

**Town of Milford
PLANNING & ZONING DEPARTMENT**

Applicant:

City of Milford
Department of Public Works
83 Ford Street
Milford, CT 06460

Project Location:

0 Gulf Street
Milford, CT 06460

**Bank Stabilization
Long Island Sound**

December 2018

Project: 2016114

Prepared By:



**611 Access Road
Stratford, CT 06615
Tel: (203)-377-0663
Fax: (203)-375-6561**

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SECTION 1

Application for Coastal Site Plan Review





MILFORD PLANNING AND ZONING BOARD
APPLICATION FOR COASTAL SITE PLAN REVIEW – PAGE 1 of 9

(CLICK THE GRAY BOX TO MAKE A SELECTION OR BEGIN TYPING)

APPLICANT City of Milford - Department of Public Works

SITE PLAN REVIEW [X]

AMENDMENT TO SITE PLAN REVIEW _____

TO ESTABLISH OR CONSTRUCT _____

ON THE FOLLOWING PROPERTY (ADDRESS) 0 Gulf Street, Milford, CT 06460

OWNER OF RECORD Blichfeldt, Joseph H III & Mary C.

ASSESSOR'S MAP 028

BLOCK 584

PARCEL 1

ZONE R18

TYPE OF PROJECT APPROVAL REQUESTED:

SITE PLAN REVIEW [X]

SPECIAL PERMIT []

SUBDIVISION []

VARIANCE []

TYPE OF PROJECT OR ACTIVITY (CHECK ONE OR MORE)

COASTAL RESOURCES LOCATED WITHIN THE PROJECT OR WHICH THE PROJECT WILL AFFECT:

- Subdivision (type of use – residential, Commercial, etc. _____)
Single family residential
Multi-family residential (No. of units _____)
Condominium (No. of units _____)
Commercial – sq. ft. _____
Industrial – sq. ft. _____
Mixed residential/commercial (# units _____/sq. ft. _____)
Marina – sq. ft. _____
Commercial Port Facility – sq. ft. _____
Sewer Line – Capacity _____
Water Line – Capacity _____
Other – PLEASE SPECIFY: Municipal

- bluffs or escarpments 0.10 Acres
rocky shorefront 0.19 Acres
beaches and dunes 0.21 Acres
intertidal flats _____
tidal wetlands _____
freshwater wetlands _____
estuarine embayments _____
coastal flood hazard area 0.20 Acres
coastal erosion hazard area _____
developed shorefront _____
islands _____
coastal waters 0.20 Acres
shorelands 0.15 Acres
shellfish concentration areas 0.37 Acres

PROPERTY OWNER:

NAME Blichfeldt Joseph H III &

SIGNATURE _____

MAILING ADDRESS 650 Gulf Street Milford, CT 06460

PHONE NO. _____

IF APPEARING BY ATTORNEY OR AGENT:

NAME City of Milford

SIGNATURE _____

MAILING ADDRESS 83 Ford Street Milford, CT 06460

PHONE NO. _____

PROFESSIONAL ENGINEER – DESIGNER/ARCHITECT – LAND SURVEYOR:

NAME Azure Dee Sleicher, P.E. - RACE Coastal Engineering

MAILING ADDRESS 611 Access Road Stratford, CT 06615

SIGNATURE _____

PHONE NO. 203-377-0663

FEE – SEE SCHEDULE OF ZONING FEES (Payable by Check Only)

RECEIVED OF _____

DATE _____

RECEIVED BY _____

AMOUNT _____

RECEIPT NO. _____

APPLICATION FILED _____ APPLICATION CERTIFIED _____ PUBLIC HEARING DATE _____

DATE BOARD ACTION _____ APPROVED _____ DENIED _____

Municipal Coastal Site Plan Review Form

For Projects Located Fully or Partially Within the Coastal Boundary

Please complete this form in accordance with the attached instructions (CSPR-INST-11/99) and submit it with the appropriate plans to the Planning & Zoning Department.

Section I: Applicant Identification

Applicant:	City of Milford - Department of Public Works	Date:	09/17/2018
Address:	83 Ford Street	Phone Number:	203-783-3269
Project Address or Location:	0 Gulf Street - Milford		
Interest in Property:	<input type="checkbox"/> fee simple <input type="checkbox"/> option <input type="checkbox"/> lessee <input checked="" type="checkbox"/> easement <input type="checkbox"/> other (specify):		
List primary contact for correspondence if other than applicant:			
Name:	RACE Coastal Engineering - Azure Dee Sleicher, P.E.		
Address:	611 Access Road		
City/Town:	Stratford	State:	CT Zip Code:06615
Business Phone:	203-377-0663		
e-mail:	azuredee@racecoastal.com		

Section II: Project Site Plans

Please provide project site plans that clearly and accurately depict the following information, and check the appropriate boxes to indicate that the plans are included in this application:

- Project location
- Existing and proposed conditions, including buildings and grading
- Coastal resources on and contiguous to the site
- High tide line [as defined in CGS Section 22a-359(c)] and mean high water mark elevation contours (for parcels abutting coastal waters and/or tidal wetlands only)
- Soil erosion and sediment controls
- Storm water treatment practices
- Ownership and type of use on adjacent properties
- Reference datum (i.e., National Geodetic Vertical Datum, Mean Sea Level, etc.)

Section III: Written Project Information

Please check the appropriate box to identify the plan or application that has resulted in this Coastal Site Plan Review:

- Site Plan for Zoning Compliance
- Subdivision or Resubdivision
- Special Permit or Special Exception
- Variance
- Municipal Project (CGS Section 8-24)

Part I: Site Information

1. Street Address or Geographical Description:

0 Gulf Street

City or Town: Milford

2. Is project or activity proposed at a waterfront site (includes tidal wetlands frontage)? YES NO

3. Name of on-site, adjacent or downstream coastal, tidal or navigable waters, if applicable:

Long Island Sound

4. Identify and describe the existing land use on and adjacent to the site. Include any existing structures, municipal zoning classification, significant features of the project site:

The site is comprised of a cobble beach scattered with boulders that lead to the eroding bank adjacent to the public road, Gulf Street. Two existing revetments are located on each side of the unprotected bank. The bank, and the adjacent portion of Gulf Street are at risk of further erosion associated with significant storm events, leaving the bank vulnerable.

