MILFORD HARBOR MANAGEMENT
PLAN
MILLFORD, CT

VOL I: HARBOR MANAGEMENT FRAMEWORK

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MILFORD HARBOR MANAGEMENT PLAN
MILFORD, CONNECTICUT

Volume 1: HARBOR MANAGEMENT FRAMEWORK

HUTTO/SEMPERE ASSOCIATES
Easton, Maryland Andover, Massachusetts

June 17, 1986

Revised August 18, 1986

This document was financed in part by a grant through the Office of Coastal Zone Management National Oceanic and Atmospheric Administration of the U.S. Department of Commerce under the Coastal Zone Management Act of 1972 and was prepared in cooperation with Connecticut Department of Environmental Protection's Coastal Area Management Program.

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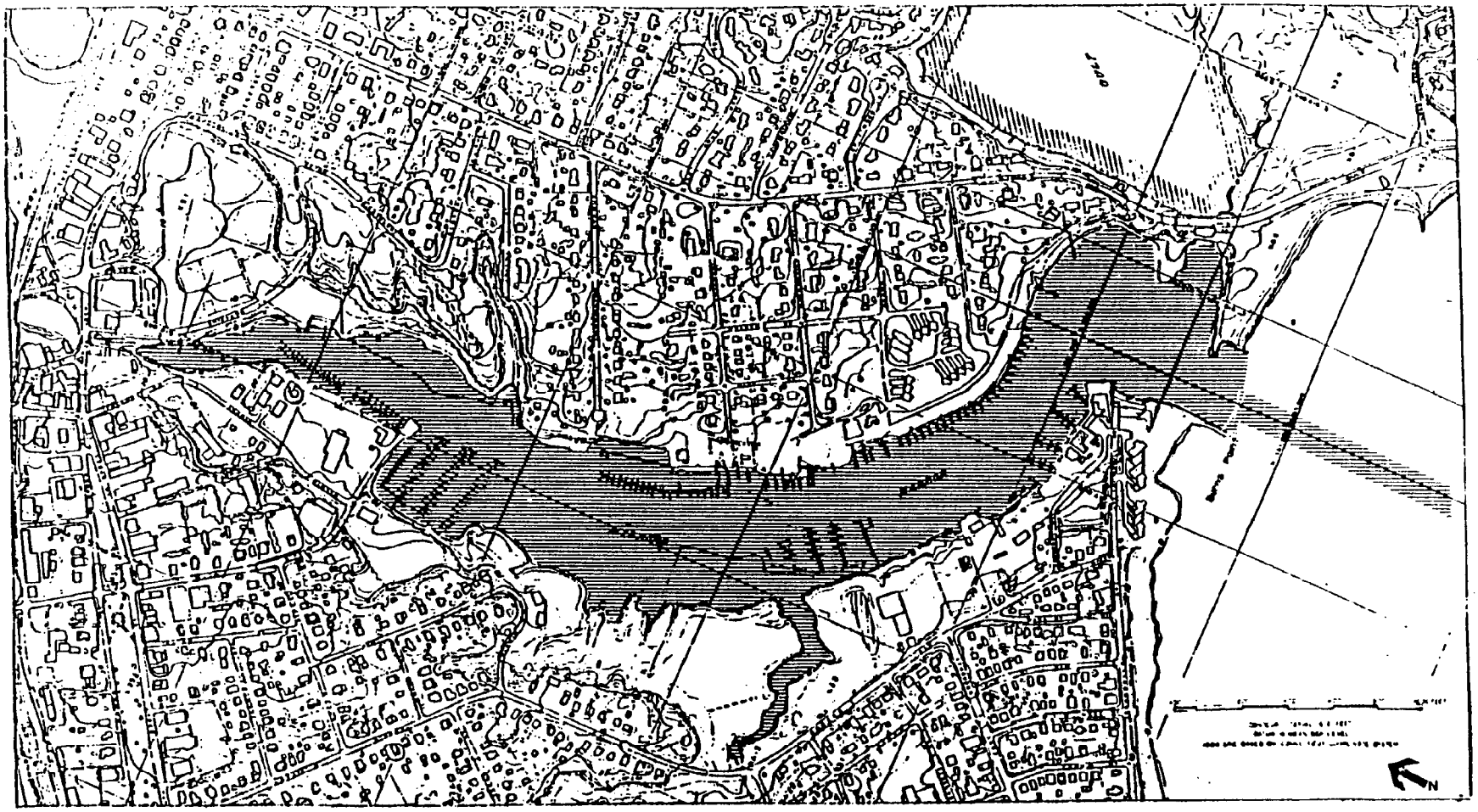
1. INTRODUCTION

Project History

The ideal location of the City of Milford along the Long Island Sound has given it a rich history of successful maritime enterprise. Ship building, commercial fishing and more recently recreational boating have been a key element in this town's commercial viability. As in many of the New England coastal communities, the rapidly growing recreational boating industry and the public's desire to live and be near the waterfront is placing increasing demands on the local governmnet for increased maintenance and control of its waters.

A brief descriptive history of Milford's waterfront was drafted by the Harbor Commission in 1979 during initial steps taken by that commission toward the development of this document, the opening statements are as follows:

> "The City of Milford, located between Bridgeport and New Haven on Long Island Sound, has an extensive shoreline on both Long Island Sound and the Housatonic River, and three small natural fresh water rivers that feed the sound through estuaries. There are a number of the shore areas that provide summer anchorage for boats of various sizes. Other areas of the shore have the potential for development of excellent harbor facilities mainly for pleasure craft and sport fishing.
>
> For many years there was substantial commercial oystering activity that operated out of Milford Harbot. The Oyster Dredging vessels that operated year round, were of substantial size and draft. The industry provided employment for a number of families and was a major element in the City's economy.
>
> Through the efforts of the oyster companies improvements were made for harbor storm protection, and channel depths were maintained both by dredging and vessel activity. Changes in the fisheries has resulted in a decline of business and a loss of this industry in Milford."



Milford Harbor Management Plan
HUTTO/SEMPERE ASSOCIATES 1983

HARBOR AREA MAP

Problems Typically Associated with Harbor Management

During the last decade, waterfront communities have been awakened to the great potential that lies dormant in their shoreline properties. New investment opportunities are available for both public and private sector development projects. This situation combined with current investment preferences have led to an ever increasing trend toward the redevelopment of out nation's waterfront areas. This type of investment is especially effective along the waterfront in many small craft harbors. Many of these small redevelopment projects, however, have contributed considerably to the problems faced by the local resource managers (town engineers, planning officials and harbormasters).

As waterfront development continues along the shoreline there is a natural tendency toward further encroachment into the adjacent water surface. This type of development pattern has the potential to compete with minimum anchorage, mooring and navigational requirements as private development projects expand into the remaining water surface. By determining in advance what the minimum water surface needs are. local decision makers can be provided with the information necessary for taking the first steps toward preserving a viable harbor area for the commercial fisherman, recreational boater or casual sightseer.

Detail of Problems Specific to Milford

The depth and severity of Milford's problems regarding the proper use, allocation and management of its waterfront has long been understood. This understanding is demonstrated in a quote taken from a document drafted by the Harbor Commission three years before this project was initiated:

"Unless better planning is instituted it (Milford's waterfront) will not meet the requirements of the general public in the near future due to the many demands placed on its limited resources."

Milford Harbor Commission,
"A Plan for the Use, Protection and Development
of Milford Harbor, Phase 1", 12/10/79

The problems that the decision makers in Milford are facing regarding Milford's waterfront can be placed into one of five categories. These five categories are:

1. Navigation and Water Surface Management
2. Administration of Harbor Use
3. Natural Resource Management
4. Public Access
5. Economic Development

The specific problems that are presently demanding attention are as follows:

a. The substantial encroachment into the Federal Project by private and commercial docks and pilings.
b. The Coast Guard has officially abandoned the maintenance of Milford's aids to navigation.
c. The Harbor Commission has a poorly defined role and little formal authority or responsibility for active management of the harbor.
d. There is no citywide comprehensive program designed solely for management of the waters of the City of Milford.
e. The State appointed harbormaster has limited local government authority.
f. There is no citywide inventory and analysis of points of waterfront access.
g. Currently there is little passive recreation access on the waterfront.
h. If there is to be a comeback in commercial fishing in Milford Harbor then there will need to be certain support services and facilities provided.

The Concept of Harbor Management Planning

One of the key objectives of Harbor Management Planning is to accurately and concisely describe existing problems and identify probable future conflicts relating to the administration and management of municipal waters. Problems specific to both the administration and the physical management of small craft harbors should be considered in light of the needs specific to the recreational boater as well as the commercial waterman. This analysis requires attention to engineering, land use management, water resource management and regulatory control.

What Is a Harbor Management Plan?

Control and regulation within municipal waters is typically shared between federal, state and local government, each level of government with its own predetermined objectives. Because these levels of government are dissimilar their respective management objectives will often be divergent. This in turn creates uncertainty regarding authority and responsibility over the management of municipal navigable waters. In addition, federal, state and local governments routinely find themselves facing complex decisions with a paucity of information to assist them in these site specific decisions.

Traditional comprehensive land use planning fails to adequately consider the administrative changes required for the implementation of land use plans beyond the shoreline. And yet it is the land use controls, adopted through the comprehensive plan process, that will allow or disallow urban waterfront activities with little regard for their impact on water surface availability, local maritime industries or the carrying capacity of the local, natural shoreline habitats.

It is the objective of Harbor Management Planning to evaluate the effect of existing, often uncoordinated, regulatory programs (municipal, state and federal government) in light of the unique constraints existing in the specific waterfront, evaluate potential problems, identify local maritime goals and objectives, and then create an integrated management framework designed to accomplish the stated goals and objectives through coordination between local, state and federal government activities.

A Harbor Management Plan is not intended to replace the Municipal Comprehensive Plan, Sewer and Water Plans or the Municipal Coastal Program. Instead, this plan is intended to offer the necessary guidance for inclusion of the navigable waterways within the existing land use/resource management plans and programs. It is also the objective of this plan to give sufficient guidance as to allow a greater degree of coordination between the various regulatory agencies active in the waterfront areas of the City of Milford.

RESOURCE INVENTORY

Introduction

The development of the Milford Harbor Management Plan is built upon the collective analysis of many past studies, reports and planning efforts. The following section summarizes some of the significant environmental, physical, and cultural factors which shape the character of Milford Harbor. The resource factors are listed below followed by a general discussion of each.

Hydrologic Setting

The major water bodies within Milford are the Housatonic and Indian Rivers, and the Wepawaug River. After flowing some 15 miles through the towns of Woodbridge, Orange and Milford, the Wepawaug River spills under the old Jefferson Bridge where it widens to form Milford Harbor. The harbor has a drainage area of approximately 20 square miles, and is found within the Central Connecticut Regional Coastal Basin. In addition to the Wepawaug, other sources of freshwater flow include Beards Creek and many points of surface inflow including those from storm drains, road drains, and street ends. Direct discharges from the Milford sewage treatment plants also add additional hydrologic flow to the harbor.

Bathemetry

The depth of water in Milford Harbor at the mean low water mark range from 9.7 feet (found within the federal channel at the mouth of the harbor), to exposed tidal mudflats found in several areas. The April 1983 Conditions Survey from the Corps of Engineers found that the federal navigation channel varies in depth from 5.3 feet (at the head of the channel) to 9.8 feet at the channel mouth. The average channel depth within the harbor is approximately 7.5 feet throughout, except in the area opposite the National Marine Fisheries site where depths average 6.0 feet (at mean low water).

The normal tidal range for Milford Harbor is 6.6 feet. The average spring tidal range is 7.6 feet.

Marine Conditions

The prevailing winds in Milford Harbor are primarily southerly during the summer months, and shift to the northwest during the winter months. The combination of wind velocity, direction, distance (or fetch), and duration create wave action within the harbor. The normal wave chop is less than one foot, but storm conditions have created wave action in excess of three feet during certain past occurances. Milford Harbor exhibits relatively strong cross-currents at the mouth of the harbor during ebb and flood tide conditions.

Coastal Flood Hazard Areas

The 100-year coastal flood hazard area as mapped by the Federal Emergency Management Agency (FEMA) is shown on Figure 2. This boundary is the base flood elevation. The base flood elevation has a 1% chance of occuring each year. In Milford Harbor this elevation is approximately +10.6 feet (above mean sea level). All of the dockage and much of the abutting waterfront structures fall within the base flood elevation. During flooding conditions due to very heavy rainfall in June of 1982, flood waters resulting in the flooding of much of Wilcox Park and the City Library facilities at the head of the harbor, and created much destruction to the harbor's marina facilities, although upstream damage was much greater than damage within the harbor. This storm occurance is reportedly the source of much of the current sedimentation and shoaling problems which are occuring in the harbor.

Water Quality

The water quality classification for Milford Harbor is SB meaning the water is suitable for all types of recreation including contact uses such as swimming and fishing. Acccording to limited water quality analysis performed during the City's 1977 wastewater facilities planning effort, the bacteria levels for the harbor fall within the SB classification standard, but are below dissolved oxygen (D.O.) standards. D.O. levels during flood tide conditions were consistently higher than ebb tide, indicating the D.O. rich waters of Long Island Sound were boosting levels during tidal mixing.

Significant potential sources of water pollution to the harbor are from discharges from the Milford Sewage Treatment Plant located at the head of the harbor and from the in-harbor discharge of marine sanitary facilities from boats. Although discharging of marine sanitary facilities is not a reasonable practice within a confined harbor area, it does occur. The problem is compounded by the fact that only a single pump-out facility for boat holding tanks is available within the harbor area.

Intertidal Resources

Significant areas of regulated tidal wetlands are found in several fringe locations throughout Milford Harbor. The most prominant areas are found along the banks of Wilcox Park south of the City boat ramp, and at the mouth of Beards Creek on the western bank of the harbor, and along the shores of the eastern basin near the mouth of the harbor. These areas, as mapped on the state's Coastal Resource Map, are shown on Figure 2.

INTERTIDAL RESOURCES

Extensive intertidal flats, relatively flat areas subjected to alternating periods of tidal inundation and flooding, are found in the area lying between the Milford Boat Works and Beards Creek on the western edge of the harbor, near the head of the harbor, and within the eastern basin area. These areas are also shown on Figure 2. These wetland areas provide habitat for a great diversity of wildlife, waterfowl, aquatic and benthic organisms.

Shellfish Resources

A review of the State of Connecticut's Shellfish Atlas, and discussions with personnel from the State Aquaculture Lab (which is housed in facilities on the western banks of Milford Harbor) show that there are shellfish concentration areas found within the limits of Milford Harbor and in The Gulf beyond the mouth of the harbor. Although no extensive bio-surveys have been undertaken in the harbor, the Aquaculture Lab reports that significant populations of the following shellfish are found within the harbor:

Soft Clam	Mya arenaria
Hard Clam	Mercenaria merceneria
Eastern Oyster	Crassostrea virginica
Blue Mussell	Mytilus edulis

The intertidal substrate of the East Basin provides a natural bed for the production of brood stock of the Eastern Oyster. These 1-2 year seed oysters are commercially harvested and transplanted for development in non-polluted off-shore waters.

SHELLFISH CONCENTRATION AREAS

Sedimentation/Shoaling

The predominant source for sediment loading in Milford Harbor is from upstream and surface runoff discharges to the harbor and from Gulf Pond, although tidal flow from Ling Island Sound carries with it sediment material. There are a series of upstream ponds which act as "sediment traps". The effective usefulness of these ponds to act as sediment traps has currently been exceeded as they are in need of clearing and digging out.

The amount of sediment material input into the harbor from the Sound is a function of tidal velocities and the amount of fresh water input from upstream sources. During low flow conditions and with high wave action, more material would tend to be carried into the harbor, while times with high discharge and lower tidal velocities will act to scour the harbor and transport the finer materials into the Sound. On the average, the net direction of sediment transport is into the Sound.

The littoral drift pattern across the mouth of the harbor results in moderate shoaling problems at the harbor entrance. This problem is added to by the erosion and movement of fine sand material that has been placed, and captured, in the Gulf Beach area for recreation use.

Land Use

The dominant uses found along the shores of the harbor are those associated with marinas, boat yards, and docks for private homes. In all, there is over 4,000 linear feet of dockage facing the harbor. Wilcox Park includes a significant portion of undeveloped waterfront, as do the tidal flats on the western shore. Residential frontage is limited to a few single-family homes and two large condominium projects, one off Dock Road and the other off Rogers Avenue. The City owns and maintains virtually all of the land found at the head of the harbor representing significant public access opportunities. These access concerns have been addressed in the Head-of-the-Harbor Plan, but as of yet not implemented.

Zoning

The State's zoning enabling legislation provides Milford with a powerful tool to shape and control the development of the harbor and the character of the waterfront. A summary of the harbor's zoning classification is given below. The existing zoning districts are mapped on the project area map.

The entirety of Milford Harbor falls within one of four zoning districts, R-12.5, BB, CBD, or GO. The predominance of Milford Harbor area is in the R-12.5 zone, and the BB zone.

Zoning Chart

R-12.5	One-Family Residential (12,500SF min. lot size)
BB	Boating Business
CBD	Central Business District
GO	General Office

CATEGORIES	R12.5	BB	CBD	GO
MIN. REQ.				
Lot Area (sq.ft.)	12,500	2Ac.	2,000	10,000
Lot Width (feet)	80	150	20	70
Lot Depth (feet)	100	200	70	100
MAXIMUM PERMITTED				
Bldg. Height Stories	2 1/2	2	3	3
Feet	35	50	40	35
Building Area	30%	-	50%	40%
Lot Coverage	45%	75%	-	80%

Key Access Points

Milford Harbor has many points of direct access available to the public. These include all of Wilcox Park, the City boat ramp, the City dock, the jetties at the mouth of the harbor (both east and west), and the property supporting the City's sewerage treatment plant adjacent to the Coast Guard Auxiliary building. In addition, many quasi-public access points are accessible, such as the several marinas and the Milford Yacht Club. Other potential and currently under-utilized access points which should be investigated include several street-ends which front directly on the harbor. These include the ends of Carrington Avenue, Edgewater, Trumbull Avenue, Pond Street, Gulf Street, Harborview and Shipyard Lane.

Federal Channel

The Army Corps of Engineers maintains the federal channel in Milford Harbor. The designated federal channel is 100 feet wide at the mouth of the harbor (of which only an 85 foot width is maintained) for a distance of approximately 1,100 feet. The designated channel widens to 100 feet at a point approximately off the end of Dock Street. Although the authorized channel is 100 feet wide, only an 85 foot wide channel has been historically dredged and maintained. The total surface area of federally maintained channel in the harbor is approximately 600,000 square feet (13.75 acres). In addition, there is approximately 55,000 square feet (1.26 acres) of non-maintained channel found within the harbor.

Anchorages

The Army Corps maintains an anchorage area of approximately 244,000 square feet (5.6 acres). In addition, there are two additional mapped, but non-maintained anchorages. One has a surface area of 53,500 square feet (1.2 acres), and the second an area of 15,250 square feet (.4 acres).

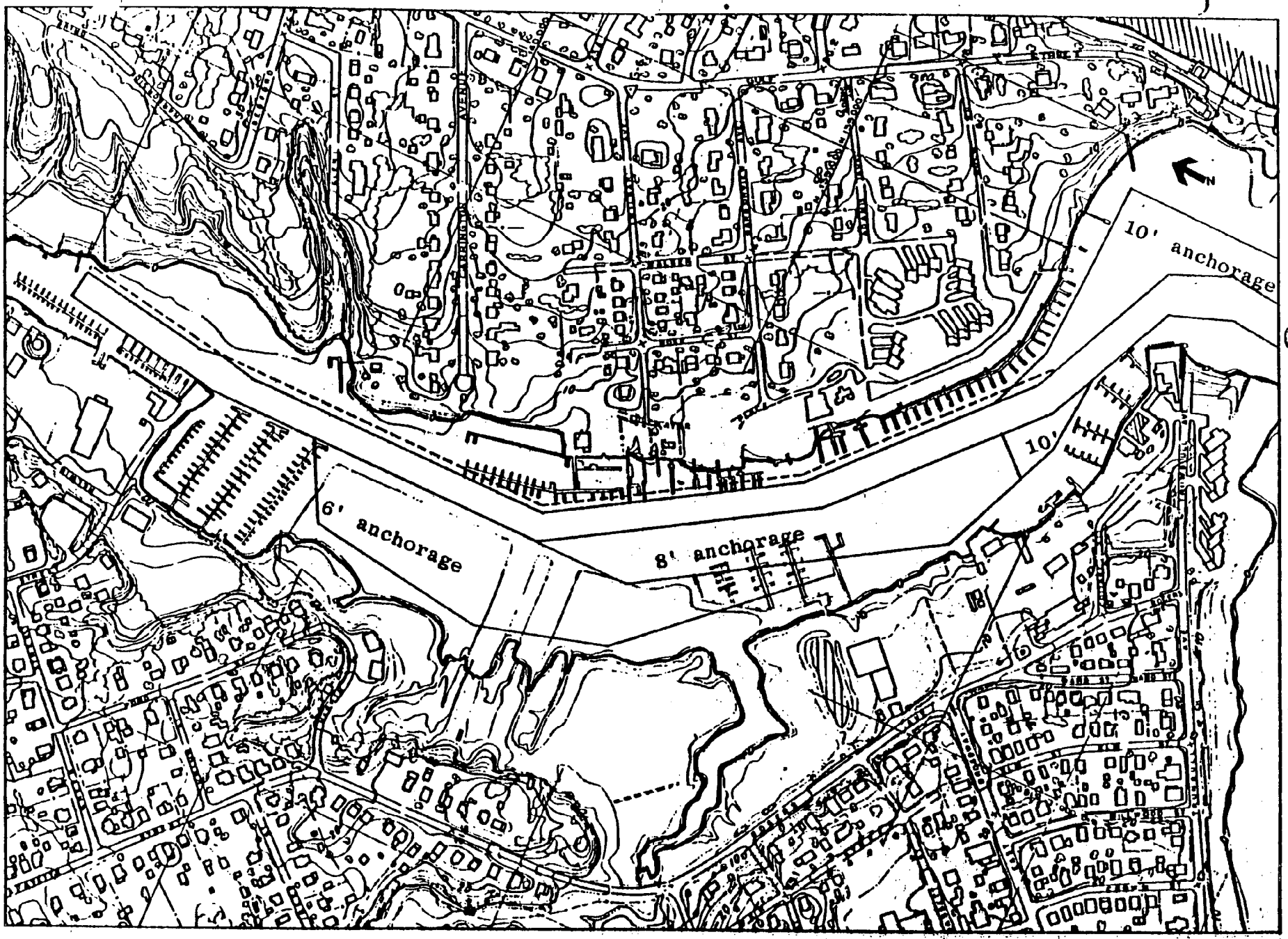
City Dock and Ramp

The City of Milford provides a public boat launch facility for residents at Wilcox Park. Limited parking for cars and trailers is available on site. The Head of the Harbor Plan has documented the physical condition of the City boat launch facility as deficient, as the pavement is showing visible signs of wear, and the launching ramp is not suitable for use in low tide conditions. At the time of that report the single guide floats to aid in the launching and retrieving of boats was not in place. This small addition has greatlly improved the usefulness of the launching facility.

The City dock located on the western side of the harbor at the end of a narrow right-of-way adjacent to the Milford Boat Works commercial operation is a small and limited facility. The pier structure has physical evidence of damage from vehicular traffic on the deck and the supporting piles show evidence of structural deficiencies. An engineering evaluation of the structures' ability to support continued vehicular traffic would be prudent.

Boating Use

Milford Harbor supports some 650 commercial slips for boats. In addition, there are pproximately 100 moorings in the Public Anchorage as well as private docks and facilities for the State Aquaculture and National Marine fisheries Labs. The Milford Municipal Coastal Plan indicates that last season, the harbormaster issued 180 permits for moorings in designated anchorages, and the City issued 805 launch permits to Milford residents. The City permits the rights for moorings, but does not provide or maintain the mooring. There are currently no moorings specially set aside in the public anchorage for transient boaters. A more detailed survey of the boating resources was carried out by the Milford Harbor Task Force in the fall of 1983.



Milford Harbor Management Plan
HUTTON/SEMPERE ASSOCIATES 1984

PRESENT AS BUILT ANCHORAGES

GOALS AND OBJECTIVES

Introduction

The following list of goals and objectives was developed with input from a variety of sources including: a review of previous planning and policy studies; discussions with state and local agency personnel ; a review of recent studies such as the Milford Municipal Coastal Plan and the Head of the Harbor Plan; and with considerable input and comments from the general public. The goals and objectives presented here were used as a blueprint to guide the identification of the recommended actions presented in the following chapter, and in the development of the implementation options presented in Chapter

The goals and objectives have been divided into five topic areas as listed below:

- Navigation and Water Surface Management
- Administration of Harbor Use
- Natural Resources
- Public Access
- Economic Development

Navigation and Water Surface Management

Goal: Work to maintain a planned pattern and program of compatible, equitable and efficient utilization of water surface within the City of Milford.

Objectives:

Resolve current problems regarding the encroachments that are within the Federal Project.

Provide for safe and secure use of all waterfront areas within the City of Milford.

Work to see that the waters of the City of Milford remain fully navigable at all times.

Provide adequate anchorage, mooring and dockage for the public.

Avoid situations that create congestion in the waterfront area.

Provide sufficient anchorage for transient boaters.

Provide sufficient anchorage for commercial charter and/or commercial fishing vessels.

Work toward the implementation of the proposed Commercial Fishing Boat Landing.

Provide for fairways as required for adequate access to the Federal and State Aquaculture Laboratories on the west side of the harbor.

Administration of Harbor Use

Goal: Establish the framework that is necessary for the coordinated administrative management for the Milford waterfront.

Objective:

Establish an effective framework and procedure for administrative control of the waterfront.

Develop a set of guidelines for the safe and secure use of the waterfront, for the protection of visitors and residents alike.

Establish a minimum set of clearly stated regulations and ordinances used to enforce the guidelines developed for governing the use of Milford waterfront.

Modify existing land use controls to be compatible with and supportive of navigational and water surface management objectives.

Determine the appropriate roles and level of involvement for Federal, State and Municipal government in the management of the waterfront area.

Provide for a Harbor Improvement Fund that will be funded partly by harbor-generated monies and that will be used for the adequate administration, operation and maintenance of the waterfront.

Natural Resources

Goal:

Protect the natural resources in and around Milford's waterfront and encourage their proper management.

Objectives:

Preserve and enhance wetland areas when possible.

Provide for the enhancement and conservation of wildlife habitat where appropriate.

Attempt to improve water quality in Milford Harbor.

Develop guidelines to determine relative value of new development vs. environmental impact.

Minimize sedimentation when possible.

Identify and implement ways to enhance existing natural habitat as compensation for new waterfront development.

Public Access

Goal:

Provide a system of community facilities and services on the waterfront that is responsive to public needs.

Objectives:

Improve existing waterfront facilities as is neded.

Give both active and passive users of the harbor consideration in making decisions regarding harbor management.

Provide for additional points of access (passive and active recreation) around the waterfront.

Provide for ease of movement from the water to the land as well as from the land to the water.

Develop better linkage between the central business district and the harbor area.Increase the amount of anchorage and dockage available in the harbor.Provide for better management and allocation of the public facilities that already exist.

Economic Development

Goal:

Encourage water dependent enterprises which offer employment and address community needs that are compatible with the other stated goals and objectives.

Objective:

Encourage the revitalization of the commercial fishing industry in Milford Harbor.

Implement those sections of the Head-of-the-Harbor Plan deemed appropriate in light of the findings contained in this document.

Make the necessary adjustments in the existing zoning that are designed to protect existing water dependent land uses.

Plan for controlled change as public needs change.

ADMINISTRATIVE CONSIDERATIONS

Jurisdictions

Several federal, state and local agencies have jurisdiction over various activities in and adjacent to the harbor. These authorities perform different, but often overlapping functions in the regulation of harbor activities. The key authorities with administrative control or interest in Milford Harbor include:

Federal Level

- U.S. Army Corps of Engineers
- U.S. Coast Guard

State Level

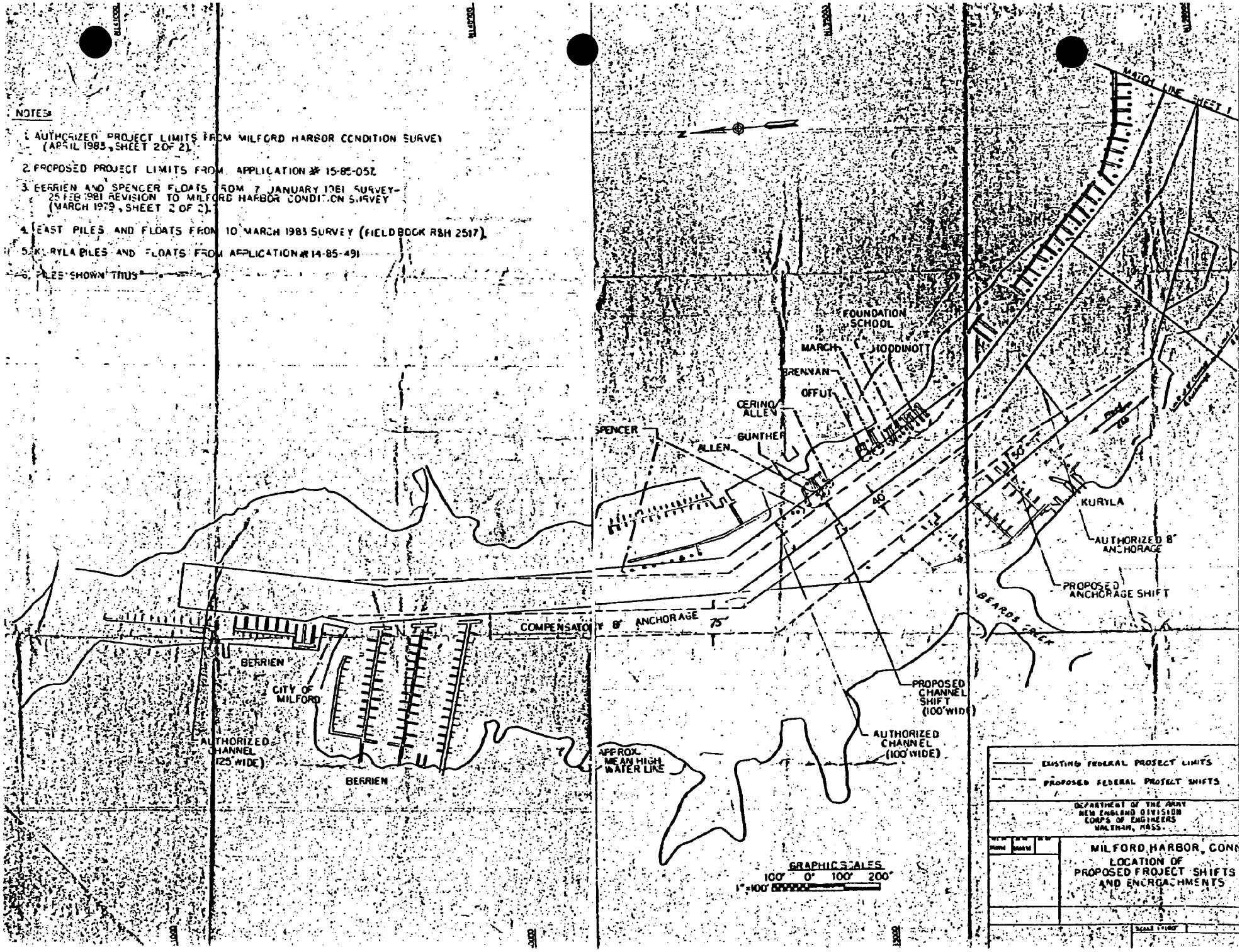
- Department of Agriculture
  - Aquaculture Division
- Department of Environmental Protection
  - Law Enforcement Unit
  - Marine Fisheries Unit
  - Planning and Coordination/Coastal Management
  - Water Compliance Unit
  - Water Resources Unit
  - Wildlife Unit
- Department of Health Services
- Department of Transportation
  - Bureau of Waterways
  - Harbormaster

Local Level

- Board of Aldermen
- Conservation Commission
- Director of Health
- Fire Department
- Flood and Erosion Control Board
- Harbor Management Commission
- Historic District Commission
- Inland Wetlands and Watercourses Commission
- Marine Police
- Parks and Recreation Department
- Planning and Zoning Commission
- Redevelopment Agency
- Sewer Commission
- Zoning Board of Appeals

NOTES:

1. AUTHORIZED PROJECT LIMITS FROM MILFORD HARBOR CONDITION SURVEY (APRIL 1983, SHEET 2 OF 2).
2. PROPOSED PROJECT LIMITS FROM APPLICATION # 15-85-052.
3. BERRIEN AND SPENCER FLOATS FROM 7 JANUARY 1981 SURVEY-25 FEB 1981 REVISION TO MILFORD HARBOR CONDITION SURVEY (MARCH 1979, SHEET 2 OF 2).
4. EAST PILES AND FLOATS FROM 10 MARCH 1983 SURVEY (FIELD BOOK R&H 2517).
5. KURYLA PILES AND FLOATS FROM APPLICATION # 14-85-491.
6. PILES SHOWN THUS



U.S. Army Corps of Engineers

Jurisdiction of the Corps is as follows:

The Corps regulates work in or affecting navigable waters under Section 10 of the Rivers and Harbors act of 1899. In New England, for purposes of Section 10, navigable waters are essentially those subject to the ebb and flow of the tide seaward of the mena high water line. The Corps also regulates the discharge of dredged or fill material into all waters of the U.S. under Section 404 of the Clean Water Act.

Historically, the Corps has dredged and maintained some type of Federal navigation project within Milford Harbor since 1874. Any dredging or structure placement within the harbor has previously required an individual permit application. Under a newly suggested "Harbor Management Plan Concept", the Corps would issue a general permit authorizing most harbor improvement projects if the activity is consistent with the approved harbor management plan. This general permit would then eliminate the need for many individual permits and allow greater local control, by the Harbor Commission and others, over harbor development activities.

U.S. Coast Guard

The Coast Guard is concerned with navigational safety within and near Milford Harbor. This is accomplished primarily through the placement and maintenance of Aids to Navigation buoys and channel markers. As a means of economy and agency streamlining, the Coast Guard has been reviewing all its navigational aids within Long Island Sound and along the Atlantic Seaboard. Milford was recently informed at a public hearing, that several aids were to be abandoned by the Coast Guard. The City of Milford has the option of continuing the maintenance of these aids, but at the expense of the City, not the Coast Guard.

CT. DEP-Coastal Area Management Unit

The Coastal Area Management Unit of the state is responsible for the administration and oversight of the States' Coastal Area Management Program which was effective in January, 1980, based on the Connecticut Coastal Area Management Act of 1979. The CAM Unit oversees consistency of Federal, State and Municipal plans and regulatory actions, funding of local municipal site reviews, the development of local coastal management plans, and the protection of critical resources. The CAM unit is also responsible for coordination/review of Harbor Management Plans and amendments to them.

CT. DEP-Water Rescurces Unit

The Connecticut DEP-Water Resources Unit administers the states tidal wetlands permit program and a permit program which regulates dredging and the placement of structures in, beneath, or over, tidal and navigable waters. The Water Resources Unit also addresses issues such as flooding and erosion control including FEMA flood insurance programs, and issues Water Quality Certifications for dredging projects carried out within the territorial waters of the State.

CT. DEP-Water Compliance Unit

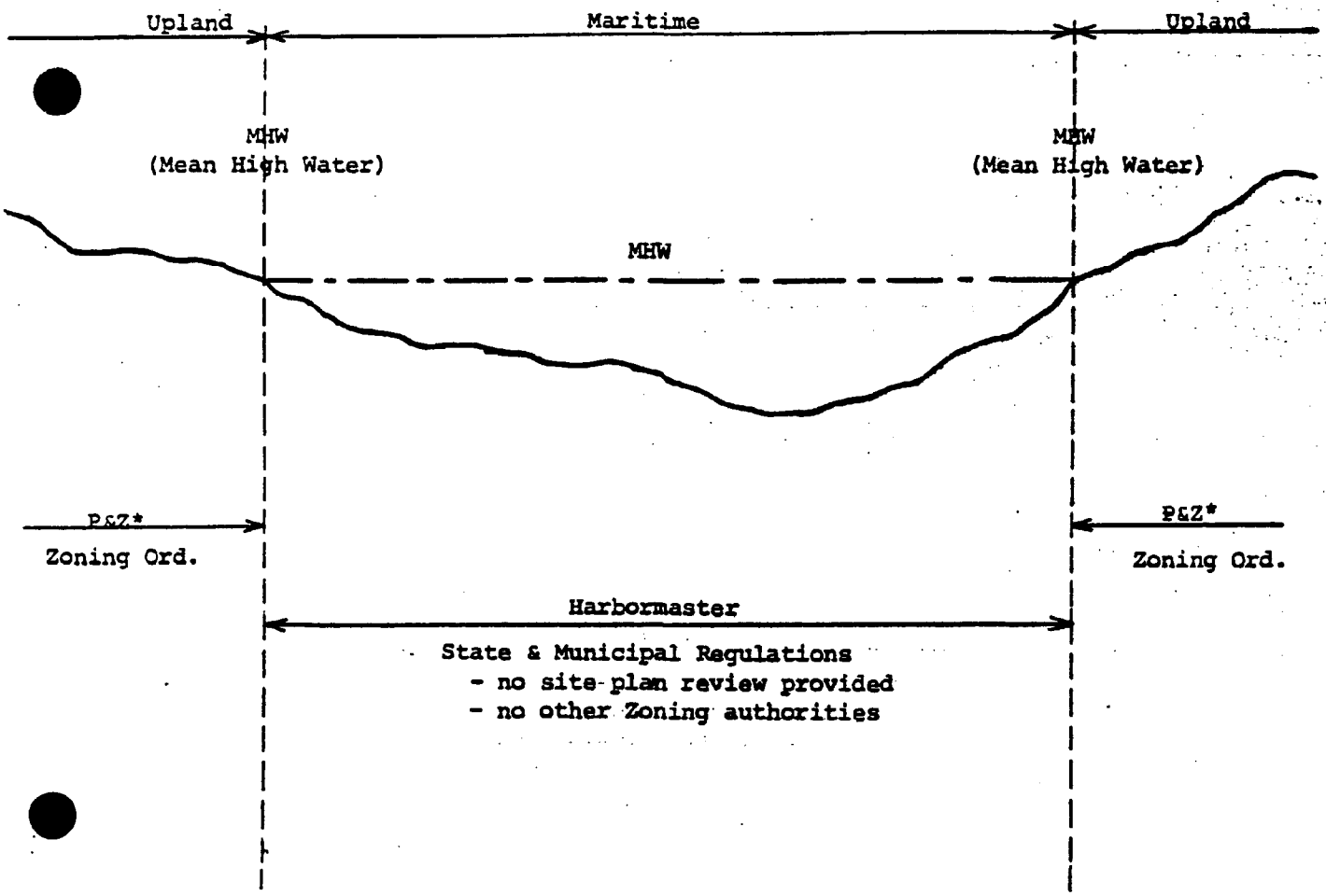
The Connecticut DEP-Water Compliance Unit administers the NPDES (National Pollution Discharge Elimination Schedule) water pollution permit program, various sewerage control programs and advises the Coastal Area Management Unit in the development of state dredge disposal policy. The Unit also establishes the state's water quality classifications and is responsible for the marine sanitation discharge law.

CT. Department of Transportation

In Connecticut, the Commissioner of Transportation is vested with the responsibility for the overall supervision of the state's harbors and navigable waterways. Under State law, the Commissioner may delegate this responsibility to the local municipality through the designation of a harbormaster, or to a local Harbor Commission. The harbormaster is appointed by the Governor, and is subject to the control and direction of the Coimmissioner of the Department of Transportation. The administrative jurisdiction of both the harbormaster and Harbor Commission are the navigable waters of the municipality shoreward to their mean high water mark.

CITY OF MILFORD

At the present time, the City of Milford has several Boards and Commissions with responsibility for the management of growth around and within the harbor area. The Milford Planning and Zoning Commission is responsible for the enforcement and updating of the city's zoning ordinances and Milford Municipal Coastal Site Plan Review. The Milford Harbor Commission is an eight member commission which serves at the discretion of the Milford Board of Aldermen and through the approval of the Planning Commission primarily for the drafting of economic development proposals regarding the use of the Harbor. The figure on the following page demonstrates the existing local administrative framework for governing harbor activities.



* The Harbor Commission serves at the discreation of the Board of Alderman and through approval of the Planning Commission for the drafting of economic development proposals regarding the use of Housetonic River and Milford Harbor.

Existing Local Organizational Framework for Harbor Management

RECOMMENDED ACTIONS

Introduction

In October 1983, the Harbor Management Plan Task Force invited the citizens of Milford to a public workshop. The objective of the workshop was to gather a representative cross sampling of both the attitudes and concerns of the people of Milford regarding the present and future use of their harbor.

During the evening of the workshop, approximately 90 participants were separated into various small groups and asked to perform two tasks. These two tasks were as follows:

1. List the five major problems associated with the use and management of the harbor area.

2. List the five key goals for the management and future use of the harbor area.

The results of this exercise have been summarized in 28 separate "Issues" which are listed below and than later used in this chapter as the framework for a discussion regarding "Problems" and "Recommendations" for the Milford Harbor Management Plan.

Issues and problems as identified during the October 27, 1983 workshop are listed below. The numbers indicated are for identification and discussion purposes only and do not represent any weighted order.

1. The Need to Develop a Comprehensive Approach to Harbor Management

2. Congestion in the Harbor

3. Encroachments in the Federal Channel

4. Aids to Navigation

5. Financing of Harbor Maintenance and Improvements

6. Water Quality

7. Dredging

8. Shoaling, Sedimentation and Debris

9. Condition of Public Facilities

10. Improvements to Public Access

11. Wetland Enhancement and Preservation

12. Wildlife and Conservation in the Harbor

13. Commercial Fishing Facilities

14. Town Dock Use and Expansion

15. Create New Anchorage and Dockage

16. Transient Moorings

17. Access to Anchorages

18. Define the Harbormaster's Duties

19. Water Safety and Security

20. Passsive Recreational Use on the Waterfront

21. Improve Pedestrian Linkage from the Harbor to the Center of Town

22. Inter/Intra Governmental Coordination

23. Establishment of a "Municipal Mooring Area" Waiting List

24. Use of the Harbor for Boat Racing

25. Boat Wakes

26. Public Education of Waterfront Management Regulations

27. Signage

28. Trash and Litter Control

Issue:

Need to Develop a Comprehensive Approach to Harbor Management

Problem:

Due to the overlap of authority between Federal, state and municipal government within the harbor, there is a need to establish a concise and clear administrative program for the management of the harbor waters and the adjacent land.

Recommendation:

Develop a comprehensive management plan for the harbor that addresses the interrelationship between existing land use controls and their potential impact on the use and access of the harbor, development of a "growth management strategy" designed to implement goals and objectives as identified by the citizenry of Milford and the establishment of an administrative framework for overseeing the proper management of the harbor.

Develop a plan that is comprehensive both in scope of issues and geographic orientation (i.e., includes areas such as the Housatonic River, Gulf Pond, and other waterfront areas).

Issue:

Congestion in the Harbor

Problem:

The limited amount of usable water surface (over 5 feet of depth) in Milford Harbor is being competed for by waterfront property owners who want to "wharf-out", the municipal anchorages, the Federal navigation channel, and the locally designated fairways.

Recommendation:

Develop a systematic technique for evaluating the appropriateness of development proposals that effect the use of the water surface.

Design a site plan review process and regulatory framework for management of the harbor water surface and equitable allocation of this limited resource.

Issue:

Encroachments in the Federal Channel

Problem:

At present, the authorized navigation channel (as designated by the Army Corps of Engineers) in Milford Harbor has numerous encroachments (pilings, floats as well as the bows and sterns of moored boats) which represent a navigational hazard. In order for the continued maintenance (dredging) of the Federal Project, the Army Corps of Engineers will require that the channel encroachments be removed or that the channel be relocated to exclude any and all encroachments. In addition, any costs associated with relocating the channel must be assumed by the City government or the affected property owners.

Recommendations:

Evaluate the potential impacts associated with:

1. Removal of all encroachments

2. Relocating the channel so as to avoid all encroachments and dredge accordingly

3. Reducing the size of the channel so as to avoid all encroachments and establishment of harbor lines to prevent all future encroachments into the channel and anchorage.

4. Complete re-design of the channel with new dredging.

Basis for these decisons should be predicated on:

A. Agreement with the Army Corps of Engineers and the State of Connecticut

B. Best alternative for the general public's long range use

C. Minimizing the cost to the City of Milford

D. Minimizing the disruption to the existing commercial and private facilities

E. Minimizing the cost to the existing facilities

Issue:

Encroachments into the Federal Anchorage Areas

Problem:

At present, the authorized anchorage areas (as designated by the Army Corps of Engineers) in Milford Harbor have encroachments (pilings, floats as well as the bows and sterns of moored boats) which represent a navigational hazard.

These encroachments, with the exception of one conditional use, are the result of unpermitted construction in the waterway during the last 50 years.

In order for the continued maintenance (dredging) of the Federal Project, the Army Corps of Engineers will require that the anchorage encroachments be removed or that the anchorage areas be relocated to exclude any and all encroachments. In addition, any costs associated with relocating the anchorage areas must be assumed by the City government or the affected property owners.

Recommendations:

Evaluate the potential impacts associated with:

1. Removal of all encroachments

2. Relocating the anchorage areas so as to avoid all encroachments and dredge accordingly

3. Reducing the size of the anchorage areas so as to avoid all encroachments

4. Complete redesign of the anchorage areas with new dredging

Basis for these decisions should be predicated on:

A. Agreement with the Army Corps of Engineers and the State of Connecticut

B. Best alternative for the general public's long range use

C. Minimizing the cost to the City of Milford

D. Minimizing the disruption to the existing commercial and private facilities

E. Minimizing the cost to the existing facilities.

Issue:

Aids to Navigation

Problem:

The U.S. Coast Guard is planning to abandon the maintenance of various aids to navigation within and arounds Milford Harbor.

During periods of peak use (summer months), navigation within Milford Harbor is often difficult.

Recommendations:

Provide for the continued maintenance of Milford's aids to navigation by the Coast Guard, the State or the City of Milford.

Investigate alternative funding sources to be used in the maintenance of navigational aids.

Provide for the maintenance of the inner harbor aids through local agency responsibility and budget.

Provide adequate security for Milford's buoys and beacons by enacting relevant local ordinances.

Issue:

Financing of Harbor Improvements and Maintenance

Problem:

Currently there is an insufficient level of fiscal planning for costs associated with repair and replacement of City owned/maintained waterfront facilities or administrative costs for municipal harbor management activities.

Previously, State and Federal funds have been available for dredging and construction of wharfs and piers, etc. Additionally, State and Federal involvement in the regulation of the harbor has helped to reduce the level of municipal administration necessary. In the predictable future, such assistance may become more difficult to secure.

Recommendations:

Analyze the suitability of establishing an amortizing fund, or other funding mechanisms, earmarked specifically for harbor related administration, physical improvements and required maintenance (aids to navigation) and piers and ramps.

Investigate the State and Federal funds available for regular maintenance and development for water access and waterfront facilities.

Issue:

Water Quality

Problem:

The apparent poor level of water quality in Milford Harbor can be attributed to several sources, such as:

1. Dumping of sewage effluent from the sewage treatment plants near the Head-of-the-Harbor, Gulf Pond and the Meadows.

2. Storm water runoff from adjacent uplands.

3. Poor water quality in Long Island Sound.

4. Point source pollution entering the Wepawaug and Indian Rivers from upstream.

Recommendations:

Encourage the scheduled abandonment of the sewage treatmant plants.

Develop changes in zoning regulations designed to avoid unnecessary stormwater runoff into the harbor.

Install sediment traps in all stormwater outfalls that terminate in the harbor.

Provide onshore restroom facilities for transient boaters and make their location known through an information brochure.

Provide for a sufficient number of marine pump-out facilities that are readily accessible to any and all boaters using the harbor.

Provide for the improvement of water quality so that the public can harvest shellfish, hard clam and oyster.

Provide for the maintenance (cleaning out) of the various ponds that serve as sediment traps located upstream in the Wepawaug and Indian Rivers.

Issue:

Dredging

Problems:

Presently there are areas of the harbor that have insufficient depth for the orderly movement of recreational craft.

There currently is no schedule maintained by the City for required public and/or private dredging projects. When dredging projects can be scheduled together, then the negative environmental impacts associated with such activities can often be reduced and, in addition, economies of scale can be used to reduce the dredging costs/cubic yeard of dredge material.

In the future, the State and Federal Government is likely to require upland containment of dredge spoil material. Therefore, the siting of a dredge mat erial placement facility in the vicinity of Milford Harbor would be beneficial for all future dredging projects.

Recommendations:

Take all necessary actions required for the timely dredging by the Army Corps of Engineers of the Federal channel.

Develop a long term dredging program for Milford Harbor that addresses both private and public future dredging projects.

Schedule dredge projects together when possible.

Explore the feasibility of constructing a permanent dredge material placement facility near Milford Harbor.

Issue:

Shoaling, Sedimentation and Debris

Problems:

Suspended sediments are continually being deposited on the bottom of the harbor. The sediments are coming from several sources. The more significant sources are:

1. Upland areas that lie to the north of the harbor and direct stormwater runoff into the Housatonic, Wepawaug and Indian Rivers or their tributaries (Beard's Creek, Gulf Pond, etc.).

2. Upland areas that are directly adjacent to the harbor and direct stormwater runoff into the harbor.

3. Suspended sediment in the waters of Long Island Sound that are carried by the tides into the harbor and are deposited from suspension during the slack tides.

4. Transportation of bottom sediments by littoral drift (longshore currents) into the mouth of the harbor.

5. Major storm occurances (both upland and tidal floods).

6. Debris dumped along the shoreline by property owners.

Investigate the State and Federal funds available for regular maintenance and development for water access and waterfront facilities.

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4. Transportation of bottom sediments by littoral drift (longshore currents) into the mouth of the harbor.

5. Major storm occurances (both upland and tidal floods).

6. Debris dumped along the shoreline by property owners.

Recommendations:

Identify location of stormwater outfalls that direct stormwater runoff into the harbor and install sediment traps.

Keep all sediment traps cleaned out through periodic inspections.

Review means of reducing shoaling due to littoral drift.

Develop and enforce local soil loss standards aimed at reducing harbor sediment loading.

Keep dumpsters out of the flood hazard areas.

Issue:

Condition of Public Facilities

Problems:

The physical condition of harbor related public facilities is generally poor.

The public facilities that are related to the Head-of-the-Harbor Plan have proposals for the improvement of public accesss, but have not been designed yet.

Points of public access that are not located at the head of the harbor may require physical improvements if public access is to be increased.

There is not a sufficient maintenance program in effect requiring the inspection and repair of public owned waterfront facilities.

Recommendations:

An inventory of all points of public access, both active and passive (visual) access, should be prepared.

All necessary improvements for each of the points of access inventoried shoulds be determined in light of the need for increased public access.

In order to accomplish these needed improvements in an organized and timely fashion, a prioritizing of these proposed improvements should be established and followed.

Begin, as soon as possible, all necessary planning required for the implementation of the Head-of-the-Harbor Plan.

Existing municipally owned waterfront structures should be inspected and an aggressive maintenance program developed that will extend the functional life of these structures as much as possible.

Issue:

Improvements to Public Access

Problem:

Many points for public access (both active and passive) around the harbor that have been improved in order to facilitate access are in need of repair or replacement of facilities.

