

FEDERAL CONSISTENCY REPORT

PROJECT:
GEORGE SCOTT FIRE STATION

PROJECT SITE:
V.I. FIRE & EMERGENCY MEDICAL SERVICES (VIFEMS)
PLOT 390 ESTATE ANNA'S RETREAT
NEW QUARTER
CHARLOTTE AMALIE, ST. THOMAS, USVI 00802



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INTRODUCTION

The Virgin Islands Fire & Emergency Medical Services (VIFEMS) intends to construct a new Fire Station Facility located at Plot 390, Estate Anna's Retreat, New Quarter, Charlotte Amalie, St. Thomas, USVI 00802.

The existing facility consists of approximately 4,700 SF. While the exact date of construction is unknown, research of available historic photography indicates that it was constructed prior to 1985. It's safe to assume that the building is close to or in excess of 40 years in age which puts it very near the end of its design service life. The building sustained significant damage during Category 5 hurricanes Irma and Maria in 2017 and was temporarily repaired to keep it operational. The facility previously received extensive repairs in the early 2000s. The significant age of the facility, coupled with stringent building code changes and expanded programmatic needs, requires a completely new Fire Station facility. The new structure will be a single story measuring approximately 8,240 gross square feet. The proposed facility will be constructed in virtually the same footprint as the existing with a minor expanded footprint to accommodate the additional square footage. The existing facility will be demolished prior to the commencement of new construction.

PROJECT LOCATION

The project site is located at Plot 390, Estate Anna's Retreat, New Quarter, Charlotte Amalie, St. Thomas, USVI 00802. It is located mid-island toward the eastern side of St. Thomas in the Tutu Park Community approximately one thousand (1,000) feet east of Tutu Park Mall, and approximately two-hundred and fifty (250) feet east of the intersection of Flamboyant Avenue and Emile Francis Memorial Drive.

