



SOUTH BOSTON
WATERFRONT
DISTRICT
**Municipal
Harbor Plan
Amendment**

Fort Point District South

CITY OF BOSTON - Thomas M. Menino, *Mayor*
Boston Redevelopment Authority - Mark Maloney, *Director*

October 2006

Boston
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AMENDMENT TO THE CITY OF BOSTON'S SOUTH BOSTON WATERFRONT DISTRICT MUNICIPAL HARBOR PLAN – FORT POINT DISTRICT SOUTH

Acknowledgements

The development of this Amendment to the City of Boston's South Boston Waterfront District Municipal Harbor Plan has been a collaborative effort. The Boston Redevelopment Authority would like to thank the following individuals and organizations that have contributed to the process, and many other residents, advocacy groups and business representatives who have contributed their time toward this Municipal Harbor Plan Amendment. Many of your ideas and comments are incorporated into this plan, which is a better plan because of your efforts.

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1. INTRODUCTION AND OVERVIEW

This document amends a portion of the *South Boston Waterfront District Municipal Harbor Plan* (*South Boston MHP*) as it applies to a particular land area along the south side of the Fort Point Channel, in the vicinity of Downtown Boston (shown in *Figure 1-1*). This *Fort Point District South Municipal Harbor Plan Amendment* (*MHP Amendment*) provides for a coordinated State and City planning and permitting approach for prospective redevelopment of the *MHP Amendment* planning area.

The Municipal Harbor Plan (MHP) planning area addressed in this document comprises approximately 12 acres of land, which is currently owned by The Gillette Company. The boundaries of the *MHP Amendment* planning area generally extend from Necco Court on the northeast to the edge of the Gillette manufacturing facilities to the southwest. The planning area boundaries were established and calculated using BRA base plans reflective of existing conditions and available information provided by the City.

The *South Boston MHP* was prepared by the Boston Redevelopment Authority (BRA), adopted in the year 2000, and approved by the Secretary of Environmental Affairs of the Commonwealth of Massachusetts in the same year. The *South Boston MHP* includes provisions to guide the development and implementation of Boston's community vision for water-dependent use and associated public access along the harbor meeting the objectives of the Massachusetts Waterways Regulations (310 CMR 9.00) and the Review and Approval of Municipal Harbor Plans (301 CMR 23.00). It provides an overall planning and regulatory framework for an area of approximately 1025 acres of land and adjacent watershed that comprise the South Boston Waterfront District.

This *MHP Amendment* refines the coordinated regulatory framework for a portion of the South Boston Waterfront area located along the Fort Point Channel and subject to state jurisdiction through the provisions of Chapter 91 legislation. As a result, most of the land addressed in this *MHP Amendment* is subject to Massachusetts Waterways Regulations (310 CMR 9.00) and is within the area of the *100 Acres Master Plan* that has been prepared by the BRA since the approval of the original *South Boston MHP*.

The *South Boston MHP* subdivided the overall harbor planning area into subdistricts with planning considerations appropriate to different portions of the harbor. The planning area for this *MHP Amendment* is largely within the Fort Point Historic Subdistrict South, which was also referred to as the "Wormwood Area" in the original document. Both the *South Boston MHP* and the subsequent *Decision on the City of Boston's South Boston Waterfront District* (*Decision*), issued by the Secretary of Environmental Affairs on December 6, 2006, provided general guidance for this area. The regulatory approach presumed that the regulations for the area would be applied to a single development proposal and result in a single Chapter 91 license for the properties owned by The Gillette Company. The *Decision* for this subdistrict was also conditioned upon the completion of a more detailed master planning process that would consider outstanding issues regarding preservation of industry, transportation measures, public access, pedestrian links and compatibility of new development with the existing water-dependent uses and historic character.

The relevant planning for this area of the harbor is now complete. In addition to responding to all of the issues listed in the Secretary's *Decision*, the planning has taken into account physical changes in South Boston and the Fort Point Channel area. This planning responded to new conditions created by the completion of the Massachusetts Turnpike extension under Fort Point Channel, the development of the state-of-the-art Boston Convention and Exhibition Center nearby, market trends and renewed community expectations. The process of preparing the *100 Acres Master Plan* has been conducted with extensive community participation, which has continued in the preparation of this associated amendment to the *South Boston MHP*.

1.1 Purpose of this Amendment

This *MHP Amendment* has been composed in a manner that is consistent with the general standards and requirements of the underlying *South Boston MHP*, except for refinements that are specific to the planning area addressed within this document. As a result, the following objectives are accomplished:

- Substitute Provisions and Offsetting Public Benefits – This *MHP Amendment* includes refined regulatory provisions appropriate to this area of Boston Harbor that will define the water-dependent use zone (WDUZ), and re-organize building height standards in keeping with the purposes of the Chapter 91 regulations. This *MHP Amendment* enhances the City's Harborpark zoning standard by requiring an 18' clear walkway where there is a WDUZ of at least 100 feet, and a 12' clear walkway along the remainder of the water's edge which serves as a substitution of the baseline Chapter 91 regulations in this area of the harbor.
- Licensing Term – This *MHP Amendment* provides direction for special public benefit requirements that may be established for extending Chapter 91 license terms for future projects in the *MHP Amendment* planning area, in the event that the Department of Environment Protection (DEP) or the Secretary of Environmental Affairs establishes conditions or requirements beyond the standards normally addressed by the existing regulations.
- Transportation Policy - As required by the Secretary's *Decision*, this *MHP Amendment* records advancement of separate transportation analyses and planning that demonstrate consistency with applicable policies of the Massachusetts Office of Coastal Zone Management (CZM). Although district-wide transportation planning is not generally a subject of Chapter 91 licensing, the Secretary is responsible for ensuring that municipal harbor plans are coordinated with transportation planning that meet state goals.
- Public Access Network – This *MHP Amendment* provides more specific planning for the public access network that will connect this area of the harbor and encourage public use by establishing the *100 Acres Master Plan* for guidance in Chapter 91 licensing.
- Pedestrian Links – This *MHP Amendment* employs the *100 Acres Master Plan* as the framework to define required pedestrian links that will achieve Chapter 91 purposes, connect key destinations outside of the planning area, and accomplish important City goals.
- Design Guidelines for Compatibility – Through the guidelines established in the *100 Acres Master Plan* and implemented in zoning, this *MHP Amendment* ensures that new development projects requiring Chapter 91 licensing will be compatible with the existing historic character of the built environment along this portion of Boston harbor.
- Provision for Phased Development and Licensing - This *MHP Amendment* provides a framework that will allow incremental development with separate licenses for different projects that will be designed and implemented over time while ensuring that the provisions of Chapter 91 will be met continuously.
- Coordination with Zoning – This *MHP Amendment* addresses the need to have a City zoning regulatory framework that is consistent with the municipal harbor plan. The City is advancing a special zoning mechanism (a Planned Development Area) to provide zoning that is fully coordinated and consistent with the state regulatory framework provided through Chapter 91.

This *MHP Amendment* serves to extend the terms of the entire *South Boston MHP* for a term of 10 years.

1.2 City of Boston Municipal Harbor Plan Overview

The first Municipal Harbor Plan (MHP) for the City of Boston was prepared in 1990 by the BRA, and approved by the state Secretary of Environmental Affairs in 1991. The plan was the culmination of a long planning process led by the City in conjunction with the Harborpark Advisory Committee, public agencies and members of the community. It was effective for five years. In 1996, the BRA requested additional time to file its renewal, and the Secretary corresponded stating that the plan will remain in effect until the City renews it. Also known as the Harborpark Plan, this document provides a planning and regulatory basis consistent with the City goals and vision for public access and development along the waterfront.

In the years that followed, the BRA has filed and received approval for the South Boston Waterfront District Municipal Harbor Plan, in 2000, as well as for a few geographic and Municipal Harbor Plan amendments (a Municipal Harbor Plan Limited Geographic Amendment in 1999, the Fort Point Channel Phase I Municipal Harbor Plan in 2002, and Fort Point Downtown Waterfront Phase II in 2003). These documents and the corresponding planning processes have served to develop and elaborate the City's planning goals for distinctive areas within the waterfront. General goals aim at creating a mix of uses that will foster and support daily and year-round waterfront activation, public access along the water through a public "Harborwalk" that extends along the entire harbor, access and connections to water transportation, public programming of interior and open spaces along the water, and active ground floor uses.

It soon became apparent during the South Boston Waterfront planning process that Fort Point Channel required a separate planning focus, and a Watersheet Activation Plan for the Fort Point Channel was prepared to increase public access and public use of the channel. More details about this study, completed in 2001, are provided in *Section 4, Fort Point Channel Planning Context* of this document.

1.3 Massachusetts General Laws Chapter 91 and the Municipal Harbor Plan Regulations

Two sets of state regulations ensure the protection, care and supervision of public access and interests along the Commonwealth's shoreline and tidelands: Chapter 91 (310 CMR 9.00 Waterways Regulations) and regulations implementing the Municipal Harbor Planning process (301 CMR 23.00 Review and Approval of Municipal Harbor Plans). Chapter 91 sets standards for the protection of the Commonwealth's and public's interests along the waterfront, including the preservation of public access and the capacity to accommodate water-dependent uses. The Municipal Harbor Planning process allows cities and towns to adjust the state and local regulatory frameworks to best fulfill both state and local purposes by jointly approving a Municipal Harbor Plan.

The Executive Office of Environmental Affairs (EOEA) and the Department of Environmental Protection (DEP) are the Massachusetts agencies in charge of overseeing and protecting the rights of the Commonwealth and its citizens along the water. Chapter 91 provides the regulatory framework and vehicle by ensuring that tideland uses are either water-dependent or serve a public purpose. DEP has the authority to grant licenses that prescribe terms and conditions for the use and development of tidelands and former tideland areas (Chapter 91 licenses).

Chapter 91 applies to all waterways and filled tideland areas lying between the "present or historic high water mark, whichever is farther landward, and the seaward limit of state jurisdiction". However, the Commonwealth recognizes that each particular harbor and municipality has unique characteristics and needs that may deserve and require a special approach. Municipal Harbor Plan regulations set procedural standards to guide and promote the development of municipally-based harbor plans that also incorporate fundamental state policies and national coastal policies governing the area of jurisdiction. These are developed in consultation with DEP and the Massachusetts Coastal Zone Management (CZM).

As part of its Municipal Harbor Plan (MHP), a town or city may propose substitute provisions to replace specific use limitations or dimensional standards specified by Chapter 91. The MHP needs to substantiate the need for these substitutions, and demonstrate that the public interests and objectives are comparable or achieved better with the proposed provisions than with the original Chapter 91 standards. The substitute provisions, subject to the Secretary of Environmental Affairs' approval, will be applied to the review and evaluation of Chapter 91 License applications within the corresponding harbor planning area. MHP regulations (301 CMR 23.00) also establish criteria for the evaluation and approval of substitute provisions.

The Secretary's approval of a MHP includes a written determination that it be consistent with Harbor Planning Guidelines developed by CZM, other CZM policies, and Chapter 91 principles and objectives. This written determination may also articulate conditions for approval that should be met as part of the plan's implementation.

