

Minor Land Development Permit Application

For Improvements To

Little St. James Island
Parcel B

Applicant:
L.S.J., LLC
P.O. Box 870
St. Thomas, Virgin Islands

March 22, 2010

Minor Land Development Permit Application

For Additions to Little St. James Island, VI – Parcel B

March 22, 2010

INTRODUCTION

The purpose of this Minor Land Permit Application is to address the construction of an accessory building and landscape improvements by the owner of Little St. James Island. It is the desire of the owner of LSJ to construct improvements which will be part of the existing single family compound including:

B.1 - A Guest Cottage

1.0 Applicant:

L.S.J., LLC
Little St. James Island
6100 Red Hook Quarter A2-7
St. Thomas, USVI 00802

2.0 Location: Little St. James – Parcel B

2.01 Vicinity Map (see attached)
2.02 Parcel Map (see attached)

3.0 Project Description, Components & Environmental Site Considerations

3.01 Guest Cottage Parcel – B (See Exhibits B.1 – B.4)

The proposed 5,000 square foot guest cottage will be constructed on the eastern side of LSJ near the beach known as Second Beach. The raised four bedroom cottage will be designed in a colonial Caribbean design and will have all of the living areas on a single floor. The cottage will be placed on the site so as to be setback from the required CZM coastal setback line. There will be minimal sitework associated with this cottage as it will be a raised pier structure and most of the surrounding site will remain in a natural state.

Total site footprint: 5,000 square feet

Temporary Drainage & Erosion Control – Excavation for the structure will be performed using backhoe and hoe rams as needed for rock excavation. The excavation will be as limited as practical to install the structure. During construction the bare soils will be encircled with erosion control silt fencing.

Erosion control devices will be checked daily and immediately after heavy rains to ensure proper function.

Storm Water Controls & Mitigation – Storm water from the roof of the new structure will be collected in a cistern and will be used for irrigation. The runoff from the paved areas will be directed to several grass vegetated forebays within the landscaped areas adjacent to the building area where it will be allowed to percolate into the soil. The remainder of the runoff from the site will sheet flow to the ocean to mimic existing runoff patterns. There is a negligible increase in runoff and thus no flooding concerns as the eventual discharge is to the ocean.

Sewage Disposal – The new building will have all sewage flow discharged through a prepackaged hydro-action disposal system which consists of a pre-treatment tank (septic tank), treatment plant, pump tank and turtle drip subsurface dosing system. The location of the disposal zone is located so as to satisfy the requirements of the USVI handbook on onsite sewage treatment systems. The drip irrigation disposal zone will be located within the surrounding low landscaped earth mounds.

Water – Potable water will be supplied from the existing reverse osmosis plant.

Construction activities starting with the installation of silt fencing and demolition is scheduled to begin in May 2010 pending approvals.

Parcel B – Total Area 23.0 Acres

Proposed Structures

B-1	Guest Cottage	<u>5,000 SF</u>
	Total Proposed Structures	5,000 SF

Existing Structures

B-2	Screen Cabana	225 SF
B-3	Beach Cabana	225 SF
B-4	Open Cabana	225 SF
B-5	Lookout Pavilion	<u>920 SF</u>
	Total Existing Structures	1,595 SF

Total proposed & existing structures-Lot Occupancy Coverage 6,595 SF (0.15 Acres)

Open Space Area & Percentage 22.85 Acres (99%)

Little St. James

CZM Minor Land Permit Application

Environmental Assessment

March 22, 2010

INTRODUCTION

At the request of the staff of the Coastal Zone Commission LSJ, LLC, the owner of Little St. James Island (LSJ) has commissioned this study to confirm that no future development can or will have a substantial, adverse impact on the existing environment of LSJ.

EXECUTIVE SUMMARY

Little St. James is a small privately owned island located about one mile off the southeast coast of St. Thomas and is approximately 71.5 acres in size. The coordinates of the island are 18 18' 06" N, 64 49' 37" W. Little St. James is and has been developed as a residential compound for almost 2 decades. It contains single family residential structures, accessory uses, a trail system and associated utilities. Its sole owner is committed to further development only to the extent of expanding the residential compound for personal use and expanding its water generation facilities for personal use and maintaining the vegetation.

LSJ is divided into three lots or parcels and is shown on Exhibit A. Parcel A is comprised of 36.7 acres, Parcel B is 23.0 acres and Parcel C is 11.8 acres for a total of 71.5 acres. Parcels A & B are very sparsely developed with most of the main house compound within Parcel C, including a main house with an accessory staff house and associated mechanical workshops for standby generators and an R/O complex which generates water.

The existing conditions of the island have been evaluated thoroughly in two reports which have been previously submitted. The first is a comprehensive survey of plant, animal and related conditions by Dr. R.B. Burbidge, PH.D., B. Sc. And the second is a detailed hydrological study by William McComb in conjunction with the Maguire Group.

