

CE-2016-1023-027

DRNA

Nº 1447



TRANSMITTAL

SOL. CONJUNTA

To: Hana Y. López, Bióloga
Departamento de Recursos Naturales y Ambientales
Secretaría de Permisos
División de Bienes de Dominio Público en Zona Marítimo Terrestre
P.O. Box 366147, San Juan PR 00936

From: Rich Reave
CH2M HILL
6600 Peachtree Dunwoody Road
400 Embassy Row, Suite 600
Atlanta, Georgia 30328
678.530.4285

Attn: Ms. Hana Y. López, Bióloga

Date: October 5, 2015

Re: Joint Application Package for JM01, Solid Waste Management Unit 3, Naval Activities Puerto Rico, Ceiba, Puerto Rico

We Are Sending You:



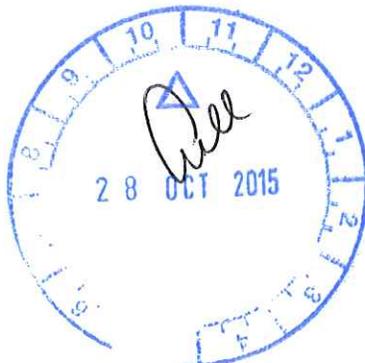
Attached

	Shop Drawings	X	Documents	Tracings
	Prints		Specifications	Catalogs
X	Copy of letter		Other CD	

Quantity	Description
15 hard copies	US Army Corp of Engineers 404 Permit Monitoring Report for JM01, Solid Waste Management Unit 3, Naval Activities Puerto Rico, Ceiba, Puerto Rico
15 hard copies	DNER Coastal Zone Management Act Determination for JM01, Solid Waste Management Unit 3, Naval Activities Puerto Rico, Ceiba, Puerto Rico
15 hard copies	National Marine Fisheries Essential Fish Habitat Determination for JM01, Solid Waste Management Unit 3, Naval Activities Puerto Rico, Ceiba, Puerto Rico
15 hard copies	Fish & Wildlife National Marine Fisheries Protected Species Determination for JM01, Solid Waste Management Unit 3, Naval Activities Puerto Rico, Ceiba, Puerto Rico
15 hard copies	Other approved permits for JM01, Solid Waste Management Unit 3, Naval Activities Puerto Rico, Ceiba, Puerto Rico

*If material received is not as listed, please notify us at once.

cc:



1171
28 OCT 2015
Mr





US Army Corp of Engineers 404 Permit
Monitoring Report for JM01,
Solid Waste Management Unit 3,
Naval Activities Puerto Rico,
Ceiba, Puerto Rico



CH2M HILL

6600 Peachtree Dunwoody Rd.

400 Embassy Row, Suite 600

Atlanta, Georgia 30328

Tel 678-530-4285

Fax 770.604.9183

September 29, 2015

Jacksonville District Corps of Engineers, Antilles Office
ATTN: Gisela Roman
Annex Building, Fundación Ángel Ramos
2nd Floor, Suite 202
Franklin Delano Roosevelt Avenue #383
San Juan, Puerto Rico 00917



Subject: Clean Water Act Permit for: Stormwater outlets for Solid Waste Management
Unit 3, Area 1 Naval Activity Puerto Rico

Dear Mrs. Roman:

The enclosed ENG Form 4345 and supporting information for construction of stormwater outlets for the capping of Solid Waste Management Unit (SWMU) 3, Area 1 at Naval Activity Puerto Rico (NAPR) is being submitted on behalf of our client, Naval Facilities Engineering Command. The U.S. Navy is completing a landfill cap of an area historically used for disposal of inert and solid waste near the eastern end of NAPR, designated as Area 1 at SWMU 3. The engineered soil cap constructed over waste at Area 1 has been designed to convey stormwater away from SWMU 3 to existing downstream areas within the area's watershed. Two stormwater outlets would be constructed that would manage this revised stormwater flow to the Caribbean Sea, which is the only available receiving water.

Surveys for corals and seagrasses have been completed within the proposed project areas and no federally-listed coral species were identified. These areas are unsuitable for nesting by sea turtles and likely would only receive incidental use by other listed species. No adverse impacts to federally listed species are expected. Pre-construction surveys for the Puerto Rican boa and nest of the yellow-shouldered blackbird will be conducted and appropriate measures implemented if either species is identified in or adjacent to the proposed work areas.

We have initiated coordination with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service Office of Protected Resources regarding listed species. Because there will be minor impacts to designated essential fish habitat that will result in a net of no adverse affect with proposed mitigation, we are consulting with the National Marine Fisheries Service Habitat Conservation Division.

Copies of correspondence to these agencies are provided as an attachment to the permit application.

The U.S. Navy POC for the SWMU 3, Area 1 stormwater outlets is Mr. Stacin Martin (757-322-4780; stacin.matrin@navy.mil). Mr. Martin's mailing address is: 6506 Hampton Boulevard, Norfolk, VA 23508.

Johann Sasso
U.S. Army Corps of Engineers
Page 2
September 29, 2015

We appreciate your assistance in this matter and look forward to your response. If you require any additional information or documentation, please contact Dr. Richard Reaves at Richard.Reaves@ch2m.com or 678-530-4285.

Sincerely,

CH2M



Thomas Beisel
Senior Project Manager



cc (w/enclosure): Mr. Stacin Martin, NAVFAC LANT
Mr. Pedro Ruiz, Naval Activity Puerto Rico

17. DIRECTIONS TO THE SITE

There are two routes to the project site. See the attached "NAPR SWMU 3 Supplemental Information Memo" and "Site Directions Map".

18. Nature of Activity (Description of project, include all features)

Two outlets would be constructed. Outlet #1 will consist of a concrete outlet structure and an energy-dissipating, rip-rap apron. The concrete pipe will convey runoff to the outlet. The outlet will have a short section within regulated waters, but the majority of the pipe and construction will be installed landward of the mean, high-tide elevation. Outlet #2 will consist of four PVC pipes, an energy-dissipating gabion endwall, and gabion mattress. The PVC pipes will convey runoff to the gabion outlet. The outlet will have a short section within regulated waters, but the majority of these pipes and construction will be installed landward of the mean, high-tide elevation.

Quantities of excavation below the mean, high-tide elevation and quantities of fill to be placed below the mean, high-tide elevation are provided in the attached "NAPR SWMU 3 Supplemental Information Memo", figures and Box 21 (below).

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

Construct stormwater outlets to convey run-off water from the capped Solid Waste Management Unit (SWMU) 3 to the Caribbean Sea. These outlets will allow run-off to move from the landfill and protect the cap that was placed over the landfill.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

Fill material must be placed in the the regulated water to allow the stormwater collection and conveyance system for the capped SWMU to operate properly.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards
Outlet #1: 44 CY of Type 1 rip rap	Outlet #2: 22 CY of 3"-6" diameter rock	

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres or Linear Feet	Outlet #1: 400 SF (0.0092 acres)	Outlet #2: 600 SF (0.0138 acres)
----------------------------	----------------------------------	----------------------------------

23. Description of Avoidance, Minimization, and Compensation (see instructions)

Use of two outlets will reduce the energy of the discharge and reduce potential for scour. The encroachment into the sea will be the minimum necessary to accommodate the outlet structures and the energy-dissipating aprons.

Sites for outlets were selected to avoid disturbance to mangroves.

Seagrass within the area of disturbance will be relocated to bare areas within nearby seagrass beds.

See attached additional information and figures for further details on avoidance/minimization and proposed compensation.

24. Is Any Portion of the Work Already Complete? Yes No IF YES, DESCRIBE THE COMPLETED WORK

The solid waste management unit cap construction is in progress, but no work has been initiated within regulated waters for these stormwater outlets. It may be necessary to place the portion of the concrete pipes from the collection areas on the cap to the edge of the cap prior to receiving the permit for the work in waters of the United States, depending on the rate at which the capping is completed. However, no work within areas subject to regulation under the Clean Water Act would be initiated until after receipt of the permit.

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

a. Address- Local Redevelopment Authority for Roosevelt Roads - 355 F.D. Roosevelt Avenue

City - Hato Rey State - PR Zip - 00918

b. Address-

City - State - Zip -

c. Address-

City - State - Zip -

d. Address-

City - State - Zip -

e. Address-

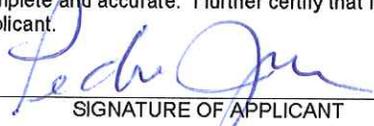
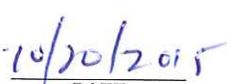
City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
NMFS	EFH Determination		pending		

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

 SIGNATURE OF APPLICANT DATE SIGNATURE OF AGENT DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

NAPR SWMU 3-ENG Form 4345 Supplemental Information Memo

PREPARED FOR: USACE Antilles Permits Section
COPY TO: Stacin Martin / NAVFAC LANT
Pedro Ruiz / Naval Activity Puerto Rico
PREPARED BY: Rich Reaves / CH2M ATL
DATE: August 21, 2015
PROJECT NUMBER: 457891
REVISION NO.: 00
APPROVED BY: Rich Reaves / CH2M ATL

This memorandum provides supplemental information for a Section 404 Individual Permit Application for stormwater outlets at Solid Waste Management Unit (SWMU) 3 at Naval Activity Puerto Rico (NAPR), Ceiba, Puerto Rico.

The information in this document is provided as supplemental information to Engineering Form 4345.

Box 17. Directions to the Site

The project area can be reached from either the north or the south from Puerto Rico Highway 3. The attached map shows how to reach the site from either direction.

Box 18. Nature of Activity (Description of project, include all features)

SWMU 3 was an inert and solid waste landfill for the former Naval Station Roosevelt Roads. SWMU 3 is being capped with a compacted clay soil cap overlain with a vegetative, protective topsoil cover. The cap was designed to include stormwater management and conveyance. Stormwater collection areas were designed to convey water towards two confluences for discharge. From these two stormwater confluences, pipes will convey runoff under the perimeter road to the two outlets. There will be two outlets to convey stormwater piped beneath the perimeter road into to the Caribbean Sea.

Stormwater Outlet #1 will be will consist of a single inlet structure, a single, underground 30-inch, diameter round concrete pipe (RCP), and a single outlet structure that discharges to the Caribbean Sea. Approximately 44 cubic yards (CY) of rip-rap will be placed below the mean high tide elevation as an energy-dissipating apron. The riprap for the apron will be placed directly on a geotextile mat with its edges keyed into to the seafloor. All of the of 30-inch concrete pipe will be constructed above the high tide elevation landward with the stormwater collection area and inlet structure on the SWMU 3 cap. As noted in the additional information provided for Box 23 below, no mangroves or corals would be impacted by this work. Any seagrass within the area of disturbance would be relocated by transplanting prior to commencement of disturbance.

Stormwater Outlet #2 will be placed partially below the mean high tide elevation. Approximately 22 CY of seafloor will be excavated for placement of the energy-dissipating gabion mattress. The gabion

mattress will be placed directly on a geotextile mat with its edges keyed into to the seafloor. As noted in the additional information provided for Box 23 below, no mangroves would be impacted by this work. Any seagrass within the area of disturbance would be relocated by transplanting prior to commencement of disturbance. Any coral within the area of disturbance would be relocated by moving the rocks to which they are attached to a comparable depth and exposure prior to commencement of disturbance.

The attached site figures show the design and locations of the outlets, provide plan and profile depictions of the outlets, indicate the extent of disturbance below the mean high tide elevation and aerial view of the extent of disturbance for each outlet and show the types of aquatic habitats that would be disturbed.

Construction of the two outfalls would result in disturbance to seagrasses and construction of Outlet #2 would result in disturbance to lesser starlet coral and gorgonians. No corals that would be disturbed are listed as threatened or endangered. A mitigation plan for disturbance to corals and seagrasses has been developed (see Item 4 in Box 23) and the U.S. Navy has submitted a determination of effect to National Marine Fisheries Service with regard to impacts to essential fish habitat, including proposed mitigation to reduce the magnitude of the impacts to a net no-effect.

The U.S. Navy has determined that there would be no impacts to species listed as threatened or endangered or to species proposed for listing under the Endangered Species Act and that there would be no impacts to designated critical habitat, as defined under the Endangered Species Act.

Box 23 Description of Avoidance, Minimization, and Compensation

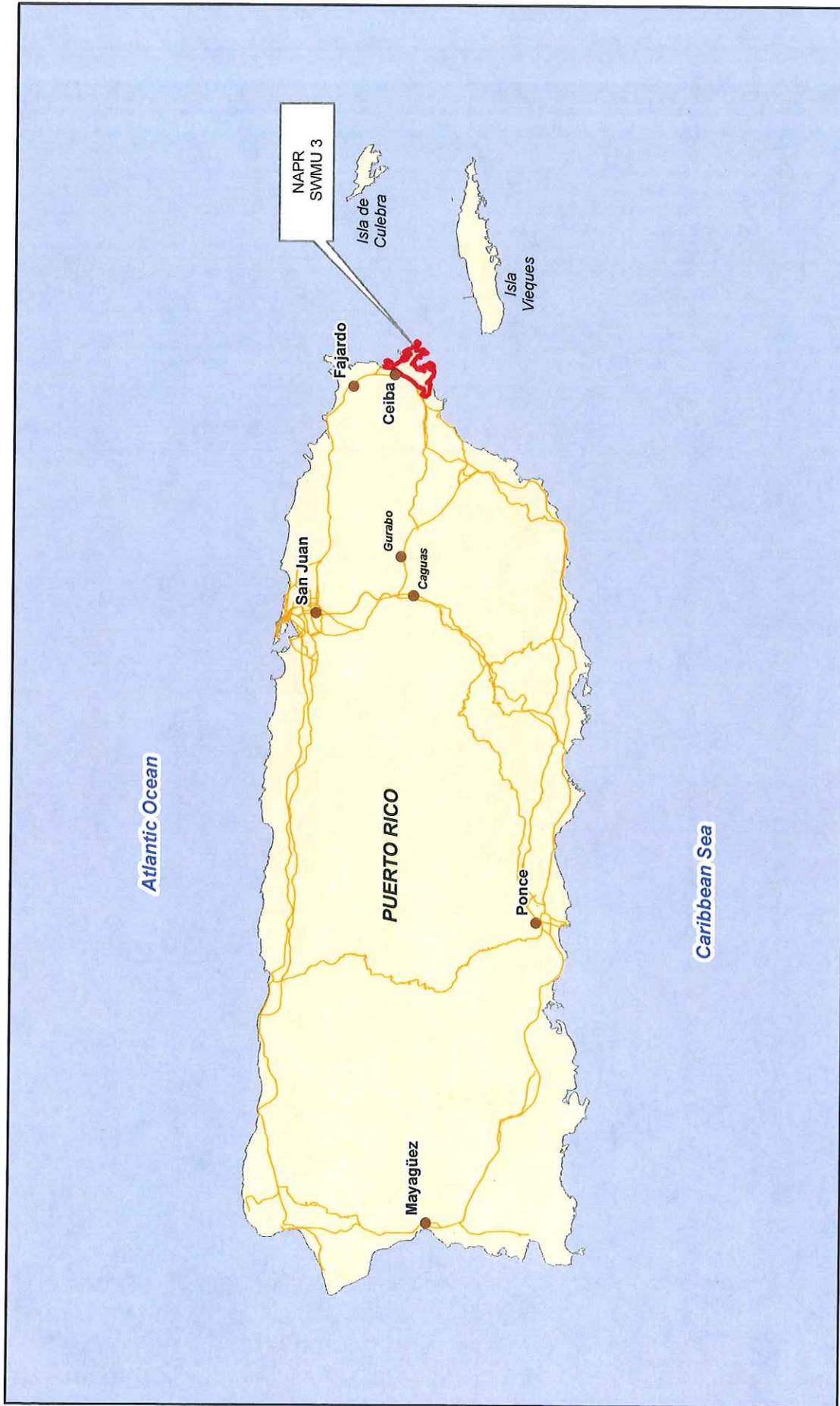
- 1) It was not possible to cap the landfill without providing for stormwater discharge to leave the site. The Caribbean Sea is the only potential receiving water for stormwater runoff from SWMU 3. Because the discharge was unavoidable, the design was developed to meet four goals from the standpoint of minimization:
 - a) minimize the energy impacting the sea bottom from the stormwater runoff
 - b) minimize the extent of encroachment into regulated waters below the mean high tide elevation by the pipes, outlet, and the rip-rap apron.
 - c) avoid mangroves, dense areas of seagrasses, and coral reefs
 - d) minimize the amount of seagrasses and non-reef corals that would be impacted directly or indirectly as a result of the outlets.
- 2) The design for Outlet #1 was able to avoid impacts to mangroves and corals, both from direct disturbance from placement of the outlet and apron and from potential scour associated with runoff moving from the outlet and across the apron.
- 3) The design for Outlet #2 was able to avoid impacts to mangroves, both from direct disturbance from placement of the outlet and apron and from potential scour associated with runoff moving from the outlet and across the apron.
- 4) The design for Outlet #1 minimized the disturbance of seagrasses and the design for Outlet #2 minimized the disturbance of seagrasses and corals. No loss of seagrass would be expected because seagrass from within the area of direct and indirect disturbance would be relocated as noted below.

At Outlet #1, 400 square feet (SF) of seagrass would be within the area encompassed by the outlet and apron or within 10 feet of the end of the apron. Intact plugs of seagrass will be removed from the area of disturbance and replanted in bare areas within nearby seagrass growth outside the area of disturbance and outside the outlet flow path.

At Outlet #2, 600 SF of seagrass would be within the area encompassed by the gabion mattress. Intact plugs of seagrass will be removed from the area of disturbance and then replanted in bare areas within nearby seagrass growth outside the area of disturbance. Because there is a decided increase in depth beyond the end of the apron for Outlet #2 and because the stormwater would be less dense than the seawater and would remain near the surface, additional relocation of seagrass outside the gabion mattress at Outlet #2 would not be done.

There are scattered occurrences of lesser starlet coral and gorgonians on rocks that would be within the apron area of Outlet #2. These rocks would be relocated laterally, to a comparable depth and with the orientation of the rock maintained.

- d) The design includes two outlets to divide the runoff flow and reduce the volume of discharge compared to a single outlet. The divided runoff will have less total energy at the point of the outlet than a single larger outlet.
- e) The size of the riprap aprons was calculated to provide the minimum area needed to dissipate energy and prevent bottom scour from runoff from the outfall.



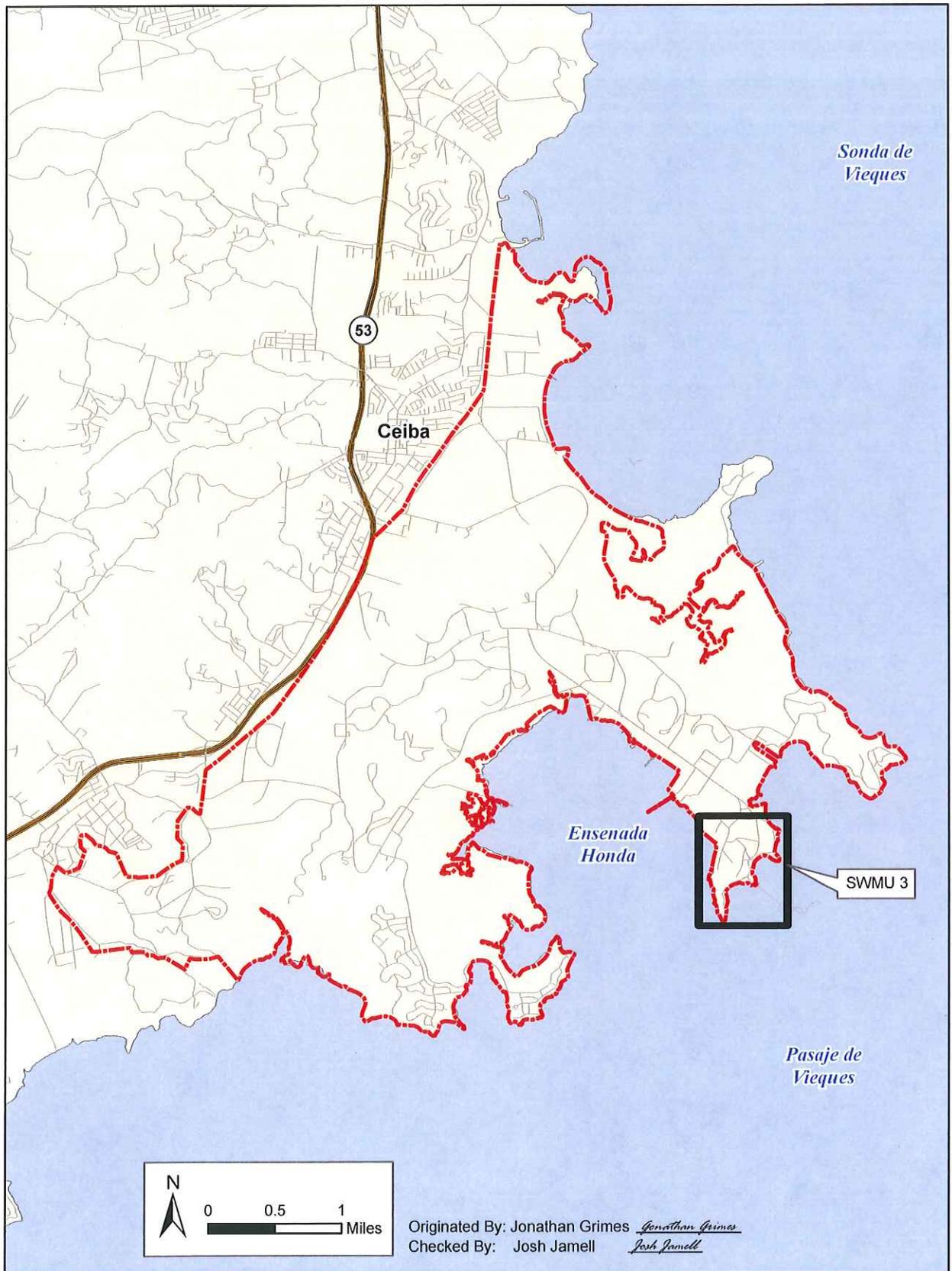
● City

— Major Road

▭ Naval Activity Puerto Rico Boundary



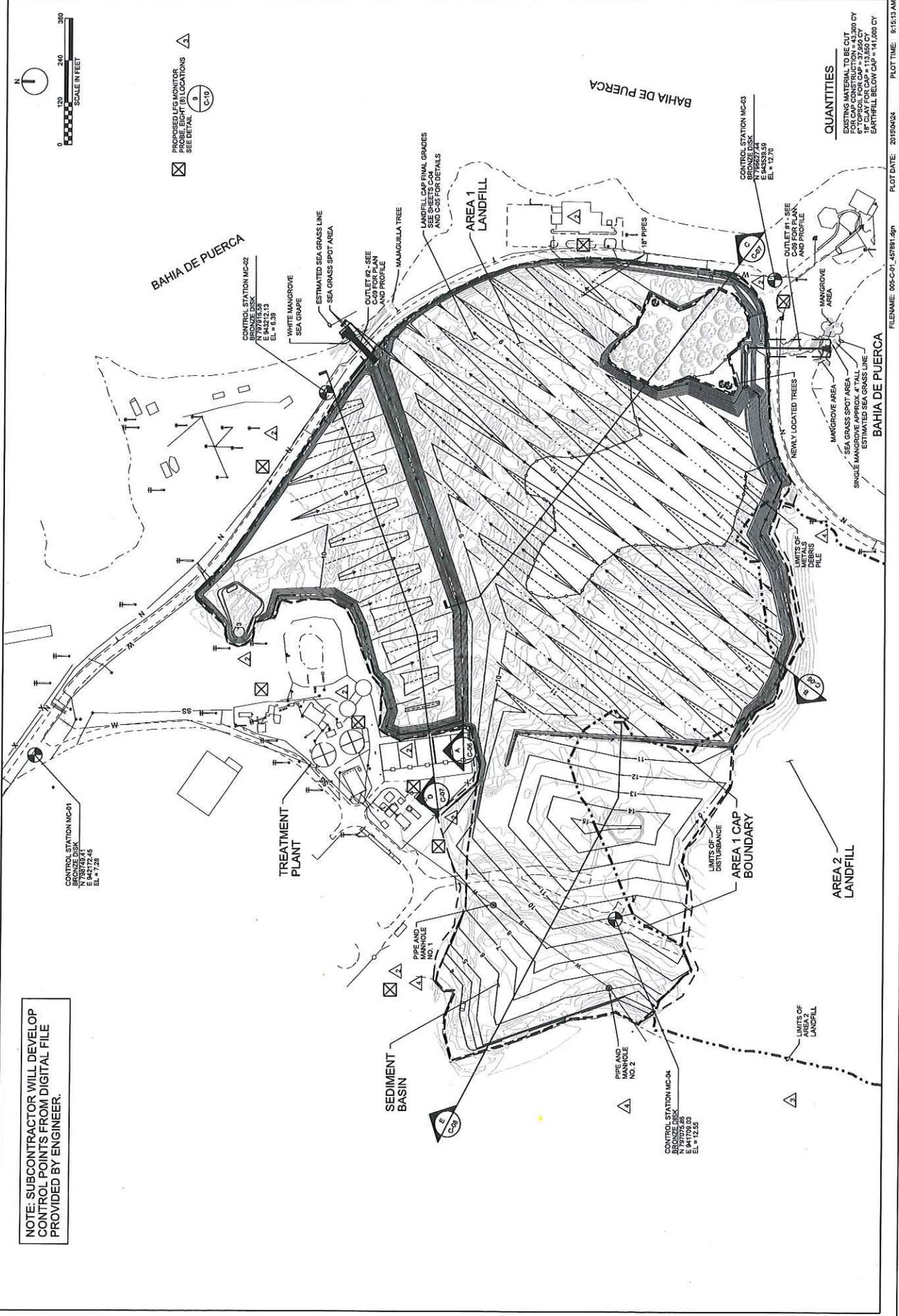
FIGURE 1
 NAPR Location in Puerto Rico
 Naval Activity Puerto Rico