There are several locations around the harbor that are owned by the public sector, but have not been improved to allow for safe public access.

Recommendation:

Inventory existing waterfront improvements designed for public access and determine required repair and maintenance.

Develop an aggressive maintenance program designed to extend the functional life of these waterfront structures to the degree possible.

Identify those locations around the harbor that are publicly owned and are appropriate for use in increasing public access.

Retain for public use those properties which are presently owned and operated by the State and Federal government, but which may be returned to private sector use in the near future.

Design and constsruct those improvements deemed appropriate for increasing public access.

Locate and priortize locations around the waterfront to be purchased by the City for improving public access.

Consider a policy which seeks to maintain the access to water provided by commercial marinas.

Issue:

Wetland Enhancement and Preservation

Problem:

Due to the close proximity of adjacent land use and water surface use typical of a urban harbor, the existing wetland areas in Milford Harbor are subjected to chronic stress from poor water quality, physical destruction and accelerated sedimentation from stormwater runoff.

Recommendations:

Develop and implement ways to enhance conditions for natural habitat as compensation for the inadvertant destruction of wetland habitat through the further development along the City waterfront.

Make adjustments to land use regulations that will address the problems associated with stormwater runoff from adjacent lands.

Avoid unnecessary disruption of wetland areas by discouraging uncompatable adjacent land uses.

Issue:

Wildlife and Conservation in the Harbor

Problem:

Development presssures within waterfront areas are reducing the amount and quality of suitable habitat for wildlife and shellfish species.

Recommendation:

Encourage the preservation of those areas in Milford that provide suitable habitat as compensation for the inadvertent destruction of wetland habitat through the further development along the City waterfront.

Issue:

Commerical Fishing Facilities

Problem:

Commercial fishing in Milford harbor appears to be attempting a comeback; however, there are currently insufficient planning efforts and support facilities for the commercial fishermen.

Recommendation:

Identify the needs that are specific to the commercial fishermen in Milford Harbor and develop an economic development program and permanent facilities aimed at further encouraging commercial fishing.

Issues that need attention include:

a. product landing

b. equipment storage

c. sufficient mooring areas and mooring fee schedule

d. seafood buying station

Issue:

Town Dock Use and Expansion

Problem:

Currently, the Town Dock is the only public improvement on the west side of the harbor. The various uses which occur at the dock such as parking of cars, fishing, boat on/off loading or just sitting by the water enjoying the view, often create conflicting situations.

Incompatible uses can produce problems such as:

insufficient maneuvering room for parking of cars will compete with all other pedestrian uses,

boat on/off loading and refueling often competes with fishing activities for access to the edge of the bulkhead,

discarded fishing bait and other trash develop odors and unsightly conditions that interfere with "walks by the water".

Recommendation:

Provide additional points of public access on the west side of the harbor and separate the conflicting uses mentioned above.

Provide additional parking for waterfront access users that will not compete with pedestrian uses.

Review the structural integrity of the dock and its ability to support vehicles and moored vessels.

Issue:

Create New Anchorage and Dockage

Problem:

Many residents indicated that there is an insufficient amount of municipal anchorage and dockage space available.

Recommendation:

Determine the feasibility and cost associated with dredging the East Basin, the Six Foot anchorage or other areas for use as an additional anchorage or other areas for use as an additional anchorage area.

Determine the feasibility and need associated with the construction of a municipal marina.

Issue:

Transient Anchorage

Problem:

There is no transient anchorage area in the harbor for use by the visiting boater.

Recommendation:

Implement, when possible, those elements of the Head-of-the-Harbor Plan that provide additional transient anchorage.

Determine the location and sizing of additional anchorage as needed for the visiting boater.

Issue:

Access to Anchorages

Problem:

Boaters using the municipal moorings, anchorage areas and transient moorings must come ashore in dinghies. There is currently no central place for them to land. This is inconvenient for boaters and owners of waterfront property.

Recommendation:

Provide a landing area exclusively for the use of boaters coming ashore, where dinghies will be protected and visitors can have safe, easy access to the City.

Investigate the feasibility of tender service in association with a private marina, boat club or other municipal operation.

Have all moorings registered to specific parking areas around the harbor utilizing a parking permit system and the City mass transit facilities, when possible.

Issue:

Define the Harbormaster's Duties

Problem:

Due to the level of activity in Milford Harbor during peak use periods, there may be a need to expand the duties of, or provide for, a full-time harbormaster.

Recommendations:

Determine the need for, and the feasibility of, having the State of Connecticut appoint a full-time harbormaster.

Define any additional duties, responsibilities or qualifications that a full-time harbormaster should have in addition to those that currently exist.

Make all necessary changes in the current administrative framework to better coordinate and regulate waterfront uses within the City of Milford.

Identify existing and potential new sources of funding for a full-time harbormaster, deputy harbormaster and/or mooring inspectors.

Consider using the existing Milford Transit District/Transit Commissioner Ordinance as a model for the establishment of a new administrative role for the harbormaster(s).

Issue:

Water Safety and Security

Problem:

There is, at this time, very little regulation of Milford Harbor beyond the duties and responsibilities of the part-time harbormaster and local police enforcement.

Recommendation:

Draft and enact a Water Safety and Security Ordinance following accepted patterns so that enforcement is possible to protect against unsafe practices.

Identify the expanded enforcement duties of such an ordinance, and the individual (i.e., harbormaster) or department (i.e., police or fire) responsible for implementation.

Establish rules and regulations for contractors operating in or around the City waterfront. These regulations should include such items as proper times for working, handling overhead powerlines, elevated or submerged sewer or water lines, procedures for placement and adequate construction standards.

Establish regulations addressing procedures for icing conditions, oil spill contingency, removal of vessels for City owned or maintained waters, water quality and debris within the waterway, maintenance of the aids to navigation and mooring inspection.

Issue:

Passive Recreational Access to the Waterfront

Problem:

The points of access that exist around the waterfront to date are designed primarily for active recreational use.

Recommendation:

Implement when possible, those elements of the Head-of-the-Harbor Plan that improve passive recreational use on the waterfront.

Determine the appropriateness of providing additional points of access for passive recreational use.

Issue:

Improve Pedestrian Linkage from the Harbor to the Center of Town

Problem:

Currently there is poor linkage between the harbor and the center of town. A design study was undertaken two years ago that addressed this issue, but has not been implemented yet.

Determine the feasibility and the location for additional improvements in pedestrian linkage with the center of town (i.e., east side of the harbor, Gulf Beach and Fort Trumbull).

Issue:

Inter/Intra Governmental Coordination

Problem:

There is a lack of information exchange between City agencies within Milford's municipal government as well as a lack of information sharing between adjacent communities regarding the proper administration and management of shared water resources (Housatonic, Wepawaug and Indian Rivers).

Recommendations:

Establish dialogue with the adjacent communities regarding the issues that involve joint management of waterfront areas. Exchanging information on techniques that can be used as well as coordination regarding the Federal and State government (i.e., dredge spoil containment facility).

Improve information exchange and coordination between municipal government agencies in Milford including:

a. Mayor's Office

b. Board of Aldermen

c. Planning and Zoning

d. City Engineer

e. Public Works

f. Parks and Recreation

g. Flood, Shore and Erosion

h. Harbor Commission

i. Police/Fire Departments

j. Conservation Commission

k. Community Development

l. Sewer Commission

Issue:

Establishment of a "Municipal Mooring Area" Waiting List

Problem:

Due to constraints in the amount of available deep water (over 6 feet at MLW) in Milford Harbor there are an insufficient amount of anchorage areas.

There are currently more boaters looking for ahcnorage area than can be adequately accommodated.

Recommendations:

Develop a written procedure for the proper allocation and equitable distribution of City controlled anchorages.

Develop and map a mooring grid which will aid in the efficient use of anchorage areas.

Investigate the feasibility of constructing additional dockage space for temporary mooring.

Issue:

Use of the Harbor for Boat Racing

Problem:

Small craft periodically use the waters within the harbor as an area for boat racing.

Recommendation:

Establish local guidelines to determine the appropriateness of using the harbor waters for any such boating activity.

Avoid the use of the inner harbor "aids to navigation" as marks in the race course.

Issue:

Boat Wakes

Problem:

Boating traffic is sometimes responsible for unnecessarily large boat wakes.

Recommendation:

Establish a boat speed control ordinance.

Review the suitability of an ordinance that will require the operator of watercraft within the waters of the municipality to be responsible for any damages arising from reckless operation of a boat (i.e., damage from boat wakes).

Support the efforts of local law enforcement officers in the endorcement of speed controls.

Issue:

Public Education of Waterfront Management Regulations

Problem:

Many of the problems that arise in the administration of a small craft harbor have to do with a lack of importlant information specific to the harbor in question. Visiting boaters often don't know where to go, where to anchor or tie up, what water is deep and what is shoal, or what facilities may be found on the waterfront or in town.

Recommendation:

Prepare for broad public distribution an accurate chart of Milford Harbor that shows depths, public docks, landings, the location of boating services, means of access into the center of town. In addition, the City can post all relevant rules and regulations concerning the use of the harbor.

Issue

:Signage

Problem:

Visitors that are unfamiliar with the harbor will find it difficult to locate needed facilities and services once they are ashore.

Recommendation:

Develop an overall plan for the posting of signs that will direct visitors to the proper areas around town and protect the interests and privace of town residents.

Issue:

Trash and Litter Control

Problem:

An insufficient number of trash cans and poor placement of receptacles along the harbor, as well as along the river's edge upstream, result in trash that is likely to end up on the ground and in the water.

Recommendation:

Develop and maintain a program of Trash and Litter Control for the harbor area which will place sufficient containers and receptacles in key locations to collect litter before it is thrown in the water or on the ground.

NEXT STEPS

Organization of the Milford Harbor Management Plan.

Volume 1 - Harbor Management Framework (Phase 1)

Volume 2 - Implementation Program (Phase 2)

Volume 3 - Technical Memorandum (Phase 1 & 2)

Phases in the Development of the Milford Plan

Phase One of the Harbor Management Plan has involved an inventory, analysis and initial planning for this subject. This first step has produced the goals and ojbectives for management of the waterfront as well as the preliminary recommendations for accomplishing the guidelines contained in the goals and objectives. In addition, the Phase One effort incorporates Technical Memorandum, developed by the consultants and/or the Task Force, for addressing special issues such as existing encroachments in the Federal Project, establishment of a new administrative framework for accomplishing the recommendations identified during Phase One, and the first draft of an ordinance designed to offer a new integrated approach between the Harbor Commission and the harbormaster.

Issues Addressed

It has been the understanding from the initiation of this effort that the priority of resolving issues lies with satisfying the concern of (in descending order):

- The Army Corps of Engineers - Navigation issues
- DEP - CAM - Administrative issues
- City of Milford - Zoning, rules and use ordinances

This current phase of the plan should resolve most issues of interest to the Corps of Engineers. This phase of the effort also deals in a significant way with issues of concern to DEP-CAM and identifies in a coherent framework most of the key issues of concern facing the City of Milford.

Next Steps

In order to better assess the options available for future efforts, listed below (not necessarily in any suggested order) are those recommended actions or issues that could be addressed in Phase 2 of the planning effort. Phase 2 of the Harbor Management Plan - the Implementation Program - is proposed to include:

1. Harbor Management Regulations - regulation of harbor use, (i.e., mooring regulations, mooring fee schedule, regulation of harbor activities.

2. Criteria for the establishment of a Harborline (line beyond which no channelward placement of docks, floats or pilings may extend).

3. Drafting of an ordinance for the establishment of new responsibilities and duties for the Harbor Commission.

4. Drafting of legislation to establish a new role for the Planning and Zoning Commission regarding harbor management.

5. Necessary changes to the City Code to enable (require) the coordination between the above mentioned resource management techniques.

6. Evaluate the environmental consequences of alternative solutions to the existing Federal Project encroachments.

7. Other changes in the regulatory framework as deemed necessary by the Harbor Management Task Force.

The efforts put forth to date by all involved deserve recognition. Although the completion of this first phase report will bring the City closer to its intended goal of creating an equitable and workable management plan for Milford Harbor, it must be remembered that planning is a process, not a product. The process embraced to date has been a valuable exercise and an education, as well.

HMP Consistency Review Process

I. Consistency Review Considerations

The establishment of the Harbor Management Commission consistency review process is to ensure the effective implementation of the Milford Harbor Management Plan. The purpose of development of the Harbor Management Plan was not to supercede existing state and local management authorities but rather to ensure that the implications of proposed projects on tidal wetlands and waters are adequately considered by such management authorities.

The goals of the Plan are to:

(1) Maintain a planned pattern and program of :compatible, equitable and efficient utilization of the water surface.

(2) Protect the natural resources in and around Milford's waterfront and encourage their proper management.

(3) Provide a system of waterfront community facilities and services that is responsive to public needs.

(4) Encourage water dependent enterprises that offer employment and address community needs that are compatible with other stated goals and objectives.

The establishment of the review process of the Harbor Management Commission was authorized by Conn. General Statutes, Chapter 444a Sections 113k through 113t. Upon adoption of the Harbor Management Plan, a permit is required from the harbor master or deputy harbor master for any mooring or anchorage in the town waters. In addition the Commission is authorized to review and make recommendations regarding consistency with the Harbor Management Plan on any proposed projects on, in, or contiguous to the Harbor submitted to local or state management authorities. A 2/3 vote of a local agency is required to approve a proposed project that has not received a favorable recommendation of the Commission. In addition once a plan is adopted the Commission may request a general permit from the U.S. Army Corps of Engineers for eligible projects deemed to be consistent with the Plan.

Thus the purpose of the adoption of the Harbor Management Plan and the establishment of the Harbor Management Plan Consistency review process is to establish a coordinated, comprehensive review process for proposed waterfront projects and activities on or adjacent to the waterfront which ensure that the public interest is adequately considered, development of specific criteria which will serve to clarify the type of projects that are likely to be allowable, provide for efficient, equitable and timely review of proposed projects, and ensure the protection of the quality of the City's waterfront areas, wetlands and aquaticresources.

II. Existing Administrative Programs

As presented in Chapter Four of the Harbor Management Plan there are numerous Federal, State and local governmental agencies involved in the regulation and administration of harbor waters. However recent legislation by the Connecticut state government has provided the means by which the Connecticut municipalities will be able to take the lead in the regulation and management of their waterfronts. Attempts to allow for the effective regulation of this natural resource will require a careful analysis of the various activities that occur within the municipal waterfront, specific approaches for allowing an increased role for the municipal government and identification of potential conflicts that the recommended changes in the existing regulatory programs may create. The activities on the waterfront that will be considered for increased municipal regulatory control are discussed below.

Anchorages

Currently the anchoring of transient and resident vessels in Milford's municipal waters is handled by the Harbor Master and the Army Corps of Engineers. For the purposes of this Harbor Management Plan the term transient anchorage shall refer to those water surface areas designated for the securing of a vessel to the bottom of a body of water by dropping an anchor or anchors or other ground tackle found on-board the vessel. This activity is regulated by the City of Milford in designated areas. Presently, the City of Milford has two designated transient anchorage areas. One anchorage is located in the protected waters directly north of Charles Island (see map labeled Transient Anchorage Area "B"). The second transient anchorage area is located in the inner harbor, north of the fairway to the National Marine Fisheries and State Aquaculture Labs , west of the Federal Channel and east of the boatyard known as Port Milford (see map labeled Water Use Plan).
No anchoring is permitted in the inner harbor in other than the designated "Area A".
Nothing in this plan shall compromise a captain's right to safe anchorage.

Moorings

Mooring locations and mooring placement are regulated by DOT Harbor Masters and the Army Corps of Engineers. For the purposes of this Harbor Management Plan the term mooring shall refer to the use and occupation of a municipal mooring location assignment. Currently the City of Milford has several mooring areas within Milford Harbor which are regulated by the city harbor master. Mooring areas are federally maintained and open to the public on equal terms.

Dredging

Dredging activity is regulated by the Department of Environmental Protection, Water Resources Unit and by the Army Corps of Engineers.

Grading and Filling

Grading and filling is currently regulated by the DEP Water Resources Unit and the Army Corps of Engineers. In addition, the Milford Board of Planning and Zoning requires a Special Permit for this activity if it occurs within 25 feet of any flood hazard area, waterbody, water course, or wetland. Milford Zoning Ordinance, Article IV, Section 4.1.15 and Article V, Section 5.5.2, 5.5.3).

Placement of Docks, Piers and Pilings

The construction and placement of docks, piers and pilings are regulated by DEP Water Resources Unit and the Army Corps of Engineers. The construction of such waterfront structures are subject to the obtaining of a Special Permit from the Board of Planning and Zoning, however it appears that this permitting procedure is more to ensure adequate parking for docks than to approve or reject structures.

Upland Development and Construction Adjacent to the Waterfront

Development and construction occuring within the designated coastal boundary, as defined in CGS Chpt. 444 Sec. 22a-94, will require a DEP Coastal Area Management review. In addition there are Milford Planning and Zoning Board project review procedures for:

(1) Subdivision or Resubdivision of property

(2) Zoning changes

(3) Special Use Permit or Special Exception

(4) Amended Plan of Development

(5) Site Plan Approval

III. Consistency Review Process

The adoption of the Harbor Management Plan and the establishment of a HMP Consistency Review Process should enable the federal consistency provisions of the federal Coastal Zone Management Act and tha state Coastal Management Act to be more efficiently and effectively addressed. It should also provide for a more comprehensive and coordinated review of proposed projects by local managment authorities.

The federal Coastal Zone Management Act provides that any project permitted, funded or undertaken by a federal agency is to be consistent with the state's Coastal Zone Management Program. These provisions are pertinent to adoption and implementation of the Harbor Management Plan in two ways. First, if the Corps of Engineers issues a general permit for activities consistent with the Harbor Management Plan then only a single federal consistency determination would be required by the State of Connecuticut regarding the issuance of the general permit rather than issuance of a consistency determination for each individual project that would normally require a ACOE permit. Second, if the Harbor Management Plan is submitted to the federal government and approved as a routine Program Improvement to the Coastal Management Program, then any activity not provided for within the framework of the general permit but proposed within the boundary of the Harbor Management Plan and that is otherwise permitted, funded or undertaken by any federal agency would be required to be consistent to the maximum extent possible with the provisions of the Harbor Managment Plan.

The adoption of a Harbor Management Plan and establishment of the Plan Consistency Review Process would also enable local agencies to more effectively implement municipal plans adopted pursuant to the State Coastal Management Act since recommendations will be made to the relevant local management authority regarding the potential impacts of proposed projects on the City's tidal waters and the use thereof. The recommendations of the Harbor Management Commission should also provide guidance to the State Commissioner of Environmental Protection in carrying out his responsibility regarding the coordination of state regulatory programs with the state Coastal Management Plan. Thus the adoption and implementation of the Harbor Management Plan will both ensure that local interests are understood and considered by the Commissioner in his deliberations as well as provide more detailed information for the Commissioner to consider regarding the potential impact that a project may have on the City's waters and use thereof.

To ensure that the review of proposed projects at the state and local level are closely coordinated and carried out in a timely manner the following procedures coordinate the actions of the Harbor Management Commission with those of state and local agencies.

As provided for in sec. 113p of the Harbor Management Act, whenever a project or request for approval of an activity is proposed, affecting the real property on, in or contiguous to Milford's waterfront by any of the various boards, commissions or committees representing Milford's Board of Aldermen the Harbor Management Commission shall be notified in writing of such proposed projects and activities at least 35 days prior to hearing on the proposed project and if no hearing is held 35 days prior to final action being taken on the project. If the Harbor Management Commission does not submit recommendations on the proposed project prior to final action on the project, its approval of the project is to be assumed. Copies of proposed project plans and drawings must be requested by the Harbor Management Commission when additional information is required. Such concurrent review will enable the Commission to provide relevant recommendations to the pertinent state or local management authority without significantly increasing the time of review for a proposed project.

In addition, a step toward establishing coordination and clarity between the affected state (CAM and WRU) and municipal (HMC and P&Z) agencies would be to draft a Memorandum of Understanding or other written agreement specifing the procedures to be followed by the various agency staff in the review of waterfront related proposals. Such an agreement would allow the different agencies to know what the process will be for this new review process within the effected agencies.

The Harbor Management Commission shall utilize the following criteria in making recommendations regarding proposed projects and activities within its jurisdiction:

(1) No piers, docks, vessels, piling or mooring buoys shall be placed within five (5) feet of a harborline defined as the line formed by the outermost boundarys of either the ACOE designated channel or anchorage/mooring areas which ever falls closest to the land. See Chapter 8 - Water Use Plan for a full description of the harbor line criteria and a preliminary map of the harbor line location.

Harbor and Shorelines: The harbor line and shoreline are the lines labeled as such on the applicable Map for HarborLines.

Setbacks

A. Harbor Line Setbacks: Any piers, "T" heads, "L" heads, mooring piles, moorings and/or anchorages must be located such that no moored vessel or permanent or temporary obstruction extends beyond the harbor line. It will be the responsibility of the applicant to assure that the design and location of such construction will meet this requirement. For instance, if the intended use of the dock, pier or float is for docking abreast then it will be necessary to leave sufficient room for any vessel beam that might be docked between the end of the proposed structure and the harborline. The same consideration must be given to the extention of a vessels bow or stern beyond the harborline (see Rules and Regulations, Chapter 7, Harbor Management Plan Consistency Review for Structures).

4. Pre-existing Uses: Any marine facilities lawfully existing at the time of adoption of this Regulation may continue to be used even though such marine facility or use does not conform to use or dimensional regulations as herein defined. Any alteration of an existing non-conforming marine facility or use is subject to the provisions of this section.

Harbor filling and bulkheading beyond the shoreline should be minimized to the greatest degree possible, except as approved by the Harbor Management Commission for the purposes of straightening minor shoreline irregularities or efficient bulkhead construction. Unnecessary encroachments of the shoreline into the waterways may create new constraints to navigation or further aggravate existing problems.

Permitted Activities	Current Regulatory Agencies Involved	Proposed Municipal Involvement	Proposed Municipal Permitting Agency	State Legislation Relevant to Activity	Municipal Legislation Relevant to Activity	Method of Municipal Regulation	Recommended Action
Anchorage	DOT HM ACOE	HMC HM-DOT		PA 84-247 CGS 15-8	proposed	HMC-designation of locations for use as anchorages	Amend Art. VII of Zoning Ordinance
Mooring	DOT HM ACOE	HMC HM-DOT		PA 84-247 CGS 15-8	proposed	HMC-designation of mooring areas and permit program	Implement HMP recommendations
Dredging	DEP-WRU ACOE	HMC		CGS 22a-361, 383-385	N/A	HMC-Consistency Determination issued at request of DEP	Request that WRU consider HMP recommendations
Filling	DEP-WRU ACOE P&Z	HMC P&Z	P&Z	PA 84-247 CGS 22a-359,361	Zoning Ordinance	HMC-Consistency Determination P&Z-Art. VII, Special Permit	Request that WRU consider HMP recommendations
Placement of docks, piers and pilings	DEP-WRU ACOE P&Z	HMC P&Z	P&Z	PA 84-247 CGS 22a-361 et.seq.	proposed	HMC-Consistency Determination P&Z-Art. IV, Special Permit -required Consistency Determination by P&Z	-Harbor line system -Lateral line system -P&Z to include HMC consistency determ. before permit approval
Upland development adjacent to waterfront	DEP-CAM P&Z	HMC P&Z	P&Z	PA 84-247 CGS 22a-101 et.seq.	proposed	HMC-Consistency Determination P&Z-Existing Permit System to require determination of consistency with HMP	Require that P&Z include a consist. determination prior to permit approval

abbreviations:

DEP-Department of Environmental Protection
WRU-Water Resources Unit
CAM-Coastal Area Management
ACOE-Army Corps of Engineers
P&Z-Planning and Zoning Board

HMC-Harbor Management Commission
HMP-Harbor Management Plan
DOT-Department of Transportation
HM-Harbor Master
PA-Public Act
CGS-Connecticut General Statutes

FIGURE A

The Water Use Plan

The various components of the Milford Harbor Water Use Plan are described below and shown on the Water Use Map. The Water Use Plan describes the location and preferred uses of the Federally designated channel and anchorages, municipal anchorages and fairways and the prosposed criteria for locating the municipal harbor line.

Federally Designated Channel

A 100 foot wide Federally designated channel is present in Milford Harbor. This Channel has depths of 8 feet and 10 feet in respective locations. The Federally designated channel shall be kept free and clear of obstructions or encroachments at all times. The location of the Federally designated channel and designated channel depths are indicated on the Water Use Map.

Turning Basin

The Turning Basin is defined as the navigable water within the area defined in the planning study "Head of the Harbor", upstream of the Federal Project. Although the area is not dredged at this time, it is incorporated in the Harbor Management Plan for future consideration. This use would provide access to the existing town launching ramp, the proposed commercial fish boat landing and public access to the area presently known as "Memorial Field" for future water dependent uses.

Harbor Line

The harbor line is the designated limit for use of water surface area by piers and the vessels attached thereto which is 5 feet shoreward of the federal project including all mooring areas. The fairways shall be included in the zone protected from encroachment by shoreside structures, i.e. water front docks, piers, and pilings, and the vessels that moor to them. The harbor line shall be a continuous line as defined by the East line of the channel starting at the Milford Harbor entrance light; proceeding around the "East Anchorage" then returning to the federal channel (East side); and then to its northern limit at the turning basin; around this turning basin and returning to the northern limit of the federal channel on the west side; then proceeding along the federal channel to the 8 foot fooring area; thence around the mooring area to the fairway at Milford Wharf Cl.; thence around the fairway and transient anchorage and then around the fairway to the State Aquaculture laboratory; thence along the fairway to the National Marine Fisheries, then returning to the Federal channel on its West side; then proceeding along the channel to the limit of the east breakwater at Burn's Point. The Harbor Management Commission will seek harbor line approval from the Water Resources Unit to properly enforce and coordinate permit decisions.

Commercial Moorings

The renting of individual moorings shall not be allowed except for the occasional instance when a vessel permitted to that location shall be absent from its mooring. The Harbor Master shall be informed in advance when a mooring will be vacant for four days or more.

Transient Anchorage Areas

Transient Anchorage may be allowed by the Harbormaster in locations and number to be determined by the Harbormaster. All Transient Anchorage shall be located within the areas designated below:

(a) The water area east of Beards Creek as shown on the Water UsePlan.

(b) The water area north of Charles Island as shown on the attached map labled Transient Anchroage Area "B".

Fairways

All fairways and thoroughfairs shall be kept free and clear at all times. Fairways are indicated on the Water Use Map.

Public Mooring Areas

Our present mooring areas accomodate 100 vessels of varying size from 20' to 50'. For the 1986 season, the ratio of 10 persent commercial fishermen would provide 10 moorings for that category. We would anticipate that implementation of the Harbor Management Plan with it's expanded mooring area would provide an adcitonal 70 moorings. This would bring the total to 170 moorings, with 17 being available for commercial fishermen.

The Harbormaster shall allow the issuance of mooring permits for any waters not restricted above. Persons desiring to make application for a mooring permit in Milford Harbor shall:

a. Contact the Harbormaster to place their name on the waiting list and acquire a mooring placement application.

b. Complete a formal application provided by the Harbormaster and return it to establish priority on the list. The application must be signed in order to be valid and shall be signed by the applicant only.

Application for a mooring space shall be maintained by the Harbormaster until an assignment from the established waiting list is made or an applicant indicates a valid need no longer exists. If an applicant declines assignment the application is voided on that date.

If assignment is accepted the applicant shall provide the ground tackle within 15 days to the Harbormaster for inspection prior to its placement in the harbor.

Priority for discrimination in mooring assignments shall be made on the following basis:

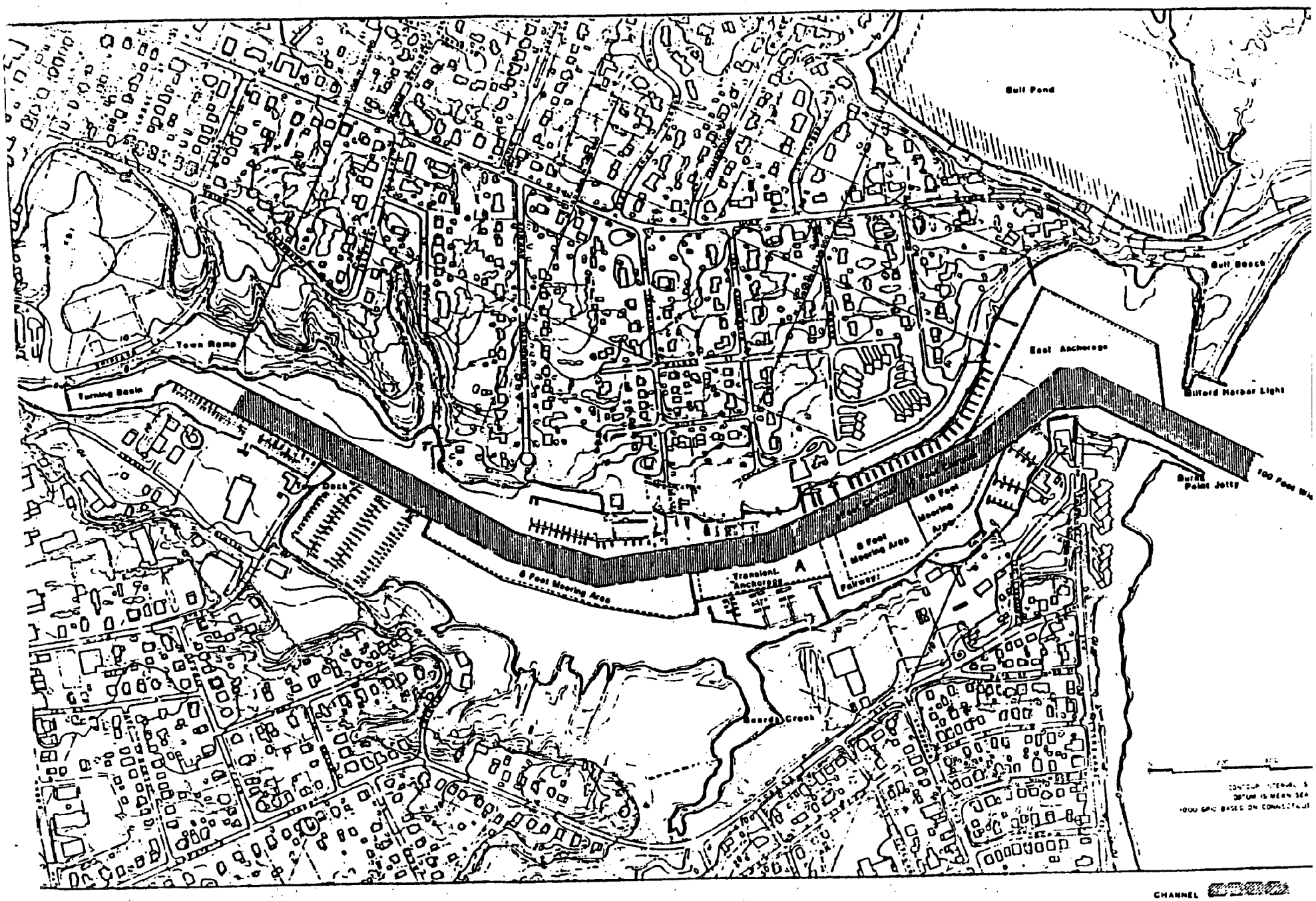
(a)Commerical fishing vessels shall receive first priority for 10% of the mooring spaces assigned.

(b) Application shall be reviewed without consideration of residency.

Mooring Plan The mmoring plan shall be maintained by the Harbormaster showing all mooring areas for public use within the area of jurisdiction of this plan.

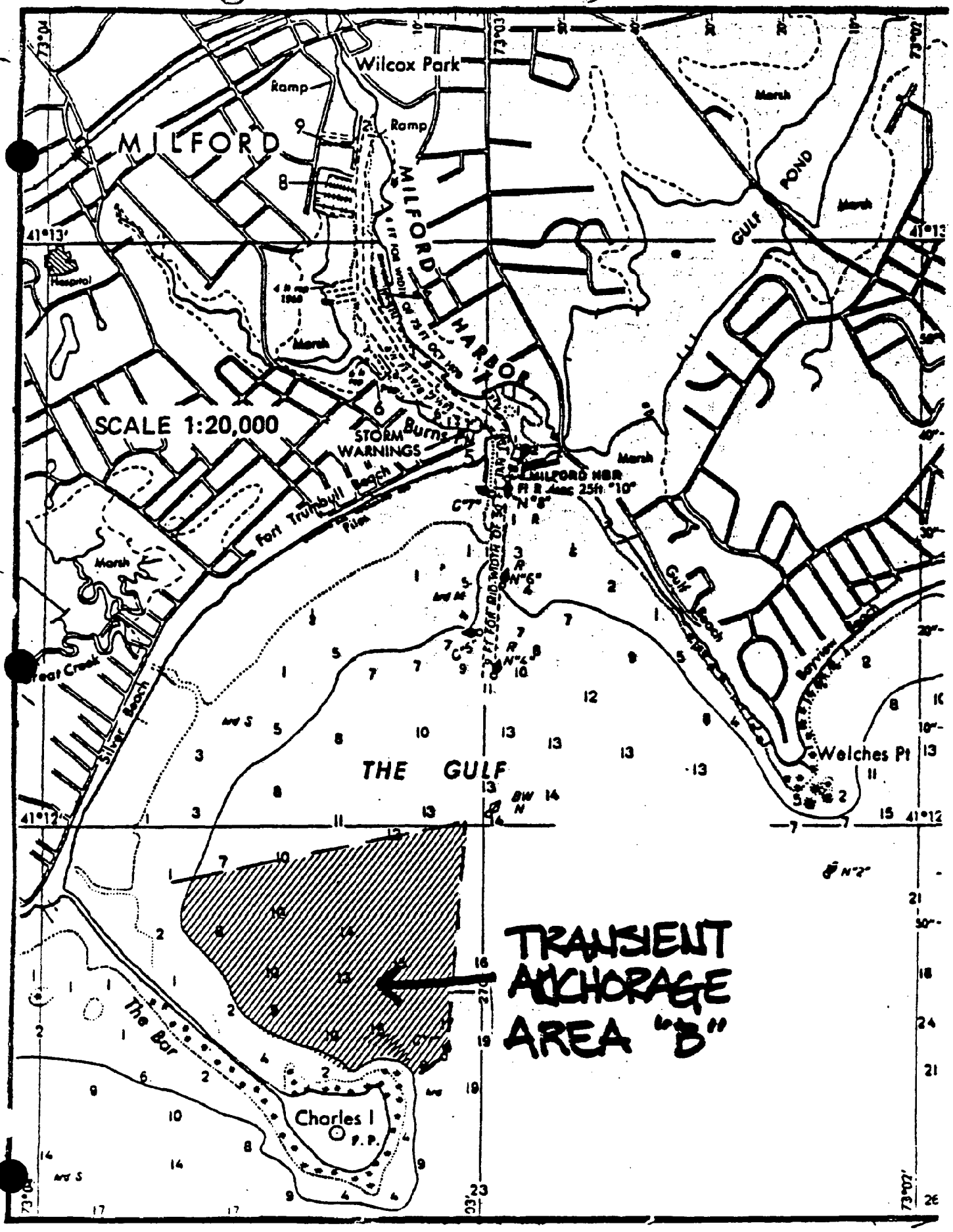
The layout shall be a modified grid which shall be in parallel rows to the navigation channel. The width of the rows shall be based upon the average size of the vessels to be accomodated and the annual assignment shall determine the number of vessels in each row.

The Harbor Master and Harbor Management Commission reserve the right to rearrange mooring assignments based on the spatial and draft requirements of moored vessels to maximize the mooring area capacity.



or Management Plan
ASSOCIAT 1985

WATER USE PLAN



Wilcox Park
Ramp
Ramp
MILFORD
MILFORD HARBOR
Marsh
Marsh
Marsh
Marsh
GULF POND
Hospital
SCALE 1:20,000
STORM WARNINGS
Burns Pt
Fort Trumbull Beach
Piles
MILFORD HBR
Gulf Beach
Bayview Beach
Great Creek
Silver Beach
THE GULF
Welches Pt
The Bar
Charles I
TRANSIENT ANCHORAGE AREA "B"
41°13'
41°12'
73°04'
73°03'
73°02'

Allen G. Berrien, Harbormaster, City of Milford
One High Street, Milford, CT 06460
877-1475 (Days)

1985
MOORING SPACE REQUEST

_____
Date

From: _____ Owner

To: Harbormaster/Harbor Commission of Milford's Harbors

Subject: Request for permission to place a seasonal mooring in Housatonic River
Wepawaug River (Delete one) Unmarked or special anchorage on chart of Milford Harbor for 1985 season.

Name _____ Tel. _____
Home Business

Address _____
Street City State Zip

Vessel's Name _____ Documentation or Connecticut Registration # _____

Make of Vessel _____ Type _____
(Cruiser, sail, etc.)

Length _____ Draft _____

Weight of Moorings _____ Length of Chain _____ (each) Length of Pennant _____ (each)

Dinghy Location or Access _____

I understand that my vessel must be properly registered in Connecticut or have a decaled documentation in order to obtain a mooring space in Milford. Moorings may not be sub-let.

_____
Signature of Owner

NOTE: Moorings should have adequate ground tackle and scope for the area and conditions expected. Mooring scope must not allow infringement on other moorings with vessel attached. *Under NO conditions are moorings allowed that* will permit the vessel to swing into Corps of Engineers established navigational channels by action of wind or tide or into established fairways, wharfs, docks, or floats. Buoys must be identified with boat name.

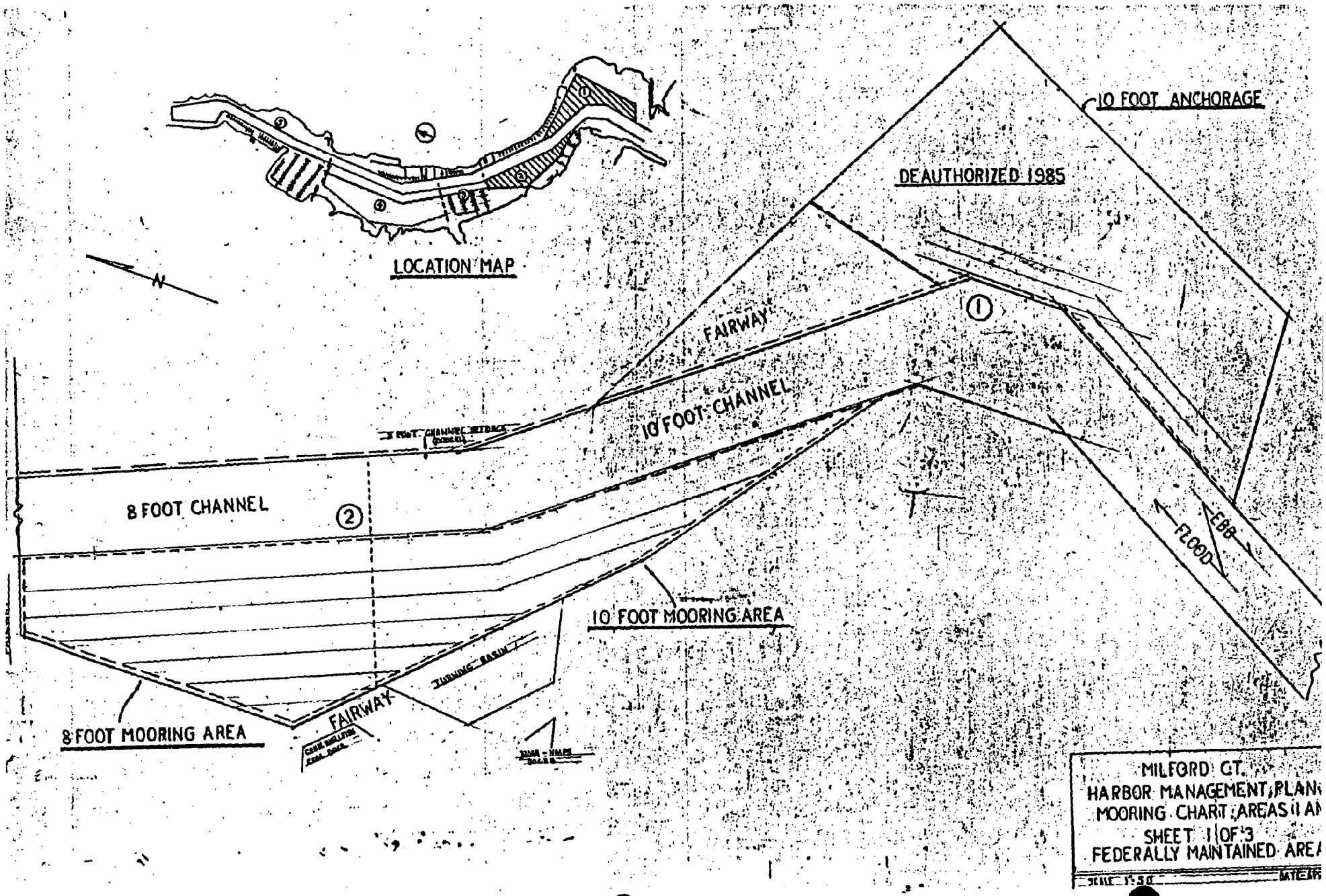
Do not write in this space - for Harbormaster's/Harbor Commission use only.

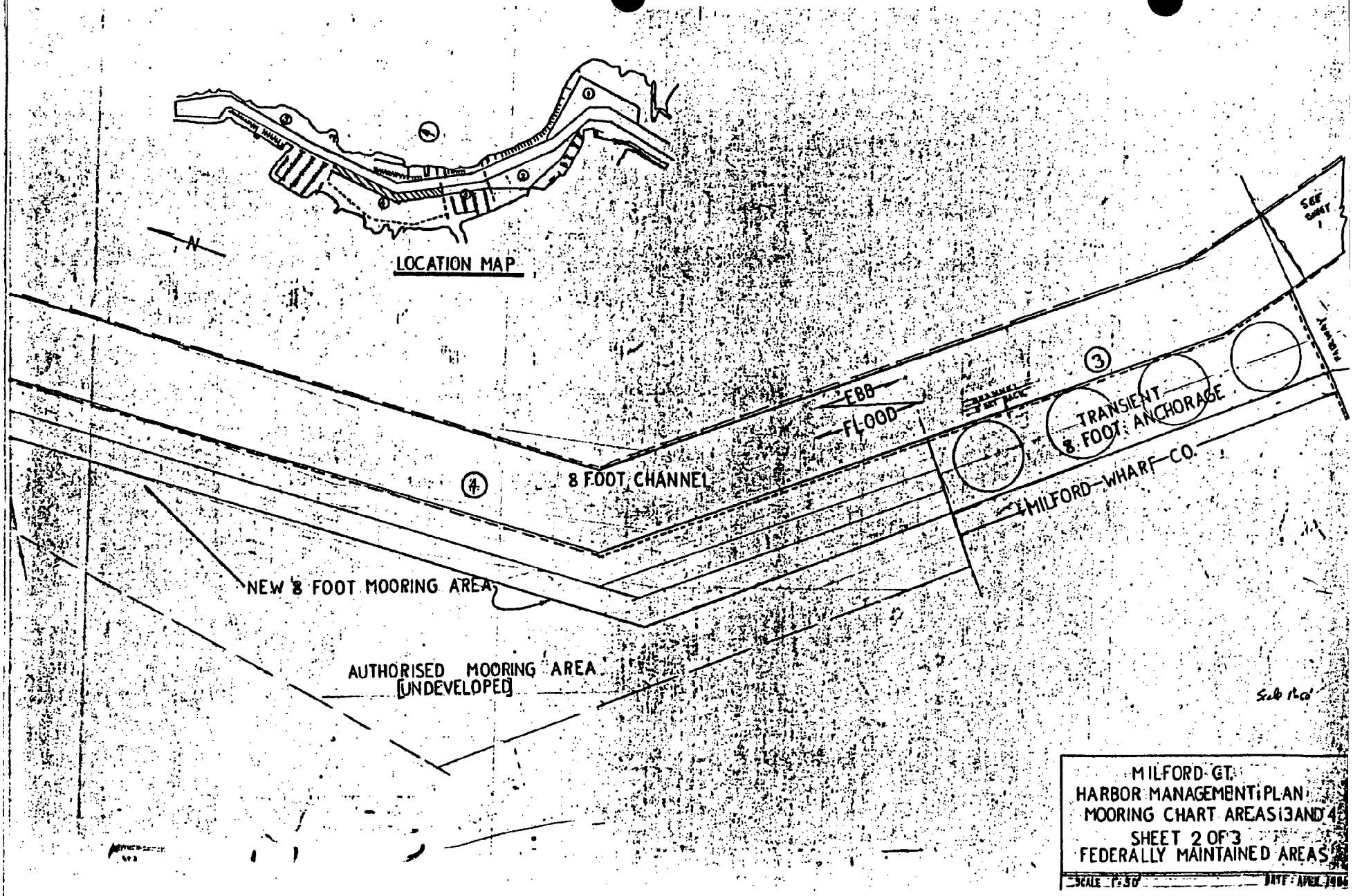
Position assigned _____ Ground tackle inspected _____

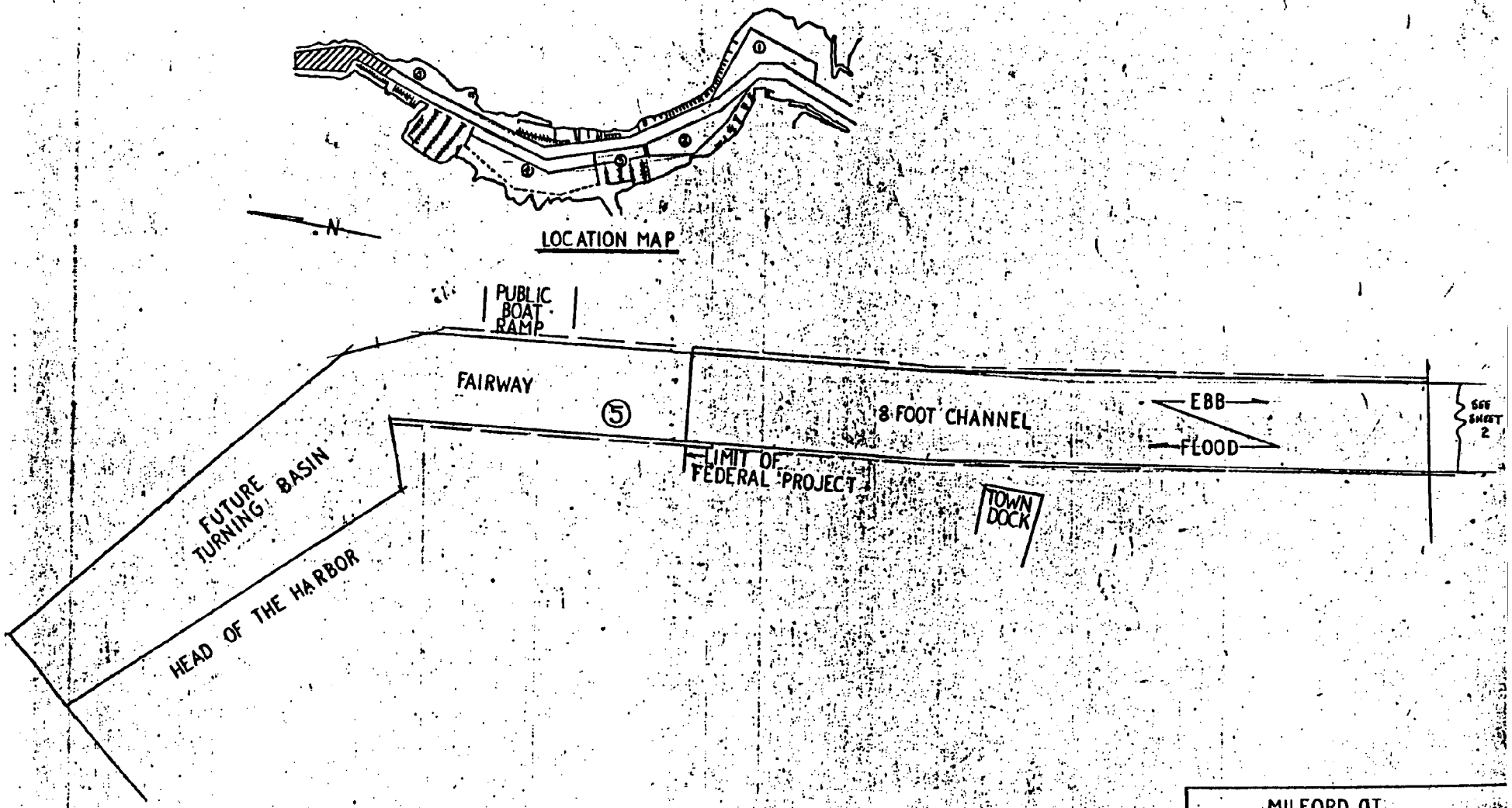
Number assigned _____

MOORING WAITING LIST MANAGEMENT PLAN

DATE	NAME	ADDRESS	PHONE	SIZE	DRAFT	COM. REC.	APPLICATION ON FILE	NUMBER	COMMENTS
								1	
								2	
								3	
								4	
								5	
								6	
								7	
								8	
								9	
								10	
								11	
								12	


LOCATION MAP
N
10 FOOT ANCHORAGE
DEAUTHORIZED 1985
FAIRWAY
10 FOOT CHANNEL
8 FOOT CHANNEL
FLOOD
EBB
10 FOOT MOORING AREA
TURNING BASIN
FAIRWAY
8 FOOT MOORING AREA
MILFORD CT.
HARBOR MANAGEMENT PLAN
MOORING CHART AREAS II AN
SHEET 1 OF 3
FEDERALLY MAINTAINED AREA


LOCATION MAP
N
EBB
FLOOD
8 FOOT CHANNEL
TRANSIENT
8 FOOT ANCHORAGE
MILFORD WHARF CO.
NEW 8 FOOT MOORING AREA
AUTHORISED MOORING AREA
[UNDEVELOPED]
SEE SHEET 1
MILFORD CT.
HARBOR MANAGEMENT PLAN
MOORING CHART AREAS 3 AND 4
SHEET 2 OF 3
FEDERALLY MAINTAINED AREAS
SCALE 1"=50'
DATE: APRIL 1986



MILFORD CT.
HARBOR MANAGEMENT PLAN
MOORING CHART AREA 5
SHEET 3 OF 3

ORDINANCE FOR ESTABLISHMENT OF A HARBOR COMMISSION IN ACCORDANCE WITH PUBLIC ACT 84-247

Milford, Connecticut

April 1986
At the special meeting of the Board of Aldermen held
June 18,1985
the following ordinance was approved:

the City of Milford, Connecticut, has developed a Harbor Management Plan pursuant to State requirements as outlined in Public Act 84-247 and other related legislation; and

WHEREAS, the City of Milford wishes to make improvements to Milford Harbor to increase the use of the harbor and its associated waters by Milford residents, provide adequate maintenance for, and preserve and enhance the beauty and value of the harbor as a recreational, environmental and economic resource; and

WHEREAS, the City believes that the most responsible way to ensure that the provisions of the Harbor Management Plan are implemented and that the waters of the municipality are properly managed and regulated is through the establishment of a Harbor Management Commission,

NOW THEREFORE, BE IT ORDAINED AND ENACTED By the Board of Aldermen of the City of Milford as follows:

Section 1. Creation of the Harbor Management Commission

There is hereby created the Harbor Management Commission for the City of Milford, which Commission shall consist of seven (7) members appointed by the Board of Aldermen, to serve without compensation, for terms of five (5) years each, provided, however, that the initial term of each member shall be as follows: two (2) members for one (1) year; two (2) members for two (2) years; one (1) member for three (3) years; one (1) member for four (4) years and one (1) member for five (5) years, as designated by the Aldermen.

