

**VIRGIN ISLANDS WATER AND POWER AUTHORITY
COASTAL CONSISTENCY DETERMINATION REQUEST
HANNAH’S REST UNDERGROUND ELECTRICAL PROJECT, ST. CROIX, U.S. VIRGIN ISLANDS**

INTRODUCTION

The VIRGIN ISLANDS WATER AND POWER AUTHORITY (VIWAPA) is proposing the burial of utility lines within the Hannah’s Rest Subdivision in Frederiksted St. Croix. The purpose of the project is to improve the electrical power resilience on the island of St. Croix both for routine service provision and in the event of future catastrophic weather events. The project will serve residents in the Hannah’s Rest Community.

VIWAPA has been working to relocate transmission and distribution feeders so that services can be restored immediately after the occurrence of major storm events. Underground lines provide improved reliability and reduce outage frequency caused by overhead obstructions and faults.

VIWAPA proposes the installation of an underground distribution lateral line with manholes, pad-mounted transformers, and other underground devices to replace the existing overhead distribution line feeding the Hannah’s Rest community.

PROJECT LOCATION

The proposed underground project is in the southwestern region of St. Croix, west of Hannah’s Rest Drive (Emancipation Drive), north of the Melvin Evan’s Highway (Route 66), to the east of Tranberg Road and the Arthur A. Richards Junior School and to the south of Queen Mary Highway (Centerline Road). The center of the subdivision is located at Latitude 17.690900° and Longitude -64.877266°.



Figure 1. Location of the proposed Hannah's Rest Underground Electrical project on the island of St. Croix, U.S. Virgin Islands. The route will be located within the area delineated in red.



Figure 2. The relationship between the proposed Hannah's Rest Underground Electrical project (purple) and CZM first tier jurisdiction. The areas of first tier jurisdiction are outlined in Red.

PROJECT DESCRIPTION

VIWAPA proposes the installation of underground electrical ducts with manholes, pad-mounted transformers, switchgear and other underground devices to replace the existing overhead distribution lines feeding the Hannah's Rest community in Frederiksted, St. Croix. This is the first all residential underground project that VIWAPA is undertaking.

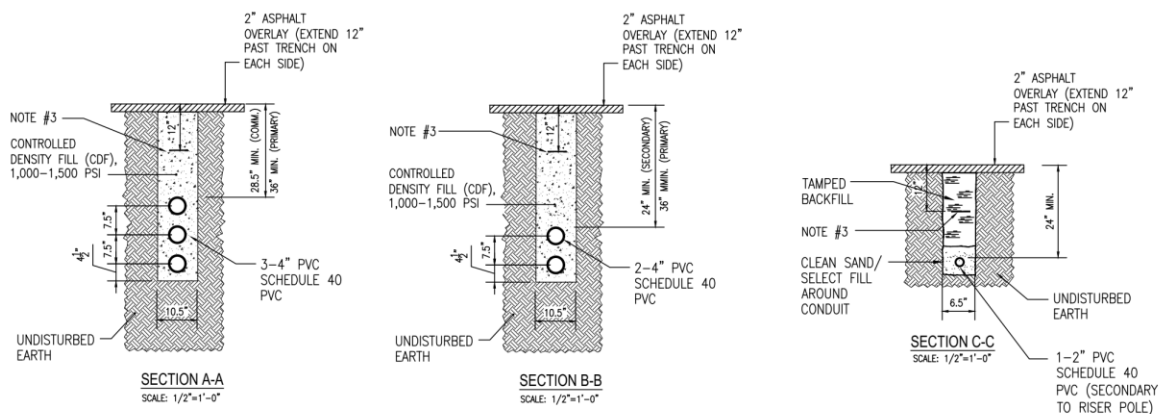
Connections to the buried electrical lines will be made available to all residences within the subdivision including stub up and caps for future development of undeveloped lots. Duct banks will be installed under roadways throughout the neighborhood along with pad-mounted transformers, pad-mounted switchgear, electrical manholes, pedestal mounted meters and communications handholes.

The project will extend the main feeder into the neighborhood of Hannah's Rest.

