

Feasibility Study

Understanding the Parameters for Rebuilding OIH at 9 East Creek Road

Our Island Home
9 East Creek Road
Nantucket, MA 02554

September 9, 2019

LWDA
DESIGN

Architecture
Interior Design
Landscape
Planning



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Feasibility Study Goals

LWDA was retained to conduct an architectural/ engineering study in early 2019 to explore the feasibility of rebuilding OIH on its current site at 9 East Creek Road, either by renovation or with a new building, so that the Town of Nantucket could make an informed decision on how to proceed.

To quote Ms. Elizabeth (Libby) Gibson, Town Manager, at the 5/6/19 OIH Charrette,
“The study is not to solidify a commitment to rebuild/renovate at the current site but rather to gain a more concrete understanding of what it would take to help make an informed decision on how to proceed with a potential new Our Island Home.”

Primary goals for a new OIH include:

1. Improved Resident Living and Care Environment that follows current Best Practices.
2. Resiliency to climate change and rising seas.
3. Phased construction sequence to allow residents to remain onsite during construction (no alternate on-island site is currently available to temporarily house residents).
4. Disruption for residents and staff to be minimized during construction.
5. Inreach/ outreach programs to better integrate OIH with Island community life.
6. Improved integrated parking layout for the entire OIH /Landmark House site.

CLA Study and Population Projections

This Feasibility Study is conducted in conjunction with a separate Marketing Analysis and Program Demand Study by Richard Hamilton of CLA (Clifton Larson Allen) that provides a “modeling dashboard” tool that can be used by the Town to evaluate the financial feasibility of the architectural options presented in this report.

The CLA report relied on UMass Donahue Institute Vintage 2015 Population Projections issued in March 2015. This report projects solid growth in the over-70-year-old demographic on Nantucket that will largely be populating OIH:

Nantucket Elderly pop.	2020 projected	2025 projected	2030 projected	2035 projected	% cumulative growth
70-74 years	493	567	611	627	27%
75-79	331	397	455	491	48%
80-84 years	187	232	272	279	74%
85+	185	202	244	291	57%

This data suggests strong continued demand for OIH services for the foreseeable future.



Background: OIH History and Previous Studies

1. The original OIH was housed in the Landmark House, the 1850 structure which today is used for low income elderly housing. It has 26 units and a caretaker's residence.
2. The current OIH Nursing Home facility was constructed in 1980 and is the subject of this study.
3. An initial feasibility study for OIH was conducted in 2006-7 to evaluate possibilities for future expansion or upgrades.
4. A 2015 A/E Feasibility Study by SMRT examined potential alternate sites for OIH as well as the existing 9 East Creek Road site, under the assumption that a relocated project would
 - a. Allow for a single phase of construction and therefore cost less.
 - b. Involve less resident disruption and fewer moves.
 - c. Generate a substantial profit from sale of the 9 East Creek Road site.
 - d. Provide more site area for parking and future expansion.

Those assumptions did not pan out. The alternate sites proved less desirable due to buried existing utility lines that could not be easily moved, buried historic artifacts, the cost of acquiring a new site, and potential abutter resistance.

5. Strong opposition from Town Meeting led OIH to circle back to consider renovation and/or rebuilding on the existing 9 East Creek Road site.
6. Continued deterioration of the existing building and the prospect of ongoing expensive repairs led to the current study.
7. During the 5/6/19 Charrette, the possibility of relocating OIH to the 5-acre Hays property on 174 Orange Street was raised. However, on May 9, 2019, the Nantucket Land Bank Commission reviewed and accepted a proposal to convey the Hays property from the Owner directly to the Land Bank to avoid a lengthy Town meeting process that would be required for other uses such as OIH (5/17/19 letter by Eric Savetsky, Executive Director of the Nantucket Land Bank, to the Nantucket Select Board). Thus this property is not available for OIH.
8. At the beginning of this study, it was suggested the Landmark House might be moved towards Orange Street to make more room for a new OIH. This idea was dropped after it became apparent that there was no place to temporarily house Landmark residents, that moving the building would add a big expense to the project, and that the idea would receive strong pushback from Town officials, Town residents, Landmark residents and the Landmark Board.
9. See Program Ground rules for Building Program (p. 22)



Feasibility Study Process and Schedule

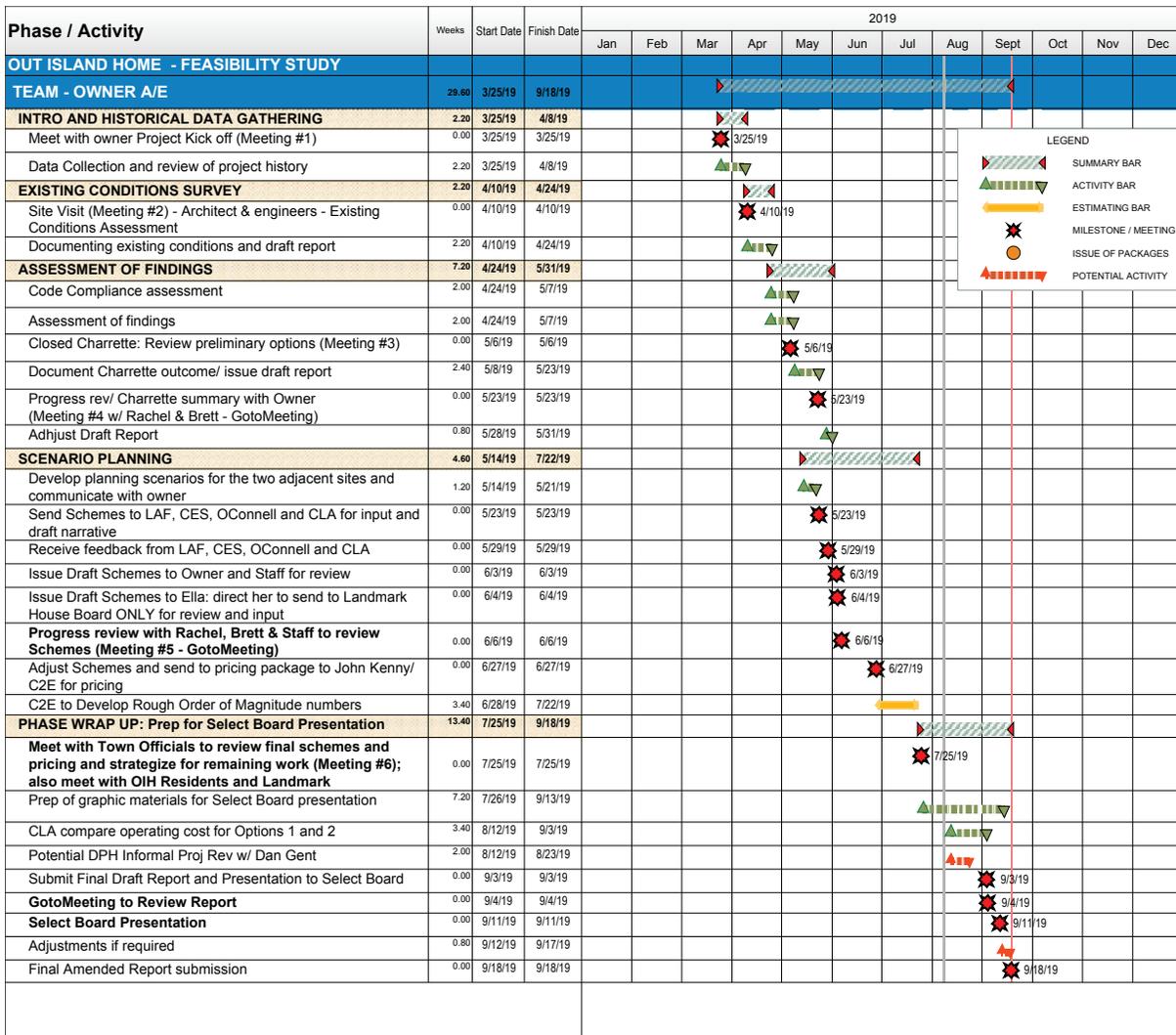
The 2019 Study was conducted between March and September with the following steps:

1. Data Gathering
2. Existing Conditions Survey
3. Assessment of Findings
4. Charrette
5. Scenario Planning
6. Draft Report
7. Cost Estimate
8. Final Input
9. Final Report
10. Presentation to Select Board

OIH FEASIBILITY STUDY

OUR ISLAND HOME

Aug 8, 2019



Code Restrictions and Regulatory Agencies

Nantucket agencies

Nantucket Zoning §139-14 OIH

The Nantucket Zoning Bylaw designates the 9 East Creek OIH property, together with Landmark House, as a special zoning district appropriate for elder housing and related uses. Constraints typically imposed elsewhere on the Island-- density, height, setbacks, aesthetics, parking, driveway access, landscaping and screening-- are intentionally omitted from the Bylaw for the OIH district, with the expectation that the Select Board and Planning Board will review any proposed project as a Special Permit that requires a Site Plan Review and further design review.

With this in mind, we are proceeding with our building options to the extent possible as if typical restrictions do apply, with explanations of special circumstances for any deviations.

- **Setbacks:** approximately 6' from lot line along East Creek Road; 10' back from the road itself. The footprint is positioned to allow for Phase 1 construction to proceed while the existing OIH facility remains intact.
- **Aesthetics:** We assume traditional Nantucket vernacular exterior, to be developed during Schematic Design.
- **Height:** Assume 2 story scheme + pitched roof. 1st Floor will be elevated approximately 5' above current grade for resiliency. Potential for 2½ story scheme with habitable attic.
- **Parking:** Assume combined parking for Landmark and OIH will increase capacity from 67 to approximately 84 (subject to wishlist programs ultimately included in project). Current Zoning regulation §139-18 calls for 1 per 2 beds for "Elderly Housing" would require OIH (45/2 = 23) + Landmark (27/2= 14) for a total of 37 spaces; but obviously more is needed, as the current 67 is considered inadequate by staff. Any type of Physical Therapy Clinic or Medical Office Suite would require substantial additional parking, as these types of services require 4 parking spaces/ 1,000 sf of office space.
- **Driveway access:** The reconfigured parking lot between Landmark House and OIH will have two entrances from East Creek Road for redundancy and flexibility. Parking space assignment to be worked out between Landmark and OIH.
- **Screening:** Parking areas, driveways and service dock will be screened from adjacent properties per typical Nantucket requirements.

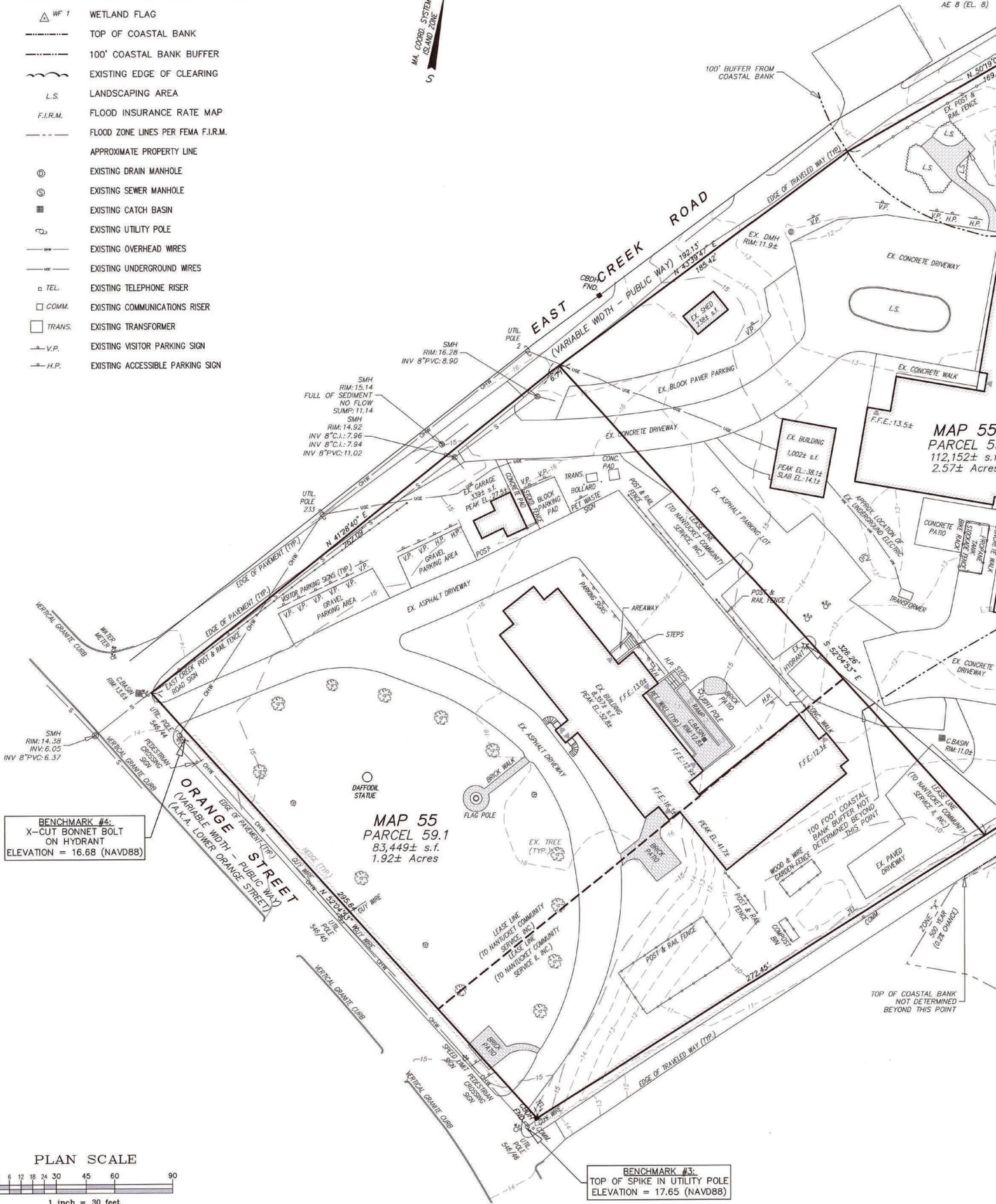
Special District: Our Island Home (OIH) and Assisted/Independent Living Community District (ALC)

Site lies within the ALC Special District which requires the following:

- Open area free from impervious surfaces: at least 20% as defined in SS 139-16E.
- Minimum vegetative buffer area: 50 feet from all lot lines, 75 feet from street lines (except as necessary for entrance drive and utilities).
- Maximum number of units (excluding employee housing and affordable housing): 75 dwelling units.
- The requirement for off-street parking and loading facilities shall be established by the Planning Board.
- The requirement of these items (SS 139-14D) may be waived through the issuance of special permit by the Planning Board based upon finding that the requested relief is not substantially more detrimental to the neighborhood than the existing conditions.