The findings of these reports demonstrate that:

- No evidence of antiquities or significant archeological remnants.
- Limited rare or endangered species existing on-island.
- Existing erosion control methods are adequate but will be improved upon.
- Future development will cause minimal impact to the natural environment of the island.
- Stormwater run-off controls are adequate and functioning.
- Existing vegetation plantings and landscaping is controlling erosion & sedimentation.

EXISTING CONDITIONS

Climate & Weather

Little St. James island is located southeast of St. Thomas. The climate on LSJ is closely related to the climate on St. Thomas. The climate throughout the USVI is maritime tropical, generally consisting of fair weather and steady easterly trade winds. Mean air temperatures range between 76 F and 82 F throughout the year. The highest temperatures occur in August or September and the lowest are in January or February. The highest average daytime temperature in the warmest months is about 88 F, and in the coolest months it is in the low 80's. Nighttime lows are usually in the mid 70's during the warmest months and in the high 60's during the cooler months.

Rainfall amounts vary with topography, and increase at higher elevations. The wettest period generally is from September to November, and the driest period is from January to June. The average annual rainfall on St. Thomas is approximately 40 inches, ranging from 35 inches toward the eastern end of the island to more than 55 inches at the higher elevations to the northwest.

The area experiences 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. Hurricanes occur most frequently between August and mid-October with their peak activity occurring in September. Hurricane winds may exceed well over 74 mph and significantly affect the area. The annual probability of a hurricane is one in sixteen years. Since 1989, the Virgin Islands have been impacted by Hurricane Hugo 1989, Hurricanes Luis and Marilyn in 1995 and Hurricanes Bertha and Hortense in 1996. No hurricanes passed the Virgin Islands in 1997. Hurricane Georges passed close to St. Thomas on September 21, 1998. Hurricane Lenny, a Category 4 hurricane, impacted St. Croix on November 17, 1999. Hurricane Lenny developed very late in the season and approached the islands from the southwest.

Landform, Soils, Geology & Drainage

The USVI are located near the northeastern corner of the present Caribbean Plate, a relatively small trapezoidal-shaped plate which is moving eastward relative to the North and South American continents carried on the American plate. That 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 active volcano to the USVI is Saba and lies 100 miles to the east and last erupted in 1636.

The island of Little St. James is relatively hilly with the maximum elevation of 142 feet above sea level. The shoreline of the island is irregularly shaped and approximately 2.2 miles long. The soils of the island are classified into six different soil classifications. The main series of soils are Redhook, Solitude, Salt Flat and Southgate.

The Redhook series soils are predominantly located along the 2.2 miles of shoreline. Redhook soils are classified as being excessively drained soils on vegetated beaches. The soils formed in

alkaline marine deposits. Slopes range from 0 to 5 percent. Typical composition of the Redhook soils is extremely stony sand, mild slopes, rubbly, and rarely flooded. These soils have low natural fertility and have a slight hazard of erosion. (NRCS 2007)

The Solitude series soils are located throughout the island and are mainly located in association with the Redhook series near saline conditions. These soils are classified by gravelly fine sandy loam, with a 0 to 2 percent slope, which frequently is flooded. The natural fertility of these soils is low to moderate with a slight hazard of erosion. (NRCS 2007)

The Salt Flats soils are located on the western side of the island with the associated salt pond. These soils are unvegetated areas of saline flats, saline marshes and salt ponds. The area is prone to ponding and flooding resulting from gut flow, marine tides and storm surges. The soils are very deep and poorly drained. The areas are strongly saline and are frequently ponded for long periods of time. (NRCS 2007)

The Southgate series of soils are located throughout the islands and compose all of the upland soils on the island. These soils are classified as Southgate Rock outcrop complex with varying slopes from 12% - 60% depending on the soil type and the location on the island. The steepest slopes are located in the SrF soils located on the western and southern portions of the island with slopes from 40% - 60%. These soils are typically volcanic hills and mountains, composed of very gravelly, stony, or rubbly surface layer. The natural fertility is moderate with a severe erosion hazard, and no flooding. (NRCS 2007)

The islands topography and drainage patterns are broken into several drainage watershed areas. Each of the proposed improvements will include detail site plans and drainage improvements which will direct the stormwater runoff into bio-retention swales and drainage forebays so as to minimize stormwater runoff.

Fresh Water Resources

On island freshwater resources are limited. The owner of the island has incorporated other methods to collect and treat freshwater for personal use, irrigation and household needs. The island produces fresh water from three sources: a ground-water well, ocean intake for reverse osmosis and rainwater collection in cisterns. Based on the capacity of these three systems, the water requirements for the island home will be adequately handled.

Vegetation

The vegetation and species composition of the island is typical of an east-facing, semi-arid Caribbean island and closely resembles the vegetation found on the east end of St. John and St. Thomas. There are approximately 100 native species present on the island. One species is listed on the Federal or Territorial Endangered Species list, and because of its habitat on steep sloping grassland and rocky outcrops, it is under no immediate threat. The island has never been occupied by grazing animals and is also free of some of the invasive exotic plant species (Burbidge 2007).