The number conduits in the conduit duct banks will vary per location and the conduits will be 4-inch Gray Schedule 40 PVC for both electrical and communication lines. The conduits will be installed a minimum of 30" below final grade and will be encased with Controlled Density Fill (CDF), rated between 1,000 and 1,500 PSI. Underground electrical red warning tape (6 inches wide) will be installed along the trench route one (1) foot below final grade. Trench routes will be returned to pre-construction standards, and a full lane width asphalt road restoration will be performed by DPW shortly after the

electrical construction project is completed, in accordance with a joint utility effort that was initiated in 2022. Electrical manholes for this project will be 5'-0" clear in length by 5'-0" clear in width by 5'-0" clear in height. These manholes will be supplied by VIWAPA, through a joint agreement with VINGN. Communication handholes for this project will be 3'-0" clear in length by 3'-0" clear in width by feet 3'-0" clear in height. Each electric manhole will have a three-quarter inch by 10 feet ground rod in the floor which will be bonded to a #1/0 AWG perimeter copper ground ring. Standard heavy-duty type H-20 Highway loading manhole covers will be utilized and will be marked "ELECTRIC" or "COMMUNICATION" as required.

The trench width will vary depending on the number of conduits. It is anticipated that the project will take 9-12 months to complete.



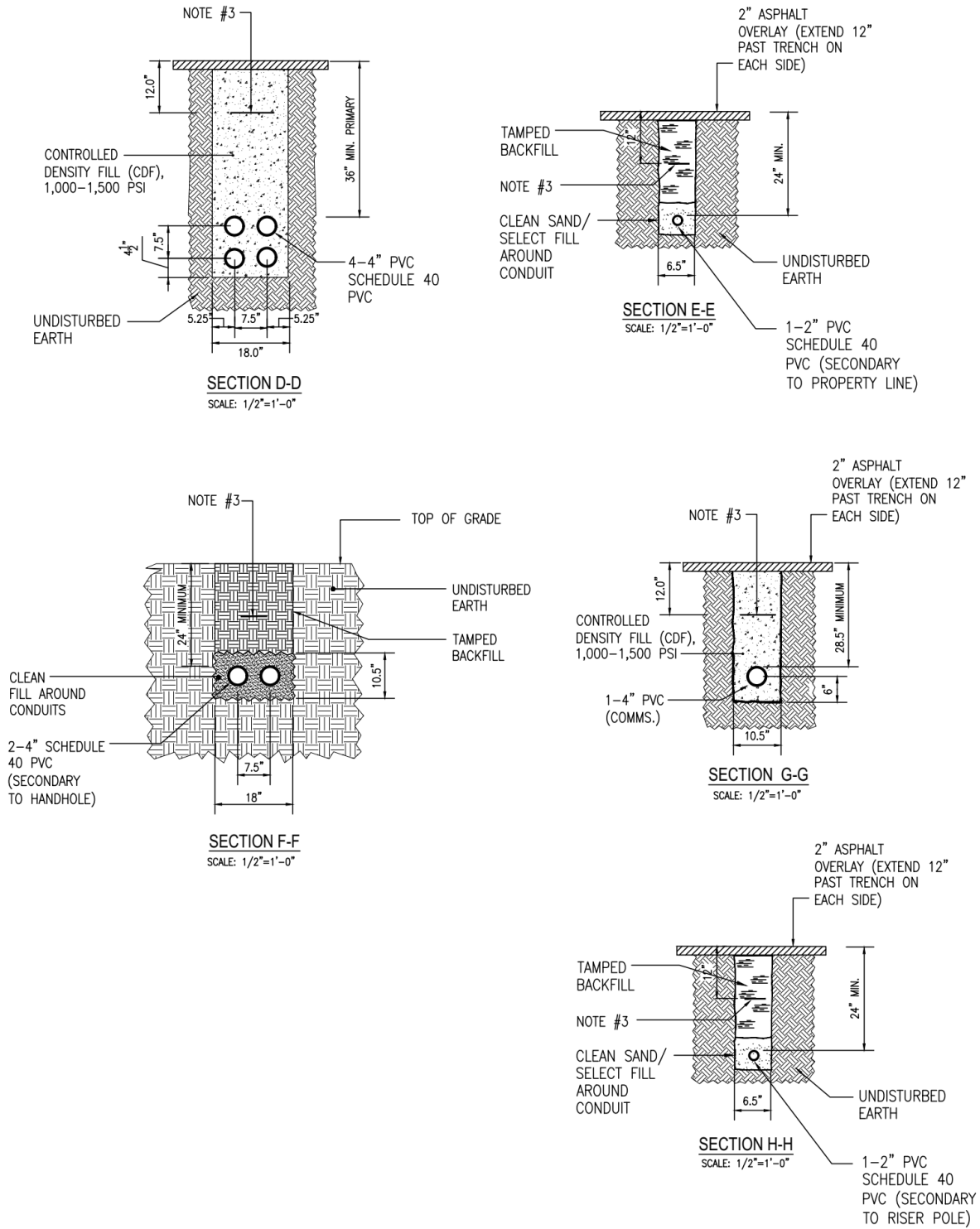


Figure 3 The duct banks that will be installed within Hannah's Rest.

ENVIRONMENTAL IMPACTS

Climate/Weather

Once complete, the buried Hannah's Rest electrical lines will not be affected by climate or weather. During construction, rainfall will affect trenching and line burial activities. Strictly enforced sedimentation and erosion control measures will be implemented to ensure rainfall will not impact the nearby drainage way during installation.

The selected contractor(s) shall ensure that all temporary erosion and sediment control, dust control and pollution control measures are in place prior to performing any excavation work.

Landform Geology, Soils and Historic Land Use

