

Attachment to Application for Coastal Site Plan Review

40 Signal Road & 0 Thread Needle Lane
Stamford, CT
SEA Project No. 2021049

PROJECT DESCRIPTION:

The Applicant is seeking authorization for a four-lot subdivision of the existing parcels of land described as Lots 11 & 12 on Map 10325 on the Stamford Land Records. The parcels currently consist of an office building, parking lot, lawn, and a dock. The office building is a pre-existing, non-conforming use. The lots are in an R-20 Zone and located within the Special Flood Hazard Area (SFHA). The proposal consists of demolition of the existing office building and construction of four, single-family dwellings, each on its own lot. Included with this proposal is the infrastructure associated with the development and the ability for each parcel to have amenities such as a deck or patio and swimming pool. Construction activities associated with this proposal also include demolition of the existing parking lot and obsolete infrastructure, and regrading associated with road construction and stormwater drainage.

Because the proposed subdivision is located within the SFHA as designated by FEMA, all work must comply with Section 7.1 – Flood Prone Area Regulations. SEA has performed a review of the proposed drawings and Draft Flood Evacuation and Preparedness Plan (dated December 21, 2022) prepared by Redniss & Mead. Based on these documents, the proposed subdivision meets the requirements of Section 7.1 of the Stamford Zoning Regulations. These drawings include the following:

- Drawing PSUB “Preliminary Subdivision Map” dated December 21, 2022
- Drawing PSTS “Property & Topography Survey” dated December 7, 2022
- Drawing SE-1 “Site Development Plan” dated December 21, 2022
- Drawing SE-2 “Site Grading Plan” dated December 6, 2022
- Drawing SE-3 “Site Development Plan” dated December 21, 2022
- Drawing SE-4 “Site Development Plan” dated December 21, 2022
- Drawing SE-5 “Soil Data & Details” dated December 21, 2022
- Drawing SE-6 “Details” dated December 21, 2022
- Drawing SE-7 “Fire Truck Access Exhibit” dated December 21, 2022

Site Description and Coastal Resources:

The site consists of two parcels located along Long Island Sound and the Dolphin Cove Lagoon Waterway. The site is adjacent to the west side of Peck Point in Stamford Harbor and has direct exposure from southerly winds and has partial protection from the Stamford Harbor breakwaters for winds from SSE.

The property is within the *Coastal Boundary* and the *Coastal Hazard Area*. The State of Connecticut has defined certain coastal resources at this site. They include *Beaches & Dunes, Modified Bluffs & Escarpments, Estuarine Embayments, & Nearshore Waters*. These resources are highly regulated by the Connecticut Department of Energy and Environmental Protection (“CT DEEP”) and the US Army Corps of Engineers (“USACE”). Connecticut General Statutes (“CGS”) define these resources as follows:

- 22a-93(7)(C) “*Beaches and Dunes*” means beach systems including barrier beach spits and tombolos, barrier beaches, pocket beaches, land contact beaches and related dunes and sandflats;

- 22a-93(7)(E) *“Tidal Wetlands”* means “wetland” as defined by section 22a-29; (2) *“Wetland”* means those areas which border on or lie beneath tidal waters, such as, but not limited to banks, bogs, salt marsh, swamps, meadows, flats, or other low lands subject to tidal action, including those areas now or formerly connected to tidal waters, and whose surface is at or below an elevation of one foot above local extreme high water; and upon which may grow or be capable of growing some, but not necessarily all, of the following: [plant list not included - see CGS];
- 22a-93(7)(G) *“Estuarine Embayments”* means a protected coastal body of water with an open connection to the sea in which saline sea water is measurably diluted by fresh water including tidal rivers, bays, lagoons and coves;
- 22a-93(7)(H) *“Coastal Hazard Areas”* means those land areas inundated during coastal storm events or subject to erosion induced by such events, including flood hazard areas as defined and determined by the National Flood Insurance Act, as amended and all erosion hazard areas as determined by the commissioner.
- 22a-93(7)(K) *“Nearshore Waters”* means the area comprised of those waters and their substrates lying between mean high water and a depth approximated by the ten-meter contour.
- 22a-94(c) *“Coastal Boundary”* means the land seaward of a continuous line delineated on the landward side by the interior contour elevation of the one hundred year frequency coastal flood zone, as defined and determined by the National Flood Insurance Act, or a one thousand foot linear setback measured from the mean high water mark in coastal waters, or a one thousand foot linear setback measured from the inland boundary of tidal wetlands mapped under section 22a-20, whichever is farthest inland; and shall be delineated on the seaward side by the seaward extent of the jurisdiction of the state.
- *“Modified Bluffs and Escarpments”* means bluffs & escarpments which have been temporarily stabilized by erosion control structures (revetment, bulkhead or seawall) positioned seaward of the marine cliff or escarpment.