Rare and Endangered Species

One rare or endangered species exists on the island and is located in areas which cannot be built on. This species is an indigenous endangered species which is not federally listed. It is a species of orchid, *Tetramicra canaliculata*. This orchid is common on select sections of Little St. James, usually in association with the grass *Uniola virgata* where it grows epiphytically among the leaves and culms of the grass. The species thrives in areas which are steep, grass covered, or rocky hillsides.

Wetland Areas

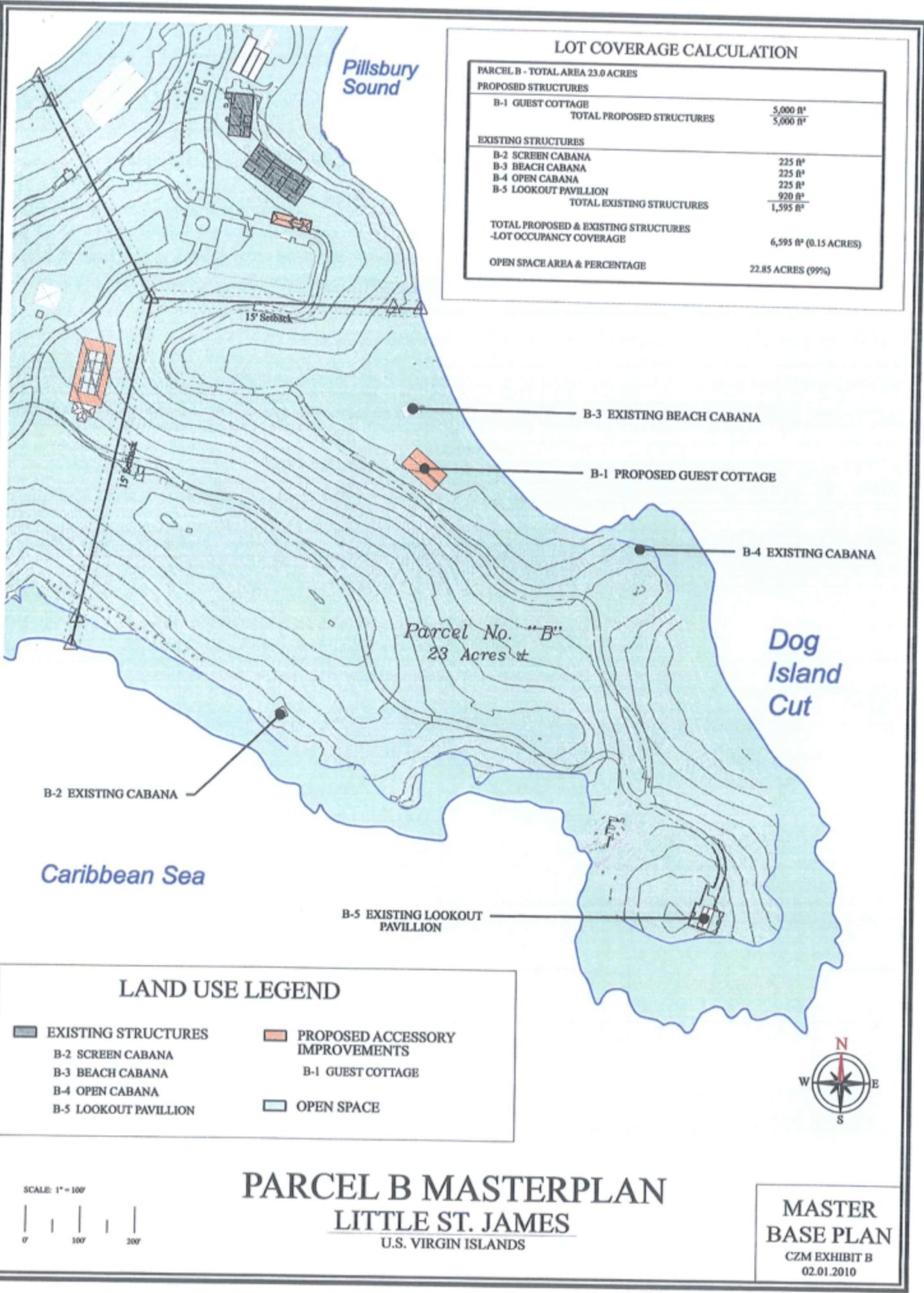
Two wetland areas exist on the island in addition to the coastal areas. These wetland areas are located on the north and western sides of the island. These areas consist of a small brackish pond on the north side of the island and a large salt pond on the western side of the island.

The northern pond is located in a small depression between the beach and the foot of the hill. The pond is an ephemeral storm water retention pond that collects run-off from the surrounding hills. This pond becomes dry several times a year, however on isolated occasions waves do wash into the pond and the salt concentration is maintained, varying with the collection of rainwater. The salinity has been measured and indicates that the pond is classified as brackish water. Vegetation surrounding this pond is sparse.

The western pond is a large salt pond separated from the bay by a cobble beach. It holds seawater year round and contains red, white and black mangroves. The mangrove fringe while not being very dense does offer habitat benefits. Three sides of the pond are bordered by hills and therefore some natural upland erosion has caused some sedimentation deposits into the pond. The pond also receives run-off from the gut that runs nearby.