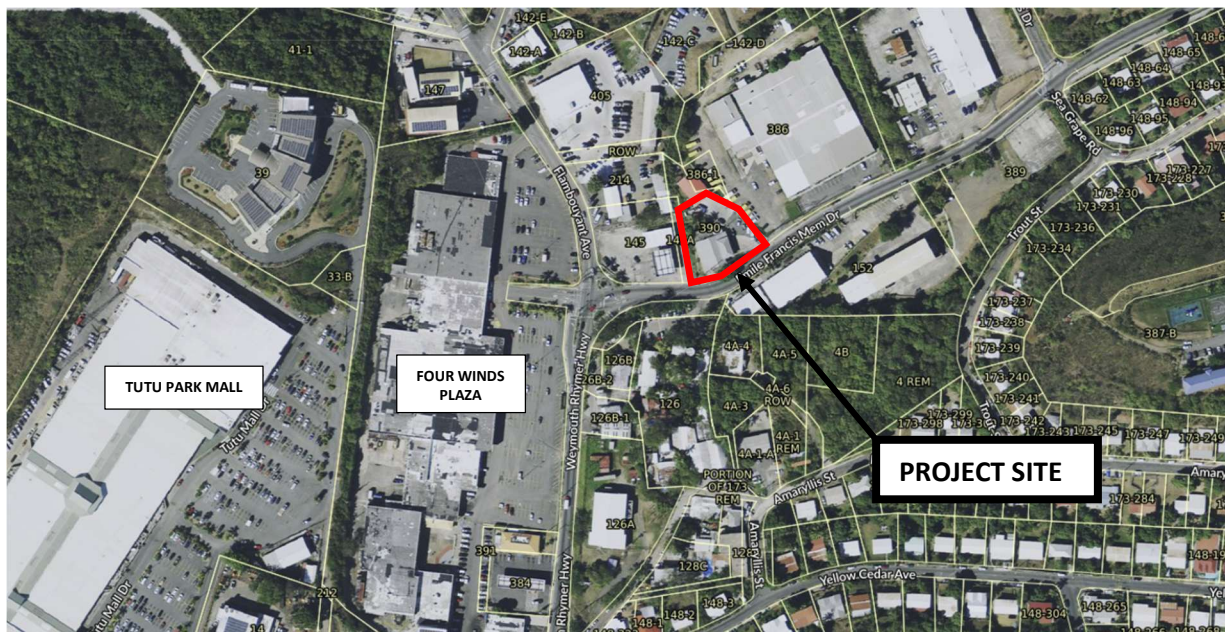


Exhibit 1 – Location Map

PROJECT DESCRIPTION

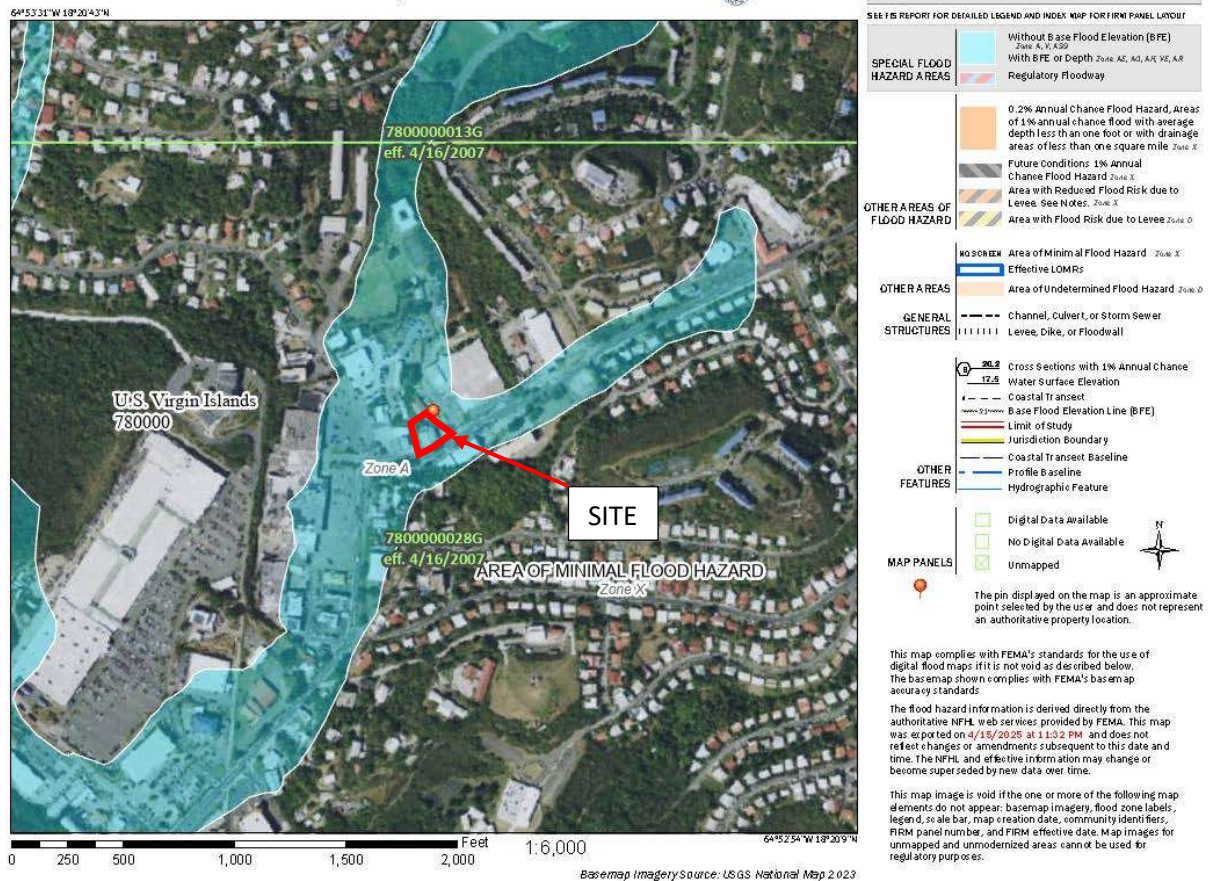
The disturbed project site measures approximately 0.59 acres which is the full limits of Plot 390, Estate Anna's Retreat, New Quarter, Charlotte Amalie, St. Thomas, USVI 00802. It is zoned Commercial (C) and owned by the Government of the Virgin Islands.