A Chairman, Vice-Chairman and Secretary of the Harbor Management Commission shall be elected by the membership of the Commission.

Section 2. Jurisdiction of the Harbor Management Commission

The Harbor Mangement Commission shall have jurisdiction within the area located on, in or contiguous to the waters of the Wepawaug River, Indian River and Beard's Creek seaward to a line from Welches Point to Charles Island and along the tombolo or sand bar to the high water mark at Silver Beach. The Harbor Management Commission shall also have authority over the area that lies within the Milford boundary of the East side of the Housatonic River from the Milford/Orange Town boundary line to the southern end of thee breakwater at Milford Point.

Section 3. Selection of Harbor Management Commission Membership by Board of Aldermen

The Mayor shall appoint with the approval of the Board of Aldermen the member(s) of the Harbor Management Commission and alternates.

Section 4. Required Attendance at Regular Meetings by Harbor Management Commission Members

An unexplained failure to attend three (3) regular consecutive meetings in 12 months shall be evidence of cause to consider removal of any member.

Section 5. Appointment and Function of Alternate Harbor Management Commission Members

There shall be two (2) alternate Harbor Management Commission members appointed to serve on the Harbor Management Commission in case of the absence of a regular Harbor Management Commission member. Their terms shall be for two (2) years and their initial terms shall be for one (1) year and two (2) years as designated by the Board of Aldermen. Should any regular member be absent, the Chairman shall make all necessary arrangements for contacting the alternate Harbor Management Commission member(s) for attendance at the regular meeting.

Section 6. Harbor Management Commission Powers, Duties and Responsibilities

The Commission shall review and make recommendations on issues within the Harbor Management Commission jurisdiction (see Sec. 2 this ordinance) that are received by any zoning commission, planning commission, zoning board of appeals, historic district commission, flood and erosion control board, economic development agency, redevelopment agency, sewer commission, water pollution control authority or special district with zoning or other land use authority.

Those agencies shall send a copy of any such proposal to the commission. The commission shall be notified in writing of any such proposal within the Harbor Management Commission's jurisdiction at least thirty five days prior to the commencement of the hearing thereon, or where no hearing is held, at least thirty five days prior to the taking of any final action on the proposal.

The agency authorized to act on the proposal shall consider the recommendations of the commission. A two-thirds vote of all the members of the agency having authority to act on the proposal shall be required to approve a proposal which has no received a favorable recommendation from the commission, provided that the provisions of this section shall not be deemed to alter the authority of the agency having primary jurisdiction over the proposal, to deny, modify or condition the proposal.

Failure of the commission to submit a recommendation shall be deemed to be approval of the proposal. The Harbor Management Commission shall review the Harbor Management Plan annually and make any additions and/or modifications to the plan that may be deemed appropriate subject to the process and procedures set forth in Public Act 84-247, entitled, "An Act Concerning Harbor Management", or any subsequent legislation enacted by the State Legislature.

Section 7. Regulation of Mooring and Anchorage Area

All mooring activity, permanant and transient, shall be regulated by the Harbor Management Commission and the Harbor Master. Mooring schedules, fees and plans shall be developed as elements of the Harbor Management Plan and made available for review by the general public. For the purpose of this section, a Mooring Committee shall be established, consisting of the Harbor Master, the Chairman of the Harbor Management Commission and a third member of the Harbor Management Commission, agreeable to both the Chairman and the Harbor Master. All three members of the Mooring Committee shall be voting members of that committee.

Section 8. Commissioner's Authority to Establish Regulations

The Harbor Commission shall have the authority to establish regulations relating to the use and maintenance of the area within its jurisdiction as set forth in Public Act 84-247.

Section 9. Commissioner's Authority to Establish Fees

The Harbor Management Commission shall have the authority to establish fees subject to the approval of the Board of Aldermen for the use and maintenance of :

1. The City of Milford Launching Ramps

2. The City Dock

3. Designated Anchoring and Mooring Areas

4. Other Facilities developed for the use of commercial and pleasure craft.

The Harbor Management Commission shall also have the authority to establish fees for services involved in setting, retrieving, inspecting and repairing mooring tackle and equipment.

Section 10. Harbor Masters and Deputy Harbor Masters

The Harbor Master shall have the general care and supervision of the harbors and navigable waterways over which they have jurisdiction, subject to State Statutes regulating harbor masters, and shall be responsible to the Milford Harbor Management Commission for the safe and efficient operation of such harbor and navigable waterways in accordance with Public Act 84-247. A Deputy Harbor Master may be appointed upon the recommendation of the Mayor to the Governor, depending upon community needs. The Harbor Master shall have a non-voting ex-officio membership in the Harbor Management Commission.

This ordinance shall take effect in accordance with the Charter of the City of Milford.

Attest: Margaret S. Egan
Town-City Clerk

Dated at Milford, CT this
21st day of June, 1985

ORDINANCE FOR ESTABLISHMENT OF A MUNICIPAL HARBOR MANAGEMENT FUND

Milford, Connecticut

April 1986

At the special meeting of the Board of Aldermen held June 18, 1985, the following ordinance was approved:

WHEREAS, the City of Milford, Connecticut has developed a Harbor Management Plan pursuant to State requirements as outlined in Public Act 84-247 and other related legislation; and

WHEREAS, the City of Milford wishes to manage Milford Harbors and associated waters to increase the use of the harbor by the public, provide adequate maintenance for, and preserve and enhance the beauty and value of the harbor as a recreational and economic resource, and manage it as a valuable environmental resource; and

WHEREAS, the City believes that the most fiscally responsible way to ensure that funds are available for the required maintenance and management of Milford Harbor is to establish a separate and distinct Harbor Management Fund;

NOW THEREFORE BE IT ORDAINED AND ENACTED By the Board of Aldermen of the City of Milford as follows:

Section 1. Creation of a Harbor Management Fund

The City of Milford Harbor Management Fund is hereby created. This fund shall be separate and distinct from all other funds of the City of Milford. This fund is created for the purpose of the maintenance and improvement of Milford Harbor consistent with the Harbor Management Plan adopted by the City of Milford pursuant to Section 22a-113m of the Connecticut General Statutes. The source of monies for this fund shall be as delineated in this Ordinance. The uses of monies in this fund shall be as described herein.

Section 2. Sources of Monies

Monies from the following sources shall be deposited into the Harbor Management Fund:

1. Mooring and Docking Fees pursuant to Section 22a-113s of the Connecticut General Statutes; and

2. Appropriations approved by the Board of Aldermen of the City of Milford from the general budget and appropriations aproved by the Board of Aldermen of other revenues and funds.

Section 3. Investment and Management of Harbor Funds

Monies from the above-mentioned sources shall be deposited with the City Treasurer, who shall hold said monies int the Harbor Management Fund for the purposes of the fund. Monies in the Harbor Management Fund shall be invested by the City in a manner consistent with the requirements of Section 7-400 of the Connecticut General Statutes regarding the investment of funds by municipalities.

Section 4. Expenditure from Harbor Management Fund

Harbor Management Fund monies shall be spent for purposes consistent with the Harbor Management Plan of the City of Milford and related to capital improvements to, or operations of, Milford Harbor and its associated waterfront as defined by the City ordinance. No funds may be expended from this fund or for these purposes without the prior budgetary approval of the Board of Aldermen of the City of Milford.

This ordinance shall take effect in accordance with the Charter of the City of Milford.

Attest: Margaret S. Egan
Town-City Clerk

Dated at Milford, CT this
19th day of June, 1985

ORDINANCE FOR ESTABLISHMENT OF RULES AND REGULATIONS FOR THE USE AND ENJOYMENT OF MILFORD HARBOR

MILFORD, CONNECTICUT

PREAMBLE

WHEREAS, The City of Milford, Connecticut has developed a Harbor Management Plan pursuant to State requirements as outlined in CGS chpt. 444a secs. 113k through 113t and other related legislation, and

WHEREAS, the City of Milford wishes to make improvements to Milford harbor to increase the use of the harbor by its residents, provide adequate maintenance for, and preserve and enhance the beauty and value of the harbor as a recreational and economic development resource, and

WHEREAS, the City believes that the most responsible way to ensure that the provisions of the Harbor Management Plan are implemented and that the waters of the municipality are properly managed and regulated is through the establishment of rules and regulations for the use and enjoyment of the waters of the City of Milford,

THEREFORE, the Mayor and the Board of Alderman hereby enact the RULES AND REGULATIONS FOR THE USE AND ENJOYMENT OF MILFORD HARBOR as hereinafter set forth.

Revised June 30, 1985

ARTICLE I

General Provisions

Sec. 1. Short Title: This ordinance shall be known and may be cited as the Milford Harbor Rules and Regulations.

Sec. 2. Applicability: The provisions of this Ordinance and any rules and regulations adopted pursuant thereto shall be applicable, and shall govern, the use of the area located on, in or contiguous to the waters of the Wepawaug River, Indian River, and Beards Creek seaward to a line from Welches Point to Charles Island and along the tombolo or sand bar to the high water mark at Silver Beach, and the area that lies within the east side of the Housatonic River from the Milford/Orange town boundary line to the southern end of the breakwater at Milford Point.

Sec. 3. Invalidity of Provisions: If any provisions of the Ordinance is held invalid or inoperative, the remainder shall continue in full force and effect as though such invalid or inoperative provisions had not been made.

Sec. 4. .Authority: Whenever, by the provisions of this Ordinance, a power is granted to the Harbor Commission for the City of Milford or a duty is imposed upon them, the power may be exercised or duty performed by a deputy of the Harbor Management Commission or by a person authorized pursuant to law, unless it is expressly otherwise provided.

Sec. 5. Facilities, Control of Use: The Harbor Management Commission is vested with authority over and control of all floats, wharves, docks, launching ramps, and other facilities owned, leased, controlled, constructed or maintained by the City of Milford, or constructed or maintained by a lessee in any Milford harbor or water as defined in Section 2 above.

Sec. 6. Rules, Regulations and Orders: For the provisions of this Ordinance, the Harbor Management Commission shall have the power and duty to enforce the laws, ordinances, traffic and safety regulations covering usage of the waters of the City of Milford, as designated in Section 2 of this Ordinance.

Sec. 7. Enforcement Agents: The Harbor Management Commission, the Harbormaster or duly authorized agent(s) acting under the direction and jurisdiction of the Harbor Management Commission, and uniformed marine officers of the City of Milford shall have full authority to enforce this Ordinance.

Sec. 8. Violations:

(a) Violation of this Ordinance - shall be a municipal infraction as described in Chapter 1, Section 1-9 of the City of Milford Code of Ordinances, and a fine not to exceed $100.00 shall be imposed for each conviction hereunder. Each day in violation shall be considered a separate offense and subject to separate citations. A fine not to exceed $100.00 shall be imposed for each repeat offense.

(b) Collection of Fines - Fines levied under the provisions of this Ordinance shall be collected by the Harbormaster and deposited in the City of Milford Municipal Harbor Management Fund.

(c) Revocation of Mooring Permit - Repeated violations of this Ordinance may be cause for the revocation of a mooring permit as set forth in Section 43 of this Ordinance.

ARTICLE II

Definitions

Anchorage: Shall mean those water areas designated for ancoring with ground tackle found on board.

Commercial Vessel: Shall mean any vessel licensed or unlicensed used or engaged for any type of commercial venture, including but not limited to, the display of advertising or the carrying of cargo and/or passengers for hire.

Distress: Shall mean a state of disability or a present or obviously imminent danger which, if unduly prolonged, could endanger life or property.

Emergency: Shall mean a state of imminent or proximate danger to life or property in which time is of the essence.

Facilities: Shall mean any and all facilities of a harbor or maritime facility either publicly or privately owned that are intended primarily to be used by or for the service of small craft (including ramps, hoists, parking areas, leased water areas, concessions and service facilities) located on land or in the waters under the jurisdiction of the City of Milford.

Fairway: Shall mean the parts of a waterway kept open and unobstructed for free movement for water access.

Float: Shall mean any floating structure normally used as a point of transfer for passengers and goods and/or for mooring purposes.

Harbor Management Commission: The duly appointed body of the City of Milford with responsibilities for carrying out the Harbor Management Plan as set forth under Public Act 84-247.

Harbormaster: Shall mean the Harbormaster appointed by the Governor of Connecticut who shall advise the Harbor Management Commission with respect to matters concerning the waters under the jurisdiction of the City of Milford.

Houseboat: Shall mean any structure constructed on a raft, barge or hull, moored or docked in any water that is used primarily for single or multiple-family habitation or that is used for the domicile of any individual(s) for a period of more than 2 weeks; if used for transportation, this use is secondary.

Maritime Facility: Shall mean any facility affecting the use and operations of pleasure or commercial vessels bordering on, concerned with, related to a protected water area of Long Island Sound and its tributaries that is owned, managed or controlled by or under the jurisdiction of the City of Milford.

Moor: Shall mean to secure a vessel other than any anchoring.

Mooring: Shall mean a place where buoyant vessels are seasonally secured by equipment other than at a fixed pier of dock.

Mooring Tackle: The equipment used to secure avessel at a mooring.Public Area: Shall mean all areas of any harbor except those areas under specific lease to private persons of firms or owned privately.

Slip: Shall mean berthing space for a single vessel alongside a pier, finger float, or walkway.

Shore: Shall mean that part of the land in immediate contact with a body of water, including the area between high and low water lines.

Shall and May; "Shall" is mandatory; "May" is permissive.

State: Shall mean the State of Connecticut.

Stray Vessel: Shall mean (1) an abandoned vessel; (2) a vessel the owner of which is unknown; or (3) a vessel underway without a competent person in command.

To Anchor: Shall mean to secure a vessel to the bottom within a body of water by dropping an anchor or anchors or other ground tackle found on-board the vessel.

Underway: Shall mean the condition of a vessel not at anchor; without moorings; and not made fast to the shore nor aground.

ARTICLE III

General Boat and Traffic Control Regulations

Sec. 9. Traffic Control Authority: The Harbormaster, Deputy Harbormaster, or Marine Enforcement Officers for the City of Milford shall have authority to control waterborne traffic in any portion of the waters of a harbor or maritime facility under their jurisdiction by use of authorized State regulatory markers, signals, orders or directions any time preceding, during and after any race, regatta, parade or other special event held in any portion of the waters of a harbor or maritime facility or at any time when the enforcement officer deems it necessary in the interest of safety of persons and vessels or other porperty, and it shall be unlawlful for any person to willfully fail or refuse to comply.

Sec. 10. Basic Speed Law: The operation of any vessel, wet bike or powered vessel, within the harbor area or anchorage, and the one hundred-foot navigable area on either side of the marked channel from Milford Harbor entrance southerly to the aids to navigation buoys (Red Lighted Buoy 4 and Green Can 5) by boats and boat operators in excess of established speed limits, or in the absence of such limits, in a manner to create a wash which endangers persons or property, shall constitute a violation of this Ordinance. In no event shall any boat under power exceed a speed limit of 5 knots within the areas defined, when passing boats and anchorages, provided that special written permission may be granted to conduct and engage in water sports and regattas in specific designated areas.

Sec. 11. Permits for Races and Special Events: It shall be a violation of this Ordinance for any person to engage or participate in a boat race, watersport, exhibition, or other special event unless especially authorized by permits from the U.S. Coast Guard - Group Long Island Sound and the State of Connecticut Dept. of Environmental Protection - Marine Patrol Division. These organizations shall have authority to issue such permits and to attach such conditions thereto as, in their opinion, are necessary and reasonable for the protection of life and property. Copies of said permits shall be provided to the Harbor Master.

ARTICLE IV

General Regulations

Sec. 12. Liability:
(a) Boat Owner - Any person using maritime facilities within the limits of the City of Milford, shall assume all risk of damage or loss to his property and the City of Milford assumes no risk on account of fire, theft, Act of God, or damages of any kind to vessels within the harbor or maritime facility.

(b) Marina Owner and/or Operator - It shall be the responsibility of the owner, licensee, lessee, or operator of any marina, repair yard, or other marine facility, located within any harbor, waterway or other maritime facility, to maintain the physical improvements under his jurisdiction in a safe, clean, and visually attractive condition at all times, to provide adequate security and fire prevention measures and appropriate fire fighting equipment as may be directed by the Fire Marshall. Failure to initiate within 30 days of receipt of written notice from the Harbor Management Commission to correct unsafe or otherwise unsatisfactory conditions and to pursue same to completion to the satisfaction of the Harbor Management Commission, shall be a violation of this Section.

Sec. 13. Use Permits, Suspensions or Revocations: All permits granted under the authority of this Ordinance shall be valid only for such period as may be determined by the Harbormaster and permits of unqualified duration of validity shall not be granted. A violation of the provisions of this Ordinance or of any other applicable Ordinance by any permittee, shall be grounds for suspension or revocation of such permit or permits.

Sec. 14. Harbor Management Plan Consistency Review: The Harbor Management Commission shall review all permit applications for structures within the jurisdiction of the waters designated in Section 2 of this Ordinance, to determine if they are in compliance with the Milford Harbor Management Plan as prepared pursuant to sec. 22a-113p of the Ct. Harbor Management Act, and other related legislation.

Sec. 15. Damage to Harbor or Other Property: It shall be unlawlful to willfully or carelessly destroy, damage, disturb, deface or interfere with any property in the Harbor area

Sec. 16. Obstruction of Facilities: It shall be a violation of this Ordinance for any person willfully to prevent any other person from the lawful use of any assigned or public mooring, anchorage, pier, dock, boat launch or other harbor facilities.

Sec. 17. Signs, Erection and Maintenance:

(a) The Harbormaster may place and maintain, or lclause to be placed maintained, either on land or water, such signs, notices, signals buoys or control devices as he deems necessary to carry out the provisions of this Ordinance, or to secure public safety and lthe orderly and efficient use of a harbor or maritime facility.

(b) Private use signs (including For Rent or For Sale signs) shall be limited to a size of eight and one-half inches (8 1/2") by eleven inches (11") and must be posted on the vessel.

(c) Failure to comply with the provisions of this Section may be cause for the revocation of a mooring permit as set forth in Section 43 of this Ordinance.

Sec. 18. City Dock and Boat Ramps:

(a) No person shall use the City boat ramp, unless his trailer or automobile shall have affixed thereto a registration plate for the current year certifying that the boat is entitled to the use of such launching facilities. Transients may tie to the launching ramp docks for a maximum of two hours. Launching or recovery on the ramp requires a permit.

Launching ramp permits and identification plates are obtained from the City (Tax Office) and are available to Milford residents for one dollar and to non-residents for 35 dollars per year.

Connecticut residents must show their current boat registration. Parking permits are available to residents and non-residents. All vessels must be properly registered in order to obtain a ramp use permit and use to use the public facilities.

(b) No person shall moor any vessel at the City dock for a continuous period longer than two (2) hours without permission of the Harbormaster.

(c) The City dock shall be posted with appropriate signs indicating "Twelve Hour Emergency Mooring Only"

(d) No person shall be allowed to dive, jump or swim from or in the immediate area of the City dock.

(e) The Harbor Management Commission shall from annually propose to the Aldermen fees for the use of City controlled facilities.

(f) The State of Connecticut maintains a launching ramp on the Housatonic River, immediately South of the I-95 bridge. No city permit is required for it's use.

Sec. 19. Water Skiing: No water skiing is allowed within Gulf Pond, or within 200 feet of a designated channel or anchorage.

Sec. 20. Underwater Diving: Underwater diving is prohibited in navigation channels and anchorages except in cases of emergency or for the purpose of underwater inspection.

Sec. 21. Swimming, a Hazard to Navigation: All swimming and bathing shall occur only in areas designated by the Harbor Management Commission.

ARTICLE V

Regulations Concerning Anchoring, Mooring and Security of Vessels

Sec. 22. Anchoring: It shall be a violation of this Ordinance to anchor a vessel in the harbor without obtaining a permit from the Harbormaster, except in designated anchoring areas. Vessels in distress are excepted from this prohibition, but as soon as practicable, the person in charge of any such vessel shall report the situation to the Harbormaster.

Sec. 23. Obstruction of Channels, Fairways, and Berthing Spaces: No person shall moor or anchor so as to interfere with the free and unobstructed use of the channels, fairways or berthing spaces within the areas as designated in Section 2 of this Ordinance. It shall be unlawful to voluntarily or carelessly sink or allow to be sunk any vessel in any channel, fairway, or berthing space; or to float loose timbers, debris logs or piles in any channel, fairway or berthing space in such a manner as to impede navigation or cause damage. Any wrecked or sunken vessels within a harbor shall be subject to removal as set forth in Section 24 below.

Sec. 24. Removal of Abandoned and Sunken Vessels: No person shall abandon, sink, or cause to be sunk, scuttle or burn any vessel, boat, craft or object in the areas described in Section 2 of this Ordinance, nor shall such person abandon, sink, scuttle or burn or otherwise place a vessel, craft or object in such areas where it may be hazardous to navigation or to boats moored in such areas. The Harbormaster of the City shall notify the owner of such abandoned vessel by Certified Mail to remove such abandoned vessel. If such owner is not known, the Harbormaster shall post a notice, if practical, on such abandoned boat or vessel requesting its immediate removal, and after a period of 24 hours following such notification or posting, the Harbor Master may cause it to be removed. See sections 15-11A and 15-140C of the Connecticut General Statutes. Within the federal project Title 33; Section 414 of the U.S. Code is adopted.

Sec. 25. Vessels Making Fast: No person shall make fast or secure a vessel to any mooring already occupied by another vessel, or to a vessel already moored, except that a rowboat, dinghy or yacht tender regularly used by a larger vessel for transporation of persons or property to or from shore may be secured to such larger vessel or to the mooring regularly used by such larger vessel. If tied within a slip, such rowboat, dingly, or tender shall not extend into the fairway beyond the larger vessel if such larger vessel is also occupying the slip, or otherwise beyond the slip itself.

Sec. 26. Correcting an Unsafe Berthing: If any vessel shall be found in the judgment of the Harbormaster to be anchored, berthed or moored within any harbor or maritime facility in an unsafe or dangerous manner, or in such a way as to create a hazard to other vessels or to persons or property, the Harbormaster shall order and direct necessary measures to eliminate such unsafe or dangerous condition. Primary responsibility for compliance with such orders and directions shall rest with the owner of the improperly anchored, berthed, or moored vessel or his authorized agent; in the absence of such owner or agent, said responsibility shall rest with the authorized operator of the vessel or the facility at which the vessel is anchored, berthed, or moored. In an emergency situation and in the absence of any such responsible person, the Harbormaster shall forthwith board such vessel and cause the improper situation to be corrected. and the owner of the vessel shall be liable for any costs incurred by the Harbormaster or his agents in effecting such correction.

Sec. 27. Unseaworthy Vessels: No person shall secure or permit to be anchored, berthed, or moored in a harbor, waterway, or maritime facility a vessel of any kind whatsoever which the Harbormaster considers unseaworthy or in a badly deteriorated condi,tion, or which is likely to sink or to damage docks, wharves, floats, and/or other vessels, or cause water pollution, or which may become a menace to navigation. Such vessels shall be removed from the water and/or be otherwise disposed of as directed by the Harbormaster.

Sec. 28. Use of Vessel as Abode: Houseboats, as defined in Article II, are prohibited from berthing or mooring in Milford Harbor. Living aboard vessels in the harbor is prohibited. For the purpose of this Section, the term "living aboard" means the continuous use of a vessel for a period in excess of three days, including use of the vessel for overnight lodging.

Sec. 29. Placement of Private Moorings: It shall be a violation of this Ordinance to place any mooring in the waters of the City of Milford without a permit from the Harbormaster. No vessel so moored or anchored shall extend beyond the mooring area into any designated channels or fairway.

Sec. 30. Mooring Records :

(a) The Harbormaster shall keep a detailed record of all moorings, their location, and the owner's name, home and business address, telephone number, date mooring was set, and name, length, registration number, and type of boat to be attached thereto.

(b) The Harbormaster shall maintain in a public place, a waiting list for mooring space, for assignment of mooring space, and an application procedure for use of the harbor and facilities.

(c) Applications for moorings and a place on the mooring waiting list shall be renewed annually.

Sec. 31. Allocation of Moorings:

(a) The Harbor Commission shall establish and post in a public place, an allocation procedure and priority list for seasonal moorings.

(b) As provided in Section 30 above, available mooring shall be offered to the senior applicant on the mooring waiting list, subject to the constraints contained in these Rules and Regulations. If the available mooring is not suitable to accommodate the senior applicant's vessel, it shall be offered to the next senior qualified applicant. The Harbor Management Commission shall continue efforts to provide a suitable mooring for the senior applicant. In order to obtain the most effective utilization of existing mooring facilities, lists of applicants will be maintained according to the size of the vessels. These lists will be available for public perusal and review during regular hours.

(c) The anchorage space available, as defined for transient boaters, shall be available on first come, first served basis and this space shall be accepted on a temporary basis.

Sec. 32. Original Application for Mooring Permit : Any interested person or persons or corporation may apply for a mooring permit by completing, in full, the application provided for that purpose. In the case of a corporation, association, or other group however organized, disclosure of the principals of the corporation, and evidence of corporate organization must be submitted by producing current Articles of Incorporation or similar instrument registered with, approved and issued by the State of Connecticut.

Sec. 33. Mooring Permits Valid for One Year Only: Mooring permits are valid for a period not to exceed one year unless renewed as referenced in this Ordinance.

Sec. 34. Renewal of Mooring Permit: All mooring permits shall expire on December thirty-first, and shall be renewed by January thirtieth of the following calendar year. A grace period lasting until the last calendar day of February is allowed after which period, renewal applications received will be treated in the same manner as first-time applications.

Sec. 35. Mooring Registration Fee: All applications for a re-registration shall be accompanied by a fee. All such fees shall be non-refundable. In the case of applications for new mooring space, the fee shall not be due until such time as the Harbormaster shall assign such applicant a mooring space and the applicant shall accept same. All mooring space permits issued shall expire on the 31st day of December next following its issuance. All fees established under this plan shall be reasonable and in line with the value of the service rendered.

Sec. 36. Mooring Permits Are Non-Transferable: Whenever a permittee parts with possession of, or transfers the title or interest in the small craft identified in the mooring permit to another person by any arrangement whatsoever, the Mooring Permit shall expire except as otherwise provided herein with respect to the original permittee. The new possessor, transferee or owner shall have no right to use the mooring space covered by the mooring permit. The original permittee may, upon written application to and approval by, the Harbor Management Commission, retain the mooring space assigned under his or her mooring permit provided that another small craft owned by the permittee is moved into the mooring within thirty (30) days (unless the period is extended by the Harbor Management Commission because of special circumstances involved) and the permittee continues to pay the appropriate fees.

As long as a corporation which possesses a valid mooring permit remains in being, the mooring permit remains valid, regardless of whether or not any portion of its interest is conveyed through sale or transfer of stock. However, should the controlling interest in the corporation change through such a sale or transfer of stock, the permit shall expire.

Sec. 37. Permittees Change of Vessel
The Harbormaster shall attempt to accomodate a permittees change in vessel size during the permit period, provided such a change doesn't reduce the number of moored vessels or compromise vessel safety.

Sec. 38. Specifications for Mooring Tackle:

1. Mooring tackle shall meet the following minimum requirements:

Boat Length	Paired Anchors	Chain	Nylon Line
Under 16	75 # ea.	5/16	1/2
16-19	100 # ea.	3/8	1/2
20-22	150 # ea.	3/8	1/2
23-25	200 # ea.	3/8	5/8
26-30	300 # ea.	1/2	3/4
31-35	350 # ea.	1/2	3/4
36-40	400 # ea.	5/8	1
41-50	500 # ea.	5/8	1

NOTE: The above list is furnished as a guide only. Meeting these specs. does not guarantee a safe mooring in all conditions.

2. Pick-up buoy shall be lettered with boat name.

3. The maximum length of the pennant shall be two times the distance from the bow chock to the water plus the distance from the bow chock to the mooring cleat or post.

4. All pennant lines running through a chock or any other object where chafing may occur shall have adequate chafe guards.

5. The total length of the chain shall be one and one-quarter times the depth of the water at high tide.

6. All shackles, swivels and other hardware used in the mooring hookup shall be proportionable in size to the chain used.

7. All shackles shall be properly seized.

8. It is recommended that the pennant be spliced or shackled into the bitter end of the chain so the strain is not carried by the buoy. The use of a second pennant in heavy weather is encouraged.

9. Only mushroom anchors will be acceptable on permanent moorings.

Sec. 39. Abandonment of Mooring Tackle: Any registered owner who owns tackle and is abandoning their mooring space may offer to sell the tackle occcupying such space to the next person assigned the same. Failure of the registered owner to remove such tackle shall constitute the abandonment thereof, and such tackle may be removed by the Harbormaster at the expense of such registered owner therof.

Sec. 40. Mooring Inspection:

(a) No mooring shall be placed in the waters of the City of Milford as designated in Section 2 of this Ordinance without inspection and approval of the Harbormaster. The Harbormaster must direct the placement of all moorings.

(b) Each mooring shall be raised or removed for inspection at least once every two years. The cost of inspection shall be set by the Harbor Management Commission, and shall be at the sole expense of the owner.

The Harbormaster will maintain a record of the inspection and his report for a period of four years. If, as the result of such inspection it shall be determined that any chain, shackle, swivel or other piece of mooring tackle has become warped or worn by one-third of its normal diameter, all such chain, shackle, swivel or other piece of mooring tackle shall be replaced accordingly. Failure to make such replacement shall be grounds for revocation of mooring registration by the Harbor Management Commission.

Sec. 41. Moorings: Ice Protection: Mooring buoys to be disconnected by Dec. 1st and rebuoyed by April 1st on the alternate year that the ground tackle is not removed for inspection.

Sec. 42. Transient Anchorage: No vessel will be allowed to anchor within the waters of the City of Milford as designated in Section 2 of this Ordinance, utilizing her own ground tackle and be left unattended. The owner or operator and party may go ashore, but shall not leave the area. They shall be available to tend to the vessel in the event of heavy weather.

Sec. 43. Revocation of Mooring Location Permit: The awarding of a mooring permit entitles the owner to the use of a specific mooring location identified by mooring number. The permittee may occupy the assigned mooring only with that small craft described in his or her application for mooring permit.

Any permittee who fails to remedy any breach of the duties, covenants or conditions of the agreement, or who fails to desist from violating these Rules and Regulations directed at him by the Harbor Management Commission or their agents for immediate corrective action and compliance, will suffer the automatic revocation of the mooring permit and any rights thereunder.

Reasons for termination or revocation of a mooring permit will be established by the Harbor Management Commission and posted in a location for public inspection.

ARTICLE VI

Regulations Concerning Commercial Activity

Sec. 43. Vessels for Hire: The owners, master or person in charge of or operating any vessel using the waters designated in Section 2 of this Ordinance, be required to furnish to the Harbormaster information regarding the number of passengers carried and the charges or other considerations paid by such passengers. Failure to provide such information to the Harbormaster on demand shall be a violation of this Article.

Sec. 44. Soliciting: Soliciting is prohibited within the harbor, except as may be specially authorized by permit issued by the Harbormaster, and subject to terms and conditions prescribed in such permit.

Sec. 45. Water Taxi: No person shall operate a water taxi within the harbor or maritime facility without complying with the Rules for Uninspected Vessels (Title 46, Code of Federal Regulations Parts 24-26 and 175-187).

Sec. 46. Commercial Activities: No owner or operator of any commercial boat or any other boat, licensed or unlicensed, shall conduct, maintain or engage in any activity for hire from any premises within the waters designated in Section 2 of this Ordinance except from those leaseholds specifically permitted by Planning and Zoning Board regulations to conduct such activities, nor shall any lessee or any boat mooring operator in said waters permit, authorize, or allow the operation of a commercial activity from within the area of their control of tenancy unless specifically permitted by the Planning and Zoning Board.

Appendix No. 1

Channel Realignment, Compensating Anchorage and Permit Application

To: Mayor Alberta Jagoe 9 September 1985

Re: Milford Harbor Task Force: Channel Encroachment and Redesign, Recommendations

Dear Mayor Jagoe:

In accordance with your letter of January 14, 1983 the Task Force has studied the problems of encroachments relating to the Federal Project in Milford Harbor. Through public meetings, coordination with the Corp of Engineers, State of Connecticut DEP, and National Marine Fisheries we made evaluations of various alternatives and arrived at a conclusion and recommendations as follows:

"That the Federal Project should be updated by redesign to relieve the encroachments, improve vessel traffic flow, expand the anchorage area, provide for improved use of the City Dock and future marine developmen of the Head of the Harbor".

The redesign has resulted in a Plan referred to as Dwg 9B to which all agencies have agreed and a subsequent permit to accomplish the compensating dredging work has been applied for by the City of Milford by Aldermanic resolution on January 7th, 1985.

The Task Force, meeting with the Harbor Managemnet Commission and affected property owners on August 26, 1985, obtained a formal vote of approval of the plan and compensation costs from all private and commerical property owners. The City of Milford's formal approval of participation will be required to assure the Corp of Engineers that a final resolution of the encroachments is imminent.

Will you please advise me of what if any additional information or activity will be required in order to have your Office and the Board of Alderman make a positive statement of participation regarding the resolution of the long standing problem in the Federal Project.

Sincerely,

Allen G. Berrien
Task Force Chairman

Enclosed: Summary of Evaluation and Conclusions
Permit Application for Compensatory Dredging

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NOAA Evaluation and Recommendation

Consideration Regarding Anchorage Area Revised

Harbor Chart 9B

Task Force DEP/CAM Communication

APPENDIX - RESOLUTION OF CHANNEL ENCROACHMENTS 1985

CITY OF MILFORD

Mayor Alberta Jagoe

HARBOR MANAGEMENT TASK FORCE

Members:

Chairman Allen Berrien

Edward Austin
Mead Batchelor
Grace Carroll
Edmund Colangelo
John Donnelly
John Keegan
William Mildner
Larry Mitchell
William Mullarkey
William Schultz

Six bases for the evaluation of our recommendation:

1. Our recommendation has to meet the approval of the C.O.E.
2. Our recommendation has to meet the approval of the D.E.P.
3. Our recommendation must be in the public's long-term best interest.
4. Our recommendation must minimize the cost to the City of Milford.
5. Our recommendation must minimize disruption to the existing users.
6. Our recommendation must minimize the cost to the existing users.

The six options for our recommendation are:

1. Physical removal of all channel encroachments.
2. Shift a portion of the Federal channel and the accompaning anchorage area to the west.
3. Reduce the size of the existing Federal channel so that no encroachments remain within the channel.
4. Move the Federal channel to the west into the anchorage area and compensate this loss by providing additional anchorage area in the West 6 foot Basin.
5. Do nothing to address the issue.
6. Re-design the channel and anchorage to provide for the best use today and for the future needs.

Further, the Corps has agreed to a five foot setback from the Federal Project, to provide future maintanence dredging and to permit any compensating dredging to take place in the authorized six foot anchorage that has never been federally funded. (Reported by Richard Roach, from his superiors, to Allen Berrien on January 6, 1984 in Groton.)

ALTERNATIVES

BASIS FOR EVALUATION	PHYSICAL REMOVAL OF ALL CHANNEL ENCROACH.	SHIFT A PORTION OF CHANNEL WEST	REDUCE SIZE OF CHANNEL	MOVE CHANNEL WEST AND COMPENSATE W/ NEW AREA	DO NOTHING	UPDATE CHANNEL & ANCHORAGE DESIGN
MUST MEET C.O.E. APPROVAL	ACCEPTABLE	ANCHORAGE LOSS NOT ACCEPT.	NAV. RESTRICT NOT ACCEPT. 65% USERS UPSTREAM	ACCEPTABLE	NOT ACCEPTABLE C.O.E. WILL ACT	ACCEPTABLE - LOCAL INPUT DESIRED
MUST MEET D.E.P. APPROVAL	ACCEPTABLE PERMIT REQD. TO MOVE BACK	ACCEPTABLE NO DREDGING REQUIRED	ACCEPTABLE?	DREDGING PERMIT REQUIRED	NOT ACCEPTABLE	ACCEPTABLE - REVISED HEAD OF HARBOR PLAN AND DEDICATION OF INTERTIDAL FLAT
BENEFITS TO PUBLIC NAVIGATION- MOORING SPACE	RENEWED USE OF 100' CHANNEL - NO LOSS OF ANCH.	RENEWED USE OF 100' CHAN. LOSE 30,000SF ANCHORAGE	50% CHANNEL RESTRICTED REDUCED COMM. POTENTIAL. COMM. FISH. BOATYARD, HEAD OF HARB.	RENEWED 100' CHANNEL RESTORED ANCH. CAPACITY	DECISIONS MADE BY OTHER THAN LOCAL INT. NO MAINT. DREDGING	RESTORED CHANNEL TO 100' NO REDUCTION OF PUBLIC ANCHORAGE - FULL USE OF CITY DOCK, COMM. FISHING EXPANSION.(107)
MINIMIZE COST TO CITY OF MILFORD PRESENT & LONG-TERM	MINIMAL EXCEPT CITY TO OBTAIN BLANKET DREDGING PERMIT	PRESENT - NONE	PRESENT- NONE. LONG-RANGE REDUCED TAX BASE & VESSEL SIZE	PRESENT - NO COST LONG-RANGE: INCR. REVENUE & TAXES	LONG-RANGE COSTS HIGH	PRESENT: RESOLVED CONFLICTS CO-OPERATE ON COSTS DUE TO CITY DOCK ENCROACHMENT LONG-RANGE: IMPLEMENTATION OF H of H PLAN & STABLE TAX BASE
MINIMIZE DISRUPTION TO EXISTING FACILITIES	MAXIMUM DISRUPT. OF PRESENT USERS	LOSS OF 9-10 MOORING SPACES	MINIMUM	ALL STRUCTURES REMAIN AS BUILT PROVIDE 5' SET-BACK FROM CHANNEL	NOW MINIMUM. C.O.E. ACT VERY HIGH NO NEW PERMITS	NONE - NEW PROJECT LIMITS DEFINED. PROVIDES FOR EXISTING MARINA EXPANSION.
MINIMIZE COST TO EXISTING FACILITIES	PRIVATE: FOR CONT. PRESENT USE, EST. COST: $75 -$85 M COMMERCIAL: EST. COST: $22-$25M PLUS SUBSTANTIAL REVENUE LOSS $12M ANNUALLY $190 LINEAL FOOT	PRESENT ENCROACHMENTS SHARE COSTS. FUTURE RELOCATIONS EQUAL COSTS. COST TO DREDGE CHANNEL: $15-$18M	MINIMUM NOW REDUCTION IN VESSEL SIZE AND DRAFT LIMITS.	ESTIMATED COST: $75-$85M TO RELOCATE CHANNEL AND DREDGE AN ANCHORAGE 30MSF ESTIMATED: $75-80 PER SQ. FT.	NOW MINIMUM C.O.E. ACT VERY HIGH NO NEW PERMITS	ESTIMATED COSTS: $75-$85M RELOCATE CHANNEL AND COM - PENSATE ANCHORAGE: $75-$80 LF RESOLVES MARINA EXPANSION IN EXISTING ANCHORAGE 80,000 SF IMPLEMENTATION OF COMMERCIAL FISHING LANDING

CONCLUSIONS

1. Maximum disruption of existing users with maximum cost at approximately $190. per lineal foot. Not recommended - evaluation attached.

2. Present encroachments share cost equally. Cost to dredge relocated channel $15 - $18 thousand. Loss of approximately 9 - 10 mooring spaces in the public anchorage. Not recommended.

3. Restriction of navigation for 65-70% of users of harbor. Places a stress on upstream facilities with no future potential for commercial fishboat landing, and projected reduction of vessel size and draft. Not recommended.

4. Acceptable but makes no provision for future needs with cost approximately $75 - $80 per lineal foot contribution from existing encroachers. Not recommended.

5. Devastating eventually for all commercial users and raises serious question about our ability to govern ourselves. No permits at all will be issued. Not recommended.

6. Provides for utilization of maximum local input to relocate channel and dredge compensating anchorage. Cost: approximately $75 - $80 per lineal foot for existing shorefront structures, same as #4. Further, it resolves the issue of the existing marina in a portion of the public anchorage. It provides for utilization of the entire public anchorage rather than leaving a large portion under utilized to provide access to the existing marina. In covering all six bases for evaluation, there was no substantial negative impact known by task force. It provides for clearance from the face of the City Dock for vessels to tie up without mooring "in" the channel and provides for 5 foot set-back as agreed by the C.O.E. It further provides for expansion of access to the public launching area that is beyond the existing navigation project and provides for the additional upstream (107) project for the commercial fishboat landing. As all of the property at the head of the harbor is publicly owned, this area will be the core of public access to navigable water. Unanimously recommended.

EVALUATION ALTERNATE ONE MOVEBACK FROM CHANNEL

AREA A PRIVATE DOCK OWNERS (10)

OWNER	FEASIBLE	DREDGE	PILES	DOCK	BULKHD.	OTHER	TOTAL
BARONE	YES	1200	2200	1000	10000	3000	17000
FDN. SCHOOL	YES	1000	3600	1000	10000	----	15600
MARCH	YES	600	800	600	----	---	2000
BRENNAN	YES	1800	2000	1500	25000	---	30300
OFFUTT	YES	2000	1800	500	---	---	4300
MEYERS	YES	---	1500	500	---	---	2000
CERINO/ALLEN	YES	___	400	250	---	---	650
PRIESS	CLEAR OF CHANNEL		---	----	-	-	---
GUNTHER	YES	---	400	250	---	---	650
ALLEN	YES	---	1500	1500	---	---	3000
							$75900.

PILING COST AT $350/400 EACH

DREDGING AT $6.00 / cu. yd.

BULKHEAD AT $350.00 lineal foot

COST OF WORK PER LINEAL FOOT $\frac{75900}{400}$ = $190.00 lf. avg

EVALUATION ALTERNATE ONE SPENCERS BOAT YARD

NORTH END

POSSIBILITY 1. LOOSE FOUR OR FIVE FINGER DOCKS OR TEN BOATS @ $1200 PER YEAR= $12,000 PER YEAR

2. MOVE BACK 25' + or -

	FEASIBLE	DREDGE	PILES	DOCKS	TOTAL
138'	YES	4000	10,000	2000	$16,000

SOUTH END

POSSIBILITY 1. LOOSE 20 SMALL BOATS @ $500.00 PER YEAR $10,000

FEASIBLE	DREDGE	PILES	DOCKS	TOTAL
YES		4500	2000	$6500

COST $22,000.

ANNUAL REVENUE LOSS $22,000

EVALUATION

ALTERNATE TWO MOVE CHANNEL WEST

to accomodate present vessels and docks
and provide 5' clear of new channel
40' west

SEE ALTERNATE FOUR

CHANNEL DREDGING $15-18000.

BASED ON 1000' OF CHANNEL FRONTAGE

$\frac{18000}{1000} =$ $18.00 per front foot

EVALUATION ALTERNATE THREE

REDUCE CHANNEL WIDTH TO CLEAR INFRINGEMENTS

ASSUME CHANNEL MOVED TO CLEAR PRESENT DOCKS, FLOATS AND VESSELS BY 5' TO NEW LOCATION 40' WEST + OR - PER ALTERNATE TWO AND FOUR.

CHANNEL NOW BECOMES 100'-40' =60'min.
100'-35' =65'max.

RESTRICTS UPPER HARBOR USAGE

DOCKS AND FLOATS AT 90° TO CHANNEL TOO RESTRICTED

POOR ANCHORAGE ACESS

GENERALLY UNSAFE NAVIGATION FOR THE MULTIPLE USERS OF THE HARBOR

RESTRICTS POTENTIAL EXPANSION OF THE "HEAD OF THE HARBOR"

EVALUATION ALTERNATE FOUR

MOVE CHANNEL WEST TO PROVIDE 5' CLEARANCE FROM EXISTING DOCK, FLOATS AND VESSELS. FURTHER TO DREDGE EQUIVALENT ANCHORAGE AREA.

AREA TAKEN FROM ANCHORAGE

AREA A -PRIVATE DOCKS 750 lineal feet,times 40 feet.

30,000 sq ft.

$\frac{400}{2} \times \frac{40 \times 8}{27} =$ 2400cu yd

COST 2400 cu yd @ 6. $14,400.

$\frac{400}{2} \times 40 =$ 8000 sq ft.

TOTAL TAKEN 38000 sq ft.

$\frac{30000 \times 9}{27} =$ 10000 cu yds.

COST 10000 cu yds @ $6 =$60000

TOTAL COST	CHANNEL	$ 14000
	ANCHORAGE	$ 60000
		$ 74000

BASED ON 1000 LINEAL FEET = $74.00 PER FOOT OF FRONTAGE

EVALUATION ALTERNATE FIVE DO NOTHING

LET CORPS OF ENGINEERS TAKE ACTION

DEVASTATING TO ALL PRESENT COMMERCIAL AND PRIVATE USERS

RAISES SERIOUS QUESTION ABOUT OUR ABILITY TO GOVERN OURSELVES

ALTERNATE SIX

EVALUATION REDESIGN CHANNEL AND ANCHORAGE TO MEET PRESENT AND FUTURE NEEDS OF USERS

SEE BASIC ALTERNATIVES TWO AND FOUR FOR CALCULATIONS.

FURTHER CONSIDERATIONS INCLUDED IN THIS OPTION ARE MARINA PRESENTLY UTILIZING A PORTION OF THE FEDERAL PROJECT CAN BE RESOLVED BY COMPENSATING FOR THIS USE BY DREDGING AN EQUAL AREA IN THE AUTHORIZED BUT UN FUNDED 6'ANCHORAGE.

FURTHER THE CITY DOCK IS DIRECTLY ADJACENT TO THE NAVIGATION CHANNEL AND ANY VESSEL MOORED TO IT IS PARTIALLY OBSTRUCTING THE SAFE TRANSITING OF MILFORD HARBOR.

THE BOAT YARD NORTH OF THE CITY DOCK IS ON THE SITE OF A PREVIOUS COAL YARD AND ITS DOCKS ARE IN AN UNUSED 125'TURNING BASIN, THE REESTABLISHMENT OF A 100' CHANNEL THROUGH THE ENTIRE LENGTH OF MILFORD HARBOR WOULD PROVIDE FOR THE IMPLEMENTATION OF A COMMERCIAL FISHBOAT LANDING (HEAD OF THE HARBOR) AND FUTURE PUBLIC ACESS ON THE EAST SIDE OF THE NAVIGATION PROJECT.

Allen G. Berrien, Task Force Chairman, City of Milford
One High Street
Milford, CT 06460

Harbor Fund Compensating Cost Calculations to Federal Project

Catalog of Use

460 lineal feet	Private Property Owners (Residential Zone)
888 lineal feet	Marinas and Boat Yards (Business Boating Zone)
880 lineal feet	City of Milford (Park Land Zone)

$177,600.00 is $80.00 x 2228

$6.00/yard x 30,000 yards is $180,000.00

Allen G. Berrien, Task Force Chairman, City of Milford
One High Street
Milford, CT 06460

Lineal Frontage Dimensions on Milford Harbor

City of Milford	Harborview Avenue	60feet
Barone	46-47B	70
Holst	43,44,45	50
March	41-42	20
Brennan	40,40A,40B	40
Offutt	38-39	50
Bernstein	37	10
Meyer	32A,33,34,35,36	70
Cerino	32	20
Allen	31B	10
Priess	31A (not in current violation)	10
Gunther	31,30	30
Allen	28,29	40
Ferrari	26,27 (not in current violation)	20
Allen	25	20
Allen (Spencer's)	1	138
Allen (Spencer's)	24	320
		978
City of Milford	Wilcox Park	820
		1798
Milford Wharf Company		430
Total Lineal Footage for Compensation		2228feet

MILFORD HARBOR MANAGEMENT PLAN

Considerations Regarding Compensating
Anchorage Areas

Assuming that the proposed channel relocations would be made and that the areas taken from existing 8' anchorage and future 6' anchorage by the relocation, would be compensated for by dredging new and additional anchorage areas for the general public. Costs would be borne by those that are benefitted by not having to remove their present facilities and/or benefitting by the relocated channel lines.

A. Study was made to determine where the compensating areas could and or should be dredged.

Alternates were:

1. Authorized but not dredged 6 foot anchorage (Depth to be determined)
2. Authorized but not dredged 10 foot anchorage at harbor entrance east side.
3. Area east of channel adjacent to Wilcox Park.

No serious consideration was given to any wet land area for ecological reasons. No serious consideration was given at this time to any areas previously filled and now used for other purposes (Fowler Field) which must be considered in the future as a municipal marina or to expand the public water related activities.

Evaluation:

1. <u>6 foot Anchorage</u> - this has always been considered as the next area for anchorage expansion and would have been developed in the past had the need been sufficiently pressing for the City to make some expenditure.

a. The area borders the present and proposed channel on the west side making it very efficient for access along approximately 850 feet of channel.

b. It would result in the extension of the present 8 foot anchorage and this has advantages in efficiency of layout.

c. Serious consideration should be made in planning to have the entire compensative area dredged to 8 foot depth.

d. The proposed channel relocation and compensating anchorage expenasion would not totally utilize the authorized area (approx. 35%) to be developed in the future as needs arise.

e. The area is located between the three main marinas and would be accessible to those on moorings for dinghy arrangements parking and etc.

f. Although there are private properties adjacent to the anchorage on the west side the moorings would not interfere with their access to the channel.

g. The anchorage being approximatly 1/2 mile from the entrance any storm surge is disapated by the time it reaches this area.

h. The anchorage is close to the town dock and transients (on moorings) would have access to that facility.

NOW DEAUTHORIZED 1985

2. <u>10' Anchorage at the Harbor Entrance</u> - This area, although authorized, has not been completely developed in the past. There are certain basic disadvantages to the location that must be considered.

   a. It is at the entrance to the harbor where traffic is the heaviest and it is therefore not desirable for maneuvering, particularly larger vessels entering or departing a mooring area.

   b. The south section of the anchorage adjacent to the seawall is actually the main course for waters entering and leaving the Gulf Pond. This is a substantial water area and results in very high velocities and a strong cross current to the main harbor channel. At full ebb vessels now have some problem holding course in this area, particularity those not familiar with local conditions.

   c. There is a turn in the main channel along the west edge of this anchorage which again makes it undesirable to the vessels maneuvering in this area.

   d. The north and west sides of the anchorage are adjoined by private properties having riparian rights to deep water and this would result in a fairway evolving around these sides of the anchorage which would reduce the actual area available for moorings. Most of the property owners now have boats and would certainly take advantage of any improvements made for

mooring adjacent to their property which in effect would provide deep water access which is not now available.

e. The harbor entrance and channel face southerly and the reach is approximately 12 miles of open water. In severe southerlies there is a substantial surge in this area, and any storm even from the East causes a surge at the entrance area.

f. Previous efforts to dredge this area reportedly discovered very hard and stoney bottom which would be expensive for dredging.

