MAJOR CZM LAND ENVIRONMENTAL ASSESSMENT REPORT PLOT 73 ESTATE CLAIRMONT ST. CROIX, U.S. VIRGIN ISLANDS

SUBMITTED TO

THE OFFICE OF COASTAL ZONE MANAGEMENT
OFFICE OF PERMITS
DEPARTMENT OF PLANNING AND NATURAL RESOURCES
GOVERNMENT OF THE VIRGIN ISLANDS

SUBMITTED BY

INFRA TOWERS, LLC.

PREPARED BY

BIOIMPACT, INC. P.O. BOX 132 KINGSHILL, ST. CROIX, U.S.VIRGIN ISLANDS 00851

SEPTEMBER 2023

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Maintenance Plan



1.00 NAME AND ADDRESS OF APPLICANT

Infra Towers, LLC 1800 Diagonal Road, Suite 600 Alexandria, Virginia 22314

2.0 LOCATION OF PROJECT

Infra Towers, LLC is proposing to install a monopalm wireless tower on Plot 73 Estate Clairmont, Northside B Quarter, St. Croix, U.S. Virgin Islands. The tower will be located at Latitude 17.774169° Longitude -64.77438°.

A location map, showing the regional context and vicinity in the U.S. Virgin Islands is shown in Figure 2.00.1. Figure 2.00.2 depicts the project in reference to adjacent properties, and Figure 2.00.3 depicts the property in relationship to jurisdictional line of the Department of Planning and Natural Resources, Division of Coastal Zone Management.



Figure 2.00.1 Location map showing the regional context and vicinity in the U.S. Virgin Islands.



Figure 2.00.2 The project in reference to adjacent properties.

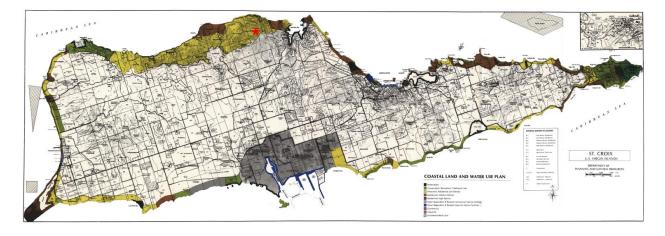


Figure 2.00.3 Agency Review Map (DPNR Land and Water Use Map).

3.00 ABSTRACT

Infra Towers, LLC develops, owns, and operates wireless infrastructure facilities. They are proposing to construct a 100-foot monopalm service tower (100-foot monopalm with a 6-foot lighting rod) on Plot 73 Estate Clairmont, Northside B Quarter, St. Croix. The facility will be housed in a 30ft by 50ft compound. The compound will be graveled and have a 10ft x 18ft. concrete slab which will have a backup diesel generator with associated fuel tank and equipment cabinets.

4.00 STATEMENT OF OBJECTIVES SOUGHT BY THE PROPOSED PROJECT

Liberty Mobile USVI/PR (Liberty) is a wireless service provider working to improve service in St. Croix USVI. Infra Towers, LLC is working with Liberty to develop wireless infrastructure to reduce gaps in service. The 100-foot monopalm will fill a significant gap in existing service and can support up to three wireless service providers.

5.00 DESCRIPTION OF PROPOSED PROJECT

5.01 Summary of Proposed Project

Infra Towers, LLC is proposing to construct a 100-foot monopalm service tower (100-foot monopalm with a 6-foot lighting rod) on Plot 73 Estate Clairmont, Northside B Quarter, St. Croix. The tower will be housed in a 30ft by 50ft compound surrounded by a 6ft high chain-link fence. The site will be accessed by a 5ft wide walkway off the existing paved driveway. The compound will be graveled and have a 10ft x 18ft. concrete slab which will have a backup diesel generator with associated fuel tank and equipment cabinets. There will be a multi-meter H-Frame utility rack. The compound includes sufficient space for future equipment for additional wireless carriers.

There is an existing generator room located in the project footprint. The generator room will be relocated to the east.

5.01a Purpose of Project

The purpose of this application is to allow the construction of a 100-foot monopalm wireless service tower to help resolve significant gaps in wireless service on the island of St. Croix.

5.01b Presence and Location of Any Critical Areas or Possible Trouble Spots

The property is within an existing maintained lawn associated with a residential property. The site currently has a generator building which will be relocated to the east on to another area of maintained mown grass. The project has been issued clearance letters from both the Division of Fish and Wildlife and the Division of Historic Preservation.

There are no critical areas or problem areas associated with the project.

5.01c Proposed Method of Land Clearing

A small low-weight excavator will be used for grading. The site is already clear of vegetation. Prior to any earthmoving, sedimentation and erosion control features will be installed.

5.01d Provisions to Preserve Topsoil and Limit Site Disturbance

The project will be occurring in an area which is already completely disturbed and is the location of an existing generator building and mown lawn. The project will be constructing a graveled

walkway from the existing paved drive rather than a driveway to minimize disturbance.

5.01e Erosion and Sedimentation Control Devices to be Implemented

Wire re-enforced silt fencing will be used to surround all areas of earth disturbance and will be maintained until all exposed surfaces are stabilized.

5.01f Schedule for Earth Change Activities and Implementation of Erosion/Sediment Control Measures

Silt fencing will be installed prior to any earth change.

5.01g Maintenance of Erosion and Sediment Control Measures

Erosion control will be inspected and maintained throughout the installation. Any deficiencies in the control measures will be repaired immediately and no deficiencies will be left overnight.

5.01h Method of Stormwater Management

The site disturbance is minimal, and the project will not change existing drainage patterns.

5.01i Maintenance Schedule for Stormwater Facilities

No stormwater facilities will be installed.

5.01i Sewage Disposal

This is an unmanned site and does not require sewage disposal.

5.02 DRAWINGS PROVIDED

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Grading and Erosion Control	.11
Compound Layout	
Equipment Plan	.13
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Civil Details (Compound Section)	.15
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5.03 PROPOSED DATES OF CONSTRUCTION

The project will begin as soon as all permits are granted.

5.03.1 PROJECT WORK PLAN

5.03.1a Identification of Subprojects and Activities

- Install silt fencing as shown on the plans and down slope of all areas of excavation.
- Clear and Grub project footprint.
- Install temporary stabilization.
- Construct tower foundation and communication facilities.
- Install on-site utilities.
- Finish grade proposed access and tower compound.
- Stabilize gravel and paved areas per plans, permanently seed areas of disturbance outside compound.
- Maintain silt fence until all soils are stabilized.
- Remove silt fencing once the site is completely stabilized.

011 ACRES (4,79 SF) 01 ACRES (4,192 SF) VIRGIN ISLANDS WATER AND POWER AUTHORITY (WAPA) PHONE. (340) 773-2250 TELECOMMUNICATIONS RAWLAND MONOPALM STEALTH TOWER 100-FT+/-17" 46 27.007" N (37.774169") 64" 46 27.76" W (44.77438") 888.5-FT+/-AMSL (NAVD 88) DPNR, US VIRGIN ISLANDS 201207052500 SITE OVERVIEW THE OF OCCUPANCY: SIET THE: TOWER THE FORT: TOWER LATITUDE: TOWER LOWSTILDE: GROUND ELEVATION: CROUND ELEVATION: PARCEL ID: ZONED: PROJECT AREA: DISTURBED AREA: POWER COMPANY:

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	LAND OWNER.	HILLTOP PROPERTIES, LLC 1215 KING CROSS STREET, CHRISTIANSTED, USVI 00820
m-1	CARRIER	LIBERTY PR 996 SAN ROBERTO STREET, MONACILLOS RIO PIEDRAS, PR 00926
44400	APPLICANT:	INFRA TOWERS, LLC 1800 DIAGONAL ROAD, STE 600 ALEXANDRIA, VA 22314
	SITE ENGINEER.	DELTA OAKS GROUP, PLLC 4904 PROFESSIONAL COURT AAAEIGH, NOC 27609 CONTACT: WILLIAM RHETT BUTLER, PE (919) 342-8347

PROPOSED 100-FT MONOPALM STEALTH TOWER

CONSTRUCTION DRAWINGS

THE GREEN PIECE ENGINEERING +
ENVIRONMENT, LIC SOULJ, CHANDLESS WHARF CHRISTIANSTED, VIRGIN ISLANDS 008 PRONE, GHJ, 778-747 RAUL, IPPWHEGRENVIECLUS

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE PROPERTION FOR THE LOCAL CONFORMER, CONTINUES, WORKING IN THESE TLANS IS TO BE CONSTRUED FRAMEN WORK NOT CONFIGURATION THE LIBERT EDITIONS OF THE POLICINISM.

CODE COMPLIANCE

8. 2018 INTERNATIONAL MECHANICAL CODE 9. 2018 INTERNATIONAL PIEC GAS CODE 11. 2028 INTERNATIONAL ENERGY CONSERVATION CODE 11. 2020 NATIONAL ELECTRICAL CODE

INFRA TOWERS, LLC O DIAGONAL ROAD, STE 600 ALEXANDRIA, VA 22314 PHONE: (571) 336-1720 INFRA



LIBERTY LATIN AMERICA











SITE NAME:
CLAIRMONT
SITE ADDRESS:
73 CLAIRMONT
CHRISTIANSTED, USVI 00820

SITE ID: VI020

SHEET TITLE TITLE SHEET

SHEET NUMBER T-1

INFRA TOWERS

INFRA TOWERS, LLC 1800 DIAGONAL ROAD, STE 600 ALEXANDRIA, VA 22314

SITE NAME CLAIRMONT

SITE ID VI020

SITE COORDINATES

17° 46' 27.007" N, 64° 46' 27.767" W 73 CLAIRMONT CHRISTIANSTED, USVI 00820 SITE ADDRESS





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DESCRIPTION

SHEET NO. SHEET INDEX

DESCRIPTION

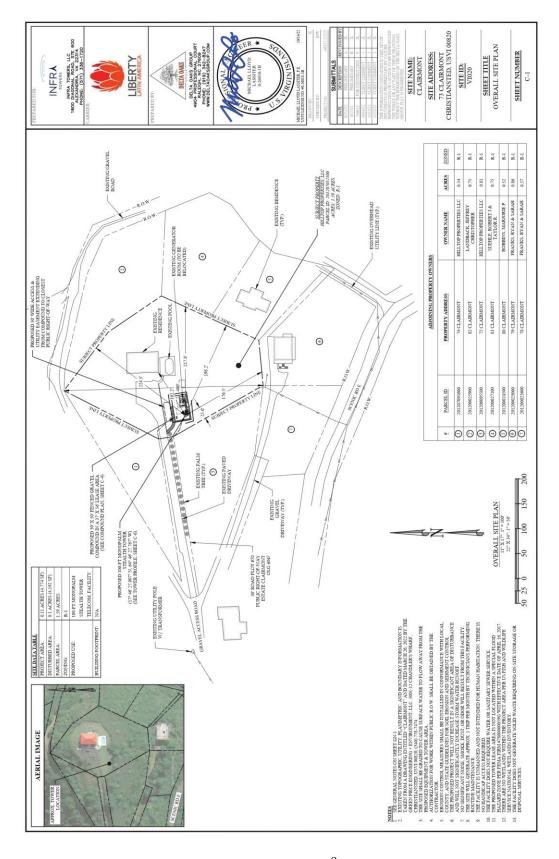
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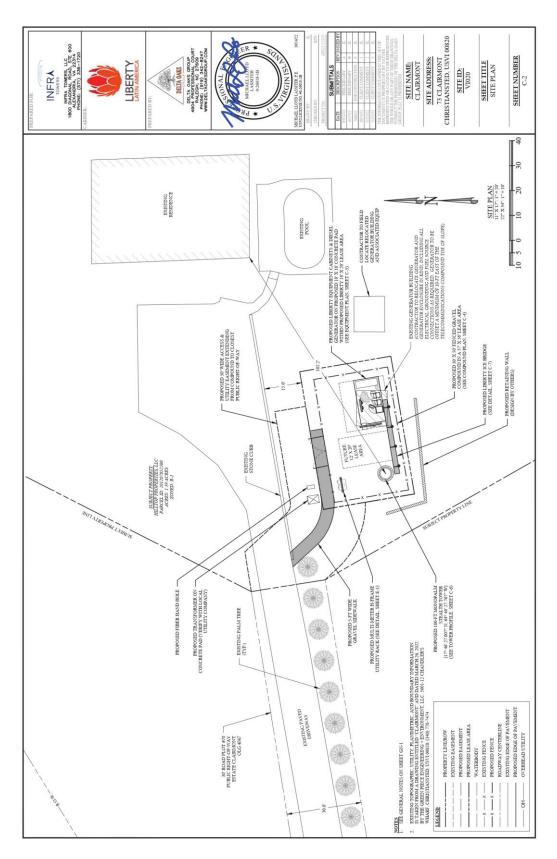
USVI S11, INC.
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48 HOURS REFORE YOU DIG

