Town of Brewster Sea Camps Bay Parcel Discovery Analysis

April 4, 2023

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HISTORY

These places were part of the ancestral homelands of the Aquinnah Wampanoag and the Mashpee Wampanoag peoples for thousands of years prior to European occupation. The Wampanoag tribes sustainably managed and cared for the Cape's coastal and pond ecosystems which in turn sustained them.

HISTORY

WAMPANOAG LANDS

10,000+ YEARS

Present-day Route 6A was an ancient Native foot path.

1653

Thomas Prence and William Bradford, on behalf of Plymouth and its partners, purchase most of present-day Brewster from Sachems Wano and his son Sachemas. Brewster was first settled as a northeastern parish of the town of Harwich.

Following European settlement it is unknown what the sites were used for. However, much of Cape Cod was cleared for lumber and the resulting clearings were used for sheep pasture.

1803

Brewster was incorporated as a municipality.

1912

The main house is built.

POND PARCEL

Historical analysis suggests a small cranberry bog operated on the Pond Parcel using Long Pond as a source of irrigation from late 1800s to the 1960s.

1922

The Delahanty and Dodd families founded a boy's camp called Camp Monomoy located on a six-acre property in West Harwich.

1925

Camp Monomoy moved to Brewster to an area that is now part of Nickerson State Park.

BAY PARCEL

1938

The Delahanty family opened Camp Wono, a girls' overnight camp, on the Bay Parcel. Most of the cabins are built in the 1940s.

1965

A day camp was added.

1967

The Pond Parcel was purchased and incorporated into Camp Wono.

1975

Camp Monomoy and Camp Wono are merged into one co-ed camp.

1977

An access drive is built off of Route 137.

2006-2008

The Boathouse and Arts Building are built.

2020

The Cape Cod Sea Camps ceased operations and were listed for sale.

2021

Brewster residents vote for the town to acquire the two parcels.

HISTORIC SITE EVOLUTION

Bay Parcel

1. Woodland is cleared off of 6A creating the open fields that terrace towards the bay.
2. Access off of 6A exists only on the eastern side of the site.
3. The main house and a cluster of other buildings at the center of the property are built.
4. A straight path is carved into the existing woodland from the main house to the beach.
5. Spruce Hill and the property west of the parcel are largely deforested.

1. An entry drive is added off of 6A, which today is the primary access.
2. The majority of cabins are built in the center of the property. Woodland is removed in distinct bands to allow access roads to the cabins.
3. The dining hall is built.
4. Tennis courts are added at the dune edge.
5. Second growth forest begins to reclaim Spruce Hill and the property west of the parcel. Spruces are planted towards Route 6A.

1. Additional tennis courts are added at the dune edge.
2. Tennis courts are added at the eastern side of the parcel.
3. The pool by the beach is added.
4. Spruce Hill is largely reforested.

1. In the current maintenance area, the woodland is cleared in areas to expand circulation.
2. Woodland is thinned throughout the property to accommodate expanding program.

CONTEXT

Set Within an Open Space Network

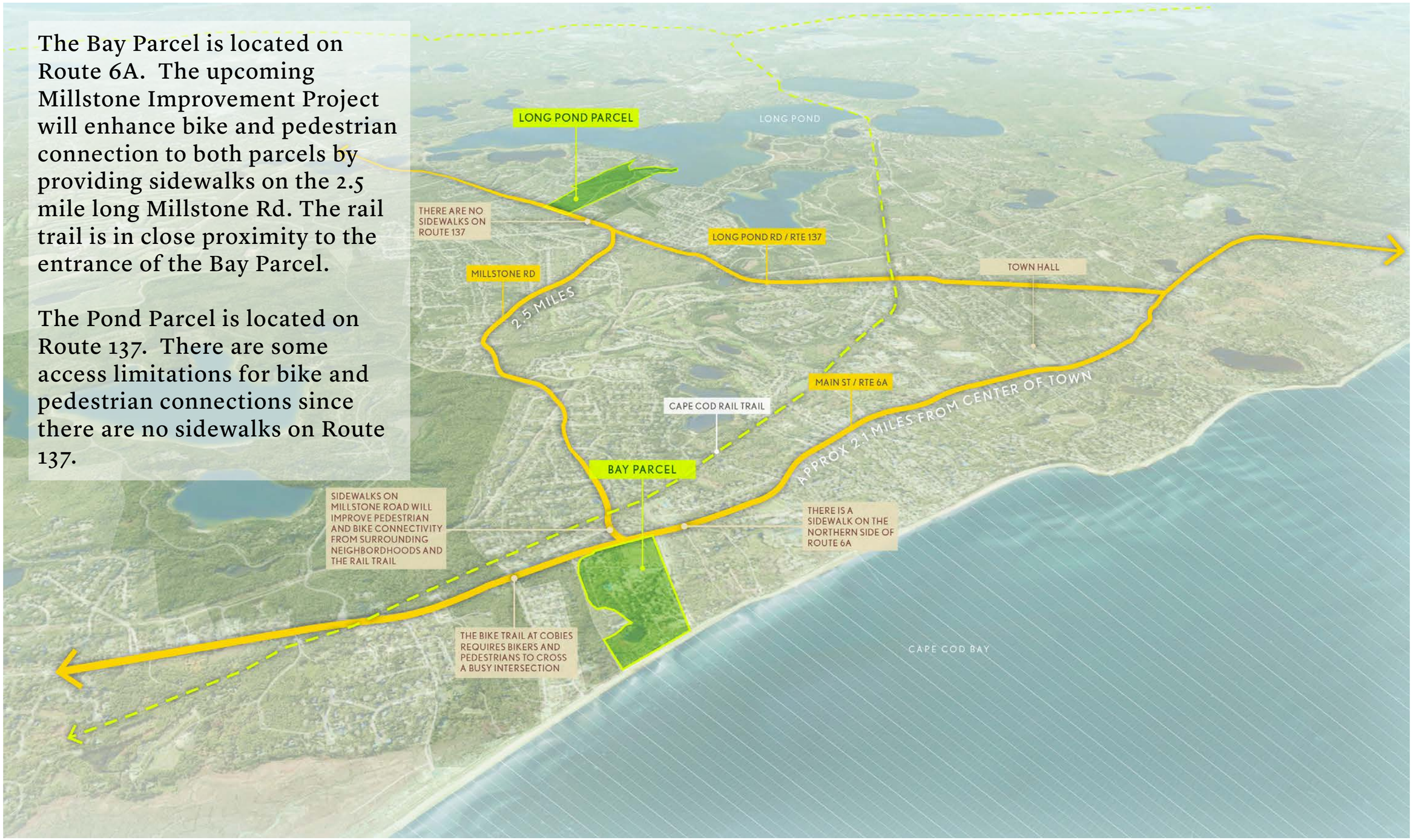
The Bay and Pond Parcels have the potential to contribute to Brewster's vibrant network of open spaces and leverage connections to adjacent conserved areas including Spruce Hill and the Long Pond Woodlands.

CONTEXT

Access

The Bay Parcel is located on Route 6A. The upcoming Millstone Improvement Project will enhance bike and pedestrian connection to both parcels by providing sidewalks on the 2.5 mile long Millstone Rd. The rail trail is in close proximity to the entrance of the Bay Parcel.

The Pond Parcel is located on Route 137. There are some access limitations for bike and pedestrian connections since there are no sidewalks on Route 137.



CONTEXT

Relationship to Town Amenities

Both parcels present opportunities to expand Brewster's town amenities by providing space for new activities and the potential relocation of existing amenities in need of upgrading.

Bay Parcel

KEY QUESTIONS GUIDING OUR SITE ANALYSIS

1. Based on desired site program and use, which areas have the highest potential for reuse and/or new development?

2. How will historical patterns and existing natural systems influence future use and development of the parcel?

3. Which buildings have the highest potential for reuse? Which can be removed and potentially reused elsewhere?

4. Which areas should be protected or preserved?

5. Which areas are best for active, public use? And which areas may be suited for new structures, such as housing or community centers?

6. What are the trade-offs for keeping vs removing existing structures and how will the Town be evaluating those trade-offs?

TOPOGRAPHY AND HYDROLOGY

Elevation - Revealing the Bay

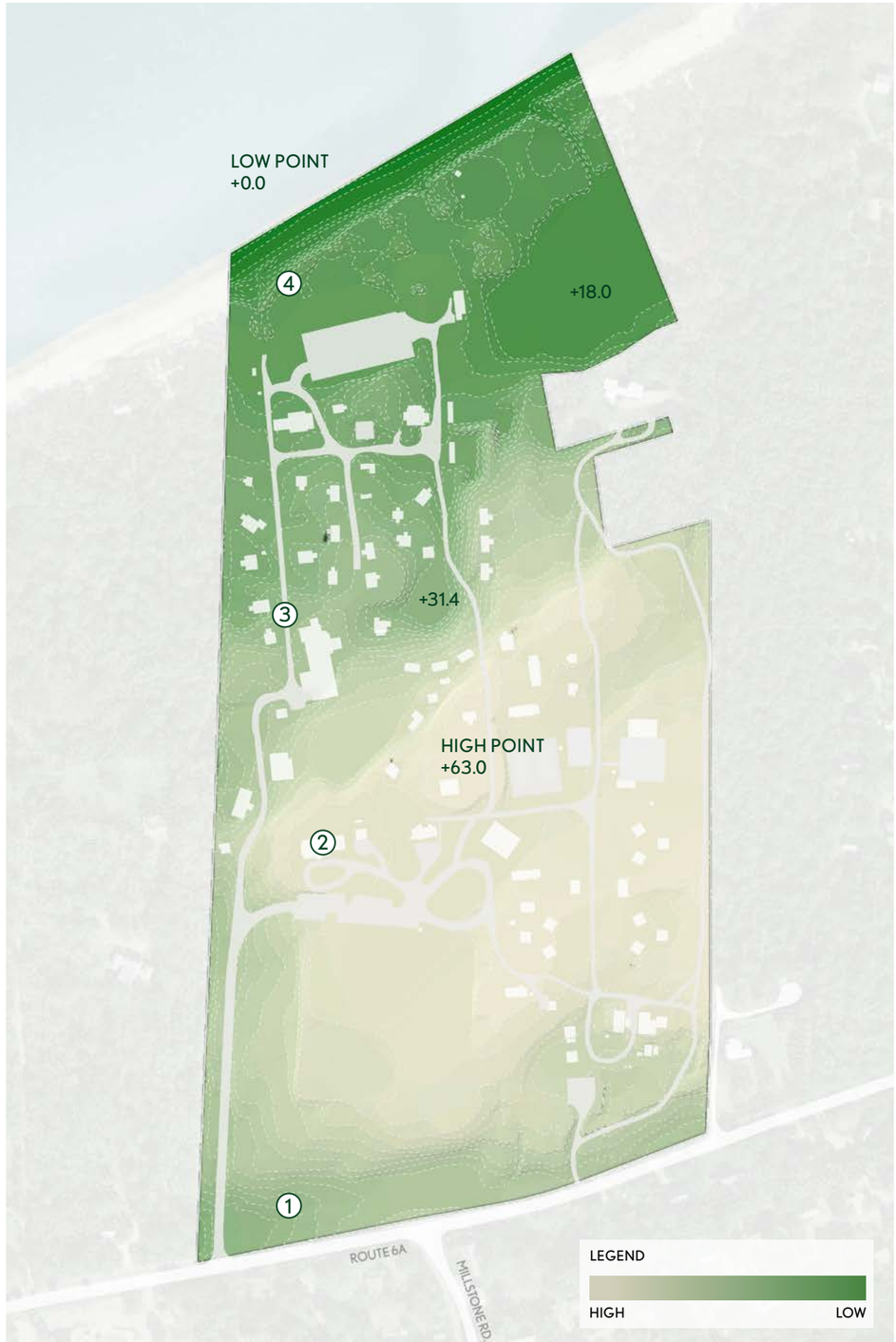
The Administrative House sits near the high point of the property, from which the topography terraces down toward the Bay to the north and towards Route 6A to the south.

① LAWN EMBANKMENT ALONG ROUTE 6A

② ADMINISTRATIVE HOUSE SITS AT HIGH ELEVATION

③ TOPOGRAPHY DESCENDING TOWARDS THE BAY

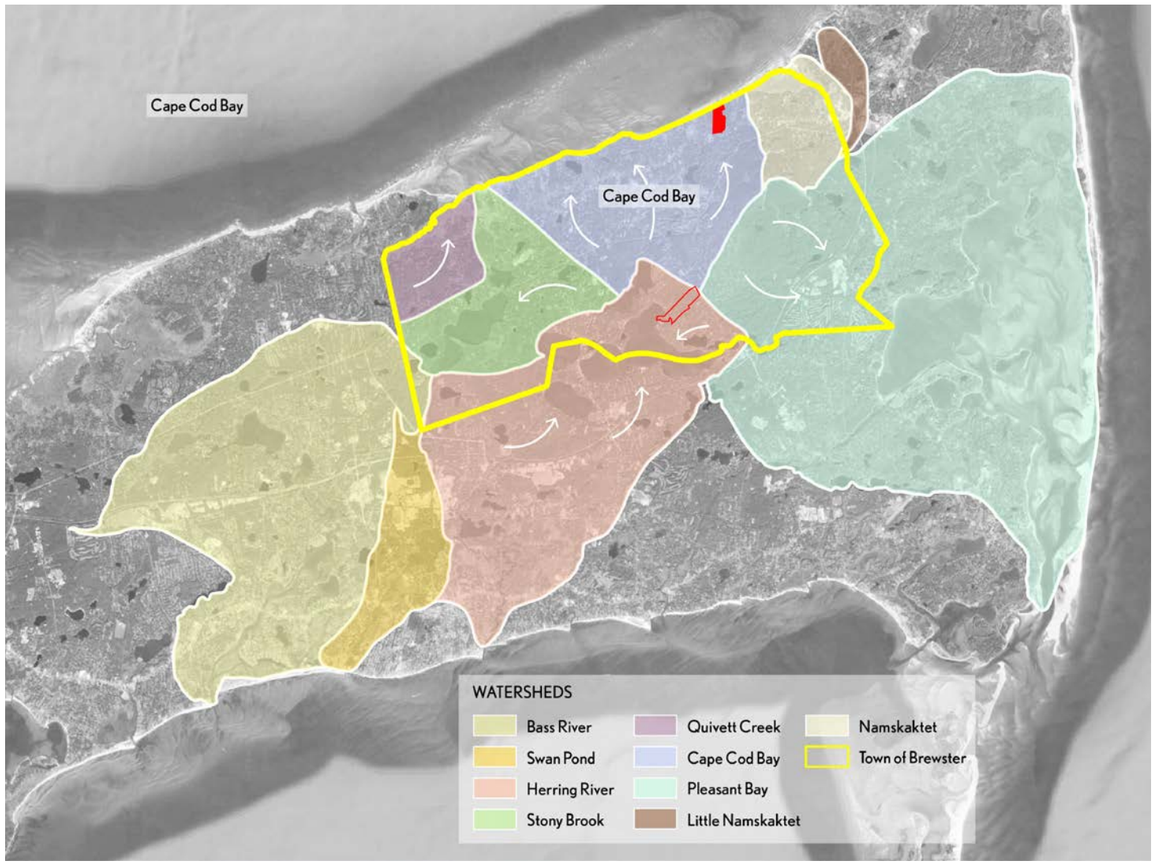
④ DUNE



TOPOGRAPHY AND HYDROLOGY

Hydrology

The Bay Parcel is situated in the Cape Cod Bay watershed. Localized water primarily flows from the open lawn towards the bay and pond. Aside from new stormwater systems that have been installed by the beach and temporary pool parking areas, there is no formal drainage system on site and water primarily flows along the existing paths.