5. Indicate the area of the project site: 0.64 acres **or** square feet

6. Check the appropriate box below to indicate total land area of disturbance of the project or activity (please also see Part II.B. regarding proposed stormwater best management practices):

- Project or activity will disturb 5 or more total acres of land area on the site. It may be eligible for registration for the Department of Environmental Protection's (DEP) General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities
- Project or activity will disturb one or more total acres but less than 5 total acres of land area. A soil erosion and sedimentation control plan must be submitted to the municipal land use agency reviewing this application.
- Project or activity will not disturb 1 acre total of land area. Stormwater management controls may be required as part of the coastal site plan review.

7. Does the project include a shoreline flood and erosion control structure as defined in CGS section 22a-109(d) Yes No

Part II.A.: Description of Proposed Project or Activity

Describe the proposed project or activity including its purpose and related activities such as site clearing, grading, demolition, and other site preparations; percentage of increase or decrease in impervious cover over existing conditions resulting from the project; phasing, timing and method of proposed construction; and new uses and changes from existing uses (attach additional pages if necessary):

See Coastal Site Plan Review Attachment.

Part II.B.: Description of Proposed Stormwater Best Management Practices

Describe the stormwater best management practices that will be utilized to ensure that the volume of runoff generated by the first inch of rainfall is retained on-site, especially if the site or stormwater discharge is adjacent to tidal wetlands. If runoff cannot be retained on-site, describe the site limitations that prevent such retention and identify how stormwater will be treated before it is discharged from the site. Also demonstrate that the loadings of total suspended solids from the site will be reduced by 80 percent on an average annual basis, and that post-development stormwater runoff rates and volumes will not exceed pre-development runoff rates and volumes (attach additional pages if necessary):

The revetment will have a 230'± vegetated bank at its crest which will span the length of the proposed 230'± revetment. In addition, a vegetated swale will be located at the crest of the vegetated bank at an elevation of 24' to 25' in order to allow for the controlled drainage of stormwater. The vegetated bank and swale will be comprised of salt and wind tolerant native species. The revetment will mitigate the sloughing of the existing bank drastically reducing suspended solids running off from the site into the Long Island Sound.

Part III: Identification of Applicable Coastal Resources and Coastal Resource Policies

Identify the coastal resources and associated policies that apply to the project by placing a check mark in the appropriate box(es) in the following table.

Coastal Resources	Off-site but within the influence of project			
	On-site	Adjacent	Off-site but within the influence of project	Not Applicable
General Coastal Resources* - Definition: CGS Section 22a-93(7); Policy: CGS Section 22a-92(a)(2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Beaches & Dunes - Definition: CGS Section 22a-93(7)(C); Policies: CGS Sections 22a-92-(b)(2)(C) and 22a-92(c)(1)(K)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bluffs & Escarpments - Definition: CGS Section 22a-93(7)(A); Policy: CGS Section 22a-92(b)(2)(A)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coastal Hazard Area - Definition: CGS Section 22a-93(7)(H); Policies: CGS Sections 22a-92(a)(2), 22a-92(a)(5), 22a-92(b)(2)(F), 22a-92(b)(2)(J), and 22a-92(c)(2)(B)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coastal Waters, Estuarine Embayments, Nearshore Waters, Offshore Waters - Definition: CGS Sections 22a-93(5), 22a-93(7)(G), and 22a-93(7)(K), and 22a-93(7)(L) respectively; Policies: CGS Sections 22a-92(a)(2) and 22a-92(c)(2)(A)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Developed Shorefront - Definition: CGS Section 22a-93(7)(I); Policy: 22a-92(b)(2)(G)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Freshwater Wetlands and Watercourses - Definition: CGS Section 22a-93(7)(F); Policy: CGS Section 22a-92(a)(2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Intertidal Flats - Definition: CGS Section 22a-93(7)(D); Policies: 22a-92(b)(2)(D) and 22a-92(c)(1)(K)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Islands - Definition: CGS Section 22a-93(7)(J); Policy: CGS Section 22a-92(b)(2)(H)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Rocky Shorefront - Definition: CGS Section 22a-93(7)(B); Policy: CGS Section 22a-92(b)(2)(B)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shellfish Concentration Areas - Definition: CGS Section 22a-93(7)(N); Policy: CGS Section 22a-92(c)(1)(I)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shorelands - Definition: CGS Section 22a-93(7)(M); Policy: CGS Section 22a-92(b)(2)(I)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tidal Wetlands - Definition: CGS Section 22a-93(7)(E); Policies: CGS Sections 22a-92(a)(2), 22a-92(b)(2)(E), and 22a-92(c)(1)(B)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

* General Coastal Resource policy is applicable to all proposed activities

Part IV: Consistency with Applicable Coastal Resource Policies and Standards

Describe the location and condition of the coastal resources identified in Part III above and explain how the proposed project or activity is consistent with all of the applicable coastal resource policies and standards; also see adverse impacts assessment in Part VII.A below (attach additional pages if necessary):

The following resources have been identified on and adjacent to the site. "Coastal resources" means the coastal waters of the state, their natural resources, related marine and wildlife habitat and adjacent shorelands, both developed and undeveloped, that together form an integrated terrestrial and estuarine ecosystem; coastal resources include: Refer to Coastal Site Plan Review Attachment.