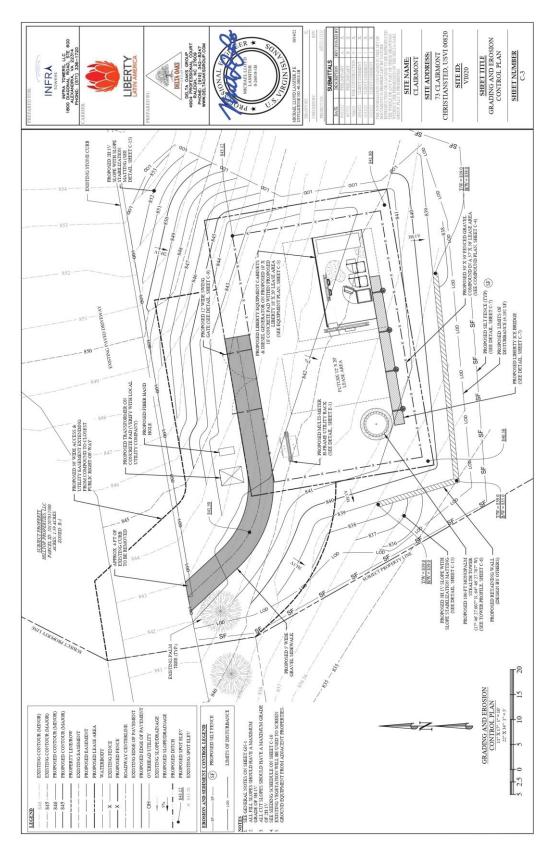
GENERAL NOTES

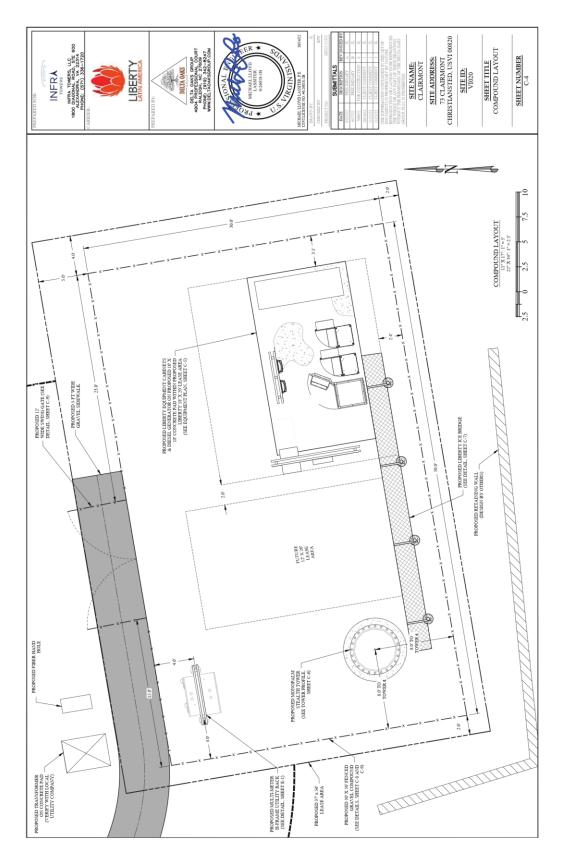
PROPERTY OWNER: HILLTOP PROPERTIES, LLC 1A LOCATION LATITUDE: N 17' 46' 27.007" NAD83 LONGINDE:W 64' 46' 27.767" NAD83 ELEVATION: 838.5' NYD09 © EXIST. UTILITY POLE EXIST. TELE PED O IRON FOUND EXISEL MARK FOUND COMPUTED POINT 03/26/23 The Green Piece Engineering + Environment, LLC 5001-12 Chandler's Wharf CLAIRMONT M 020 73 CLAIRMONT CHRISTIANSTED ST CROIX, VI 00820 ST CROIX US VIRGIN ISLANDS SITE OWNER: INFRA TOWERS, LLC 1800-600 DIAGONAL ROAD ALEXANDRIA, VA 22314 Christiansted, Virgin Islands 00820 Ph: 340.778.7474 Infra Towers, LLC 1800-600 Diagonal Road Alexandria, VA 22314 22X049 REVISION/ISSUE SITE SURVEY PER COMMENTS PROJECT NUMBER: PREPARED FOR: SITE ADDRESS: SITE NUMBER: SITE NAME: THIS PLAN HAS BEEN PREPARED FOR LAYOUT AND PERMITTING PURPOSES ONLY. THIS IS NOT A BOUNDARY SURVEY. PROPERTY LINES SHOWN WERE TAKEN FROM EXISTING FIELD EVIDENCE, EXISTING DEEDS AND 7. PROPERTY OWNER: HILLTOP PROPERTIES, LLC. 8. THIS MAP AND A CERTIFIED SURVET AND HAS NOT BEEN REVIEWED BY A LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH A PAPPLISATE LAND DEVELOPMENT BE LIGHTON SURVEYOR TO SOME TO SHAD 4. VERTICAL DATUM , LATITUDE, LONGITUDE AND STATE PLANE COORDINATES, IF SHOWN, ARE GIVEN IN NORTH AMERICAN DATUM 6. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES AND ALL BEARINGS ARE PUERTO I/OS VIRGIN ISLANDS COORDINATE PLOT 81 Estate Clairmont OLG 4047 ISLAND TITLE SERVICES CORP REPORT IT-21-0035 05/20/2020 EXCEPTIONS Source: USVI GIS Property Lines PLOT 80 Estate Clairmont OLG 4047 Estate Clairr OLG 4047 PLOT 82 1. THIS SURVEY WAS PREPARED BY BCSC DOSPIVA, LLC., UNDER THE SUPERVISION OF JEFFREY BATEMAN, PLS. Estate Clairmont OLG 4047 PLATS OF PUBLIC RECORD, AND INFORMATION SUPPLIED TO THE SURVEYOR BY THE CLIENT PLOT 79 Estate Clairmont OLG 4047 PLOT 73 Estate Clairmont OLG 4047 1.5871 US Acres +/(Recorded) Estate Clairmont OLG 4047 ROAD PLOT 70 A- AS SHOWN ON MAP B- 20'S FERBACK APPLISTO PERIMETER OF PLOTS 73, 74 & 75 (COMMON OWNERSHIP) C- NOTA SUNEYTEM C- NOTA SUNEYTEM PLOT 100 CENTLE 4. VERTICAL DATUM JATTUDE, LONGITUDE AND STATE PLANE LUCHGURINALES, IP 2017 WINDS 7. OF 1983 (NADBS) AND ARE DERIVED BY OPUS SOLUTION BASED ON ZONE 5200. OF 324. S. FIELD EQUIPMENT USED: TRIMBLE GNSS GPS. E - DOES NOT AFFECT THE LEASE AREA OR ACCESS/UTILITY EASEMENTS F - DOES NOT AFFECT THE LEASE AREA OR ACCESS/UTILITY EASEMENTS PARENT TRACT DESCRIPTION Plot No. 73 Estate Clairmont, Northside Be Quarter, St. Crox, Ly Sv. Virgin Islands, as shown on Map 4047 filed with the Office of the Lt. Governor. PLOT 101 Estate Clairmont OLG 4047 DATED APRIL 16, 2007 AND IS ZONED R-1. **Estate Clairmont** SYSTEM UNLESS OTHERWISE SHOWN. PLOT 74 Estate Clairmont OLG 4047 OLG 4047 PLOT 75 GENERAL NOTES Estate Clairmont OLG 4047 SCALE: 1" = 100 ft ROAD PLOT 70 (*) 10b The site Lease Area and Essements are located in an area adegrated as a flood Zone X as defined by the U.S. Department of Housing, and Urban Development pursuant to the Flood Disaster Act of 1973 FIRM Community Panel No 780000 00596. (X) 12. Depicts the latitudinal and longitudinal coordinates of the proposed tower(b) location(s), to the nearest tenth of a second, the elevation above mean sea level of the base and tip of each tower, plus or minus 20 feet, the elevation of the tip of each tower as secured from ground level, and additionally, the levestion of the tip of the highest appurtenance on the tower as measured from (X) 11. Describes and shows the location of all public streets and roads visibly providing access to and from the subject property, and correctly sets forth the municipal address of the subject property. ground level, if such appurtenance is higher in elevation than the highest point of the tower structure itself, to the nearest foot, on the survey drawing and on a separate $8.1/2^{\circ}$ x 11° certified letterhead.) 10a. Shows the location and acres contained in all portions of nent, LLC the Lease Area and Easements which are located in an area designated as a "FLOOD PRONE AREA (ZONE A)" as defined by the U.S. Department of Housing and Urban Development pursuant to the Flood Disaster Act of 1973; NONE, FIRM Community Panel No. WICINITY MAP 1" = 2000 ft (X) 13. Survey of the Lease Area and Easements meets or exceeds the minimum technical standards for Land Boundary 2 1053-LS & SURVINE S X) 14. The subject property is currently zoned R-1. Jeffrey L' Bateman, PLS The Green Piece Engineering + Enviro surveys set forth by Virgin Islands Law. March 18, 2022 L. Jeffrey Bateman, do hereby certify to infra Towers, LLC, a Delaware Ininted Insiling romapan, with its headquares address at 1800 Dagonal Road, Sute 600, Alexandra, Ad. 2334, infra Holdings, LLC, a Delaware ininted lability company, that intermediate Holdings, LLC, a Delaware ininted lability company, and each of their affiliates and tenders, the Federal Advation Andmistration, Isaland Title Services Corporation, Lowenstein Sandler LLP, Stewart Title Guaranty Company, Tellety National Title Instrumence Company, Old Republic National Title Instrumence Company and the successors and assigns of each of the foregoing. That this survey was made on the ground under my personal sugeryicion and that this pale is a true, correct and accurate representation of the facts as found at the time of the accurate representation of the facts as found at the time of the are from a re part of a parent parets, such lease Paretel and Essements are located within the boundaries of the record title legal description of such parent parcel. The location of said Lease Parcel and seaments relative to an approximation of the location of the boundaries of the parent tracts illustrated on the inset shown $(\mathbf{x} \setminus \mathbf{y})$. Shows the location and dimension of all alleys, streets, roads, right-of-way, easternets and other matters of record which the surveyor has been adviced affects the lease Area and/or streements leave has been identified by instrument volume and page number if available). $\boldsymbol{\mathsf{X}}$) 4. The distance from the nearest intersecting public street or oad is as shown hereon. (X) 6. Except as shown, there are no visible easements, nights-of way, party walls or conflicts affecting the Lease Area and/or Easements; further, this survey is not subject to any easements or rights-of-way not visible on the ground. (X) 9. Except as shown, there are no visible encroachments onto the Lease Area and/or Easements by any building, structure or other improvements situated on adjoining premises. (X) 7. The location of all buildings, structures and other improvements of visible teams affecting the tease Parcel and Easement, If shown, are as indicated hereon. The location of all on the parliar trast, structures as indicated hereon. The location of all on the parliar trast, structures are approximate to institute the parliar trast, structure and Easements are experiently located within the boundaries of the parent parcel, as shown on the inset. 3c. Stakes are set in the centerline of proposed Access Road. (X) 38. Except as shown, there are no visible protrusions on adjoining premises, streets or alleys by any building, structure or other improvements situated on the Lease Area and/or Easements. I do hereby certify that the survey conforms to the conditions and stipulations as checked $\langle x \rangle$ below. (🗶) 1. The boundary lines and dimensions of the Infra Towers' Leased Area, Access and Utility easements (collectively, the X) 2. To the extent the Lease Area and Easements indicated 3d. Stakes are set at each proposed guy anchor point (if) 3a. Stakes are set at each proposed Lease Area corner.) 3b. Stakes are set at proposed tower location. 'Easements") indicated hereon is correct. X) 3e. No stakes are set.