1.4 City of Boston MHP and the Secretary of Environmental Affairs Decisions

The South Boston Waterfront District Municipal Harbor Plan was submitted to the state for review and approval in July 2000. The Secretary of Environmental Affairs issued his approval in December of the same year. The Secretary's *Decision* offered a detailed explanation of the reasons and rational supporting his approval, as well as specific conditions that should be met. In the particular case of Fort Point Channel and the Historic South Subdistrict, the Secretary's *Decision* served to establish the following:

- The Fort Point Historic South and the Fort Point Industrial Subdistricts are marked by the presence of The Gillette Company (owned by Procter & Gamble today). Gillette is Boston's largest industrial employer, and relies on the use of water from the Fort Point Channel for industrial processing, which entitles it to special protection under waterways regulations as a water-dependent use.
- The Secretary's approval of the South Boston Waterfront District MHP was conditioned to the subsequent completion of more detailed master planning efforts for the Fort Point Channel area, which would protect industrial truck routes and define buffer zones to prevent land use conflicts. These efforts were to be undertaken by the City in coordination with landowners and stakeholders, and are currently underway resulting in the production and pending approval of the *100 Acres Master Plan* (detailed in *Section 5* below).
- Planning was to continue for the activation of the Fort Point Channel watershed in order to utilize its full potential, which culminated with the preparation and issuing of the *Fort Point Channel Watersheet Activation Plan* in November 2001.
- Implementation of the MHP will depend on the adoption of appropriate zoning measures codifying the use and dimensional requirements approved as substitute provisions. In particular, the *Decision* indicated that such amendments might take the form of Planned Development Areas (PDAs), which would apply to large master plan sites in excess of one acre. PDAs, which are subject to a public process, allow for somewhat greater flexibility in the application of certain dimensional requirements (such as building heights) in exchange for additional master plan development controls "to ensure that wind, shadow, and other height related conditions (such as massing) at the ground-level will be conducive to water-dependent activity and public access to the waterfront..." (*page 64 of the Decision*).

These conditions underlie and inform the subsequent planning efforts that culminated in the preparation of this *MHP Amendment*.

1.5 Chapter 91 Compliance Summary

Future development projects within the *MHP Amendment* planning area will be required to comply with all of the applicable Chapter 91 legal and regulatory requirements except as specifically modified by either the *South Boston MHP* or as further amended by this document. This section of the amendment describes the extent of Chapter 91 jurisdiction within the planning area. The discussion provides an overview of how the planning complies with existing requirements that have been established by the regulations and the *South Boston MHP*.

1.5.1 Planning Area

This amendment encompasses a planning area that represents a significant portion of the Fort Point Historic Subdistrict South as described in the *South Boston MHP*. The boundaries of this planning area have been slightly modified to represent a more coherent planning approach that takes into account the relationship between the Fort Point Channel and the Fort Point Industrial District. The limits of the planning area are intended to supersede the alignments in the *South Boston MHP*. The *MHP Amendment* planning area limits are shown in *Figure 1-2* and have been adjusted to take into account the following considerations:

- Fort Point Channel - Planning for the Fort Point Channel, including specific planning for its watershed, has been advanced through the *Fort Point Channel Watersheet Activation Plan* and the *Fort Point Downtown Waterfront Municipal Harbor Plan*. As a result, the area below the existing mean high water line along the Fort Point Channel is not considered to be within this *MHP Amendment* planning area limits. This *MHP Amendment* takes into account the findings and recommendations of these and other prior studies in order to be consistent with the existing planning and regulatory framework for the channel area.
- Boundary with the Fort Point Industrial Subdistrict – The alignment of this boundary has been adjusted to reflect a practical and simpler distinction between the land area that is principally occupied by the existing Gillette industrial uses (a water-dependent use), and the land that could be redeveloped and/or used in conjunction with non-industrial mixed-use development. This has the effect of creating a straight line connecting A Street to the Fort Point Channel that allows for unimpeded access and use of the northern edges of the existing industrial structures and operations.
- Boundary along Necco Court – The boundary reflects the limits of the land that is currently owned by The Gillette Company, extending to the limits of the rights-of-way along a proposed garage accessway, Necco Street, and Necco Court.

1.5.2 Chapter 91 Jurisdiction

The Commonwealth's regulatory framework for waterways distinguishes among several categories of tidelands and the associated public rights within them. The *MHP Amendment* planning area contains two categories: historic Commonwealth tidelands, and historic private tidelands. It also contains "landlocked tidelands" that are not within Chapter 91 jurisdiction.

In general, Chapter 91 protects the public's rights for the access to and/or active use for water-dependent uses associated with historic tidelands. The Commonwealth also protects the public's rights for access to and from the flowed tidelands through its regulation of private tidelands. Accordingly, there are higher standards for historic Commonwealth tidelands than private tidelands.

Research has identified the historic locations of the relevant boundaries of these categories. These boundaries are summarized in *Figure 1-3*. The analysis utilized historic maps that have been used as the

basis for similar determinations for the Fort Point Channel. The location will be confirmed prior to Chapter 91 licensing as a procedural matter. This summary of the research results is provided for planning purposes.

The entire planning area for this *MHP Amendment* consisted of extensive shallow waters and tidal flats that once stretched northwards into Boston Harbor from the Dorchester uplands. For these circumstances, Chapter 91 regulations define the extent of historic Commonwealth Tidelands as those areas that were once historically flowed and that are beyond a maximum limit of 100 rods (1,650 feet) from the historic high water line. This line was determined using historic maps, and is shown in *Figure 1-3*. Land seaward of this line is presumed to be historic Commonwealth tidelands. Landward areas from this line are presumed to consist of historic private tidelands, with the exceptions further noted below.

Chapter 91 jurisdiction does not include land that was dedicated for public ways or separated from the water by public ways that existed prior to January 1, 1984 which were more than 250 feet from existing flowed tidelands. The *MHP Amendment* planning area includes land under these circumstances. Portions of two former streets (Sobin Park and Mt. Washington Avenue) once occupied the southeasterly portions of the *MHP Amendment* planning area (about 17,690 square feet). The intersection of these streets created landlocked tidelands, which are also excluded from Chapter 91 jurisdiction (about 1,150 square feet). The total amount of land within the *MHP Amendment* planning area that is occupied by portions of the former Sobin Park and Mt. Washington Avenue, and by landlocked tidelands of approximately 18,840 square feet or 0.43 acres.

As a result, the total planning area of this *MHP Amendment* consists of approximately 12.66 acres, of which 12.23 acres are within Chapter 91 jurisdiction. This latter area has been used as the basis for calculating associated Chapter 91-related regulatory standards, substitute provisions and offsets.

The Chapter 91 regulations specify that an area along the project shoreline (in this case, the mean high water mark) be preserved for water-dependent use. The water-dependent use zone (WDUZ) employed for the purposes of this *MHP Amendment*, based on Chapter 91 standard provisions, is portrayed in *Figure 1-3*. The WDUZ consists of a setback line that varies in depth. Along much of the area, the setback extends to 100', which is the maximum required under Chapter 91 regulations. However, because the regulations limit the setback to no more than 25 percent of the depth of the waterfront land under certain circumstances, the WDUZ extends to approximately 80 feet from the project shoreline along a portion of the *MHP Amendment* planning area. The composite area within the WDUZ, as a result, is approximately 96,460 square feet.

This approach to defining the WDUZ reflects a goal of this *MHP Amendment* to anticipate phased and separate licensing of future projects and ownership parcels in the future. In part, the setback calculation reflects the potential for subdivision of the existing single ownership laterally along the project shoreline into multiple parcels in the future, prior to licensing of separate projects and properties. It also reflects consideration of different scenarios that could reasonably occur in licensing future projects along Necco Court. If a project and license were to be advanced for the property at 60 Necco Court that retains the landward property line whose establishment occurred prior to the effective date of 310 CMR 9.00, then the required WDUZ setback under 310 CMR 9.51(3)(c) would be about 25 feet, because of the limited depth of the site. However, as the parcels along Necco Court are now under single ownership, projects or parcelization could be advanced that would reconfigure this area up to the boundary of Necco Street. Under these circumstances, the WDUZ setback would extend to 80 feet. As a result, the maximum WDUZ area that might be defined under any phased or separate licensing process is the basis of calculation for both substitute provisions and the corresponding offsetting public benefits.

The regulations specify a setback standard that limits heights for buildings for nonwater-dependent uses. A limit exists 100 feet landward of the high water mark and is indicated on *Figure 1-3*. Building heights

for nonwater-dependent uses are 55 feet landward of this line, and then climb at a ratio of one-half foot for each additional foot in a landward direction.

1.5.3 Compliance with Standards

The development and improvements associated with the *100 Acres Master Plan* and this related *MHP Amendment* comply with the requirements of the Chapter 91 regulations. This compliance will be achieved by meeting the existing standards in 310 CMR 9.00, or through substitute provisions and offsetting benefits provided through the approved *South Boston MHP* and this *MHP Amendment*, upon its approval.

The following table (*Table 1.1*) has been assembled as a general synopsis of key regulatory standards as they apply to both existing conditions and to the changes proposed in the *100 Acres Master Plan*. Full compliance will be a condition of any Chapter 91 licensing approval, and a complete documentation of each project's compliance will be required as part of the associated process.

It should be noted that some existing sites and uses within the planning area are subject to previous Chapter 91 licenses. These licenses provide for continued use of the waterfront that is consistent with the existing license terms and conditions, unless a new license for changes in use or improvements is sought. At that point, redevelopment would need to comply with the contemporary Chapter 91 and approved MHP regulatory standards.

The licensing within the planning area includes an amnesty license issued by the Massachusetts DEP (Amnesty License No. 9342a, issued on May 29, 2003 and recorded with the Suffolk County Registry of Deeds in Book 32060, Page 59) to maintain existing fill and structures on the parcel acquired by the Gillette Corporation from the Boston Wharf Company. One of the conditions listed in the Amnesty License requires the provision of a ramp and float system suitable for small, hand launched vessels. The presumed location for such a facility was south of the existing water intake structure on the south shore of the Fort Point Channel; this location was recommended prior to completion of the *100 Acres Master Plan*. This *MHP Amendment*, when implemented, envisions a broad park for public access and use of the waterfront centered on the area north of the water intake structure. This would appear to be a more favorable location for the ramp and float system, to provide and encourage public activation of the waterfront with a larger facility than had been envisioned in the amnesty license. This approach would also better implement the *Fort Point Channel Watersheet Activation Plan*. As a result and as noted in the table below, this *MHP Amendment* recommends a revised site and larger size for this facility.

There are two licensing and compliance implications of this approach. The location of the facility and the original commitments would be associated with the existing amnesty license. The enlarged size of the facility would be associated with new licensing. Establishing the procedural and licensing requirements associated with accomplishing a larger and better-located facility will be advanced through a collaborative consultation between the BRA, Gillette and DEP to fulfill all of the requirements associated with this facility.

The location and program for the facility may be finalized as part of the Consolidated Written Determination (CWD) by the Secretary of Environmental Affairs, or as part of a project license that would be issued subsequently and be consistent with both this MHP Amendment and the CWD. The CWD is described in Section 1.7 of this *MHP Amendment*, below. To confirm licensing compliance, the Gillette Corporation intends to confer with DEP to determine if an amendment to the existing amnesty license is required to accomplish the relocation of the facility. If required, the Gillette Corporation will then proceed with the amnesty license amendment process.

Table 1-1: Summary of Existing Conditions and *MHP Amendment* Compliance: Chapter 91 Regulations (310 CMR 9.00)

Regulation Reference	Requirement or Standard	Compliance: Existing Conditions	Compliance: <i>MHP Amendment</i>
310 CMR 9.32	Categorical Restrictions on Fill and Structures	Conforms as existing use.	Conforms because none of the proposed improvements are categorically restricted.
310 CMR 9.33	Conformance with Other Applicable Environmental Protection Standards	Conforms as existing use.	Conforms through actions and mitigation as described in the <i>100 Acres Master Plan</i> and through other applicable approval processes, including MEPA.
310 CMR 9.34	Conformance with Municipal Zoning and Municipal Harbor Plans		
9.34	Conformance with municipal zoning	Conforms as existing use.	Conformance subject to review and changes to the underlying City of Boston zoning. A special Planned Development Area zoning mechanism has been prepared that provides for compatibility between Chapter 91 standards as provided in this <i>MHP Amendment</i> and City zoning approvals.