Part V: Identification of Applicable Coastal Use and Activity Policies and Standards

Identify all coastal policies and standards in or referenced by CGS Section 22a-92 applicable to the proposed project or activity:

- General Development* - CGS Sections 22a-92(a)(1), 22a-92(a)(2), and 22a-92(a)(9)
- Water-Dependent Uses** - CGS Sections 22a-92(a)(3) and 22a-92(b)(1)(A);
Definition CGS Section 22a-93(16)
- Ports and Harbors - CGS Section 22a-92(b)(1)(C)
- Coastal Structures and Filling - CGS Section 22a-92(b)(1)(D)
- Dredging and Navigation - CGS Sections 22a-92(c)(1)(C) and 22a-92(c)(1)(D)
- Boating - CGS Section 22a-92(b)(1)(G)
- Fisheries - CGS Section 22a-92(c)(1)(I)
- Coastal Recreation and Access - CGS Sections 22a-92(a)(6), 22a-92(C)(1)(j) and 22a-92(c)(1)(K)
- Sewer and Water Lines - CGS Section 22a-92(b)(1)(B)
- Fuel, Chemicals and Hazardous Materials - CGS Sections 22a-92(b)(1)(C), 22a-92(b)(1)(E) and 22a-92(c)(1)(A)
- Transportation - CGS Sections 22a-92(b)(1)(F), 22a-92(c)(1)(F), 22a-92(c)(1)(G), and 22a-92(c)(1)(H)
- Solid Waste - CGS Section 22a-92(a)(2)
- Dams, Dikes and Reservoirs - CGS Section 22a-92(a)(2)
- Cultural Resources - CGS Section 22a-92(b)(1)(J)
- Open Space and Agricultural Lands - CGS Section 22a-92(a)(2)

* General Development policies are applicable to all proposed activities

** Water-dependent Use policies are applicable to all activities proposed at waterfront sites, including those with tidal wetlands frontage.

Part VI: Consistency With Applicable Coastal Use Policies And Standards

Explain how the proposed activity or use is consistent with all of the applicable coastal use and activity policies and standards identified in Part V. **For projects proposed at waterfront sites (including those with tidal wetlands frontage)**, particular emphasis should be placed on the evaluation of the project's consistency with the water-dependent use policies and standards contained in CGS Sections 22a-92(a)(3) and 22a-92(b)(1)(A) -- also see adverse impacts assessment in Part VII.B below (attach additional pages if necessary):

See Coastal Site Plan Review Attachment.

Part VII.A.: Identification of Potential Adverse Impacts on Coastal Resources

Please complete this section for all projects.

Identify the adverse impact categories below that apply to the proposed project or activity. The Applicable column **must** be checked if the proposed activity has the **potential** to generate any adverse impacts as defined in CGS Section 22a-93(15). If an adverse impact may result from the proposed project or activity, please use Part VIII to describe what project design features may be used to eliminate, minimize, or mitigate the potential for adverse impacts.

Potential Adverse Impacts on Coastal Resources	Applicable	Not Applicable
Degrading tidal wetlands, beaches and dunes, rocky shorefronts, and bluffs and escarpments through significant alteration of their natural characteristics or functions - CGS Section 22a-93(15)(H)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Increasing the hazard of coastal flooding through significant alteration of shoreline configurations or bathymetry, particularly within high velocity flood zones - CGS Section 22a-93(15)(E)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Degrading existing circulation patterns of coastal water through the significant alteration of patterns of tidal exchange or flushing rates, freshwater input, or existing basin characteristics and channel contours - CGS Section 22a-93(15)(B)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Degrading natural or existing drainage patterns through the significant alteration of groundwater flow and recharge and volume of runoff - CGS Section 22a-93(15)(D)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Degrading natural erosion patterns through the significant alteration of littoral transport of sediments in terms of deposition or source reduction - CGS Section 22a-93(15)(C)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Degrading visual quality through significant alteration of the natural features of vistas and view points - CGS Section 22a-93(15)(F)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Degrading water quality through the significant introduction into either coastal waters or groundwater supplies of suspended solids, nutrients, toxics, heavy metals or pathogens, or through the significant alteration of temperature, pH, dissolved oxygen or salinity - CGS Section 22a-93(15)(A)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Degrading or destroying essential wildlife, finfish, or shellfish habitat through significant alteration of the composition, migration patterns, distribution, breeding or other population characteristics of the natural species or significant alterations of the natural components of the habitat - CGS Section 22a-93(15)(G)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Part VII.B.: Identification of Potential Adverse Impacts on Water-dependent Uses

Please complete the following two sections **only if the project or activity is proposed at a waterfront site**:

1. Identify the adverse impact categories below that apply to the proposed project or activity. The applicable column **must** be checked if the proposed activity has the **potential** to generate any adverse impacts as defined in CGS Section 22a-93(17). If an adverse impact may result from the proposed project or activity, use Part VIII to describe what project design features may be used to eliminate, minimize, or mitigate the potential for adverse impacts.

Potential Adverse Impacts on Future Water-dependent Development Opportunities and Activities	Applicable	Not Applicable
Locating a non-water-dependent use at a site physically suited for or planned for location of a water-dependent use - CGS Section 22a-93(17)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Replacing an existing water-dependent use with a non-water-dependent use - CGS Section 22a-93(17)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Siting a non-water-dependent use which would substantially reduce or inhibit existing public access to marine or tidal waters - CGS Section 22a-93(17)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2. Identification of existing and/or proposed Water-dependent Uses

Describe the features or characteristics of the proposed activity or project that qualify as water-dependent uses as defined in CGS Section 22a-93(16). If general public access to coastal waters is provided, please identify the legal mechanisms used to ensure public access in perpetuity, and describe any provisions for parking or other access to the site and proposed amenities associated with the access (e.g., boardwalk, benches, trash receptacles, interpretative signage, etc.):

The existing project site is an unprotected coastal bank which has been significantly impacted from reoccurring erosion. The continually eroding bank poses a safety threat to the adjacent public infrastructure, Gulf Street, and to the patrons which use Gulf Street. The proposed project will fortify the coastal bank using a vegetated bank, a concrete retaining wall and a stone revetment. The proposed structure makes the site safer such that patrons can continue to use it for recreational water-dependent activites such as fishing, reflection and relaxation.