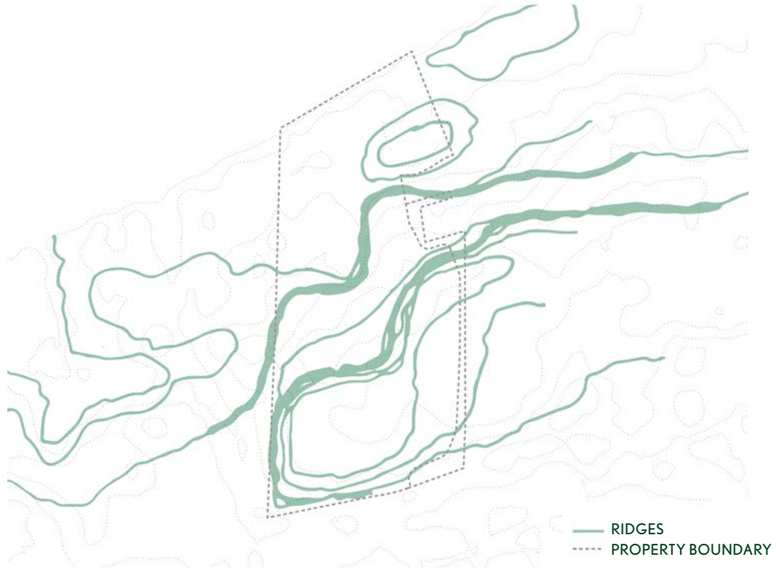


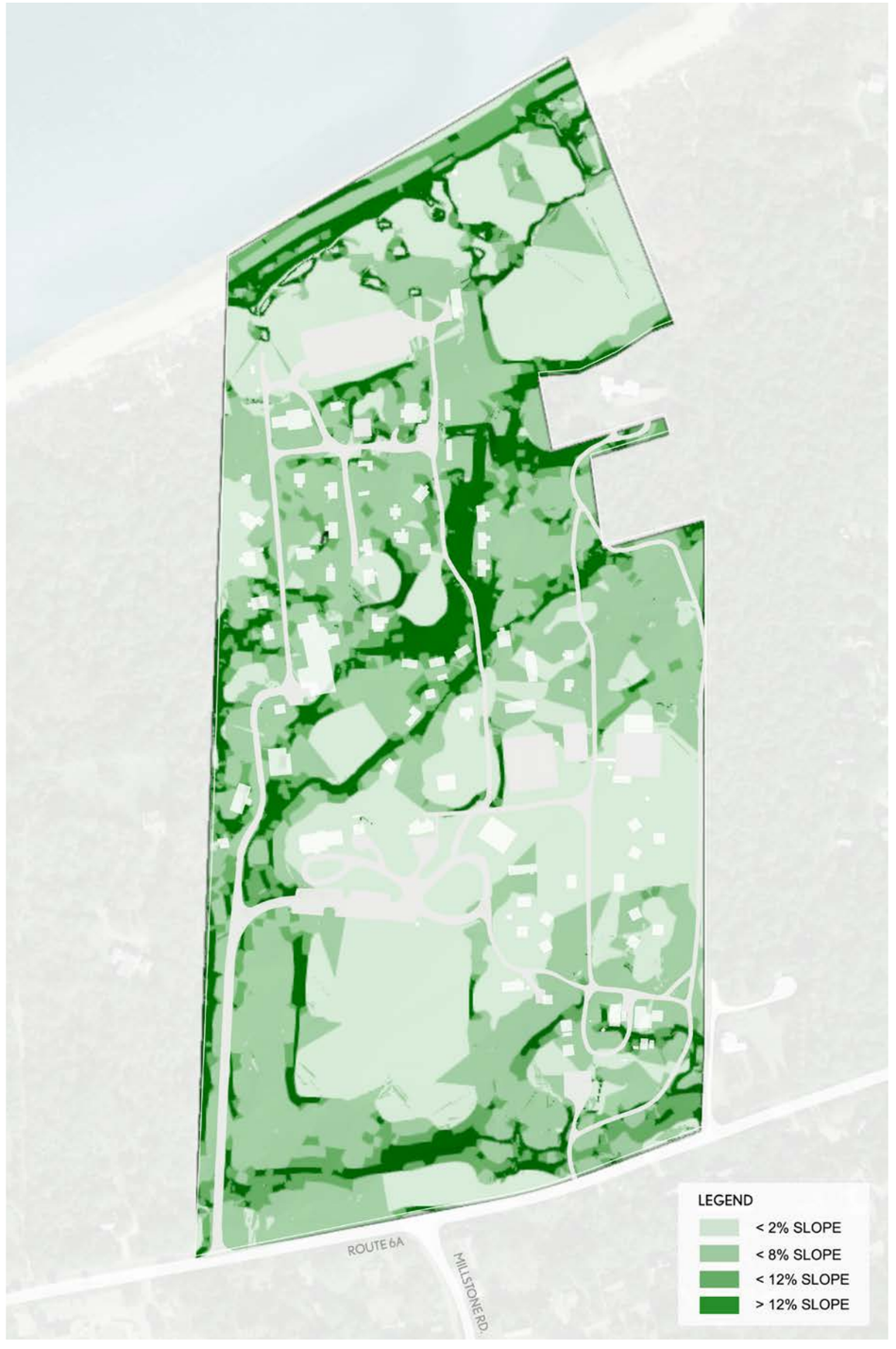
TOPOGRAPHY AND HYDROLOGY

Slope

The existing varied topography is characterized by steep ridge lines formed by glacial moraines that run roughly east-west, large upland flat zones, and smaller natural hollows. The lawn on Route 6A is surrounded by steep embankments. Toward the center of the site, a natural amphitheater and overlooking ridge are notable features.

SLOPES SURROUNDING OPEN GLADE AT CENTER OF PARCEL





ECOLOGY
Plant Communities

The parcel is composed of woodland, open lawn, pond, wetlands, dunes and beach.

DENSE WOODLAND

OPEN WOODLAND

POND AND WETLANDS

DUNES AND BEACH

TOWN OF BREWSTER SEA CAMPS, BREWSTER MA

ECOLOGY

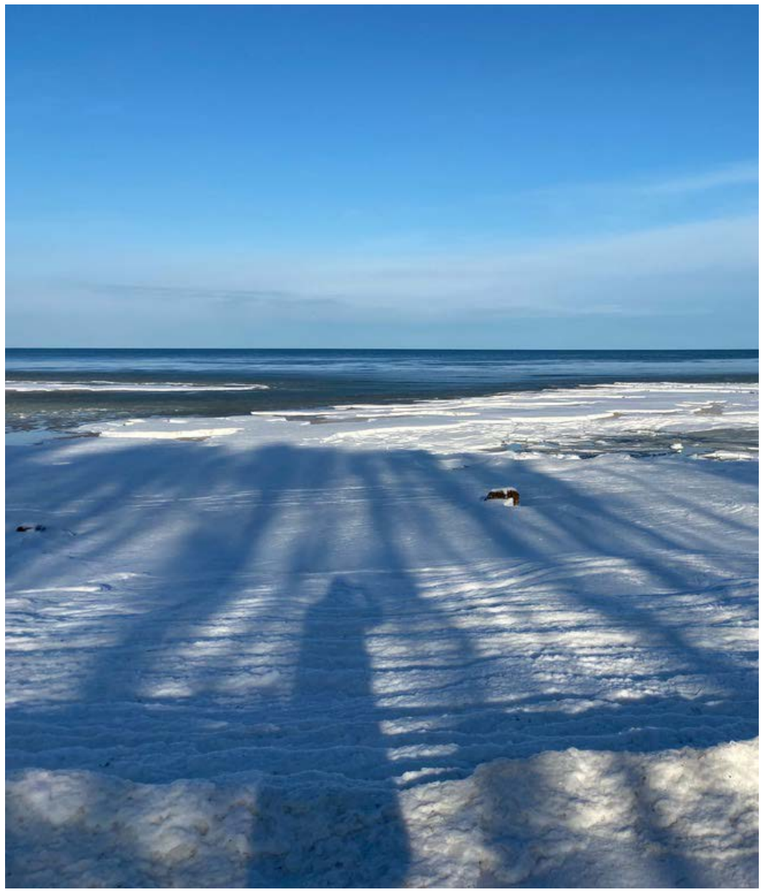
Invasives

The northeasterly edge of the pond and abutting border vegetated wetland is dominated by a dense, monoculture stand of invasive phragmites. Throughout the greater property, a variety of invasive vegetation is present. In some areas, the extent of invasive vegetation limits wildlife habitat functioning.

ECOLOGY

Coastal Resource

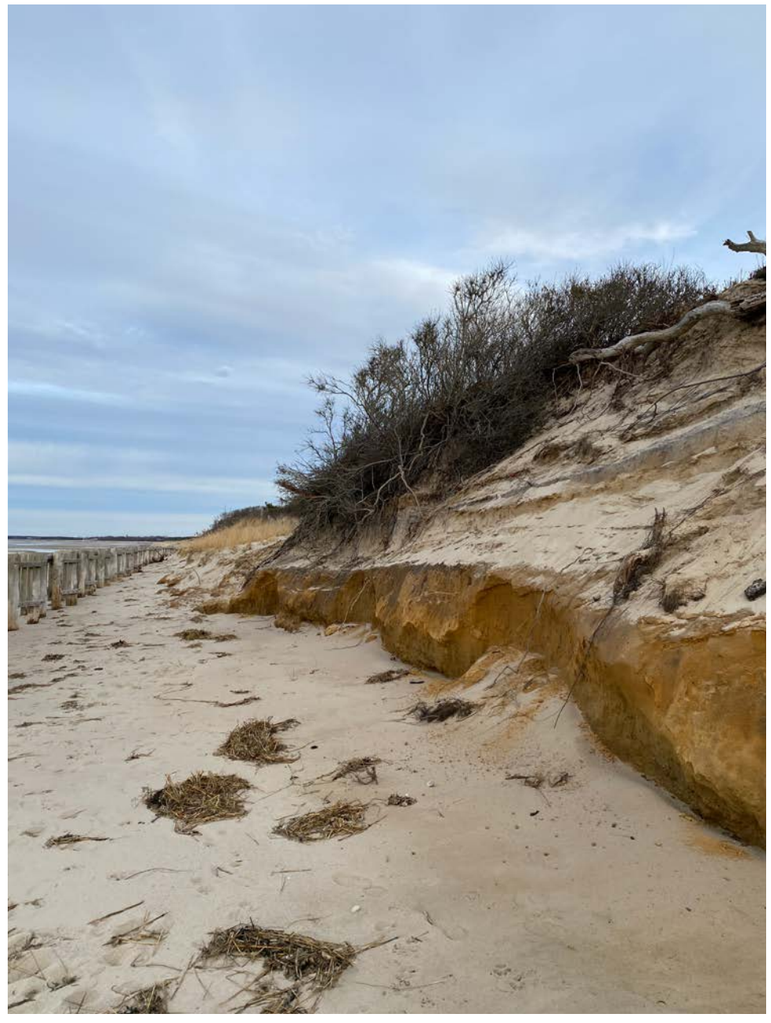
With 944 linear feet of beach frontage (1,720 linear feet of frontage when combined with Spruce Hill) the Bay Parcel is an important coastal resource. During low tide, the ocean recedes over 1 mile enabling visitors to explore the sandbars, clam beds, and tidal pools of the flats. Providing resilient and sustainable public access to the beach is critical to maintain healthy beach and dune systems and to support the variety of habitat and marine life along the coast.



ECOLOGY

Shoreline Change

As evident by the accumulation of wind-blown sand within the northerly remaining tennis courts, continued landward migration of the Coastal Dune is expected in the short-term. The dune coastal bank on the beach-side is eroding, as shown by the vegetation at the dune edge. In 2016, dune fencing was installed and beach nourishment was performed to protect the dune ecosystem and combat erosion.



TOWN OF BREWSTER SEA CAMPS, BREWSTER MA

ECOLOGY

Recommendations

① Remove the remaining northerly tennis courts and replace with natural vegetation to increase coastal resiliency.

② Conduct dune enhancement activities to improve dune stability and coastal resiliency (i.e., revegetating denuded areas, etc.).

③ Evaluate paths through dune and border vegetated wetland and abandon those deemed not critical for future access needs, and upgrade footbridges as necessary.

④ Design and implement a comprehensive Invasive Species Management Plan, including the Phragmites stand present at the Pond and multitude of invasive vegetation spread throughout the campus.

⑤ Provide stormwater management (i.e., rain garden) between Units 38 and 40 where road runoff is currently draining into the isolated vegetated wetland.

⑥ Considering shoreline change, plan for further inland beach parking in the long term.

⑦ Protect and expand contiguous forest.

⑧ Explore potential for enhancing wildlife habitat value.

⑨ Verify wetland and dune resources and their buffer zones through regulatory filing with the Brewster Conservation Commission.

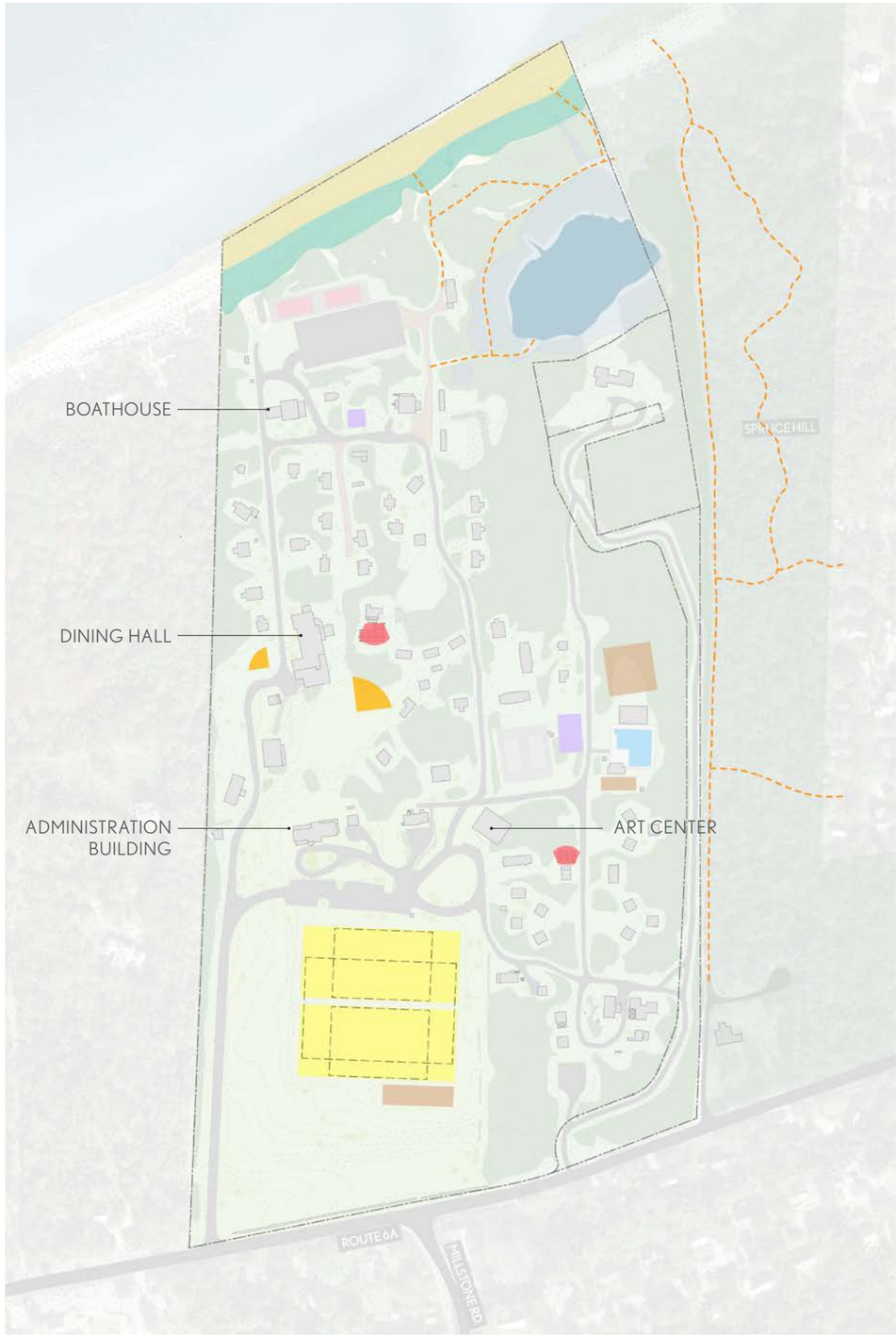
⑩ Peform a Vernal Pool Assessment(s) along the fringes of the pond in spring (March-April) to provide baseline information.

