Virgin Islands Department of Education
Coastal Consistency Determination Request

Claude O. Markoe PreK-8th Project – New Build,
St. Croix, U.S. Virgin Islands

Grant Manager: #86891
FEMA Applicant Id: #000-U6P8U-01
June 1, 2022

The Virgin Islands Department of Education (VIDE) hereby requests your permission to undertake the FEMA-funded project – Claude O. Markoe PreK-8th Project – New Build. The address is as follows:

Claude O. Markoe Elementary School

71-75 Mars Hill, Frederiksted, St. Croix, VI 00840

DESCRIPTION OF PROJECT

The Claude O. Markoe Elementary School was damaged during Hurricanes Irma and Maria in September 2017. These Hurricanes required new conversations around resiliency and student and community needs. Coupled with new funding opportunities such as the Federal Emergency Management Agency (FEMA) Public Assistance (PA) program, utilizing the flexibility afforded by the Bipartisan Budget Act (BBA). The VIDE was in a position to plan for the replacement of infrastructure. Hence, the demolition and construction of a new school campus, New Claude O. Markoe PreK to 8th School.

The purpose of the project is to demolish the existing Claude O. Markoe School and design and construct a completely new school, including classrooms, administrative offices, a library, a cafeteria, a kitchen, bathrooms, stairways, balconies, hallways, and all fixtures, equipment, and contents to replace the campus with a new campus to fulfill the VIDE vision outlined in the Bridging Documents.

The general scope is primarily the safe demolition, removal, and legal disposal of concrete roofs, slabs, stairs, and foundations, C.M.U. walls, windows, doors, finishes, fixtures, and with the safe identification, testing, and abatement of any and all hazardous materials (including but not limited to asbestos and lead paint), and design, construct, equip, and furnish the New Claude O. Markoe PreK-8th School.

Claude O. Markoe Elementary School

I. Detailed analysis that the project and its effects are consistent with the goals and policies of the VI Coastal Zone Management Program (VICZMP):

VIDE Response:

The Claude O. Markoe Elem. School was damaged during the 2017 Hurricane Irma and Maria events and was deemed unsafe for students and faculty.

The VIDE kindly seeks your review and approval for the required Consistency Determination certification process in accordance with the Virgin Islands Coastal Zone Management Program (CZMP as required under the VI Code Section 1, VIR and Regs. Title 12, Subchapter 904, section 904-8. This project may include the security fencing, traffic control, dust control, demolition and construction of new buildings.

ENVIRONMENTAL IMPACTS

Climate/Weather

All new structures will be designed to current IBC 2021 building code requirements meeting the regions high velocity hurricane force wind load requirements and earthquake zone seismic requirements. The new construction will incorporate many hazard mitigation measures to account for climate and weather.

Prevailing Winds

The Virgin Islands lie in the "Easterlies" or "Trade Winds" which traverse the southern part of the "Bermuda High" pressure area, thus the predominant winds are usually from the east-northeast and east.

Precipitation

St. Croix typically receives an average annual rainfall of 35-50 inches, with drier conditions (25–38 inches) on the arid east end and higher rainfall (up to 50 inches) in the northwest hills. The wet season runs from May to December, with September to November being the wettest months. Rainfall usually occurs in brief, intense showers of less than a few tenths of an inch, and major rainfall events are associated with weather systems. The Virgin Islands has no sharply defined wet seasons.

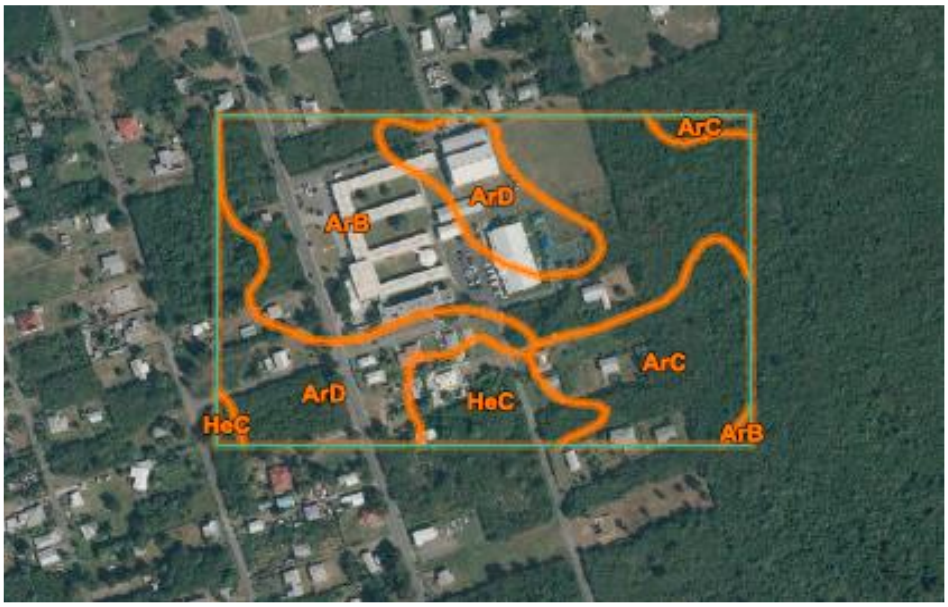
Landform Geology, Soils, and Historic Land Use