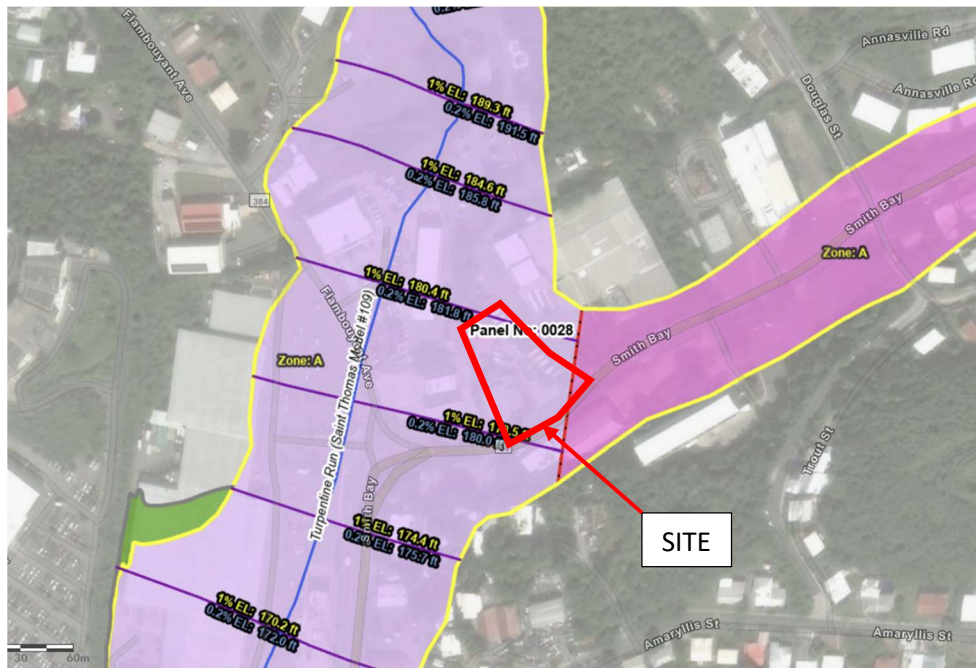
The existing fire station facility is constructed of concrete masonry units (cmu) with a galvalume metal roof.

The exact date of construction of this structure is unknown. Research of available historical photography on google earth dating to 1985, illustrates that the facility was existing prior to 1985. Building codes were significantly less stringent in the early 1980s having been drastically modified with increased design requirements due to the passing of major hurricanes such as Hugo in 1989, and Irma and Maria in 2017. The structure sustained damage during both storms in 2017 and immediate repairs were made to keep it operational given that it is an essential emergency response facility.

The disturbed project site generally slopes from north to south with the topography ranging from +184.00 ft. MSL to +194.00 ft. MSL.

National Flood Hazard Layer FIRMette





USVI Flood Hazard Advisory Map

The project is located within FEMA Flood Zone A, an area without an established Base Flood Elevation (B.F.E.). After hurricanes Irma and Maria in 2017, FEMA developed the USVI Flood Hazard Maps and established B.F.E. (1%, 100-yr) and the 500-yr (0.2%) storm elevation for various Flood Zones across the Territory.

The continued operational importance of this facility to the community classifies it as essential and therefore it falls under building risk classification IV. As such, specific requirements as per ASCE 24-14 Flood Resistant Design and Construction govern the Finish Floor Elevation (F.F.E.). These requirements include 2ft. above the FEMA B.F.E., and above the 500yr – 24hr storm maximum stage, whichever is higher. The B.F.E. for this site is 180.4 ft. and the 500-yr storm maximum stage is 181.8 ft. The B.F.E. + 2 ft. = 182.4 ft. which is the minimum controlling elevation for setting the new building F.F.E.



Photo 1 – Front View of Existing Facility – (South Elevation)



Photo 2 – Side View of Existing Facility – (East Elevation)



Photo 4 – Side View of Existing Facility – (West Elevation)

A new 8,240 SF facility is being proposed, designed to International Building Code (IBC) 2021 standards.

