

**VIRGIN ISLANDS WATER AND POWER AUTHORITY  
COASTAL CONSISTENCY DETERMINATION REQUEST  
FEEDER 8B UNDERGROUND ELECTRICAL PROJECT  
ST. CROIX, U.S. VIRGIN ISLANDS**

**INTRODUCTION**

The Virgin Islands Water and Power Authority (VIWAPA) has been working to relocate transmission and distribution underground throughout the islands so that power can be restored quickly after the occurrence of major storm events. Underground transmission lines provide improved protection from storm damage, reliability and reduce outage frequency caused by overhead obstructions and faults.

VIWAPA is proposing to install underground ducts with manholes, pad-mounted transformers, and other underground devices to replace existing overhead distribution lines in the town of Frederiksted. This will provide underground power infrastructure to businesses, government agencies and downtown Frederiksted residents. VIWAPA has been working at relocating transmission and distribution feeders in areas of essential services underground so that these critical services can be restored immediately after the occurrence of major storm events. Underground lines ensure that critical facilities can continue to provide essential services.

Duct banks will be installed under the roadways within the two of Frederiksted along with pad-mounted transformers, pad-mounted switchgear, electrical manholes, pedestal-mounted meters and communications handholes.

The duct banks will branch off under side roads to provide access to business and facilities along the route. The project will serve business, government offices and individual homeowners.

The project will extend along Prince St. with branches extending along Lagoon St., Market St., Hill St., King Cross St., Queen Cross St., and Fisher St. The lines will turn at the end of these branches along Strand St., New St., Queen St. and Custom House St. to service government buildings and facilities. 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.

It is anticipated that the installation of take 12 to 15 months to complete. However, the current supply chain challenges may slow installation due to backlogs in the availability of equipment. Most of the work will be completed during the day, but paving may be done at night to avoid peak traffic during paving. The Civil work, which will have the most impact on the community, is expected to take approximately 9 months to complete. The civil work consists of saw cutting of the road, excavation of the trenches, installation of conduits and a concrete envelope within the trench, backfill of the trench, and pathing of the roadway, installation of manholes and handhole, as well as forming and pouring concrete pads for electrical equipment.

In order to minimize disruption of activities in downtown traffic control will be a key element.

VIWAPA will also ensure that staging areas are defined and that the job sites are kept neat and the roadway clean. 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. Furthermore, VIWAPA and the Project Management Team will perform periodic inspections of staging areas, and material laydown areas.

## PROJECT LOCATION

The proposed underground project covers from Fisher St. to Lagoon St. The project extends from Latitude 17.709133° and Longitude -64.880327° to Latitude 17.715345° and Longitude -64.881577°.