Regulation Reference	Requirement or Standard	Compliance: Existing Conditions	Compliance: <i>MHP Amendment</i>
9.34	Conformance with municipal harbor plans	Conforms with original <i>South Boston MHP</i> as previously approved; however, the substitute provisions for this area of the harbor expired in 2003; as a result, the projects could not proceed absent an <i>MHP Amendment</i> .	Conforms with the <i>South Boston MHP</i> directly and through this amendment provided to meet the Secretary's <i>Decision</i> and requirement for an associated master plan.
310 CMR 9.35	Standards to Preserve Water-Related Public Rights		
9.35(2)(a)	Public navigation	Existing conditions do not interfere with the public's rights to navigation.	The proposed plan would not interfere with the public's rights to navigation.
9.35(3)(b)	Continuous lateral public access along the water edge	Existing Harborwalk provides continuous public access fully compliant with this requirement, including appropriate access around the existing water-dependent pumphouse.	Harborwalk and public access improvements will provide continuous public access fully compliant with this requirement, including appropriate access around the existing water-dependent pumphouse.
9.35(5)	Long-term management of publicly-accessible areas for effective use and enjoyment	Complies through the provision of managed public access improvements through existing amnesty license and other provisions.	Will significantly expand the area available and managed over the long term along the water edge and in the public open envisioned in the master plan.

Regulation Reference	Requirement or Standard	Compliance: Existing Conditions	Compliance: <i>MHP Amendment</i>
310 CMR 9.36	Standards to Protect Water-Dependent Uses	The land use currently complies with the standard to preserve or be compatible with existing water-dependent uses, such as Gillette's existing manufacturing activities.	The future uses are planned to be compatible with the existing and proposed water-dependent uses for the sites within and adjacent to the planning area, including ongoing operations of the water-dependent function of the Gillette manufacturing facilities.
310 CMR 9.37	Engineering Construction Standards	Parts of existing seawall are in deteriorated condition and do not conform to standards.	All deteriorated structures will be repaired and new structures will conform to engineering construction standards.
310 CMR 9.38	Use Standards for Recreational Boating Facilities	A public boating facility will be provided as a condition of an existing amnesty license and will be required to comply with the requirements provided in this section of the regulations.	A public boating facility will be provided to meet several requirements of the Chapter 91 regulations in a location better suited to this area of the harbor, and enlarged to help implement the Fort Point Channel Watersheet Activation Plan. Compliance of both the amnesty license and new licensing will be accomplished through coordination with DEP and amendment to the existing amnesty license if required.
310 CMR 9.51	Conservation of Capacity for Water-Dependent Use (dimensional and use standards)		

Regulation Reference	Requirement or Standard	Compliance: Existing Conditions	Compliance: <i>MHP Amendment</i>
9.51(1)	Prevention of significant conflict	Parking facilities within the area, to the extent that they are not accessory to existing water-dependent uses such as the Gillette manufacturing operations, conflict with the ability to expand public open space and access, as well as other potential water-dependent facilities that could be located here.	The master plan uses allocate water-dependent uses and facilities in a pattern that will prevent conflicts, including conflicts with the water-dependent Gillette manufacturing needs both within the planning area and adjacent to it.
9.51(2)	Compatibility of redevelopment with water-dependent uses	Not applicable because there would be no redevelopment.	Meets the standard as proposed in this amendment; new development compatible with water-dependent uses by virtue of the siting, configuration, scale, layout and landscaping of exterior open space and other features to provide and support public access and other water-dependent uses.
9.51(3)(b)	Setbacks for nonwater-dependent facilities of private tenancy	Existing conditions comply with these standards.	The master planned development would comply with these standards.
9.51(3)(c)	Building setbacks from a water-dependent use zone	Existing buildings are consistent with setback standards.	Would comply with a substitute provision providing for adjustment in location with offsetting benefits (see <i>Table 6-1, Summary of Chapter 91 Substitutions and Offsets</i>).

Regulation Reference	Requirement or Standard	Compliance: Existing Conditions	Compliance: <i>MHP Amendment</i>
9.51(3)(c)	Uses within the water-dependent use zone	Existing parking facilities do not comply with standard setbacks for water-dependent uses.	Would comply by providing only water-dependent uses including public open space as well as other water-dependent uses within the WDUZ.
9.51(3)(d)	Open space	Complies with 50% open space requirement.	Complies with 50% open space requirement.
9.51(3)(e)	Height standards and related impacts on public use or access	Portions of the existing structure along Necco Court exceed the standard height limits.	All development would comply with a substitute provision and offsetting benefits for this requirement that establishes a combination of increased and decreased height standards appropriate to this area of the harbor (see <i>Table 6-1, Summary of Chapter 91 Substitutions and Offsets</i>).
310 CMR 9.52	Utilization of the Shoreline for Water-Dependent Purposes		
9.52	Use of shoreline for water-dependent purposes	Complies through those portions of the land devoted to water-dependent uses, including continuous public access (Harborwalk), a water-intake structure, and other uses.	Meets the standard and provides for substantial increase in the amount of shoreline used for water-dependent purposes through a broad waterfront park and improved public access along the water's edge.

Regulation Reference	Requirement or Standard	Compliance: Existing Conditions	Compliance: <i>MHP Amendment</i>
9.52(1)(a)	One or more facilities to generate water-dependent activity	Would meet the required standard through provision of a small boat launching and docking facility. Provision of additional facilities not required because the area is beyond the limits established for water-transportation in the <i>DEP Draft Water Transportation Policy</i> , if it is adopted.	Would meet the required standard through provision of a small boat launching and docking facility suited to this area of the harbor. Provision of additional facilities not required because the area is beyond the limits established for water-transportation in the <i>DEP Draft Water Transportation Policy</i> , if it is adopted.
9.52(1)(b)	Provision of a pedestrian access network	Existing Harborwalk complies with minimum access requirements.	Meets the standard as proposed in this amendment with multiple open space and sidewalk improvements, including an enhanced Harborwalk that would include a minimum width of 18 feet clear in areas where the WDUZ is at least 100 feet wide. The remainder of Harborwalk shall be 12 feet clear, consistent with what was approved in the <i>South Boston MHP</i> . (see <i>Table 6-1, Summary of Chapter 91 Substitutions and Offsets</i>).
310 CMR 9.53	Activation of Commonwealth Tidelands		

Regulation Reference	Requirement or Standard	Compliance: Existing Conditions	Compliance: <i>MHP Amendment</i>
9.53(2)(a)	Water-based facility to promote public water-based activity	Would meet the required standard through provision of a small boat launching and docking facility. Provision of additional facilities not required because the area is beyond the limits established for water-transportation in the <i>DEP Draft Water Transportation Policy</i> , if it is adopted.	Would meet the required standard through provision of small boat launching and docking facility that would be larger and in a more appropriate location than previously envisioned as part of the amnesty license for the area. Provision of additional facilities would not be required because the area is beyond the limits established for water-transportation in the <i>DEP Draft Water Transportation Policy</i> , if it is adopted.
9.53(2)(b)	Exterior open space for public recreation	Does not comply.	Meets open space proportion standards equivalent to at least 50% of site area. The public open space will be managed and operated according to an approved open space management plan to govern year-round use during the entire term of the license.
9.53(2)(c)	Facilities of Public Accommodation	Does not comply to the extent that the existing buildings do not provide facilities of public accommodation along the ground level.	Will fully comply through adherence to standard requirements and interpretations employed by DEP to implement this regulation, including the standard that, at a maximum, ground floor accessory uses to upper floor facilities of private accommodation must not exceed 25% of the area of the building footprint.

Regulation Reference	Requirement or Standard	Compliance: Existing Conditions	Compliance: <i>MHP Amendment</i>
310 CMR 9.54	Compliance with MCZM Policies	Does not comply with several policies.	Complies with all applicable policies as proposed in this amendment.

1.6 Summary of Proposed Substitutions, Offsets, and Amplifications

Municipal Harbor Plans serve to inform and guide state agency actions affecting the implementation of waterway management programs at the local level. Approved plans provide direct assistance to DEP in making regulatory decisions pursuant to Chapter 91 that are responsive to municipal objectives and priorities, harbor specific conditions and other local and regional circumstances.

The numeric standards of the Waterways regulations for nonwater-dependent use projects that are the subject of substitute provisions in this amendment are contained in the following regulations:

- 310 CMR 9.51: Conservation of Capacity for Water-Dependent Use - The standards of this section are intended to prevent nonwater-dependent use projects from unreasonably diminishing the capacity of tidelands to accommodate water-dependent uses.
- 310 CMR 9.52: Utilization of Shoreline for Water-Dependent Purposes – The standards of this section are intended to ensure that those projects that have fill or structures within tideland provide a reasonable part of these lands for water-dependent use.

This *MHP Amendment* seeks flexibility from established Chapter 91 dimensions to widen the public access network, to promote a more appropriate configuration of the water-dependent use zone, and to provide for an appropriate ground level environment for this area of the harbor.

This *MHP Amendment* also amplifies certain requirements associated with two aspects of the regulations. In regards to both 310 CMR 9.52: Utilization of Shoreline for Water-Dependent Purposes and 310 CMR 9.53: Activation of Commonwealth Tidelands for Public Use, amplifications of the regulations will serve to implement the *Fort Point Channel Watersheet Activation Plan*.

The proposed substitutions, offsets and amplification are summarized below and described in more detail in the balance of this document.

1.6.1 Public Access Network

This *MHP Amendment* will substitute a minimum width requirement for a public access network from the standard 10 feet (301 CMR 9.52(1)(b)) to 18 feet clear in areas where the WDUZ is at least 100- feet wide. In areas where the WDUZ is less than 100 feet, the public access network shall be 12 feet clear. The proposed substitution is in keeping with the City's Harborwalk width requirements that are applied elsewhere along Boston Harbor, and direct benefit public access by requiring broader access ways. Since the proposed Harborwalk width is greater than required by standard provisions, this substitution requires no offsetting public benefit.

1.6.2 Preserving Area for Water-Dependent Uses

An amended provision will allow the reconfiguration of the standards for a water-dependent use zone (WDUZ) to maintain the *MHP Amendment* planning area's capacity for water-dependent use contained in 301CMR 9.51(3)(c). The reconfigured WDUZ is shown in *Figure 6-1*. The proposed reconfiguration will provide an alignment and organization that will locate public parks and open space in locations that provide direct continuity with the major open space spine that will be created as a centerpiece of the entire district. As a water-dependent use, the public open space that will be created will be amenable to both active and passive uses. A new structure, compatible in scale and character to the historic commercial architecture along Necco Court, will be permitted to be constructed within 18 feet of the project shoreline to help frame the open space, help activate and support the open space and pedestrian network through facilities of public accommodation along the ground level.

The substitute provision provides a mechanism for allowing individual projects to proceed through application and be licensed, while ensuring that the public purposes of Chapter 91 relating to preservation of an appropriate area for water-dependent uses are met continuously.

The substitute provision contained in this *MHP Amendment* will require an offsetting public benefit composed of deepened setback requirement for the WDUZ along most of the area's shoreline, extending to 110 feet. The total area allocated for the WDUZ will also be increased from 96,460 square feet to 96,800 square feet. The offsetting benefit will also include a requirement that the entire area of the WDUZ be improved or committed to in an approved, enforceable manner as a waterfront park prior to any development that would be within the WDUZ as defined by the baseline standards. This park will be required to comply with the design and management standards included in this *MHP Amendment*.

1.6.3 Appropriate Ground Level Environment

An amendment provision will adjust the building height requirements that are contained in 301CMR 9.51(3)(e). The typical Chapter 91 standards and revised building height standards are depicted in *Figures 6-2 and 6-3*. These revised standards set maximum building heights within the majority of the *MHP Amendment* planning area lower than those allowed by standard Chapter 91 provisions, while allowing additional height in a few locations. The substitute provision provides a mechanism for allowing individual projects to proceed through application and be licensed, while ensuring that the public purposes of Chapter 91 relating to an appropriate ground level environment are met continually, regardless of the sequential order of development.