*If there are no water-dependent use components, describe how the project site is not appropriate for the development of a water-dependent use.

Part VIII: Mitigation of Potential Adverse Impacts

Explain how all potential adverse impacts on coastal resources and/or future water-dependent development opportunities and activities identified in Part VII have been avoided, eliminated, or minimized (attach additional pages if necessary):

See Coastal Site Plan Review Attachment.

Part IX: Remaining Adverse Impacts

Explain why any remaining adverse impacts resulting from the proposed activity or use have not been mitigated and why the project as proposed is consistent with the Connecticut Coastal Management Act (attach additional pages if necessary):

There are no remaining adverse impacts resulting from the proposed activity. The proposed project complies with the applicable coastal use and activity policies and standards identified in Part V of this application. Thus, the Applicant is complying with the coastal regulations identified in the Connecticut Coastal Management Act.

Coastal Site Plan Review Attachment

Part II.A.: Description of Proposed Project or Activity

Describe the proposed project or activity including its purpose and related activities such as site clearing, grading, demolition, and other site preparations; percentage of increase or decrease in impervious cover over existing conditions resulting from the project; phasing, timing and method of proposed construction; and new uses and changes from existing uses:

The unprotected bank is located between two existing flood and erosion control revetment structures and leaves the bank, and the adjacent portion of Gulf Street, at further risk of erosion and weathering associated with significant storm events. The Applicant is seeking permission to secure the unstable bank by introducing a combination of a 260'± stone revetment, a 230'± concrete retaining wall, and a 230'± vegetated bank. The proposed structure has been designed for a 100-year return period event with the addition of 20 inches of sea level rise by 2050, as recommended by the Connecticut Institute for Resilience & Climate Adaptation (CIRCA). The crest of the proposed revetment will be at an elevation of +20'±, which is above the 100-year event runoff elevation. The revetment will have a slope of 1V:1.5H and a buried toe elevation of -6.1'±, which is below the 100-year event scour depth. The proposed armor stone will range in diameter between 1.8' to 5.7' and will be placed on bedding stone that will be wrapped in geotextile fabric. Landward of the proposed revetment will be a 230± foot concrete retaining wall at an elevation of 20'. The 230'± vegetated bank will have a toe at an elevation of 20' and a crest elevation ranging from an elevation of 24' to 25' to match the elevation of the adjacent road. The vegetated bank will have a slope of 1V:3H and will have vegetated swale to allow for the controlled drainage of stormwater. Vegetation planted along the slope will be a salt and wind tolerant native species. Construction vehicles will have access to the site from the northwest portion of the beach and will be able to stage equipment and supplies in the adjacent parking lot.

The project site is located along Gulf Street and Welch’s Point Road. The proposed project is necessary and unavoidable to prevent the unstable bank from erosion and to protect the public road, Gulf Street. The site is located between two existing flood and erosion control revetment structures which influence the amount of erosion the unprotected bank encounters. The proposed project will provide fortification and protection to the existing bank and to the unprotected portion of Gulf Street. In addition to infrastructure protection, the project site will also be utilized for recreational public activities such as fishing, reflection and relaxation via access from Gulf Beach. Other alternatives such as including a “soft” solution are not feasible at this site due to high energy nature of the site exposed to wind and large wave heights.

Construction will take place at the project site following the approval of all permit applications and after the City can secure project funding. Construction will be completed utilizing land and/or water-based equipment. Land based equipment may include dump trucks, a land-based crane, and bulldozers. Construction vehicles will have access to the project site from Gulf Beach located adjacent to the site to the northwest. The Gulf Beach parking lot is located adjacent to the site where construction equipment and supplies will have the ability to be staged and stored.



Construction equipment and supplies may also be transported to the site via the Long Island Sound. If so, a barge mounted crane will likely be used to transport revetment supplies to the site and to transfer supplies from the barge onto the project site.

Part IV: Consistency with Applicable Coastal Resource Policies and Standards

Describe the location and condition of the coastal resources identified in Part III above and explain how the proposed project or activity is consistent with all of the applicable coastal resource policies and standards; also see adverse impacts assessment in Part VII.A below:

22a-93(7) – “General Coastal Resources” means the coastal waters of the state, their natural resources, related marine and wildlife habitat and adjacent shorelands, both developed and undeveloped, that together form an integrated terrestrial and estuarine ecosystem.

The project site is located alongside and is influenced by the Long Island Sound. The site is an undeveloped coastal bank that is experiencing significant amounts of erosion. It is comprised of both terrestrial and estuarine ecosystems.

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.

The project site is an eroding coastal bank adjacent to two revetment structures on either side and the adjacent beach is cobbly in nature. The proposed project will fill in the gap between these two structures and will bring uniformity to the site. The project site is adjacent to the Gulf Street beaches, but located 790 feet away. As such, it is not anticipated that there will be negative impacts as a result of the proposed work.

22a-93(7)(A) – “Bluffs and Escarpments” means naturally eroding shorelands marked by dynamic escarpments or sea cliffs which have slope angles that constitute an intricate adjustment between erosion, substrate, drainage and degree of plant cover.

The project site is comprised of a coastal bank that is experiencing a significant amount of erosion. Both adjacent banks are hardened and the proposed project is necessary and unavoidable to prevent the unstable bank from erosion and to protect the public road, Gulf Street.

22a-93(7)(H) – “Coastal Hazard Area” means those lands 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.

