

Hyannis Harbor Municipal Vulnerability Preparedness Resilience Plan

Zoning and Harbor Use Recommendations

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1.0 OVERVIEW AND BACKGROUND

For the Town of Barnstable (the “Town”) to realize its vision for the Hyannis Harbor (the “Harbor”) area, the community needs to focus on promoting the various desired harbor and waterfront uses, commercial and recreation activities, and development patterns for both the land and water, influenced by a clear understanding of current and future flood risk within the district. The Hyannis Harbor Municipal Vulnerability Preparedness (“MVP”) Resilience Plan has been tasked with identifying flood risk vulnerabilities and other constraints, exploring opportunities, and providing recommendations for land use improvements, climate resiliency, economic development strategies, and public space enhancements for the approximately 57-acre inner Hyannis Harbor area (the “Project Site”) to help shape this vision. Across its 54 parcels and the adjacent watershed, the Project Site contains a variety of uses, including both public and private marinas, commercial fishing operations, ferry terminals, public parks, hotels, restaurants, surface parking lots, and other businesses. These elements need to have symbiotic relationships for the Project Site to be as successful as possible in the eyes of the public, residents, property owners, businesses, tourists, and Town officials. The recommendations in this memorandum explore actions and regulations for the built environment and ideas for a cohesive strategy for activating the Harbor area, while also ensuring the Harbor and associated development areas are more resilient to the threats of climate change. Please note the strategies and initiatives highlighted in this memorandum represent a menu of options which can be used in their totality for the most effective approach to make future changes, or as piecemeal endeavors to be implemented over time.

As is the case with all communities in the Commonwealth, the Town’s Zoning Ordinance promotes the health, safety, convenience, morals, and general welfare of the inhabitants of the Town, to protect and conserve the value of the property within the Town, to increase the amenities of the Town, and to secure safety from seasonal or periodic flooding, fire, congestion, or confusion, all in accord with the Massachusetts General Laws, Chapter 40A, as amended. The Project Site is no exception to this ordinance which regulates building heights and setbacks, size and width of lots, density of population, use of land and buildings, and a variety of other elements which shape the fabric of each of the Town’s seven villages. The Harbor and waterfront are also regulated by Chapter 91 of the Massachusetts General Laws, also known as the Massachusetts Public Waterfront Act, and the associated licenses issued under this Act.

Within the greater downtown of the Village of Hyannis, there are seven zoning districts known as the Downtown Hyannis Zoning Districts which cover the areas around North Street, Main Street, South Street, Barnstable Road, and Hyannis Harbor, each with their own separate regulations. All but one property within the Project Site is located in the Hyannis Harbor (“HH”) District, which is also contained within the Aquifer Protection Overlay District (“AP”). The HH District is intended to maintain an area near Hyannis Harbor for maritime activities and water-related uses, and is characterized by a mix of commercial, maritime industrial, and residential development, as well as the presence of commercial ferry services. This particular memorandum provides recommendations regarding amendments to the Zoning Ordinance, suggested improvements to the various uses within the Harbor, and impacts of Chapter 91 licenses as they relate to achieving a desired cohesive vision for the future of the Project Site.

2.0 ZONING ORDINANCE

Previous planning and community outreach efforts related to Hyannis Harbor have obtained feedback regarding the need to change zoning and other regulations to address uses in the Harbor area and vulnerabilities within hazard areas. Suggestions have included identifying new or different regulations for Land Subject to Coastal Storm Flowage (i.e. the floodplain), addressing current allowances for reconstruction of pre-1978 structures (stop the practice of grandfathering structures in hazard areas), creating incentives for the floodproofing of structures, updating the building code, and streamlining permitting to facilitate economic recovery after a storm event.

In examining the regulations within the Town’s Zoning Ordinance, it became clear a number of adjustments could be made which would benefit the overall development pattern of the Harbor area, construction of buildings, economic development, and climate resiliency, as well as other areas of land usage. When assessing how the proposed amendments would fit into the Zoning Ordinance, it was found to be difficult to have this new zoning language only as a



Harbor area initiative in a town with widespread flood risk. As such, the recommendation is the Town consider updating its Zoning Ordinance on a town-wide basis to encourage the consideration of sea level rise and flood risk projections into Design Flood Elevations (“DFEs”) for all zoning districts, and update the Floodplain District (an overlay district, Section 240-34) with text and maps that include updated flood risk projections.

The proposed amendments to the Zoning Ordinance are discussed below. It should be noted here that if Town officials and staff feel these changes would not be able to garner the support to make adjustments to the existing Floodplain or HH Zoning Districts, the Town should consider a new, Harbor area specific Coastal Flood Resilience Zoning Overlay District, paired with resilient Design Guidelines, in order to implement these adjustments.

2.1 Coastal Flood Resilience Zoning Overlay District

Each of the recommended Zoning Ordinance amendments discussed below could become part of the existing HH Zoning District, which covers the entire Project Site (with the exception of one property). However, the HH Zoning District also includes some properties which are outside of the Project Site. These properties outside of the Project Site but within the HH Zoning District should be taken into consideration because any changes to the district would impact these parcels as well, hence the push to look at any of these zoning amendments at a town-wide scale.

Keeping this consideration in mind, it may be prudent to contemplate amending the Floodplain District or implementing some type of Coastal Flood Resilience Zoning Overlay District which would include the recommended Zoning Ordinance amendments discussed below. Zoning overlay districts are zoning districts which are placed on top of the existing (or base) zoning district for an area. As such, the existing zoning district remains in place and the overlay district provides an alternative set of regulations by which property owners can use to develop or redevelop their properties. However, property owners must adhere to the base zoning district’s regulations or the overlay zoning district’s regulations, but they cannot combine different aspects of the two separate sets of regulations.

Zoning overlay districts can be advantageous because they allow existing properties to maintain their conforming aspects of the existing/base zoning district even when an overlay district is implemented on top of them. Additionally, zoning overlay districts are often established to achieve a specific purpose (such as enhanced flood resiliency, taller development in exchange for the creation of affordable dwelling units, etc.), but they typically do not allow dramatic wholesale changes to what development forms and uses are already permitted in the base zoning district. As such, for these reasons, zoning overlay districts are often times more likely to be accepted by Zoning Ordinance amendment authorities, whether that be a Town Council, City Council, or Town Meeting. Therefore, if some of the recommended Zoning Ordinance amendments listed in this memorandum seem too broad brush for the HH Zoning District or even the Project Site, they could be implemented via a new zoning overlay district which covers a smaller subset of the parcels in the Harbor area or amending the existing Floodplain District.

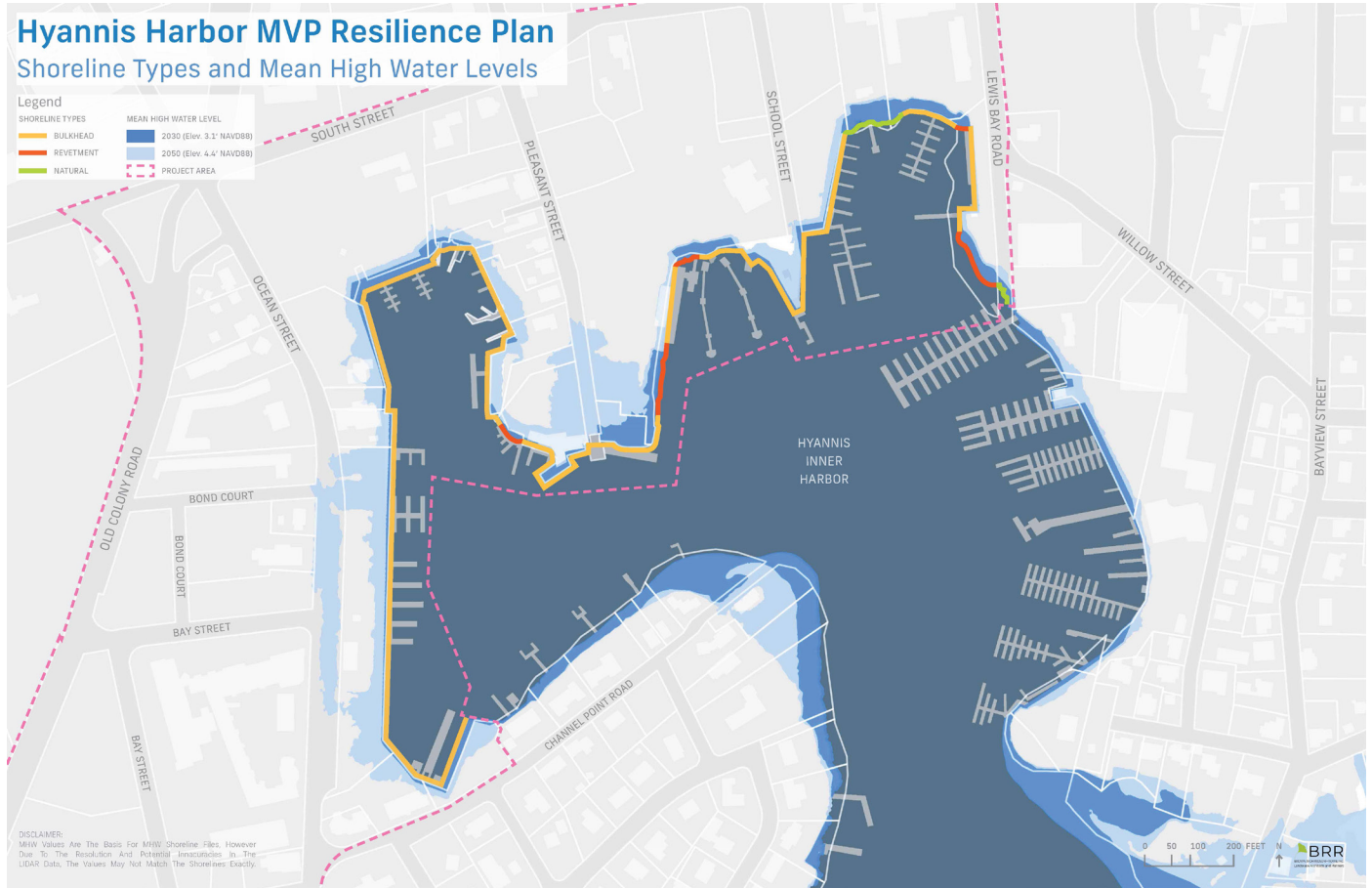
To strengthen a zoning overlay district and to provide guidance to property owners and developers, a set of Design Guidelines for the overlay district should most likely be developed. These Design Guidelines should advocate for an area which captures and enhances the existing harbor, historic, and maritime feel for the area which already exists. Additionally, these Design Guidelines should steer new development toward new or renovated structures which are smaller in nature, which is also indicative of a harbor or waterfront area in New England.