SITE PROGRAM

Active recreational program is currently concentrated along the middle and southern portions of the site and is characterized by large open play fields to the south and smaller more informal fields in the center of the property. The tennis courts near the beach are susceptible to erosion and are not currently in use.

EXISTING PROGRAM AND FACILITIES:

- Administration building
- 50+ cabins, cottages, & dorms
- Beachfront
- Boathouse
- Dining hall with commerical kitchen area
- Olympic-sized swimming pool with swimming pavilion
- Art center
- Basketball courts
- Fields for soccer, lacrosse, baseball, archery, field hockey, & other sports
- 2 outdoor theatres
- Maintenance building & garage
- Woodworking shop



LANDSCAPE PROGRAM

POND

PEDESTRIAN TRAIL

DUNE

BEACH

BASEBALL

ATHLETIC FIELDS

BASKETBALL

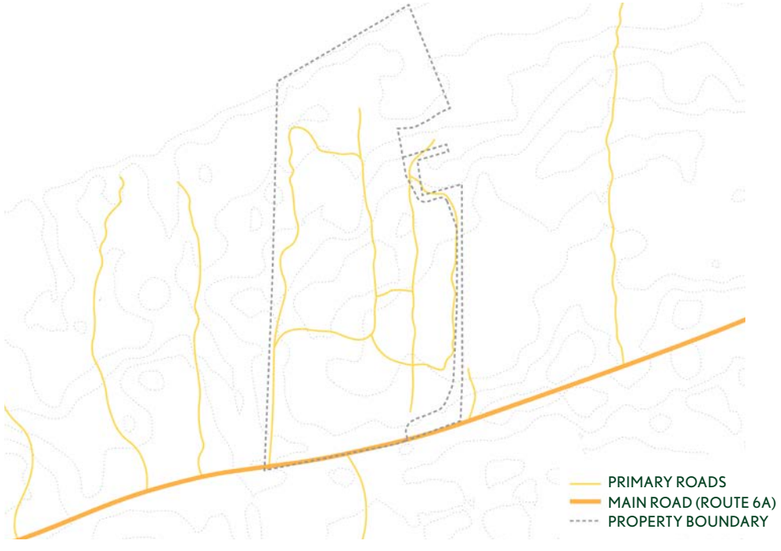
POOL

OUTDOOR AMPHITHEATER

CIRCULATION

The parcel, much like observed patterns all along the bay, is accessed by a straight driveway running perpendicularly between 6A and the beach. A second entrance off of 6A at the eastern end of the parcel provides access to the maintenance buildings and to a private residence. Two-way vehicular access is limited to the southern portion of the site. The current beach circulation is one-way looping from west to east.

Because this was a camp, parking was limited and the roads served as the primary pedestrian path network only allowing service access for vehicles. With the addition of new beach and pool parking areas, there are currently 136 parking spots within the parcel and 8 spots at neighboring Spruce Hill. Walking trails around the pond and dune could potentially be connected to existing trails at Spruce Hill.



ROAD TO BAY

POND TRAIL

LANDSCAPE CHARACTER

The Bay Parcel has a variety of different landscape experiences ranging from the intimate campus scale of the cabin woodlands to the extensive lawn on Route 6A.

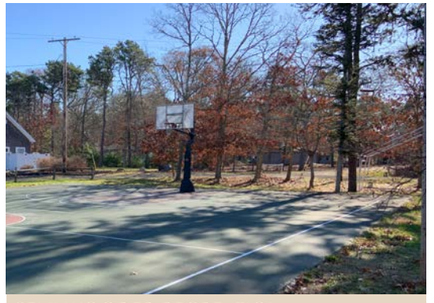
BEACH

DUNE

POND

SEMI-WOODED CAMPUS CORE

CABIN VALLEY + NATURAL AMPHITHEATER



SEMI-WOODED RECREATION

CABIN RIDGE

TERRACING LAWN

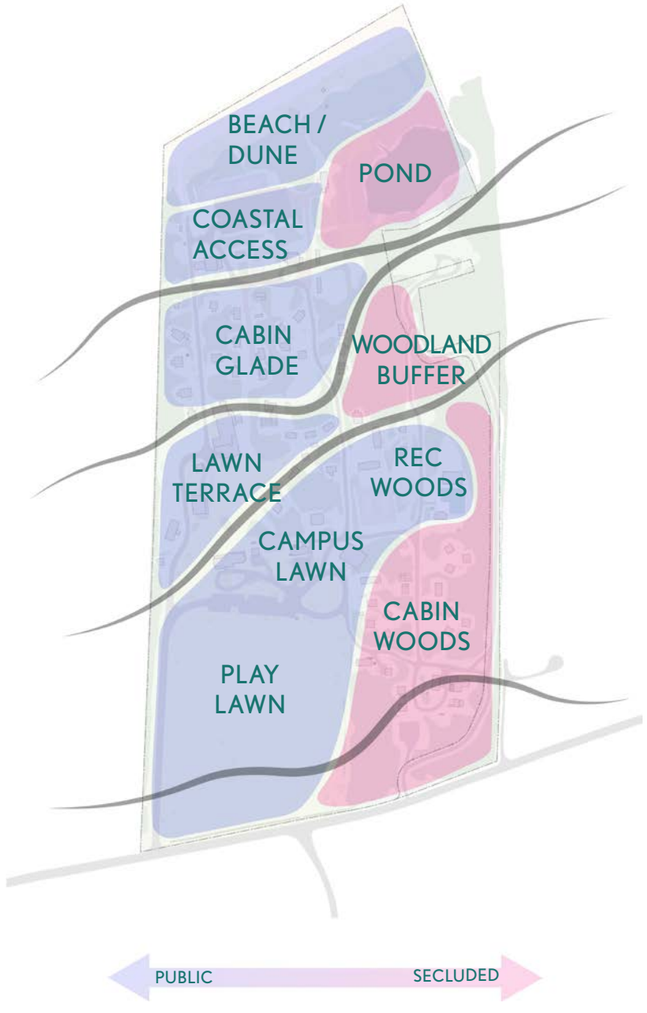
WOODLAND BUFFER

LANDSCAPE CHARACTER

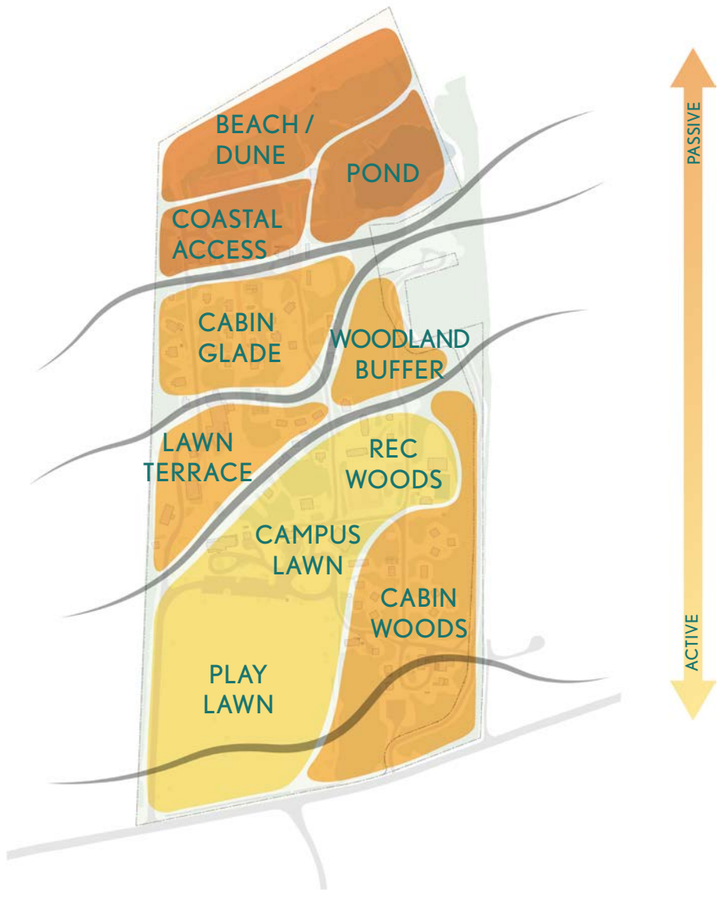
Grain of the Site

The topographic ridges that move across the site create a “grain” to the site that shapes landscape character and program. This is reflected through gradients of experience; the site feels more public on the west side and more secluded on the eastern side, and more active towards Route 6A becoming progressively more passive towards the Bay.

Public vs. Secluded



Active vs. Passive



UTILITIES

Key Takeaways

WATER

Relocation of existing 8” east-west main and potential extension to Route 6A in addition to any new building connections

SEWER

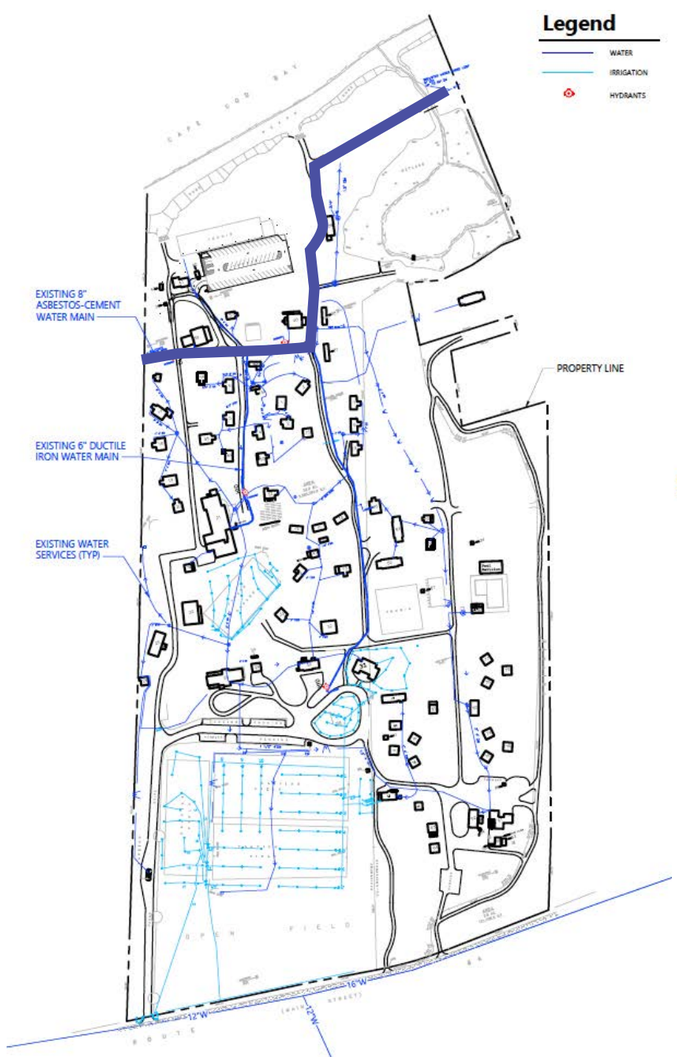
Series of existing septic systems, anticipate requiring consolidated package treatment system with additional development (dependent on scale and DEP discretion)

DRAINAGE

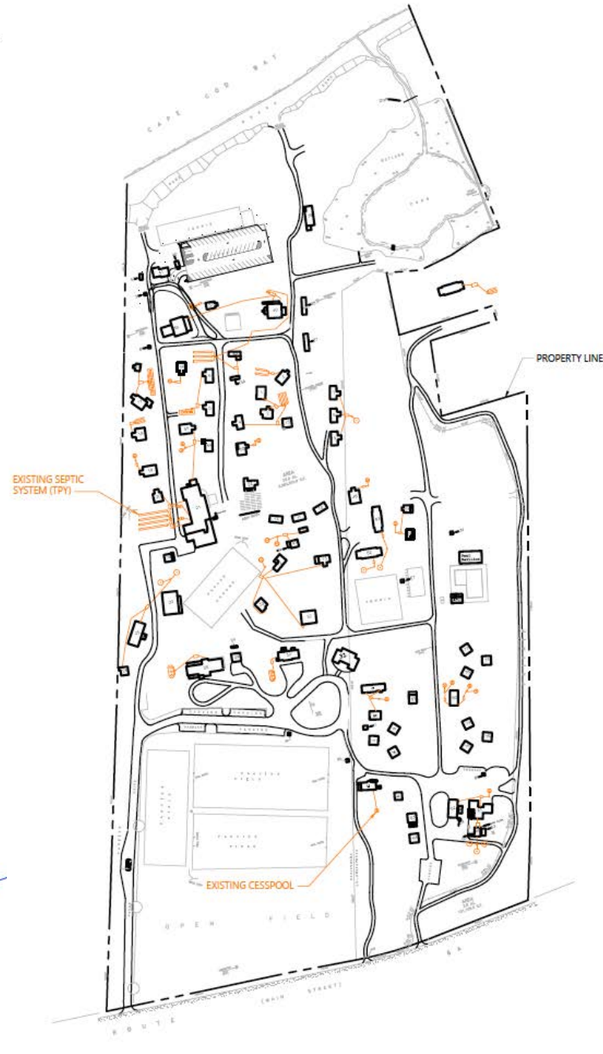
There is limited existing infrastructure on the site, anticipate phased improvements for water quality treatment, peak rate mitigation, and infiltration (DEP and local standards)

ELECTRIC / TELECOMMUNICATIONS /GAS

Exist onsite and would be extended to serve proposed development to the extent capacities/ providers allow



EXISTING WATER UTILITIES



EXISTING SEWER/SEPTIC UTILITIES

OPPORTUNITIES AND CONSTRAINTS

Topography

The majority of the site circulation (vehicular and pedestrian) is greater than 8% slope. Because all of the paths are used as the primary pedestrian circulation, this poses a challenge for accessibility.

The larger, open and flat areas of the site are primarily around the Administrative building, lawn and pool areas. These areas are well-suited for play fields, parking and potential building development.