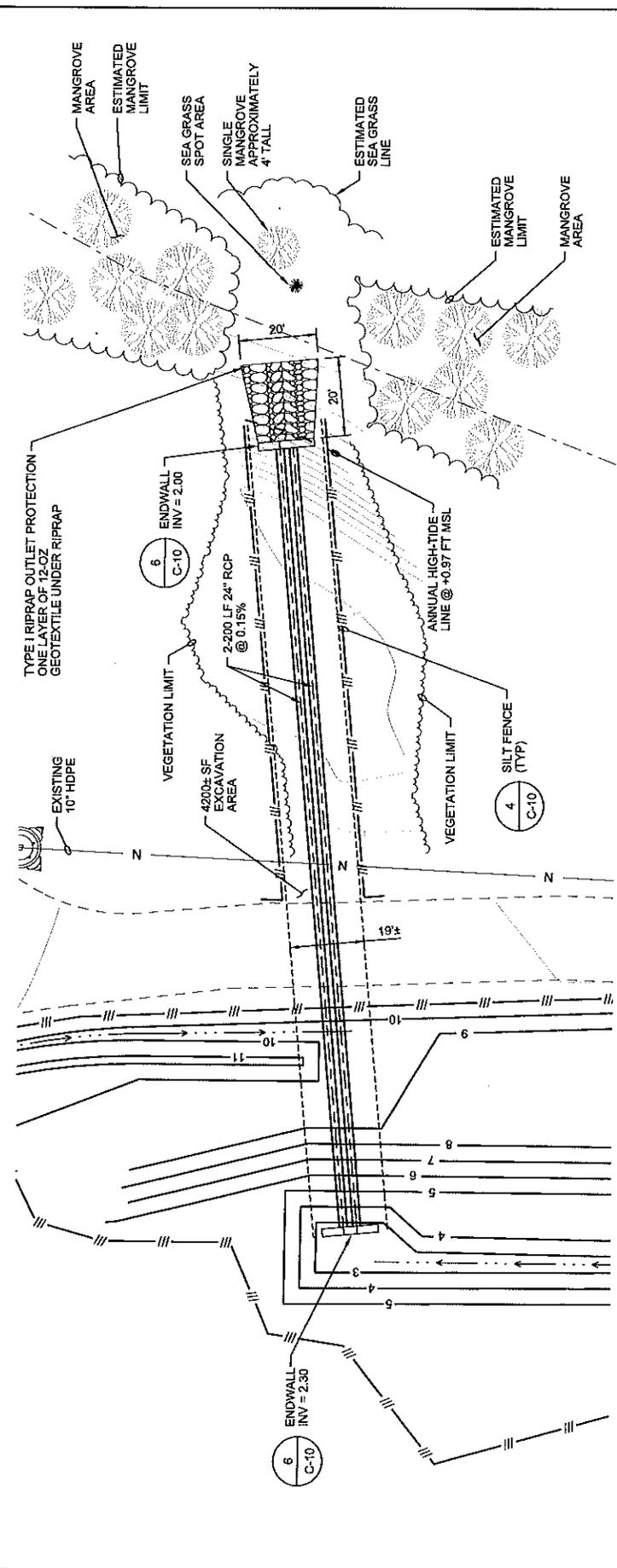


-  Road
-  Expressway
-  Naval Activity Puerto Rico Boundary

FIGURE 2
 SWMU 3 Location
 Naval Activity Puerto Rico

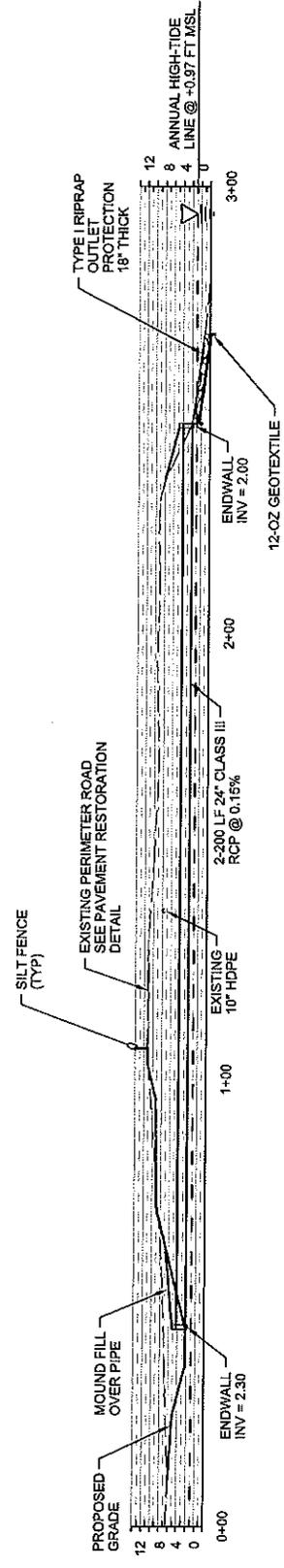
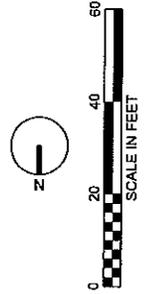
DATE: 01/13/20		DRAWN BY: C. CHAMBERS		CHECKED BY: []		APPROVED BY: []	
PROJECT: 065-C01-497891		SHEET: 6 OF 17		DATE: 01/13/20		SCALE: AS SHOWN	
DRAWING NO.: 065-C01-497891-06		SHEET NO.: 6 OF 17		DATE: 01/13/20		SCALE: AS SHOWN	
PROJECT: 065-C01-497891		SHEET: 6 OF 17		DATE: 01/13/20		SCALE: AS SHOWN	
PROJECT: 065-C01-497891		SHEET: 6 OF 17		DATE: 01/13/20		SCALE: AS SHOWN	





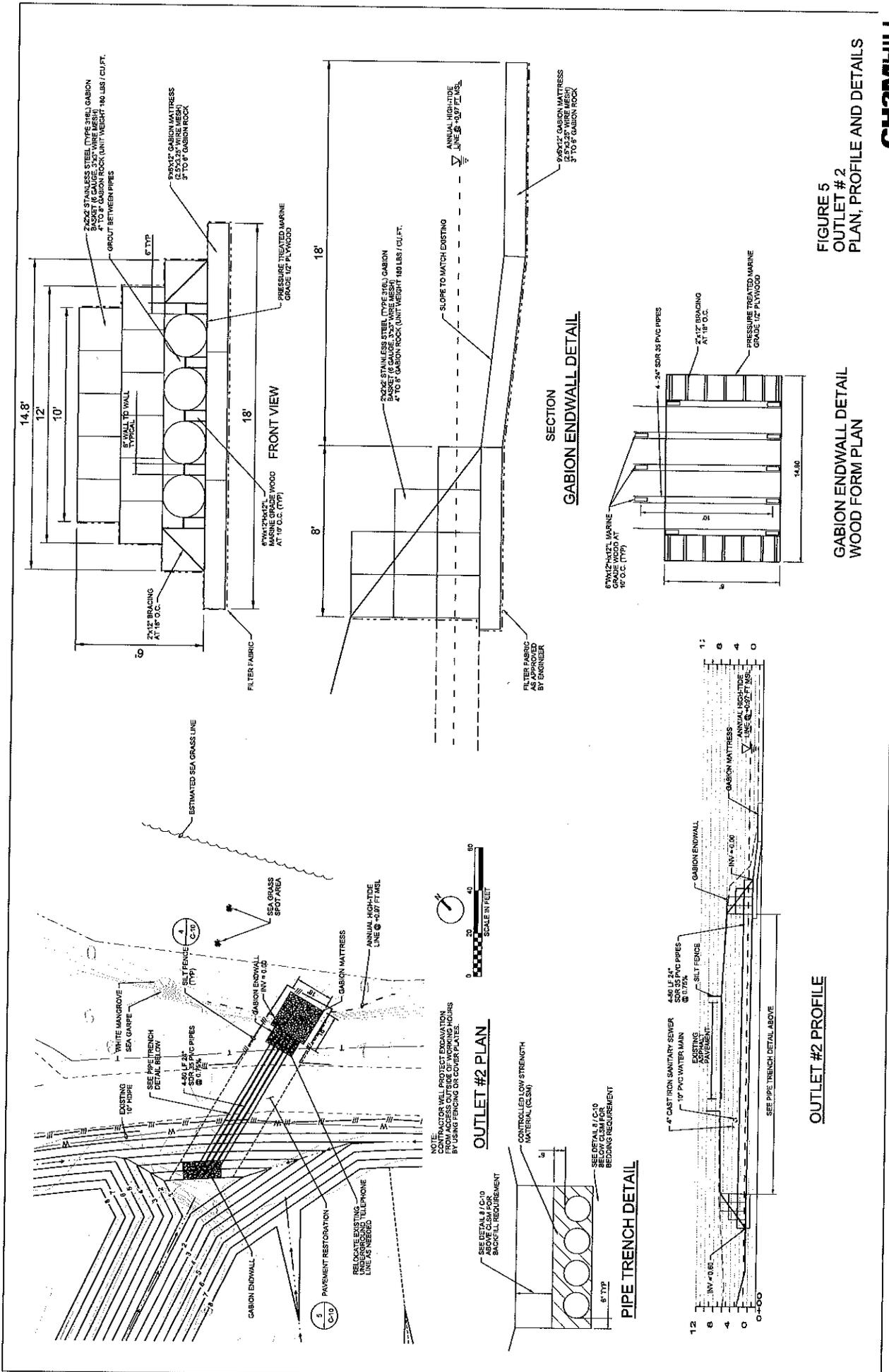
NOTE:
CONTRACTOR WILL PROTECT EXCAVATION FROM ACCESS OUTSIDE OF WORKING HOURS BY USING FENCING OR COVER PLATES.

OUTLET #1 PLAN



**FIGURE 4
OUTLET #1
PLAN AND PROFILE**

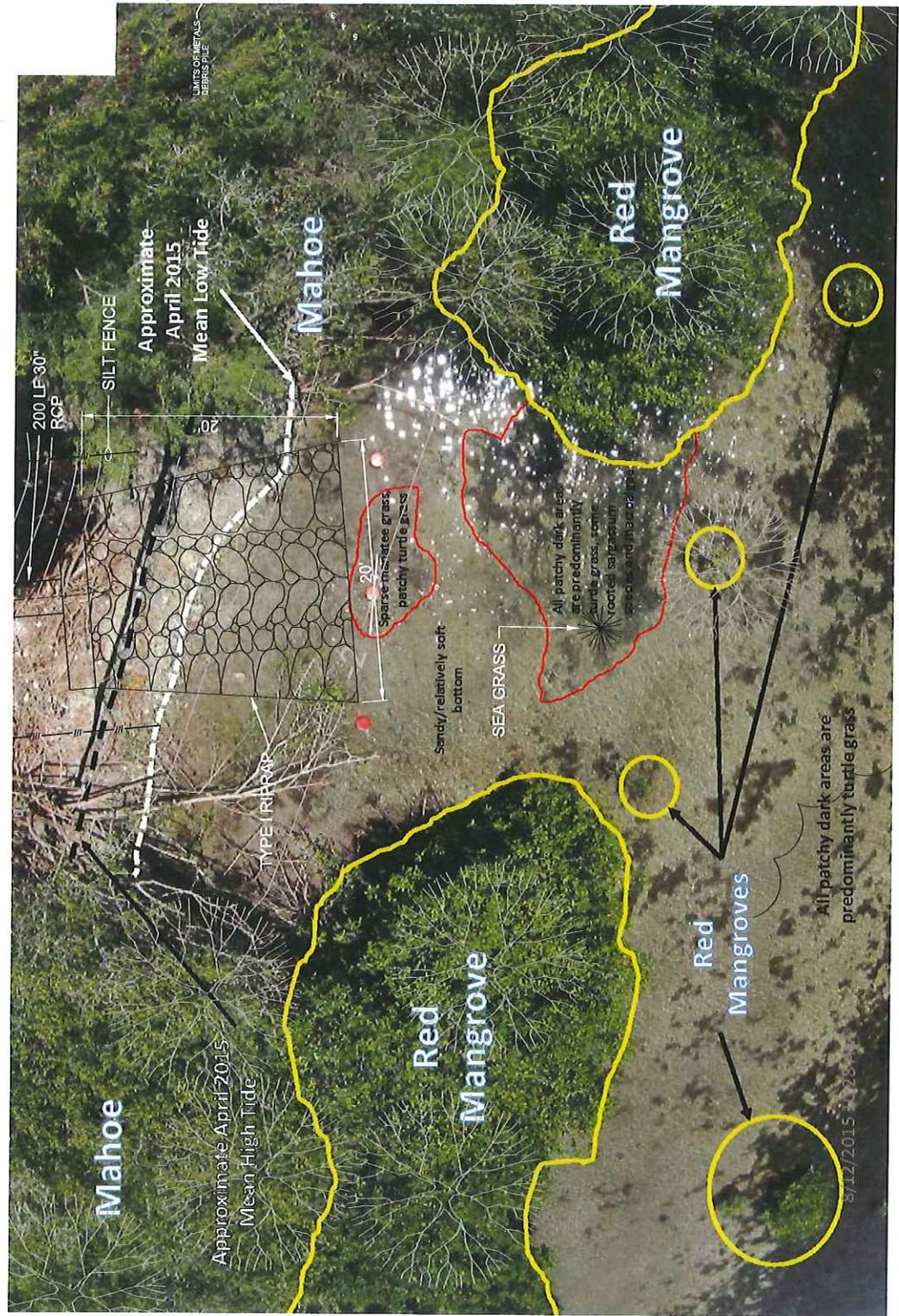
OUTLET #1 PROFILE



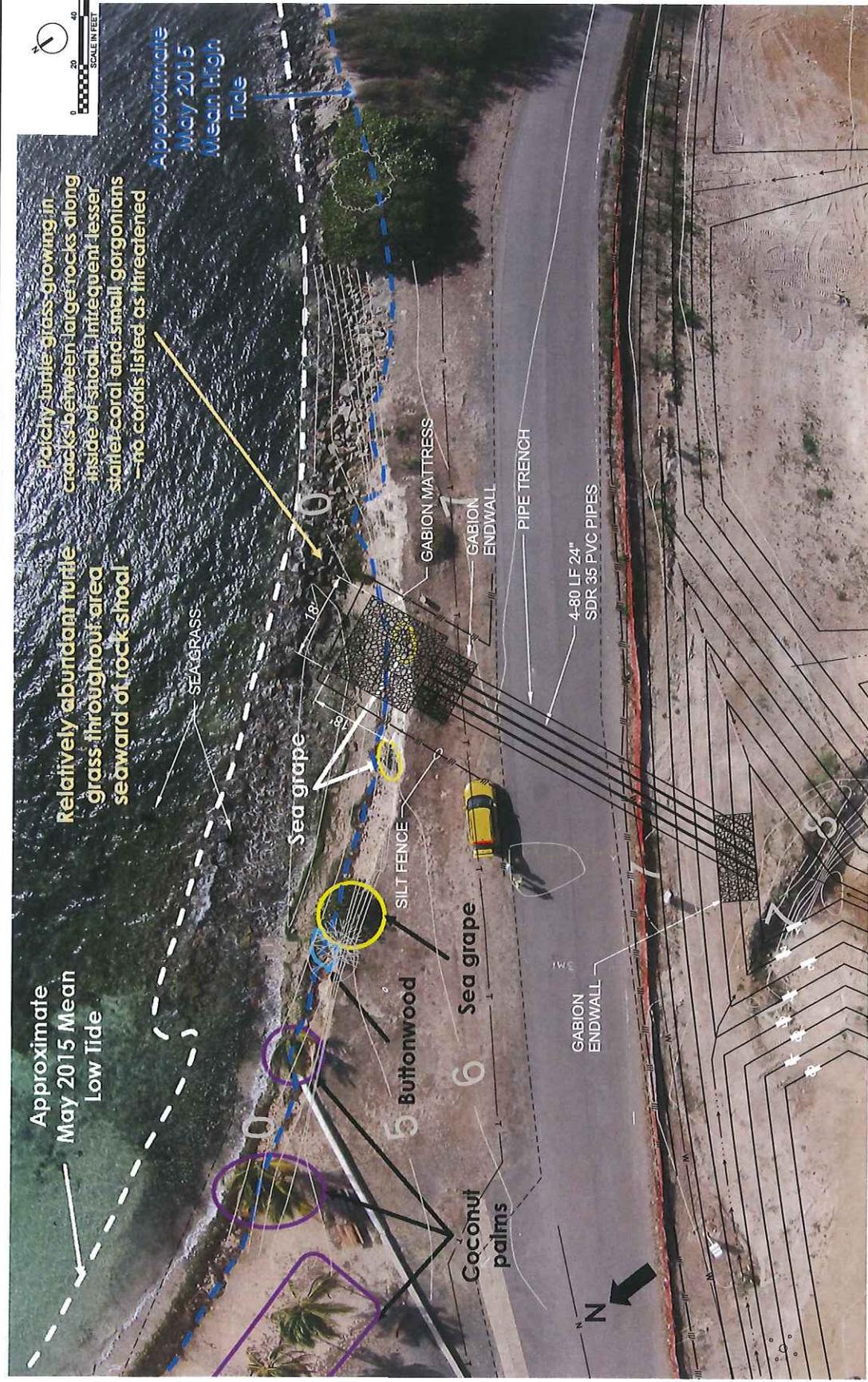
OUTLET #2 PROFILE

GABION ENDWALL DETAIL WOOD FORM PLAN

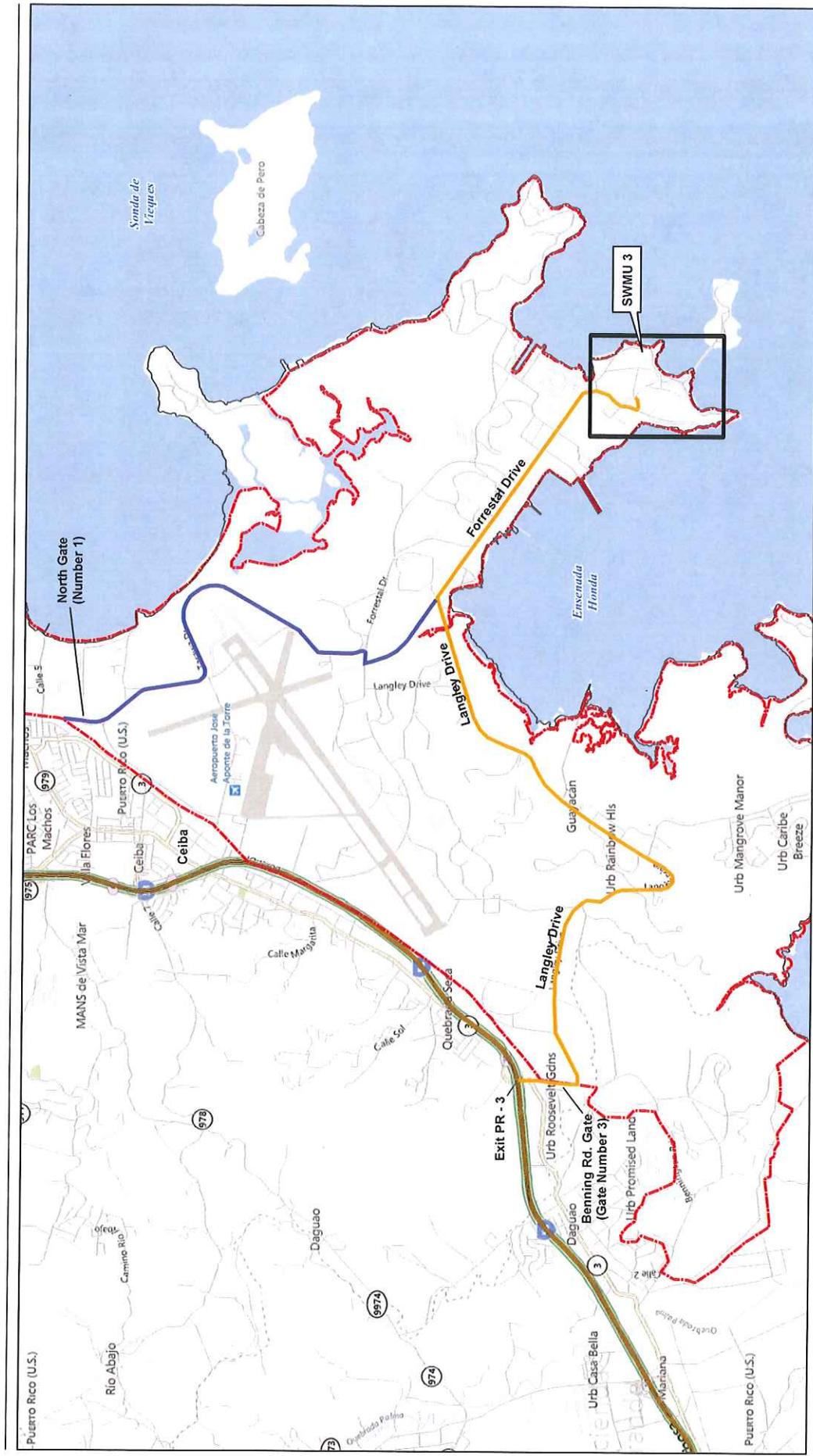
FIGURE 5
OUTLET #2
PLAN, PROFILE AND DETAILS



OUTLET #1 PLAN



OUTLET #2 PLAN



- LEGEND**
- Road
 - Expressway
 - Gate 3 Route
 - Gate 1 Route
 - Naval Activity Puerto Rico Boundary

Site Directions Map
 Naval Activity Puerto Rico



Originated By: Jonathan Grimes
 Checked By: Tom Beisel

CH2MHILL

DNER Coastal Zone Management Act
Determination for JM01, Solid Waste
Management Unit 3, Naval Activities
Puerto Rico, Ceiba, Puerto Rico



CH2M HILL

6600 Peachtree Dunwoody Rd.

400 Embassy Row, Suite 600

Atlanta, Georgia 30328

Tel 678-530-4285

Fax 770.604.9183

October 2, 2015

Puerto Rico Planning Board, Coastal Zone Unit
ATTN: Ms. Rose A. Ortiz
Centro Gubernamental Roberto Sánchez Vilella
Apartado 41119
Santurce, Puerto Rico 00940-1119

Subject: Coastal Consistency Determination
Stormwater outlets for Solid Waste Management Unit 3, Area 1, Naval Activity
Puerto Rico

Dear Ms. Ortiz:

The enclosed coastal consistency determination for construction of stormwater outlets for the capping of Solid Waste Management Unit (SWMU) 3, Area 1 at Naval Activity Puerto Rico (NAPR) is being submitted on behalf of our client, Naval Facilities Engineering Command. The U.S. Navy is completing a landfill cap of an area historically used for disposal of inert and solid waste near the eastern end of NAPR, designated as Area 1 at SWMU 3. The engineered soil cap constructed over waste at Area 1 has been designed to convey stormwater away from SWMU 3 to existing downstream areas within the area's watershed. Two stormwater outlets would be constructed that would manage this revised stormwater flow to the Caribbean Sea, which is the only available receiving water.

In addition to Commonwealth of Puerto Rico (Commonwealth) permitting, this work will require a Clean Water Act permit from the Antille permit Section of the U.S. Army Corps of Engineers (USACE). Further, the Navy is coordinating with the U.S. Fish and Wildlife Service and National Marine Fisheries Service with regard to species listed under the Endangered Species Act and the Marine Mammal Protection Act and for potential impacts to essential fish habitat.

The following items were considered relevant to the coastal consistency determination:

- The project would be implemented as part of the capping of SWMU 3 and, by directing the precipitation runoff away from the cap, the outlets will protect the integrity of the landfill cap once capping is complete. By directing this precipitation runoff to the sea, this action will further protect coastal resources of the Commonwealth. As designed the two outlets would not interfere with other uses of coastal resources.
- The design of the project avoids impacts to mangrove habitat and coral reefs. The location selected for the Outlet #1 can accommodate the outlet and construction without encroachment into the nearby mangrove areas. The location for Outlet #2 is

Rose A. Ortiz

Puerto Rico Department Planning Board, Coastal Zone Unit

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not near mangrove habitat. There are no coral reefs near either proposed location (see the attached USACE 404 permit).

- The design of the two outlets minimizes encroachment into the tidal zone. There will be minimal disturbance of seagrasses at each location and avoids any concentrated seagrass beds. Disturbance to seagrass would be mitigated by relocating seagrass plugs within the proposed areas of disturbance to nearby sand bottom with a comparable depth. There would be no long-term disturbance to seagrass habitat.
- There are no corals in the area proposed for Outlet #1, which is a soft substrate area. There are scattered soft and hard corals in the area proposed for Outlet #2. Disturbance of soft and hard corals at Outlet #2 would be mitigated by relocating rocks in the disturbance area that have corals to nearby areas with a comparable depth, with the vertical and horizontal orientations maintained. There would be no long-term disturbance to seagrass habitat.
- The outlets have been designed to dissipate the energy of the flow and to avoid scour impacts to habitats outside the rock apron (Outlet #1) and gabion apron (Outlet #2). No indirect impacts to coastal resources from scour would result.
- The landfill cap and the outlets are designed to move precipitation runoff water to the sea without infiltration. This water that would flow to the sea from the two outlets would be naturally-occurring, precipitation runoff water and no pollutants would be contributed to this runoff water from SWMU 3 to the maritime waters of the Commonwealth. Because only naturally-occurring water would flow through the outlets, there would be no impacts to water quality.
- There are no historical or cultural values at the proposed outlet locations. Construction and operation of the outlets will not affect historical or cultural resources of the Commonwealth.
- There are no scenic values at the proposed outlet locations. The location selection avoided areas where people may visit for the scenic vista. Construction and operation of the outlets will not affect scenic resources.
- There are no recreational values at the proposed outlet locations that would be adversely affected beyond temporary displacement during construction. Any recreational activities at these areas would be limited to fishing or land crabbing and these activities could resume in the area after construction is complete. Operation of the outlets will not affect scenic resources.
- Construction and operation of the outlets will not affect management of coastal resources by the Commonwealth.

Rose A. Ortiz
Puerto Rico Department Planning Board, Coastal Zone Unit
Page 3
October 2, 2015

- The construction and operation of the two stormwater outlets would not affect economic resources of the Commonwealth.

The U.S. Navy has determined that construction and operation of the two stormwater outlets will be undertaken in a manner consistent to the maximum extent practicable with the enforceable policies of the Puerto Rico Coastal Zone Management Program.

The U.S. Navy POC for the SWMU 3, Area 1 stormwater outlets is Mr. Stacin Martin (757-322-4780; stacin.martin@navy.mil). Mr. Martin's mailing address is: 6506 Hampton Boulevard, Norfolk, VA 23508.

We appreciate your assistance in this matter and look forward to your response. If you have any questions or require additional information, please contact Dr. Rich Reaves at 678-530-4285 or by email at richard.reaves@ch2m.com.

Sincerely,

CH2M



Thomas Beisel
Senior Project Manager

cc (w/enclosure): Mr. Stacin Martin, NAVFAC LANT
Mr. Pedro Ruiz, Naval Activity Puerto Rico



CH2M HILL
6600 Peachtree Dunwoody Rd.
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Tel 678-530-4285
Fax 770.604.9183

September 29, 2015

Jacksonville District Corps of Engineers, Antilles Office
ATTN: Gisela Roman
Annex Building, Fundación Ángel Ramos
2nd Floor, Suite 202
Franklin Delano Roosevelt Avenue #383
San Juan, Puerto Rico 00917

Subject: Clean Water Act Permit for: Stormwater outlets for Solid Waste Management
Unit 3, Area 1 Naval Activity Puerto Rico

Dear Mrs. Roman:

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Surveys for corals and seagrasses have been completed within the proposed project areas and no federally-listed coral species were identified. These areas are unsuitable for nesting by sea turtles and likely would only receive incidental use by other listed species. No adverse impacts to federally listed species are expected. Pre-construction surveys for the Puerto Rican boa and nest of the yellow-shouldered blackbird will be conducted and appropriate measures implemented if either species is identified in or adjacent to the proposed work areas.

We have initiated coordination with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service Office of Protected Resources regarding listed species. Because there will be minor impacts to designated essential fish habitat that will result in a net of no adverse affect with proposed mitigation, we are consulting with the National Marine Fisheries Service Habitat Conservation Division.

Copies of correspondence to these agencies are provided as an attachment to the permit application.

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Johann Sasso
U.S. Army Corps of Engineers
Page 2
September 29, 2015

We appreciate your assistance in this matter and look forward to your response. If you require any additional information or documentation, please contact Dr. Richard Reaves at Richard.Reaves@ch2m.com or 678-530-4285.