2.2 Flood Resilience and Zoning Ordinance

Woods Hole Group (“WHG”) conducted a preliminary flood vulnerability assessment for inner Hyannis Harbor which updated flood projections for 2030 and 2050 using the Massachusetts Coast Flood Risk Model (“MC-FRM”). These projections indicated the mean high water level for 2030 would be 3.1 feet NAVD88 and 4.4 feet NAVD88 in 2050. This means as soon as 2050, in the Harbor’s current state, flooding impacts would be extensive in Bismore Park, on Ocean Street, the southern edge of Aselton Park, 250 feet landward to the north on Pleasant Street, and along the southern edges of properties east of Pleasant Street to Lewis Bay Road. See Figure 1: Shoreline Types and Mean High Water Levels for details. Additionally, as soon as 2030 and then as soon as 2050, the annual probability of inundation with flooding of 30% or greater extends landward deep into the Project Site. See Figure 2: MC-FRM Annual Exceedance Probability - 2030 and Figure 3: MC-FRM Annual Exceedance Probability - 2050 for additional details.

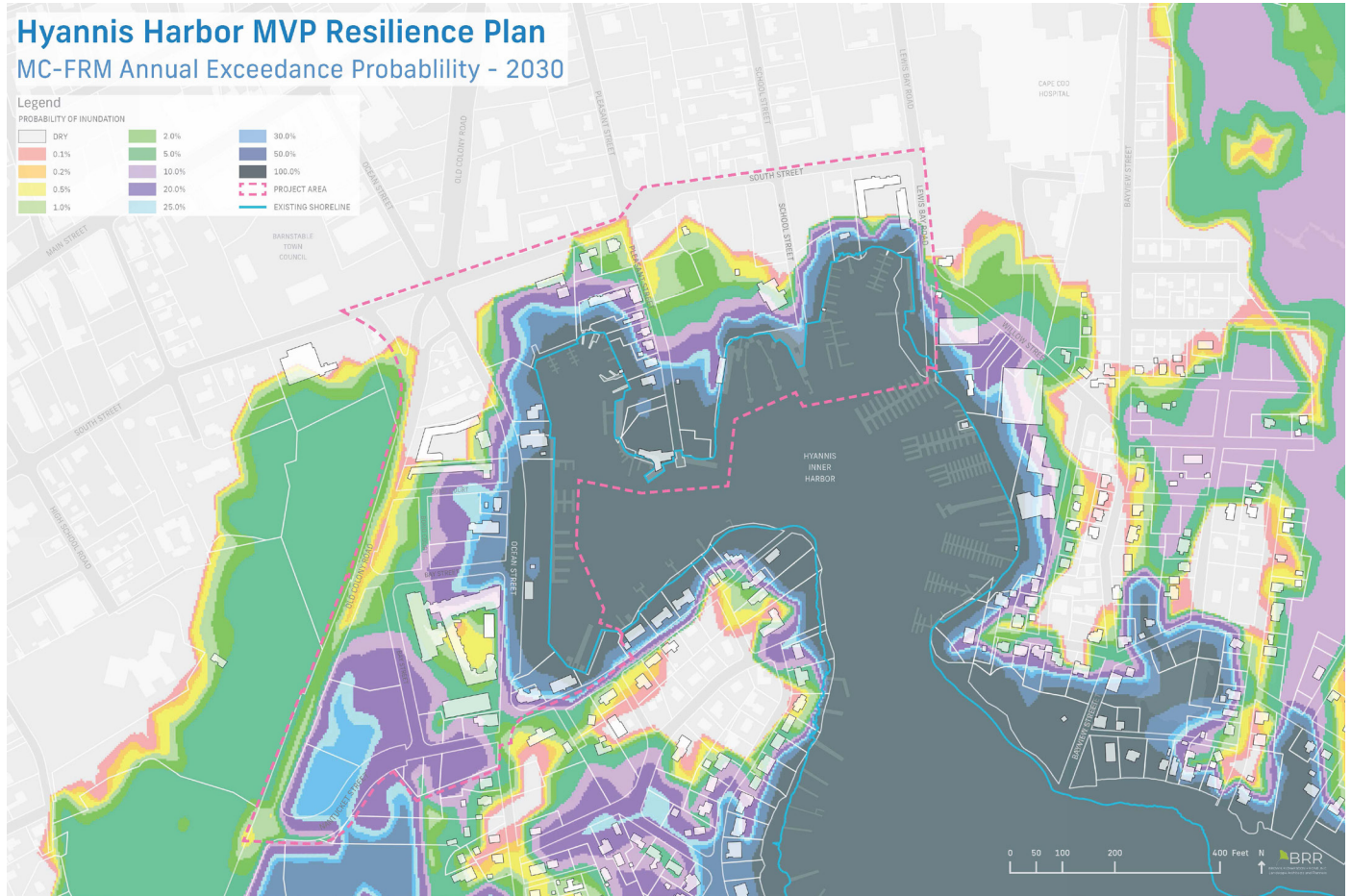


Figure 1: Shoreline Types and Mean High Water Levels



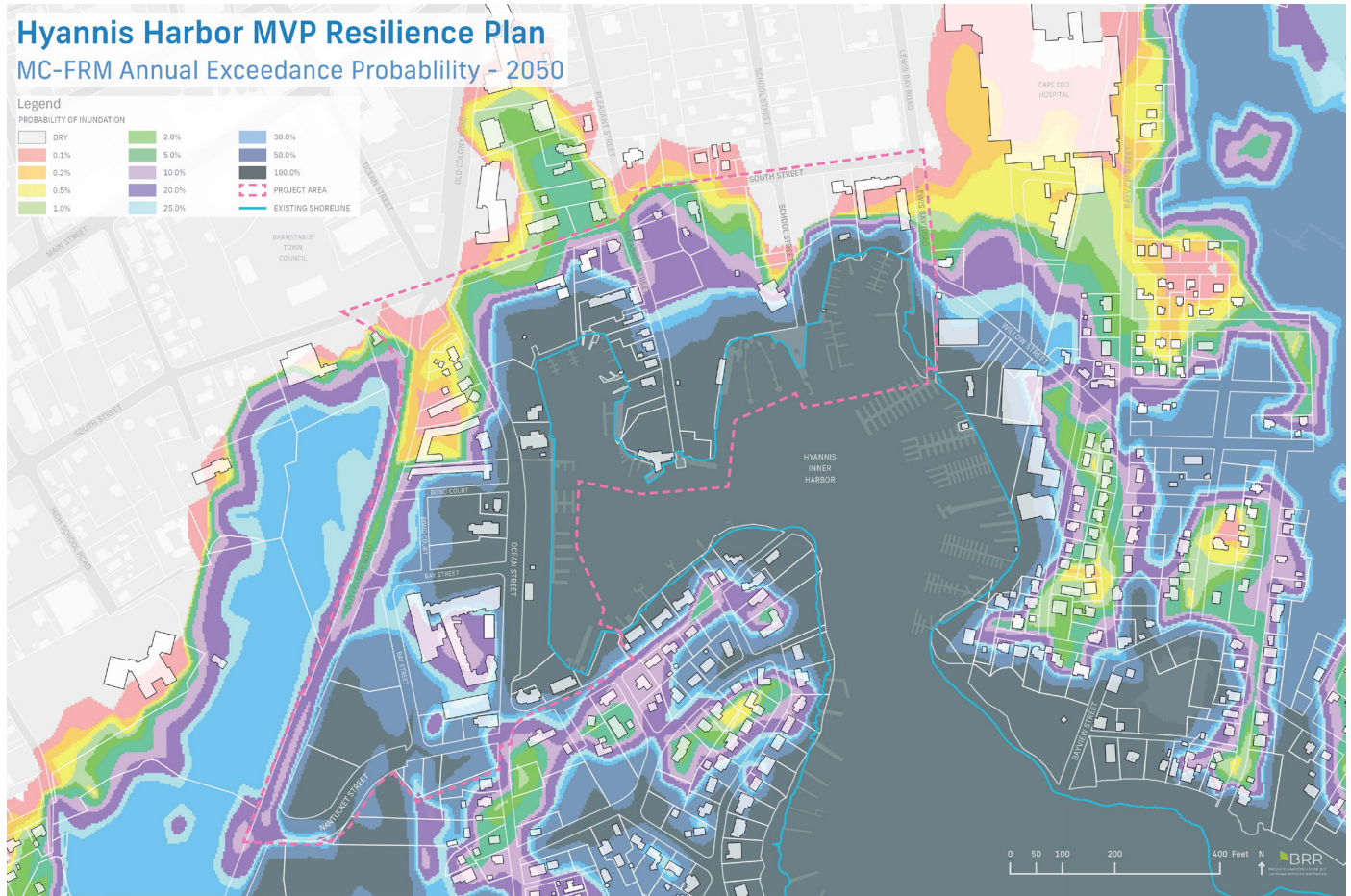
Source: Brown, Richardson + Rowe, 2024

Figure 2: MC-FRM Annual Exceedance Probability - 2030



Source: Brown, Richardson + Rowe, 2024

Figure 3: MC-FRM Annual Exceedance Probability - 2050



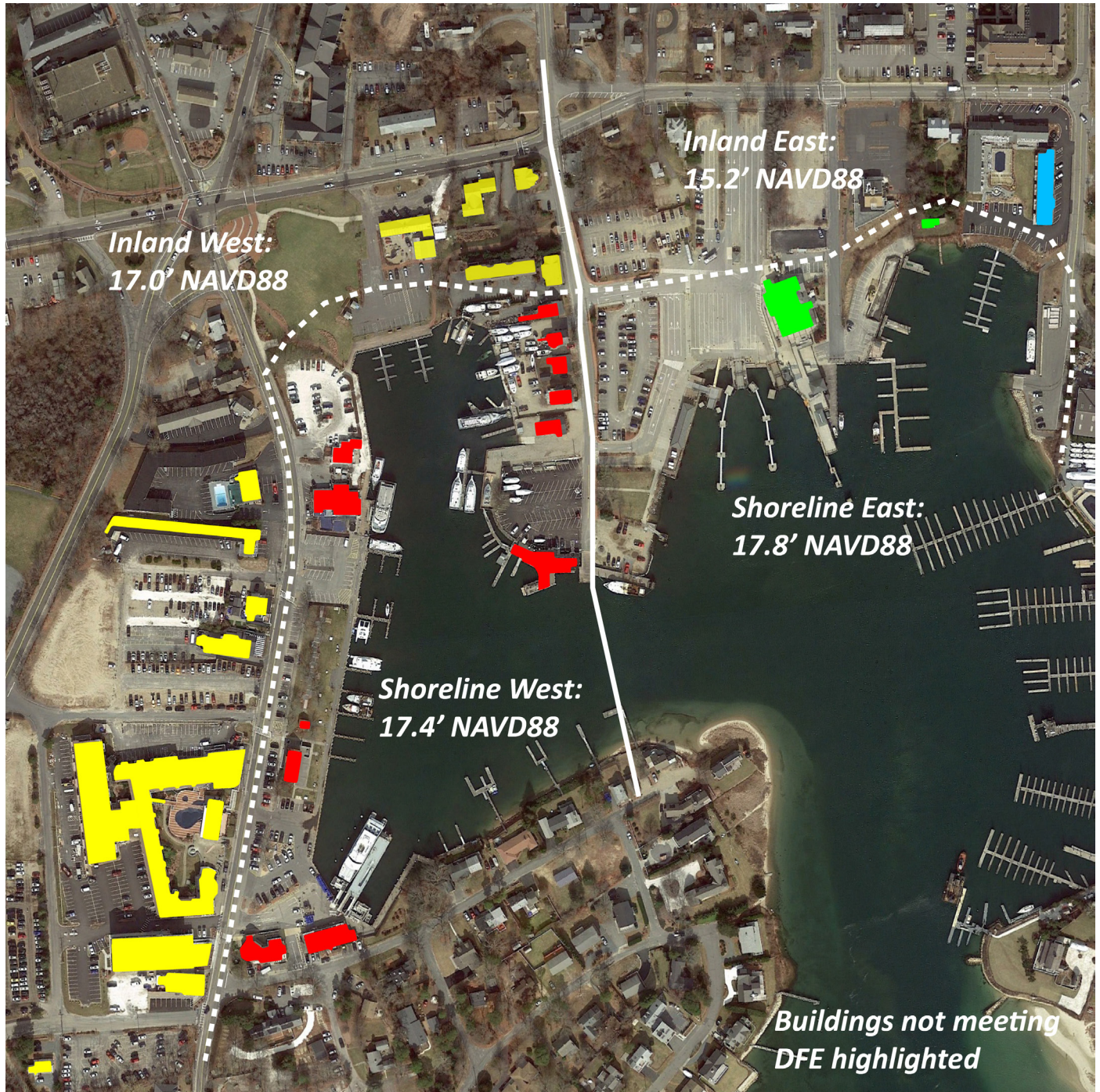
Source: Brown, Richardson + Rowe, 2024

Table 1 below displays the building DFEs within the Project Site as recommended by WHG based on significant wave height. They are divided into the east and west sides of Hyannis Harbor, and shoreline versus inland (see Figure 4: Recommended Building Design Flood Elevations Map, which displays the approximate areas). A single building DFE for the entire Project Site was considered, but conditions vary enough between the different areas that it made sense to divide them. These recommended DFEs should be worked into the Zoning Ordinance as amendments or as Design Guidelines associated with a Coastal Flood Resilience Zoning Overlay District which covers all or a portion of the Project Site, but perhaps this overlay occurs at a town-wide scale as well with amendments to the Floodplain District.

Table 1: Recommended Building Design Flood Elevations

Climate Horizon, AEP	West Inner Harbor		East Inner Harbor	
	Inland Areas (feet, NAVD88)	Shoreline (feet, NAVD88)	Inland Areas (feet, NAVD88)	Shoreline (feet, NAVD88)
2050, 1%	17.0	17.4	15.2	17.8

Figure 4: Recommended Building Design Flood Elevations Map



Source: Woods Hole Group, 2024

2.3 Permitted Use Categories

Some properties around Hyannis Harbor underutilize their location and proximity to the Harbor and waterfront. One of the primary drivers of land uses on particular parcels is the existing use table for the HH District. For example, the current use table allows for local services, such as office space, as of right, but does not encourage other uses that promote tourism, dining, water recreation, transportation, or other harbor related activities. Additionally, the

existing use table invites conflicts between roadway focused services and harbor focused services. As such, this limits accessibility by other land uses that may provide services which are more complimentary and supportive to the Harbor, fishing, or tourism. The recommended amendments below were not only influenced by the location of their particular uses, but also by the flood vulnerability of parcels within the Project Stie. The following items are specific uses for which the Town should look to adjust their permissible classification in the use table for the HH District:

Food and Beverage Services: Currently Permitted with Limitations

One of the significant draws to the Hyannis Harbor area is the waterfront and outdoor dining scene. Baxter’s Boathouse, Spanky’s Clam Shack, Black Cat Tavern, and others are some of the main drivers bringing members of the public to the Harbor area. Placing limitations on this particular use category seems unnecessary for the HH District. Other factors such as health code requirements, wastewater system capacity, parking, parcel size, and even dining saturation in the area will act as guardrails to these establishments. A Permitted By Right status for food and beverage services that support the Main Street Business District is recommended.

Additionally, specifically related to this use category, Section 240-24.1.10.D.1(b) of the Zoning Ordinance indicates the occupation of a single indoor commercial space greater than 5,000 square feet by any Food and Beverage Service or Retail Sales use requires a Special Permit. It is recommended the Town act to remove this provision of the Zoning Ordinance for Food and Beverage Service establishments. The fragmented property ownership and parcel shapes would make it unlikely a large number of businesses would greatly exceed this 5,000 square footage threshold. Additionally, removing it might entice existing or new businesses to explore creative ways to implement or expand their establishments. This would provide these Food and Beverage Service businesses with the flexibility to avoid the need to cut corners on the desired experiences within their spaces (such as layouts, corridors, bathroom sizes, kitchen space, etc.) simply to attempt to avoid a Special Permit permitting process requirement.

Figure 5: Outside Dining at Spanky’s Clam Shack



Source: Tetra Tech, 2024

Brewery/Distillery: Currently Not Permitted

At first glance, the use status for Breweries/Distilleries may appear to make sense. Large scale versions of these operations could potentially gobble up valuable real estate or restrict waterfront views. However, at a smaller scale, this use category could be extremely beneficial to the Hyannis Harbor area. Smaller Breweries/Distilleries have become extremely popular as destinations for outings or gatherings, and in particular micro versions of these establishments. Additionally, it should also be noted that when classifying uses, zoning enforcement officials look at the entire operation when making a determination regarding their classification. Often times, Breweries/Distilleries operate much more along the lines of Food and Beverage Service uses, but simply because they conduct brewing or distilling activities on the premises, they are classified differently. However, in the end, especially in harbor, waterfront, or downtown areas, this type of use category often embraces its surroundings and takes advantage of outdoor entertainment and the food/beverage consumption atmosphere. While concerns about this type of use category are noted, it seems short sighted to simply prohibit them entirely from the Hyannis Harbor area. The Town could consider installing a temporary tent or movable structure to serve as an all-season beer garden or other event or program space in the area near Gateway Marina, to widen the seasonality of the Harbor public spaces. A Permitted With Limitations status for this use category is recommended.