These heights and the resulting potential building massing were determined through an extensive planning process, and will replace the substitute provisions for this area contained within the *South Boston MHP*. In general, the resulting massing is intended to provide for building heights that are appropriate to the character of the dense urban district that defines this area of the harbor. At the same time, the location and distribution of building heights on the *MHP Amendment* planning area is consistent with the goals, set forth by the *100 Acres Master Plan*, of providing a ground level environment highly conducive to waterfront access, open space and public activation. Rather than providing for a stepped massing that could result in very tall structures adjacent to the existing and historic neighborhood context of buildings at the edges of the planning area, this massing approach provides for relatively taller building heights towards the center of the planning area (180 feet), with lower heights towards the edges, in increments of 80 feet, 100 feet and 150 feet.

This approach greatly reduces the potential height of buildings for significant portions of the planning area relative to the heights that would be allowable within the standard Chapter 91 regulatory requirements. This approach has been specifically tailored to improve the ground level conditions associated with new development relative to the massing and open space configuration for the area described in the *South Boston MHP*.

This building height strategy adopts a more generalized approach to building heights than had been provided within the *South Boston MHP*. In part, this revision reflects a reorganization of building heights for new structures along the edges of the existing historic district to the north and east that are more compatible with the existing historic buildings. This additional consideration reflects the Secretary's *Decision* and the requirement that the BRA ensure compatibility with the existing historic character of the built environment.

The resulting potential building volume that could be created using the revised standard remains substantially lower than would be provided through a general principle contained in the *South Boston MHP*. The *South Boston MHP* was prepared using a guideline that the total building volume provided as a result of substitute height provision be no more than the volume that would be permitted using the baseline standards contained in 310 CMR 9.51(3)(e). The existing standards associated with the *South*

Boston MHP, unless modified through these substitute provisions, would have allowed a range of approximately 3.7 million to 4.5 million square feet of buildings to be constructed within the amendment planning area. Under the substitute provisions in this *MHP Amendment*, this volume would be reduced to approximately 1.9 million square feet.

Preliminary evaluations of the effects on the ground level environment were performed for the massing envelopes described by the building height and open space configurations contained in this *MHP Amendment*. These assessments employed the technical methodologies that have been used in Boston's previous municipal harbor planning processes. The results of wind evaluations indicate that no detrimental conditions are expected to occur in the pedestrian level environment, and that the wind levels will be conducive to the active and passive uses that are planned for this area of the harbor. Technical evaluations of net incremental shadow clearly indicate the benefits of providing the massing approach provided though the substitute provisions relative to the shadows that would result from the massing permitted using the standard regulations. Furthermore, the location and configuration of the building and open space areas have been planned to provide a high quality and appropriate environment along areas where pedestrians are encouraged to walk and enjoy an active district and open spaces along the water's edge.

This *MHP Amendment* provides requirements for offsetting public benefits associated with the reallocation of building heights that are consistent with the standards employed and approved in the *South Boston MHP*. This *MHP Amendment* provides for an increase in open space and public open space to offset creation of net new shadow beyond the Chapter 91 standard limits, as further described in Section 6.2.3 of this document.

This approach to offsetting public open space for areas of net new shadow is unchanged from the *South Boston MHP* and as approved in the Secretary's *Decision*. There are two categories of required offsets.

The first category of offsets considers the public benefits of projects where there will be reduced height limits relative to the standard provisions of Chapter 91. In keeping with the approach contained in the *South Boston MHP*, public benefits will be considered to be attained on all of the land covered by buildings that adhere to reduced height standards.

The second category of offsets considers the public benefit that will be required to balance net new shadows created by buildings that exceed the height limits that would be applicable in the absence of an approved municipal harbor plan. Again in keeping with the strategy established in the *South Boston MHP*, the required offset would allow provision of public open space beyond the minimum standard otherwise required in the approved *South Boston MHP*.

1.6.4 Amplifications for Projects that include a Water-Dependent Use Zone

The MHP process provides an opportunity to tailor the public benefits that will be required to best meet the public needs for access and use of the area of the harbor. The amplifications are directed towards the licensing of projects that include a Water-Dependent Use Zone (WDUZ). In this regard, this MHP Amendment provides guidance that will direct public benefits associated with utilization of the shoreline and activation of Commonwealth Tidelands to implement the *Fort Point Channel Watersheet Activation Plan*.

This approach will support the coordinated provision of improvements and programs through the implementation of requirements associated with the following portions of the Chapter 91 regulations:

- Utilization of the Project Shoreline: Pedestrian Network (9.52)
- Activation of Commonwealth Tidelands for Public Use (9.53)

- Provision for Public Activity 9.53(2)
- Facilities for Water-Based Public Activity 9.53(2)(a)
- Interior Facilities of Public Accommodation 9.53(2)(c)
- Management Plan 9.53(2)(d)
- Off-Site Benefits 9.53(2)(e)

Additional descriptions and guidance regarding the *Fort Point Channel Watersheet Activation Plan* are contained in both Section 8 and Appendix 1 of this *MHP Amendment*.

1.7 Project Phasing and Licensing

The development of projects within this *MHP Amendment* planning area is expected to be phased. In part, phasing will be required in order to provide the infrastructure of structured parking, streets and utilities in an orderly manner, so that adequate infrastructure is appropriately in place as needed for the new uses that will occur here. In addition, the specific content of various phases cannot be predicted nor usefully limited in advance, as they must be able to respond to market forces in terms of timing, type and amount of uses.

As a result, this *MHP Amendment* anticipates a process for phased Chapter 91 licenses similar to that previously employed for the Fan Pier consequent to the approval of the *South Boston Waterfront District Municipal Harbor Plan*. This process allows a Waterways Application for an overall project area, leading to a Consolidated Written Determination (CWD) by the Department of Environmental Protection. This can then be followed by separate licenses for individual phases or projects, as long as they are consistent with the CWD and the conditions that are listed within it. The conditions of the CWD will establish enforceable commitments to achieve full compliance with the requirements of Chapter 91 regulations and this *MHP Amendment* for the overall area, while allowing flexibility within individual phases.

The following is the recommended list of conditions for approval appropriate for phased and separate licenses, based on the CWD that was prepared for the Fan Pier (June 28, 2002):

- Individual projects and phases should be consistent with the approved *South Boston MHP* (as amended and subsequently approved), and nothing in the CWD should be interpreted as authorizing or requiring anything that is inconsistent with those documents.
- The CWD should remain valid for five (5) years.
- Due to the scale and complexity associated with development in the planning area, extensions of the CWD should be allowed through a written request at least thirty (30) days prior to its expiration; such approval should not be unreasonably withheld.

Consistency with the CWD will be employed as the criteria for individual project licensing approval. A license application for an individual project or phase must:

- Be consistent with, and not preclude, complete implementation of the overall plan as approved in the CWD, including any qualifications, limitations, conditions, or numerical requirements contained in the CWD for the overall project area
- Meet all applicable conditions of the CWD
- Conform to the building and site layout as submitted in the application for a CWD

- Propose no new uses not listed in the CWD, except for insignificant changes in use that maintain or enhance public benefits of the project
- Balance any increases in building footprint by corresponding decreases in allowable building footprints for subsequent phases, up to a maximum of ten (10) percent of the building footprints as described in this *MHP Amendment*

The procedures associated with the issuance of multiple licenses pursuant to a CWD should be the same as those applicable to the Fan Pier process.

1.8 License Term: Special Requirements

This *MHP Amendment* anticipates license applications for extended license terms, which are necessary for project financing and conveyances of condominium units. The City supports extended license terms of 99 years. This support is based on a review of the applicable criteria listed in 310 CMR 9.15. Important public goals linked to the extension of the license term include:

- Consistency with the MHP - Such an extension is consistent with the purposes articulated in the *South Boston MHP* and this *MHP Amendment*
- The City is seeking long-term redevelopment of this area that will require construction of buildings and improvements with expected lives consistent with the maximum licensable period
- The reinvestment sought in this area of the harbor will require secure financing that is anticipated to be contingent upon extended licensing of a maximum term.

If DEP determines that additional public benefits above those directly provided through the implementation of the project are required for extended license terms, such benefits should be directed to support and be consistent with City waterfront plans including the *Fort Point Channel Watersheet Activation Plan* and the *Boston Inner Harbor Passenger Water Transportation Plan*.



aerial by: www.lesvants.com

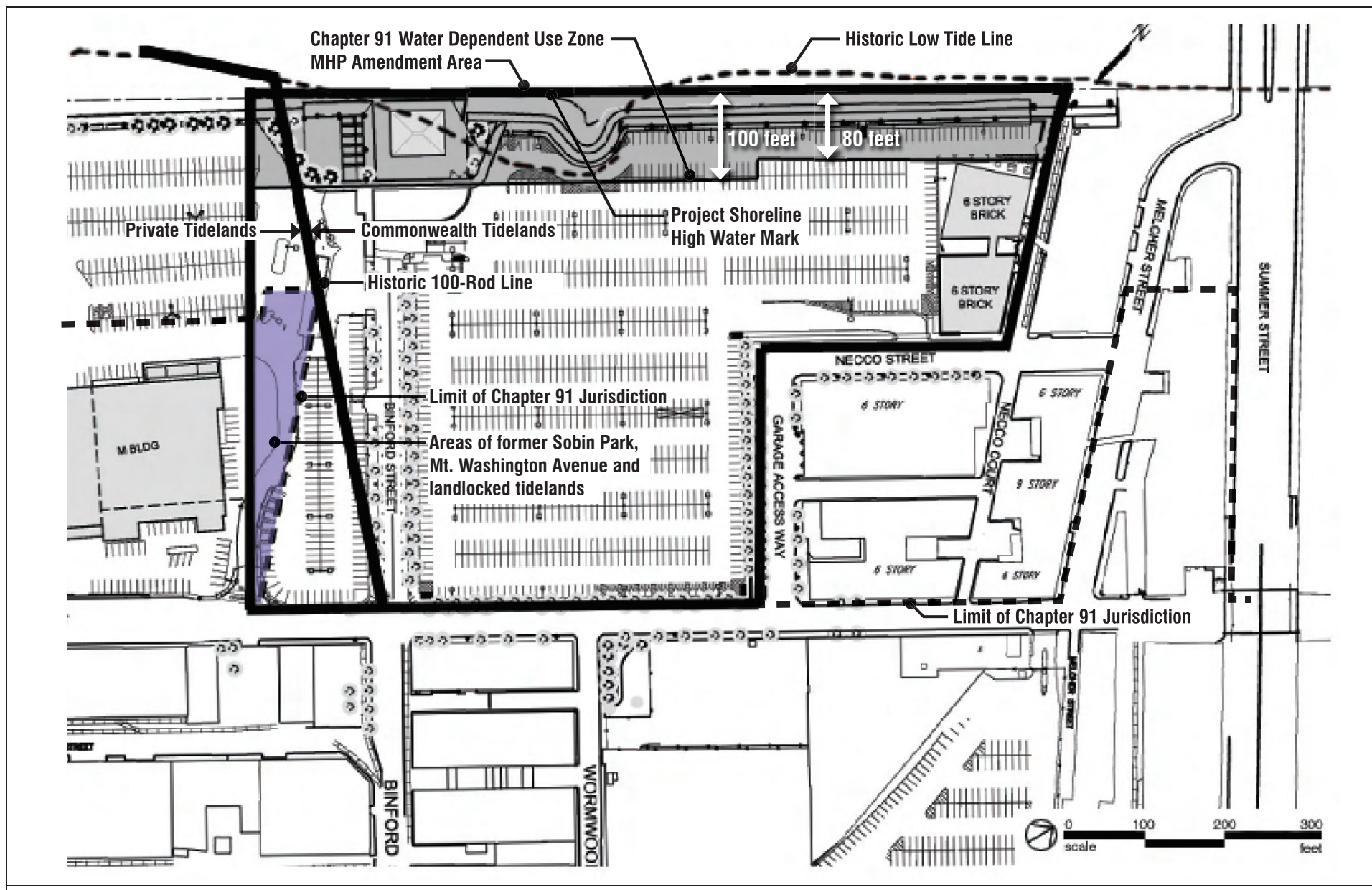
DRAFT: For internal review only
South Boston Municipal Harbor Plan Amendment
Fort Point District South

Figure 1-1
Fort Point Channel Aerial View



DRAFT: For internal review only
South Boston Municipal Harbor Plan Amendment
Fort Point District South

Figure 1-2
MHP Amendment Planning Area



DRAFT: For internal review only
 South Boston Municipal Harbor Plan Amendment
 Fort Point District South

Figure 1-3
 Chapter 91 Regulatory Limits

2. PROCESS FOR APPROVAL AND IMPLEMENTATION

The City of Boston and The Commonwealth of Massachusetts have established processes for the review and approval of an amendment to an existing Municipal Harbor Plan (MHP).

