATA SET & WAS CORRECTED IN REAL TIME VIA REAL TIME KINEMATIC (RTK) TIDES.
6. EQUIPMENT USED

VESSEL:	GBA "SEA MINNOW"
ECHO SOUNDER:	ODOM CV100
HORIZONTAL POSITIONING:	RTK 5700
BASE STATION:	TRIMBLE R8 SET UP ON NGS MONUMENT "S 176 RESET"
ROVER:	TRIMBLE R6 USED FOR UPLAND SURVEY

7. THE INFORMATION DEPICTED ON THIS PLAN REPRESENTS RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.
8. RIP–RAP LIMITS ARE APPROXIMATE. SPORADIC RIP–RAP PIECES ARE PRESENT IN SURVEY AREA AND ARE NOT SHOWN FOR CLARITY.
9. LIMITS SHOWN DEPICT THE TRANSITION FROM A COMPACT SUBSTRATE TO A SOFT MATERIAL, POSSIBLY THE SCOUR STONE PROTECTION LIMITS.

USCG CEU
CLEVELAND, OHIO
(216) 902–6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199–2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C02.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP
SCALE: AS SHOWN	PLOT SCALE: 1:1

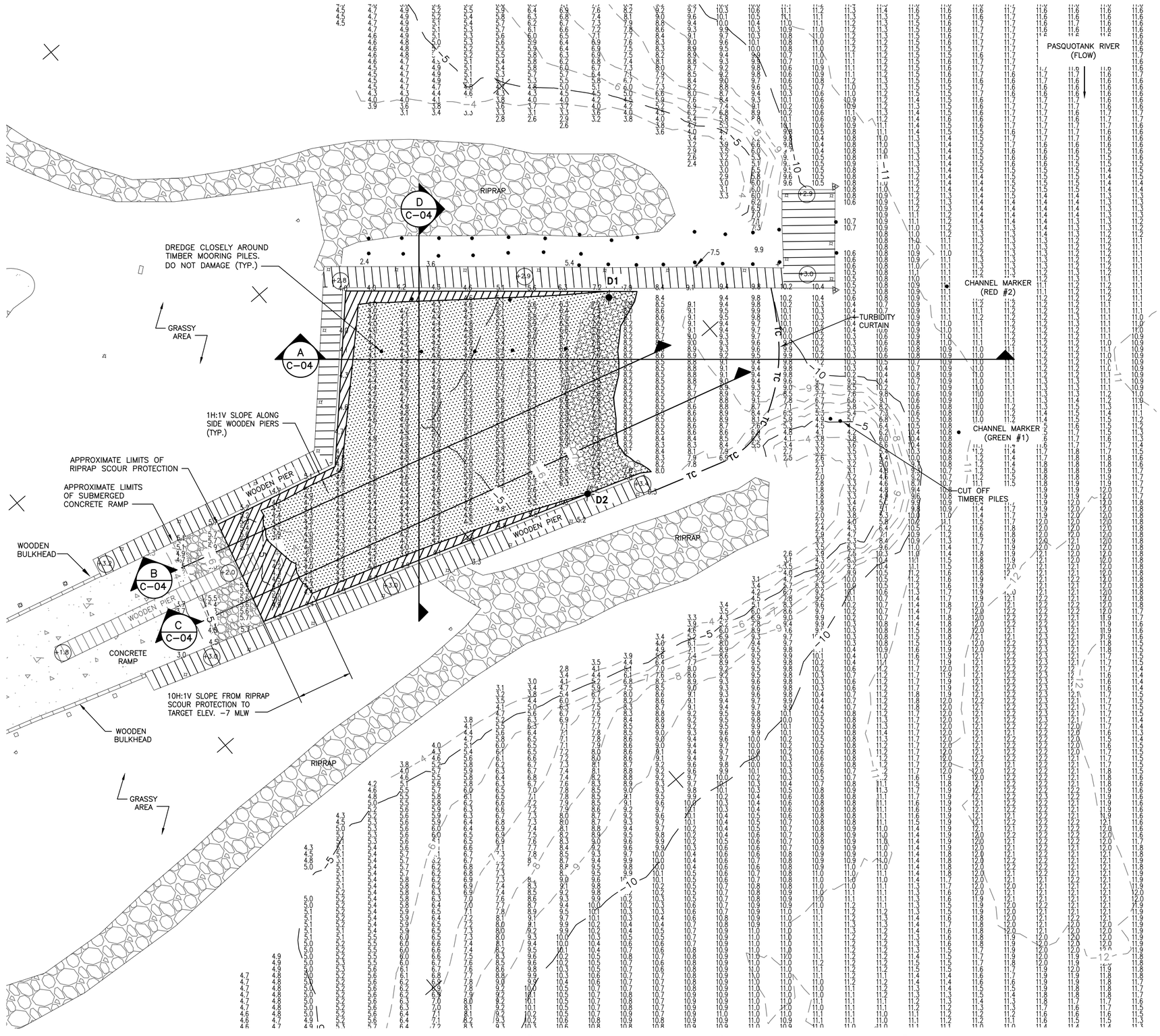
SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL
HYDROGRAPHIC SURVEY

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

P.R. CARROLL, CDR.
APPROVING OFFICER — DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257–D
DISCIPLINE/SHT NO	
C–02	SHEET 2 OF 4



LEGEND:

- EXISTING CONTOUR (5' INTERVAL)
- EXISTING CONTOUR (1' INTERVAL)
- DREDGE COORDINATE POINT & ID
- 11.3 — DEPTH MEASUREMENT (SOUNDING) REFERENCED TO MEAN WATER LEVEL (MWL)
- −10 — CONTOUR ELEVATION REFERENCED TO MWL
- +2.5 — SPOT ELEVATION (ON PIER OR STRUCTURE)
- EXISTING CONCRETE MATERIAL
- EXISTING RIPRAP
- PROPOSED DREDGING TO TARGET DEPTH −7 MWL
- PROPOSED OVER-DEPTH DREDGE TO −8 MWL
- PROPOSED DREDGE SIDE SLOPES (SLOPES VARY – SEE PLAN)

NOTES:

1. 0.0 MWL FOR PASQUOTANK RIVER = −0.44' NAVD88
2. THE TARGET DREDGE DEPTH FOR THIS PROJECT IS −7 FT MWL. OVER-DEPTH DREDGE IN THESE AREAS SHALL NOT EXCEED −8 FT MWL.
3. CONTRACTOR SHALL USE METHODS AND EQUIPMENT THAT PROTECT THE PIER STRUCTURES FROM DAMAGE. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE.
4. CONTRACTOR SHALL DREDGE AT A 10H:1V SLOPE AT THE LAUNCH RAMP STARTING AT THE END OF THE RIPRAP SCOUR PROTECTION.

DREDGE COORDINATE TABLE

DREDGE ID	NORTHING	EASTING
D1	929382.66	2831869.00
D2	929337.45	2831913.52

- **COORDINATES ARE IN** NORTH CAROLINA STATE PLANE GRID COORDINATE SYSTEM, FEET (NAD83).

0 16 32 48
SCALE IN FEET

USCG CEU
CLEVELAND, OHIO
(216) 902-6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

UNITED STATES COAST GUARD 1790

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199-2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C03.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP

SCALE: AS SHOWN PLOT SCALE: 1:1

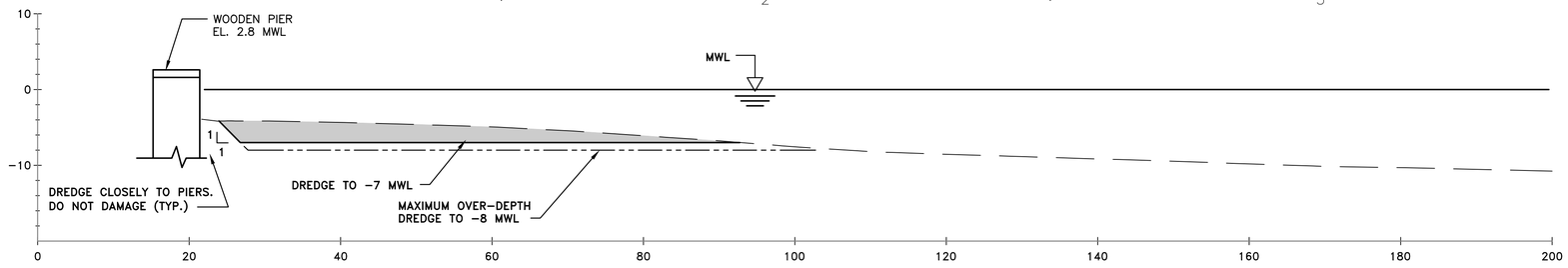
SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL
DREDGE PLAN

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

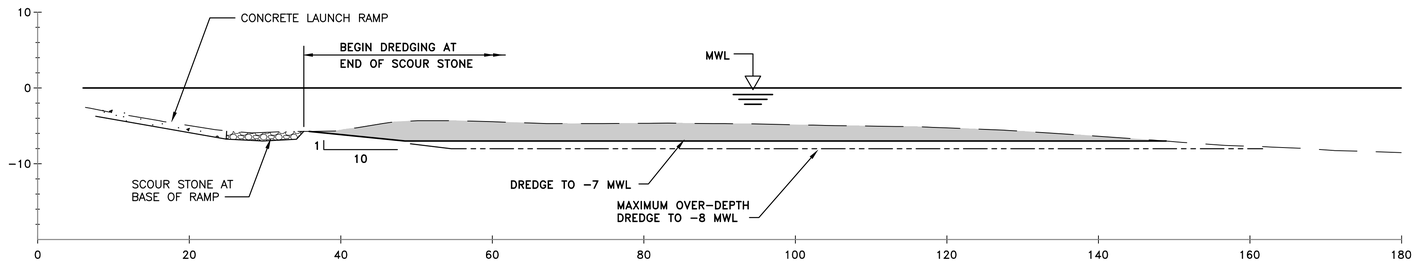
P.R. CARROLL, CDR.
APPROVING OFFICER — DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257-D
DISCIPLINE/SHT NO	SHEET 3 OF 4
C-03	



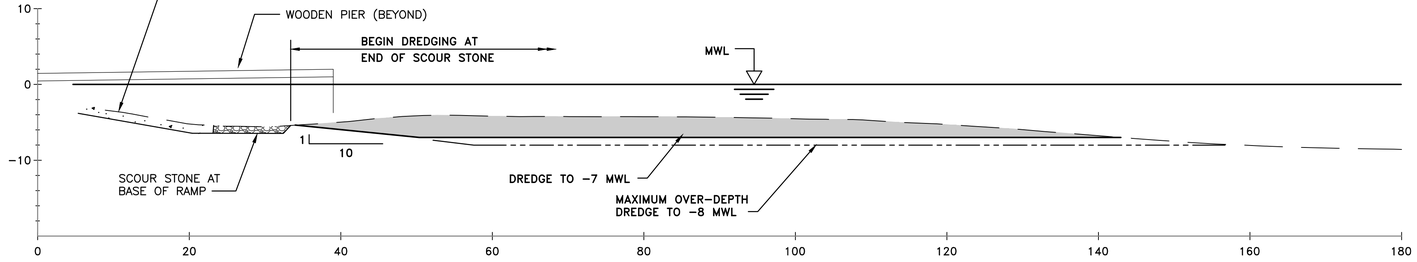
SECTION A C−04

FEET 0 10 20



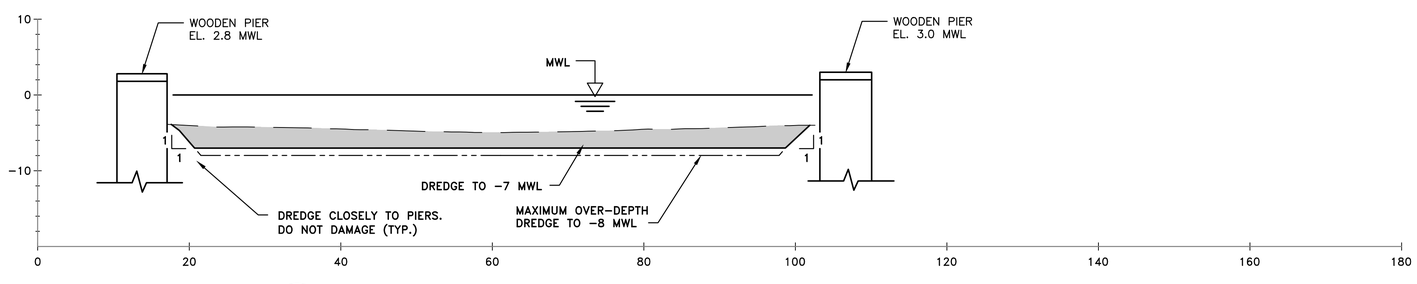
SECTION B C−04

FEET 0 10 20



SECTION C C−04

FEET 0 10 20

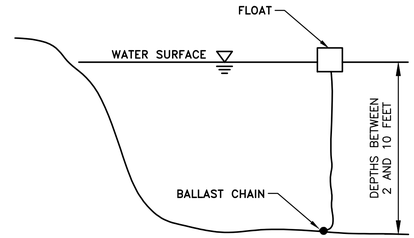


SECTION D C−04

FEET 0 10 20

LEGEND

- EXISTING TOP OF SEDIMENT
- PROPOSED BASE DREDGE ELEVATION
- MAXIMUM OVER−DEPTH DREDGE



TURBIDITY CURTAIN DETAIL

NOT TO SCALE

USCG CEU
CLEVELAND, OHIO
(216) 902−6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199−2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C04.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP

SCALE: AS SHOWN PLOT SCALE: 1:1

SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL

DREDGE CROSS SECTIONS

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

P.R. CARROLL, CDR. — APPROVING OFFICER

DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257−D
DISCIPLINE/SHT NO	
C−04	SHEET 4 OF 4

ATTACHMENT (E)

TABLE 1 – LISTING OF RARE, THREATENED AND ENDANGERED SPECIES

Table 1 - Rare, Threatenened and Endangered Species, Natural Communities, and Special Habitats Listed by the Natural Heritage Program in Elizabeth City Quadrangle and US Fish and Wildlife Service in Pasquotank County

Taxonomic Group	Scientific Name	Common Name	State Status	NCNHP Search by USGS Quadrangle	Federal Status	Federal Record Status	Listed in Pasquotank County?	Habitat
Species								
Bird	*Haliaeetus leucocephalus*	Bald Eagle	T	Historical	BGPA	*Current	yes	mature forests near large bodies of water (for nesting); lakes and sounds (for foraging) [nesting sites only]
Bird	*Calidris canutus rufa*	Red Knot	-	-	P	*Current	yes	migration stops along the Atlantic coast; principally found in marine and estuarine habitats; main food source is horseshoe crab eggs
Fish	*Acipenser brevirostrum*	Shortnose Sturgeon	E	Current	E	*Current	yes	anadromous; prefer nearshore marine, estuarine, and riverine habitat of large river systems; migrate periodically into faster moving fresh water areas to spawn
Fish	*Acipenser oxyrinchus*	Atlantic Sturgeon	SC	Current	E	*Current	yes	anadromous; migrate from estuarine and marine waters into freshwater in the spring and early summer to spawn; spawn in moderately flowing water in deep parts of large rivers; subadults and adults live in coastal waters and estuaries
Fish	*Anguilla rostrata*	American Eel	-	-	FSC	*Current	yes	catadromous; mature eels migrate from brackish and freshwater habitats in streams, large rivers, and estuaries to the ocean to spawn. Larvae develop in the ocean and the eel migrates upstream to estuaries and freshwater habitats as it matures.
Mammal	*Trichechus manatus*	West Indian Manatee	-	-	E	*Current	yes	warm waters of estuaries and river mouths
Vascular Plant	*Sagittaria weatherbiana*	Grassleaf Arrowhead	-	-	FSC	**Historic	yes	fresh or brackish marshes, streambanks, and wet depressions
Vascular Plant	*Boltonia asteroides var. glastifolia*	White Doll's-daisy	SR-O	Historical	-	-	-	clay-based Carolina bays, marshes, savannas
Vascular Plant	*Iris prismatica*	Slender Blue Iris	SR-T	Historical	-	-	-	bogs, marshes, and wet powerline clearings
Vascular Plant	*Ludwigia alata*	Winged Seedbox	SR-P	Historical	-	-	-	interdune ponds, marshes
Habitats								
Natural Community	-	Mesic Mixed Hardwood Forest (Coastal Plain Subtype)	N/A	Current	N/A	-	-	-
Natural Community	-	Nonriverine Wet Hardwood Forest (Oak Flat Subtype)	N/A	Current	N/A	-	-	-
Natural Community	-	Peatland Atlantic White Cedar Forest	N/A	Current	N/A	-	-	-
Natural Community	-	Tidal Swamp (Cypress-Gum Subtype)	N/A	Current	N/A	-	-	-

Notes

1. Current record - there is at least one record for the element in the region that has been seen recently.
2. Historical record - either the element has not been found in recent surveys in the region; or it has not been surveyed recently enough to be confident they are still present; or the occurreence is though to be destroyed.
3. *Current record - the species has been observed in the county within the last 50 years.
4. **Historic record - the species was last observed in the county more than 50 years ago.

State Status:

E = Endangered
T = Threatened
SC = Special Concern
SR-O = Significantly Rare - Other
SR-P = Significantly Rare - Peripheral
SR-T = Significantly Rare - Throughout
- = Not listed by NCNHP in Elizabeth City quad
N/A = Not applicable

Federal Status:

E = Endangered
T = Threatened
FSC = Federal Species of Concern
BGPA = Bald and Golden Eagle Protection Act
P = Proposed
- = Not listed by USFWS in Pasquotank County
N/A = Not applicable

ATTACHMENT (F)

REFERENCES CITED

References Cited

North Carolina Natural Heritage Program, Heritage Data Search, 2014. Accessed online September 2014 at http://www.ncnhp.org/web/nhp/database-search

North Carolina OneMap, Geospatial Portal, 2014. Accessed online October 2014 at http://data.nconemap.com/geoportal/catalog/main/home.page

U.S. Fish and Wildlife Service, Critical Habitat Portal, 2014. Accessed online September 2014 at http://ecos.fws.gov/crithab/

U.S. Fish and Wildlife Service, Endangered Species, Threatened Species, Federal Species of Concern, and Candidate Species for Pasquotank County, 2014. Accessed online September 2014 at http://www.fws.gov/raleigh/species/cntylist/pasquotank.html

U.S. Fish and Wildlife Service, Information, Planning, and Conservation System, 2014. Accessed online October 2014 at http://ecos.fws.gov/ipac/

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh ES Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

November 20, 2014

Jennifer Jones
AECOM
701 Corporate Center Drive, Suite 475
Raleigh, NC 27607

Re: USCG Base Elizabeth City Dredging at MWR Boat Ramp- Pasquotank County, NC

Dear Ms. Jones:

This letter is to inform you that a list of all federally-protected endangered and threatened species with known occurrences in North Carolina is now available on the U.S. Fish and Wildlife Service's (Service) web page at http://www.fws.gov/raleigh. Therefore, if you have projects that occur within the Raleigh Field Office's area of responsibility (see attached county list), you no longer need to contact the Raleigh Field Office for a list of federally-protected species.

Our web page contains a complete and frequently updated list of all endangered and threatened species protected by the provisions of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.)(Act), and a list of federal species of concern[1] that are known to occur in each county in North Carolina.

Section 7 of the Act requires that all federal agencies (or their designated non-federal representative), in consultation with the Service, insure that any action federally authorized, funded, or carried out by such agencies is not likely to jeopardize the continued existence of any federally-listed endangered or threatened species. A biological assessment or evaluation may be prepared to fulfill that requirement and in determining whether additional consultation with the Service is necessary. In addition to the federally-protected species list, information on the species' life histories and habitats and information on completing a biological assessment or evaluation and can be found on our web page at http://www.fws.gov/raleigh. Please check the web site often for updated information or changes.

---

[1] The term "federal species of concern" refers to those species which the Service believes might be in need of concentrated conservation actions. Federal species of concern receive no legal protection and their designation does not necessarily imply that the species will eventually be proposed for listing as a federally endangered or threatened species. However, we recommend that all practicable measures be taken to avoid or minimize adverse impacts to federal species of concern.

If your project contains suitable habitat for any of the federally-listed species known to be present within the county where your project occurs, the proposed action has the potential to adversely affect those species. As such, we recommend that surveys be conducted to determine the species' presence or absence within the project area. The use of North Carolina Natural Heritage program data should not be substituted for actual field surveys.

If you determine that the proposed action may affect (i.e., likely to adversely affect or not likely to adversely affect) a federally-protected species, you should notify this office with your determination, the results of your surveys, survey methodologies, and an analysis of the effects of the action on listed species, including consideration of direct, indirect, and cumulative effects, before conducting any activities that might affect the species. If you determine that the proposed action will have no effect (i.e., no beneficial or adverse, direct or indirect effect) on federally listed species, then you are not required to contact our office for concurrence (unless an Environmental Impact Statement is prepared). However, you should maintain a complete record of the assessment, including steps leading to your determination of effect, the qualified personnel conducting the assessment, habitat conditions, site photographs, and any other related articles.

With regard to the above-referenced project, we offer the following remarks. Our comments are submitted pursuant to, and in accordance with, provisions of the Endangered Species Act.

Based on the information provided and other information available, it appears that the proposed action is not likely to adversely affect any federally-listed endangered or threatened species, their formally designated critical habitat, or species currently proposed for listing under the Act at these sites. We believe that the requirements of section 7(a)(2) of the Act have been satisfied for your project. Please remember that obligations under section 7 consultation must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered; (2) this action is subsequently modified in a manner that was not considered in this review; or, (3) a new species is listed or critical habitat determined that may be affected by the identified action.

However, the Service is concerned about the potential impacts the proposed action might have on aquatic species. Aquatic resources are highly susceptible to sedimentation. Therefore, we recommend that all practicable measures be taken to avoid adverse impacts to aquatic species, including implementing directional boring methods and stringent sediment and erosion control measures. An erosion and sedimentation control plan should be submitted to and approved by the North Carolina Division of Land Resources, Land Quality Section prior to construction. Erosion and sedimentation controls should be installed and maintained between the construction site and any nearby down-gradient surface waters. In addition, we recommend maintaining natural, vegetated buffers on all streams and creeks adjacent to the project site.

The North Carolina Wildlife Resources Commission has developed a Guidance Memorandum (a copy can be found on our website at (http://www.fws.gov/raleigh) to address and mitigate secondary and cumulative impacts to aquatic and terrestrial wildlife resources and water quality. We recommend that you consider this document in the development of your projects and in completing an initiation package for consultation (if necessary).

We hope you find our web page useful and informative and that following the process described above will reduce the time required, and eliminate the need, for general correspondence for . species' lists. If you have any questions or comments, please contact John Ellis of this office at (919) 856-4520 ext. 26.

Sincerely,

Pete Benjamin
Field Supervisor

List of Counties in the Service's Raleigh Field Office Area of Responsibility

Alamance
Beaufort
Bertie
Bladen
Brunswick
Camden
Carteret
Caswell
Chatham
Chowan
Columbus
Craven
Cumberland
Currituck
Dare
Duplin
Durham
Edgecombe
Franklin
Gates
Granville
Greene
Guilford
Halifax
Harnett
Hertford
Hoke
Hyde
Johnston
Jones
Lee
Lenoir
Martin
Montgomery
Moore
Nash
New Hanover
Northampton
Onslow
Orange
Pamlico
Pasquotank
Pender
Perquimans
Person
Pitt
Randolph
Richmond
Robeson
Rockingham
Sampson
Scotland
Tyrrell
Vance
Wake
Warren
Washington
Wayne
Wilson

AECOM
701 Corporate Center Drive, Suite 475
Raleigh, NC 27607

919.854.6200 tel
919.854.6259 fax

October 29, 2014

Ms. Shannon Deaton
Habitat Conservation Program Manager
North Carolina Wildlife Resources Commission
Inland Fisheries
1721 Mail Service Center
Raleigh, NC 27699-1721

Subject: U.S. Coast Guard Base Elizabeth City – Dredging at MWR Boat Ramp, Elizabeth City, North Carolina

Dear Ms. Deaton:

The U.S. Coast Guard (USCG) Civil Engineering Unit Cleveland is in the process of preparing an Environmental Assessment (EA) for proposed maintenance dredging of the boat basin and moorings at the Morale, Welfare and Recreate (MWR) Boat Ramp at the USCG Base Elizabeth City. The USCG Base Elizabeth City is located approximately 3.5 miles southeast of Elizabeth City, along Highway 34, on the south shore of the Pasquotank River in Pasquotank County, North Carolina (**Attachment A**). The geographic location of the MWR Boat Ramp is latitude 36° 16' 14.72" north and longitude 76° 10' 40.31" west.

The MWR Boat Ramp is a previously dug man-made basin and the proposed dredging will occur entirely within the previously disturbed footprint of the boat basin and moorings. However, the USCG has no record of the as-built drawings indicating the original dredge depth. While the dredging required for the original construction of the MWR Boat Ramp likely disturbed the sediments to a depth proximate to the proposed dredge depth, the exact depth of the original dredging is not documented. Therefore, the USCG has elected to conduct an EA to address National Environmental Policy Act of 1969 requirements. The EA will determine whether or not there is potential for significant impact to the human and natural environments. Following completion of the EA, the USCG will either file a Finding of No Significant Impact or prepare an Environmental Impact Statement. This letter provides the North Carolina Wildlife Resources Commission (NC WRC) with information on the boat ramp construction, existing environment, and proposed action in advance of issuance of the EA for this project. The USCG would appreciate any comments the NC WRC may have for consideration in preparation of the EA.