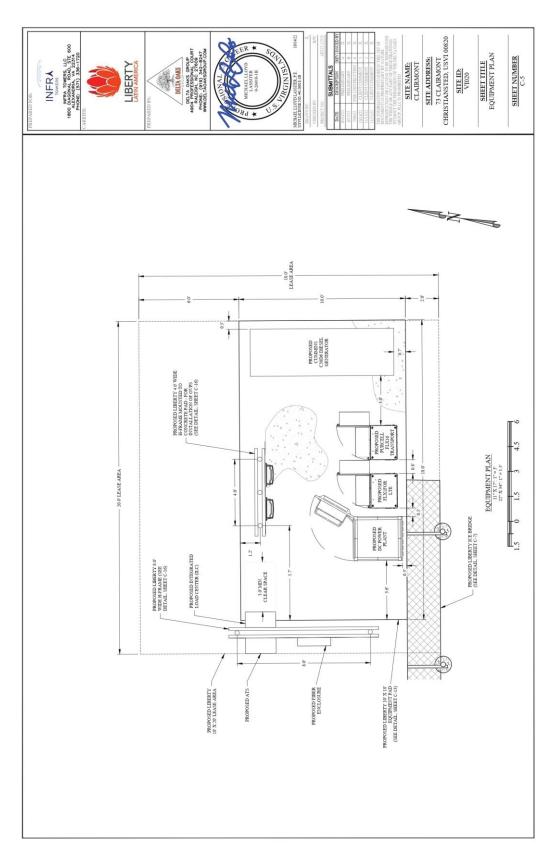


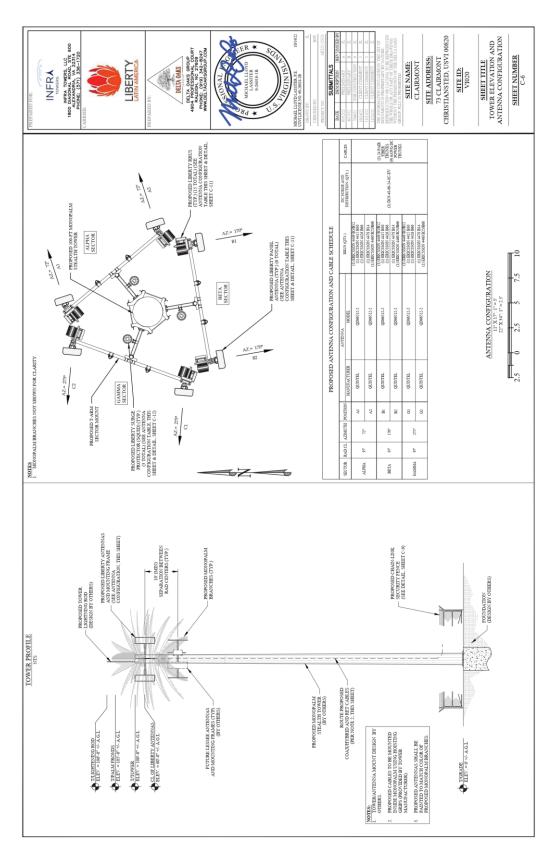


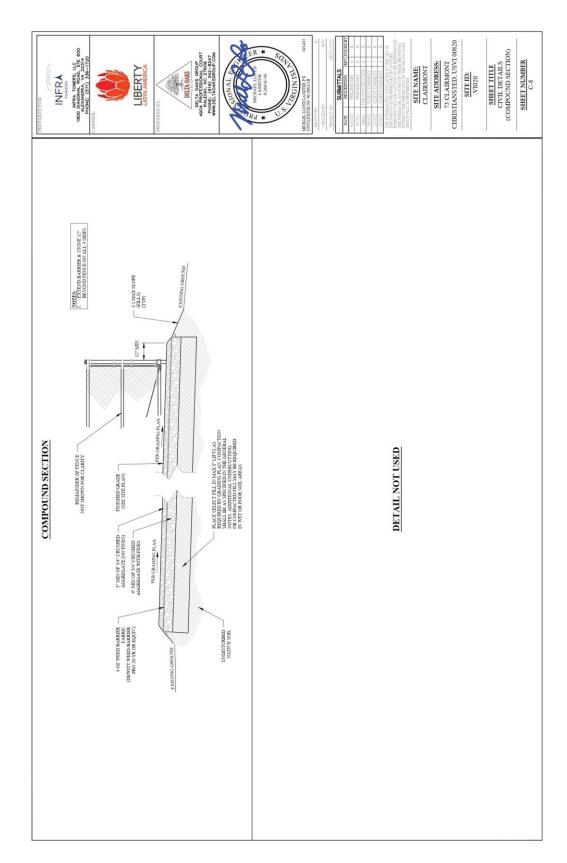


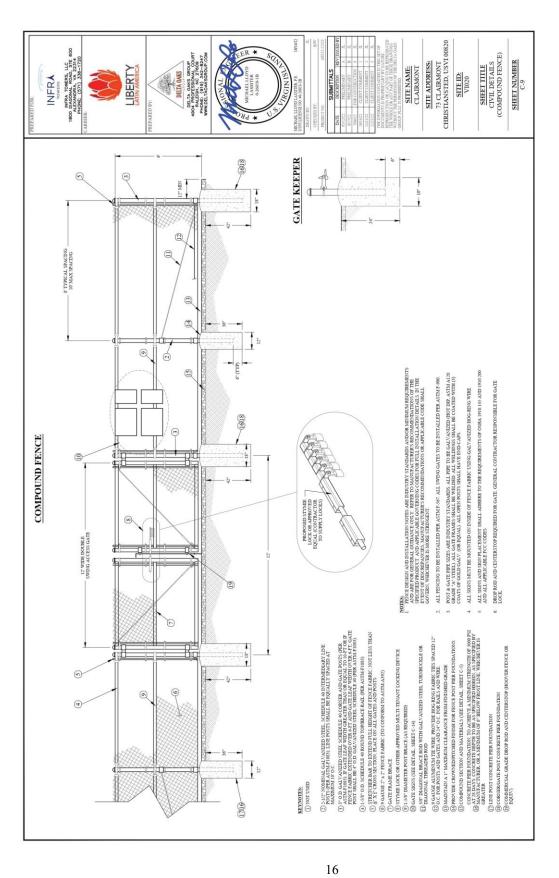












6.00 ENVIRONMENTAL SETTING AND PROBABLE PROJECT MODIFICATIONS

6.01 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 (IRF, 1977). These trade winds vary seasonally (Figure 6.01.1) and are broadly divided into 4 seasonal modes: 1) December to February; 2) March to May; 3) June to August; and 4) September to November. Below are the characteristics of these modes as taken from Marine Environments of the Virgin Islands Technical Supplement No. 1 (IRF, 1977).

December - February

During the winter the trade winds reach a maximum and blow with great regularity from the east-northeast. Wind speeds range from eleven to twenty-one knots about sixty percent of the time in January. This is a period when the Bermuda High is intensified with only nominal compensation pressure changes in the Equatorial Trough. The trade winds during this period are interrupted by "Northerners" or "Christmas Winds" which blow more than twenty knots from a northerly direction in gusts from one to three days. Such outbreaks average about thirty each year. They are created by the strengthening of high-pressure cells over the North American continent that, in turn, allows weak cold fronts to move southeastward over the entire Caribbean region. These storms are accompanied by intermittent rains, clouds, and low visibility for mariners.

March - May

During the spring, the trade winds are reduced in speed and blow mainly from the east. Winds exceed twenty knots only thirteen percent of the time in April. The change in speed and direction is the result of a decrease in the Equatorial Trough.

June - August

Trade winds reach a secondary maximum during this period and blow predominantly from the east to east southeast. Speeds exceed twenty knots twenty-three percent of the time during July. The trend for increasing winds results from the strengthening of the Bermuda High and a concurrent lowering of the pressure in the Equatorial Trough. Trade winds during this period are interrupted by occasional hurricanes.

September - November

During the fall, winds blow mainly from the east or southeast and speeds reach an annual minimum. Only seven percent of the winds exceed twenty knots in October. The low speeds result from a decrease in the Equatorial Trough. During this period, especially during late

August through mid-October, the normal trade wind regime is often broken down by easterly waves, tropical storms, and hurricanes.

Storms and Hurricanes

There are numerous disturbances during the year, especially squalls and thunderstorms. These occur most frequently during the summer, lasting only a few hours and causing no pronounced change in the trade winds.

A tropical cyclone whose winds exceed 74 miles per hour is termed a hurricane in the northern hemisphere, and significantly affects the area. These hurricanes occur most frequently between August and mid-October (Figure 6.01.2) with their peak activity occurring in September. The annual probability of a cyclone is one in sixteen years (Bowden, 1974).

The tower is being designed to 2018 IBC 165 MPH Wind Speed.

Climate

The climate is maritime tropical and is characterized by generally fair weather, steady winds, and slight but regular annual, seasonal, and diurnal ranges in temperature. Rain-producing weather systems generally move into St. Croix from the east in summer and from the northwest in winter. Major rainfall events are associated with weather systems that enhance the uplift of moist air in the region. Orographic lifting of moist air over hilly terrain is the most common cause of rainfall in St. Croix. The amount of rainfall increases with increasing elevation. The total annual rainfall differs substantially at various locations throughout the island. The total annual rainfall is more than 50 inches in the northwestern part of the island, about 25 to 35 inches on the southwestern coast, about 40 to 50 inches on the south-central coast, and about 20 to 30 inches in the eastern part of the island. Leeward aspects receive greater amounts of rain because clouds develop over the slopes on a daily basis. In general, days have a higher incidence of rainfall than nights. St. Croix's wettest period generally is from September to November, and the driest period is from January to June.

Occasionally, intense rainfall occurs during the drier period. The Clairmont site receives about 40 inches of rainfall a year.

The difference between the mean temperatures of the coolest and warmest month is only7 degrees F. The highest temperatures are in August or September and the lowest are in January or February. The highest average daytime temperature in the warmest months is about 88 degrees F, and in the coolest months is in the low 80's. Nighttime lows are usually in the mid 70's during the warmer months and in the high 60's during the cooler months (USGS 1998). In general, air temperature in the Virgin Islands ranges between 75 degrees and 88 degrees.

Table 6.01.1 Monthly Climate Summary from 1972 to 2012

CHRISTIANSTED FORT, VIRGIN ISLANDS (671740)

Period of Record Monthly Climate Summary

Period of Record: 1/1/1972 to 4/30/2012

-	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Annual
Average Max. Temperature (F)	82.8 83.1 83.2 84.4 86.1 87.0 87.0 87.4 87.8 87.5 85.7 83.5 85.5
Average Min. Temperature (F)	71.7 71.7 72.7 74.2 75.8 77.1 77.3 77.3 76.6 76.3 75.1 73.2 74.9
Average Total Precipitation (in.)	1.93 1.42 1.81 2.41 4.38 2.70 3.32 3.82 5.43 5.50 6.28 3.07 42.07

Percent of possible observations for period of record.

Max. Temp.: 80.9% Min. Temp.: 82.9% Precipitation: 93.2%

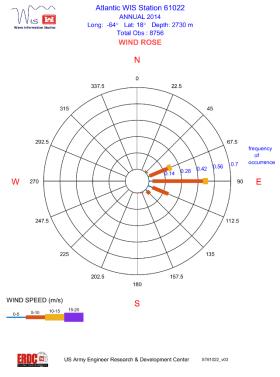


Figure 6.01.1 A wind rose from station ST61022 showing the frequency of occurrence of wind speed and direction in 2014. (ERDC, USACE Research and Development Center wis.usace.army.mil/hindcasts.html?dmn=atlantic)

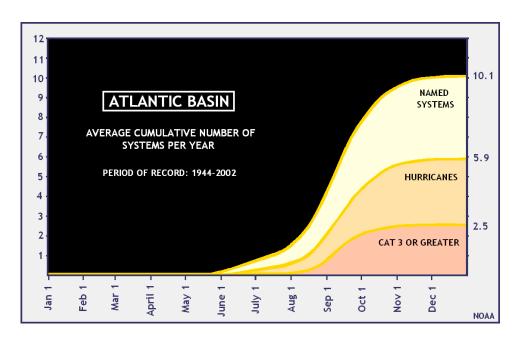
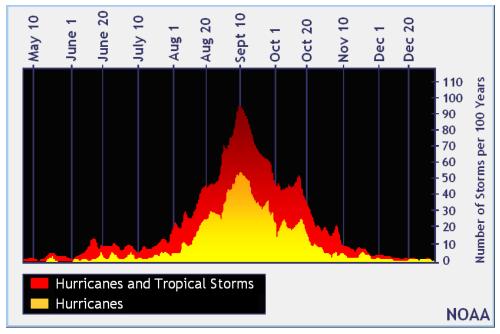


Figure 6.01.2 Tropical Cyclone Frequencies in the Atlantic (National Weather Service).

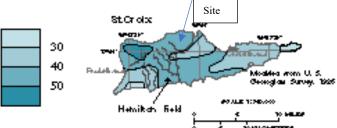


6.01.3 Tropical Storm and Hurricane Occurrences in the Atlantic (National Weather Service).

EXPLANATION

Average annual precipitation (1951-80), in inches

National Weather Service precipitation gage



6.01.4 Rainfall map of St. Croix (National Weather Service).

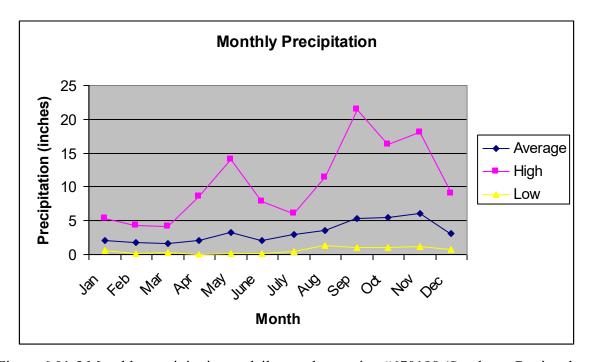


Figure 6.01.5 Monthly precipitation at daily weather station #670198 (Southeast Regional Climate Center, 1971-2000).

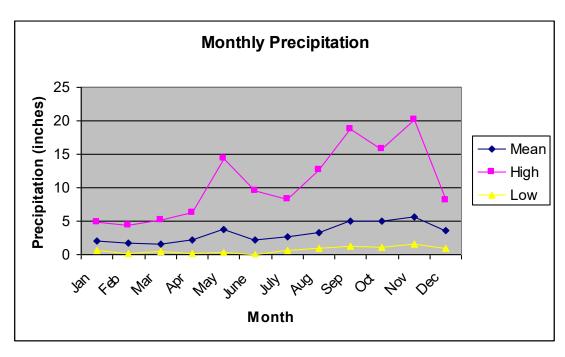


Figure 6.01.6 Monthly precipitation at daily weather station #673677 (Southeast Regional Climate Center, 1971-2000).

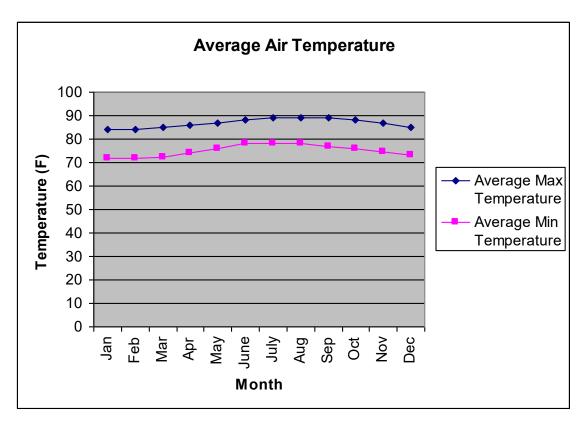


Figure 6.01.7 Average monthly air temperature at daily weather station #670198 (Southeast Regional Climate Center, 1971-2000).

6.02 Landforms, Geology, Soils, and Historic Use

GEOLOGY OF ST. CROIX

The Virgin Islands are near the northeastern corner of the present Caribbean Plate, a relatively small trapezoidal-shaped plate that is moving eastward relative to the North and South American continents carried on the American plate. The arc of the Lesser Antilles is an active volcanic arc above a subduction zone in which the Atlantic oceanic crust of the American Plate is carried downward under the Caribbean Plate. The closest volcano to the Virgin Islands that is still active is Saba, about 160 km to the east.

The island of St. Croix consists geologically of two predominant mountainous areas (the North side and the east end ranges), with a central sediment filled valley in between. The oldest rock underlying both ranges, and probably in the valley as well, are from the Cretaceous period, 80 million years ago. These sedimentary rocks that were formed from the erosion of volcanic ash and debris, and are beset with igneous intrusions, underwent a period of orogeny lifting them up from the ocean floor and forming two islands with a channel in between. Oligocene clays and muds were deposited in this channel forming what is known as the Jealousy formation. Next, tertiary limestones were deposited when this channel area became a lagoon encircled by coral reef. These limestones and marls that overlay the Jealousy formation are known as the Kingshill

formation. After these formations were deposited, the area underwent another period of uplifting, the two islands became connected by the newly emergent filled-in area, and the island of St. Croix was formed. Since that time, geologic activity has been limited primarily to the erosion of sediments and the formation of ponds, beaches, reefs and beach rock coast.

GEOLOGY OF 73 CLAIRMONT

The site is at the top of one of the highest hills in the northside mountain range which extends from mid island to the west end. The tower will sit on a western facing slope.

ADVERSE SITE CONDITIONS

The U.S. Virgin Islands lie in one of the most earthquake prone areas of the world, and are susceptible to ground shaking, earthquake-induced ground failures, surface fault ruptures and tsunamis (tidal waves) (Hays, 1984). The activity is mostly associated with large-scale tectonic activity or faulting, originating in the Anegada Trough to the northeast of the islands. The year 2023 marks the 156th anniversary of the last major earthquake in the islands. This quake, which occurred in 1867, had an identified intensity of VIII on the Modified Mercalli Scale. Earthquakes of this magnitude have generally been associated with epicentral ground accelerations of between 0.05 and 0.35 gravities. Over the last several years numerous minor tremors have been felt on the island. Many feel that this increased activity is associated with the volcanic eruptions that have been occurring to the southeast on the island of Montserrat. Below is the earthquake probability map for St. Croix produced by UVI Conservation Data Center. The tower is located in the lowest probability area for St. Croix.