Legend

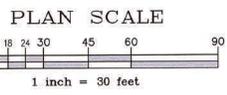
- 90--- EXISTING CONTOUR
- ~~~~~ EXISTING EDGE OF LAWN
- ===== EDGE OF WATER
- EDGE OF BORDERING VEGETATED WETLAND
- △ WF 1 WETLAND FLAG
- TOP OF COASTAL BANK
- 100' COASTAL BANK BUFFER
- EXISTING EDGE OF CLEARING
- L.S. LANDSCAPING AREA
- F.I.R.M. FLOOD INSURANCE RATE MAP
- FLOOD ZONE LINES PER FEMA F.I.R.M.
- APPROXIMATE PROPERTY LINE
- ⊙ EXISTING DRAIN MANHOLE
- ⊙ EXISTING SEWER MANHOLE
- ⊙ EXISTING CATCH BASIN
- ⊙ EXISTING UTILITY POLE
- ow--- EXISTING OVERHEAD WIRES
- uw--- EXISTING UNDERGROUND WIRES
- TEL. EXISTING TELEPHONE RISER
- COMM. EXISTING COMMUNICATIONS RISER
- TRANS. EXISTING TRANSFORMER
- V.P.--- EXISTING VISITOR PARKING SIGN
- H.P.--- EXISTING ACCESSIBLE PARKING SIGN

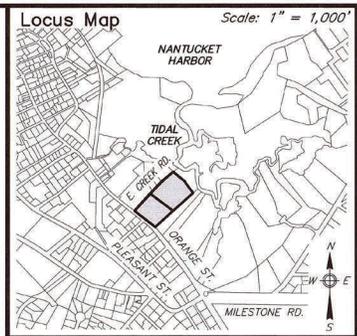
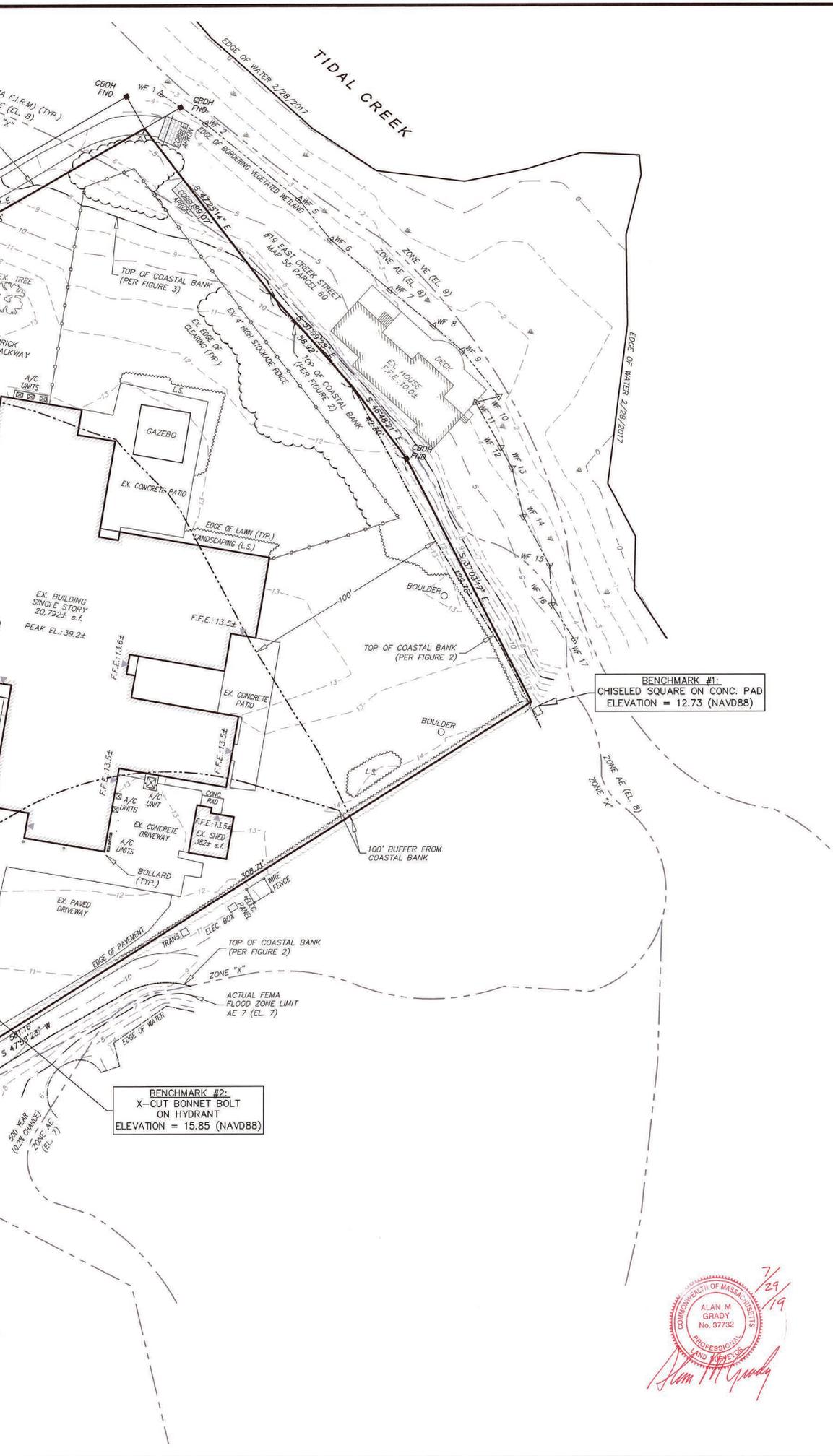


BENCHMARK #4:
X-CUT BONNET BOLT
ON HYDRANT
ELEVATION = 16.68 (NAVD88)

MAP 55
PARCEL 59.1
83,449± s.f.
1.92± Acres

BENCHMARK #3:
TOP OF SPIKE IN UTILITY POLE
ELEVATION = 17.65 (NAVD88)





- Notes**
- LOCUS: #9 EAST CREEK ROAD
MAP 55 PARCEL 59
 - OWNER: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA. 02554
 - DEED REF: Bk: 51, Pg: 266
 - PLAN REF: PLAN FILE 18-D (LOT 2)
~ and ~
 - LOCUS: 150 ORANGE STREET
MAP 55 PARCEL 19.1
 - OWNER: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA. 02554
 - DEED REF: Bk: 51, Pg: 279
 - PLAN REF: PLAN FILE 18-D (LOT 1)
 - LESSEES: 1. NANTUCKET COMMUNITY SERVICE, INC.
BK.232 PG.95
BK.656 PG.186
2. NANTUCKET COMMUNITY SERVICE II, INC.
BK.656 PG.191
 - LOCUS DOES PARTIALLY FALL WITHIN A SPECIAL FLOOD HAZARD ZONE AE 8 (EL.8) AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP No. 25019C-0089-G dated 06/09/2014.
 - LOCUS DOES NOT FALL WITHIN THE NATURAL HERITAGE and ENDANGERED SPECIES PROGRAM (NHESP) AREAS OF ESTIMATED HABITATS OF RARE WILDLIFE and PRIORITY HABITATS OF RARE SPECIES.
 - LOCUS FALLS WITHIN ZONE "A" OF THE NANTUCKET HARBOR WATERSHED PROTECTION DISTRICT.
 - LOCUS FALLS WITHIN A ZONE II WATER PROTECTION DISTRICT.

Prepared By:

BRACKEN ENGINEERING, INC.

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(tel) 508.833.0070 (tel) 508.325.0044
(fax) 508.833.2282 (www.brackeneng.com)

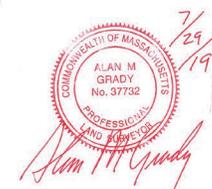
EXISTING CONDITIONS PLAN IN NANTUCKET, MASSACHUSETTS

Prepared For:
TOWN OF NANTUCKET

#9 EAST CREEK ROAD
MAP 55 PARCEL 59
&
#150 ORANGE STREET
MAP 55 PARCEL 59.1

No.	Date	Revision Description	By
1.	7/29/19	ADD LEASE LINES AND SEWER MANHOLE INFORMATION	AMG

Date: MARCH 24, 2017 Drawn: ERC/BEI Checked: DFB/AMG Sheet: 1 of 1



Planning Board and Select Board

Special permit and Site Plan Review required for density, lot coverage, height, setbacks, planting, aesthetics and parking. The presentation to the Select Board scheduled for September 11, 2019 will initiate this review process with a review of this report and a presentation of Design Options 1 and 2.

Nantucket Conservation Commission

Proximity to Coastal Banks have been reviewed closely. A Top of Coastal Bank line runs along the northeast property line and another Top of Coastal Bank line runs just southeast of the southeast property line. 100' setback lines from these top of bank lines run through the property and are indicated on the survey. The Wetland Protection Regulations (Feb 25, 1988, revised July 1, 2013) call for the following restrictions:

- 100'- 50' setback: The area between a 100' setback and the 50' setback restricts coastal engineering structures but does not restrict other new construction in this zone.
- 50' building setback from the top of coastal bank for all new structures.
- 25' natural undisturbed area adjacent to coastal bank.
- Fire department is not allowed to cross these buffer zones, as it would cause significant disturbance. A roadway or emergency access route can be permitted by the Conservation Commission provided there are no specific requirements to no build zones, and proper methods are taken to protect the resource area.
- Conservation Commission Submittals for Notice of Intent (NOI) require submittal to the National Pollutant Discharge Elimination System NPDES eNOI portal, as well as submittal to the local Conservation Commission and MassDEP at:

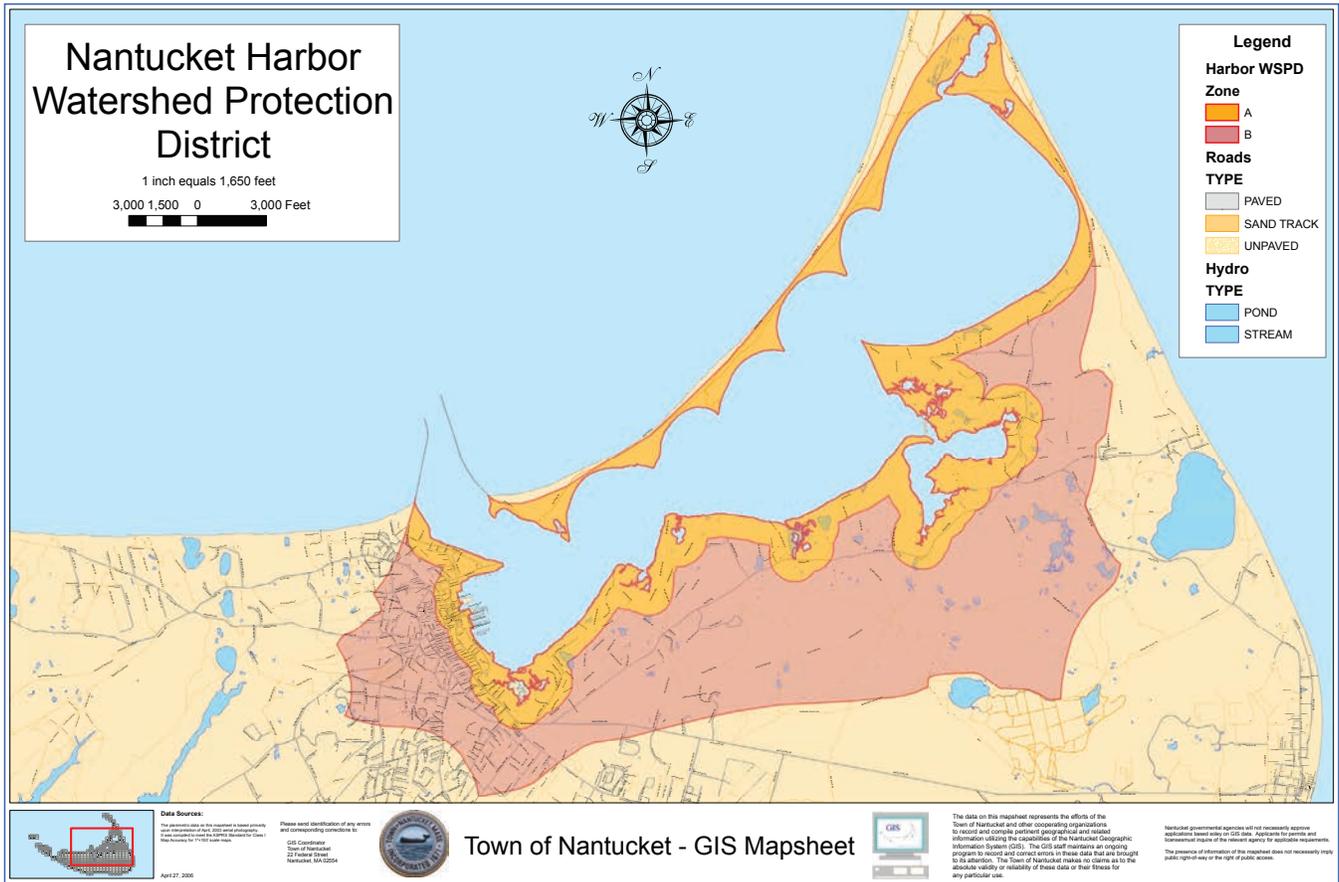
Commonwealth of Massachusetts
Department of Environmental Protection
Box 4062
Boston, MA 02211

We have reviewed Site Plan Options 1 and 2 with Jeff Carlson of the Nantucket Conservation Commission and he finds them to be reasonable and does not think they would require waivers. See also further discussion below p. 55 regarding Option 3.

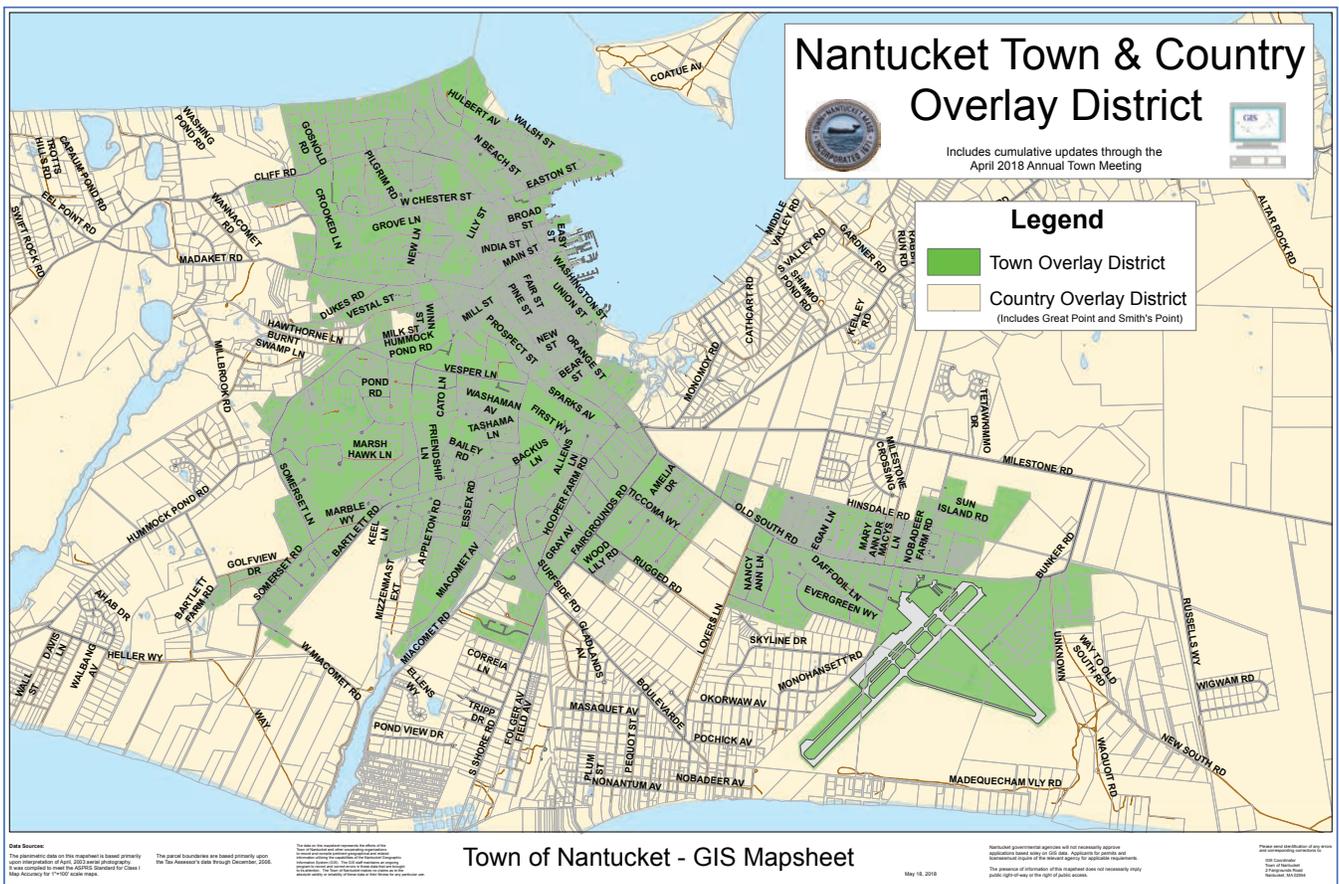
Nantucket Fire Department/ Life Safety Access

We have shared Site Plan Options 1 and 2 with Nantucket Fire Chief Stephen A. Murphy, and he finds them to be reasonable, subject to further detailed study, for fire truck access:

- Per preliminary email discussions with Chief Murphy on June 10, 2019, the proposed OIH building will require full perimeter access for the Department's largest fire truck with specific interest in capability of turning off and onto East Creek Road.
- Take parking size and location into consideration while determining emergency access to and from the site, specifically length of parking spaces to accommodate larger vehicles while allowing trucks to by-pass.
- Fire lanes should be incorporated into the final design.
- Fire protection systems shall be installed for the full project during Phase I to ensure coverage of the entire site throughout and after construction.
- Location of Fire Department Connections will drive the requirement for addition hydrants on site.
- Current fire fighting accessibility to Landmark House is adequate.
- A fire truck does not have to turn around on the site; by using the emergency access lane behind the new building, it can follow a loop path.



NANTUCKET HARBOR WATERSHED PROTECTION DISTRICT



NANTUCKET TOWN & COUNTRY OVERLAY DISTRICT

Nantucket Watershed Protection District

Zone A. The site is part of a coastal area that drains into Nantucket Harbor. Potential extra care measures to limit runoff during construction.

Nantucket Wellhead Protection District

Upper Zone. The site is also part of zone that drains into an underground aquifer and the Mass. Department of Environmental Protection Wellhead Protection Zone 2. Pesticides located on the Groundwater Protection List shall not be utilized on site. Other pollution sources that could be detrimental to groundwater supplies shall also be avoided.

Energy Code and Energy Coordinator

Stretch Code applies.

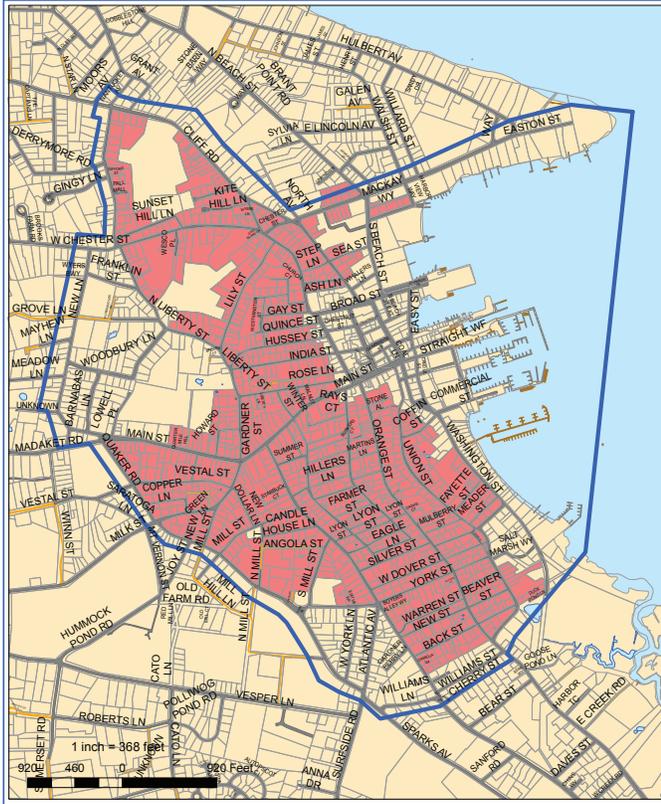
LEED Silver certifiable level of sustainability (see DoN below) is more than adequate, according to Lauren Sinatra, Nantucket Energy Coordinator (telephone call, 4/12/19). This approach was confirmed at the 5/6/19 Charrette.

OIH is considered a high energy user on the Island; its Laundry uses a considerable amount of hot water, and the current building has a high electricity demand as well. Solar panels should be considered to reduce electric demand.

Town Overlay District

The site falls within the Town Overlay district. Per SS 139-12E, the purpose of the Town Overlay District is to limit the spatial extent of growth within a district consistent with the traditional settlement pattern represented by the settled portion of Nantucket Town, except in the Residential Old Historic (ROH) District. The following may be provisioned during site plan review with the Planning Board:

- Provision of Town water and sewer service, which shall be adequate to serve the proposed use.
- Road and drainage improvements shall be adequate to serve the proposed use.
- Bike and/or pedestrian systems shall be adequate to serve the proposed use, and reasonable measures shall be taken to provide connectivity to existing bike and pedestrian systems.
- The project minimizes parking demand and auto-dependency (i.e. by inducements employed by the applicant for the utilization of the NRTA seasonal shuttle system).
- Consistency with the recommendations of any area plan endorsed by Town Meeting, such as the Mid-Island Area Plan, Sconset Area Plan, and Madaket Area Plan.



Legend

- Core Historic Districts
- Parcels

Zoning Districts

CODE

- SOH
- SOH

Please send identification of any errors and corresponding corrections to:
GIS Coordinator
Town of Nantucket
2 Front Street, 2nd Floor
Nantucket, MA 02554



Town of Nantucket - GIS Mapsheet

TOWN OF NANTUCKET GIS MAPSHEET

Nantucket Land Bank Commission

The Land Bank does not have jurisdiction, but as an abutter it makes sense to keep them apprised of OIH plans and potentially work out an arrangement to enhance walking paths and parking (see Opportunities for Community Inreach and Outreach, p.39).

Historic District

East Creek Road is NOT within the Nantucket Historic District.

Natural Heritage and Endangered Species Program (NHESP) Areas of Estimated Habitats of Rare Wildlife and Priority Habitats of Rare Species.

The site does NOT fall within these areas.

Massachusetts Agencies and Codes

DoN

As a Massachusetts Healthcare Facility project with a project cost over \$1,989,328 [current threshold effective 10/1/18], a Determination of Need application will have to be filed by OIH to justify the project to the State. We assume the application process will take three months and State approval may take another six months (see Proposed Building Project Schedule, p.60).

LEED Silver Certifiable status

One of the DoN requirements is that the Project must be designed and constructed as LEED Silver certifiable; that is, it has to meet the sustainability requirements of a LEED Silver Certified project, without necessarily going through the (onerous) documentation process to achieve an actual LEED Silver certificate awarded by the US Green Building Council (USGBC). Based on feedback at the May 6 Charrette, the Project will not apply for the actual certificate, but should be sustainably designed to qualify as Silver Certifiable.

DPH: Department of Public Health

As a Long-Term Care Facility, the Project is subject to licensure regulations in 105 CMR 150.000 and the following compliance checklists:

- LTC1: Long Term Care Facility - Level II & Level III Nursing Care Units
- LTC3: Long Term Care Facility - Common Areas

If the Project includes Level IV (resident care) Rest Home units, that portion would be subject to

- LTC2: Long Term Care Facility - Level IV Resident Care Unit

As a practical matter, the LTC2 requirements are lower than LTC1, and if the building is to be designed flexibly to admit residents of varying disability and needs throughout the facility, then LTC2 can be ignored if all areas meet the more stringent requirements for LTC1.

DPH will conduct a Part 1 review of the Design Development drawings (assume 4 months for DPH Review, which typically runs concurrently with the Construction Document phase of design) and then a Part 2 review of the completed Construction Documents (assume 2 months, which typically runs concurrently with the Bidding phase). See Proposed Building Project Schedule, p.60.

Applicable State Building Codes and Classifications

- Massachusetts State Building Code 780 CMR 9th Edition Base Code, referencing IBC 2015 with amendments for Massachusetts per 780 CMR 110.R1 through 115AA
- Construction type 1B fireproof construction (minimum)
- Occupancy I-2
- Life Safety NFPA 101 Life Safety Code
- Health Care NFPA 99 - 2018 Health Care Facilities Code