The MWR Boat Ramp is located on the north end of the Base's shoreline, in a portion of the river tidal flats. The MWR Boat Ramp consists of a two-lane concrete ramp with a concrete pavement approach and a launch dock centered in the boat ramp (**Attachments B and C**). Rubble mound stone breakwaters project approximately 100 to 125 feet from the shoreline on both sides of the launch ramp to form a protected harbor area for launching and retrieving boats. Timber docks line both sides of the boat basin. Mooring piles are in place along the west timber dock. Navigation aids are located near the entrance to the boat basin. These consist of a red dayboard with a solar-powered red beacon, and a green dayboard. The MWR Boat Ramp is utilized by base military personnel for launching privately-owned recreational boats, and for launching USCG vessels stationed at the Building 43 moorings.

The purpose of this project is to dredge the boat basin and moorings to a required depth below mean water level at the MWR Boat Ramp due to changing conditions at the site. Water depth in the boat basin and moorings is reduced by heavy winds from the north, which push water from the boat

basin and down the Pasquotank River. This wind effect decreases the depth of the water and encumbers the USCG's ability to utilize the existing boat ramp for both operational missions and recreational purposes. The project involves mechanical dredging of the boat basin and moorings to a maximum depth of 8 feet below mean water level (includes 1 foot over dredge depth). Mean water level corresponds to elevation -0.44 North American Vertical Datum 1988 (NAVD88). Therefore, dredging will proceed to -8.44 feet NAVD88. The calculated dredge volume for the MWR Boat Ramp is 755 cubic yards of sediment. The proposed dredging project will only temporarily impact open waters (an area totaling approximately 0.18 acres) and will occur entirely within the existing boat basin (limited to an area approximately 150 feet from the shoreline). The 35 percent civil site plan entitled, "Dredging at MWR Boat Ramp: CG Base Elizabeth City" illustrates the location and specifications of this proposed dredging project (**Attachment D**).

During the proposed dredging activities, the dredge area will be closed with an impermeable floating turbidity curtain with a weighted bottom edge. The dredge material will be deposited on barges, dewatered on the barges, transported by barge to an unloading site, offloaded to trucks, and transported by truck to the East Carolina Regional Landfill in Aulander, North Carolina for disposal. Formal approval for disposal of the dredge material at the MWR Boat Ramp has been received from the East Carolina Regional Landfill.

The USCG has completed background research and records review using various maps and available online sources for the site including, but not limited to: the North Carolina OneMap (NC OneMap) Habitat Map; the NC DMF Anadromous Fish Spawning Areas (AFSA) map for the Albemarle Sound area; the DMF Fishery Nursery Areas map; the National Oceanic and Atmospheric Administration Environmental Sensitivity Map for the Elizabeth City Quadrangle; and the South Atlantic Fishery Management Council's Essential Fish Habitat (EFH) online map. Based on the USCG's review, the proposed project site is located within AFSA waters and in an area of EFH; however, the project site is not located in the vicinity of a designated submerged aquatic vegetation area, a primary nursery area, or an EFH-Habitat Area of Particular Concern.

The USCG requests that the NC WRC provide any additional information or potential concerns regarding the presence of significant natural resources that may be potentially affected by the maintenance dredging of the boat basin and moorings at the MWR Boat Ramp. Any comments or recommendations that your agency may have for avoiding potential impacts associated with this project would also be appreciated. We would appreciate receipt of your written approval within 30 days of this letter; this will help us maintain the overall schedule for this project.

If you have any questions, please contact Jennifer Jones (AECOM) at (919) 239-7150 or Leilani Woods (USCG) at (252) 335-6847.

Yours sincerely,

Jennifer Jones
Environmental Task Manager

Ron Johnson
Senior Biologist

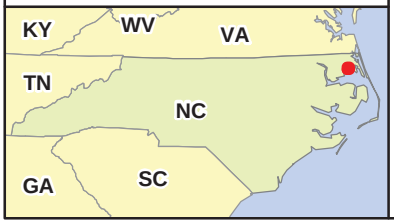
Cc: Ms. Leilani Woods, Environmental Engineer, USCG Civil Engineering Unit Cleveland
Mr. Greg Carpenter, Environmental Project Manager, USCG Civil Engineering Unit Cleveland

Attachments: (A) Dredge Site - Location Map
(B) Dredge Site - Aerial Photograph
(C) Dredge Site - Ground-Level Photographs
(D) Dredge Site – 35% Plan
(E) References Cited

ATTACHMENT (A)

DREDGE SITE - LOCATION MAP

Map Location



Site Location Map

MWR Boat Ramp
USCG Base Elizabeth City, North Carolina

Elizabeth City NC Topographic Quadrangle (1983)

0 1,000 2,000 Feet

June 2014

60321114

Figure 1

AECOM Environment
701 Corporate Center Drive, Suite 475
Raleigh, NC 27607
Phone: (919) 854-6200
Fax: (919) 854-6259
Web: http://www.aecom.com

ATTACHMENT (B)

DREDGE SITE – AERIAL PHOTOGRAPH

Scale: Not To Scale	(Source: Google Earth© 2014)	**Dredge Site - Aerial Photograph** US Coast Guard Base Elizabeth City – MWR Boat Ramp Elizabeth City, NC	AECOM **Attachment B**
			www.aecom.com

ATTACHMENT (C)

DREDGE SITE – GROUND-LEVEL PHOTOGRAPHS

PHOTOGRAPH LOG

Facility Name:	Site Location:	Project No.
United States Coast Guard	MWR Boat Ramp – USCG Base Elizabeth City, NC	60321114

Photo No. 1	Date: 05/7/14

Direction Photo Taken:

North

Description:

View from the southern side of the shore (concrete pavement approach) of the concrete ramp, docks, navigation aids, and light pedestals.

Photo No. 2	Date: 05/7/14

Direction Photo Taken:

Northwest

Description:

View from the concrete pavement approach along the southern shoreline.

PHOTOGRAPH LOG

Facility Name:	Site Location:	Project No.
United States Coast Guard	MWR Boat Ramp – USCG Base Elizabeth City, NC	60321114

Photo No. 3	Date: 05/7/14

Direction Photo Taken:

South

Description:

View looking south of the concrete ramp, docks, light pedestals, and mooring piles.

Photo No. 4	Date: 05/7/14

Direction Photo Taken:

North

Description:

View at the end of the concrete ramp of the docks, light pedestals, and mooring piles.

PHOTOGRAPH LOG

Facility Name:	Site Location:	Project No.
United States Coast Guard	MWR Boat Ramp – USCG Base Elizabeth City, NC	60321114

Photo No. 5	Date: 05/7/14

Direction Photo Taken:

South-Southeast

Description:

View of the man-made beach located southeast of the MWR Boat Ramp.

Photo No. 6	Date: 05/7/14

Direction Photo Taken:

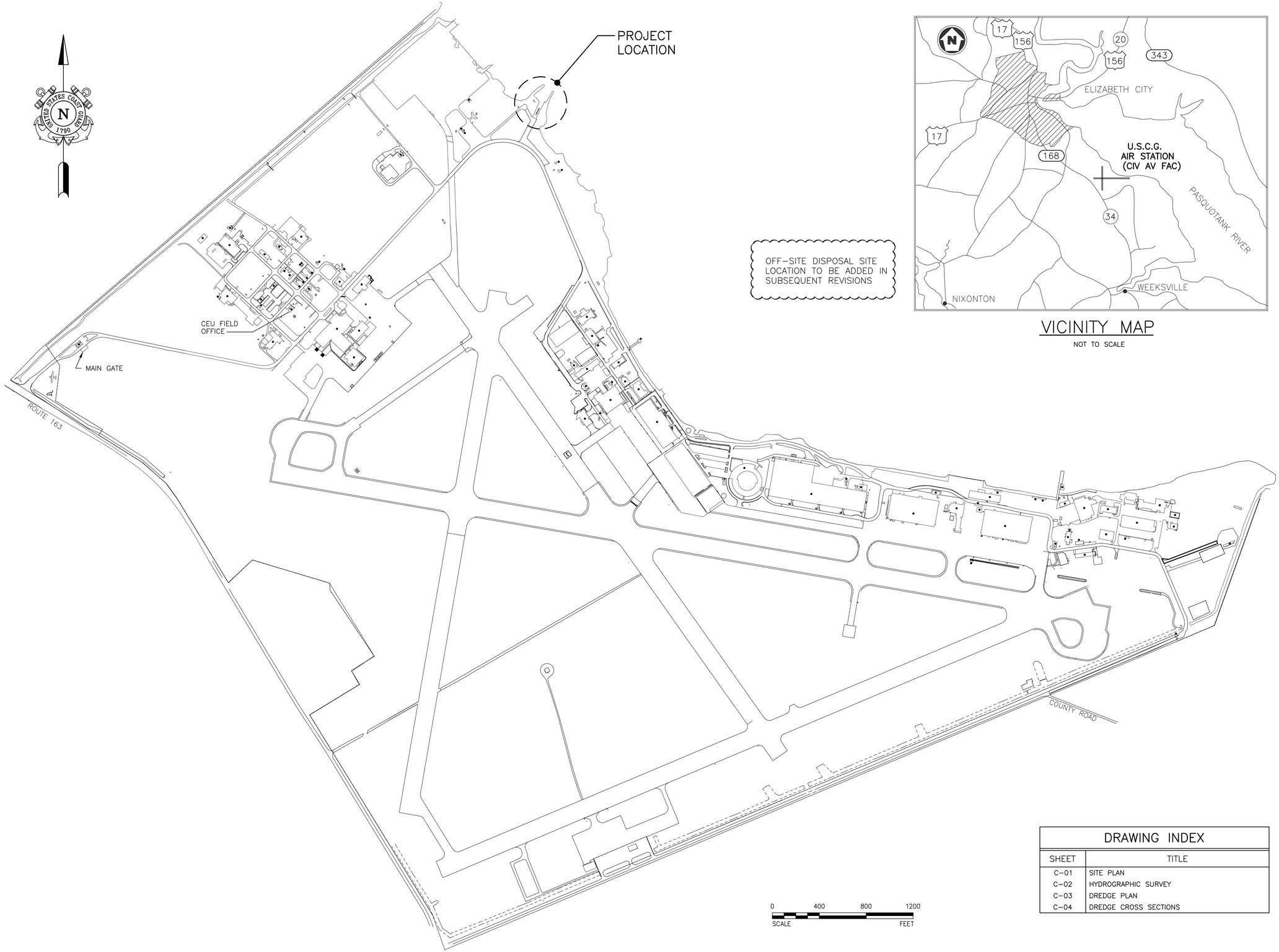
North

Description:

View of the navigation aids at entry to the protected harbor area. Note two timbers low to water surface in the entry-way.

ATTACHMENT (D)

DREDGE SITE – 35% PLAN



OFF-SITE DISPOSAL SITE LOCATION TO BE ADDED IN SUBSEQUENT REVISIONS

VICINITY MAP

NOT TO SCALE

DRAWING INDEX

SHEET	TITLE
C-01	SITE PLAN
C-02	HYDROGRAPHIC SURVEY
C-03	DREDGE PLAN
C-04	DREDGE CROSS SECTIONS

USCG CEU
CLEVELAND, OHIO
(216) 902-6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199-2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C01.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP

SCALE: AS SHOWN PLOT SCALE: 1:1

SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL
SITE PLAN

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

P.R. CARROLL, CDR. — APPROVING OFFICER
DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257-D
DISCIPLINE/SHT NO	
C-01	SHEET 1 OF 4

LEGEND

8.2 (TYP) – DEPTH MEASUREMENT (SOUNDING) REFERENCED TO MEAN WATER LEVEL (MWL)

−10 (TYP) – CONTOUR ELEVATION REFERENCED TO MWL

(+2.5) (TYP) – SPOT ELEVATION (ON PIER & SHEET PILE)

(TYP) – UNDERGROUND UTILITY VAULT

(TYP) – CONCRETE MATERIAL

(TYP) – RIP–RAP

(TYP) – WOODEN PIER / BULKHEAD

(TYP) – UTILITY VALVE

(S) (TYP) – SANITARY SEWER MANHOLE

(E) (TYP) – ELECTRIC UTILITY MANHOLE

(TYP) – LIGHT PEDESTAL

(TYP) – LIGHT

(TYP) – INFORMATIONAL SIGN

(TYP) – CAMERAL POLE

(TYP) – MARINE PILING

(TYP) – MOORING DOLPHIN

0 20' 40'

HORIZONTAL SCALE

N 929,300 N 929,400 N 929,500 N 929,600 N 929,700 N 929,800 N 929,900

E 2,892,700 E 2,892,800 E 2,892,900 E 2,893,000 E 2,893,100 E 2,893,200 E 2,893,300

RIP–RAP (SEE NOTE 8)

MOORING DOLPHIN (3 PILINGS) (TYP.)

INFORMATIONAL SIGN

MARINE PILING (TYP.)

CONCRETE PAD & ELECTRIC MANHOLE(S)

ELECTRIC UTILITY VAULT

LIGHT (TYP.)

CHANNEL MARKER (RED #2)

CAMERA POLE

PASQUOTANK RIVER (FLOW)

GRASSY AREA

TIMBER MOORING PILES (7)

STREET LIGHT

CHANNEL MARKER (GREEN #1)

CONCRETE ACCESS/EGRESS ROADWAY

APPROXIMATE LIMITS OF SUBMERGED CONCRETE RAMP

WOODEN PIER

WOODEN BULKHEAD

LIGHT PEDESTAL

CUT OFF TIMBER PILES

INFORMATIONAL SIGN (NO SWIMMING)

INFORMATIONAL SIGN (STAY OFF ROCKS)

SEE NOTE 9

CONCRETE RAMP

WOODEN BULKHEAD

LIGHT (TYP.)

LIGHT PEDESTAL

INFORMATIONAL SIGN (NO SWIMMING)

RIP–RAP (SEE NOTE 8)

POWER PEDESTAL

GRASSY AREA

INFORMATIONAL SIGN (STAY OFF ROCKS)

BATHYMETRY NOTES

1. BATHYMETRIC SURVEY DATA WAS COLLECTED ON MAY 07–09, 2014 BY GAHAGAN & BRYANT ASSOCIATES OF NC, PLLC. (GBA) AND IS EXPRESSED IN FEET BELOW MEAN WATER LEVEL (MWL).
2. HORIZONTAL DATUM IS IN REFERENCE TO THE NORTH CAROLINA STATE PLANE GRID COORDINATE SYSTEM NORTH AMERICAN DATUM OF 1983 (NAD83).
3. VERTICAL DATUM IS IN REFERENCE TO MEAN WATER LEVEL (MWL). MWL IS 0.44 FEET ABOVE THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

MWL
0.44'
NAVD88
5.94'
−5.50'
USGS GAUGE #0204382800

4. MWL ESTABLISHED FROM USGS WATER LEVEL GAUGE #0204382800 LOCATED ON THE PASQUOTANK RIVER. GAUGE DATUM = −5.50' NAVD88, MEAN GAUGE HEIGHT = 5.94' (FEB 06 – SEP 08)
5. BATHYMETRIC DATA DEPICTED ON THIS PLAN IS REPRESENTATIVE OF A LARGER DATA SET & WAS CORRECTED IN REAL TIME VIA REAL TIME KINEMATIC (RTK) TIDES.
6. EQUIPMENT USED

VESSEL:	GBA "SEA MINNOW"
ECHO SOUNDER:	ODOM CV100
HORIZONTAL POSITIONING:	RTK 5700
BASE STATION:	TRIMBLE R8 SET UP ON NGS MONUMENT "S 176 RESET"
ROVER:	TRIMBLE R6 USED FOR UPLAND SURVEY

7. THE INFORMATION DEPICTED ON THIS PLAN REPRESENTS RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.
8. RIP–RAP LIMITS ARE APPROXIMATE. SPORADIC RIP–RAP PIECES ARE PRESENT IN SURVEY AREA AND ARE NOT SHOWN FOR CLARITY.
9. LIMITS SHOWN DEPICT THE TRANSITION FROM A COMPACT SUBSTRATE TO A SOFT MATERIAL, POSSIBLY THE SCOUR STONE PROTECTION LIMITS.

USCG CEU
CLEVELAND, OHIO
(216) 902–6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199–2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C02.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP
SCALE: AS SHOWN	PLOT SCALE: 1:1

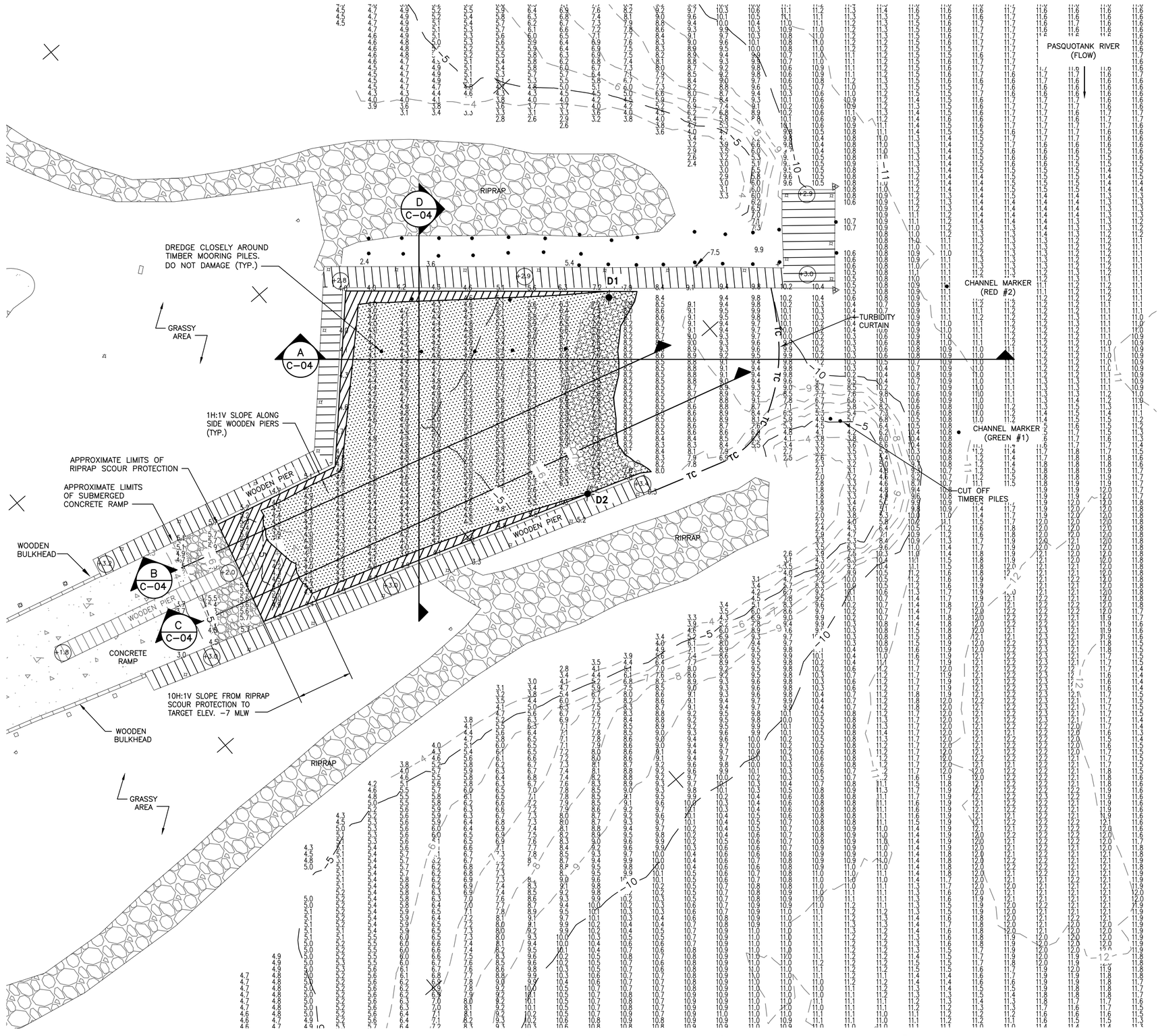
SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL
HYDROGRAPHIC SURVEY

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

P.R. CARROLL, CDR.
APPROVING OFFICER — DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257–D
DISCIPLINE/SHT NO	
C–02	SHEET 2 OF 4



LEGEND:

- EXISTING CONTOUR (5' INTERVAL)
- EXISTING CONTOUR (1' INTERVAL)
- DREDGE COORDINATE POINT & ID
- 11.3 — DEPTH MEASUREMENT (SOUNDING) REFERENCED TO MEAN WATER LEVEL (MWL)
- −10 — CONTOUR ELEVATION REFERENCED TO MWL
- +2.5 — SPOT ELEVATION (ON PIER OR STRUCTURE)
- EXISTING CONCRETE MATERIAL
- EXISTING RIPRAP
- PROPOSED DREDGING TO TARGET DEPTH −7 MWL
- PROPOSED OVER-DEPTH DREDGE TO −8 MWL
- PROPOSED DREDGE SIDE SLOPES (SLOPES VARY – SEE PLAN)

NOTES:

1. 0.0 MWL FOR PASQUOTANK RIVER = −0.44' NAVD88
2. THE TARGET DREDGE DEPTH FOR THIS PROJECT IS −7 FT MWL. OVER-DEPTH DREDGE IN THESE AREAS SHALL NOT EXCEED −8 FT MWL.
3. CONTRACTOR SHALL USE METHODS AND EQUIPMENT THAT PROTECT THE PIER STRUCTURES FROM DAMAGE. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE.
4. CONTRACTOR SHALL DREDGE AT A 10H:1V SLOPE AT THE LAUNCH RAMP STARTING AT THE END OF THE RIPRAP SCOUR PROTECTION.

DREDGE COORDINATE TABLE

DREDGE ID	NORTHING	EASTING
D1	929382.66	2831869.00
D2	929337.45	2831913.52

- **COORDINATES ARE IN** NORTH CAROLINA STATE PLANE GRID COORDINATE SYSTEM, FEET (NAD83).

0 16 32 48
SCALE IN FEET

USCG CEU
CLEVELAND, OHIO
(216) 902-6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

UNITED STATES COAST GUARD 1790

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199-2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C03.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP

SCALE: AS SHOWN PLOT SCALE: 1:1

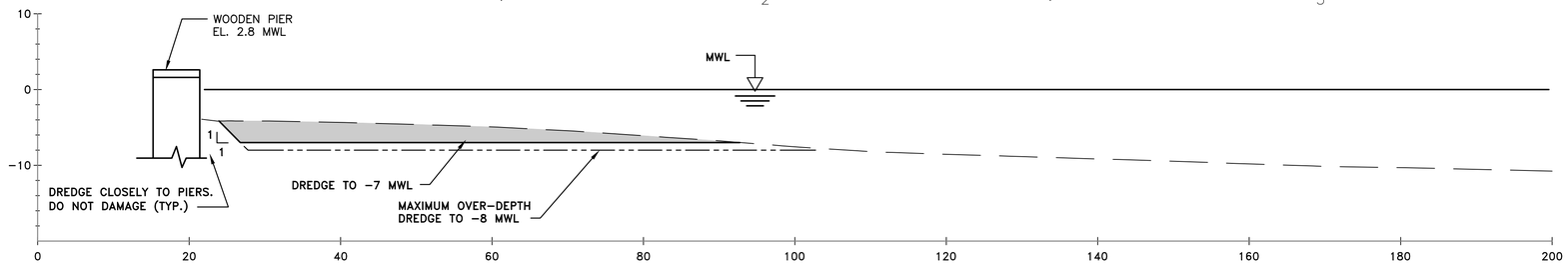
SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL
DREDGE PLAN

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

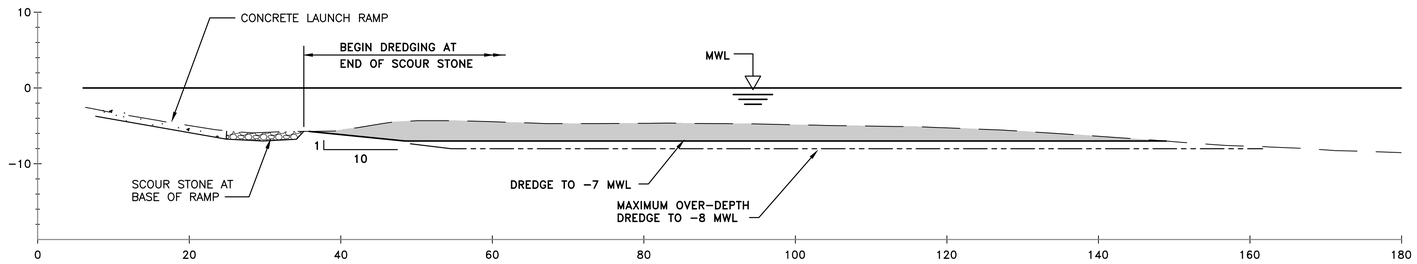
P.R. CARROLL, CDR.
APPROVING OFFICER — DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257-D
DISCIPLINE/SHT NO	SHEET 3 OF 4
C-03	