The new facility will consist of (3) apparatus bays measuring 1989 square feet and administrative spaces measuring 6,251 square feet. The structure is trapezoidal in shape measuring a total gross approximate square footage of 8,240 square feet. The new square footage represents an approximate 75% increase over the existing facility which is necessary to meet the current and future programmatic requirements of the Fire Service Department especially given that this is an essential first responders facility. This new design results in a much more efficient and functional layout for current and future operational needs.

Hazard Mitigation measures include reinforced cmu construction, structural steel, impact resistant glass and hurricane shutters. The mechanical systems proposed are as energy efficient as possible to reduce power consumption and operational cost.

Necessary programmatic functions addressed in the new facility are as follows:

- Office Spaces
- Dining/Day Room
- Male and Female Showers and Lockers
- Male and Female Dormitories
- ADA Accessibility
- Equipment Room
- Safe Room
- Apparatus Bays

Construction Plans prepared by Jaredian Design Group – Architects, Engineers and Construction Managers; detail all of the building design elements to include architectural, structural, mechanical, electrical, plumbing, life safety. In addition to the building improvements, major site improvements are also detailed on the construction documents such as new portland cement concrete driveways, improved grading to enhance positive stormwater drainage away from the building, and new building cistern for fire protection and supplemental potable water. The new building will be connected to both municipal potable water and sanitary sewer mains that exist within the project limits.

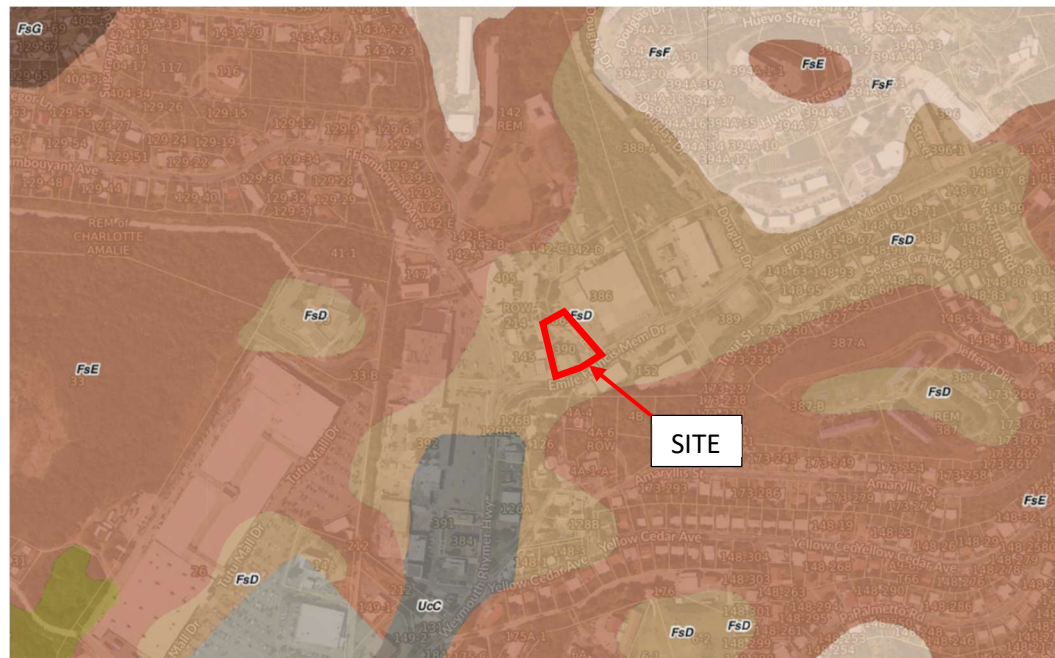
ENVIRONMENTAL IMPACTS

1.0 Climate & Weather

Best Management Practices (BMPs) implementing sediment and erosion control measures will be utilized to ensure that rainfall runoff does not adversely impact adjacent properties. These measures will include a combination of silt fences, gravel construction entrance and egress points with wash down areas, and hay bales. 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.