2.1 The Public Process for the Municipal Harbor Plan

An amendment to the City's Municipal Harbor Plan, in this case the *South Boston Waterfront District Municipal Harbor Plan (South Boston MHP)*, is prepared by the Boston Redevelopment Authority (BRA) staff. This includes the participation of its Municipal Harbor Planning Advisory Committee (MHPAC) in reviewing a draft amendment during its preparation and prior to review and adoption by the Board of the BRA. Members of the MHPAC are also on the Fort Point 100 Acres Advisory Committee, which was appointed in 2003. Members of the committee have been included in the public process for the *100 Acres Master Plan* and have provided input on the substitution provisions described in this *Fort Point District South Municipal Harbor Plan Amendment (MHP Amendment)*.

A parallel adoption process by the Commonwealth, which allows the Secretary of Environmental Affairs to approve an amendment to an Approved Plan (301 CMR 23.06(1)), is formalized within the regulations for the review and approval of Municipal Harbor Plans (301 CMR 23.00, the "MHP Regulations"). This process includes review of the City's submittal, public notice and distribution, public comment and a public hearing, and issuance of a written decision by the Secretary of Environmental Affairs.

The standards for approval that should be met by this *MHP Amendment* stipulate that:

- The plan be consistent with all applicable MCZM Policies.
- The plan be consistent with the policy objectives and regulatory principles contained in 310 CMR 9.00 (Chapter 91). Where substitute provisions are provided for discretionary and applicable portions of §9.51(3)(a) through (e), §9.52(1)(b)(1) or §9.53(2)(b) and (c), the provisions should accomplish comparable regulatory purposes (subject to the Secretary's determination).
- The plan include all feasible measures to achieve compatibility with the plans and planned activities of all state agencies owning real property or responsible for the implementation and development of plans within the harbor planning area.
- The plan include enforceable implementation commitments to ensure that all measures will be taken to offset the effect of any plan requirement less restrictive than those contained in Chapter 91 (in a timely and coordinated manner).

The draft *MHP Amendment* will be reviewed by the City's Harbor Planning Advisory Committee in meetings that will be open to the public. During these meetings the public may pose questions or make comments to the proposed plan elements and measures. Upon approval of this *MHP Amendment* by the City and the Commonwealth, the substitute provisions and offsetting provisions will be implemented as a condition on local and state approvals.

The procedure outlined in 301 CMR 23.04 also contains provisions for further public comment and a public hearing to be conducted by CZM, which afford additional opportunities for public input on this document.

2.2 Use and Density Regulations

In order for this *MHP Amendment* to take effect, the City will implement new permanent zoning that incorporates the effective provisions of this document and the conditions set forth by the *Decision* of the Secretary of Environmental Affairs relevant to its approval.

The BRA will authorize any proposed zoning changes before recommending them to the Zoning Commission for their approval and adoption to ensure conformity. The zoning changes will require a public hearing, after which the Zoning Commission will present the proposed zoning amendment to the Mayor for his approval.

Upon approval of the zoning, the City will require future projects to comply with the same use and density requirements for projects within the *MHP Amendment* planning area as will be required for Chapter 91 license approval. Both approvals, using the same standards, will be necessary for a project to be implemented.

2.3 Planned Development Areas

The *South Boston MHP* proposes that substitute provisions for Chapter 91 requirements, and in particular for open space, be approached as part of an open space “aggregation program”. As part of this approach, an open space aggregation program would be proposed for a large planning area instead of separate open space substitute provisions for individual development parcels.

The Secretary of Environmental Affairs agreed in his *Decision on The City of Boston’s South Boston Waterfront District Municipal Harbor Plan (Decision)* that this approach was consistent with previous Chapter 91 licensing decisions when an area is in common ownership and submitted as one project, and therefore this approach would eliminate the need for separate and smaller open space substitute provisions (as long as the area of aggregate open space is at least equal to the area that would be provided under strict application of Chapter 91).

The Secretary also requested that a management plan for the entire area, specifying guidelines for the location, management and implementation of the aggregate open space program, accompany the MEPA submittal and be included as a condition of the Chapter 91 license.

A Planned Development Area is the zoning mechanism within the Boston Zoning Code that offers more flexibility and more adequate results for the implementation of this type of “aggregate” approach. Its implementation is contemplated as part of planning recommendations envisioned for the district within the *100 Acres Master Plan*.

The open space aggregation program may also be implemented through a phased licensing approach through an area-wide application and Comprehensive Written Determination (CWD). This approach is provided in this *MHP Amendment*, as discussed above. This implementation approach has been employed by the Secretary of Environmental Affairs for other areas of the South Boston Waterfront District (Fan Pier project).

3. HISTORIC AND PLANNING BACKGROUND

Multiple planning initiatives and development projects have been completed in the South Boston Waterfront over the last twenty years. Each one of these derived a set of planning principles to guide future development in the district. However, all of these initiatives share a common planning goal: to activate the South Boston waterfront with water-dependent uses, public amenities, and commercial and residential uses. This section makes reference to the key planning initiatives and projects that have provided a basis for this *Fort Point District South Municipal Harbor Plan Amendment (MHP Amendment)*.

3.1 History of the South Boston Waterfront

Earlier maps of Boston show the majority of the area that we know today as the South Boston Waterfront as being tidal mud flats – the Dorchester Flatts, according to the Pelham map of 1777. English settlers established a rudimentary community on a nearby peninsula, Dorchester Neck, as early as 1630. Through the years, a dense settlement evolved on the peninsula relying on fishing and maritime commercial activities, later becoming known as South Boston.

The 1852 Chesbrough map shows the Fort Point Channel as a navigational channel providing access to the South Bay and clearly defined by filled tidelands on both sides. Three bridges connect both sides of the channel – a railroad bridge roughly following today’s CSX/MBTA commuter rail alignment, and two roadway bridges roughly aligned with today’s West Fourth Street and Dorchester Avenue. Boston Wharf is shown as a large landfill area expanding between West Second Street and Mt. Washington Avenue (chartered on the map).

Landfill operations continued during the second half of the 19th Century creating over 750 acres of new land on what had originally been tidal mud flats. Shipping docks, wharves, rail yards, railroad ferry operations and manufacturing were established in the area. South Boston became the marine industrial center of the city, and a flourishing seafood processing industry developed along the waterfront.

Types of employment shifted from iron, glasswork, rail and ferry shipping industries to machinery, brick, wagon, soap, elevator and beer manufacturing. In 1905, based on the revolutionary notion of creating a disposable razor blade cut from strips of thin sheet steel, the Gillette Safety Razor Company opened its South Boston plant next to the Fort Point Channel. The company relied on the Channel as its direct shipping route and used it as a natural resource for manufacturing cooling processes. Later, as its shipping modes shifted to the container shipping method and relied increasingly on vehicular transportation, truck routes were designated in South Boston to provide truck access to keep these industrial uses viable.

The role of the South Boston waterfront as an industrial and shipping center started to decline as truck and air transportation became the preferred modes for distribution and delivery. In the 1960s new concepts for land and marine cargo transportation, container shipping and economic development began to transform the look and feel of the waterfront. City planning initiatives that support redevelopment and public access along the water fostered the development of new commercial, civic and residential uses in places where industrial activities are not viable. State and local regulations aimed at preserving the capacity for water-dependent uses and activities along the water have resulted in the provision of public open space and amenities available for everybody’s enjoyment.

In recent years, the City’s economy has shifted toward service-oriented industries. The convention and tourism/cultural industry are now an integral part of the South Boston Waterfront District with the opening of the Boston Convention and Exhibition Center in June 2004. The Fort Point Channel is located between the new convention facility and the downtown financial district. As a result, the 100 Acres area has the potential to incorporate other uses in addition to the industrial, such as warehouse, office, research and development, commercial, retail, residential and artist live-work spaces.

3.2 History of the Fort Point Channel

Fort Point Channel was originally laid out in 1837, and the original granite seawalls were built soon thereafter. During subsequent years, the Boston Wharf Company and other enterprises continued with landfill operations along the channel, which culminated in the creation of a large railroad terminus on what is today called the Fan Pier. The Boston Wharf Company developed buildings that were used for storage and distribution of lumber and sugar, and that constitute much of what is today the Fort Point Historic Subdistrict. Additional bridges crossed the channel, and the South Bay was eventually filled south of West Fourth/East Berkeley Street.

Soon after its opening at the center of what is known today as the Fort Point Industrial District, the Gillette Safety Razor Company began exporting razors and shaving products worldwide. Today it employs over 1,800 people, which makes it the largest manufacturer in the city, and one of the largest razor and blade manufacturing plants in the world. The plant remains The Gillette Company's World Shaving Headquarters today, and still relies on waters from the channel to cool its mechanical processes.

Gillette has been instrumental in supporting the preparation of the *100 Acres Master Plan* - the master planning effort undertaken as a result of the Secretary's *Decision on The City of Boston's South Boston Waterfront District Municipal Harbor Plan (Decision)* dated December 6, 2000. The company owns over 12 acres of land in the Fort Point District South that are subject to Chapter 91 jurisdiction and are the focus of this *MHP Amendment*.

The Fort Point Channel area was once a bustling component of the Port of Boston. As Boston grew and became more densely settled as an urban area, and as the needs of 21st century port users have changed, water-dependent industrial uses have been consolidated into modern port areas such as the South Boston Marine Industrial Park. The Channel now hosts three water-dependent uses including the Gillette Facility. The Channel is currently constrained by the clearances below both the Old Northern Avenue Bridge when closed and the Moakley Bridge, and even more so by the Congress and Summer Street Bridges. The area is not suitable for significant additional port-related industrial land use, but is suitable for other industrial, manufacturing and non-navigational water-dependent uses.

The Fort Point District is an active artist community. Artists were attracted to the area by the architectural character and adaptability of the warehouse buildings originally built by the Boston Wharf Company between 1880 and 1920. In the 1970s, they created co-operative studios as their live/work spaces and established art galleries and open studio activities taking advantage of relatively low rents. The artists' work includes jewelry, lighting, painting, mixed media, sculpture, photography, clay pottery, textile, handbag and ceramic designs. Shops and craft stores that support artist work have opened within the 100 Acres. Local artist community organizations have contributed major revitalization initiatives to the area and created a strong art district character.

Planning and construction of the Massachusetts Turnpike (I-90) extension connecting Boston to Logan Airport below the water has had a substantial impact on the Fort Point Channel area. The Fort Point District South, subject of this *MHP Amendment*, was used as a construction site and staging area for the Turnpike extension during most of the 1990s. Now that construction is over and traffic flows through a tunnel located underneath the site, the area is open again to new planning and redevelopment initiatives.

3.3 Harborpark Plan: The City of Boston Municipal Harbor Plan, BRA, 1990

The *City of Boston Municipal Harbor Plan*, also called the *Harborpark Plan*, was approved by the state's Secretary of the Executive Office of Environmental Affairs in May 1991. In this plan, the City addressed a broad geographic area based on the City's Harborpark zoning districts that extend from the Charlestown waterfront to South Boston. Although the Fort Point District was not part of the planning

area, the baseline planning and design requirements (including those for the Harborwalk) have been consistently carried over to the Fort Point District by the BRA through the design review and zoning processes.