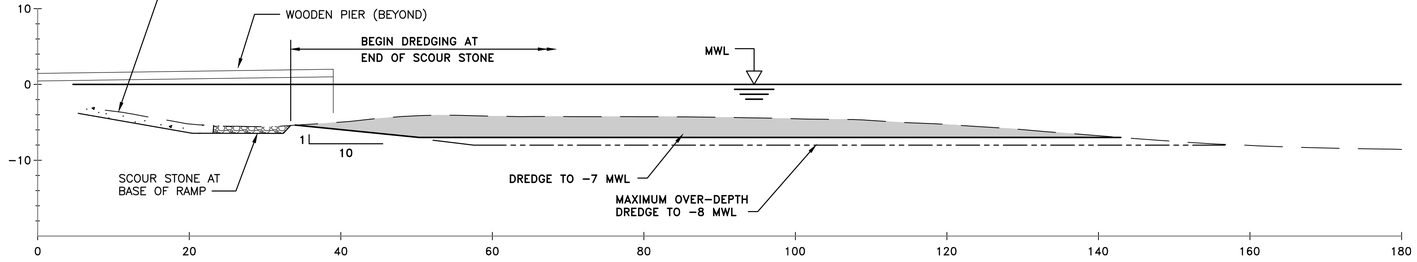
SECTION A C−04

FEET 0 10 20



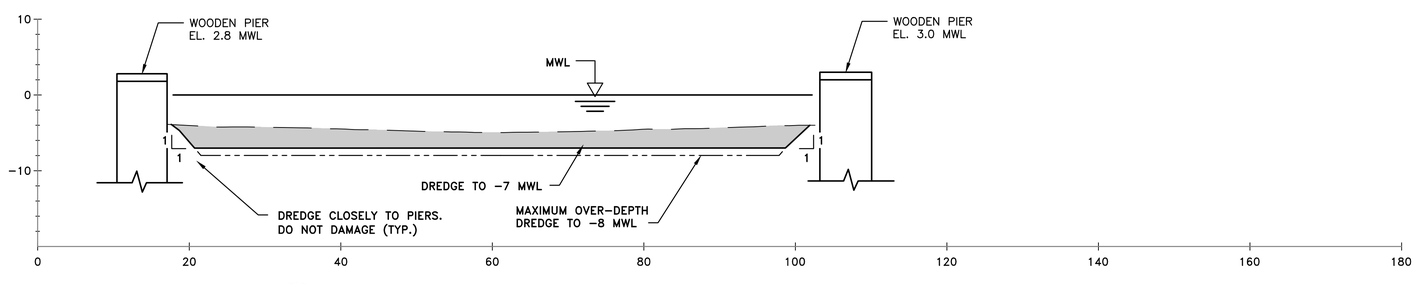
SECTION B C−04

FEET 0 10 20



SECTION C C−04

FEET 0 10 20

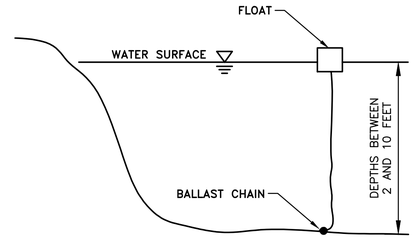


SECTION D C−04

FEET 0 10 20

LEGEND

- EXISTING TOP OF SEDIMENT
- PROPOSED BASE DREDGE ELEVATION
- MAXIMUM OVER−DEPTH DREDGE



TURBIDITY CURTAIN DETAIL

NOT TO SCALE

USCG CEU
CLEVELAND, OHIO
(216) 902−6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199−2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C04.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP

SCALE: AS SHOWN PLOT SCALE: 1:1

SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL

DREDGE CROSS SECTIONS

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

P.R. CARROLL, CDR. — APPROVING OFFICER

DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257−D
DISCIPLINE/SHT NO	
C−04	SHEET 4 OF 4

ATTACHMENT (E)

REFERENCES CITED

References Cited

National Oceanic and Atmospheric Administration, Office of Response and Restoration, Environmental Sensitivity Index Maps, 2011. Accessed online September 2014 at http://response.restoration.noaa.gov/esi

North Carolina Division of Marine Fisheries, Anadromous Fish Spawning Areas Maps, 2014. Accessed online October 2014 at http://portal.ncdenr.org/web/mf/afsa-maps

North Carolina Division of Marine Fisheries, Fishing Nursery Areas, 2014. Accessed online October 2014 at http://portal.ncdenr.org/web/mf/primary-nursery-areas

North Carolina Division of Marine Fisheries, Mapped Fish Habitats in Coastal North Carolina, 2014. Accessed online October 2014 at http://portal.ncdenr.org/web/mf/58

North Carolina OneMap, Geospatial Portal, 2014. Accessed online September 2014 at http://data.nconemap.com/geoportal/catalog/main/home.page

South Atlantic Fishery Management Council, Online Mapping, Essential Fish Habitat, 2014. Accessed online October 2014 at http://www.safmc.net/ecosystem-management/mapping-and-gis-data

North Carolina Wildlife Resources Commission

Gordon Myers, Executive Director

Ms. Jennifer Jones
AECOM
701 Corporate Center Drive, Suite 475
Raleigh, NC 27607

Subject: USCG Base Elizabeth City – Dredging at MWR Boat Ramp, Elizabeth City, NC

Dear Ms. Jones:

The North Carolina Wildlife Resources Commission (NCWRC) received your letter regarding the above subject and request for any additional information as it related to aquatic and terrestrial wildlife resources in the project area.

The project is located within the Pasquotank River, along the south shore approximately 3.5 miles southeast of Elizabeth City, NC. This area of the Pasquotank River is designated an Anadromous Fish Spawning Area (AFSA). Due to the importance of this area to anadromous species, a February 15 – June 30 moratorium may be requested for in-water work to minimize noise, vibration, and elevated turbidity levels during this period of time.

The NCWRC does not generally object to maintenance dredging activities, such as within boat ramps, when the project is maintained to the original permit dimensions. However, if this is unknown, dredging to depths deeper than connecting water depths should be avoided. This minimizes impacts to water quality and is consistent with NC Division of Coastal Management rule.

If you have additional questions or would like to discuss this project in more detail, please contact me at (252)948-3916 or at maria.dunn@ncwildlife.org

Sincerely,

Maria T. Dunn
Coastal Coordinator

Mailing Address: Division of Inland Fisheries • 1721 Mail Service Center • Raleigh, NC 27699-1721
Telephone: (919) 707-0220 • **Fax:** (919) 707-0028

U.S. Department of Homeland Security

United States Coast Guard

Commanding Officer
United States Coast Guard
Civil Engineering Unit Cleveland

1240 East Ninth Street
Room 2179
Cleveland Ohio 44199-2060
Staff Symbol: ER
Phone: (216) 902-6219
Fax: (216) 902-6277
Email: Gregory.O.Carpenter@uscg.mil

11000

National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southeast Regional Office

Submitted via e-mail to: nmfs.ser.esa.consultations@noaa.gov

SUBJECT: Integrated EFH and ESA Section 7 Consultation Request
U.S. Coast Guard Base Elizabeth City
Proposed Dredging at MWR Boat Ramp
Elizabeth City, Pasquotank County, North Carolina

Dear Sir/Madam:

Pursuant to Section 7 of the Endangered Species Act (ESA) of 1973 and the Magnuson-Stevens Fishery Conservation and Management Act (MSA) Sections 305(b)(2), the United States Coast Guard (USCG) is submitting this interagency consultation request. The USCG proposes to complete maintenance dredging of the boat basin and moorings at the Morale, Welfare and Recreation (MWR) Boat Ramp at the USCG Base Elizabeth City located at 1664 Weeksville Road, Elizabeth City, Pasquotank County, North Carolina. The geographic location of the MWR Boat Ramp is latitude 36° 16' 14.72" north and longitude 76° 10' 40.31" west.

The USCG, Civil Engineering Unit (CEU) Cleveland, Environmental Section conducted an effects determination of the proposed project and determined that the proposed action may affect, but is not likely to adversely affect, Endangered Species Act (ESA) listed species and Essential Fish Habitat (EFH).

This correspondence provides your office with a completed National Marine Fisheries Service (NMFS) ESA Section 7 Checklist as Attachment A. The Section 7 Checklist also includes information pertinent to the EFH Assessment. The proposed project Site Location Map and other supporting figures are presented as Attachments B, C and D. Attachment E contains the Dredge Plan. Attachment F contains a list of references reviewed in the effects determination.

SUBJECT: Integrated EFH and ESA Section 7 Consultation Request

The USCG requests your written concurrence in response to our informal consultation. If you have any questions, please contact Ms. Leilani Woods of my staff at (252) 335-6847. Alternatively, you may contact Ms. Jennifer Jones with our environmental firm (AECOM) at (919) 239-7150.

Sincerely,

Gregory O. Carpenter
Chief, Environmental Compliance
By direction of the Commanding Officer

Attachments:

(A) NMFS Endangered Species Act Section 7 Checklist
(B) Dredge Site - Location Map
(C) Dredge Site - Aerial Photograph
(D) Dredge Site - Ground-Level Photographs
(E) Dredge Site – 35% Plan
(F) References Cited

ATTACHMENT (A)

NMFS Endangered Species Act Section 7 Checklist

NMFS Endangered Species Act Section 7 Checklist

A) Project Identification

Lead Action Agency:

United States Coast Guard

Agency Contact: (Phone, Email)

Leilani Woods / Leilani.L.Woods@uscg.mil / (252) 335-6847

Applicant Name/ Contact: (Phone, Email)

AECOM, Jennifer Jones / Jennifer.Jones@aecom.com / (919) 239-7150

Project Name & ID #:

Dredging at MWR Boat Ramp / USCG Project# 3756419

B) Project Location

1. Address and description of property (public, residential, commercial, industrial, etc.):

1664 Weeksville Road, Elizabeth City, NC/USCG Base Elizabeth City (Government property). Dredging will occur at the USCG's boat ramp located within the Pasquotank River. The boat ramp is located at the north end of the base, along the south shore of the river.

2. Latitude & Longitude:
   i. Decimal Degrees and Datum (e.g., 27.71622° N, 80.25174° W [NAD83])
   ii. Online conversion: http://transition.fcc.gov/mb/audio/bickel/DDDMMSS-decimal.html

36.270836'N, 76.177862'W [NAD83]

3. Waterbody:
   i. Name of the body of water on which the project is located (St. Johns River, Tampa Bay, Suwannee River, etc.)
   ii. If riverine or estuarine, approximate navigable distance from marine environment (e.g., Atlantic, Gulf of Mexico)

The proposed project will occur within the Pasquotank River, approximately 10 nautical miles from Albemarle Sound and approximately 30 nautical miles from the Atlantic Ocean.

C) Project Site Description

1. Existing Structures: (Describe current structures in project area.)
   i. Marina, seawall, riprap, dock, etc.
   ii. Number of slips, size (area of overwater structures), linear footage, location, orientation, etc.

The MWR Boat Ramp consists of a two-lane concrete ramp with a concrete pavement approach and a launch dock centered in the boat ramp. Rubble mound stone breakwaters project approximately 100 to 125 feet from the shoreline on both sides of the launch ramp to form a protected harbor area. Timber docks line both sides of the boat basin. Mooring piles are in place along the west timber dock.

2. Existing Conditions: (Describe the project area.)
   i. Substrate type, water quality, depth, current, etc.

i. The substrate within the project area consists primarily of poorly graded sand with some silty sand (U.S.C.S. class is SP and SP-SM).
ii. Water quality parameters measured on 5/14/14: temperature 26.15 degrees Celsius; pH 6.95; conductivity 1.208 millisiemens per centimeter; dissolved oxygen 6.25 milligrams per liter, oxidation reduction potential 97.3 millivolts.
iii. Water depth at MWR Boat Ramp based on hydrographic survey performed on 5/7/14 ranged from 3.9 to 8.0 feet within the proposed project area.
iv. The project site is located within the estuarine waters of the Pasquotank River . The portion of the Pasquotank River where the project site is located is classified as "SB", which is described as "Primary Recreation, Salt Water".
v. Water depth in the boat basin and moorings is often reduced by heavy, sustained winds from the north, which push water from the boat basin and down the Pasquotank River. This wind effect decreases the depth of the water in the boat basin and moorings.

3. Seagrasses & Other Marine Vegetation:

i. If a benthic survey was conducted , provide date of survey and a copy of the report.
ii. Species area of coverage estimates and density of species coverage (percentage) estimates.
iii. Location relative to proposed structures. Provide detailed sketch of action area and location of all marine vegetation.

Not applicable. Also, the project site is not located in the vicinity of a designated submerged aquatic vegetation area.

4. Mangroves:

i. Species (red, black, or white)
ii. Area (square footage and linear footage). Provide detailed sketch of action area and location of mangroves.

Not applicable.

5. Corals:

i. Species area of coverage estimates (percentage) and density of species estimates.
ii. Location relative to proposed structures. Provide detailed sketch of action area and location of corals.

Not applicable.

D) Project Description and Construction Methods

1. Project: (Please provide detail.)

The purpose of this project is to dredge the boat basin and moorings to a required depth below mean water level at the MWR Boat Ramp due to changing conditions at the site. Water depth in the boat basin and moorings is reduced due to natural sediment deposition and wind-induced water level fluctuations, which encumber the USCG's ability to utilize the existing boat ramp for both operational missions and recreational purposes.
The MWR Boat Ramp is a previously dug man-made basin and the proposed dredging will occur entirely within the previously disturbed footprint of the boat basin and moorings. However, the USCG has no record of the as-built drawings indicating the original dredge depth. While the dredging required for the original construction of the MWR Boat Ramp likely disturbed the sediments to a depth proximate to the proposed dredge depth, the exact depth of the original dredging is not documented. Therefore, the USCG has elected to conduct an Environmental Assessment (EA) to address National Environmental Policy Act of 1969 requirements.

2. Methods:

i. Construction methodology (Please provide detail.)
ii. Demolition/removal of existing structures/debris
iii. Location of work (barge, upland, or both)

The project involves mechanical dredging of the boat basin and moorings to a maximum depth of 8 feet below mean water level. Mean water level corresponds to elevation -0.44 North American Vertical Datum 1988 (NAVD88). Therefore, dredging will proceed to -8.44 feet NAVD88. The calculated dredge volume for the MWR Boat Ramp is 755 cubic yards of sediment. The proposed dredging project will only temporarily impact open waters (an area totaling approximately 0.18 acres) and will occur entirely within the existing boat basin (limited to an area approximately 150 feet from the shoreline).
The dredging will be performed from a floating plant and not from land based operations. During the proposed dredging activities, the dredge area will be closed with an impermeable floating turbidity curtain with a weighted bottom edge. The dredge material will be deposited on barges, dewatered on the barges within the turbidity curtain, transported by barge to an unloading site, offloaded to trucks, and transported by truck to a licensed landfill for disposal.

3. Overwater Structures:

i. Is the proposed use of this structure for a docking facility or an observation platform?

ii. If no, is this a fishing pier? (public or private)
(a) If a fishing pier, how many people are expected to fish per day? (Use box below.)
(b) If a fishing pier, how do you plan to address hook and line captures? (Use box below.)

Section D, Question 3 is not applicable because the proposed project does not involve development or construction.

iii. Will Dock Guidelines - in Florida be used?

Dock Guidelines - Construction Guidelines in Florida for Minor Piling-Supported Structures Constructed in or over Submerged Aquatic Vegetation (SAV), Marsh or Mangrove Habitat. U.S. Army Corps of Engineers/National Marine Fisheries Service August, 2001

iv. If in Johnson's range, will Dock Construction Key regarding Johnson's seagrass be used?

Dock Key - Key for Construction Conditions for Docks or Other Minor Structures Constructed in or Over Johnson's Seagrass (*Halophila johnsonii*). National Marine Fisheries Service/U.S. Army Corps of Engineers, October 2002

(a) Grated (yes/no/NA)

v. Type of decking

1. 43% open space (yes/no/NA)

(b) Wooden planks or composite planks

1. Proposed spacing between boards (0.50-inch, 0.75-inch, etc.)

vi. Height above Mean High Water (MHW) elevation

vii. Directional orientation of main axis of dock

viii. Overwater area (calculate square footage)

ix. Will Sea Turtle and Smalltooth Sawfish Construction Conditions, dated March 23, 2006 be used? (yes/no)

4. Pilings & Sheetpiles

i. Construction methodology (pile driving, vibratory hammer, jetting, etc.)
ii. Provide piling size, material, and number of pilings (mandatory)
iii. Have potential impacts to species been adequately addressed (noise impacts, marine vegetation impacts, etc.)?

Section D, Question 4 is not applicable because the proposed project does not involve development or construction.

5. Boat Slips

i. Number and size of new slips, change from existing
ii. High-and-dry boat storage: vessel storage capacity
iii. Estimated shadow effect of the boat (square footage of shaded area beneath boat)

Section D, Question 5 is not applicable because the proposed project does not involve development or construction.

6. Boat Ramp

i. Number of ramps and size of ramps
ii. Number of vessels that can be moored (e.g., staging area, shoreline docks for loading/unloading, etc.)
iii. Trailer parking lot capacity, and if this number changes from what is currently available at the project.

Section D, Question 6 is not applicable because the proposed project does not involve development or construction.

7. Shoreline Armoring: Seawalls, jetties, riprap, groins, breakwaters, etc.

i. Project description, linear footage, square footage, material, etc. Provide detailed sketch of action area and location of structure.

Section D, Question 7 is not applicable because the proposed project does not involve development or construction.

8. Dredging

i. Dredge type (hopper, cutterhead, clamshell, etc.)
ii. Depth of cut
iii. Area (square feet) to be dredged
iv. Volume of material (cubic yards)
v. Spoil deposition plans: Where is dredged material being disposed of? Location of disposal area (upland/openwater/ beneficial use site); sediment type at disposal area; thickness of fill placement; etc.
vi. Hydrodynamic description (average current speed/direction, etc.)

i. The project involves mechanical dredging (grab/clamshell) of the boat basin and moorings to a maximum depth of 8 feet below mean water level (includes 1 foot over dredge depth). Mean water level corresponds to elevation -0.44 North American Vertical Datum 1988 (NAVD88). Therefore, dredging will proceed to -8.44 feet NAVD88.
ii. The calculated dredge volume for the MWR Boat Ramp is 755 cubic yards of sediment. The proposed dredging project will only temporarily impact open waters (an area totaling approximately 7,945 square feet) and will occur entirely within the existing boat basin (limited to an area approximately 150 feet from the shoreline).
iii. The dredging will be performed from a floating plant and not from land based operations. During the proposed dredging activities, the dredge area will be closed with an impermeable floating turbidity curtain with a weighted bottom edge. The dredge material will be deposited on barges, dewatered on the barges within the turbidity curtain, transported by barge to an unloading site, offloaded to trucks, and transported by truck to the East Carolina Regional Landfill in Aulander, North Carolina for disposal. Formal approval for disposal of the dredge material at the MWR Boat Ramp has been received from the East Carolina Regional Landfill.
iv. The sediment within the project area consists primarily of poorly graded sand with some silty sand (U.S.C.S. class is SP and SP-SM). The grain size analysis of sediment collected within the project area indicated that the sediment material consisted of predominately poorly graded sand (95.5 to 93.2 percent sand) with 4.5 to 6.8 percent fines (passing a # 200 sieve). For disposal purposes, the sediment was tested for a variety of parameters and the results were either below the laboratory's reportable limits or the North Carolina "Contained-Out" Levels for Unrestricted Use. The sediment material was characterized as non-hazardous.
v. Site-specific hydrodynamic data is not available for the project site. An Ecological Assessment of the Nearshore Habitat at the Camden Reverse Osmosis - Water Treatment Plant (RO-WTP), located in Chantilly Bay in the Pasquotank River and approximately 1.8 nautical miles from the MWR Boat Ramp, was reviewed. The hydrodynamic description was taken from 2005 and 2006 data collected at a sample site located approximately 1,200 feet offshore from the RO-WTP. Results of the study indicate that the average surface water speed was highly variable and ranged from 100 meters per hour to 1.1 kilometers per hour depending on the time of the year. Prevalent surface water flow direction was to the SE depending on the time of the year.

9. Blasting

i. Explosive weights
ii. Blasting plan

Not applicable.

10. Artificial Reefs

Please refer to the Section 7 Checklist procedures for directions on how to complete this question.

Not applicable.

11. Construction Schedule

i. In-water work
ii. Number of days/weeks/months; daytime/24-hour; seasonal restriction; etc.

The exact dredging schedule has not been determined yet; dredge work will be submitted for bid. Anticipated work hours are daytime only. To avoid potentially adverse impacts on life cycles of anadromous fish, the proposed project is expected to occur outside of the anadromous fish spawning moratorium (February 15 to June 30).

12. Mitigation/ Protective Measures:

How is mitigation or other protective measures being incorporated in this project, if any?

Measures will be taken to avoid or minimize adverse impacts to natural and biological resources. The proposed dredging project will only temporarily impact open waters (an area totaling approximately 7,945 square feet) and will occur entirely within the existing boat basin (limited to an area approximately 150 feet from the shoreline). The dredging will be performed from a floating barge and not from land based operations. Prior to commencing dredging operations, the proposed area for dredging will be closed with an impermeable floating turbidity curtain. The turbidity curtain will remain in place in accordance with the permit conditions or for a period of 48 hours following completion of the dredging, whichever occurs longer. Additionally, the proposed dredging is expected to occur outside of the anadromous fish spawning moratorium.

E) Effects of the Project

1. Listed Species and Critical Habitat within the Action Area

i. Please indicate which listed species and critical habitats are within the Action Area.

ii. For information on species and critical habitat under NMFS jurisdiction that may be present within the action area, visit "Species and Critical Habitat Found in the Southeast Region" page. If you are uncertain of which areas contain critical habitat, please visit the Maps and GIS Data page.

Species	Effect Determination	Critical Habitat	Effect Determination
Shortnose Sturgeon	NLAA	Not in Critical Habitat	No Effect
Atlantic Sturgeon	NLAA	Not in Critical Habitat	No Effect
Select One	Select One	Select One	Select One
Select One	Select One	Select One	Select One
Select One	Select One	Select One	Select One
Select One	Select One	Select One	Select One
Select One	Select One	Select One	Select One
Select One	Select One	Select One	Select One
Select One	Select One	Select One	Select One
Select One	Select One	Select One	Select One
Select One	Select One	Select One	Select One
Select One	Select One	Select One	Select One
Select One	Select One	Select One	Select One
Select One	Select One	Select One	Select One
Select One	Select One	Select One	Select One
Select One	Select One	Select One	Select One
Select One	Select One	Select One	Select One
Select One	Select One	Select One	Select One

2. Effects to Species

i. Explain potential route of effects to each species and critical habitat checked above

i. Heavy equipment and construction activity noises will result from dredging and transport of the dredged material to the landfill by barge and truck. The noise from heavy equipment and dredging activities will repel nearby fish (including Shortnose sturgeon and Atlantic sturgeon). Fish will likely relocate to a nearby habitat when the dredging activities begin, and will likely return after these activities are completed. Therefore, the fish will be affected by evidence of their avoidance; however, since the effects will be temporary and short-term and have no realistic potential to lead to harm or harassment of the fish, the effect is insignificant.

ii. The water quality may be affected by the dredging activities by temporarily increasing turbidity. However, prior to commencing dredging activities the dredge area will be enclosed with an impermeable floating turbidity curtain. The curtain will be of a full depth floating design with a weighted bottom edge. The dredge material will be dewatered on the barges within the turbidity curtain and the turbidity curtain will remain in place in accordance with the permit conditions or for a period of 48 hours following completion of the dredging, whichever occurs longer. Therefore, the water quality effects are expected to be temporary and minimal because the suspended particles will settle out within a short time frame without measurable effects on water quality and increases in turbidity will be abated by use of the turbidity curtain.

iii. Since the proposed dredging will occur entirely within the previously disturbed footprint of the boat basin and moorings and the dredge depth is expected to be proximate to the original dredge depth, the project is not expected to have an adverse effect on any unique habitat conditions that would impact the continued survival of federally managed species. Based on the relatively small dredge area (an area totaling approximately 7,945 square feet) and volume of material to be removed (755 cubic yards), and that the dredging will occur within a previously disturbed footprint, effects to the aquatic environment are expected to be insignificant.

3. Effects to Critical Habitat:

i. Identify which essential feature(s) are present, if they will be impacted, and how they will be impacted
ii. Size of area affected (square footage) - Mangroves (linear footage of shoreline)
iii. How will the habitat be changed/altered as a result of the action

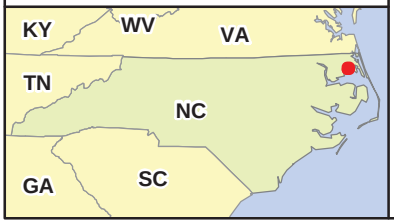
Not applicable. No designated critical habitat exists within the proposed project area.

Revised on: September 25, 2014

ATTACHMENT (B)

DREDGE SITE - LOCATION MAP

Map Location



Site Location Map

MWR Boat Ramp
USCG Base Elizabeth City, North Carolina

Elizabeth City NC Topographic Quadrangle (1983)

0 1,000 2,000 Feet

June 2014

60321114

Figure 1

AECOM Environment
701 Corporate Center Drive, Suite 475
Raleigh, NC 27607
Phone: (919) 854-6200
Fax: (919) 854-6259
Web: http://www.aecom.com

ATTACHMENT (C)

DREDGE SITE – AERIAL PHOTOGRAPH

Scale: Not To Scale	(Source: Google Earth© 2014)	**Dredge Site - Aerial Photograph** US Coast Guard Base Elizabeth City – MWR Boat Ramp Elizabeth City, NC	AECOM **Attachment B**
			www.aecom.com

ATTACHMENT (D)

DREDGE SITE – GROUND-LEVEL PHOTOGRAPHS

PHOTOGRAPH LOG

Facility Name:	Site Location:	Project No.
United States Coast Guard	MWR Boat Ramp – USCG Base Elizabeth City, NC	60321114

Photo No. 1	Date: 05/7/14

Direction Photo Taken:

North

Description:

View from the southern side of the shore (concrete pavement approach) of the concrete ramp, docks, navigation aids, and light pedestals.

Photo No. 2	Date: 05/7/14

Direction Photo Taken:

Northwest

Description:

View from the concrete pavement approach along the southern shoreline.

PHOTOGRAPH LOG

Facility Name:	Site Location:	Project No.
United States Coast Guard	MWR Boat Ramp – USCG Base Elizabeth City, NC	60321114

Photo No. 3	Date: 05/7/14

Direction Photo Taken:

South

Description:

View looking south of the concrete ramp, docks, light pedestals, and mooring piles.

Photo No. 4	Date: 05/7/14

Direction Photo Taken:

North

Description:

View at the end of the concrete ramp of the docks, light pedestals, and mooring piles.