PATH SLOPE

AREAS UNDER 4% SLOPE

REGULATIONS
Current Zoning Regulations

ADJACENT PARCEL BUFFER ZONES

25' BUFFER ZONES

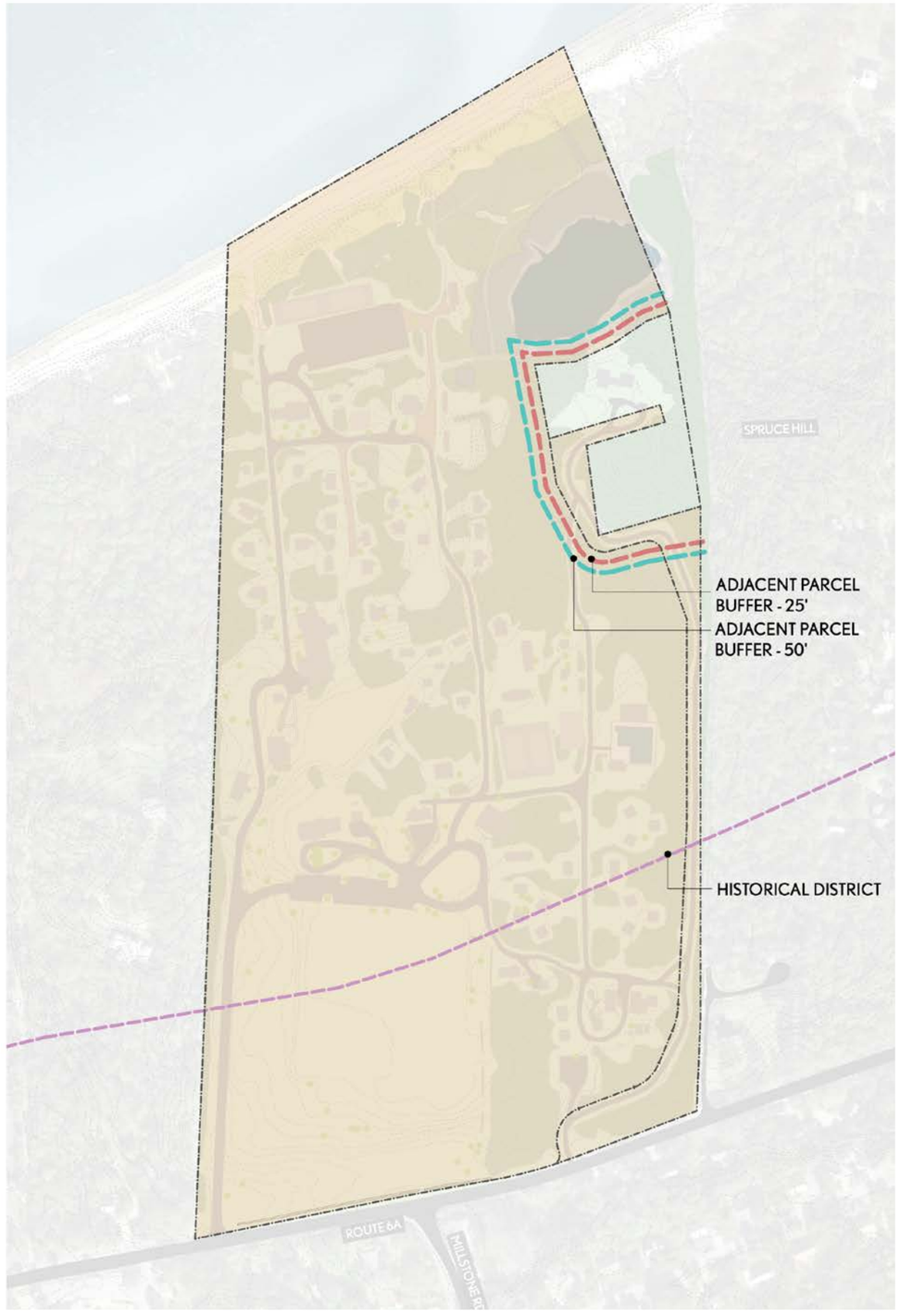
Public use and access to this area is limited to pedestrian access to the existing dock and adjacent access path located in the southwest corner of the pond. Buildings and structures cannot be placed within this area and trees cannot be cleared or removed.

50' BUFFER ZONE

25' buffer restrictions apply to this zone except that public access is permitted as long as it is not for parking, storage, staging, or congregating.

OLD KINGS HIGHWAY HISTORIC DISTRICT

The Old King's Highway Historic District committee has jurisdiction on any buildings within the view corridor of the edge of the district. New buildings and modifications to existing buildings are reviewed by the Historic District Committee to ensure any changes are appropriate to maintaining the aesthetic tradition of Brewster as a member of the Old King's Highway Regional Historic District.



REGULATIONS

Natural Buffer Zones and High Risk Coastal Areas

RESOURCE AREAS

50'/100' WETLAND BUFFER ZONE

Activity within this zone must not impair the wetland's ability to perform. Building within or altering a vegetated wetland is prohibited unless a variance is granted, which can occur if there is an overriding public interest and the proposed activity does not impair the wetland functioning. Maintenance of an already existing structure is permitted.

50'/100' COASTAL DUNE BUFFER ZONE

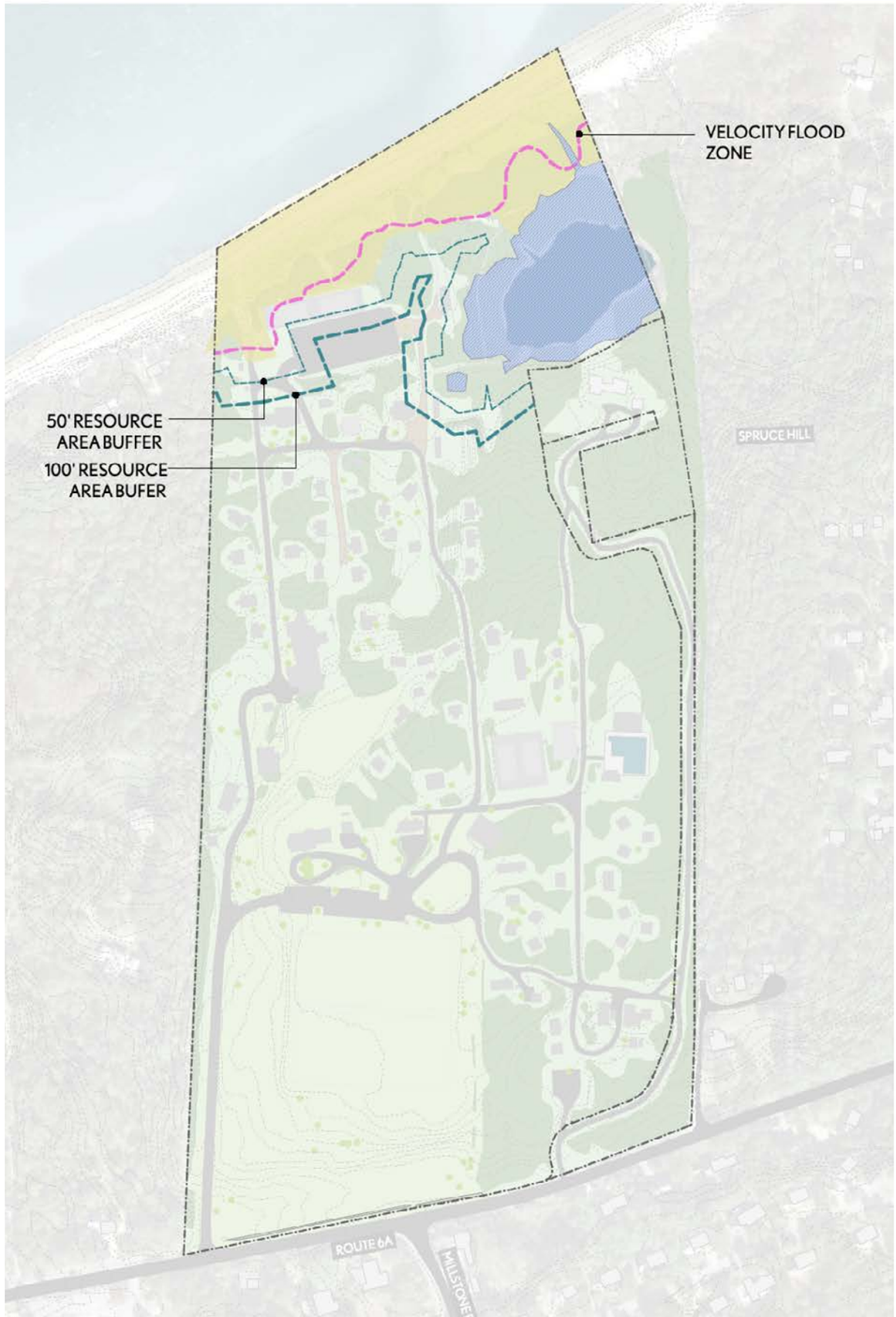
Activity within the 100' zone should not have an adverse effect on the dune's functioning, stabilization, vegetation, or habitat. Permitted activities include pedestrian walkways that do not disturb vegetative cover, plantings compatible with the natural vegetative cover, and fencing that increases dune development.

Within the 50' buffer zone, no activity other than maintenance of an already existing structure is permitted. A permit can be obtained for activities that do not interfere with the dune's functioning or habitat.

VELOCITY FLOOD ZONE

LAND SUBJECT TO COASTAL STORM FLOWAGE (LSCF)

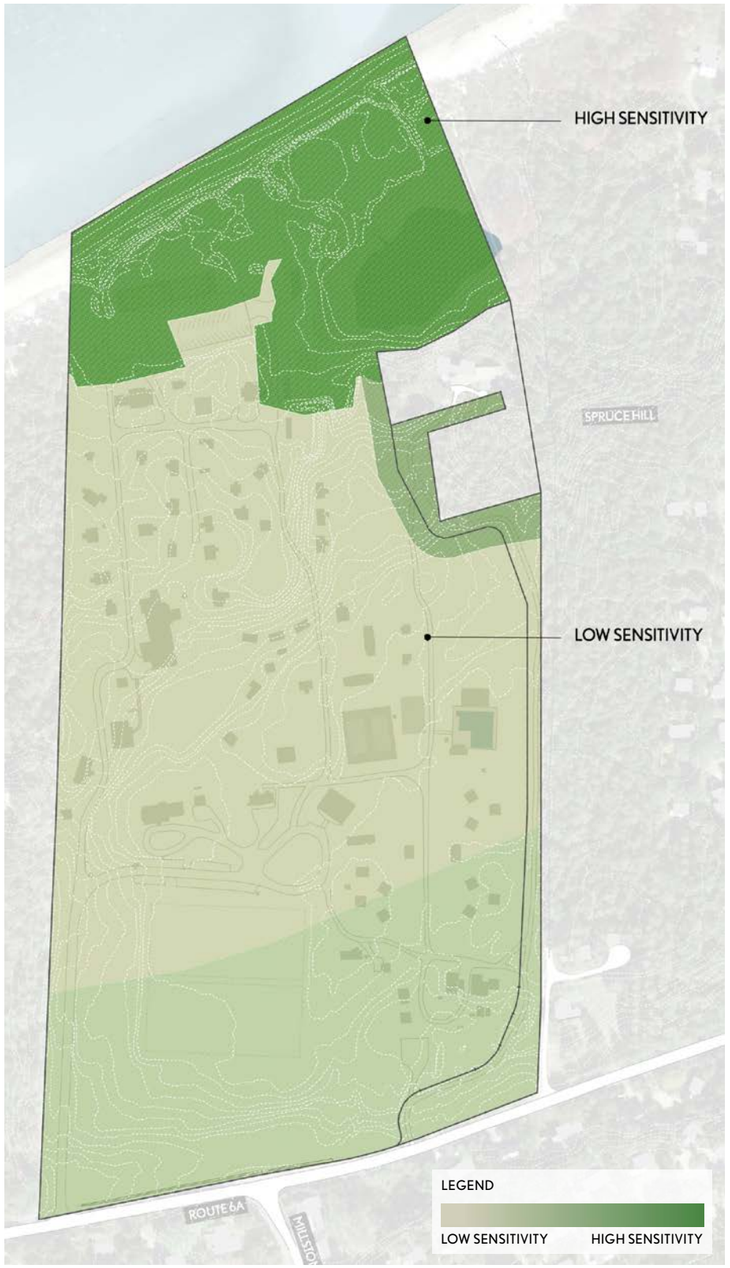
This area has greater than 1% chance of flooding and an additional hazard associated with storm waves. This area has a 26% chance of flooding over the life of a 30–year mortgage.

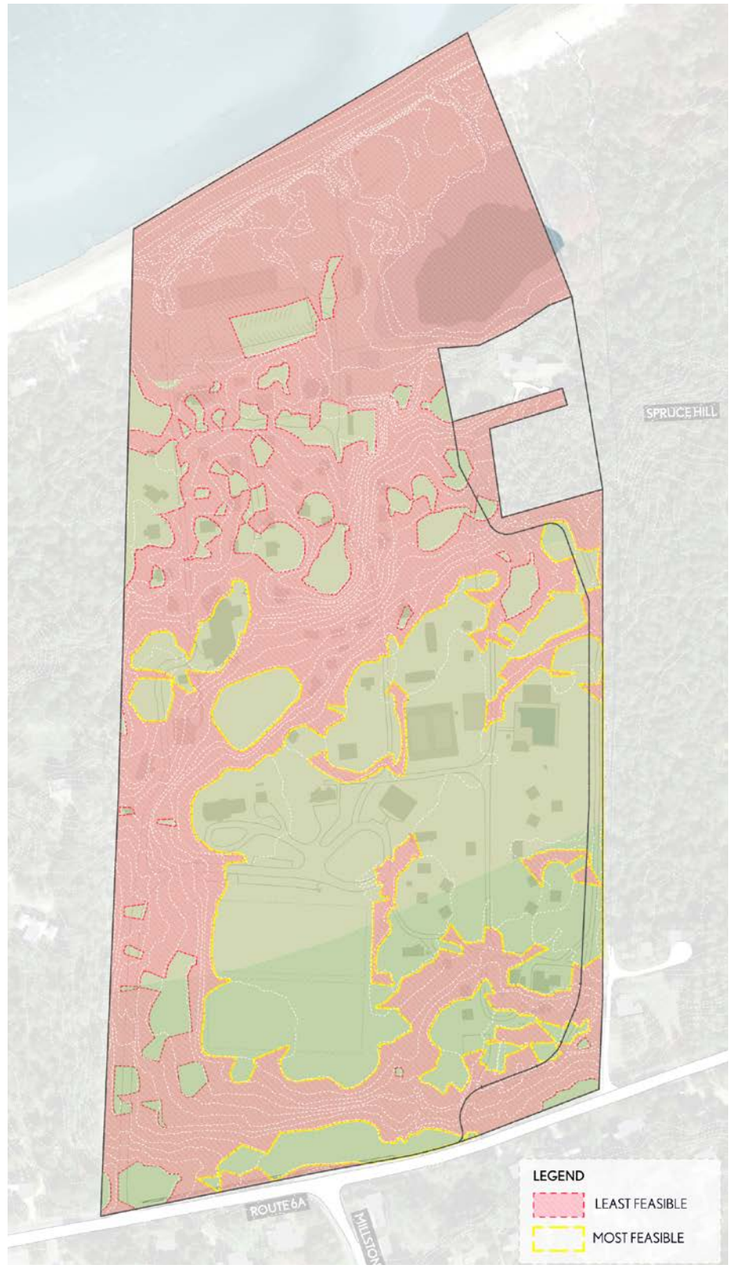


OPPORTUNITIES AND CONSTRAINTS

Development Feasibility

SENSITIVE AREAS + AREAS UNDER 4% SLOPE = DEVELOPMENT FEASIBILITY





Building Analysis

BAY PARCEL KEY QUESTIONS

1. Based on the desired potential programs for the site, which buildings have the highest potential for reuse? Which can be removed and potentially reused elsewhere?