The Harborwalk is a continuous public walkway along the City's waterfront edge. The Harborwalk System connects the City's neighborhoods to the harbor, leading to recreational, cultural and historic attractions, and direct connections to public transit, including water transportation facilities. Over 31 miles of Harborwalk either have been completed or are under construction. When completed, Harborwalk will stretch over 47 miles linking Dorchester to East Boston. Approximately 1,000 linear feet of Harborwalk in the Fort Point District South will be improved and maintained as a result of the provisions of this *MHP Amendment*.

The foregoing calculations do not include the upland areas over which The Gillette Company donated public easements for the portions of the Harborwalk running from the southerly boundary of this *MHP Amendment* planning area in a southerly direction to Dorchester Avenue. Those donations affected about 47,322 square feet of public open space fronting on the Fort Point Channel within the so-called Channel-walk Easement, as well as an additional 726 square feet of public access area along Dorchester Avenue in two Public Access easements, for a total of 49,048 square feet of donated open space. These donations, which were extremely costly to The Gillette Company in terms of available parking and in terms of potential development of its land, also enabled the Central Artery/Third Harbor Tunnel Project to perform certain pre-existing mitigation obligations within the area of these donated parcels at significantly reduced cost, resulting in creation of approximately 1,200 linear feet of Harborwalk south of the *MHP Amendment* planning area. Although The Gillette Company is not receiving credit within this *MHP Amendment* for the creation of those donated spaces, the City feels that it is appropriate that such donations of open spaces be recognized as open spaces for purposes of any further amendments to the *South Boston Waterfront District Municipal Harbor Plan (South Boston MHP)* or any future Chapter 91 licenses, in either case relating to the portions of the Fort Point Channel Industrial District presently owned by The Gillette Company.

3.4 The South Boston Public Realm Plan, BRA, 1999

In 1999, the Boston Redevelopment Authority issued a public realm plan for the South Boston Waterfront called "*The Seaport Public Realm Plan*" (*Public Realm Plan*). This plan established a set of planning principles that became the waterfront's planning framework and set the basis for the *South Boston MHP* and this document. These principles include the following:

- Promote access to Boston Harbor as a shared natural resource to connect people, land and water.
- Preserve and enhance the industrial port and balance the growth of mixed-use and recreational activities along Boston Harbor with the needs of maritime commerce.
- Plan the district as a vital mixed-use neighborhood that expands the City's residential communities and provides a lively mix of open space, civic, cultural, water-transit and commercial uses, and offers job opportunities that are mutually supportive and bring activity to the waterfront.
- Develop the district as an integral part of Boston's economy, enhancing the City's manufacturing, hotel, commercial office, retail and visitor industries, and securing its position as an economic catalyst for the region.

- Ensure that the South Boston residential community and all neighborhoods of the City are not only protected from potential impacts of development, but share in the benefits of private investment.

The *Public Realm Plan* emphasizes three major strategies. As part of the first strategy, the waterfront can be defined into three subareas. Each relates to a body of water and with its own unique character. These subareas include the Fort Point Channel District, the Piers District and the Reserved Channel District.

The plan addresses the unique opportunities specifically associated with Fort Point Channel and its importance as a great public space between the Downtown and the South Boston Waterfront. The plan envisions the Fort Point Channel as an intimately scaled, narrow channel similar to a riverfront in the heart of an historic European-style city with active edges, small boats, and abundance of water activities, with multiple bridge crossings. The land area along the eastern edge of Fort Point Channel and extending to the harbor is envisioned as hosting the most diverse mix of uses in the entire planning area, with public, civic, residential, retail, hotel, commercial, industrial, manufacturing, warehouse, research and development, and office uses.

The second strategy is to strengthen street connections that link new and existing developments to the water. The two connecting orientations include the east-west connection to downtown and the north-south connections to the South Boston community and the Harbor. These connections will be strengthened both through new streets and improvements to existing streets, open space and pedestrian links.

The third element is ensuring mixed-use neighborhoods with strong residential components throughout the waterfront area. The plan's recommendation is not to create another downtown district dominated by office and other commercial uses that go dark after 6 o'clock in the afternoon and on the weekends. Rather, the plan advocates an appropriate mix of retail, office, hotel, residential, open space and community facilities which will bring life to the waterfront and create an active and rich 24-hour district.

The *Public Realm Plan* provides the following specific guidelines and recommendations for the Fort Point Channel area:

- Encourage residential, cultural, civic, retail, restaurant, recreation and entertainment uses closer to the waterfront.
- Protect and enhance industrial, manufacturing, warehouse, research and development and office uses in South Boston, and preserve the economic viability of water-dependent users reliant upon the Harbor and the Channel.
- Support development of affordable housing throughout the South Boston neighborhood including artist live-work space in the Fort Point Historic District.
- Provide well-paying jobs at a variety of skill levels that are part of a diverse economy including in the port and industrial sectors.
- Design a compact walkable environment with small-scaled streets, blocks and neighborhood parks with local connections to the waterfront.
- Appropriately integrate the new convention center into surrounding areas.
- Connect the Seaport to the proposed Urban Ring Transit System.

The *Public Realm Plan*'s buildout and design guidelines have been translated into the South Boston Interim Planning Overlay District (IPOD). The IPOD's "interim" status reflects the need for additional planning and analysis that is provided in both the *100 Acres Master Plan* and the previously completed *South Boston MHP*. In addition, the City's Leading the Way and Back Streets policies and the completion of the *Fort Point Channel Watersheet Activation Plan* have also resulted in modifications to the recommendations and principles in the Public Realm Plan and IPOD.

3.5 The South Boston Municipal Harbor Plan, BRA, 2000

In order to implement the *Public Realm Plan*, the BRA decided to prepare a Municipal Harbor Plan for the South Boston Waterfront to achieve a public realm more in keeping with Boston's urban character and mixed-use economy than would have resulted under the strict application of the State's Waterways Regulations. The *South Boston MHP* was submitted to the State's Executive Office of Environmental Affairs in July 2000.

A series of substitute use and dimensional requirements was presented with corresponding offset provisions that, when implemented, will create an inviting and active public waterfront environment. The principles upon which the City, working in concert with the Municipal Harbor Plan Advisory Committee, residents, landowners, and the State, based their work in the development of the *South Boston MHP* were intended to:

- Enhance open space access
- Avoid privatization of the shoreline
- Minimize adverse effects of wind and shadow
- Identify substitutions and quantifiable offsets to ensure enforceability
- Promote offsets that are valued by the public consistent with the opinions expressed in public comments
- Ensure that developments are carried out in a manner that protects public rights in both filled and flowed tidelands

The Fort Point Channel water body itself was addressed in the *South Boston Municipal Harbor Plan* and a set of planning objectives was created to relate the channel to the five main goals of the *Public Realm Plan*. These planning objectives are listed below:

- Promote access to Boston Harbor as a shared natural resource
- Preserve and enhance the industrial port
- Plan the district as a vital, mixed-use area
- Develop the district as an integral part of Boston's economy
- Enhance the South Boston community

In spite of the BRA's effort to incorporate all the stakeholders' concerns in developing the *South Boston MHP*, not all the planning issues in the Fort Point District South were fully addressed. The Gillette Company in particular was concerned about the potential impacts of adjacent residential and other non-

industrial development on the ability of the South Boston Manufacturing Center (SBMC), which generates a significant amount of truck and employee traffic, to remain at its current location. Additional concerns included the ability of the SBMC to receive raw materials, manufacture and package finished products and to move those finished products to market.

The Gillette Company undertook an extensive traffic study focused primarily on the intersections in South Boston, where acceptable traffic flows were most critical to ongoing manufacturing and distribution activities. That study concluded that there were a number of intersections in that group that potentially would be overburdened without additional planning of the Fort Point District South area, and coordination with other BRA's planning efforts for the balance of the approximately 1,000 acres of industrial/commercial land in South Boston.

The Secretary ultimately approved the *South Boston MHP* in December 2000, but only on the condition that the Fort Point District South and the Fort Point Industrial District be further master planned by the BRA to include detailed measures to protect industrial truck routes, and the definition of buffer zones to prevent conflicts among land uses. The master plan should also fully incorporate the needs of The Gillette Company, one of the largest water-dependent users in South Boston. This commitment by the BRA initiated the planning process of the *100 Acres Master Plan*, and the corresponding basis for this related *MHP Amendment*.

3.6 South Boston Transportation Study, BTB with BRA and Massport, 2000

The *South Boston Transportation Study* was prepared to examine the cumulative transportation impacts of all the land development envisioned in the *Public Realm Plan* for the South Boston Waterfront. The study analyzed the effects of infrastructure improvements and the transportation impacts of new development at several future milestones.

The study concluded that the new transportation system, completed in 2005, would be able to support the land development of approximately 27 million square feet projected for 2010, which includes 10 million square feet of net new development. Furthermore, the transportation system could accommodate the trips generated by 31 million square feet of development (with a net of 14 million new square feet) projected by year 2025, at which time the trips would begin to saturate the system's capacity. For the full buildout scenario projected for year 2040, the study finds that the currently planned transportation system cannot support the travel demand generated by the estimated 39 million square feet full buildout of the South Boston Waterfront District, and therefore will require additional transportation infrastructure not currently planned.

The study recommends that truck access to South Boston maritime and industrial areas should be preserved, suggesting that the South Boston Bypass/Haul Road abutting the Fort Point District South is extremely important for this access. By preserving truck routes, residential neighborhoods will be better protected from truck traffic. The study also indicates that more transit service connecting South Boston residents to the waterfront, with either significant capacity upgrades to the Silver Line or the construction of some other new high capacity transit or roadway improvements will be needed in the 2040 development scenario.

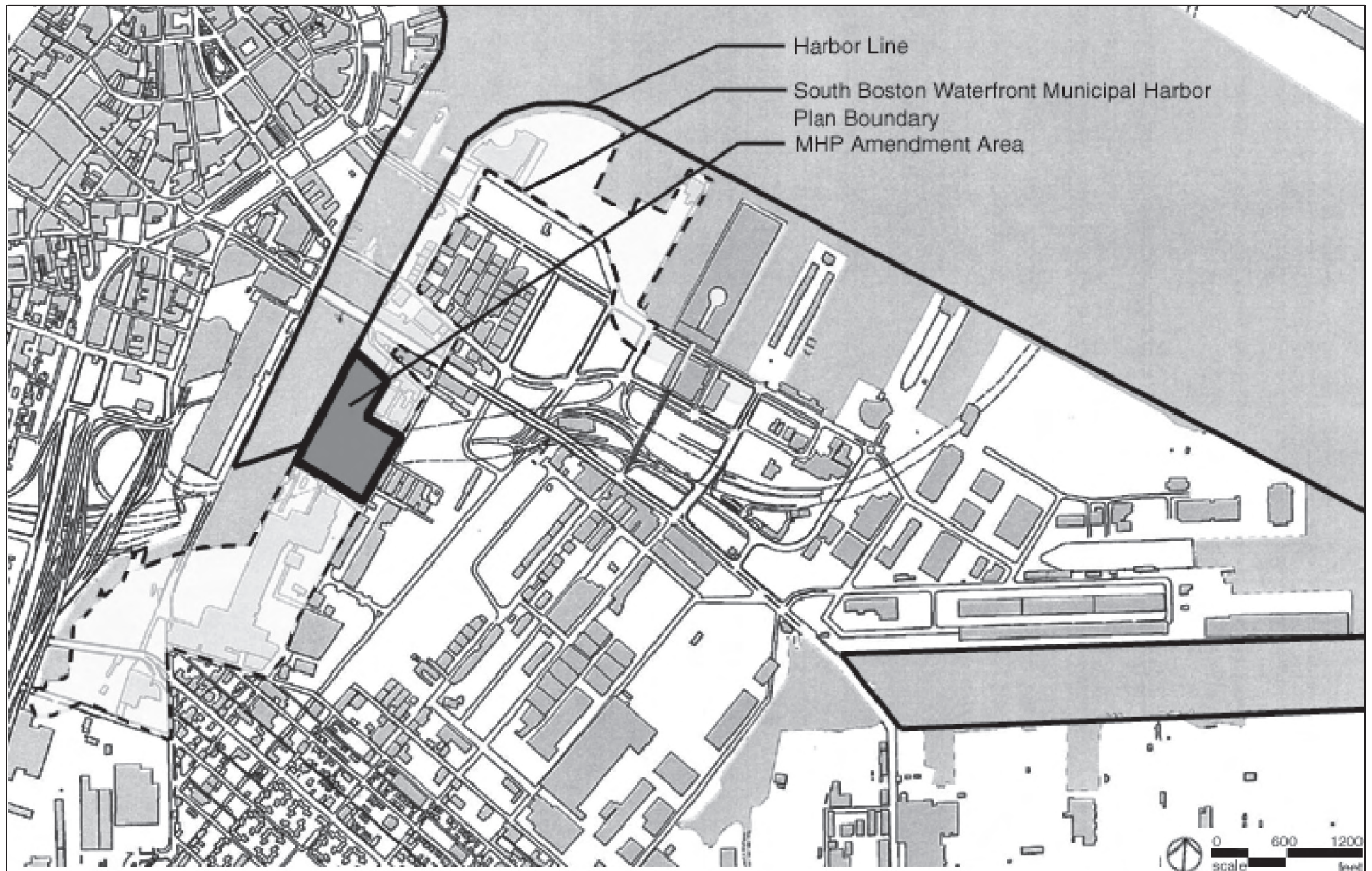
3.7 Boston Inner Harbor Passenger Water Transportation Plan, BRA, 2000