PHOTOGRAPH LOG

Facility Name:	Site Location:	Project No.
United States Coast Guard	MWR Boat Ramp – USCG Base Elizabeth City, NC	60321114

Photo No. 5	Date: 05/7/14

Direction Photo Taken:

South-Southeast

Description:

View of the man-made beach located southeast of the MWR Boat Ramp.

Photo No. 6	Date: 05/7/14

Direction Photo Taken:

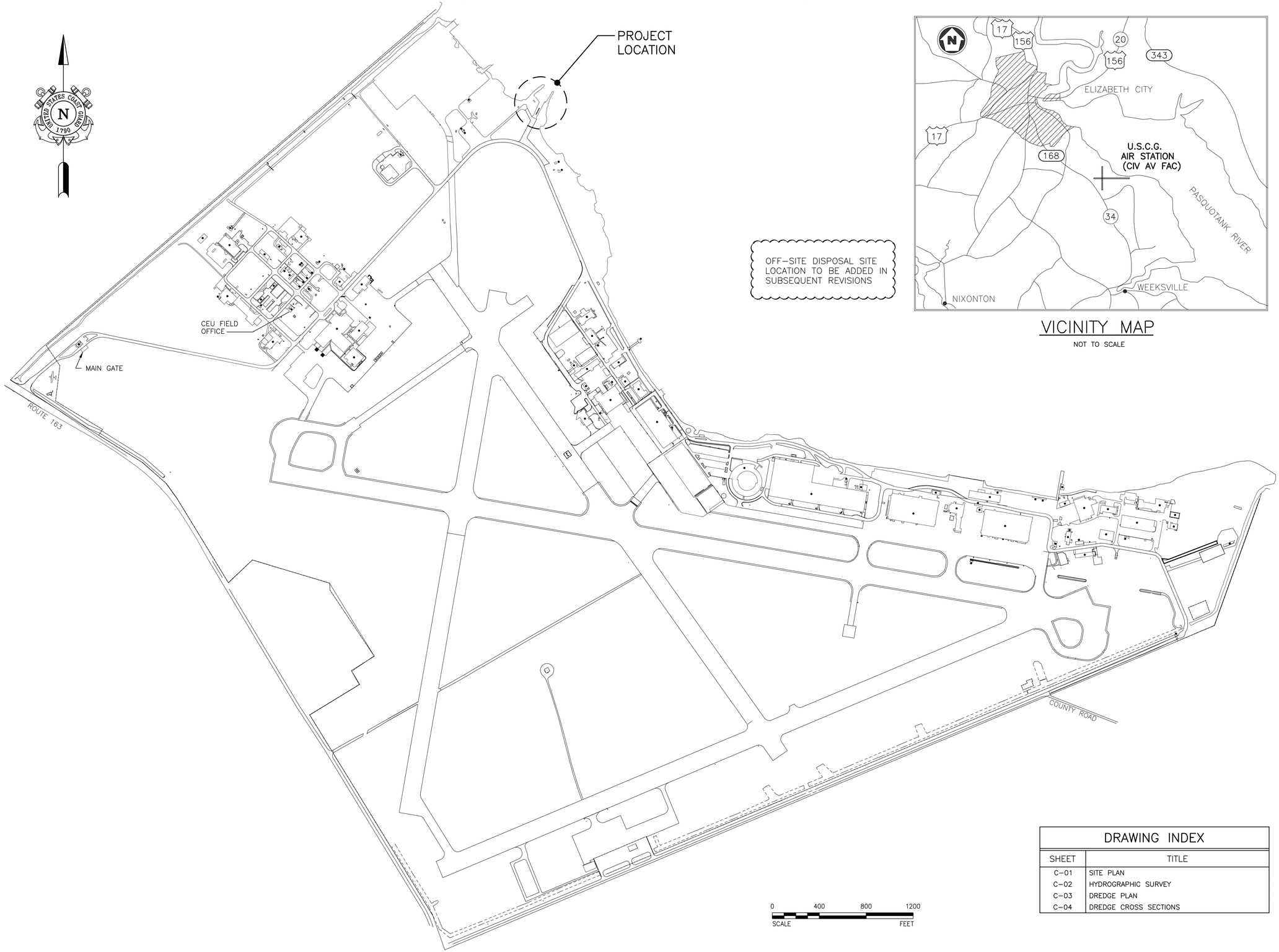
North

Description:

View of the navigation aids at entry to the protected harbor area. Note two timbers low to water surface in the entry-way.

ATTACHMENT (E)

DREDGE SITE – 35% PLAN



OFF-SITE DISPOSAL SITE LOCATION TO BE ADDED IN SUBSEQUENT REVISIONS

VICINITY MAP

NOT TO SCALE

DRAWING INDEX

SHEET	TITLE
C-01	SITE PLAN
C-02	HYDROGRAPHIC SURVEY
C-03	DREDGE PLAN
C-04	DREDGE CROSS SECTIONS

USCG CEU
CLEVELAND, OHIO
(216) 902-6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199-2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C01.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP

SCALE: AS SHOWN PLOT SCALE: 1:1

SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL
SITE PLAN

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

P.R. CARROLL, CDR. — APPROVING OFFICER
DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257-D
DISCIPLINE/SHT NO	
C-01	SHEET 1 OF 4

LEGEND

8.2 (TYP) – DEPTH MEASUREMENT (SOUNDING) REFERENCED TO MEAN WATER LEVEL (MWL)

−10 (TYP) – CONTOUR ELEVATION REFERENCED TO MWL

(+2.5) (TYP) – SPOT ELEVATION (ON PIER & SHEET PILE)

(TYP) – UNDERGROUND UTILITY VAULT

(TYP) – CONCRETE MATERIAL

(TYP) – RIP–RAP

(TYP) – WOODEN PIER / BULKHEAD

(TYP) – UTILITY VALVE

(S) (TYP) – SANITARY SEWER MANHOLE

(E) (TYP) – ELECTRIC UTILITY MANHOLE

(TYP) – LIGHT PEDESTAL

(TYP) – LIGHT

(TYP) – INFORMATIONAL SIGN

(TYP) – CAMERAL POLE

(TYP) – MARINE PILING

(TYP) – MOORING DOLPHIN

0 20' 40'

HORIZONTAL SCALE

N 929,300 N 929,400 N 929,500 N 929,600 N 929,700 N 929,800 N 929,900

E 2,892,700 E 2,892,800 E 2,892,900 E 2,893,000 E 2,893,100 E 2,893,200 E 2,893,300

RIP–RAP (SEE NOTE 8)

MOORING DOLPHIN (3 PILINGS) (TYP.)

INFORMATIONAL SIGN

MARINE PILING (TYP.)

CONCRETE PAD & ELECTRIC MANHOLE(S)

ELECTRIC UTILITY VAULT

LIGHT (TYP.)

CHANNEL MARKER (RED #2)

CAMERA POLE

PASQUOTANK RIVER (FLOW)

GRASSY AREA

TIMBER MOORING PILES (7)

STREET LIGHT

CHANNEL MARKER (GREEN #1)

CONCRETE ACCESS/EGRESS ROADWAY

APPROXIMATE LIMITS OF SUBMERGED CONCRETE RAMP

WOODEN PIER

WOODEN BULKHEAD

LIGHT PEDESTAL

CUT OFF TIMBER PILES

INFORMATIONAL SIGN (NO SWIMMING)

INFORMATIONAL SIGN (STAY OFF ROCKS)

SEE NOTE 9

CONCRETE RAMP

WOODEN BULKHEAD

LIGHT (TYP.)

LIGHT PEDESTAL

INFORMATIONAL SIGN (NO SWIMMING)

RIP–RAP (SEE NOTE 8)

POWER PEDESTAL

GRASSY AREA

INFORMATIONAL SIGN (STAY OFF ROCKS)

BATHYMETRY NOTES

1. BATHYMETRIC SURVEY DATA WAS COLLECTED ON MAY 07–09, 2014 BY GAHAGAN & BRYANT ASSOCIATES OF NC, PLLC. (GBA) AND IS EXPRESSED IN FEET BELOW MEAN WATER LEVEL (MWL).
2. HORIZONTAL DATUM IS IN REFERENCE TO THE NORTH CAROLINA STATE PLANE GRID COORDINATE SYSTEM NORTH AMERICAN DATUM OF 1983 (NAD83).
3. VERTICAL DATUM IS IN REFERENCE TO MEAN WATER LEVEL (MWL). MWL IS 0.44 FEET ABOVE THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

MWL
0.44'
NAVD88
5.94'
−5.50'
USGS GAUGE #0204382800

4. MWL ESTABLISHED FROM USGS WATER LEVEL GAUGE #0204382800 LOCATED ON THE PASQUOTANK RIVER. GAUGE DATUM = −5.50' NAVD88, MEAN GAUGE HEIGHT = 5.94' (FEB 06 – SEP 08)
5. BATHYMETRIC DATA DEPICTED ON THIS PLAN IS REPRESENTATIVE OF A LARGER DATA SET & WAS CORRECTED IN REAL TIME VIA REAL TIME KINEMATIC (RTK) TIDES.
6. EQUIPMENT USED

VESSEL:	GBA "SEA MINNOW"
ECHO SOUNDER:	ODOM CV100
HORIZONTAL POSITIONING:	RTK 5700
BASE STATION:	TRIMBLE R8 SET UP ON NGS MONUMENT "S 176 RESET"
ROVER:	TRIMBLE R6 USED FOR UPLAND SURVEY

7. THE INFORMATION DEPICTED ON THIS PLAN REPRESENTS RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.
8. RIP–RAP LIMITS ARE APPROXIMATE. SPORADIC RIP–RAP PIECES ARE PRESENT IN SURVEY AREA AND ARE NOT SHOWN FOR CLARITY.
9. LIMITS SHOWN DEPICT THE TRANSITION FROM A COMPACT SUBSTRATE TO A SOFT MATERIAL, POSSIBLY THE SCOUR STONE PROTECTION LIMITS.

USCG CEU
CLEVELAND, OHIO
(216) 902–6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199–2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C02.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP
SCALE: AS SHOWN	PLOT SCALE: 1:1

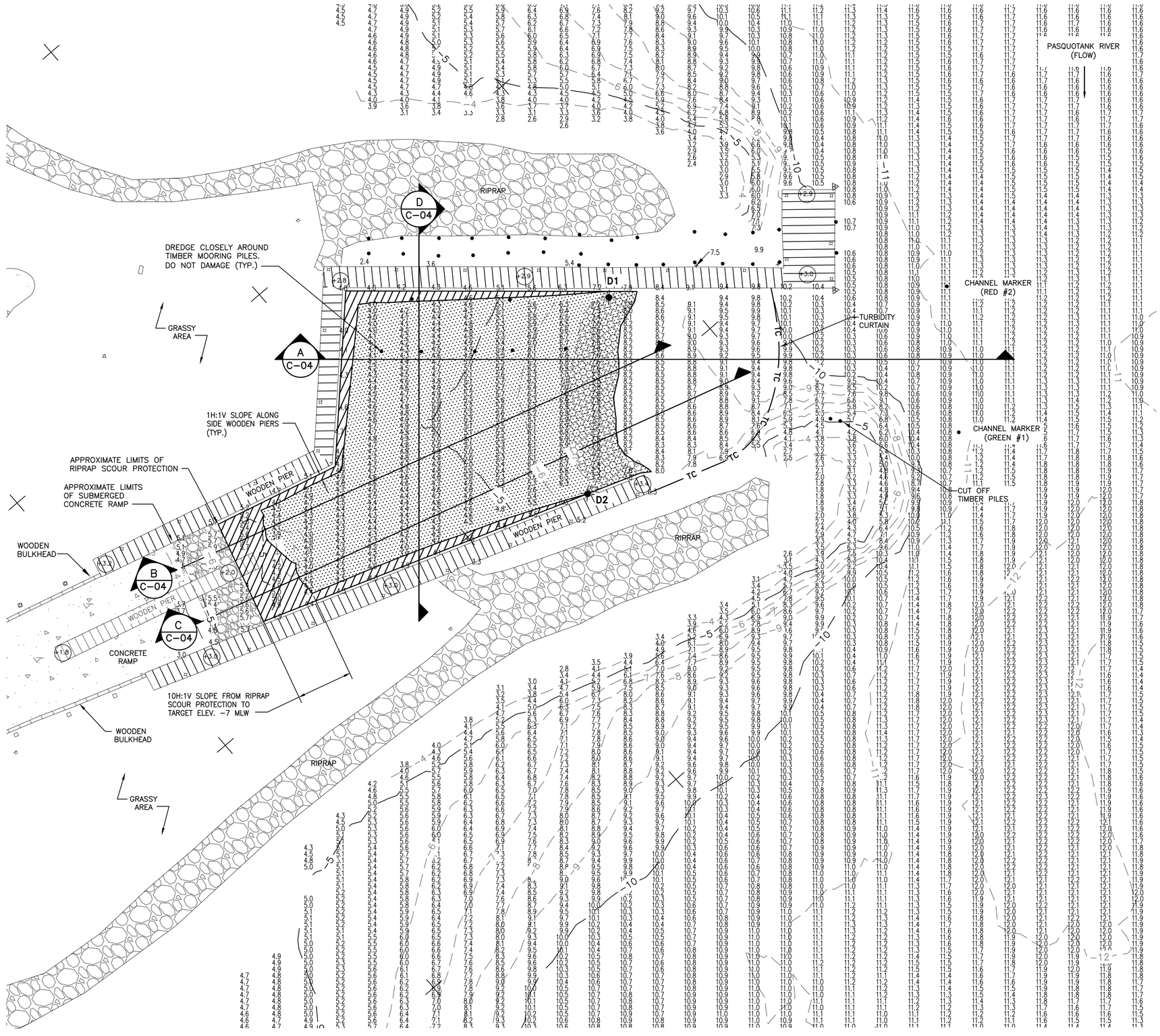
SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL
HYDROGRAPHIC SURVEY

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

P.R. CARROLL, CDR.
APPROVING OFFICER — DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257–D
DISCIPLINE/SHT NO	
C–02	SHEET 2 OF 4



LEGEND:

- EXISTING CONTOUR (5' INTERVAL)
- EXISTING CONTOUR (1' INTERVAL)
- DREDGE COORDINATE POINT & ID
- 11.3 — DEPTH MEASUREMENT (SOUNDING) REFERENCED TO MEAN WATER LEVEL (MWL)
- −10 — CONTOUR ELEVATION REFERENCED TO MWL
- +2.5 — SPOT ELEVATION (ON PIER OR STRUCTURE)
- EXISTING CONCRETE MATERIAL
- EXISTING RIPRAP
- PROPOSED DREDGING TO TARGET DEPTH −7 MWL
- PROPOSED OVER-DEPTH DREDGE TO −8 MWL
- PROPOSED DREDGE SIDE SLOPES (SLOPES VARY – SEE PLAN)

NOTES:

1. 0.0 MWL FOR PASQUOTANK RIVER = −0.44' NAVD88
2. THE TARGET DREDGE DEPTH FOR THIS PROJECT IS −7 FT MWL. OVER-DEPTH DREDGE IN THESE AREAS SHALL NOT EXCEED −8 FT MWL.
3. CONTRACTOR SHALL USE METHODS AND EQUIPMENT THAT PROTECT THE PIER STRUCTURES FROM DAMAGE. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE.
4. CONTRACTOR SHALL DREDGE AT A 10H:1V SLOPE AT THE LAUNCH RAMP STARTING AT THE END OF THE RIPRAP SCOUR PROTECTION.

DREDGE COORDINATE TABLE

DREDGE ID	NORTHING	EASTING
D1	929382.66	2831869.00
D2	929337.45	2831913.52

- **COORDINATES ARE IN** NORTH CAROLINA STATE PLANE GRID COORDINATE SYSTEM, FEET (NAD83).

0 16 32 48
SCALE IN FEET

USCG CEU
CLEVELAND, OHIO
(216) 902-6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

UNITED STATES COAST GUARD 1790

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199-2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C03.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP

SCALE: AS SHOWN PLOT SCALE: 1:1

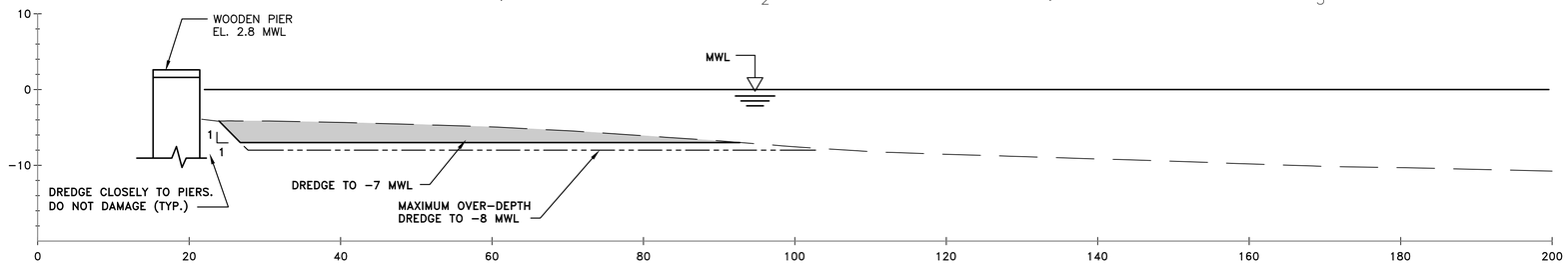
SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL
DREDGE PLAN

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

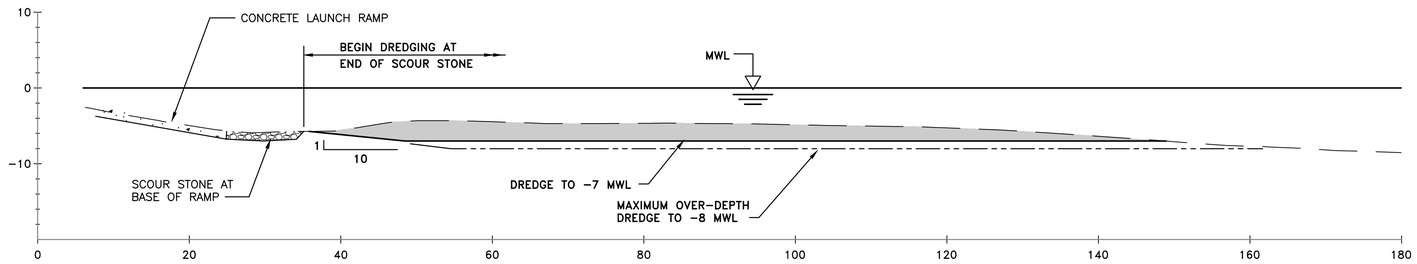
P.R. CARROLL, CDR.
APPROVING OFFICER — DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257-D
DISCIPLINE/SHT NO	SHEET 3 OF 4
C-03	



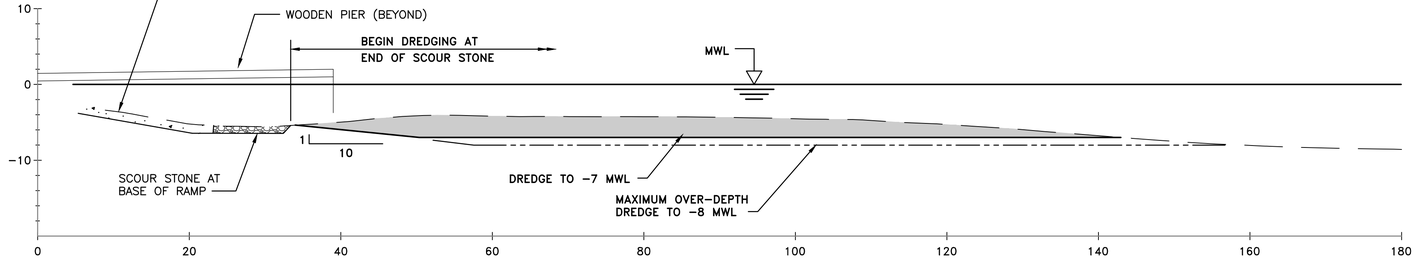
SECTION A C−04

FEET 0 10 20



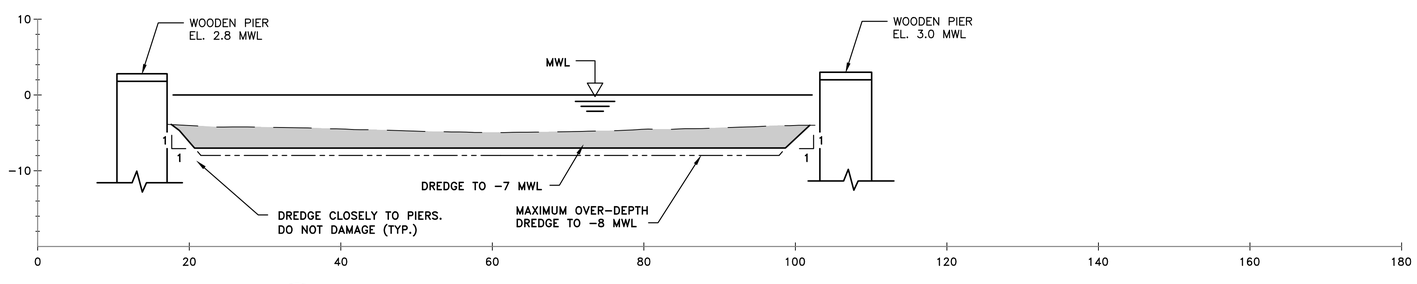
SECTION B C−04

FEET 0 10 20



SECTION C C−04

FEET 0 10 20

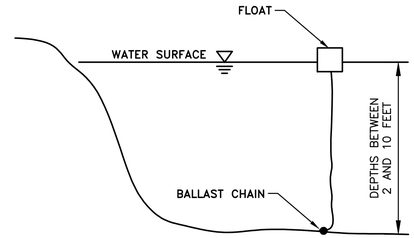


SECTION D C−04

FEET 0 10 20

LEGEND

- EXISTING TOP OF SEDIMENT
- PROPOSED BASE DREDGE ELEVATION
- MAXIMUM OVER−DEPTH DREDGE



TURBIDITY CURTAIN DETAIL

NOT TO SCALE

USCG CEU
CLEVELAND, OHIO
(216) 902−6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199−2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C04.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP

SCALE: AS SHOWN PLOT SCALE: 1:1

SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL

DREDGE CROSS SECTIONS

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

P.R. CARROLL, CDR. — APPROVING OFFICER

DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257−D
DISCIPLINE/SHT NO	
C−04	SHEET 4 OF 4

ATTACHMENT (F)

REFERENCES CITED

References Cited

National Oceanic and Atmospheric Administration, Office of Response and Restoration, Environmental Sensitivity Index Maps, 2011. Accessed online September 2014 at http://response.restoration.noaa.gov/esi

North Carolina Division of Marine Fisheries, Anadromous Fish Spawning Areas Maps, 2014. Accessed online October 2014 at http://portal.ncdenr.org/web/mf/afsa-maps

North Carolina Division of Marine Fisheries, Fishing Nursery Areas, 2014. Accessed online October 2014 at http://portal.ncdenr.org/web/mf/primary-nursery-areas

North Carolina Division of Marine Fisheries, Mapped Fish Habitats in Coastal North Carolina, 2014. Accessed online October 2014 at http://portal.ncdenr.org/web/mf/58

North Carolina OneMap, Geospatial Portal, 2014. Accessed online September 2014 at http://data.nconemap.com/geoportal/catalog/main/home.page

South Atlantic Fishery Management Council, Online Mapping, Essential Fish Habitat, 2014. Accessed online October 2014 at http://www.safmc.net/ecosystem-management/mapping-and-gis-data

Appendix E.

State Historic Preservation Office Consultation

AECOM
701 Corporate Center Drive, Suite 475
Raleigh, NC 27607

919.854.6200 tel
919.854.6259 fax

July 18, 2014

Ms. Renee Gledhill-Earley
State Historic Preservation Office
4617 Mail Service Center
Raleigh, NC 27699-4617

SUBJECT: U.S. Coast Guard Base Elizabeth City – Dredging at MWR Boat Ramp, Elizabeth City, North Carolina

Dear Ms. Gledhill-Earley:

In compliance with Section 106 of the National Historic Preservation Act (NHPA), the U.S. Coast Guard (USCG) Civil Engineering Unit Cleveland is initiating consultation with your office concerning the proposed action to complete dredging of the boat ramp and moorings at the Morale, Welfare and Recreate (MWR) Boat Ramp at the USCG Base Elizabeth City. The USCG Base Elizabeth City is located approximately 3.5 miles southeast of Elizabeth City, along Highway 34, on the south shore of the Pasquotank River in Pasquotank County, North Carolina (**Attachment A**). The geographic location of the MWR Boat Ramp is latitude 36° 16' 14.72" north and longitude 76° 10' 40.31" west. The USCG has approved this consultation packet pursuant to 36 CFR 800.2(a)(3).

The base is the largest USCG Air Station in the nation, and contains a number of commands - Air Station Elizabeth City, Aircraft Repair and Supply Center, Aviation Technical Training Center, Support Center Elizabeth City, and Small Boat Station Elizabeth City. The base was established in 1940 and consists of over 100 buildings which have been constructed over the lifetime of the base. The base occupies approximately 950 acres and most of the base's buildings support the air command. The base can be accessed either from the main gate off Weeksville Road on the north end of the base, or from a second entrance off Consolidated Road on the south end of the base. The MWR Boat Ramp can be approached by water from the northeast or by land via Moukawsher Drive along the shoreline (**Attachment B**).

The MWR Boat Ramp is located on the north end of the base's shoreline, in a portion of the river tidal flats. The MWR Boat Ramp consists of a two-lane concrete ramp with a concrete pavement approach, and a launch dock centered in the boat ramp. Rubblemound stone breakwaters project approximately 100 to 125 feet from the shoreline on both sides of the launch ramp to form a protected harbor area for launching and retrieving boats. Timber docks line both sides of this protected harbor area. Mooring piles are in place along the west timber dock. Navigation aids are located near the entrance to the protected harbor area. These consist of a red dayboard with a solar-powered red beacon, and a green dayboard (**Attachment C**).