The overall topography of the existing site ranges from approximately 116 ft at the northeast corner of the property down to an elevation of approximately 110 ft along the western property line by the intersection of Emancipation and Wells Way. The existing school building has a finished floor elevation of approximately 117.50 ft.

Historically, the surrounding area, like much of the land near Frederiksted and Estate Whim, was used for sugar cane cultivation. It is a significant historical educational landmark, dedicated in 1958 and named after a prominent local educator. It represents a 60-plus-year legacy of education on the island and is a well-known, older structure. The land use of the site is currently academic and support services. The site plan concept aims to create a campus complex, including academic buildings, administrative offices, athletic facilities, and maintenance support, within a secure environment. The primary development concept for the campus has been the establishment of a pedestrian-oriented core, holding vehicle and service circulation to the outer bounds of the built campus. This project addresses both support and academic land uses. The academic uses share adjacency and proximity to a campus pedestrian promenade open-space core.

The soil composition of the area of the Claude O. Markoe Demolition/Reconstruction Project site is Arawak gravelly loam ArB – 2 to 5 percent slope, ArC- 5 to 12 percent slopes, ArD – 12 to 20 percent slopes and soils are stony. Hesselberg clay 5-12 percent slopes. All work is being done in areas that have already been disturbed.

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
ArB	Arawak gravelly loam, 2 to 5 percent slopes, very stony	14.4	47.7%
ArC	Arawak gravelly loam, 5 to 12 percent slopes, very stony	5.3	17.3%
ArD	Arawak gravelly loam, 12 to 20 percent slopes, very stony	8.0	26.3%
HeC	Hesselberg clay, 5 to 12 percent slopes	2.6	8.6%
Totals for Area of Interest		30.3	100.0%



Drainage, Erosion Control, and Maintenance

On-site drainage will be handled with inlets and pipes that will convey the runoff from the design storm to a water management facility, such as a dry pond, for percolation and evaporation. If pervious space is not available an underground exfiltration chamber system will be implemented. Erosion control will not be required for this mostly flat site. Vegetation will be planted in open areas to prevent sediment from being exposed.

Drainage Patterns

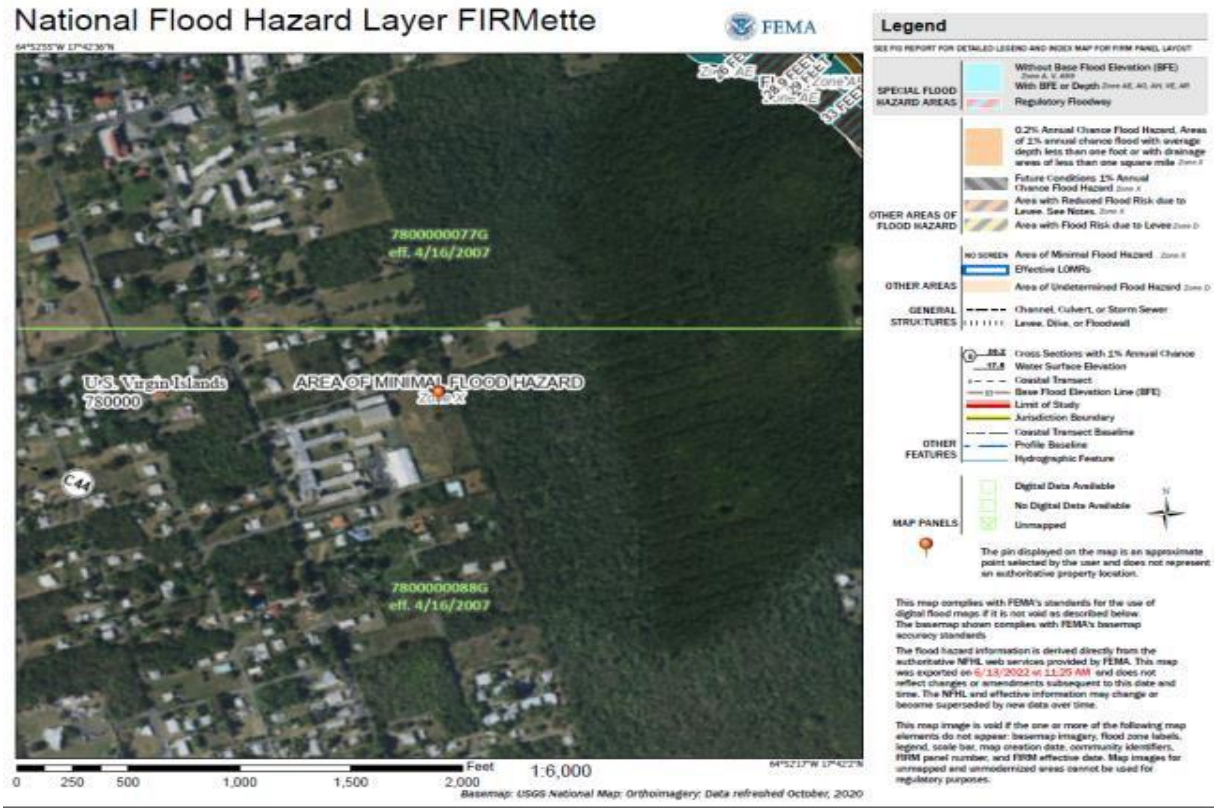
The hydrology and hydraulics design has two primary objectives: to effectively convey water off of paved surfaces and away from buildings such that their use is not impacted during heavy rains, and to attempt to minimize site runoff to no more than the volume generated by the existing site conditions. To support this, we will prepare a drainage layout identifying major features of buried and surface drainage, such as pipes, inlets, storm water manholes, swales, and culverts. The drainage layout will be used to create a site hydraulic model, which will allow us to verify rough sizing of drainage features and estimate