Figure 6: Second Story of Sam Adams Tap Room, Faneuil Hall, Boston, MA



Source: The Boston Calendar, 2024

Office: Currently Permitted By Right

Allowing this use category by right in an area which should be geared towards tourism, dining, transportation, water recreation, or other harbor related activities seems counter intuitive. Office uses typically have hours which operate almost exactly at opposite times of leisure activities. When they are open and operational, Office uses generate very little street traffic. When closed, they create deserts of activity along the streetscape. Since the Project Site is limited in size due to the finite amount of waterfront, every piece of land in the Hyannis Harbor area is extremely valuable to any type of cohesive vision for the area. Based upon the recent and historic feedback from past planning initiatives, this Office use category is not consistent with what the area is attempting to achieve. This is not to say office space is completely unnecessary in the Harbor area, but many of the businesses currently in the Project Site simply have this

use category as an accessory component of their operations. Office uses as stand alone operations are something completely different and do not fit into the desired activity fabric for the Harbor area. A Not Permitted or Special Permit status for this use category is recommended.

Health Care Clinic: Currently Permitted By Right

Similarly to the Office use category, Health Care Clinics are not geared towards the tourism, dining, water recreation, transportation, or harbor related activities the HH District strives to promote. Health Care Clinics operate mostly during the opposite hours of the harbor activities and serve a very different contingent of the population (those in need of medical care). However, more importantly, immediately adjacent to the Project Site is the Downtown Hospital (“DH”) District which allows Health Care Clinics as of right and is home to Cape Cod Hospital, the largest hospital on the Cape. Health Care Clinic uses should be channeled to the DH District to not further constrain the unique and valuable real estate in the Project Site and Harbor area. A Not Permitted status for this use category is recommended.

Research and Development: Currently Permitted By Right

This is another use category in the HH District currently Permitted By Right within the Project Site but does not seem to advance the general land use fabric of the Harbor area which has developed over the years. The Research and Development use category spans a number of disciplines (such as medical, sciences, technology, education, etc.), but none of these closely align with recreation, transportation, leisure, or harbor related activities. As such, it is somewhat odd this use category is being promoted in the HH District. A Not Permitted status for this use category is recommended. The one exception that might be considered is an exception for maritime or oceanic research and development.

Retail Sales: Currently Permitted With Limitations

The Retail Sales use category is a key component to any tourism, leisure, recreation, and entertainment area. This use category could be extremely beneficial to the Hyannis Harbor area by bringing in additional foot traffic and enhancing the Harbor area as a destination. If allowed by right, parking, parcel size, and even saturation of the use category (numerous stores) in the area will act as guardrails to the over population of these establishments. Additionally, this use category generates a high volume of streetscape activity which is beneficial to all businesses in the Project Site and the general vibrancy of the Harbor area. A Permitted By Right status for this use category is recommended.

As was also noted earlier, specifically related to this use category, Section 240-24.1.10.D.1(b) of the Zoning Ordinance indicates the occupation of a single indoor commercial space greater than 5,000 square feet by any Food and Beverage Service or Retail Sales use requires a Special Permit. It is recommended the Town act to increase this square footage threshold which requires a Special Permit for Retail Sales establishments or remove this provision entirely from the Zoning Ordinance. The fragmented property ownership, parcel shapes, existing land use fabric, and general nature of the Harbor area would make it unlikely for businesses to desire to exceed this square footage threshold. However, removing it might entice existing or new businesses to explore creative ways to implement their establishments and interact with the general public who visit the Harbor area, as opposed to limiting their space just to avoid a Special Permit permitting process requirement.

Mixed-Use Development with Residences on Upper Stories: Currently Not Listed

In addition to the use categories discussed above, the Town should implement a use category which clearly allows a path to mixed-use development that involves residential units as accessory uses on upper stories above other permitted use categories in the HH District. Sprinkling in residential units amongst the variety of businesses which are already permitted in the Project Site would create more of an around the clock activity feeling to the Harbor area. This type of mixed-use development has created a vibrancy which has led to successful harbor areas, with Provincetown being just one local example. These residential units could provide housing for a variety of constituents ranging from seasonal occupants to employees of businesses in the area, and could be either rental or ownership in nature. If this use category is already permitted in the Zoning Ordinance in the eyes of the zoning enforcement official, this should be made explicitly clear in the use table for the HH District.

With the above stated, there are a number of existing dwelling units within walking distance of the Harbor area already and, even with dwelling units being on located on upper stories, their accessory components (access to the units, parking spaces, etc.) will still be subject to flood events. However, in certain locations within the Project Site, these

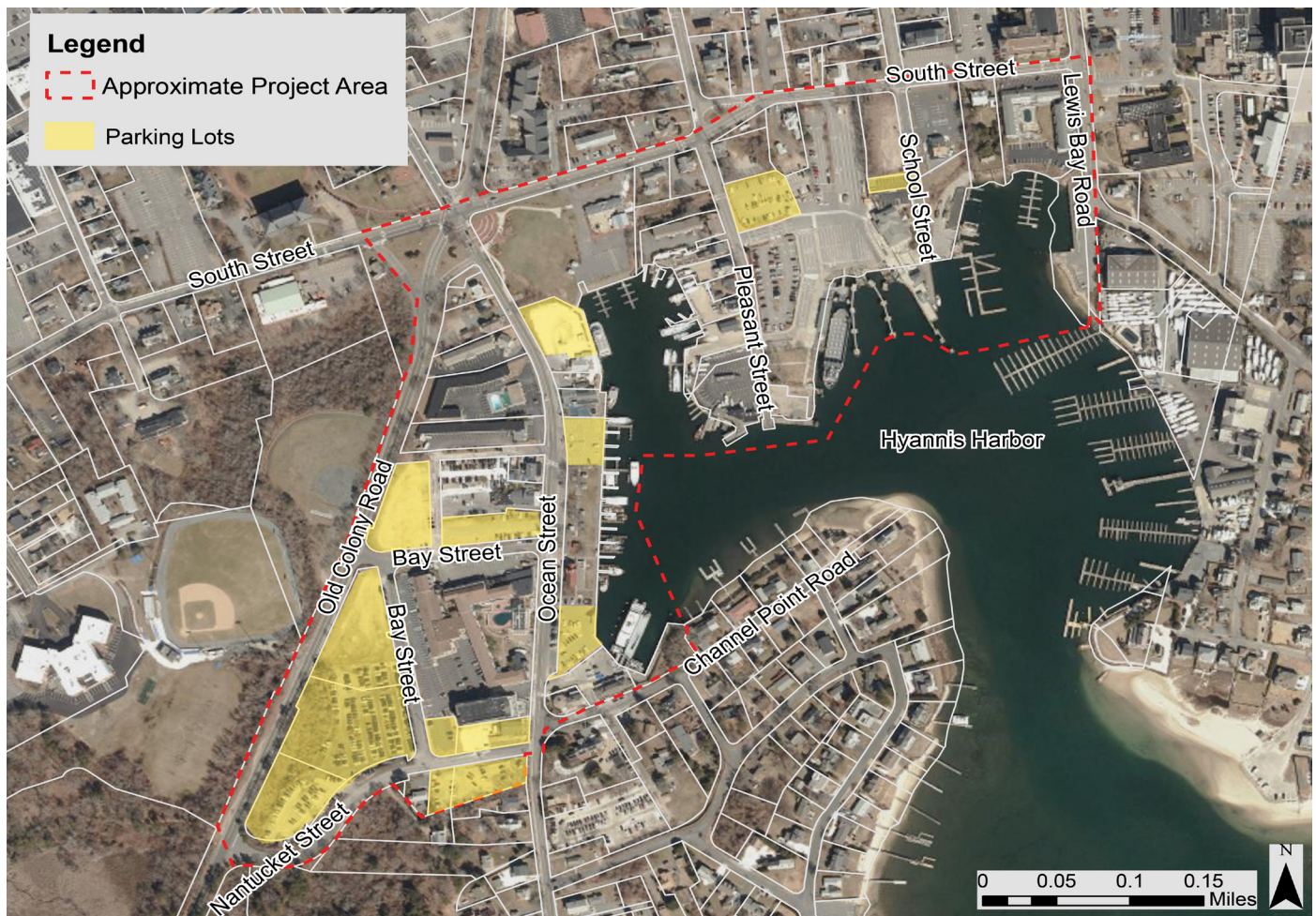


accessory components can be accommodated outside of flood areas directly. Therefore, a Special Permit status for this use category is recommended since there may be certain situations where this type of mixed-use development makes sense for the Harbor area and particular developments.

2.4 Parking Requirements

As was noted in the Existing Conditions Memorandum, parking is a lucrative enterprise for both the Town and private landowners. Parking rates range from \$10 to \$25 per car per day and with ferry services to the islands, patrons accumulate fees each day for the duration of their trip. Past parking studies of downtown Hyannis, such as the one conducted by Nelson Nygaard in 2017, have indicated there is ample parking within the Project Site and the greater Harbor area, including for downtown Hyannis (Main Street area). This includes not only parking for patrons of the Steamship Authority and Hy-Line Cruises, but also for the dining, retail sales, water-related, and other activities of the Harbor area. In many instances, there is ample parking immediately adjacent to a particular use or only a short walking distance away. Between the Project Site and Main Street to the north, there are a number of parking lots, including those which are municipally owned (some free, others which charge a fee with a time limit) as well as private lots which charge a fee. See Figure 7: Parking Areas within Project Site. In these lots and areas both within and just outside the Project Site, there are options for both short- and long-term parking. Additionally, the private parking lots owned by the Steamship Authority and Hy-Line Cruises are not exclusively restricted to their customers and can be used by any paying customer.