Existing Structures

Currently there are several existing structures on the island making up the residence and its accessory uses. The structures include a Main House with three guest rooms, Master Bedroom, Office Pavilion, Staff Cottage, Mechanical Building, Wood Shop, Gym, Beach Hut, Tiki Hut and several small open thatched cabanas. The main house, office pavilion and mechanical building are all going through various stages of construction under previously obtained permits.



LOT COVERAGE CALCULATION

PARCEL B - TOTAL AREA 23.0 ACRES	
PROPOSED STRUCTURES	
B-1 GUEST COTTAGE	5,000 ft ²
TOTAL PROPOSED STRUCTURES	5,000 ft²
EXISTING STRUCTURES	
B-2 SCREEN CABANA	225 ft ²
B-3 BEACH CABANA	225 ft ²
B-4 OPEN CABANA	225 ft ²
B-5 LOOKOUT PAVILLION	920 ft ²
TOTAL EXISTING STRUCTURES	1,595 ft²
TOTAL PROPOSED & EXISTING STRUCTURES	6,595 ft² (0.15 ACRES)
-LOT OCCUPANCY COVERAGE	
OPEN SPACE AREA & PERCENTAGE	22.85 ACRES (99%)

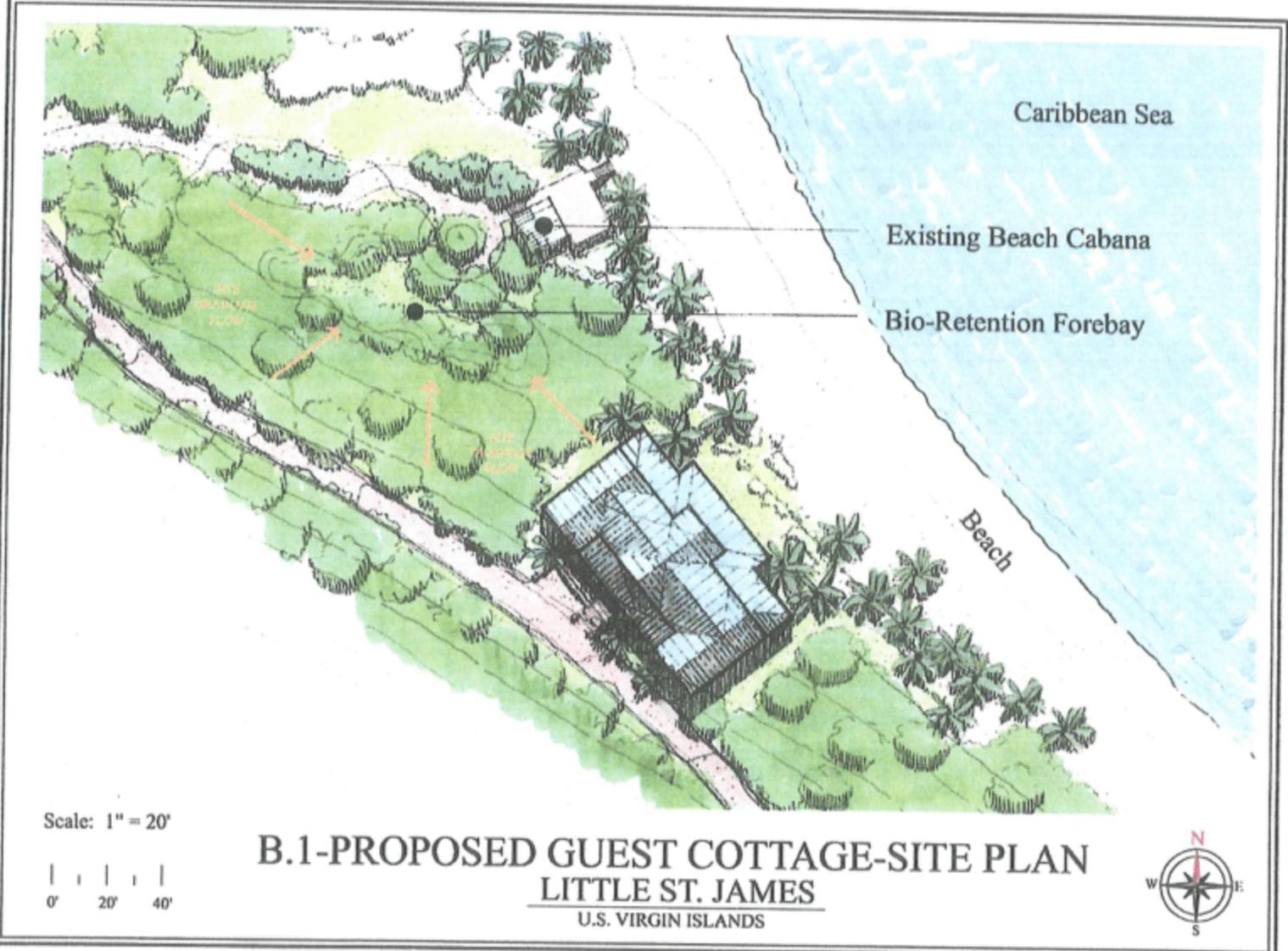
LAND USE LEGEND

- | | |
|-----------------------|---------------------------------|
| EXISTING STRUCTURES | PROPOSED ACCESSORY IMPROVEMENTS |
| B-2 SCREEN CABANA | B-1 GUEST COTTAGE |
| B-3 BEACH CABANA | |
| B-4 OPEN CABANA | OPEN SPACE |
| B-5 LOOKOUT PAVILLION | |