3. <u>The area west of Wilcox Park</u> - would be sufficient for a part of the compensating area however there are several features that are considered as disadvantages beyond those that relate to the wild life refuge and ecological issues.

a. The area is at the head of the harbor and all new anchorage traffic would be directed the entire length of the channel further increasing traffic problems.

b. Two of the marinas are remote from this area limiting the access for moorings from dinghy and parking etc.

c. There being no private property adjacent would eliminate the double value of increasing the water depth as in the other two alternatives.

d. There is a very substantial amount of small craft (launching ramp) traffic in this area, which two hours prior to and after high tide use the area for navigation at this time.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Habitat Protection Branch
212 Rogers Avenue
Milford, Connecticut 06460

April 11, 1984

Mr. Alan Berrien
Chairperson, Harbor Management Task Force
City Hall
City of Milford
Milford, Connecticut 06460

Dear Mr. Berrien:

At your request the National Marine Fisheries Service (NMFS) has been involved in some of the developments regarding the Milford Harbor Management plan. In response to the specific issues regarding the conflict between compensation for realignment of the federal project and the environmental impact associated with that action we believe the NMFS position has been thoroughly detailed. To help you in compiling the justifications for the task force plan required by the Corps of Engineers we have drafted up the enclosed discussion on the value of tidal mudflats in general and the Milford Harbor flats specificially. It would appear that the alignment we reviewed today (April 3, 1984) reflects a reasonable compromise alignment between the conflicting interests of the public and the living marine resources which inhabit the Harbor mudflats. We believe that in producing your plan "9b" the task force has gone a long way toward resolving those conflicting needs. We find that the compromise addresses all existing unauthorized encroachments, minimizes the destruction of the productive mudflats and would encourage a higher use of the inner harbor by transients and residents alike.

Biological Value of Mudflats

Intertidal mudflats are soft to semi-soft environments often found in close proximity to tidally inundated salt marshes. Mudflats are the result of sediment accumulations typically found in sheltered coastal embayments. The sheltering effect is often created by barrier beaches, manmade structures, or shoals. Whichever cause is present, the mudflat is the result of current and wave protection and the subsequent alteration of sediment transport processes. The shape and extent of the tidal flat is also related to coastal shape, tidal amplitude and sediment load of the water masses acting about it.

Tidal mudflats are dynamic systems that are usually linked physically and biologically to other coastal systems. The salt marsh - mudflat linkage is generally recognized in New England as a very strong relationship. In this relationship organic material generated by the salt marsh

is exported by tidal movements to the flats for use/consumption by marine organisms living on or within the mud substrate. In the past few decades biologists have grown to appreciate that the mudflats are very important to many estuarine resources which rely on tidal movements to stir up the sediments and nutrients allowing easy access to the plethora of food organisms and materials present.

Beginning in the early 1950's biologists became aware of the fact that nearshore marine habitats, particularly in bays and estuaries, are vitally important to marine resources for their use as sites for reproduction and early maturation. Providing not only resting and feeding sites for early life stages they also represent the chosen living sites for organisms such as hard clams (Mercenaria mercenaria), Eastern oysters (Crassostera virginica), soft shell clams (Mya arenaria), sand worms (Neris virens) and other organisms mankind has come to rely on for direct consumption or indirectly by their use as bait for more predatory and desirable species. These resident organisms have developed biological systems which allow them to thrive in highly variable chemical environments with varying levels of turbidity. These biological systems include modest motility, rapid silt expulsion and short-term hibernation. Each system is employable as conditions vary at the specific residence site on the mudflat.

Man's activities on mudflats are typically of three basic types: dredging or mudflat removal; filling or mudflat burial and; contamination by discharge of pollutants into or across the tidal flat. Each activity carries impact effects which vary in severity from total destruction to contamination and subsequent exclusion of organisms normally associated with a mudflat. In the case at hand, removal by dredging is in the "total destruction" catagory. By modifying the sediment elevation from intertidal zone to subtidal zone the resource group which can utilize the area will be altered. Because estuarine harbors, such as Milford, are deposition basins for materials carried from the land as runoff and from Long Island Sound as suspended sediment, they tend to collect materials somewhat rapidly along artificially deepened areas. The rate of collection or accretion is dependent upon the sediment load and velocity of the water moving in the area. When basins or anchorages are dredged, either along channels or isolated from those channels, deposition/accretion processes are often accelerated. The acceleration of the deposition processes is due to the altered physics of the basin and the associated hydrodynamics of the water's movement through that basin. If deposition is increased in such basins resources which normally survive at a broad range of locations and elevations in the Harbor are frequently buried by rapidly accumulating sediment after colonizing the newly created habitat. They may also find the substrate too soft to support occupation. In both cases the organisms are found settling progressively deeper in the sediment as silting rate exceeds their ability to migrate vertically. Unable to find purchase for movement upward to the sediment-water interface they face suffocation. In the case of shellfish this inability to move

quickly enough is compounded by their growth in size and weight as they mature which increases the likelihood of sinking through the sediment. Suffocation is often the end result for organisms which attempt to occupy these deposition basin areas. In Milford one need only sample within marine basins to see this problem created as a result of dredging. Another problem created by rapid sediment accretion is the depletion of available oxygen in the bottom. Bacterial action and chemical decay of organic material in the sediment often out compete larger organisms for available oxygen supplies in the sediment and adjacent overlieing waters. Exhaustion of that available oxygen makes the area unuseable by larger colonists such as fish and shellfish.

The specific value of tidal mudflats to finfish resources is difficult to quantify. It is significantly easier to explain the impacts. As with benthic populations that are denied use of the area by altered sediment characteristics and depths so too are many of the finfish. Because the nutritive value of the area is forfeit and the sediment is so unstable, bottom resident fish sink into the sediment when resting. Thus the alteration makes the overall habitat less desirable. The loss of desirability causes areas to be avoided or not sought out by a variety of species. In either case the fishery use of the area is diminished and the overall biological value of the area degraded.

Another aspect of the situation is the impact of removing tidal mudflats on shorebirds. Shore and wading birds rely heavily, some species almost exclusively, on these areas for both food and resting habitat. Removing these areas from access by avian species by dredging them reduces the availability of those support services to the birds. This, in turn, means fewer birds can use an area.

Milford Harbor has been developed as a result of individual needs and goals. The result of this process has been the piecemeal modification of the Harbor. The majority of these modifications have occurred along the eastern/northern side of the Harbor possibly as a result of the proximity of deep water and the residential development pressure. Along the western/southern boundary of the Harbor, development has been more landward oriented except at those sites where water access was integral to the development. For this reason the tidal flats and associated salt marshes extending from the Milford Wharf Company northward to the Milford Boat Works are well-established habitats only occasionally bisected by access channels used by riparian property owners. This in turn has allowed the area to, by and far, remain a productive mudflat supporting oysters, hard clams, soft shell clams, marine worms, winter flounder, "snapper" blue fish and the biological systems which utilize adjacent resources to support those resident and migratory populations.

The sediment character of the Milford Harbor mudflat changes from a compact and stable sand-silt mixture at the northeastern end adjacent to the channel to an unstable, high water/high silt content mixture in the southwestern area. This variation in sediments provides habitat for

a relatively wide variety of species which have become established there. In the northern area the flats have, historically, supported a healthy population of hard clams with some eastern oysters. This population relationship shifts more to oysters as one moves down the harbor. Unfortunately, much of the oyster population in the whole Harbor was killed during the June 1982 rain storm. The mortality seems to be the result of depressed salinity levels and the massive deposition of sediment carried down the Wepawaug River by the flood waters.

The fate of the oysters is still visible by sampling anywhere along the mudflat as the harder bottom areas are still littered with adult oyster shells buried only inches below the present day surface. In 1982 and 83 oysters spawning elsewhere in Milford Harbor began the process of repopulating the mudflats. By the winter of 1983 the results of this recolonization effort were visible in the nearshore zone from Beard Creek northward.

Soft shell clams (Mya arenaria) are found in dense, community, concentrations scattered across the mudflats. These clams also experienced a relatively high level of mortality in the June 1982 rain storm but have had two good reproductive seasons since.

Collectively these resources provide a balanced population that is not only resident in the sediments but actively processing the same sediment material of the mudflats to provide nutrients for resources which visit the area.

Some of the finfish visitors of the flats include juvenile winter flounder (Pseudopleuronectes americanus) which move into the area during the late winter months and use the area for nursery habitat and feeding grounds. Adults arrive to use the area only a short time later. As the water temperature rises in the spring bait fish spawned in the adjacent salt marshes and upper reaches of the tidal encroachment begin to move onto the flats, as the tidal cycle allows, to feed. These species include the mummichog and striped killifish (Fundulus heteroclitus and F. majalis), the Atlantic silversides (Menidia menidia). Shrimp (Crangon septemspinosa) and (Hippolyte sp) as well as Amphipods also feed on the mudflats. These species in turn provide food for young bluefish (Pomatomus saltatrix) who mix these food species with young Atlantic menhaden (Brevoortia tyrannus) or moss bunkers for a "balanced" diet. Other finfish visitors may include young striped bass (Morone saxatilis), black fish (Tautoga onitis, Cunner (Tautogolabras adspersus) and skates (Raja sp).

Along the existing channel line the mudflats slope downward to the centerline depth. The slopes have collected modest amounts of fine silt and so have a gentle undulation pattern extending down the channel line. Recent maintenance activity along both sides of the channel have created some sharper slopes but tidal action seems to be smoothing them rapidly. In prior years the channel bottom has been reported to be littered with

organic material washed into the system from both the upland and offshore. Discharges from the Head-of-Harbor Sewage Treatment Plant (STP) have been found throughout the entire area of the mudflat. While visually inseparable from other sediments the STP discharge includes small amounts of nutrients and bacteria. This is not unexpected since even when operating within design capacity STP facilities do not remove all the nutrients found in the process flow.

Finally, a few comments on the Harbor above the existing federal end of the channel. Historically the area was navigable. Much of the material presently found in the Harbor between the Head-of-Harbor STP and the Town Library appears to be upland in geological character. As such it would probably provide excellent fill and riprap material for the erosional faces on both sides of the Harbor in this area. There has been some natural stabilizing of this area by the colonization and subsequent expansion of the salt marsh vegetation Spartina alterniflora. Initially this vegetation became established as single sprigs and has expanded by growth runners. It is our hope that any stabilization plans for this area could avoid destroying this natural erosional barrier. On the Fowler Field/Wilcox Park side of the Harbor we believe the salt marsh vegetation should be encouraged wherever possible as an enhancement to the bird sanctuary.

Should you desire more information on any of the topics presented above feel free to contact me.

As a postscript I would like to take this opportunity to commend both Ken Neff and yourself for the effort you have put into this project. I noted your thought that the realignment design is at #9b above but that only hints at the many hours you gentlemen must have put into this effort. When the plan is finalized the City of Milford will have much to thank you two for, I know that the federal review agencies already have. Again thanks for the effort.

Sincerely,

Michael Ludwig

Michael Ludwig
Ecologist

MILFORD HARBOR MANAGEMENT PLAN

Considerations Regarding Compensating
Anchorage Areas
Revised

Further to the initial considerations used to develop and evaluate the proposed channel relocations etc. which resulted in the plan shown as Dwg 9 of 9 and which had a general approval of the Task Force and municipal agencies, certain additional guidelines have been provided which:

1. Resulted in the preparation of plan 9A. This merely defined, at the COE's request, the specific areas considered as developed to compensate for areas A, B, and C and Milford Wharf Co. areas 50' and beyond. There was no change in scope of project under this study and resulting Dwg 9A.

2. Resulted in a re-evaluation of the total amount of inter-tidal flats that would have to be taken to maintain the project scope. This re-evaluation was prompted by information and technical advice from the NMF regarding the actual benefit the area provides in the overall ecological system in Milford Harbor. Therefore the project was reviewed to minimize the taking of the inter-tidal area and other areas re-addressed where compensating work could be performed, for the public benefit, for channel relocations (A,B, & C for Plan 9B). Co-incidental with this review we

were unofficially advised that the 107 Project relating to waterside work at the head of the Harbor had been found lacking in cost/benefit and would not be persued further by the COE.

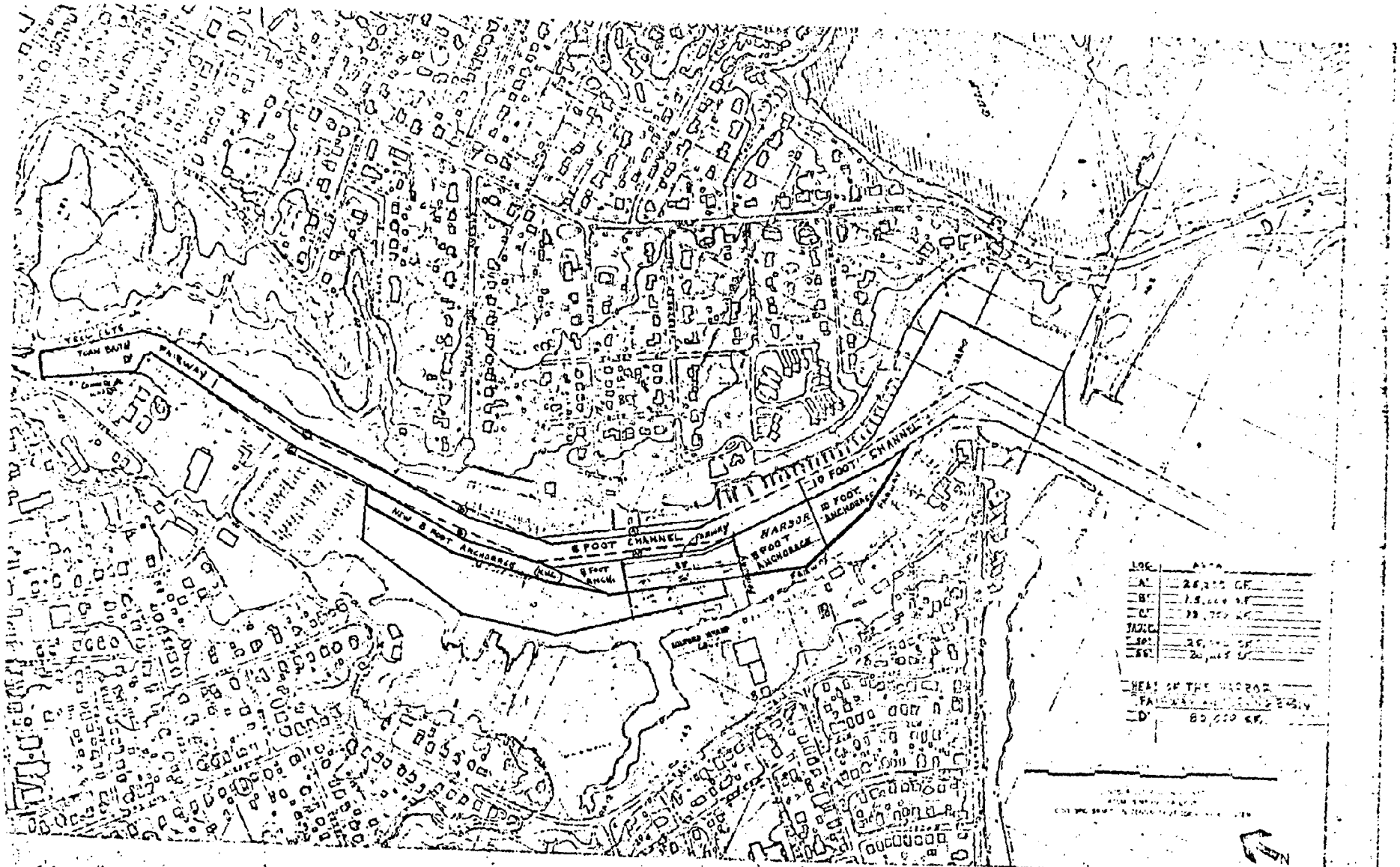
The extension of the Federal 8' Channel and the dredging of the turning Basin to serve the Commercial Wharf and transient accommodations were therefore considered and studied as an area of work that would be compensating to the general public for those areas taken for channel relocation. Calculations showed that the area requiring improvement matched the total area (approximately 54,000 SF) to be compensated for areas A,B, and C which are channel related.

It therefore appreared logical and reasonalbe to:

1. Consider the anchorage replacement to resolve the Milford Wharf Co. as being a newly developed anchorage extension to the 8 foot anchorage along the channel and
2. The development of a equal area at the Head of the Harbor to replace the several areas of channel relocation.

This has been shown as Dwg 9B and results in a 70'± wide new anchorage area in the same area originally considered most desirable. It minimizes the amount of inter-tidal flat that is disturbed.

It continues to address the Head of Harbor Planning and in fact would perhaps expedite that program through local control.



or Management Plan
ASSOCIATES 1983

CHANNEL AND ANCHORAGE REDESIGN DWG. 9B

4-2-84

State of Connecticut
Dept. of Environmental Protection
Coastal Area Management Program

TO: Arthur J. Rocque, Jr.

In the City of Milford Municipal Coastal Program Phase II, Sept. 1982 the Proposed Goals and Policies Addressed under Part A. Milford Harbor issues that essentially meant Harbor Management. As you are aware, that was continued and the final stages of the first planning efforts, Volume I of the Milford Harbor Management Plan is in the final stages of acceptance.

Volume I defines Navigation and Water Surface Management and Administration of Harbor Use as the first and second priorities. It further provides the format for the actual implementation of many other issues but also provides a resolution recommendation for the problems of encroachments in the Federal Navigation Project. In addition, it provides a preliminary format for the necessary changes in the local agencies and ordinances for the implementation of the Harbor Management Plan.

We are therefore now prepared to develop the specifics necessary to have the plan and the necessary ordinances addressed and hopefully adopted as a part of the City of Milford Municipal Coastal Plan.

We visualize the effort of the consultant continuing into Volume 2 on the basis of the following tasks:

A. <u>Navigation and Water Surface Management</u>

1. Develop the necessary rules, guidelines and ordinance(s) if necessary to provide safe and secure use of all waterfront areas within the City of Milford.
2. Develop the necessary guidelines and or ordinances to assure that the waters of the City of Milford remain or are developed for full navigational use by the public.
3. Develop the necessary rules for the management of the anchorages, transient facilities, commercial fishing landing, channels and fairways, etc.

B. Administration of Harbor Use:

1. Based on the general guidelines in Volume I develop specific rules, procedures, ordinances as necessary to make the Harbor Commission the administrative body for Harbor Management Plan.
2. Provide the necessary coordination with the P & Z Commission to define the land area (overlay zone) and to develop specific rules and ordinances required to address the waterside issues involved.
3. Develop a specific set of guidelines that would provide for close coordination of Harbor Management activities with all other city agencies and departments, etc.
4. Develop a specific plan to allow the Harbor Commission to institute and manage a Harbor Improvement Fund. Also to provide a recommended schedule of fees that would assist in maintaining this fund as well as recommendations for municipal funding support.

C. Natural Resources:

1. To provide a reference base for decisions required for Harbor Management Develop and prepare and inventory of present natural resources and their considered values that addresses fin-fish, shellfish, wetlands, intertidal areas, etc. This might best be a compilation of existing data.

The completion of the items above combined with Volume I will constitute a workable Harbor Management Plan that addresses the most immediate or high priority items and provides for a continually expandable document as further time and funds become available for the many other issues or areas of concern.

In all considerations above the Proposed Substitute Bill # 13 - LCO No. 2168 - "An Act Concerning Harbor Management" - General Assembly should be considered and generally followed since it would appear that this or one very similiar will be passed and used as a basis for Harbor Management from The State of Connecticut - standpoint.

At the Regular Meeting of the Board of Aldermen held January 7, 1985, the following Resolution was approved:

RESOLUTION RE: APPLICATION FOR PERMIT FOR HARBOR DREDGING

WHEREAS, the Army Corps of Engineers has identified Federal permit violations and unauthorized encroachment in Milford Harbor which must be corrected; and

WHEREAS, the City of Milford has been advised that the intended purpose of the Federal project is to provide a harbor which is open to all on equal terms and to provide open water areas for transiting, maneuvering and anchoring in the harbor; and

WHEREAS, the City of Milford, in response to the actions of the Army Corps of Engineers has created a Harbor Management Task Force and has engaged a professional consultant to create a Harbor Management Plan; and

WHEREAS, one of the initial products of the Harbor Management Planning is a realignment of the Federal channel and the creation of new anchorage to meet the requirements of the Army Corps of Engineers which will require additional harbor dredging; and

WHEREAS, this dredging requires the filing of a Federal permit application; and

WHEREAS, it is in the best interests of the City of Milford to make application to the Army Corps of Engineers for additional harbor dredging so that the requirements of the Army Corps for harbor management and maintenance can be met,

NOW, THEREFORE, BE IT AND IT IS HEREBY RESOLVED By the Board of Aldermen of the City of Milford that the Mayor of the City of Milford is hereby authorized to file with the Army Corps of Engineers an application for a Federal permit for additional dredging of Milford Harbor to compensate for the realignment, restoration and reestablishment of the 100 foot Federal channel as required by Federal law.

Attest: s/Margaret S. Egan
Town-City Clerk

Dated at Milford, CT this
8th day of January, 1985.

Fo[illegible] e of this form, see EP 1145-2-1

The Department of the Army permit program is authorized by Section 10 of the River and Harbor Act of 1899, Section 404 of P. L. 92-500 and Section 103 of P. L. 92-532. These laws require permits authorizing structures and work in or affecting navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Information provided in ENG Form 4345 will be used in evaluating the application for a permit. Information in the application is made a matter of public record through issuance of a public notice. Disclosure of the information requested is voluntary; however, the data requested are necessary in order to communicate with the applicant and to evaluate the permit application. If necessary information is not provided, the permit application cannot be processed nor can a permit be issued.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and checklist) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

1. Application number (To be assigned by Corps)	2. Date	3. For Corps use only.
5 14-85-57	Day Mo. Yr.	

4. Name and address of applicant.	5. Name, address and title of authorized agent.
City of Milford City Hall, River Street Milford, CT 06460 Telephone no. during business hours A/C (203) 783-3201 Mayor A/C (203) 877-1475 Harbormaster	City Attorney Martelon 1 Polizzi Plaza Milford, CT 06460 Telephone no. during business hours A/C (203) 783-3250 A/C ( )

6. Describe in detail the proposed activity, its purpose and intended use (private, public, commercial or other) including description of the type of structures, if any to be erected on fills, or pile or float-supported platforms, the type, composition and quantity of materials to be discharged or dumped and means of conveyance, and the source of discharge or fill material. If additional space is needed, use Block 14.

The purpose of this activity is to dredge a new anchorage in the authorized, but unfunded, anchorage on the west side of Milford Harbor (Wepawaug River). To compensate for the realignment of the 100' wide channel and restore the channel to the original design and provide for the present and future upstream needs. The anchorage portion (Sheet 2) of this redesignaed project will provide a transient, commercial fishboat and seasonal mooring area for the public. This work will resolve

7. Names, addresses and telephone numbers of adjoining property owners, lessees, etc., whose property also adjoins the waterway.

150 names and addresses enclosed

8. Location where proposed activity exists or will occur.

Address:

Milford Harbor (Wepawaug River)
Street, road or other descriptive location

Milford
In or near city or town

New Haven Connecticut 06460
County State Zip Code

Tax Assessors Description: (If known)

Map No. Subdiv. No. Lot No.

Sec. Twp. Rge.

PUBLIC APPLICATION

9. Name of waterway at location of the activity.

Wepawaug River

ENG Form 4345, 1 OCT 77 Edition of 1 Apr 74 is obsolete.

JAN 21 1985

10. Date activity is proposed to commence. ( ) ( )

Date activity is expected to be completed 1988 with 10 year maintenance cycle

11. Is any portion of the activity for which authorization is sought now complete? ☐ YES ☒ NO
If answer is "Yes" give reasons in the remark section. Month and year the activity was completed _____. Indicate the existing work on the drawings.

12. List all approvals or certifications required by other federal, interstate, state or local agencies for any structures, construction, discharges, deposits or other activities described in this application.

Issuing Agency	Type Approval	Identification No.	Date of Application	Date of Approval
Conn DEP	Water Quality		Concurrent	
Conn DOT				

13. Has any agency denied approval for the activity described herein or for any activity directly related to the activity described herein?

☐ Yes ☒ No (If "Yes" explain in remarks)

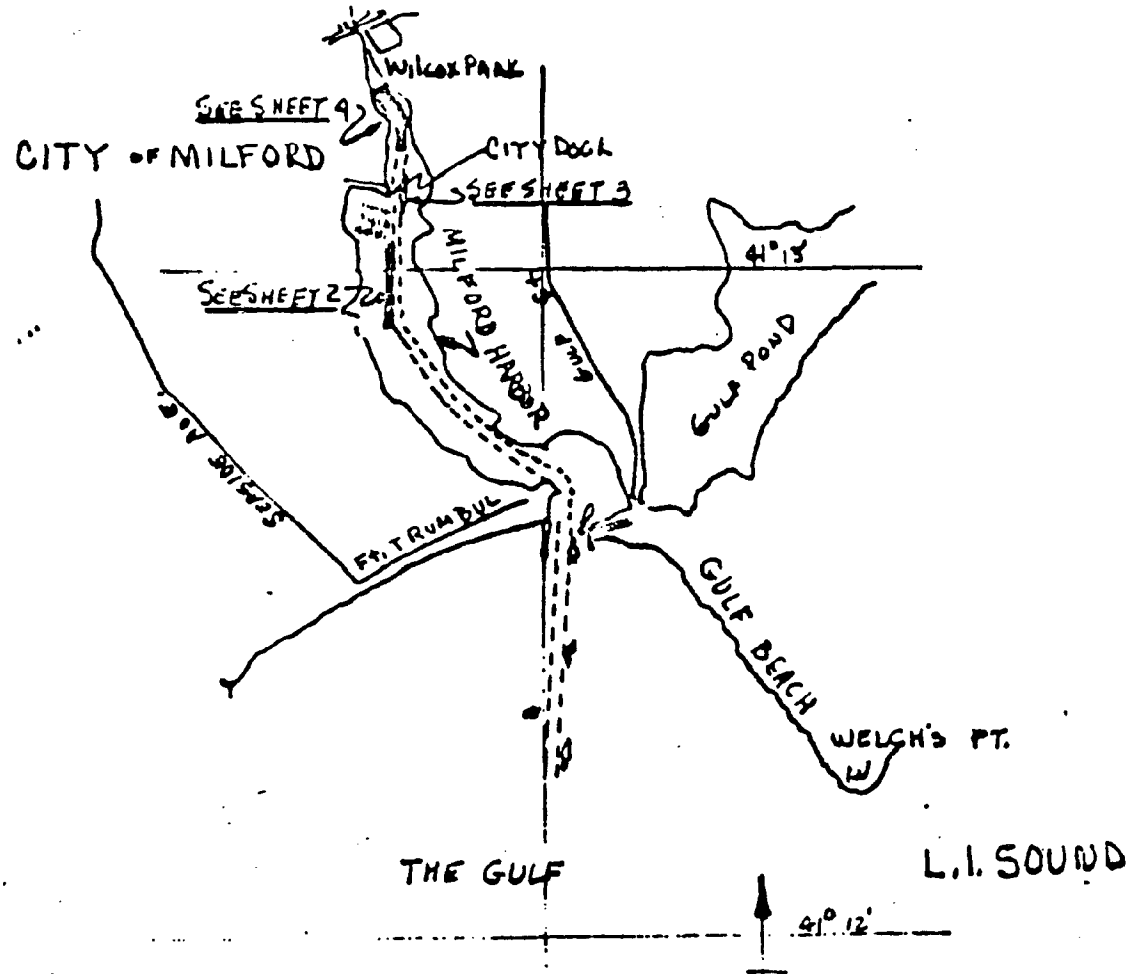
14. Remarks or additional information. all the existing encroachments in Milford Harbor at no cost to the federal or state government with the dredging cost paid by those benefiting shore/side property owners. The area east of the city dock (Sheet 3) is to provide clearance from vessels berthed at the wharf to eliminate encroachment into the 100' wide channel. The work beyond the upper limit of the federal project is to provide navigable access to the city property not presently served by the federal project. The fairway and turning basin will serve the local commercial fishing fleet, the launching ramp and police, fire and coast guard auxiliary boats. The disposal area is mid-Sound dump coordinates 41°08'57N 72°53'51W. The material will be removed by bucket and dump scow. The material is typical of the samples in the permit issued the City in 1980 (analysis enclosed). The entire activity is for public use and is consistent with the CAM Act and is being done under the implementation phase of the Harbor Management Plan of the City of Milford Municipal Coastal Plan as approved by the State of Connecticut. Further, this activity is supported by the enclosed letter from Habitat Protection Branch N.O.A.A. M. Ludwig.

15. Application is hereby made for a permit or permits to authorize the activities described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities.

Signature of Applicant or Authorized Agent

The application must be signed by the applicant; however, it may be signed by a duly authorized agent (named in Item 5) if this form is accompanied by a statement by the applicant designating the agent and agreeing to furnish upon request, supplemental information in support of the application.

18 U. S. C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false fictitious or fraudulent statement or entry, shall be fined not more than $10,000 or imprisoned not more than five years, or both. Do not send a permit processing fee with this application. The appropriate fee will be assessed when a permit is issued.



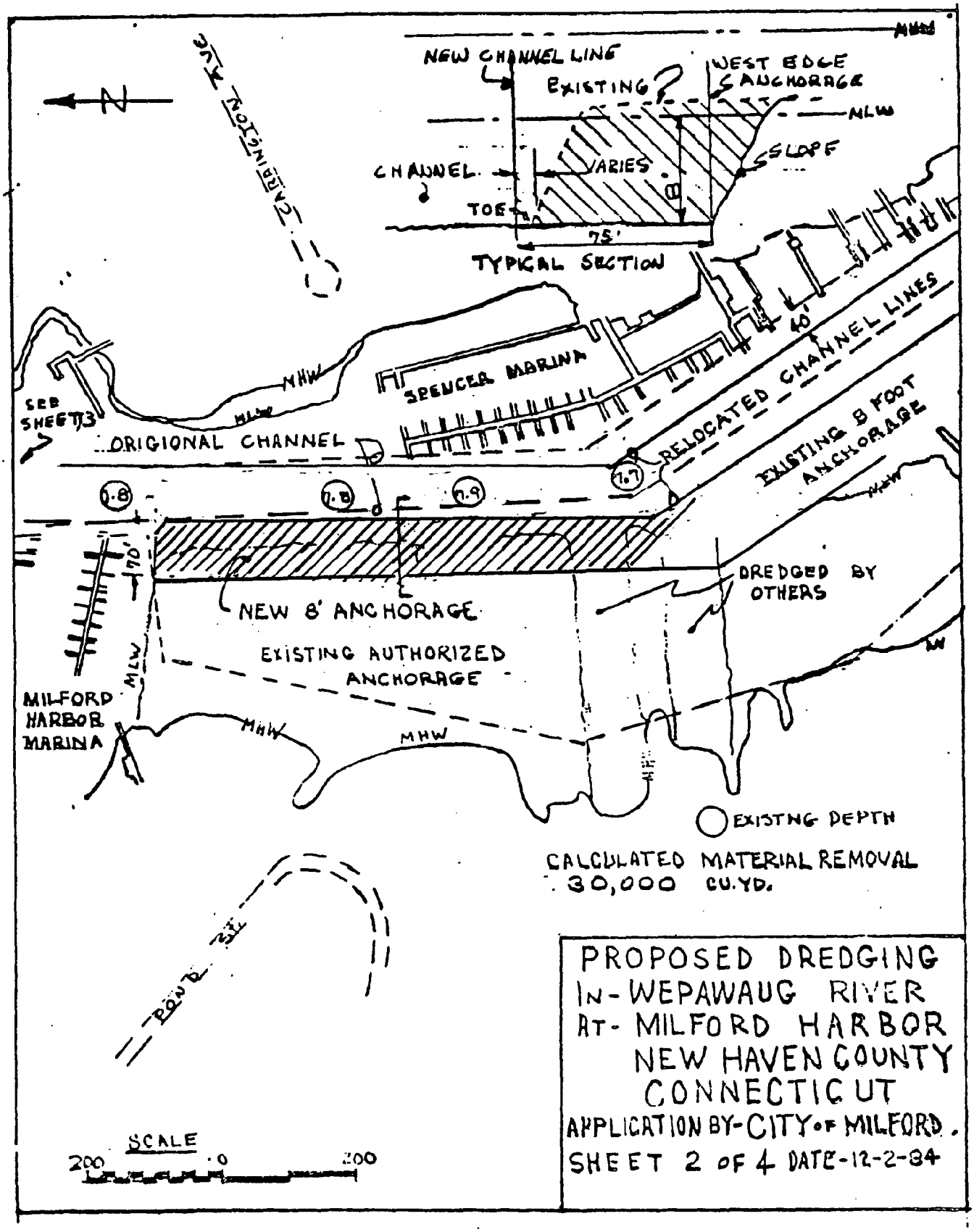
VICINITY MAP
(CHART 12370)

NOTES

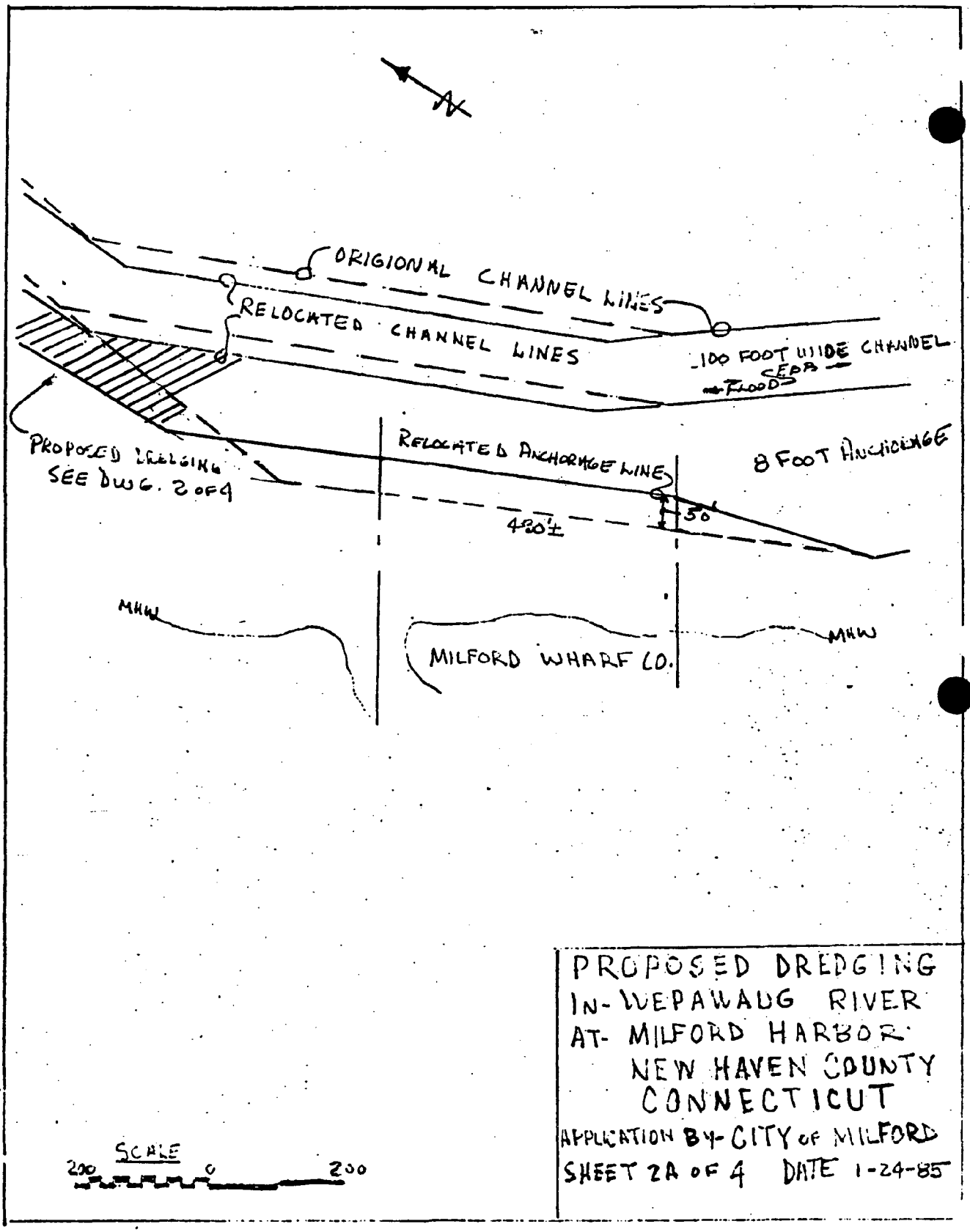
1. DREDGED MATERIAL TO BE PLACED IN CENTRAL L.I.S. DUMP SITE - 41°-08.95 N/72°-52.85 W
2. SEE SHEETS 2, 3, & 4 FOR QUANITIES CALCULATED
3. EXISTING DEPTHS TAKEN FROM DWG. Md.406-4-83 C.O.E. CONDITION SURVEY
4. DEPTHS REFER TO THE PLANE OF MEAN LOW WATER

SCALE
1500 0 1500

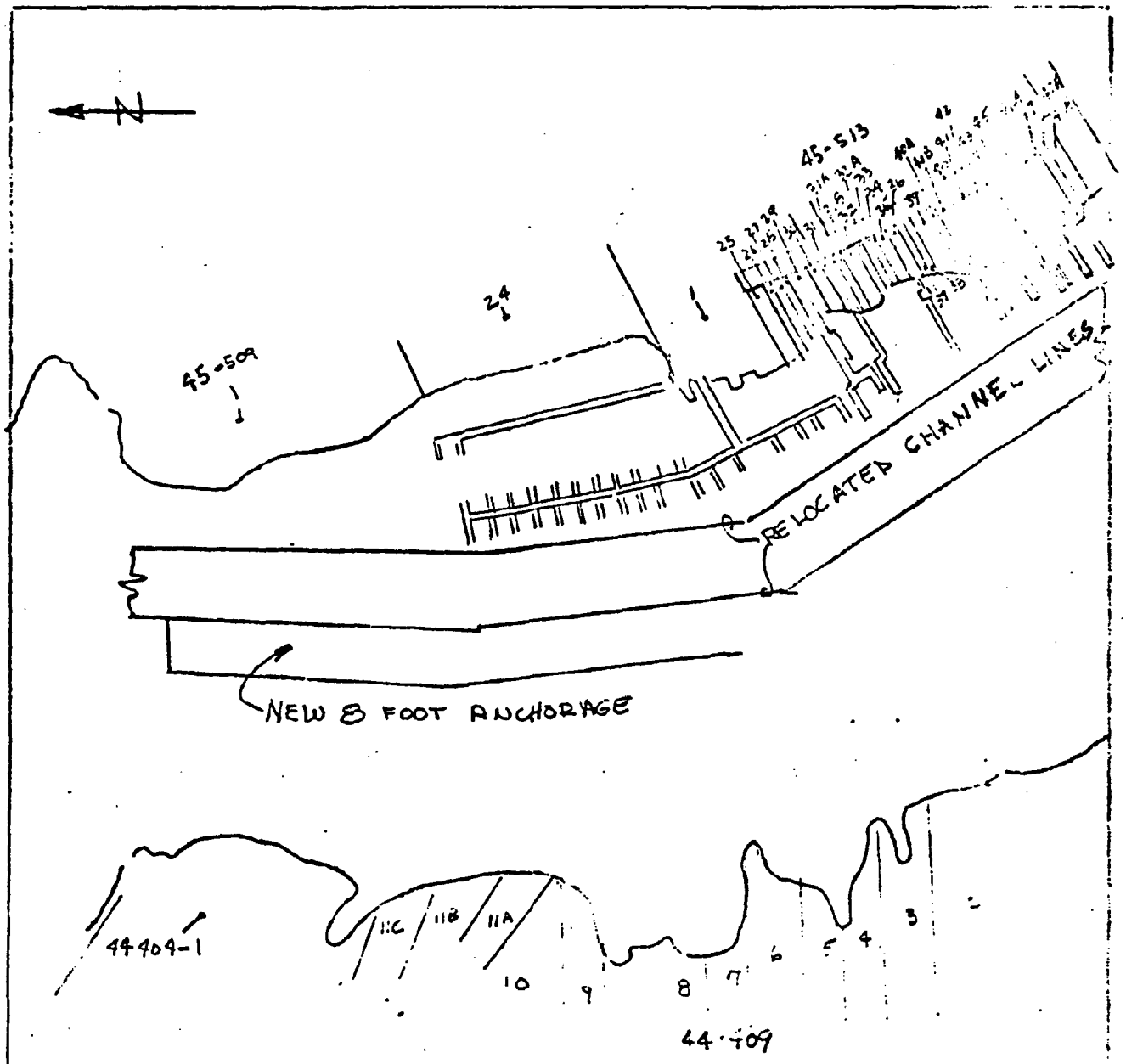
PROPOSED DREDGING
IN - WEPAWAUG RIVER
AT - MILFORD HARBOR
NEW HAVEN COUNTY
CONNECTICUT
APPLICATION BY - CITY OF MILFORD
SHEET 1 OF 4 DATE - 12-2-84



PROPOSED DREDGING
IN- WEPAWAUG RIVER
AT- MILFORD HARBOR
NEW HAVEN COUNTY
CONNECTICUT
APPLICATION BY- CITY OF MILFORD.
SHEET 2 OF 4 DATE-12-2-84



PROPOSED DREDGING
IN- WEPAWAUG RIVER
AT- MILFORD HARBOR
NEW HAVEN COUNTY
CONNECTICUT
APPLICATION BY- CITY OF MILFORD
SHEET 2A OF 4 DATE 1-24-85



NOTE-
SEE SHEET 2C FOR
PROPERTY OWNER IDENTIFICATION

PROPOSED DREDGING
IN - WEPAWAUG RIVER
AT - MILFORD HARBOR
NEW HAVEN COUNTY
CONNECTICUT
APPLICATION BY CITY OF MILFORD
SHEET 2B OF 4 DATE-

Property Owner Identification List

Sheet 2C

Reference - Drawing 2B

45 - 509

1 Hotchkiss, Albert
24 Hotchkiss, Albert

45 - 513

1 Allen, James F.
25 Allen, James F.
26 Ferrari, Edward
27 Ferrari, Edward
28 Allen, James F.
29 Allen, James F.
30 Gunther, John
31 Gunther, John
31A Preiss, Clifford
31B Allen, James F.
32 Cerino, Nicholas
32A Meyers, Melvin
33 Meyers, Melvin
34 Meyers, Melvin
35 Meyers, Melvin
36 Meyers, Melvin
36A Meyers, Melvin

44 - 409

2 Taylor/Finley
3 Porter, Donald
4 DiPietro, Peter
5 Hinckley, Julia
6 Chernock, Stella
7 Maloy, Clare
8 Wagner, Andrew
9 Gabriel, Michael
10 City of Milford
11A Orkisz, Rudolf
11B Peterson, Juergen
11C Shaheen, George

44 - 404

1 Allen, H.K.

37 Bernstein, Sidney
38 Offut, Daniel
39 Offut, Daniel
40 Brennan, John
40A Brennan, John
40B Brennan, John
41 March, Edwin
42 March, Edwin
43 Holst, Herman
44 Holst, Herman
45 Holst, Herman
46 Baron, Arthur
46A Baron, Arthur
47 Baron, Arthur
47A Baron, Arthur
47B Baron, Arthur

PROPOSED DRE[illegible]
IN- WEPAWAUG [illegible]
AT- MILFORD HA[illegible]
NEW HAVE[illegible]
CONNECT[illegible]
[illegible] BY CITY [illegible]
SHEET 2,3,4 OF 4 [illegible]

Property Owner Identification List, Sheet 2C, Page 2

Reference - Drawing 3A

44 - 401

3 City of Milford
4 Milford Boat Works

44 - 404

1 Allen, H.K.
2 Milford Harbor Marina

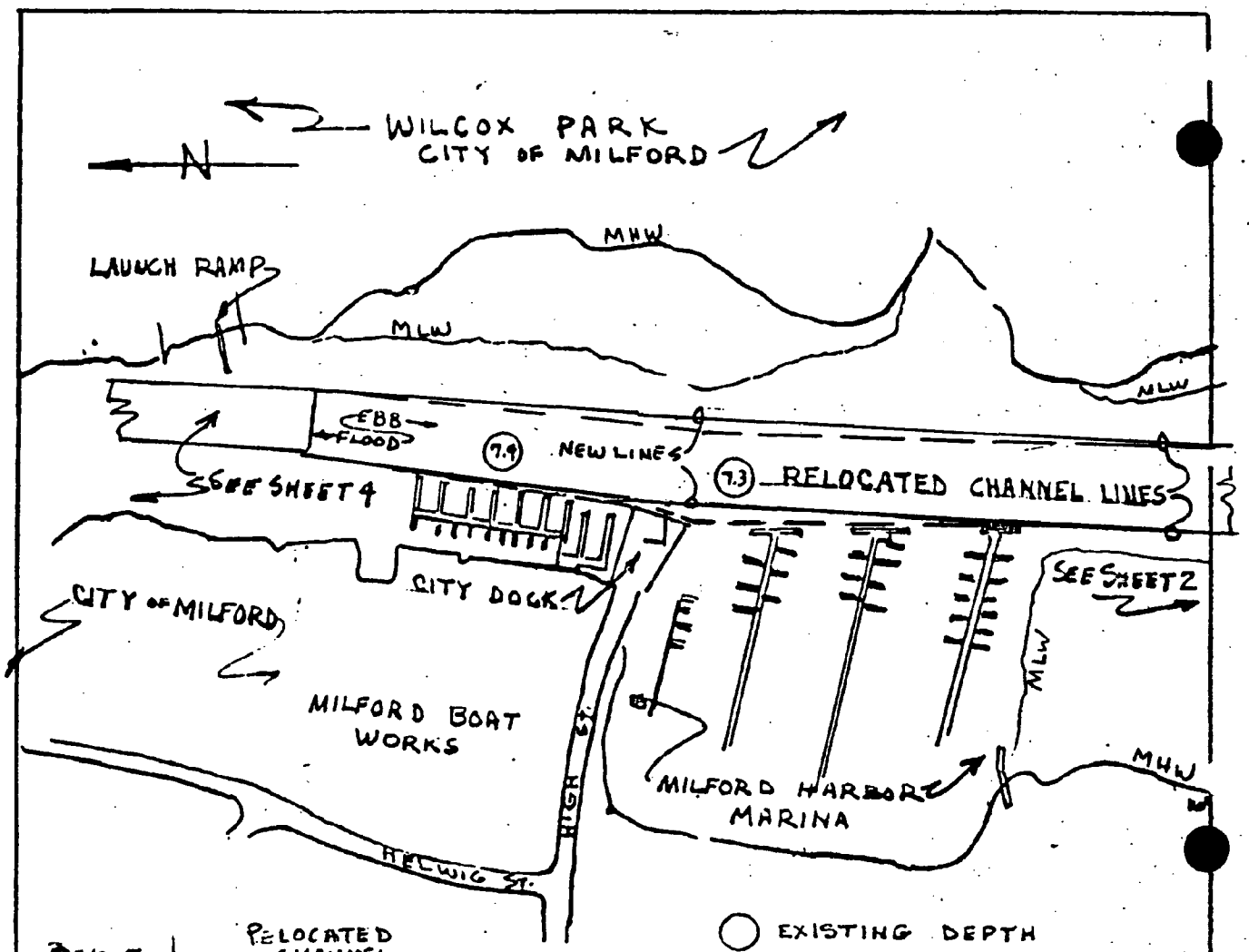
45 - 501

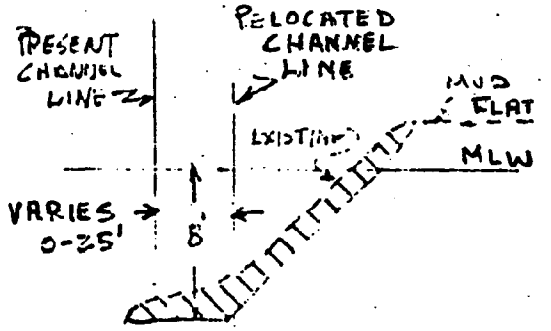
1 City of Milford

45 - 509

1 Hotchkiss, Albert
2 Hotchkiss, Albert
2A Clemence, Robert
3 Clemence, Robert

PROPOSED DREDGING
IN - WEPAWAUG RIVER
AT - MILFORD HARBOR
NEW HAVEN COUNTY
CONNECTICUT
APPLICATION BY - CITY OF MILFORD
SHEET 2C-2 OF 4 DATE 2-8-85





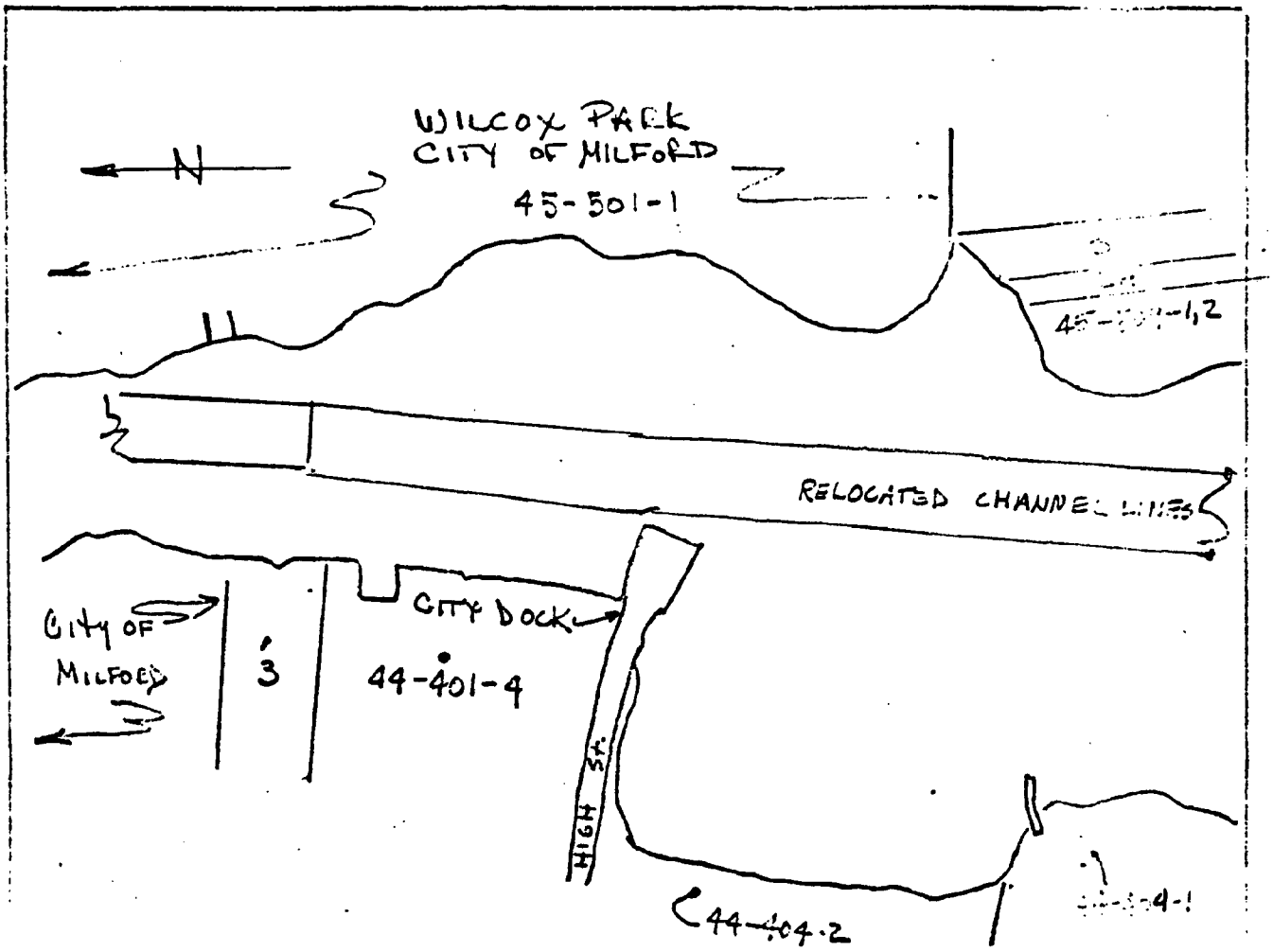
TYPICAL SECTION

EXISTING DEPTH

CALCULATED MATERIAL REMOVAL 6000 CU.YD.