2. Which areas may be candidates for new structures, such as housing or community centers?

3. What are the trade-offs for keeping vs. removing existing structures and how will the Town be evaluating those trade-offs?

BAY PARCEL - BUILDING TYPE

The Site is characterized by a range of building types, from small cabins/dormitories to communal buildings and older structures that once served as homes.

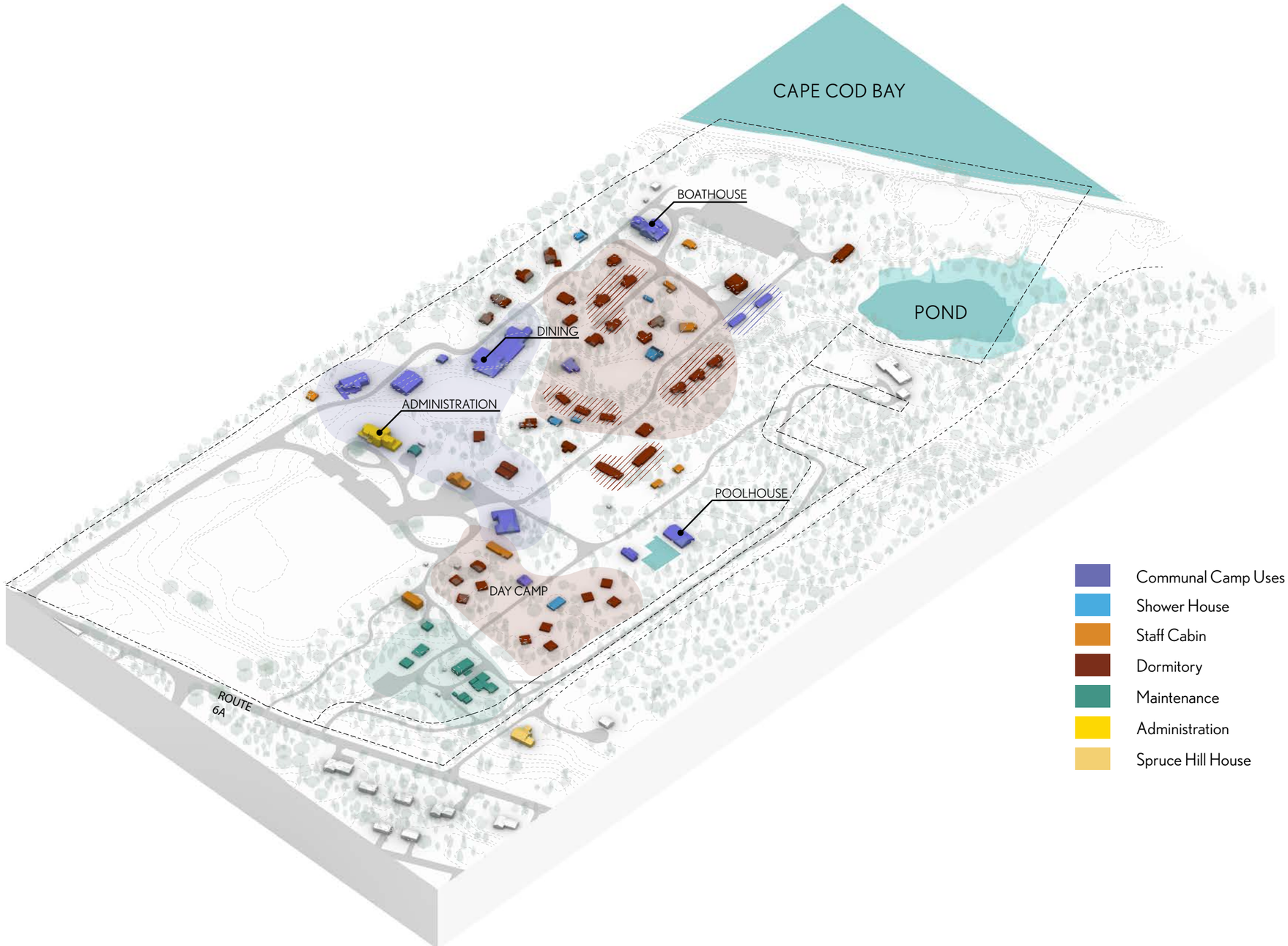
BAY PARCEL - BUILDING TYPE

Site Analysis

Most dormitory buildings are situated in clusters.

Buildings are typically clustered by use.

Some day camp buildings were relocated from Monomoy (original boys' camp opened in 1922).



BAY PARCEL - WINTERIZATION

Issues

Many of the buildings on site are non-winterized cabins with varied interior structural conditions. Several of these buildings have been moved over the years or have structural defects.

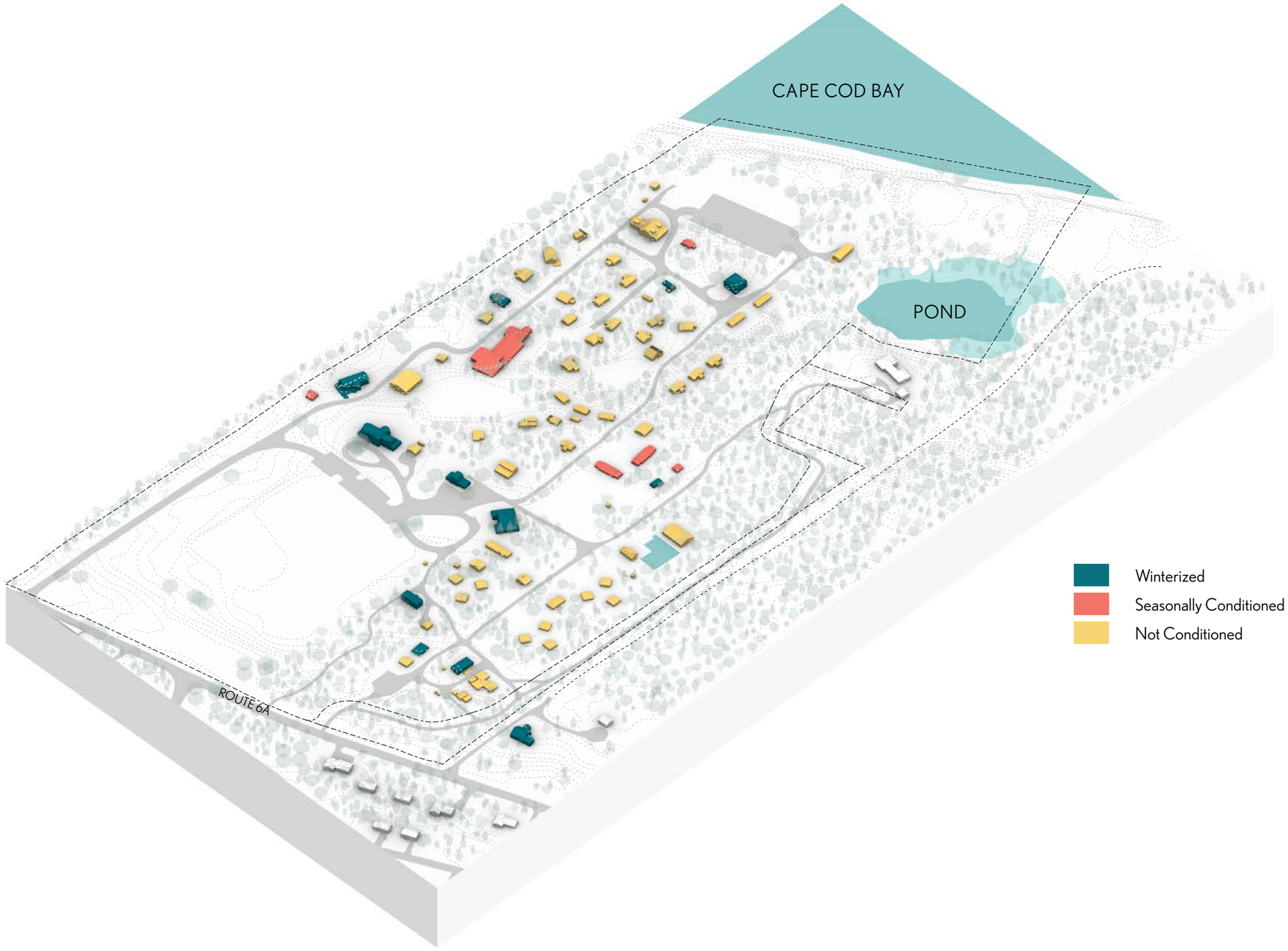
BAY PARCEL - WINTERIZATION

Site Analysis

Conditioned buildings may have a higher potential for reuse on site.

Most buildings are not conditioned or insulated.

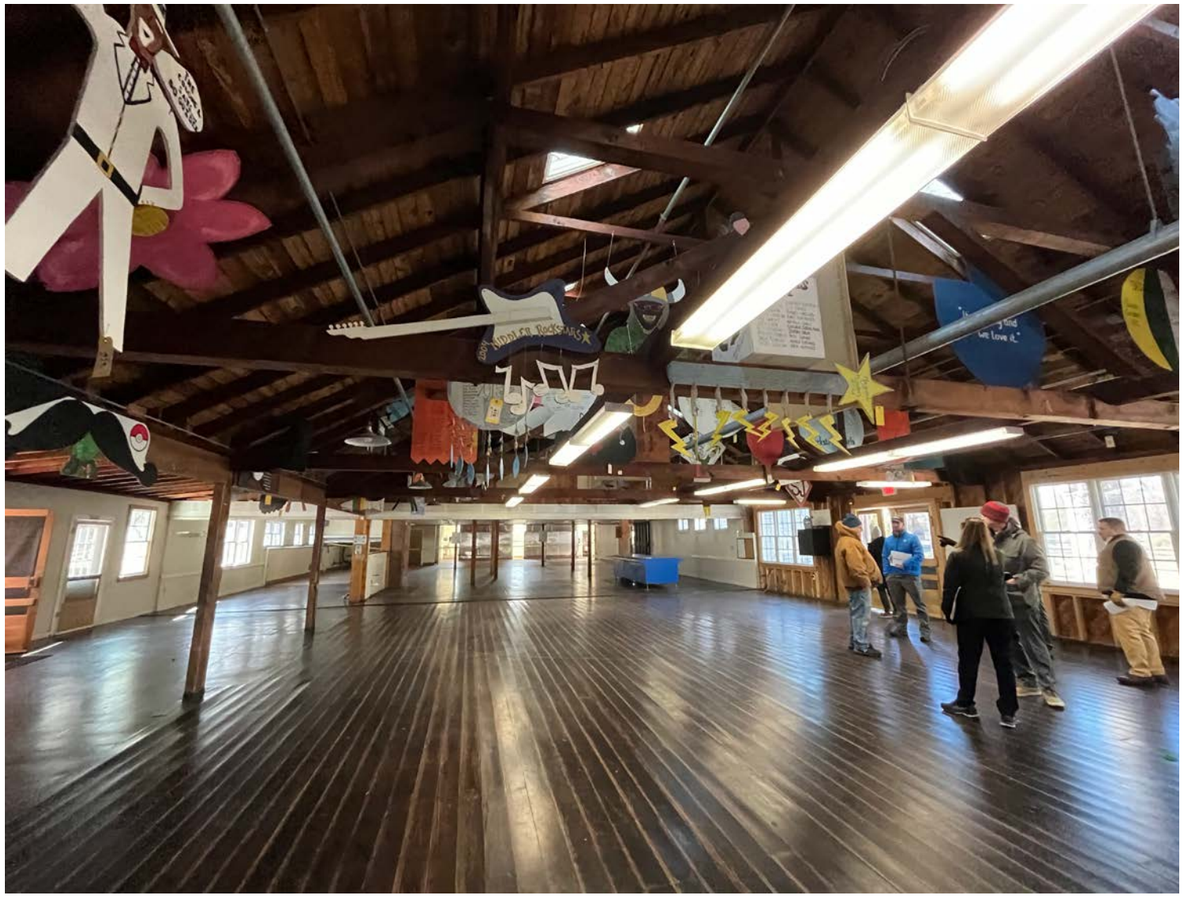
The boathouse, although a newer structure, is not conditioned.



BAY PARCEL

Issues

Several older buildings, including the administration building, have awkward interior configurations that will require more extensive renovation and redesign.



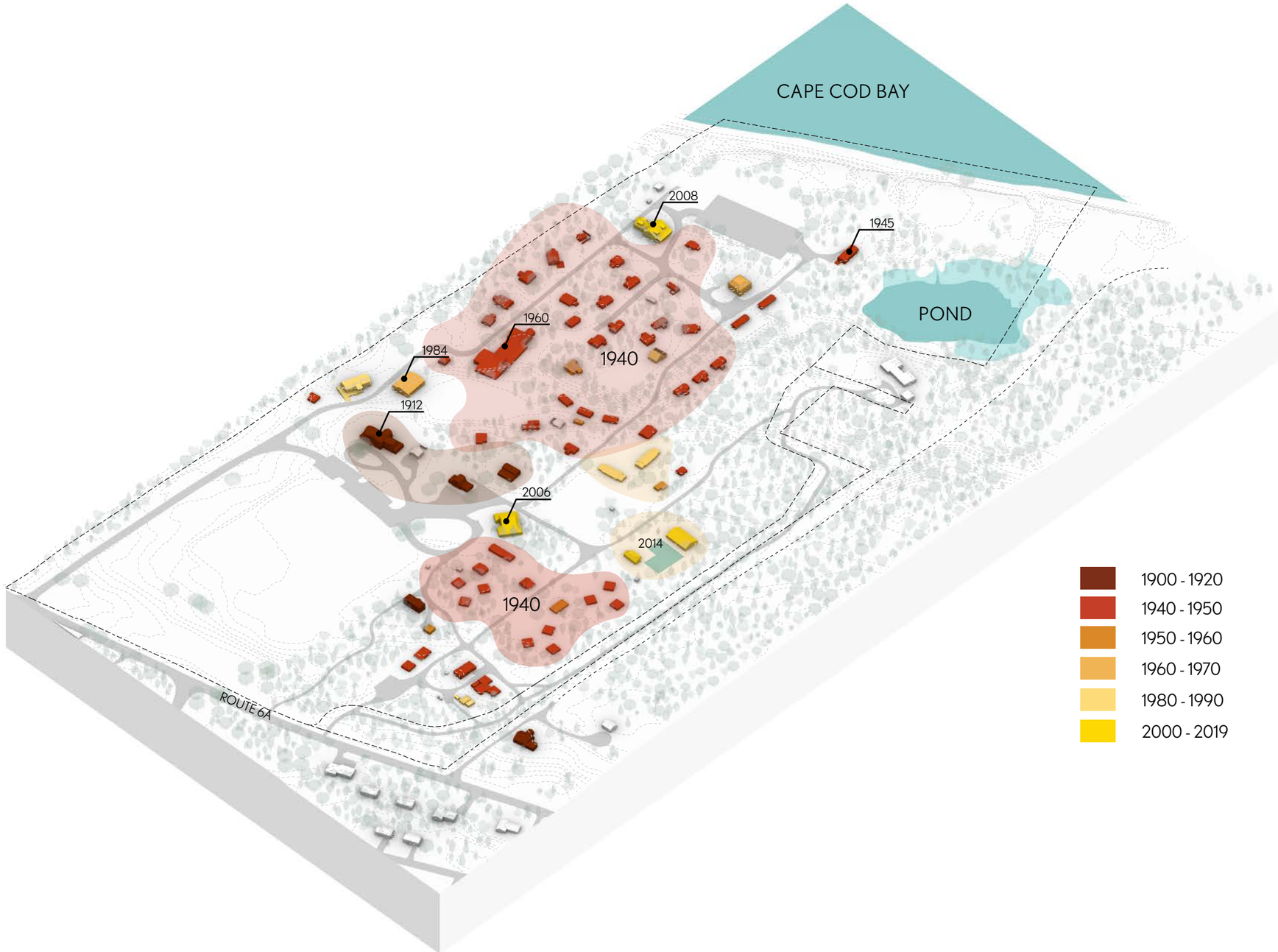
Some newer structures are in good structural condition and can be reutilized with limited modifications. The Boat House, however, is not currently winterized.