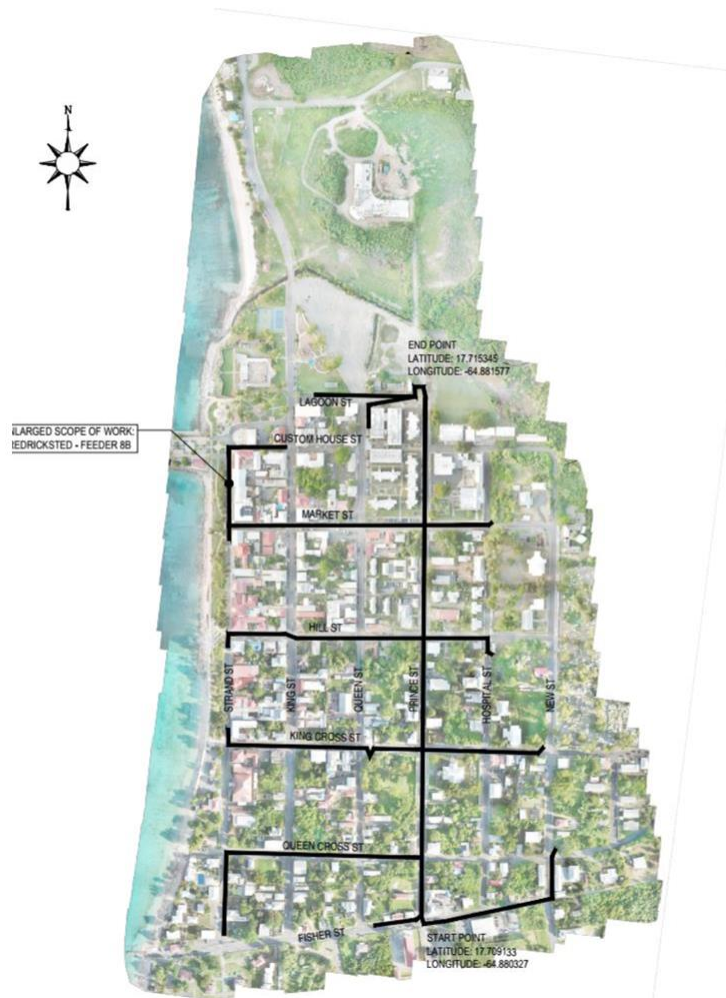


Figure 1. Location of the proposed Feeder 9B Underground Electrical project on the island of St. Croix, U.S. Virgin Islands.

Note: This project is outside of the Coastal Zone Management (CZM) first tier jurisdiction.

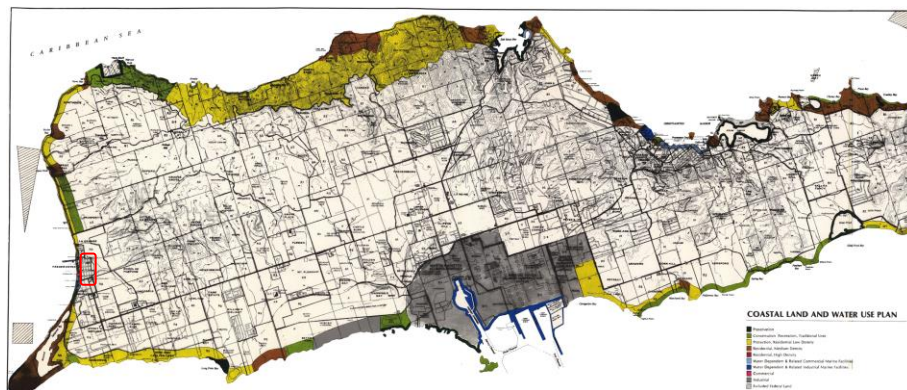


Figure 2. The relationship between the proposed Feeder 8B Underground Electrical project and CZM first tier jurisdiction. The first-tier areas are shown in color on the map. Downtown Frederiksted is outside the first tier of CZM.

## PROJECT DESCRIPTION

VIWAPA proposes the installation of a main underground primary distribution line (Feeder 9B) with manholes, pad-mount transformers, pad mounted primary switchgear, pad mounted primary sectionalizing cabinets, and other underground devices to replace the existing overhead distribution lines in downtown Frederiksted.

Existing Electrical and communication manholes will be intercepted / tied into at the intersection of Fisher St. and Emancipation Drive. The duct banks will provide service to the Frederiksted Post Office, St. Patrick's Church, Caribbean Breeze Apartments, Frederiksted Moravian Church, Holy Trinity Lutheran Church, Liberty Hall Apartments, the Oscar E. Henry Customs House, the UCA Kitchen, the Frederiksted Police Station, the Legislature of the Virgin Islands, the Frederiksted Fire Station, the Caribbean Museum Center for the Arts, Dorsch Cultural Center, and the Frederiksted Health Center.