The greatest demand for increased public berthing space and expanded terminal facilities is along the downtown waterfront, particularly along spaces that relate to the central business district and visitor attractions. The first goal of this plan is to develop a state-of-the-art 21st century ferry system with an expanded and enhanced terminal and service network. Terminal sites were prioritized according to functionality, with secondary terminals providing space for the Inner Harbor network as opposed to those

serving longer distance, larger commuter ferries. No sites are identified within the basin adjacent to the *MHP Amendment* planning area due to low bridge clearances along the Fort Point Channel. However, smaller water taxi landings may be located at various points along the channel in the future.

3.8 The MBTA South Boston Piers/Fort Point Channel Transitway (Silver Line)

The Transitway is the 1.5-mile underground transit tunnel section of the Silver Line that will provide a direct transit link between the Boylston Green Line Station and the World Trade Center in the South Boston Piers area. The current segment just opened included the construction of the Transitway tunnel between South Station and the World Trade Center. This tunnel runs under Russia Wharf, 500 Atlantic Avenue, and the Fort Point Channel. The Transitway offers the Fort Point Channel area improved public transportation through the new Court House Station near Sleeper Street. Connections are provided to South Station, downtown Boston, development sites on the South Boston waterfront, and the entire regional mass transit network.



DRAFT: For internal review only
South Boston Municipal Harbor Plan Amendment
Fort Point District South

Figure 3-1
South Boston Waterfront Municipal Harbor Plan

4. FORT POINT CHANNEL PLANNING CONTEXT

Several planning studies and initiatives carried out in the recent past have focused exclusively on addressing planning issues and concerns specific to the Fort Point Channel area. The Fort Point Channel represents an invaluable recreational and environmental asset for Downtown Boston and for the City in general. Its significance as a navigational channel and waterway connecting parts of the harbor has diminished through the years, as the industrial character of South Boston and the South Bay has evolved. However, its value as a public amenity and landmark open space has increased substantially as the adjacent tidelands have become developed for commercial and tourism-related activities.

4.1 The Fort Point Channel Watersheet Activation Plan, 2002

During the development of the *South Boston Waterfront District Municipal Harbor Plan (South Boston MHP)* a group of interested individuals began to focus on the Fort Point Channel, ultimately recommending that a more detailed planning effort be undertaken for this important city resource. Out of these discussions came the proposal to develop the *Fort Point Channel Watersheet Activation Plan (Watersheet Activation Plan)*. This planning effort represents the cooperative and collaborative efforts of the BRA, Fort Point Channel Abutters Group, and the Fort Point Channel Working Group. The funding for this plan reflects this public-private partnership.

The *Watersheet Activation Plan* contemplates a number of public amenities designed to activate the Fort Point Channel. The construction of public access along the channel's edges, now largely in place due to the public-private partnerships between the Central Artery Project and various landowners such as The Gillette Company, is an example of such amenities. The Gillette Company has made nearly 2,200 linear feet of upland available for permanent and interim Harborwalk construction, along with associated open space, and the company has also agreed to absorb the significant annual cost of maintaining the Harborwalk in accordance with a detailed maintenance plan.

The plan further contemplates certain public uses in the so-called "Seawall Basin" south of Summer Street, including rowing, canoeing, racing, water taxiing, youth programs, water festivals, lantern festivals, paddle boats, kayaks, floating islands, floating art, floating horticultural displays, an art barge, model boat racing, light festivals and displays, a floating park, fountains, pedestrian bridge, small boat program, an interpretive water trail and tidal art.

These public uses will benefit from a number of improvements such as lighting of existing bridges, a floating pavilion, a public boating facility, a landside support facility, an art barge, and fountains, as well as a pedestrian bridge designed to link the 100 Acres area more closely to the existing and future transit facilities (subways, trains, buses) in the vicinity of South Station. The aggregate cost of the more significant improvements was estimated in the plan to be well in excess of \$10 million (not including dredging or the pedestrian bridge), with ongoing annual maintenance costs of several hundred thousand dollars. Once these numbers are adjusted for inflation and to include the omitted facilities, significantly larger expenditures will be needed.

Some initial public amenities that have been completed include the Harborwalk and Binford Street Park, and several benefits secured through the amnesty Chapter 91 Licenses for the Gillette (i.e., a proposed floating dock) and the former Boston Wharf companies.

The implementation plan calls for coordination between landside development and the watersheet activation plan. The Plan recommends elements that could be used by the Department of Environmental Protection as a menu to fulfill standard baseline requirements under the Chapter 91 state law, as well as substitute requirements such as amplifications and offsets identified in the city's *South Boston MHP*. The plan's priorities may also be achieved as Chapter 91 funded district-wide efforts or as mitigation for

specific development. This implementation strategy, recommended for all areas that fall within Chapter 91 jurisdiction on both sides of the Fort Point Channel including areas within the 100 Acres, is incorporated into the implementation of the *100 Acres Master Plan*.

The primary implementation funding sources will be from the private sector on both sides of the Fort Point Channel, through Chapter 91 and contributions from the public. It is anticipated that the implementation will require public grants, subsidies, and other contributions as well. These funds will be allocated for capital, maintenance, operations and programming costs.

The Friends of the Fort Point Channel, a non-profit organization the creation of which was recommended by the *Watersheet Activation Plan*, was formed in 2004. This group will help coordinate and program public events and attractions along the channel to provide year-round public use and enjoyment of the waterfront.

4.2 The Fort Point Downtown Waterfront Municipal Harbor Plan (Phases 1 and 2)

The *South Boston MHP* addressed planning issues and concerns relative to the implementation of the *Public Realm Plan* and Waterways regulations along the east side of Fort Point Channel. Subsequently the BRA initiated the preparation of the *Fort Point Downtown Waterfront Municipal Harbor Plan*, focusing on the Downtown side of the channel, including its watershed. This plan was done in two phases. *Phase 1* established general principles for the entire area, located between Atlantic Avenue and the Fort Point Channel, and limited by Northern Avenue to the north and West Fourth Street to the south. *Phase 1* also had a specific focus on the proposed development of 500 Atlantic Avenue, currently in the final stages of construction. *Phase 2* included the Fort Point Channel watershed and six large parcels along the water (Hook Lobster, 470 Atlantic Avenue, Russia Wharf, Federal Reserve Property, 245 Summer Street and the Postal Annex).

Although the nature and character of this area are strongly conditioned by its proximity to the Financial District, South Station and the Downtown, and are therefore very different from the 100 Acres and Fort Point District South, the *Fort Point Downtown Waterfront Municipal Harbor Plan* served to establish important principles and guidelines that are applicable to the east side of the channel. In particular, this plan proposes important strategies for activating the watershed, the ground floor of buildings and exterior waterfront areas, and planning guidelines for the design of public open spaces along the water.

Phase 2, in particular, establishes a framework for a Watersheet Management Plan and planning guidelines for watershed activation that are applicable to the entire channel, and represent a vehicle for the implementation of the *Watersheet Activation Plan*. Implementation steps recommended for the east bank of the channel include the completion of the Harborwalk and the South Bay Harbor Trail (described below), the creation of floating landings/platforms at several points, water taxi landings, the potential for a small boat concession, and the provision of a watershed vertical access link in the vicinity of Summer Street.

In advancing the goal of preserving and enhancing the viability of The Gillette Company as a water-dependent use as described in Section 1 of this *MHP Amendment*, the *Fort Point Downtown Waterfront Municipal Harbor Plan* contemplates that the implementation of the *Fort Point Channel Watersheet Activation Plan* would also include a Water Quality Protection Zone (WQPZ) in the vicinity of the Gillette intake structure. This structure is located on the southeast side of the Channel to the north of the so-called Mt. Washington Avenue Open Space. This WQPZ, which was intended to accommodate one of a number of Watersheet Private Uses referenced in Section 7.1.1. of the *Fort Point Downtown Waterfront Municipal Harbor Plan*, was established in order to provide a buffer between the public recreational activities taking place in the Channel and The Gillette Company's private operational needs. The BRA has recognized that such a WQPZ also will address security needs of The Gillette Company.

associated with the protection of the functionality of the South Boston Manufacturing Center from unlawful activity.

The *Fort Point Downtown Waterfront Municipal Harbor Plan* also contemplates that the WQPZ would be defined and then marked on charts of the Channel and noted by signs along the shoreline bulkhead. Such area was shown as a trapezoid with a longer parallel side of about 225 feet and a shorter parallel side of about 150 feet, extending approximately 75 feet from the edge of the seawall adjacent to the intake structure. Following further discussion with The Gillette Company, the BRA recommends that the implementation of the *Fort Point Downtown Waterfront Municipal Harbor Plan* reflect a WQPZ that is rectangular in shape, being 140 feet in length and 50 feet in width, centered on the intake structure and enclosed by a system of exclusion, such as an anchored buoy and chain system.

4.3 The Central Artery/Tunnel (CA/T) Project Mitigation Commitments

The Interstate 90 crossings of the Fort Point Channel and the construction of Ventilation Buildings 1 and 3 in the flowed and filled tidelands along the Channel have led to a number of proposed improvements to the Channel and the adjacent waterfront parcels. These improvements were identified in the CA/T Project Environmental Impact Report (EIR) and adopted in the 1993 final Chapter 91 Consolidated Written Determination for the CA/T Project (amended 1996). As described in the 1990 CA/T Project's Final Supplemental Environmental Impact Report (FSEIR), improvements proposed for the Fort Point Channel area include over 2,500 linear feet of public walkways in areas of the Fort Point Channel formerly not accessible to the public; the creation of open space on the west side of West Fourth Street and Broadway Bridges, Vent Building 1, corner of Wormwood and A streets and New Binford Street; the reconstruction of the Broadway and Dorchester Avenue Bridges; and the construction of the West Side Connector that was intended to improve traffic flows from A Street to the South Boston Bypass Road. Navigational improvements to the Channel include the removal of over 800 wooden pilings located throughout the Channel.