- Residential 2015 International Residential Building Code (IRC) w/ local amendments
- Mechanical 2015 International Mechanical Code (IMC) w/ local amendments
- Energy Stretch Code (2015 International Energy Conservation Code (IECC) w/ local amendments)
- Plumbing Massachusetts Plumbing Code 248 CMR
- Electrical 2017 National Electrical Code (NEC) with Mass Amendments (527 CMR)
- Sprinklers NFPA 13 - 2013 Automatic Sprinkler Systems
- Fire Prevention 527 CMR - MA Fire Prevention and Electrical Regulations
- Local Fire Department requirements
- Insurance Factory Mutual Research Corporation (FM)
- Various Underwriters Laboratories, Inc. (UL)
- Accessibility Massachusetts Architectural Access Board (MAAB) 521 CMR

Accessibility (State)

(MAAB) 521 CMR requires site to be fully accessible around building perimeter for circumnavigation by residents. There will be a continuous sidewalk around the building, connecting all entries, egress ramps and fire stair exits.

Section 4.6, 13.3.3 of the MAAB regulations states that in long term care facilities and nursing homes, 5% of the total number of patient bedrooms with toilets shall be designed as Group 2B Units (full accessibility at the time of initial construction without need for further modification) and 45% of the patient bedrooms with toilets shall be designed as Group 1 Units (can be modified without structural change to meet specific functional needs of a disabled occupant).

Federal Codes and Guidelines

Federal codes call for slightly different percentages of accessible units.

CMS (Center for Medicare and Medicaid Services) and Fair Housing Act

The 1991 Fair Housing Act, enforced by HUD (Housing and Urban Development), was written to provide meaningful access to housing for people with disabilities. It requires any multifamily building (four or more units) with an elevator to have 5% of the units fully accessible and the remaining 95% of the units to be adaptable for full future accessibility. Also, 2% of the units must be compliant for the hearing and visually impaired.

HUD

If HUD is funding any portion of the project or provides subsidies for its operation, UFAS (United States Access Board) regulations also must be met. UFAS requires Skilled Nursing Facilities to provide accessibility for at least 50% of its bedrooms and toilets, and 100% for all public and common use areas.

ADA

The proposed development will incorporate twelve (12) ADA parking spaces with six (6) van accessible spaces and associated access aisles. With a total of 84 proposed parking spaces, only three (3) ADA parking spaces are required of which one (1) space will be required to be van accessible. All ADA parking layouts will incorporate appropriate grades and access to the path of travel per ICC ANSI 117.1. Two (2) van accessible spaces and one (1) standard accessible space are proposed to be associated with the Landmark House, with the remaining four (4) van accessible spaces serving Our Island Home. Curb ramps are proposed to connect the spaces to the buildings, with the spaces located as close as reasonably possible to the building entrances. Where applicable, ADA compliant cross walks will be installed to connect ADA parking areas to building entrances across vehicular ways.

All proposed sidewalks and curb ramps along the path of travel from ADA parking spaces to the applicable building entrance are proposed to be ADA compliant for grades and design. Outdoor leisure areas are proposed to meet ADA requirements as well in order to provide the most accessibility to the site. The proposed building and appurtenances are proposed to meet all ADA requirements for interior spaces as well as provide ADA accessible access to and from the building along the proposed path of travel.

Note also that ADA applies specifically to public accommodations, so while it applies to the public areas of a multi-family facility like OIH, it does not apply to the actual dwelling units, i.e., the resident rooms, themselves.

LWDA strongly recommends Full Accessibility for OIH

LWDA strongly recommends that all OIH resident units, as well as common spaces, should be universally designed to be 100% accessible. LWDA proposes to make the entire facility fully accessible to meet and exceed all federal and state accessibility requirements, and to provide OIH management the ability to operate within a resident-centered atmosphere and the flexibility to locate residents and staff as needed.



EQUIPMENT IN CORRIDOR



LIVING ROOM IS THE ONLY ACTIVITY SPACE



TYPICAL DOUBLE PATIENT ROOM IS CRAMPED

Program

The existing building was designed as “code-minimum” and as such, there is no swing space for any additional programs or spaces to improve conditions for residents and staff.

Existing Program Deficiencies

Covered entry	None
Resident Rooms	<ul style="list-style-type: none"> • Current best practice suggests an exterior covered drop-off. <p>Predominantly double occupancy: 21 doubles + 3 singles.</p> <ul style="list-style-type: none"> • Doubles meet code (exactly at 180 sf) but feel cramped. • Current best practice suggests single rooms unless there is a compelling need for shared occupancy.
Showers	<p>Double rooms have no showers or baths in toilet rooms. Showering and bathing is done in common rooms in the East and West wings.</p> <ul style="list-style-type: none"> • Current best practice suggests shower in patient room for privacy and dignity.
Accessibility	<p>Patient Toilet rooms and Common Toilet Rooms do not meet handicapped accessibility requirements, except for full baths in single rooms.</p> <ul style="list-style-type: none"> • Current best practice suggests fully accessible rooms and fixtures.
Equip Storage	<p>Inadequate. Meets code, but equipment observed blocking corridor access.</p> <ul style="list-style-type: none"> • Current best practice suggests providing distributed storage alcoves along corridor.
Nursing Support Activity Spaces	<p>Storage and offices undersized.</p> <p><u>Living Room</u> is the one major activity space: 552 sf vs. 360 sf code minimum required.</p> <p><u>Day Room</u> on nursing unit is required per DPH checklist LTC1@ 9sf/ bed</p> <p><u>Day Room solarium, sitting room or equivalent area</u> with direct outside exposure provided in each unit is missing.</p> <p><u>Dining Room</u> is oversized and theoretically could be considered a substitute for the missing Day Room, but it is only available certain hours per day between meals and is not actually used that way or monitored by staff during off hours.</p> <ul style="list-style-type: none"> • Current best practice suggests multiple activity spaces.
Wishlist programs	<p>No opportunity for outreach programs within current building footprint. (e.g., Wheeler Program, Outpatient Rehab Clinic)</p> <ul style="list-style-type: none"> • Current best practice suggests opportunities for engagement with surrounding community and to enhance resident wellness. <p>See Additional Wishlist programs below</p>

Proposed Model of Care: Small House vs. Centralized Operations

The care model for skilled nursing has radically changed from the institutional setting of the 1970s and 1980s to a more home-like model where residents have more choice and control over their life, in a setting that mirrors domestic features rather than a medical facility. This new model provides a higher quality of life and better-quality outcomes for residents and their families.

A previous OIH Feasibility Study in 2015 focused on the “Small House” or “Greenhouse” model of nursing care. These residential models are based on smaller groups of 8 – 10 resident rooms clustered around a core of common spaces (living room, dining room, laundry, day room) to impart a less institutional, more residential experience. The Small House model of care has many wonderful attributes that we espouse— residential scale and aesthetics, “hidden” nursing and medical support, non-institutional kitchens and dining, and a focus on light, nature, and a variety of common spaces that foster social interaction. These resident houses can be linked with covered walkways or enclosed corridors, or they can be completely independent structures; the houses are typically arranged around a green or open space in view of one another to give a sense of the larger whole.

This approach requires a larger site than a single building approach, and typically requires more staff to support the decentralized arrangement. Unfortunately, the 9 East Creek Road site is too small to accommodate a Small House approach, especially with a phasing plan that would require the existing building to remain while multiple smaller structures were constructed around it. Also, it would likely carry higher operational costs with higher staffing ratios.

Instead, we have developed a model of care for OIH that draws from the Small House example to help break down the scale of a large facility and de-institutionalize the environment, while continuing to operate in a single structure with the current centralized operational model. The goal is to incorporate more ‘home-like’ culture change elements with residential aesthetics, a greater variety of activity spaces, a higher level of privacy and comfort for residents with mostly private rooms and individual 3-fixture bathrooms, and a straight-forward plan that takes advantage of the wonderful site and views, while discreetly concealing “back of house” kitchen and laundry support areas and decentralized nursing support spaces to maintain a non-institutional feel.

Program Groundrules

1. Program to be housed in a single building.
2. All resident rooms on single floor to avoid higher staffing levels.
3. Accommodate 45 licensed Nursing Home beds to maintain current licensure, which provides
 - a. 22 Level II Skilled Nursing Care beds
 - b. 23 Level III Supportive Nursing Care beds
4. OIH will continue to serve a variety of Level II, III and IV (Rest Home) residents within the 45-bed total, but the entire facility should be designed to meet stricter Level II requirements for maximum flexibility.
5. OIH does NOT want to create specialized units for Dementia Care, Parkinsons, ALS, Inpatient or Short Stay Rehab, Hospice Care, etc., but will provide those services as needed in a mixed environment.
6. Assume 37 singles and 4 doubles to accommodate sisters, couples, mother/daughter pair, etc.
7. During all phases of construction, assume at least 35 residents must be accommodated.



BLUE SKIES TEXAS: FREEDOM HOUSE



SOUTH COVE MANOR

Draft Program

Pages 24-25

Additional Wishlist Programs

Wishlist items indicated on draft program below with tan color:

Outpatient Physical Therapy Suite (beyond minimum DPH required 200 sf Inpatient Therapy Room)

- Rehab Gym PT/OT
- Aquatic Therapy
- Requires 4 parking spaces/ 1,000 sf

Medical Offices

Private or small house Dining, in addition to central Dining

Screened porch

Greenhouse/ Sunroom

Arts & Crafts Room

Library/ Chapel/ Quiet Room

Hospice Care Room for visiting family

Open Stair from 1st to 2nd Floor

Snack Shop

Community Space

Shop and Garage Storage

Wheeler program w/ staging area; provide charging station

Assisted Living unit suite with dedicated entrance; could go on different floor level, away from SNF

Outdoor Amenities

- Terrace/ Patio required Accessible rec. area @ 25sf/res min x 45 res = 1,125 sf min
- Porte Cochere required
- Garden and shed
- Gazebo
- Walking path loop on grounds
- Connection to walking/ bike path along Orange Street
- Secured area with fence