PARCEL B MASTERPLAN
LITTLE ST. JAMES
 U.S. VIRGIN ISLANDS

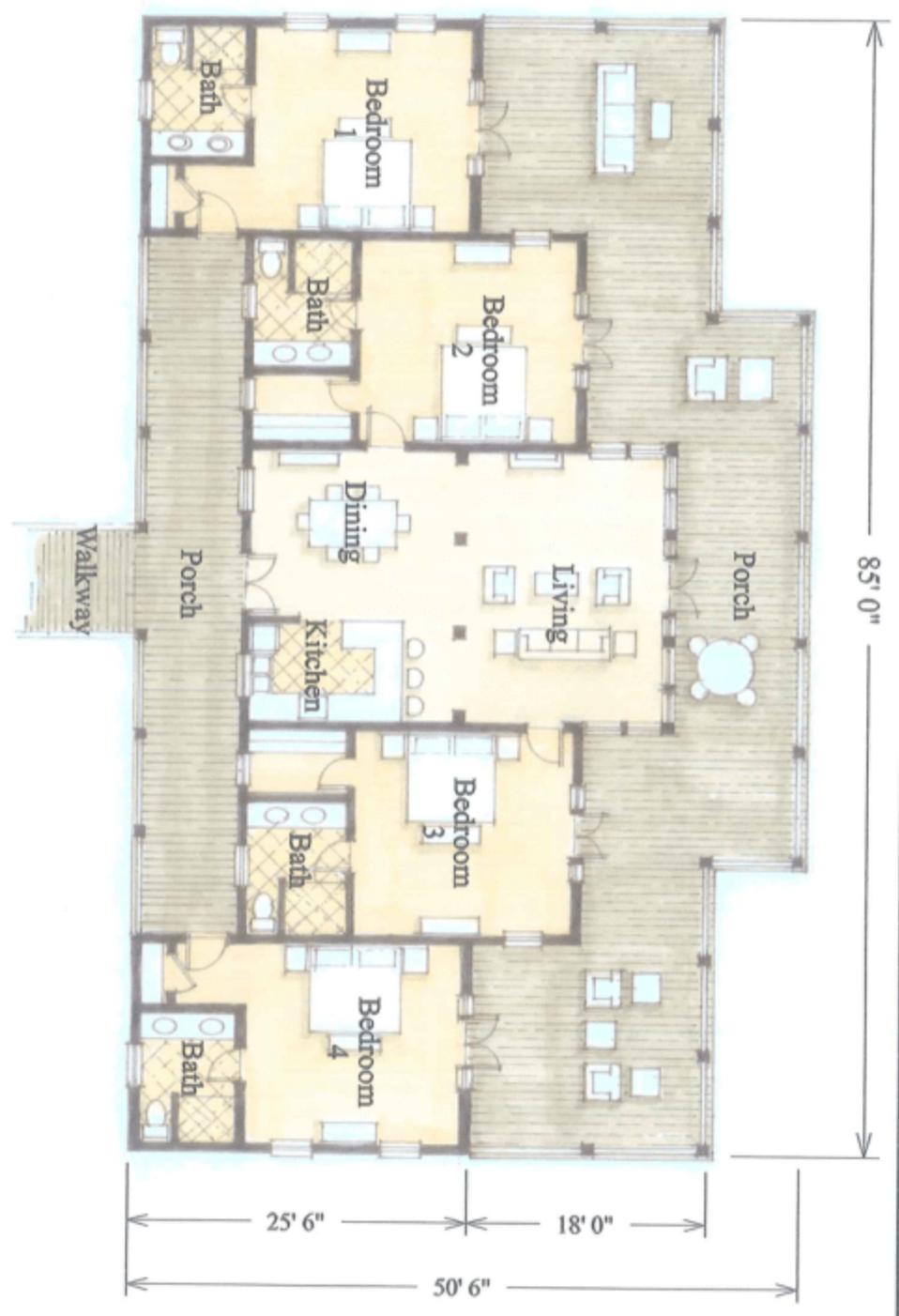
**MASTER
 BASE PLAN**
 CZM EXHIBIT B
 02.01.2010