Sincerely,

CH2M



Thomas Beisel
Senior Project Manager

cc (w/enclosure): Mr. Stacin Martin, NAVFAC LANT
Mr. Pedro Ruiz, Naval Activity Puerto Rico

U.S. ARMY CORPS OF ENGINEERS
APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT
 33 CFR 325. The proponent agency is CECW-CO-R.

Form Approved -
OMB No. 0710-0003
Expires: 30-SEPTEMBER-2015

Public reporting for this collection of information is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of the collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters, Executive Services and Communications Directorate, Information Management Division and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please **DO NOT RETURN** your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE
--------------------	----------------------	------------------	------------------------------

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME First - Stacin Middle - Last - Martin Company - U.S. Navy - NAVFAC LANT (Navy Tech. Rep.) E-mail Address - stacin.martin@navy.mil			8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required) First - Middle - Last - Company - E-mail Address -		
6. APPLICANT'S ADDRESS: Address- 6506 Hampton Boulevard City - Norfolk State - VA Zip - 23508 Country - USA			9. AGENT'S ADDRESS: Address- City - State - Zip - Country -		
7. APPLICANT'S PHONE NOS. w/AREA CODE a. Residence b. Business c. Fax (757) 322-4780 (757) 322-4805			10. AGENTS PHONE NOS. w/AREA CODE a. Residence b. Business c. Fax		

STATEMENT OF AUTHORIZATION

11. I hereby authorize, _____ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

MARTIN STACIN R. 1391434553 2015-09-24
 _____ _____
 SIGNATURE OF APPLICANT DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions) Solid Waste Management Unit 3 Stormwater Outlets			
13. NAME OF WATERBODY, IF KNOWN (if applicable) Caribbean Sea, Bahia de Puerca		14. PROJECT STREET ADDRESS (if applicable) Address Forestal Drive NAPR (See Site Directions Map)	
15. LOCATION OF PROJECT see Additional Information Latitude: °N Longitude: °W		City - Cieba State- PR Zip-	
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions) State Tax Parcel ID Municipality Section - Township - Range -			

17. DIRECTIONS TO THE SITE

There are two routes to the project site. See the attached "NAPR SWMU 3 Supplemental Information Memo" and "Site Directions Map".

18. Nature of Activity (Description of project, include all features)

Two outlets would be constructed. Outlet #1 will consist of a concrete outlet structure and an energy-dissipating, rip-rap apron. The concrete pipe will convey runoff to the outlet. The outlet will have a short section within regulated waters, but the majority of the pipe and construction will be installed landward of the mean, high-tide elevation. Outlet #2 will consist of four PVC pipes, an energy-dissipating gabion endwall, and gabion mattress. The PVC pipes will convey runoff to the gabion outlet. The outlet will have a short section within regulated waters, but the majority of these pipes and construction will be installed landward of the mean, high-tide elevation.

Quantities of excavation below the mean, high-tide elevation and quantities of fill to be placed below the mean, high-tide elevation are provided in the attached "NAPR SWMU 3 Supplemental Information Memo", figures and Box 21 (below).

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

Construct stormwater outlets to convey run-off water from the capped Solid Waste Management Unit (SWMU) 3 to the Caribbean Sea. These outlets will allow run-off to move from the landfill and protect the cap that was placed over the landfill.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

Fill material must be placed in the the regulated water to allow the stormwater collection and conveyance system for the capped SWMU to operate properly.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards
Outlet #1: 44 CY of Type 1 rip rap	Outlet #2: 22 CY of 3"-6" diameter rock	

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres or Linear Feet	Outlet #1: 400 SF (0.0092 acres)	Outlet #2: 600 SF (0.0138 acres)

23. Description of Avoidance, Minimization, and Compensation (see instructions)

Use of two outlets will reduce the energy of the discharge and reduce potential for scour. The encroachment into the sea will be the minimum necessary to accommodate the outlet structures and the energy-dissipating aprons.

Sites for outlets were selected to avoid disturbance to mangroves.

Seagrass within the area of disturbance will be relocated to bare areas within nearby seagrass beds.

See attached additional information and figures for further details on avoidance/minimization and proposed compensation.

24. Is Any Portion of the Work Already Complete? Yes No IF YES, DESCRIBE THE COMPLETED WORK

The solid waste management unit cap construction is in progress, but no work has been initiated within regulated waters for these stormwater outlets. It may be necessary to place the portion of the concrete pipes from the collection areas on the cap to the edge of the cap prior to receiving the permit for the work in waters of the United States, depending on the rate at which the capping is completed. However, no work within areas subject to regulation under the Clean Water Act would be initiated until after receipt of the permit.

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list)

a. Address- Local Redevelopment Authority for Roosevelt Roads - 355 F.D. Roosevelt Avenue

City - Hato Rey State - PR Zip - 00918

b. Address-

City - State - Zip -

c. Address-

City - State - Zip -

d. Address-

City - State - Zip -

e. Address-

City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
NMFS	BFH Determination		pending		

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT

DATE

SIGNATURE OF AGENT

DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

NAPR SWMU 3-ENG Form 4345 Supplemental Information Memo

PREPARED FOR: USACE Antilles Permits Section
COPY TO: Stacin Martin / NAVFAC LANT
Pedro Ruiz / Naval Activity Puerto Rico
PREPARED BY: Rich Reaves / CH2M ATL
DATE: August 21, 2015
PROJECT NUMBER: 457891
REVISION NO.: 00
APPROVED BY: Rich Reaves / CH2M ATL

This memorandum provides supplemental information for a Section 404 Individual Permit Application for stormwater outlets at Solid Waste Management Unit (SWMU) 3 at Naval Activity Puerto Rico (NAPR), Ceiba, Puerto Rico.

The information in this document is provided as supplemental information to Engineering Form 4345.

Box 17. Directions to the Site

The project area can be reached from either the north or the south from Puerto Rico Highway 3. The attached map shows how to reach the site from either direction.

Box 18. Nature of Activity (Description of project, include all features)

SWMU 3 was an inert and solid waste landfill for the former Naval Station Roosevelt Roads. SWMU 3 is being capped with a compacted clay soil cap overlain with a vegetative, protective topsoil cover. The cap was designed to include stormwater management and conveyance. Stormwater collection areas were designed to convey water towards two confluences for discharge. From these two stormwater confluences, pipes will convey runoff under the perimeter road to the two outlets. There will be two outlets to convey stormwater piped beneath the perimeter road into to the Caribbean Sea.

Stormwater Outlet #1 will be will consist of a single inlet structure, a single, underground 30-inch, diameter round concrete pipe (RCP), and a single outlet structure that discharges to the Caribbean Sea. Approximately 44 cubic yards (CY) of rip-rap will be placed below the mean high tide elevation as an energy-dissipating apron. The riprap for the apron will be placed directly on a geotextile mat with its edges keyed into to the seafloor. All of the of 30-inch concrete pipe will be constructed above the high tide elevation landward with the stormwater collection area and inlet structure on the SWMU 3 cap. As noted in the additional information provided for Box 23 below, no mangroves or corals would be impacted by this work. Any seagrass within the area of disturbance would be relocated by transplanting prior to commencement of disturbance.

Stormwater Outlet #2 will be placed partially below the mean high tide elevation. Approximately 22 CY of seafloor will be excavated for placement of the energy-dissipating gabion mattress. The gabion

mattress will be placed directly on a geotextile mat with its edges keyed into to the seafloor. As noted in the additional information provided for Box 23 below, no mangroves would be impacted by this work. Any seagrass within the area of disturbance would be relocated by transplanting prior to commencement of disturbance. Any coral within the area of disturbance would be relocated by moving the rocks to which they are attached to a comparable depth and exposure prior to commencement of disturbance.

The attached site figures show the design and locations of the outlets, provide plan and profile depictions of the outlets, indicate the extent of disturbance below the mean high tide elevation and aerial view of the extent of disturbance for each outlet and show the types of aquatic habitats that would be disturbed.

Construction of the two outfalls would result in disturbance to seagrasses and construction of Outlet #2 would result in disturbance to lesser starlet coral and gorgonians. No corals that would be disturbed are listed as threatened or endangered. A mitigation plan for disturbance to corals and seagrasses has been developed (see Item 4 in Box 23) and the U.S. Navy has submitted a determination of effect to National Marine Fisheries Service with regard to impacts to essential fish habitat, including proposed mitigation to reduce the magnitude of the impacts to a net no-effect.

The U.S. Navy has determined that there would be no impacts to species listed as threatened or endangered or to species proposed for listing under the Endangered Species Act and that there would be no impacts to designated critical habitat, as defined under the Endangered Species Act.

Box 23 Description of Avoidance, Minimization, and Compensation

- 1) It was not possible to cap the landfill without providing for stormwater discharge to leave the site. The Caribbean Sea is the only potential receiving water for stormwater runoff from SWMU 3. Because the discharge was unavoidable, the design was developed to meet four goals from the standpoint of minimization:
 - a) minimize the energy impacting the sea bottom from the stormwater runoff
 - b) minimize the extent of encroachment into regulated waters below the mean high tide elevation by the pipes, outlet, and the rip-rap apron.
 - c) avoid mangroves, dense areas of seagrasses, and coral reefs
 - d) minimize the amount of seagrasses and non-reef corals that would be impacted directly or indirectly as a result of the outlets.
- 2) The design for Outlet #1 was able to avoid impacts to mangroves and corals, both from direct disturbance from placement of the outlet and apron and from potential scour associated with runoff moving from the outlet and across the apron.
- 3) The design for Outlet #2 was able to avoid impacts to mangroves, both from direct disturbance from placement of the outlet and apron and from potential scour associated with runoff moving from the outlet and across the apron.
- 4) The design for Outlet #1 minimized the disturbance of seagrasses and the design for Outlet #2 minimized the disturbance of seagrasses and corals. No loss of seagrass would be expected because seagrass from within the area of direct and indirect disturbance would be relocated as noted below.

At Outlet #1, 400 square feet (SF) of seagrass would be within the area encompassed by the outlet and apron or within 10 feet of the end of the apron. Intact plugs of seagrass will be removed from the area of disturbance and replanted in bare areas within nearby seagrass growth outside the area of disturbance and outside the outlet flow path.

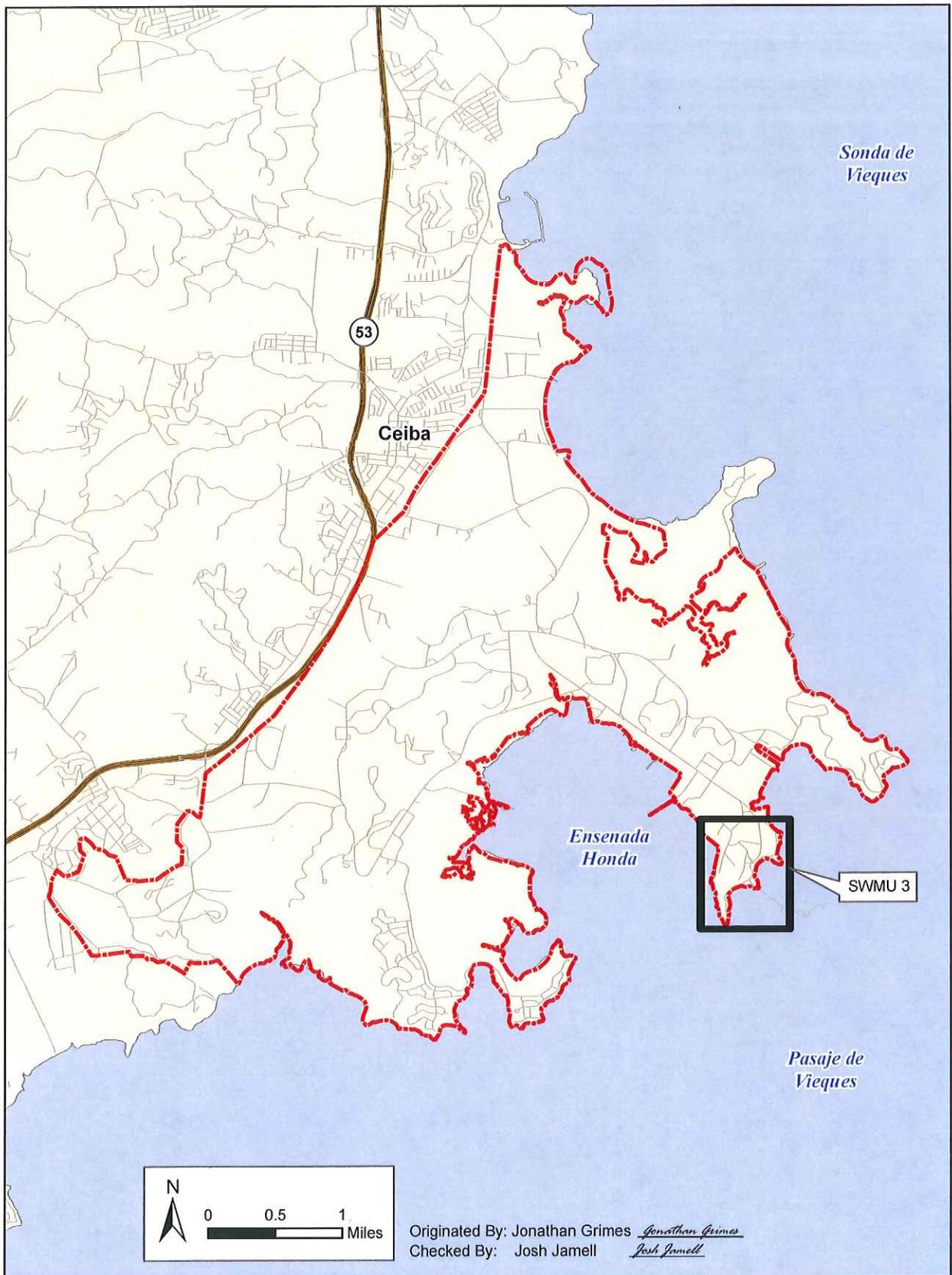
At Outlet #2, 600 SF of seagrass would be within the area encompassed by the gabion mattress. Intact plugs of seagrass will be removed from the area of disturbance and then replanted in bare areas within nearby seagrass growth outside the area of disturbance. Because there is a decided increase in depth beyond the end of the apron for Outlet #2 and because the stormwater would be less dense than the seawater and would remain near the surface, additional relocation of seagrass outside the gabion mattress at Outlet #2 would not be done.

There are scattered occurrences of lesser starlet coral and gorgonians on rocks that would be within the apron area of Outlet #2. These rocks would be relocated laterally, to a comparable depth and with the orientation of the rock maintained.

- d) The design includes two outlets to divide the runoff flow and reduce the volume of discharge compared to a single outlet. The divided runoff will have less total energy at the point of the outlet than a single larger outlet.
- e) The size of the riprap aprons was calculated to provide the minimum area needed to dissipate energy and prevent bottom scour from runoff from the outfall.

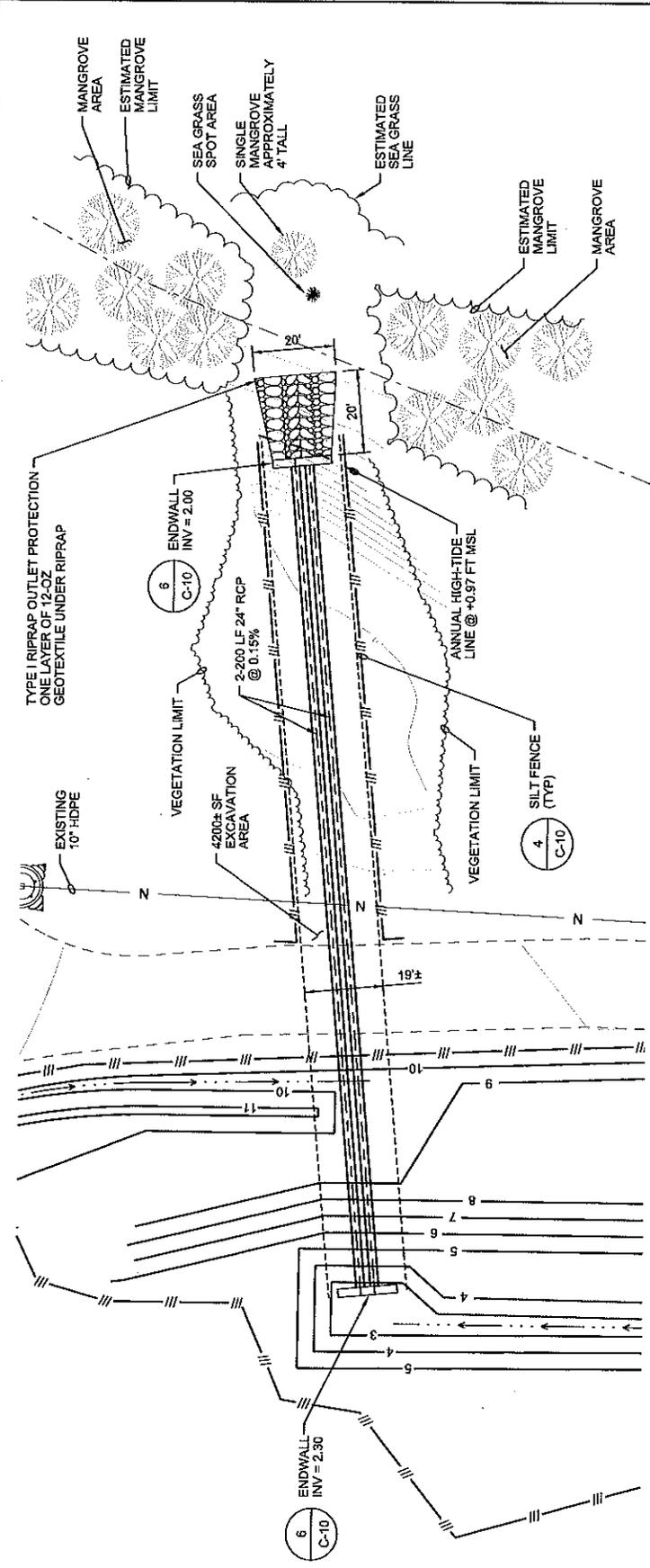


FIGURE 1
 NAPR Location in Puerto Rico
 Naval Activity Puerto Rico



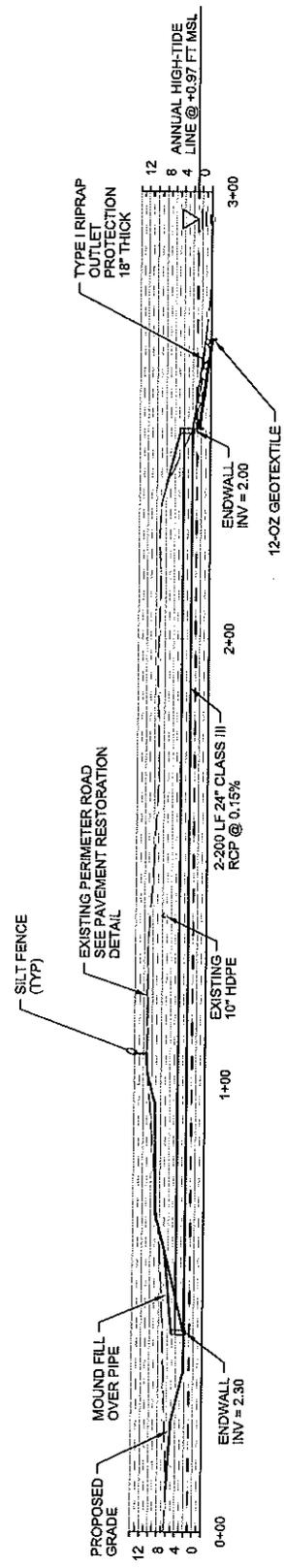
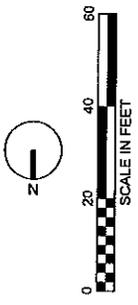
- Road
- Expressway
- ▭ Naval Activity Puerto Rico Boundary

FIGURE 2
 SWMU 3 Location
 Naval Activity Puerto Rico



NOTE:
CONTRACTOR WILL PROTECT EXCAVATION
FROM ACCESS OUTSIDE OF WORKING HOURS
BY USING FENCING OR COVER PLATES.

OUTLET #1 PLAN



OUTLET #1 PROFILE

**FIGURE 4
OUTLET #1
PLAN AND PROFILE**

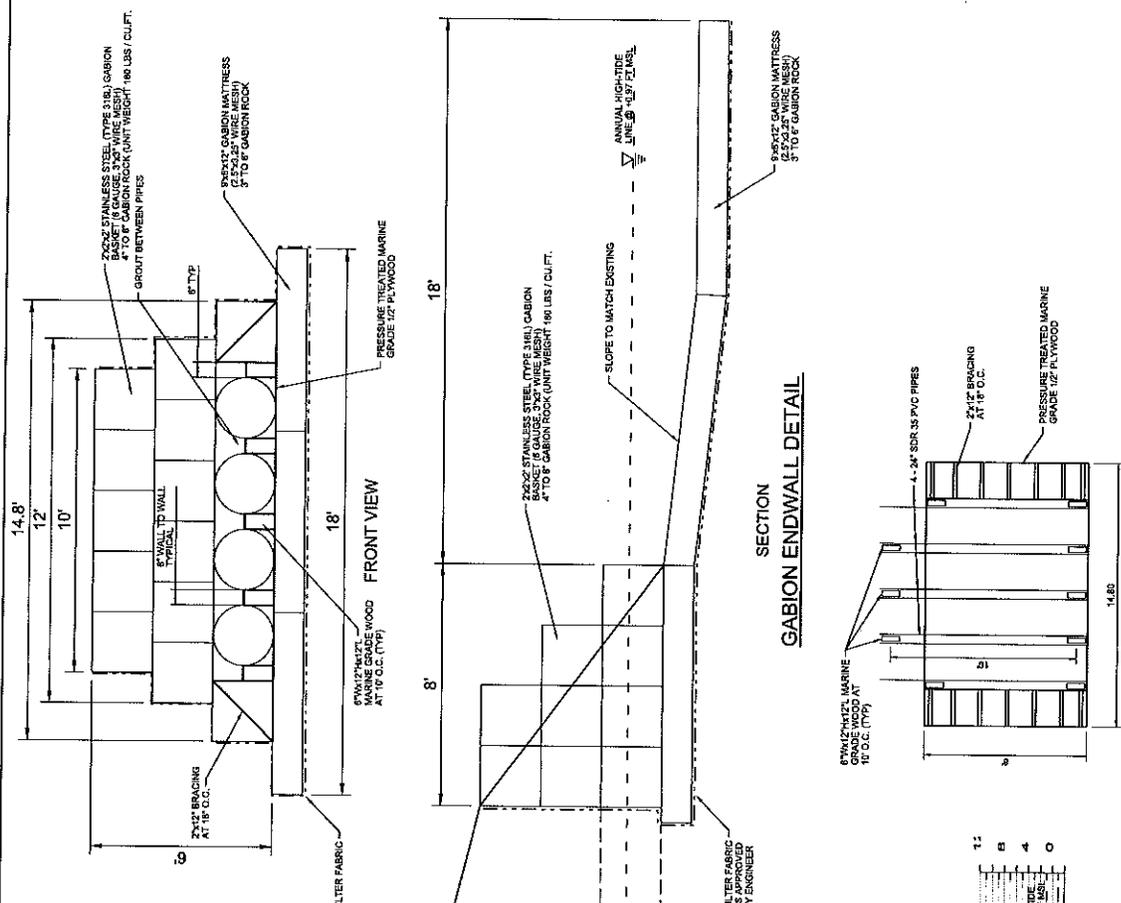
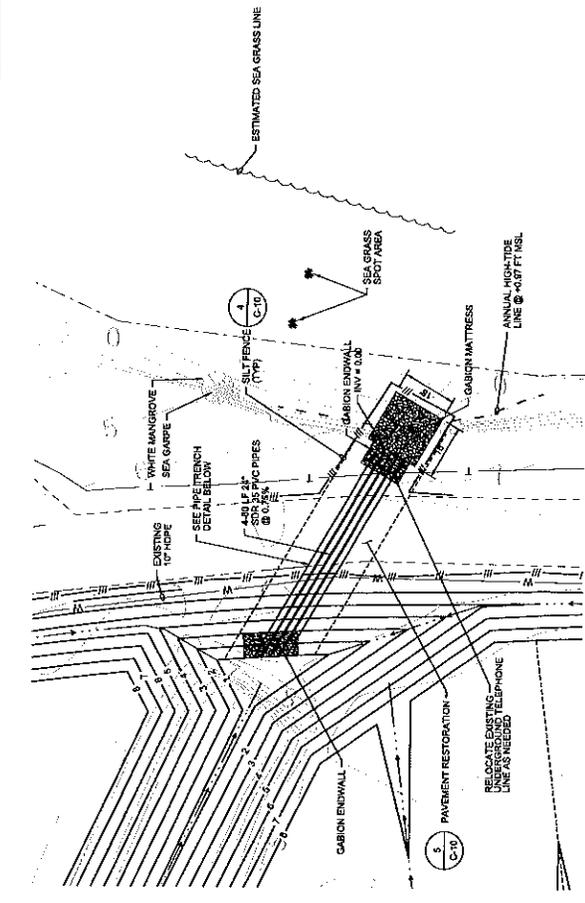


FIGURE 5
OUTLET #2
PLAN, PROFILE AND DETAILS

GABION ENDWALL DETAIL
WOOD FORM PLAN

OUTLET #2 PROFILE

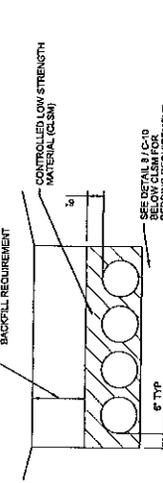


NOTE:
CONTRACTOR WILL PROTECT EXCAVATION
UNDERGROUND TELEPHONE
BY USING FENCING OR COVER PLATES.

