

**APPENDIX F**  
**Archaeological**  
**Monitoring Plan**

## **Archaeological Monitoring: Scope of Work**

**February 5, 2015**

### **PDMC-PJ-02-VI-2014-002: USVI St. Croix: Coastal Interceptor Relocation**

Virgin Islands Waste Management Authority (VIWMA); St. Croix Coastal Interceptor Relocation at La Grande Princess. -- VISHPO Project No.: STX-05-14

Coordinates: west end: MH#0432 (17.756724, -64.723180)

east end: MH#0439 (17.7534N, 64.7193W)

proposed new lift station will be placed at coordinates 17.756330, -64.724132

## **INTRODUCTION**

The Department of Homeland Security-Federal Emergency Management Agency (DHS-FEMA) is proposing to provide Pre-Disaster Mitigation (PDM) funds from the Hazard Mitigation Assistance program to the Virgin Islands Waste Management Authority (VIWMA), Sub grantee, for the Undertaking as described below. PDM funds are used for hazard mitigation planning and projects on an annual basis. The PDM program was set in place to reduce overall risk to people and structures, while at the same time, reducing reliance on federal funding if an actual disaster were to occur. The Virgin Islands Waste Management Authority (VIWMA) initiated Section 106 consultation in March 2014. FEMA initiated consultation on November 4, 2014 and subsequently presented a revised determination on January 26, 2015. Virgin Island's State Historic Preservation Office (VISHPO) concurred with the archaeological monitoring proposed by FEMA to mitigate the potential to affect historic properties in the area of potential effects of the coastal interceptor relocation.

The scope of work for the St. Croix Coastal Interceptor Relocation Project consists of easement and land acquisition (by VIWMA); clean and inspect existing sewer line with close circuit camera television; clean and abandon in place 2200 feet of existing sewer line; clean and collapse six (6) existing manholes; install 200 feet of new gravity line from MH-31 to a new lift station with required mechanical, structural, instrument, and electrical systems; install 2300 feet of new force main piping with air release valves; install new transition manhole with 600 feet of new gravity line; rehabilitate two (2) manholes; and install two (2) lateral connections to reconnect current users. Inspection and acceptance of work will be performed by the VIWMA Division of Engineering and VIWMA Division of Operations during and upon completion of the project.

The Area of Potential Effects (APE) will be within the boundaries of the ground disturbance for the installation of the sewer line, manholes and lift stations and any staging area that may be needed for the excavations taking place. The project area of potential effects (APE) is divided into three sections:

1. Section 1 for the relocation of the coastal interceptor is located inside undeveloped land. The beginning of the gravity line reroute starts at MH#0431 (17.7572N, 64.7237W). The proposed lift station 0.04 acre property to be acquired is at 17.7569N, 64.7244W. The proposed lift station property and structure is located near the south east boundary of the existing Nature Conservatory at Plot No. 52 La Grande Princess. The force main runs southeast through Plots 52C, 52D, 53A; it continues southeast along the boundary between Plots 222 and 223. The location of the new lift station; the new sewer line from MH#431 to the new lift station; and the western

segment of the new sewer line between STA 0+00 and STA 10+51, all are located inside undeveloped land and have the potential to present historic properties.

VISHPO has requested that all excavation work for the new sewer line from MH#431 to STA 10+51 at Route 752 will have to be monitored by a qualified Archaeologist.

2. Section 2 for the relocation of the coastal interceptor is located inside developed area. The force main continues southeast at edge of Road Plot No 236; and ends at the proposed transition manhole just northwest of the Sugar Beach Condominium Driveway (17.7524N, 64.7206W). The gravity from the proposed transition manhole runs northeast along the south boundary of the Sugar Beach Condominium Property towards the existing manhole MH#0439 (17.7534N, 64.7193W) of the Coastal Interceptor to complete the reroute. VISHPO has requested that all excavation work for the new sewer line from STA 10+51 to MH#0439 will have to be monitored by a qualified Archaeologist.
3. Section 3 for the demolition of the existing submerged pipeline to be abandoned between MH#0431 to MH#0439.