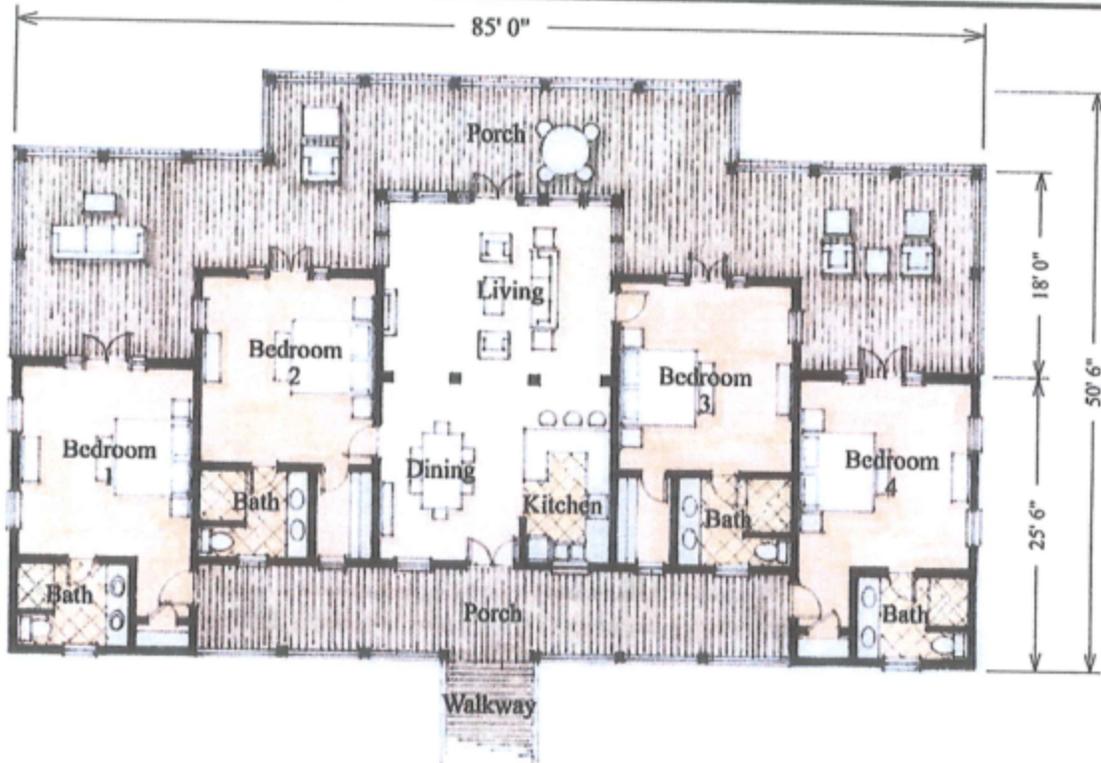


Scale: 1/8" = 1'
 0' | 8' | 16'