The MWR Boat Ramp is a two-lane concrete surface launch ramp utilized by base military personnel for launching privately-owned recreational boats, and for launching USCG vessels stationed at the Building 43 moorings. The purpose of this project is to dredge the boat basin and moorings to a required depth below Mean Water Low (MWL) datum at the MWR Boat Ramp in order for the unit's small boats to transit and be able to execute their operational missions without the encumbrances of shoaling in the boat basin that they currently are experiencing due to specific wind directions at low tide. Maintenance dredging has not previously been conducted at the MWR Boat Ramp. The USCG anticipates conducting the proposed

maintenance dredging activities under USACE Nationwide Permit #35. For the MWR Boat Ramp, the USCG Area of Potential Effects (APE) includes dredging to a maximum depth of 8 feet below MWL (includes one foot over dredge). The dredge volume for the MWR Boat Ramp is 755 cubic yards. The 35% civil site plan entitled, "Dredging at MWR Boat Ramp: CG Base Elizabeth City" illustrates the location and specifications of this proposed dredging project (**Attachment D**).

The USCG has researched multiple options for disposal of dredge material for this project. The East Carolina Regional Landfill, located at 1922 Republican Road in Aulander, Bertie County, North Carolina, is approximately 63 miles from Base Elizabeth City. This landfill is a licensed and approved landfill that will accept dredged material. Therefore, the APE includes the East Carolina Regional Landfill since it is the likely recipient of dredge spoils for this proposed project.

The USCG completed background research and records review using the State Historic Preservation Office (SHPO) Web GIS application, the online files of the North Carolina Office of State Archaeology, and the National Register of Historic Places. Based on the USCG's review, there have been no prior archaeological investigations and no historic architectural surveys completed for the APE. There are no National Register-listed or -eligible, or potentially eligible (according to the SHPO Study List) terrestrial or underwater archaeological sites or historic architectural resources located within or immediately adjacent to the APE. Three historic architectural resources have been identified within one mile of the APE, including one site that has been Determined Eligible and two potentially eligible sites on the SHPO Study List. No shipwrecks have been recorded in the MWR boat ramp and moorings APE and no historic properties have been recorded at the East Carolina Regional Landfill.

The Thrun Hall Barracks is a site that has been determined National Register-eligible in 2010 and is located inland from the MWR Boat Ramp, approximately three-quarters of a mile to the southeast of the APE. The Thrun Hall Barracks were subsequently photo documented and demolished upon the SHPO's approval. The John Hollowell House (PK0972) and the C.W. Hollowell House (PK0474) are on the Study List and are located inland from the MWR Boat Ramp, approximately one mile to the south-southwest of the APE (**Attachment E**).

The proposed dredging activities will not create any subsurface disturbance that could affect terrestrial archaeological resources, if present. Dredging will not be staged on the shore, and all dredged sediment will be loaded onto a barge. No previously identified shipwrecks or other underwater archaeological resources have been recorded for the MWR boat ramp and moorings APE or for the immediate vicinity of the APE. Although maintenance dredging has not been conducted for the boat ramp and moorings, the actions required for the original construction of the two-lane concrete ramp, launch dock, wooden piers, and associated moorings have undoubtedly disturbed the sediments to a considerable depth. Due to the extent of prior subsurface disturbance in the MWR boat ramp and moorings APE, it is unlikely that intact, significant underwater archaeological resources would be present and retain integrity. Therefore, the USCG has determined "No Historic Properties Affected." We would appreciate your concurrence with this determination.

If you have any questions, please contact Jennifer Jones (AECOM) at (919) 239-7150 or Leilani Woods (USCG) at (252) 335-6847.

Yours sincerely,

Jennifer Jones
Environmental Task Manager

Nancy Stehling, RPA
Senior Archaeologist

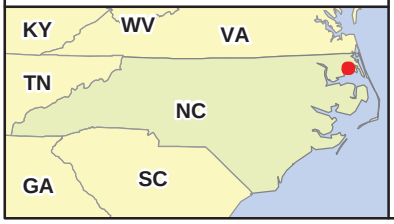
Attachments: (A) Dredge Site - Location Map
(B) Dredge Site - Aerial Photograph
(C) Dredge Site - Ground-Level Photographs
(D) Dredge Site – 35% Plan
(E) Historic Preservation Office – Web GIS Maps
(F) References Cited

CC: Ms. Leilani Woods, Environmental Engineer, USCG Civil Engineering Unit Cleveland
Mr. Greg Carpenter, Environmental Project Manager, USCG Civil Engineering Unit Cleveland

ATTACHMENT (A)

DREDGE SITE - LOCATION MAP

Map Location



Site Location Map

MWR Boat Ramp
USCG Base Elizabeth City, North Carolina

Elizabeth City NC Topographic Quadrangle (1983)

0 1,000 2,000 Feet

June 2014

60321114

Figure 1

AECOM Environment
701 Corporate Center Drive, Suite 475
Raleigh, NC 27607
Phone: (919) 854-6200
Fax: (919) 854-6259
Web: http://www.aecom.com

ATTACHMENT (B)

DREDGE SITE – AERIAL PHOTOGRAPH

Scale: Not To Scale	(Source: Google Earth© 2014)	**Dredge Site - Aerial Photograph** US Coast Guard Base Elizabeth City – MWR Boat Ramp Elizabeth City, NC	AECOM **Attachment B**
			www.aecom.com

ATTACHMENT (C)

DREDGE SITE – GROUND-LEVEL PHOTOGRAPHS

PHOTOGRAPH LOG

Facility Name:	Site Location:	Project No.
United States Coast Guard	MWR Boat Ramp – USCG Base Elizabeth City, NC	60321114

Photo No. 1	Date: 05/7/14

Direction Photo Taken:

North

Description:

View from the southern side of the shore (concrete pavement approach) of the concrete ramp, docks, navigation aids, and light pedestals.

Photo No. 2	Date: 05/7/14

Direction Photo Taken:

Northwest

Description:

View from the concrete pavement approach along the southern shoreline.

PHOTOGRAPH LOG

Facility Name:	Site Location:	Project No.
United States Coast Guard	MWR Boat Ramp – USCG Base Elizabeth City, NC	60321114

Photo No. 3	Date: 05/7/14

Direction Photo Taken:

South

Description:

View looking south of the concrete ramp, docks, light pedestals, and mooring piles.

Photo No. 4	Date: 05/7/14

Direction Photo Taken:

North

Description:

View at the end of the concrete ramp of the docks, light pedestals, and mooring piles.

PHOTOGRAPH LOG

Facility Name:	Site Location:	Project No.
United States Coast Guard	MWR Boat Ramp – USCG Base Elizabeth City, NC	60321114

Photo No. 5	Date: 05/7/14

Direction Photo Taken:

South-Southeast

Description:

View of the man-made beach located southeast of the MWR Boat Ramp.

Photo No. 6	Date: 05/7/14

Direction Photo Taken:

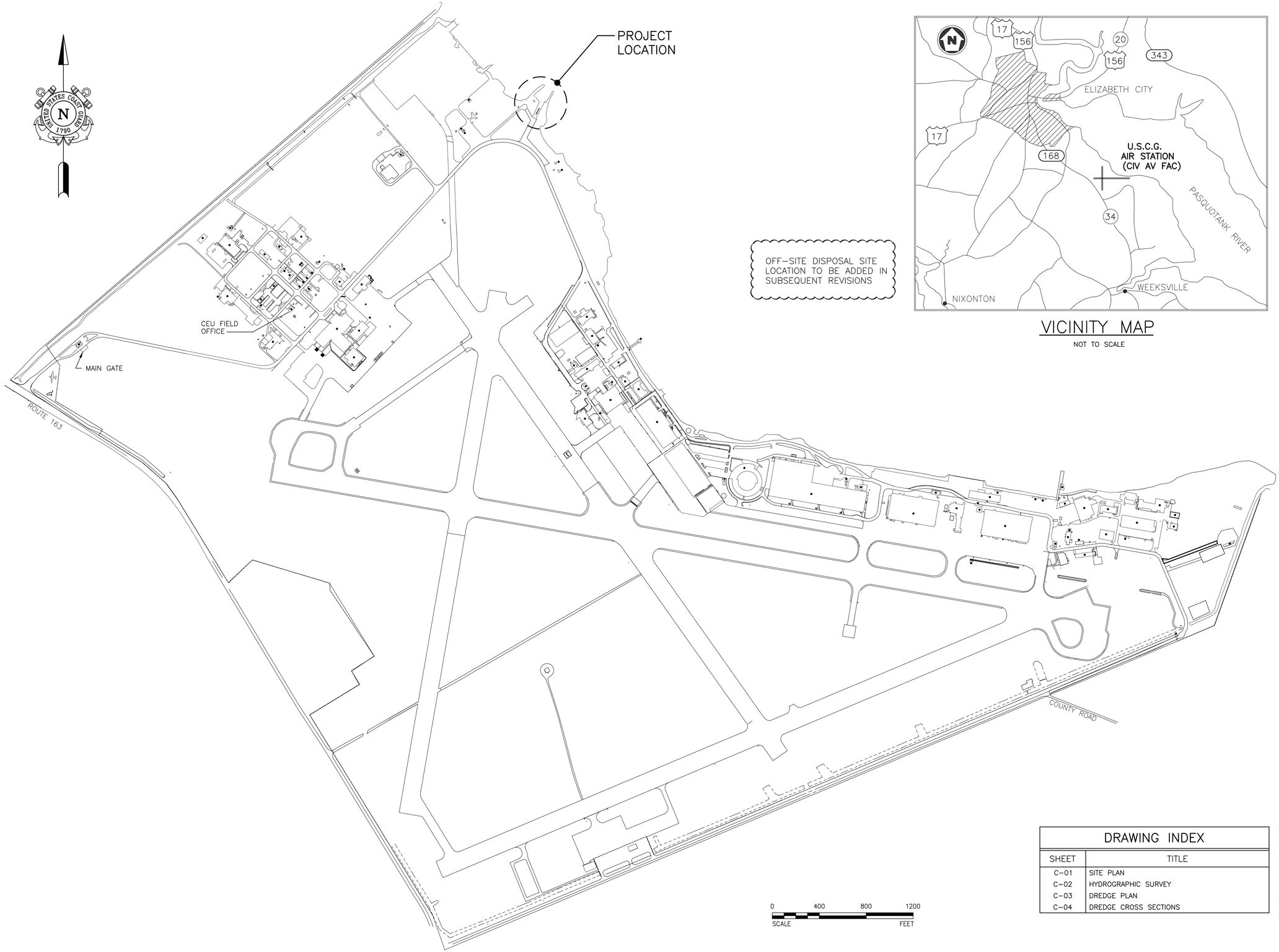
North

Description:

View of the navigation aids at entry to the protected harbor area. Note two timbers low to water surface in the entry-way.

ATTACHMENT (D)

DREDGE SITE – 35% PLAN



OFF-SITE DISPOSAL SITE LOCATION TO BE ADDED IN SUBSEQUENT REVISIONS

VICINITY MAP

NOT TO SCALE

DRAWING INDEX

SHEET	TITLE
C-01	SITE PLAN
C-02	HYDROGRAPHIC SURVEY
C-03	DREDGE PLAN
C-04	DREDGE CROSS SECTIONS

USCG CEU
CLEVELAND, OHIO
(216) 902-6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199-2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C01.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP

SCALE: AS SHOWN PLOT SCALE: 1:1

SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL
SITE PLAN

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

P.R. CARROLL, CDR. — APPROVING OFFICER
DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257-D
DISCIPLINE/SHT NO	
C-01	SHEET 1 OF 4

LEGEND

8.2 (TYP) – DEPTH MEASUREMENT (SOUNDING) REFERENCED TO MEAN WATER LEVEL (MWL)

−10 (TYP) – CONTOUR ELEVATION REFERENCED TO MWL

(+2.5) (TYP) – SPOT ELEVATION (ON PIER & SHEET PILE)

(TYP) – UNDERGROUND UTILITY VAULT

(TYP) – CONCRETE MATERIAL

(TYP) – RIP–RAP

(TYP) – WOODEN PIER / BULKHEAD

(TYP) – UTILITY VALVE

(S) (TYP) – SANITARY SEWER MANHOLE

(E) (TYP) – ELECTRIC UTILITY MANHOLE

(TYP) – LIGHT PEDESTAL

(TYP) – LIGHT

(TYP) – INFORMATIONAL SIGN

(TYP) – CAMERAL POLE

(TYP) – MARINE PILING

(TYP) – MOORING DOLPHIN

0 20' 40'

HORIZONTAL SCALE

N 929,300 N 929,400 N 929,500 N 929,600 N 929,700 N 929,800 N 929,900

E 2,892,700 E 2,892,800 E 2,892,900 E 2,893,000 E 2,893,100 E 2,893,200 E 2,893,300

RIP–RAP (SEE NOTE 8)

MOORING DOLPHIN (3 PILINGS) (TYP.)

INFORMATIONAL SIGN

MARINE PILING (TYP.)

CONCRETE PAD & ELECTRIC MANHOLE(S)

ELECTRIC UTILITY VAULT

LIGHT (TYP.)

CHANNEL MARKER (RED #2)

CAMERA POLE

PASQUOTANK RIVER (FLOW)

GRASSY AREA

TIMBER MOORING PILES (7)

STREET LIGHT

CHANNEL MARKER (GREEN #1)

CONCRETE ACCESS/EGRESS ROADWAY

APPROXIMATE LIMITS OF SUBMERGED CONCRETE RAMP

WOODEN PIER

WOODEN BULKHEAD

LIGHT PEDESTAL

CUT OFF TIMBER PILES

INFORMATIONAL SIGN (NO SWIMMING)

INFORMATIONAL SIGN (STAY OFF ROCKS)

SEE NOTE 9

CONCRETE RAMP

WOODEN BULKHEAD

LIGHT (TYP.)

LIGHT PEDESTAL

INFORMATIONAL SIGN (NO SWIMMING)

RIP–RAP (SEE NOTE 8)

POWER PEDESTAL

GRASSY AREA

INFORMATIONAL SIGN (STAY OFF ROCKS)

BATHYMETRY NOTES

1. BATHYMETRIC SURVEY DATA WAS COLLECTED ON MAY 07–09, 2014 BY GAHAGAN & BRYANT ASSOCIATES OF NC, PLLC. (GBA) AND IS EXPRESSED IN FEET BELOW MEAN WATER LEVEL (MWL).
2. HORIZONTAL DATUM IS IN REFERENCE TO THE NORTH CAROLINA STATE PLANE GRID COORDINATE SYSTEM NORTH AMERICAN DATUM OF 1983 (NAD83).
3. VERTICAL DATUM IS IN REFERENCE TO MEAN WATER LEVEL (MWL). MWL IS 0.44 FEET ABOVE THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

MWL
0.44'
NAVD88
5.94'
−5.50'
USGS GAUGE #0204382800

4. MWL ESTABLISHED FROM USGS WATER LEVEL GAUGE #0204382800 LOCATED ON THE PASQUOTANK RIVER. GAUGE DATUM = −5.50' NAVD88, MEAN GAUGE HEIGHT = 5.94' (FEB 06 – SEP 08)
5. BATHYMETRIC DATA DEPICTED ON THIS PLAN IS REPRESENTATIVE OF A LARGER DATA SET & WAS CORRECTED IN REAL TIME VIA REAL TIME KINEMATIC (RTK) TIDES.
6. EQUIPMENT USED

VESSEL:	GBA "SEA MINNOW"
ECHO SOUNDER:	ODOM CV100
HORIZONTAL POSITIONING:	RTK 5700
BASE STATION:	TRIMBLE R8 SET UP ON NGS MONUMENT "S 176 RESET"
ROVER:	TRIMBLE R6 USED FOR UPLAND SURVEY

7. THE INFORMATION DEPICTED ON THIS PLAN REPRESENTS RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.
8. RIP–RAP LIMITS ARE APPROXIMATE. SPORADIC RIP–RAP PIECES ARE PRESENT IN SURVEY AREA AND ARE NOT SHOWN FOR CLARITY.
9. LIMITS SHOWN DEPICT THE TRANSITION FROM A COMPACT SUBSTRATE TO A SOFT MATERIAL, POSSIBLY THE SCOUR STONE PROTECTION LIMITS.

USCG CEU
CLEVELAND, OHIO
(216) 902–6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199–2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C02.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP
SCALE: AS SHOWN	PLOT SCALE: 1:1

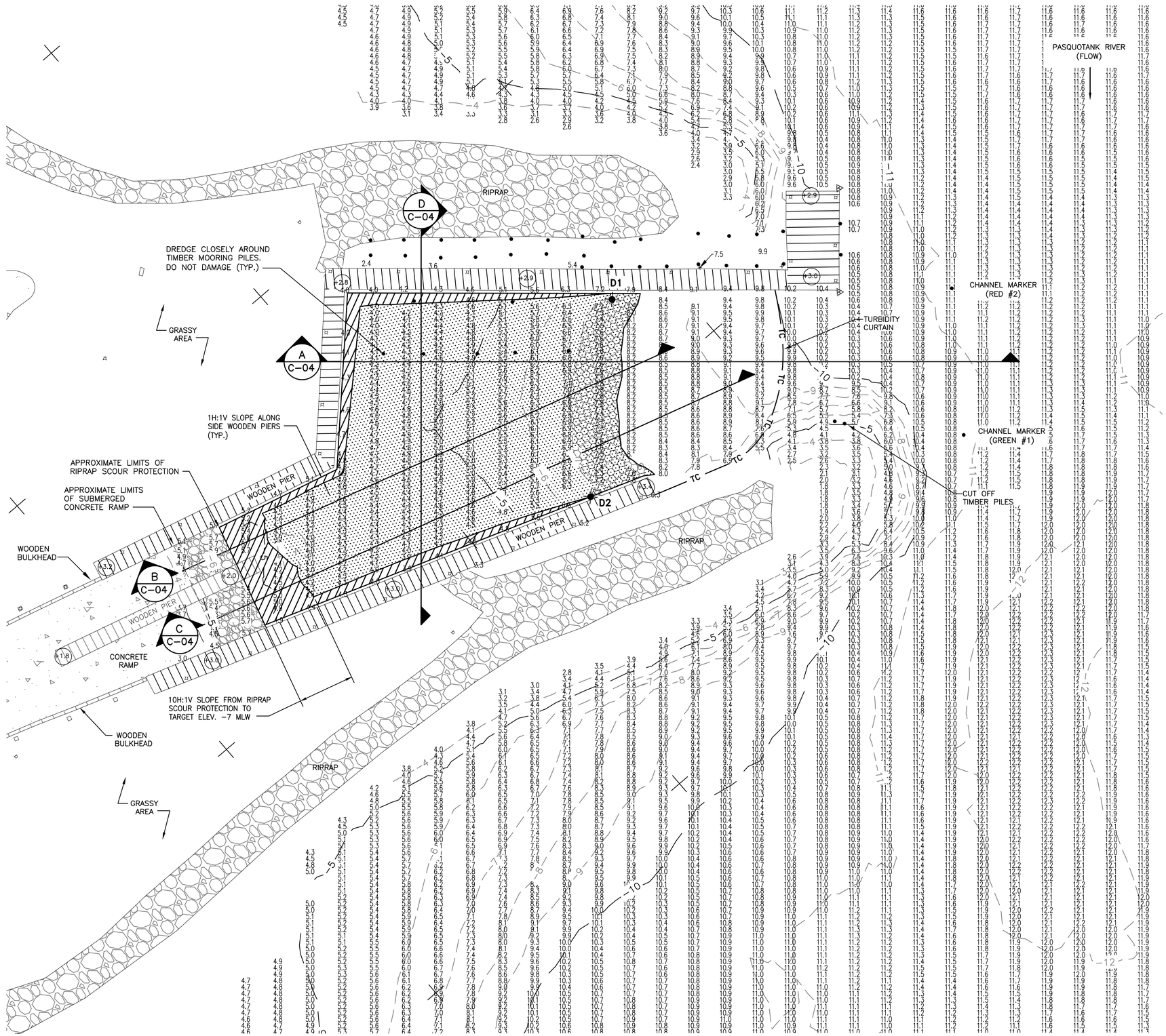
SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL
HYDROGRAPHIC SURVEY

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

P.R. CARROLL, CDR.
APPROVING OFFICER — DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257–D
DISCIPLINE/SHT NO	
C–02	SHEET 2 OF 4



LEGEND:

- EXISTING CONTOUR (5' INTERVAL)
- EXISTING CONTOUR (1' INTERVAL)
- DREDGE COORDINATE POINT & ID
- 11.3 — DEPTH MEASUREMENT (SOUNDING) REFERENCED TO MEAN WATER LEVEL (MWL)
- −10 — CONTOUR ELEVATION REFERENCED TO MWL
- +2.5 — SPOT ELEVATION (ON PIER OR STRUCTURE)
- EXISTING CONCRETE MATERIAL
- EXISTING RIPRAP
- PROPOSED DREDGING TO TARGET DEPTH −7 MWL
- PROPOSED OVER-DEPTH DREDGE TO −8 MWL
- PROPOSED DREDGE SIDE SLOPES (SLOPES VARY – SEE PLAN)

NOTES:

1. 0.0 MWL FOR PASQUOTANK RIVER = −0.44' NAVD88
2. THE TARGET DREDGE DEPTH FOR THIS PROJECT IS −7 FT MWL. OVER-DEPTH DREDGE IN THESE AREAS SHALL NOT EXCEED −8 FT MWL.
3. CONTRACTOR SHALL USE METHODS AND EQUIPMENT THAT PROTECT THE PIER STRUCTURES FROM DAMAGE. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE.
4. CONTRACTOR SHALL DREDGE AT A 10H:1V SLOPE AT THE LAUNCH RAMP STARTING AT THE END OF THE RIPRAP SCOUR PROTECTION.
5. MORATORIUM: TO COMPLY WITH PERMITS, NO DREDGING SHALL BE CONDUCTED BETWEEN OCTOBER 1 AND FEBRUARY 15.

DREDGE COORDINATE TABLE

DREDGE ID	NORTHING	EASTING
D1	929382.66	2831869.00
D2	929337.45	2831913.52

- **COORDINATES ARE IN** NORTH CAROLINA STATE PLANE GRID COORDINATE SYSTEM, FEET (NAD83).