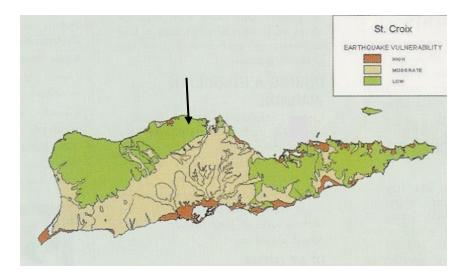


Figure 6.02.1 Earthquake probability map, UVI Conservation Data Center. SOILS

The tower has been designed to Seismic Design Category D.

Site is entire Victory-Southgate soils 40-70% slopes as shown in the Soil Resource Report for Virgin Islands of the United States. The soils are found on summits and side slopes of volcanic hills and mountains, the soil is well drained, and bedrock is found in 20 to 40 inches of depth.



Figure 6.02.1 Soils map of Plot 73 Estate Clairmont.

IMPACT OF PROJECT

The project does not require significant cutting or filling and will not result in a significant change to the geology of the site.

6.03 Drainage, Flooding and Erosion Control

6.03A Existing Drainage Patterns

The site is sloped to the west and rainfall runoff would flow to the west across the project site. There are no defined drainage patterns.

6.03B Proposed Alterations to Drainage Patterns

There are no defined drainage patterns on the site. The project will not result in a change to the existing drainage patterns.

6.03C Relationship of Project to the Coastal Floodplain

The project site is within Zone X, areas where 100-year coastal flooding is not expected (Flood Insurance Rate Map, Panel 78 of 94, revised April 16, 2007).

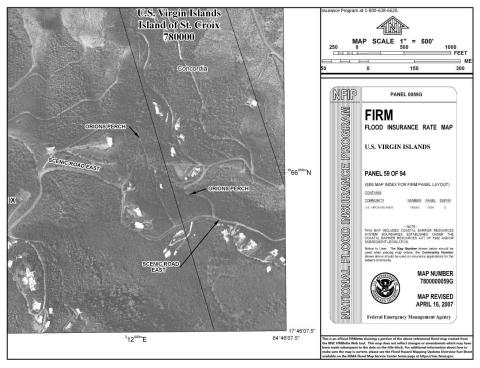


Figure 6.03.1 FEMA FIRM MAP

6.03D Peak Stormwater Flow Calculations

The project will not result in notable changes to stormwater runoff or patterns.

6.03E Existing Stormwater Disposal Structures

There are no stormwater disposal structures on site.

6.03F Proposed Stormwater Disposal Structures

There are no stormwater disposal structures, the slab is slightly slanted to allow for runoff.

6.03G Maintenance Schedule for Stormwater Facilities

No stormwater facilities will be installed.

6.03H Method of Land Clearing

A small low-weight excavator will be used for grading. The site is already clear of vegetation. Prior to any earthmoving, sedimentation and erosion control features will be installed.

6.03I Provisions to Preserve Topsoil and Limit Site Disturbance

The project will be occurring in an area which is already completely disturbed and is the location of an existing generator building and mown lawn. The project will be constructing a graveled walkway from the existing paved drive rather than a driveway to minimize disturbance.

6.03J Presence and Location of Critical Areas and Possible Trouble Spots

The property is within an existing maintained lawn associated with a residential property. The site currently has a generator building which will be relocated to the east on to another area of maintained mown grass. The project has been issued clearance letters from both the Division of Fish and Wildlife and the Division of Historic Preservation.

6.03K Erosion and Sediment Control Devices to be Implemented

Wire re-enforced silt fencing will be used to surround all areas of earth disturbance and will be maintained until all exposed surfaces are stabilized.

6.03L Maintenance of Erosion and Sediment Control Devices

Silt fencing will be installed prior to any earth change.

6.03M Impacts of Terrestrial and Shoreline Erosion

The project is more than 0.5 miles inland from the shoreline and will not impact shoreline erosion. The project will not be impacting any existing drainage patterns and should have a negligible impact on any terrestrial erosion.

6.04 FRESH WATER RESOURCES

Freshwater resources on St. Croix are limited. There is only a small potential for groundwater resources production on the island because of the limited amount of rainfall and subsequent lack of runoff. The project site has no freshwater resources.

6.05 OCEANOGRAPHY

The project site is located more than 0.5 miles from the coastline and will have no impact on oceanography or marine water quality.

6.06 MARINE RESOURCES

The project is more than 0.5 miles from the coastline and will have no impact on the marine environment.

6.07 TERRESTRIAL RESOURCES

The project site is within a mown lawn which currently has a generator building on it. The area to the west is colonized by grasses (primarily *Panicum maximum*) and tan-tan (*Leucaena leucocephala*), Spanish bayonet (*Yucca aloifolia*) and black mampoo (*Guapira fragrans*).



The large black mampoo is seen here to the south of the existing generator building. The area which will be impacted is shown in the center photograph. There is an existing tower (~40ft) to the south of the two-story residential structure.

IMPACT OF STABILIZATION PROJECT

The project will result in the clearing of some grasses and herbaceous plants which occur immediately along the maintained lawn. There is a larger black mampoo tree located to the south of the area of clearing which will not be disturbed.

6.08 WETLANDS

The U.S. Army Corps of Engineers defines wetlands as "those areas that are periodically inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, bogs, marshes and similar areas." (U.S. Army Corps of Engineers, 1986).

There are no terrestrial wetlands near the project site.

6.09 RARE AND ENDANGERED SPECIES

The project is proposed within a residential property with a maintained lawn and the edge of the lawn which has secondary growth vegetation. There are no ESA listed plants on the site and no ESA listed animals use the site as an exclusive habitat. The Director of the Division of Fish and Wildlife, Department of Planning and Natural Resources concluded that the proposed plans to construct a 106-foot mono-palm telecommunications tower on Plot 73 Estate Clairmont, Northside B Quarter, St. Croix, USVI, will not impact threatened or endangered species.

6.10 AIR QUALITY

All of St. Croix is designated Class II by the Environmental Protection Agency 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).

There will be a slight short-lived increase in combustion engine exhaust during the use of heavy equipment on the site. Once the project is complete air quality will return to ambient.

7.00 IMPACTS OF PROPOSED PROJECT ON THE HUMAN ENVIRONMENT

7.01 LAND AND WATER USE PLANS

Plot 73 Clairmont is zoned R-1, low density, the proposed use is for a wireless support structure and wireless facility. The regulations for a site proposed in a R-1 zone require a stealth tower, per Section 312 (b)-7 of Wireless Facility and Wireless Support Structure Rules and Regulations for the USVI, which read:

(2) In residentially zoned and/or utilized area(s), the use of a stealth facility is required, if commercially feasible; and to facilitate such use, the Commissioner may provide limited offsetting incentives only to include an expedited application review process, and waiver of certain design standards, except the setback and height requirements of these regulations.

Therefore, a regular monopole is not allowed in this zone. A monopalm was chosen as the stealth

tower option for aesthetic compatibility with existing vegetation.

7.02 VISUAL IMPACT

Infra Towers, LLC will be installing a monopalm to minimize the visual impact of the tower. The property already has a tower which is approximately 40ft in height to the south of the residential structure.





Existing tower on the property.

7.03 IMPACT ON PUBLIC SERVICES AND UTILITIES 7.03A WATER

The project will not impact water use.

7.03B SEWAGE TREATMENT AND DISPOSAL

The project will not impact sewer treatment or disposal.

7.03B SOLID WASTE DISPOSAL

The project will have no impact on waste disposal.

7.03C ROADS, TRAFFIC AND PARKING

The project will have a negligible impact on traffic during construction and no impact on parking. The project will have no impact on traffic once in operation.

7.03D ELECTRICITY

The project will utilize the VI WAPA power and has an Access and Utility Easement. The wireless facility will have a backup Cummins C30D6 Diesel Generator with an integrated fuel tank.

7.03E SCHOOLS

The project will have no impact on schools.

7.03F FIRE AND POLICE PROTECTION

The project will be part of the US FirstNet Authority, a new broadband network dedicated to first responders. The project should have a beneficial impact on fire and police communications.

7.03G PUBLIC ACCESS

The project is located more than 0.5 miles from the coast and will have no impact on public access to the coastline.

7.04 SOCIAL IMPACTS

The project will have a positive social impact by providing wireless service to areas where there currently are service gaps.

7.05 ECONOMIC IMPACT

Making wireless service available to an area which is currently underserved will provide the potential for economic growth to businesses and offices within the service area.

7.06 IMPACT ON HISTORICAL AND ARCHEOLOGICAL RESOURCES

The location for the proposed tower was reviewed by David Brewer the Senior Archeologist for the Virgin Island State Historic Preservation Office and he concluded that a Phase I Cultural Resource Survey was not required and that VISHPO has no objections to the proposed tower installation.

7.07 RECREATION USE

The project site is not used for recreation.

7.08 HAZARDOUS WASTE DISPOSAL

There are no hazardous wastes associated with the project.

7.09 ACCIDENTAL SPILLS

The small low-weight excavator will be fueled and oiled but will not be fueled while on the property. The machinery will be checked to ensure that it is in good conditions prior to being brought to the site and if the machinery is found to be leaking it will be placed on the pavement and repaired and any spilt fuel or other releases cleaned up and cleanup supplies will be disposed of properly.

7.10 POTENTIAL ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

The only impact as a result of the project will be a change in the viewshed. To minimize this impact, a monopalm will be used rather than a traditional tower.

8.00 MITIGATION OF IMPACTS

To mitigate the impact to the viewshed, Infra Towers, LLC, is installing a monopalm rather than a traditional tower.

9.00 ALTERNATIVES TO PROPOSED ACTION

No Build – The wireless tower could not be built and large areas of the Clairmont and Concordia area would remain without wireless service.

Traditional Tower – A traditional tower could be installed and it would look more industrial.

Proposed Design – The proposed design is intended to make the tower blend more into the environment. Royal palms which are common on St. Croix can grow to 50 - 80ft in height. The proposed monopalm is only 20ft taller than the tallest Royal palm.

10.0 RELATIONSHIP BETWEEN SHORT-TERM AND LONG-TERM USES OF MAN'S ENVIRONMENT

The proposed project will provide wireless service to an area where there are currently service gaps while having a minimal environmental impact. As wireless services become more critical as populations increase and people become more reliant on technology, providing wireless service will be critical for all communities.

11.00 REFERENCES

Literature Cited

- Bowden, M.J. et. al., 1969. Climate, water balance and climatic change in the north-west Virgin Islands. Caribbean Research Institute, CVI,, St. Thomas, Virgin Islands.
- Donnelly, T. 1966. Geology of St. Thomas and St. John, U.S. Virgin Islands. In: Hess, H. (ed.) Caribbean geological investigations. Geol Soc. Amer. Mem. 98:85-176.
- Donnelly, T., et al. 1971. Chemical evolution of the igneous rocks of the Eastern West Indies. In: Donnely, t. (ed.) Caribbean geophysical, tectonic and petrologic studies. Geol. Soc. Amer. Mem. 130:181-224.
- ERDC, USACE Research and Development Center wis.usace.army.mil/hindcasts.html?dmn=atlantic
- Hays, W. W. 1984. Evaluation of the earthquake-shaking hazard in Puerto Rico and the Virgin Islands. Paper present at the earthquake hazards in the Virgin Islands Region Workshop, St. Thomas, April 9-10, 1984.
- Jordan, D.G. 1975. A survey of the water resources of St. Croix, Virgin Islands. Open file report, U.S. Geological Survey.
- Meyerhoff, Howard A. "Physiography of the Virgin Islands, Culebra and Vieques." Scientific Survey of Puerto Rico and Virgin Islands, (New York Academy of Sciences), Vol. IV, Pt. I, pp. 71-141.
- Multer, H.G. and L.C. Gerhard (ed.) 1980. Guidebook to the geology and ecology of some marine and terrestrial environments, St. Croix, U.S. Virgin Islands, Spec. Publ. No. 5 West Indies Laboratory.
- U.S. Department of Agriculture Soil Conservation Service. 1970 Soil Survey Virgin Islands of the United States. U.S. Gov't. Printing Office, Wash.,D.C.
- Whetten, J.T. Field Guide to the Geology of St. Croix, U.S. Virgin Islands," In: Multer, G. and L.C. Gerhard (editors), Geology Ecology of St. Croix, U.S.V.I. Special Publication No. 5, West Indies Laboratory, Fairleigh Dickenson University, U.S.V.I. 1974.

APPENDIX I



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EMAIL: bioimpact@islands.vi, bioimpact.islands.vi@gmail.com

QUALIFICATION STATEMENT

Bioimpact, Inc. is a Virgin Islands corporation that has been licensed to do business in the USVI since 1986.

Bioimpact, Inc. is qualified to conduct and prepare both terrestrial and marine Environmental Assessment Reports required by the U.S. Virgin Islands Department of Planning and Natural Resources (DPNR), Division of Coastal Zone Management (CZM), and the U.S. Army Corps of Engineers (USACE).

Bioimpact, **Inc.** has wetland delineators certified by the National Wetland Science Training Cooperative to establish wetland jurisdictional limits for the USACE.

Bioimpact, Inc. is experienced in the creation and implementation of wetland mitigation programs.

Bioimpact, **Inc.** is experienced in developing and implementing marine water quality monitoring programs and long-term monitoring of the benthic environment.

Bioimpact, Inc. has water samplers and analysts certified by the DPNR Division of Environmental Protection (DEP).

Bioimpact, **Inc.** has successfully designed and implemented large scale coral and seagrass transplant programs.

Bioimpact, Inc. is experienced in cable landfall studies and the establishment of routes for undersea cables and monitoring of cable installations to minimize impact.

Bioimpact, Inc. is experienced in conducting endangered species surveys including corals listed under the Endangered Species Act (ESA) and terrestrial flora and fauna species surveys.

Bioimpact, Inc. is experienced in preparing Biological Assessments for the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (FWS).

Bioimpact, **Inc.** is experienced in the transplant and monitoring of ESA-listed corals, as authorized under "Take Permits" from NMFS.

Bioimpact, Inc. is experienced in preparing Environmental Assessments for federal permitting and for federal issuance of a Finding of No Significant Impact (FONSI).