GUEST COTTAGE FLOOR PLAN
LITTLE ST. JAMES
 U.S. VIRGIN ISLANDS

Living Area.....2,260ft²
 Covered Porch.....1,800ft²
 Total.....4,060ft²



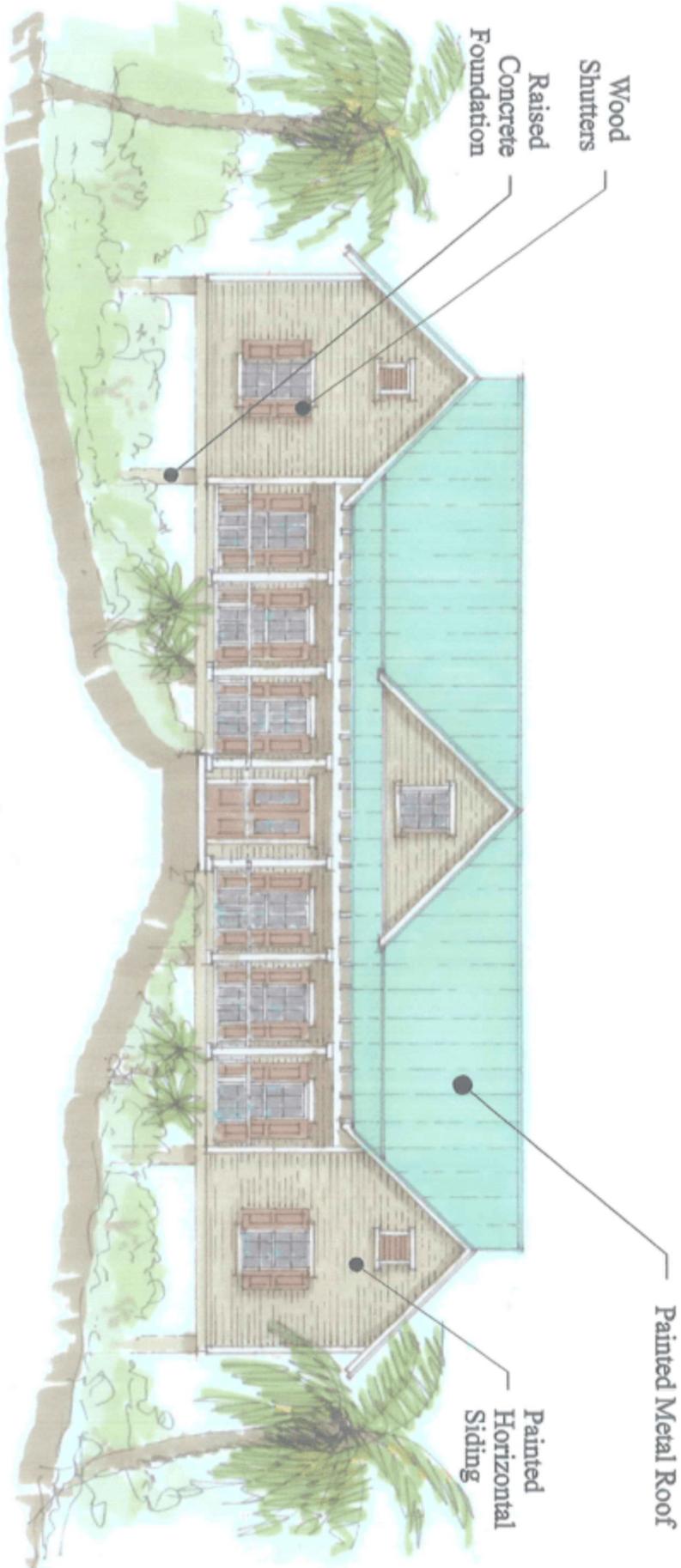


Scale: 1/8" = 1'



B.2-GUEST COTTAGE FLOOR PLAN
LITTLE ST. JAMES
 U.S. VIRGIN ISLANDS

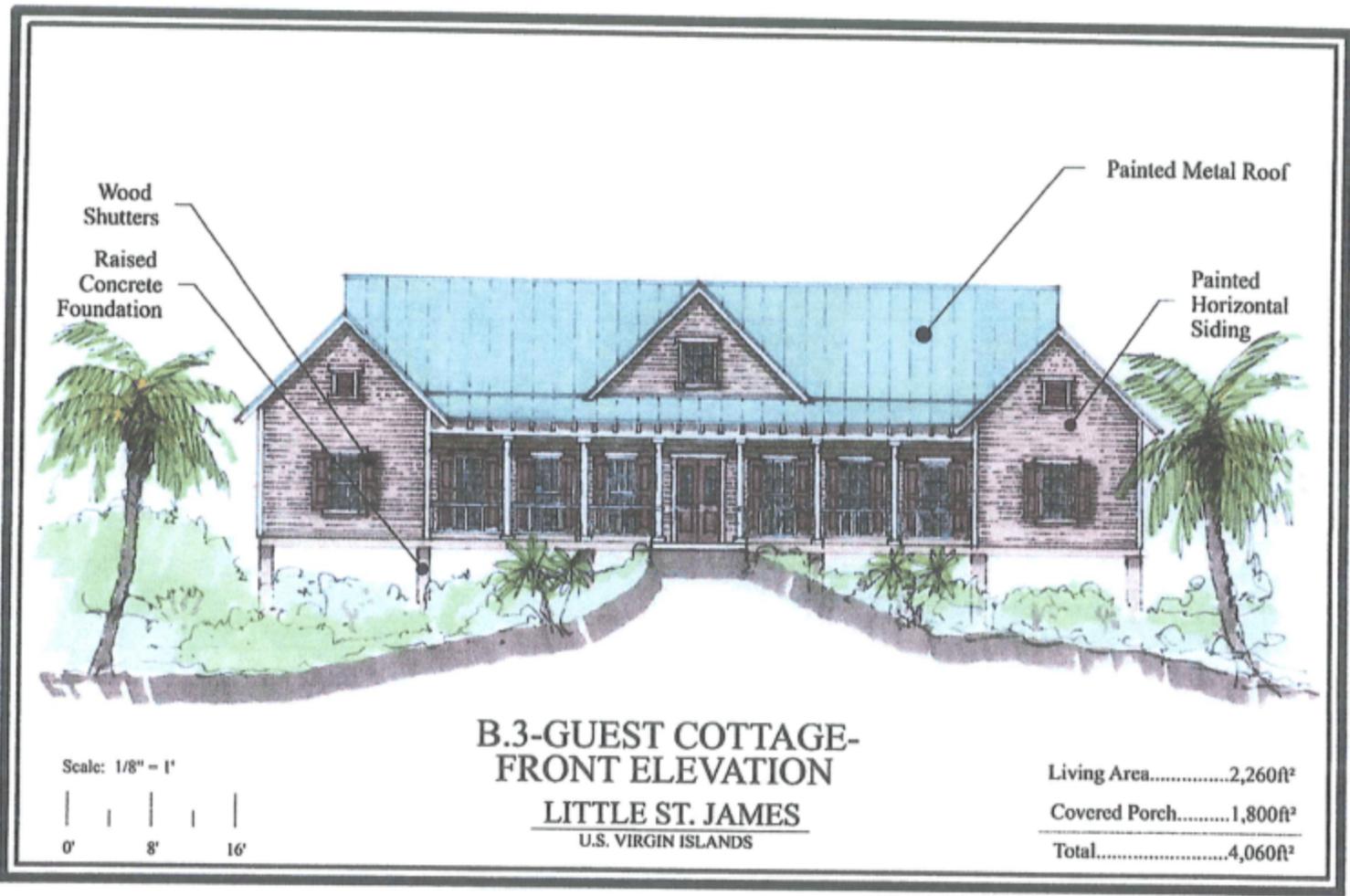
Living Area.....	2,260ft ²
Covered Porch.....	1,800ft ²
Total.....	4,060ft²