0 16 32 48
SCALE IN FEET

USCG CEU
CLEVELAND, OHIO
(216) 902-6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199-2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C03.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP
SCALE: AS SHOWN	PLOT SCALE: 1:1

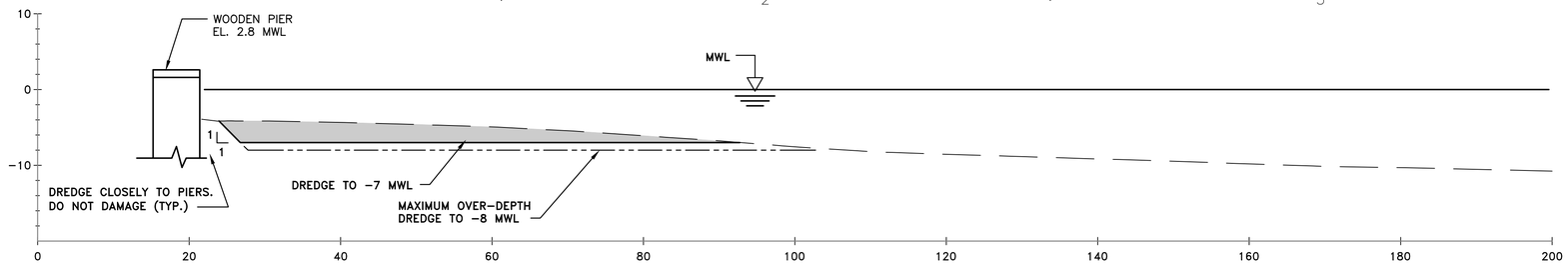
SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL
DREDGE PLAN

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

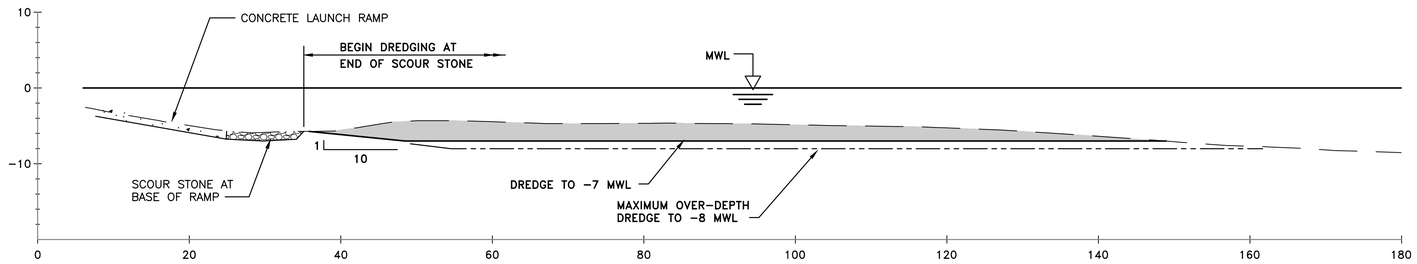
P.R. CARROLL, CDR.
APPROVING OFFICER — DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257-D
DISCIPLINE/SHT NO	SHEET 3 OF 4
C-03	



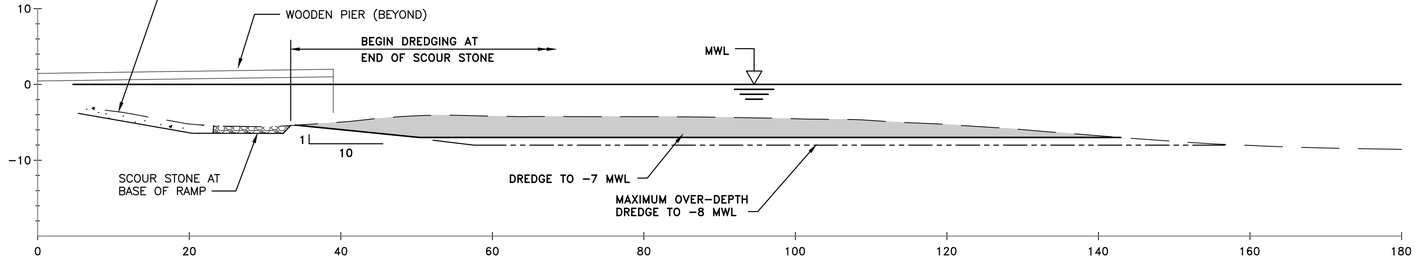
SECTION A C−04

FEET 0 10 20



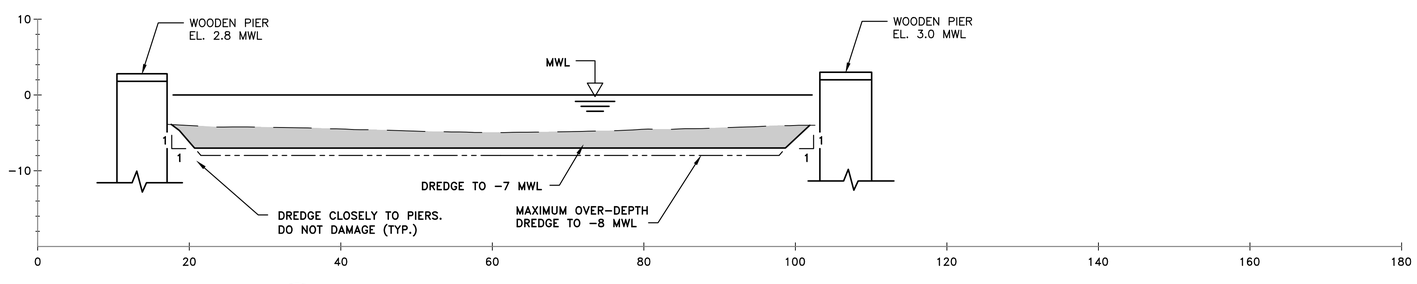
SECTION B C−04

FEET 0 10 20



SECTION C C−04

FEET 0 10 20

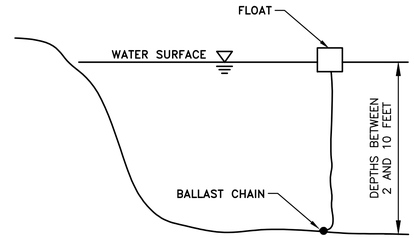


SECTION D C−04

FEET 0 10 20

LEGEND

- EXISTING TOP OF SEDIMENT
- PROPOSED BASE DREDGE ELEVATION
- MAXIMUM OVER−DEPTH DREDGE



TURBIDITY CURTAIN DETAIL

NOT TO SCALE

USCG CEU
CLEVELAND, OHIO
(216) 902−6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199−2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C04.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP

SCALE: AS SHOWN PLOT SCALE: 1:1

SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL

DREDGE CROSS SECTIONS

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

P.R. CARROLL, CDR. — APPROVING OFFICER

DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257−D
DISCIPLINE/SHT NO	
C−04	SHEET 4 OF 4

ATTACHMENT (E)

HISTORIC PRESERVATION OFFICE –
WEB GIS MAPS

Base Elizabeth City_MWR Boat Ramp

July 8, 2014

1:25,000

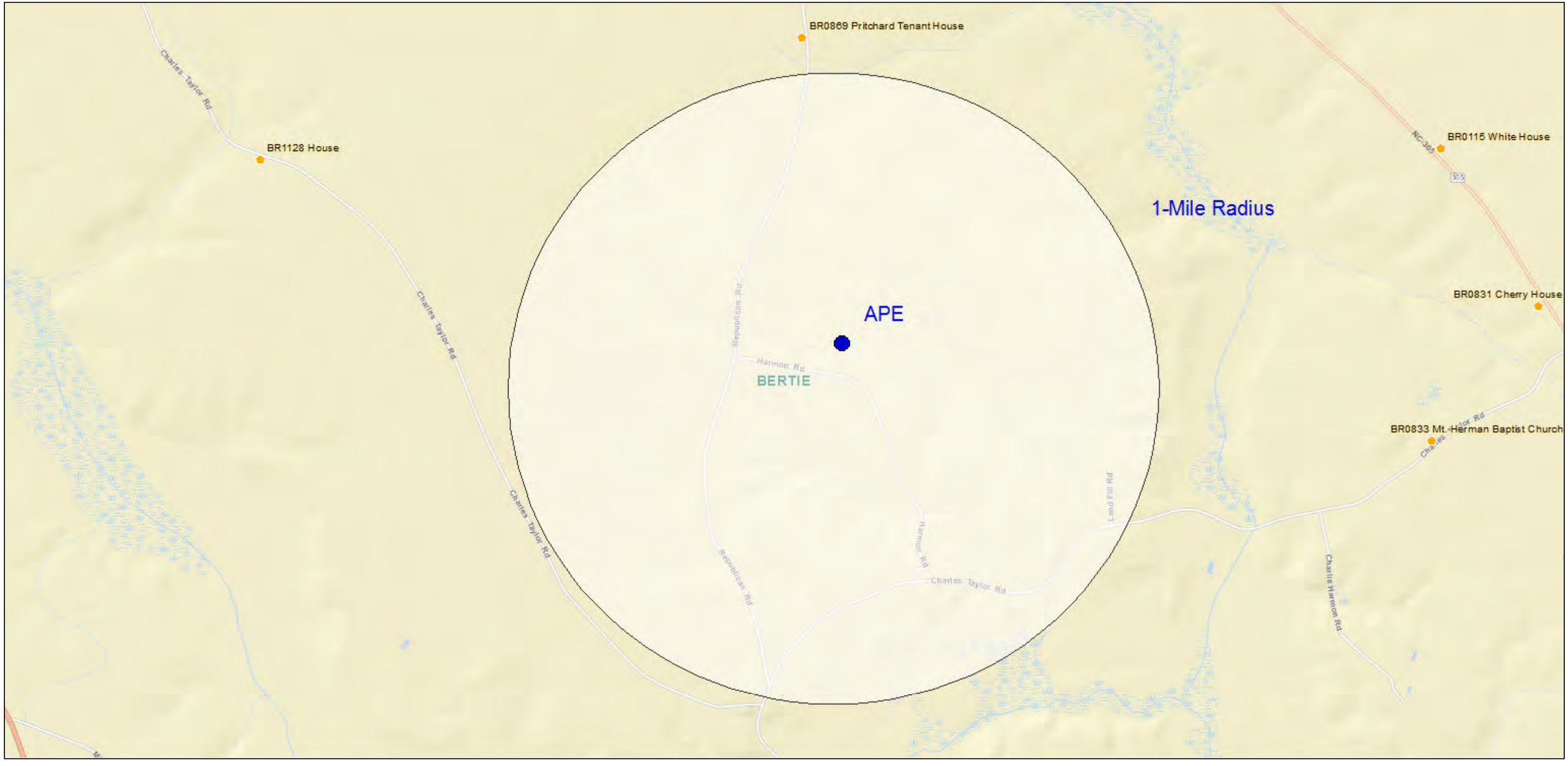
0 0.3 0.6 1.2 mi

0 0.5 1 2 km

- NR Individual Listing
- NR Listing, Gone
- NRHD Center Point
- National Register Boundary
- Boundary of Destroyed/Removed NR Listing
- SL Individual Entry
- SL and DOE entry
- Study List Entry, Gone
- SL and DOE, Gone
- SLHD Center Point
- SLDOEHD Center Point
- Study List Boundary
- Both SL and Determined Eligible Boundary
- Determined Eligible
- DOE, Gone
- SL and DOE
- SL and DOE, Gone
- DOEHD Center Point
- SLDOEHD Center Point
- Determined Eligible Boundary
- Both DOE and Study List Boundary
- Surveyed Only
- Surveyed in NRHD
- Surveyed Only, Gone
- Surveyed in NRHD, Gone
- Blockface- Multiple properties
- Blockface in NRHD
- Surveyed Area, No designation
- County Boundaries

Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

East Carolina Regional Landfill



July 8, 2014

- NR Individual Listing
- NR Listing, Gone
- NRHD Center Point
- National Register Boundary
- Boundary of Destroyed/Removed NR Listing
- SL Individual Entry
- SL and DOE entry
- Study List Entry, Gone
- SL and DOE, Gone
- SLHD Center Point
- SLDOEHD Center Point
- Study List Boundary
- Both SL and Determined Eligible Boundary
- Determined Eligible
- DOE, Gone
- SL and DOE
- SL and DOE, Gone
- DOEHD Center Point
- SLDOEHD Center Point
- Determined Eligible Boundary
- Both DOE and Study List Boundary
- Surveyed Only
- Surveyed in NRHD
- Surveyed Only, Gone
- Surveyed in NRHD, Gone
- Blockface- Multiple properties
- Blockface in NRHD
- Surveyed Area, No designation
- County Boundaries

1:25,000

0 0.3 0.6 1.2 mi

0 0.5 1 2 km

Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

ATTACHMENT (F)

REFERENCES CITED

References Cited

North Carolina State Historic Preservation Office, Division of Historical Resources, 2014. HPOWEB GIS Map Service. Accessed online 30 June 2014 at http://gis.ncdcr.gov/hpoweb/

U.S. Coast Guard
n.d. Boat Station: Station Elizabeth City. Accessed online on 20 June 2014 at http://www.uscg.mil/d5/staElizabethCity/

North Carolina Department of Cultural Resources

State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Pat McCrory
Secretary Susan Kluttz

Office of Archives and History
Deputy Secretary Kevin Cherry

August 19, 2014

Jennifer Jones
AECOM
701 Corporate Center Drive, Suite 475
Raleigh, NC 27607

Re: Dredge At MWR Boat Ramp, US Coast Guard Base, Elizabeth City, Pasquotank County, ER 14-1676

Dear Ms. Jones:

Thank you for your letter of July 18, 2014, concerning the above project.

We have conducted a review of the project and are aware of no historic resources which would be affected by the project. Therefore, we have no comment on the project as proposed.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579 or renee.gledhill-earley@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

Renee Gledhill-Earley

for Ramona M. Bartos

Appendix F.

Permit Applications

Office Use Only:
Corps action ID no. _____
DWQ project no. _____
Form Version 1.4 January 2009

Pre-Construction Notification (PCN) Form

A. Applicant Information

1. Processing

1a. Type(s) of approval sought from the Corps:	☒ Section 404 Permit	☒ Section 10 Permit
1b. Specify Nationwide Permit (NWP) number:	or General Permit (GP) number: 198200277	
1c. Has the NWP or GP number been verified by the Corps?	☐ Yes	☒ No

1d. Type(s) of approval sought from the DWQ (check all that apply):

☒ 401 Water Quality Certification – Regular ☐ Non-404 Jurisdictional General Permit

☐ 401 Water Quality Certification – Express ☐ Riparian Buffer Authorization

1e. Is this notification solely for the record because written approval is not required?	For the record only for DWQ 401 Certification: ☐ Yes ☒ No	For the record only for Corps Permit: ☐ Yes ☒ No
1f. Is payment into a mitigation bank or in-lieu fee program proposed for mitigation of impacts? If so, attach the acceptance letter from mitigation bank or in-lieu fee program.		☐ Yes ☒ No
1g. Is the project located in any of NC's twenty coastal counties. If yes, answer 1h below.		☒ Yes ☐ No
1h. Is the project located within a NC DCM Area of Environmental Concern (AEC)?		☒ Yes ☐ No

2. Project Information

2a. Name of project:	USCG Base Elizabeth City - Dredging at the MWR Boat Ramp
2b. County:	Pasquotank
2c. Nearest municipality / town:	Elizabeth City
2d. Subdivision name:	N/A
2e. NCDOT only, T.I.P. or state project no:	N/A

3. Owner Information

3a. Name(s) on Recorded Deed:	United States Coast Guard
3b. Deed Book and Page No.	Book 96 and Page 390
3c. Responsible Party (for LLC if applicable):	CDR Peter Carroll, USCG
3d. Street address:	1664 Weeksville Road
3e. City, state, zip:	Elizabeth City, NC 27909
3f. Telephone no.:	(216) 902-6204
3g. Fax no.:	(216) 902-6277
3h. Email address:	Peter.R.Carroll@uscg.mil

4. **Applicant Information (if different from owner)**	
4a. Applicant is:	☐ Agent ☒ Other, specify: US Coast Guard Commanding Officer
4b. Name:	CDR Pete Carroll, USCG
4c. Business name (if applicable):	United States Coast Guard, Civil Engineering Unit Cleveland
4d. Street address:	1240 East Ninth Street, Room 2179
4e. City, state, zip:	Cleveland Ohio 44199-2060
4f. Telephone no.:	(216) 902-6204
4g. Fax no.:	(216) 902-6277
4h. Email address:	Peter.R.Carroll@uscg.mil
5. Agent/Consultant Information (if applicable)	
5a. Name:	Jennifer Jones
5b. Business name (if applicable):	AECOM
5c. Street address:	701 Corporate Center Drive, Suite 475
5d. City, state, zip:	Raleigh, NC 27607
5e. Telephone no.:	(919) 239-7150
5f. Fax no.:	(919) 854-6259
5g. Email address:	Jennifer.Jones@aecom.com

B. Project Information and Prior Project History		
1. Property Identification		
1a. Property identification no. (tax PIN or parcel ID):		8932 255146
1b. Site coordinates (in decimal degrees):	Latitude: 36.270843	Longitude: -76.177868
1c. Property size:		748.47 acres
2. Surface Waters		
2a. Name of nearest body of water to proposed project:		Pasquotank River
2b. Water Quality Classification of nearest receiving water:		Class SB
2c. River basin:		Pasquotank River Basin
3. Project Description		
3a. Describe the existing conditions on the site and the general land use in the vicinity of the project at the time of this application: Land Cover (51 - Coastal Water Body)/Land Use (4.98 - Other Water Bodies in Active Use). The dredging will occur in the Pasquotank River and the area to be dredged is about 65 ft by 45 ft. The proposed dredge site (MWR Boat Ramp) is located along the south shore of the river at the USCG Base Elizabeth City, NC. The MWR Boat Ramp consists of a two-lane concrete ramp with a concrete pavement approach and a launch dock.		
3b. List the total estimated acreage of all existing wetlands on the property: 0		
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 0		
3d. Explain the purpose of the proposed project: See attached word document.		
3e. Describe the overall project in detail, including the type of equipment to be used: See attached word document.		
4. Jurisdictional Determinations		
4a. Have jurisdictional wetland or stream determinations by the Corps or State been requested or obtained for this property / project (including all prior phases) in the past?		☐ Yes ☒ No ☐ Unknown Comments: Not Applicable
4b. If the Corps made the jurisdictional determination, what type of determination was made?		☐ Preliminary ☐ Final
4c. If yes, who delineated the jurisdictional areas? Name (if known):		Agency/Consultant Company: Other:
4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation.		
5. Project History		
5a. Have permits or certifications been requested or obtained for this project (including all prior phases) in the past?		☐ Yes ☒ No ☐ Unknown
5b. If yes, explain in detail according to "help file" instructions.		
6. Future Project Plans		
6a. Is this a phased project?		☐ Yes ☒ No
6b. If yes, explain.		

C. Proposed Impacts Inventory

1. Impacts Summary

1a. Which sections were completed below for your project (check all that apply):

☐ Wetlands ☐ Streams – tributaries ☐ Buffers ☒ Open Waters ☐ Pond Construction

2. Wetland Impacts

If there are wetland impacts proposed on the site, then complete this question for each wetland area impacted.

2a. Wetland impact number Permanent (P) or Temporary (T)	2b. Type of impact	2c. Type of wetland	2d. Forested	2e. Type of jurisdiction Corps (404,10) or DWQ (401, other)	2f. Area of impact (acres)
W1 -	Choose one	Choose one	Yes/No	-	
W2 -	Choose one	Choose one	Yes/No	-	
W3 -	Choose one	Choose one	Yes/No	-	
W4 -	Choose one	Choose one	Yes/No	-	
W5 -	Choose one	Choose one	Yes/No	-	
W6 -	Choose one	Choose one	Yes/No	-	
				2g. **Total Wetland Impacts:**	

2h. Comments:

3. Stream Impacts

If there are perennial or intermittent stream impacts (including temporary impacts) proposed on the site, then complete this question for all stream sites impacted.

3a. Stream impact number Permanent (P) or Temporary (T)	3b. Type of impact	3c. Stream name	3d. Perennial (PER) or intermittent (INT)?	3e. Type of jurisdiction	3f. Average stream width (feet)	3g. Impact length (linear feet)
S1 -	Choose one		-	-		
S2 -	Choose one		-	-		
S3 -	Choose one		-	-		
S4 -	Choose one		-	-		
S5 -	Choose one		-	-		
S6 -	Choose one		-	-		
					3h. **Total stream and tributary impacts**	

3i. Comments:

4. Open Water Impacts

If there are proposed impacts to lakes, ponds, estuaries, tributaries, sounds, the Atlantic Ocean, or any other open water of the U.S. then individually list all open water impacts below.

4a. Open water impact number Permanent (P) or Temporary (T)	4b. Name of waterbody (if applicable)	4c. Type of impact	4d. Waterbody type	4e. Area of impact (acres)
O1 T	Pasquotank River	Dredging	Estuary	0.18
O2 -		Choose one	Choose	
O3 -		Choose one	Choose	
O4 -		Choose one	Choose	
			4f. **Total open water impacts**	0.18

4g. Comments:

5. Pond or Lake Construction

If pond or lake construction proposed, then complete the chart below.

5a. Pond ID number	5b. Proposed use or purpose of pond	5c. Wetland Impacts (acres)			5d. Stream Impacts (feet)			5e. Upland (acres)
		Flooded	Filled	Excavated	Flooded	Filled	Excavated	
P1	Choose one							
P2	Choose one							
	5f. **Total:**							

5g. Comments:

5h. Is a dam high hazard permit required?	☐ Yes ☐ No If yes, permit ID no:
5i. Expected pond surface area (acres):	
5j. Size of pond watershed (acres):	
5k. Method of construction:	

6. Buffer Impacts (for DWQ)

If project will impact a protected riparian buffer, then complete the chart below. If yes, then individually list all buffer impacts below. If any impacts require mitigation, then you **MUST** fill out Section D of this form.

6a. Project is in which protected basin? ☐ Neuse ☐ Tar-Pamlico ☐ Catawba ☐ Randleman ☐ Other:

6b. Buffer Impact number – Permanent (P) or Temporary (T)	6c. Reason for impact	6d. Stream name	6e. Buffer mitigation required?	6f. Zone 1 impact (square feet)	6g. Zone 2 impact (square feet)
B1 -			Yes/No		
B2 -			Yes/No		
B3 -			Yes/No		
B4 -			Yes/No		
B5 -			Yes/No		
B6 -			Yes/No		
			6h. **Total Buffer Impacts:**		

6i. Comments:

D. Impact Justification and Mitigation

1. Avoidance and Minimization

1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing project.

There is not available shoreline or an adequate structure to allow for dredging or stockpiling/loading of material on land. Therefore, dredging will be performed from a floating plant and not from land based operations. Prior to commencing dredging operations, the proposed area for dredging will be closed with an impermeable floating turbidity curtain. The curtain will be a full depth floating design with weighted bottom edge. The turbidity curtain will remain in place until dredging operations and final depths have been verified.

1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques.

No dredging will be conducted between February 15 and October 1, due to the dredging moratorium.

2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State

2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?	☐ Yes ☒ No
2b. If yes, mitigation is required by (check all that apply):	☐ DWQ ☐ Corps
2c. If yes, which mitigation option will be used for this project?	☐ Mitigation bank ☐ Payment to in-lieu fee program ☐ Permittee Responsible Mitigation

3. Complete if Using a Mitigation Bank

3a. Name of Mitigation Bank:

3b. Credits Purchased (attach receipt and letter)	Type: Choose one Type: Choose one Type: Choose one	Quantity: Quantity: Quantity:

3c. Comments:

4. Complete if Making a Payment to In-lieu Fee Program

4a. Approval letter from in-lieu fee program is attached.	☐ Yes
4b. Stream mitigation requested:	linear feet
4c. If using stream mitigation, stream temperature:	Choose one
4d. Buffer mitigation requested (DWQ only):	square feet
4e. Riparian wetland mitigation requested:	acres
4f. Non-riparian wetland mitigation requested:	acres
4g. Coastal (tidal) wetland mitigation requested:	acres

4h. Comments:

5. Complete if Using a Permittee Responsible Mitigation Plan

5a. If using a permittee responsible mitigation plan, provide a description of the proposed mitigation plan.

6. **Buffer Mitigation (State Regulated Riparian Buffer Rules) – required by DWQ**				
6a. Will the project result in an impact within a protected riparian buffer that requires buffer mitigation?				☐ Yes ☒ No
6b. If yes, then identify the square feet of impact to each zone of the riparian buffer that requires mitigation. Calculate the amount of mitigation required.				
Zone	6c. Reason for impact	6d. Total impact (square feet)	Multiplier	6e. Required mitigation (square feet)
Zone 1			3 (2 for Catawba)	
Zone 2			1.5	
	6f. **Total buffer mitigation required:**			
6g. If buffer mitigation is required, discuss what type of mitigation is proposed (e.g., payment to private mitigation bank, permittee responsible riparian buffer restoration, payment into an approved in-lieu fee fund).				
6h. Comments:				

E. Stormwater Management and Diffuse Flow Plan (required by DWQ)	
1. Diffuse Flow Plan	
1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?	☐ Yes ☒ No
1b. If yes, then is a diffuse flow plan included? If no, explain why.	☐ Yes ☐ No
2. Stormwater Management Plan	
2a. What is the overall percent imperviousness of this project?	0 %
2b. Does this project require a Stormwater Management Plan?	☐ Yes ☒ No
2c. If this project DOES NOT require a Stormwater Management Plan, explain why: Dredging will occur in the Pasquotank River; no activities will occur on land.	
2d. If this project DOES require a Stormwater Management Plan, then provide a brief, narrative description of the plan:	
2e. Who will be responsible for the review of the Stormwater Management Plan?	
3. Certified Local Government Stormwater Review	
3a. In which local government's jurisdiction is this project?	
3b. Which of the following locally-implemented stormwater management programs apply (check all that apply):	☐ Phase II ☐ NSW ☐ USMP ☐ Water Supply Watershed ☐ Other:
3c. Has the approved Stormwater Management Plan with proof of approval been attached?	☐ Yes ☐ No
4. DWQ Stormwater Program Review	
4a. Which of the following state-implemented stormwater management programs apply (check all that apply):	☐ Coastal counties ☐ HQW ☐ ORW ☐ Session Law 2006-246 ☐ Other:
4b. Has the approved Stormwater Management Plan with proof of approval been attached?	☐ Yes ☐ No
5. DWQ 401 Unit Stormwater Review	
5a. Does the Stormwater Management Plan meet the appropriate requirements?	☐ Yes ☐ No
5b. Have all of the 401 Unit submittal requirements been met?	☐ Yes ☐ No

F. Supplementary Information	
1. Environmental Documentation (DWQ Requirement)	
1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land?	☒ Yes ☐ No
1b. If you answered "yes" to the above, does the project require preparation of an environmental document pursuant to the requirements of the National or State (North Carolina) Environmental Policy Act (NEPA/SEPA)?	☒ Yes ☐ No
1c. If you answered "yes" to the above, has the document review been finalized by the State Clearing House? (If so, attach a copy of the NEPA or SEPA final approval letter.) The USCG is currently preparing an Environmental Assessment (EA) for the project. Comments:	☐ Yes ☒ No
2. Violations (DWQ Requirement)	
2a. Is the site in violation of DWQ Wetland Rules (15A NCAC 2H .0500), Isolated Wetland Rules (15A NCAC 2H .1300), DWQ Surface Water or Wetland Standards, or Riparian Buffer Rules (15A NCAC 2B .0200)?	☐ Yes ☒ No
2b. Is this an after-the-fact permit application?	☐ Yes ☒ No
2c. If you answered "yes" to one or both of the above questions, provide an explanation of the violation(s):	
3. Cumulative Impacts (DWQ Requirement)	
3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality?	☐ Yes ☒ No
3b. If you answered "yes" to the above, submit a qualitative or quantitative cumulative impact analysis in accordance with the most recent DWQ policy. If you answered "no," provide a short narrative description.	
4. Sewage Disposal (DWQ Requirement)	
4a. Clearly detail the ultimate treatment methods and disposition (non-discharge or discharge) of wastewater generated from the proposed project, or available capacity of the subject facility.	