Figure 7: Parking Areas within Project Site



Source: MassGIS, 2024; Tetra Tech, 2024

With significant parking areas within the Project Site (both municipal and private, on- and off-street), as well as to the north and south, it is recommended the Town amend the Zoning Ordinance to eliminate entirely, or at a minimum reduce, all minimum parking space requirements for the HH District (Section 240-24.1.5.C. Parking standards) except for residential or artist live/work uses. Any type of business establishment (Commercial Service, Food and Beverage Service, Retail Sales, Office, Hotel/Motel, etc.) will not occupy a space or redevelop a site if they feel the property cannot provide enough parking for their patrons or if the parking cannot be provided in the immediate area. By removing minimum parking requirements in the HH District from the Zoning Ordinance, it will allow land users the flexibility to occupy existing spaces or to redevelop properties in creative ways without the need to provide off-street parking, which may not even be necessary. This is especially true in the Hyannis Harbor area where there is already ample parking both within and outside the Project Site. With minimum parking requirements removed from the Zoning Ordinance or significantly reduced, proponents of an establishment could still provide parking spaces on the subject property as they deemed appropriate, but it would not be required.

An additional parking consideration includes the incorporation of structured parking in or adjacent to the Project Site. In addition to structured parking, increased shuttle services provided by the ferry companies or in collaboration with the Hyannis Transportation Center or the Cape Cod Gateway Airport could reduce the demand for parking along Nantucket Street and Bay Street within the Project Site. Surface parking uses within low-lying areas of the Project Site could be repurposed to enhance economic activity and promote flood resilience purposes. It would likely be necessary for the Town to lead the planning and implementation of a structured parking approach within or near the Project Site due to current availability of surface parking lots and the surplus of parking available in existing off-site locations.

2.5 Building Height

Within the HH District, the maximum number of stories permitted by the Zoning Ordinance is currently 2.5 and the maximum building height is 35 feet. Based upon the above information, it is recommended the Town amend the Zoning Ordinance such that the definition of “Building Height” in the HH District and/or Floodplain District (to be impactful on a town-wide basis) consist of language along the following lines and include the following provisions:

- **Building Height** in areas subject to the Design Flood Elevations (“DFE”) shall be measured from the higher of: (a) Grade or (b) Finished Floor Elevation (“FFE”).

As was noted above, the Town should consider updating its Zoning Ordinance on a town-wide basis to encourage the consideration of sea level rise and flood risk projections into DFEs for all zoning districts, and update the Floodplain District (an overlay district, Section 240-34) with text and maps that include updated flood risk projections. Therefore, it is also recommended the Zoning Ordinance be amended to limit residential uses below the DFE by including the following language:

- **Limitation on Residential Uses Below Design Flood Elevation.** Except for accessory uses allowed by this subsection, Residential Uses are not recommended below the DFE. The following uses accessory to a Residential Use are allowed below the DFE:
 - » Access and vertical circulation (including lobbies, stairs, and similar spaces);
 - » Flood Protection Equipment;
 - » Storage; and
 - » Parking.

The language above will help ensure new construction and renovations are at or above the 2050 1% Annual Exceedance Probability for flooding and wave action within the Project Site.

2.6 Front, Side, and Rear Setbacks

Another area of the existing Zoning Ordinance which could be amended to achieve the vision of Hyannis Harbor and make the area more resilient is adjusting the regulations around front, side, and rear setbacks. These setback areas should permit bringing building elements closer to the street such as pavilions, porches, plazas, and areas used



for vertical circulation from grade to the DFE. It is recommended the following language be added to the Zoning Ordinance in the HH District and/or the Floodplain District to make it easier to implement flood resiliency measures within the setbacks:

- **Front, Rear, and Side Setbacks.** The following may be located within required setbacks:
 - » In Front, Rear, and Side Setbacks: Areas used for vertical circulation from grade to the recommended DFE; and
 - » In Rear and Side Setbacks: Flood Protection Equipment and structures housing mechanical equipment above the recommended DFE.
 - » The intent of these regulations is to allow for the layering which needs to occur to ease the transition between the streetscape and the new DFEs.

2.7 Lot Coverage

Another aspect of the existing Zoning Ordinance which can be adjusted to improve flood resiliency within the Project Site is lot coverage. As one of its action items, the Town's 2022 Hazard Mitigation Plan Update calls for reduced impacts in the Federal Emergency Management Agency ("FEMA") Flood Zones A and V by amending the Zoning Ordinance to require floor area ratio ("FAR") requirements that allow development and redevelopment which does not create large amounts of impervious surface and maintains coastal flood resiliency. These measures are intended to address flooding, shoreline change, and coastal erosion. However, along with the existing maximum lot coverage requirement in the Zoning Ordinance, the other dimensional requirements, such as lot width; front, side, and rear setbacks; and building height, the development envelopes on parcels within the HH District are already well regulated without an FAR requirement.

Lot coverage in the HH District is defined as "the ratio or percentage of a lot that is covered by principal buildings, outbuildings, accessory structures, and impervious paved surfaces including driveways, parking lots and sidewalks." The current permissible maximum lot coverage requirement in the HH District is 90%. This maximum requirement is fairly high even for a harbor/waterfront location in a historic area, where there is often more density of buildings, uses, and activities. In order to promote additional flood resiliency in the HH District, it is recommended the Zoning Ordinance be amended to reduce the maximum permissible lot coverage requirement to 80%. This additional 10% of pervious lot area could then be used as space for landscaping, lawn, or even patios with pervious pavers. Additionally, to further address flood resiliency, it is recommended the following items be added to the Zoning Ordinance regarding lot coverage and open space requirements:

- **Lot Coverage and Open Space.** The following areas shall be excluded from the measurement of recommended usable open space on a lot:
 - » Areas used for vertical circulation from grade to the recommended DFE; and
 - » Flood Protection Equipment, and structures housing mechanical equipment and utility systems above the recommended DFE.

Some of these flood resiliency measures may cause the need for additional impervious surfaces or lot coverage to be created. However, the overall benefit in terms of flood resiliency outweighs the benefits of the property maintaining those small areas as pervious surface.

3.0 HARBOR USES

Hyannis Harbor has a long history of commercial fishing, passenger and freight ferry service, charters, and hospitality including restaurants and hotels. The area is a dense intersection of economic development, tourism, commerce, transportation, and recreation. Balancing all of these uses and activities in a small area is challenging, especially when attempting to make improvements for climate resiliency, and in particular flooding. This section examines a variety of changes which can be made to various elements and activities in the Harbor to continue improving its operations and resiliency for all parties.



3.1 Commercial Fishing

As was noted in the Existing Conditions Memorandum, the confluence of the commercial fishing offloading area in the southwestern portion of the Harbor with passenger loading and unloading at the neighboring Hy-Line Cruises property poses many problems with safety and congestion. Passengers with families and luggage often do not adhere to the temporary fencing erected by the Town to guide pedestrians around the offloading zone, which are intended to assist in avoiding interference with the offloading activities. Instead, fishing personnel offloading their catch and the trucks receiving the catch battle congestion with pedestrians and safety concerns in the shared parking lot.

As obtained in feedback from the commercial fishing industry during public outreach in 2023, the industry has shown an interest in a dedicated area to offload fish which could also include service features (a crane, oil disposal, water, and drain). Additionally, as part of this, the fishing community expressed a desire to implement a fish market at the offloading location in order to sell fish from boats or vending areas where they offload, directly to consumers. The southern-most end of Pleasant Street has been identified as a future location for commercial fishing offloading and the implementation of a direct-to-consumer fish market. The intent of such an endeavor would help support local restaurants, service local residents, and activate the end of Pleasant Street for viewing of the commercial fishing boats, which is currently a popular activity. Limited commercial fishing offloading and could continue at its existing location off of Bismore Park, to accommodate viewing from this location by residents and visitors. The introduction of limited direct-to-consumer fish sales in this location could serve to active Bismore Park. See Figure 8: Proposed Commercial Fishing Offloading and Fish Market Location.

Figure 8: Proposed Commercial Fishing Offloading and Fish Market Location



Source: Tetra Tech, 2024

In this location the commercial fishing boats would not need to travel as deeply into the Harbor to unload and there is already a municipally owned dock, power hookup, and a small gravel parking area at this spot. These existing resources would make it easier to install some of the additional necessary infrastructure for a quality offloading location and fish market including water, waste oil disposal facility, a small crane, and even additional pump outs.

These pump outs could connect into the existing sewer system which ends only 250 feet northward up Pleasant Street. However, in order to make this connection, it would need to be confirmed there is additional existing capacity in the sewer line and system. Alternatively, tight tanks could be used which would need to be pumped out periodically and Hyannis Harbor also has a boat pumpout program which could be used. When interviewed in April of 2024, the Steamship Authority indicated one of their concerns with the commercial fishing offloading being relocated to the end of Pleasant Street was if/how this might impact their existing pump out system.