the increased runoff volume for the design storm due to increased impervious surfaces. Because the site has limited space for retention features, we will size an infiltration retention system that can be installed either beneath the proposed parking lot or the sports field. The TR-55 method will be used to estimate design storm runoff volumes and flow rates, per the requirements of the TPDES and SWPPP.

Existing drainage patterns will not be changed from the existing to the proposed school site. The mostly flat site slopes from a high point of 116 ft at the east down to 110 ft at the western property line.

Coastal Floodplain

The project is not located in a coastal flood plain. Sediment and erosion controls will be implemented in this area, and any materials that need to be stockpiled overnight will be properly stored so as not to be susceptible to runoff.



Fresh Water Resources

The proposed demolition and reconstruction will have no impact on freshwater resources. No freshwater ponds or streams occur within the project footprint, and groundwater resources within the area are deeper than 80 inches, meaning below the depth of the proposed project.

Oceanography

The proposed project is located inland, approximately 2,290.10 ft from the nearest coastline, and will not be affected by storm events at sea.

Marine Resources

The property is located inland and will have no direct impact on the marine environment.

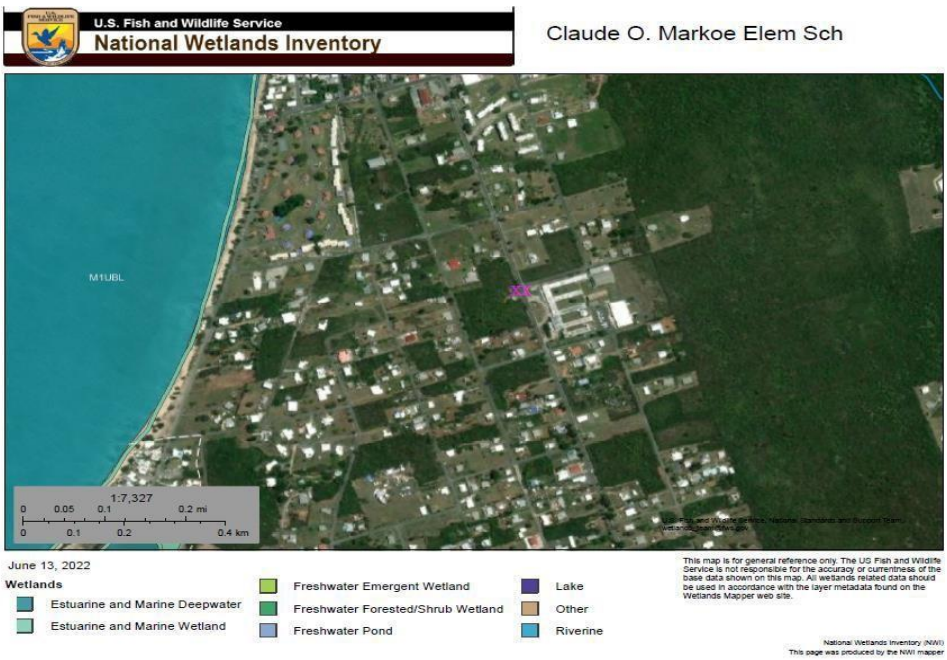
Location

Terrestrial Resources

The proposed project will occur within existing previously developed areas. No natural terrestrial resources, native flora, or fauna will be impacted.