2.0 Landform Geology, Soils, and Historic Land Use

The soil type across the project site consists of Fredrikstal-Sussanaberg (12-20% slope) (FsD)



The Fredrikstal-Sussanaberg series consist of the following:

The Fredrikstal series consists of shallow, well drained, slowly permeable soils on summits and side slopes of volcanic hills and mountains. They formed in material weathered from igneous bedrock. Near the type location, the mean annual air temperature is about 80 degrees F., and the mean annual precipitation is about 40 inches. Slopes range from 12 to 90 percent

TYPICAL PEDON: Fredrikstal very gravelly clay loam. (Colors for moist conditions.)

A--0 to 7 inches; dark reddish brown (5YR 3/3) very gravelly clay loam; moderate medium and coarse granular structure; firm; many fine roots, common medium roots, and few coarse roots; common very fine and fine interstitial pores; about 40 percent, by volume, pebbles, cobbles, and stones; neutral; clear smooth boundary. (3 to 8 inches thick)

Bw--7 to 12 inches; reddish brown (5YR 4/3) very gravelly clay loam; moderate fine and medium subangular blocky structure; firm; common fine and medium roots; about 5 percent, by volume, flagstones; about 50 percent, by volume, pebbles; common medium faint reddish brown (5YR 4/4) masses of iron accumulation; neutral; gradual smooth boundary. (3 to 8 inches thick)

Cr--12 to 16 inches; yellowish red (5YR 4/6) weathered igneous bedrock; few fine roots; clear smooth boundary. (4 to 12 inches thick)

R--16 to 60 inches; unweathered igneous bedrock.

The Susannaberg series consists of shallow, well drained, slowly permeable soils on summits and side slopes of volcanic hills and mountains. They formed in material weathered from volcanic residuum. Near the type location, the mean annual air temperature is about 80 degrees F., and the mean annual precipitation is about 40 inches. Slopes range from 12 to 90 percent.

TYPICAL PEDON: Susannaberg clay loam. (Colors for moist conditions.)

A--0 to 2 inches; very dark brown (10YR 2/2) clay loam; moderate medium and coarse granular structure; friable; common fine and medium roots, few coarse roots; common fine and medium interstitial pores; few medium wormcasts; about 10 percent, by volume, pebbles, cobbles, and stones; neutral; clear smooth boundary. (3 to 10 inches thick)

Bw--2 to 9 inches; very dark brown (10YR 2/2) clay; moderate fine and medium subangular blocky structure; firm; common fine and medium roots, few coarse roots; common fine and medium tubular pores; few medium wormcasts; about 10 percent, by volume, pebbles; many fine soft masses of iron and manganese; neutral; clear wavy boundary. (3 to 8 inches thick)

BC--9 to 15 inches; dark brown (10YR 3/3) very gravelly clay loam; moderate fine and medium subangular blocky structure; friable; few fine, medium, and coarse roots; common fine tubular pores; many fine and medium wormcasts; about 30 percent, by volume, pebbles; common medium and coarse soft masses of iron and manganese; neutral; abrupt smooth boundary. (4 to 10 inches thick)

Cr--15 to 21 inches; yellowish brown (10YR 5/4) and dark yellowish brown (10YR 4/5) weathered igneous bedrock.