1 OIH PATIENT ROOM COUNT		PROPOSED PATIENT CAPACITY		EXISTING PATIENT CAPACITY						
	Pat Rms	Pats		Pat Rms	Pats					
2	Northwest Wing [after Phase 2 complete]		West Wing							
3	Level II/ III Single Room & Toile	21	21	Level III/ III Single Room & Toilet	1					
4	Level II/ III Double Room & Toile	0	0	Level III/ III Double Room & Toilet	8					
5	Subtotal	21	21	Subtotal	9					
6	Southeast Wing [after Phase 2 complete]		North Wing							
7	Level II/ III Single Room & Toile	16	16	Level III/ III Single Room & Toilet	1					
8	Level II/ III Double Room & Toile	4	8	Level III/ III Double Room & Toilet	6					
9	Level IV Single Room & Toilet	0	0	Subtotal	7					
10	Level IV Double Room & Toilet	0	0							
11	Subtotal	20	24	East Wing						
12			Level III/ III Single Room & Toilet		1					
13			Level III/ III Double Room & Toilet		7					
14			Subtotal		8					
15	Total Singles	37	35	Total Singles	3					
16	Total Doubles	4	10	Total Doubles	21					
17	Total	41	45	Total	24					
18					45					
19										
20										
21										
22										
23										
24										
25										
26										
27	OIH DRAFT PROGRAM		PROPOSED ROOMS		EXISTING ROOMS					
28			No	Area	Totals					
29			Dimensions		No					
30					Area					
31					Totals					
32					Dimensions					
33	Northwest Wing: 21 residents									
34	Level II/ III Single Room & Toilet	21	336	7,056	14'-0" x 24'-0" (incl. Toile Rm @ 6'-6" x 8'-0")	3	268	804	11'-6" x 23'-4" (incl. Toile Rm @ 5' x 7')	what is bed size?
35	Level II/ III Double Room & Toilet	0	504	0	14'-0" x 24'-0" (incl. Toile Rm @ 6'-6" x 8'-0")	10	268	2680	11'-6" x 23'-4" (incl. Toile Rm @ 5' x 7')	
36	Nurse Substation	1	150	150	10' x 15'	1	91	91	8'-6" x 10'-8"	
37	Copy Room/ orig Nurse Off	1	120	120	10' x 12'	1	80	80	7'-3" x 11'-1"	
38	Staff Toilet	1	50	50	6'-6" x 7'-6" min	1	26	26	5'-1" x 5'-1"	
39	Med Room	1	120	120	8'-6" x 14'-0"	1	58	58	5'-6" x 10'-6"	
40	Clean Utility	1	70	70	70 sf min = 7' x 10'	1	89	89	8'-0" x 11'-2"	
41	Soiled Utility	1	70	70	70 sf min = 7' x 10'	1	85	85	8'-0" x 10'-8"	
42	Exam Treatment	1	140	140	10'x14';125 sf min flr	1	127	127	11'-1" x 11'-6"	
43	Linen Storage	2	45	90	6' x 9' min	1	21	21	4'-2" x 5'-0"	
44	Drinking Fountain	1	10	10	2' x 5'	1	10	10	2'-6" x 4'-0"	
45	Janitor Closet	1	50	50	7' x 7'	1	26	26	5'-1" x 5'-1"	
46	Gen Equip Storage	1	50	50	50 sf min = 7' x 7'	1	48	48	3'-10" x 12'-7"	
47	Tub Room (vs. West Tub/2 Shwr/Toil	2	120	240	9' x 11' min	1	268	268	11'-6" x 23'-4"	
48	O2 Storage	1	10	10	2' x 5'	0	0	0		
49	Nourishment Kitchen	1	70	70	7' x 10'	1	62	62	6'-0" x 10'-3"	
50	Activity Area	1	210	210	21 res x 9 =189 sf min	0	0	0		
51	Common Patient Toilets	2	50	100	6'-6" x 7'-6" min	2	42	84	6' x 7'	
52	Southeast Wing: 24 residents									
53	Level II/ III Single Room & Toilet	16	336	5,376	14'-0" x 24'-0"	0	268	0	11'-6" x 23'-4"	
54	Level II/ III Double Room & Toilet	4	525	2,100	21'-0" x 25'-0"	11	268	2948	11'-6" x 23'-4"	
55	Level IV Single Room & Toilet	0	504	0	14'-0" x 24'-0"	0	0	0	11'-6" x 23'-4"	how big?
56	Level IV Double Room & Toilet	0	672	0	14'-0" x 24'-0"	0	0	0	11'-6" x 23'-4"	how big?
57	Nurse Station	1	150	150	10' x 15'	0	0	0		
58	Copy Room/ orig Nurse Off	1	120	120	10' x 12'	0	0	0		
59	Staff Toilet	1	50	50	6'-6" x 7'-6" min	0	0	0		
60	Med Room	1	120	120	8'-6" x 14'-0"	0	0	0		
61	Clean Utility	1	70	70	70 sf min = 7' x 10'	0	0	0		
62	Soiled Utility	1	70	70	70 sf min = 7' x 10'	0	0	0		
63	Exam Treatment	1	140	140	10'x14';125 sf min flr	0	0	0		2nd required?
64	Linen Storage	2	10	20	2' x 5'	0	0	0		
65	Drinking Fountain	1	10	10	2' x 5'	0	0	0		
66	Janitor Closet	1	50	50	7' x 7'	0	0	0		
67	Gen Equip Storage	1	50	50	50 sf min = 7' x 7'	0	0	0		
68	Tub Room (vs. East Tub/1 Shwr/Toil	1	120	120	9' x 11' min	1	360	360	15'-6" x 23'-2"	
69	O2 Storage	1	10	10	2' x 5'	0	0	0		
70	Nourishment Kitchen	1	70	70	7' x 10'	0	0	0		
71	Activity Area	1	210	210	24 res x 9 =216 sf min	0	0	0		
72	Common Patient Toilets	2	50	100	6'-6" x 7'-6" min	0	0	0		
73	Common Spaces									
74	Entry Vestibule	1	150	150	10' x 15'	1	143	143	9'-6" x 15'-0"	
75	General Activity Room	1	360	360	45 res x 8 sf min	1	552	552	16'-8" x 25' + 10' x 13'-6"	
76	Storage Closet for Activity Room	1	40	40						
77	Beauty Salon	1	45	45		1	185	185	8'-0" x 23'-2"	
78	General Storage	1	450	450	45 res x 10 sf min	1	467	467	20'-0" x 23'-4"	off-unit OK?
79	Conf/ Classroom/ orig Activities	1	600	600	40 res x 15 sf	1	370	370	15'-9" x 23'-6"	A/V capable
80	Visitor Toilets	2	50	100	6'-6" x 7'-6" min	2	42	84	6' x 7'	
81	Common Pat Toilets	2	50	100	6'-6" x 7'-6" min	0	0	0		depends on plan
82	Snack Shop	1	100	100	10' x 10'	0	0	0		if desired
83	Gift Shop	1	100	100	10' x 10'	0	0	0		if desired
84	Greenhouse	1	1,200	1,200	30' x 40'	0	0	0		if desired
85	Arts & Crafts	1	750	750	25' x 30'	0	0	0		if desired
86	Open Stair	2	375	750	15' x 25' x 2 floors	0	0	0		if desired
87										
88										



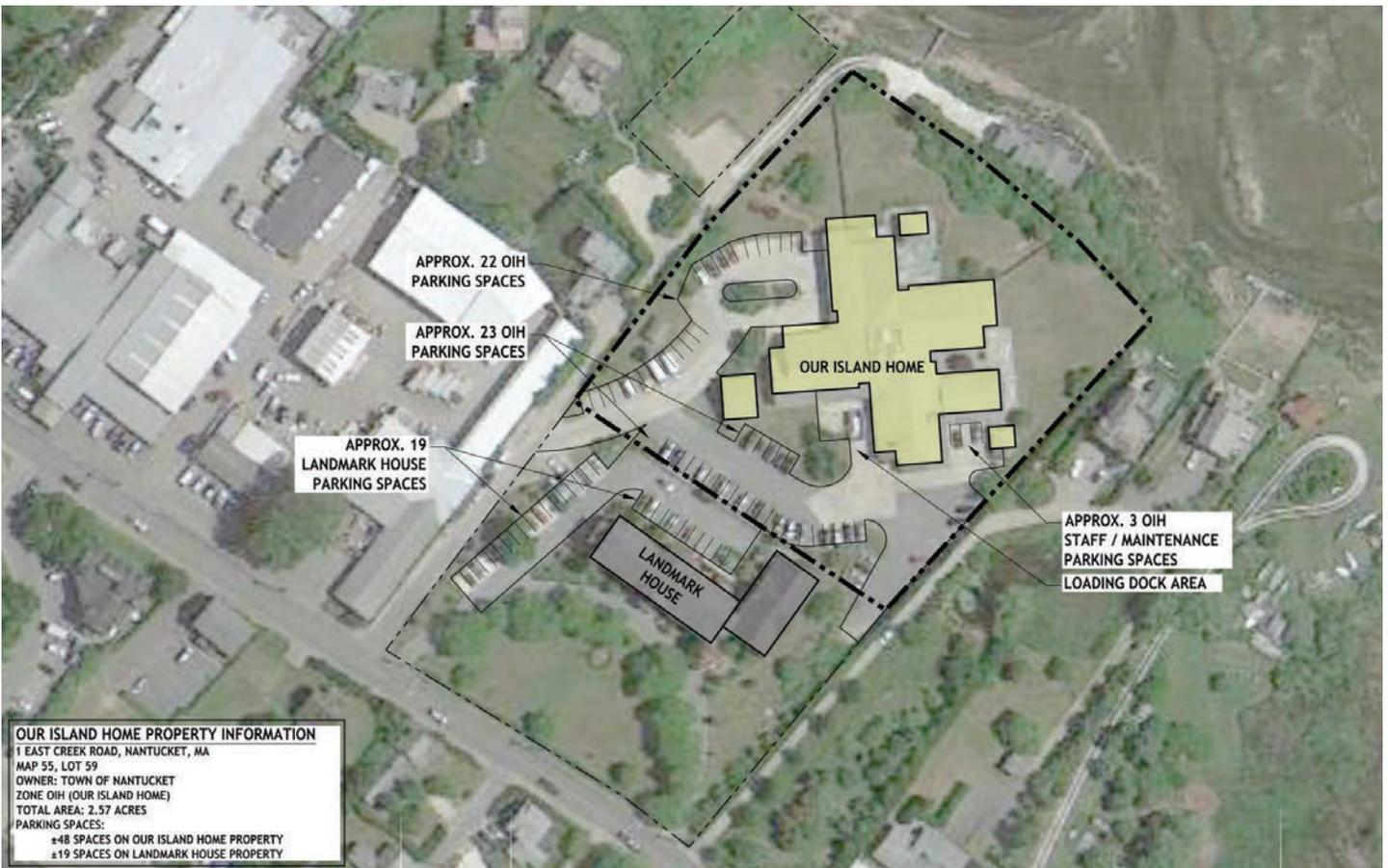
	PROPOSED ROOMS				EXISTING ROOMS				
	No	Area	Totals	Dimensions	No	Area	Totals	Dimensions	
89									
90									
91									
92									
93	Admin Offices								
94	Receptionist/ orig Soc Work Off	1	120	120	10' x 12'	1	100	100	7'-6" x 13'-4"
95	Nurse Mgr Off / orig Secretary	2	120	240	10' x 12'	1	100	100	7'-6" x 13'-4" off-unit ok?
96	Activities Off/ orig Conf Rm	1	120	120	10' x 12'	1	121	121	9'-1" x 13'-4"
97	Admin Off/ orig part of Pat Din	1	120	120	10' x 12'	1	257	257	11'-0" x 23'-4"
98	Multi Desk Off/ orig Admin	1	120	120	10' x 12'	1	100	100	7'-6" x 13'-4"
99	Business Mgr Off/ orig Med Rec	1	120	120	10' x 12'	1	121	121	9'-1" x 13'-4" near Recep?
100	D.O.N. Off/ orig Pat Lounge	1	120	120	10' x 12'	1	142	142	9'-6" x 15'-0"
101	Off Stor/ orig Personal Care	1	120	120	10' x 12'	1	130	130	8'-8" x 15'-0" required?
102	Staff Dev Off/ orig HC Shower	1	120	120	10' x 12'	1	81	81	7'-0" x 11'-6"
103									
104									
105	Dining / Kitchen								
106	Dining Vest/ orig part of Pat Din	0		0		1	303	303	13'-0" x 23'-4"
107	Private Dining	1	220	220	12' x 18'	0		0	
108	Central Dining	1	450	450	45 res x 10 sf min	1	1352	1352	26' x 52'
109	Staff Dining	1	308	308	14' x 22'	1	292	292	12'-6" x 23'-4"
110	Staff Lounge	1	150	150	10' x 15'	1	143	143	9'-6" x 15'-0"
111	Staff Lockers	1	120	120	10' x 12'	1	80	80	7'-6" x 10'-8"
112	Kitchen	1	1,200	1,200	incl. Dishwash area	1	910	910	23'-4" x 39'-0"
113	Food Storage	1	150	150	150 sf min	1	146	146	9'-4" x 15'-8"
114	Dietitian Office	1	120	120	10' x 12'	1	81	81	9'-3" x 11'-0"
115	Staff Toilet	2	50	100	6'-6" x 7'-6" min	1	26	26	5'-1" x 5'-1"
116	Janitor Closet	1	50	50	7' x 7'	1	25	25	5' x 5'
117	Trash & Recycling	1	120	120	8' x 15'	1	55	55	3'-0" x 18'-3" inside bldg?
118									
119									
120	Potential Multi-Purpose Rental Suites								
121	Phys Therapy	1	2,137	2,137	20' x 105'	0			200 sf PT req if no rental sp
122	Community Space	1	5,846	5,846	60' x 90'	0			8 parking spaces
123									23 parking spaces
124									
125	Laundry / Support								
126	Loading Dock/ Receiving	1	260	260	10' x 26'	0		0	
127	Mechanical Room	2	200	400	10' x 20'	1	225	225	11'-3" x 20'-0"
128	IT/ orig Shop Office	2	150	300	10' x 12'	1	81	81	8'-10" x 9'-2"
129	Electric Room	2	96	192	8' x 12'				
130	Electric Satellite Closet	4	18	72	2 normal, 2 emerg	1	26	26	3'-0" x 8'-6"
131	Laundry	1	375	375	15' x 25'	1	288	288	12'-4" x 23'-4"
132	Laundry Chutes	1							
133	Med Records/ orig Shop	1	180	180	12' x 15'	1	163	163	10'-6" x 15'-6" req?
134	Garage Shop	1	1,008	1,008	28' x 36'	1	1008	1008	28' x 36' inside bldg?
135	Shed	1	238	238	12' x 20'	1	238	238	12' x 20' inside bldg?
136	Generator/ Garden Shed	1	382	382	19' x 20'	1	382	382	19' x 20' inside bldg?
137	Elevators	2	100	200	2 hole hyd @ 9' x 11'	0			
138	Elevator Machine Rooms	2	100	200		0			
139									
140									
141	Subtotal			38,165	Net square feet			16,644	
142	Circulation, etc.			1,50%	x Target = 1.50%				
143	Total			57,248	Gross square feet				
144									
145									
146	Exterior Spaces								
147	Porte Cochere	1	900	900	30' x 30'				
148	Porch/ Gazebo	1	1,000	1,000	10' x 40' + 15' x 40'	1	625	625	25' x 25' ext
149	Terrace/ Patio	1	3,000	3,000	deck 15' x 100' + at grade 15' x 100'	1	4,075	4,075	22' x 36' + 11' x 32' + 45' x 65' = 1,125
150									
151									
152									
153									
154									
155									
156						current sf		20,792 Building	
157								1,008 Garage Shop	
158								382 Generator/ Garden Shed	
159								238 Shed	
160								22,420	



FIRST VIEW OF OIH UPON ARRIVAL



MAIN ENTRY HIDDEN FROM VIEW



OUR ISLAND HOME PROPERTY INFORMATION
 1 EAST CREEK ROAD, NANTUCKET, MA
 MAP 55, LOT 59
 OWNER: TOWN OF NANTUCKET
 ZONE OIH (OUR ISLAND HOME)
 TOTAL AREA: 2.57 ACRES
 PARKING SPACES:
 ±48 SPACES ON OUR ISLAND HOME PROPERTY
 ±19 SPACES ON LANDMARK HOUSE PROPERTY

PROPERTY INFORMATION

Existing Conditions at 9 East Creek Road

Site

The site is comprised of two parcels located in Tax Map 55: Parcel 59 which contains the Our Island Home building and associated appurtenances, parking and leisure areas, and Parcel 59.1 which contains the Landmark House and associated appurtenances, parking and leisure areas. Current access to the Our Island Home is from East Creek Road, with an approximate 60-degree angle street connection that leads to the existing loading areas to the West and existing dropoff and parking areas in front of the building, located to the northwest. Access to the Landmark House currently exists via a semi-circular driveway which connects to Orange Street that allows for access and drop off in front of the building as well as to parking along the rear, or northeast, side of the building. As noted by current staff, the site is under-parked.

Emergency access to the Landmark House is maintained via the looped driveway connecting to Orange Street, which allows access to the southern facing building side. Access to the northern and western building sides are through the looped driveway as well, with fire truck access through the connected parking lot to the West and North. Access to the easterly side of the Landmark House is via the access drive from East Creek Road that connects to Our Island Home and associated parking. Currently there are no observed issues with emergency access to the Landmark House.

Emergency access to the Our Island Home currently takes place via the access drive that connects to East Creek Road at an approximate 60-degree angled connection. Access to the northwestern building alcove causes difficulties for a ladder truck turning radii, as there is an existing landscape island that breaks up the turning area. Emergency vehicles access the northeastern building alcove via driving on the grassed area within to the north of the building. Ladder truck access to the southern portions of the buildings are via the parking and loading areas to the South of the Our Island Home building. The Fire Chief has specified that access will be required to all sides of the building for the largest emergency vehicle possible, in this case a ladder truck, for all proposed modifications.

Site Deficiencies

- Entrance is hidden on first approach along East Creek Road.
- Visitors are greeted by Garage.
- Building does not take advantage of spectacular views to Northwest (Town), North (Ocean) and Northeast (Harbor) for common areas.
- The site features large area of paved surface– 30%-- due to the wide separation between the Main Entry and the Service Entry.
- Parking deemed inadequate by staff: currently 48 OIH + 19 Landmark House = 67 total spaces.
- OIH has no architectural relationship to Landmark House:
 - Building orientation is rotated 45 ° from Landmark