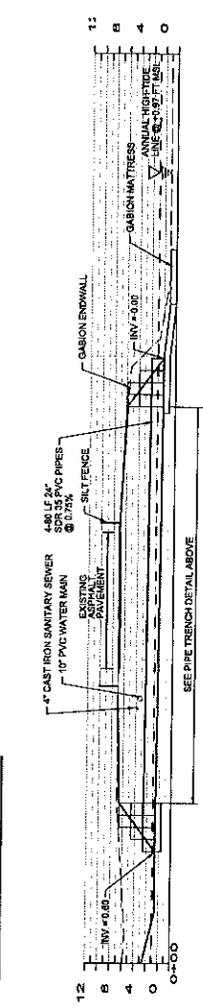
OUTLET #2 PLAN



PIPE TRENCH DETAIL



PIPE TRENCH DETAIL

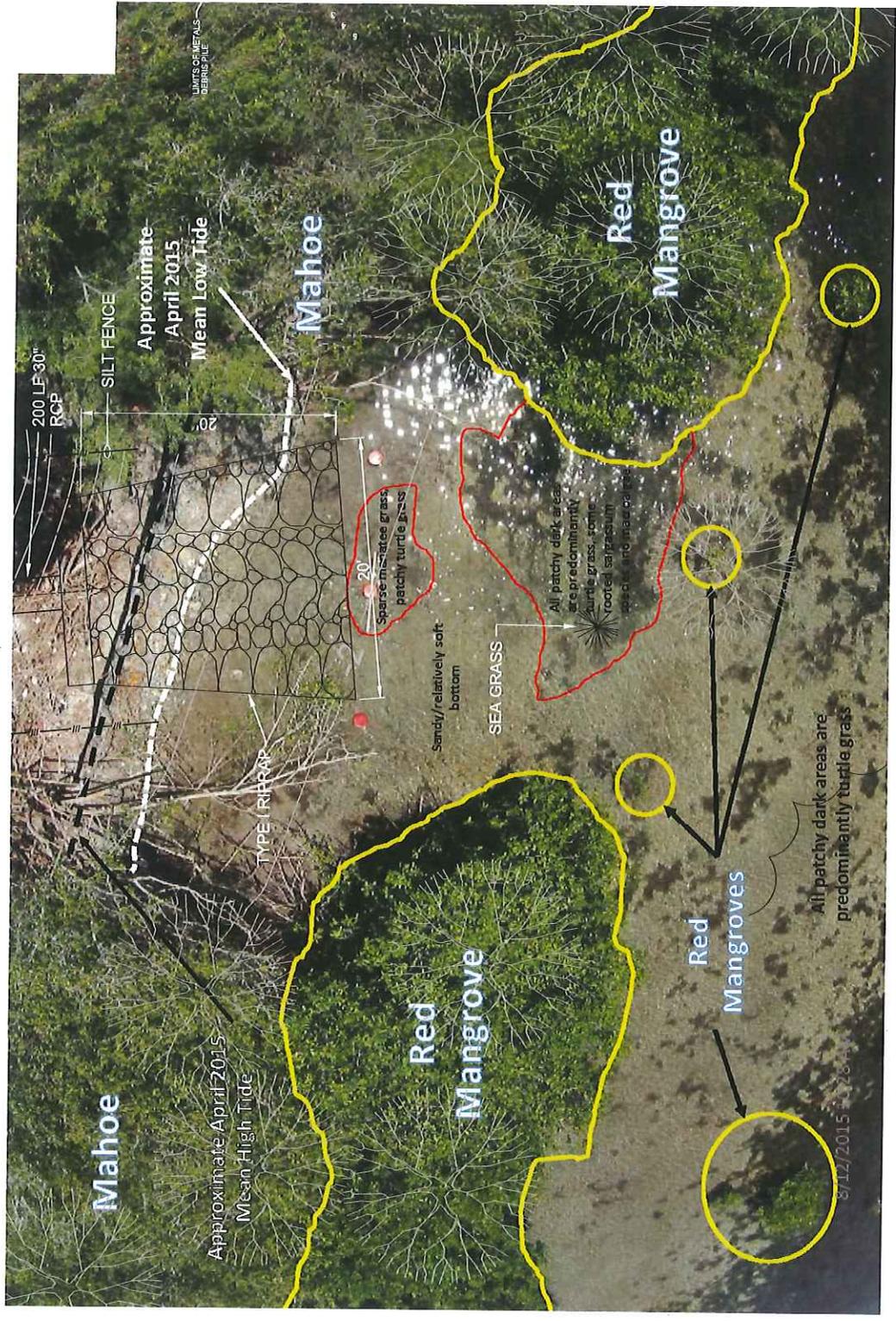


OUTLET #2 PROFILE

GABION ENDWALL DETAIL
WOOD FORM PLAN

OUTLET #2 PROFILE

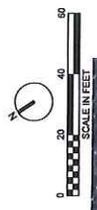
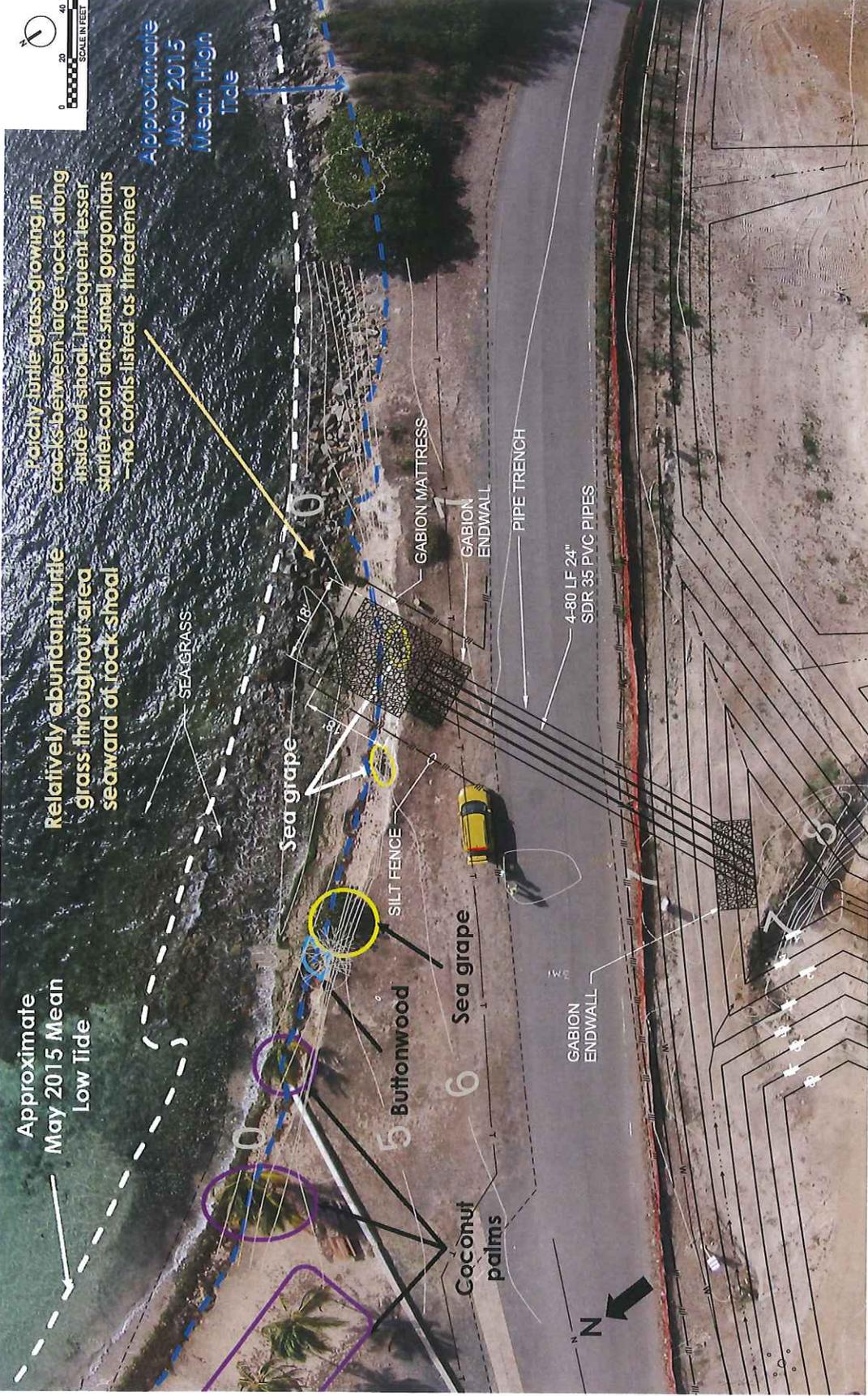
PIPE TRENCH DETAIL



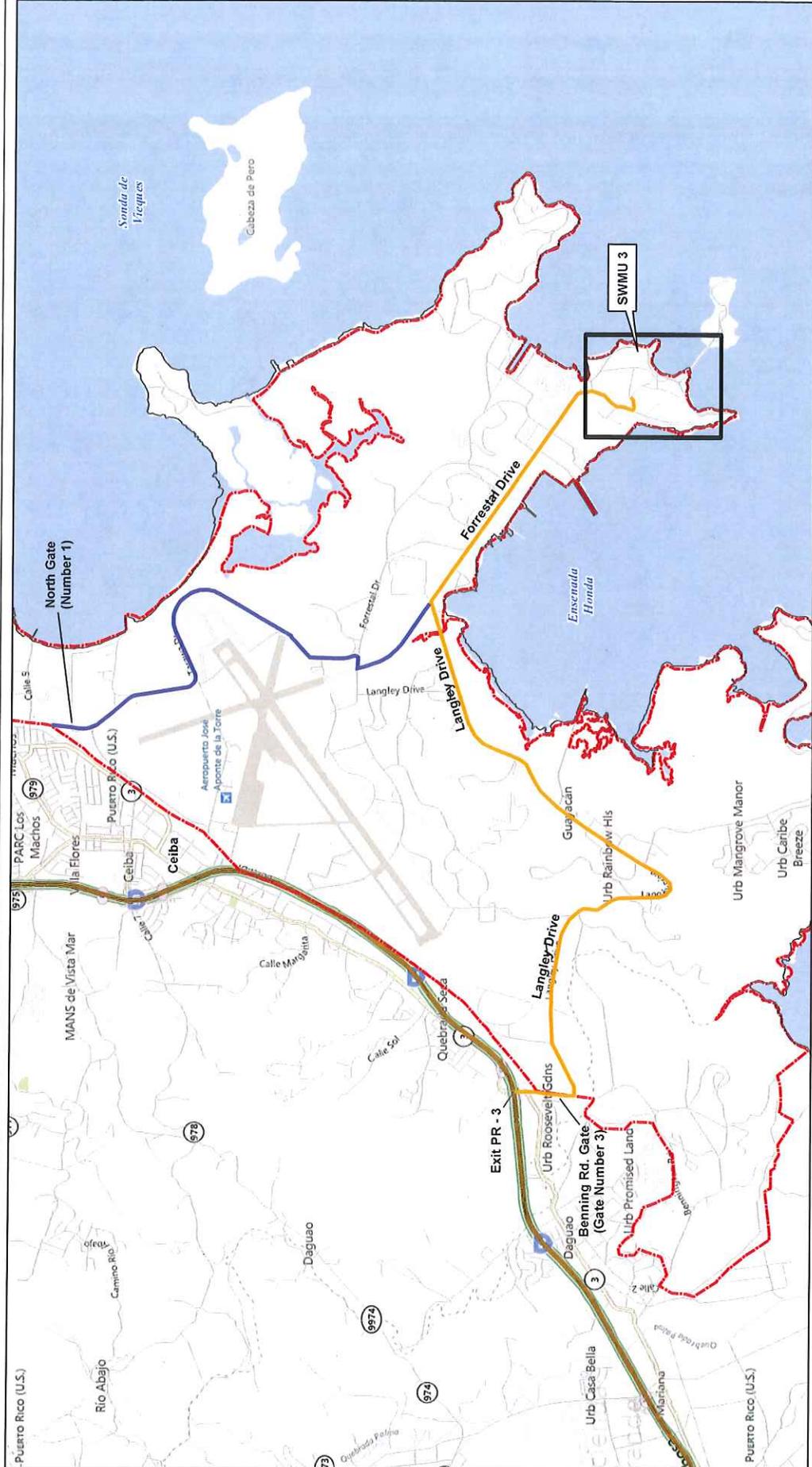
FILENAME: PLOT DATE: 2015/08/14 PLOT TIME: 10:25:56 AM

OUTLET #1 PLAN

CH2MHILL.



OUTLET #2 PLAN



- LEGEND**
- Road
 - Expressway
 - Gate 3 Route
 - Gate 1 Route
 - Naval Activity Puerto Rico Boundary

Site Directions Map
Naval Activity Puerto Rico



Originated By: Jonathan Grimes
Checked By: Tom Belsel

National Marine Fisheries Essential
Fish Habitat Determination for JM01,
Solid Waste Management Unit 3,
Naval Activities Puerto Rico, Ceiba,
Puerto Rico



CH2M HILL

6600 Peachtree Dunwoody Rd.

400 Embassy Row, Suite 600

Atlanta, Georgia 30328

Tel 678-530-4285

Fax 770.604.9183

September 29, 2015

National Marine Fisheries Service, Habitat Conservation Division
ATTN: José A. Rivera
c/o Jacksonville District Corps of Engineers, Antilles Office
Annex Building, Fundación Ángel Ramos
2nd Floor, Suite 202
Franklin Delano Roosevelt Avenue #383
San Juan, Puerto Rico 00917

Subject: Essential Fish Habitat Consultation
Stormwater outlets for Solid Waste Management Unit 3, Area 1 Naval Activity
Puerto Rico

Dear Mr. Rivera:

The enclosed Essential Fish Habitat Determination for construction of stormwater outlets for the capping of Solid Waste Management Unit (SWMU) 3, Area 1 at Naval Activity Puerto Rico (NAPR) is being submitted on behalf of our client, Naval Facilities Engineering Command. The U.S. Navy is completing a landfill cap of an area historically used for disposal of inert and solid waste near the eastern end of NAPR, designated as Area 1 at SWMU 3. The engineered soil cap constructed over waste at Area 1 has been designed to convey stormwater away from SWMU 3 to existing downstream areas within the area's watershed. Two stormwater outlets would be constructed that would manage this revised stormwater flow to the Caribbean Sea, which is the only available receiving water.

Pursuant to the Magnuson-Stevens Fishery Conservation Management Act, the U.S. Navy is requesting a consultation with the National Marine Fisheries Service (NMFS) Habitat Conservation Division on potential effects on essential fish habitat (EFH) as a result of the construction of these two stormwater outlets.

The entire coastline of the former NAPR has been designated as EFH, so there is no location that these outlets could be constructed that would not encroach on EFH. Locations for the outlets considered and avoided to the extent practicable areas of mangroves, coral reefs, and extensive seagrass beds. The U.S. Navy will implement mitigation measures to reduce the net effect of the unavoidable encroachment into EFH.

As detailed in the attached EFH determination, the U.S. Navy has concluded that the proposed stormwater outlets will result in no-effect for EFH species (reef fish, spiny lobster, and queen conch) and no-effect to EFH mangrove or coral reef habitat. There will be insignificant effects to EFH seagrass habitat that will be mitigated to no-effect. The U.S. Navy requests NMFS concurrence on these EFH conclusions.

Jose A. Rivera
National Marine Fisheries Service
Page 2
September 29, 2015

This work will require a Clean Water Act permit from the Antilles Permit Section of the U.S. Army Corps of Engineers. A joint individual permit application has been filed with that office and with the Puerto Rico Department of Environment and Natural Resources. The Navy is coordinating with the U.S. Fish and Wildlife Service and with the NMFS Protected Species Division regarding species listed under the Endangered Species Act.

The U.S. Navy POC for the SWMU 3, Area 1 stormwater outlets is Mr. Stacin Martin (757-322-4780; stacin.matrin@navy.mil). Mr. Martin's mailing address is: 6506 Hampton Boulevard, Norfolk, VA 23508.

We appreciate your assistance in this matter and look forward to your response. If you require any additional information or documentation, please contact Dr. Richard Reaves at Richard.Reaves@ch2m.com or 678-530-4285.

Sincerely,

CH2M



Thomas Beisel
Senior Project Manager

cc (w/ enclosure): Mr. Stacin Martin, NAVFAC LANT
Mr. Pedro Ruiz, Naval Activity Puerto Rico
Mr. Johann Sasso, USACE Antilles Permits Section

**Essential Fish Habitat Determination for the
Construction of Stormwater Outlets for Capping of
Solid Waste Management Unit 3**

**Naval Activity Puerto Rico
Ceiba, Puerto Rico**

**Contract No. N62470-12-D-7004
Task Order No. JM01**

Submitted to:



**U.S. Naval Facilities
Engineering Command
Southeast**

Prepared by:



**2809 South Lynnhaven Rd. Suite 200
Virginia Beach, VA. 23452**

September 2015

Essential Fish Habitat Determination for the Construction and Operation of Stormwater Outlets for Solid Waste Management Unit 3, Naval Activity Puerto Rico, Ceiba, Puerto Rico

1.0 Description of the action

1.1 Background

The Magnuson-Stevens Fishery Conservation Management Act (16 United States Code Section 1801-1882) required that fishery management plans (FMPs) be developed to direct responsible management of exploited fish and invertebrate species in waters of the United States. Upon reauthorization of this act in 1996, the National Oceanic and Atmospheric Administration Marine Fisheries Service (NMFS) was assigned the responsibility of designating and conserving essential fish habitat (EFH) for species managed under FMPs.

Following the closure of Naval Activity Puerto Rico (NAPR; formerly Naval Station Roosevelt Roads) in 2004, an EFH assessment for this installation was conducted to support redevelopment of the Station for public/private use (GeoMarine, Inc., 2005). This investigation confirmed that there were areas of mangroves, seagrasses, and corals on and surrounding NAPR.

Solid Waste Management Unit (SWMU) 3 was used for disposal of inert and solid waste and final use of the site was discontinued in 2004. When NAPR was closed, the closure decision required SWMU 3 to be capped prior to transferring the site to the Commonwealth of Puerto Rico.

SWMU 3 and its cap are entirely within upland area on NAPR, and separated from the coast by a perimeter road. The landfill cap was designed to direct stormwater from SWMU 3 to two collection locations and each of these locations would convey stormwater to the Caribbean Sea via an outlet. If the stormwater were not removed, the integrity of the landfill cap would be at risk of failing.

Selection of the outlet locations considered the known locations of coral reefs, mangroves, and extensive seagrass beds in the nearshore waters around SWMU 3. All of the known large habitat areas were avoided in the design and the encroachment into EFH has been minimized to the extent practicable. The two outlets were selected to distribute the volume of water over a greater area and dissipate the energy that could contribute to seafloor scour. The design also includes a riprap apron for each outlet to further dissipate the energy of the water flow following precipitation events.

Underground pipes would convey stormwater from the collection areas on the landfill cap to each of the outlets. The two outlet structures are described below. Please refer to the attached figures for additional information on the outlets.

Stormwater Outlet #1

Stormwater Outlet #1 will consist of a single inlet structure, a single, underground 30-inch, diameter round concrete pipe (RCP), and a single outlet structure that discharges to the Caribbean Sea. Approximately 44 cubic yards (CY) of rip-rap will be placed below the mean high tide elevation. All of the of 30-inch concrete pipe will be constructed above the high tide elevation landward with the stormwater collection area and inlet structure on the SWMU 3 cap.

The outlet structure for Outlet #1 will be constructed partially below the mean high tide elevation. Approximately 44 CY of seafloor will be excavated for placement of the energy-dissipating apron. The riprap for the apron will be placed directly on a geotextile mat with its edges keyed into to the seafloor. This apron will dissipate the energy of the moving water from the outlet (see Figure 4).

Stormwater Outlet #2

Stormwater Outlet #2 will consist of a single inlet, that will connect with four (4) 24-inch, PVC pipes that convey to a single outlet structure that discharges to the Caribbean Sea. The outlet will consist of 22 CY of gabion mattress that will be placed below the mean high tide elevation. All of the PVC pipes will be placed above the high tide elevation landward to connect with the stormwater collection area on the SWMU 3 cap (see Figure 5).

Outlet #2 will be placed partially below the mean high tide elevation. Approximately 22 CY of seafloor will be excavated for placement of the energy-dissipating gabion mattress. The gabion mattress will be placed directly on a geotextile mat with its edges keyed into to the seafloor. This gabion mattress will dissipate the energy of the moving water from the outlet (see Figure 5).

1.2 Analysis of the potential adverse effects of the action on EFH and the managed species. Please provide information on the quantity and quality of seagrass and other habitats that may be impacted

No direct or cumulative impacts to mangroves or coral reefs, or to species managed under FMPs would result from construction and operation of the stormwater outlets. No life history stages of these species would be affected by the proposed action.

On May 1, 2015 and August 3, 2015, CH2M conducted surveys for seagrasses and corals in the vicinity of the proposed outlets. The survey covered 100 percent of the area of disturbance for each outlet and extended outward from the area of direct disturbance for 100 feet. The following paragraphs discuss the potential for impacts to mangrove, hard and soft coral, and seagrass habitats.

There is no mangrove habitat within the proposed work areas; therefore, there would be no direct or cumulative impacts to these habitats. Red mangroves occur to either side of the proposed work area for Outlet #1, but all mangroves will be avoided during construction of the outlets and these plants would not be in the flow path exiting the outlet (see Figure 6). A single buttonwood occurs near the proposed site of Outlet #2 (see Figure 7). This tree would not be impacted during construction and is at a higher elevation than the proposed outlet.

There are no corals at the proposed location of Outlet #1, which would be placed within an area with a soft sand/silt substrate. There would be no direct, indirect, or cumulative impacts to corals at Outlet #1.

Limited amounts of both hard and soft coral occur scattered among rocks within the area proposed for the apron at Outlet #2. While no coral reefs are within the area of disturbance, both lesser stellar coral and gorgonians were observed growing on individual rocks in this area. No corals listed as threatened or endangered and no corals proposed for listing were observed in this area. Minor direct impacts to corals would be expected as a result of the construction of the stormwater outfalls. The U.S Navy proposes to relocate rocks that have lesser stellar coral and gorgonians laterally from the area of disturbance and place these rocks at the same orientation and depth as that from which they were removed. Because impacts to corals would be limited to scattered individuals of common species, no cumulative impacts to corals would result. With the proposed relocation, no adverse impacts to corals would be expected. Additionally, the rocks of the apron may provide substrate for additional colonization by coral species in this area.

Small amounts of seagrasses occur within the proposed areas of disturbance at both Outlet #1 and Outlet #2. At both locations, intact plugs of seagrasses would be relocated laterally to comparable depth/substrate and replanted outside the area of disturbance. Because there would be no impacts to large seagrass beds, no cumulative impacts to seagrasses would result. Because the disturbance of seagrasses will be limited to small areas of sparse or scattered growth, because seagrasses would be relocated from the area of disturbance, and because no impacts to nearby large seagrass beds would result, no adverse impacts to seagrasses would be expected.

1.3 Federal agency's conclusions regarding the effects of the action on EFH

There would be no direct or cumulative impacts to mangroves as a result of the construction and operation of the stormwater outlets at SWMU 3 on NAPR. Mangrove habitat does not occur in the proposed work areas and the U.S. Navy will avoid nearby mangroves.

Minimal intrusion into areas with corals and seagrasses cannot be avoided, but the magnitude of intrusion would be minimal and impacted individuals would be relocated to comparable nearby habitat outside the area of disturbance. The U.S. Navy has determined that this action would result in direct minor temporary disturbance to scattered seagrasses and isolated corals. Because the individuals that would be impacted would be relocated outside the area of disturbance prior to construction of the stormwater outlets, no adverse impacts to EFH would be expected. No cumulative impacts to corals, seagrasses or EFH are expected.

1.4 Proposed mitigation, if applicable

Mitigation measures described above would be implemented prior to construction of the stormwater outlets. Because of the expected minimal disturbance of seagrasses and corals, no post-project monitoring is proposed.

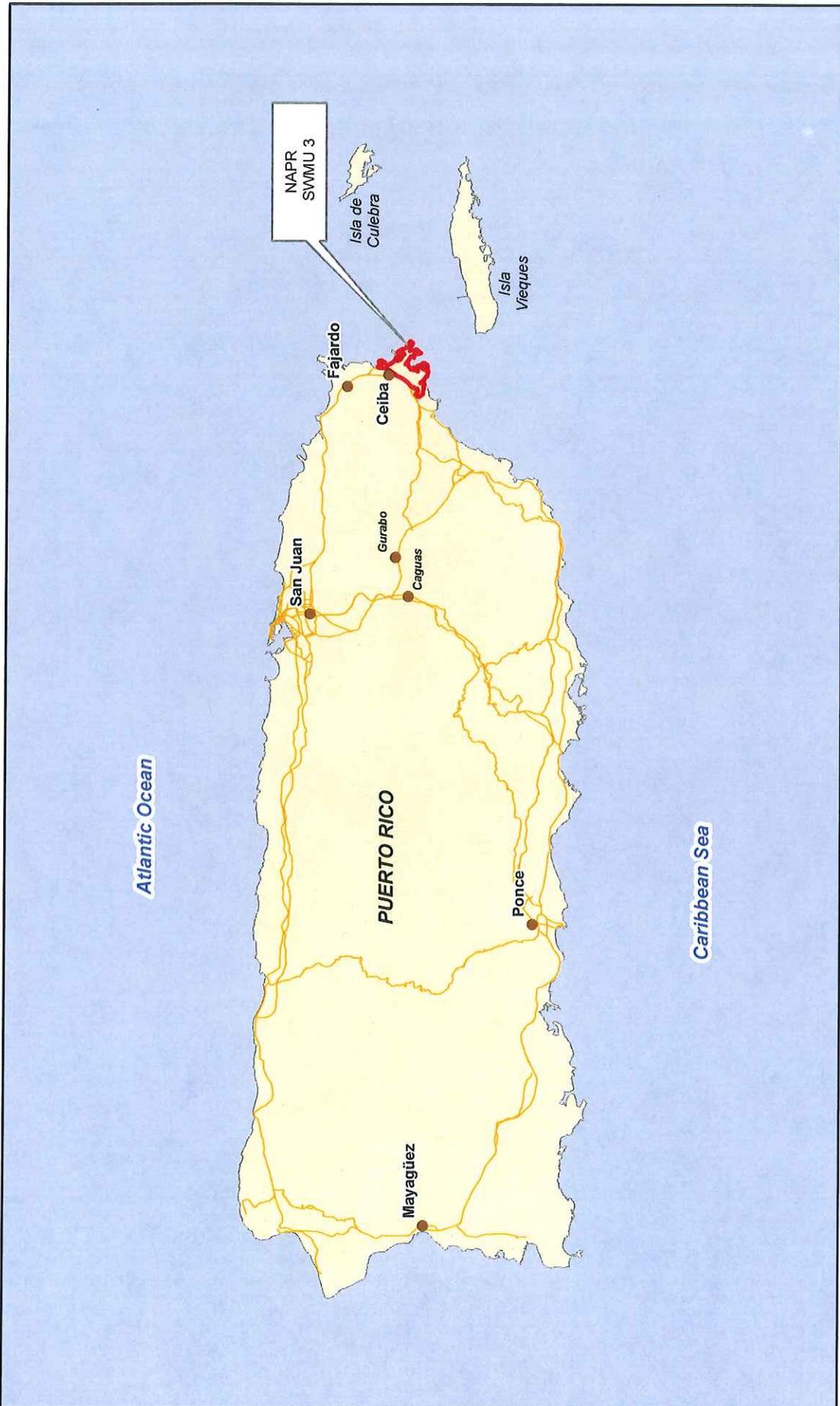
2.0 Additional Information

The following information is provided to supplement this determination.