Adjacent to the north of the municipal parcel at the south end of Pleasant Street is Hyannis Harbor Park situated on Steamship Authority property. If an agreement could be reached with the Steamship Authority to allow access to this property, this additional land could accommodate a large truck turnaround and a small fish market. The Steamship Authority was open to discussing the potential turn around and fish market at this location, but they did have concerns as to how the truck traffic and required turnaround might impact their property and operations. The fish market would need to meet all health code requirements and, as such, would require a cement padded base with a drain and running water. However, this type of structure would not require much room as it could be operated in a shed type of building. The dock itself could also be slightly reconfigured with additional floating docks perpendicular to shore to accommodate several vessels. These additional floating docks and vessels should easily be able to stay clear of the Federal Navigation Channel, which requires they be at least three times away from the depth of the 13 foot deep channel from its edge (unless Army Corps of Engineers approves closer distance). Lastly, the public dock, bulkhead, and parking area at the end of Pleasant Street could all be raised to or above targeted standard minimum bulkhead elevation for Hyannis Harbor of 6.0 feet NAVD88.

3.2 Harborwalk Continuation

While much of the Project Site is private property, the Town of Barnstable owns multiple parcels along Hyannis Harbor. These public parks and their amenities play key roles in facilitating connectivity and interaction along the waterfront. In particular, the public parcels have contributed successfully to the lengthiest segment of the Harborwalk from the Hy-Line Cruises location all the way northward through Pleasant Street Park to Pleasant Street. In examining the possible continuation of the Harborwalk from this location, improvements could be made along the public right-of-way of Pleasant Street headed southward to continue this Harborwalk. Widening the sidewalks along Pleasant Street and implementing materials which are consistent with materials of the Harborwalk in other locations are two simple, yet effective, items which would create a more pleasurable experience for pedestrians.

From there, people could travel south down Pleasant Street, wrap around the gravel parking lot, head through Hyannis Harbor Park, and into the Steamship Authority where there is an existing Chapter 91 public right-of-way access. Future explorations of extending the Harborwalk should attempt to find a way across or around the ferry loading area to get to the underpass on the east side of the Steamship Authority property. While this underpass is currently gated, if access could be regained to this area it could potentially lead to a more formalized destination at the end of School Street. See Figure 9: Potential New Harborwalk Destination Area below for an image of this area. This might include some type of passive recreation area, seating, gazebo, and/or a pocket park. From there, the Harborwalk could continue northward on School Street.

Once it reached South Street, travelers could head west and loop back to Pleasant Street Park, creating a somewhat formalized Harborwalk loop. The streetscape that will result from the redevelopment of 110 and 115 School Street will be an important piece to this connected pathway. All efforts should be made to work this developer to establish a formalized and safe walkway that will allow people to walk north on School Street and then head west.

While the extension of the Harborwalk would significantly contribute to the public accessibility and activation of the waterfront, the Harborwalk and its features can also serve as flood protection elements. The bulkhead along the Harborwalk can be built to the DFE and contain components to allow for integration of additional protection. Some examples of this include deployable drop-in gates, fixed knee walls, elevated planters, or seating alignments. In instances where private property limits ability to continuously implement a Harborwalk flood protection system, the Town would need to find tie-backs to effectively close flood pathways.



Figure 9: Potential New Harborwalk Destination Area



Source: Tetra Tech, 2024

3.3 Slip Reconfiguration

Another recommendation that should be examined is the reconfiguration of the slips around the inner Harbor. The one area that jumps out immediately is the Gateway Marina which could be reconfigured for larger ships or perhaps to allow more vessels direct access to the Harborwalk in front of the Maritime Museum. Additionally, with the commercial fishing offloading being moved to the end of Pleasant Street, there may be an opportunity to add an additional slip where this offloading currently occurs (near the Harbormaster’s Office). Any slip reconfiguration should strive to maximize spaces and accessibility, and be able to accommodate sea level rise in the years to come.

3.4 Property at 91 South Street

While there are a number of key municipal properties in the Harbor area, one that is intriguing in terms of a possible reuse or redevelopment site is 91 South Street. This property is roughly located at the intersection of South Street and Pleasant Street. It contains a 1,164 square foot building constructed in 1935 that was formerly used as a municipal sewage pump house. This building served as the primary sewage pump station for downtown Hyannis from 1935 until 1989, but has not been used in over 20 years. The structure has recently been evaluated and the cost to restore this building would be extensive as substantial remediation would be needed in order to bring it up to code. Additionally, alterations to the building would be regulated by the Hyannis Main Street Waterfront Historic District Commission as it is located within a historic district.

With that said, the property and building are notable because the parcel is one of the most flood resilient properties in the entire Project Site. Since the parcel is highly flood resilient it presents opportunities for possible municipal uses in the future. This property should be considered as an alternative location for the Harbormaster’s Office critical services and storm operations in the near-term, and as a potential future home for Harbormaster’s Office services in the long-term. Other opportunities should be investigated for reuse of the parcel and/or building including a small welcome center for the Harbor area and/or a public restroom.

Figure 10: Building at 91 South Street



Source: Tetra Tech, 2024

4.0 PUBLIC ACCESS AT WATERFRONT

The Commonwealth's primary tool for protection and promotion of public use of its tidelands and other waterways is Massachusetts General Law Chapter 91, the waterways licensing program, also known as the Massachusetts Public Waterfront Act. Chapter 91 regulates activities on both coastal and inland waterways, including construction, dredging and filling in tidelands, great ponds, and certain rivers and streams. Through Chapter 91, the Commonwealth seeks to preserve and protect the rights of the public, and to guarantee private uses of tidelands and waterways serve a proper public purpose.

As part of understanding existing state environmental regulations which may impact recommendations regarding the harbor uses, Tetra Tech collected existing Chapter 91 Licenses from the Massachusetts Department of Environmental Protection (“MassDEP”). The licenses outline the conditions of each of the uses, including public access along Hyannis Harbor, and show plans relating to activities including dredging, building and expanding docks, piers, and bulkheads. The benefits the Chapter 91 program can afford a town are best captured in the five basic objectives of the program:

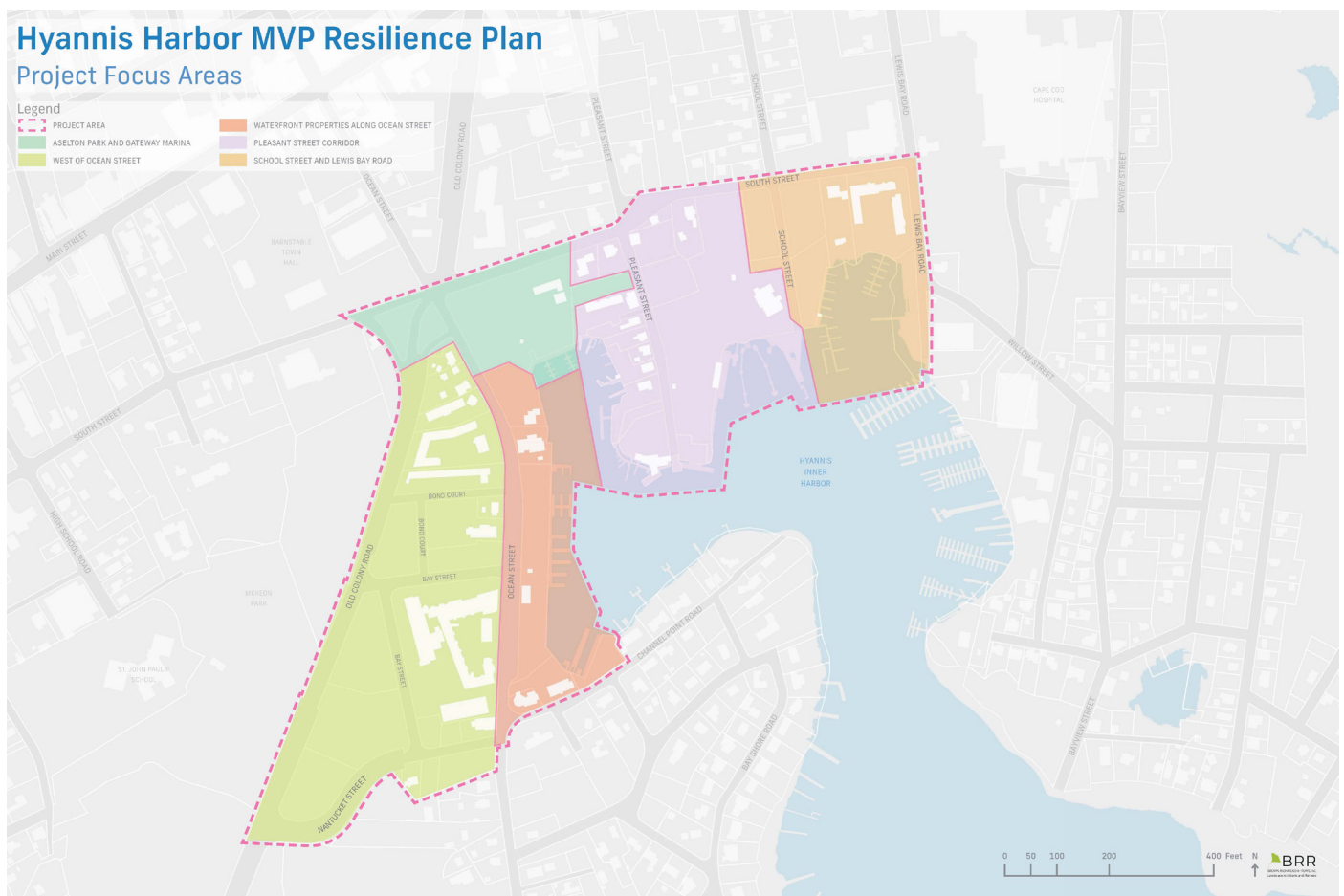
1. Ensure the waterfront is used primarily for water-dependent purposes;
2. Provide public access;
3. Facilitate other state programs related to shoreline use and conservation;
4. Strengthen local controls and encourage Harbor planning; and

5. Ensure accountability to present and future public interests.

Public access to the water is a core element of the Commonwealth’s responsibility to hold tidelands in trust for the general public. A continuous public access system along a harbor can be accomplished by a Harborwalk system. Conflict may occur between public access, public safety, and security of private water dependent property. In times of rising sea level and the desire to protect inland areas from coastal flooding, flood barriers can be combined with public access structures to accomplish dual goals of access and protection. As such, it appears to be a simple solution, but it is not. Fill, retaining walls, new impervious surfaces, and new amenities along the water will change the way floodwaters move over the area, and these changes may be exacerbated over time by changes to the flooding frequency and depth caused by sea level rise and increasing coastal storm frequency and intensity. For this reason, planners should expect the Massachusetts Office of Coastal Zone Management to push back on barriers. Public access within the Project Site is required in a piecemeal manner with limitations on formality and there are much needed connections between parcels.