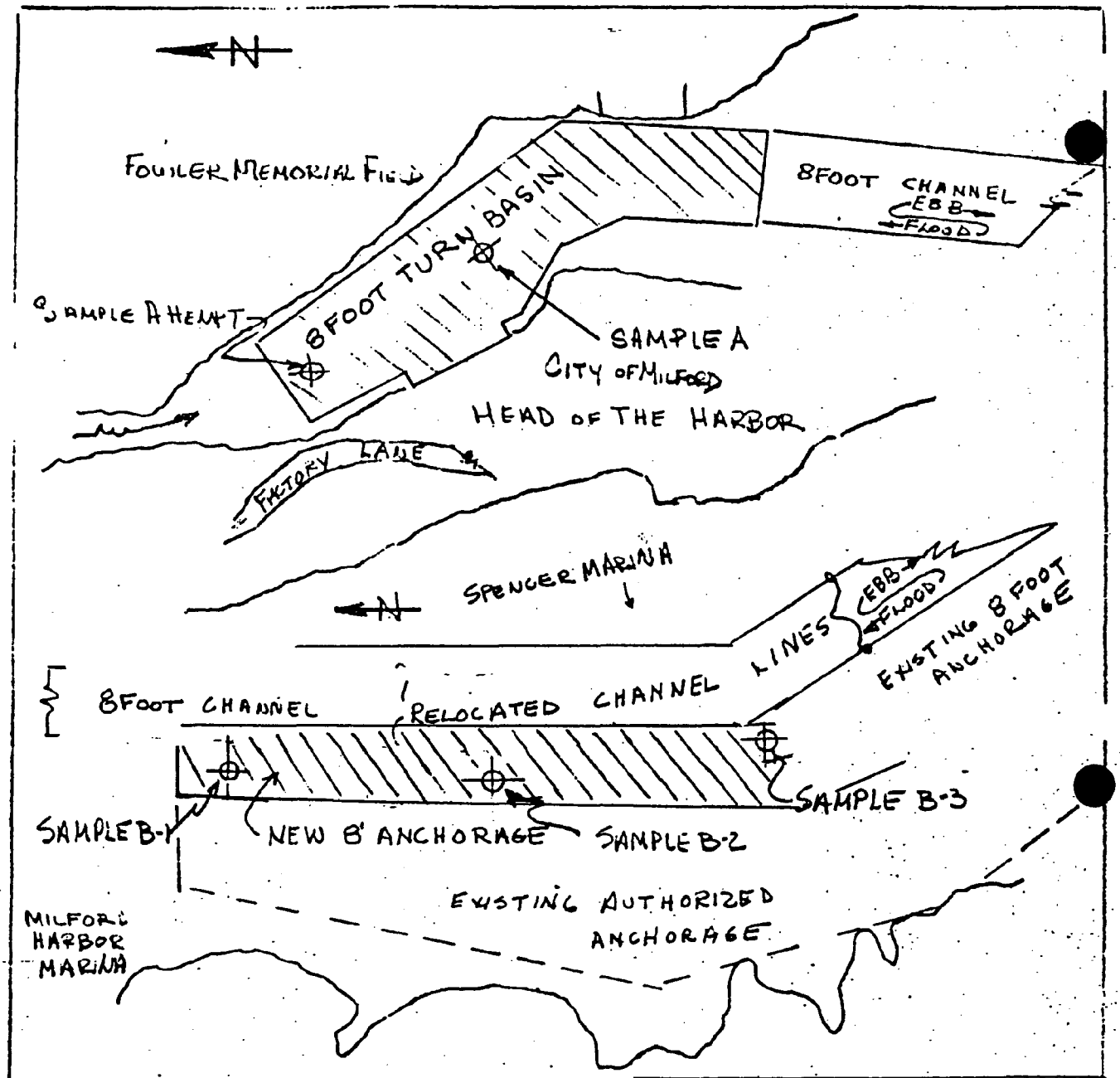
SCALE
200 0 200

PROPOSED DREDGING
IN - WEPAWAUG RIVER
AT - MILFORD HARBOR
NEW HAVEN COUNTY
CONNECTICUT
APPLICATION BY CITY OF MILFORD
SHEET 3 OF 4 DATE - 12-2-84



NOTE-
SEE SHEET 2C FOR PROPERTY OWNER IDENTIFICATION

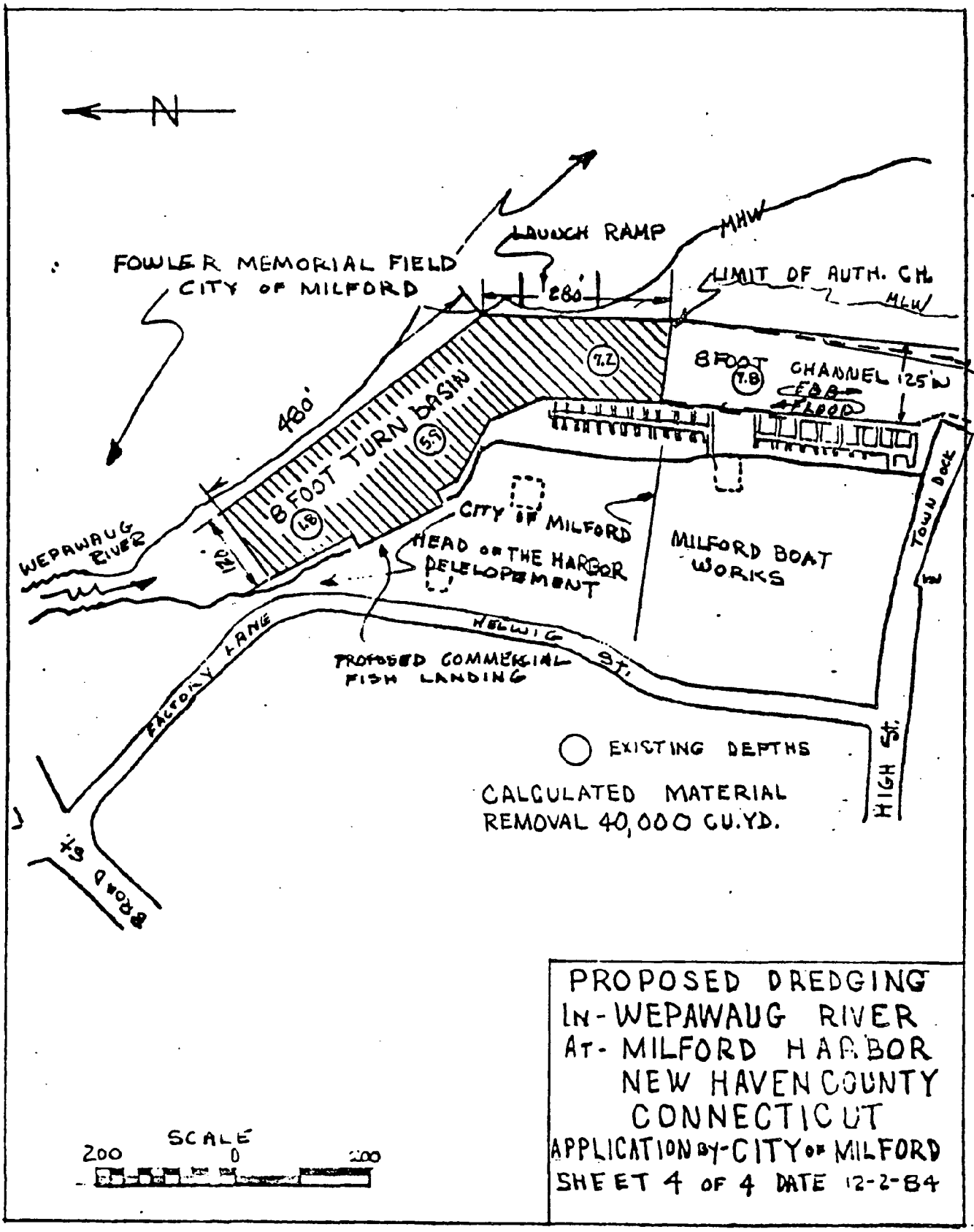
PROPOSED DREDGING
IN - WEPAWAUG RIVER
AT - MILFORD HARBOR
NEW HAVEN COUNTY
CONNECTICUT
APPLICATION BY CITY OF MILFORD
SHEET 3A OF 4 DA[illegible]



SAMPLING LOCATIONS

SCALE
200 0 200

PROPOSED DREDGING
IN- WEPAWAUG RIVER
AT- MILFORD HARBOR
NEW HAVEN COUNTY
CONNECTICUT
APPLICATION BY- CITY OF MILFORD
SHEET 3B OF 4 DATE 3-12-85



PROPOSED DREDGING
IN - WEPAWAUG RIVER
AT - MILFORD HARBOR
NEW HAVEN COUNTY
CONNECTICUT
APPLICATION BY - CITY OF MILFORD
SHEET 4 OF 4 DATE 12-2-84

Allen Berrien, Chairman, City of Milford
Harbor Management Task Force
One High Street
Milford, CT 06460
January 25, 1985

Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02154

Attention: Margo Walter

Re: Supplemental Information for City of Milford Permit

Item 1. Map showing property lines

I have enclosed tax maps showing a numerical key to the list of 150 property owners adjacent to Milford Harbor. The number shown on each parcel is the last number under the the column "Map/Block Parcel."

Item 2. Upland Disposal

Since 1978 the City of Milford as well as several boatyards and private property owners within the Wepawaug River Basin have attempted to find an upland disposal site. I will list the known sites and the conclusions reached.

Memorial Field Shipyard Lane

A site used for hydraulic disposal during the 1930's by the C.O.E. This area at the northeast corner of Milford Harbor was diked and filled with a cover applied by the local government. It is presently used as a public recreation area with several ball fields, a BMX bike course, a skating rink (during the winter months), tennis courts, and a parking lot for the public library. To convert this site to an upland disposal area is not a financially sound practice, and the location in the center of the city precludes any further consideration as a spoil area.

Milford Boat Works High Street

The east side of this property was diked and filled by hydraulic dredge during the maintenance dredging of the channel during the 1930's. As this spoil area is presently the site of a boat yard employing 30 people, its re-use is impractical.

The Ford Property Rogers Avenue

This diked and filled spoil area (same project 1930's) is presently a State of Connecticut classified wetlands area owned by the State of Connecticut. No permit will be granted for filling this area.

Ford's Boat Yard (now Milford Wharf Company.) Rogers Avenue

This spoil area is currently a boat yard that employs over six people and is unavailable to re-open for future disposal. Further, the balance of the property is a classified wetlands that is currently the location of a mandated marsh restoration project, not available for dredging disposal.

Gulf Beach

The area north of Gulf Beach was used as a hydraulic dredge disposal area. It is currently a public parking lot servicing the public beach and is not available as a spoil area.

Fort Trumbull Beach

This was the location site of a dredge containment site study at the request of the Milford Harbor Commission. No action was taken, and we can only assume that there are engineering considerations that preclude its construction. This was one of several locations studied in Long Island Sound, and its evaluation, funding, and construction is by others. It is not available to us to include in our permit application.

Silver Sands State Park

This location west of Milford Harbor was considered as an upland disposal area. It is presently under contract between the State of Connecticut and the United Illuminating Company for the disposal of fly ash.

During our negotiations, the environmental considerations became insurmountable. The site is the location of a previous land fill, and the leachate and methane gas isssues compounded the dredge disposal issues. The communications with D.E.P. indicate that no permit would be issued to use this area.

Not available for Milford's use.

Trucking of material is impractical as all the inland sites proved to be inland wetland areas and, of course, unavailable for filling.

We, in the City of Milford, have always considered upland disposal in our pre-application discussions. There are no sites available within the city boundaries, and any changes in this situation would be re-evaluated.

Item 3. Milford Wharf Company

Drawing 2A shows the area to be permitted for the use of Milford Wharf Company. They will be required to provide funds to create a portion of the compensating anchoragae. This area (approximately 50ft. x 430ft.) from the National Marine Fisheries property to Beards Creek has been under constant use by various companies (Ford's Boat Yard, Marine Incorporated, Nichols Yacht Yard, Commodore Marine, and now Milford Wharf Company). As the area has always been under-utilized as an anchorage, the creation of a new anchorage dedicated to moorings is consistent with the city's management plan to use the available anchorage space to the fullest extent. The dredged area (by Milford Wharf) appears to be 50ft. x 500ft. to provide clearance for manuvering. When the silt is removed from the mouth of Beards Creek during the next maintenance dredging, this area will be a portion of the fairway to the anchorage and marina docks.

Respectfully submitted,

Allen Berrien
Chairman, City of Milford
Harbor Management
Task Force

AB:ns

ABSTRACT ASSESSMENT ROLL OF REAL PROPERTY

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT	CO	TYPE PROPERTY	GR ASSI
A05775	ALLEN HOWARD K & THELMA A & SURV	44	1	1-1	RES DWL LOT	
	60 POND STREET	404	1	1-3	RES DWLG	
	MILFORD CT 06460	1	1	1-4	RES OUTBLDG	
	60 POND STREET					
	07/26/71 VOL 0654 PAGE 0517	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				
A05787	ALLEN JAMES F	45	1	2-1	COM LAND	
	ROSE STREET	513	1	2-3	COM BLDG	
	MILFORD CT 06460	1	1	2-4	COM YD ITEM	
	ROSE ST TO MILFORD HARBOR					
	02/04/66 VOL 564 PAGE 547	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				
A05835	ALLEN JAMES F	45	1	5-1	VC RES LAND	
	73 WILBAR AVENUE	513				
	MILFORD CT 06460	25				
	EDGEWATER PLACE TO MILFORD HARBOR					
	02/04/66 VOL 564 PAGE 537	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				
A05847	ALLEN JAMES F	45	1	5-1	VC RES LAND	
	73 WILBAR AVENUE	513				
	MILFORD CT 06460	318				
	EDGEWATER PLACE WALKER MANOR					
	08/25/70 VOL 0645 PAGE 0983	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				
A05855	ALLEN JAMES F	36	1	5-1	VC RES LAND	
	73 WILBAR AVE	519				
	MILFORD CT 06460	7				
	EDGEWATER PLACE TO MILFORD, HARBOR					
	09/16/76 VOL 0866 PAGE 0131	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				
A05856	ALLEN JAMES F	36	1	5-1	VC RES LAND	
	73 WILBAR AVE	519				
	MILFORD CT 06460	6				
	EDGEWATER PLACE TO MILFORD HARBOR					
	09/16/76 VOL 0866 PAGE 0131	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				
A05857	ALLEN JAMES F	45	1	5-1	VC RES LAND	
	73 WILBAR AVE	513				
	MILFORD CT 06460	28				
	EDGEWATER PLACE TO MILFORD HARBOR					
	12/16/76 VOL 0877 PAGE 0240	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				

2

CITY OF MILFORD, CO

ABSTRACT ASSESSMENT ROLL OF REAL PROPERTY

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT	CD	TYPE PROPERTY	A
A05858	ALLEN JAMES F 73 WILBAR AVE MILFORD CT 06460 EDGEWATER PLACE TO MILFORD HARBOR 12/16/76 VOL 0877 PAGE 0240	45 513 29 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
A05865	ALLEN JAMES F 86 CARRINGTON AVE MILFORD CT 06460 EDGEWATER PLACE THRU TO MILFORD HARBOR 03/05/82 VOL 1148 PAGE 0250	36 519 6 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
A09231	ANDERSONS LANDING INC 189 ROGERS AVENUE MILFORD CT 06460 TRUMBULL AVE 01/22/71 VOL 0649 PAGE 0484	36 413 1A * * * * * T O T A L * * * BOARD OF TAX REVIEW	1 1	2-4 5-2	COM YD ITEM VC COM LAND	

* * * * * * * * L E T T E R A * * * * * * * T O T A L * * *
R E C O R D S 10

B2

804857

NUMBER
NAME, DBA
LOCATION
804855 BARON AR
109 BR
WILTON
ED

* * * *
R E C O R D

ABSTR

CITY OF MILFORD, CT

ABSTRACT ASSESSMENT ROLL OF REAL PROPERT

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT	CD	TYPE PROPERTY
804855	BARON ARTHUR L 109 BRANCH BROOK ROAD WILTON CT 06897 EDGEWATER PLACE TO MILFORD HARBOR 06/09/82 VOL 1158 PAGE 0236	45 513 46 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND
804857	BARON ARTHUR L 109 BRANCH BROOK ROAD WILTON CT 06897 EDGEWATER PLACE 06/09/82 VOL 1158 PAGE 0236	45 513 46A * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND
804858	BARON ARTHUR L 109 BRANCH BROOK ROAD WILTON CT 06897 EDGEWATER PLACE 06/09/82 VOL 1158 PAGE 0238	45 513 47 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND
804866	BARON ARTHUR L 109 BRANCH BROOK ROAD WILTON CT 06897 EDGEWATER PLACE & HARBORVIEW AVE 11/15/82 VOL 1178 PAGE 0282	45 513 47B * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND
804870	BARON ARTHUR L 109 BRANCH BROOK ROAD WILTON CT 06897 EDGEWATER PLACE TO MILFORD HARBOR 08/09/83 VOL 1225 PAGE 0076	45 513 47A * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND
809951	BECKERER FRANK S JR & CAROLE A & SURV 40 DOCK LANE MILFORD CT 06460 40 DOCK LANE TO MILFORD HARBOR 04/30/73 VOL 0732 PAGE 0108	36 519 13 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1 1	1-1 1-3	RES DWL LOT RES DWLG
816035	BERNSTEIN SIDNEY & THERESA NASH & SURR 49 HARBORVIEW AVENUE MILFORD CT 06460 EDGEWATER PLACE TO MILFORD HARBOR 09/29/54 VOL 392 PAGE 83	45 513 37 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND

CITY OF MILFORD, CO.

ABSTRACT ASSESSMENT ROLL OF REAL PROPERTY

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT	CD	TYPE PROPERTY	A
820544	BOARDMAN BURTON E 276 HEMLOCK HILL ROAD ORANGE CT 06477 7 OLD OYSTER DOCK LANDING UNIT 7 02/25/81 VOL 1103 PAGE 0220	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
823010	BORUFF LOUIS P 112 TRUMBULL AVENUE 5 B MILFORD CT 06460 112 TRUMBULL AVENUE UNIT 5 B 07/19/82 VOL 1163 PAGE 0393	36 414 16 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	1-5	RES CONDO	
827627	BREDENBERG CARL E 417 GULF STREET MILFORD CT 06460 417 GULF ST 12/16/60 VOL 483 PAGE 485	36 519 18 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1 1	1-1 1-3	RES DWL LOT RES DWLG	
828221	BRENNAN JOHN J JR ET ALS 70 PLATT ROAD SHELTON CT 06484 EDGEWATER PLACE TO MILFORD HARBOR 07/12/76 VOL 0856 PAGE 0282	45 513 40A * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
828222	BRENNAN JOHN J JR ET ALS 70 PLATT ROAD SHELTON CT 06484 EDGEWATER PLACE 07/12/76 VOL 0856 PAGE 0282	45 513 40 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
828223	BRENNAN JOHN J JR ET ALS 70 PLATT ROAD SHELTON CT 06484 EDGEWATER PLACE 07/12/76 VOL 0856 PAGE 0282	45 513 40B * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	

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RECORDS 13

CITY OF MILFORD, CONN

ABSTRACT ASSESSMENT ROLL OF REAL PROPERTY

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT	CD	TYPE PROPERTY	GR ASSE
C04524	CARLSON WILLIAM D 200 STEVENSON ROAD NEW HAVEN CT 06515 15 OLD OYSTER DOCK LANDING UNIT 15 06/03/81 VOL 1116 PAGE 0276	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
C05007	CARPENTER PAUL G 3738 PARK AVE BRIDGEPORT CT 06604 41 OLD OYSTER DOCK LANDING UNIT 41 12/29/82 VOL 1186 PAGE 0024	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
C08890	CEKINO NICHOLAS L 36 GREEN MEADOW ROAD MILFORD CT 06460 EDGEWATER PLACE TO MILFORD HARBOR 08/30/77 VOL 0913 PAGE 0148	45 513 32 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
C10512	CHARLESVIEW INC C/O ATTY GINSBERG PO BOX 605 WEST HAVEN CT 06516 116 TRUMBULL AVENUE UNIT 7D 08/23/79 VOL 1025 PAGE 0292	36 414 16 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	1-5	RES CONDO	1 1
C10516	CHARLESVIEW INC C/O ATTY GINSBERG PO BOX 605 WEST HAVEN CT 06516 96 TRUMBULL AVENUE UNIT 1A 08/23/79 VOL 1025 PAGE 0292	36 414 16 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	1-5	RES CONDO	1 1
C11288	CHERNOCK JOHN R 1115 WEST RIVER STREET MILFORD CT 06460 2 OLD OYSTER DOCK LANDING UNIT 2 10/09/80 VOL 1085 PAGE 0238	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
C11367	CHERNOCK STELLA K 20 ROGERS AVENUE MILFORD CT 06460 20 ROGERS AVE THRU TO MILFORD HARBOR 01/03/67 VOL 0581 PAGE 0221	44 409 6 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1 1 3	1-1 1-3 1-4	RES DWL'LOT RES DWLG RES OUTBLDG	

C I T Y O F M I L F O R D , C O N N

ABSTRACT ASSESSMENT ROLL OF R E A L P R O P E R T Y

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT	CD	TYPE PROPERTY	GR ASSI
C31609	CITYTRUST 945 MAIN STREET BRIDGEPORT CT 06600 56 ROGERS AVENUE C1 06/10/83 VOL 1211 PAGE 0288	35 409 1 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	1-5	RES CONDO	
C33844	CLEMENCE ROBERT H & GRACE E 77 CARRINGTON AVENUE MILFORD CT 06460 77 CARRINGTON AVENUE 06/17/80 VOL 1069 PAGE 0188	45 509 3 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1 1	1-1 1-3	RES DWL LOT RES DWLG	
C43801	COTTRELL JAMES & CAROL & SURV 649 ORANGE AVENUE MILFORD CT 06460 37 OLD OYSTER DOCK LANDING UNIT 37 07/08/81 VOL 1121 PAGE 0279	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
C43802	COTTRELL JAMES & CAROL & SURV 649 ORANGE AVENUE MILFORD CT 06460 36 OLD JYSTER DOCK LANDING UNIT 36 10/09/80 VOL 1085 PAGE 0228	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	

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R E C O R D S 11

CITY OF MILFORD, CON

ABSTRACT ASSESSMENT ROLL OF REAL PROPERTY

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT	CD	TYPE PROPERTY	AS
D13294	DINARDO FRANK SR 1524 BOSTON POST ROAD MILFORD CT 06460 3 OLD OYSTER DOCK LANDING UNIT 3 05/19/83 VOL 1207 PAGE 0233	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
D13666	DIPIETRO PETER 91 SHELL AVENUE MILFORD CT 06460 30 ROGERS AVENUE THRU TO MILFORD HARBC 08/05/82 VOL 1165 PAGE 0283	44 409 4 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1 1	1-1 1-3	RES DWL LOT RES DWLG	
D14211	DIXON LARRY J & DOLORES ANNE & SURV 445 GULF ST MILFORD CT 06460 445 GULF STREET TO MILFORD HARBOR 01/02/74 VOL 0762 PAGE 0014	36 519 17 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1 1	1-1 1-3	RES DWL LOT RES DWLG	
D20511	DUMRAESE EMMA B LIFE USE THEN TO PAUL 330 GULF STREET MILFORD CT 06460 13-21-35-37 NEW HAVEN AVE & WEPAWAUG 06/12/70 VOL 0643 PAGE 0693	54 401 2 R * * * * * T O T A L * * * BOARD OF TAX REVIEW	1 3	2-1 2-3	COM LAND COM BLDG	

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RECORDS 4

CITY OF MILFORD, CON

ABSTRACT ASSESSMENT ROLL OF REAL PROPERTY

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT CD	TYPE PROPERTY	AS
E06075	ETZOLD ROLF D 221 ROLLING HILLS DRIVE FAIRFIELD CT 06430 43 OLD OYSTER DOCK LANDING UNIT 43 09/29/81 VOL 1132 PAGE 0110	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1 VC RES LAND	

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R E C O R D S 1

ARTICLE VII

Sanitation Regulations

Sec. 47. Discharge of Refuse:

(a) It shall be a violation of this Ordinance to discharge or permit the discharge into the waters of the harbor of any refuse or waste matter, petroleum or petroleum matter, paint, varnish or any other foreign matter, including dead animals, fish, bait and debris.

(b) The Harbor Management Commission shall be the enforcement agent for the provisions established under the Clean Water Act.

Sec. 48. Toilet Fixtures: Except in no-discharge zones, which may be established pursuant to Sec. 316 of the Clean Water Act, no person shall operate the toilet fixtures of a vessel within the waters of the City of Milford at any time so as to cause or permit to pass or to be discharged into the waters of such area, any untreated sewage or other waste matter or contaminant of any kind. Any discharge shall be in compliance with current Federal standards concerning Marine Sanitary Discharge or local Health Officer.

Although there are no "no discharge zones" in Connecticut pursuant to the above cited Clean Water Act, the Ct. DEP is now researching the issue by committee.

Sec. 49. Responsibility for Sanitation of Facilities: The lessee, agent, manager or person in charge of a facility or water area, shall at all times, maintain the premises under his charge in a clean, sanitary condition, free from malodorous materials and accumulations of garbage, refuse, debris and other waste materials. Should the Harbor Management Commission find, during the discharging of their duties, evidence of non-compliance with the Harbor Management Plan with respect to harbor sanitation, the Harbor Management Commission shall report, in writing, such findings to the Health Officer. Failure to correct such sanitation problems with reasonable dispatch shall be a violation of this Article.

ARTICLE VIII

Safety and Maintenance

Sec. 50. Flammable and Combustible Liquids and/or Materials: Within a harbor or maritime facility, no person shall sell, offer for sale, or deliver in bulk, any class of flammable liquid or combustible material, nor dispense any flammable or combustible liquids in the fuel tanks of a vessel except when in compliance with all requirements of the N.F.P.A. Fire Code and any other laws or regulations applicable thereto.

Sec. 51. Obstruction to Walkways: Obstructing walkways within the harbor by mooring lines, water hoses, electrical cables, boarding ladders, permanently fixed stairs or any other materials is strictly prohibited. Dinghys may not be left on the floats and piers, but may be stored only in areas designated for that purpose. This section does not apply to personal use facilities.

Sec. 52. Defective or Dangerous Conditions: Whenever any buildings, structures or floating facilities within a harbor or maritime facility either on land or water are found to be defective or damaged so as to be unsafe or dangerous to persons or property, it shall be the duty of the owner, agent, lessee, operator or person in charge thereof to immediately post a proper notice and/or fence or barricade and at night to adequately light such unsafe area or areas, , and such unsafe area or areas shall be kept posted and lighted and/or fenced or barricaded until the necessary repairs are made. In the event an owner, agent, lessee, operator or person in charge fails or neglects to repair or to put up fences or other barriers to prevent persons from using or going upon the unsafe area or areas, upon notification by the Harbormaster, the Harbor Management Commission may then take such measures as they may deem necessary for the protection of the public and charge the cost of same to such owner, lessee, agent, person or persons having charge of the buildings, structures, or floating facilities that are defective or dangerous.

Sec. 53. Minimum Design Criteria: The Harbor Management Commission during their review of proposed projects and structures under the jurisdiction of the Commission may review the adequacy of construction details for proposed docks, piers, bulkheads and other shoreside facilities.

CITY OF MILFORD, CO

ABSTRACT ASSESSMENT ROLL OF REAL PROPERTY

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT	CD	TYPE PROPERTY
F03963	FERRARI EDWARD & CATHERINE L HARBORVIEW AVENUE MILFORD CT 06460 EDGEWATER PLACE TO MILFORD HARBOR 01/12/46 VOL 275 PAGE 323	45 513 26	1	5-1	VC RES LAND * * * * * T O T A L * * * BOARD OF TAX REVIEW
F03967	FERRARI EDWARD & CATHERINE L HARBORVIEW AVENUE MILFORD CT 06460 EDGEWATER PLACE TO MILFORD HARBOR 09/03/49 VOL 322 PAGE 462	45 513 27	1	5-1	VC RES LAND * * * * * T O T A L * * * BOARD OF TAX REVIEW
F06006	FINLEY PATRICIA & TAYLOR CHARLES & SUR 40 ROGERS AVENUE MILFORD CT 06460 40 ROGERS AVE THRU TO MILFORD HARBOR 01/12/78 VOL 0934 PAGE 0243	44 409 2	1 2 1 1 1	1-1 1-3 1-4 1-2	RES DWL LOT RES DWLG RES OUTBLDG RES EX ACR * * * * * T O T A L * * * BOARD OF TAX REVIEW
F14673	FUSCO VINCENT W 1672 CAPITOL AVENUE BRIDGEPORT CT 06604 5 OLD OYSTER DOCK LANDING UNIT 5 04/07/81 VOL 1109 PAGE 0038	36 519 11	1	5-1	VC RES LAND * * * * * T O T A L * * * BOARD OF TAX REVIEW

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RECORDS 4

ABSTRACT ASSESSMENT ROLL OF R E A L P R O P E R T Y

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT	CD	TYPE PROPERTY	AS
G00096	GABRIEL MICHAEL J	44	1	L-1	RES DWL LOT	
	2 ROGERS AVE	409	1	1-3	RES DWLG	
	MILFORD CT 06460	9				
	2 ROGERS AVENUE					
	10/18/77 VOL 0921 PAGE 0263	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				
G00447	GAGE MARCELLA F	36	1	5-1	VC RES LAND	
	20 COLONIAL CIRCLE	519				
	WEST HAVEN CT 06516	11				
	12 OLD OYSTER DOCK LANDING UNIT 12					
	10/27/80 VOL 1088 PAGE 0045	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				
G00621	GAGLIARDI PAUL & JAMES	36	1	5-1	VC RES LAND	
	5 ROCK STREET	519				
	WEST HAVEN CT 06516	11				
	1 OLD OYSTER DOCK LANDING UNIT 1					
	10/09/80 VOL 1085 PAGE 0233	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				
G06444	GERMAN HENRY 1/2 INT & BEATRICE E 1/2	36	1	1-1	RES DWL LOT	
	30 DOCK ROAD	519	1	1-3	RES DWLG	
	MILFORD CT 06460	18A				
	30 DOCK LANE					
	01/06/77 VOL 0880 PAGE 0032	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				
G06993	GESNER MELVERN E ANTOINETTE E SURV	36	1	5-1	VC RES LAND	
	28 WOODY LA	519				
	WEST HAVEN CT 06516	1C				
	EDGEWATER PLACE THRU TO MILFORD HARBOR					
	08/22/78 VOL 0968 PAGE 0286	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				
G09147	GINSBERG GARY R	36	1	1-5	RES CONDO	
	P O BOX 605	414				
	WEST HAVEN CT 06516	16				
	100 TRUMBULL AVENUE UNIT 3C					
	10/05/82 VOL 1173 PAGE 0177	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				
G09153	GINSBERG GARY R & PATRICIA F & SURV	36	1	1-5	RES CONDO	
	PO BOX 605	414				
	WEST HAVEN CT 06516	16				
	110 TRUMBULL AVENUE UNIT 4A					
	12/29/82 VOL 1185 PAGE 0280	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				

A B S T R A C T A S S E S S M E N T R O L L O F R E A L P R O P E R T Y

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT	CD	TYPE PROPERTY	AS
G15231	GRAY FREDERICK G JR ET ALS 188 GULF STREET MILFORD CT 06460 20 OLD OYSTER DOCK LANDING UNIT 20 08/14/81 VOL 1126 PAGE 0194	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
G18520	GROSBY ROBERT N 21 ISAAC STREET NORWALK CT 06850 31 OLD OYSTER DOCK LANDING UNIT 31 10/09/80 VOL 1085 PAGE 0223	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
G20139	GUNTHER JOHN C 78 CARRINGTON AVENUE MILFORD CT 06460 EDGEWATER PLACE TO MILFORD HARBOR 03/26/51 VOL 345 PAGE 76	45 513 30 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
G20163	GUNTHER JOHN C 78 CARRINGTON AVENUE MILFORD CT 06460 EDGEWATER PLACE TO MILFORD HARBOR 09/24/65 VOL 557 PAGE 95	45 513 31 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	

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R E C O R D S 11

ABSTRACT ASSESSMENT ROLL OF REAL PROPERTY

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT	CO	TYPE PROPERTY	A
H01931	HALL JOHN P	45	1	5-1	VC RES LAND	
	395 ANSANTAWAE ROAD	509				
	MILFORD CT 06460	22				
	GLEN STREET					
	12/22/71 VOL 0671 PAGE 0134	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				
H03588	HAMMOUND LYNDA A	35	1	1-5	RES CONDO	
	56 ROGERS AVENUE UN S4	409				
	MILFORD CT 06460	1				
	56 ROGERS AVENUE S-4					
	11/19/82 VOL 1180 PAGE 0059	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				
H13370	HINCKLEY JULIA C & JOSEPH H 1/2 INT EA	44	1	1-1	RES DWL LOT	
	823 COVE ROAD	409	1	1-3	RES DWLG	
	STAMFORD CT 06902	5				
	26 ROGERS AVENUE THRU TO MILFORD HARBO.					
	08/06/79 VOL 1022 PAGE 0184	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				
H15735	HOLST HERMAN GORDON ET ALS	45	1	5-1	VC RES LAND	
	14 LAWRENCE AVE	513				
	MILFORD CT 06460	43				
	EDGEWATER PLACE TO MILFORD HARBOR					
	08/17/79 VOL 1025 PAGE 0100	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				
H15736	HOLST HERMAN GORDON ET ALS	45	1	5-1	VC RES LAND	
	14 LAWRENCE AVE	513				
	MILFORD CT 06460	45				
	EDGEWATER PLACE TO MILFORD HARBOR					
	08/17/79 VOL 1025 PAGE 0100	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				
H15737	HOLST HERMAN GORDON ET ALS	45	1	5-1	VC RES LAND	
	14 LAWRENCE AVE	513				
	MILFORD CT 06460	44				
	EDGEWATER PLACE TO MILFORD HARBOR					
	08/17/79 VOL 1025 PAGE 0100	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				
H18723	HOTCHKISS ALBERT K & MARGARET E	45	1	1-1	RES DWL LOT	
	83 CARRINGTON AVENUE	509	1	1-3	RES DWLG	
	MILFORD CT 06460	1				
	91 CARRINGTON AVENUE TO HARBOR					
	09/20/60 VOL 479 PAGE 592	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				

CITY OF MILFORD, CON

ABSTRACT ASSESSMENT ROLL OF REAL PROPERTY

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT	CD	TYPE PROPERTY	AS
M18771	HOTCHKISS ALBERT K & MARGARET E & SURV	45	1	1-1	RES DWL LOT	
	83 CARRINGTON AVENUE	505	1	1-3	RES DWLG	
	MILFORD CT 06460	2	2	1-4	RES OUTBLDG	
	63 CARRINGTON AVENUE THROUGH TO HARBOR					
	05/21/48 VOL 317 PAGE 90	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				
M18795	HOTCHKISS ALBERT K & MARGARET E & SURV	45	1	5-1	VC RES LAND	
	83 CARRINGTON AVENUE	513				
	MILFORD CT 06460	24				
	90 CARRINGTON AVENUE & MILFORD HARBOR					
	02/27/57 VOL 431 PAGE 181	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				

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RECORDS 9

ABSTRACT ASSESSMENT ROLL OF REAL PROPERTY

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT CD	TYPE PROPERTY	AS
100078	IACURCI ARTHUR 56 ROGERS AVENUE J-3 MILFORD CT 06460 56 ROGERS AVENUE J3 01/07/83 VOL 1187 PAGE 0182	35 409 1 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	1-5 RES CONDO	

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R E C O R D S 1

ABSTRACT ASSESSMENT ROLL OF REAL PROPERTY

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT CD	TYPE PROPERTY	A
K00267	KAGAN GERALD A OYSTER BAY ASSOC PO BOX 297 MILFORD CT 06460 32 OLD OYSTER DOCK LANDING UNIT 32 10/09/80 VOL 1085 PAGE 0248	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1 VC RES LAND	
K04095	KEEGAN HELEN 290 POND POINT AVENUE MILFORD CT 06460 35 OLD OYSTER DOCK LANDING UNIT 35 04/03/81 VOL 1108 PAGE 0245	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1 VC RES LAND	
K04149	KEEGAN JOHN 290 POND POINT AVENUE MILFORD CT 06460 34 OLD OYSTER DOCK LANDING UNIT 34 12/29/80 VOL 1097 PAGE 0125	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1 VC RES LAND	
K04225	KEEGAN MACHINE & FABRICATING COMPANY 922 BRIDGEPORT AVENUE MILFORD CT 06460 33 OLD OYSTER DOCK LANDING UNIT 33 06/14/83 VOL 1212 PAGE 0128	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1 VC RES LAND	
K13943	KRANTZ BERNICE 558 MEETING HOUSE CIR ORANGE CT 06477 8 OLD OYSTER DOCK LANDING UNIT 8 03/16/83 VOL 1197 PAGE 0027	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1 VC RES LAND	
K14607	KREIGER CHARLES H ARTHUR V & SHULA 15 FLINTLOCK DRIVE DANBURY CT 06810 EDGWATER PLACE TO MILFORD HARBOR 03/12/80 VOL 1057 PAGE 0177	36 519 3 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1 VC RES LAND	
K17175	KYRITSIS KATHERINE 34 DOCK LANE MILFORD CT 06460 34 DOCK LANE THRU TO MILFORD HARBOR 04/05/73 VOL 0729 PAGE 0129	36 519 14 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1 1	1-1 RES DWL LOT 1-3 RES DWLG	

ABSTRACT ASSESSMENT ROLL OF REAL PROPERTY

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT	CD	TYPE PROPERTY	AS
L04051	LARSEN CATHERINE D & SALSBURY PETER B 56 ROGERS AVENUE M-3 MILFORD CT 06460 56 ROGERS AVENUE M3 12/16/82 VOL 1183 PAGE 0232	35 409 1 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	1-5	RES CONDO	
L06899	LEARY LAURENCE R & PATRICIA H & SURV 111 DELAWARE ROAD EASTON CT 06425 42 OLD OYSTER DOCK LANDING UNIT 42 05/04/81 VOL 1112 PAGE 0006	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
L08148	LEMERE PETER N & BARBARA E & SURV 48 CENTER ROAD ORANGE CT 06477 24 OLD OYSTER DOCK LANDING UNIT 24 02/25/83 VOL 1194 PAGE 0087	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
L11178	LILLIOS NIKO 167 MARTIN LANE ORANGE CT 06477 40 OLD OYSTER DOCK LANDING UNIT 40 10/09/80 VOL 1085 PAGE 0243	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	

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RECORDS 4

ABSTRACT ASSESSMENT ROLL OF REAL PROPERT

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT	CD	TYPE PROPERTY
M01917	MACTAGGART JANET C & FRANCIS C & SURV 56 ROGERS AVE A1 MILFORD CT 06460 56 ROGERS AVENUE A1 04/29/83 VOL 1204 PAGE 0081	35 409 1 * * * * * TOTAL * * * BOARD OF TAX REVIEW	1	1-5	RES CONDO
M03975	MAIER ROBERT W & MARYANNE E & SURV 465 GULF ST MILFORD CT 06460 465 GULF STREET 03/02/77 VOL 0885 PAGE 0201	36 519 16B * * * * * TOTAL * * * BOARD OF TAX REVIEW	1 1	1-1 1-3	RES DWL LOT RES DWLG
M06075	MALOY CLARE A & ROBERT F 16 ROGERS AVENUE MILFORD CT 06460 16 ROGERS AVE THRU TO MILFORD HARBOR 03/02/65 VOL 545 PAGE 476	44 409 7 * * * * * TOTAL * * * BOARD OF TAX REVIEW	1 1 1	1-1 1-3 1-4	RES DWL LOT RES DWLG RES OUTBLDG
M06747	MANION MARION C 25 HARBORVIEW AVENUE MILFORD CT 06460 EDGEWATER PLACE 02/13/69 VOL 620 PAGE 432	36 519 18 * * * * * TOTAL * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND
M07643	MARCH EDWIN 49 LORANN DRIVE NAUGATUCK CT 06770 EDGEWATER PLACE TO MILFORD HARBOR 05/16/73 VOL 0734 PAGE 0187	45 513 41 * * * * * TOTAL * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND
M07644	MARCH EDWIN 49 LORANN DRIVE NAUGATUCK CT 06770 EDGEWATER PLACE TO MILFORD HARBOR 05/16/73 VOL 0734 PAGE 0187	45 513 42 * * * * * TOTAL * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND
M08785	MARINO ROBERT A & EVELYN D & SURV 109 CRESTWOOD ROAD BETHANY CT 06525 10 OLD OYSTER DOCK LANDING UNIT 10 10/09/80 VOL 1085 PAGE 0253	36 519 11 * * * * * TOTAL * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND

CITY OF MILFORD, CONN

ABSTRACT ASSESSMENT ROLL OF REAL PROPERTY

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT	CD	TYPE PROPERTY	GRO ASSE
M23574	MEYERS MELVIN N 24 ROSE STREET MILFORD CT 06460 EDGEWATER PLACE TO MILFORD HARBOR 10/25/68 VOL 0615 PAGE 0061	45 513 34	1	5-1	VC RES LAND	
		* * * * * T O T A L * * * BOARD OF TAX REVIEW				
M23575	MEYERS MELVIN N 24 ROSE STREET MILFORD CT 06460 EDGEWATER PLACE TO MILFORD HARBOR 10/25/68 VOL 0615 PAGE 0061	45 513 35	1	5-1	VC RES LAND	
		* * * * * T O T A L * * * BOARD OF TAX REVIEW				
M23576	MEYERS MELVIN N 24 ROSE STREET MILFORD CT 06460 EDGEWATER PLACE TO MILFORD HARBOR 10/25/68 VOL 0615 PAGE 0061	45 513 33	1	5-1	VC RES LAND	
		* * * * * T O T A L * * * BOARD OF TAX REVIEW				
M23577	MEYERS MELVIN N 24 ROSE STREET MILFORD CT 06460 EDGEWATER PLACE TO MILFORD HARBOR 10/25/68 VOL 0615 PAGE 0061	45 513 36	1	5-1	VC RES LAND	
		* * * * * T O T A L * * * BOARD OF TAX REVIEW				
M23578	MEYERS MELVIN N 24 ROSE STREET MILFORD CT 06460 EDGEWATER PLACE 10/25/68 VOL 0615 PAGE 0061	45 513 32A	1	5-1	VC RES LAND	
		* * * * * T O T A L * * * BOARD OF TAX REVIEW				
M23703	MEYERS MELVIN N & DOROTHY B & SURV 24 ROSE ST MILFORD CT 06460 EDGEWATER PLACE TO MILFORD HARBOR 06/30/71 VOL 0653 PAGE 0832	45 513 36A	1	5-1	VC RES LAND	
		* * * * * T O T A L * * * BOARD OF TAX REVIEW				
M25707	MILFORD BOAT WORKS INC HIGH STREET MILFORD CT 06460 HIGH ST TO FACTORY LANE 01/30/46 VOL 275 PAGE 358	44 401 4	1 2 2	2-1 2-3 2-4	COM LAND COM BLDG COM YD ITEM	19 16
		* * * * * T O T A L * * * BOARD OF TAX REVIEW				36

CITY OF MILFORD, CON

ABSTRACT ASSESSMENT ROLL OF REAL PROPERTY

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT	CO	TYPE PROPERTY	G ASS
M26007	MILFORD DINER 13 NEW HAVEN AVE MILFORD CT 06460 13 NEW HAVEN AVENUE 00/00/00 VOL 0000 PAGE 0000	54 401 2 * * * * * T O T A L * * * BOARD OF TAX REVIEW				
M26043	MILFORD HARBOR MARINA INC 2 HIGH STREET MILFORD CT 06460 18 HIGH ST & MILFORD HARBOR 12/29/64 VOL 543 PAGE 196	44 404 2 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1 2 1	2-1 2-3 2-4	COM LAND COM BLDG COM YD ITEM	
M33375	MONTANO GARY 105 WOLFE HARBOR ROAD MILFORD CT 06460 4 OLD OYSTER DOCK LANDING UNIT 4 03/05/81 VOL 1101 PAGE 0268	34 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	

* * * * * * * * LETTER M * * * * * * * T O T A L * * *
RECORDS 17

CITY OF MILFORD, CONI

ABSTRACT ASSESSMENT ROLL OF REAL PROPERTY

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT	CO	TYPE PROPERTY	G ASS
N06138	NORDIAN A FRANCIS & DORA C & SURV	54	1	2-1	COM LAND	
	453 SQUIRES LANE	401	1	2-3	COM BLDG	
	ORANGE CT 06477	1	1	2-4	COM YD ITEM	
	1-3-4-7-9 NEW HAVEN AVE & FACTORY LA					
	02/06/80 VOL 1054 PAGE 0052	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				

* * * * * * * * L E T T E R N * * * * * * * T O T A L * * *
R E C O R D S 1

CITY OF MILFORD, CON

ABSTRACT ASSESSMENT ROLL OF REAL PROPERTY

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT CO	TYPE PROPERTY	AS
001869	OFFUT DANIEL E 50 KETTLE CREEK ROAD WESTON CT 06883 EDGEWATER PLACE TO MILFORD HARBOR 02/26/80 VOL 1056 PAGE 0029	45 513 39 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1 5-1	VC RES LAND	
001887	OFFUTT DANIEL E C/O ALFRED STANFORD 50 KETTLE CREEK ROAD WESTON CT 06883 EDGEWATER PLACE TO MILFORD HARBOR 02/26/80 VOL 1056 PAGE 0029	45 513 38 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1 5-1	VC RES LAND	
004220	ORKISZ RUDOLPH 48 WHITNEY LANE ORANGE CT 06477 PONC STREET 09/12/79 VOL 1029 PAGE 0089	44 409 11A * * * * * T O T A L * * * BOARD OF TAX REVIEW	1 5-1	VC RES LAND	

* * * * * * * * LETTER O * * * * * * * TOTAL * * *
RECORDS 3

C I T Y O F M I L F O R D , C O N

A B S T R A C T A S S E S S M E N T R O L L O F R E A L P R O P E R T Y

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT	CD	TYPE PROPERTY	G ASS
P08536	PERLER S ROY 38 IVES HILL COURT CHESHIRE CT 06410 26 OLD OYSTER DOCK LANDING UNIT 26 08/14/81 VOL 1126 PAGE 0189	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
P09933	PETERSEN JUERGEN 82 POND STREET MILFORD CT 06460 82 POND STREET 02/21/78 VOL 0938 PAGE 0229	44 409 11B * * * * * T O T A L * * * BOARD OF TAX REVIEW	1 1	1-1 1-3	RES DWL LOT RES DWLG	
P17563	PORTER DONALD N 36 ROGERS AVENUE MILFORD CT 06460 36 ROGERS AVE THRU TO MILFORD HARBOR 07/03/67 VOL 0589 PAGE 0170	44 409 3 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1 1 1	1-1 1-3 1-4	RES DWL LOT RES DWLG RES OUTBLDG	
P19515	PREISS CLIFFORD W & ISABELLA G & SURVV 3 WALKER STREET MILFORD CT 06460 EDGEWATER PLACE WALKER MANOR 10/23/62 VOL 510 PAGE 368	45 513 31A * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	

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R E C O R D S 4

ABSTRACT ASSESSMENT ROLL OF R E A L P R O P E R T Y

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT	CD	TYPE PROPERTY	(ASS
R11507	ROGERS KEITH & NANCY & SURV 74 HARBORVIEW AVENUE MILFORD CT 06460 EDGEWATER PLACE TO MILFORD HARBOR 12/18/79 VOL 1046 PAGE 0109	36 519 2	1	5-1	VC RES LAND * * * * * T O T A L * * * BOARD OF TAX REVIEW	
R11508	ROGERS KEITH & NANCY & SURV 74 HARBORVIEW AVENUE MILFORD CT 06460 EDGEWATER PLACE TO MILFORD HARBOR 12/18/79 VOL 1046 PAGE 0110	36 519 1A	1	5-1	VC RES LAND * * * * * T O T A L * * * BOARD OF TAX REVIEW	
R11871	ROGERS RAYMOND K & NANCY & SURV 74 HARBORVIEW AVENUE MILFORD CT 06460 EDGEWATER PLACE TO MILFORD HARBOR 03/05/82 VOL 1148 PAGE 0248	36 519 5	1	5-1	VC RES LAND * * * * * T O T A L * * * BOARD OF TAX REVIEW	
R12161	ROHLOFF CATHERINE A 90 BUTTERNUT LANE SOUTHPORT CT 06280 16 OYSTER LANDING LTD UNIT 16 09/08/81 VOL 1129 PAGE 0279	36 519 11	1	5-1	VC RES LAND * * * * * T O T A L * * * BOARD OF TAX REVIEW	
R13126	ROMANO RALPH W JR MD 56 ROGERS AVENUE B-1 MILFORD CT 06460 56 ROGERS AVE B1 10/15/82 VOL 1174 PAGE 0296	35 409 1	1	1-5	RES CONDO * * * * * T O T A L * * * BOARD OF TAX REVIEW	

* * * * * * * * L E T T E R R * * * * * * * T O T A L * * *
R E C O R D S 5

C I T Y O F M I L F O R D , C O N

ABSTRACT ASSESSMENT ROLL OF R E A L P R O P E R T Y

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT	CD	TYPE PROPERTY	AS
S02985	SANTA DONALD F & JANE T & SURV 98 TRUMBULL AVE UN 2B MILFORD CT 06460 98 TRUMBULL AVENUE UNIT 2B 09/14/83 VOL 1233 PAGE 0259	36 414 16 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	1-5	RES CONDO	
S11285	SETTLERS COVE INC 97 LANE STREET SHELTON CT 06484 56 ROGERS AVENUE L3 09/21/82 VOL 1171 PAGE 0130	35 409 1 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	1-5	RES CONDO	
S11287	SETTLERS COVE INC 97 LANE STREET SHELTON CT 06484 56 ROGERS AVENUE Q4 09/21/82 VOL 1171 PAGE 0130	35 409 1 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	1-5	RES CONDO	
S11290	SETTLERS COVE INC 97 LANE STREET SHELTON CT 06484 56 ROGERS AVENUE Q4 09/21/82 VOL 1171 PAGE 0130	35 409 1 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	1-5	RES CONDO	
S11292	SETTLERS COVE INC 97 LANE STREET SHELTON CT 06484 56 ROGERS AVENUE K3 09/21/82 VOL 1171 PAGE 0130	35 409 1 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	1-5	RES CONDO	
S11301	SETTLERS COVE INC 97 LANE STREET SHELTON CT 06484 56 ROGERS AVENUE G2 09/21/82 VOL 1171 PAGE 0130	35 409 1 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	1-5	RES CONDO	
S11302	SETTLERS COVE INC 97 LANE STREET SHELTON CT 06484 56 ROGERS AVENUE D1 09/21/82 VOL 1171 PAGE 0130	35 409 1 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	1-5	RES CONDO	