The electrical utility lines are being buried under the existing neighborhood roadways. The electrical ducts will be buried under the asphalt and unpaved roadway to a depth of approximately 3ft. Minor earthwork will occur within residential yards to provide service to existing meters and pedestals. The highest elevations are found in the northeastern corner of Hannah's Rest which are just under 90ft and the area slopes to the southwest with the lowest elevation at 10ft adjacent to Tranberg Road.



Figure 4. The composition of soils within the proposed Hannah's Rest Underground Electrical project.

Hannah's Rest is almost entirely Hesselberg clay (HeB), 2 to 5% slopes. There is a small area of Hesselberg clay, 0 to 2% slopes (HeA) which pretrudes into the western edge of the property. Hesselberg clay is well drained soil and the depth to petrocalcic restrictive feature is 10 to 20 inches. The very southwestern corner, there is a small intrusion of Glynn gravelly loam, 2 to 5% slopes (GyB). Glynn gravelly loam has restrictive layers deeper than 80 inches, which will be below the depth of the conduits. Ground water will be deeper than 80 inches throughout the project site.

Drainage, Flooding and Erosion Control

Strictly enforced measures to control sedimentation and erosion will be implemented during all phases of the proposed project to ensure that rainfall will not impact the drainage and runoff during installation. In addition, no material will be stockpiled overnight. There are two drainage ways crossing within the project area.



Figure 5. Coverage under the General TPDES Construction Stormwater Permit and a Stormwater Pollution Prevention Plan should not be required since no more than 1 acre of land will be disturbed at any time.



There is a concreted drainageway in the southwestern area of the subdivision. The installation of the underground conduits will have no impact on this drainage. When the trenching is done for this area, care will be taken to ensure that all erosion control features are in place and no material is stored within the drainageway.

Drainage Patterns

The proposed project will have no impact on existing drainage patterns once complete since the electrical utility lines will be installed within existing paved and unpaved roadways, and within maintained residential lawns and will not result in any change in topography. Two drainageway crossings were noted during surveys of the subdivision - both in the southwestern area of the subdivision.

Coastal Floodplain

The entirety of the proposed underground project route is within FEMA Flood Zone X, where 100-year flooding is not expected.