5. Endangered Species and Designated Critical Habitat (Corps Requirement)	
5a. Will this project occur in or near an area with federally protected species or habitat?	☒ Yes ☐ No
5b. Have you checked with the USFWS concerning Endangered Species Act impacts?	☐ Yes ☒ No
5c. If yes, indicate the USFWS Field Office you have contacted.	-
5d. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? USFWS species list for Pasquotank County, Critical Habitat Mapper, NC Natural Heritage Program Data Search. T&E species that may be impacted include: Atlantic Sturgeon, Shortnose Sturgeon, and the West Indian Manatee. As part of the EA, the USFWS and the NCNHP will be consulted.	
6. Essential Fish Habitat (Corps Requirement)	
6a. Will this project occur in or near an area designated as essential fish habitat?	☐ Yes ☒ No
6b. What data sources did you use to determine whether your site would impact Essential Fish Habitat? The South Atlantic Fishery Management Council's (SAFMC) Essential Fish Habitat (EFH) Online Mapping. As part of the EA, the NC Division of Marine Fisheries will be consulted.	
7. Historic or Prehistoric Cultural Resources (Corps Requirement)	
7a. Will this project occur in or near an area that the state, federal or tribal governments have designated as having historic or cultural preservation status (e.g., National Historic Trust designation or properties significant in North Carolina history and archaeology)?	☐ Yes ☒ No
7b. What data sources did you use to determine whether your site would impact historic or archeological resources? The SHPO Web GIS application, online files of the NC Office of State Archaeology, and the NRHP. The USCG has determined that no historic properties affected by the proposed dredging. The USCG received SHPO concurrence on 8/19/14 (see attachment).	
8. Flood Zone Designation (Corps Requirement)	
8a. Will this project occur in a FEMA-designated 100-year floodplain?	☐ Yes ☒ No
8b. If yes, explain how project meets FEMA requirements: Not applicable. No construction. Project involves dredging which will take place in open water.	
8c. What source(s) did you use to make the floodplain determination? FIRM Panel 3720893200J	

Peter R. Carroll, CDR Applicant/Agent's Printed Name	Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)	9/3/14 Date

Pre-Construction Notification (PCN) Form

Project: USCG Base Elizabeth City – Dredging at the MWR Boat Ramp

B. Project Information and Prior Project History

3. Project Description

3d. Explain the purpose of the proposed project:

The purpose of the project is to dredge the boat basin and moorings to a required depth below Mean Water Low (MWL) to prevent the shoaling that the USCG is currently experiencing. Water depth in the moorings is reduced by heavy winds from the north, which push water from the moorings and down the Pasquotank River. This wind effect encumbers the USCG's ability to transit, moor and execute operational missions. The USCG military personnel launch privately-owned recreational boats and USCG vessels stationed at the Building 43 moorings from the MWR Boat Ramp. Maintenance dredging has not previously been conducted at the MWR Boat Ramp. The MWR Boat Ramp is a previously dug man-made basin and the proposed dredge area will occur entirely within the previously dug boat basin and moorings. There are no as-built drawings available for the MWR Boat Ramp; therefore, the original depth of the boat basin is unknown. Thus, the USCG is in the process of preparing an Environmental Assessment (EA) for the proposed dredging of the boat ramp to address NEPA requirements.

3e. Describe the overall project in detail, including the type of equipment to be used:

The project involves mechanical dredging of the boat basin and moorings at the MWR Boat Ramp to a maximum depth of 8 feet below MWL (includes one foot over dredge). The calculated dredge volume for the MWR Boat Ramp is 755 cubic yards. The proposed dredge area will be closed with an impermeable floating turbidity curtain with a weighted bottom edge. The dredge material will be deposited on barges, dewatered on the barges (within the turbidity curtain), transported by barge to an unloading site, offloaded to trucks, and transported by truck to the East Carolina Regional Landfill for disposal.

F. Supplementary Information

5. Endangered Species and Designated Critical Habitat (Corps Requirement)

5d. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat?

The USFWS species list for Pasquotank County, USFWS Critical Habitat Mapper, NC Natural Heritage Program Data Search for the Elizabeth City quadrangle along with habitat requirements. The USFWS Information, Planning, and Conservation (IPaC) System was also reviewed. The USFWS (Raleigh field office) and the NC NHP will be consulted.

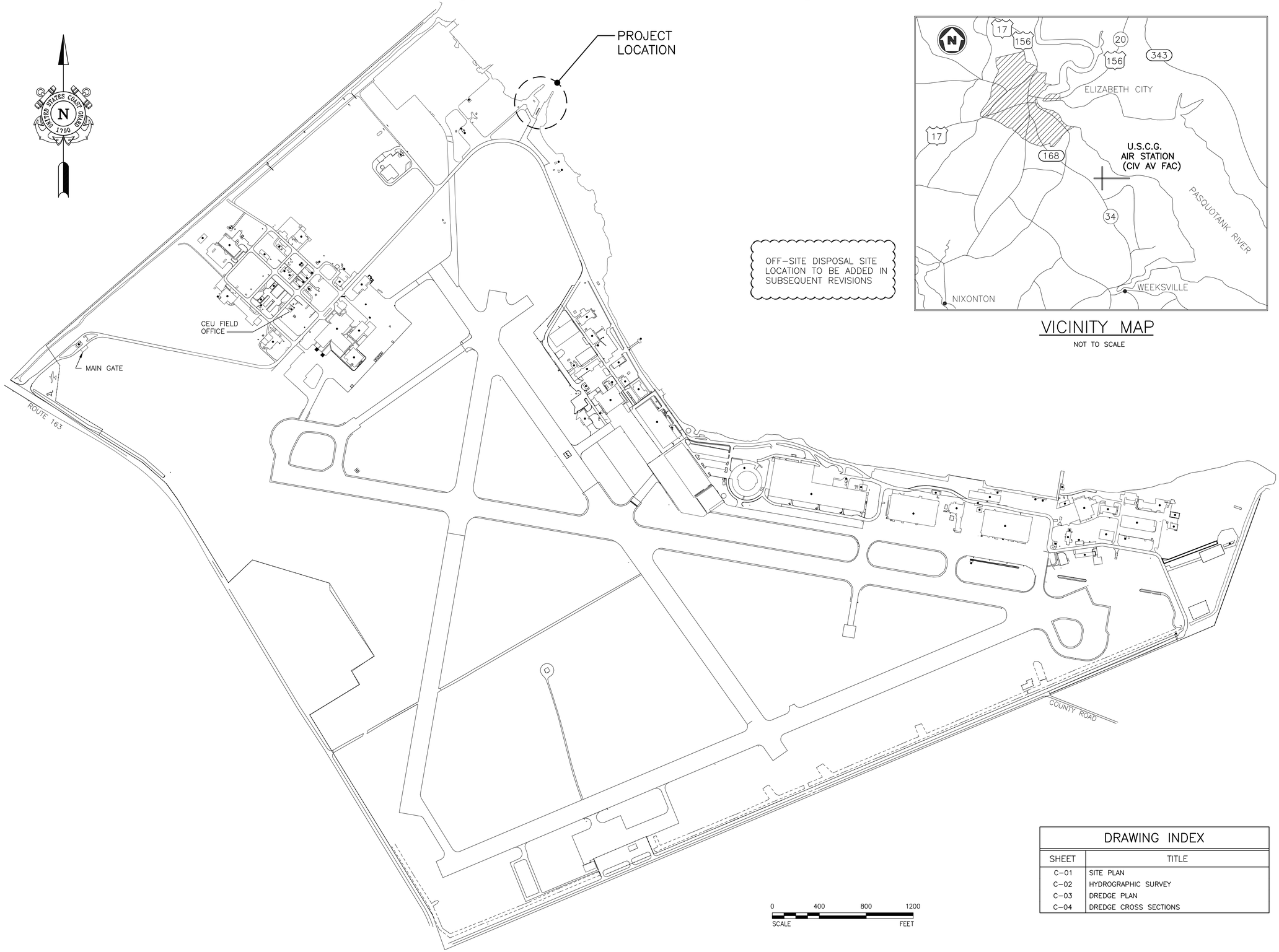
According to the online resources there are three federally-listed endangered species identified within Pasquotank County with potential habitat in the project area; Shortnose sturgeon (*Acipenser*

brevirostrum), Atlantic sturgeon (*Acipenser oxyrinchus*), and West Indian manatee (*Trichechus manatus*). No critical habitats were identified within the proposed project area. Review of the IPaC System indicates that only two of the endangered species (i.e., Shortnose sturgeon and Atlantic sturgeon) should be considered in an effects analysis for the proposed project.

6. Essential Fish Habitat (Corps Requirement)

6b. What data sources did you use to determine whether your site would impact Essential Fish Habitat?

The South Atlantic Fishery Management Council's (SAFMC) Essential Fish Habitat (EFH) online map was reviewed. As part of the EA, the NC Division of Marine Fisheries will be consulted. The NC Wildlife Resources Commission will also be consulted. The NC OneMap Habitat Map, the National Oceanic and Atmospheric Administration (NOAA) Environmental Sensitivity Map for the Elizabeth City Quadrangle, and the NC DMF Anadromous Fish Spawning Area (AFSA) map for the Albemarle Sound area were also reviewed. The proposed dredge area is located within AFSA waters; however, the project site is not located in the vicinity of a designated primary nursery area, submerged aquatic vegetation area, or an area of EFH.



OFF-SITE DISPOSAL SITE LOCATION TO BE ADDED IN SUBSEQUENT REVISIONS

VICINITY MAP

NOT TO SCALE

DRAWING INDEX

SHEET	TITLE
C-01	SITE PLAN
C-02	HYDROGRAPHIC SURVEY
C-03	DREDGE PLAN
C-04	DREDGE CROSS SECTIONS

USCG CEU
CLEVELAND, OHIO
(216) 902-6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199-2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C01.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP

SCALE: AS SHOWN PLOT SCALE: 1:1

SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL
SITE PLAN

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

P.R. CARROLL, CDR. — APPROVING OFFICER
DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257-D
DISCIPLINE/SHT NO	
C-01	SHEET 1 OF 4

LEGEND

8.2 (TYP) – DEPTH MEASUREMENT (SOUNDING) REFERENCED TO MEAN WATER LEVEL (MWL)

−10 (TYP) – CONTOUR ELEVATION REFERENCED TO MWL

(+2.5) (TYP) – SPOT ELEVATION (ON PIER & SHEET PILE)

(TYP) – UNDERGROUND UTILITY VAULT

(TYP) – CONCRETE MATERIAL

(TYP) – RIP–RAP

(TYP) – WOODEN PIER / BULKHEAD

(TYP) – UTILITY VALVE

(S) (TYP) – SANITARY SEWER MANHOLE

(E) (TYP) – ELECTRIC UTILITY MANHOLE

(TYP) – LIGHT PEDESTAL

(TYP) – LIGHT

(TYP) – INFORMATIONAL SIGN

(TYP) – CAMERAL POLE

(TYP) – MARINE PILING

(TYP) – MOORING DOLPHIN

0 20' 40'

HORIZONTAL SCALE

N 929,300 N 929,400 N 929,500 N 929,600 N 929,700 N 929,800 N 929,900

E 2,892,700 E 2,892,800 E 2,892,900 E 2,893,000 E 2,893,100 E 2,893,200 E 2,893,300

RIP–RAP (SEE NOTE 8)

MOORING DOLPHIN (3 PILINGS) (TYP.)

INFORMATIONAL SIGN

MARINE PILING (TYP.)

CONCRETE PAD & ELECTRIC MANHOLE(S)

ELECTRIC UTILITY VAULT

LIGHT (TYP.)

CHANNEL MARKER (RED #2)

CAMERA POLE

PASQUOTANK RIVER (FLOW)

GRASSY AREA

TIMBER MOORING PILES (7)

STREET LIGHT

CHANNEL MARKER (GREEN #1)

CONCRETE ACCESS/EGRESS ROADWAY

APPROXIMATE LIMITS OF SUBMERGED CONCRETE RAMP

WOODEN PIER

WOODEN BULKHEAD

LIGHT PEDESTAL

CUT OFF TIMBER PILES

INFORMATIONAL SIGN (NO SWIMMING)

INFORMATIONAL SIGN (STAY OFF ROCKS)

SEE NOTE 9

CONCRETE RAMP

WOODEN BULKHEAD

LIGHT (TYP.)

LIGHT PEDESTAL

INFORMATIONAL SIGN (NO SWIMMING)

RIP–RAP (SEE NOTE 8)

POWER PEDESTAL

GRASSY AREA

INFORMATIONAL SIGN (STAY OFF ROCKS)

BATHYMETRY NOTES

1. BATHYMETRIC SURVEY DATA WAS COLLECTED ON MAY 07–09, 2014 BY GAHAGAN & BRYANT ASSOCIATES OF NC, PLLC. (GBA) AND IS EXPRESSED IN FEET BELOW MEAN WATER LEVEL (MWL).
2. HORIZONTAL DATUM IS IN REFERENCE TO THE NORTH CAROLINA STATE PLANE GRID COORDINATE SYSTEM NORTH AMERICAN DATUM OF 1983 (NAD83).
3. VERTICAL DATUM IS IN REFERENCE TO MEAN WATER LEVEL (MWL). MWL IS 0.44 FEET ABOVE THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

MWL
0.44'
NAVD88
5.94'
−5.50'
USGS GAUGE #0204382800

4. MWL ESTABLISHED FROM USGS WATER LEVEL GAUGE #0204382800 LOCATED ON THE PASQUOTANK RIVER. GAUGE DATUM = −5.50' NAVD88, MEAN GAUGE HEIGHT = 5.94' (FEB 06 – SEP 08)
5. BATHYMETRIC DATA DEPICTED ON THIS PLAN IS REPRESENTATIVE OF A LARGER DATA SET & WAS CORRECTED IN REAL TIME VIA REAL TIME KINEMATIC (RTK) TIDES.
6. EQUIPMENT USED

VESSEL:	GBA "SEA MINNOW"
ECHO SOUNDER:	ODOM CV100
HORIZONTAL POSITIONING:	RTK 5700
BASE STATION:	TRIMBLE R8 SET UP ON NGS MONUMENT "S 176 RESET"
ROVER:	TRIMBLE R6 USED FOR UPLAND SURVEY

7. THE INFORMATION DEPICTED ON THIS PLAN REPRESENTS RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.
8. RIP–RAP LIMITS ARE APPROXIMATE. SPORADIC RIP–RAP PIECES ARE PRESENT IN SURVEY AREA AND ARE NOT SHOWN FOR CLARITY.
9. LIMITS SHOWN DEPICT THE TRANSITION FROM A COMPACT SUBSTRATE TO A SOFT MATERIAL, POSSIBLY THE SCOUR STONE PROTECTION LIMITS.

USCG CEU
CLEVELAND, OHIO
(216) 902–6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199–2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C02.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP
SCALE: AS SHOWN	PLOT SCALE: 1:1

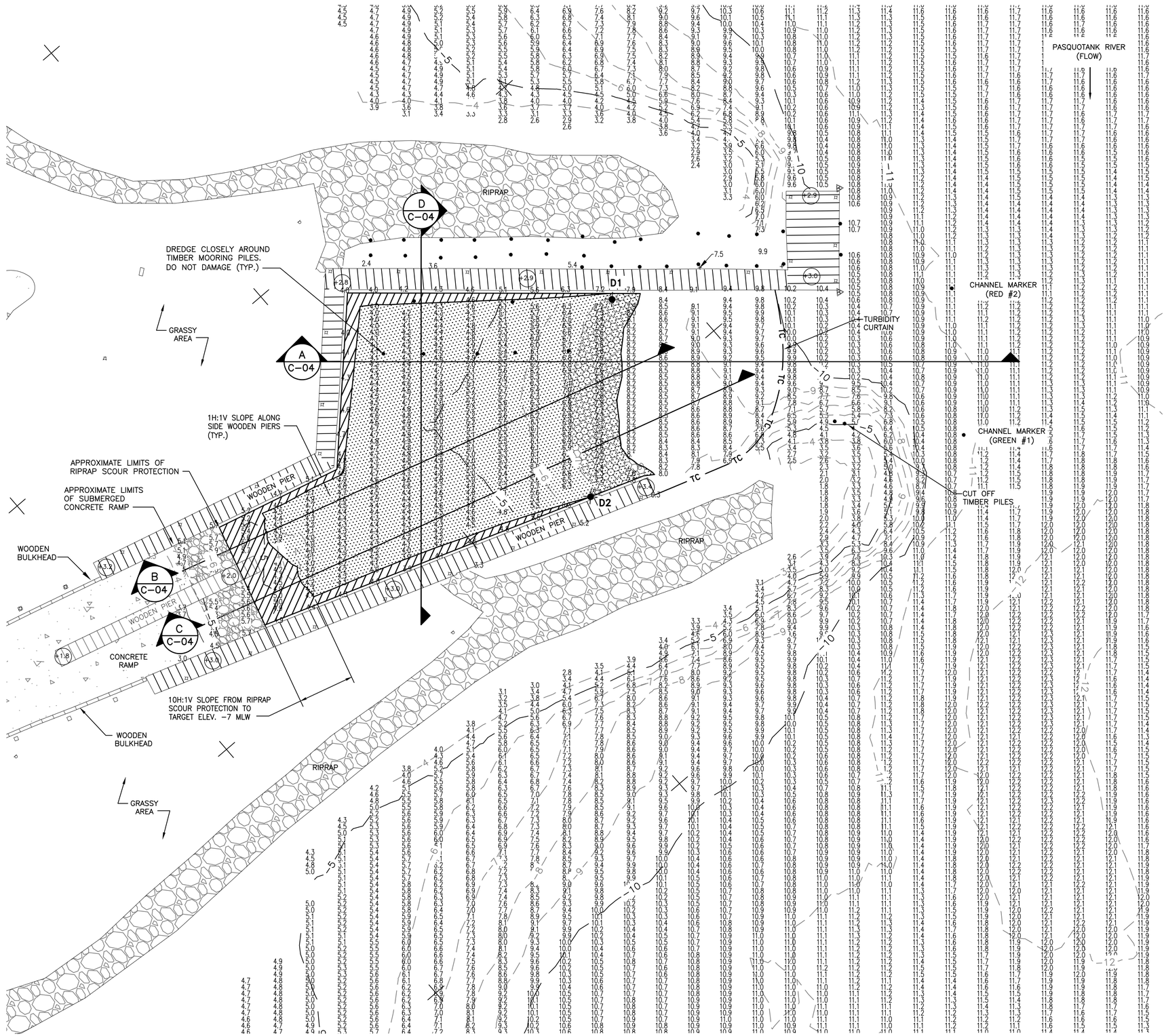
SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL
HYDROGRAPHIC SURVEY

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

P.R. CARROLL, CDR.
APPROVING OFFICER — DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257–D
DISCIPLINE/SHT NO	
C–02	SHEET 2 OF 4



LEGEND:

- EXISTING CONTOUR (5' INTERVAL)
- EXISTING CONTOUR (1' INTERVAL)
- DREDGE COORDINATE POINT & ID
- 11.3 — DEPTH MEASUREMENT (SOUNDING) REFERENCED TO MEAN WATER LEVEL (MWL)
- −10 — CONTOUR ELEVATION REFERENCED TO MWL
- +2.5 — SPOT ELEVATION (ON PIER OR STRUCTURE)
- EXISTING CONCRETE MATERIAL
- EXISTING RIPRAP
- PROPOSED DREDGING TO TARGET DEPTH −7 MWL
- PROPOSED OVER-DEPTH DREDGE TO −8 MWL
- PROPOSED DREDGE SIDE SLOPES (SLOPES VARY – SEE PLAN)

NOTES:

1. 0.0 MWL FOR PASQUOTANK RIVER = −0.44' NAVD88
2. THE TARGET DREDGE DEPTH FOR THIS PROJECT IS −7 FT MWL. OVER-DEPTH DREDGE IN THESE AREAS SHALL NOT EXCEED −8 FT MWL.
3. CONTRACTOR SHALL USE METHODS AND EQUIPMENT THAT PROTECT THE PIER STRUCTURES FROM DAMAGE. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE.
4. CONTRACTOR SHALL DREDGE AT A 10H:1V SLOPE AT THE LAUNCH RAMP STARTING AT THE END OF THE RIPRAP SCOUR PROTECTION.
5. MORATORIUM: TO COMPLY WITH PERMITS, NO DREDGING SHALL BE CONDUCTED BETWEEN OCTOBER 1 AND FEBRUARY 15.

DREDGE COORDINATE TABLE

DREDGE ID	NORTHING	EASTING
D1	929382.66	2831869.00
D2	929337.45	2831913.52

- **COORDINATES ARE IN** NORTH CAROLINA STATE PLANE GRID COORDINATE SYSTEM, FEET (NAD83).

0 16 32 48
SCALE IN FEET

USCG CEU
CLEVELAND, OHIO
(216) 902-6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199-2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C03.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP
SCALE: AS SHOWN	PLOT SCALE: 1:1

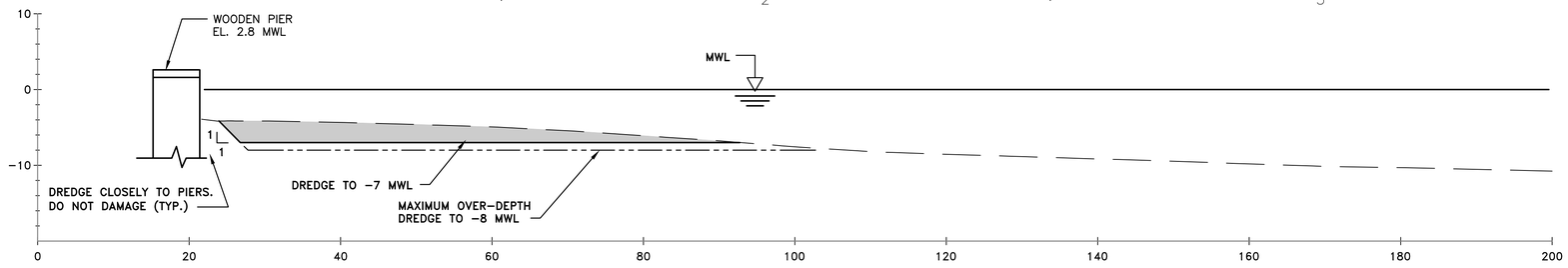
SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL
DREDGE PLAN

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

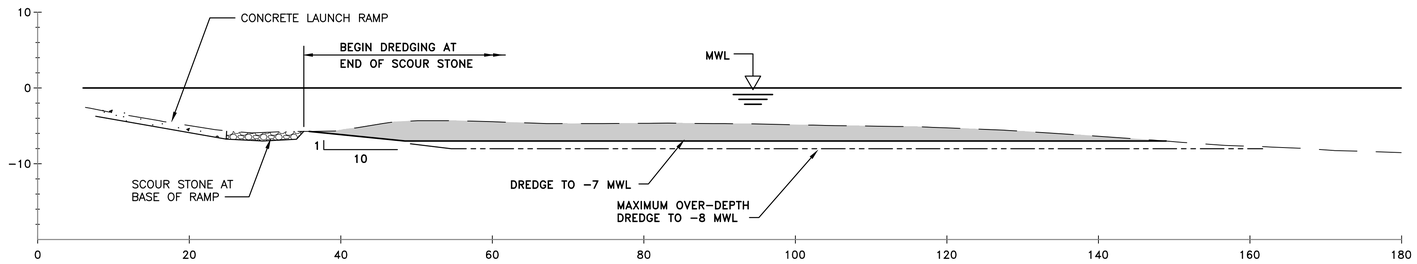
P.R. CARROLL, CDR.
APPROVING OFFICER — DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257-D
DISCIPLINE/SHT NO	SHEET 3 OF 4
C-03	



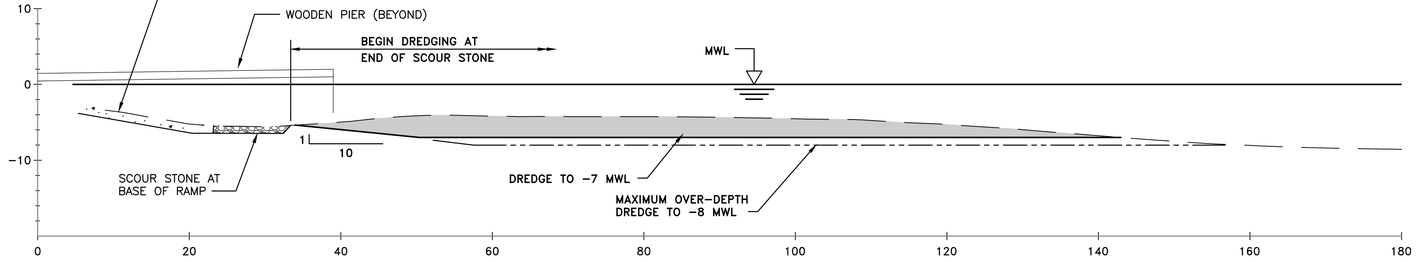
SECTION A C−04

FEET 0 10 20



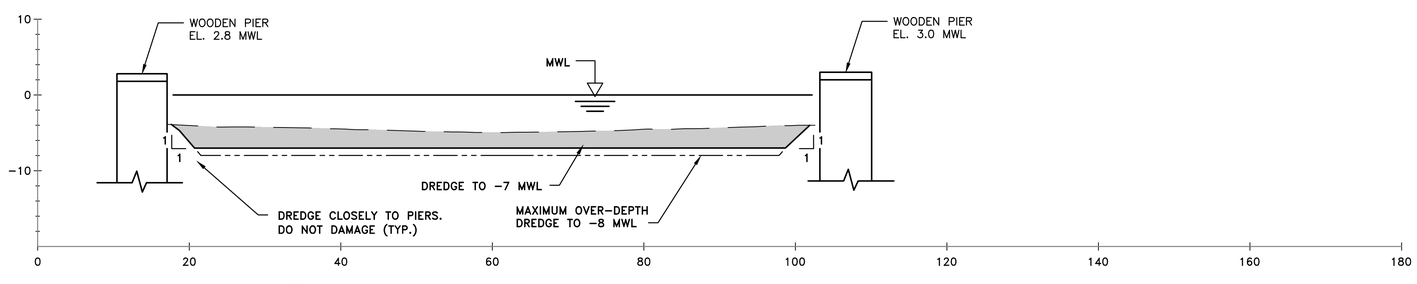
SECTION B C−04

FEET 0 10 20



SECTION C C−04

FEET 0 10 20

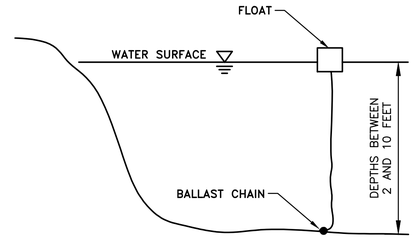


SECTION D C−04

FEET 0 10 20

LEGEND

- EXISTING TOP OF SEDIMENT
- PROPOSED BASE DREDGE ELEVATION
- MAXIMUM OVER−DEPTH DREDGE



TURBIDITY CURTAIN DETAIL

NOT TO SCALE

USCG CEU
CLEVELAND, OHIO
(216) 902−6200

CONSULTANTS

AECOM
8320 Guilford Road, Suite L
Columbia, MD 21046

U. S. COAST GUARD
CIVIL ENGINEERING UNIT
CLEVELAND

USCG. CEU CLEVELAND
1240 EAST 9TH STREET
CLEVELAND, OH 44199−2060

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:	60321114
CAD FILE NAME:	C8257C04.DWG
DESIGNED BY:	SJR
DRAWN BY:	MJC
EDITED BY:	MJC
CHECKED BY:	TAP

SCALE: AS SHOWN PLOT SCALE: 1:1

SHEET TITLE

DREDGING AT MWR BOAT RAMP
CG BASE ELIZABETH CITY
ELIZABETH CITY NC
MWR BOAT RAMP
CIVIL

DREDGE CROSS SECTIONS

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
J.W. NICKS	G.P. LODGE	G.S. PLACZEK
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

P.R. CARROLL, CDR. — APPROVING OFFICER

DATE

PROJECT NUMBER	DRAWING NUMBER
3756419	8257−D
DISCIPLINE/SHT NO	
C−04	SHEET 4 OF 4

North Carolina Department of Cultural Resources

State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Pat McCrory
Secretary Susan Kluttz

Office of Archives and History
Deputy Secretary Kevin Cherry

August 19, 2014

Jennifer Jones
AECOM
701 Corporate Center Drive, Suite 475
Raleigh, NC 27607

Re: Dredge At MWR Boat Ramp, US Coast Guard Base, Elizabeth City, Pasquotank County, ER 14-1676

Dear Ms. Jones:

Thank you for your letter of July 18, 2014, concerning the above project.