ABSTRACT ASSESSMENT ROLL OF REAL PROPERTY

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT	CD	TYPE PROPERTY	AS
S11320	SETTLERS COVE INC 56 ROGERS AVENUE UN R4 MILFORD CT 06460 56 ROGERS AVENUE R4 09/21/82 VOL 1171 PAGE 0130	35 409 1 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	1-5	RES CONDO	
S11771	SHAHEEN GEORGE M TRUSTEE 76 POND STREET MILFORD CT 06460 76 POND STREET 01/07/81 VOL 1098 PAGE 0269	44 409 11C * * * * * T O T A L * * * BOARD OF TAX REVIEW	1 1	1-1 1-3	RES DWL LOT RES DWLG	
S23259	SMITH PHYLLIS C 22 DOCK LANE MILFORD CT 06460 22 DOCK LANE 09/30/68 VOL 613 PAGE 373	36 519 18C * * * * * T O T A L * * * BOARD OF TAX REVIEW	1 1	1-1 1-3	RES DWL LOT RES DWLG	
S26991	SPANGLER WILLIAM F & JOAN K & SURV 71 CARRINGTON AVENUE MILFORD CT 06460 71 CARRINGTON AVENUE 07/01/75 VOL C814 PAGE 0063	45 509 4 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1 1 1	1-1 1-3 1-4	RES DWL LOT RES DWLG RES OUTBLDG	
S27074	SPARTAN DEVELOPMENT CORPORATION 4 OYSTER LANDING ROAD MILFORD CT 06460 13 OLD OYSTER DOCK LANDING UNIT 13 12/10/82 VOL 1182 PAGE 0217	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
S27075	SPARTAN DEVELOPMENT CORPORATION 4 OYSTER LANDING ROAD MILFORD CT 06460 38 OLD OYSTER DOCK LANDING UNIT 38 12/10/82 VOL 1182 PAGE 0217	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
S27076	SPARTAN DEVELOPMENT CORPORATION 4 OYSTER LANDING ROAD MILFORD CT 06460 30 OLD OYSTER DOCK LANDING UNIT 30 12/10/82 VOL 1182 PAGE 0217	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	

ABSTRACT ASSESSMENT ROLL OF R E A L P R O P E R T Y

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT	CD	TYPE PROPERTY	AS
S27077	SPARTAN DEVELOPMENT CORPORATION 4 OYSTER LANDING ROAD MILFORD CT 06460 29 OLD OYSTER DOCK LANDING UNIT 29 12/10/82 VOL 1182 PAGE 0217	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
S27078	SPARTAN DEVELOPMENT CORPORATION 4 OYSTER LANDING ROAD MILFORD CT 06460 23 OLD OYSTER DOCK LANDING UNIT 23 12/10/82 VOL 1182 PAGE 0217	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
S27079	SPARTAN DEVELOPMENT CORPORATION 4 OYSTER LANDING ROAD MILFORD CT 06460 27 OLD OYSTER DOCK LANDING UNIT 27 12/10/82 VOL 1182 PAGE 0217	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
S27081	SPARTAN DEVELOPMENT CORPORATION 4 OYSTER LANDING ROAD MILFORD CT 06460 14 OLD OYSTER DOCK LANDING UNIT 14 12/10/82 VOL 1182 PAGE 0217	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
S27082	SPARTAN DEVELOPMENT CORPORATION 4 OYSTER LANDING ROAD MILFORD CT 06460 6 OLD OYSTER DOCK LANDING UNIT 6 12/10/82 VOL 1182 PAGE 0217	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
S27083	SPARTAN DEVELOPMENT CORPORATION 4 OYSTER LANDING ROAD MILFORD CT 06460 9 OLD OYSTER DOCK LANDING UNIT 9 12/10/82 VOL 1182 PAGE 0217	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
S27084	SPARTAN DEVELOPMENT CORPORATION 4 OYSTER LANDING ROAD MILFORD CT 06460 22 OLD OYSTER DOCK LANDING UNIT 22 12/10/82 VOL 1182 PAGE 0217	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	

ABSTRACT ASSESSMENT ROLL OF REAL PROPERTY

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT	CD	TYPE PROPERTY	A
S27088	SPARTAN DEVELOPMENT CORPORATION 4 OYSTER LANDING ROAD MILFORD CT 06460 28 OLD OYSTER DOCK LANDING UNIT 28 12/10/82 VOL 1182 PAGE 0217	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
S27089	SPARTAN DEVELOPMENT CORPORATION 4 OYSTER LANDING ROAD MILFORD CT 06460 17 OLD OYSTER DOCK LANDING UNIT 17 12/10/82 VOL 1182 PAGE 0217	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
S27090	SPARTAN DEVELOPMENT CORPORATION 4 OYSTER LANDING ROAD MILFORD CT 06460 19 OLD OYSTER DOCK LANDING UNIT 19 12/10/82 VOL 1182 PAGE 0217	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
S27091	SPARTAN DEVELOPMENT CORPORATION 4 OYSTER LANDING ROAD MILFORD CT 06460 21 OLD OYSTER DOCK LANDING UNIT 21 12/10/82 VOL 1182 PAGE 0217	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
S27092	SPARTAN DEVELOPMENT CORPORATION 4 OYSTER LANDING ROAD MILFORD CT 06460 18 OLD OYSTER DOCK LANDING UNIT 18 12/10/82 VOL 1182 PAGE 0217	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
S27981	SPRY ANNE 618 UPPER GRASSY HILL WOODBURY CT 06798 EDGEWATER PLACE HARBORVIEW AVE 09/27/83 VOL 1236 PAGE 0125	36 519 1 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1	VC RES LAND	
S28071	SQUIER GARY P & OLYMPIA B & SURV 463 GULF STREET MILFORD CT 06460 463 GULF ST TO BRIDGE -NFD HARBOR 06/11/73 VOL 0737 PAGE 0226	36 519 16 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1 1	1-1 1-3	RES DWL LOT RES DWLG	

CITY OF MILFORD, CO

ABSTRACT ASSESSMENT ROLL OF REAL PROPERTY

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT	CD	TYPE PROPERTY	A
529586	STANFORD ALFRED	36	1	1-1	RES DWL LOT	
	433 GULF STREET	519	1	1-3	RES DWLG	
	MILFORD CT 06460	18B				
	433 GULF STREET TO MILFORD HARBOR					
	03/12/54 VOL 0383 PAGE 0549	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				

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R E C O R D S 29

CITY OF MILFORD, CO

ABSTRACT ASSESSMENT ROLL OF REAL PROPERTY

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK. PAR	CNT CD	TYPE PROPERTY	A
T02047	TEGFORD E MARIE 27 FENWAY NORTH MILFORD CT 06460 25 OLD OYSTER DOCK LANDING UNIT 25 12/15/80 VOL 1095 PAGE 0255	36 519 11 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1 VC RES LAND	
T08755	TREVETHAN SUSAN P 56 ROGERS AVENUE F 2 MILFORD CT 06460 56 ROGERS AVENUE F2 08/26/83 VOL 1229 PAGE 0218	35 409 1 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	1-5 RES CONDO	

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RECORDS 2

CITY OF MILFORD, CO

ABSTRACT ASSESSMENT ROLL OF REAL PROPERT'

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT CD	TYPE PROPERTY
V02916	VIGILIO ADOLPH P & SANDRA E SURV 56 ROGERS AVENUE P4 MILFORD CT 06460 56 ROGERS AVENUE P4 09/14/83 VOL 1233 PAGE 0275	35 409 1 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	1-5 RES CONDO
V05979	VOYTERSHARK PAUL JOHNSON W RUTLAND ROAD MILFORD CT 06460 EDGEWATER PLACE TO MILFORD HARBOR 09/04/52 VOL 354 PAGE 315	36 519 4 * * * * * T O T A L * * * BOARD OF TAX REVIEW	1	5-1 VC RES LAND

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RECORDS 2

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ABSTRACT ASSESSMENT ROLL OF REAL PROPERTY

NUMBER	NAME, DBA, ADDRESS LOCATION OF PROPERTY	MAP/BLK PAR	CNT	CD	TYPE PROPERTY	AS:
W00215	WAGNER ANDREW L JR & JEAVONS J W	44	1	1-1	RES DWL LOT	
	53 TURTLE BAY DRIVE	409	1	1-3	RES DWLG	
	BRANFORD CT 06405	8				
	8 ROGERS AVENUE THRU TO CREEK					
	04/27/82 VOL 1153 PAGE 0277	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				
W01914	WALSH DONALD G	36	1	1-5	RES CONDO	
	114 TRUMBULL AVE UN 6 B	414				
	MILFORD CT 06460	16				
	114 TRUMBULL AVENUE UNIT 681					
	07/28/83 VOL 1222 PAGE 0052	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				
W04527	WATERMAN CHARLES B	36	1	5-1	VC RES LAND	
	489 CARRIAGE DRIVE	519				
	ORANGE CT 06477	11				
	39 OLD OYSTER DOCK LANDING UNIT 39					
	04/16/81 VOL 1110 PAGE 0072	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				
W10440	WHITTLE DONALD G & ELIZABETH G & SURV	36	1	1-1	RES DWL LOT	
	46 DOCK LANE	519	1	1-3	RES DWLG	
	MILFORD CT 06460	12	1	1-4	RES OUTBLDG	
	46 DOCK LANE TO MILFORD HARBOR					
	03/16/73 VOL 0726 PAGE 0142	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				
W18060	WOODWIND LTD	36	1	5-1	VC RES LAND	
	101 NORTH FAIRFIELD DR	519				
	DOVER DE 19901	11				
	11 OLD OYSTER DOCK LANDING UNIT 11					
	05/05/81 VOL 1112 PAGE 0198	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				
W18259	WORMS RICHARD M	36	1	5-1	VC RES LAND	
	3 SENECA PLACE	519				
	MILFORD CT 06460	11				
	44 OLD OYSTER DOCK LANDING UNIT 44					
	10/07/81 VOL 1133 PAGE 0232	* * * * * T O T A L * * *				
		BOARD OF TAX REVIEW				

* * * * * * * LETTER W * * * * * * * T O T A L * * *
RECORDS 6

February 5,1985

Regulatory Branch
NEDOD-R-35

Allen Barrien
One High Street
Milford, Connecticut 06460

Dear Allen:

This refers to your permit application 15-85-57 concerning dredging in Milford Harbor, Milford, Connecticut.

To help us in evaluating the material which you intend to have dredged and disposed of at an open water disposal site, additional testing is necessary. As we discussed, you should take three representative samples at Site 1 (west compensatory area) and two representative samples at Site 2(Head of the Harbor). The samples at each individual site can be combined and the mixture tested. Therefore, you will need to have only two analyses performed. Each sample should be taken to the proposed project depth. The two consolidated samples will require a grain size analysis and a bulk sediment test. The standard parameters to be tested for in the bulk sediment test include the following:

BULK SEDIMENT TEST

PARAMETER	SUGGESTED METHOD	DETECTION LIMIT
Volatile Solids	NED	1%
Water	-	1%
Oil & Grease	Hexane extract Gravimetric	0.5%
Mercury - Hg	AD, Flameless AAS	0.1ppm
Lead - Pb	AD, AAS	20ppm
Zinc - Zn	AD, AAS	20ppm
Arsenic - As	Gaseous Hydride AAS	1ppm
Cadmium - Cd	AD, AAS	2ppm
Chromium - Cr	AD, AAS	20ppm
Copper - Cu	AD, AAS	20ppm
Nickel - Ni	AD, AAS	30ppm
PCB's	Extraction, CG	1ppb

NED - New England Division Method. Sample heated to 350-400 C.
AD - Acid Digestion SE-Solvent Extraction
AAS - Atomic Absorption Spectrophotometry CG-Gas Chromatography

Reference: Plumb, A.H., Jr., 1981. "Procedure for Handling and Chemical Analysis of Sediment and Water Samples" Technical Report EPA/CE-81-1, prepared by Great Lakes Laboratory, State University College at Buffalo, Buffalo, N.Y., for the U.S. Environmental Protection Agency/Corps of Engineers Technical Committee on Criteria for Dredged and Fill material. Published by the U.S. Army Engineer Waterways Experiment Station, CE, Vicksburg, Mississippi.

Bulk sediment metals and PCB data should be expressed in ppm or ppb based on dry weight of sample. Additional parameters may be requested if there is concern for special contaminants in the area.

If you have any questions, please contact me at (617) 647-8687, or you may use our toll free number 1-800-343-4789.

Sincerely,

Margo Walter

Margo Walter
Project Manager
Regulatory Branch

March 4, 1985

Mayor Alberta C. Jagoe
City of Milford
Milford, CT 06460

Dear Mayor Jagoe,

Enclosed are the two quotations for obtaining the core samples from Milford Harbor as required by the Army Corps of Engineers. I have been able to obtain the services of an operator and two laborers to accomplish the sampling at no charge.

The lab report from Environmental Laboratories Incorporated in West Haven is being forwarded directly to the Army Corps of Engineers.

Yours very truly,

Allen G. Berrien
Harbormaster
Harbor Task Force Chairman

AGB/fgb
enc. three

A. K. Hotchkiss, Inc.

DREDGING, PILE DRIVING, DOCK BUILDING, BULKHEADS GROINS

83 CARRINGTON AVENUE
MILFORD, CONNECTICUT 06460

TELEPHONE (203) 874-6666

Allen G. Berrien, Harbormaster
City of Milford
1 High Street
Milford, CT 06460

March 4, 1985

Rental of pile driver for one day to obtain core samples in Milford Harbor (total 5)

$750.00

ENVIRONMENTAL LABORATORIES INCORPORATED

158 Bull Hill Lane
West Haven, CT 06516

(203) 934-3506
(203) 789-1260

QUOTATION FOR LABORATORY SERVICES

Client:

Allen Bannier
One High Street
Milford, Conn.

Attn:

Quotation No.:

Parameter	No. Samples	Unit Fee	Frequency	Total Fee
Volatile Solids	(2)	10	1	$890
Water Content	"	10		+
Oil and Grease	"	25		TAX
Mercury	"	25		
Lead	"	25		
Zinc	"	25		
Arsenic	"	25		
Cadmium	"	25		
Chromium	"	25		
Copper	"	25		
Nickel	"	25		
PCB's	"	150		
Grain Size Analysis	"	50		

LETTER OF TRANSMITTAL

ENVIRONMENTAL LABORATORIES INCORPORATED

ONE COLUMBUS PLAZA
NEW HAVEN, CONN. 06510
203.789-1266

• Conn. Cert. #PH-0450

• Testing & Analysis
• Studies & Reports
• Process Design
• Research & Development

A SUBSIDIARY OF

FLAHERTY GIAVARA ASSOCIATES, P.C.

ENVIRONMENTAL DESIGN CONSULTANTS

DATE	PROJECT NO
3/15/85	85-719-10

TO: Mr. Allen Barrien
Town of Milford
One High St.
Milford, CT 06460

REF: Sediment Analyses

GENTLEMEN:

WE ARE SENDING YOU ☒ Attached ☐ Under separate cover via ..... the following items:

☒ Test Reports ☐ Proposal ☐ Quotation ☐ Samples ☐ Copy of .....

☐ _____

COPIES	DATE	NO.	DESCRIPTION
1	3/13/85		Test Results - Your Sample ID No: Samples A & B

THESE ARE TRANSMITTED as checked below:

☐ As requested
☒ For your use
☐ For approval
☐ For review and comment
☐ Returned after loan to us
☐ _____

REMARKS: _____

BY TO _____

SIGNED: _____

If enclosures are not as noted kindly notify us at once.

ENVIRONMENTAL
LABORATORIES
INCORPORATED

ONE COLUMBUS PLAZA
NEW HAVEN, CT 06510
(203) 789-1260

S. GIAVARA, P.E.
President

HUGH C. FLAHERTY, P.E.
Secretary Treasurer

- Organic/Inorganic Testing & Analysis
- Studies & Reports
- Process Design
- Research & Development
- Conn. Cert. #PH-0450

A SUBSIDIARY OF

FLAHERTY
GIAVARA
ASSOCIATES, INC.

ENVIRONMENTAL
DESIGN
CONSULTANTS

ONE COLUMBUS PLAZA
NEW HAVEN, CT 06510
(203) 789-1260

Town of Milford
One High Street
Milford, CT 06460
Attn: Mr. Allen Barrien

ELI No.: 85-719-10
Date:

Sediment Analysis

ELI Sample No's:	Sample Type:	Client I.D.
85-1514	Sediment	Sample A
85-1515	"	Sample B

Collected By: Client
Date Received: 3/1/85

RESULTS OF ANALYSIS

Parameter	Concentration 1514	1515	
Volatile Solids	5.19	3.48	%
Water Content	36.32	31.34	%
Oil and Grease	<0.5	<0.5	%
Metals:			
Arsenic	<0.10	<0.10	mg/kg
Mercury	0.24	0.29	mg/kg
Lead	31.4	42.7	mg/kg
Zinc	64.0	47.6	mg/kg
Cadmium	<2.00	<2.00	mg/kg
Copper	13.3	23.3	mg/kg
Nickel	56.8	37.9	mg/kg
PCB's	ND<1.0	ND<1.0	ppb

ND = None Detected

REPORT PREPARED BY:
Nancy R. Ballou,
Chemist

REPORT CERTIFIED BY:

David C. Barris,
Laboratory Director

Analysis
Studies & Reports
Process Design
Research & Development
Conn. Cert. #PH-0458

INCORPORATED
158 BULL HILL LANE
WEST HAVEN CT 06516
(203) 934-1500

SIEVE ANALYSIS

DATE RECIEVED _____

SOIL SAMPLE 85-1514

LOCATION _____

BORING NO. _____ SAMPLE NO. _____

SAMPLE DEPTH _____

SPECIFIC GRAVITY, G_s, _____

DATE COMPLETED 3/6/85

SOIL SAMPLE WEIGHT

CONTAINER NO. _____

WT. CONTAINER + DRY SOIL IN g _____

WT. CONTAINER IN g _____

WT. DRY SOIL W_s, IN g 118.9

SIEVE NO.	Opening in Inches	WT. SOIL RETAINED IN g	PERCENT RETAINED	CUMULATIVE PERCENT RETAINED	PERCENT FINER
	0.50	0.00			
	0.25	10.6			
	0.0787	26.8			
	0.0165	31.0			
	0.0059	18.3			
	0.0029	6.1			
	<0.0029	26.1			

REMARKS:

David C Barris
ANALYST

Organic/Inorganic Testing & Analysis
Studies & Reports
Process Design
Research & Development
Conn. Cert. #PH-0450

LABORATORIES INCORPORATED
158 BULL HILL LANE
WEST HAVEN CT 06516
(203) 934-[illegible]

SIEVE ANALYSIS

DATE RECIEVED _____

DATE COMPLETED 3/6/85

SOIL SAMPLE 85-1515

SOIL SAMPLE WEIGHT

CONTAINER NO. _____

WT. CONTAINER + DRY SOIL IN g _____

LOCATION _____

BORING NO. _____ SAMPLE NO. _____

WT. CONTAINER IN g _____

SAMPLE DEPTH _____

WT. DRY SOIL W_s, IN g _____

SPECIFIC GRAVITY, G_s, _____

SIEVE NO.	Opening in Inches	WT. SOIL RETAINED IN g	PERCENT RETAINED	CUMULATIVE PERCENT RETAINED	PERCENT FINER
	0.50	0.0			
	0.25	14.8			
	0.0787	31.7			
	0.0165	37.5			
	0.0059	38.8			
	0.0029	23.6			
	<0.0029	35.0			

REMARKS:

[illegible]
ANALYST

ENVIRONMENTAL
LABORATORIES
INCORPORATED

ONE COLUMBUS PLAZA
NEW HAVEN CONN 06510
(203) 789-1266

S GIAVARA P.E., President
HUGH C FLAHERTY P.E., Secretary/Treasurer

- Testing & Analysis
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DESIGN
CONSULTANTS

ONE COLUMBUS PLAZA
NEW HAVEN CONN 06510
(203) 789-1266

Bulk Sediment Analysis
Small Boat Launching R[illegible]
Fowler Memorial Field
City of Milford
Milford, Connecticut

ELI No. 80 655 10

Date of Report: December 15, 1980

ELI Sample No.: 80-689 (Site "A")
80-690 (Site "B")

Date Received: December 2, 1980

Source: Wepawaug River

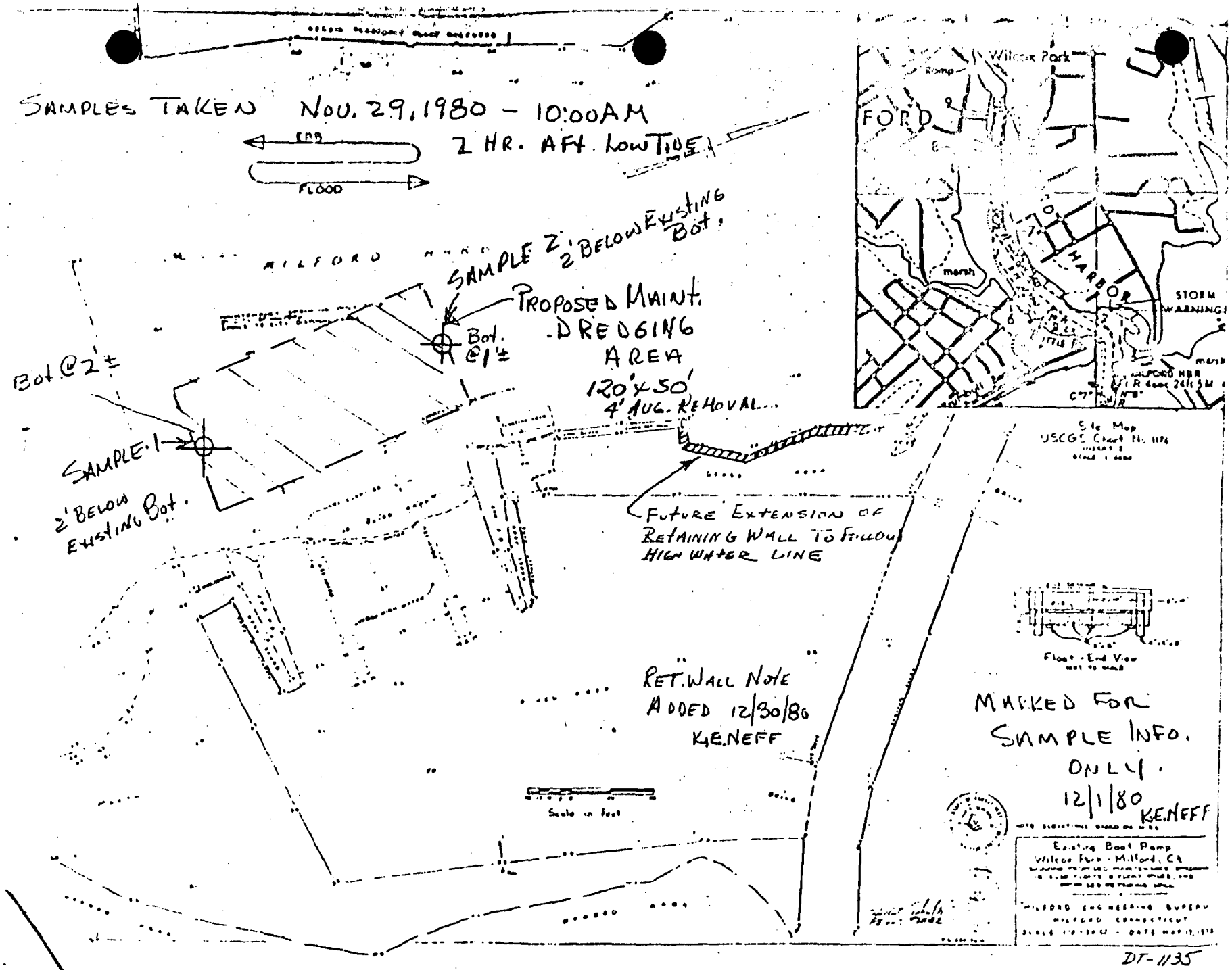
Sample Type: Grab

Collected By: Client

RESULTS OF ANALYSIS - (CHEMICAL)

Parameter	Concentration - Site "A"	Concentration - Site "B""
Mercury	N.D.*	N.D.*
Lead	0.014%	0.015%
Zinc	0.03%	0.03%
Arsenic	0.0002%	0.0003%
Cadmium	0.0003%	0.00025%
Total Chromium	0.007%	0.0035%
Copper	0.023%	0.014%
Nickel	0.004%	0.002%
Vanadium	0.004%	0.00[illegible]
PCB's	N.D.**	N.D.**
Oil & Grease	0.35%	0.49[illegible]
Total Solids	43.6%	58.[illegible]

*None Detected (< 0.0001%)
**None Detected (< 1 PPB)


SAMPLES TAKEN NOV. 29, 1980 - 10:00AM
2 HR. AFT. LOW TIDE
EBB
FLOOD
MILFORD HARBOR
SAMPLE 2
2' BELOW EXISTING BOT.
PROPOSED MAINT. DREDGING AREA
120'x50'
4' AVG. REMOVAL
Bot. @1'±
Bot @2'±
SAMPLE 1
2' BELOW EXISTING BOT.
FUTURE EXTENSION OF RETAINING WALL TO FOLLOW HIGH WATER LINE
RET. WALL NOTE ADDED 12/30/80 K.E. NEFF
Scale in Feet
Wilcox Park
Ramp
FORD
marsh
HARBOR
STORM WARNING
Site Map
USCGS Chart No. 1116
Float - End View
MARKED FOR SAMPLE INFO. ONLY.
12/1/80 K.E. NEFF
Existing Boat Ramp
Wilcox Park - Milford, Ct.
MILFORD ENGINEERING BUREAU
MILFORD CONNECTICUT

DT-1135

1 High Street
Milford, CT 06460
March 12, 1985

Mrs. Margo Walter
Project Manager - Milford Harbor
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA

Dear Mrs. Walter,

The bulk sample analysis for Milford Harbor (CT) will be sent to you directly from the analyzing laboratory - Environmental Laboratory, Inc. of West Haven, CT. The purpose of this letter (3rd supplement sheet to the permit application) is to provide: 1.) a chart of the sample sites 3B of 4 sheets 2.) a description of the sample technique and conditions found.

The core samples were obtained using 10' lengths of thin-wall steel conduit. They were driven into the sample areas using a local contractor's pile-driving equipment with a 2,400 pound drop hammer. The driven tubes were extracted using a lift cable and sling from the top of the tower and lowered on deck where they were identified for future core extraction. After the 5 samples were obtained at the 2 locations the tubes were taken ashore and a plug ram pressed through each tube to remove the sediment that was contained in each conduit. The sediments from both sites, 3 from site B and 2 from site A were mixed per the written instructions and placed in two labeled containers and transported to the laboratory for analysis.

The 3 samples taken from site B (compensating anchorage) were driven to a depth of 7½', 8', and 9' respectively and no major resistance was found at the 3 identified locations.

The 2 samples attempted from site A (head of the harbor) provided a dramatically different result. The northernmost sample area provided no material. After 5 attempts to provide a core, that site was abandoned. The drop hammer (2,400 pounds) was completely supported by the mentioned tube and penetration was minimal - 3" to 6" maximum. A physical examination of that site at low tide with a shovel showed a bank of loose stone 3/4" to 5" in diameter with an overlayer of mud approximately ½" thick, a hole approximately 1½' deep was dug by hand and was gravel throughout the dug area.

Approximately 1 year ago a clamshell crane dug a hole approximately 10' deep and the material (gravel) was consistent throughout the entire test hole. No clay or mud was found except a minimal amount that sifted between the stones. The second sample was taken to a depth of approximately 1½' and then "refusal" was reached at the same depth with 2 attempts. The bottom 6" of gravel in the sample was lost in retreiving the core and was loose gravel 1/4" to 3/4" in diameter. A later site inspection at low water showed approximately 1' of material, a sample of which has been sent to the laboratory for analysis and their description. Then below that 3" to 6" of small gravel mentioned and then large gravel 3" to 12" in size.

Very truly yours,

Allen G. Berrien
Chairman
Milford Harbor Task Force

AGB/fgb

Appendix No. 2

The Head of the Harbor Plan

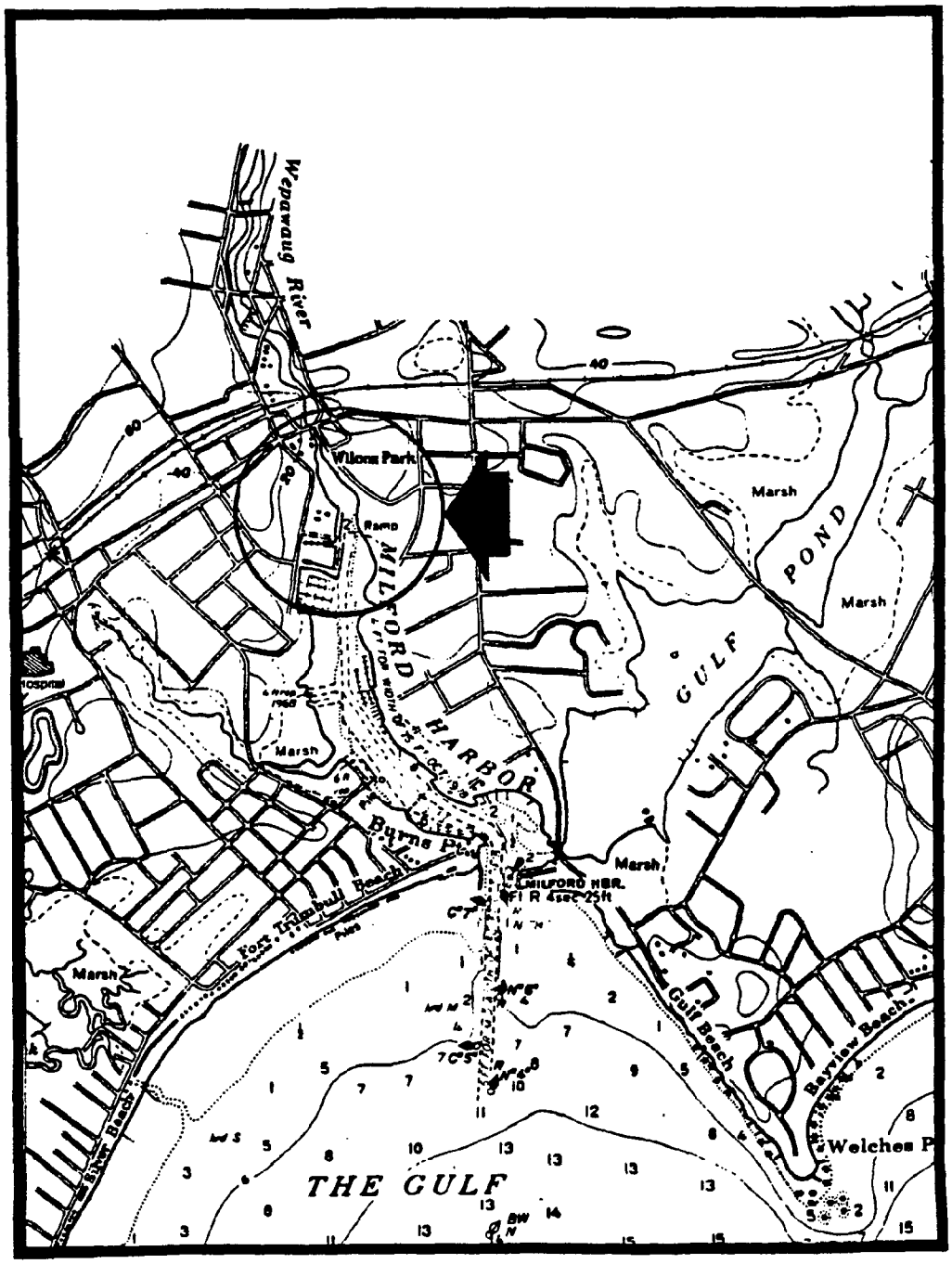
MILFORD COASTAL AREA MANAGEMENT

SPECIAL PROJECT

Head of the Harbor

MILFORD COASTAL AREA MANAGEMENT SPECIAL PROJECT

HEAD of the HARBOR



HEAD OF THE HARBOR PLAN

MILFORD, CONNECTICUT

A "SPECIAL PROJECT" PREPARED AS PART OF

COASTAL AREA MANAGEMENT PLANNING

RAYMOND, PARISH, PINE & WEINER, INC.

REVISED DECEMBER 1982

This document was financed in part by a grant through the Office of Coastal Zone Management National Oceanic and Atmospheric Administration of the U.S. Department of Commerce under the Coastal Zone Management Act of 1972 and was prepared in cooperation with the Connecticut Department of Environmental Protection's Coastal Area Management Program.

CITY OF MILFORD

City Staff

Wade E. Pierce, City Planner
Peter W. Crabtree, Assistant City Planner

Task Force Members

Grace Carroll, Chairperson, Conservation Commission
Mead Batchelor, Harbor Commission
Edmond Colangelo, Flood, Shore and Erosion Control Board
James Mallico, Parks and Recreation Commission
John Morris, Planning and Zoning Board
Kenneth Neff, Harbor Commission
Joseph Sastre, Borough of Woodmont
Lillian Wilde, Planning and Zoning Board

RAYMOND, PARISH, PINE & WEINER, INC. - Planning Consultants

In Association With:

Daniel Shuster, Planning Advisor
Olko Engineering, Marine Engineers

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III	POLICIES FOR THE HARBOR	17
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MAPS

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PHOTOS AND EXHIBITS

I BACKGROUND AND PURPOSE

The narrow channel where Milford Harbor meets the Wepawaug River is an area of great significance to Milford's past and unrealized potential in its present. The "head of the harbor" gives a special character to Milford and offers opportunities for the future which cannot be duplicated elsewhere.

Recently, this area has been the subject of study by three different groups - the Milford Coastal Task Force, the Milford Harbor Commission and the Milford Center Task Force. These three groups are in basic agreement as to the potential of the harbor and the general policies for its use and development. Many questions remain, however, as to specific development potential, use of key land parcels, design of certain facilities, staging, costs and possible funding sources.

The purpose of this study is to develop a comprehensive plan for the Head of the Harbor which will provide direction to the City and other interested bodies as they pursue a detailed development program for the harbor.

II SURVEY AND RECONNAISSANCE

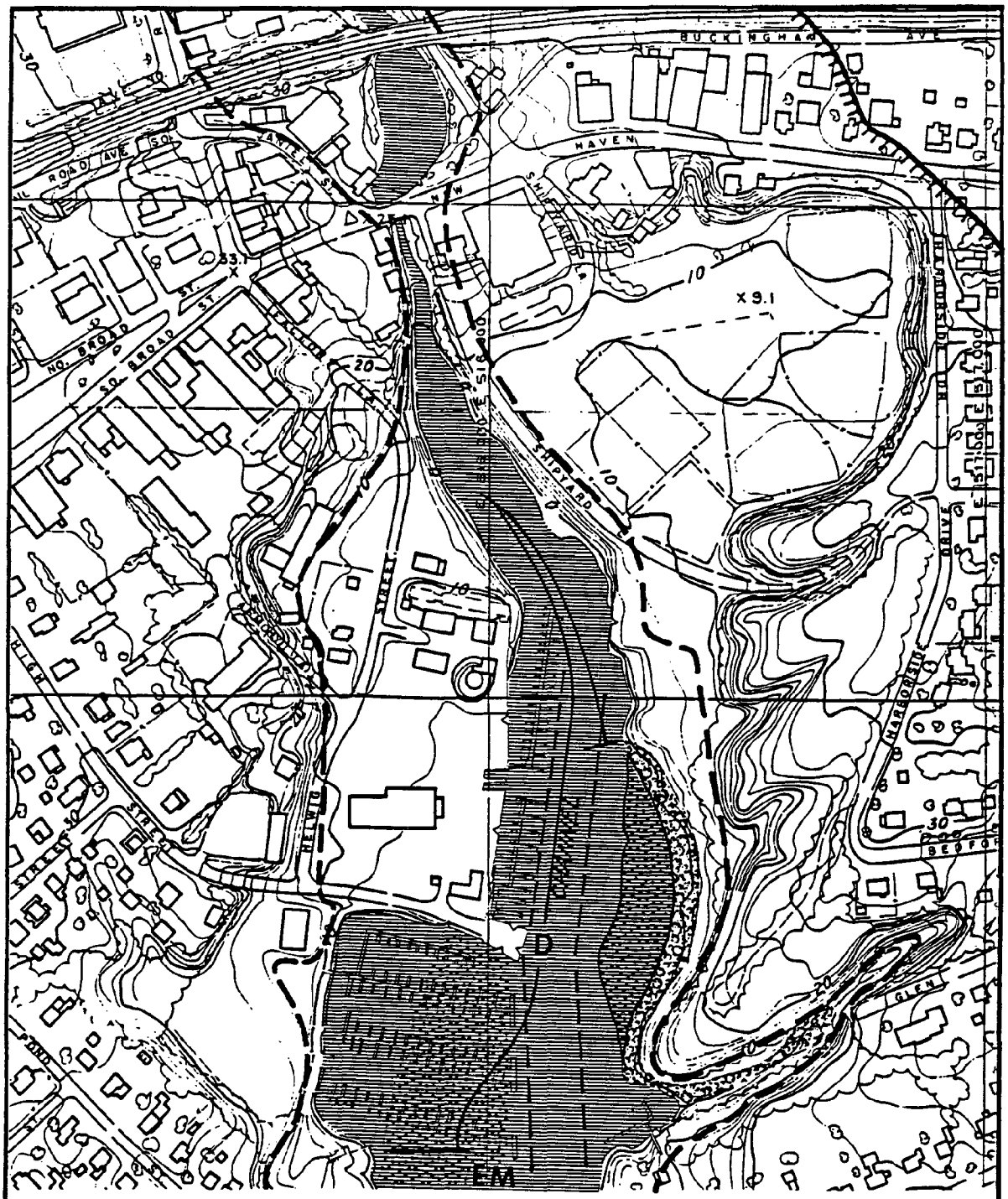
Prior to preparing plans and recommendations for the Head of the Harbor, a variety of data related to the use and physical conditions of the harbor was gathered and analyzed. While particular emphasis was placed on Fowler Field/Wilcox Park and the sewage treatment plant site, the entire area on both sides of the harbor from New Haven Avenue to the City Dock was examined since the interrelationship between water-related uses in this constricted area is important.

Basic Data

Maps were prepared showing property lines, ownership, existing buildings, topography and existing land use to serve as a basis for planning and management recommendations. Significant physical features such as the channel location, tidal marshes, bulkheads, boat ramp, athletic facilities, wooded areas, etc. were also noted and mapped. (See Reconnaissance Map.)

Coastal Resources

Milford Center, Harbor and the entire Wilcox Park/Fowler Field property are within the Coastal Area Boundary. The coastal



MILFORD COASTAL AREA MANAGEMENT SPECIAL PROJECT

HEAD of the HARBOR

COASTAL RESOURCES

- Coastal Boundary
- Coastal Flood Hazard Area
- Shorelands
- D Developed Shorefront
- Water
- Regulated Tidal Wetlands
- Intertidal Flats
- EM Estuarine Embayments
- Additional Intertidal Flats noted by field observation.

Source: 1979 CAM, DEP Map

resources in this area involve the Coastal Flood Hazard Area which includes the Milford Marina, sewage treatment plant, and houses on the west side of Helwig Street on the west side of the harbor. On the east side of the harbor, the Coastal Flood Hazard Area is not as broad but includes Shipyard Lane and most of the public boat launch parking lot. The Flood Hazard Area narrows to a depth of approximately 50 feet at the southernmost tip of Wilcox Park and follows the banks of the brook in the vicinity of Glen Street.

Regulated tidal wetlands follow a similar pattern along the brook and the eastern banks of the harbor up to a point just south of the boat ramp. The remaining harbor banks to the north and on the west of the harbor are classified as Developed Shorefront. The harbor, itself, is an Estuarine Embayment and contains intertidal flats on the west side of the channel south of the Municipal Dock. Intertidal flats are also apparent on the east side of the harbor from the southern tip of Wilcox Park to a point south of the public boat launch.

New dredging and filling in areas of intertidal flats and tidal wetlands are generally inconsistent with coastal policies. However, where intertidal flats occur in urban port areas and contiguous to developed shorefronts, certain activities may be consistent with coastal policies under special conditions. [1]

[1] Coastal Policies and Use Guidelines: II-69 and II-70.

It should be noted that all structures and fill in coastal waters are regulated under the DEP structure permit program (CGS 25-7b); and all new dredging in coastal waters is regulated under DEP dredging permit program (CGS 25-10 to 18).

Marine Conditions and Weather Factors

The following factors affect the use, maintenance and development of the harbor and adjacent waterfront property.

Winds

The winds at Milford Harbor vary to some extent with the seasons. During summer, the southerly winds prevail, particularly from the southwest. In contrast, during winter, the northwesterly winds prevail. However, the winds do blow from all directions during both seasons, but generally easterly winds are rather rare, especially during the winter.

The winds are significant in terms of boat slip layout, and general navigation with a preference to be aligned with the winds. The northwesterly winds during winter indicate that ice floes would generally be pushed towards the east shore, tending to keep the channelway and shores on the westerly side free of

ice floes. The summer winds from the south are somewhat disadvantageous in that they are in alignment with Milford Harbor and considering the available fetch, with strong winds, a wave chop can develop at the northerly portions of the Harbor.

Occasionally, Milford Harbor is subjected to somewhat unusual wind conditions. For example, about three years ago, during the winter, a westerly wind prevailed for approximately one and a half months. This maintained the western portions of the Harbor free of ice, but severe ice floes and debris piled upon the easterly shores, blown by the wind.

Waves

Waves are generated by wind and the height and period of the waves is determined by the wind velocity, its duration and direction. In Milford Harbor, easterly or westerly winds are not serious because the alignment of the Harbor is basically north to south. Accordingly, the prevailing northwesterly winds in winter cause a wave chop at the south end of Milford Harbor with its opening into the Gulf. The situation is made more difficult by the fact that Milford Harbor does have, for its southern half, a northwesterly alignment, thus reinforcing the wind and wave action.

In contrast, during the summer months, with the southerly winds, the wave chop is more severe at the north end of the

harbor. An indication of the possible height of wave is that with storms from the south, or wind velocities of 70 to 80 miles per hour, waves as high as three feet have been observed at the north end of the Harbor. However, the usual wave chop is less than one foot.

Tides and Currents

The average tide in Milford Harbor is about 6.5 feet. This creates tidal currents of about 0.5 to 1.0 knots. Higher tides occur with storms and, in particular, strong currents can develop when an ebb tide is combined with heavy stream flow from the Wepawaug River, discharging at the north end of Milford Harbor, during heavy rain storms. The currents can then exceed ten knots. In fact, it is reported that at the extreme north end, where the river flows under New Haven Avenue bridge, the velocity has been about 15 knots.

It is understood that studies made of the 100-year flood levels at Milford Harbor indicate that the 100-year storm still water surge, inside Milford Harbor, is at approximately elevation +10.6 feet NGVD datum (approximately Mean Sea Level). Accordingly, to be eligible for flood insurance, new structures located inside the harbor must be constructed above this elevation. Due

to the sheltered harbor entrance, wave action is not superimposed on top of the 10.6 ft. still water storm level. However, at the exposed Harbor entrance at Burns Point, the 100-year storm surge elevation with wave action is elevation +15.0 ft. NGVD.

However, within the memory of residents, the City Dock at the end of High Street on the east bank of the Harbor adjacent to the Milford Boat Works, has not had more than one foot of water above the street.

Ice

During winter and seasonable cold spells, the ice in Milford Harbor is about two feet thick. This creates a problem in that it is of sufficient thickness to pull out friction piles and damage boat hulls.

Consequently, bubble or propeller systems are required to prevent freezeup and, in some cases, it is necessary to periodically chop the ice to prevent it from gripping piles or boats. During the Spring thaw, ice floes can be a problem. There are reports of timber piles being sheared off below the mud line by the ice floes.

The location and concentration of ice floes is largely dependent on the prevailing winds and the tidal-river currents. Considerable ice packs can develop along the shorelines.

Marine Borers

It is understood that marine borers are prevalent in Milford Harbor to a relatively significant degree. Therefore, timber work must be creosoted and/or otherwise protected.

Soil Conditions

In general, Milford Harbor consists of upper sediments of relatively soft organic silts, with some sand layers overlying a glacial till with bedrock outcroppings, particularly at the north end of the harbor.

A relatively severe river runoff during the Spring of 1982 has filled in portions of the channels with a conglomeration of tree trunks, cobbles, boulders, all intermixed with sands and silts. Cleaning out and dredging the filled channelways, particularly at the northerly end of Milford Harbor close to the discharge of the Wepawaug River, will be costly and time consuming.

Based on both master piles and sheet piles driven for the Milford Boat Works, there is an indication that the hard pan and bedrock rise towards the north. This is especially evident at the New Haven Avenue bridge.

Dredging

Dredging of the clogged channelways, particularly at the north end of the harbor, will be difficult because of the debris that was brought down during the floods of the Spring of 1982.

The official depth is eight feet at MLW and it is understood that the channel maintained by the U.S. Army Corps of Engineers stops at about the south end of the existing sewer plant. The Corps has not, however, dredged in this area for about 12 years.

The question of dredge spoil disposal is beyond the scope of this study but, depending on the contaminates, it is quite possible that an offshore dumping ground in Long Island Sound may be used. On the other hand, if the material is relatively sandy in nature, it could be used to develop additional filled land areas.

It is understood that the upstream dams north of Milford Harbor are not maintained and are completely backfilled. Conse-

quently, silt discharging with floods flows uninterruptedly into Milford Harbor, rather than being retained behind the dams in the still waters of the reservoirs.

Navigation

Milford Harbor accommodates a large number of boats in its sheltered waters. Consequently, nagivational controls are required. It is understood that the Town has recently passed a speed ordinance and that there is a need for more buoys and proper marking of the limits of the navigation channel.

The south end of Milford Harbor is a natural, narrow bottleneck for boats entering or leaving, traversing a winding channel out into the Gulf and Long Island Sound. Very little can be done in the way of control without the coordination and cooperation of the Federal Government, in terms of channel maintenance, both in depth and width. The entrance to Milford Harbor is a problem area, but not a limitation on present boating activities.

New Haven Avenue Bridge

The New Haven Avenue bridge is an old stone arch bridge, rather picturesque and founded on bedrock. The narrow width of roadway on the bridge creates some traffic congestion, but it is understood that there are no plans to replace and/or widen this bridge. It will have to be accepted in its present condition.

Immediately south of the bridge, the river flows in a relatively narrow rock ravine which is quite picturesque and is a scenic point. Immediately south of this ravine the river broadens out into the north end of Milford Harbor and presently, during low tide, there are rather extensive areas of cobbles and boulders representing the debris and other matter brought down by the Spring floods of 1982.

The orientation of the river immediately south of the New Haven Avenue bridge must be considered in the layout of any facilities because of its tendency to scour the banks, both on the east and the west sides of the harbor with high velocity river flows during Spring floods.

Boating Activity and Demand

Boating activity in Milford Harbor and the adjacent communities is quite heavy (see photos 1 and 2). The 1982 "Boating Almanac" lists 36 commercial and municipal marinas in the eleven communities from Westport to Guilford with a total of 4,003 slips available. In addition, there are at least eleven private yacht clubs, many moorings in designated anchorages, numerous private docks and public launching ramps.

In Milford Harbor, itself, there are 649 commercial slips listed plus the Milford Yacht Club and private docks. The Harbor Master reports 178 permits for mooring in designated anchorages and the City issued 805 launch permits to Milford residents in 1982. Thus, an estimated 2,000 boats regularly operate out of Milford Harbor. A survey undertaken by the Harbor Commission revealed that nearly 150,000 trips in and out of the harbor were made in 1980 by vessels permanently moored there. (See Exhibit A.)

Despite the heavy level of use, demand for space is great throughout the region. Calls to approximately 25 percent of the listed commercial marinas in the Westport to Guilford area indicated that virtually every one is filled and has a long

waiting list. Rates vary widely based on size, location and facilities at the individual marina. The consensus was that both additional slips and launch facilities would be quickly absorbed if made available. The ultimate limit of boats that can be supported in Milford Harbor is not dictated by demand but, rather, by the number of vessels that can be accommodated in the constricted harbor without undue congestion.

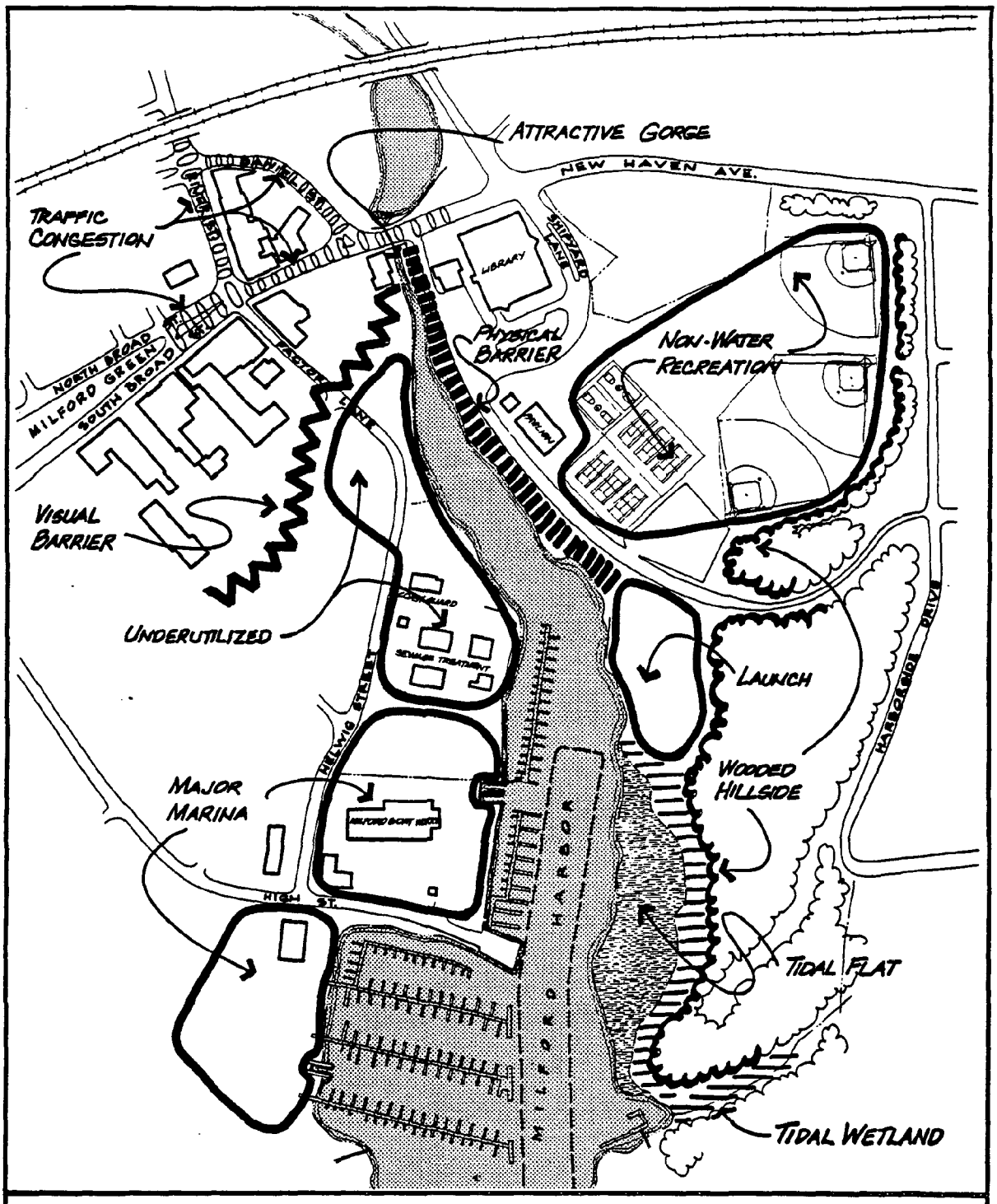
An abandoned proposal for a causeway to Charles Island would have created a great many sheltered moorings. However, transient facilities in Milford Harbor are still limited to a few slips at commercial marinas; there are no public transient docking facilities or moorings. The demand for such space is difficult to document since boaters tend to base destinations on availability of docking space and to avoid harbors where space is scarce. Since most boating guides provide such information, few boats actually come in search of space if it is in limited supply. However, the level of boating activity in Long Island Sound and the general lack of transient facilities suggest that a sheltered harbor with docking and/or mooring space easily accessible to marine supplies, interesting shops, recreation facilities and restaurants would generate substantial use. Milford Harbor has potential to provide all of these attributes and, therefore, to support a transient facility.