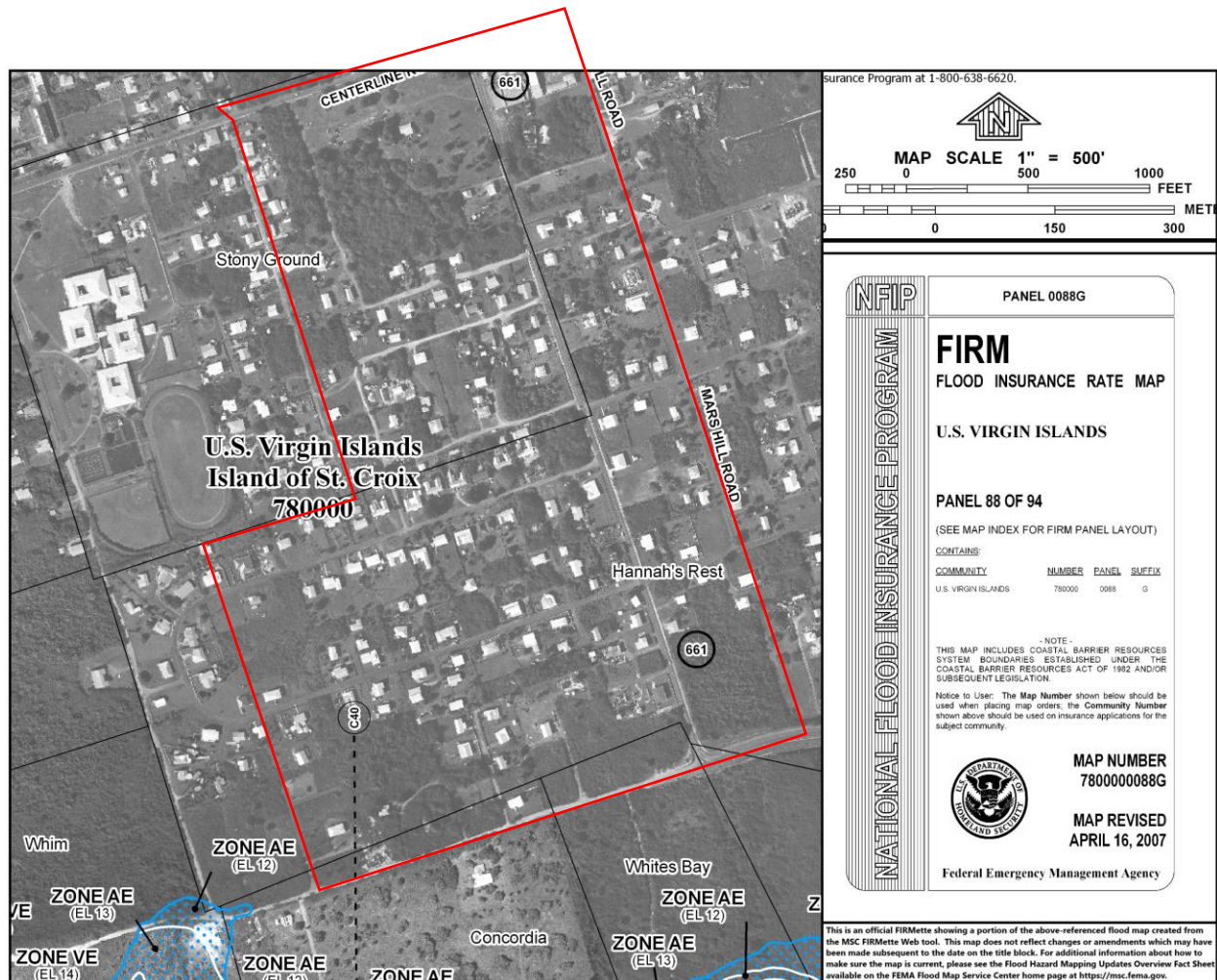


Figure 6. FEMA Flood Insurance Rate Map (FIRM) for the proposed Hannah's Rest Underground Electrical project area; Panel 88 of 94. The proposed project is outlined in RED.

Fresh Water Resources

The proposed project will have no impact on freshwater resources as it involves the burial of electrical lines in previously disturbed areas. No freshwater ponds or streams occur within the proposed project footprint and groundwater resources within the area are deeper than 80 inches, which is well below the depth of the proposed project.

Oceanography

The project occurs well inland and will not be affected by sea storm events.