The site is located in FEMA Zone VE (El 19’)/ X Zone per FEMA Map No. 09009C0533J, dated July 8, 2013. The work has been designed such that it does not impact these zones.



22a-93(7)(K) – *“Nearshore Waters” means the area comprised of those waters and their substrates lying seaward of a depth approximated by the ten-meter contour.*

The proposed project is located near the edge of nearshore waters, but the majority of the work is to take place above MHW. The proposed work will bring the site into conformance with adjacent structures.

22a-93(7)(N) – *“Shellfish Concentration Areas” means actual, potential or historic areas in coastal waters, in which one or more species of shellfish aggregate.*

The proposed project will be located landward of MLW. The shellfish concentration area is located approximately 1000’ offshore, thus no adverse impacts are anticipated.

22a-93(7)(B) – *“Rocky Shorefronts” means shorefront composed of bedrock, boulders and cobbles that are highly erosion-resistant and are an insignificant source of sediments for other coastal landforms.*

Boulders are located at the toe of the existing bank and cobbles are found scattered throughout the project site and are in abundance between El. +2 to MLW. The contractor will move and stockpile the cobbles adjacent to the project site prior to construction. The cobbles will be returned to their original locations following the construction of the proposed project, thus no adverse impacts are anticipated.

22a-93(7)(M) – *“Shorelands” means those land areas within the coastal boundary exclusive of coastal hazard areas, which are not subject to dynamic coastal processes and which are comprised of typical upland features such as bedrock hills, till hills and drumlins.*

The project site is located within a Zone VE (EL. +19) and a X Zone boundary, thus not entirely within the coastal flood hazard area. The work has been designed such that it does not impact these zones.

Part VI: Consistency With Applicable Coastal Use Policies And Standards

Explain how the proposed activity or use is consistent with all of the applicable coastal use and activity policies and standards identified in Part V. For projects proposed at waterfront sites (including those with tidal wetlands frontage), particular emphasis should be placed on the evaluation of the project’s consistency with the water-dependent use policies and standards contained in CGS Sections 22a-92(a)(3) and 22a-92(b)(1)(A) – also see adverse impacts assessment in Part VII.B below:

Section 22a-92(b)(2)(J): *to maintain the natural relationship between eroding and depositional coastal landforms and to minimize the adverse impacts of erosion and sedimentation on coastal land uses through the promotion of nonstructural mitigation measures. Structural solutions are permissible when necessary and unavoidable for the protection of infrastructural facilities, cemetery or burial grounds, water-dependent uses, or commercial and residential structures and substantial appurtenances that are attached*



or integral thereto, constructed as of January 1, 1995, and where there is no feasible, less environmentally damaging alternative and where all reasonable mitigation measures and techniques have been provided to minimize adverse environmental impacts.

The proposed project is being completed to protect the public infrastructure, Gulf Street and the utilities in the roadway, from being undermined due to the continual erosion of the adjacent waterward bank. The project site experiences high amounts of wave energy that has resulted in a significant amount of erosion along the bank. The proposed work is located in between two existing revetment flood and erosion control structures. The proposed project is necessary and unavoidable due to the continuously erosive environment and high wave energy between these two structures. If no work is performed, the roadway and utilities in the roadway will be subject to failure, putting the public at risk.

Alternatives considered included softer solutions such as geo-tubes, coir logs, and beach nourishment. An extensive coastal engineering analysis was performed to characterize wave and current energies at the site and to determine if a softer solution would be feasible, but these solutions were ultimately rejected as the wave energy at the site makes them unsuitable to protect site as they not be robust enough to resist loads associated with the waves that impact the site. Additionally, these solutions would be a challenge to tie these structures into the adjacent revetment structures. Other alternatives considered included a bulkhead, concrete seawall, and a gabion wall. The proposed armor stone also allows for a more gently sloped structure than a bulkhead or concrete seawall which will allow for waves to run up the slope instead of being reflected by a wall structure. Additionally, the armor stone will tie-in into the adjacent structures without creating any corners or sharp angles which could focus wave energy. Cutting back the slope was not considered, as this would undermine the adjacent structures as well as the road. The proposed concept was determined to be the least environmentally damaging alternative as such, the proposed work is consistent with CGS Sec. 22a-92(b)(2)(J).

General Development –

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.*

Section 22a-92(a)(2): *To preserve and enhance coastal resources in accordance with the policies established by chapters 439, 440, 446i, 466k, 447, 474 and 477.*

Section 22a-92(a)(9): *To coordinate planning and regulatory activities of public agencies at all levels of government to ensure maximum protection of coastal resources while minimizing conflicts and disruption of economic development.*



The proposed project will have no adverse impacts in the development, preservation and growth of the surrounding areas. The project is necessary and unavoidable to prevent the unstable bank from erosion and to protect the public road, Gulf Street. Coordination planning and regulatory activities of public agencies at all levels of government has been/ will continue to be provided throughout the various stages of the proposed project.

Water-Dependent Use –

Section 22a-92(a)(3): To give high priority and preference to uses and facilities which are dependent upon proximity to the water or the shorelands immediately adjacent to marine and tidal waters.

Section 22a-92(b)(1)(A): To manage uses in the coastal boundary through existing municipal planning, zoning and other local regulatory authorities and through existing state structures, dredging, wetlands, and other state siting and regulatory authorities, giving highest priority and preference to water-dependent uses and facilities in shorefront areas.

The proposed project is necessary and unavoidable to prevent the unstable bank from erosion and to protect the public road, Gulf Street. It will allow for the fortification of the unstable bank and improve safety at the site where patrons of the community enjoy water-dependent activities at the site such as fishing, relaxing and reflecting.

Coastal Structures and Filling –

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.