Scale: 1/8" = 1'
 0' | | 8' | | 16'

GUEST COTTAGE FRONT ELEVATION
LITTLE ST. JAMES
 U.S. VIRGIN ISLANDS

Living Area.....	2,260ft ²
Covered Porch.....	1,800ft ²
Total.....	4,060ft ²



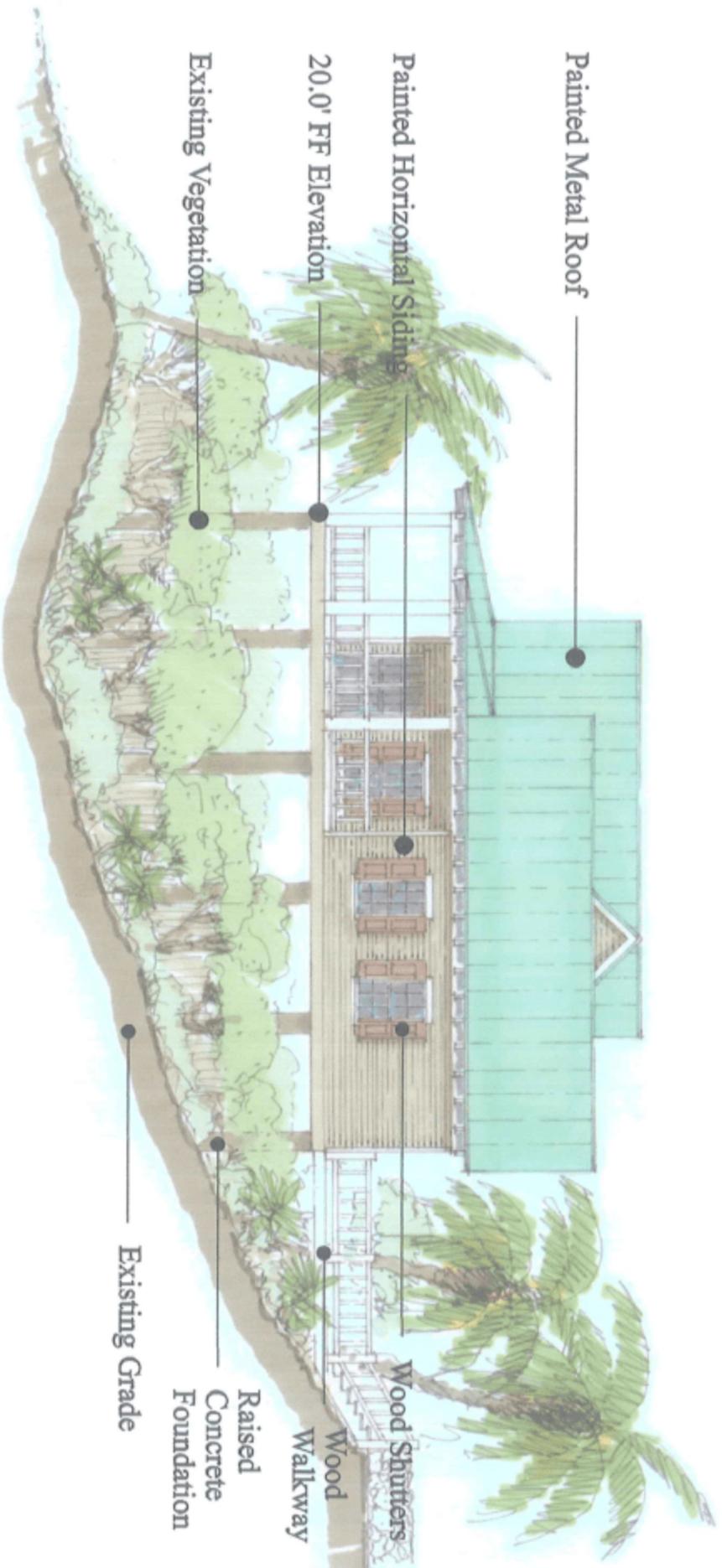
Scale: 1/8" = 1'

0' 8' 16'

B.3-GUEST COTTAGE-
FRONT ELEVATION

LITTLE ST. JAMES
U.S. VIRGIN ISLANDS

Living Area.....	2,260ft ²
Covered Porch.....	1,800ft ²
Total.....	4,060ft ²



Painted Metal Roof

Painted Horizontal Siding

20.0' FF Elevation

Existing Vegetation

Existing Grade

Wood Shutters

Wood Walkway

Raised Concrete Foundation

Scale: 1/8" = 1'



GUEST COTTAGE SIDE ELEVATION

LITTLE ST. JAMES

U.S. VIRGIN ISLANDS