In an effort to provide better structure and focus to site-specific recommendations, which are discussed in other memorandums, the Project Site has been divided into five Focus Areas (see Figure 11: Project Focus Areas). The following analysis and recommendations for the five Focus Areas in Hyannis Harbor reflect consistency with the Chapter 91 Regulations:

Figure 11: Project Focus Areas



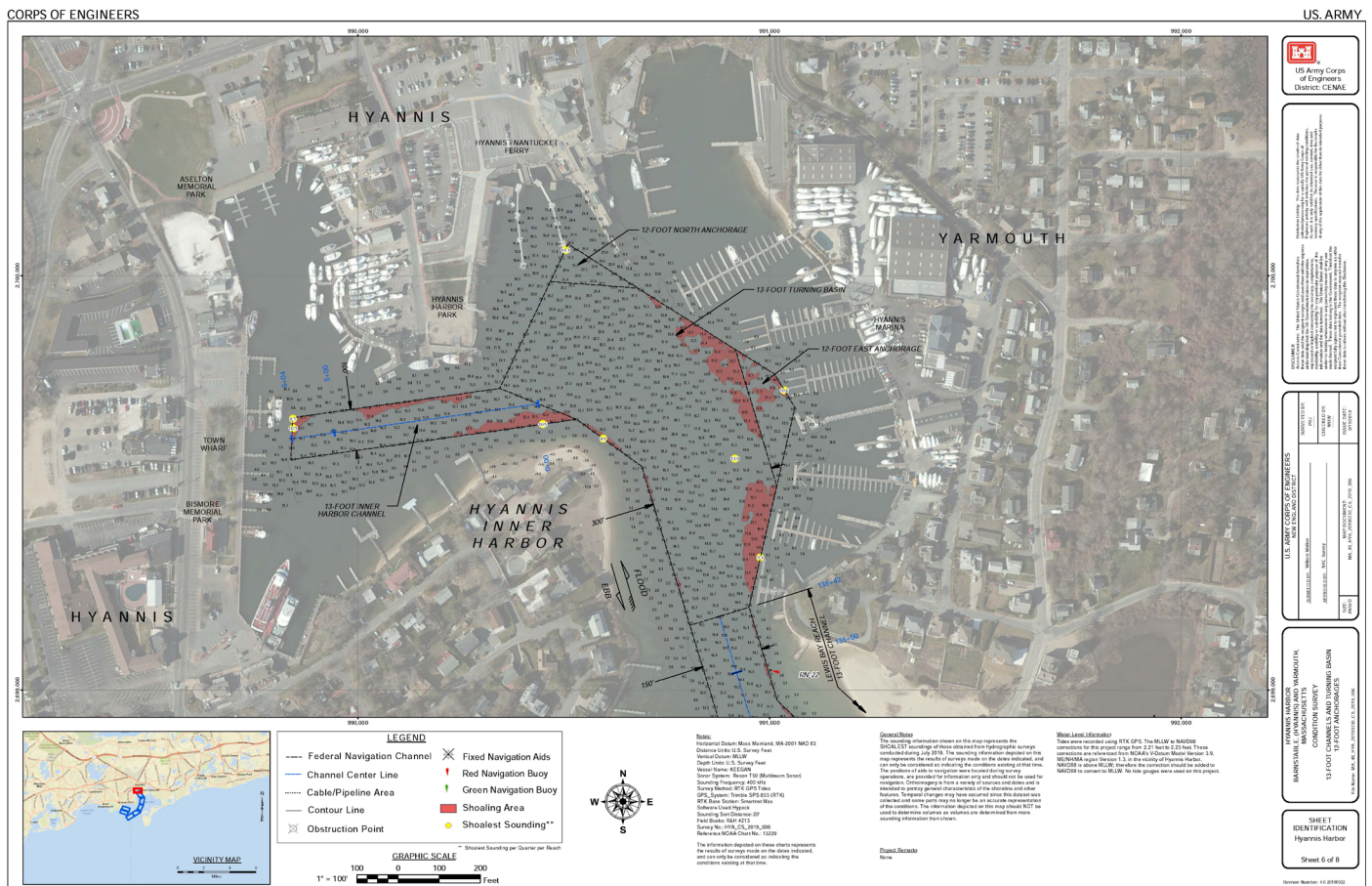
Source: Brown, Richardson + Rowe, 2024

1. Aselton Park and Gateway Marina

The public access connections at Aselton Park are informative for how a Harborwalk system should work. There is a pleasant transition of the Harborwalk from the Ocean Street park areas and businesses, to the walkway(s) at the corner of Ocean Street and South Street, and over to the Pleasant Street Park walkway. Expansion of the Harborwalk with a goal of continuous access along the water’s edge, where feasible, should be of varied materials and provide varied experiences with location and surrounding uses. The Town may want to consider a business supported Waterfront Improvement District Fund to pay for Harborwalk segments or connections. The Harborwalk sections should also be tied together with consistent signage that signals to the public they are welcome – with kit-of-parts for nearby amenities or location identification. Access to the Harbor from Aselton Park and Gateway Marina should be prioritized year-round. Programming of this area to encourage public use in the winter could include an all-season beer garden or programming tent at the Gateway Marina parking area.

There is also the potential for tall ships or other educational vessels to visit near the Cape Cod Maritime Museum and Gateway Marina that will serve as a draw to the public to come down to the water’s edge. One of the key components to bringing in these new vessels deeper into the Harbor is the Federal Navigation Project (“FNP”), which is the channel running through Harbor that is dredged periodically (see Figure 12: Sheet 6 of 8 of the U.S. Army Corps of Engineers Survey (2019)).

Figure 12: Sheet 6 of 8 of the U.S. Army Corps of Engineers Survey



Source: U.S. Army Corps of Engineers, New England District, 2019



However, unfortunately, as is displayed in Figure 12, the FNP does not reach to Aselton Park's waterfront. The FNP in Hyannis Harbor at the 100-foot wide 13-foot design depth is mostly around 14 feet to 15 feet deep (usually there is a 2-foot over dredge beyond the design depth). Note in Figure 12 the "shoaling areas" on the Hyannis Harbor Park side and the depths by the gravel parking area just south of Hyannis Harbor Park. The water is deeper at the gravel parking area compared to the present commercial fishing vessel offloading area. Any new docks at the parking area should be set back 36 feet from the FNP, but may be closer with Army Corps of Engineers permission. Regulatory standards for vessels invoke 2.5 feet of clearance to the bottom to avoid turbidity by vessels bottoming out during low tide.

The recommendation regarding the channel is that it be extended deeper into Hyannis Harbor toward Aselton Park. However, tall ships would likely require more depth than 13 feet and dredging the entire length of the channel deeper would be a rigorous endeavor. Even if this challenge could not be overcome, there would still be other options. Since this location is adjacent to the Maritime Museum, it would still be a great spot for other educational vessels such as light ships, tug boats, retired research vessels, glass bottom vessels, and many others, who could partner with the museum. These vessels could be substantial cultural drivers and contribute to additional water programs that would bring in other tourists to the Hyannis Harbor area.

2. West of Ocean Street

60 Nantucket Street, 65 Bay Street, and 85 Bay Street Each have historically filled tidelands (intertidal streams) according to the "Tidelands Jurisdiction Chapter 91 Jurisdiction" data layer on Mass Mapper. Mass Mapper also shows an existing stream running through each of these properties. The presence of an existing stream would have a high-water mark without separation by a public way, therefore, the historically filled areas are not landlocked and any change in use or new structures, on the flowed or filled areas on these parcels, would be subject to Chapter 91 Licensing. Prior to any development, the existing stream location should be verified and the location of the historically filled stream should be verified through historic map overlays. These may be one and the same, or there would be two threads of jurisdiction requiring licensing.

Other parcels west of Ocean Street include hotels, restaurants, and parking for those uses, as well as ferry parking. The uses mesh very well with the draw of the ferries. The challenge would be for more intense density of the same uses (hotels/restaurants) with considerations for greater height balanced with the historic character and the elimination of surface parking. Should zoning increase allowable heights, a Chapter 91 like staggered setback with encouragement of porches and balconies could take advantage of water and port views.

Generally, the area west of Ocean Street is poorly lit at night, which should be considered in the context of activating and increasing development in this area.