Sections 1 and 2 for the relocation of the coastal interceptor, was deemed archaeologically sensitive by United States Virgin Islands State Historic Preservation Office (USVISHPO) (VISHPO Project No.: STX-05-14, Letter dated March 28, 2014). Excavation activities within these areas will be directly supervised by an archaeologist meeting the Secretary of the Interior's (SOI) Professional Qualifications Standards ([http://www.nps.gov/history/local-law/arch\\_stnds\\_9.htm](http://www.nps.gov/history/local-law/arch_stnds_9.htm)).

### **PROJECT DESCRIPTION**

The goal of archaeological monitoring will be to identify evidence of historic and/or prehistoric human/cultural activities that may inadvertently be displaced by excavation activities. The archaeologist will be present on site at all times during excavations. Once the excavation schedule has been established and agreed upon with the archaeologist, FEMA will be notified.

The archaeologist's work is to conform to the guidelines established for archaeological investigations in the United States Virgin Islands. Analysis of any cultural material recovered and report preparations are also to be under the supervision of a SOI-qualified archaeologist. The monitoring and all excavations shall follow standard archaeological practice and the level of description and documentation in the report submitted to FEMA for review shall be consistent with The Secretary of the Interior's Standards and Guidelines for Archaeological Documentation ([http://www.nps.gov/history/local-law/arch\\_stnds\\_7.htm](http://www.nps.gov/history/local-law/arch_stnds_7.htm)) and National Park Service publication, The Archaeological Survey: Methods and Uses (1978).

### **CONTRACTOR SERVICES AND REQUIRED INVESTIGATIONS**

#### **A. General Services:**

The archaeology contractor will provide all labor, materials, equipment, transportation, supervision, management, etc. to support the archaeological monitoring effort associated with the project.

**B. Contractor Support:**

The excavation contractor shall support the governmental agencies' archaeological monitoring requirements by providing access to the site and communications regarding schedules and scopes of work.

A protocol for excavation work stoppages will be developed to enable archaeologist time for recordation and for any archaeological data recovery that may be needed and will be addressed within a written monitoring plan. A written protocol or monitoring plan should be prepared and agreed to by the consulting archaeologist, the review agency archaeologist, the Applicant, the undertaking agency representative and the excavation contractor. This protocol will include an agreement that the excavation contractor shall allow for the immediate stoppage of any excavations if the archaeological monitor notices anything of potential significance and needs to investigate the area. Once the written monitoring plan is prepared and agreed upon by all parties, a draft will be submitted to FEMA who will submit the monitoring plan to SHPO for approval.

In addition, the excavation contractor will allow for the excavation trenches to be made available for archaeologist to inspect the area of excavation on a regular agreed upon time basis that is appropriate to the nature and size of the site (e.g. the archaeologist could inspect the construction trench for 1 hour per every 20 linear feet of trench).

The excavation contractor shall also ensure the security of the site at all times and will otherwise comply with all health and safety requirements (see C. Health and Safety Plan – HASP below). The archaeologist shall provide a written progress report if work continues longer than two weeks until as long as is needed to both the Applicant and to FEMA's Public Assistance Program, which will be communicated to Environmental and Historic Preservation Cadre of FEMA Region II as they are received.

The agreed upon monitoring plan is only applicable for the proposed excavations, and cannot be applied to any other projects taken on within the APE or funded by the Applicant, FEMA or any other party.

**C. Health and Safety Plan (HASP):**

Prepare Health and Safety Plan (HASP)-The Health and Safety Plan shall serve as a safety plan and research strategy for all work.

- a. The HASP and all work will comply with DHS Directive 066-01 Safety & Health Programs. Under this Directive, reside the DHS Safety & Health Manual and all other applicable regulations and guidelines. The current manual is located at:  
[http://dhsconnect.dhs.gov/policies/Instruction%20Supplements/DHS%20Safety%20Manual%202010%2006-23%20\(2\).pdf](http://dhsconnect.dhs.gov/policies/Instruction%20Supplements/DHS%20Safety%20Manual%202010%2006-23%20(2).pdf)
- b. FEMA acceptance of the Health and Safety Plan must be obtained before any fieldwork is undertaken.