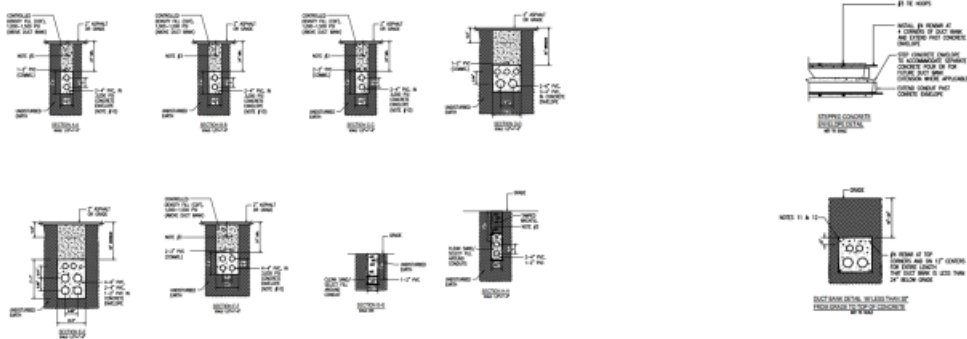


Figure 4. The duct banks that will be installed along the proposed downtown Feeder 8B Underground Electrical project route.

## ENVIRONMENTAL IMPACTS

### Climate/Weather

Once complete, the buried Feeder 8B lines will not be affected by climate or weather. During construction, rainfall will affect trenching and line burial activities. Sedimentation and erosion controls will be implemented to ensure rainfall will not impact the nearby drainageway during installation. The contractor will obtain coverage under the Construction General Permit (CGP) for stormwater prior to the start of construction.

### Landform Geology, Soils and Historic Land Use

The electrical utility lines are being buried under existing roadways within the town of Frederiksted. The electrical ducts will be buried to a depth of approximately 3ft. Minor earthwork will occur, within developed properties, to provide service to existing meters and pedestals and to place pad mounted transformers and Sectionalizing Cabinets.

Frederiksted town has a variety of soil types through the proposed route. The highest elevations are found at the eastern extent of the project and are between 20 and 30 feet of elevation, most of the project lies between 10 and 20 feet of elevation (Figure 5).