Bioimpact, Inc. is experienced in conducting Phase I Environmental Site Assessments as set forth in the ASTM International Standard Practice Designation E1527-21 and All Appropriate Inquires and Phase II Environmental Site Assessments as set for in ASTM E1903-11.

Bioimpact, Inc. is experienced in the development and implementation of sampling plans to detect and delineation hazardous materials and petroleum products.

Bioimpact, Inc. is experienced in conducting deep water remotely operated vehicle (ROV) surveys up to 1,250 feet and has all the necessary equipment to undertake these studies.

Bioimpact, Inc. has conducted environmental studies in the U.S. Virgin Islands, Puerto Rico, British Virgin Islands, as well as other parts of the Caribbean and in the Florida Keys.

PARTIAL JOB LIST

Updated March 31, 2022

MONITORING LARGE SCALE PROGRAMS

- **2021 Present** Watershed and Stormwater Sampling on St. Croix and St. Thomas as a Subcontractor to Watershed Consulting Associates LLC.
- **2021 Present** Development and Implementation of a Water Quality and Environmental Monitoring Plan for Construction of a Private Dock in Chocolate Hole, St. John.
- **2021 Present** Development and Implementation of a Water Quality Monitoring Plan for the Reconstruction of the Marriott Frenchman's Reef Dock and Minor Dredging.
- **2020 Present** Monitoring for the Virgin Islands Tree Boa at the Donoe Housing Redevelopment Site.
- 2019 Present Development and Implementation of the Water Quality and Environmental Monitoring Plan for the Installation of a Single Point Mooring at Limetree Marine Terminals, St. Croix.
- **2013 Present** U.S. Virgin Islands Ambient Water Quality Monitoring Program, Sampling for St. Croix.
- 2018 2021 Development and Implementation of the Water Quality and Environmental Monitoring Plan for the Construction of the Veterans Drive Project on St. Thomas for the U.S. Virgin Islands Department of Public Works (VIDPW).
- 2016 Development and Implementation of the Water Quality Monitoring Plan for the West Indian Company Limited (WICO) Emergency Bulkhead Replacement on St. Thomas.
- 2014 2018 Development and Implementation of the Environmental Monitoring Plans for the Conversion of U.S. Virgin Islands Water and Power Authority (VIWAPA) to Liquid Petroleum Gas (LPG) for Vitol on St. Croix and St. Thomas.
- 2014 2018 Development and Implementation of the Environmental Monitoring Plans for the Creation of a Dolphin Exhibit at Coral World (VI), Inc. on St. Thomas.
- 2013 2018 Development and Implementation of the Water Quality and Environmental Monitoring Related to the Dredging of the Crown Bay Marine Terminal and Turning Basin on St. Thomas.
- **2013 Present** Development and Implementation of the Monitoring Plans for the VIDPW's Improvements to Veterans Drive on St. Thomas.

- 2013 2018 Development and Implementation of the Monitoring Plans for the U.S. Virgin Islands Port Authority's (VIPA) Maintenance Dredging of Crown Bay Marina on St. Thomas.
- 2013 2018 Development and Implementation of Monitoring Plans for the Westin Resort's Dock Permit and Improvements of Stormwater Drainage on St. John.
- 2013 2015 Implementation and Monitoring of a Wetland Created as Mitigation for the Development of the U.S. Virgin Islands Waste Management Authority's (VIWMA) Transfer Station on St. Croix.
- 2012 2018 Development and Implementation of the Monitoring Plans for the Virgin Islands Next Generation Network's (viNGN) Fiber Optic Cable System in the USVI.
- 2011 2019 Development and Implementation of a Water Quality and Environmental Monitoring Plan to Assess Impacts of an Increase in Discharge from the Marriott Frenchman's Reef Hotel on St. Thomas.
- 2010 2012 Development of the Water Quality and Environmental Monitoring Program for the Development of Thatch Cay with a Special Emphasis on ESA-listed Corals.
- 2009 2015 Environmental Monitoring for the Development of Oil Nut Bay and the Yacht Club Costa Smeralda (YCCS) for Victor International on Virgin Gorda, British Virgin Islands (BVI).
- 2009 2010 Development and Implementation of a Water Quality Monitoring Plan for the Construction of the Dock at Frenchman's Cove for Marriott Vacation Club, Inc on St. Thomas.
- **2009** Establishment of the Baseline for the Dredging of Charlotte Amalie Harbor and Entrance Channel, and the and the Disposal of Dredged Materials in the Historic Dredging Hole in Lindbergh Bay, St. Thomas for WICO.
- **2008 2009** Environmental Monitoring of the Development of Scrub Island in the BVI for Mainsail Lodging and Development.
- 2007 2010 Water Quality Monitoring for the Development of the Calabash Boom Affordable Housing Complex for Reliance Housing in Estate Calabash Boom on St. John.
- **2007 2009** Water Quality and Environmental Monitoring for Flamboyant Real Estate of a Subdivision of Seventy-seven Acres in Hansen Bay, St. John.
- **2006 2008** Water Quality Monitoring for the Dredging of a Sand Channel in St. Croix for VIWAPA.

- **2006 2007** Water Quality Monitoring for the Renovations of the Ritz-Carlton Hotel on St. Thomas for the Ritz-Carlton.
- 2006 2010 Environmental Monitoring for the Placement of Undersea Cables at the Global Crossing Cable Station in St. Croix for Global Crossing Network, Alcatel, and Tyco Electronics Subsea Communications (now SubCom).
- 2005 2007 Water Quality Monitoring for the Dredging of Crown Bay, St. Thomas for VIPA.
- **2005 2006** Water Quality and Environmental Monitoring for Improvements to the Redhook Marine Terminal for VIPA.
- 2004 2011 Water Quality and Environmental Monitoring for the Construction of the Pond Bay Resort for First American Development Group on St. John.
- **2004** Benthic Habitat Survey of Crown Bay and Gregerie Channel to Supplement the USACE Feasibility Report for VIPA.
- **2003 2006** Water Quality Monitoring for the Construction of the Enighed Pond Marine Terminal on St. John for VIPA.
- **2003 2004** Water Quality Monitoring for the Development of the Crown Bay Marine Terminal on St. Thomas for VIPA.
- **2002 2008** Water Quality and Environmental Monitoring for the Development of Marine Amenities on the Island of Lovango for the Joseph Markus Trust.
- **2002 2005** Water Quality Monitoring for the Improvements to the Gallows Bay Marine Terminal on St. Croix for VIPA.
- **2001 2008** Coral Transplant Monitoring for the Enighed Pond Marine Terminal on St. John for VIPA.
- **2001 2006** Coral Transplant Monitoring for the Mangrove Lagoon Sewage Treatment Plant Outfall on St. Thomas for VIDPW.
- 2001 2002 Water Quality Monitoring for Improvements to the Tropical Shipping Dock in Crown Bay, St. Thomas for Meisner Marine.
- **2000 2006** Seagrass Transplant Monitoring of the Seagrass Transplanted for the Dredging of Charlotte Amalie Harbor on St. Thomas for VIPA.
- **2000 2003** Water Quality Monitoring for the Dredging of Charlotte Amalie Harbor on St. Thomas for VIPA.

- 1999 2006 Water Quality Monitoring for Repairs to the Frederiksted Pier on St. Croix for VIPA.
- 1999 2002 Water Quality Monitoring for the Construction of Cable Stations at Estate Northside on St. Croix for Global Crossings.
- 1997 2005 Development of a Water Quality Monitoring Program for the Construction of the Christiansted Boardwalk on St. Croix Prepared for the Government of the U.S. Virgin Islands.
- 1997 2005 Wetland Monitoring of the Tren Urbano, Puerto Rico (PR) 5 and PR 22 Mitigation Sites under Subcontract to Nutter & Associates, Inc. for the Puerto Rico Highway Authority.
- 1997 2002 Wetland Monitoring of the Airport Mitigation Site at the Henry E. Rohlsen Airport on St. Croix for VIPA.
- 1997 2002 Wetland Monitoring for the Fairplains Mitigation Site at the Henry E. Rohlsen Airport on St. Croix for VIPA.
- 1996 1998 Water Quality Monitoring for the Expansion of the Molasses Pier at the Third Port on St. Croix for the VIPA.
- 1996 Development and Implementation of a Water Quality Monitoring Program for the Expansion of, and Improvements to, the Redhook Marine Terminal on St. Thomas for VIPA.
- 1996 Development and Implementation of a Water Quality Monitoring Program for the Creation of the Enighed Pond Marine Terminal on St. John Prepared for the Maguire Group, Inc. and VIPA.
- 1995 Water Quality Monitoring for the Construction of the AT&T Cable Landing Facility in Estate Northside, St. Croix for AT&T Submarine Systems.
- 1992 1994 Development and Implementation of a Water Quality Monitoring Program for the Reconstruction of the Frederiksted Pier on St. Croix for VIPA.
- 1992 1993 Conducted a Baseline Assessment and Developed a Long-term Monitoring Plan for VIWAPA of the Benthic Community Potentially Impacted the Outfall from the Richmond Power Plant on St. Croix
- 1992 1993 Development and Implementation of a Monitoring Plan to Study Algal Blooms within the Alumina Cooling Pond Discharge and Strategies to Alleviate Runoff for V.I. Alumina Corporation LLC (VIALCO) on St. Croix.

- 1990 1992 Water Quality Monitoring for Dredging Christiansted Harbor on St. Croix for VIPA.
- **1989** Development and Implementation of a Turtle Monitoring Program for Manchineel Beach on St. Croix.

LARGE SCALE MITIGATION PROGRAMS

- 2021 Present Removal and Relocation of 209 Corals for the U.S. Coast Guard Aids to Navigation (ATON) Replacement Project on St. Croix and Routine Monitoring of a Subset of Corals.
- 2020 Present Development and Implementation of the Compensatory Mitigation Plan for the Transplant of 1,700 corals, the Repair of 500 Corals of Opportunity, and the Outplanting of 3,000 ESA-listed corals for Limetree Bay Terminal's Single Point Mooring on St. Croix.
- 2018 Present Development and Implementation of a Compensatory Mitigation Plan for the Relocation of 1.25 Acres of Seagrass and 631 Corals from the Impact Footprint of the Veterans Drive Project on St. Thomas, and the Repair of Damaged Corals on Triangle Reef for VIDPW.
- **2016 2020** Development and Implementation of a 190-Coral Transplant for the Stabilization of the Seawater Intake Line for the Marriott Frenchman's Reef Hotel on St. Thomas.
- 2016 2020 Development and Implementation of a Coral Transplant to Minimize the Impacts of Construction for LPG Improvements at VIWAPA Facilities on St. Croix and St. Thomas.
- **2015 2021** Development and Implementation of the Mitigation Plan for the Relocation of 10,000 Corals Off the WICO Bulkhead in Havensight for WICO on St. Thomas.
- 2014 Present Development and Implementation of a Coral and Seagrass Transplant for Coral World (VI), Inc. in Association with the Development of the Dolphin Exhibit on St. Thomas; 250 Corals were Transplanted and More Than 500 Corals were Repaired after the 2017 North Atlantic Hurricane Season.
- **2014 2019** Development and Implementation of the Mitigation Plans for VIPA's Maintenance Dredging of Crown Bay Marina on St. Thomas.
- 2013 2018 Development and Implementation of the Mitigation Plans for the Westin Resort's Dock Permit and Improvements of Stormwater Drainage on St. John.
- **2013 2015** Creation of a Herbaceous Wetland for VIWMA as Mitigation for the Construction of the Transfer Station at the Anguilla Landfill on St. Croix.
- **2009** Transplantation of 300 Corals for Victor International Coral for Impacts Associated with the Development of an Access Ramp and Dock at Oil Nut Bay in the BVI.

- **2008 2009** Transplantation of 3,000 Corals for Mainsail Lodging and Development for Impacts Associated with the Development of the Scrub Island Resort in the BVI.
- **2006 2011** Planting of 1 Acre of Mangrove Wetland for VIDPW as Mitigation for the Construction of the Mangrove Lagoon Sewage Treatment Plant on St. Thomas.
- **2003 2008** Planting of 2.8 Acres of Mangrove Wetland for VIPA as Compensatory Mitigation for the construction of the Enighed Pond Terminal on St. John.
- **2003 2008** Removal and Relocation of 3,000 Corals Outside the Area of Impact for the Development of the Crown Bay Marine Terminal on St. Thomas for VIPA.
- **2002 2007** Development and Implementation of the Mitigation Plans for VIPA's Dredging of Crown Bay Marine Terminal and Turning Basin on St. Thomas.
- **2002 2007** Transplantation of 50,000 Corals for VIPA Outside the Area of Impact for the Enighed Pond Marine Terminal Project on St. John.
- **2002** Creation of Artificial Coral Reefs and *Acropora spp*. Thickets for Joseph Markus Trust as Mitigation for the Construction of a Barge Landing Facility on the Island of Lovango.
- **2000 2005** Transplantation of 2 Acres of Seagrass for VIPA to an Area Outside the Dredging Footprint of the Charlotte Amalie Harbor on St. Thomas.
- **2000 2001** Transplantation of 7,000 Corals for VIDPW Outside of the Area of Impact for the Placement of the Mangrove Lagoon Sewage Treatment Plant Outfall on St. Thomas.
- 1999 2004 Transplantation of 300 Corals for VIPA Outside the Area of Impact for the Mooring Improvements to the Frederiksted Pier on St. Croix.
- 1997 2003 Planting of ½ Acres of Mangroves for VIPA/VIDPW as a Mitigation Project for the Construction of the Molasses Dock Road on St. Croix.
- 1997 2002 Creation of a 1-Acre Herbaceous Wetland for VIPA as Mitigation for Henry E. Rohlsen Airport Construction on St. Croix.
- 1997 2002 Development of a Mitigation Plan for VIPA for the Creation of a 16,000-square Foot Wetland at Manning Bay to Address the Impact Incurred in Fairplains Gut on St. Croix.
- 1996 Development of a Mitigation Plan for VIPA for the Creation of 4.1 Acres of Wetland as Mitigation of the South Shore Power Plant, Third Port on St. Croix.

1994	Development of a Mitigation Plan for Green Cay Resort for the 12 Acres of Wetland Impacted by the Construction of the Resort on St. Croix.				

ENVIRONMENTAL ASSESSMENT REPORTS 2020– PRESENT

Water quality, monitoring and/or compensatory mitigation plans were developed to supplement most of the environmental assessment reports listed.