1. *Aerial photographs of each proposed outlet area, with locations of the proposed outlet and apron and the locations of seagrasses, mangroves, and corals clearly depicted. These photographs provide the results of the underwater survey conducted by CH2M on May 1, 2015 and August 3, 2015.*
2. *Copy of application for Clean Water Act Permit Application submitted to request authorization to implement the project within Waters of the United States under the jurisdiction of the U.S. Army Corps of Engineers.*

3.0 References

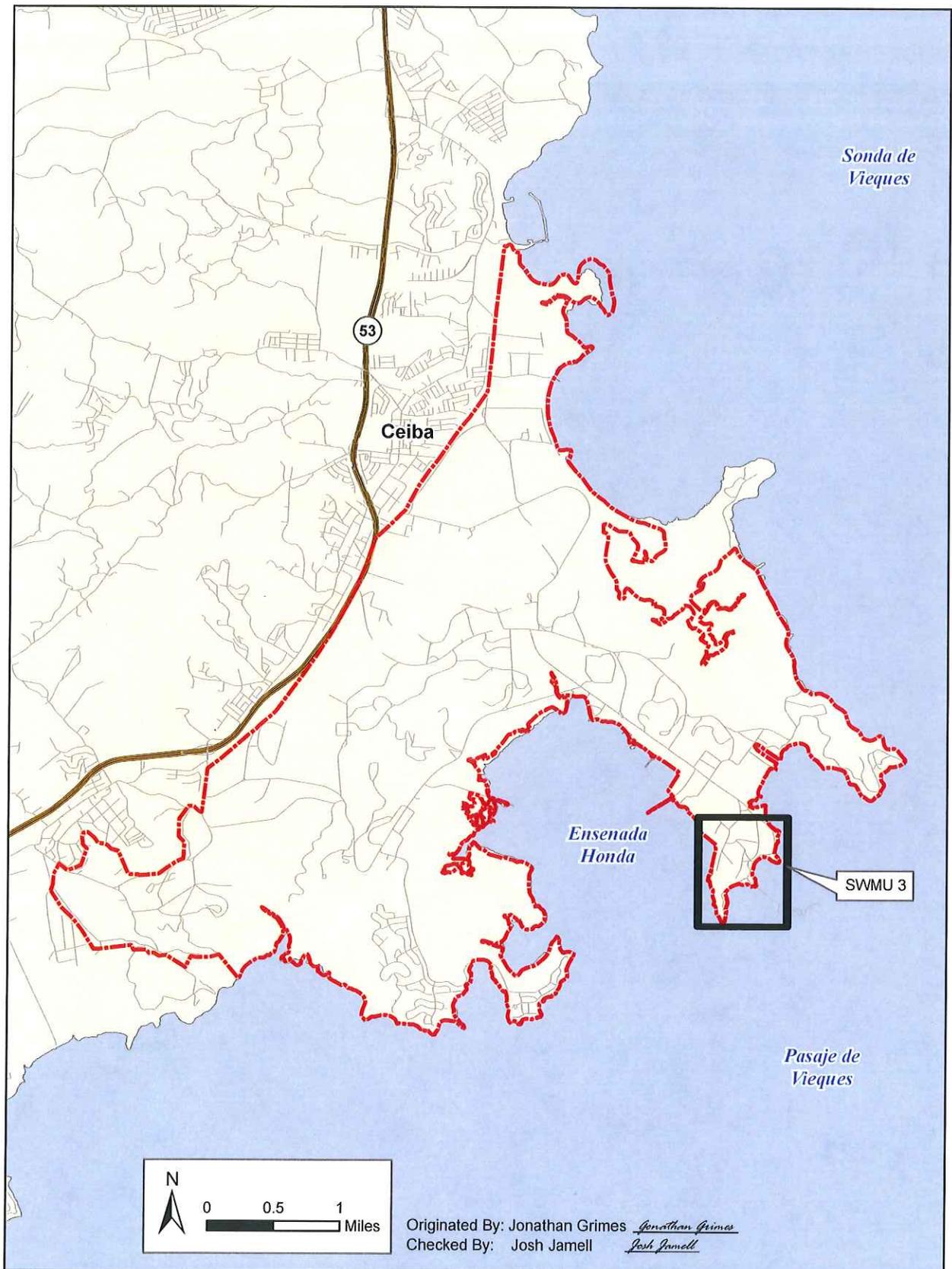
Geo-Marine, Inc., 2005. *Essential Fish Habitat Assessment Naval Activity Puerto Rico*. Prepared for Naval Facilities Engineering Command, Norfolk, VA. Plano, TX: August. Retrieved from <https://www.cnrc.navy.mil/navycni/groups/public/@pub/@southe/documents/image/cnrcsenaprenglisheaappendb.b.pdf>.



- City
- Major Road
- Naval Activity Puerto Rico Boundary

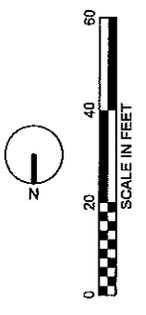
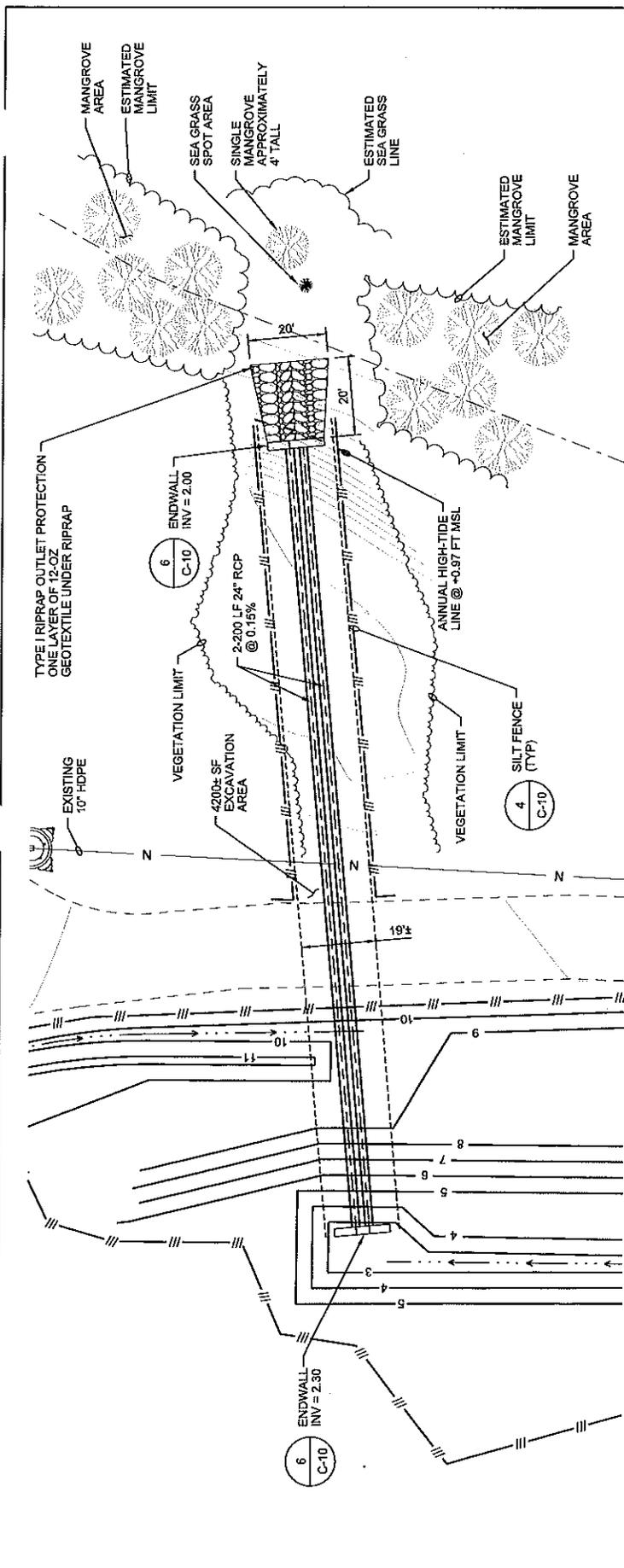


FIGURE 1
 NAPR Location in Puerto Rico
 Naval Activity Puerto Rico



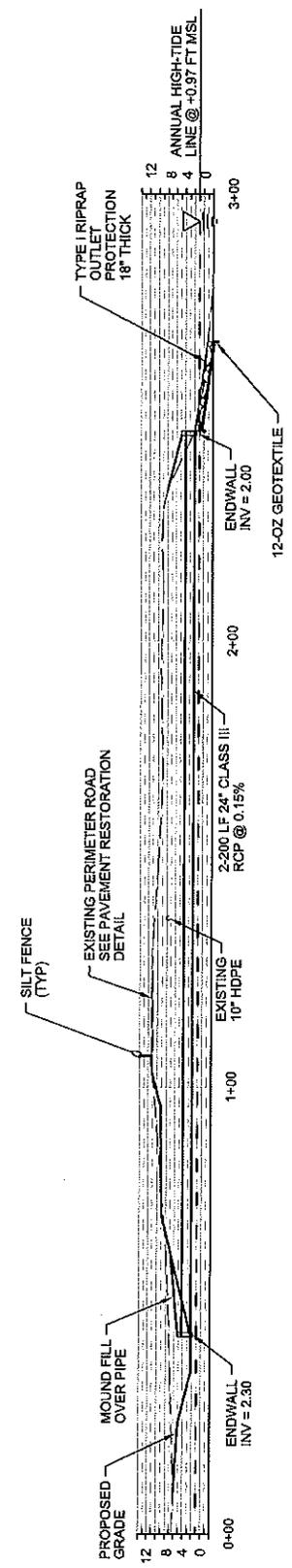
- Road
- Expressway
- ▭ Naval Activity Puerto Rico Boundary

FIGURE 2
 SWMU 3 Location
 Naval Activity Puerto Rico



NOTE:
CONTRACTOR WILL PROTECT EXCAVATION
FROM ACCESS OUTSIDE OF WORKING HOURS
BY USING FENCING OR COVER PLATES.

OUTLET #1 PLAN



**FIGURE 4
OUTLET #1
PLAN AND PROFILE**

OUTLET #1 PROFILE

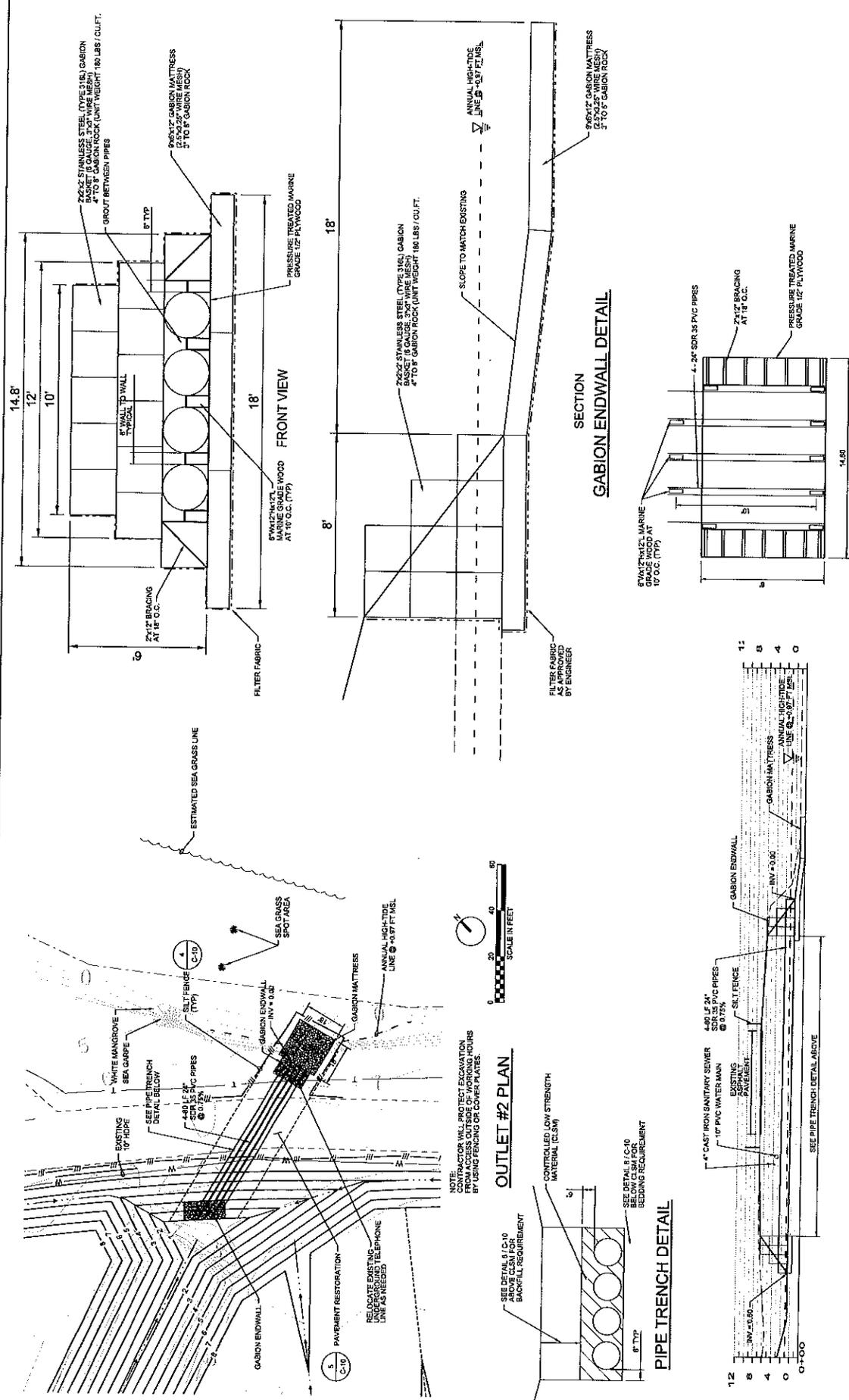
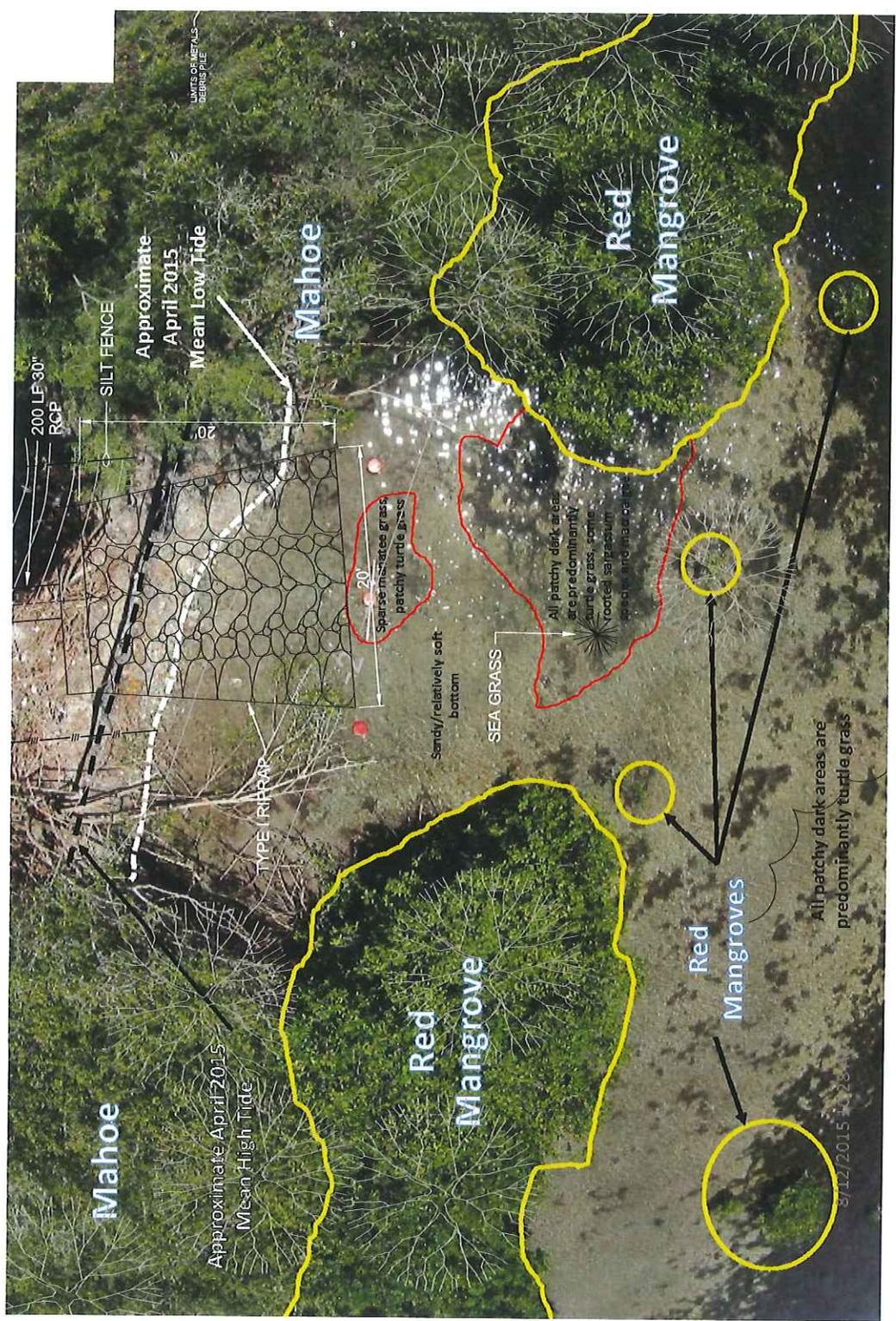
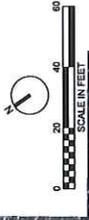
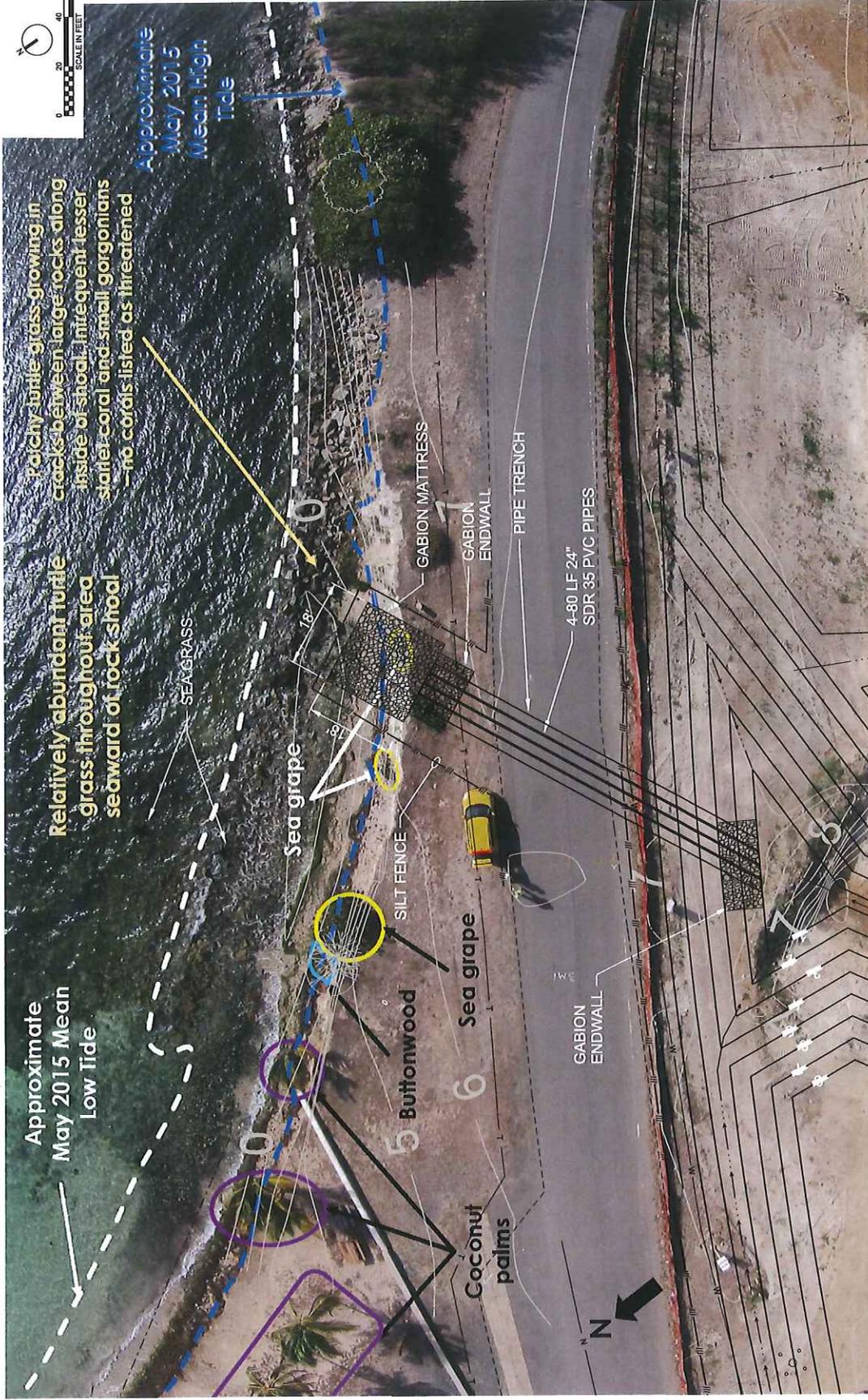


FIGURE 5
 OUTLET #2
 PLAN, PROFILE AND DETAILS

CH2MHILL



OUTLET #1 PLAN



Approximate
May 2015
Mean High
Tide

Patches of large rocks along
inside of shoal, infrequent lesser
stouter coral and small gorgonians
—no corals listed as threatened

Relatively abundant turtle
grass throughout area
seaward of rock shoal

Approximate
May 2015 Mean
Low Tide

Sea grape

5 Buttonwood

6 Sea grape

Coconut
palms

GABION MATTRESS

GABION
ENDWALL

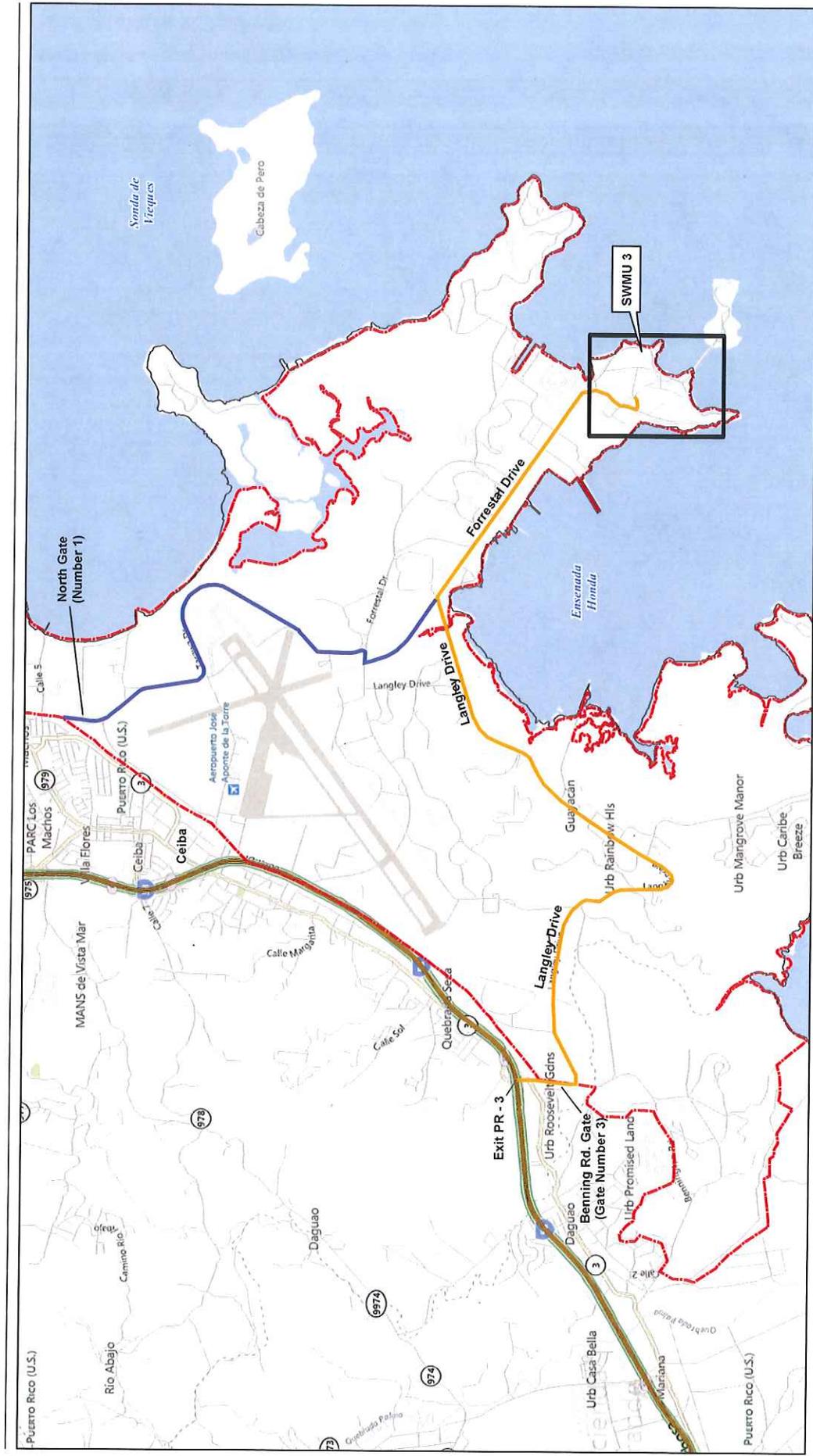
PIPE TRENCH

4-80 LF 24"
SDR 35 PVC PIPES

GABION
ENDWALL



OUTLET #2 PLAN



LEGEND
 Road
 Expressway
 Gate 3 Route
 Gate 1 Route
 Naval Activity Puerto Rico Boundary

Site Directions Map
 Naval Activity Puerto Rico



Originated By: Jonathan Grimes
 Checked By: Tom Baisel

CH2MHILL

Fish & Wildlife National Marine
Fisheries Protected Species
Determination for JM01, Solid Waste
Management Unit 3, Naval Activities
Puerto Rico, Ceiba, Puerto Rico



CH2M HILL

6600 Peachtree Dunwoody Rd.

400 Embassy Row, Suite 600

Atlanta, Georgia 30328

Tel 678-530-4285

Fax 770.604.9183

September 29, 2015

U.S. Fish and Wildlife Service
ATTN: Felix Lopez
P.O. Box 491
Road 301 Km 5.1
Boquerón, Puerto Rico 00622

Subject: Protected Species Coordination for Clean Water Act Permit for
Stormwater outlets for Solid Waste Management Unit 3, Area 1 Naval Activity
Puerto Rico

Dear Mr. Lopez:

This request is being submitted to the U.S. Fish and Wildlife Service (USFWS) on behalf of our client, Naval Facilities Engineering Command. The U.S. Navy is completing a landfill cap of an area historically used for disposal of inert and solid waste near the eastern end of Solid Waste Management Unit (SWMU) 3, Area 1 at Naval Activity Puerto Rico (NAPR). The engineered soil cap constructed over waste at Area 1 has been designed to convey stormwater away from SWMU 3 to existing downstream areas within the area's watershed. Two stormwater outlets would be constructed that would manage this revised stormwater flow to the Caribbean Sea, which is the only available receiving water (see attached Figures).

A joint Clean Water Act permit application has been filed with the Antilles Permit Section of the U.S. Army Corps of Engineers and with the Puerto Rico Department of Environment and Natural Resources. We also are coordinating with the National Marine Fisheries Service (NMFS) Protected Species Division regarding marine listed species and with the NMFS Habitat Conservation Division regarding impacts to essential fish habitat.

There is red mangrove and buttonwood habitat near the proposed location of Outlet #1, but no mangroves would be disturbed during construction of the outlet. The proposed project area has been surveyed for the presence of cobana negra, yellow-shouldered blackbird, and Puerto Rican boa. None of these species were identified within or adjacent to the proposed project areas. The landward portion of the proposed outlet areas are not suitable for sea turtle nesting.

Small amounts of seagrasses occur within the proposed work locations and larger seagrass beds occur nearby. It is possible that sea turtles or the West Indian manatee could forage in the vicinity of the proposed outlets. Prior to work each day, the area would be checked by a trained/qualified person for sea turtles and manatees. If any of these animals are observed, work would be delayed until the animal(s) had voluntarily left the area. The design of the outlets would provide sufficient energy dissipation to prevent indirect impacts to foraging habitat from scour once the outlets are in operation.