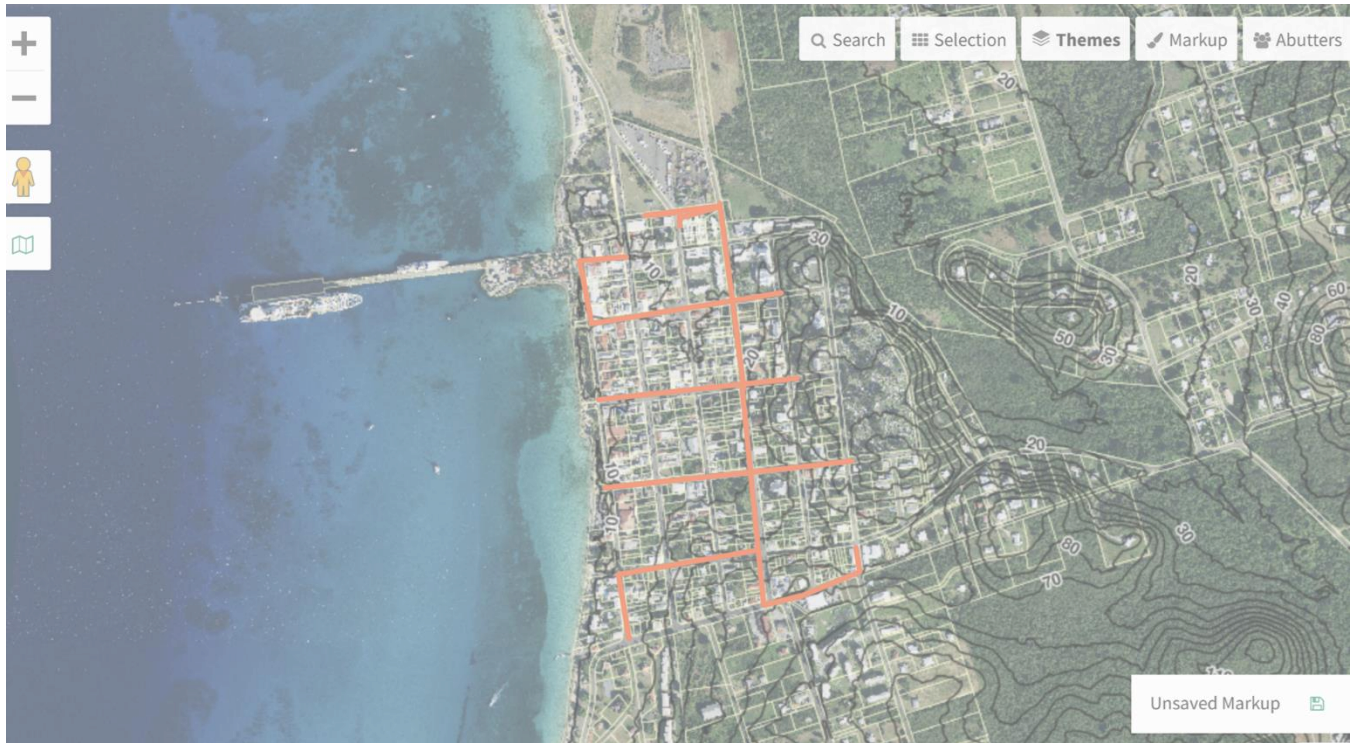


Figure 5. Elevations found with the Feeder 8B Underground Project Route.



Figure 6. The composition of soils within the proposed Feeder 8B Underground Electrical project.

The project crosses through 4 different soil types of various slopes. These include Arawak gravelly loam, 12 to 20 percent slopes, very stony at the eastern end of some of the conduits, and Hesselberg clay, 0 to 2 percent slopes at the southwestern end of the project. Most of the project is within Urban land to the east and Urban land-Glynn complex, 0 to 2 percent slopes closer to the shoreline.

Arawak gravelly loam, 12 to 20 percent slopes, very stony is a well-drained soil in which the water table will be deeper than 80 inches and the depth to a restrictive layer (paralithic bedrock) will be between 10 and 20 inches. Hesselberg clay, 0 to 2 percent slopes which is well drained, and the water table will be deeper than 80 inches and the depth to a restrictive layer (petrocalcic) will be between 10 and 20 inches. Urban Land is well drained and the depth to the water table and to a restrictive feature is more than 80 inches. Urban land-Glynn complex, 0 to 12 percent slopes is a well-drained soil and the depth to the water table and to a restrictive feature is more than 80 inches.

### 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 nearby drainageways and water

courses during installation. In addition, no materials will be stockpiled overnight. The project will apply for coverage under the General Construction Permit for stormwater due to its length.

### 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 roadway. Pad mounted transformers and Sectionalizing Cabinets are not being placed within drainage ways.

### Coastal Floodplain

Most of the project is within Zone X areas where 100-year flooding is not expected (FEMA FIRM Map 77 of 94). The most western ends of the conduits and the most northern leg along Lagoon Street are within Zone AE11, areas where the 100-years storm have been determined to be elevation 11 ft. Pad mounted electrical equipment consisting of primary switchgear, transformers, and primary sectionalizing cabinets, and equipment pads will be elevated to 54" above finished grade in order to comply with DPNR requirements that have been established on a previous underground project that contained equipment pads ,located in flood zones (Container Port).