 - Entrance is hidden and separate from Landmark
 - No sense of campus shared between the two buildings
- Fire truck turning radii at Main Entry is inadequate as noted above.



EXISTING SIDING IN POOR CONDITION



EXTERIOR APPROACHING END OF USABLE LIFE



EXISTING FLOOR PLAN



Building Exterior shell

- No vestibules at ends of West, East and North wings.
- Wind infiltration and resulting occupant discomfort is a problem on this exposed oceanfront site.
- Windows need replacing.
- Wood screen for rooftop kitchen exhaust fan falling apart.

Life Expectancy: 5 years

Structure

See Structural Narrative

- Existing steel structure is sound, but any substantial building upgrade would require temporary and/or permanent lateral bracing, which would require invasive work on the exterior walls.
- Spread footings used for the existing foundation were based on geotechnical information shown on the original structural drawings prepared by SGH in 1979, and there has been little apparent settlement to the existing building during its life. We would expect a new building would have similar (shallow) foundations, although the 1st Floor would be an elevated structural slab.

Life Expectancy: unknown

Mechanical, Electrical, and Plumbing

See MEP Narrative

- Existing condition: poor.
- AC is not provided to patient rooms to meet current DPH code.
- Ventilation does not meet current requirements.
- As noted in 2014 SED report, below slab waste lines are corroding at elbows and often leak, difficult to access and costly to replace. Current review by CES confirms this problem.
- Electrical service no longer code compliant. The patient rooms lack isolated ground outlets.

Life Expectancy: Past its useful life.

Fire Protection

See MEP Narrative

- Existing condition: poor.
- The non-addressable fire alarm system is no longer code compliant because of the device layout.
- The attic is not protected.

Life Expectancy: Past its useful life.

Renovation vs. New Construction

1 Renovation of building within existing footprint **NOT RECOMMENDED**

Since the building would remain occupied during renovation, the work would have to be done in multiple small phases, driving up the cost per square foot and extending the timeline, inconveniencing residents and staff. The existing building has no swing space and no non-essential space per DPH guidelines, so any construction would take required space out of service for a period of time and might require temporary waivers from DPH.

There is no room for additional program within the existing footprint; any new space would come at the expense of an existing space. This means, for example, no additional patient rooms could be added.

The result will be a compromised solution, due to aging infrastructure in unrenovated areas, limited program opportunities, and long-term vulnerability to sea level rise. It would also be expensive on a per square foot basis due to the piecemeal nature of the work. The infrastructure limitations created by a slab on grade structure would remain. Also, any substantial upgrade (Level II or III renovation per Existing IBC) to the existing structure would likely trigger code compliance issues such as lateral bracing requirements to meet current structural standards of the 2015 Existing IBC, which would involve invasive work of the exterior wall (see Structural Narrative Appendix).

2 Partial renovation and additions **NOT RECOMMENDED**

To increase the room count to 41 (37 singles + 4 doubles) from the existing 24 (3 singles + 21 doubles), the existing north, west and south patient room wings would have to be extended and bent in plan to stay within coastal bank setback limits, leaving the new rooms out of sight of the central nurse station, or in need of new nurse substations. Once these additions were completed, residents could be relocated to the new rooms, but they would continue to use the existing wings to reach the central common area; this would require any renovation work in those existing areas to be sub-phased on each side of the connecting corridor. Alternatively, an entire wing could be vacated for a period of time, but that would entail multiple moves for residents over a period of several years.

The central Nurse Station would also have to be relocated at least twice to allow renovation there, and its temporary location would be difficult to access from at least one of the wings during that time. Overall, this would be a very disruptive process for the residents and staff, playing out over many years.

Furthermore, the additions would have to be located at the same elevation as the existing building, leaving the entire facility vulnerable to rising sea levels over the long term. Other limitations noted above to renovate the existing building— infrastructure buried below slab on grade, in particular— would remain.

We do not recommend adding to the existing building and then renovating all or part of the existing building, for many of the same reasons stated in Option 1 above— it would not be a wise investment of resources. The question of renovation was raised at the 5/6/19 Charrette, and no one present was in favor of saving the existing building.

3 Demolition of existing building to create a completely new OIH Facility, as part of a reconfigured campus

RECOMMENDED

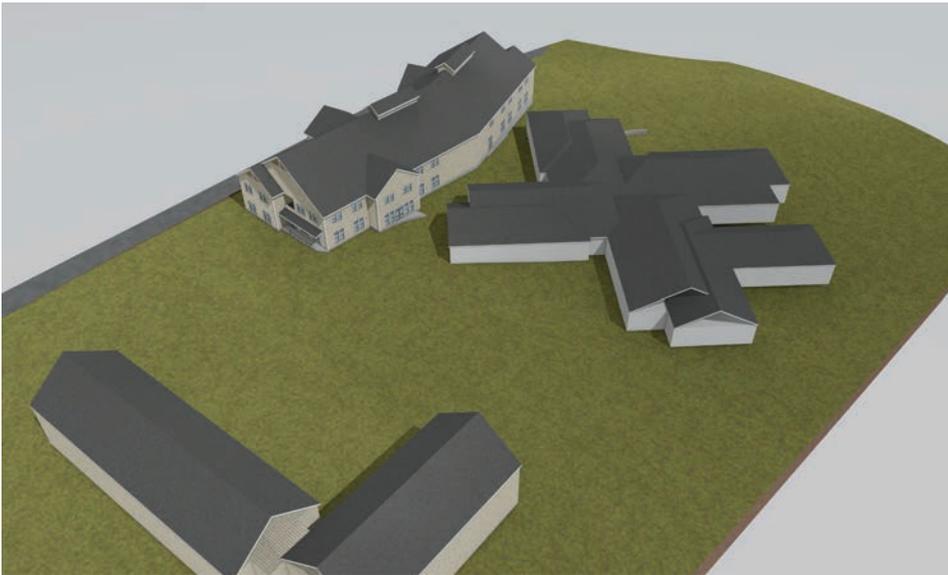
A new building makes the most sense, from a financial, operational and aesthetic standpoint.

A new building can be designed to the appropriate size needed to meet OIH's desired mix of mostly single and a few double rooms. The structure can be lifted above existing grade to avoid vulnerability to rising seas. The enclosure can be upgraded to provide better thermal comfort and minimize air infiltration with a life expectancy of eighty years. Phasing can be limited to two main phases (with a minor Phase 3 renovation to temporary common spaces on the 1st floor of Phase 1), which means contractors can work on large areas of scope without interruption and perform the work at a lower cost per square foot.

Likewise, disruption for residents and staff will be limited, compared to the renovation or partial renovation/addition scenarios. Residents will have to relocate one time from existing shared rooms to new shared rooms in Phase 1, and then half of them will relocate again to Phase 2 rooms. All new rooms will be larger than the existing OIH doubles and feature 3-fixture residential bathrooms, which means that at each step, the accommodations will keep improving. The construction work will occur in a separate building from where residents are housed, meaning less noise, vibration, dust and no unfamiliar construction workers within OIH.

Operationally, the new building can be designed to meet current nursing models for living and care, with single patient rooms that meet accessibility standards, together with appropriate nursing and storage support spaces. It can be designed flexibly to accommodate future demographic changes with a modular approach to singles and doubles. "Soft space" on the 1st Floor earmarked for community space, home health services headquarters, or medical offices will provide a cushion for future growth and offer the possibility of space for several assisted living units.

Finally, the new building can be sited and detailed to create an integral campus with Landmark House. It can be oriented to create an architectural dialog with Landmark, and its entry can face that building to help tie the two together visually. It can take advantage of great views of the ocean, harbor and town to the rear. The parking lots for OIH and Landmark can be consolidated and made more efficient. The aesthetics of the new exterior can harmonize with Landmark by employing a traditional Nantucket/ New England shingle style vernacular.



PHASE 1



PHASE 2 OPTION 1



PHASE 2 OPTION 2

Project Challenges

1. Phasing

Rebuilding on the existing site requires phased construction so that residents can remain on site throughout the construction process. The goal is to have as few phases as possible to shorten the overall construction time and reduce the number of patient moves.

The phasing concept is to relocate up to 41 residents into double rooms within the new Phase 1 building, which will function as a self-contained, DPH code-compliant building while Phase 2 is under construction (see Architectural Schemes with Phasing, Options 1 and 2, p.41-53). 20 patient rooms will initially be outfitted as double rooms (larger than existing double rooms), and another as a single room, to accommodate up to 41 residents while Phase 2 is under construction.

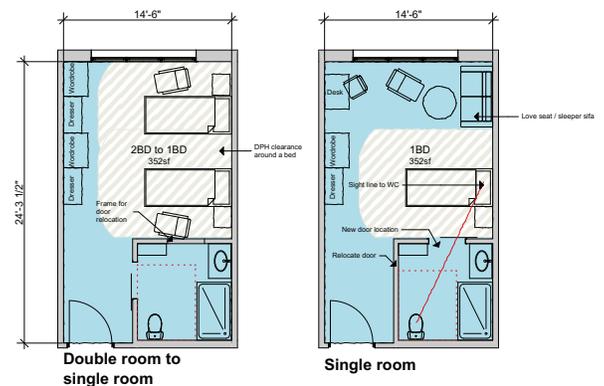
A temporary lift and exterior ramps will provide access to the elevated 1st floor of Phase 1 while Phase 2 is under construction. During this period, the Kitchen and Dining Room will be temporarily located on the 1st Floor of Phase 1.

Note that the mechanical infrastructure required for the temporary Kitchen is a substantial cost to the project; the temporary space must be fit out with kitchen equipment, plumbed and ducted to be fully operational for a relatively short period of time. If an alternative meal delivery service or caterer could be arranged instead— for a year or so while Phase 2 is under construction and assuming DPH would grant a waiver to allow it – the project could avoid this expense. Alternatively, it might be possible to get DPH approval for a reduced-size temporary Kitchen for Phase 1; on other projects, LWDA has helped to secure approval for this type of temporary accommodation during construction.

When Phase 2 construction is complete, half the residents will be decanted to Phase 2 rooms (mostly single occupancy), and all Phase 1 rooms will become single occupancy. We suggest that the Patient Toilet Rooms in Phase 1 have the sliding door relocated at this time to a different wall so that the Toilet room is easier to see and access from the bed.

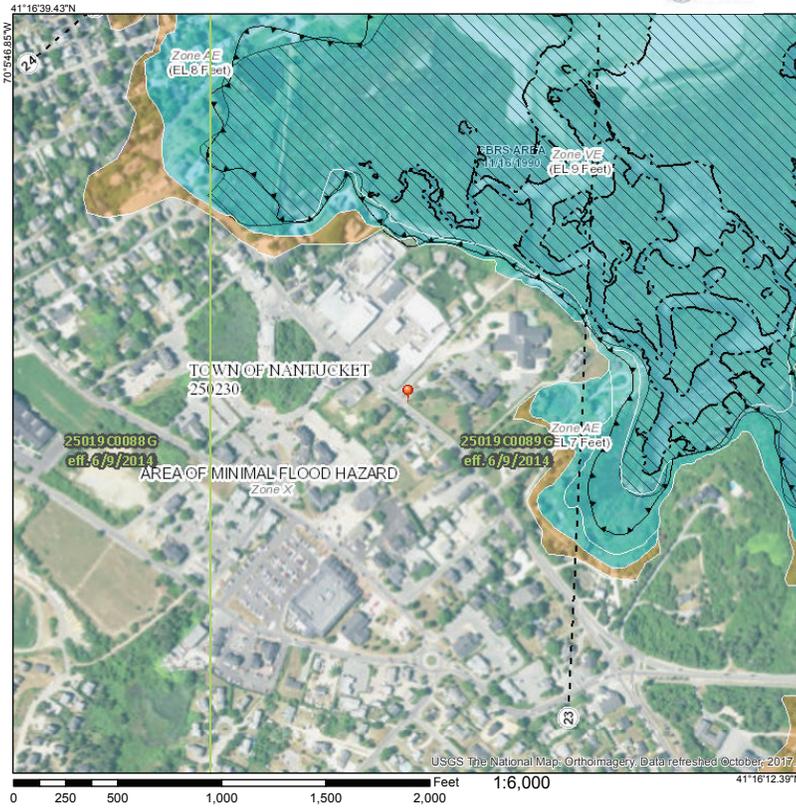
The temporary elevator and exterior ramps will no longer be needed once Phase 2 is complete and the site is regraded.

A small Phase 3 will involve renovation of approximately 8,000 sf of the 1st floor of Phase 1 to convert the temporary Lobby, Dining/ Kitchen and support spaces into permanent space. The Lobby, Dining Room and Kitchen will be relocated to the 1st Floor of Phase 2 for proper adjacency to loading, receiving and support spaces.



PHASE 1 RESIDENT ROOMS WILL BE FIT OUT AS DOUBLES AND LATER CONVERTED TO SINGLES

National Flood Hazard Layer FIRMette



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- SPECIAL FLOOD HAZARD AREAS**
 - Without Base Flood Elevation (BFE) Zone A, V, AP9
 - With BFE or Depth Zone AE, AO, AH, VE, AR
 - Regulatory Floodway
- OTHER AREAS OF FLOOD HAZARD**
 - 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
 - Future Conditions 1% Annual Chance Flood Hazard Zone X
 - Area with Reduced Flood Risk due to Levee, See Notes, Zone X
 - Area with Flood Risk due to Levee Zone D
- OTHER AREAS**
 - Area of Minimal Flood Hazard Zone X
 - Effective LOMRs
 - Area of Undetermined Flood Hazard Zone D
- GENERAL STRUCTURES**
 - Channel, Culvert, or Storm Sewer
 - Levee, Dike, or Floodwall
- OTHER FEATURES**
 - Cross Sections with 1% Annual Chance Water Surface Elevation
 - Coastal Transect
 - Base Flood Elevation Line (BFE)
 - Limit of Study
 - Jurisdiction Boundary
 - Coastal Transect Baseline
 - Profile Baseline