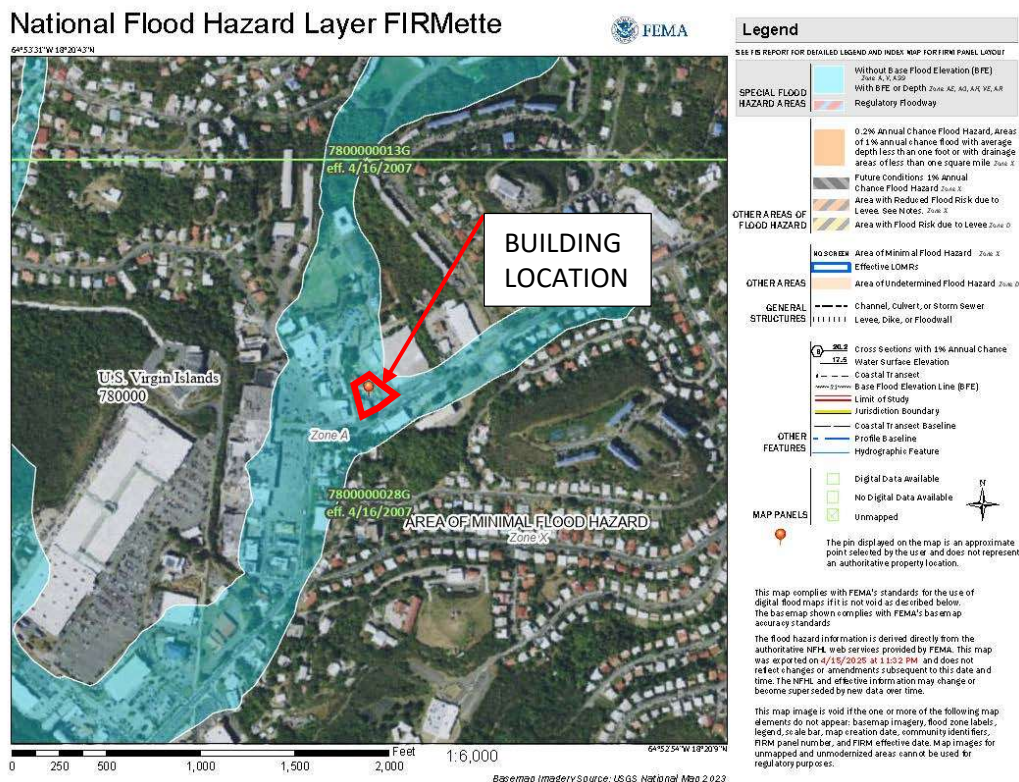
R--21 to 60 inches; yellowish brown (10YR 5/4) unweathered igneous bedrock.

3.0 [Drainage, Flooding, and Erosion Control](#)

The project is located within FEMA Flood Zone A, an area without an established Base Flood Elevation (B.F.E.). After hurricanes Irma and Maria in 2017, FEMA developed the USVI Flood Hazard Maps and established B.F.E. (1%, 100-yr) and the 500-yr (0.2%) storm elevation for various Flood Zones across the Territory.

The B.F.E. for this site is 180.4 ft. and the 500-yr storm maximum stage is 181.8 ft. The B.F.E. + 2 ft. = 182.4 ft. which is the minimum controlling elevation for setting the new building F.F.E.

To further reduce the chance of flooding, a grading plan has been developed to enhance positive drainage away from the building structure.



Best Management Practices (BMP's) will be implemented from the onset of construction to manage sediment and erosion control.

4.0 Drainage Patterns

The proposed improvements will maintain historic north to south drainage patterns across the site.

5.0 Coastal Floodplain

The project site is located approximately 4,800 feet inland away from the coastal waters of St. Thomas. The site area is only 0.59 acres and coupled with the distance away from the coastal waters, any minimal runoff from the site is not anticipated to have any adverse impacts to said coastal waters.

6.0 Fresh Water Resources

Best Management Practices (BMP's) will be implemented to manage sediment and erosion control and ensure no adverse impacts to any freshwater resources.

7.0 Oceanography

This project is located inland and will not be affected by sea storm surge events.

8.0 Marine Resources

This project is located inland and will not have an impact on marine resources.

9.0 Terrestrial Resources

The project will occur within the footprint of existing buildings, paved roadways, paved and gravel parking lots, concrete sidewalks etc. There will be no significant impacts to existing terrestrial resources or native vegetation.

10.0 Wetlands

The project will have no impact on any wetlands as no wetlands exist within the project footprint or are adjacent to the project site.

11.0 Rare and Endangered Species

There are no habitats present onsite for any rare and/or endangered species and as such, no federal, local or threatened endangered species will be impacted by this project.

12.0 Air Quality

All of St. Thomas is designated Class II by the Environmental Protection Agency (EPA) in compliance with the 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). Heavy equipment such as excavators, backhoes, dump trucks etc. will be used during construction that will create engine exhaust fumes that will go away upon completion of construction when air quality will be returned to ambient pre-construction conditions. The project will also have a standby generator for which the appropriate air quality permits will be applied for.