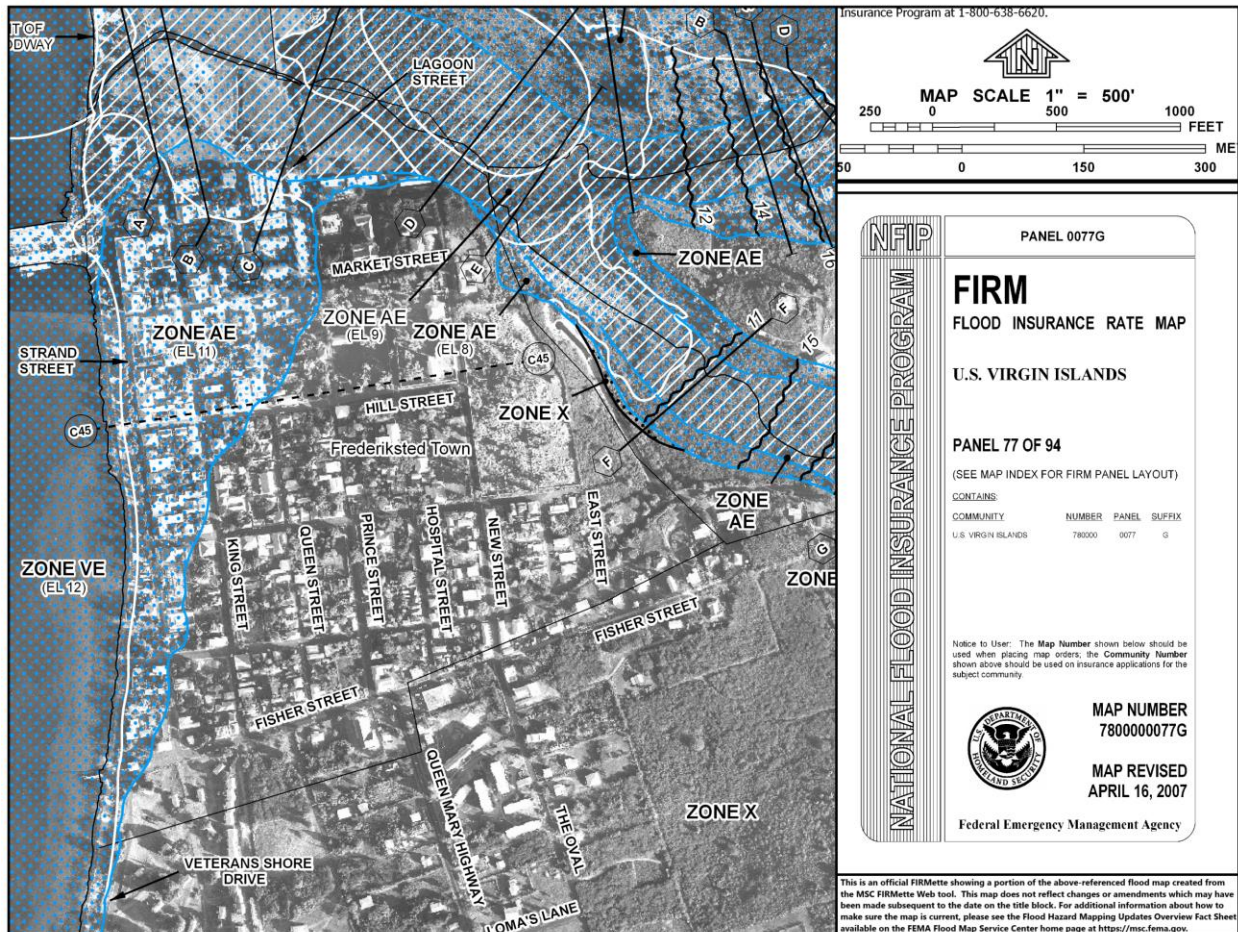


Figure 8. FEMA FIRM 77 of 94. The proposed project route is shown in red.

The buried conduits should not be impacted by these flood zones since they will be placed in the existing roadways or will be put on existing drainage crossing structures.

During construction no soil may be stock piled over night.

### **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; deeper than the depth of the proposed project.

### **Oceanography**

The project location is well inland and will not be affected by sea storm events. The project will implement strict stormwater control measures during construction and will apply for coverage under the General Stormwater Permit for construction and the required monitoring of the controls and therefore should not create sediment laden runoff which could impact water quality.

### **Marine Resources**

The property is located entirely inland and will have no direct impact on the marine environment. But due to the proximity to drainage ways and the sea to the west strict sedimentation and erosion control will be required.