The proposed activity will have no adverse impact to the circulation and sedimentation patterns, water quality, or flood and erosion measure of the Long Island Sound. The proposed structure will be constructed adjacent to two revetment structures on either side and will fill in the gap between these two structures in order to bring the site into uniformity. Therefore, there will be no conflict with the existing riparian rights with adjacent landowners.

Part VIII: Mitigation of Potential Adverse Impacts

Explain how all potential adverse impacts on coastal resources and/or future water-dependent development opportunities and activities identified in Part VII have been avoided, eliminated, or minimized:



CGS Section 22a-93(15)(H) – Degrading tidal wetlands, beaches and dunes, rocky shorefronts, and bluffs and escarpments through significant alteration of their natural characteristics or functions

The proposed project is adjacent to two revetment structures on either side and will fill in the gap between these two structures. The project is necessary and unavoidable to protect the upland infrastructure from erosion and to stabilize the existing bank in between the two structures. The adjacent beach is cobbly in nature and the project will bring uniformity to the site. Thus, no negative impacts are anticipated as a result of the proposed work.

CGS Section 22a-93(15)(E) – Increasing the hazard of coastal flooding through significant alteration of shoreline configurations or bathymetry, particularly within high velocity flood zones

The proposed project is located near the edge of near shore waters, but the majority of the work is to take place above MHW. The proposed work will bring the site into uniformity with adjacent structures. Thus, no negative impacts to the mapped special flood hazard area on the site are anticipated as a result of the proposed work.

CGS Section 22a-93(15)(C) – Degrading natural erosion patterns through the significant alteration of littoral transport of sediments in terms of deposition or source reduction

The proposed project is necessary and unavoidable to protect the upland infrastructure from erosion and to stabilize the existing bank. Thus, no negative impacts are anticipated as a result of the proposed work.





SECTION 5

Attachment D Easement to City of Milford



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MAR 10 1992

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3.55

ADMINISTRATOR'S DEED

TO ALL PEOPLE TO WHOM THESE PRESENTS SHALL COME, GREETING:

KNOW YE, THAT, I, ELIZABETH S. MAHER, Administratrix, D.B.N., C.T.A., of the Estate of Helen M. Stuart, Deceased, acting pursuant to the authority contained in Article Third of the Last Will and Testament of the said Helen M. Stuart, on file in the Milford Probate Court, as well as the authority contained in Sec. 45a-324 of the Connecticut General Statutes, presently of the City of Milford, County of New Haven and State of Connecticut, for the consideration of NINE HUNDRED THOUSAND AND NO/100 (\$900,000.00) DOLLARS received to my full satisfaction of JOSEPH H. BLICHFELDT, III and MARY C. BLICHFELDT, both of said City of Milford, do give, grant, bargain, sell and confirm unto the said JOSEPH H. BLICHFELDT, III and MARY C. BLICHFELDT, and unto the survivor of them, and unto such survivor's heirs and assigns forever, all the right, title, interest, claim and demand which the said HELEN M. STUART had at the time of her decease, or which I as such Administratrix D.B.N., C.T.A. have or ought to have, in and to those two certain pieces or parcel of land together with all buildings and improvements, situated in the City of Milford, County of New Haven and State of Connecticut, more particularly bounded and described as set forth in Schedule A attached hereto and made a part hereof.

Said premises are subject to:

- 1.) Building lines, all laws, ordinances or governmental regulations, including building and zoning ordinances, affecting said premises.
- 2.) Taxes to the City of Milford on the List of October 1, 1991 which the grantees herein assume and agree to pay as part consideration for this deed.
- 3.) Restrictions, Conditions and Agreements contained in a Quit-Claim Deed recorded in Volume 74 at Page 226 and Volume 74 at Page 227 of the Milford Land Records. (Affects Second Piece)
- 4.) An Easement in favor of the Town of Milford dated January 20, 1939 and recorded in Volume 247 at Page 95 of the Milford Land Records. (Affects Second Piece)
- 5.) An Easement Agreement by and between The Estate of Helen Stuart and the City of Milford dated June 22, 1984 and recorded in Volume 1295 at Page 261 of the Milford Land Records. (Affects Second Piece)

TO HAVE AND TO HOLD the above granted and bargained premises with the appurtenances thereof, unto them the said grantees, and unto the survivor of them, and unto such survivor's heirs and assigns forever. And I, the said Administratrix D.B.N., C.T.A., do hereby covenant with the said grantees, and with the survivor of them, and with such survivors' heirs and assigns, that I have full power and authority as Administratrix D.B.N., C.T.A., aforesaid, to grant and convey the above described premises in manner and form aforesaid and for myself, and my heirs, executors and administrators do further covenant to warrant and defend the same to them, the said grantees, and to the survivor of them and to such survivors' heirs and assigns, against the claims of any person or persons whomsoever, claiming by, from or under me as Administratrix D.B.N., C.T.A. aforesaid.

COMM. REVENUE SERVICES
5,000.⁰⁰

CONVEYANCE TAX RECEIVED
\$ 990.⁰⁰
TOWN CLERK OF MILFORD

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SCHEDULE A

ALL THOSE TWO certain pieces or parcels of land together with all buildings and improvements, situated in the City of Milford, in New Haven County, and being more particularly bounded and described as follows:

FIRST PIECE:

- NORTHERLY: by land now or formerly of Helen H. Curtiss, being land formerly of Dumond Merwin and the late Frank Gilbert, 593.5 feet;
- NORTH-EASTERLY: by land in part of Harry Merwin and in part by land now or formerly of George Gillette et al, a distance of 488.5 feet;
- EASTERLY: by land now or formerly of said George Gillette et al 193.2 feet;
- SOUTHERLY: by Welch's Point Road, 96.3 feet;
- WESTERLY: by land of Margaret Stuart Boynton, 154.33 feet;
- SOUTHERLY: again by land of said Margaret Stuart Boynton, 179.78 feet;
- SOUTHERLY: again by land of Elizabeth Stuart Maher and by land of Jane Stuart Fowler, in all a distance of 240 feet;
- EASTERLY: again by land of Jane Stuart Fowler 279.05 feet;
- SOUTHERLY: again by Welch's Point Road, 87.12 feet;
- EASTERLY: again by Welch's Point Road, 7 feet;
- SOUTHERLY: again by Welch's Point Road, 150 feet;
- WESTERLY: again by Gulf Street, 465 feet, more or less.