Increasing density would increase parking demand where spaces can be in high demand (seasonally). Reducing the surface parking would have aesthetic and environmental benefits. Environmental considerations would include a reduction of the heat island effect and stormwater runoff quality. Replacing parking with structures would be expensive relative to the minimal expense and revenue gains of existing surface parking, and there would need to be incentives for lot owners to change their current uses. It would be beneficial to expand satellite parking availability along with the shuttle service between parking spaces and destinations. Educating the general and infrequent visitor public would need to be ramped up for a smooth transition away from the surface lots in the Project Site.

3. Waterfront Properties along Ocean Street

This area has existing waterfront public access that ties into Aselton Park. 220 Ocean Street is home to Hy-Line Cruises which takes passengers to Nantucket/Oak Bluffs/Around the Sound (both)/Hyannis Harbor Site Seeing. 138 Ocean Street contains Hy-Line Cruises Deep Sea Fishing Excursions. This Focus Area also contains commercial fishing operations, sightseeing, speed touring, charter fishing, a pirate ship charter, and other educational tours along with private recreational tie up slips. These uses compliment the hotels, restaurants, and art offerings, but water-dependent uses should be given priority as they cannot be located away from the water. The potential for the relocation of the commercial fishing offloading to the end of Pleasant Street will help to improve safety and aesthetics in this area, and some offloading could continue to occur as their operations can also be a draw for residents and visitors alike. While there are some lights to increase safety at night in this area, the Town should continue to evaluate safety concerns and lighting opportunities.



Figure 13: Bismore Park and Waterfront in Background



Source: Tetra Tech, 2024

The uses along Ocean Street both on the water and across the street compliment each other very well. Conflicts may occur when the intensity of the non-water dependent commercial uses increases demand for space, especially parking. Space conflicts for vessel tie ups and navigation should be carefully planned for safety and navigation. Facilities of private tenancies, especially residential uses, should be avoided in this area, as such uses would increase the need for space, reduce access, and add to traffic congestion.

4. Pleasant Street Corridor

Public access along the west side of Pleasant Street is required by various licenses, but access may be restricted by current businesses and due to the fact there is no Harborwalk in this location. Landside residential uses would conflict with public access along the water’s edge. The presumptive Chapter 91 jurisdictional line runs through most of the parcels on this side of the street, but it does not enclose any whole individual parcel in this area. The street includes properties along the water with both a mix of residential and commercial, or commercial (boat rentals, boat sales, and a restaurant). See 125 Pleasant Street for an example of residential condominiums with the jurisdictional portion of the property connecting to a ramp and vessel float. If the adjacent drive or parking area is used by the non-water dependent uses, said uses would make a license in this area a non-water dependent license and public access would be a requirement.

137 Pleasant Street’s License (#7104) requires public access, but there is no formal Harborwalk and it is unknown whether there is any indication to the general public they are allowed access to the water at this location. Here is an example where clarification to the public regarding their ability to access the water would be of great assistance.

149 Pleasant Street's License (#12761) provides for public access between Mean High Water ("MHW") and Mean Low Water ("MLW"), and a right to go around the structures. However, the MHW and MLW lines are at the bulkhead and there does not appear to be a requirement for public use of the deck. Public access signs are required at this location.

Figure 14: Pleasant Street



Source: Tetra Tech, 2024

157 Pleasant Street's License (#10524) provides for public access between MHW and MLW, and a right to go around the structures. However, the MHW and MLW lines are at the bulkhead. Public access signs are required here and there is also a boat ramp at this location.

167 Pleasant Street appears to be used for boat storage and may be included in the license for 177 Pleasant Street. 177 Pleasant Street's License (#11878) provides for public access between MHW and MLW, and on Commonwealth Tidelands. Public Access Signs are required here as well. The lack of a formal Harborwalk on these properties conflicts with the requirements of Chapter 91 that would prioritize the existing water dependent uses within jurisdiction as they are located appropriately. New non-water dependent uses or structures within jurisdiction should require the construction of a formalized publicly accessible Harborwalk.

182 Pleasant Street's License allows for a parking lot with dockage, but is mostly out of Chapter 91 jurisdiction.

The gravel parking area at the south end of Pleasant Street, combined with the wharf at 190 Pleasant Street, provide the potential for a high-quality commercial fishing vessel unloading point. The water is deeper in this location compared to the present-day commercial fishing offloading area. Additional docking would also enhance the proposed area for future commercial fishing offloading and any related fish market. New docks in the water at this location would require Wetland, Chapter 91, and Army Corps of Engineers permitting. There is limited to no Chapter 91 jurisdiction in this location and any redesign to accommodate truck access and turning should enhance the visual buffer provided by the existing park, and provide water and sewer service to accommodate the proposed use. Town property records indicate water and sewer improvements are not currently considered for this street. Conflicts at this location may include:

- Existing sewer sizing as the line would tie into the same line as the pump out for the Steamship Authority vessels.
- Increased truck traffic for commercial fish transport and fish market shopper traffic, with the residential uses, charters, restaurant, and ferry terminal traffic.
- Article 97 considerations and process may also be applicable in this location.

Pleasant Street and South Street parcels with partial Chapter 91 jurisdictional areas:

- 71 South Street which contains the Steamship Authority's Hyannis Steamship Ferry Terminal (a/k/a 69 South Street).
- 124 Pleasant with parking as an accessory use.
- 123 School Street with reserved parking, and it appears a water-dependent accessory use and is not within Chapter 91 jurisdiction.

These parcels are in water dependent or water dependent accessory use locations. There is no requirement for public access and no formal Harborwalk. The public can access most of the areas, except where safety is a concern. Future updates should consider more formalized access and access connections where feasible.

- 91 South Street is outside of Chapter 91 jurisdiction.
- 77 South Street contains two residential buildings (one is in Chapter 91 jurisdiction).
- 102 Pleasant Street contains professional offices, parking (ferry accessory or professional office accessory), and a mix of residential and commercial uses. The structure is outside of Chapter 91 jurisdiction.

5. School Street and Lewis Bay Road

110 School Street and 115 School Street are outside of Chapter 91 jurisdiction.

0 School Street is within Chapter 91 Jurisdiction and has water dependent accessory parking for the Dockside Marina. License #12880 provides for public access between MHW and MLW, and is on Commonwealth Tidelands. Public access signs are required at this location and there is no formal Harborwalk.

25 South Street is a residential property with several structures outside of Chapter 91 jurisdiction. There is a ramp and a float within jurisdiction, and what appears to be a beach crossed by the ramp. Public access between MHW and MLW would be physically easier than properties with MHW and MLW at a bulkhead. There is no license in the file for this property. A Harborwalk connection to 0 School Street may have some issues with the grade differential.

1 South Street's License (#13568) requires all pedestrian areas on the site to be open to the general public and includes public access signage requirements. There is a deck running along the project shoreline that appears to be suitable for public access. However, the license has limitations which make it unclear if public access is allowed on the deck. Most of the site is outside of Chapter 91 jurisdiction. There is no transition for public access to 25 South Street, which would expand and connect to additional shoreline areas. This property is fenced along Lewis Bay Road and does not have a pedestrian connection to the walkway that leads to the boat ramp on the adjacent Town property at 147 Lewis Bay Road.

147 Lewis Bay Road includes a parking area, docks, and a public boat ramp. The site is well laid out for the intended function. Future uses of the site may interfere with the present function. The site is mostly out of Chapter 91 jurisdiction, but presents a water dependent asset to the community and boaters in general.



5.0 SUMMARY OF RECOMMENDATIONS

In a number of areas there are improvements and changes which can be made to bring Hyannis Harbor into the future as a more enjoyable, functional, and resilient location. The recommendations in this memorandum cover a number of topics including Zoning Ordinance amendments, the harbor uses themselves, and public access aspects of Chapter 91 licensing. As was mentioned earlier, all of these recommended changes can be implemented and operate independently, but they will be most effective if they can be instituted around the same time to allow them to work together. Here are the takeaways from each of the sections:

Zoning Ordinance

- Implement a Coastal Flood Resilience Zoning Overlay District.
- Food and Beverage Services, and Retail Sales changed to be Permitted By Right Use Categories.
- Brewery/Distillery changed to be a Permitted With Limitations Use Category.
- Office, Health Care Clinic, and Research and Development changed to be Not Permitted Use Categories. The one exception that might be considered is an exception for maritime or oceanic research and development.
- Mixed-Use Development with Residences on Upper Stories created to be Special Permit Use Category.
- Eliminate or significantly reduce all minimum parking space requirements in the Project Site.
- Change the definition of Building Height to indicate that in areas subject to the Design Flood Elevations it shall be measured from the higher of: (a) Grade or (b) Finished Floor Elevation.
- Reduce maximum lot coverage requirement to 80%.

Harbor Uses

- Relocate the commercial fishing offloading location to the southern-most end of Pleasant Street and establish a fish market.
- Continue the Harborwalk to School Street to a destination in that location.
- Reconfigure the slips in the Gateway Marina.
- Explore the reuse of the property and building at 91 South Street.

Public Access at Waterfront

- Extend the Harborwalk to provide continuous access along the water's edge.
- Consider implementing a business supported Waterfront Improvement District Fund.
- Improve signage to promote public access along the waterfront.
- Extend the Federal Navigation Channel deeper into Hyannis Harbor towards Aselton Park.
- If zoning permits increased building heights, investigate implementing staggered building heights with porches and balconies.
- Reduce surface parking to improve aesthetics and environmental benefits.
- Give priority to water dependent uses along the Harbor.
- Expand upon existing public programming and prioritize year-round public access.