Marine Resources

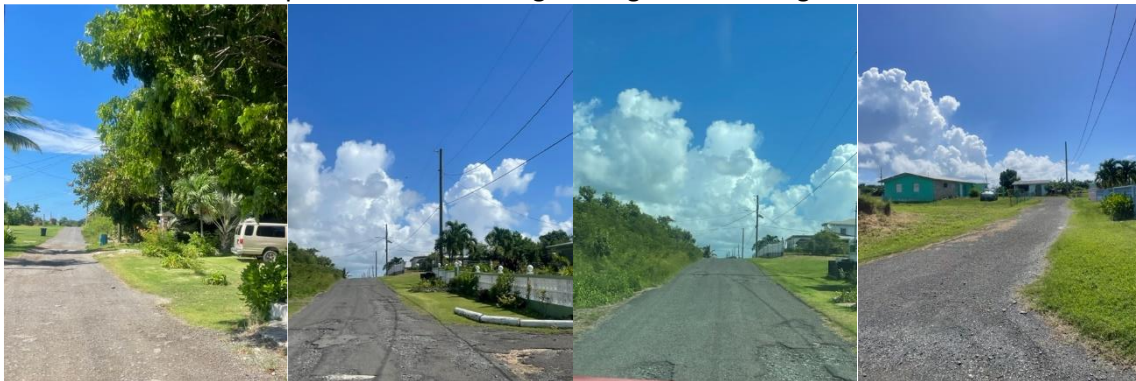
The property is located entirely inland and will have no direct impact on the marine environment. It will be important that strict sedimentation and erosion control measures be implemented and maintained during construction to minimize sediment laden runoff into coastal drainageways. The successful bidder will be required to prepare, and submit, a site-specific Erosion and Sediment Control Plan, for review

and approval. Finally, VIWAPA Personnel and the Underground Electrical Project Management Team will provide periodic onsite inspections to ensure s conformance to erosion and sediment control measures.

Terrestrial Resources

The proposed project will occur within existing paved and unpaved roadways, parking areas and previously developed areas. No natural terrestrial resources or any native flora or fauna will be significantly impacted during the installation of the buried electrical lines. The electrical lines will not be buried near large trees along the roadside; surveys found no trees within the subdivision which should be impacted by the proposed installation. There may be impact to ground covers and residential lawns during the installation of the underground electrical service lines to individual residences.

Relocating electrical lines underground will alleviate the need to trim trees away from suspended, overhead lines and will prevent future damage to vegetation during storm events.



The placement of the underground utility lines should have no impact on flora or fauna.

Wetlands

The project will have no impact on wetlands, as there are no wetlands in, or adjacent to, the proposed project route. The proposed project route is in an existing roadway and previously paved parking areas.

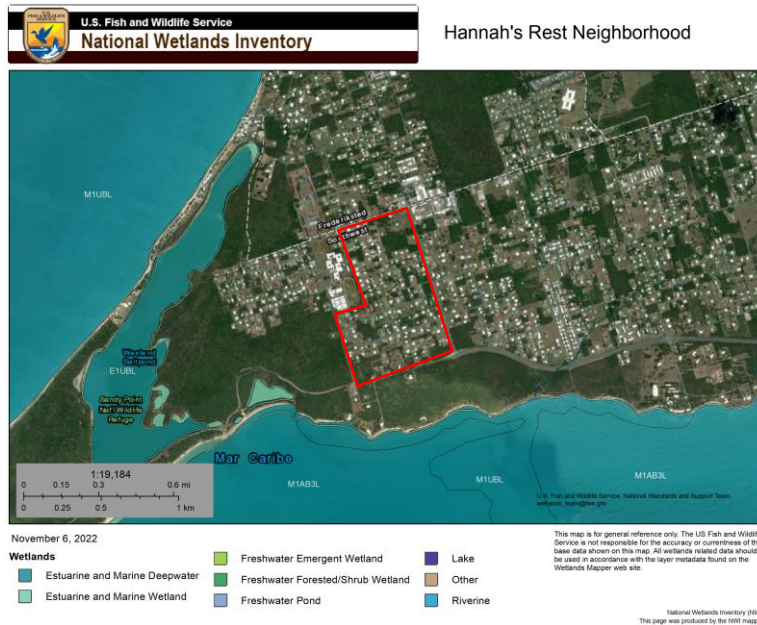


Figure 7. The FWS wetland map in relationship with the proposed underground project.

No wetlands were seen within the Hannah's Rest neighborhood.

Rare and Endangered Species

According to the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) project tool *Buxus vahlii* could occur within the area and have been seen during surveys in nearby undeveloped areas near the Sandy Point Refuge. Neither *Agave eggersiana*, nor *Catesbaea melanocarpa* are known to occur in the area.

Agave eggersiana primarily occurs along the coast line of the eastern end of St. Croix and mid island on the south shore.