IMPACT ON MAN'S ENVIRONMENT

13.0 Land and Water Use plans

The project site is located at Plot 390, Estate Anna's Retreat, New Quarter, Charlotte Amalie, St. Thomas, USVI 00802. The impacted area is approximately 0.59 acres and is zoned Commercial (C) and owned by the Government of the Virgin Islands.

14.0 Visual Impacts

The new fire station facility will be a beautiful state-of-the-art modern contemporary facility that will be an aesthetic statement in architecture.

15.0 Social and Economic Impacts

The new fire station facility will have a significant social and economic impact on the surrounding community. It is the first response center for the Tutu Park community and the eastern side of St. Thomas. The new state-of-the-art facility will provide a sense of community pride and an uplift to the surrounding areas. In addition, the new facility will better serve the VIFEMS' needs, allowing it to be more efficient and effective in protecting and preserving life and property for the Tutu Park community and the eastern side of St. Thomas.

16.0 Historical and Archeological Resources

The project site is previously disturbed land. As such, there are no known historical and archeological resources in the project footprint.

17.0 Water Disposal and Accidental Spills

Impacted area is minimal and stormwater runoff will be positively drained away from the building structure and eventually offsite.

Equipment and company vehicles will be kept in good operational condition to mitigate any potential leaking of fluids

COASTAL CONSISTENCY

The proposed Virgin Islands Fire & Emergency Medical Services (VIFEMS) George Scott Fire Station will have a negligible impact on environmental resources and ambient water quality during construction. Best Management Practices (BMPs) involving sediment and erosion control devices such as silt fences, hay bales, and gravel construction access driveways will be implemented during construction to negate the potential of adverse environmental impacts. The proposed project will only occur within the footprint of previously disturbed/improved areas and as such there is no anticipated impact on any historical and/or cultural resources.

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 resources of the Coastal Zone be consistent with the enforceable policies of a state's federally approved Coastal Management Program. The Fire Station facility is designed to fall within existing roadways and previously disturbed areas. The project will not impact any natural resources and will improve the visual landscape within the Tutu Park and greater eastern community of St. Thomas. As proposed, it 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 this Project's compliance with the U.S. Virgin Islands' CZM Program.

The project meets each of the basic goals of the USVI for its coastal zone as set forth in the Virgin Islands Code Title 12, Conservation Chapter 21, Virgin Islands Coastal Zone Management [V.I. Code tit. 12, §903(b)]. 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 Fire Station Facility is designed to fall within existing roadways and previously disturbed areas. The project will not impact any natural resources and will improve the visual landscape within the Tutu Park and greater eastern community of St. Thomas.

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 economic development and growth in the coastal zone by fulfilling the required programmatic needs for the Virgin Islands Fire & Emergency Medical Services (VIFEMS). The enhanced, expanded and efficient layout of the new facility will allow VIFEMS to provide emergency first response services to the community aiding in the preservation of life and property. This new facility will mitigate potential human and property loss, thereby

fostering economic stability and growth for the community. The new facility itself will employ new technologies to reduce energy cost related to cooling and also enhance the use of natural lighting.

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 does not impact coastal dependent development within the coastal zone area.

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 proposed project is designed to fall within existing roadways and previously disturbed areas. The project will not impact any natural resources and will improve the visual landscape within the Tutu Park and greater eastern community of St. Thomas. The proposed project will provide critical public services and therefore will meet the economic and social needs of the residents of Tutu Park and greater eastern community of St. Thomas.

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 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.

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 and parking lots. 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.

The proposed project is designed to fall within existing roadways and previously disturbed areas. The project will not impact any natural resources and will improve the visual landscape within the Tutu Park and greater eastern community of St. Thomas. It will maintain coastal water quality through control of erosion, sedimentation, runoff, and siltation. As designed, it 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 set forth in the Virgin Islands Code Title 12, Conservation Chapter 21, Virgin Islands Coastal Zone Management [V.I. Code tit. 12, § 903 (b)].

END COASTAL CONSISTENCY DETERMINATION REQUEST