BAY PARCEL - BUILDING AGE

Site Analysis

A majority of dormitory structures date to 1940.

The poolhouse and pavilion is the newest building constructed in 2014 and in use seasonally.

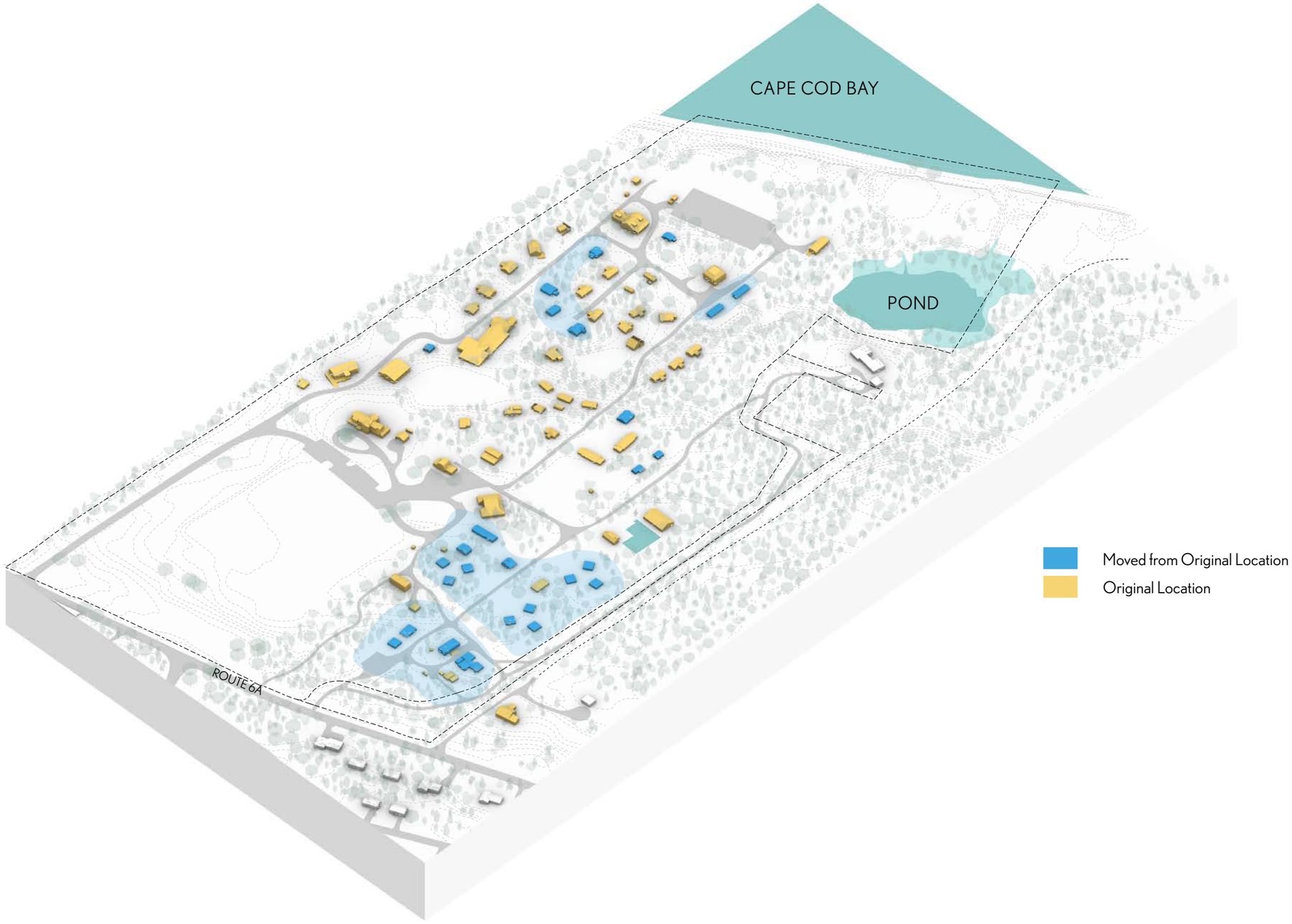


BAY PARCEL - MOVED/ORIGINAL LOCATION

Site Analysis

A majority of buildings that have been moved from their original location, have been moved from Monomoy.

The Riflery and BB Range buildings have been moved from their original location.



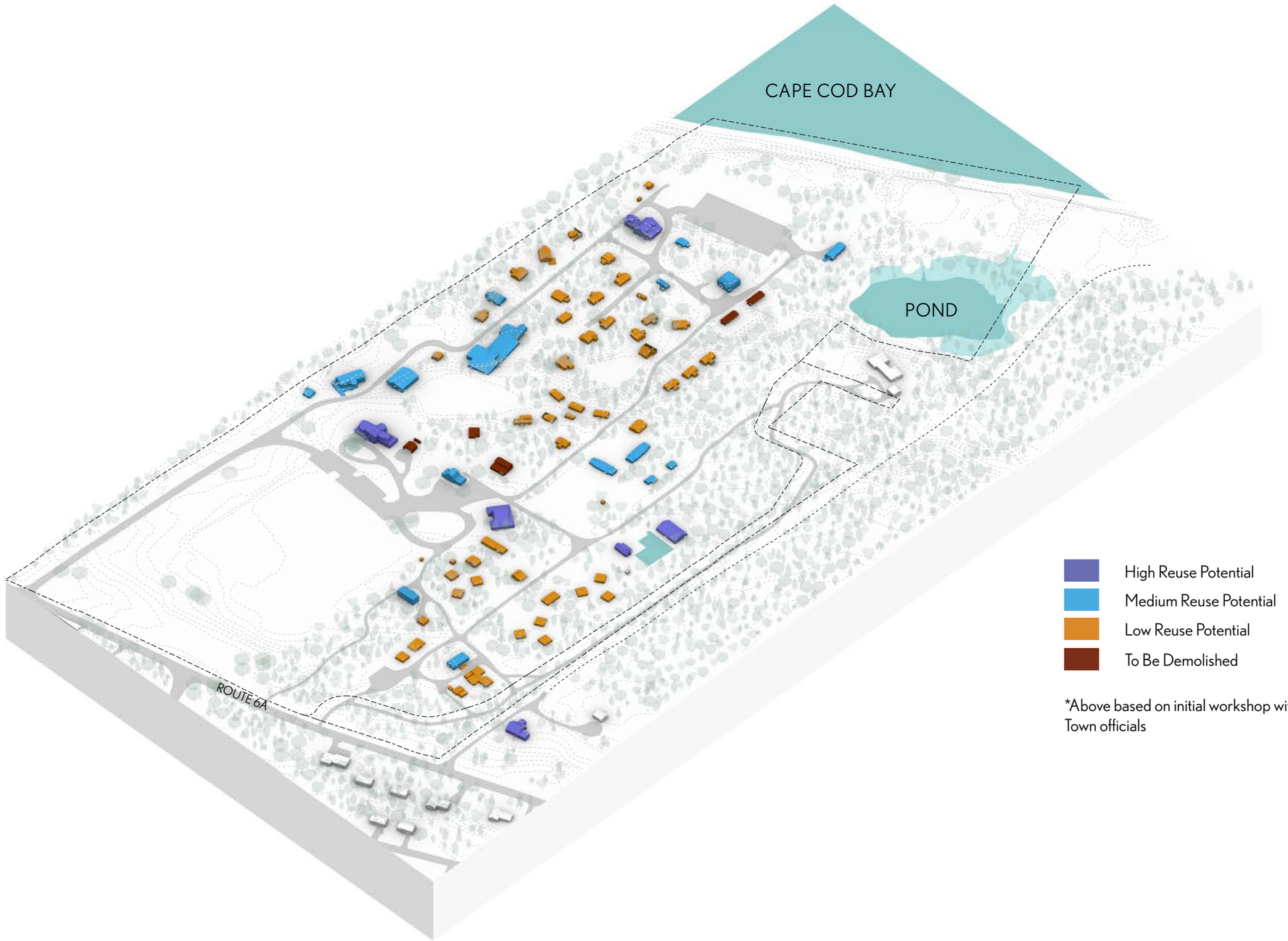
BAY PARCEL - POTENTIAL FOR REUSE

Site Analysis

Buildings have a range of potential for reuse and rehabilitation.

Buildings likely to be demolished have structural concerns.

Most winterized structures have the most potential for reuse.



*Above based on initial workshop with Town officials

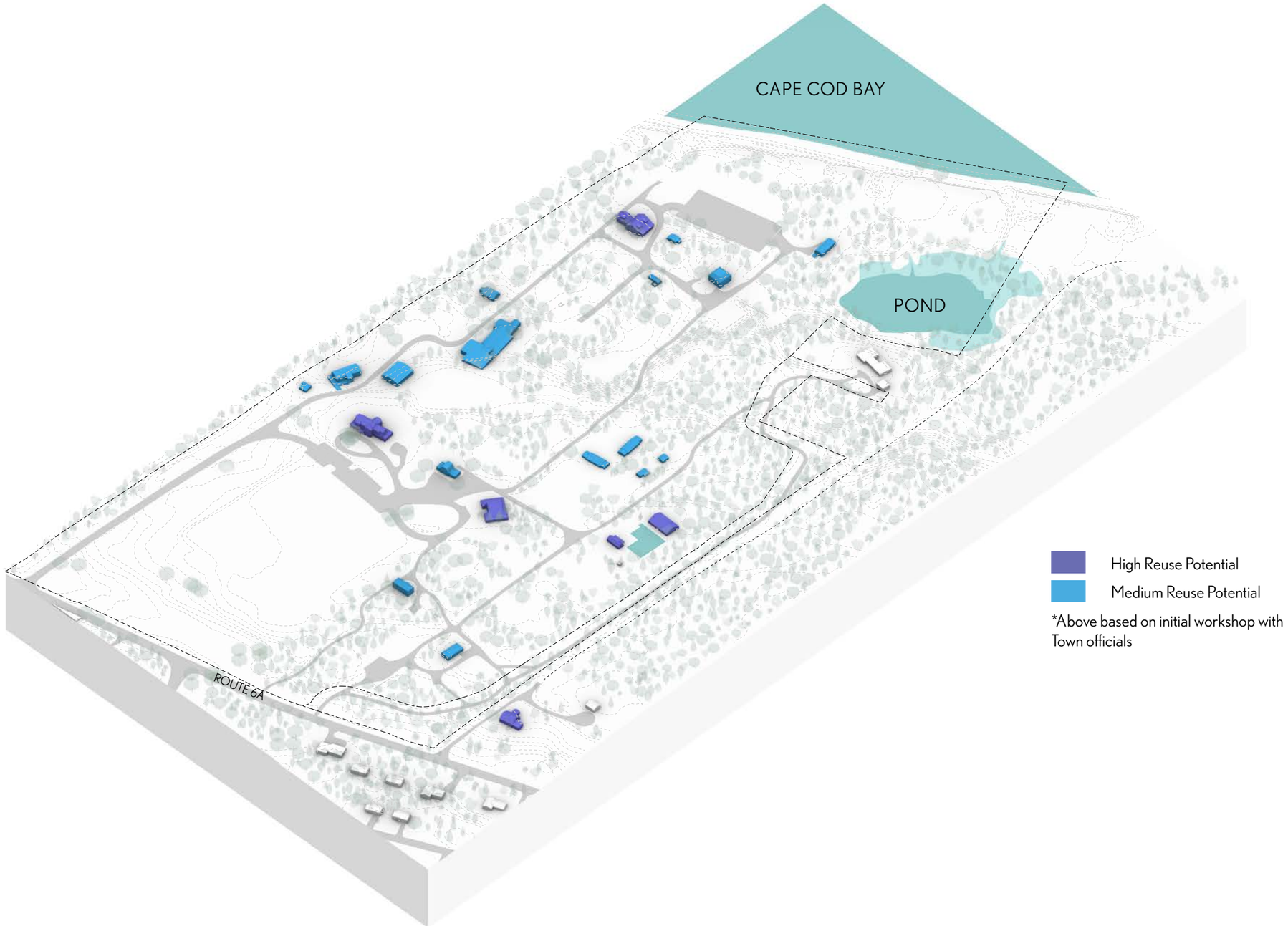
BAY PARCEL - POTENTIAL FOR REUSE

Site Analysis

Removal of all non-winterized structures (excluding the boathouse) would result in a largely open campus.

Remaining structures show most immediate potential for reuse.

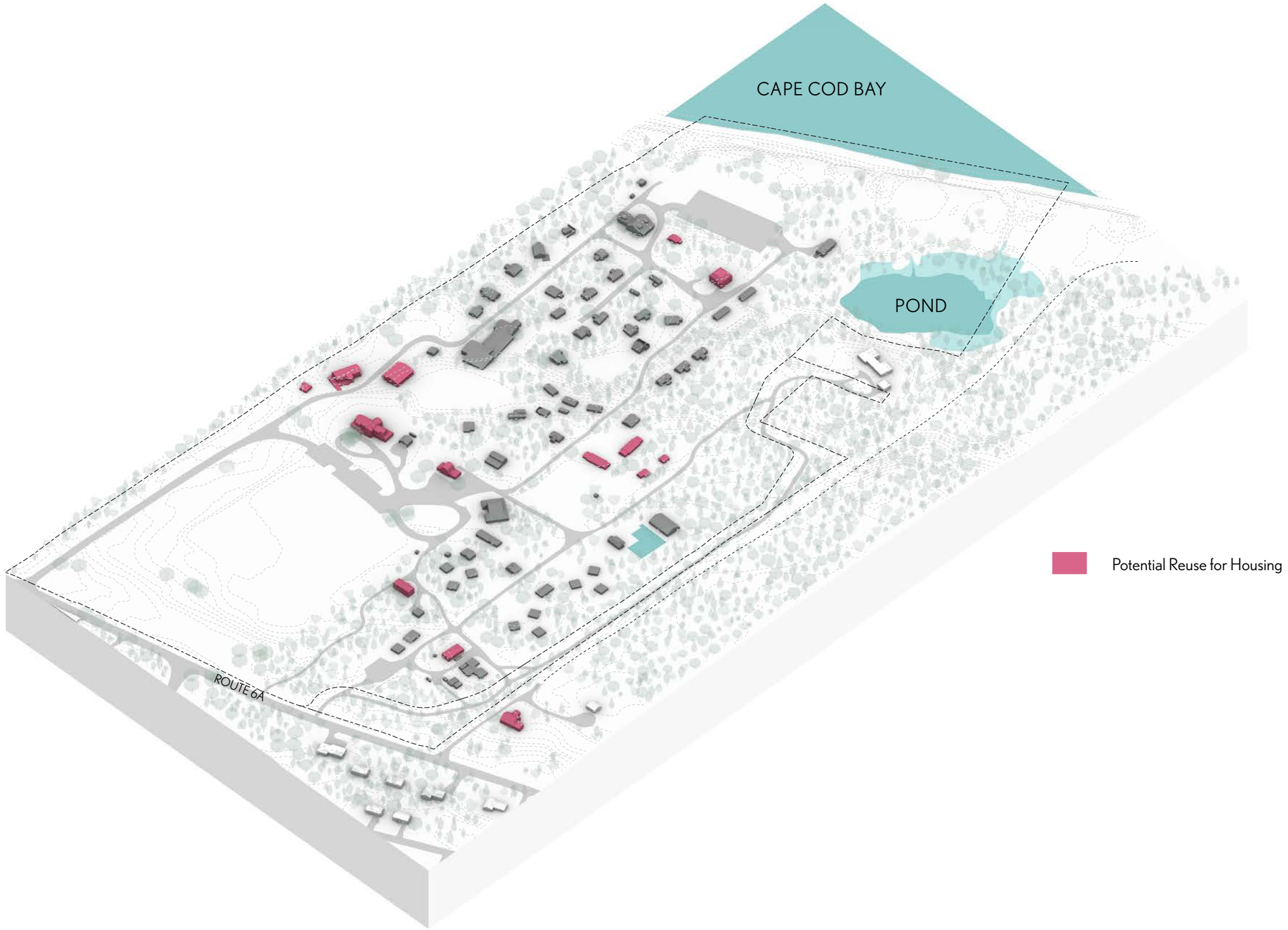
New programs are being contemplated across the site.