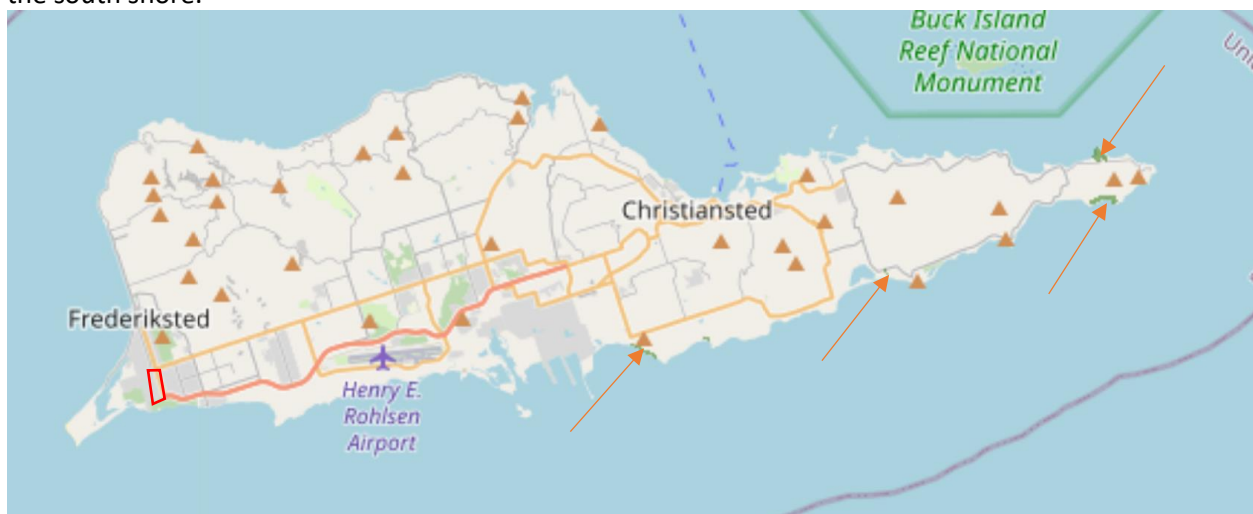


Figure 8. Known habitat of *A. eggersiana* is shown in dark green (orange arrows), and the project area is shown in red.

C. melanocarpa is known to occur on the south shore well east of the proposed project area.

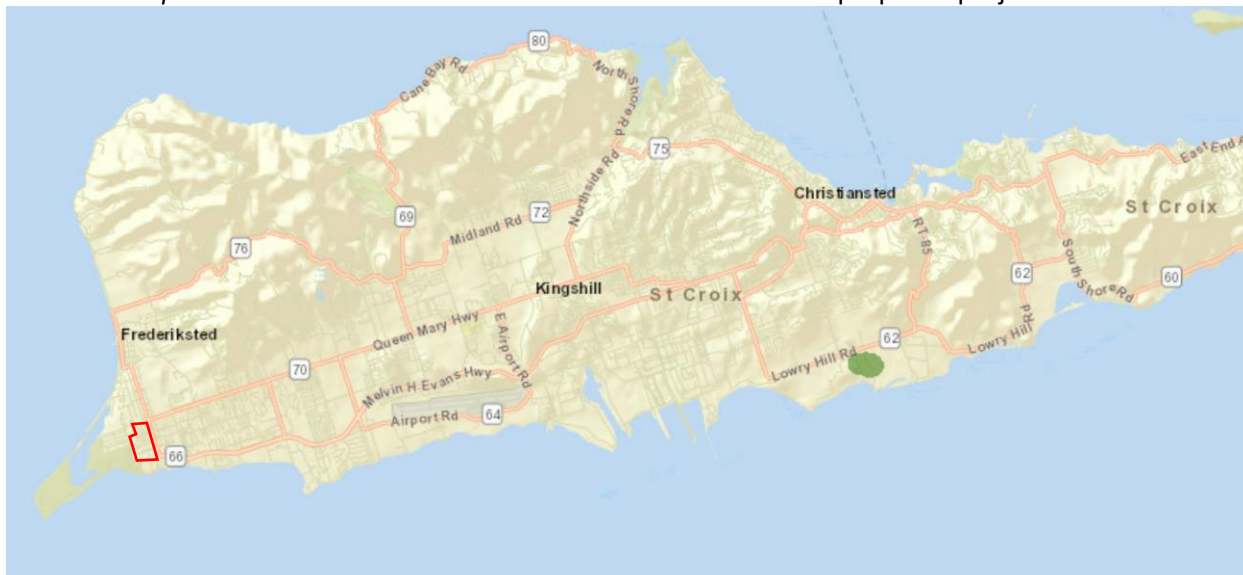


Figure 9. The know locations of *Catesbaea melanocarpa* is shown in the green on the south shore to the east, the project area is to the west outlined in red