Felix Lopez
U.S. Fish and Wildlife Service
Page 2
September 29, 2015

Prior to the start of construction, each work area would be surveyed again for the presence of Puerto Rican boa and for nests of the yellow-shouldered blackbird. Procedures previously developed and permitted through the Puerto Rico Department of Natural and Environmental Resources for conducting work in areas with potential for occurrence of the Puerto Rican boa, including work area monitoring and relocation of any snakes that are found, will be implemented during the work. If an active yellow-shouldered blackbird nest is found within or adjacent to the proposed work areas, work will be delayed until after the young have fledged.

With implementation of the above avoidance measures, the U.S. Navy has determined that the proposed outlet construction would not affect species listed under the Endangered Species Act or the Marine Mammal Protection Act. The U.S. Navy is requesting concurrence with this determination from the USFWS on this determination.

The U.S. Navy POC for the SWMU 3, Area 1 stormwater outlets is Mr. Stacin Martin (757-322-4780; stacin.matrin@navy.mil). Mr. Martin's mailing address is: 6506 Hampton Boulevard, Norfolk, VA 23508.

We appreciate your assistance in this matter and look forward to your response. If you require any additional information or documentation, please contact Dr. Richard Reaves at Richard.Reaves@ch2m.com or 678-530-4285.

Sincerely,

CH2M



Thomas Beisel
Senior Project Manager

cc (w/enclosure): Mr. Stacin Martin, NAVFAC LANT
Mr. Pedro Ruiz, Naval Activity Puerto Rico
Mr. Johann Sasso, USACE Antilles Permits Section



September 29, 2015

National Marine Fisheries Service
Protected Resources Division
ATTN: Lisamarie Carrubba
PO Box 3323
Lajas, Puerto Rico 00667-3323

CH2M HILL
6600 Peachtree Dunwoody Rd.
400 Embassy Row, Suite 600
Atlanta, Georgia 30328
Tel 678-530-4285
Fax 770.604.9183

Subject: Protected Species Coordination for Clean Water Act Permit for
Stormwater outlets for Solid Waste Management Unit 3, Area 1 Naval Activity
Puerto Rico

Dear Dr. Carrubba:

This request is being submitted to the National Marine Fisheries Service (NMFS) Protected Species Division on behalf of our client, Naval Facilities Engineering Command. The U.S. Navy is completing a landfill cap of an area historically used for disposal of inert and solid waste near the eastern end of Solid Waste Management Unit (SWMU) 3, Area 1 at Naval Activity Puerto Rico (NAPR). The engineered soil cap constructed over waste at Area 1 has been designed to convey stormwater away from SWMU 3 to existing downstream areas within the area's watershed. Two stormwater outlets would be constructed that would manage this revised stormwater flow to the Caribbean Sea, which is the only available receiving water (see attached Figures).

A joint Clean Water Act permit application has been filed with the Antilles Permit Section of the U.S. Army Corps of Engineers and with the Puerto Rico Department of Environment and Natural Resources. We also are coordinating with the U.S. Fish and Wildlife Service regarding terrestrial listed species and with the NMFS Habitat Conservation Division regarding impacts to essential fish habitat.

On May 1, 2015 and August 3, 2015, CH2M conducted surveys for seagrasses and corals in the vicinity of the proposed outlets. The survey covered 100 percent of the area of disturbance for each outlet and extended outward from the area of direct disturbance for 100 feet. No coral reefs occur at the proposed outlet locations. No corals were found at the proposed location of Outlet #1, which is within an area with a soft sand/silt substrate. Limited numbers of lesser stellar coral and gorgonians were observed growing on individual rocks in the area proposed for Outlet #2. No corals listed as threatened or endangered and no corals proposed for listing were observed in this area. No listed coral species were identified.

The landward portion of the proposed outlet areas are not suitable for sea turtle nesting. It is possible that sea turtles or the West Indian manatee could forage in the vicinity of the proposed outlets. Prior to work each day, the area would be checked by a trained/qualified person for sea turtles and manatees. If any of these animals are observed, work would be delayed until the animal(s) had voluntarily left the area. The design of the outlets would

Lisamarie Carrubba
National Marine Fisheries Service
Page 2
September 29, 2015

provide sufficient energy dissipation to prevent indirect impacts to foraging habitat from scour once the outlets are in operation.

With implementation of the above avoidance measures, the U.S. Navy has determined that the proposed outlet construction would not affect species listed under the Endangered Species Act or the Marine Mammal Protection Act. The U.S. Navy is requesting concurrence with this determination from the NMFS Protected Resources Division.

The U.S. Navy POC for the SWMU 3, Area 1 stormwater outlets is Mr. Stacin Martin (757-322-4780; stacin.martin@navy.mil). Mr. Martin's mailing address is: 6506 Hampton Boulevard, Norfolk, VA 23508.

We appreciate your assistance in this matter and look forward to your response. If you require any additional information or documentation, please contact Dr. Richard Reaves at Richard.Reaves@ch2m.com or 678-530-4285.

Sincerely,

CH2M



Thomas Beisel
Senior Project Manager

cc (w/enclosure): Mr. Stacin Martin, NAVFAC LANT
Mr. Pedro Ruiz, Naval Activity Puerto Rico
Mr. Johann Sasso, USACE Antilles Permits Section

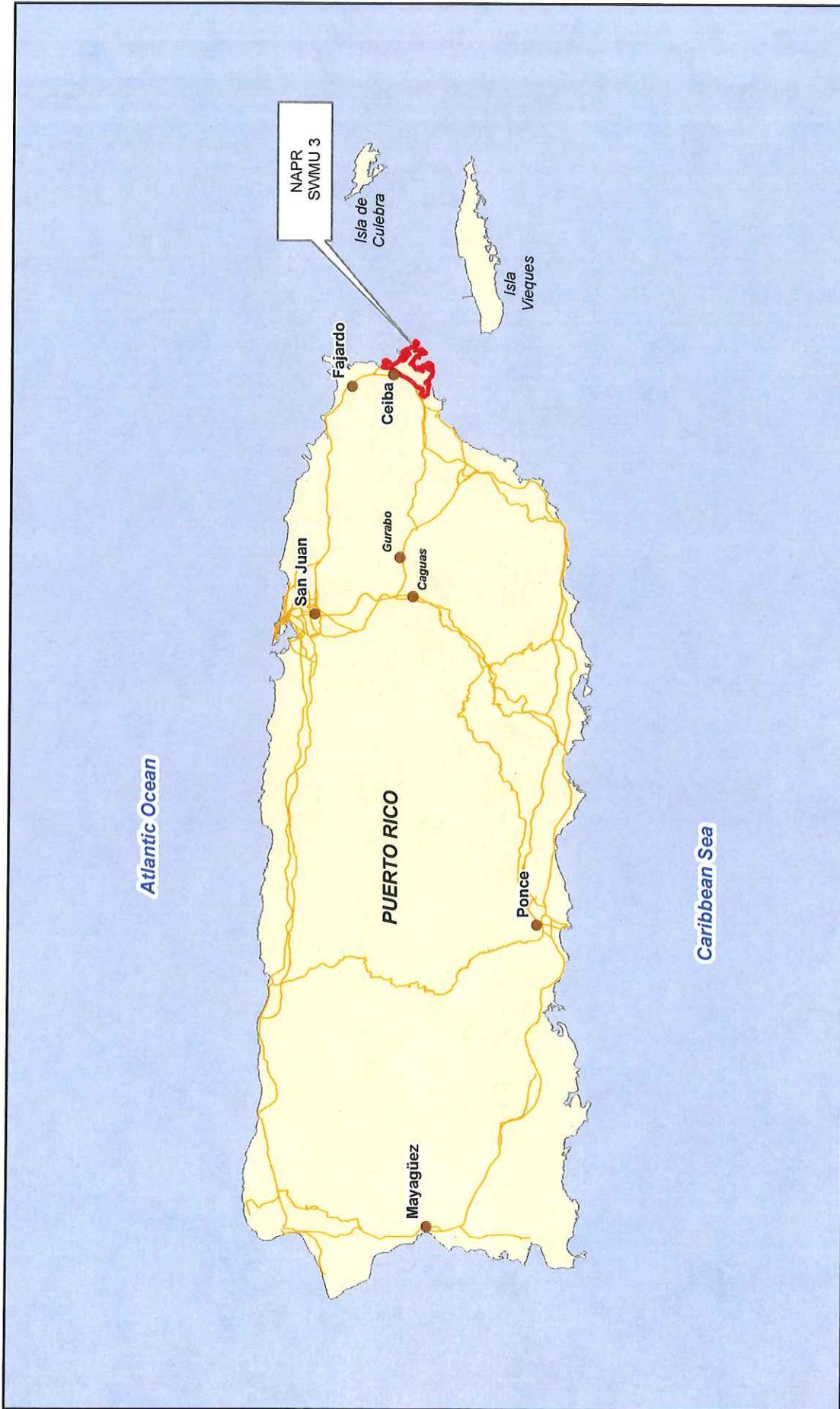
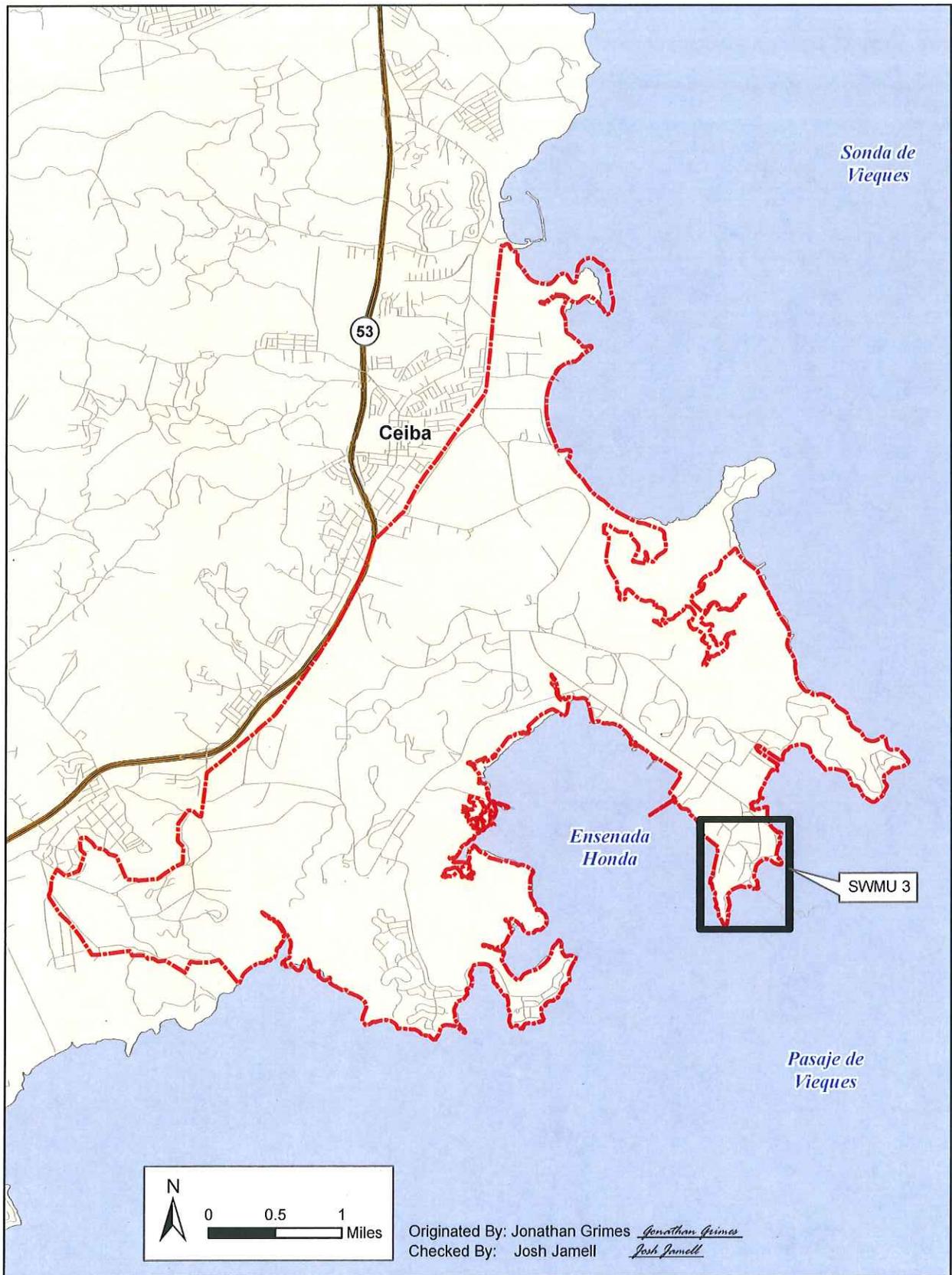


FIGURE 1
 NAPR Location in Puerto Rico
 Naval Activity Puerto Rico



-  Road
-  Expressway
-  Naval Activity Puerto Rico Boundary

Originated By: Jonathan Grimes *Jonathan Grimes*
 Checked By: Josh Jamell *Josh Jamell*

FIGURE 2
 SWMU 3 Location
 Naval Activity Puerto Rico

DATE	05/20/2014
BY	10/01
CHKD BY	02
DATE	05/20/2014
BY	10/01
CHKD BY	02

CH2MHILL

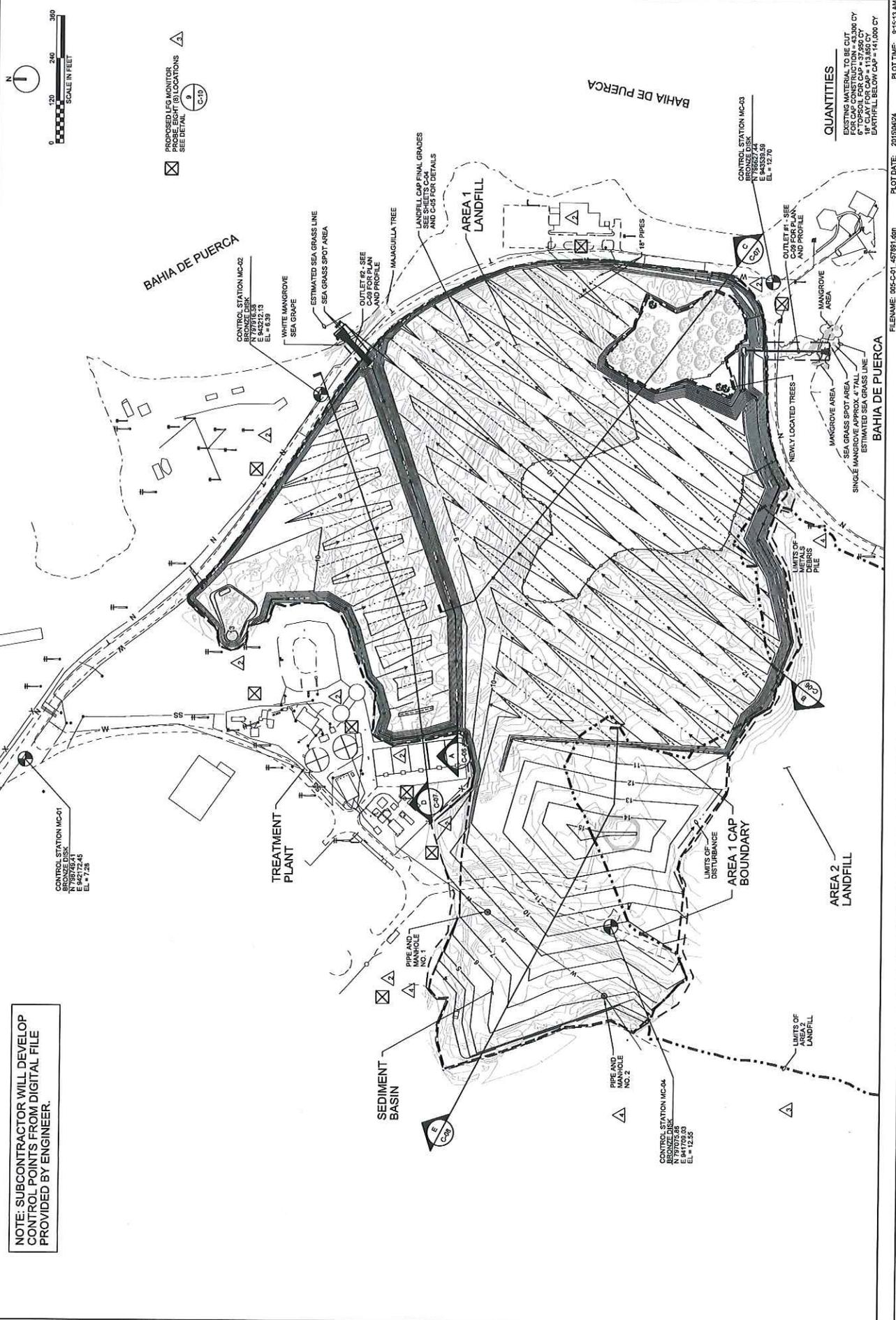
NAYFAC

LANDFILL CAP COMPLETION

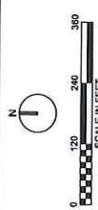
PROJECT NO.	201504024
DATE	05/20/2014
BY	10/01
CHKD BY	02

PROJECT NO.	201504024
DATE	05/20/2014
BY	10/01
CHKD BY	02

PROJECT NO.	201504024
DATE	05/20/2014
BY	10/01
CHKD BY	02



NOTE: SUBCONTRACTOR WILL DEVELOP CONTROL POINTS FROM DIGITAL FILE PROVIDED BY ENGINEER.



QUANTITIES

EXISTING MATERIAL TO BE CUT
 6" TOPSOIL FOR CAP 27,850 CY
 6" TOPSOIL FOR CAP 13,850 CY
 6" TOPSOIL FOR CAP 14,000 CY
 6" TOPSOIL FOR CAP 14,000 CY

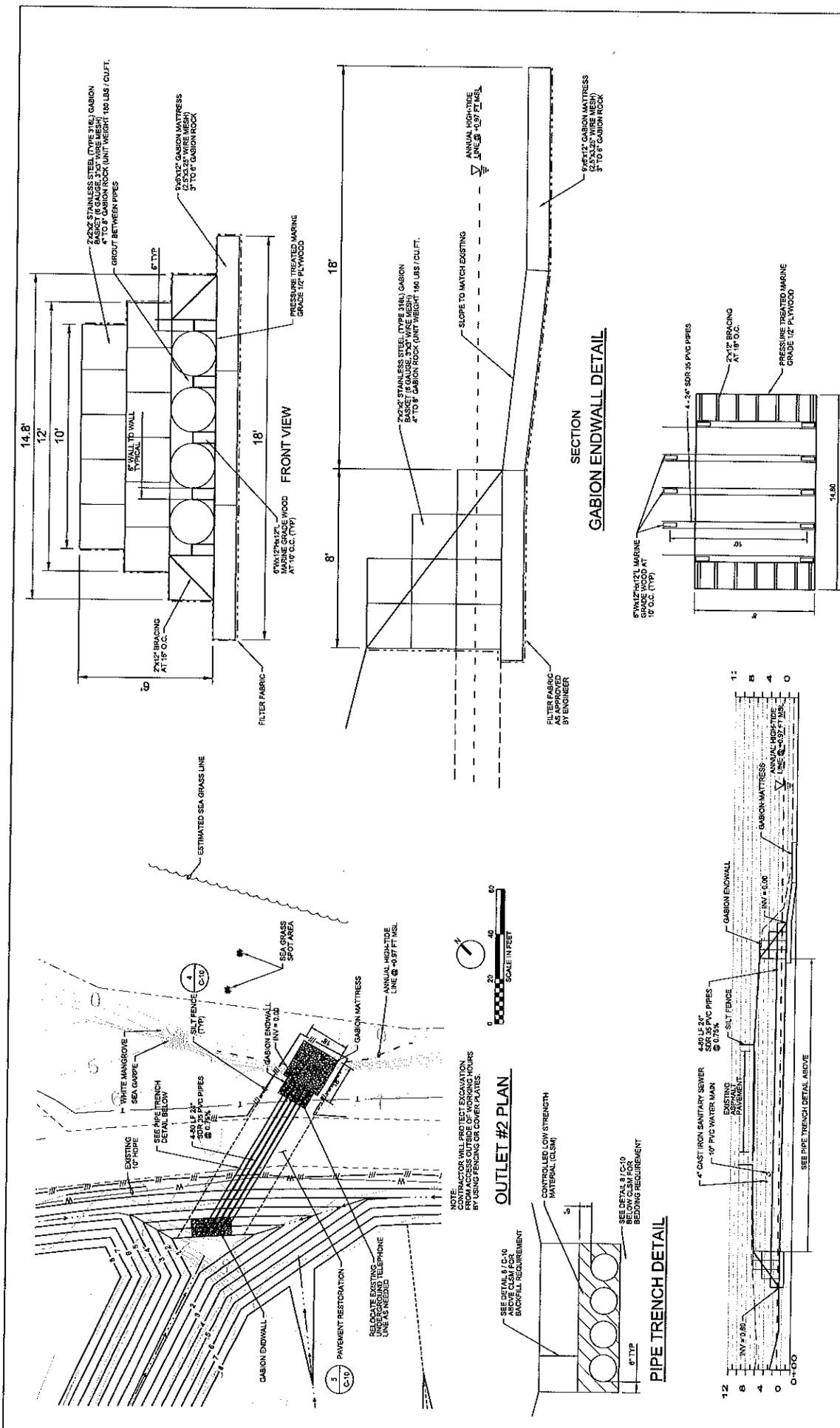
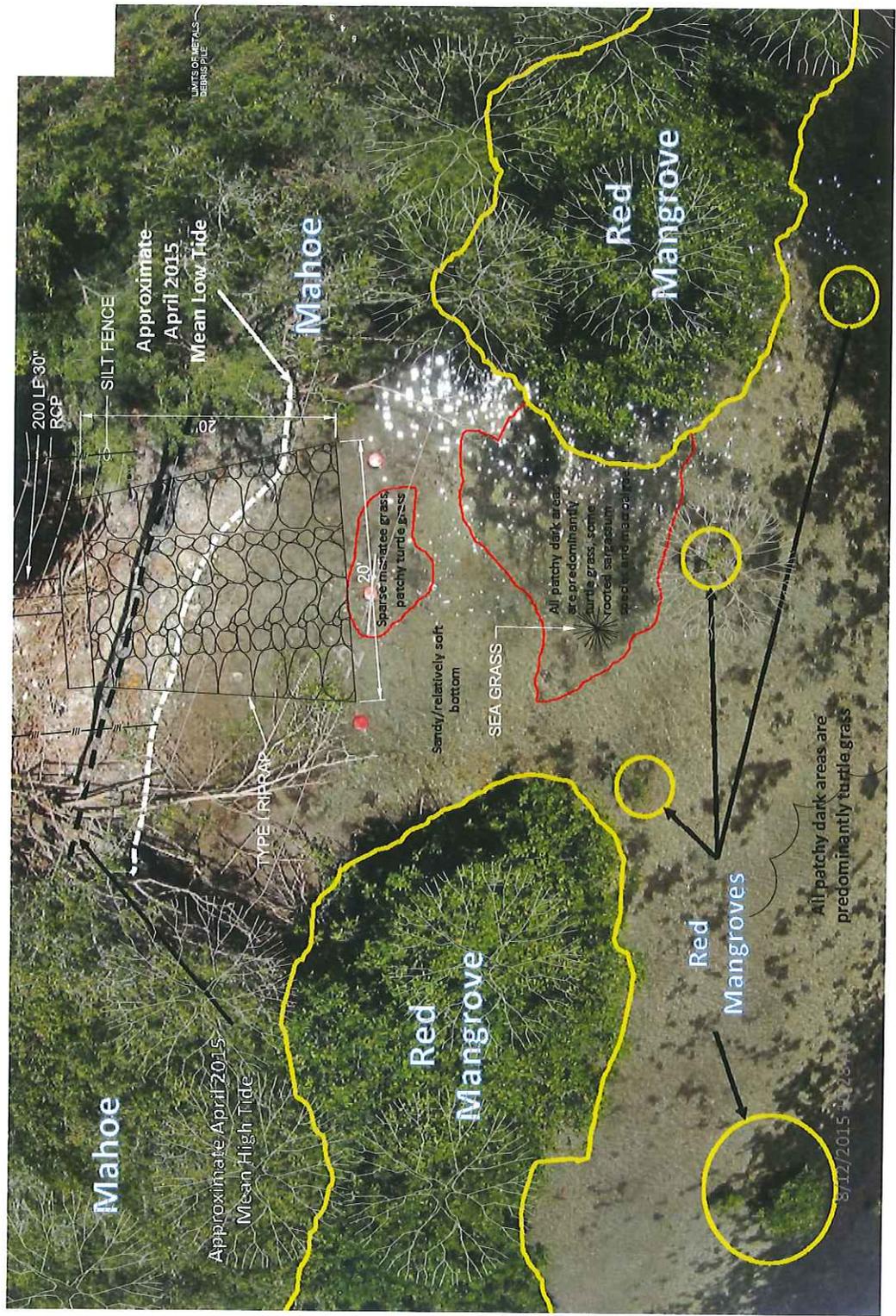


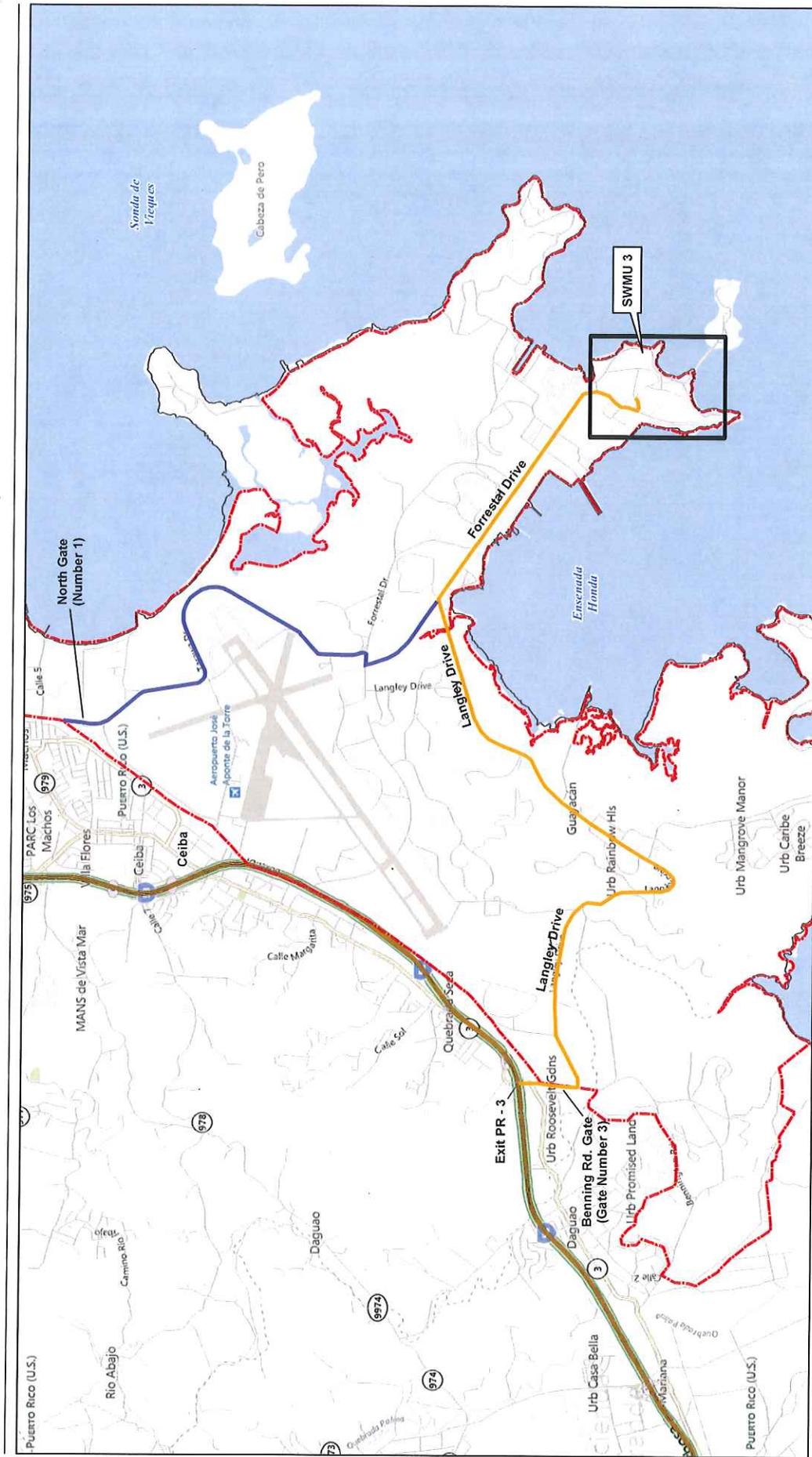
FIGURE 5
OUTLET #2
PLAN, PROFILE AND DETAILS



OUTLET #1 PLAN

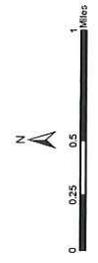


OUTLET #2 PLAN



- LEGEND**
- Road
 - Expressway
 - Gate 3 Route
 - Gate 1 Route
 - Naval Activity Puerto Rico Boundary