Water Island Development, Water Island Development Corporation, Environmental Assessment Report for the Development of a Resort and Marina, Water Island

Villa Olga Shoreline Revetment, Olga's Fancy, Environmental Assessment Report for the Restoration and Revetment of the Shoreline, St. Thomas

Expansion of Yacht Haven Grande Marina, IGY, Environmental Assessment Report for the Expansion of the Existing Yacht Haven Grande Marina, St. Thomas

Sapphire Bay Marina Dredging and Installation of Sargassum Barriers and Shoreline Revetment, SBMCOA, LLC, Environmental Assessment Report for Dredging of the Marina, Revetment of the Shoreline, and Installation of Sargassum Barriers, St. Thomas

Ritz-Carlton Shoreline Preservation Plan, Ritz-Carlton Club, Assessment Report for the Installation of Sargassum Barriers and Geotubes, St. Thomas

St. Croix Yacht Club, St. Croix Yacht Club, Environmental Assessment Report to Permit the Existing Facility and to Allow for Repair and Maintenance, St. Croix

Container Port, Golden Grove and Midland Road Underground Projects, V.I. Water and Power Authority, Environmental Assessment Report for the Installation of Underground Power Systems to Improve Resiliency, St. Croix.

Flamingo Bay Eco-Resort, BBK Development, Environmental Assessment Report for the Development of the Small Eco-Resort, Water Island.

Pearl Landfill and Recycling Facility, V.I. Waste Management Authority, Environmental Assessment Report for the Development of a Solid Waste Facility in Estate Pearl, St. Croix.

Charlotte Amalie Harbor Dredging, V.I. Port Authority, Environmental Assessment Report and HUD Environmental Assessment for the Dredging of the Charlotte Amalie Harbor Channel, Turning Basin, and WICO Inner Berth, St. Thomas.

Crown Bay and East Gregory Channel Dredging, V.I. Port Authority, Environmental Assessment Report and HUD Environmental Assessment for the Dredging of Portions of Crown Bay and East Gregory Channel, St. Thomas.

Frenchman's Reef and Morningstar, Beach Enhancement and Shoreline Stabilization, CREF3 (Formerly Diamond Rock), Environmental Assessment Report for the Revetement of the Shoreline, the Installation of Offshore Breakwaters and Sand Renourishment, St. Thomas.

Emergency Response Dock and Shoreline Revetment at the Harley Plant, V.I. Water and Power Authority, Environmental Assessment Report for the Construction of an Emergency Fuel Spill Response Dock and the Revetment of the Eroded Shoreline, St. Thomas.

Consolidated Permit for Randolph E. Harley Power Plant, V.I. Water and Power Authority, Environmental Assessment Report to Bring All Components into Compliance including those Pre-dating CZM, St. Thomas.

Underwater Memorial Park, Virgin Islands Underwater Memorial Park, Environmental Assessment Report for the Creation of an Underwater Park to Intern Ashes into Reef Building Structures, St. Thomas.

Mooring and Operation of a Bar and Restaurant in the Pillsbury Sound, Cowgirl Bebop, LLP, Environmental Assessment Report for the Installation of Moorings for Vessels and Patrons in the Pillsbury Sound, St. John.

Cruz Bay Underground, V.I. Water and Power Authority, Environmental Assessment Report for the Installation of an Underground Power Cable System in Cruz Bay Feeder 7E, St. John.

Tropical Marine Expansion, Tropical Marine, Environmental Assessment Report to Combine Docks at Mangrove Marine and Off Plot 28 and the Expansion of the Existing Dock, St. Thomas.

Limetree Resort, Wyndham Bluebeard's Beach Club, Environmental Assessment Report for the Renovation and Expansion of the Existing Limetree Resort, St. Thomas.

Repair to Cruz Bay Visitor Center, Docks, and Surrounding Grounds Impacted by Hurricanes Irma and Maria, Croft Engineering/National Park Service, Environmental Assessment Report for Dredging the Basin and Repairs to the Bulkhead and Renovation and Upgrades to the Existing Visitor Center, St. John.

Latitude 18 Marina, Jack Rock EA-C LLC, Environmental Assessment Report for the Development of a Marina and Management of a Mooring Field and Dry Storage for Vessels, St. Thomas.

Green Cay Marina, St. Croix Financial Center, Environmental Assessment Report for the Expansion of the Existing Marina, Maintenance Dredging, and Beach and Shoreline Improvements, St. Croix.

King Christian Dock, USVI Opportunity Fund LLC, Environmental Assessment Report for the Reconstruction and Expansion of a Hurricane-Damaged Dock, St. Croix.

Renovations and Expansion of an Existing Dock, Inter-Island Ferry Service, Environmental Assessment Report for the Expansion and Extension of an Existing Dock to Better Accommodate Vessel Dockage, St. Thomas.

Repair of a Hurricane Damaged Dock, Margaritaville, Environmental Assessment Report for the Reconstruction of the Damaged Dock (modified to include a reverse osmosis line extension), St. Thomas.

Boat Building Facility and Dock, Gold Coast Yacht, Inc., Environmental Assessment Report for a Boat Building Warehouse and a Launch and Outfitting Dock, St. Croix.

Turquoise Bay Resort, VIPM LLC, Environmental Assessment Report for a Glamping Resort and Restaurant, St. Croix.

Christiansted National Historic Site Existing Wharf Replacement, HDR, Inc. and National Park Service, Environmental Assessment Report for the Replacement of the Failing Sheet Pile Wall and Bulkhead (and Acoustic Monitoring Plans), St. Croix.

Lovango Cay Beach Club and Resort, Lovango Island Holdings LLP, Environmental Assessment Report to Permit the Development of a Beach Club and Resort and Mooring Installation, Lovango Island.

Wave Attenuation System, LSJ LLC, Environmental Assessment Report for the Installation of Wave Attenuation Systems, Little St. James.

Installation of Access Docks, and Barge Landing Facility, Great St. James, Great St. Jim LLC. Environmental Assessment Report for the Development of a New Dock, the Renovation of an Existing Dock, and the Construction of a Barge Landing, Great St. James.

Installation of a Single Point Mooring at the Limetree Bay Terminal on St. Croix, Limetree Bay Terminals LLC, Environmental Assessment Report for the Installation of an Undersea Pipeline, Pipeline End Manifold (PLEM), and Buoy System at a Depth of 650 Feet, St. Croix.

St. Croix Sports Complex, Coastal Systems, Environmental Assessment Report for the Construction of the Paul. E. Joseph Stadium, Wetland Delineations, and Endangered Terrestrial and Marine Species Assessments (and Development of a Sea Turtle Lighting Mitigation Plan), St. Croix.

Installation of a Submarine Cable System, V.I. Water and Power Authority, Environmental Assessment Report for Submarine Cable Routing and Beach Landfall, St. Thomas.

Maintenance Dredging of Krause Lagoon Channel, V.I. Port Authority, Environmental Assessment Report for the Dredging of the Cross-Channel into the Container Port and Molasses Dock, St. Croix.

Installation of New Reverse Osmosis Discharge and Intake Line, Westin Resort, Environmental Assessment Report for the Installation of a Saltwater Intake Line Over 2000 Feet Offshore, St. John.

Shoreline Stabilization Project for Buccaneer Hotel, The Buccaneer, Environmental Assessment Report for the Placement of a Shoreline Stabilization Structure to Protect the Eroding Shoreline, St. Croix.

VIWAPA's Conversion to LPG, VITOL and V.I. Water and Power Authority, Environmental Assessment Report for the Installation of LPG conversion Equipment and Fuel Dock Expansion (and Offshore Deep-Water Buoy Permit for LPG Ships), St. Croix and St. Thomas.

ENVIRONMENTAL ASSESSMENT REPORTS 2014 – 2019

Water quality, monitoring and/or compensatory mitigation plans were developed to supplement many of the environmental assessment reports listed.

viNGN Submarine Cable Network, Alcatel-Lucent for viNGN, Environmental Assessment Report for the Installation of an Inter-Island Cable System (including a Cable Beach Routing and Landfall Study), U.S. Virgin Islands.

Improvements to the Frederiksted Pier, V.I. Port Authority, Environmental Assessment Report for the Installation of a New Tender Landing, St. Croix.

Improvements to the Red Hook Marine Terminal, V.I. Port Authority, Environmental Assessment Report for the Construction of a New Customs Building and Shoreline Improvements, St. Thomas.

Offshore Windmills, Ocean Energy, Inc., Environmental Assessment Report for the Installation of Offshore Turbines, a Submarine Cable, and Cable Landing (including a Bird Study), St. Thomas.

St. John Marina, Summers End Group, Environmental Assessment Report for the Development of a Marina and Associated Upland Facilities, St. John.

Maintenance Dredging of the Schooner Channel, V.I. Port Authority and HUD/V.I. Housing and Finance Authority (VIHFA), Environmental Assessment Report for the Dredging of the Schooner Channel (including an Evaluation of Alternative Alignments), St. Croix.

Remediation of Hydrocarbon Contamination at the V.I. Seaplane Ramp, V.I. Port Authority, Environmental Assessment Report for the Installation of Restorative Sheet Piles to Restore (and

the Containment of Hydrocarbon-contaminated Soil from a Leaking Underground Storage Tank [LUST]), St. Croix.

Maintenance of the Existing Bulkhead and Maintenance Dredging of Charlotte Amalie Harbor, CH2M Hill and WICO, Environmental Assessment Report for the Replacement of the Sheet Pile in the Inner Berth (including the Development of a Coral Transplant Mitigation Plan), St. Thomas.

ENVIRONMENTAL ASSESSMENT REPORTS 2009 – 2013

Water quality, monitoring and/or compensatory mitigation plans were developed to supplement each of the environmental assessment reports listed.

Dredging of Crown Bay Marine Terminal and Turning Basin, V.I. Port Authority, Environmental Assessment Report for the Dredging of the Crown Bay Marine Terminal and Basin, St. Thomas.

Maintenance Dredging of Crown Bay Marina, V.I. Port Authority, Environmental Assessment Report for the Dredging of Crown Bay Marina (including a Seagrass and Coral Mitigation Plan), St. Thomas.

Improvements to Bordeaux Road, V.I. Department of Public Works and Federal Highway Administration in Collaboration with Parsons Brinkerhoff, Environmental Assessment Report for a Finding of No Significant Impact, St. Thomas.

Improvement to Spring Gut Road, V.I. Department of Public Works and Federal Highways Administration in Collaboration with Stanley Engineer, Environmental Assessment Report for Improvements to Spring Gut Road for a Finding of No Significant Impact, St. Croix.

Coral World's Dolphin Exhibit, Coral World (VI), Inc., Environmental Assessment Report for the Construction of an Offshore Dolphin Pen and Viewing Dock (and ESA Corals Monitoring and Mitigation Plan), St. Thomas.

Expansion of the Spratt Bay Homeowners Dock (SBHOA), Spratt Bay Homeowner's Association, Environment Assessment Report for the Expansion of the SBHOA Dock, Water Island.

Expansion of Veterans Drive, V.I. Department of Public Works and Federal Highway Administration in Collaboration with Parsons Brinckerhoff, Environmental Assessment Report for a Finding of No Significant Impact and Drafting the USACE Statement of Findings, St. Thomas.

Chiller Cooling System, BaHaMar and HDR, Inc., Environmental Assessment Report for the Placement of a Saltwater Intake Line at the BaHaMar Resort, Grand Bahama.

Reverse Osmosis Facility, V.I. Water and Power Authority, Environmental Assessment Report for the Installation a New Reverse Osmosis Facility at the St. Thomas Power Plant, St. Thomas.

Submarine Power Cable, V.I. Water and Power Authority, Environmental Assessment Report for the Installation of a Submarine Power Cable between the Islands of St. Thomas and St. John, Pillsbury Sound, St. Thomas and St. John.

Chiller System and Dock Repairs at the Marriott Frenchman's Reef, Diamond Rock, Environmental Assessment Report for the Installation of Saltwater Intake Line and Dock Repairs (and Larval Study for Intake), St. Thomas.

Expansion of Heavy Materials Krum Bay Facility, Heavy Materials St. Thomas, Environmental Assessment Report for the Expansion of Heavy Materials Concrete Facility in Krum Bay, St. Thomas.

Thirty-three-Megawatt Waste-to-Energy Plant, Alpine Energy Group, Inc., Environmental Assessment Report for the Construction of a 33-Megawatt Waste-to-Energy Plant (including Conducting a Survey of Endangered V.I. Tree Boas in the Area), St. Thomas.

Eighteen-Megawatt Waste-to-Energy Plant, Alpine Energy Group, Inc., Environmental Assessment Report for the Construction of an 18-Megawatt Waste-to-Energy Plans (including a Wetland Delineation), St. Croix.

Reverse Osmosis Facility on St. John, V.I. Water and Power Authority, Environmental Assessment Report for the Construction of a Reverse Osmosis Facility, St. John.

Seven Hills Development, Robin Bay Partners, Environmental Assessment Report for the Development of Seven Hills Residential Community (including a Wetland Delineation), St. Croix.

Improvements to the Molasses Dock, V.I. Port Authority, Environmental Assessment Report for Dredging and Improvements to the Molasses Dock Roll-on Roll-off Facility (and Mitigation Plan for the Mangrove Shoreline), St. Croix.

Dredging of the Charlotte Amalie Harbor Channel and the Filling of Lindbergh Bay, The West Indian Company Limited, Environmental Assessment Report for the Dredging and Widening of the Charlotte Amalie Harbor to Accommodate Oasis Class Ships at WICO Docks and the Disposal of Dredged Materials in the Historic Dredging Hole in Lindbergh Bay, St. Thomas.

Fueling Station, V.I. Water and Power Authority, Environmental Assessment Report for the Installation of a Vehicle Fueling Station in the Richmond Plant Terminal Facility License, St. Croix.

ENVIRONMENTAL ASSESSMENT REPORTS 2005 – 2008

Water quality, monitoring and/or compensatory mitigation plans were developed to supplement each of the environmental assessment reports listed.

Port of Mandahl, MSJ Realty, Environmental Assessment Report for the Development of the Marina and Resort in Estate Mandahl, St. Thomas.

North Sound Yacht Club, Victor International, Environmental Assessment Report for the Development of a Marina and Yacht Club in North South, Virgin Gorda, BVI.