D. Field Monitoring:

Monitoring discoveries shall be documented by note taking and through daily diaries and stratigraphic level/layer forms (if applicable); annotated photographic documentation; scaled plan view maps and profile drawings (soil types in layers shall be described and their colors noted using Munsell color chips and representative photographs shall be taken) and sample profiles shall be drawn in the event that no significant deposits are found to document the nature of the deposits. All photographs are to be captioned and will contain directional information and a scale (when appropriate).

FEMA will be responsible to coordinate a right-of-entry with USVIWMA, owner of the property, prior to access of the site. Ingress and egress access to the property will be coordinated by FEMA. No trespassing outside of project shall take place.

E. Laboratory Analysis:

If any artifacts are collected as a result of monitoring they shall be catalogued, labeled, and described in the report. An inventory table of artifacts shall be included in an appendix of the report. Faunal materials shall be analyzed to the nearest taxonomic level to species as possible. Charcoal samples suitable for dating shall be collected, properly bagged in aluminum foil and provided with provenances and a description of the context.

F. Action Taken by Contractor Upon Any Significant Finds:

In the event that potentially significant archaeological deposits or features are discovered the monitor shall stop work in the immediate area of the discovery and contact FEMA for consultation. In the case where a significant feature or deposit is identified during monitoring the treatment option(s) to be implemented will depend on consultation and agreement between Applicant and USVISHPO. The archaeologist performing the monitoring shall not act upon any treatment option until FEMA has instructed them to proceed. Any additional work that might be required will address a research question or questions related to local USVI history or prehistory.

G. Actions Taken by Contractor in the Event of Discovery of Human Remains:

In the event a human burial is encountered all work shall stop and the archaeological monitor shall consult with USVISHPO and the county coroner/medical examiner, local law enforcement, and will notify FEMA of their findings. The coroner and local law enforcement will make the official ruling on the nature of the remains, being either forensic or archaeological. A decision concerning avoidance or hand excavation of the burial and final disposition of the remains shall be made by consulting parties in coordination with the USVISHPO.

H. Data Analysis and Final Storage of Any Artifacts:

The archaeologist shall temporarily store all artifacts, faunal material, human remains and soil samples in order to perform analysis. At the conclusion of the project and upon

submission of the archaeological final report and approval by FEMA, all materials shall be returned to a repository as directed by the USVISHPO in consultation with the Applicant.

I. Draft and Final Reports:

The archaeologist shall provide FEMA with a draft report describing the work conducted within 30 days after the completion of the project field work for comments and review. The final report will be submitted no longer than 15 days after the draft report is reviewed and commented on by FEMA. The contractor shall ensure that the report is written following the USVISHPO report guidelines.

The report will make recommendations concerning whether a significant archaeological site is present, will have evaluated the site relative to the impacts of the project excavations on the site by applying 36 CFR 800 effect criteria and will make effect determination recommendations based on that evaluation. If applicable, the archaeologist shall ensure that the archaeological site registration form is updated. The final report will be submitted to FEMA and FEMA will submit final report to USVISHPO office for consultation review.