 - Hydrographic Feature
- MAP PANELS**
 - Digital Data Available
 - No Digital Data Available
 - Unmapped

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 4/11/2019 at 4:01:12 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

NATIONAL FLOOD HAZARD LAYER

2. Resiliency

A. Life Expectancy

The existing building needs replacement after only 40 years, partly due to a change in nursing care philosophy, but also due to a minimal first-cost construction approach. OIH has found that existing slab on grade construction makes maintenance difficult, and renovation within the minimal footprint has proven to be challenging and expensive (compare this situation to Landmark House, still useful, after substantial renovation, at 170 years).

New OIH construction should be designed to last at least 80 years, a reasonable life expectancy that represents a prudent return on investment; assume mechanical systems will be replaced once or twice during that period. The exterior envelope, subject to steady offshore winds, should be carefully detailed to minimize air infiltration.

B. Rising seas:

According to Rebecca Lindsey, "Climate Change: Global Sea Level: NOAA Climate.gov, 8/1/18,"Sea level has been rising over the past century, and the rate has increased in recent decades. In 2017, global mean sea level was 3 inches (77 millimeters) above the 1993 average—the highest annual average in the satellite record (1993-present) ... Since the start of the satellite sea level record in 1993, the average rate of sea level has been about one-eighth of an inch (3.1 mm) per year.

In 2012, at the request of the U.S. Climate Change Science Program, NOAA scientists conducted a review of the research on global sea level rise projections, and concluded that there is very high confidence (greater than 90% chance) that global mean sea level will rise at least 8 inches (0.2 meter) but no more than 6.6 feet (2.0 meters) by 2100."

NOAA further refines these predictions and states that for the year 2100, the current intermediate low-range prediction is 19" of sea level rise, and the intermediate-high range is 47". The year 2100 is a convenient reference point because it coincides with the proposed life expectancy of a new OIH.

The existing OIH 1st Floor elevation is at 13.5' above (current) sea level, high enough to avoid impacts of today's worst-case current anticipated storm surge and Category 4 hurricanes, per the Nantucket GIS website. The lower lying northern and southeastern corners of the site are currently vulnerable to worst-case storm surge and Category 4 hurricanes (see GIS map), and as the sea level rises, the area of potential worst-case inundation will encroach on the existing building footprint in the center of site.

If the 1st Floor of OIH can be elevated 5' above existing grade (i.e., raised from Elevation 13.5' to Elevation 18.5' above current sea level), the new building should be protected for its life expectancy. We think this can be achieved with careful regrading of site, while remaining fully accessible to residents and staff. (A raised floor will also allow for easier access to utilities and reconfiguration/ upgrades in the future, to avoid the kind of maintenance problems OIH is currently experiencing with deteriorating plumbing waste lines below the slab.)

Utility infrastructure— emergency generator, generator and propane tanks, transformer, meters— should also be raised to ensure continuity of service during severe weather events. As much as mechanical equipment as possible-- cooling tower, heat pumps, condensing units-- should be located on the roof or in the Attic.

We are also considering the feasibility of creating gaps covered with hinged doors, also known as flood vents, in the foundation wall on the north and southeast sides of the footprint, to allow any potential flood water to flow in and out during severe storms, to reduce the risk of water pressure damaging the foundation. The crawl space within the foundation wall will vary from 3' to 7' tall, and potentially could be used for "rough" storage, but any stored items would be vulnerable during severe storms.

C. FEMA flood zones

The small low-lying area next to East Creek Road at the north corner of the property-- about 900 sf of the 120,000 sf OIH site-- falls within a FEMA Special Flood Hazard Zone VE at Elevation 9. The remainder of the property, including the existing building footprint, is considered to be in an "Area of Minimal Flood Hazard", but that boundary will change with sea level rise.

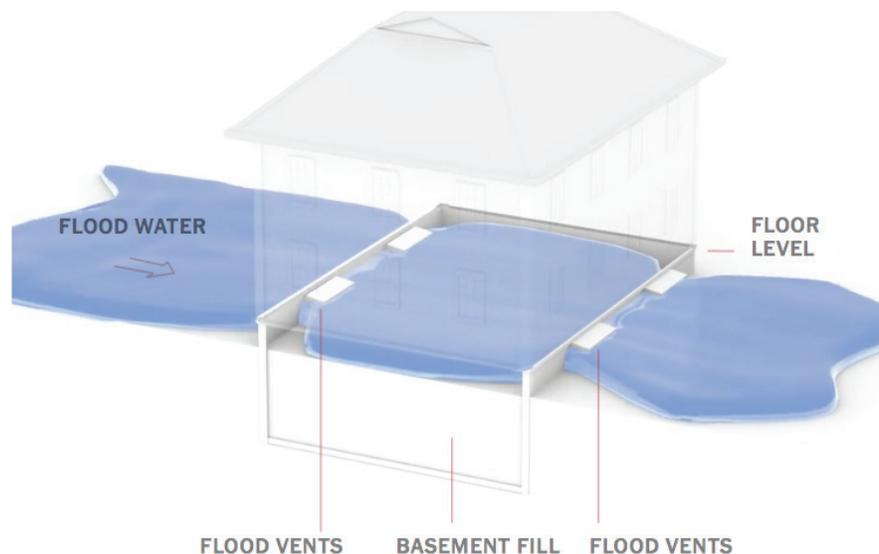
This special flood hazard zone will grow as sea levels rise and is the reason the new building should be elevated.

According to Anthony Paletta, "Battling a Flooded Future", AIA Architect Journal, 7/2/19:

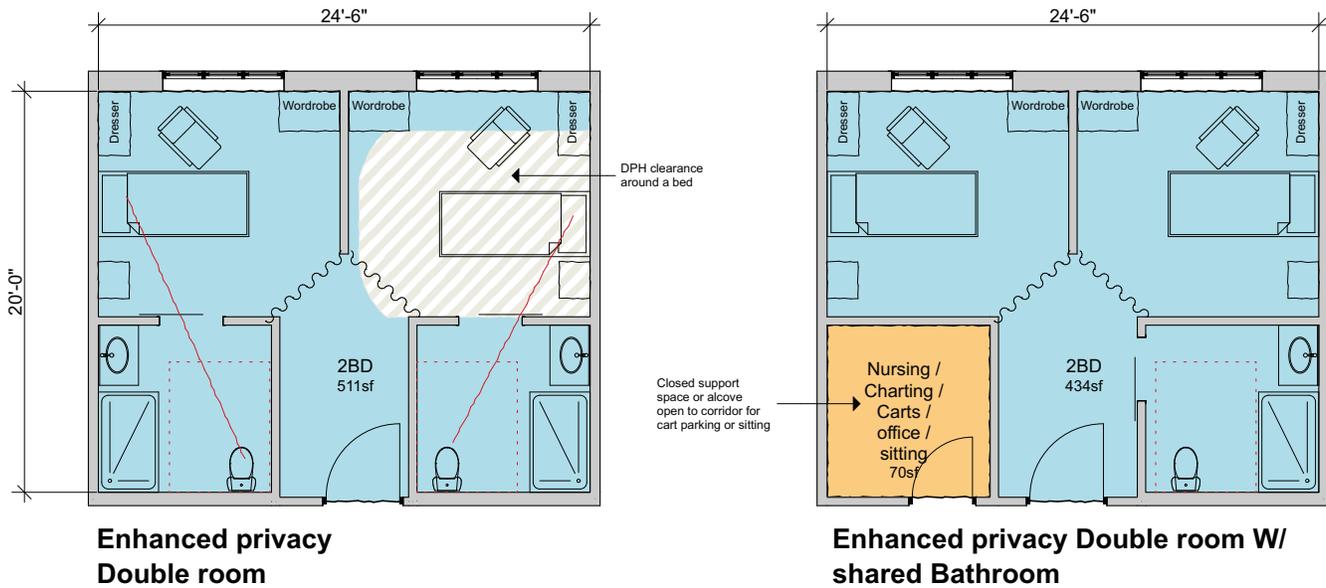
"FEMA's Risk Rating 2.0 update, set to be implemented in 2020, will apply a finer-grained set of evaluations to individual properties, including the elevation of ground on the property, the elevation of a structure's first-floor distance to water, and potential rebuilding costs."

D. Top of Coastal Bank Buffer: (see Conservation Commission p.13)

There is a no-build zone within 50' of the Top of Coastal Bank lines, and a Do Not Disturb buffer zone within 25' of the lines. These setbacks restrict the location of a new building.



FLOW THROUGH FOUNDATION TO ACCOMMODATE STORM SURGE



LONG TERM FLEIBILITY FOR DOUBLE ROOMS

3. **Flexibility and Future Expansion**

- An elevated floor slab will allow for easy infrastructure access over life of the building.
- Long term adaptability from SNF single occupancy room to SNF double occupancy room is possible; modular room sizing allows typical proposed single rooms to be temporarily used as double occupancy, or two adjacent single rooms to be combined into a double room permanently, with the extra toilet room converted to nursing support if needed.
- If future census needs change and there is greater demand for Assisted Living and lesser demand for SNF beds (unlikely, but possible), a wing of the building could be retrofitted as Assisted Living, with a mix of 1 Bedroom and Studio apartments, within the proposed footprint. The wing would require a dedicated entrance and elevator.
- Long term expansion needs are currently undefined. There is little room for future horizontal expansion on the site; the footprint is close to East Creek Road on the northwest, the 50' setback line from the top of coastal bank on the northeast and is limited by a reasonably sized and configured parking lot on the southeast and southwest.
- Potential expansion space can be considered in the Attic. This would require an extension of stairs and elevators, dormer windows, and coordination of major pieces of mechanical equipment that will be located there. If any such expansion is contemplated, appropriate design measures would have to be incorporated during Schematic Design. Due to space limitations, it would be difficult to locate a conventional nursing unit there, but the space could certainly accommodate AL units, office suites, and/or various activity spaces.

4. Sensitivity to Landmark House needs

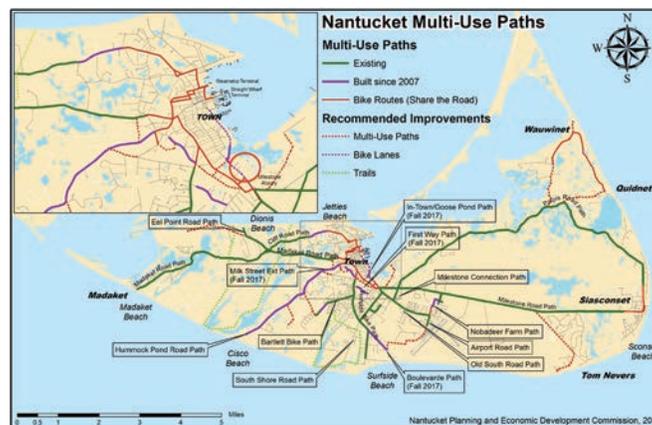
To create a sense of campus it is preferable to

- Orient the new building orthogonal to Landmark (e.g., parallel or perpendicular)
- Relocate the OIH entrance to face Landmark, to create a dialog between buildings and also to be more visible to visitors approaching from Orange Street
- Create a shared parking lot that reflects the current operational use of parking spaces.

Note that Landmark House will not be moved to make more room for OIH, and it will not be used as swing space for OIH residents during construction. There will be no change to the building, and there will be no change to Landmark’s ceremonial semi-circular drive facing Orange Street. Minor enhancements are planned along the edge of the parking lot at the rear of Landmark House that will widen the sidewalk. The existing outdoor transformer will be relocated as part of the parking lot reconfiguration.



LANDMARK HOUSE



NANTUCKET MULTI-USE PATHS

5. Opportunities for Community Inreach and Outreach

A. Nantucket Trail Network for Biking and Walking

OIH should establish walking trail and bike path connections on its site to enable the Nantucket Wheelers Program to share in the expanding network of Nantucket bike paths and walking trails. An existing bike path crosses the Landmark House property along the north side of Orange Street and could be accessed via the existing driveway to the west of Landmark House to provide a safe connection for OIH residents.

The Nantucket Wheelers Program offers bike rides to OIH residents by certified volunteers on specially outfitted bikes that need to be stored and charged. Currently, the rides are arranged in advance and a van is summoned to bring residents to remote bike locations; if there was a storage/charging area on site under cover, it would be much more convenient for residents and providers, eliminating the need for the van and advance coordination.



NANTUCKET WHEELERS PROGRAM BIKE DIAGRAM

B. Coordination with the Nantucket Land Bank Commission

We have not pursued potential arrangements with the Land Bank, but it might be worthwhile to explore options during Schematic Design for a possible land swap and/or easement arrangement between OIH and the Land Bank. The Land Bank owns additional properties in the lowland marsh to the northwest and northeast of OIH and might be interested in establishing a continuous coastal walking path close to the coastal bank.

Perhaps the small triangle in the northern corner of the OIH parcel beyond the coastal bank would be of interest to the Land Bank; it cannot be developed by OIH, as it sits beyond the top of coastal bank line. Or maybe the strip of OIH property shown on Options 1 and 2 for fire truck access could be granted as an easement to the Land Bank for a walking path. In return, OIH could benefit from use of the Land Bank's small parking area across East Creek Road. Such an arrangement would also provide ambulatory OIH residents access to a walking path with coastal views.

C. **Outpatient Physical Therapy/ Occupational Therapy Clinic**

There was a strong desire expressed at the 5/6/19 Charrette for an outpatient PT/OT clinic that could serve the needs of the larger community as well as OIH residents. OIH Administration hopes to avoid the time and expense involved in providing these services to residents off-Island or bringing visiting nurses to the Island. Diane Pearl, MD, a representative of the Nantucket Cottage Hospital, agreed that outpatient physical therapy is currently underserved on the Island. Richard Hamilton of CLA suggested including an Aquatic Therapy component if possible, as that service does not currently exist on the Island.

A 2,100 sf outpatient PT/OT is shown on Architectural Options 1 and 2, on the 1st Floor of Phase 2, with a dedicated entrance and associated HC parking spaces. Note that this type of clinical space carries a substantial parking requirement that would have to be considered in the early stages of site design.

D. **Adult Day Center Program**

This program differs from the generic community gathering space provided by a senior center such as Nantucket's Saltmarsh Senior Center. An Adult Day program would be tailored to address the needs of independent senior residents who need outpatient support services in a group setting to help with particular medical needs.