Fowler Field/Wilcox Park

The two component parts of this 18 acre, City-owned facility are distinctly different.

Wilcox Park, dedicated to the City in 1901, is a wooded, hilly area which has been maintained in essentially its natural state. The Recreation Commission proposes to expand the existing trail system for use by handicapped persons and to create picnic areas and a rest room facility.

Fowler Field was created in the 1930's by filling a wetland area. It is devoted almost exclusively to athletic facilities - three baseball fields, six tennis courts and two basketball courts. While reported to be well-used and located with respect to its service area, none of the facilities, with the exception of the boat launching area, are water-related. Shipyard Lane, which provides access to the launching area, physically and visually separates the park from the waterfront. Even the new picnic pavilion has no relationship to the water. The lack of a sidewalk along the road and the rough condition of the water's edge discourage pedestrian access to the water. (See photos 3 and 4.)



MILFORD COASTAL AREA MANAGEMENT SPECIAL PROJECT

HEAD of the HARBOR

RECONNAISSANCE

100 0 100 200 300 400'

CITY of MILFORD, CONNECTICUT

Raymond, Parish, Pine & Weiner, Inc.

Planning Consultants Hamden, Connecticut

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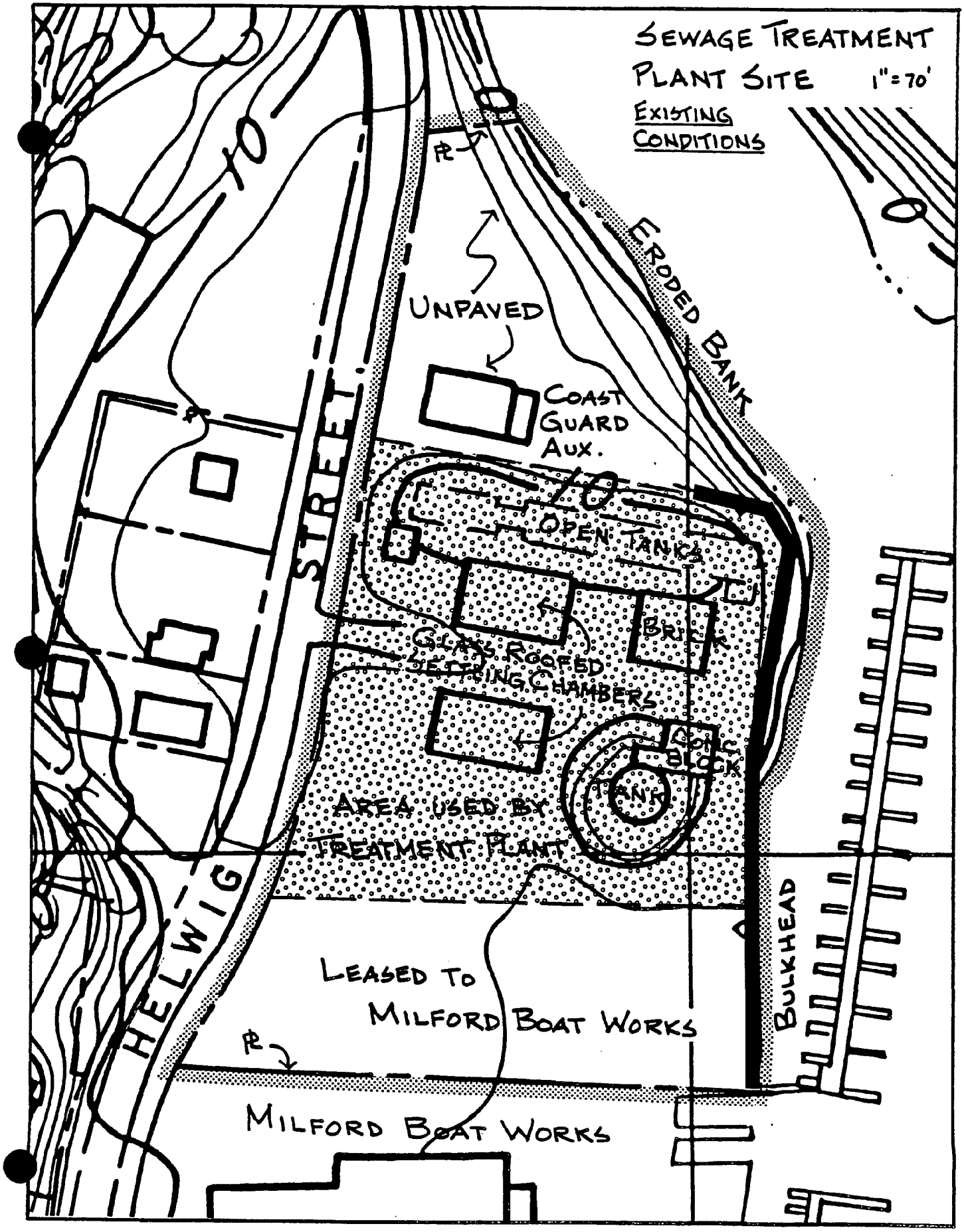
The boat launch is a well-used facility despite several deficiencies. Parking for cars and trailers at peak periods is limited. There are no floats or docks to permit boats to be loaded and launched easily from shore. The ramp paving does not extend far enough into the water so that, at low tide (see photos 5 and 6), trailers drop into pot-holes while launching.

Sewage Treatment Plant

The sewage treatment plant on the west side of the harbor is not a major visual intrusion despite its function. It is well tended, the bulkhead is in relatively good condition and the basic design and layout of the five buildings is pleasing. Its location between active waterfront uses and the business area at Milford Center presents an obstacle to establishing a strong link while the plant is in operation but an opportunity to do so upon its proposed elimination in the next five years. The design of the buildings, particularly the brick structure nearest the water, is such that the potential to adapt them to other compatible uses should be explored prior to a decision to remove them. The adjacent City-owned land, while unimproved and seriously eroded, adds to the importance of this site. (See photo 7 and Map of Treatment Plant.)


SEWAGE TREATMENT
PLANT SITE 1" = 70'
EXISTING
CONDITIONS
ERODED BANK
UNPAVED
COAST
GUARD
AUX.
OPEN TANKS
BRICK
GLASS ROOFED
SETTLING CHAMBERS
Conc. block
TANK
AREA USED BY
TREATMENT PLANT
HELWIG
STREET
LEASED TO
MILFORD BOAT WORKS
MILFORD BOAT WORKS
BULKHEAD

Other Features

A number of other features which affect planning for the Head of the Harbor are worthy of mention.

1. The narrow gorge under New Haven Avenue, at the entrance to the harbor, (see photos 8 and 9) is an unique and attractive feature. It is presently barely visible and quite difficult to reach.
2. The lack of stable shoreline protection above the treatment plant and along Shipyard Lane has resulted in erosion of the banks and accumulation of soil and debris in the waterway (see photos 10 and 11).
3. The City Dock, although minimally equipped and in need of repair, is heavily used as a fishing pier and attracts many pedestrians (see photo 12). In addition, it is an official City landing for commercial use and must be maintained as such to satisfy Federal Harbor requirements as well as maritime business interests.
4. Pedestrian circulation is discouraged by lack of sidewalks and physical barriers to continuous movement along the water's edge.
5. Despite its proximity to Milford Center, the harbor is visually obscured from it by buildings and functionally by lack of pedestrian access and the traffic congestion at the Broad Street/New Haven Avenue intersection.

III POLICIES FOR THE HARBOR

Detailed planning for the harbor is being undertaken in conjunction with the City's Municipal Coastal Program which addresses issues and problems along the City's entire coastal area. Under the guidance of a Coastal Task Force comprised of representatives from various commissions and groups concerned with the coastal zone, various issues were explored and a set of general coastal policies established. Set forth below are, first, those policies developed by the Task Force which relate to Milford Harbor and, second, some specific policies and recommendations developed during the course of the Head of the Harbor study.

General Policies

1. Maintain and enlarge the harbor channel for expanded recreational and commercial boating activities and to provide additional mooring space.

2. Provide additional docking facilities for recreational and commercial boats, either in or near Milford Harbor.

3. Provide additional berthing places for transient boats in the harbor with proximity, if possible, to Milford Center.

4. Develop and enhance the integral relationship between Milford Center and the upper harbor.
5. Maintain and enhance public access to the harbor, waterfront views and scenic pedestrian ways.
6. Establish maintenance program of removing silt from the Wepawaug River to prevent accelerated siltation of the harbor, since it costs less to remove from the shallow river than from the depths of the harbor.

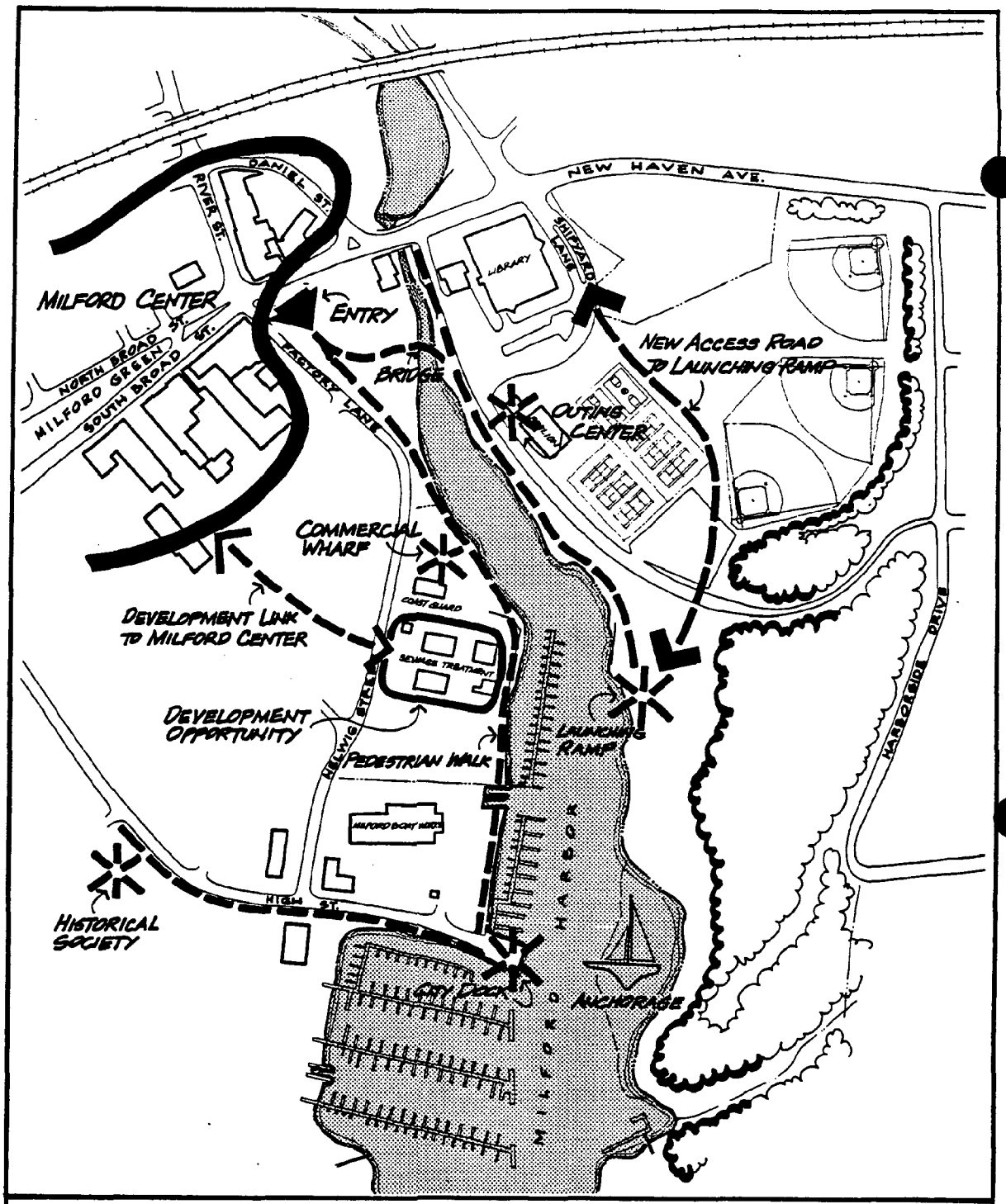
Specific Head of the Harbor Policies

1. Channel improvements and expansion should be planned and carried out as soon as possible to prevent further deterioration of the harbor and to foster new, high priority, waterfront development such as a commercial fishing wharf.
2. Priority for new waterfront facilities should be given to those activities which do not now exist (e.g. commercial fishing) and/or which do not require large land support facilities (e.g. transient docking) and/or which are heavily used (e.g. fishing or boat launching).
3. A major entrance to the waterfront should be developed that provides visibility and identity from Milford Center.
4. Activity centers along the water's edge should be linked by a continuous pedestrian walkway, and barriers to pedestrian access to the water should be removed or overcome.

5. Water's edge protection and improvement projects should be carefully designed to complement the use and character of the adjacent land as well as the waterfront environment. Techniques should be developed to suit each different circumstance.

6. Attractive natural features such as the Wepawaug gorge and the Wilcox Park woods and tidal marsh should be protected and other areas developed to make the Park features more accessible to the public.

7. New activities which attract people to the waterfront should be encouraged.



MILFORD COASTAL AREA MANAGEMENT SPECIAL PROJECT

HEAD of the HARBOR

CONCEPT PLAN

100 0 100 200 300 400

CITY of MILFORD, CONNECTICUT

Raymond, Parish, Pine & Weiner, Inc.
Planning Consultants Hamden, Connecticut

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IV DEVELOPMENT CONCEPTS AND OPTIONS

The development concept for the Head of the Harbor is expressed graphically on the Concept Plan Map. It indicates a variety of waterfront activity centers connected by a pedestrian walkway. Some of the activities already exist - others are new or expanded. All will benefit by being part of a coordinated, active harbor improvement program. Each element is discussed in detail in the next section.

Several options were considered as the Concept Plan was developed (see Development Options Map). The options and the rationale for the decision in each case is discussed below.

1. Public Marina vs. Transient Docking

Limited dredging of the inter-tidal flats adjacent to Wilcox Park, across from the City Dock, offers an opportunity to create additional water area for boats. Such an area could accommodate a new public marina for City residents or docking and anchorage for transient vessels. An alternative would be to develop transient boat accommodations adjacent to the proposed turning basin on the east side of the harbor.

A marina would add to the supply of slips available to Milford residents but has high construction, maintenance and operational costs. In addition, automobile parking is essential

to such a facility and parking in this area, adjacent to the boat launch, is already limited. Therefore, additional parking would have to be created by filling in the harbor or clearing wooded sections of Wilcox Park.

Accommodations for transient vessels also require significant capital expenditures. However, most of these are related to "water's edge" improvements since less extensive docking space and no automobile parking are required. If most space is provided at off-shore moorings, only limited bulkhead would be required. The proximity of this site to Milford Center would make it attractive to boaters and would enhance the opportunities for tourist-related business in the Center. For these reasons, this option was selected. However, as discussed in Chapter V, Harbor Development Plan, the substantial cost versus the relevant benefit makes either alternative a low priority project.

2. Marine Commercial vs. Maritime Center

Upon its termination, the sewage treatment plant site could be adapted for a variety of uses. During concurrent planning for the adjacent Milford Center business area, the policy was established that water-dependent commercial uses should be developed in the harbor area. The Milford Harbor Commission has recommended that the site be used for "additional public water access, water-

related recreation and servicing facilities". Within these guidelines, the development of a portion of the site for marine commercial uses or a center for maritime functions was considered. While there are other locations where marine commercial uses can be developed, separately or in conjunction with other waterfront uses, the opportunity to use public land to create a center to house various maritime educational, cultural, historic and recreational functions is unique. Therefore, a portion of the treatment plant site is designated for such use.

3. Commercial Fish Wharf vs. Boat Launch

The vacant City-owned land north of the sewage treatment plant was evaluated within the same guidelines as described in 2 above. The Harbor Commission has proposed use of the site for a commercial fishing wharf to serve local fishermen. The site would also be suitable for a recreational boat ramp or launching area or short term transient docking.

A commercial wharf offers the opportunity to serve a singular component of the waterfront community, which presently has no real base of operations, and to foster economic activity on the water. The site is well located for connection with vehic-

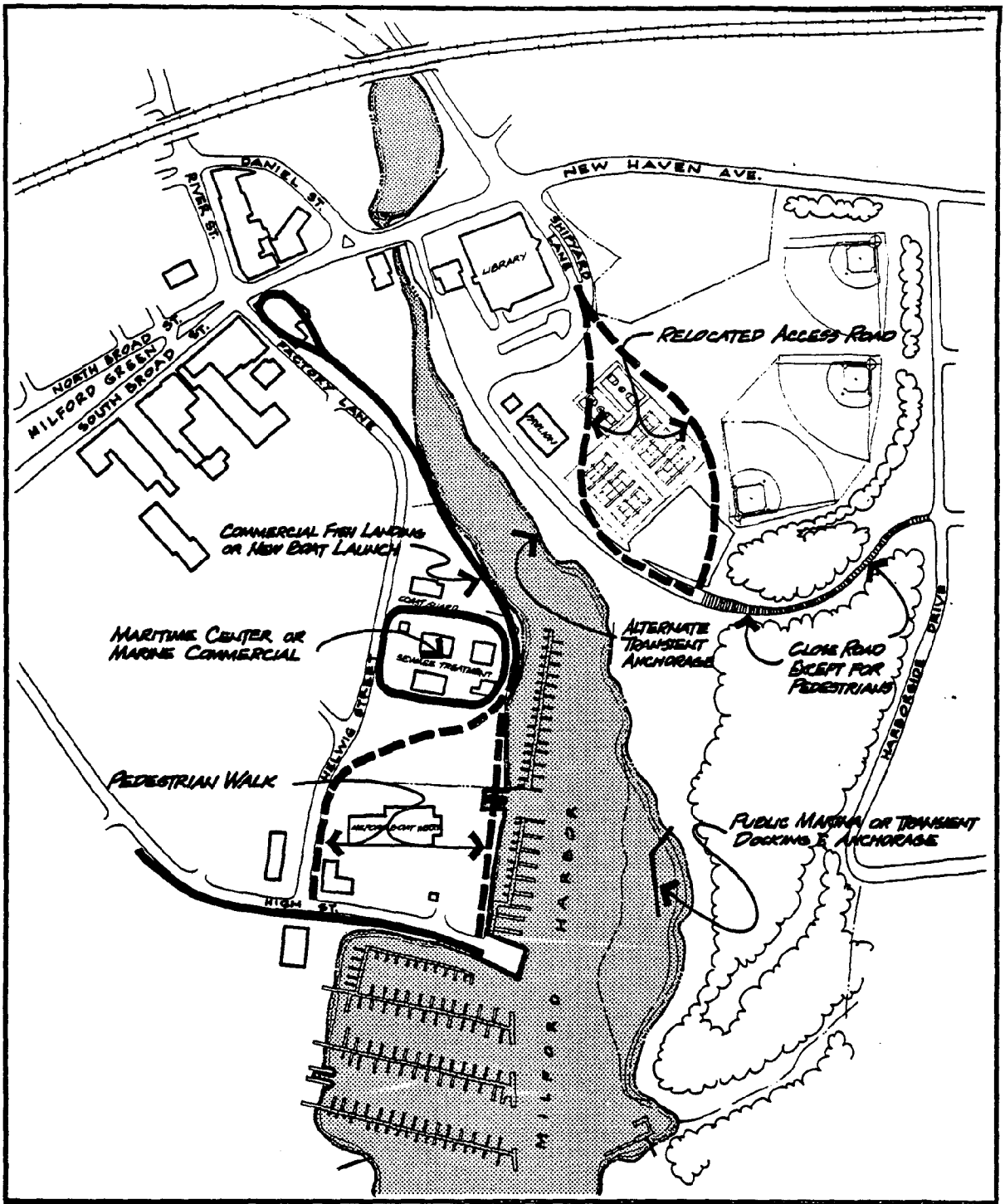
ular transport, would generate activity adjacent to the business area and could even, indirectly, complement activities at the maritime center. A boat launch, while serving an obvious need, would duplicate facilities planned elsewhere and would also require more land for attendant automobile and/or trailer parking and was therefore dropped as an option.

While transient docking might take place at the same floating dock as used for the commercial wharf, such an arrangement creates conflicts between the two user groups. Commercial fishermen must use the dock for various equipment as well as transfer of fish; their vessels are of a different character than those of transient boaters who seek an attractive recreational environment. Therefore, such a combination is not recommended.

4. Roads and Walkways

Various physical obstacles confront both the relocation of Shipyard Lane on the east side of the harbor and the pedestrian walk on the west. In each case, the route which can achieve the objective with the least disruption has been selected.

The exit onto Harborside Drive presently encourages through traffic at excessive speeds which endangers pedestrians using the park. It is suggested that the portion from the boat launch to the top of the hill be closed except to pedestrians.



MILFORD COASTAL AREA MANAGEMENT SPECIAL PROJECT

HEAD of the HARBOR

DEVELOPMENT OPTIONS

100 0 100 200 300 400

CITY of MILFORD, CONNECTICUT

Raymond, Parish, Pine & Weiner, Inc.
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V HARBOR DEVELOPMENT PLAN

The Development Plan for the Head of the Harbor evolved from the basic concept set forth previously and an analysis of the specific details necessary to achieve the concept. Following is a description of the major elements of the plan and the rationale behind each. The entire plan is illustrated on the Site Plan Map.

Fowler Field/Wilcox Park

The plans for this facility are aimed at increasing waterfront access and improving and expanding facilities which attract people to the water while preserving important natural features. Although many of the athletic facilities at Fowler Field are not water-related, they are actively used and bring people to the waterfront vicinity. Furthermore, with the occasional exception of parking, there are no conflicts between the two types of recreational uses; and no additional land based, water-related activities are proposed which space needs would require elimination of any of the existing facilities. The improvements described below should enhance waterfront use. The plan includes the following major elements:

1. Boat Launch:

Expansion of the existing boat launch and related parking is planned just south of the existing ramp by filling part of the inter-tidal flats. This facility receives heavy use and provides access to the water for nearly as many boats as are permanently moored in the harbor. The existing ramp should be improved by expanding the paving into the water for use at low tide and providing boarding docks.

2. Outing Center:

The recently-constructed pavilion adjacent to the Fowler Field tennis courts presents the opportunity to serve as the nucleus for a center for various outdoor events and gatherings on the waterfront. To do so, it is proposed to: (1) relocate Shipyard Lane, as discussed below, so that a direct relationship to the waterfront can be established; (2) provide a music shell so that outdoor concerts can be performed on the waterfront with the pavilion as shelter; (3) create access for boats via the transient dock described below; and (4) supply the necessary facilities (picnic tables, grills, seating, etc.) to accommodate gatherings. Such a facility can attract people to the waterfront who otherwise would not use it.

3. Traffic Flow:

The location of Shipyard Lane presents a distinct physical and visual barrier between all the park facilities and the water's edge. The plan calls for this road to be relocated between the tennis courts and baseball fields. It will be necessary to eliminate (or relocate) one tennis court and rearrange the small parking lot south of the tennis courts, but the resulting layout will considerably enhance the waterfront.

The narrow access road between the Fowler Memorial Building and the harbor is dangerous and should be closed to traffic and dedicated to pedestrian use only.

The large unpaved and unmarked parking area between the ball fields will have direct access from the new road and should be designed as shown to provide more efficient parking.

4. Treatment of the Water's Edge:

The east shore of the harbor has an undefined, unusable edge which has experienced recent erosion. However, it does support certain growth and wildlife and the proposed uses do not require continuous bulkheading. Therefore, it is proposed that the shoreline be stabilized and protected by construction of tiered

"gabions" (see Exhibit C) which will support sufficient growth to serve as a habitat for certain wildlife in an attractive, natural setting while preventing erosion.

5. Transient Docking:

A docking facility for transient vessels is proposed south of the existing boat launching ramp. Such a facility would allow visitors both docking and anchorage in an attractive setting, adjacent to a wooded hillside, yet only a short walk from the businesses in Milford Center.

To create this facility, it would require dredging a portion of the inter-tidal flats to a depth of approximately six feet. Some of the spoils would then be used to provide the fill for expansion of the adjacent boat launch and parking. Since transient boats do not require parking areas for automobiles, little land support area is required, reducing the need to fill and bulkhead the adjacent shoreline. Docking facilities can be provided via floating docks, a permanent "relieving platform" or a combination thereof. Floating docks require continual maintenance but would provide more spaces than those just along the relieving platform. The relieving platform (see Exhibit B) is a means of reducing bulkhead cost and disruption of the waterfront

environment. Since this proposal could be considered to infringe on natural coastal resources, an alternate site is shown on the Site Plan adjacent to the proposed outing center. It would not have the capacity for many boats but it would contribute to the transient space needs.

An additional floating dock for short stops and unloading of transient visitors is planned just north of the existing boat launch. A small shelter at this location would provide cover for fishermen as well.

All this is predicated on obtaining such permits as would be needed from appropriate State and Federal Agencies.

Sewage Treatment Plant Site

The treatment plant occupies part of a nearly three acre City-owned property, all of which must be considered in future plans. The part south of the plant is leased to the adjacent Milford Boat Works; the part to the north is vacant except for a building used by the Coast Guard Auxiliary. The total site has over 600 feet of harbor frontage.

1. Commercial Fishing Wharf:

The vacant land north of the treatment plant is planned for development as a facility which can be used by local commercial fishermen to unload their catch, transfer it to trucks and take

on supplies. New bulkheading will have to be constructed, a floating dock provided, electric service made available, and a small paved parking area developed. Due to reported substantial resistance when driving piles near this location, it is recommended that bulkhead of "cell pile" construction be considered as an alternate to standard "sheet pile" construction. (See Exhibit D.)

2. Maritime Center:

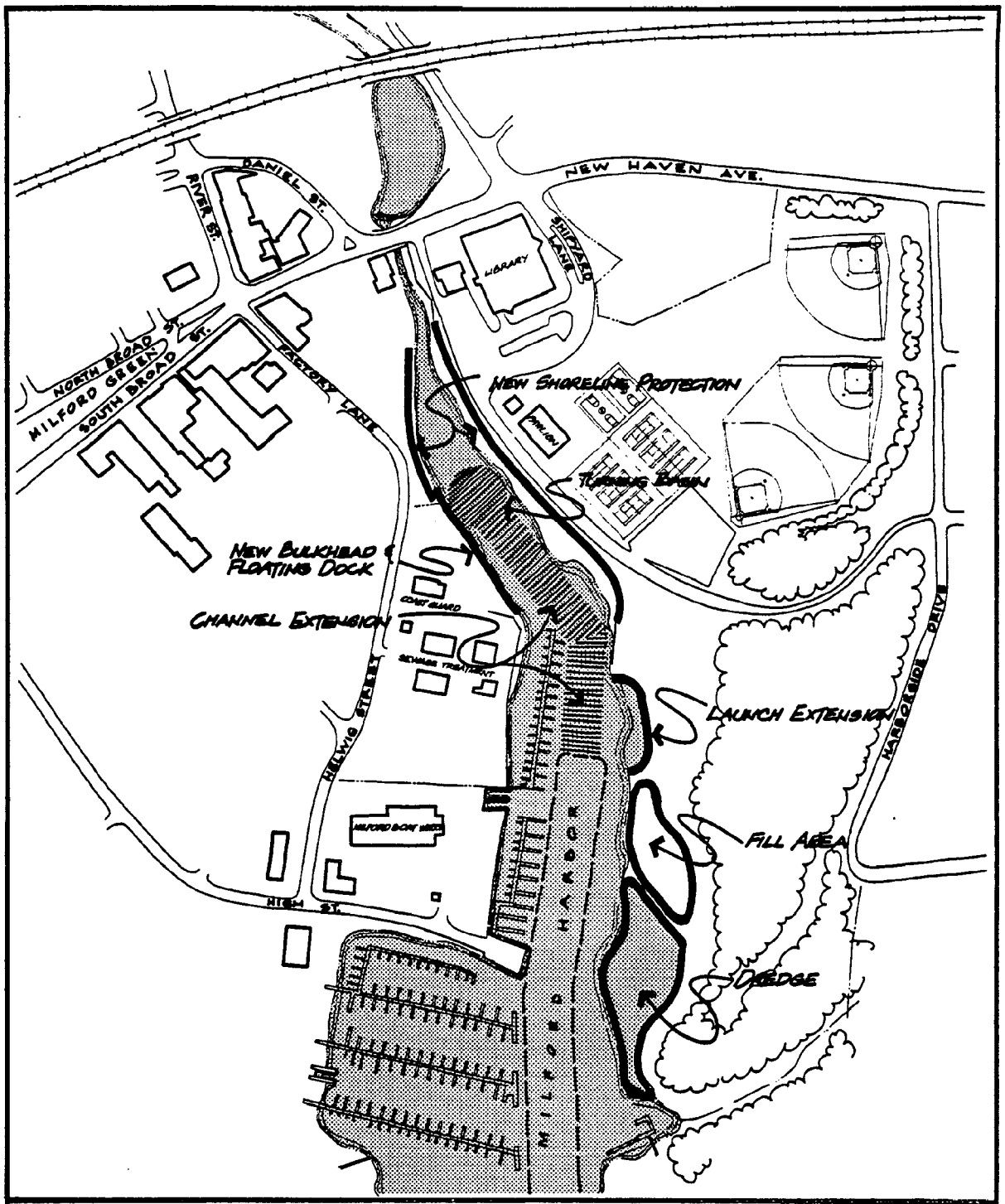
A facility to bring together a variety of maritime-related resources is proposed for the actual plant site. If, at all feasible, the brick structure closest to the water and, perhaps, the two glass roofed structures should be adapted to accommodate a variety of activities by local institutions and organizations. Such uses could include the following: exhibits by both the state and federal aquaculture laboratories; school education programs; exhibits of Milford's maritime history by the Historical Society; programs put on by the Conservation Commission, Harbor Commission and Parks and Recreation Commission; demonstrations and short courses on various past and current marine skills; and establishment of an oyster museum. The location between a commercial fishing wharf and an active marina is an ideal setting as part of a "working waterfront". A similar project has been developed on the site of an abandoned sewage treatment plant in Bellingham, Washington (see Exhibit E).

3. Parking:

In order to serve the maritime center and other existing and expanded uses, some additional parking will be required. The area of the treatment plant closest to the street is appropriate for such use and could supply 40-50 spaces. During the winter months, some or all of this area could be leased for boat storage (as some land is already) or exchanged for certain access rights to the waterfront (as discussed below).

Channel Improvements

The Head of the Harbor has been subject to erosion of its banks and siltation from the Wepawaug River for many years. In order to maintain access to existing marinas and the boat launch, dredging and maintenance of the existing channel is important. However, to capitalize on the potential of this unique area by development of the commercial fishing wharf, outing center and transient docking facilities, it is essential that the channel be extended some 500-600 feet and dredged to an eight foot depth to create an ample turning basin to accommodate commercial fishing vessels as well as pleasure boats. In order to support the commercial fishing wharf, the designated anchorage south of the City Dock should be developed to a depth of six feet.



MILFORD COASTAL AREA MANAGEMENT SPECIAL PROJECT

HEAD of the HARBOR

HARBOR TREATMENT

100 0 100 200 300 400'

CITY of MILFORD, CONNECTICUT

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Pedestrian Walkway System

Walkways linking all major uses are important to the waterfront (see Site Plan). While it is not anticipated that many pedestrians will walk the entire system at one time, the ability to get from one related use to another makes the waterfront more enjoyable and efficient.

The area needed for the basic walk need only be some 20 feet wide - a ten foot walk of boards, paving stones or stone dust,and a ten foot landscaping strip. Design will vary depending on whether the walk is along a bulkhead, a gabion embankment or, in some cases, just the improvement of an existing sidewalk. The sense of continuity and a common theme can be maintained by use of constant details such as benches, light fixtures and directional signs.

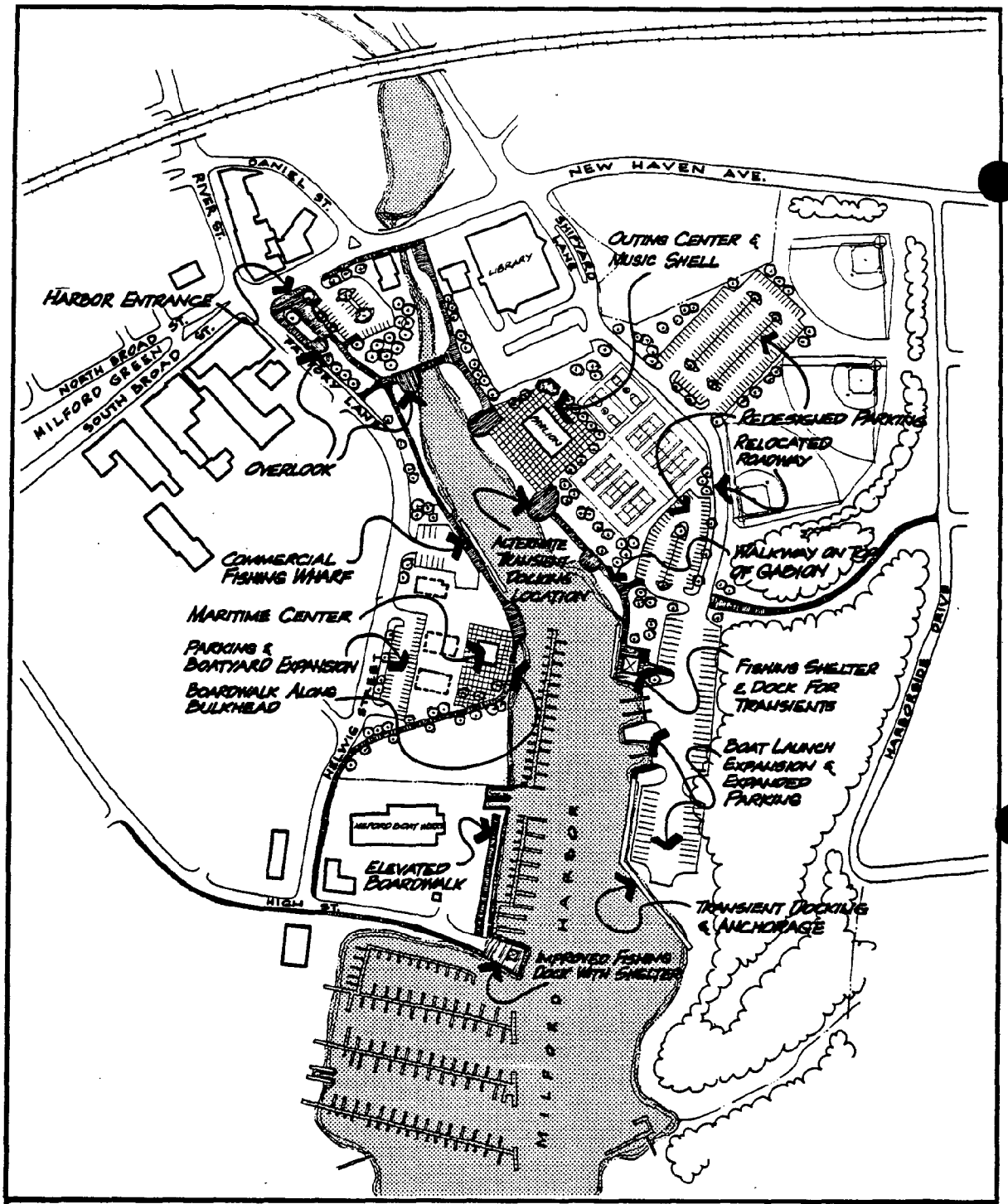
A number of special features are planned as part of the walkway system to suit special circumstances.

1. A park at the southeast corner of the Broad Street/New Haven Avenue intersection should be designed as an entrance to the harbor with flagpoles to attract the eye and "overlooks" to provide a view of the waterfront.

2. As the walkway descends the slope from the business area toward the water an overlook of the narrow gorge under New Haven Avenue should be provided. At this same point, a bridge across the gorge would provide more views and direct, easy access to the new outing center at Fowler Field and the transient docking facilities.

3. Discussion with the owner of Milford Boat Works suggests that it may be possible to arrange for public access along the water's edge in the marina so that the boats may be viewed at close hand. One way to achieve this would be via a raised walkway extending from the City Dock to the boat lift. Although it would only have access from one end (at the City Dock), this walkway would provide a magnificent raised viewing platform of the entire harbor as well as marina activity.

4. The City Dock is heavily used and should be improved for fishermen and strollers alike. More benches and an open-sided shelter would provide comfort and protection from sun and rain.



MILFORD COASTAL AREA MANAGEMENT SPECIAL PROJECT

HEAD of the HARBOR

SITE PLAN

100 0 100 200 300 400'

CITY of MILFORD, CONNECTICUT

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VI STAGING, COSTS, FUNDING SOURCES AND IMPLEMENTATION

Staging

A multi-faceted development program must be broken down into distinguishable components which can be staged, over time, based on available resources, priorities and relationship to other projects. The following activities are set forth in order of priorities and logical staging sequence. Items 1 (Boat Launch Improvements), 4 (Relocation of Shipyard Lane) and 5 (Outing Center) will serve a large number of users at relatively modest cost and are, therefore, quite cost effective. Item 2 (Channel Improvements) is essential to the long term viability of the entire harbor, and Item 3 (Commercial Fishing Wharf) will add a new dimension and economic component to the harbor. Items 6 (Transient Docking) and 7 (Maritime Center) are long term projects which require considerable lead time, extensive design and program development, and substantial funding sources.

It should be emphasized that a successful harbor development program does not require that every one of these projects be accomplished. Each has its own merits and, in most cases, can be undertaken independently. The program should be reviewed periodically as resources, priorities or conditions change to determine if the sequence should be altered, if new projects should be added or existing proposals deleted.

1. Boat Launch Improvements:

Repair of the existing ramp and construction of additional ramp space and parking can immediately serve many current boaters.

2. Channel Improvements:

Maintenance and dredging of the existing channel first, followed by extension of the channel and creation of a turning basin.

3. Commercial Fishing Wharf:

Development of this facility will fulfill an unmet need and add to the diversity of the waterfront. This can be accomplished now and will not interfere with the present operation of the treatment plant.

4. Relocation of Shipyard Lane:

Relocation of this road will improve access to the water and enhance the establishment of the outing center.

5. Outing Center:

Development of picnic facilities adjacent to the water and erection of a music shell will substantially increase use of the waterfront.

6. Transient Docking:

New facilities for transient vessels will enhance the waterfront after the earlier projects are completed.

7. Maritime Center:

Upon abandonment of the treatment plant, this new facility will complement other activities in a diverse waterfront area.

Development of the pedestrian walkway system can be staged to coincide with the above projects as appropriate. It is assumed that water's edge improvements will be undertaken as part of the related project.

Cost Estimates

Cost estimates for the recommended actions depend on final engineering, timing, coordination with other actions and a variety of factors not known at this time. The following estimates are quite preliminary and presented only to suggest the order of magnitude of costs for each project.

1. Boat Launch:

Repair and extend existing launch	$30,000	
Construct new 100' wide launch with all facilities	120,000	
Expanded parking	50,000	
		$200,000

2. Channel Improvements:

Extend existing 8' channel to create turning basin; dredge 18,000 cu. yd.	$225,000	
Dredge existing channel to authorized 8' depth (Lump Sum)	50,000	
		$275,000

3. Commercial Fishing Wharf:

Timber bulkhead with fenders, etc. 250 lin. ft.	$425,000	
Floating dock (10' wide) with gangways, bollards, cleats, etc., 250 lin. ft.	87,500	
Parking and loading area	25,000	
		$537,500

4. Relocation of Shipyard Lane:

New roadway, 650 feet.	$ 65,000	
Adjust parking lot	10,000	
		$ 75,000

5. Outing Center:

Paving, landscaping, lighting, furniture	$100,000	
Music shell	25,000	
		$125,000

6. Transient Dock and Anchorage:

Dredging to 6'; 5,500 cu. yd.	$ 75,000	
Relieving platform with deck, piles, etc.	600,000	
Fill, seed, etc.	20,000	
		$695,000

7. Maritime Center:

Three buildings, 6,400 sq. ft. @ $50/ft.	$320,000	
Miscellaneous	80,000	
		$400,000

8. Walkway System:

At grade walk, 2,800 ft.	$112,000	
Elevated boardwalk	40,000	
Bridge, 8' wide	30,000	
Fishing pier with shelter	75,000	
		$257,000

Subtotal	$2,564,000
Engineering and Contingencies	400,000
Grand Total	$2,964,000

Funding Sources

Funding from many sources is essential to the execution of a multi-faceted program such as that for the Head of the Harbor. Many public funding programs for such activities have recently been reduced or eliminated. However, some may be revived or new sources created for similar purposes.

One such program, the Land and Water Conservation Fund of the Department of Interior, has not been funded in the past two years, but may be funded in FY 1983. If funded, Connecticut would receive $1 million, most of which has already been accounted for, but it appears probable that it will be funded again in FY 1984. These funds would be for land and development for outdoor recreation.

Other federal sources include the Corps of Engineers which offers funds under Section 107 of the 1960 River and Harbor Act for small navigation projects (see Exhibit F). The Harbor Commission is already pursuing this source of action for channel improvements, although these funds cannot be used for the turning basin or other improvements beyond the authorized channel limits.

Funds for similar programs have been received from the Department of Housing and Urban Development (including the Community Development Block Grant program for which the City of Milford now receives funds), the Shoreline Stabilization Fund of the U.S. Soil and Conservation Service, the Environmental Protection Agency and the Department of Transportation for Harbor Improvements. The Department of Transportation program (see Exhibit G) has not been funded in recent years, but it is possible that it may be revived in the future, therefore, the City should be prepared to submit an application at the appropriate time. State bond issues for recreational development have provided funds for waterfront programs. Funds to foster the commercial fishing industry may be available through the Department of Agriculture. Local funds and foundation grants can be used to provide the matching share for state or federal programs or to initiate additional projects.

The City may also wish to pursue financial assistance from foundations and major local industries.

Implementation

Achieving the plan for the Head of the Harbor requires careful coordination of administrative and regulatory measures as

well as physical development programs. While a variety of local bodies will necessarily be involved, one agency should have overall responsibility to insure proper coordination of the total effort.

The one such body with the most specifically focused interest in the harbor, as well as certain Charter designated authority, is the Milford Harbor Commission. While its powers are most specifically related to the water area itself, the Commission is equally concerned with treatment of the water's edge and use of adjacent land. Therefore, it is recommended that the Harbor Commission be designated as the "lead agency" for implementation of the Head of the Harbor plan. In carrying out this task, it should maintain close liaison with the other departments and agencies concerned with harbor use and development without pre-empting any existing statutory or charter provisions.

PHOTOS

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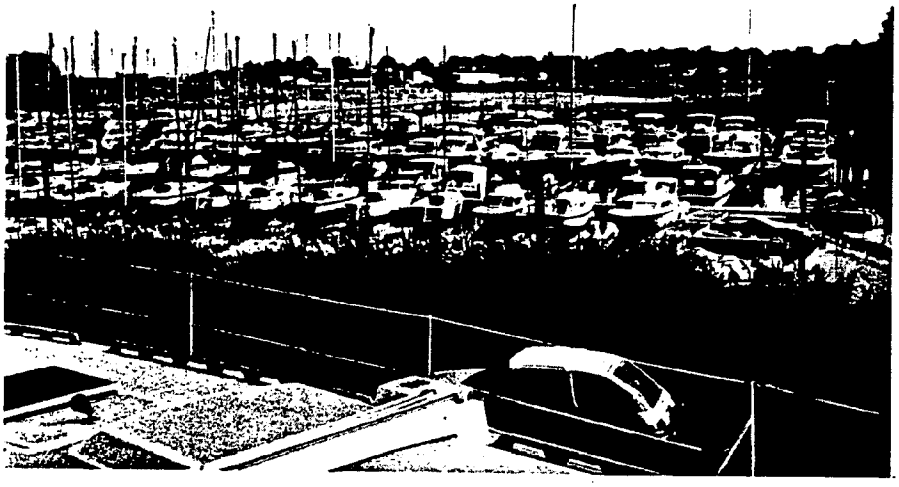

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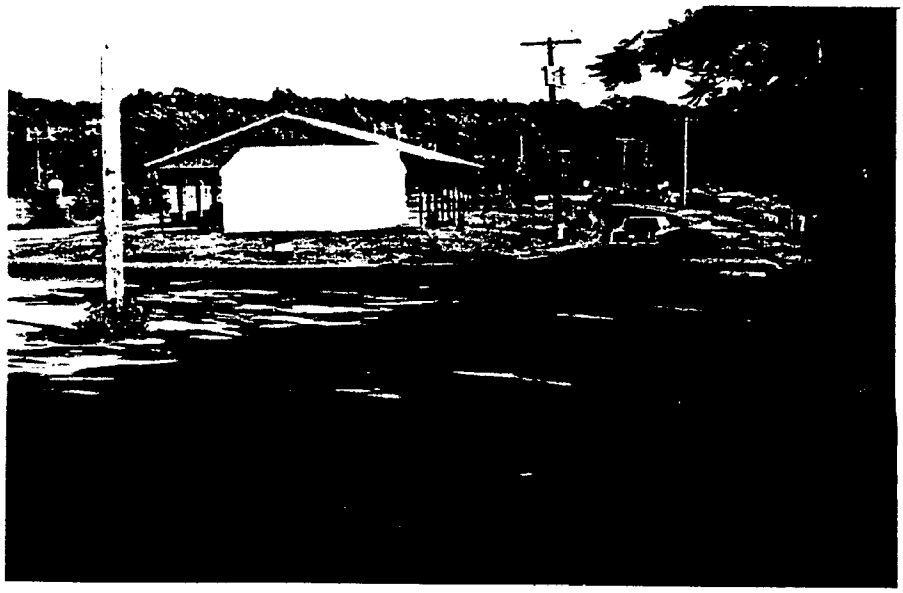

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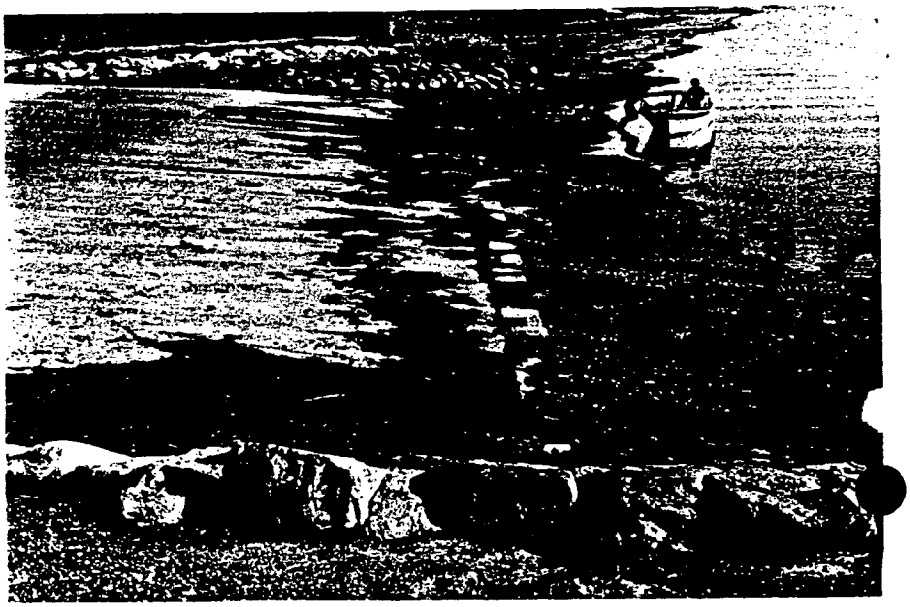

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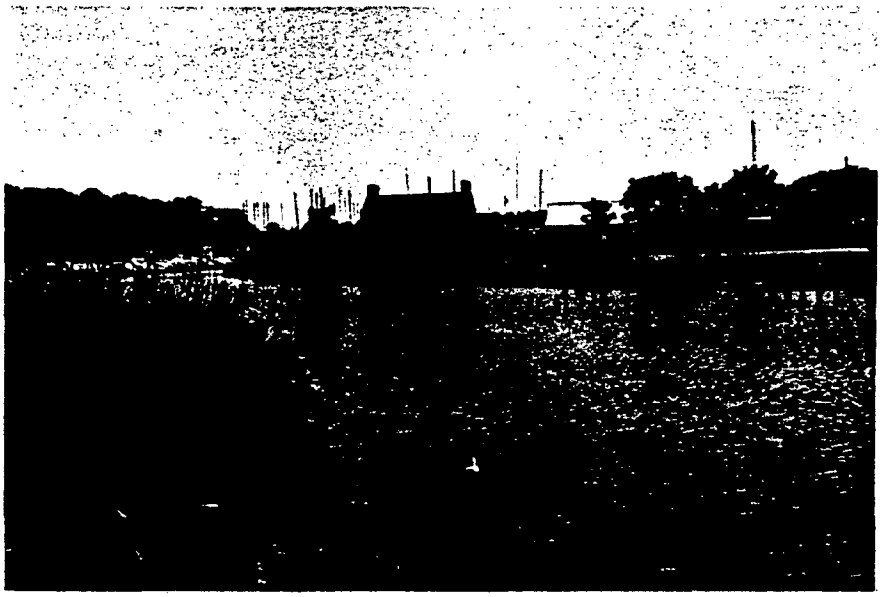

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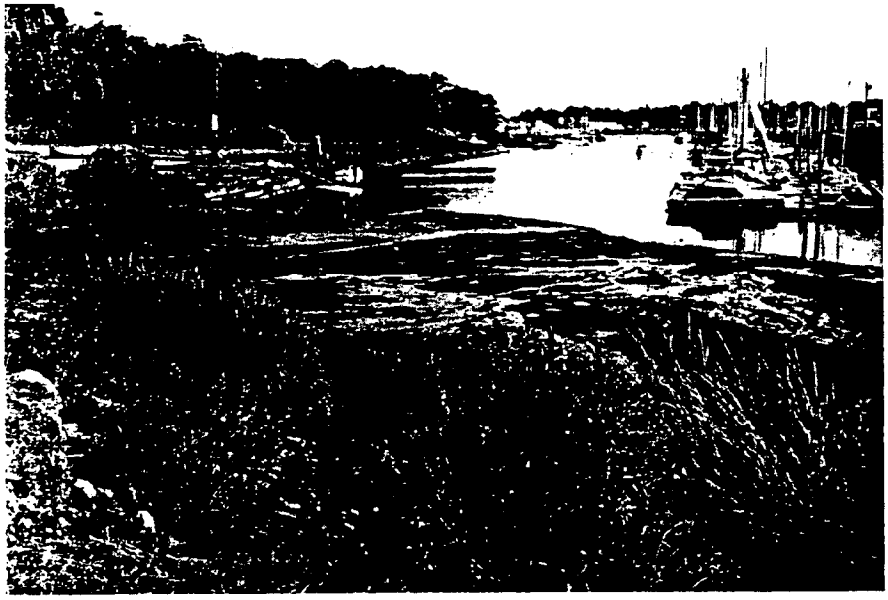


12

EXHIBITS

MILFORD HARBOR DATA

A. Boat Population and Traffic

In 1978 the Corps of Engineers requested we make a survey to determine the number of vessels and particularly the number of "trips" the boats were making in and out of the harbor on an annual basis.