Coastal Water Surface Elevations:

The table below identifies significant water elevations that are important in understanding the conditions when the site becomes inundated by coastal flooding.

WATER LEVEL	ELEVATION (ft) (NAVD-1988)
Base Flood Elevation (1% Annual Chance Flood or 100-yr flood) ¹	VE (16) / AE (12)
Total Water Level (1% Annual Chance Flood or 100-yr flood) ²	11.8
1% Annual Chance Stillwater Elevation ²	10.8
Coastal Jurisdiction Line ⁴	5.5
High Tide Line ³	4.5
Mean High Water ³	3.4
Mean Low Water ³	-3.8

Notes:

1. FEMA FIRM Panel 09001C0518G with an effective date of July 8, 2013.
2. FEMA Flood Insurance Study 09009CV001C and includes effects of wave setup.
3. US Army Corps of Engineers: New England Coastline Tidal Flood Survey September 1988 converted to NAVD-1988 using NOAA VDatum.
4. CT DEEP website: <https://portal.ct.gov/DEEP/Coastal-Resources/Coastal-Permitting/Coastal-Jurisdiction-Line-Fact-Sheet>

Flood Zone Review:

The entire site is within the Special Flood Hazard Area (SFHA) and is subject to inundation by the 1% Annual Chance Flood (100-year flood) as defined by the Federal Emergency Management Agency (FEMA) and is exposed to coastal flooding during storm events, i.e., hurricanes and nor'easters, which impact the region. FEMA has published flood maps for this area for the purpose of insurance ratings. These maps are also used as reference by Design Professionals to prepare designs that are compliant with the National Flood Insurance Program (NFIP). The maps are periodically updated. The property is located in Flood Zones VE with a Base Flood Elevation (BFE) of +16 feet and AE with a BFE of +12 as defined by FEMA on Flood Insurance Rate Map (FIRM) panel 09001C0518G with an effective date of July 8, 2013. A copy of the flood map is in Appendix E.

FEMA defines Zone VE as "Areas subject to inundation by the 1-percent-annual-chance flood event with additional hazards due to storm-induced velocity wave action (<https://www.fema.gov/glossary/zone-ve-and-v1-30>). Base Flood Elevations (BFEs) derived from detailed hydraulic analyses are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply.

FEMA defines Zone AE as "Areas subject to inundation by the 1-percent-annual-chance flood event determined by detailed methods (<https://www.fema.gov/glossary/zone-ae-and-a1-30>). Base Flood Elevations (BFEs) are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply.

A portion of the site lies within the "Coastal A Zone" (CAZ) or "Limit of Moderate Wave Action" (LiMWA). Structures located within the LiMWA are subject to waves over 18 inches and therefore are required to be constructed with open foundations and breakaway walls for enclosed spaces.

WHAT POSSIBLE ADVERSE OR BENEFICIAL IMPACTS MAY OCCUR AS A RESULT OF THIS PROJECT?

Because the proposed subdivision is located within the SFHA, it is highly regulated by Federal, State, and Local agencies. The project has been designed to meet all of these requirements. Therefore, there are no potential adverse impacts to the coastal resources as follows:

- **Beaches & Dunes:** There is a beach located along the Long Island Sound shoreline. No work is proposed on or adjacent to the beach. Therefore, there are no adverse impacts to the beach.
- **Tidal Wetlands:** There are small patches of tidal wetlands located in the intertidal areas along both parcels. No work is proposed on or adjacent to tidal wetlands. Therefore, there are no adverse impacts to tidal wetlands.
- **Estuarine Embayment:** The Dolphin Cove Lagoon is an estuarine embayment. No work is proposed in the water. Therefore, there are no adverse impacts to the estuarine embayment.
- **Coastal Hazard Area:** As stated above, the property lies entirely within the SFHA and the proposed structures and infrastructure have been designed in compliance with all applicable regulations. Therefore, there are no adverse impacts associated with the proposed subdivision.