Site Directions Map
Naval Activity Puerto Rico



Originated By: Jonathan Grimes
Checked By: Tom Beisel

CH2MHILL

Other approved permits for JM01,
Solid Waste Management Unit 3,
Naval Activities Puerto Rico, Ceiba,
Puerto Rico



Determinación de Cumplimiento Ambiental por Exclusión Categórica

Solid Waste Management Unit 3-Naval Activity

Datos de Localización

De conformidad con las disposiciones contenidas en las leyes y los reglamentos vigentes, se expide la presente Certificación de Exclusión Categórica, Otros: Department of Navy, Privado, para las acción(es) antes descrita(s):

Dirección Física

Municipio: Ceiba

Unidad o Km: Bahía de Puerca

Sector: Roosevelt Roads

Apartamento:

Barrio: Guayacán

Calle o carretera: Antigua Base Naval

Casos de Referencia**Dueño(s)**

DEPARTMENT OF THE NAVY

Certificado por:**Número(s) de Catastro:**

232-000-001-04

Calificación

Distrito(s) de Calificación: Terrenos urbanizables

Distrito Especial:

Distrito Sobrepuesto: SU

Distrito en el Mapa de Inundabilidad: x

Accesos: Privado

Tipo de suelo: Descalabrado-Urbano Variante Terreno-Guayama

Colindantes

Norte: Department of Army

Distrito: Terrenos urbanizables

Sur: Department of Navy

Distrito: Terrenos urbanizables

Este: Department of Navy

Distrito: Terrenos urbanizables

Oeste: Department of Navy

Distrito: Terrenos urbanizables

Datos de determinación

Exclusión CategóricaNúmero de exclusión categórica aplicable de acuerdo a la R-10-45-5 de la JCA*:
119**Fecha de emisión**

Fecha de emisión: 01/04/2013

Condiciones Generales

De acuerdo con la solicitud de esta Determinación, se certificó cumplimiento con los siguientes requisitos, cuyo incumplimiento podrá repercutir en la revocación de esta Determinación:

1. Las actividades de uso o de construcciones livianas de nuevas estructuras no están ubicadas o desarrolladas en:
 - a. áreas especiales de riesgo de inundación, derrumbes o marejadas;
 - b. áreas en las que la JCA u otras agencias gubernamentales estatales o federales hayan determinado que existe un grado de contaminación que excede el permitido por los reglamentos vigentes;
 - c. áreas ecológicamente sensitivas o protegidas, según establecido por el DRNA, en las que existan especies únicas de fauna o flora o que estén en peligro de extinción o en las que puedan afectarse ecológicamente sistemas naturales o artificiales, ya sea en forma directa o indirecta;
 - d. áreas en las que existen problemas de infraestructura o de deficiencias en los sistemas de servicios de suministro de agua potable, disposición de las aguas sanitarias, suministro de energía eléctrica o capacidad vial para el manejo adecuado del tránsito de vehículos de motor;
 - e. áreas que constituyan yacimientos minerales, conocidos o potenciales;
 - f. áreas en las que existen yacimientos arqueológicos o de valor cultural, según determinado por el Instituto de Cultura Puertorriqueña;
 - g. áreas de topografía escarpada, en cuencas hidrográficas donde se puedan afectar fuentes de abasto de agua potable; y
 - h. cualquier otra acción que la JCA haya establecido mediante Resolución.



Determinación de Cumplimiento Ambiental por Exclusión Categórica

2. No descargará contaminantes a cuerpos de agua, ni generará desperdicios peligrosos o emisiones al aire que excedan dos (2) toneladas al año de contaminantes de aire criterio, o cinco (5) toneladas de cualquier combinación de contaminantes criterios, ni emitirá al aire contaminantes peligrosos o tóxicos u olores objetables.
3. La disposición o descarga de las aguas usadas se realizará mediante acometidas a un sistema sanitario existente, lo cual requerirá la obtención del endoso de la AAA previo a la solicitud de permisos de construcción.
4. Que existe la infraestructura necesaria (agua potable y alcantarillado sanitario suministrado por la AAA, energía eléctrica, alcantarillado pluvial, vías de acceso) para servir a la operación del proyecto o actividad propuesta, con excepción de los proyectos agrícolas que se ubican por regla general en áreas rurales, así como las residencias unifamiliares asociadas en las que las instalaciones de esta naturaleza son limitadas.
5. La operación de la actividad no afectará áreas residenciales o zonas de tranquilidad por contaminación sónica, según establecido por el Reglamento para el Control de la Contaminación por Ruido.
6. Que el desarrollo de la instalación comercial, industrial, de servicio, institucional y de desarrollo de terrenos para uso turístico y proyectos recreativos no excede de cinco mil (5,000) pies cuadrados de construcción en área total de ocupación y área bruta de piso y que cumple con las condiciones de ubicación y operación establecidas por la OGPe u otra agencia con jurisdicción, según sean aplicables.
7. El uso de edificios o estructuras existentes para facilidades comerciales, almacenes y usos industriales o de servicios no excederán de cien mil (100,000) pies cuadrados en área total de ocupación y área bruta de piso. Dicha operación deberá cumplir con las condiciones de ubicación y operación establecidas por la OGPe u otra agencia con jurisdicción, según sean aplicables, y las establecidas para las exclusiones categóricas en el Reglamento de Evaluación y Trámite de Documentos Ambientales de la Junta de Calidad Ambiental (RETDA).
8. Para la ejecución o desarrollo de las acciones aprobadas como exclusiones categóricas, se requerirá la obtención de los permisos aplicables de las agencias gubernamentales para las etapas de construcción y operación.
9. La acción no ha sido fragmentada o segmentada para fines de la evaluación y será determinación de la agencia proponente si la misma satisface o no los requisitos para ser considerada y ejecutada bajo una exclusión categórica.
10. Que ha cumplido con el requisito de publicación de un Aviso Público de conformidad con la Regla 122 del RETDA, en el caso de que la acción propuesta esté relacionada al uso u otorgamiento de fondos federales que requieran un proceso de evaluación parecido al de NEPA (NEPA-Like Process).

Aviso

Si luego de haberse aquí dado cumplimiento con el Artículo 4(B) de la Ley Núm. 416 surgieran variaciones sustanciales en la acción propuesta que requieran la evaluación a los impactos ambientales, habrá que presentar el correspondiente documento ambiental, de conformidad con la Ley sobre Política Pública Ambiental.

Condiciones Especiales

Firma / Sellos

Fecha de expedición

01/04/2013





Determination of Environmental Compliance via Categorical Exclusion

Solid Waste Management Unit 3-Naval Activity

Location Data

In compliance with the dispositions of the current laws and regulations, the following Determination of Environmental Compliance via Categorical Exclusion is issued, Others: Department of Navy, Private, for the action(s) previously described:

Physical Address

Municipality: Ceiba

Ud. o Km: Bahía de Puerca

Sector: Roosevelt Roads

Apt./Suite No:

Ward: Guayacán

Road or Street: Antigua Base Naval

Reference Cases

Owner(s):

DEPARTMENT OF THE NAVY

Certified by:

Cadastral Number(s):

232-000-001-04

Original Qualification District

Qualification District: Urban terrain

Special District:

Overimposed district: SU

Flood Zone Code: x

Access: Private

Type of soil: Descalabrado-Urbano Variante Terreno-Guayama

Adjacent Neighbors

North: Department of Army

District: Urban terrain

South: Department of Navy

District: Urban terrain

East: Department of Navy

District: Urban terrain

West: Department of Navy

District: Urban terrain

Determination Data

Categorical Exclusion

Number of applicable Categorical Exclusion as per the Environmental Quality Board's (EQB or JCA, in Spanish) R-10-45-5*: 119

Issue Date

Issue Date: 01/04/2013

General Conditions

According to the application of this Determination, compliance with the following requirements was agreed upon. Noncompliance of these requirements will result in the revocation of this Determination:

1. The proposed action will not to be located or developed in:
 - a. Special areas susceptible to or in risk of flooding, subsidence or tidal surges;
 - b. Areas where pollution levels exceed those allowed by current laws and regulations, as determined by the Environmental Quality Board (EQB or JCA), State agencies or Federal agencies;
 - c. Areas designated by the Department of Natural and Environmental Resources (DRNA) as ecologically sensitive or protected, that are inhabited by endangered or unique species of flora or fauna, or where, directly or indirectly by way of the proposed action, there might be significant ecological alterations of natural or artificial systems;
 - d. Areas with deficiencies in infrastructure or supply and service systems for drinking water, wastewater, electricity or vehicular transportation;
 - e. Areas of known or potential mineral deposits;
 - f. Areas of significant historic, architectural, prehistoric, archeological, or cultural value, as determined by the Institute of Puerto Rican Culture (ICP);
 - g. Topographically steep areas in hydrographic basins that could affect drinking water supplies;
 - h. Any other situation that the EQB (JCA) has established by Resolution.



Determination of Environmental Compliance via Categorical Exclusion

2. The proposed action does not involve new or relocated discharges of pollutants into bodies of water, the generation of hazardous solid wastes, the emission of more than two (2) tons per year of air pollutants or more than five (5) tons per year of any combination of air pollutants, nor the release of hazardous or toxic substances into the air.
3. The disposition or discharge of used waters will take place through existent wastewater systems, with proper recommendation from the Puerto Rico Aqueduct and Sewer Authority (PRASA or AAA, in Spanish) prior to applying for a construction permit.
4. The infrastructure (such as drinking water supply systems, sewer systems, electricity supply systems, stormwater systems, and transportation systems) required for the development, construction and/or operation of the proposed action exists, or in its place the proposed action consists of an agricultural project or an one-family residence in a rural area where there is limited access to infrastructure.
5. The operation of the proposed action will not have significant adverse effect upon residential or tranquility zones as a consequence of noise pollution, as established by the Regulation for Noise Pollution Control (Reglamento para el Control de la Contaminación por Ruido).
6. The development of commercial, industrial, services and/or institutional installations, as well as the land development for touristic and recreational uses, does not include more than five thousand (5,000) square feet of construction for total occupational area and gross floor area, and at the same time meets site and operational requirements established by the Permit Management Office (OGPe) and any other agency with applicable jurisdiction.
7. The use of existing buildings and structures for commercial facilities, warehouses and industrial use or services will not exceed one hundred thousand (100,000) square feet in total area of employment and gross floor area. This operation must meet the location and operation conditions set by the OGPE or any other agency with jurisdiction, as applicable, and the categorical exclusions provided for in this Regulation.
8. The implementation or development of actions approved as categorical exclusions will require the procurement of applicable permits for construction and operation stages from government agencies.
9. The proposed action will not individually or cumulatively have a significant effect on the human environment. Said action has not been fragmented or segmented for evaluation purposes, and it will be the proposed agency determination whether or not it meets the requirements to be considered and executed under a categorical exclusion.
10. Has complied with the requirement to publish a Public Notice in accordance with Rule 122 of the Evaluation and Processing of Environmental Documents for the JCA Regulations, in the event that the proposed action is related to the use or granting of federal funds that require an evaluation process similar to NEPA (NEPA-Like Process).

Notice

If after having complied with Act. No. 416 arose substantial variations in the proposed actions requiring environmental impact assessment, will require submission of the appropriate environmental document in accordance with the Environmental Public Policy Act.

SPECIAL CONDITIONS

Signature/ Seal

Issue date

01/04/2013



Determinación de Cumplimiento Ambiental vía Exclusión Categórica

Favor de completar los encasillados según aplique.

¿Proyecto Existente?		<input type="checkbox"/> Sí	Número de Caso:
		<input checked="" type="checkbox"/> No	
Descripción de la acción propuesta			
Tipo de solicitud	<input checked="" type="checkbox"/>	Exclusión categórica	
	<input type="checkbox"/>	Evaluación ambiental	
	<input type="checkbox"/>	Declaración de impacto ambiental	
Referencia a determinación de cumplimiento ambiental previa (Solo si aplica):		No aplica	
Número de exclusión categórica conforme a la Resolución vigente de la JCA*:		Exclusión número 119 (R11-17)	
Actividad:*			
<p>Memorial Explicativo</p> <p>La Marina de Guerra de Estados Unidos (en adelante NAVY por sus siglas en ingles), actualmente realiza trabajos remediativos en algunas áreas de la antigua Base Naval Roosevelt Roads en Ceiba por orden y acuerdo con la Agencia de Protección Ambiental. Los terrenos bajo remediación no serán traspasados totalmente al gobierno de Puerto Rico hasta que dichos trabajos remediativos culminen. Según acuerdos con la Agencia de Protección Ambiental, el NAVY requiere realizar los trabajos remediativos asociados a los terrenos donde ubica el antiguo vertedero de basura denominado como SWMU 3 en las inmediaciones de la Antigua Base. Dicho vertedero fue construido a mediados de los años 60 y recibió sus últimos desperdicios en Septiembre de 2006. La Figura 1 muestra la localización del proyecto. Estos terrenos consisten de un área de 85 acres.</p> <p>La ejecución de los trabajos requiere el corte de arboles y despojar del lugar la vegetación invasiva. La actividad propuesta es clasificada bajo la Exclusión Categórica 119 del listado de Exclusiones Categóricas aprobadas por la Junta de Calidad Ambiental. La actividad del corte de árboles fue discutida ampliamente con personal del Departamento de Recursos Naturales y Ambientales. Se concluye de dichas conversaciones con el DRNA que los terrenos objeto de consulta aún se encuentran bajo el manejo del NAVY.</p> <p>Para cumplir con las medidas remediativas señaladas por la EPA, la Armada realizó un inventario de árboles en el área SMWU 3 en enero de 2013. El inventario de árboles considera aproximadamente 25 porciento del área SWMU 3 a lo largo de los transectos e identificó habitats representativos y atípicos del lugar. El inventario identificó cuatro tipos de habitats en las inmediaciones del área SMWU 3, estos son; arboles maduros, pasto regenerado, áreas boscosas y zonas sin árboles. El área que comprende los árboles maduros consiste en aproximadamente 1.6 acres de terreno en tamaño y carece de especies no-nativas. El tamaño y edad de los árboles más altos en el área indica que estos no fueron perturbados durante la operación del vertedero SWMU, por lo que se determinó que esta área no se limpiará por entenderse que se encuentra intacta. El inventario de arboles identificó aproximadamente 1,768 individuos de 17 especies de plantas leñosas que incluyen individuos con un diámetro mayor de 4 pulgadas de diámetro a la altura del pecho que requieren ser removidas.</p> <p>La mayoría de los tallos son de especies no-nativas, mayormente invasoras o de rápido crecimiento como las especies leñosas que típicamente recolonizan las áreas despejadas en las regiones costeras. La vegetación se removerá a no más de 6 pulgadas por encima de la superficie de la tierra. El corte, limpieza del área y remoción se realizará de manera que no disturbe o exponga los suelos a erosión alguna o a sedimentación. De ser necesario, para eliminar el crecimiento excesivo de especies invasoras se realizará el corte a mano para evitar disturbios en el suelo. La vegetación invasora o cubierta vegetal se extraerá de la zona de trabajo y se dispondrá temporariamente en un lugar designado para su posterior reutilización. Las yerbas más blandas como pastos permanecerán en el lugar donde se corten para posterior reutilización.</p>			
Indique si las actividades a desarrollar cumplen con las siguiente condiciones			
En caso de que desarrolle actividades de uso o de construcciones livianas de nuevas estructuras, certifique, marcando la casilla correspondiente, que no estarán ubicadas o se desarrollarán en:			
<input checked="" type="checkbox"/>	Áreas susceptibles a inundaciones, derrumbes o marejadas		
<input checked="" type="checkbox"/>	Áreas donde la Junta de Calidad Ambiental haya determinado que existe un grado de contaminación que excede el permitido por los reglamentos vigentes		
<input checked="" type="checkbox"/>	Áreas ecológicamente sensitivas o protegidas, según establecido por el Departamento de Recursos Naturales y Ambientales (DRNA)		
<input checked="" type="checkbox"/>	Áreas donde existan problemas de infraestructura o de deficiencias en los sistemas de servicios de suministro de agua potable, disposición de las aguas sanitarias, suministro de energía eléctrica o capacidad vial para el manejo adecuado del tránsito de vehículos de motor		

Determinación de Cumplimiento Ambiental vía Exclusión Categórica

X	Áreas que constituyan yacimientos minerales
X	Áreas donde existen yacimientos arqueológicos o de valor cultural, según determinado por el Instituto de Cultura Puertorriqueña
X	Áreas de topografía escarpada, en cuencas hidrográficas donde se puedan afectar fuentes de abasto de agua potable
En caso de que desarrolle actividades de uso o de construcciones livianas de nuevas estructuras, verifique que las actividades a desarrollar cumplen con las siguientes condiciones:	
X	No deberán descargar contaminantes a cuerpos de agua
X	No generaran desperdicios peligrosos o emisiones al aire que excedan dos toneladas al año de contaminantes de aire criterio, o cinco toneladas de cualquier combinación de contaminantes criterios
X	No emitirán al aire contaminantes peligrosos o tóxicos u olores objetables
Verifique que las actividades a desarrollar cumplen con las siguientes condiciones:	
X	No serán financiadas mediante uso o el otorgamiento de fondos federales que requieran un proceso de evaluación parecido al de NEPA ("NEPA-Like Process")
X	La disposición o descarga de las aguas usadas se realizará mediante acometidas a un sistema sanitario existente; lo cual requerirá la obtención del endoso de la AAA
X	Existirá la infraestructura necesaria (agua potable y alcantarillado sanitario suministrado por la AAA, energía eléctrica, alcantarillado pluvial, vías de acceso) para servir a la operación del proyecto o actividad propuesta, (exceptuando los proyectos agrícolas y las residencias unifamiliares)
X	No afectaran áreas residenciales o de tranquilidad por contaminación sónica o vibraciones, según establecido por el Reglamento para el Control de la contaminación por Ruido
X	En el caso de instalaciones comerciales, industriales, de servicios, institucionales, y los desarrollos de terrenos para uso turístico y proyectos recreativos, no excederán de 5,000 pies cuadrados de construcción en área total de ocupación y área bruta de piso
X	La zonificación del área deberá estar acorde o compatible con el uso propuesto
X	Se dispone de los permisos aplicables de las agencias gubernamentales para las etapas de construcción y operación
X	La acción no ha sido fragmentada o segmentada para fines de la evaluación

Los campos con (*) son requeridos y no podrán dejarse en blanco.

Advertencia: en caso de que la acción no cumpla con alguna de las condiciones descritas, tendrá que preparar un documento ambiental cumpliendo con las disposiciones del Reglamento de evaluación y Trámite de Documentos Ambientales de la JCA.

X	Certifico que la actividad cumple con todas las condiciones aplicables según descritas en el Reglamento de evaluación y Trámite de Documentos Ambientales de la JCA y otras normas aplicables.
X	Certifico que he evaluado, revisado y aceptado la información relacionada a la exclusión categórica para la actividad anteriormente indicada y que toda la información es cierta, correcta y completa a mi mejor saber y entender.
X	Afirmo y reconozco las consecuencias de incluir y someter información incompleta, inconclusa o falsa en dicho documento.

Manifiesto que la información proporcionada en esta solicitud es veraz y doy mi consentimiento para que sea verificada. Entiendo que cualquier información fraudulenta es motivo para cancelar esta solicitud.	
Carmen Mangual, REM Firma del Solicitante	25/ Marzo/ 2013 Fecha (día/mes/año)

Determinación de Cumplimiento Ambiental vía Exclusión Categórica

Firma del Funcionario _____	Fecha (día/mes/año) _____
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Determinación de Cumplimiento Ambiental por Exclusión Categórica

SWMU 3, Landfill Cap Installation (Naval Activity)

Datos de Localización

De conformidad con las disposiciones contenidas en las leyes y los reglamentos vigentes, se expide la presente Certificación de Exclusión Categórica, Otros: old landfill-EPA-02-2007-7301, Privado, para las acción(es) antes descrita(s):

Dirección Física

Municipio: Ceiba

Unidad o Km: na

Sector: Antigua Base Naval

Apartamento:

Barrio: Guayacán

Calle o carretera: SWMU 3

Calificación

Distrito(s) de Calificación: Terrenos urbanizables

Distrito Especial:

Distrito Sobrepuesto:

Distrito en el Mapa de Inundabilidad: X

Accesos: Privado

Tipo de suelo: Múcara-Caguabo-Terreno Urbano

Casos de Referencia**Dueño(s)**

Department of Navy

Certificado por:**Número(s) de Catastro:**

232-000-001-04

Colindantes

Norte: Department of Navy

Distrito: Terrenos urbanizables

Sur: Department of Navy

Distrito: Terrenos urbanizables

Este: Department of Navy

Distrito: Terrenos urbanizables

Oeste: Department of Navy

Distrito: Terrenos urbanizables

Datos de determinación

Exclusión CategóricaNúmero de exclusión categórica aplicable de acuerdo a la R-11-17 de la JCA*:
119**Fecha de emisión**

Fecha de emisión: 23/10/2014

Condiciones Generales

De acuerdo con la solicitud de esta Determinación, se certificó cumplimiento con los siguientes requisitos, cuyo incumplimiento podrá repercutir en la revocación de esta Determinación:

1. Las actividades de uso o de construcciones livianas de nuevas estructuras no están ubicadas o desarrolladas en:
 - a. áreas especiales de riesgo de inundación, derrumbes o marejadas;
 - b. áreas en las que la JCA u otras agencias gubernamentales estatales o federales hayan determinado que existe un grado de contaminación que excede el permitido por los reglamentos vigentes;
 - c. áreas ecológicamente sensitivas o protegidas, según establecido por el DRNA, en las que existan especies únicas de fauna o flora o que estén en peligro de extinción o en las que puedan afectarse ecológicamente sistemas naturales o artificiales, ya sea en forma directa o indirecta;
 - d. áreas en las que existen problemas de infraestructura o de deficiencias en los sistemas de servicios de suministro de agua potable, disposición de las aguas sanitarias, suministro de energía eléctrica o capacidad vial para el manejo adecuado del tránsito de vehículos de motor;
 - e. áreas que constituyan yacimientos minerales, conocidos o potenciales;
 - f. áreas en las que existen yacimientos arqueológicos o de valor cultural, según determinado por el Instituto de Cultura Puertorriqueña;
 - g. áreas de topografía escarpada, en cuencas hidrográficas donde se puedan afectar fuentes de abasto de agua potable; y
 - h. cualquier otra acción que la JCA haya establecido mediante Resolución.



Determinación de Cumplimiento Ambiental por Exclusión Categórica

2. No descargará contaminantes a cuerpos de agua, ni generará desperdicios peligrosos o emisiones al aire que excedan dos (2) toneladas al año de contaminantes de aire criterio, o cinco (5) toneladas de cualquier combinación de contaminantes criterios, ni emitirá al aire contaminantes peligrosos o tóxicos u olores objetables.
3. La disposición o descarga de las aguas usadas se realizará mediante acometidas a un sistema sanitario existente, lo cual requerirá la obtención del endoso de la AAA previo a la solicitud de permisos de construcción.
4. Que existe la infraestructura necesaria (agua potable y alcantarillado sanitario suministrado por la AAA, energía eléctrica, alcantarillado pluvial, vías de acceso) para servir a la operación del proyecto o actividad propuesta, con excepción de los proyectos agrícolas que se ubican por regla general en áreas rurales, así como las residencias unifamiliares asociadas en las que las instalaciones de esta naturaleza son limitadas.
5. La operación de la actividad no afectará áreas residenciales o zonas de tranquilidad por contaminación sónica, según establecido por el Reglamento para el Control de la Contaminación por Ruido.
6. Que el desarrollo de la instalación comercial, industrial, de servicio, institucional y de desarrollo de terrenos para uso turístico y proyectos recreativos no excede de cinco mil (5,000) pies cuadrados de construcción en área total de ocupación y área bruta de piso y que cumple con las condiciones de ubicación y operación establecidas por la OGPe u otra agencia con jurisdicción, según sean aplicables.
7. El uso de edificios o estructuras existentes para facilidades comerciales, almacenes y usos industriales o de servicios no excederán de cien mil (100,000) pies cuadrados en área total de ocupación y área bruta de piso. Dicha operación deberá cumplir con las condiciones de ubicación y operación establecidas por la OGPe u otra agencia con jurisdicción, según sean aplicables, y las establecidas para las exclusiones categóricas en el Reglamento de Evaluación y Trámite de Documentos Ambientales de la Junta de Calidad Ambiental (RETDA).
8. Para la ejecución o desarrollo de las acciones aprobadas como exclusiones categóricas, se requerirá la obtención de los permisos aplicables de las agencias gubernamentales para las etapas de construcción y operación.
9. La acción no ha sido fragmentada o segmentada para fines de la evaluación y será determinación de la agencia proponente si la misma satisface o no los requisitos para ser considerada y ejecutada bajo una exclusión categórica.
10. Que ha cumplido con el requisito de publicación de un Aviso Público de conformidad con la Regla 122 del RETDA, en el caso de que la acción propuesta esté relacionada al uso u otorgamiento de fondos federales que requieran un proceso de evaluación parecido al de NEPA (NEPA-Like Process).

Aviso

Si luego de haberse aquí dado cumplimiento con el Artículo 4(B) de la Ley Núm. 416 surgieran variaciones sustanciales en la acción propuesta que requieran la evaluación a los impactos ambientales, habrá que presentar el correspondiente documento ambiental, de conformidad con la Ley sobre Política Pública Ambiental.