Wetlands

The project will have no impact on wetlands, as there are no wetlands in or adjacent to the proposed project site.



Rare and Endangered Species

No endangered or threatened species or endangered species habitat exists within the proposed project site. According to the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) project tool, no endangered species, critical habitat, or migratory birds are expected to be found within the proposed project site area.

There is an endangered ground lizard (Ameiva polops) found on the island of St. Croix, but this lizard is only found on Buck Island, Green Cay, Ruth Cay and Protestant Cay, locations outside of the proposed project site.

There are also three endangered plant species located on St. Croix (Agave eggersiana, Buxus vahlii and Catesbaea melanocarpa), but these are primarily located in exposed, dry areas

- Five (5) known populations of Agave Eggersianai on St. Croix are all well removed from the proposed project site.
- Three (3) known populations of Buxus Vahlii on St. Croix are well removed from the proposed project site.
- One (1) known population of Catesbaea Melanocarpa on St. Croix, and it is also located outside the proposed project site.

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, open burning, visible air contaminants, particulate matter emissions, volatile petroleum products, sulfur compounds, and internal combustion engine exhaust are all regulated (Virgin Islands Code Rules and Regulations).

IMPACT ON MAN'S ENVIRONMENT

Land and Water Use Plans

The project site is zoned R2-R3 Residential, which complies with the Coastal Land and Water Use Plan, published in 2004. Impacts on the existing site: NONE

Visual Impacts

The proposed Demolition/Reconstruction project will demolish the existing buildings, and construction of a new facility will begin. The replacement buildings will thereby improve the area's visual appearance. As a result, this project will positively impact the existing landscape.

Historical and Archaeological Resources

The proposed demolition is intended as the initial phase of construction prior to replacing the facility structure. The project involves only impact areas that have already been developed and will not affect any known historical or archeological resources. No undisturbed area will be affected.

Waste Disposal and Accidental Spills

The Virgin Islands Waste Management Authority has specific guidelines and criteria for accepting construction debris. Any excess excavated material or construction debris will be collected, taken off-site, and disposed of in accordance with all governing laws and regulations. Equipment will be kept in good operational condition to mitigate potential fluid leaks during the proposed project timeline, and will not be fueled on-site. The selected demolition contractor shall be certified in the procedural requirements for handling, containing, and disposing of any hazardous materials identified during the demolition project. The handling and disposal of any hazardous materials shall be in strict accordance with all governing laws and regulations.

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 Claude O. Markoe Elementary School PreK-8th School Project meets each of the basic goals of the USVI for its coastal zone 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 visitors of the United States Virgin Islands.**

Comment: - The project site is not located in the Tier 1 coastal zone. However, the proposed construction work will be conducted within the regulatory framework, with all required permits in place. Once constructed, site operations will be carried out with minimal impact to the environment and in conformance with best management practices, especially with respect to storm water runoff, water reuse, and renewable energy.

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.**

Comment: The proposed project will have no impact on the economic development and growth in the coastal zone.

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.**

Comment: This project is located outside the coastal area and is 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.**

Comment: The proposed demolition and reconstruction project will affect only previously disturbed areas. The new campus will not negatively affect the immediate area's social and economic needs; it will be designed to enhance them for USVI students, school staff, and local residents.

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

Comment: The proposed project will not affect trust lands or other submerged or filled lands of the U. S. Virgin Islands. The project is not located within or near trust lands.

6. **Preserve what has been a tradition and protect what has become a right of the public by ensuring 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.**

Comment: 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.

Comment: 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.

Comment: - The proposed demolition and reconstruction project will impact only previously disturbed areas associated with the removal of the existing buildings, including the existing foundations and the reconstruction of the new campus. The project will have no impact on natural resources and will use best management practices (BMPs) to minimize disturbance, thereby protecting adjacent habitats.

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

Comment: The proposed demolition and reconstruction project will have no long-term change on sedimentation or erosion. Storm water will be directed to a gravel/ rock soak-away for percolation before any overflow into the existing drainage ways. The former building footprints will become permeable.

II. An assessment relating to the probable effects of the proposed activity and its associated facilities on the VICZMP.

Comment: The proposed demolition and reconstruction project will have no adverse effect. Best practices and measures for erosion control will be taken in compliance with all requirements approved by DPNR in the demolition permit process. After the buildings are removed, water will percolate where it previously collected on the roofs, be channeled to drains, and overflow onto impervious surfaces. The impact of this project on the school's stormwater drainage system will be less than under existing conditions.

The proposed activity is consistent to the maximum extent practicable with the Virgin Islands Coastal Zone Management Program and will be conducted in a manner consistent with such program

Thank you for your careful consideration of this request for Consistency Determination.