None of these three endangered plant species were seen along the roadways within the Hannah's Rest neighborhood during the roadside surveys.



Buxus vahlii

The proposed installation is within existing paved and unpaved roadways and in previously developed areas and should not impact *Buxus vahlii* or any of its habitat.

There is an endangered ground lizard, *Ameiva polops*, on the island of St. Croix, but this lizard is only found on Protestant Cay and Ruth Cay.

Air Quality

All of St. Croix is designated Class II by the Environmental Protection Agency, in compliance with National Ambient Air Quality Standards. In Class II air quality regions, the following air pollutants are regulated: open burning, visible air contaminants, particulate matter emissions, volatile petroleum products, sulfur compounds, and internal combustion engine exhaust (Virgin Islands Code Rules and Regulations). Trenchers will be used during project construction and will create combustion engine exhaust during use. Upon the completion, air quality will return to pre-construction conditions.

IMPACT ON MAN'S ENVIRONMENT

Land and Water Use Plans

The burial of electrical lines is in accordance with the laws and regulations of the U.S. Virgin Islands.

Visual Impacts

The relocation of the overhead electrical lines underground will contribute to the visual improvement of St. Croix's landscape.

Social Impacts and Economic Impacts

Providing more resilient power to critical infrastructure on St. Croix will benefit residents within the Hannah's Rest neighborhood. Being able to maintain, or quickly restore power, is essential welfare of St. Croix residents.

Hannah's Rest roadways are narrow in many areas and it will be critical to maintain access throughout the neighborhood and into individual homes. Staging areas will be strategically located to allow for traffic and VIWAPA will ensure that areas are left clean and neat and that the roadways are returned to as good or better condition than prior to the project. The successful bidder will be required to prepare and submit a staging plan for this project, for review and approval by VIWAPA, and the Underground Electrical Project Management Team.

Traffic patterns will be worked out prior to the beginning of work. The successful bidder will be required to prepare and submit an overall Traffic Control Plan, as well as specific Traffic Control Plans to indicate specific road closures, detours, traffic control devices, etc. The Traffic Control Plans will be reviewed and approved by VIWAPA and The Project Management Team, and will be sent to DPW, as well as the Public.

Historical and Archaeological Resources

The proposed project involves the installation of underground electrical utility lines under existing roadways, which are located on lands that have been altered by grading and in some cases paving. A SHPO Clearance Letter has been requested.

Waste Disposal and Accidental Spills

Equipment will be kept in good operational condition during the proposed project and equipment will not be fueled while at the construction site. Any excess excavated material and debris will be collected, taken off-site and properly disposed of.

COASTAL CONSISTENCY

The proposed Hannah's Rest Underground Electrical project has a negligible potential of impacting environmental resources, or ambient water quality during construction. As necessary, sedimentation and erosion control measures will be implemented during construction to ensure that no environmental impacts occur. The proposed project will occur only within previously altered areas and an Archeological

Scope of Work Analysis will be conducted to minimize impact on historical or cultural resources. Project activities stop if historic remains or resources are encountered, and SHPO will be contacted to determine the best course of action.

The Coastal Zone Management Act of 1972 requires that federal actions, within and outside the coastal zone, which have reasonably foreseeable effects on any coastal use (land or water), or natural resource of the coastal zone be consistent with the enforceable policies of a state's federally approved coastal management program. The Hannah's Rest Underground Electrical Project, as proposed, will be undertaken in a manner consistent to the maximum extent practicable with the enforceable policies of the U.S. Virgin Islands' CZM Program. This federal consistency determination demonstrates the Hannah's Underground Electrical project's compliance with the U.S. Virgin Islands' CZM Program.