Containing 5-1/2 acres more or less, being the same premises as shown on a map entitled "Map of Property owned by Henry J. Stuart, Milford, Connecticut, Sept. 29, 1939". Scale 1 inch equals 40 feet. Revised August 3, 1948 - Made by V.B. Clarke, Civil Engineer, Ansonia, Connecticut.

Being the same premises as described in a Probate Certificate Devise from the Estate of Henry J. Stuart to Helen M. Stuart, dated October 20, 1953 and recorded in Volume 379 at Page 377 EXCEPTING THEREFROM a certain piece or parcel of land taken by the City of Milford for the street line establishment of Gulf Street, dated January 17, 1967 and recorded in Volume 581 at Page 545 of the Milford Land Records.

SECOND PIECE:

- NORTHERLY: by land now or formerly of A. Berthena Merwin;
- EASTERLY: by the highway known as Gulf Street, sometimes known as Welch's Point Road;
- SOUTHERLY: by land now or formerly of Nicholas N. Pond; and
- WESTERLY: by Milford Harbor or Long Island Sound.

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IN WITNESS WHEREOF, I as such Administratrix D.B.N., C.T.A., have hereunto set my hand and seal this 10th day of March, 1992.

Signed, Sealed and Delivered
in the Presence Of:

T.B. Lynch

 THOMAS B. LYNCH

Janice R. Slater

 JANICE R. SLATER

ESTATE OF HELEN M. STUART
Elizabeth S. Maher

 BY: ELIZABETH S. MAHER
 ADMINISTRATRIX D.B.A., C.T.A.

STATE OF CONNECTICUT)
) ss: Milford March 10, 1992
 COUNTY OF NEW HAVEN)

On this the 10th day of March, 1992, before me, Thomas B. Lynch, the undersigned officer, personally appeared, ELIZABETH S. MAHER, Administratrix D.B.A, C.T.A. of the Estate of Helen M. Stuart, Deceased, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument and acknowledged that she executed the same for the purposes herein contained, as her free act and deed.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

T.B. Lynch

 Thomas B. Lynch
 Commissioner of the Superior Court

Grantees' Latest Address:
 14 Laurelwood Drive
 Wallingford, CT 06492

MAR 10 1992
 Received for record _____
 at 3:55 PM and recorded by me.
Alvin H. Johnson

 Milford City Clerk

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EASEMENT AGREEMENT

THIS INDENTURE, made, this 22ND day of June, 1984, by and between THE ESTATE OF HELEN STUART hereinafter referred to as the Grantor and the City of Milford, a duly organized municipal corporation operating under the laws of the State of Connecticut, hereinafter referred to as the Grantee, wherein the parties in consideration of the mutual covenants set forth herein and other good and valuable considerations wherein, agree as follows:

1. The Grantor, for its part does hereby grant to the Grantee and its successors and assigns forever, the rights, privileges and easement to locate, use, maintain, repair and/or replace a revetment under, upon and across a strip of land situated in said City of Milford, County of New Haven and State of Connecticut being bounded and described as follows, to wit:

Beginning at the northerly corner of the Grantor's property, at the point of intersection of the easterly property line of land now or formerly of Helen G. Ripley and the southerly highway line of Gulf Street;

Thence running southeasterly for a distance of 400 feet, more or less, along the southerly highway line of Gulf Street;

Thence turning and running southwesterly for a distance of 81 feet, more or less, to the mean high water mark of Long Island Sound;

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Thence turning and running northwesterly along said mean high water mark for a distance of 415 feet, more or less;

Thence turning and running northeasterly along the easterly property line of land now or formerly of Helen G. Ripley for a distance of 45 feet, more or less, to the point of beginning.

Said permanent easement being approximately 50 feet wide (average) and 408 feet long and containing 15,870 square feet more or less, as shown and delineated on a map entitled, "City of Milford, Department of Public Works, Easements to be acquired for Slope Stabilization on Gulf Street, Bureau of Engineering, April 30, 1964".

2. And the said Grantee does covenant to maintain adequate insurance of the premises during the construction of the improvements to hold harmless the Grantor, its successors, and heirs from any and all claims arising from said construction of the improvement on said premises during the period of said construction and thereafter, indemnifying the Grantor from any liability whatsoever to the public and non-invitees, for the duration of the easement granted herein.

3. The Grantee further covenants to construct the so-called revetment in such a way as to allow future placement or construction of a stairway to the beach area from the upper edge of the

easement area, located at Gulf Street. The purpose of this covenant is to allow the Grantor, or its heirs, to construct such a stairway, at its cost, at some future date. Provided, however, that no such stairway shall jeopardize the structural safety of the revetment, as may be determined by the City Engineer at some future date.

4. The Grantee further covenants that it will not construct any sidewalk or other public accessway on the easement area, nor on any part of the Grantor's property.

5. The Grantee further covenants that the property tax assessment for the improvement provided by the easement and revetment shall not be increased due to this public works project. However, such waiver of increased tax assessment is strictly limited to any possible increases due to the present public project and does not apply to any future, privately undertaken improvements that may be undertaken by the Grantor or its heirs.

6. It is further understood by the parties that the Grantor may, at its option, exercise the right to challenge any future tax assessment(s) of the serviant property involved herein for the use of the easement, as controlled by state statute.