Reconstruction of the Frenchman's Cove Dock, Marriott Vacation Club, Environmental Assessment Report for the Reconstruction and Expansion of a Damaged Dock in Charlotte Amalie Harbor, St. Thomas.

Thatch Cay Development, Thatch Cay LLC, Environmental Assessment Report for the Development of a Resort Community and Marine Infrastructure on Thatch Cay, St. Thomas.

Smith Bay Development, Smith Bay Developers, Inc., Environmental Assessment Report for a Condominium Complex, St. Thomas.

Subdivision of Great St. James, Christian Kejer, Environmental Assessment Report for The Development of a Residential Community on Great St. James including Marine Access Infrastructure, Great St. James Island, St. Thomas.

Subdivision of Inner Brass, Green Island Developers, Environmental Assessment Report for the Development of a Residential Community on Inner Brass including Marine Access Infrastructure, Inner Brass Island, St. Thomas.

Subdivision of Inner Brass, Bryan Family, Environmental Assessment Report for the Subdivision of Lots for a Residential Community on Inner Brass and the Development of a Dock for Access. Inner Brass Island, St. Thomas.

Cabrita Point, Cabrita Point Partners and Lionstone LLC, Environmental Assessment Report for the Development of a Resort Community, a Mitigation and Monitoring Plan for the Endangered V.I. Tree Boa and a Monitoring Plan for a Reverse Osmosis Intake Line, Dock and Swimming Platform, St. Thomas.

Subdivision of 77 Acres in Hansen Bay, St. John Flamboyant Realty, Environmental Assessment Report for the Development of Roads and a Subdivision in Hansen Bay, St. John.

Subdivision of 14 Acres in Hansen Bay, St. John Hansen Bay Development Group, Environmental Assessment Report for the Development of Roads, and a Subdivision in Hansen Bay (including a Wetland Delineation), St. John.

Expansions and Improvements to the Ritz-Carlton Hotel, William Karr and Associates, Environmental Assessment Report for the Expansion and Renovation of the Ritz-Carlton Hotel, St. Thomas.

Modification to Carden Beach Condominiums, TK Properties, Inc., Environmental Assessment Report for the Development of Zero Lot Line Homes at the Carden Beach Property, St. Croix.

Development of Betty's Hope, V.I. Port Authority, Environmental Assessment Report and Wetland Delineations for the Development of the South Shore Property for Commercial and/or Residential Use, St. Croix.

Expansion of the Compass Point Marina, Margate Management, Environmental Assessment Report for the Addition of Docks at the Compass Point Marina in Benner Bay, St. Thomas.

Improvements, Expansions and Maintenance of HOVENSA Petroleum Refinery, HOVENSA LLC, Environmental Assessment Reports for the 1) Construction of Maintenance Buildings and Replacement of Existing Stacks, 2) Construction of a Low Sulfur Fuels (LSF) Facility, 3) Construction of Modular Buildings, and 4) Construction of Housing in Estate Blessing (including Permitting of an Existing Borrow Pit), St. Croix.

Installation of a Permanent Barge Landing Facility on Lovango Cay, Joseph Markus Trust, Environmental Assessment Report for the Development of a Permanent Barge Landing Facility (including a Compensatory Mitigation Plan for Endangered Coral Species), Lovango Cay.

Barge Landing, Swim Dock and Beach Enhancement on Little St. James, LSJ LLC, Environmental Assessment Report for the Relocation of the Existing Barge Landing and the Construction of a Swim Dock and Beach Enhancing Devices, Little St. James.

Development of Affordable Housing in Calabash Boom, Reliance Housing, Environmental Assessment Report for the Development of Affordable Housing in Calabash Boom (and Territorial Pollutant Discharge Elimination System [TPDES] Permits), St. John.

Demineralized Water System and Storage Tank Upgrades, V.I. Water and Power Authority, Environmental Assessment Report for the Installation of a New Storage Tank and Demineralizer, St. Croix.

Development of a Pizza Bar and Miniature Golf Course, Divi Carina Bay Resort, Environmental Assessment Report for the Development of Amenities at the Divi Carina Bay Resort and Casino, St. Croix.

Placement of Fuel Pipelines on the Ann E. Abramson Pier, Royal Caribbean Cruise Lines, V.I. Port Authority, Environmental Assessment Report for the Installation of Fuel Lines on the Frederiksted Pier, St. Croix.

Development of a Marina and Related Infrastructure, Coral Bay Marina LLC, Environmental Assessment Report for the Dredging and Development of a Marina in Coral Bay (including an Alternative Analysis to Reduce Impacts for the USACE), St. John

Development of a Marine Mammal Encountered Facility, Coral World (VI), Inc., Environmental Assessment Report for the Development of a Sealion Encounter Facility, St. Thomas.

Improvements to The Randall "Doc" James Racetrack, TRAXCO, Environmental Assessment Report for Improvements to the "Doc" James Racetrack Facility (including Wetland Delineations), St. Croix.

Maintenance Dredging and the Permitting of Permanent Moorings, Westin Resort, Environmental Assessment Report for Maintenance Dredging of the Existing Channel and around the Dock, and Mooring Installations, St. John.

ENVIRONMENTAL ASSESSMENT REPORTS 2000 – 2004

Water quality, monitoring and/or compensatory mitigation plans were developed to supplement each of the environmental assessment reports listed.

Compass Point Marina Expansion, Compass Point Marina in Collaboration with Springline Architects, Environmental Assessment Report for the Expansion of the Existing Compass Point Marina, St. Thomas.

Emergency Electrical Cable St. Thomas-St. John, V.I. Water and Power Authority, Environmental Assessment Report for the Placement of a New Submarine Power Cable between St. Thomas and St. John, St. Thomas.

Richmond Sand Channel Dredging, V.I. Water and Power Authority, Environmental Assessment Report for Maintenance Dredging of the Richmond Sand Channel, St. Croix.

Hassel Island Electrical Cable Replacement, V.I. Water and Power Authority Environmental Assessment Report for the Installation of a New Submarine Cable between St. Thomas and Hassel Island, St. Thomas.

Golden Resorts Golf Resort, Casino & Conference Center, Golden Resort, Environmental Assessment Report for the Development of Golden Resorts Golf Resort, Casino, and Conference Center (including a Wetland Delineation), St. Croix.

Crown Bay Marine Terminal Improvements, V.I. Port Authority in Collaboration with Adams, Inc., Environmental Assessment Report for Improvements to the Crown Bay Marine Terminal, St. Thomas.

Global Crossings Point of Presence, Global Crossings, Environmental Assessment Report for the Placement of a Point of Presence Communications Tower in Frederiksted, St. Croix.

Burial of Fiber Optic Cables, Innovative Telephone, Environmental Assessment Report for the Burial of Fiber Optic Cables on the North Shore, St. Croix.

Burial of Fiber Optic Cables on the West End of St. Croix, Innovative Telephone, Environmental Assessment Report for the Burial of Fiber Optic Cables on the West End, St. Croix.

Callaloo Club Blowing Point, Callaloo Club Peninsula, Environmental Assessment for the Development of a Marina on the Island of Anguilla, British West Indies.

Installation of a Waterline between St. Thomas and St. John, V.I. Water and Power Authority, Environmental Assessment Report for the Installation of a Waterline between St. Thomas and St. John, St. Thomas.

Installation of a Submarine Cable to Little St. James, V.I. Water and Power Authority, Environmental Assessment Report for the Installation of a Utility Line between St. Thomas and Little St. James, Little St. James.

South American Crossing Cable Station, Global Crossing, Environmental Assessment Report for the Construction of the South American Crossing Cable Station at Estate Northside, St. Croix.

Water Island Ferry Dock, V.I. Department of Public Works, Environmental Assessment Report for the Construction of a Ferry Dock on Water Island, Water Island.

CuisinArt Golf Resort & Spa Beach Enhancements, CuisinArt, Environmental Impact Assessment Report for Beach Renourishment, Anguilla, British West Indies.

Cinnamon Reef Resort, Cinnamon Reef, Environmental Impact Assessment Report for the Development of a Marine Facility, Anguilla, British West Indies.

Frederiksted Pier Improvements, V.I. Port Authority, Environmental Assessment Report for Improvements to the Existing Frederiksted Pier, St. Croix.

Construction of a Private Dock on Little St. James, LSJ LLC, Environmental Assessment Report for the Construction of a Private Dock on the Island of Little St. James, Little St. James.

Phase II of the Christiansted Boardwalk, Government of the Virgin Islands Environmental Assessment Report for Phase II of the Christiansted Boardwalk, St. Croix.

Construction of a Headquarters, Beal Aerospace, Environmental Assessment Report for the Construction of Beal Aerospace's World Headquarters in Estate Great Pond, St. Croix.

ENVIRONMENTAL ASSESSMENT REPORTS 1988 – 2000

Hurricane Damaged Dock Reconstruction, Divi Carina Bay Resort, Environmental Assessment Report for the Reconstruction of a Dock after Damage Associated with Hurricane Hugo at the Divi Carina Bay Resort and Casino, St. Croix.

Global Crossing Cable Terminal, Global Crossing, Environmental Assessment Report for the Construction of a Cable Terminal Building and Corridor for Eight Submarine Fiber Optic Cables (including a Landfall Study) in Frederiksted, St. Croix.

Construction of a Coker and Coker Dock at the HOVENSA Petroleum Refinery, HOVENSA LLC, Environmental Assessment Report for the Construction of a Coker and Coker Dock, St. Croix.

Frederiksted Pier Mooring Dolphin, V.I. Port Authority, Environmental Assessment Report for the Construction of a Mooring Dolphin at the Frederiksted Pier, St. Croix.

Seaplane Terminal, V.I. Port Authority, Environmental Assessment Report for the Development of a Seaplane Terminal at the Old Seaplane Ramp, St. Croix.

Forest Bay Marina, Forest Bay Group, Environmental Assessment Report for the Development of a Marina and Related Facilities in Forest Bay, Anguilla, British West Indies.

Dolphin Lagoon, META Resorts, Environmental Assessment Report for the Development of a Dolphin Lagoon at Meads Bay, Anguilla, British West Indies.

Construction of the Christiansted Boardwalk, Government of the Virgin Islands, Environmental Assessment Report for the Construction of a Boardwalk in Christiansted, St. Croix.

Runway Extension of the Henry E. Rohlsen Airport, V.I. Port Authority in Collaboration with LPA Group, Environmental Assessment Report for the Runway Extension at the Henry E. Rohlsen Airport, St. Croix.

Red Hook Marine Terminal Expansion, V.I. Port Authority, Environmental Assessment Report for the Expansion of the Red Hook Marine Terminal (including the Development and Implementation of Mitigation and Monitoring Plans), St. Thomas.

Enighed Pond Marine Terminal, V.I. Port Authority, Environmental Assessment Report for the Creation of the Enighed Pond Marine Facility (including the Development and Implementation of Mitigation and Monitoring Plans), St. John.

Submerged Land Renewal, Coral World (VI), Inc., Environmental Assessment Report for the Renewal of the Submerged Land Lease for the Coral World Facility, St. Thomas. Construction of a Seawall, Cowpet Bay, Environmental Assessment Report for the Modification of an Existing Permit to Construct a Seawall, St. Thomas.

Riprap Revetment Installation, Watergate East Villas, Environmental Assessment Report for the Construction of a Rip-Rap Revetment, St. Thomas.

Improvements to the Fuel Dock, V.I. Water and Power Authority, Environmental Assessment Report for Improvements to the Fuel Dock at the Power Generating Facility, St. Thomas.

Subdivision of Estate Misgunst, La Domaine, Environmental Assessment Report for the Subdivision of 40 Acres of Land in Estate Misgunst, St. Thomas.

Expansion of the Alexander Hamilton Airport and Highway 64 Relocation, V.I. Port Authority, Environmental Assessment Report for the Expansion of the Alexander Hamilton Airport Terminal and Highway 64 Relocation (including a Wetland Delineation, and Development and Implementation of a Wetland Mitigation Plan), St. Croix.

AT&T Cable Landing Facility, AT&T, Environmental Assessment Report for the Cable Landing Facility at Estate Northside (including a Beach Landfall Study, a Cable Routing Study, and the Development of a Water Quality and Environmental Monitoring and Mitigation Plan), St. Croix.

Dredging of the Sand Channel, DEVCON, Environmental Assessment Report for the Dredging of the Christiansted Sand Channel, St. Croix.

Expansion of the Red Mud Storage Ponds, VIALCO, Environmental Assessment Report for the Expansion of the Red Mud Storage Ponds at the VIALCO Alumina Facility, St. Croix.

Stormwater Drainage System, VIALCO, Environmental Assessment Report for the Creation of a Stormwater Drainage System at the VIALCO Alumina Facility, St. Croix.

Permitting of a Caliche Mine, VIALCO, Environmental Assessment Report for the Mining of Caliche at the VIALCO Alumina Facility, St. Croix.

Molasses Dock Expansion, V.I. Port Authority Subcontracted by Frank Torrez, Environmental Assessment Report for the Molasses Dock Terminal at the Third Port Facility, St. Croix.

ENVIRONMENTAL ASSESSMENT REPORTS (SELECTED) 1988 – 1993

Beach Renourishment, St. Croix by the Sea, Environmental Assessment Report for a Beach Renourishment and Jetty Construction at St. Croix by the Sea, St. Croix.

Vieques Shrimp Farm, Vieques Shrimp Mariculture Project, Environmental Assessment Report for the Creation of a Shrimp Farm in Puerto Ferro, Vieques, Puerto Rico.

Marine Spill Response Corporation (MSRC) Dock, Hess Oil Virgin Islands (HOVIC) Petroleum Refinery, Environmental Assessment Report for the Construction of a Pier in the HOVIC West Turning Basin, St. Croix.

Construction of Eden Beach Hotel and Condominiums, Eden Beach, Environmental Assessment Report for the Proposed Construction of Eden Beach Hotel and Condominiums, St. Croix.

Expansion of the Tamarind Reef Hotel, Tamarind Reef, Environmental Assessment Report for the Proposed Reconstruction and Expansion of the Tamarind Reef Hotel, St. Croix.

Construction of Gas Turbines at the Third Port, V.I. Water and Power Authority, Environmental Assessment Report and USACE Application for the Construction of Two Gas Turbines at the Third Port Site, St. Croix.

Subdivision of Lovango Cay, Joseph Markus Trust, Environmental Assessment Report for the Creation of a Subdivision on Lovango Cay and Placement of a Private Dock, Lovango Cay.