- **Modified Bluffs and Escarpments:** These conditions exist along the Dolphin Cove Lagoon and along the adjacent properties. No work is proposed at or near the shoreline. Therefore, there are no adverse impacts to modified bluffs and escarpments.

Beneficial impacts include removal of existing structures and infrastructure that is subject to damage from flooding. Beneficial impacts include removal of occupants working below the Base Flood Elevation. Occupants of the proposed development will be elevated above the Base Flood Elevation and will have an evacuation route that is above the BFE.

The site is designed to flood. The design of the road includes culverts underneath to carry floodwaters in and out of the area in order to maintain existing flood conditions. The culvert design avoids the road from performing as a levee or a water diversion structure. Stormwater design is included that will improve water quality.

HOW IS THE PROPOSAL CONSISTENT WITH ALL APPLICABLE GOALS AND POLICIES OF THE CAM ACT?

The proposal is consistent with all applicable goals and policies of the CAM Act as follows. Planning Report No. 30 defines these as follows:

- **Applicable Policies Concerning General Resources:**

CGS Section 22a-92(a)(2): to preserve and enhance coastal resources in accordance with the policies established by chapters 439 (Environmental Protection Department and State Policy), 440 (Wetlands and Watercourses), 446i (Water Resources), 446k (Water Pollution Control), 447 (State Parks and Forests), 474 (Pollution), and 477 (Flood Control and Beach Erosion).

All work is designed in accordance with applicable standards for construction in the SFHA and no work is proposed that will adversely impact coastal resources. Therefore, this proposal is consistent with the General Resource Policy.

- **Applicable Policies Concerning Coastal Structures & Filling:**

CGS Section 22a-92(b)(1)(D): to require that structures in tidal wetlands and coastal waters be designed, constructed and maintained to minimize adverse impacts on coastal resources, circulation and sedimentation patterns, water quality, and flooding and erosion, to reduce to the maximum extent practicable the use of fill, and to reduce conflicts with the riparian rights of adjacent landowners;

CGS Section 22a-92(c)(2)(B): to maintain, enhance, or, where feasible, restore natural patterns of water circulation and fresh and saltwater exchange in the placement or replacement of culverts, tide gates or other drainage or flood control structures.

The proposed site grading has been designed such that there are no changes in flood patterns. Culverts have been added under the proposed road to maintain flooding and to carry receding floodwaters. Stormwater design is included in this proposal that will improve water quality.

- **Applicable Policies Concerning General Development:**

CGS Section 22a-92(a)(1): to ensure that the development, preservation or use of the land and water resources of the coastal area proceeds in a manner consistent with the rights of private property owners and the capability of the land and water resources to support development, preservation or use without significantly disrupting either the natural environment or sound economic growth.

The proposal is consistent with this policy. The proposed subdivision optimizes the use of the property, to the extent that the applicant has agreed with adjacent property owners and other interested parties, without adversely impacting the coastal resources on or adjacent to the property. The proposed subdivision will be constructed in a manner consistent with all applicable regulations for construction within the SFHA.

WHAT MEASURES ARE BEING TAKEN TO MITIGATE ADVERSE IMPACTS AND ELIMINATE INCONSISTENCIES WITH THE CAM ACT?

The proposed subdivision has been designed to be consistent with the CAM Act and with no adverse impacts that require mitigation. Certain components of the design are incorporated specifically to be consistent with the CAM Act and to be eliminate any potential adverse impacts include the following. These features would not normally be included in a subdivision outside of this highly regulated area.

- Dwellings designed to be FEMA compliant with the Coastal A Zone.
- Dwellings located outside of the VE Flood Zone
- Accessory structures located in the VE Flood Zone to be FEMA compliant.
- Culverts under the road to manage floodwaters
- Roads and infrastructure at or above the Base Flood Elevation
- Utilities at or above the Base Flood Elevation
- Evacuation routes at or above the Base Flood Elevation
- Grading designed as to not increase wave runup or cause wave reflection
- Stormwater drainage design to improve water quality