### **Terrestrial Resources**

The proposed project will occur within existing paved roadways in the town of Frederiksted. No natural terrestrial resources or any native flora or fauna will be significantly impacted during the installation of the buried conduits. The electrical lines will be buried near large trees along the roadside; thus, some minor cutting of tree roots may occur due to the proximity of some of the trees and the roadway.

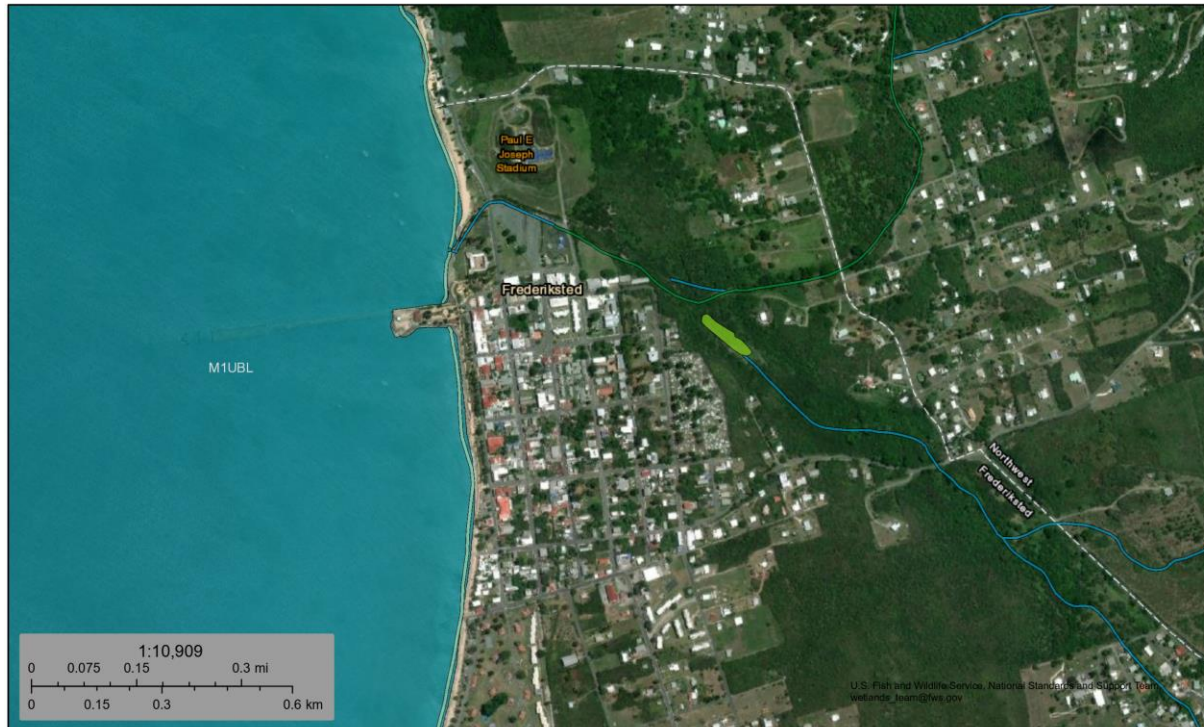
An arborist will be retained by the successful bidder for the project, to monitor/advise. Any vegetative debris will be mulched.

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

### **Wetlands**

The project is within the town of Frederiksted and will have no impact on wetlands, as there are no wetlands in, or adjacent to, the proposed project route. The proposed project route is along paved roadways and the ground-mounted equipment will be placed in areas which have already been altered from their natural state.