We have conducted a review of the project and are aware of no historic resources which would be affected by the project. Therefore, we have no comment on the project as proposed.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579 or renee.gledhill-earley@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

Renee Gledhill-Earley

for Ramona M. Bartos

AECOM
701 Corporate Center Drive, Suite 475
Raleigh, NC 27607

919.854.6200 tel
919.854.6259 fax

July 18, 2014

Ms. Renee Gledhill-Earley
State Historic Preservation Office
4617 Mail Service Center
Raleigh, NC 27699-4617

SUBJECT: U.S. Coast Guard Base Elizabeth City – Dredging at MWR Boat Ramp, Elizabeth City, North Carolina

Dear Ms. Gledhill-Earley:

In compliance with Section 106 of the National Historic Preservation Act (NHPA), the U.S. Coast Guard (USCG) Civil Engineering Unit Cleveland is initiating consultation with your office concerning the proposed action to complete dredging of the boat ramp and moorings at the Morale, Welfare and Recreate (MWR) Boat Ramp at the USCG Base Elizabeth City. The USCG Base Elizabeth City is located approximately 3.5 miles southeast of Elizabeth City, along Highway 34, on the south shore of the Pasquotank River in Pasquotank County, North Carolina (**Attachment A**). The geographic location of the MWR Boat Ramp is latitude 36° 16' 14.72" north and longitude 76° 10' 40.31" west. The USCG has approved this consultation packet pursuant to 36 CFR 800.2(a)(3).

The base is the largest USCG Air Station in the nation, and contains a number of commands - Air Station Elizabeth City, Aircraft Repair and Supply Center, Aviation Technical Training Center, Support Center Elizabeth City, and Small Boat Station Elizabeth City. The base was established in 1940 and consists of over 100 buildings which have been constructed over the lifetime of the base. The base occupies approximately 950 acres and most of the base's buildings support the air command. The base can be accessed either from the main gate off Weeksville Road on the north end of the base, or from a second entrance off Consolidated Road on the south end of the base. The MWR Boat Ramp can be approached by water from the northeast or by land via Moukawsher Drive along the shoreline (**Attachment B**).

The MWR Boat Ramp is located on the north end of the base's shoreline, in a portion of the river tidal flats. The MWR Boat Ramp consists of a two-lane concrete ramp with a concrete pavement approach, and a launch dock centered in the boat ramp. Rubblemound stone breakwaters project approximately 100 to 125 feet from the shoreline on both sides of the launch ramp to form a protected harbor area for launching and retrieving boats. Timber docks line both sides of this protected harbor area. Mooring piles are in place along the west timber dock. Navigation aids are located near the entrance to the protected harbor area. These consist of a red dayboard with a solar-powered red beacon, and a green dayboard (**Attachment C**).

The MWR Boat Ramp is a two-lane concrete surface launch ramp utilized by base military personnel for launching privately-owned recreational boats, and for launching USCG vessels stationed at the Building 43 moorings. The purpose of this project is to dredge the boat basin and moorings to a required depth below Mean Water Low (MWL) datum at the MWR Boat Ramp in order for the unit's small boats to transit and be able to execute their operational missions without the encumbrances of shoaling in the boat basin that they currently are experiencing due to specific wind directions at low tide. Maintenance dredging has not previously been conducted at the MWR Boat Ramp. The USCG anticipates conducting the proposed

maintenance dredging activities under USACE Nationwide Permit #35. For the MWR Boat Ramp, the USCG Area of Potential Effects (APE) includes dredging to a maximum depth of 8 feet below MWL (includes one foot over dredge). The dredge volume for the MWR Boat Ramp is 755 cubic yards. The 35% civil site plan entitled, "Dredging at MWR Boat Ramp: CG Base Elizabeth City" illustrates the location and specifications of this proposed dredging project (**Attachment D**).

The USCG has researched multiple options for disposal of dredge material for this project. The East Carolina Regional Landfill, located at 1922 Republican Road in Aulander, Bertie County, North Carolina, is approximately 63 miles from Base Elizabeth City. This landfill is a licensed and approved landfill that will accept dredged material. Therefore, the APE includes the East Carolina Regional Landfill since it is the likely recipient of dredge spoils for this proposed project.

The USCG completed background research and records review using the State Historic Preservation Office (SHPO) Web GIS application, the online files of the North Carolina Office of State Archaeology, and the National Register of Historic Places. Based on the USCG's review, there have been no prior archaeological investigations and no historic architectural surveys completed for the APE. There are no National Register-listed or -eligible, or potentially eligible (according to the SHPO Study List) terrestrial or underwater archaeological sites or historic architectural resources located within or immediately adjacent to the APE. Three historic architectural resources have been identified within one mile of the APE, including one site that has been Determined Eligible and two potentially eligible sites on the SHPO Study List. No shipwrecks have been recorded in the MWR boat ramp and moorings APE and no historic properties have been recorded at the East Carolina Regional Landfill.

The Thrun Hall Barracks is a site that has been determined National Register-eligible in 2010 and is located inland from the MWR Boat Ramp, approximately three-quarters of a mile to the southeast of the APE. The Thrun Hall Barracks were subsequently photo documented and demolished upon the SHPO's approval. The John Hollowell House (PK0972) and the C.W. Hollowell House (PK0474) are on the Study List and are located inland from the MWR Boat Ramp, approximately one mile to the south-southwest of the APE (**Attachment E**).

The proposed dredging activities will not create any subsurface disturbance that could affect terrestrial archaeological resources, if present. Dredging will not be staged on the shore, and all dredged sediment will be loaded onto a barge. No previously identified shipwrecks or other underwater archaeological resources have been recorded for the MWR boat ramp and moorings APE or for the immediate vicinity of the APE. Although maintenance dredging has not been conducted for the boat ramp and moorings, the actions required for the original construction of the two-lane concrete ramp, launch dock, wooden piers, and associated moorings have undoubtedly disturbed the sediments to a considerable depth. Due to the extent of prior subsurface disturbance in the MWR boat ramp and moorings APE, it is unlikely that intact, significant underwater archaeological resources would be present and retain integrity. Therefore, the USCG has determined "No Historic Properties Affected." We would appreciate your concurrence with this determination.

If you have any questions, please contact Jennifer Jones (AECOM) at (919) 239-7150 or Leilani Woods (USCG) at (252) 335-6847.

Yours sincerely,

Jennifer Jones
Environmental Task Manager

Nancy Stehling, RPA
Senior Archaeologist

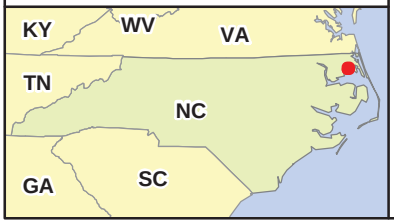
Attachments: (A) Dredge Site - Location Map
(B) Dredge Site - Aerial Photograph
(C) Dredge Site - Ground-Level Photographs
(D) Dredge Site – 35% Plan
(E) Historic Preservation Office – Web GIS Maps
(F) References Cited

CC: Ms. Leilani Woods, Environmental Engineer, USCG Civil Engineering Unit Cleveland
Mr. Greg Carpenter, Environmental Project Manager, USCG Civil Engineering Unit Cleveland

ATTACHMENT (A)

DREDGE SITE - LOCATION MAP

Map Location



Site Location Map

MWR Boat Ramp
USCG Base Elizabeth City, North Carolina

Elizabeth City NC Topographic Quadrangle (1983)

0 1,000 2,000 Feet

June 2014

60321114

Figure 1

AECOM Environment
701 Corporate Center Drive, Suite 475
Raleigh, NC 27607
Phone: (919) 854-6200
Fax: (919) 854-6259
Web: http://www.aecom.com

ATTACHMENT (B)

DREDGE SITE – AERIAL PHOTOGRAPH

Scale: Not To Scale	(Source: Google Earth© 2014)	**Dredge Site - Aerial Photograph** US Coast Guard Base Elizabeth City – MWR Boat Ramp Elizabeth City, NC	AECOM **Attachment B**
			www.aecom.com

ATTACHMENT (C)

DREDGE SITE – GROUND-LEVEL PHOTOGRAPHS

PHOTOGRAPH LOG

Facility Name:	Site Location:	Project No.
United States Coast Guard	MWR Boat Ramp – USCG Base Elizabeth City, NC	60321114

Photo No. 1	Date: 05/7/14

Direction Photo Taken:

North

Description:

View from the southern side of the shore (concrete pavement approach) of the concrete ramp, docks, navigation aids, and light pedestals.

Photo No. 2	Date: 05/7/14

Direction Photo Taken:

Northwest

Description:

View from the concrete pavement approach along the southern shoreline.

PHOTOGRAPH LOG

Facility Name:	Site Location:	Project No.
United States Coast Guard	MWR Boat Ramp – USCG Base Elizabeth City, NC	60321114

Photo No. 3	Date: 05/7/14

Direction Photo Taken:

South

Description:

View looking south of the concrete ramp, docks, light pedestals, and mooring piles.

Photo No. 4	Date: 05/7/14

Direction Photo Taken:

North

Description:

View at the end of the concrete ramp of the docks, light pedestals, and mooring piles.

PHOTOGRAPH LOG

Facility Name:	Site Location:	Project No.
United States Coast Guard	MWR Boat Ramp – USCG Base Elizabeth City, NC	60321114

Photo No. 5	Date: 05/7/14

Direction Photo Taken:

South-Southeast

Description:

View of the man-made beach located southeast of the MWR Boat Ramp.

Photo No. 6	Date: 05/7/14

Direction Photo Taken:

North

Description:

View of the navigation aids at entry to the protected harbor area. Note two timbers low to water surface in the entry-way.

ATTACHMENT (D)

DREDGE SITE – 35% PLAN

This page intentionally left blank.

ATTACHMENT (E)

HISTORIC PRESERVATION OFFICE –
WEB GIS MAPS

Base Elizabeth City_MWR Boat Ramp

July 8, 2014

1:25,000

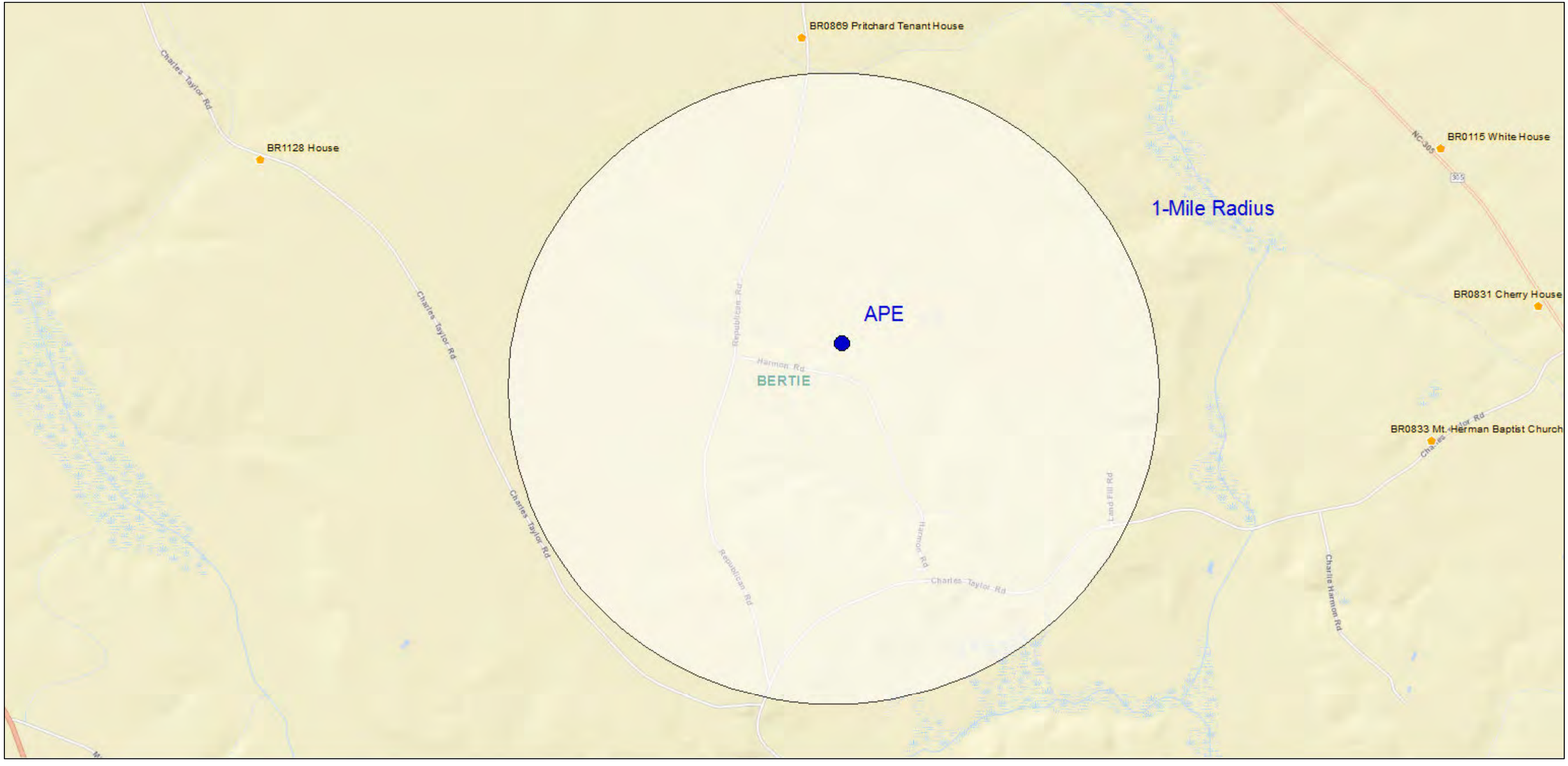
0 0.3 0.6 1.2 mi

0 0.5 1 2 km

- NR Individual Listing
- NR Listing, Gone
- NRHD Center Point
- National Register Boundary
- Boundary of Destroyed/Removed NR Listing
- SL Individual Entry
- SL and DOE entry
- Study List Entry, Gone
- SL and DOE, Gone
- SLHD Center Point
- SLDOEHD Center Point
- Study List Boundary
- Both SL and Determined Eligible Boundary
- Determined Eligible
- DOE, Gone
- SL and DOE
- SL and DOE, Gone
- DOEHD Center Point
- SLDOEHD Center Point
- Determined Eligible Boundary
- Both DOE and Study List Boundary
- Surveyed Only
- Surveyed in NRHD
- Surveyed Only, Gone
- Surveyed in NRHD, Gone
- Blockface- Multiple properties
- Blockface in NRHD
- Surveyed Area, No designation
- County Boundaries

Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

East Carolina Regional Landfill



July 8, 2014

- NR Individual Listing
- NR Listing, Gone
- NRHD Center Point
- National Register Boundary
- Boundary of Destroyed/Removed NR Listing
- SL Individual Entry
- SL and DOE entry
- Study List Entry, Gone
- SL and DOE, Gone
- SLHD Center Point
- SLDOEHD Center Point
- Study List Boundary
- Both SL and Determined Eligible Boundary
- Determined Eligible
- DOE, Gone
- SL and DOE
- SL and DOE, Gone
- DOEHD Center Point
- SLDOEHD Center Point
- Determined Eligible Boundary
- Both DOE and Study List Boundary
- Surveyed Only
- Surveyed in NRHD
- Surveyed Only, Gone
- Surveyed in NRHD, Gone
- Blockface- Multiple properties
- Blockface in NRHD
- Surveyed Area, No designation
- County Boundaries

1:25,000

0 0.3 0.6 1.2 mi

0 0.5 1 2 km

Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

ATTACHMENT (F)

REFERENCES CITED

References Cited

North Carolina State Historic Preservation Office, Division of Historical Resources, 2014. HPOWEB GIS Map Service. Accessed online 30 June 2014 at http://gis.ncdcr.gov/hpoweb/

U.S. Coast Guard
n.d. Boat Station: Station Elizabeth City. Accessed online on 20 June 2014 at http://www.uscg.mil/d5/staElizabethCity/

North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

John E. Skvarla III
Secretary

October 23, 2014

DWQ Project # 14-1039
Pasquotank County

CERTIFIED MAIL: RETURN RECEIPT REQUESTED
7014 0150 0000 7802 4768

United States Coast Guard, Civil Engineering Unit Cleveland
CDR Pete Carroll
1240 East Ninth Street, Room 2179
Cleveland, Ohio 44199-2060

Subject Property: USCG Base Elizabeth City – MWR Boat Ramp
Pasquotank River Basin, Pasquotank River [PAS 50, 30-3-(12); SB]

REQUEST FOR ADDITIONAL INFORMATION

Dear Mr. Carroll:

On September 26, 2014, the Division of Water Resources (DWR) received your application dated September 3, 2014 for proposed dredge impacts at the MWR boat ramp. The DWR has determined that your application was incomplete and/or provided inaccurate information as discussed below. Please note that in accordance with 15A NCAC 02H .0502 the DWR requires additional information in order to process your application. Therefore, unless we receive the additional information requested below, we will have to move toward denial of your application as required by 15A NCAC 2H .0506 and 15A NCAC 2B .0200 and will place this project on hold as incomplete until we receive this additional information. Please provide the following information so that we may continue to review your project.

Additional Information Requested:

1. Please be advised that in accordance with 15A NCAC 02H .0506, it is necessary that the Environmental Assessment (EA) be published before this Office can issue a General Certification (GC) for the subject project. It is allowable to issue a GC if the EA is published in Draft form. This Office should be contacted as soon as the results of the EA are published to resume the permitting process.

Please respond in writing to the DWR within 30 days of the date of this letter to with the requested information. If we do not hear from you within 30 days, we will assume that you no longer want to pursue this project and we will consider the project as withdrawn. This letter only addresses the application review and does not authorize any impacts to wetlands, waters or protected buffers. Please be aware that any impacts requested within your application are not authorized (at this time) by the DWR. Please call Roberto Scheller of the Washington Regional Office at 252-948-3940 if you have any questions regarding or would like to set up a meeting to discuss this matter.

Sincerely,

Robert Tankard
Assistant Regional Supervisor
Division of Water Resources

cc: Jennifer Jones, AECOM, email: Jennifer.Jones@aecom.com
Bill Biddlecome, USACE Washington, Regulatory Field Office
DWQ Webscape Unit
File Copy

Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

Waste Profile #	Expiration Date
30261412720	7/30/2015

I. Decision Request: ☑ Initial ☐ Recertification ☐ Change

Disposal Facility: 3026 - East Carolina Regional Landfill

Generator Name: USCG Base Elizabeth City

Generator Site Address: 1664 Weeksville Road

City: Elizabeth City **County:** **State:** NC **Zip:**

Name of Waste: Dredge Material

Estimated Annual Volume: 755 Cubic Yards

II. Special Waste Department Decision: ☑ Approved ☐ Rejected

Management Method(s): ☑ Landfill ☐ Solidification ☐ Bioremediation ☐ Transfer Facility

Problematic Special Waste according to Republic? ☐ Yes ☑ No

If yes, which one?

Approved by Special Waste Review Committee? ☐ Yes ☐ No ☑ Not Applicable

Precautions, Conditions or Limitations on Approval

This waste must be able to pass a paint filter test prior to shipment and disposal.
Free liquids are not permitted for landfill disposal.

Special Waste Analyst Signature: _____ **Name (Printed):** Suzanne Glass

Date: 7/30/2014

III. Facility Decision: ☐ Approved ☐ Rejected

Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: _____ **Name (Printed):** _____

Date: 7/30/2014

REPUBLIC SERVICES

SPECIAL WASTE PROFILE

Requested Disposal Facility: 3026 East Carolina Regional LF NC

Waste Profile #: 30261412720

Saveable fill-in form. Restricted printing until all required (yellow) fields are completed.

Sales Rep #: 512

I. Generator Information

Generator Name: USCG Base Elizabeth City			
Generator Site Address: 1664 Weeksville Road			
City: Elizabeth City	County: Pasquotank	State: North Carolina	Zip: 27909
State ID/Reg No: n/a	State Approval/Waste Code: n/a (if applicable)		NAICS # : n/a
Generator Mailing Address (if different): ☐ 1664 Weeksville Road			
City: Elizabeth City	County:	State: North Carolina	Zip: 27909
Generator Contact Name: Peter R. Carroll, CDR		Email: Peter.R.Carroll@uscg.mil	
Phone Number: (216) 902-6204	Ext:	Fax Number: (216) 902-6277	

II. Billing Information

Bill To: TBD		Contact Name:	
Billing Address:		Email:	
City:	State:	Zip:	Phone:

III. Waste Stream Information

Name of Waste: Dredged Material

Process Generating Waste:

Dredged sediment material at the MWR Boat Ramp at the USCG Base Elizabeth City. The sediment material is dredged to prevent shoaling. The material is generated through natural deposition along the Pasquotank River. The material is not generated through an industrial or manufacturing process.

Type of Waste:	☐ INDUSTRIAL PROCESS WASTE ☑ POLLUTION CONTROL WASTE
Physical State:	☑ SOLID ☐ SEMI-SOLID ☐ POWDER ☐ LIQUID
Method of Shipment:	☑ BULK ☐ DRUM ☐ BAGGED ☐ OTHER:
Estimated Annual Volume:	755 Cubic Yards
Frequency:	☑ ONE TIME ☐ ONGOING
Disposal Consideration:	☑ LANDFILL ☐ SOLIDIFICATION ☐ BIOREMEDIATION

IV. Representative Sample Certification

☐ NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	☑ YES or ☐ NO

Type of Sample: ☑ COMPOSITE SAMPLE ☐ GRAB SAMPLE

Sample Date: 05/15/2014

Sample ID Numbers: MWR-1
MWR-2

Waste Profile #
30261412720

V. Physical Characteristics of Waste

Characteristic Components	% by Weight (range)
1. Metals	<1% (0.237-3.44 ppm)
2. Water Content	18 - 19%
3. Sediment	80 - 81%
4.	
5.	

Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	Flash Point
Tan and gray	None	☐ YES or ☑ NO	80-81	7.7-7.8	>140 °F

Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Chain of Custody and Required Parameters Provided for this Profile

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	☐Yes or ☑No
Does this waste contain reactive sulfides (greater than 500 ppm) or reactive cyanide (greater than 250 ppm)[reference 40 CFR 261.23(a)(5)]?	☐Yes or ☑No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	☐Yes or ☑No
Does this waste contain concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	☐Yes or ☑No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	☐Yes or ☑No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCCD), or any other dioxin as defined in 40 CFR 261.31?	☐Yes or ☑No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	☐Yes or ☑No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	☐Yes or ☑No
Is this waste a reactive or heat generating waste?	☐Yes or ☑No
Does the waste contain sulfur or sulfur by-products?	☐Yes or ☑No
Is this waste generated at a Federal Superfund Clean Up Site?	☐Yes or ☑No
Is this waste from a TSD facility, TSD like facility or consolidator?	☐Yes or ☑No

VI. Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste.

I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue.

I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services Inc.

Peter R. Carroll, CDR	U. S. Coast Guard Civil Engineering Unit
Authorized Representative Name And Title (Type or Print)	Company Name
Authorized Representative Signature	7/8/14 Date

About AECOM

AECOM is a premier, fully integrated professional and technical services firm positioned to design, build, finance and operate infrastructure assets around the world for public- and private-sector clients. With nearly 100,000 employees — including architects, engineers, designers, planners, scientists and management and construction services professionals — serving clients in over 150 countries around the world, AECOM is ranked as the #1 engineering design firm by revenue in Engineering News-Record magazine's annual industry rankings. The company is a leader in all of the key markets that it serves, including transportation, facilities, environmental, energy, oil and gas, water, high-rise buildings and government. AECOM provides a blend of global reach, local knowledge, innovation and technical excellence in delivering customized and creative solutions that meet the needs of clients' projects. A Fortune 500 firm, AECOM companies, including URS Corporation and Hunt Construction Group, have annual revenue of approximately $19 billion.

More information on AECOM and its services can be found at www.aecom.com.