BAY PARCEL - POTENTIAL REUSE FOR HOUSING

Site Analysis

Sites of seasonal and year-round housing are being considered across the site.

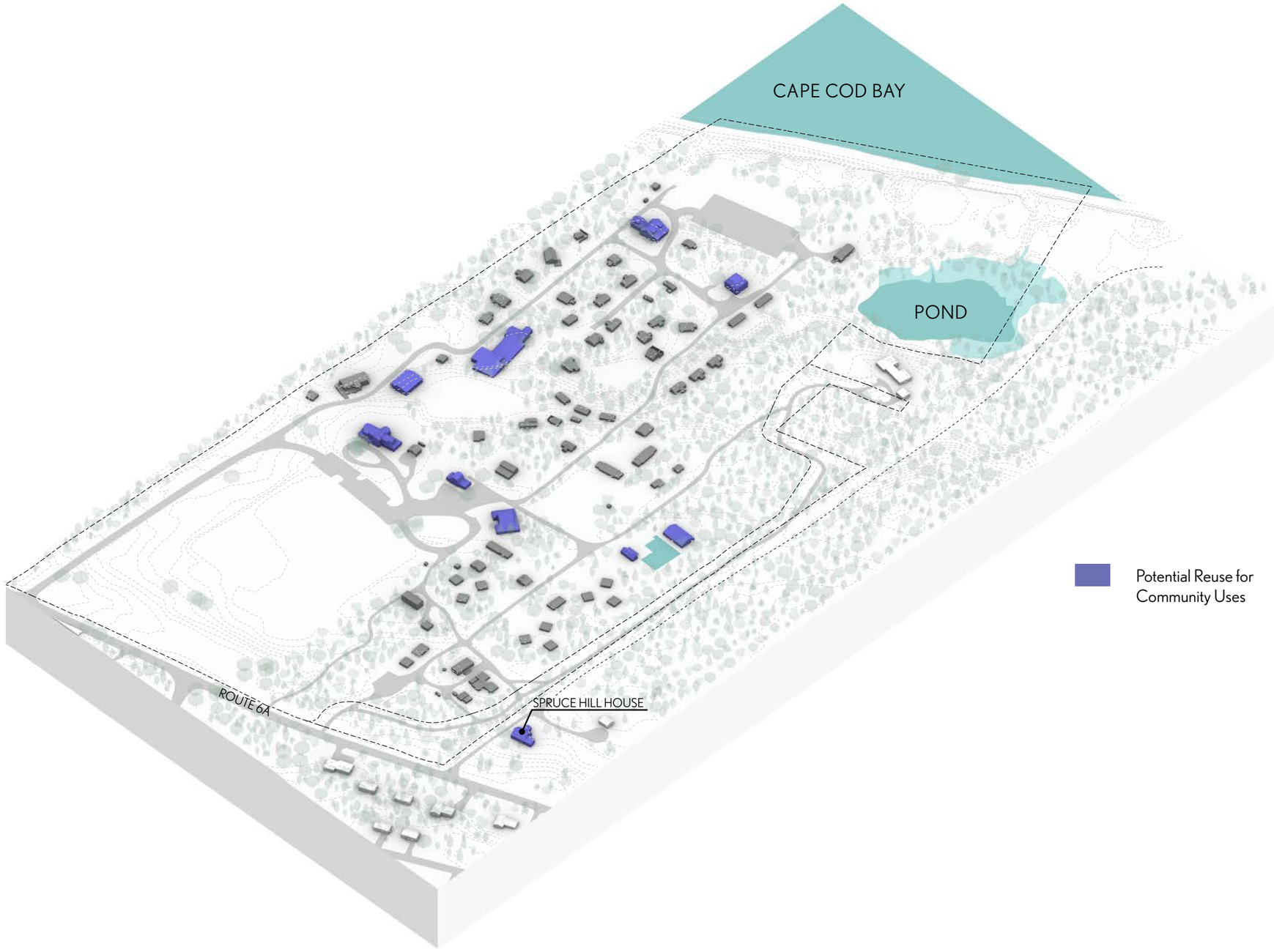


BAY PARCEL - POTENTIAL REUSE FOR COMMUNITY USES

Site Analysis

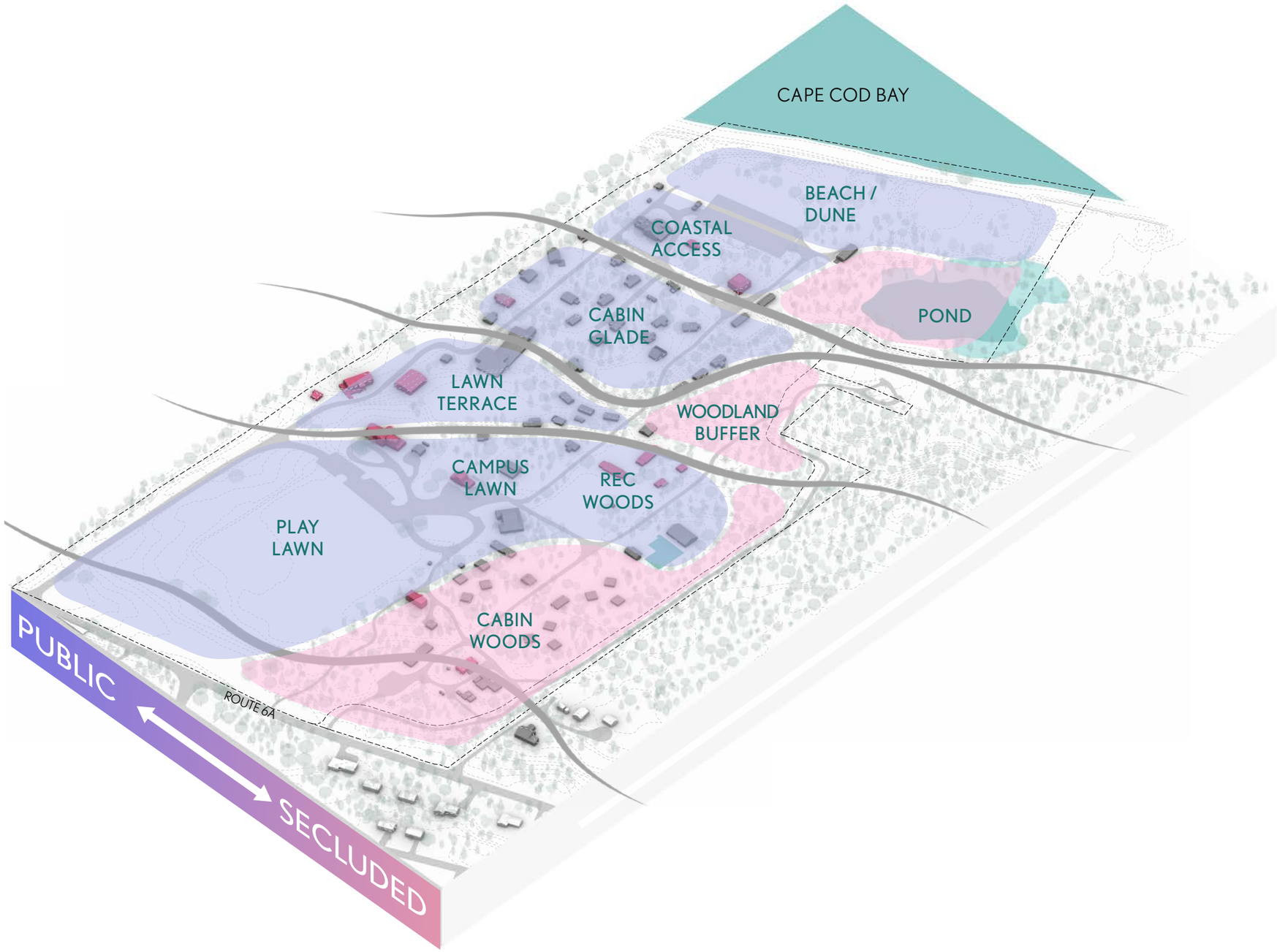
Several buildings on the site such as the Dining Hall and Boathouse have the potential to be reused as commuity facilities.

The Spruce Hill House on an adjacent lot is considered for potential reuse.