The following policies are set forth in the U.S. Virgin Islands Code Title 12, Conservation Chapter 21, Virgin Islands Coastal Zone Management [V.I. Code tit. 12, § 903(b)]. The proposed Hannah's Rest Underground Electrical project meets each of the basic goals of the USVI for its coastal zone. Additional details are as follows:

USVI Code Title Twelve Conservation, Chapter 21 § 903 (b)

(1) Protect, maintain, preserve and, where feasible, enhance and restore, the overall quality of the environment in the coastal zone, the natural and man-made resources therein, and the scenic and historic resources of the coastal zone for the benefit of residents of and visitors of the United States Virgin Islands.

- The proposed Hannah's Rest Underground Electrical project is designed to be within existing roadways and previously disturbed areas. The project will not impact any natural resources and will improve the visual landscape within the Hannah's Rest Subdivision by removing overhead electrical lines and poles.

(2) Promote economic development and growth in the coastal zone and consider the need for development of greater than territorial concern by managing: (1) the impacts of human activity and (2) the use and development of renewable and nonrenewable resources so as to maintain and enhance the long-term productivity of the coastal environment.

- This proposed project promotes the economic development and growth in the coastal zone by providing more reliable, resilient electrical transmission to residents. The improved resilience of electrical power on the island of St. Croix is beneficial for routine service provision and in the event of future catastrophic weather events.

(3) Assure priority for coastal-dependent development over other development in the coastal zone by reserving areas suitable for commercial uses including hotels and related facilities, industrial uses including port and marine facilities, and recreation uses.

- The proposed project involves the burial of electrical utility lines outside the coastal area and is therefore consistent with this policy.

(4) Assure the orderly, balanced utilization and conservation of the resources of the coastal zone, taking into account the social and economic needs of the residents of the United States

Virgin Islands.

- The burial of the electrical lines will only occur in areas that have been previously altered and will improve the electrical power resilience both for routine service provision and in the event of future catastrophic weather events. The proposed project will meet and protect the economic and social needs of residents of the island of St. Croix.

5) Preserve, protect and maintain the trust lands and other submerged and filled lands of the United States Virgin Islands so as to promote the general welfare of the people of the United States Virgin Islands.

- The proposed project will not impact trust lands or other submerged or filled lands of the U.S. Virgin Islands.

(6) Preserve what has been a tradition and protect what has become a right of the public by insuring that the public, individually and collectively, has and shall continue to have the right to use and enjoy the shorelines and to maximize public access to and along the shorelines consistent with constitutionally-protected rights of private property owners.

- The proposed project will in no way affect public access to, or use of, the shoreline. The project is located well inland.

(7) Promote and provide affordable and diverse public recreational opportunities in the coastal zone for all residents of the United States Virgin Islands through acquisition, development and restoration of areas consistent with sound resource conservation principles.

- The proposed project will not affect public recreational opportunities in the coastal zone.

(8) Conserve ecologically significant resource areas for their contribution to marine productivity and value as wildlife habitats, and preserve the function and integrity of reefs, marine meadows, salt ponds, mangroves and other significant natural areas.

- The proposed project is designed so that it impacts only previously disturbed areas like paved and unpaved roadways. The project will have no impact on natural resources and will utilize best management practices (BMPs) to minimize areas of disturbance, thereby protecting adjacent habitats.

(9) Maintain or increase coastal water quality through control of erosion, sedimentation, runoff, siltation and sewage discharge.

- The proposed project will have no long-term change on sedimentation or erosion and will not result in the creation of wastewater. As necessary, the project will implement sedimentation and erosion control BMPs to prevent loss of sediment from the project site.

The proposed Hannah's Rest Underground Electrical project, as designed, will maintain coastal water quality through control of erosion, sedimentation, runoff, and siltation and therefore is consistent with

the policy set forth in the USVI Code Title 12, Conservation Chapter 21, Virgin Islands Coastal Zone Management [V.I. Code tit. 12, § 903 (b)].

The proposed Hannah's Rest Underground Electrical project, as designed, protects, maintains, preserves, and enhances the overall quality of the environment in the coastal zone, the natural and man-made resources therein, and the scenic and historic resources of the coastal zone for the benefit of residents of and visitors of the USVI. It is therefore consistent with the policy V.I. Code tit. 12, § 903 (b).