Well Water Collection System, VIALCO, Environmental Assessment Report for the Construction of a Well Water Gathering System for Wells at the VIALCO Alumina Facility, St. Croix.

Crawl Cay, Monroe County, Environmental Assessment Report, Wetlands Delineation and Hammock Studies of Crawl Cay, Florida.

Jack's Bay Subdivision, Jack's Bay Development Company, Environmental Assessment Report for the Subdivision of Approximately 300 Acres into 64 Lots at Estate Jack Bay and Estate Isaac Bay, St. Croix.

Bauxite Building, VIALCO, Environmental Assessment Report for the Expansion of the Bauxite Building at the VIALCO Alumina Facility, St. Croix.

Carambola Beach Club Improvements, Danested, Environmental Assessment Report for the Repair and Improvement of the Carambola Beach Club Facilities, St. Croix.

Salt River National Park, National Park Service, Environmental Impact Statement for the Proposed National Park at Salt River, St. Croix.

Desalination Unit, V.I. Water and Power Authority, Environmental Assessment Report for the Construction of a Desalination Unit on St. John, St. John.

Construction of Estate Turner Hole Condominiums, Carmel by the Sea, Environmental Assessment Report for the Construction of a 95-unit Condominium at Estate Turner Hole, St. Croix.

Very Long Baseline Array (VLBA) Observation Station, NASA, Environmental Assessment Report and Landscaping Plan for the Construction of a VLBA, St. Croix.

Buccaneer Hotel Room Expansion, Buccaneer Hotel, Environmental Assessment Report for a 20-room Addition to the Buccaneer Hotel, St. Croix.

Construction of a Ritz-Carlton Hotel, Environmental Assessment Report and Zoning Application for a 350-room Ritz-Carlton Hotel in Estate Davis Bay, St. Croix.

Frederiksted Pier Expansion, V.I. Port Authority, Environmental Assessment Report for the Construction of a Second Pier in Frederiksted, St. Croix.

Construction of the Kingston Hotel, Kingston Hotel, Environmental Assessment Report for the Construction of a Hotel and Condominium in Kingston, Tortola, BVI.

Construction of an Airport Warehouse, V.I. Port Authority, Environmental Assessment Report for Construction of a Warehouse Facility at the Alexander Hamilton Airport, St. Croix.

Development of the Great Pond Resort, St. Croix, Environmental Assessment Report, for Golden Gaming, Zoning Application, and USACE Permit Application for a Hotel and Condominium Project at Estate Great Pond, St. Croix.

ENVIRONMENTAL ASSESSMENT REPORTS 1986 – 1988

St. Croix St. Thomas St. John

Columbus Landing, St. Croix Blue Beards Beach, St. Thomas Concordia, St. John

Grapetree Beach, St. Croix

St. Croix by the Sea, St. Croix

Ensenada, St. Croix

Virgin Grand, St. Croix

Sugar Bay, St. Croix

Turtle Run, St. Croix

Palm Shores, St. Croix

Baobab, St. Croix

Reflection Bay, St. Croix

Coakley Bay, St. Croix

Green Cay, St. Croix

Turquoise Bay St. Croix

Eagle Bay, St. Croix

Granard, St. Croix

Concordia, St. John

Wider Caribbean

Southeast Peninsula, St. Kitts Divi Dive Canal, Nassau, Bahamas

ENVIRONMENTAL CONTAMINATION ASSESSMENTS 1990 – PRESENT

- **2022 Present** Sampling for Heavy Metals Contamination of the Soil in Estate Donoe, St. Thomas.
- **2000 Present** Sampling for Chemical Contamination in Cisterns as a Result of a Hydrocarbon Release in the Air, St. Croix.
- **1994 Present** Periodic Sampling of the Leaking Underground Storage Tanks (LUSTs) at the V.I. Port Authority Seaplane Ramp, St. Croix.
- 2019 Sampling for Mold at the Renaissance Hotel, St. Thomas.
- **2016 2022** Sampling of Underground Storage Tanks (USTs) for Gasoline Service Stations on St. Thomas and St. Croix.
- 2012 2016 Sampling for Recognized Environmental Conditions in Estate Anna's Hope, St. Croix.
- **2006 2016** Sampling for Petroleum Product Contamination at Gasoline Stations and Industrial Sites, St. Croix.
- 1990 2002 Sampling of Residential and Commercial Properties on St. Croix, St. Thomas, St. John and Puerto Rico for Recognized Environmental Conditions.

APPENDIX II

Miles Walz-Salvador

From:

David Brewer < David.Brewer@dpnr.vi.gov>

Sent: To: Tuesday, April 12, 2022 10:15 AM Miles Walz-Salvador; Sean L. Krigger

Cc:

George Tyson; Eboni Powell

Subject:

Re: [EXTERNAL MAIL]RE: Phase 1 survey required for VI020 Clairmont

[Eboni --- this is a Section 106 consultation]

Dear Miles --

Having looked at the photos and known site locations in and around Clairmont, it is fairly obvious that the road adjacent to the location was created by scraping up the shoulder edges to create the road itself. Therefore, after discussing this with both George Tyson and my Director, Sean, I can tell you that a Phase I Cultural Resource Survey will not be required at this location and the VISHPO has no objections to the proposed tower installation there.

Thank you for the opportunity to review this matter.

David M. Brewer
Senior Archaeologist
Virgin Islands State Historic Preservation Office
Fort Frederik Museum
198 Strand St.
Frederiksted, St. Croix
U.S. Virgin Islands 00840

E-mail: david.brewer@dpnr.vi.gov

Phone: (340) 719-4315

From: Miles Walz-Salvador < Walz-Salvador@thelotisgroup.com>

Sent: Tuesday, April 12, 2022 11:05 AM

To: Sean L. Krigger <sean.krigger@dpnr.vi.gov>
Cc: David Brewer <David.Brewer@dpnr.vi.gov>

Subject: RE: [EXTERNAL MAIL]RE: Phase 1 survey required for VIO20 Clairmont

Good morning Sean,

Just following up on this. Has David recovered?

Best Regards,



GOVERNMENT OF THE VIRGIN ISLANDS OF THE UNITED STATES

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DEPARTMENT OF PLANNING AND NATURAL RESOURCES DIVISION OF FISH AND WILDLIFE

45 Mars Hill Frederiksted, VI 00840

PHONE: (340) 773-1082 FAX: (340) 775-3972 October 20, 2022

TO:

Infra Towers, LLC

1800-600 Diagonal Road Alexandria, VA 22314

FROM:

Nicole F. Angeli

Director, Division of Fish and Wildlife

RE:

Plot 73 Estate Clairmont, Northside B Quarter, St. Croix, USVI 00820

The Government of the Virgin Islands of the United States, Department of Planning and Natural Resources, Division of Fish and Wildlife (DFW) is mandated to "protect, conserve, and manage indigenous fish, wildlife and plants, and endangered or threatened species for the ultimate benefit of all Virgin Islanders, now and in the future" by Virgin Islands Code Title 12, Chapter 2, Subsection 101. This act ensures protection for all fish and wildlife indigenous to the Virgin Islands and within its geopolitical boundaries.

The DFW team reviewed the proposed plans to construct a 106-feet mono-palm telecommunication tower on Plot 73 Estate Clairmont, Northside B Quarter, St. Croix, USVI. We find that the construction will not impact threatened or endangered species. Development of other structures and the construction or renovations to existing roads is not covered under this letter and such development plans should be submitted to DFW for additional consideration.

Thus, I support the construction with the condition that all federal, state, and local permits required by authorities are obtained and respected.

For further consultation, kindly contact me at nicole.angeli@dpnr.vi.gov or 340-773-1082.

Mick F. Angdi	11/14/2022		
Dr. Nicole F. Angeli, Director	Date		



Mail Processing Center Federal Aviation Administration Southwest Regional Office Obstruction Evaluation Group 10101 Hillwood Parkway Fort Worth, TX 76177 Aeronautical Study No. 2022-ASO-12142-OE

Issued Date: 04/12/2022

Tierney Rowe Infra Towers, LLC 1800 Diagonal Road, Suite 1800 Alexandria, VA 22314

** DETERMINATION OF NO HAZARD TO AIR NAVIGATION **

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:

Monopole VI020 Clairmont

Location:

St Croix, VI

Latitude:

17-46-27.00N NAD 83

Longitude:

64-46-27.76W

Heights:

839 feet site elevation (SE)

106 feet above ground level (AGL) 945 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/ lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 10/12/2023 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Communications Commission (FCC) because the structure is subject to their licensing authority.

If we can be of further assistance, please contact our office at (847) 294-7575, or vivian.vilaro@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ASO-12142-OE.

Signature Control No: 520913130-523324698

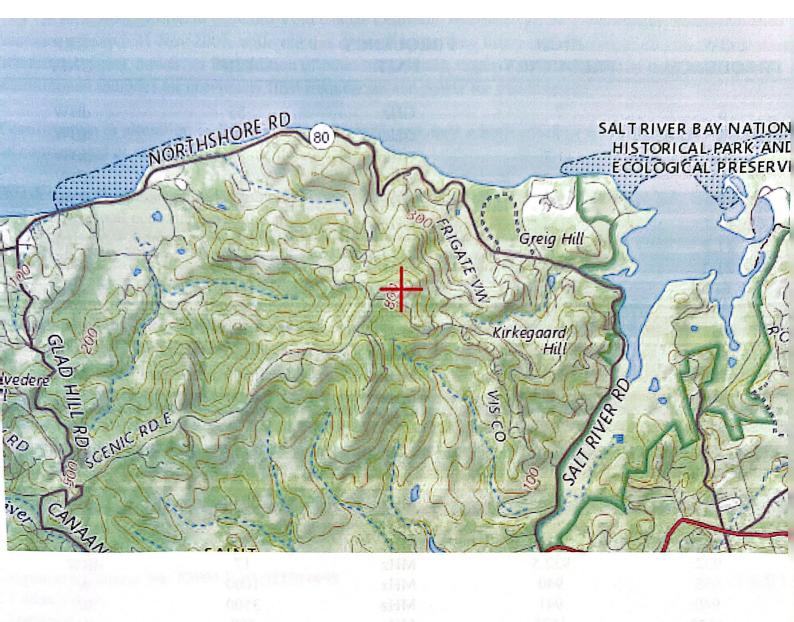
(DNE)

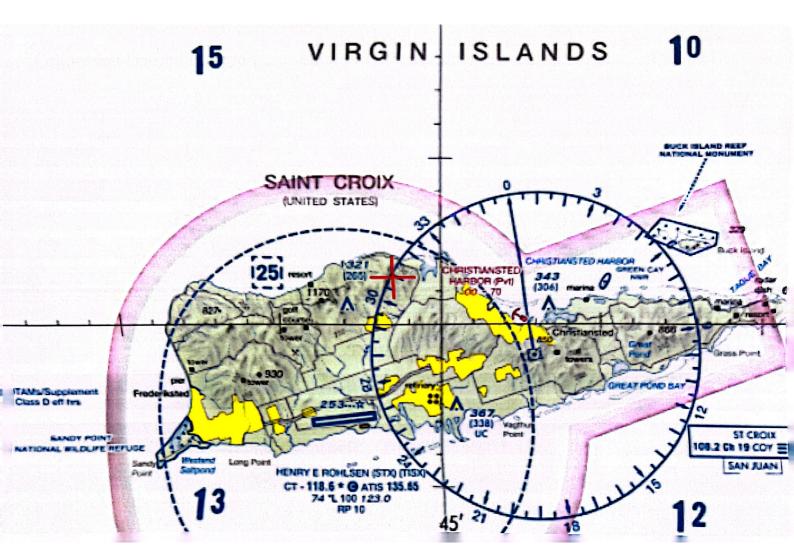
Vivian Vilaro Specialist

Attachment(s) Frequency Data Map(s)

cc: FCC

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
	7	GHz	55	dBW
6	7	GHz	42	dBW
6	11.7	GHz	55	dBW
10	11.7	GHz	42	dBW
10	19.7	GHz	55	dBW
17.7 17.7	19.7	GHz	42	dBW
21.2	23.6	GHz	55	dBW
21.2	23.6	GHz	42	dBW
614	698	MHz	1000	W
	698	MHz	2000	W
614	806	MHz	1000	W
698	901	MHz	500	W
806	824		500	W
806		MHz	500	W
824	849 866	MHz	500	W
851		MHz	500	W
869	894	MHz	500	W
896	901	MHz	7	W
901	902	MHz	3500	W
929	932	MHz		W
930	931	MHz	3500	W
931	932	MHz	3500	
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1670	1675	MHz	500	W
1710	1755	MHz	500	W
1850	1910	MHz	1640	W
1850	1990	MHz	1640	W
1930	1990	MHz	1640	W
1990	2025	MHz	500	W
2110	2200	MHz	500	W
2305	2360	MHz	2000	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W
2496	2690	MHz	500	W





APPENDIX IV



VI020 Clairmont Maintenance Plan

The following information was received by Liberty Mobile USVI/PR, Inc. regarding their maintenance plan for the VI020 Clairmont site:

As the tenant wireless equipment transmits and receives 911, and other emergency traffic, it is imperative for tenants to maintain and repair their equipment to maximize the availability of this critical public service. This requirement could include technical and/or tower personnel accessing the facility at any hour of the day, including weekends or holidays. Outside of emergency repairs, the following routine repair schedules are typically followed:

- Preventative Maintenance Monthly testing of equipment and any required calibration. This maintenance is performed on the ground and technicians drive a jeep, or small van, to carry their maintenance measuring equipment.
- Emergency Maintenance As required and mentioned above. This maintenance is performed on the ground and technicians drive a jeep, or small van, to carry their maintenance measuring equipment.
- Antenna / Feedline Repairs If ground measurements indicate an antenna or feedline coaxial cable fault, a lift truck may be required to reach wall-mounted antennas and/or feedline coaxial cable. If large antennas, or mounts, are required to be installed, or changed, a small boom truck or in few cases a crane, may be required to facilitate these changes.

The ground space will be maintained by Infra Towers, LLC, as frequently as needed, to keep the compound clear of weeds and easily accessible by tenant technicians. There will be no distinguishable impact to existing traffic patterns or infrastructure, noise levels, or safety impacts created by the periodic maintenance anticipated for this location.