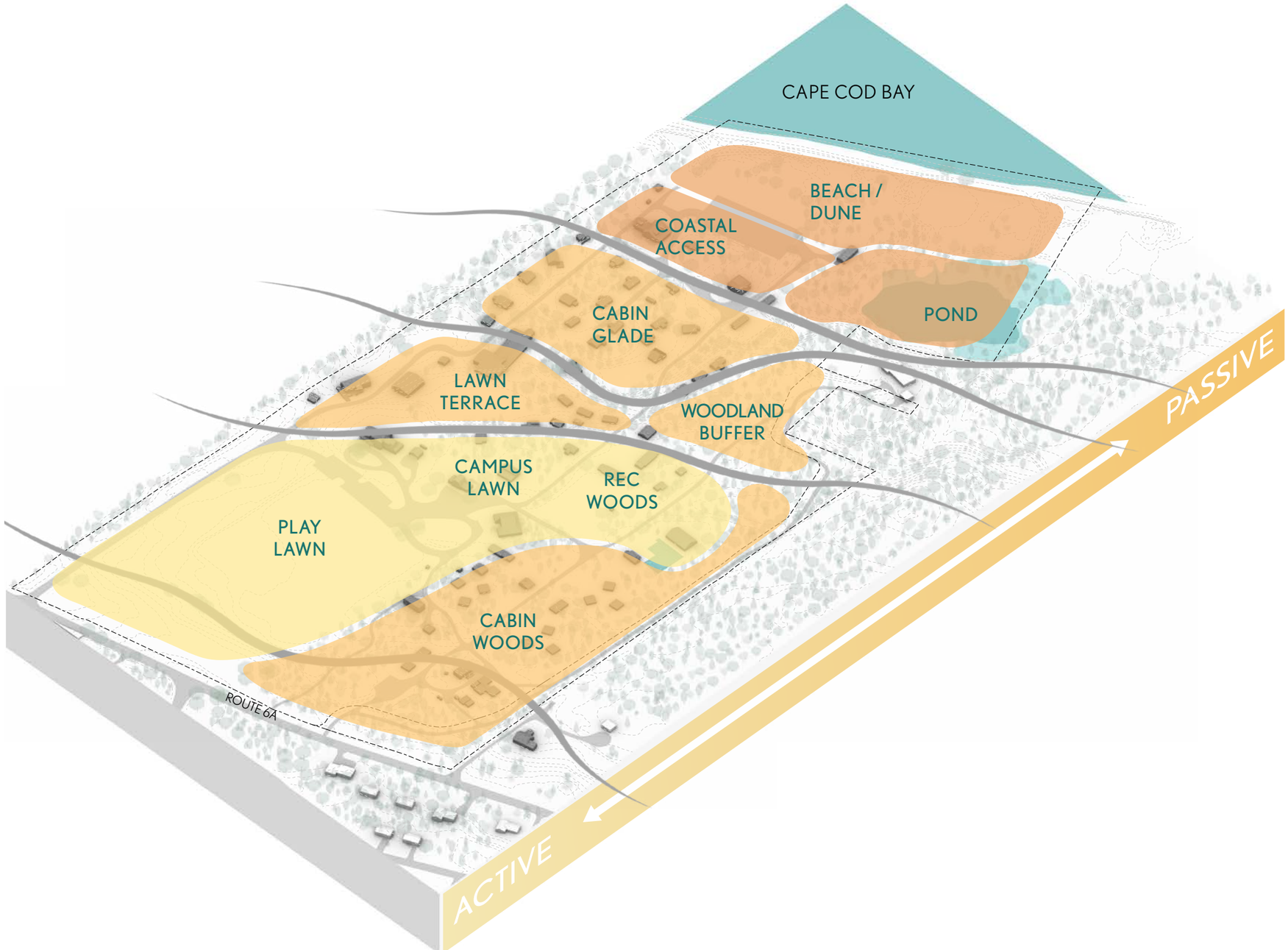
BAY PARCEL - PUBLIC TO SECLUDED

Site Analysis



BAY PARCEL - ACTIVE TO PASSIVE

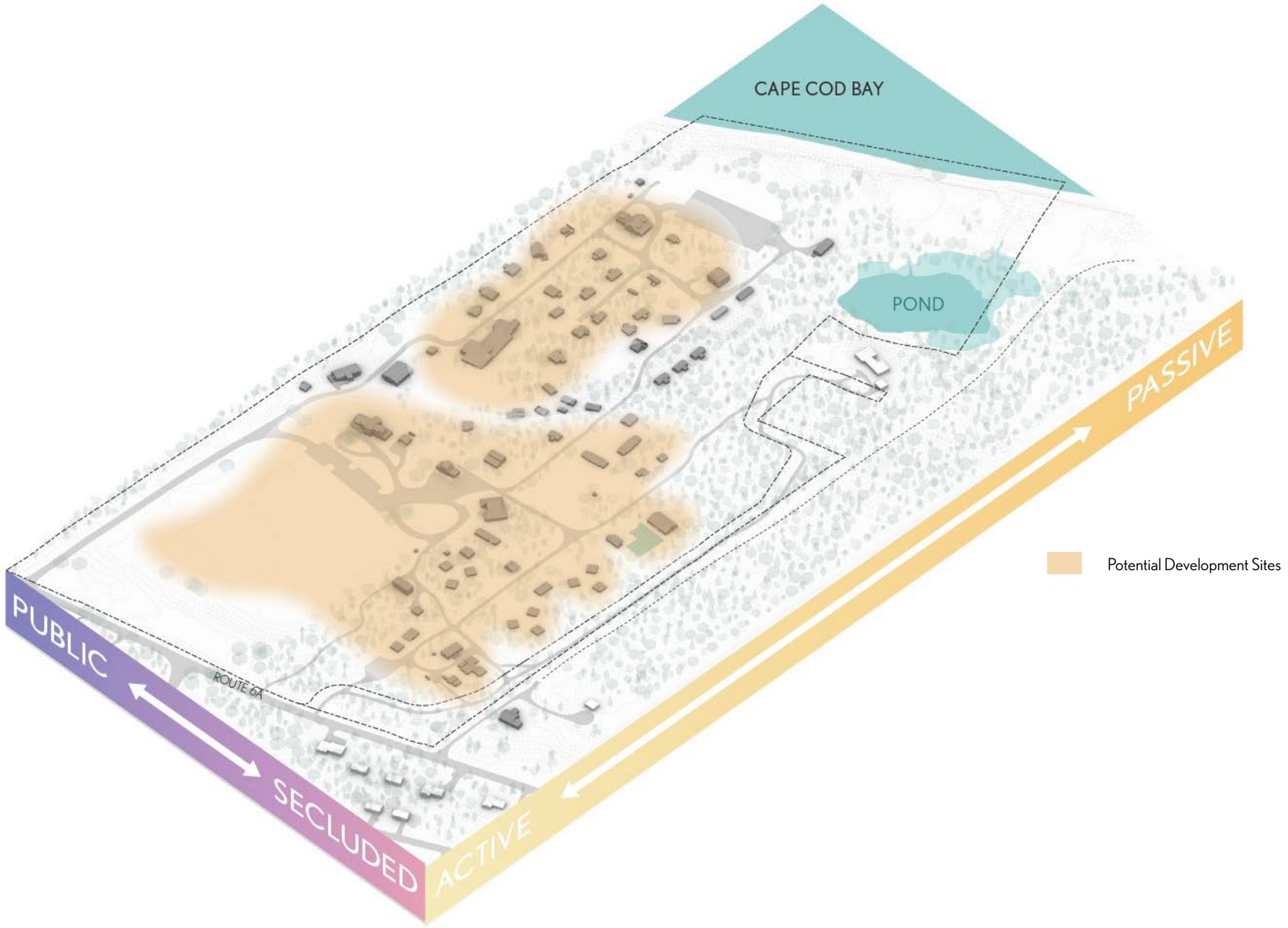
Site Analysis



BAY PARCEL - POTENTIAL DEVELOPMENT SITES

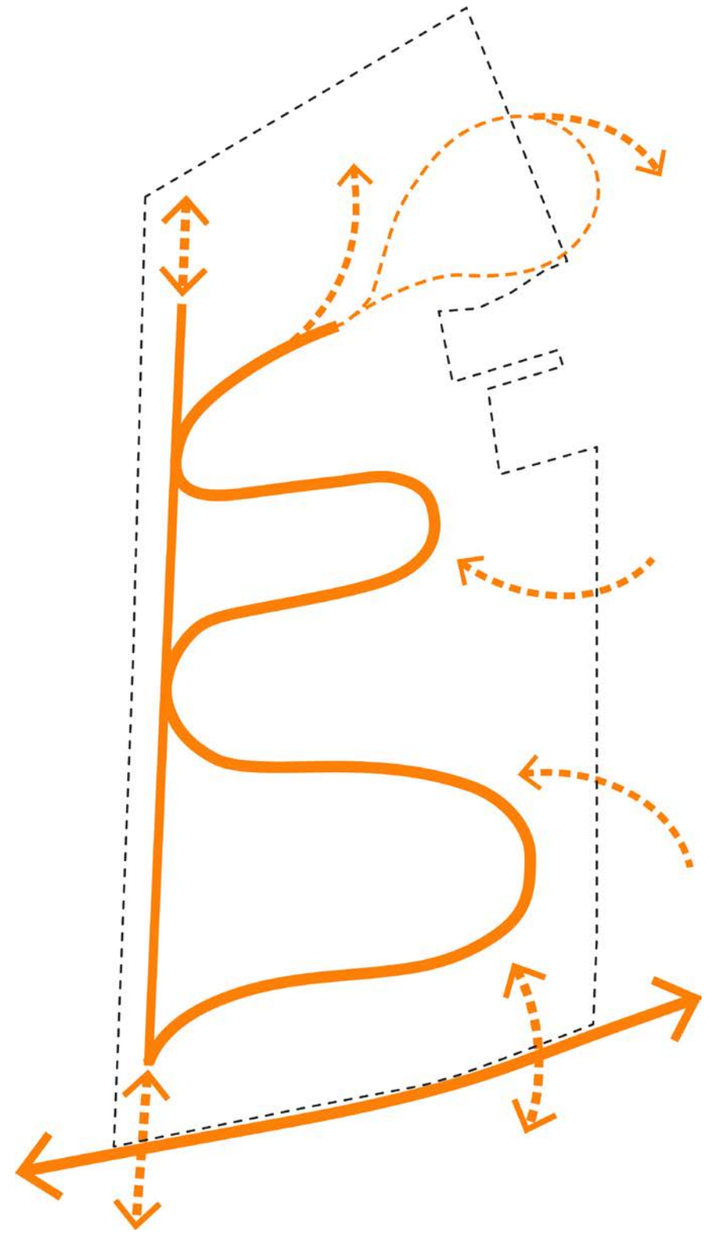
Site Analysis

Specific areas of the site have been identified for potential development.



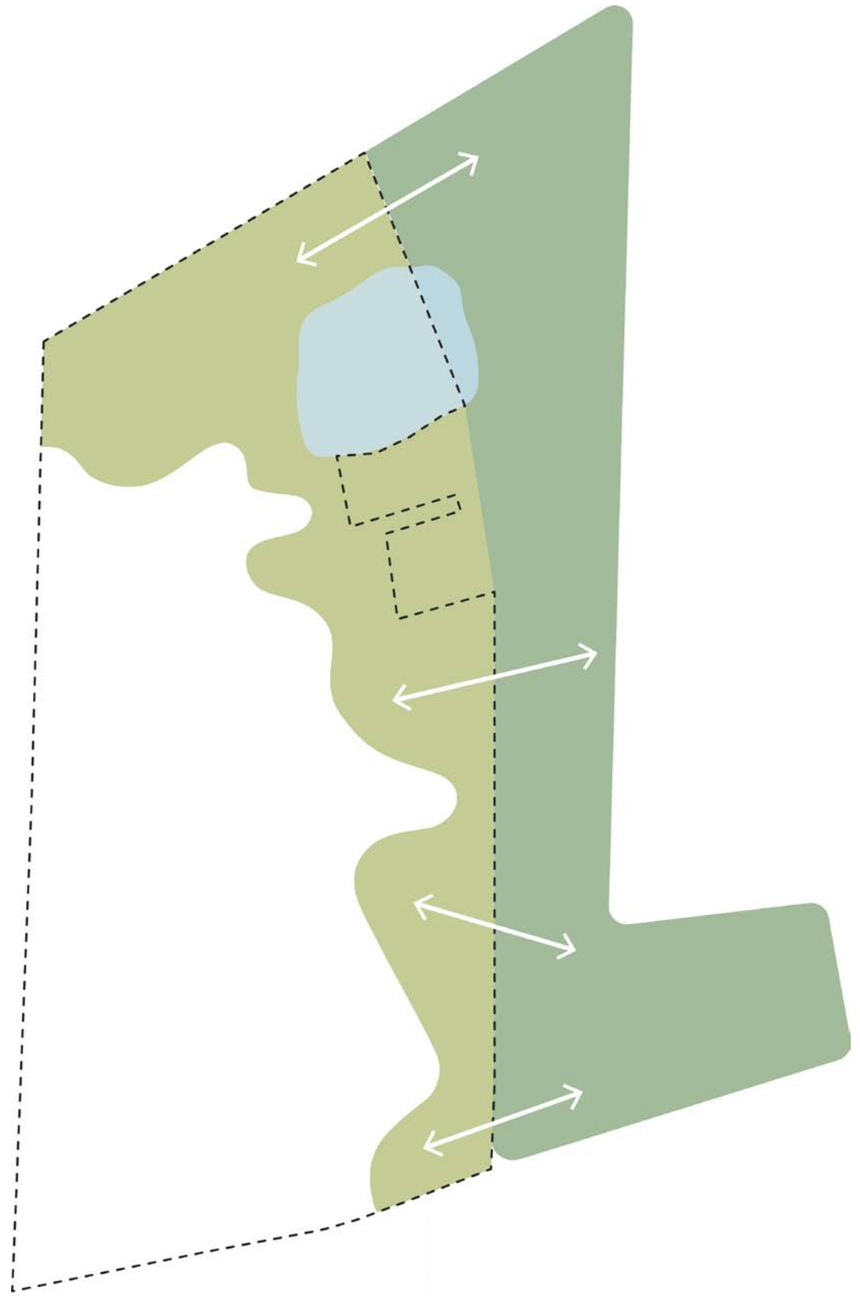
Bring Brewster to the Bay: Increase accessibility to the property and its resources

- Plan for better vehicular, pedestrian and cyclist access
- Increase number of ADA compliant walkways and paths – both trail networks and access to existing resources and buildings
- Study public vs resident access opportunities



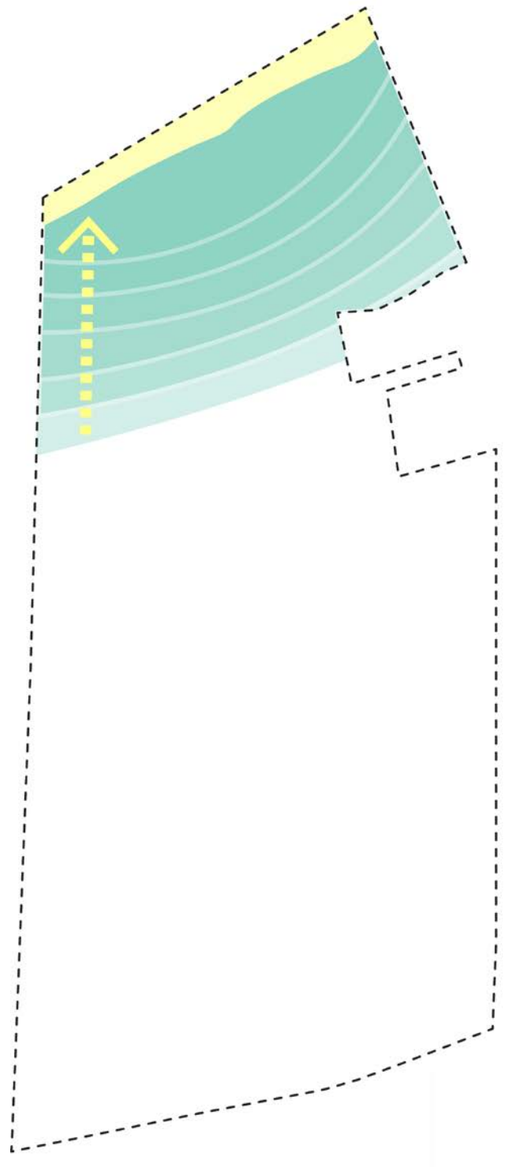
Capitalize on Adjacencies: Connect to adjacent open space at Spruce Hill

- Link trail system from Bay Parcel to Spruce Hill at key points
- Introduce additional connection points
- Integrate and increase extent of contiguous woodland/habitat



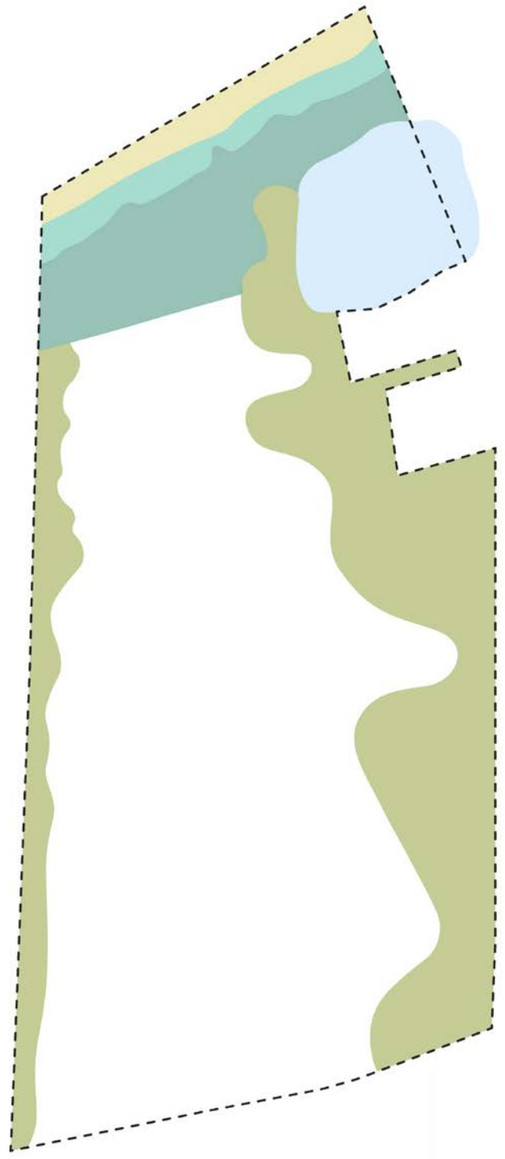
Plan for Resiliency: Enrich and sustain the coastal ecosystem

- Protect dunes, shrubland, beach
- Remove small tennis courts on the water and replace with natural vegetation
- Plan for resilient access to the beach now and into the future, including future parking access



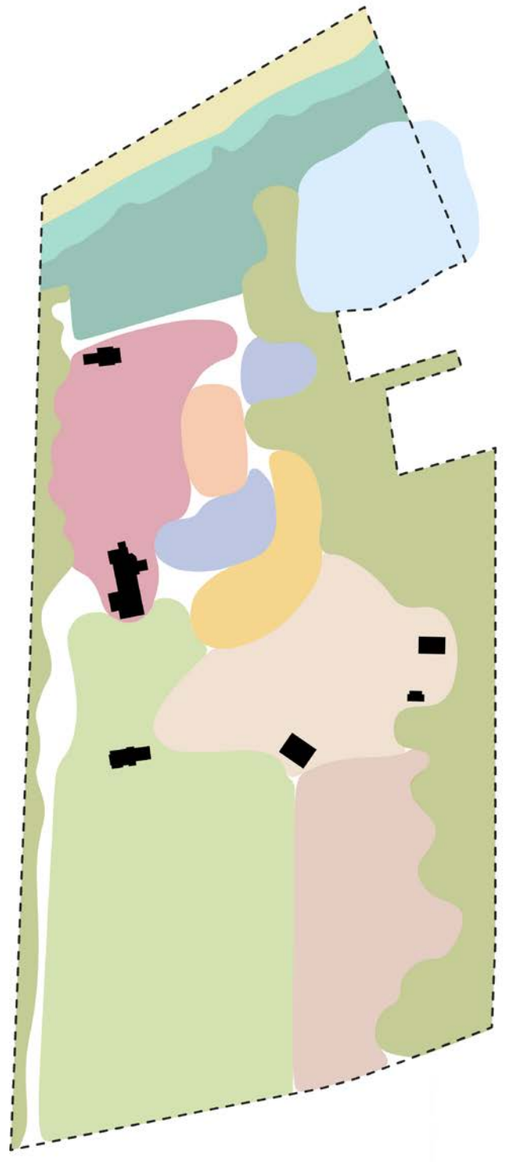
Protect natural habitat and water resources

- Protect existing habitat areas and wetlands
- Remove invasive species
- Remove buildings and structures that encroach on natural and water resources



Develop in context: Build upon the diversity of landscape character and scale for program and building

- Maintain special landscape experiences
- Highlight dramatic topography – capitalize on ridgeline views and intimate valleys
- Re-use existing buildings, recreation areas, and roads where suitable
- Find opportunities for new building programs such as housing and community centers in site-feasible areas.
- Align program with site character.



Thank You