Condiciones Especiales

Firma / Sellos

Fecha de expedición

23/10/2014





Determination of Environmental Compliance via Categorical Exclusion

SWMU 3, Landfill Cap Installation (Naval Activity)

Location Data

In compliance with the dispositions of the current laws and regulations, the following Determination of Environmental Compliance via Categorical Exclusion is issued, Others: old landfill-EPA-02-2007-7301, Private, for the action(s) previously described:

Physical Address

Municipality: Ceiba Ud. o Km: na
Sector: Antigua Base Naval Apt./Suite No:
Ward: Guayacán
Road or Street: SWMU 3

Reference Cases

Owner(s):
Department of Navy

Certified by:

Cadastre Number(s):

232-000-001-04

Original Qualification

Qualification District: Urban terrain
Special District:
Overimposed district:
Flood Zone Code: X
Access: Private
Type of soil: Múcara-Caguabo-Terreno Urbano

Adjacent Neighbors

North: Department of Navy
District: Urban terrain
South: Department of Navy
District: Urban terrain
East: Department of Navy
District: Urban terrain
West: Department of Navy
District: Urban terrain

Determination Data

Categorical Exclusion

Number of applicable Categorical Exclusion as per the Environmental Quality Board's (EQB or JCA, in Spanish) R-11-17*: 119

Issue Date

Issue Date: 23/10/2014

General Conditions

According to the application of this Determination, compliance with the following requirements was agreed upon. Noncompliance of these requirements will result in the revocation of this Determination:

1. The proposed action will not to be located or developed in:
 - a. Special areas susceptible to or in risk of flooding, subsidence or tidal surges;
 - b. Areas where pollution levels exceed those allowed by current laws and regulations, as determined by the Environmental Quality Board (EQB or JCA), State agencies or Federal agencies;
 - c. Areas designated by the Department of Natural and Environmental Resources (DRNA) as ecologically sensitive or protected, that are inhabited by endangered or unique species of flora or fauna, or where, directly or indirectly by way of the proposed action, there might be significant ecological alterations of natural or artificial systems;
 - d. Areas with deficiencies in infrastructure or supply and service systems for drinking water, wastewater, electricity or vehicular transportation;
 - e. Areas of known or potential mineral deposits;
 - f. Areas of significant historic, architectural, prehistoric, archeological, or cultural value, as determined by the Institute of Puerto Rican Culture (ICP);
 - g. Topographically steep areas in hydrographic basins that could affect drinking water supplies;
 - h. Any other situation that the EQB (JCA) has established by Resolution.



Determination of Environmental Compliance via Categorical Exclusion

2. The proposed action does not involve new or relocated discharges of pollutants into bodies of water, the generation of hazardous solid wastes, the emission of more than two (2) tons per year of air pollutants or more than five (5) tons per year of any combination of air pollutants, nor the release of hazardous or toxic substances into the air.
3. The disposition or discharge of used waters will take place through existent wastewater systems, with proper recommendation from the Puerto Rico Aqueduct and Sewer Authority (PRASA or AAA, in Spanish) prior to applying for a construction permit.
4. The infrastructure (such as drinking water supply systems, sewer systems, electricity supply systems, stormwater systems, and transportation systems) required for the development, construction and/or operation of the proposed action exists, or in its place the proposed action consists of an agricultural project or an one-family residence in a rural area where there is limited access to infrastructure.
5. The operation of the proposed action will not have significant adverse effect upon residential or tranquility zones as a consequence of noise pollution, as established by the Regulation for Noise Pollution Control (Reglamento para el Control de la Contaminación por Ruido).
6. The development of commercial, industrial, services and/or institutional installations, as well as the land development for touristic and recreational uses, does not include more than five thousand (5,000) square feet of construction for total occupational area and gross floor area, and at the same time meets site and operational requirements established by the Permit Management Office (OGPe) and any other agency with applicable jurisdiction.
7. The use of existing buildings and structures for commercial facilities, warehouses and industrial use or services will not exceed one hundred thousand (100,000) square feet in total area of employment and gross floor area. This operation must meet the location and operation conditions set by the OGPE or any other agency with jurisdiction, as applicable, and the categorical exclusions provided for in this Regulation.
8. The implementation or development of actions approved as categorical exclusions will require the procurement of applicable permits for construction and operation stages from government agencies.
9. The proposed action will not individually or cumulatively have a significant effect on the human environment. Said action has not been fragmented or segmented for evaluation purposes, and it will be the proposed agency determination whether or not it meets the requirements to be considered and executed under a categorical exclusion.
10. Has complied with the requirement to publish a Public Notice in accordance with Rule 122 of the Evaluation and Processing of Environmental Documents for the JCA Regulations, in the event that the proposed action is related to the use or granting of federal funds that require an evaluation process similar to NEPA (NEPA-Like Process).

Notice

If after having complied with Act. No. 416 arose substantial variations in the proposed actions requiring environmental impact assessment, will require submission of the appropriate environmental document in accordance with the Environmental Public Policy Act.

SPECIAL CONDITIONS

Signature/ Seal

Issue date

23/10/2014



Baker

Baker Environmental, Inc.
A Unit of Michael Baker Corporation

Airside Business Park
100 Airside Drive
Moon Township, PA 15108

Office: 412-269-6300
Fax: 412-375-3995

April 11, 2006

U.S. Environmental Protection Agency - Region II
290 Broadway – 22nd Floor
New York, New York 10007-1866

Attn: Mr. Adolph Everett, P.E.
Chief, RCRA Programs Branch

Re: Contract N62470-02-D-3052
Navy CLEAN, District III
Contract Task Order (CTO) 107
U.S. Naval Activity Puerto Rico (NAPR)
Tow Way Fuel Farm (SWMU 7/8) Statement of Basis and
SWMU 3 Solid Waste Landfill Statements of Basis
RCRA/HSWA Permit No. PR2170027203

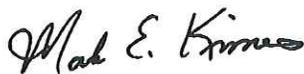
Dear Mr. Everett:

Baker Environmental, Inc. (Baker), on behalf of the Navy, is pleased to provide you with two copies of the Tow Way Fuel Farm (SWMU 7/8) Statement of Basis prepared by Baker and the SWMU 3 Solid Waste Landfill Statement of Basis prepared by ENSAFE. Copies of the Statement of Basis have also been forwarded to the three Public Repositories located at the Ceiba Public Library, EPA Caribbean Repository, and PR EQB Repository.

If you have questions regarding this submittal, please contact Mr. Mark Davidson at (843) 820-5526 or Mr. Kevin Cloe, P.E. at (757) 322-4736. Additional distribution has been made as indicated below.

Sincerely,

BAKER ENVIRONMENTAL, INC.



Mark E. Kimes, P.E.
Activity Manager

MEK/lp
Attachments

ChallengeUs.

Baker

Mr. Adolph Everett, P.E.
U.S. Environmental Protection Agency, Region II
April 11, 2006
Page 2

cc: Mr. Kevin R. Cloe, P.E. NAVFAC Atlantic - Code OPCEV5 (1 copy)
Ms. Jean Mann, NAVFAC Atlantic - Code AQ119 (letter only)
Ms. Lee Anne Rapp, NAVFAC Atlantic - Code EV312 (letter only)
Mr. David Criswell, Navy BRAC PMO SE (1 copy)
Mr. Mark Davidson, Navy BRAC PMO SE (1 copy)
Mr. Pedro Ruiz, NAPR (2 copies, 1 for NAPR and 1 for Ceiba Repository)
Mr. Tim Gordon, US EPA Region II (2 copies)
Ms. Kathy Rogovin, BAH (1 copy)
Mr. Carl Soderberg, US EPA Caribbean Office (2 copies, 1 for EPA and 1 for EPA Repository)
Mr. Manny Vargas, PR EQB (1 copy)
Ms. Yarissa Martinez, PR EQB (1 copy for EQB Repository)
Ms. Janna Staszak, CH2M Hill Virginia Beach (1 copy)

STATEMENT OF BASIS/PROPOSED FINAL REMEDY DECISION	REGION 2 ID# PR2170027203
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**NAVAL ACTIVITY PUERTO RICO (former Naval Station Roosevelt Roads)
Ceiba, Puerto Rico
(March 21, 2006)**

Facility/unit Type: SWMU #3/Solid Waste Landfill
Contaminants: benzo(a)pyrene, arsenic, chromium, thallium
Media: Groundwater
Proposed Final Remedy: Landfill Cap (final cover system) with long-term groundwater monitoring

FACILITY DESCRIPTION

The existing landfill at U.S. Naval Activity Puerto Rico (NAPR) has been in operation since the mid-1960s on approximately 85 acres of land in the southeastern area of the base, positioned on a peninsula bounded by Ensenada Honda to the west and Puerca Bay to the south and east (**Figure 1**). It has been identified as solid waste management unit (SWMU) #3 under the 1994 Resource Conservation and Recovery Act (RCRA) permit issued to the former Naval Station Roosevelt Roads by the U. S. Environmental Protection Agency (USEPA).

The landfill operation was initiated using trench fills (below grade) until it reached the original intended capacity in 1990. The operation of the site was performed by the U.S. Navy military and civilian personnel until approximately 1985. From 1985 to present, operation has been provided by private contractors.

The original design capacity of the active cell is 251,344 cubic yards (cy) of waste, with an expected life of 10 years. The design capacity for both solid waste and daily cover material is estimated at 314,180 cy. The original vertical expansion plans projected that the landfill would reach its design capacity in 2006, at which time the daily disposal rate was estimated to be 42.1 tons. Due to the implementation of a recycling program in 2002, and a reduction in personnel assigned to NAPR, the daily disposal rate was decreased from less than 40 tons to less than 20 tons in 2003.

It is estimated that 588,453 megagrams¹ (approximately 650,000 tons or 810,000 cy) of wastes have been disposed of at the NAPR Landfill from 1961 to 2004, with approximately 112,840 cy disposed of in the 10-acre expansion, to date (86,176 cy [including cover material] from June 2000-September 2003 and 14,551 cy from September 2003 to September 2004)².

The NAPR Landfill contains no monofills³ but the original design contained a separate asbestos waste disposal area in the northeast corner of the vertical expansion (**Figure 2 - Area 3**). The Operating Plan for the vertical expansion (prepared for the Navy in March 1997 by Burns & McDonnell Waste Consultants, Inc.) states that asbestos wastes arriving at the facility will be weighed by the Control Building personnel and be directed to the asbestos waste disposal area of the landfill. However, the Navy decided not to dispose of asbestos in the new cells of the landfill, and since 1997 asbestos has not been disposed of at the landfill.

An unknown number of pre-1997 asbestos disposal pits are scattered throughout older sections of the landfill, specifically Area 1. The exact number and locations of the asbestos disposal pits are not known. During disposal, soil was reportedly excavated to a depth of approximately 3 feet prior to placement of the asbestos containing material into the excavation, which was then backfilled with soil. The backfilled soil was mounded on top of the asbestos in the pits to provide a method of locating the disposal areas. The asbestos disposal areas will be capped with 18 inches of soil as part of the final remedy for the landfill.

EXPOSURE PATHWAYS

Potential human receptors include on-site workers performing either disposal or on-site construction of the corrective measures (i.e. landfill capping), who may be exposed by inhaling airborne contaminants associated with landfill contaminants. Direct exposure to landfill waste is currently minimized by existing intermediate soil cover, and will be further prevented in the future by the proposed capping and site access and land usage restrictions. Potential exposures due to continued leaching of contaminants from the buried wastes into the groundwater will be controlled through long-term groundwater monitoring.

¹ Emission Calculations for Solid Waste Landfill, NAPR, Puerto Rico, Landfill WSTS-001, Command PWD, Title V ID:F-16

² E-mailed information from NAPR Public Works Department personnel 8/10/2004.

³ RCRA contains no general statutory or regulatory definition of a "monofill." Its usage here is intended to convey that the NAPR landfill does not contain designated areas where only one type of waste was disposed, exception noted.

CONTAMINATION DETECTED AND CLEANUP GOALS						
Media	Estimated Volume	Contaminant	Maximum Concentration ¹	Action Level ² (µg/L)	Cleanup Goal ² (µg/L)	Point of Compliance
groundwater		Benzo(a)pyrene	0.5	0.2	0.2	R7GW01R
		Arsenic	0.0169	0.01	0.01	R7GW02
		Chromium	0.104	0.1	0.1	R7GW09
		Total thallium	0.034	0.002	0.002	R7GW04R
		Dissolved thallium	0.027	0.002	0.002	R7GW04R

1 Concentration represents sampling events from 1998, 2000, 2002, and 2005.

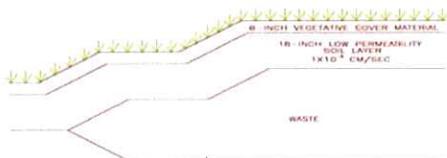
2 Action levels and cleanup goals are based on Federal drinking water maximum contaminant levels (MCLs).

PROPOSED REMEDY

A low-permeability final cover system is the selected remedy for the NAPR Landfill. Closure standards require owners and operators to install a final landfill cover system that is designed to minimize soil erosion and infiltration of liquids through the cover. Both the USEPA Solid Waste and Hazardous Waste Regulations (Subpart F: Closure and Post-Closure Care Criteria) and the EQB Non-Hazardous Waste Regulations on closure and post-closure (Part IV-D Closure Criteria), require that all solid waste landfill facilities must install a final cover system designed and constructed to:

1. Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present, or a permeability no greater than 1×10^{-5} cm/sec, whichever is less.
2. Minimize infiltration of precipitation through the closed landfill by the use of an infiltration layer that contains a minimum 18 inches of cover material ($\leq 1 \times 10^{-5}$ cm/sec).
3. Minimize erosion of the final cover by the use of an erosion layer that contains a minimum 6 inches of cover material that is capable of sustaining native plant growth.

Because the 85-acre landfill has been constructed and operated using varying liner systems (ranging from no liner to 24 inches of compacted clay) and/or cover systems (ranging from no cover to 12 inches of uncompacted material), application of the final cover system can vary for each area. However, each area will ultimately meet the minimum requirements stated above. The final cover system is illustrated below:



Area 1 (inactive portion of the landfill) has not been used since 1990. Prior to that time, it was used to dispose of various types of waste generated by NAPR activities. The original foot-print and design of this area are not precisely known; however, the proposed cap is expected to include all areas of the landfill (both the "active" and "inactive" portions).

Areas 2, 3, and 4 (active portions of the landfill) comprise portions of the landfill that have some form of intermediate cover and/or an underlying low-permeability liner.

The cap is expected to minimize further migration of landfill contamination to the groundwater. However, long-term groundwater monitoring will be required under an Administrative Order on Consent between the Navy and USEPA, and will encompass all areas of the landfill (both the "active" and "inactive" portions).

The total estimated capital and operation and maintenance (O&M) costs associated with closure and long-term groundwater monitoring of the landfill are estimated to be \$13,152,000 (\$6,508,000 for the active portion and \$6,644,000 for the inactive portion of the landfill). If exceedances of the above Action Levels are recorded, further actions may be required to meet the groundwater Clean-up Goals.

The average annual post-closure costs for the active portion of the landfill is estimated at \$74,000, and includes annual groundwater monitoring. The average annual post-closure costs for the inactive portion of the landfill is estimated at \$45,500.

PUBLIC PARTICIPATION

Public review and comment on the proposed remedy for SWMU #3 will be implemented as part of the public comment period for the proposed Administrative Order on Consent between the Navy and USEPA. A public notice of that public comment period will be published in both Spanish and English in select Puerto Rico newspapers.

NEXT STEPS

Following completion of public review and comment on the proposed remedy, the USEPA will advise of any required modifications based on the public comments, or its acceptability. Following USEPA's approval of the Proposed Remedy, closure activities, including installation of the final cap, are expected to be completed within 1 year of start-date. Post-closure activities, including groundwater monitoring, are planned for 30 years after closure.

KEY DOCUMENTS:

1. Work Plan Existing Landfill Closure Naval Activity Puerto Rico, dated October 2004.
2. Landfill Closure and Post-Closure Plan, dated August 2005.

FURTHER INFORMATION:

The Key documents may be reviewed at:

U.S. Environmental Protection Agency, Region 2
RCRA File Room
290 Broadway, 15th floor
New York, NY 1007-1866
Attn: Mr. David Abrines, phone 212 - 637-3043; or

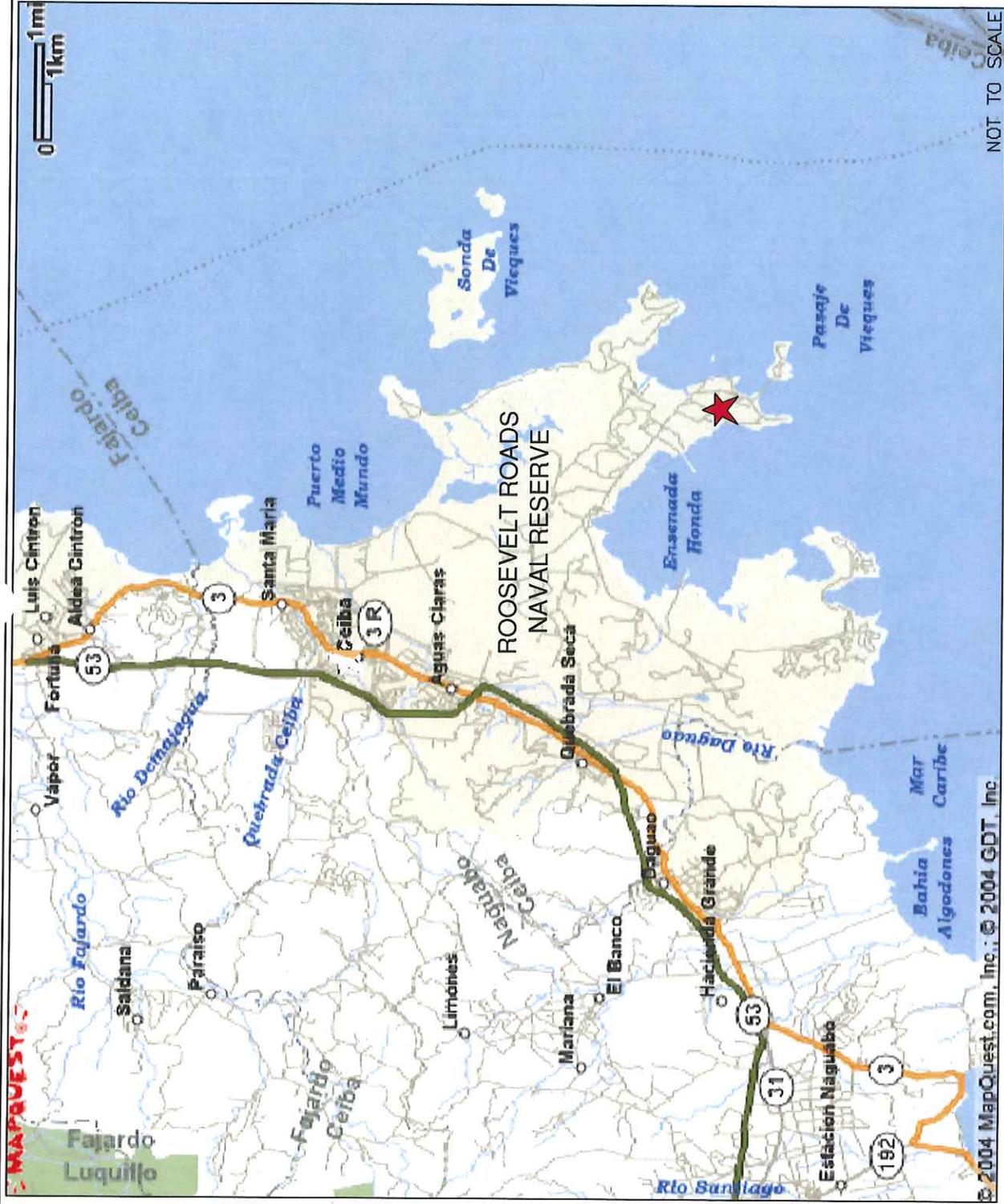
U. S. Environmental Protection Agency
Caribbean Environmental Protection Division
Centro Europa Building, Suite 417
1492 Ponce de Leon Ave
Santurce, PR 00907-4127
Attn: Mr. Luis Negron, phone 787- 977-5855

and

Puerto Rico Environmental Quality Board
Oficina del Presidente – Piso 5
Ave. Ponce de Leon #1308
Carr Estatal 8838
Sector El Cinco
Rio Piedras, PR 00926
Attn: Ms. Yarissa Martinez, phone 787- 365-8573

Or at the following internet web page address:

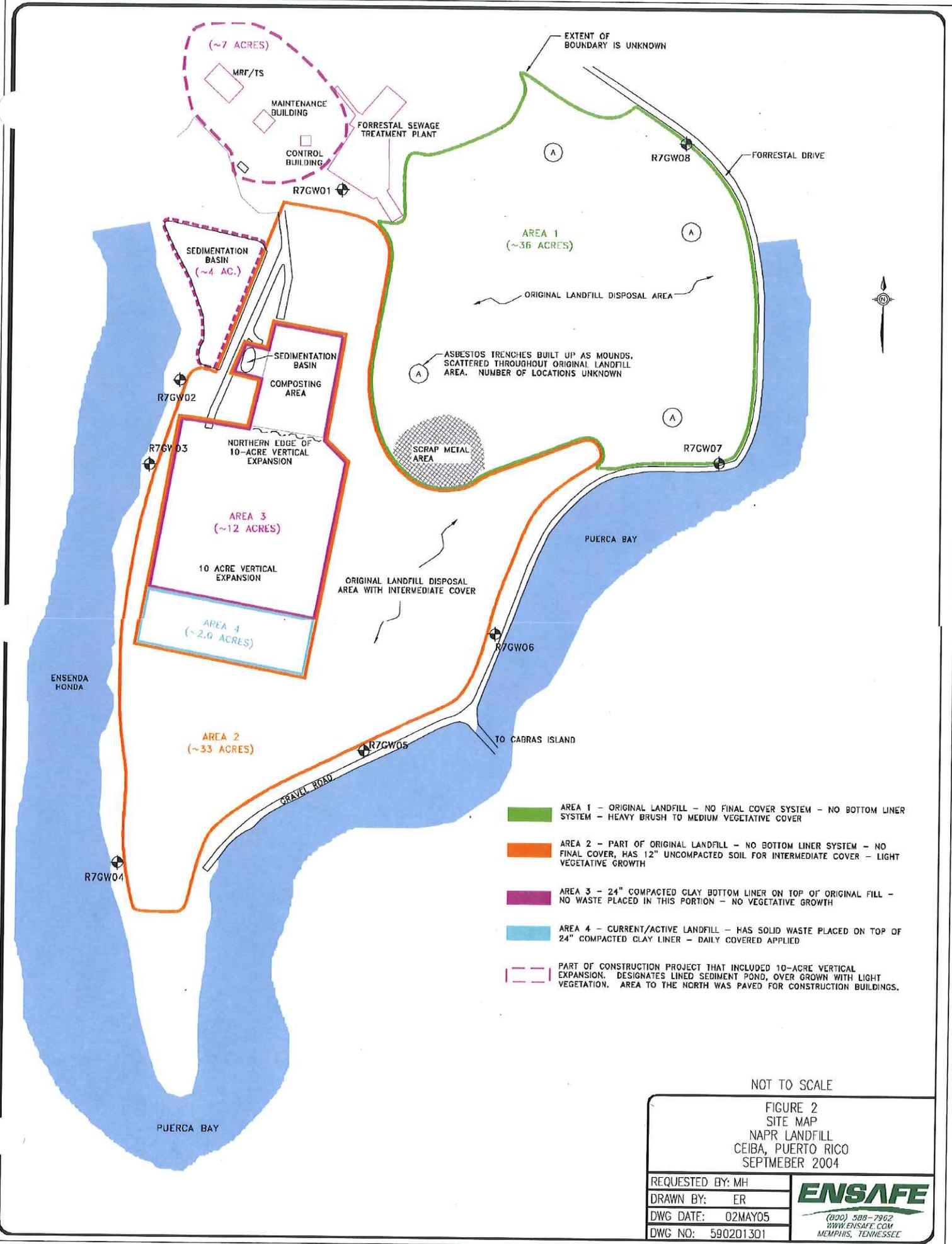
<http://nsrr-ir.org/>



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 VIRGINIA SLOVAKIA

FIGURE 1
 VICINITY MAP

DWG DATE: 09SEPT04 NAME: 5902013R003



(~7 ACRES)

MRF/TS

MAINTENANCE BUILDING

CONTROL BUILDING

FORRESTAL SEWAGE TREATMENT PLANT

R7GW01

EXTENT OF BOUNDARY IS UNKNOWN

R7GW08

FORRESTAL DRIVE

AREA 1 (~36 ACRES)

ORIGINAL LANDFILL DISPOSAL AREA

ASBESTOS TRENCHES BUILT UP AS MOUNDS. SCATTERED THROUGHOUT ORIGINAL LANDFILL AREA. NUMBER OF LOCATIONS UNKNOWN

A

A

R7GW07

SEDIMENTATION BASIN (~4 AC.)

SEDIMENTATION BASIN

COMPOSTING AREA

R7GW02

R7GW03

NORTHERN EDGE OF 10-ACRE VERTICAL EXPANSION

AREA 3 (~12 ACRES)

10 ACRE VERTICAL EXPANSION

ORIGINAL LANDFILL DISPOSAL AREA WITH INTERMEDIATE COVER

SCRAP METAL AREA

PUERCA BAY

AREA 4 (~2.0 ACRES)

R7GW06

ENSENDA HONDA

TO CABRAS ISLAND

AREA 2 (~33 ACRES)

R7GW05

GRAVEL ROAD

R7GW04

PUERCA BAY

- AREA 1 - ORIGINAL LANDFILL - NO FINAL COVER SYSTEM - NO BOTTOM LINER SYSTEM - HEAVY BRUSH TO MEDIUM VEGETATIVE COVER
- AREA 2 - PART OF ORIGINAL LANDFILL - NO BOTTOM LINER SYSTEM - NO FINAL COVER, HAS 12" UNCOMPACTED SOIL FOR INTERMEDIATE COVER - LIGHT VEGETATIVE GROWTH
- AREA 3 - 24" COMPACTED CLAY BOTTOM LINER ON TOP OF ORIGINAL FILL - NO WASTE PLACED IN THIS PORTION - NO VEGETATIVE GROWTH
- AREA 4 - CURRENT/ACTIVE LANDFILL - HAS SOLID WASTE PLACED ON TOP OF 24" COMPACTED CLAY LINER - DAILY COVERED APPLIED
- PART OF CONSTRUCTION PROJECT THAT INCLUDED 10-ACRE VERTICAL EXPANSION. DESIGNATES LINED SEDIMENT POND, OVER GROWN WITH LIGHT VEGETATION. AREA TO THE NORTH WAS PAVED FOR CONSTRUCTION BUILDINGS.

NOT TO SCALE

<p>FIGURE 2 SITE MAP NAPR LANDFILL CEIBA, PUERTO RICO SEPTEMBER 2004</p>	
<p>REQUESTED BY: MH</p> <p>DRAWN BY: ER</p> <p>DWG DATE: 02MAY05</p> <p>DWG NO: 590201301</p>	<p>ENSAFE</p> <p>(800) 588-7962 WWW.ENSAFE.COM MEMPHIS, TENNESSEE</p>