We reported the figures below for 1978 and to update that information we are including the 1980 data to show the relative growth in activity. Your request was to classify the vessels by draft and we responded in that respect for vessels that are permanently moored.

Vessel Clarification By Draft	1978	Annual Trips	1980	Annual Trips
Up to 2'	135	23,400	145	24,000
2 - 3'	181	20,000	220	23,500
3 - 4'	117	12,600	130	14,500
4 - 5'	301	36,100	335	55,000
5 - 6'	128	13,300	135	19,000
6 - 7'	37	5,700	46	9,600
7 - 8'	10	1,200	14	1,800
8 and over	4	380	3	275
	913	112,680	1,028	147,675

NOTE:
The gasoline prices and shortages have affected the traffic patterns as well as boat type and size. Generally there has been a shift to sail from power and a reduction in the number of power boat (large) trips (up to 3' draft).

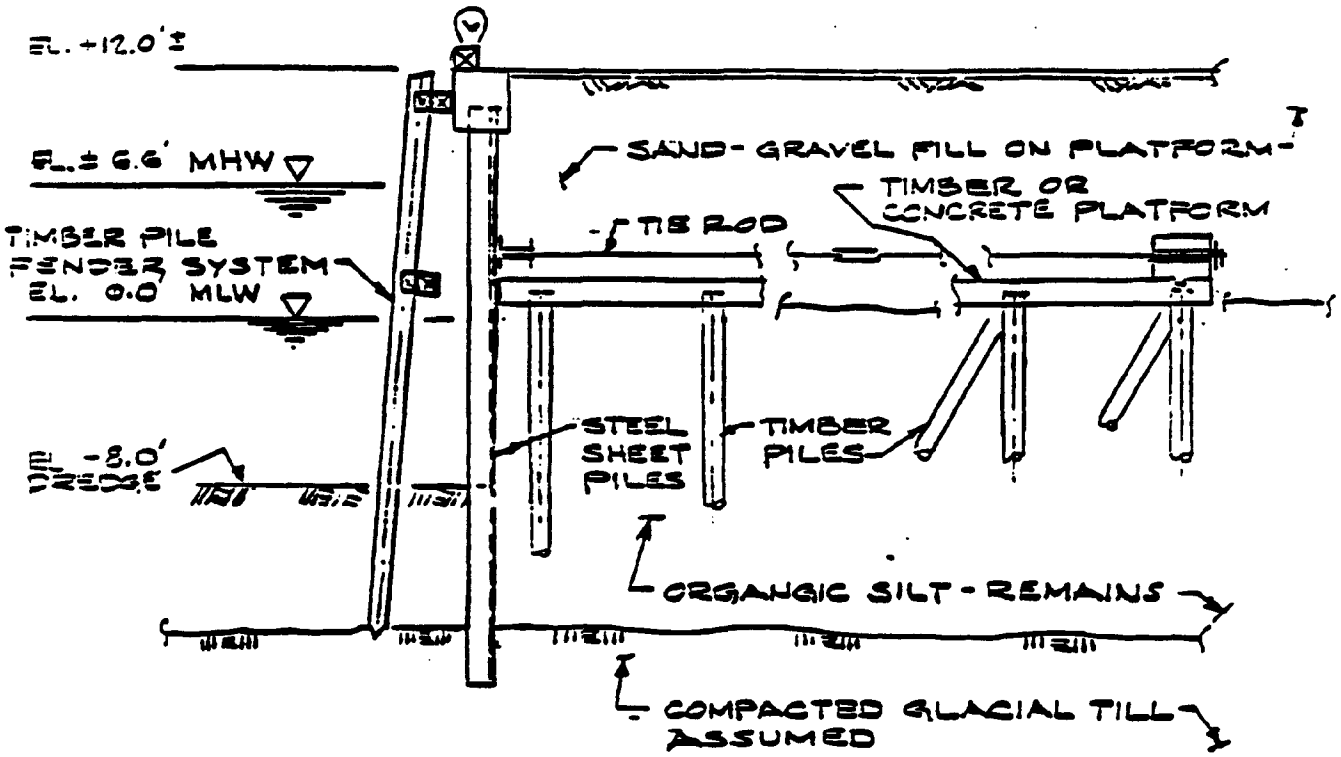
We also experienced a very good weather season in 1980 which greatly added to the number of trips of especially the larger sail boats.

For 1980 the following is a breakdown by type or use:

Pleasure - Sail	580	State and Federal Vessels	8
- Power	391		
Commercial Fishing (all sizes)	30	Municipal - Fire	1
		- Police	2
		- Coast Guard Auxiliary	1
Other work boats & marine equipment	15		

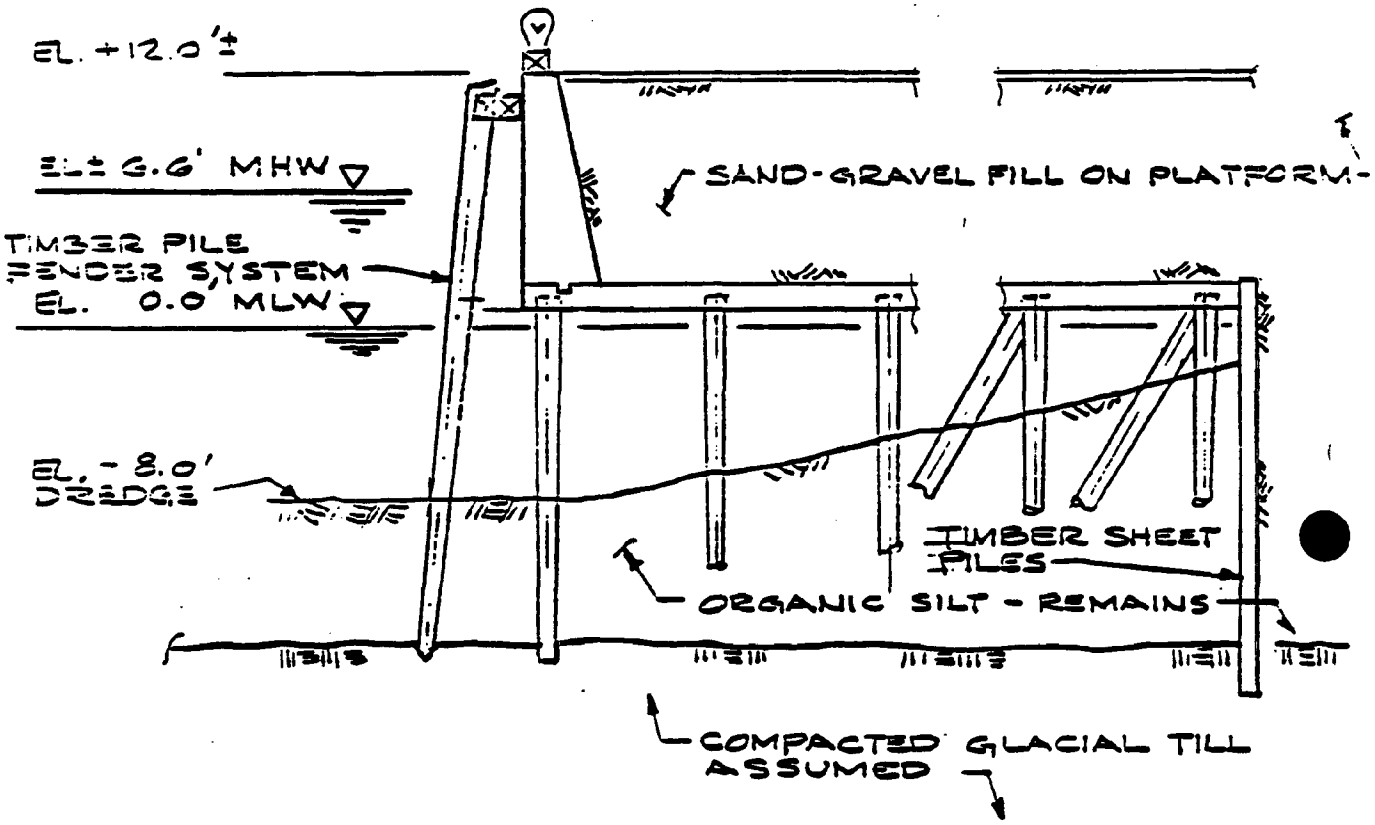
Exhibit A

SEPT. 7, 1982

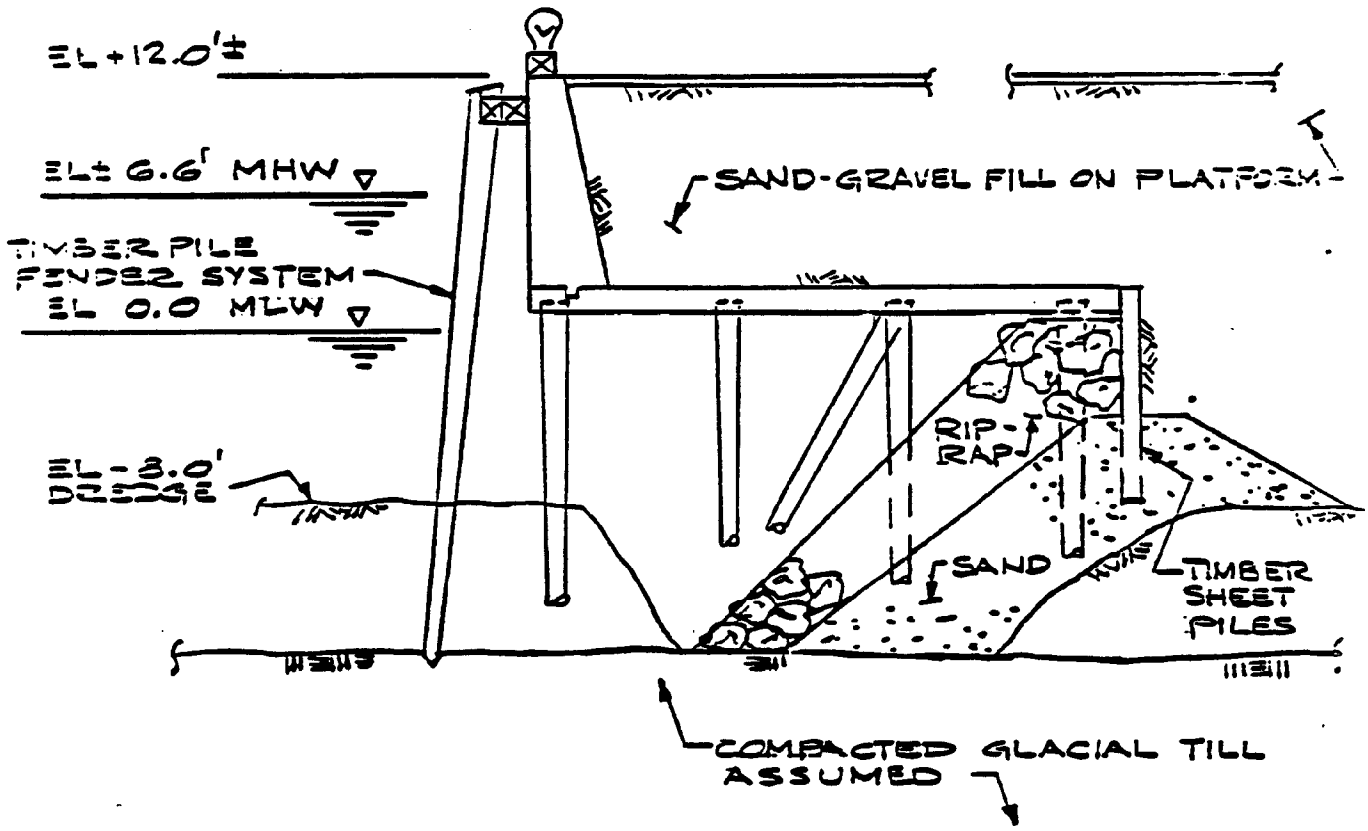


RELIEVING PLATFORM - SHEET PILES IN FRONT
CROSS SECTION AT SWAMP COVE
SOUTHEAST AREA

SEPT. 7, 1982

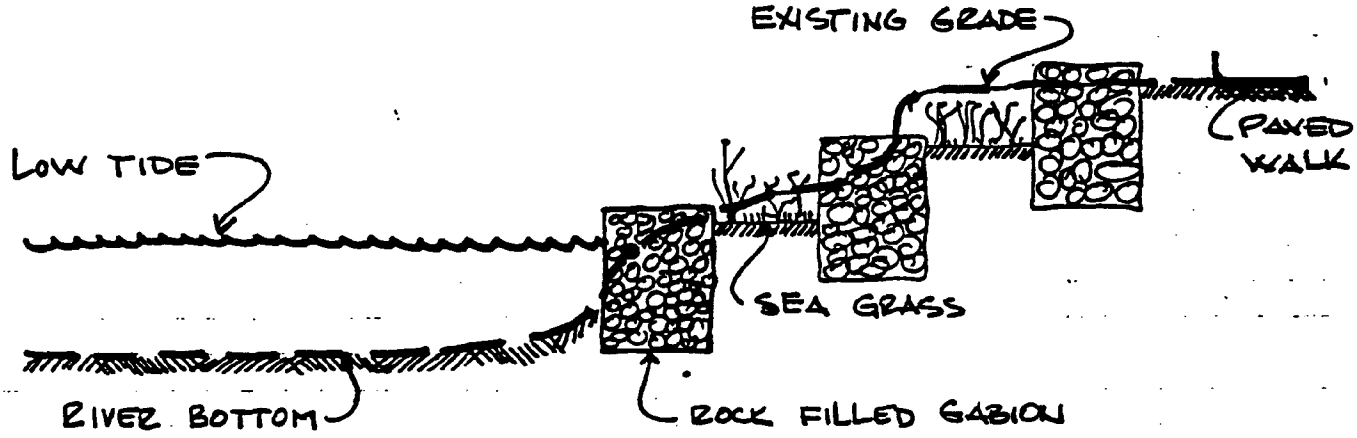


RELIEVING PLATFORM - SHEET PILES IN BACK
CROSS SECTION AT SWAMP COVE
SOUTHWEST AREA



RELIEVING PLATFORM - RIP RAP SLOPE
CROSS SECTION AT SWAMP COVE
SOUTHEAST AREA

DETAIL OF TYPICAL GABION CONSTRUCTION



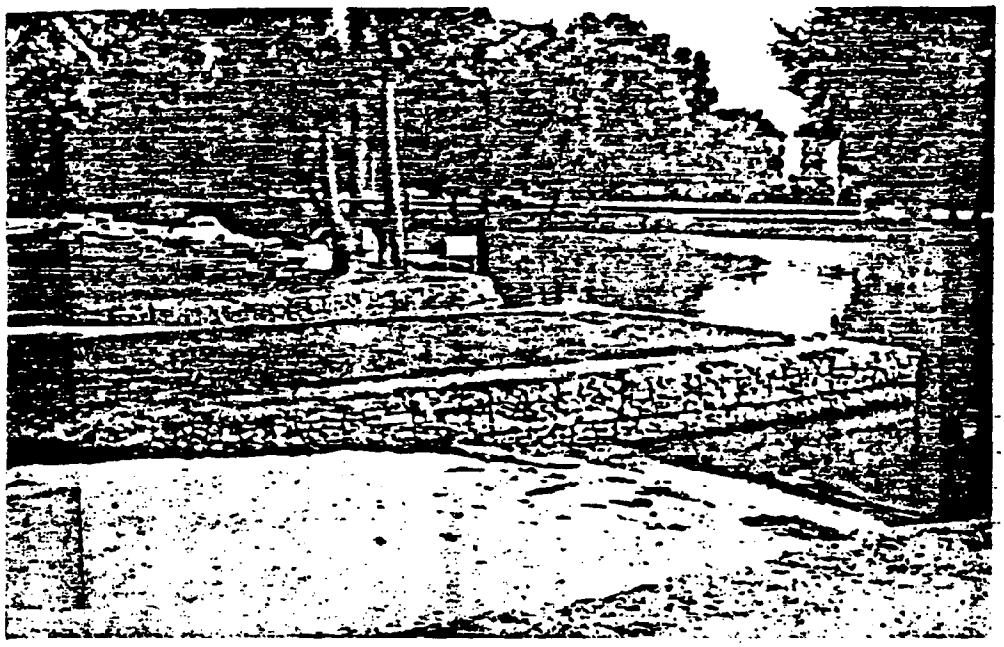
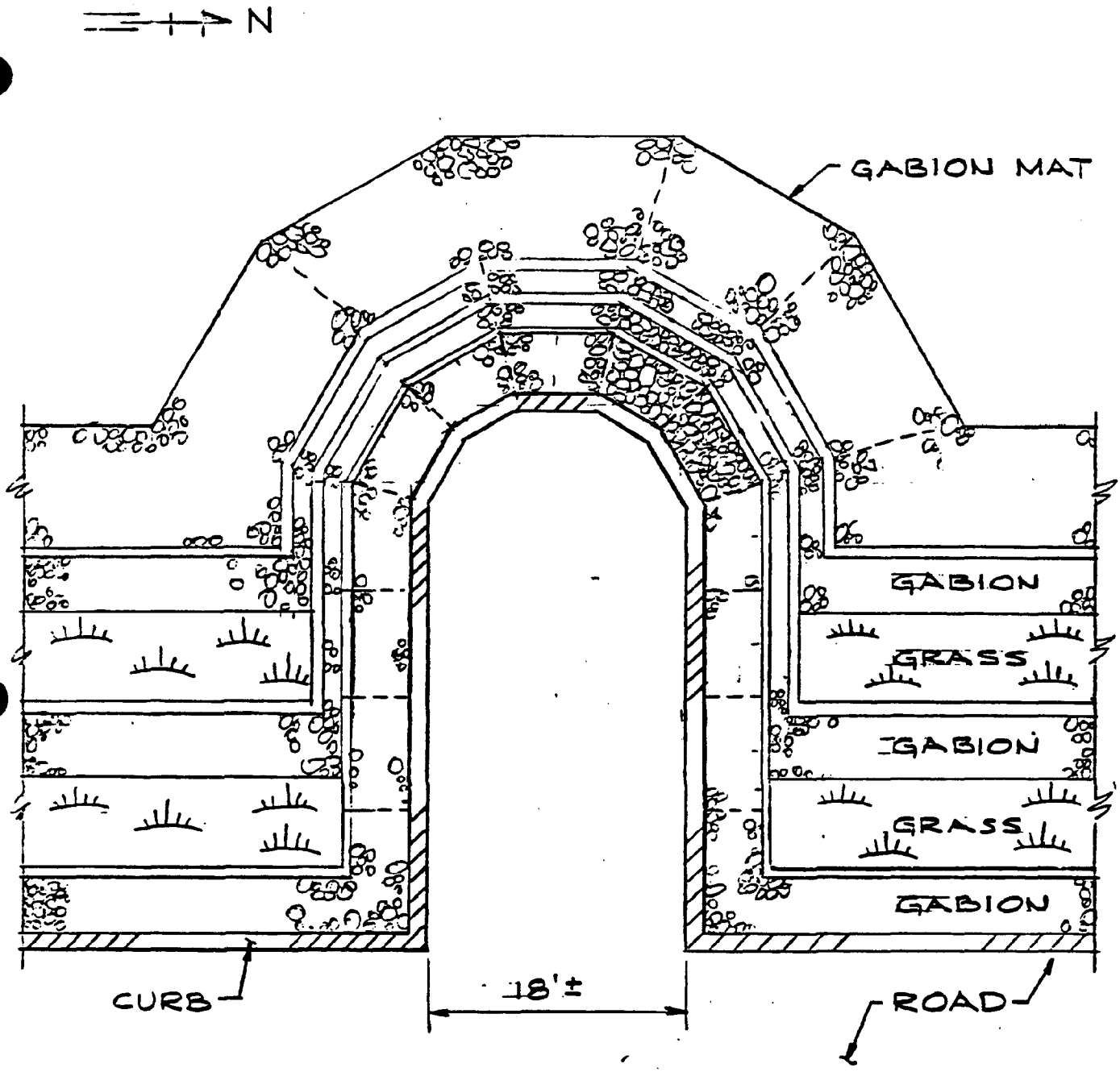
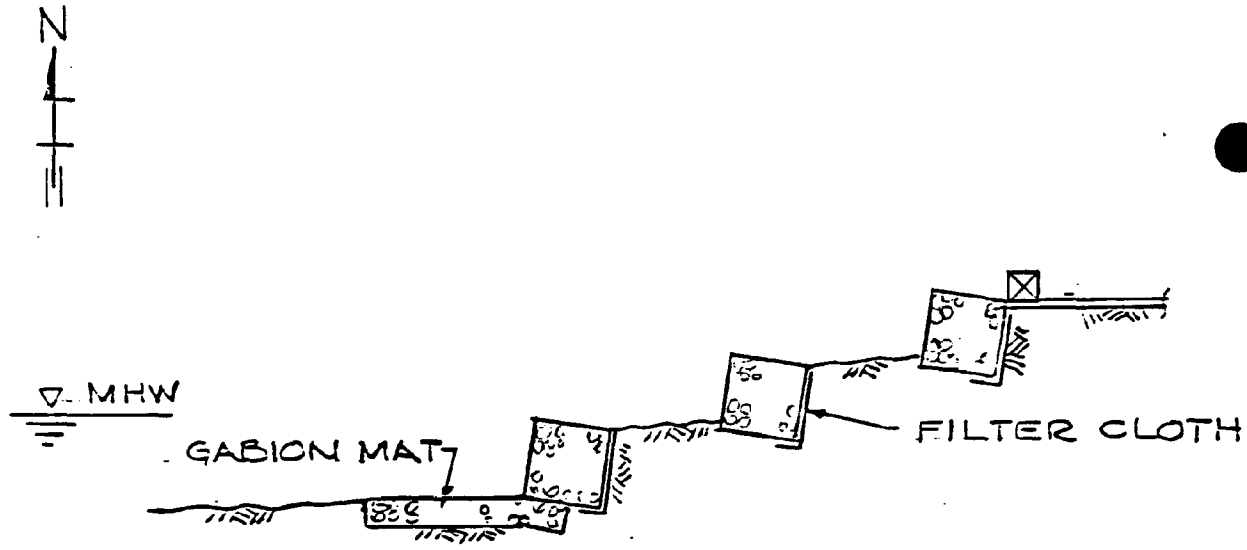


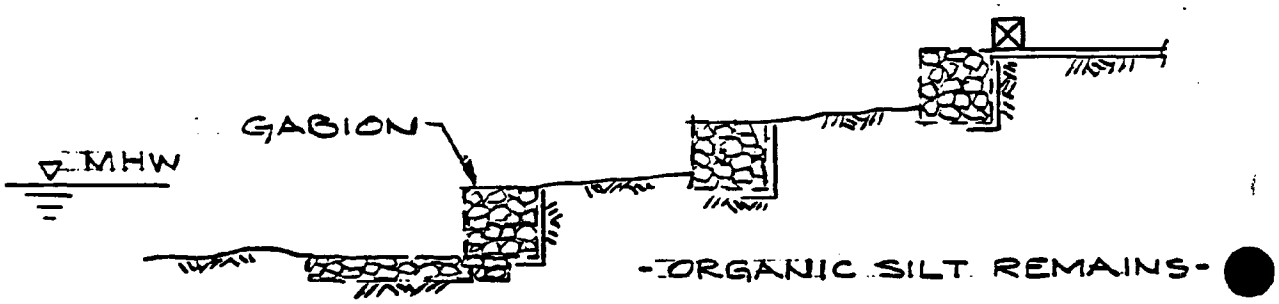
Exhibit C-1



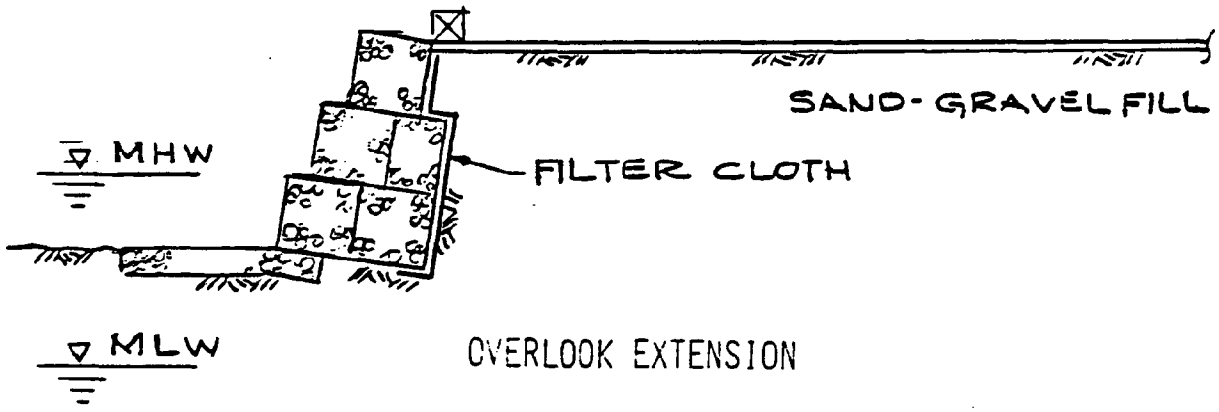
PLAN AT OVERLOOK EXTENSION
NORTHEAST AREA



TYPICAL BANK ALTERNATIVE



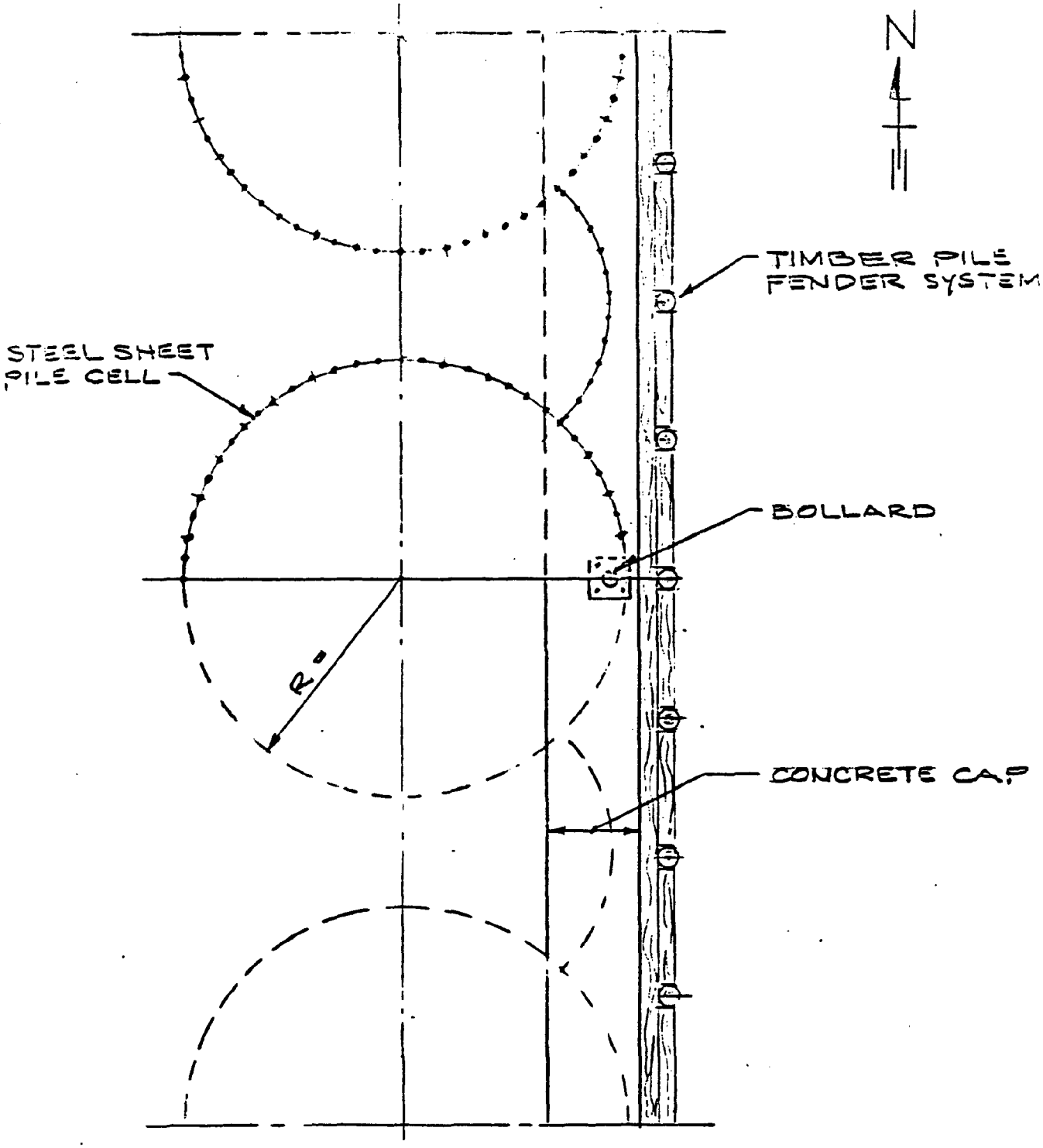
TYPICAL BANK ALTERNATIVE



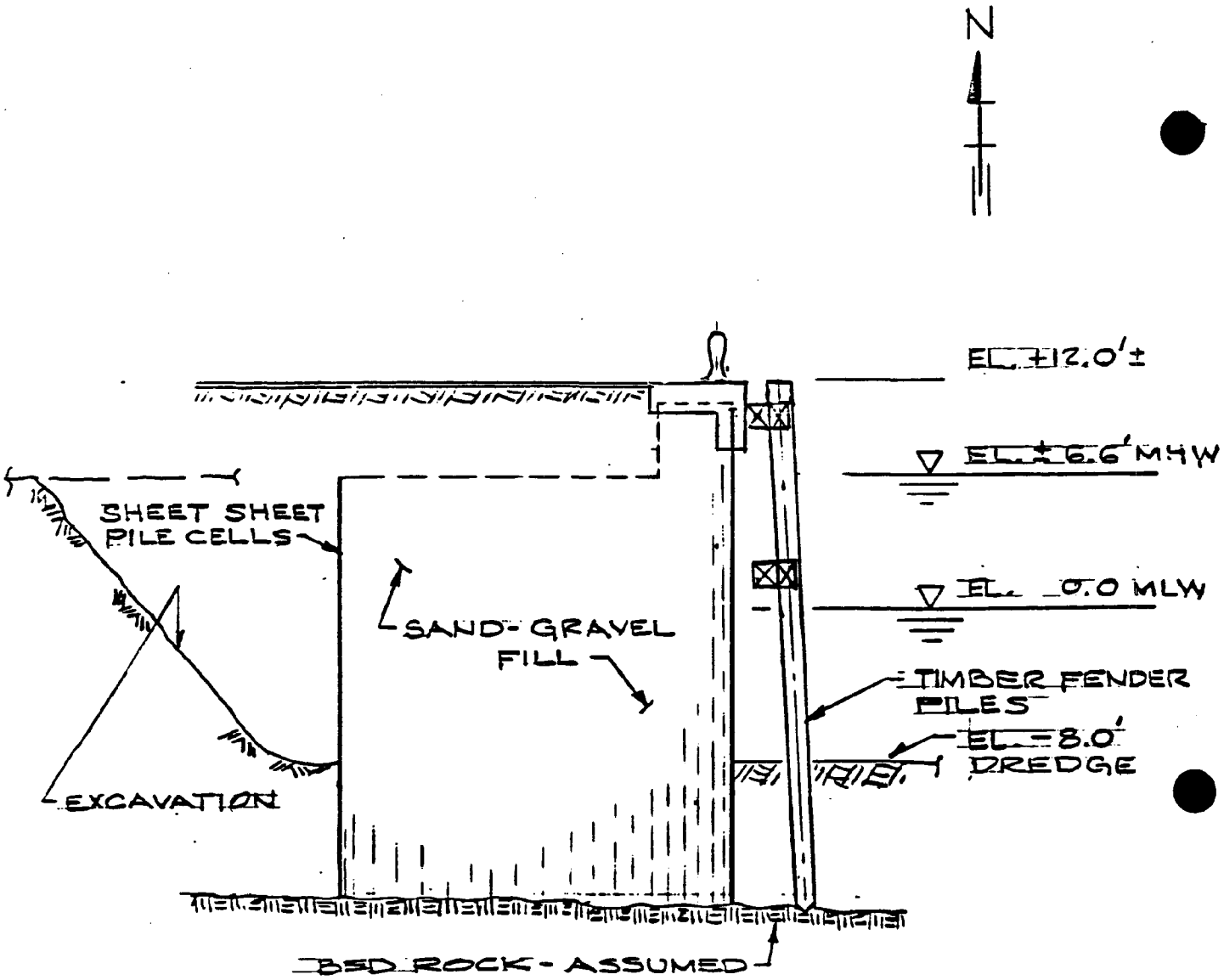
OVERLOOK EXTENSION

CROSS SECTIONS AT HARBOR BANK
NORTHEAST AREA

SEPT. 7, 1982

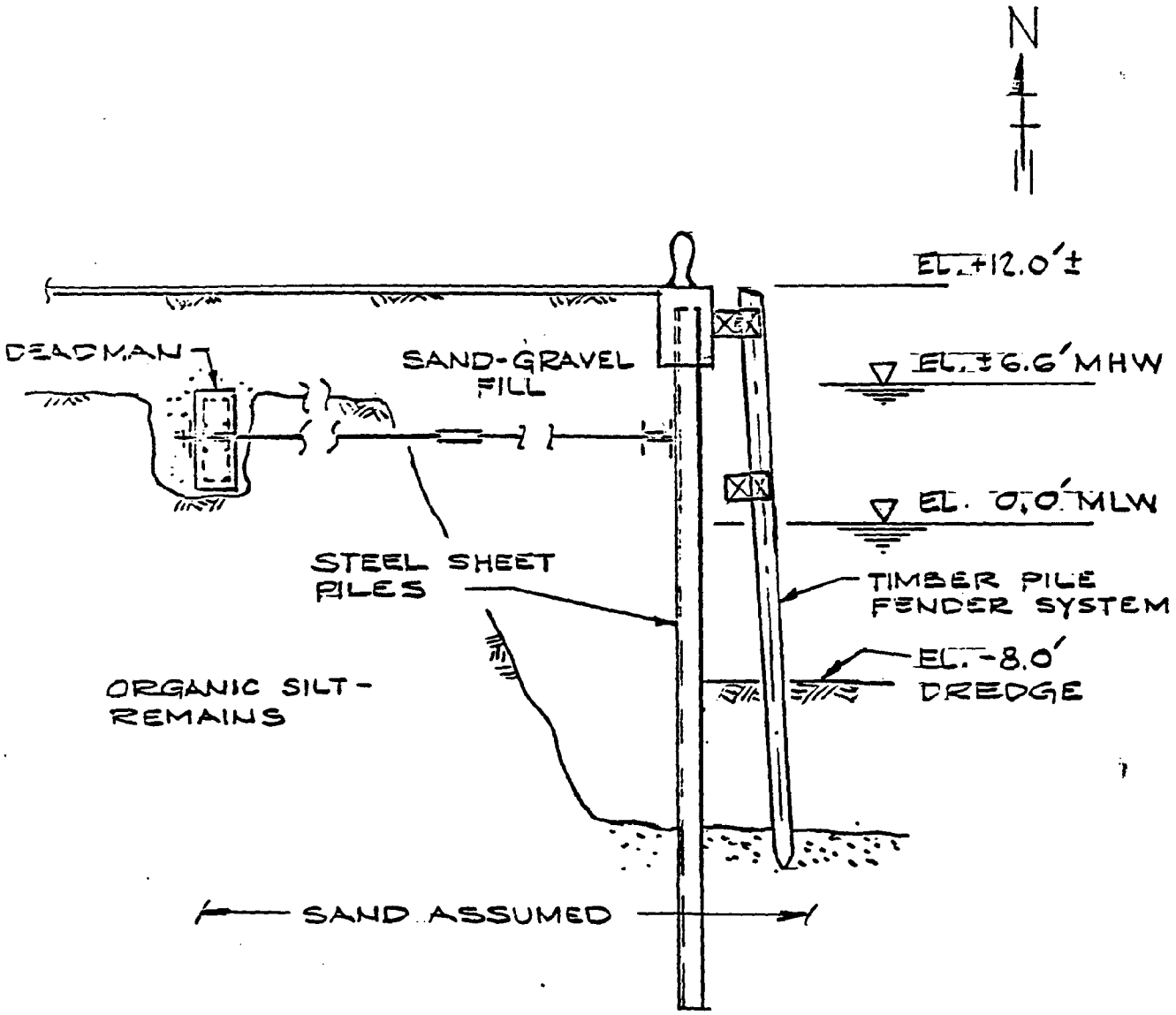


STEEL SHEET PILE CELLS
PLAN AT COMMERCIAL FISHING BERTHS
NORTHWEST AREA

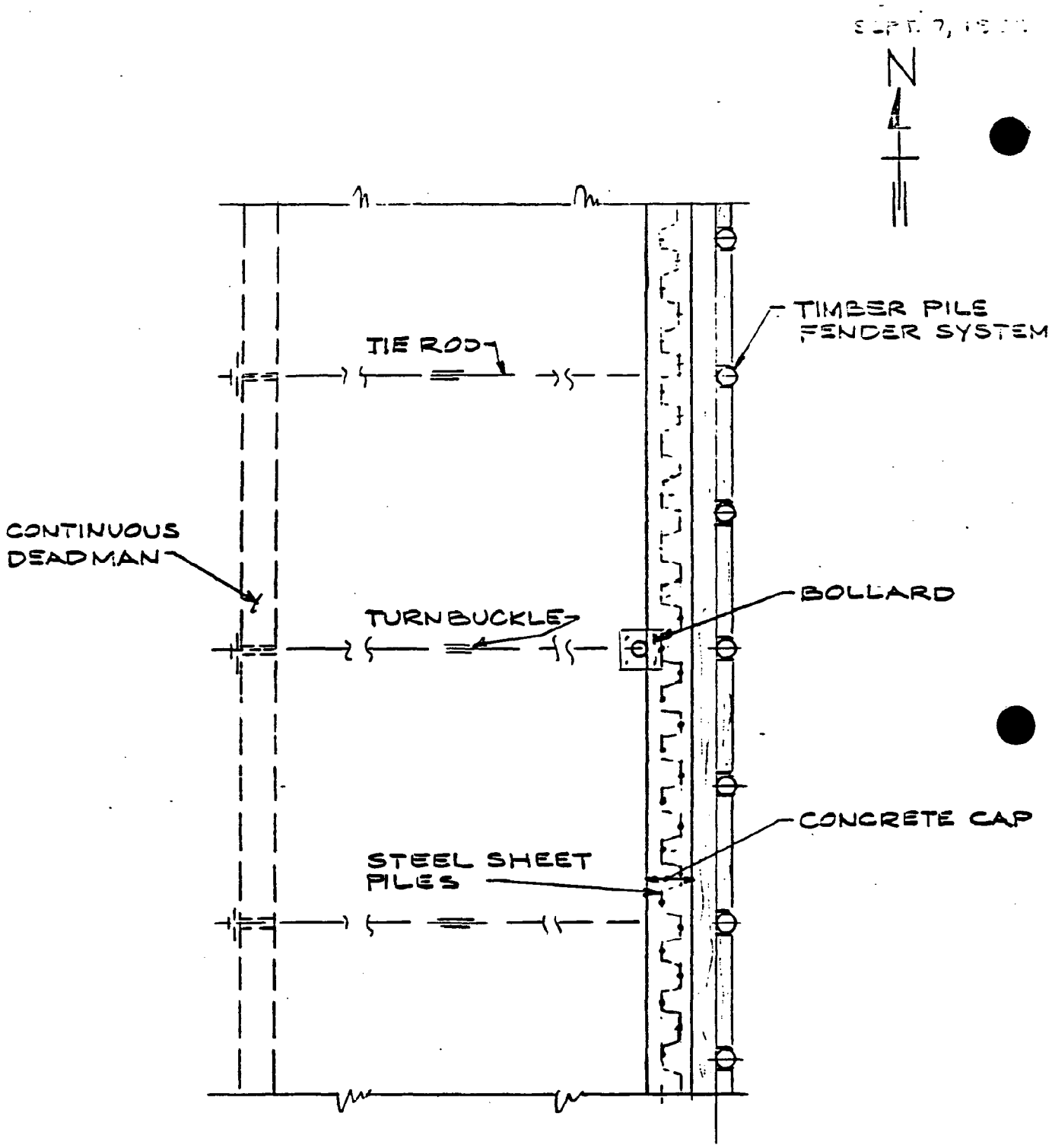


STEEL SHEET PILE CELLS
CROSS SECTION AT COMMERCIAL FISHING BERTHS
NORTHWEST AREA

SEPT. 7, 1982



STEEL SHEET PILE BULKHEAD
CROSS SECTION AT COMMERCIAL FISHING BERTHS
NORTHWEST AREA



STEEL SHEET PILE BULKHEAD
PLAN AT COMMERCIAL FISHING BERTHS
NORTHWEST AREA

12.107 NAVIGATION PROJECTS
(Small Navigation Projects)

FEDERAL AGENCY: OFFICE OF THE CHIEF OF ENGINEERS, DEPARTMENT OF THE ARMY, DEPARTMENT OF DEFENSE

AUTHORIZATION: Section 107 of 1960 River and Harbor Act, as amended; Public Law 86-645; 33 U.S.C. 577.

OBJECTIVES: To provide the most practicable and economic means of fulfilling the needs of general navigation, through projects not specifically authorized by Congress.

TYPES OF ASSISTANCE: Provision of Specialized Services.

USES AND USE RESTRICTIONS: Corps of Engineers designs and constructs the project. Each project selected must be engineeringly feasible, complete within itself, and economically justified. The non-Federal sponsoring agency must agree to assume full responsibility for all project costs in excess of the Federal cost limit of $2,000,000; contribute toward project costs for construction and maintenance in view of recreational benefits, land enhancement benefits or other special local benefits; provide all necessary lands, easements, rights-of-way; hold and save the United States free from damages; and, provide adequate public landing or wharf, piers, access roads, parking areas and other needed public facilities open and available to all on equal terms. Local cost participation requirements and procedures for determining the local share of project cost are similar to those for navigation projects specifically authorized by Congress under regular authorization procedures.

ELIGIBILITY REQUIREMENTS:

Applicant Eligibility: States, political subdivisions of States or other responsible local agencies established under State law with full authority and ability to undertake necessary legal and financial responsibilities.

Beneficiary Eligibility: Same as Applicant Eligibility.

Credentials/Documentation: Applicant must furnish evidence of legal authorization, financial capability, and willingness to provide all necessary local participation and required cooperation.

APPLICATION AND AWARD PROCESS:

Preapplication Coordination: State or local government officials should consult the nearest District Engineer regarding specific problems and the possibility of remedial action under this program. An environmental impact statement is also required.

Application Procedure: Formal letter to District Engineer from a prospective sponsoring agency indicating clear intent to provide all required local participation.

Award Procedure: The Chief of Engineers approves an individual project upon the basis of a comprehensive investigation and report by the District Engineer.

Deadlines: None.

Range of Approval/Disapproval Time: Not applicable.

Appeals: Not applicable.

Renewals: Not applicable.

ASSISTANCE CONSIDERATIONS:

Formula and Matching Requirements: None.

Length and Time Phasing of Assistance: Not applicable.

POST ASSISTANCE REQUIREMENTS:

Reports: Not applicable.

Audits: Not applicable.

Records: Not applicable.

FINANCIAL INFORMATION:

Account Identification: 96-3122-0-1-301.

Obligations: (Salaries and expenses) FY 81 $12,191,000; FY 82 est $12,800,000; and FY 83 est $12,500,000.

Range and Average of Financial Assistance: Not applicable.

PROGRAM ACCOMPLISHMENTS: Projects at 24 locations were under construction in fiscal year 1982.

REGULATIONS, GUIDELINES, AND LITERATURE: Engineer Regulation 1105-2-10, App E (33 CFR 263) and information sheets describing this program are available from the District Engineer.

INFORMATION CONTACTS:

Regional or Local Office: See Appendix IV of the Catalog for listing of District Engineers.

Headquarters Office: Office of the Chief of Engineers, Attn: DAEN-CWP-A, Washington, DC 20314. Telephone: (202) 272-0141.

RELATED PROGRAMS: 12.109, Protection, Clearing and Straightening Channels.

EXAMPLES OF FUNDED PROJECTS: Not applicable.

CRITERIA FOR SELECTING PROPOSALS: Not applicable.

Cooperation in Waterfront Design

BY IKUNO MASTERSON

How does a community recycle an abandoned sewage treatment plant in the middle of downtown? Folks in the seacoast town of Bellingham, Washington, have incorporated their abandoned facility into the Bellingham Maritime Heritage Center (BMHC). It has become an attractive focal point for the downtown, reflecting the community's natural resources and their uses. It has also helped to connect the downtown to the industrial waterfront, not only providing public access, but doing it in a way which celebrates the town's cultural and environmental uniqueness. It has also sparked revitalization efforts in the downtown and waterfront areas.

True to the "spirit of community," neighborhoods, merchants, city-county-state and federal officials, industrialists and special interest groups worked together to create this project, which continues to change and grow. Instrumental in program development was the BMHC Working Group, consisting of various department heads and directed by the Grants Coordinator, Office of the Mayor. They have benefited from wide-ranging advice from a Technical Committee of local and state agency representatives with a stake in the process. These include such varied groups as the Bellingham Public School District, the Vocational-Technical Institute, the Georgia-Pacific Corporation (a major employer), Northwest Steelheaders (a regional sports club), the University of Washington Sea Grant Program, the Washington State Department of Fisheries, the Department of Game, and the Whatcom Museum of History and Art.

In 1973, a study was undertaken which suggested that the area on and around the town's old sewage treatment plant at Lower Whatcom Falls be enhanced as a public facility. The study became known as the Morse Plan. In the long history of downtown development, the area had inadvertently become the only available open space. Inspired by the abandoned treatment tanks, Northwest Steelheaders provided the impetus for the BMHC. In 1977, after several years of discussion and negotiation, the Steelheaders were allowed to begin a small salmon rearing operation at the facility. The City has since studied and refined the area's use as a community facility.

Centering around the Steelheaders' operation, the project has evolved to encompass the idea of "depicting the area's heritage and culture in an instructive, recreational atmosphere." Devoted to open space, the 10-acre site will have numerous trails connecting neighborhoods and downtown with the waterfront and places for sitting and viewing waterfront, creek, and Heritage Center activities. Besides fish propagation and habitat displays, marine education, maritime history and marine resource interpretation will be featured programs. The Technical Committee was organized to ensure the expertise necessary in coordinating the various aspects of the project as well as its continued operation.

A major element of the project is a fish propagation and habitat area designed to show the complete life cycle of several species of Pacific Salmon on-site, with provision for public accessibility and interpretive centers. An emphasis of the Heritage Center will be on local, state, and international management of the fishing industry, to reflect its importance in the state and region. The Bellingham Vocational-Technical Institute has plans to develop a Marine Technology program, and close cooperation with local school districts will make younger students more aware of the importance of marine industries to the region. The maritime resource facility will include artifacts, models, and displays relating to the development of the waterfront area, including

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Steve Price, Grants Coordinator for the City of Bellingham, 210 Lottie Street, Bellingham, Washington 98225, can provide information on the progress of the Maritime Project. Chris Camp of the Grants Staff has provided much of the information for this article, and took the photographs which accompany it. Ikuno Masterson was an Editor for the Design Resourcebook and is currently Director of the Kittitas Valley Energy Resource Center in Ellensburg.

Exhibit E

Sec. 13b-56. (Formerly Sec. 8-211). Harbor improvement agencies. For the purposes of this section and section 13b-57, "harbor improvement agency" means any board, commission, agency or department of any municipality designated by the chief executive officer of such municipality and approved by the governing body thereof for the purpose of carrying out a harbor improvement project under this section. Any municipality may undertake a harbor improvement project, including the development, improvement, construction and installation of berthing areas, channels to berthing areas, sea walls, piers, docks, navigation aids, bridges and other related facilities and structures, pursuant to a harbor improvement plan. The harbor improvement agency may prepare or cause to be prepared a harbor improvement plan, and may approve such plan after (1) obtaining the approval of the planning agency of the municipality and (2) holding a public hearing thereon, notice of which shall be published at least twice in a newspaper of general circulation in the municipality, the first publication of notice to be not less than two weeks before the date of the public hearing. Such harbor improvement plan shall include: (a) A description of the harbor improvement area and the condition, type and use of the structures and facilities therein; (b) the location and extent of the proposed land uses and harbor uses in such area; (c) the location and extent of streets and public utilities, facilities and works within the area; (d) schedules showing the number of families and businesses to be displaced by the proposed improvement, the method of relocating such families and businesses and the availability of sufficient suitable living accommodations at prices and rentals within the financial means of such families and located within a reasonable distance of the area from which they are displaced; (e) present and proposed zoning regulations in the harbor improvement area; (f) a description of all land to be acquired and buildings and improvements to be demolished and removed or rehabilitated; (g) a description of all improvements to be constructed, installed or made; (h) the plan's relationship to definite local objectives; (i) financial aspects of the project, and (j) a ratio of the costs of the project to the benefits to be derived therefrom. After approval of the harbor improvement plan by the harbor improvement agency, the plan shall be submitted to the commissioner of transportation and the commissioner of environmental protection and, if approved by each commissioner, may be adopted by the governing body of the municipality. A harbor development plan may be modified at any time by a harbor improvement agency, provided such modification is consented to in writing by each purchaser or lessee of land in the harbor improvement project affected by such modification, and such modification does not substantially change the plan; otherwise any modification to such plan shall be approved in the same manner as the plan. Any municipality and its harbor improvement agency may exercise, for the purposes of undertaking a harbor improvement project, all the powers and authority granted to a municipality and to a redevelopment agency for the purposes of a redevelopment or urban renewal project pursuant to chapter 130.

Sec. 13b-57. (Formerly Sec. 8-212). State grants-in-aid for harbor improvement projects. The state, acting by and in the discretion of the commissioner of transportation, may enter into a contract with a municipality, acting by its harbor improvement agency, for state financial assistance for a harbor improvement project pursuant to a harbor improvement plan approved by the commissioner of transportation in the form of a state grant-in-aid equal to two-thirds of the net cost of the project as approved by the commissioner of transportation, provided state financial assistance to any municipality for such purposes shall not exceed one million dollars. Any such application for state financial assistance under this section shall be submitted by the commissioner of transportation to the commissioner of environmental protection for his review. Said commissioner of environmental protection shall submit a written report to the commissioner of transportation, setting forth his findings regarding such application.

Exhibit G

NOAA COASTAL SERVICES CENTER LIBRARY
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