E. **Other Potential Community Uses**

Potential uses for the 8,000 sf "Community Space" shown on the 1st Floor of the Architectural Options include home health services agency headquarters, medical offices with a geriatric emphasis, and assisted living units. A need for an Emergency Shelter and a Polling Station were suggested at early meetings, but it appears the new Nantucket Life Safety Building now meets those needs.

F. **Saltmarsh Senior Center**

A separate feasibility study for the Saltmarsh Senior Center is currently underway to determine a long-range solution for that facility. We see inherent synergies between OIH and Saltmarsh and think the notion of a combined facility is certainly worth study. Although targeted for different populations, the two facilities share some basic requirements: convenient parking, 100% covered entry, staffed check-in, accessibility, accessible toilet rooms, kitchen and dining facilities, and multiple Activity Rooms and outdoor spaces for recreation. The Architectural Options included here would probably have to be modified and enlarged to accommodate the additional program. While this is only one potential scenario for the Senior Center, we think it merits a closer look.



LAND BANK

Architectural Schemes with Phasing

Design Assumptions

Phase 1 must accommodate 35 residents minimum for 12-15 month expected Phase 2 construction duration (duration to be confirmed by a General Contractor at a later date); current patient census fluctuates between 35 and 45. This will be accomplished with resident rooms that serve as double occupancy rooms until Phase 2 is complete, at which time the Phase 1 rooms will be decanted and used as single occupancy (see Option 1 and 2 Plans).

Phase 1 will feature complete MEP systems and utility connections, as it must function as a self-contained, stand-alone building while Phase 2 is under construction. Mechanical system distribution will extend from Phase 1 to serve Phase 2.

To address resiliency concerns, all major mechanical equipment will be located above grade to improve likelihood of continued operation during severe weather events. To maintain long term flexibility in the floor plan, we are locating some equipment (make up air unit, cooling tower units, air handler/ heat pumps) in the attic; the balance of the equipment will be on the 1st Floor of Phase 1.

At grade exterior utilities— emergency generator, diesel tank to serve the generator, and propane tank— will be temporarily located alongside East Creek Road to serve Phase 1 while Phase 2 is under construction. When Phase 2 is complete, these items will be relocated to an elevated Service Area on the east side of Phase 2, or on elevated platforms above potential flooding.

The electrical transformer that steps down power from a National Grid pole will be located alongside East Creek Road permanently. The transformer that serves the Landmark House will be relocated, also close to East Creek Road, to allow for parking lot reconfiguration.

Option 1

Proposed Site Operations and Conditions

Landmark House

Under proposed conditions, primary access to the Landmark House will be maintained via the semi-circular drive access connecting Orange Street to the existing Landmark House. The Landmark House will be maintained as is. Parking along the northern portion of the Landmark House will be modified to allow for additional parking and to remove turning radii concerns for emergency vehicles. Electrical transformer serving Landmark House will be relocated closer to East Creek Road. Minor exterior amenities are proposed as part of this parking lot layout.

The Landmark House will maintain its location and access under proposed conditions. Access to this building will remain largely unchanged, with fire truck access to the southern and western sides of the building via the semi-circular access drive connecting to Orange Street. The northern and eastern sides of the building will be provided via the looped access drive with connection to the proposed parking areas to the north. The proposed layout will limit turning radii concerns in the existing conditions while offering additional off-street parking. Current water views from the rear of Landmark House will be circumscribed by the new OIH.



VIEW TO NORTHWEST WITH TOWN BEYOND



VIEW TO NORTHEAST WITH HARBOR BEYOND

OIH

The existing Our Island Home building will be replaced with a new H-shaped structure. This layout will maintain existing views of the lot and provide more access for vehicles and emergency trucks. Loading and receiving will be maintained along the eastern side of the lot, which allows for better screening of maintenance areas from abutting lots. A large ADA-compliant terrace is proposed along the north side of the building to capitalize on views to the north. A circular drive with porte-cochere will allow for ease of pickup and dropoff from the front entrance.

The proposed emergency access to the new Our Island Home layout allows for access to all sides of the building. A Fire Department ladder truck could pull up right to the northeastern building facade via East Creek Road; the southern side of the building could be accessed via the proposed access drive from East Creek Road by turning through a proposed access loop that allows dropoff at the front entrance; the same access drive from East Creek Road could be utilized to access the southeastern side of the building via the parking and loading area to the southeast; and access to the northern portion of the building and associated Terrace areas could be utilized via a mountable curb from the southeastern loading area. The fire truck could drive over the curb and parking in the rear of the building for emergency purposes utilizing a geotechnical subsurface stabilizing grid that would allow for H2O loading. This approach limits impervious surfaces and allows infiltration while limiting site runoff.

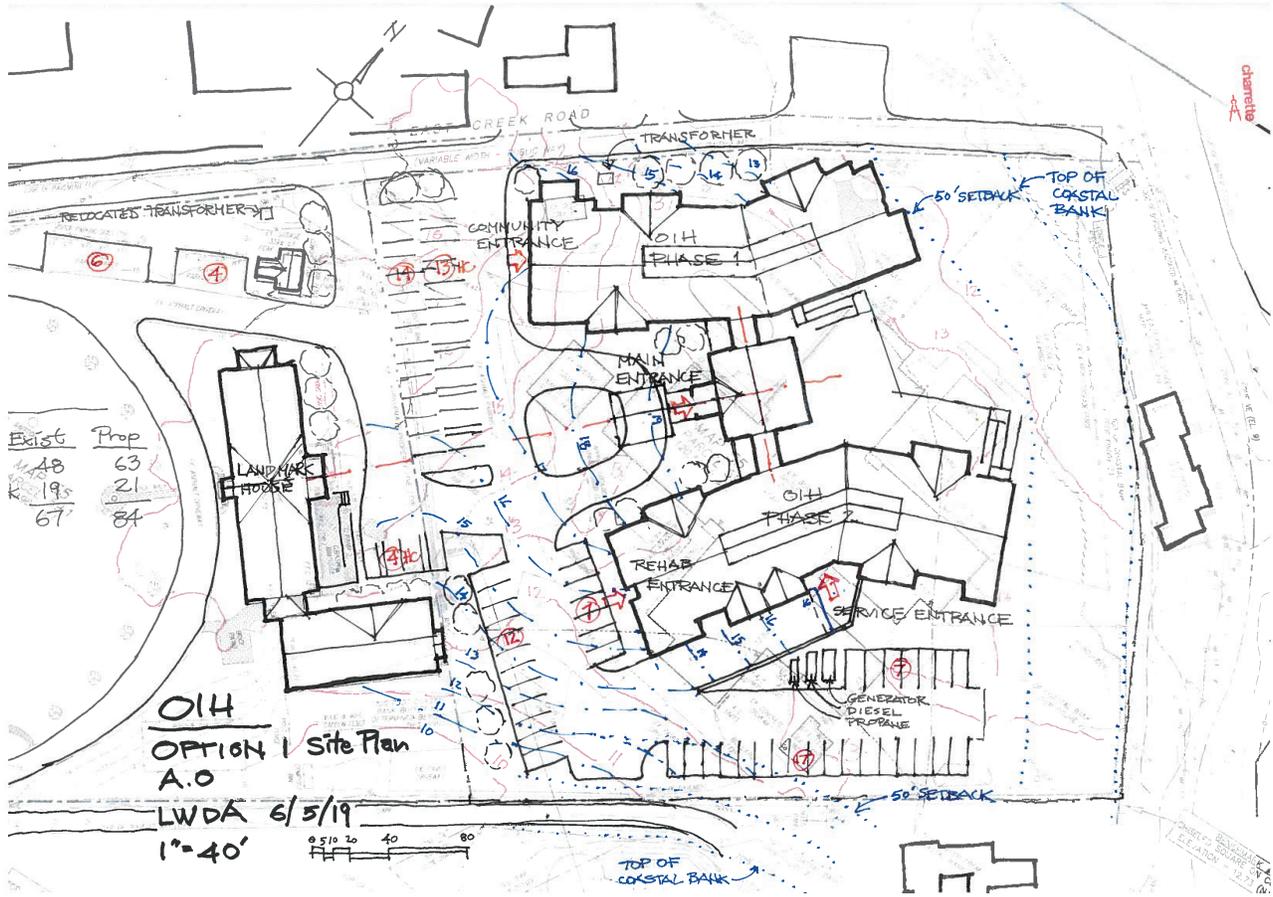
Site Design

The H-shaped Option 1 is situated to create a campus comprised of OIH and Landmark House. The OIH entrance will face the de facto Landmark entrance at the rear of the building (although Landmark's formal entrance faces Orange Street, virtually all residents and visitors use the accessible entrance on the rear facing the parking lot). The wings of the new facility will splay slightly to create a generous forecourt that establishes an architectural dialog with Landmark; the central gabled porte cochere of OIH will align with the center projecting gable of Landmark's rear elevation. The height and profile of the new OIH will be similar to the height and profile of Landmark House, to reinforce this sense of courtyard. Note also that the new OIH entry court will be visible from Orange Street at the intersection with East Creek Road for easy wayfinding.

The approach to OIH will gently ramp up at the forecourt to lift the building above anticipated rising sea levels. This can be done with minor regrading of the parking lot, while maintaining full accessibility for disabled users. This raised 1st Floor will also enhance ocean views from the northeast and northwest sides of the new building.

The parking lot will be reconfigured with a more efficient layout that will allow for some flexibility of use between OIH and Landmark, if desired; designated spaces can be signed as required. There are two entries to the lot, for redundancy and ease of use. The overall parking count will be raised from the current 67 (OIH 48 + Landmark 19) to approximately 84 (OIH 64 + Landmark 21), including 9 accessible spaces and 6 van size accessible spaces. The spaces are situated to serve a potential outpatient PT/OT Clinic and/or Community Program on the 1st Floor at the front of OIH, and Landmark House as well. The generous drop-off circle for the OIH Main Entrance will accommodate up to six cars for temporary loading and unloading.

The footprint has been carefully positioned to respect the 50' setback for structures from the coastal bank required by the Conservation Commission's Wetland Protection Regulations. The 25' natural undisturbed zone along the coastal bank on the north and east sides will remain undisturbed.



OPTION 1 SITE PLAN



OPTION 2 SITE PLAN

Building

The wings of the building have been slightly splayed to take advantage of the expansive views to the Northwest (Town), North (Harbor Outlet) and to the Northeast (Harbor), while avoiding direct alignment with the existing Starr House down at water's edge that is slated to receive an upper story soon, potentially blocking a view of the water from the 1st Floor of OIH.

The Lobby and Terrace will enjoy a spectacular harbor view. The Dining Room, located in the East Wing, will feature views of both the Town and Harbor. Most of the upper floor resident rooms will enjoy the same great views from a higher vantage point and will not be interrupted by the Starr House.

The exterior aesthetic will follow a traditional New England/ Nantucket vernacular with pitched fiberglass shingle roof, gable articulation, cedar shingle walls, punched window openings, generous porches and decks, and a stone (veneer) foundation. Large areas of glazing in the connecting link will be employed to take advantage of water views.

Extra care will be taken to ensure a tight exterior shell, carefully detailed to minimize wind infiltration on the exposed site. We envision a multi-layered exterior wall:

- 5/8" drywall
- 6" metal studs with fiberglass batt insulation
- densglas sheathing
- air barrier
- Hunter panel (4" polyisocyanurate insulation on 3/4" fire resistant plywood)
- weather barrier
- 3/4" vented airspace created by fire-retardant battens or galvanized hat channels
- Cedar shingles

This assembly will save energy and increase occupant comfort.

Option 2

Option 2 starts with the same Phase 1 building as Option 1, but Phase 2 is rotated 90° to create a T-shaped building. This layout sacrifices some of the "courtyard" sense of enclosure shared with the Landmark House created by Option 1, by opening up the site to the southeast and creating a longer building. It reduces the opportunity for a dramatic 2 story Lobby space in the center.

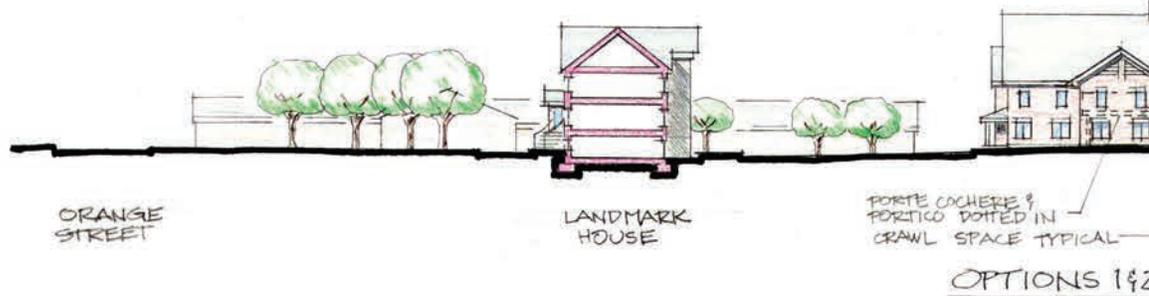
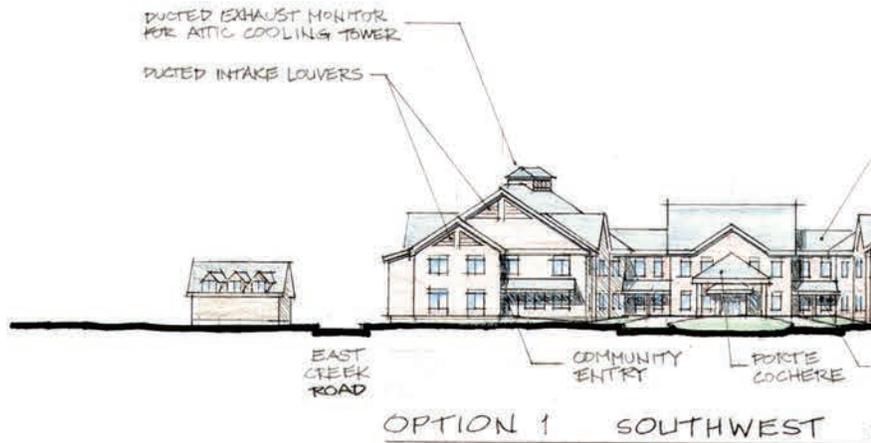
Option 2 has slightly longer distances from the central Nurse Station to the furthest resident rooms compared to Option 1.

Option 2 provides a more consolidated parking lot than Option 1, mostly between the Landmark House addition and the Service Entry for the new building, with the same total parking count of 84.

Option 2 gives up some water views for resident rooms that faace Landmark House: while Option 1 provides water views to 27 of 41 resident rooms, Option 2 provides water views to 23 of 41 resident rooms.

Both schemes provide a generous 1st floor Lobby, Terrace, Dining Room and Activity Rooms facing the water.

OUR ISLAND HOME

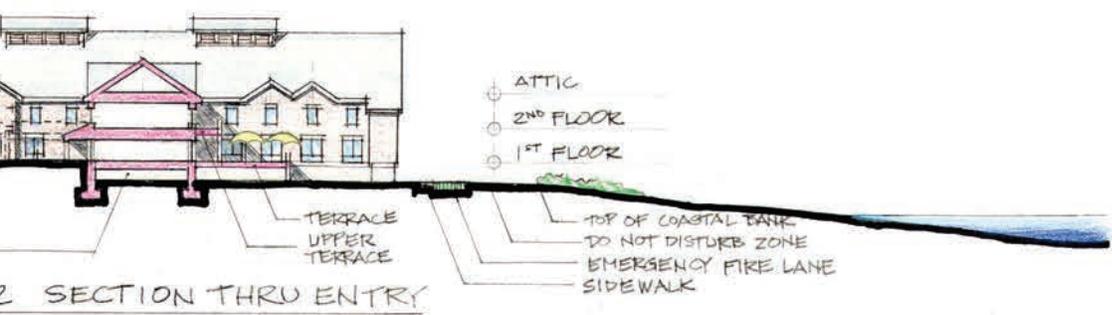
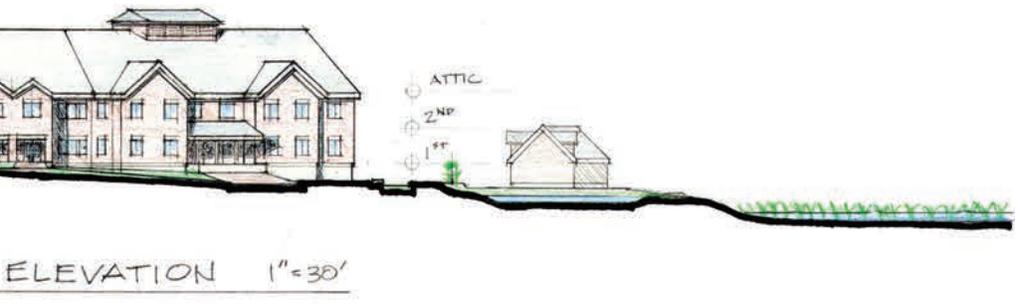
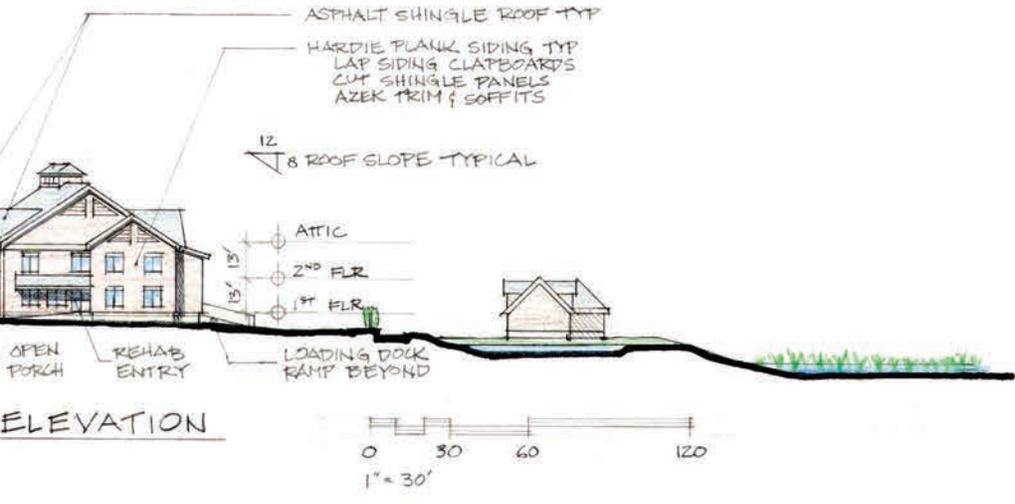


9 East Creek Road, Nantucket, MA 02554

Our Island Home

Building Elevation

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EXISTING





PHASE 2 OPTION 1



PHASE 2 OPTION 2



OPTION 1



OPTION 1



OPTION 2



OPTION 2



9 East Creek Road, Nantucket, MA 02554

SITE OPTION 1 - FIRST FLOOR PHASE 1

1.1



2 FLR 1 OPTION 1/2 TEMP
Scale: 1/16" = 1'-0"

PHASE 1 CONSTRUCTION WILL FIT BETWEEN EAST CREEK ROAD AND THE EXISTING BUILDING