November 19, 2023

Wetlands	
<span style="display:inline-block; width:10px; height:10px; background-color:teal; border:1px solid black;"></span> Estuarine and Marine Deepwater	<span style="display:inline-block; width:10px; height:10px; background-color:lightgreen; border:1px solid black;"></span> Freshwater Emergent Wetland
<span style="display:inline-block; width:10px; height:10px; background-color:lightcyan; border:1px solid black;"></span> Estuarine and Marine Wetland	<span style="display:inline-block; width:10px; height:10px; background-color:lightgreen; border:1px solid black;"></span> Freshwater Forested/Shrub Wetland
	<span style="display:inline-block; width:10px; height:10px; background-color:lightblue; border:1px solid black;"></span> Freshwater Pond
	<span style="display:inline-block; width:10px; height:10px; background-color:blue; border:1px solid black;"></span> Lake
	<span style="display:inline-block; width:10px; height:10px; background-color:lightblue; border:1px solid black;"></span> Riverine
	<span style="display:inline-block; width:10px; height:10px; background-color:lightblue; border:1px solid black;"></span> Other

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)  
This page was produced by the NWI mapper

Figure 9. The relationship between the proposed Feeder 8B Underground Electrical project and wetlands.

### Rare and Endangered Species

No endangered or threatened species or endangered species habitat exist within the proposed project route; therefore, no federal, or local, endangered, or threatened, species will be impacted. According to the U.S. Fish and Wildlife Service (USFWS) Information, Planning and Conservation System (iPAC) project tool “There are no listed species or critical habitats expected to occur at this location”. There are no migratory birds of conservation concern expected to occur at this location and no endangered species, critical habitat or migratory birds are expected to occur in the proposed project area. All 4 species of listed sea turtles occur offshore and the beach to the north of the project areas is a known sea turtle nesting beach.

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. There are also three endangered plant species on St. Croix – i.e., *Agave eggersiana*, *Buxus vahlii* and *Catesbaea melanocarpa*. *Agave eggersiana*, and *Catesbaea melanocarpa* primarily occur in dry, exposed areas and are not known to occur in the town of

Frederiksted. There are three known populations of *B. vahlii* on St. Croix and one is on the west end of St. Croix southwest of the town of Frederiksted.

Despite not being known to occur in these areas these species were looked for during the terrestrial studies of the route. Neither the endangered ground lizard nor any of the endangered plant species are found within the proposed project footprint.

### **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 be a visual improvement of St. Croix's landscape by not only placing the unsightly lines underground but by also not requiring the cutting of tree limbs to protect the lines. Trees will no longer have to be pruned into unnatural shapes to protect the lines. The removal of the overhead lines will create a better viewshed in the historical town of Frederiksted.

### **Social Impacts and Economic Impacts**

Providing more reliable and resilient power to critical infrastructure on St. Croix will benefit both residents and businesses on the island. Being able to maintain, or quickly restore, power to critical facilities like the Frederiksted Health Care Clinic, the VI Legislature, the Post Office and the Police and Fire Station.

It will be critical to maintain access throughout the town and into individual homes and businesses. 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 in existing roadways, which are located on lands that have been extensively altered by cutting or filling. An archeological Scope of Work (ASoW) will be developed with the USVI State Historic Preservation Office (SHPO) to monitor for historic resources along the project route.

## **Waste Disposal and Accidental Spills**

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

If any hazardous materials are encountered or created, they will be taken back to the yard with the proper paperwork. No hazardous materials will be stored overnight.

## **COASTAL CONSISTENCY**

The proposed Feeder 8B Underground Electrical project in downtown Frederiksted has a negligible potential of impacting environmental resources, or ambient water quality during construction. A General Stormwater Permit for construction will be obtained by the installation contractor(s) and 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 archeological monitoring 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 Feeder 8B 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 Feeder 8B 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 Feeder 8B Underground Electrical project in downtown Frederiksted 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 Feeder 8B 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 with the town of Frederiksted 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 critical island infrastructure. 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 will provide reliable service to hotels and guest houses within the town of Frederiksted 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 also service critical island infrastructure and, therefore, 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 shoreline 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 in down town of Frederiksted.

**(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. 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. The project will implement sedimentation and erosion control BMPs to prevent loss of sediment from the project site.
- The proposed Feeder 8B 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 Feeder 8B 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 title 12, § 903 (b).