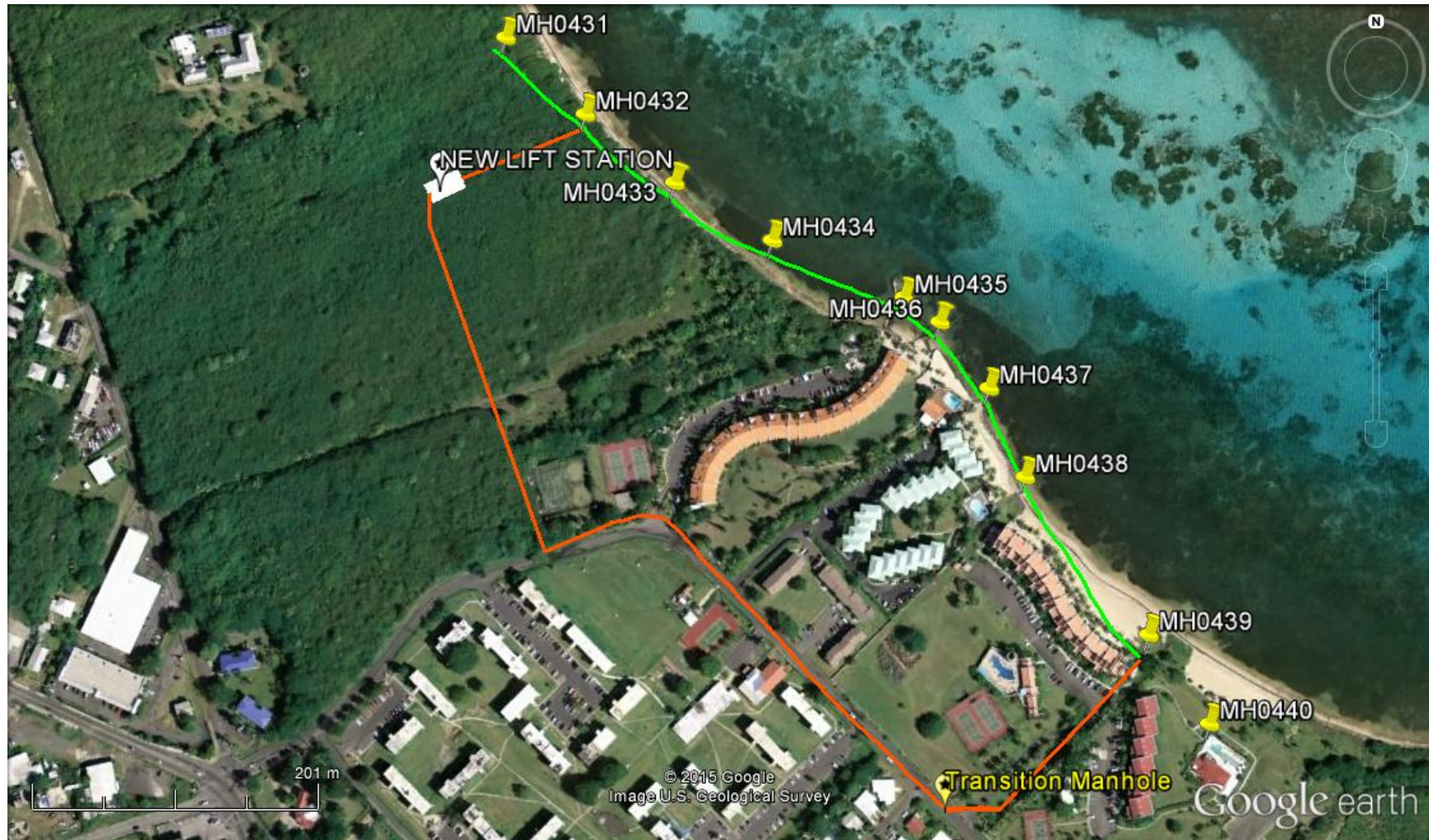
J. Coordination with FEMA:

Applicant and archaeologist will keep FEMA apprised of developments during monitoring project and if anything significant should be found.

**Notification of change in scope of work, February 23, 2015:**

This notification is a follow-up to the NHPA Section 106 consultation submitted on February 5, 2015. Since then, the Applicant has presented a change in the scope of work, with the relocation of the lift station some 225 feet to the south. The proposed new lift station will be placed at coordinates 17.756330, -64.724132. Due to the change in the lift station location, the beginning of the reroute will now occur at MH432 (coordinates 17.756724, -64.723180), not at MH0431. There are approximately 370 feet of gravity line from MH0432 to lift station. From the lift station the force main sewer line runs southeast for approximately 900 feet, to route 752. The force main continues east for some 280 feet along route 752 then turns south and continues as previously planned. As a result of the change of location of the lift station only six manholes in the water will be demolished.





General site plan with the new location for the lift station (coordinates 7.756330, -64.724132); new connection to MH0432, and re-alignment of the force main sewer line (north section) .