9 East Creek Road, Nantucket, MA 02554

SITE OPTION 1 - SECOND FLOOR PHS 1

1.2



3 FLR 2 OPTION 1/2 PHS 1
Scale: 1/16" = 1'-0"

PHASE 1 CONSTRUCTION WILL FIT BETWEEN EAST CREEK ROAD AND THE EXISTING BUILDING



9 East Creek Road, Nantucket, MA 02554

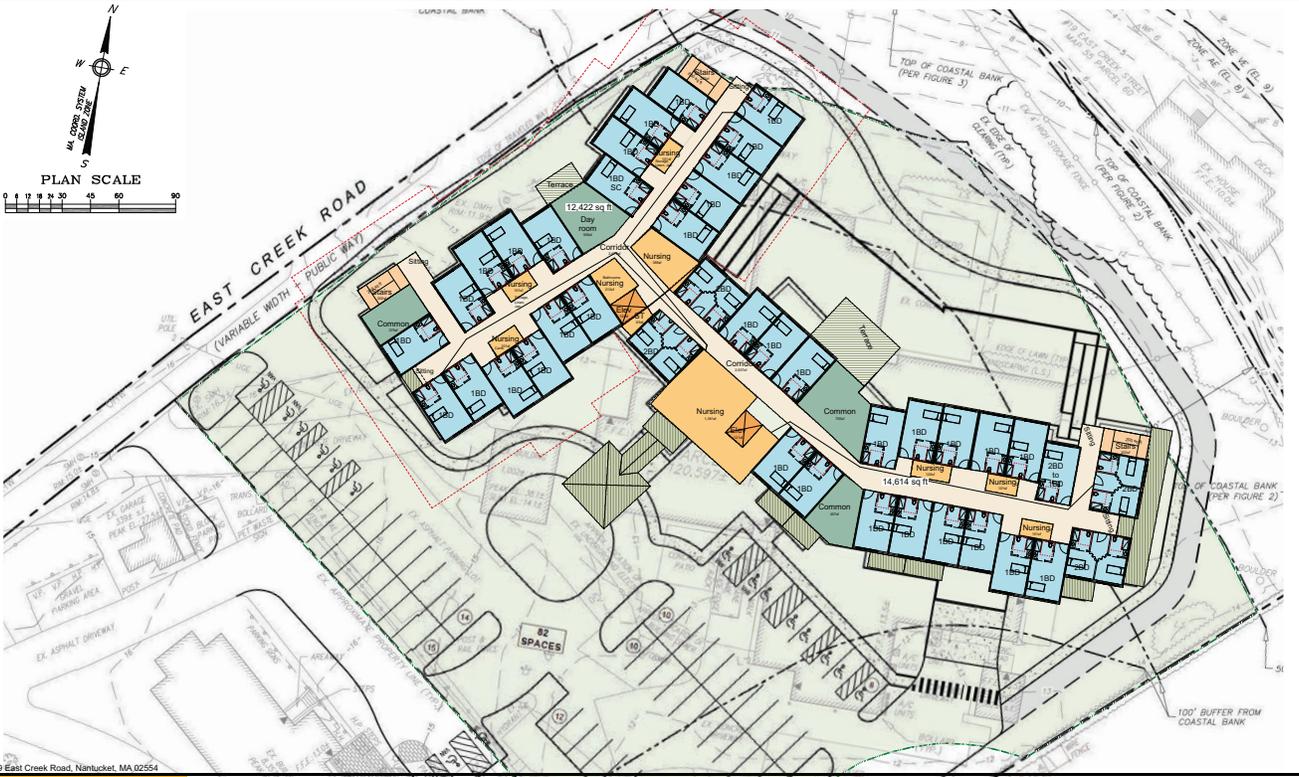
SITE OPTION 1 - SECOND FLOOR PHS 2

1.4



2 FLR 2 OPTION 1 - PHS 2
Scale: 1/16" = 1'-0"

PHASE 2 CONSTRUCTION WILL FOLLOW THE DEMOLITION OF THE EXISTING BUILDING



9 East Creek Road, Nantucket, MA 02554

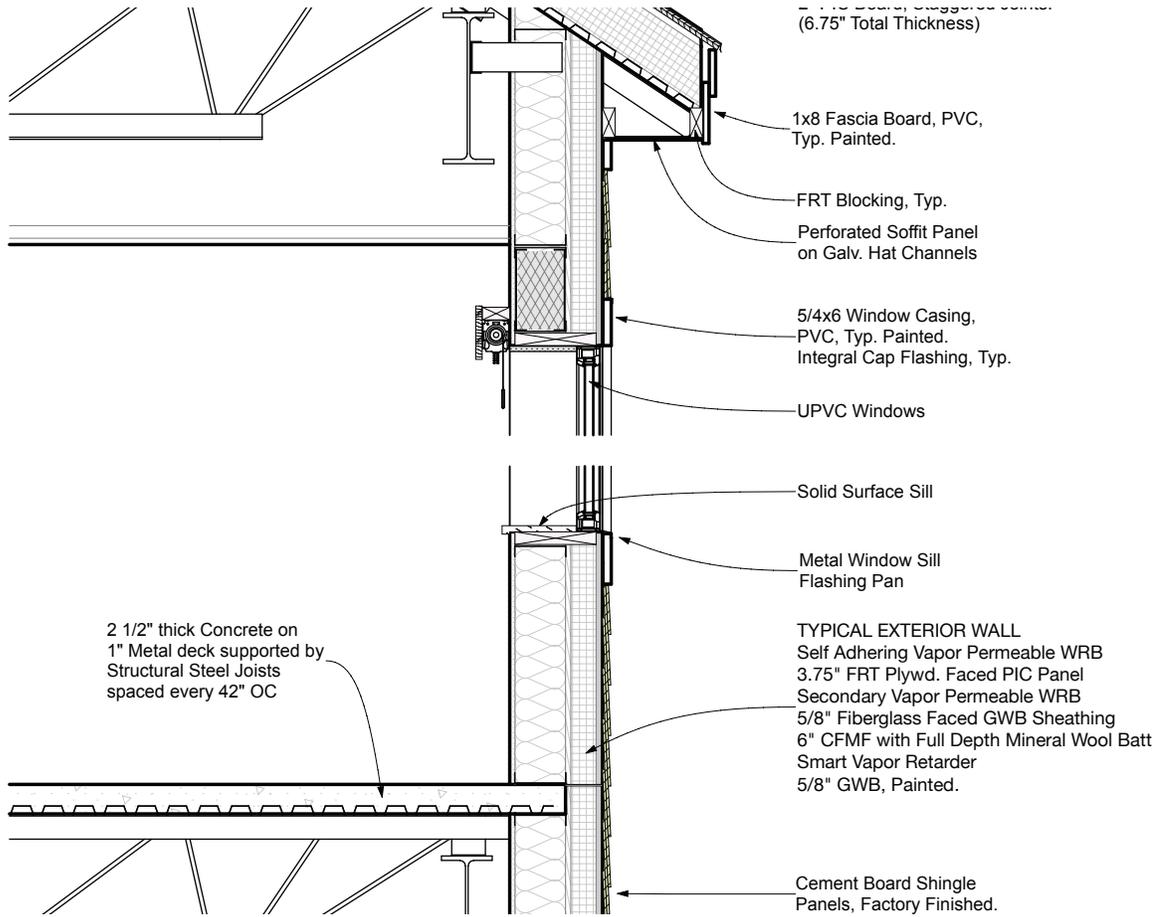
SITE OPTION 2 - SECOND FLOOR PHS 2

2.4

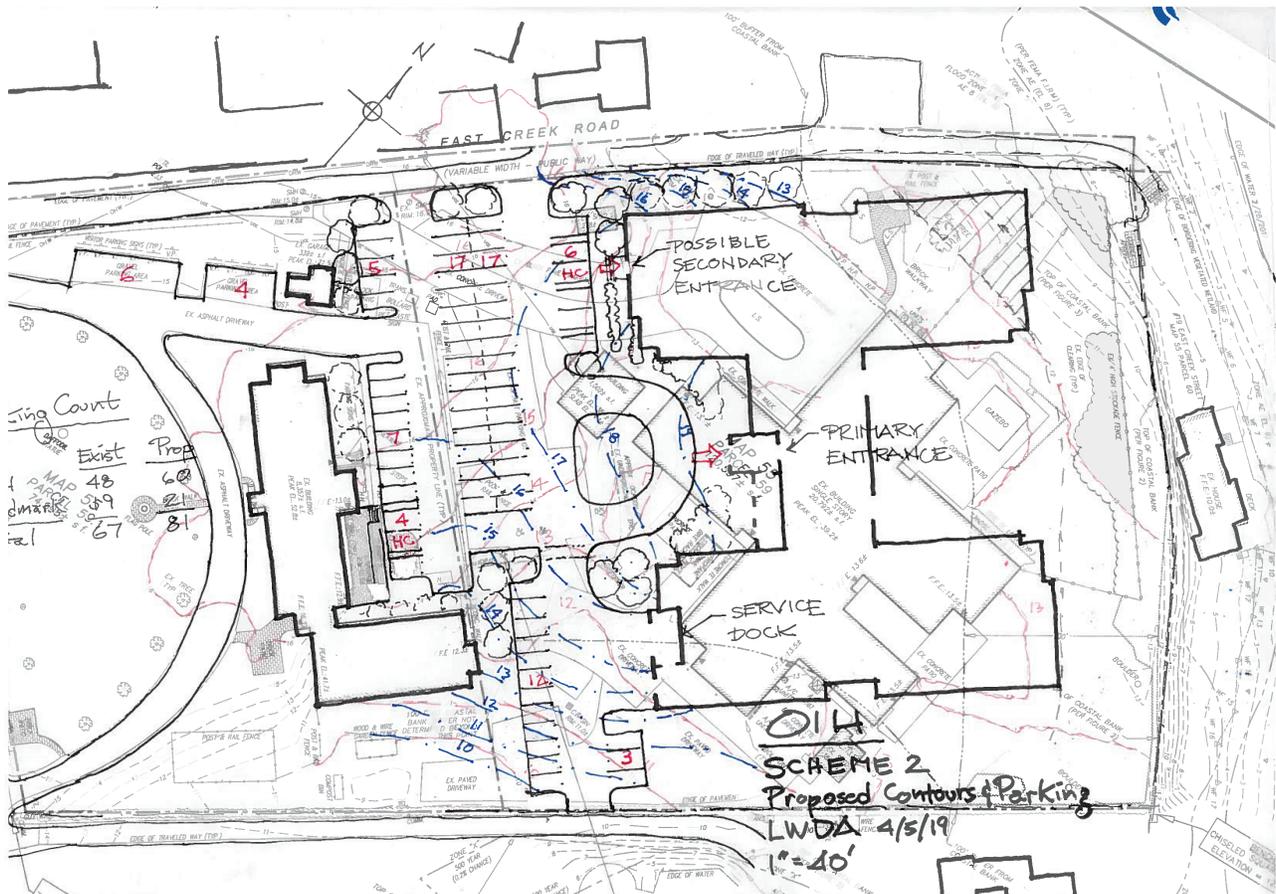


2 FLR 2 OPTION 2 PHS 2
Scale: 1/16" = 1'-0"

PHASE 2 CONSTRUCTION WILL FOLLOW THE DEMOLITION OF THE EXISTING BUILDING



WALL SECTION



Staffing Implications

The footprint of Options 1 and 2 are dictated by the spatial requirements of the bed floor on Level 2. While the plans are extremely efficient, the schemes are larger than the existing building, primarily due to the increase in room quantity, from 24 to 41. This means the overall new building square footage, including both floors, is more than twice the size of the existing building, and is much closer to current expectations of prospective residents and families.

OIH Administration and Staff have raised concerns about the new building's impact on Staffing. All beds are located on one floor to simplify staffing and minimize staffing increases, but due to the increase in room quantity and resulting distances to the furthest room, the new plan may require some different approaches.

Option 1 would start with a temporary Nurse Station in Phase 1, which would then move to the central block to become a permanent, centrally located Nurse Station once completed in Phase 2. This central location is equidistant from the furthest wings, approximately 150' (compared to about 90' to the most distant room of the West Wing in the current OIH building). Each wing will have a Nurse Substation and appropriate decentralized support spaces.

Discarded Options

LWDA and Town officials considered several other options that did not prove workable and were not further developed:

- **Option 3:** a precursor of Option 1, an H-shaped building sited closer to the coastal bank that intrudes into the 50' coastal bank setback. The advantage of this scheme was a wider parking lot between Landmark House and OIH that placed more of the parking near the Main Entrance.

This approach was reviewed informally with Jeff Carlson of the Nantucket Conservation Commission, and he explained that a waiver might be granted for the zone between 25' to 50' from the top of coastal bank if there was no reasonable alternative-- but Options 1 and 2, which are set back to the 50' line, are reasonable alternatives, so it would be a difficult argument to make to the Commission. The argument that Option 3 would provide more convenient parking to the Main Entrance would probably not be convincing, although if the issue is important to OIH, it can be pursued. Under no circumstances would a building be allowed within the 25' buffer zone from the top of coastal bank.

- **Option 4:** All resident rooms on the 1st floor, similar to the existing building.

The stumbling blocks to this scheme were:

- Temporary support services such as the Kitchen had to go on the 2nd floor
- There was no good location for a Service Entry and service support that didn't interfere with the nursing unit plan, except in the center block. This would require a service road to the rear (ocean side) of the building and effectively block all water views from the Lobby and turn the rear courtyard into a service space-- exactly the wrong idea.
- There was no opportunity for separate entries for Community Space, Rehab Clinic, AL units, etc.



Conceptual SF

Option 1	OIH			Community spaces			Building Total
	Phase 1 NW wing	Phase 2 Center & SE wing	OIH Subtotal	Phase 1 NW wing	Phase 2 Center & SE wing	Comm Subtotal	
1 st floor	6,677	14,360	21,037	5,692 (Comm)	2,137 (Rehab)	7,829	28,866
2 nd floor	12,443	15,850	28,293				28,293
Sub-Totals	19,120	30,210	49,330	5,692	2,137	7,829	57,159

Option 2	OIH			Community spaces			Building Total
	Phase 1 NW wing	Phase 2 Center & SE wing	OIH Subtotal	Phase 1 NW wing	Phase 2 Center & SE wing	Comm Subtotal	
1 st floor	6,564	13,605	20,169	5,846 (Comm)	2,187 (Rehab)	8,033	28,202
2 nd floor	12,422	14,614	27,036				27,036
Sub-Totals	18,986	28,219	47,205	5,846	2,187	8,033	55,238

Square footage numbers above are preliminary; there are still several variables that can impact the overall SF. Subsequent Schematic Design phase will provide a more accurate picture for common and service spaces.

The overall 1st floor area is based on the 2nd floor resident room building block footprint. DPH regulations require Phase 1 rooms to be code compliant for double occupancy while Phase 2 is under construction; Phase 2 can have slightly smaller single rooms or a slightly different mix (see A.4 Phase 2 room mix).

Note that the 8,000 sf Community or Opportunity Space is a byproduct of the size of the 2nd floor program. The 2nd floor establishes the size of the building footprint and leaves the 1st floor program building shell with approximately 8,000 sf of extra space available to fill in underneath.

Note also that the above SF numbers don't include Attic space for Mechanical Equipment, elevator pits, or outdoor spaces like the Terrace, Upper Terrace, Porte-cochere drop-off, or porches.

For both Options 1 and 2, there will be a small Phase 3 renovation to the Phase 1 building after Phase 2 is complete. This will encompass the Temporary Lobby, Administrative, Kitchen, Dining and Rehab spaces on the 1st Floor of Phase 1, approximately 8,000 sf. There might also be a small renovation to the Temporary Nurse Station on the 2nd Floor of Phase 1, approximately 400 sf.

Resident capacity (Options 1 and 2)

DPH Licensed beds	Phase 1 Wing	Phase 2 Wing	Total
Temp DBL rooms	20	0	
SNGL Room	1	0	
Total residents	41	0	41
Final DBL rooms	0	4	
Final SNGL rooms	21	16	
Total Residents	21	24	45

As noted above, potentially a few AL units could be added in the 1st floor community/ swing space.



Rough Order of Magnitude Construction Cost Estimate (by C2E)

See Construction Cost Estimate in Appendix.

C2E made rough order of magnitude construction cost estimates for Options 1 and 2 based on the following assumptions:

- The project would be built with a Construction Manager at Risk method of project delivery.
- The project would be built with conventional “stick-built” construction methods.
- a 30% “Island Factor” is added, based on experience C2E has had on three recent Nantucket projects, including renovations to the Police Station, the Harbor Terminal building, and a private Tennis Club.
- a 15% “Design Contingency” is added, which we believe is the right factor for a Conceptual Estimate to cover scope and detail that is undefined by the conceptual level of drawings and specifications. In our experience, we have found this to be a useful number to allow for items and systems that will be needed as the project proceeds into Schematic Design and Design Development with a greater level of specificity. The Design Contingency percentage will be reduced at each successive phase.

Bear in mind that the overall construction cost numbers at this point are largely a function of square footage, so the slightly larger Option 1 at 57,159 sf comes in at \$42.6M, vs. Option 2 at 55,238 sf comes in at \$41.5M.

Also bear in mind that these numbers are estimates for construction only and do not include the “soft costs” associated with a building project: architectural/ engineering design fees; financing, legal and accounting costs; moving/relocation costs; FF&E (furniture and furnishings); unidentified vendor-provided low voltage systems; and rolling equipment that may be required. Altogether, these items can add another 25-30 % to construction costs.

Modular Construction Option

LWDA is exploring the feasibility of modular, pre-fabricated construction as a way to raise construction quality, save money and shorten the proposed construction schedule (see p. 60). We think this is a worthwhile consideration on the Island, where skilled labor can be scarce and usually commutes from the mainland, where materials are imported, and the construction season is limited.

On our July 25 Project Review visit, we toured a new wood-framed modular development of attached 2-story houses now under construction to the east of the new Public Safety building. Modules up to 15’ wide x 1 story high x up to 58’ long arrive by barge at the harborside, are craned onto a flat bed truck, delivered to site, and positioned by crane onto a foundation that has been poured in advance. The modules include an insulated exterior wall with windows and sheathing, interior partitions, fixtures and finishes. After positioning and stacking, utility connections are made, and the overall building is shingled and trimmed.

Many aspects of the OIH project would seem appropriate for modular construction, particularly the repetitive resident rooms, which we have based on a 15’ module. Unlike the modular housing above, OIH will require non-combustible 1B construction (i.e., fire-rated steel components). We

have been reviewing the OIH project with two modular firms from Pennsylvania and continue to research the topic.

The modular fabricator would act as a fabricator and supplier, not as a General Contractor (GC) or Construction Manager (CM), so any incorporation of modular components would require the selection of a GC or CM well-versed in modular construction. Also, the architect would have to tailor Construction Documents to follow a prefabricated approach, so the construction team— GC or CM, and modular fabricator-- would have to be brought in early in the design process.

Modular components would potentially include framing, exterior wall and weather barrier, interior walls and finishes, flooring and ceiling, electrical wiring, outlets and lighting, sprinkler pipes and portions of the mechanical system. NOT included would be sitework and utilities, foundations, exterior siding and trim, masonry, mechanical duct work, elevators, and complex geometry for sloping roofs (although basic shapes and framing could be fabricated).

Based on our preliminary discussions with modular construction companies, there exists a potential savings of 20% for the fabricated items. But the real benefits would be higher construction quality and shorter construction duration. For the OIH project, pre-fab construction could shorten each construction phase by several months, which would save financing costs and allow residents to go from double occupancy rooms in Phase 1 to private rooms in Phase 2 more quickly.

Note that this modular approach is NOT reflected in the C2E cost estimates.



MODULAR HOUSING NOW UNDER CONSTRUCTION NEAR OIH





Next Steps: Proposed Building Project Schedule

Next Steps beyond Feasibility Study

a.	OIH and Town decide to pursue project:		VOTE
b.	DoN to be filed with State	3 mo	
c.	DoN approval	6 mo	
d.	Fundraising		\$ ongoing \$
e.	Schematic Design	2 mo	
f.	Design Development	3 mo	
g.	DPH Part 1 Review and approval		4 mo overlap w/
h.	Completion of design	6 mo	
i.	DPH Part 2 Review and approval		2 mo overlap w/
j.	Bids	2 mo	
k.	Construction: 3 phases	<u>30 mo</u>	stick-built construction
Total after Town Vote to Approve Project		52 months	+/- (approximate)