7. It is agreed between the parties that the grant of such easement will not in any way bar or preclude full use of the Stuart property nor bar passageway over such easement for the development of the remainder of the Stuart property.

8. It is stipulated and agreed between the parties that rights are reserved to the Stuart Estate, its heirs, and assigns to seek an award for the value of the property taken by such easement.

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IN WITNESS WHEREOF, I have set my hand and seal this 22nd day of June, 1984.

Signed and Sealed in the presence of

THE GRANTOR

Elizabeth S. Maher

Martha C. Stuart
MARTHA STUART, Executrix
Estate of Helen Stuart

Mary Anne Sherman

STATE OF CONNECTICUT)
) ss. Milford
COUNTY OF NEW HAVEN)

On this, the 22nd day of June, 1984, before me,
MARTHA STUART, Executrix of the Estate of Helen Stuart, the undersigned officer personally appeared and executed the foregoing instrument for the purpose therein contained by signing her name hereupon.

George S. Mattison, Jr.
Commissioner of the Superior
Court

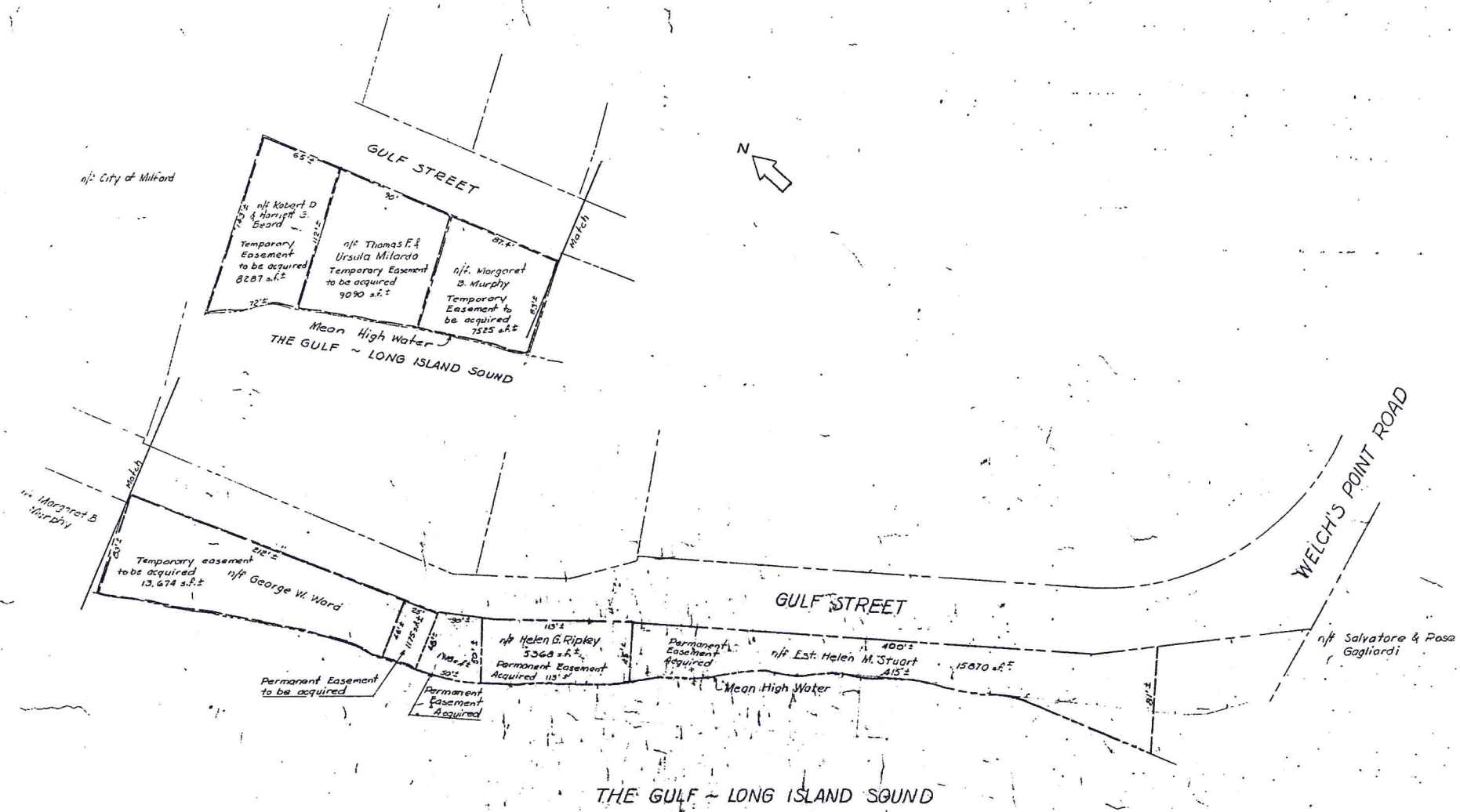
Received for record July 2, 1984 at 9:40 A.M. and recorded by me.

Virginia James, Clerk
City Clerk

AB 1215

AB 1512

BB 1215



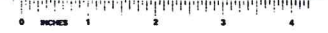
This map is compiled from other maps, deed dimensions and other sources of information, not to be construed as an accurate survey, and subject to final changes as a more accurate survey may disclose.

I hereby certify that this map and survey were prepared in accordance with the standards of a class D survey as defined in the Code of Practice for Standards of Accuracy of Surveys and Maps adopted Dec. 10, 1975 as amended by the Connecticut Association of Land Surveyors, Inc.

John Casey 27 May 87 6887
Surveyor Reg. No.



CITY OF MILFORD
DEPARTMENT OF PUBLIC WORKS
Easements to be acquired for
Slope Stabilization on Gulf Street
Bureau of Engineering April 30, 1984, Revised, April 24, 1985
Scale in Feet



DT 707-84B rev 85

AB 1215

AB 1215