Early designs in 2000 had shown the Harborwalk on a pile-supported structure over the Channel along The Gillette Company's property. However, following lengthy discussions, an agreement between The Gillette Company, the BRA, DEP and the CA/T Project, which included a land swap, resulted in the construction of the Harborwalk on existing Gillette land along the Channel's edge. Gillette has assumed long-term maintenance responsibilities for the Harborwalk. This segment, linking Dorchester Avenue to Summer Street together with the approximately 20,000 square-foot New Binford Street Park opened in the summer of 2005. Additionally, the 8,000 square foot Wormwood Street Park was opened in November 2004, and will be maintained by the United States Postal Service.

4.4 The South Bay Harbor Trail System

The South Bay Harbor Trail is a 3.5-mile long pedestrian friendly bicycle trail that begins at Ruggles Station, and terminates at Fan Pier. It is the result of a collaborative partnership between the City of Boston, Mass Highway, and the South Bay Harbor Trail Coalition, led by Save the Harbor/Save the Bay. The trail has been designed to better connect the city's neighborhoods with a cleaner Harbor and revitalized waterfront and the new opportunities they provide for all Bostonians

When the trail is completed, it will connect Lower Roxbury, the South End, and Chinatown to Fort Point Channel and Boston Harbor. It will also connect South Boston and the Fort Point Channel to the South West Corridor and the Emerald Necklace. The trail will create linkages between neighborhoods and existing bike trail networks throughout the city. It will also establish an important two-way bicycle/pedestrian connection for residents from Roxbury, South End and Chinatown to the Fort Point Channel. People from South Boston will be able to connect to the Southwest Corridor Park System and the Emerald Necklace Park systems via this trail.

The project's final design will be completed by spring 2007, and construction is expected to begin shortly thereafter. When it is completed, it will provide healthy recreational opportunities and an important additional transportation alternative to the waterfront, the harbor, and the Boston Harbor Islands Park. Challenges, including the interface of pedestrians and bicyclists along the Harborwalk and grade changes at Summer Street, are addressed in the *100 Acres Master Plan* and this document.

4.5 The Fort Point Historic Subdistrict South

In order to better tailor analysis and recommendations to the special conditions prevailing in different areas within the South Boston Waterfront District, the *Public Realm Plan* and the *South Boston MHP* divided their planning areas into separate subdistricts, each with its particular character.

The Fort Point Historic Subdistrict is defined in the *South Boston MHP* as the area bounded by Northern Avenue to the north, West Service Road and the Massport Haul Road to the east, the Fort Point Industrial District to the south (where the Gillette Plant is located) and Fort Point Channel to the west. It is further subdivided into North and South subareas, based on their location relative to Summer Street. The historic subdistrict is characterized by its late nineteenth and early twentieth century ornamental brick warehouses originally built by the Boston Wharf Company, and by large tracts of land recently used as staging areas for the construction of the Central Artery/Third Harbor Tunnel project. The area subject of this *Fort Point District South Municipal Harbor Plan Amendment (MHP Amendment)* is located at the core of the Fort Point Historic Subdistrict South, and represents a significant opportunity for redevelopment and the creation of a new civic/commercial/residential community on what is now land used for commercial and employee parking.

The *South Boston MHP* established development guidelines for the subdistrict that aimed at preserving the historic buildings and allowing for new development generally consistent in building massing and height with the existing structures. Proposed building heights for the vacant parcels were lower than what Chapter 91 would allow on the site.

An important land use objective for the area is the provision of residential uses, although retail and commercial uses are also envisioned as mixed-use components that will support the creation of a neighborhood that is active both in the day and in the evening. Ground floor facilities of public accommodation, such as restaurants, supermarkets, retail establishments, and civic and cultural uses are proposed as elements to activate waterfront areas.

The *South Boston MHP* maintained the 50% lot coverage limit requirement of Chapter 91 for the Fort Point Historic Subdistrict South, although it did not set restrictions on the specific location and configuration of the space.

4.5.1 Proposed Subdistrict Boundary Revision

As a result of planning efforts that have been advanced subsequently to the preparation of the *South Boston MHP*, and that have culminated in the *100 Acres Master Plan* further detailed in the next section of this document, a revision of the original subdistrict boundary is proposed.

The original boundary followed the northerly sideline alignment of Mt. Washington Street, a former local street providing access to the Gillette properties. The boundary now has been adjusted to follow the alignment of a private way on Gillette property still referred to as Mt. Washington Ave, as shown in *Figure 4-1*.

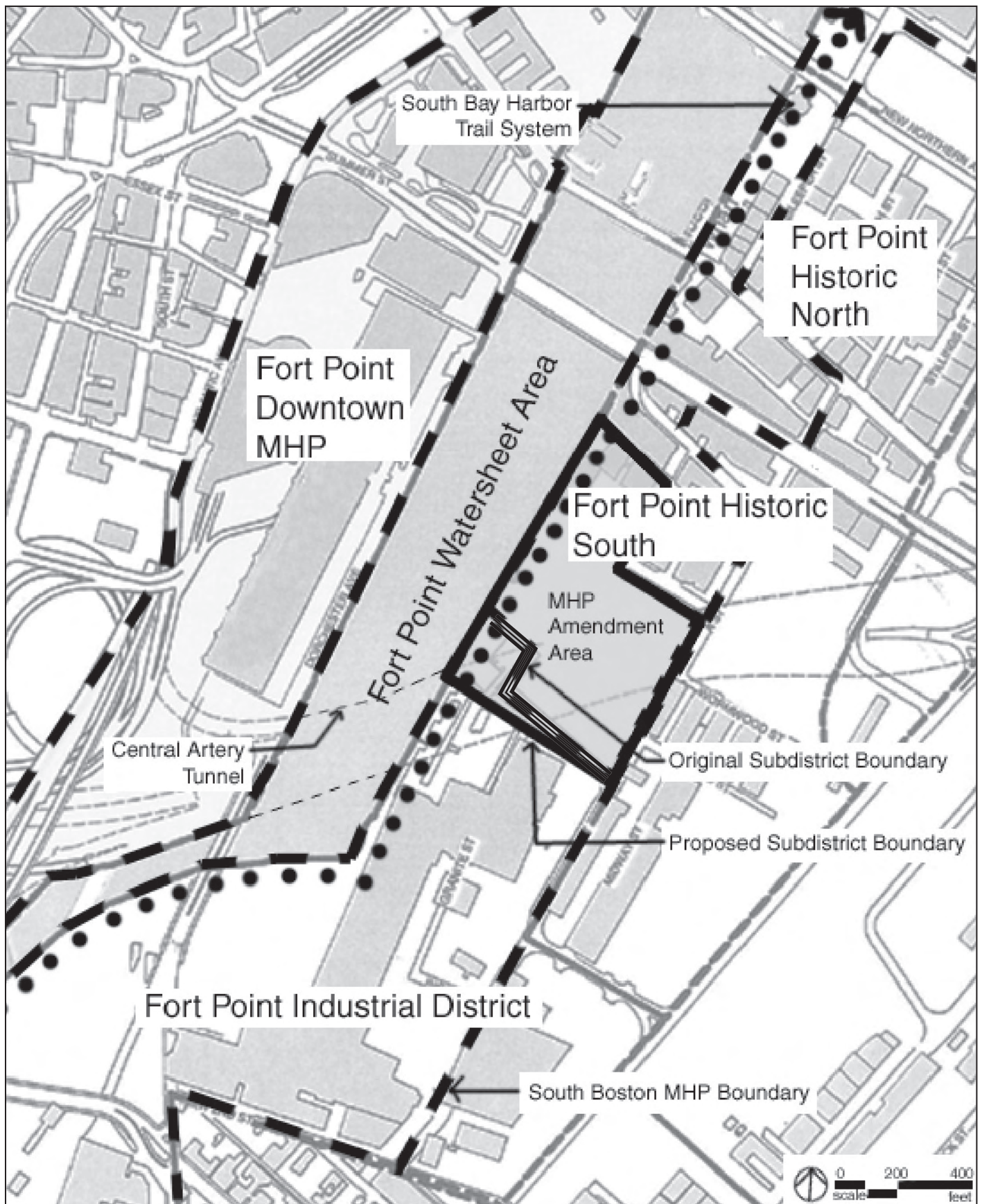
4.6 The MWRA Combined Sewer Overflow (CSO) Control Program for Fort Point Channel

Two CSO control projects have been planned to address the most significant discharges into the Channel. The Union Park Detention/Treatment Facility, with an anticipated construction completion date of March 2005, entails the construction of 2.2 million gallons of below grade storage to capture discharges caused by small storms, as well as facilities to disinfect and de-chlorinate flows that will continue to discharge into the Fort Point Channel. In June 2003, the MWRA submitted a Notice of Project Change to EOEa that recommends replacing the tunnel storage conduit with sewer separation improvements to the tributary area. Although this change was approved by EOEa, more attention to storm water control and treatment is required to improve the water quality of the channel.

The Boston Water and Sewer Commission (BWSC) has commenced construction on the installation of new storm drainage pipes in a number of streets in the 100 Acres area, including Summer Street, Melcher Street, Necco Street, and Necco Court, where the pipes are being connected to other major drainage systems operated by BWSC. It is anticipated that these improvements will address the existing issues appropriately.

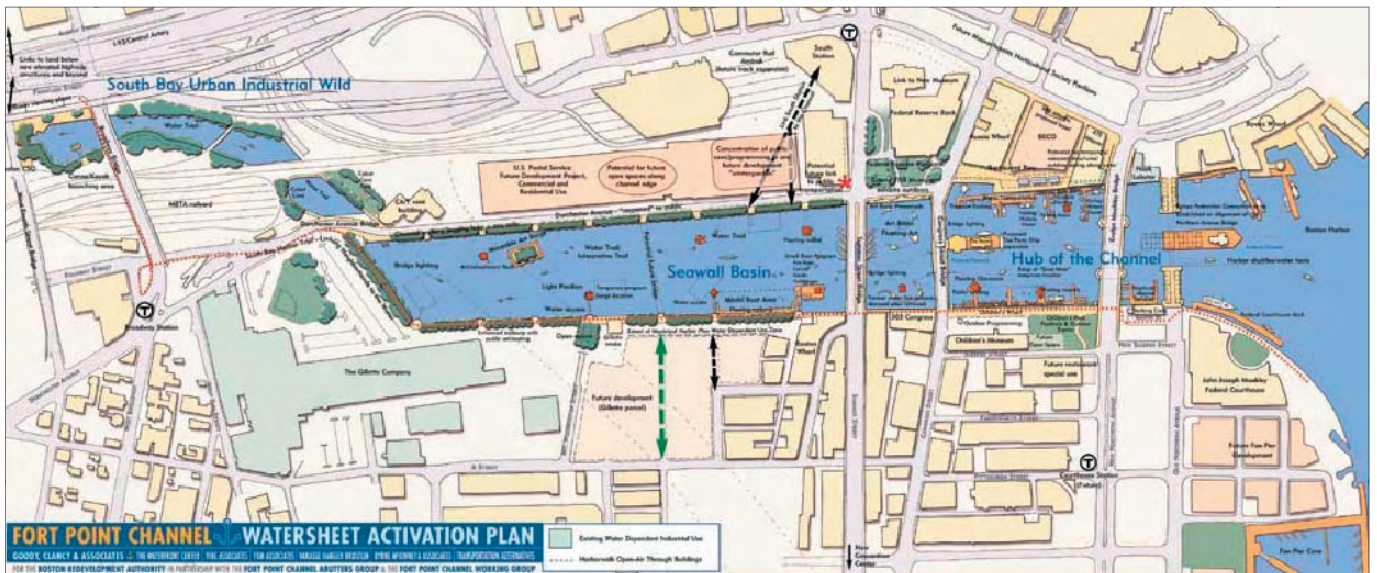
4.7 Illuminating Boston: The Diamond Necklace Project, Light Boston, 2000

The *Diamond Necklace Project* produced by Light Boston, Inc., a non-profit organization, recommends numerous lighting design strategies, including illuminating the seawalls and old and new bridges of the Fort Point Channel to create a distinctive and coherent identity for the Fort Point Channel District.



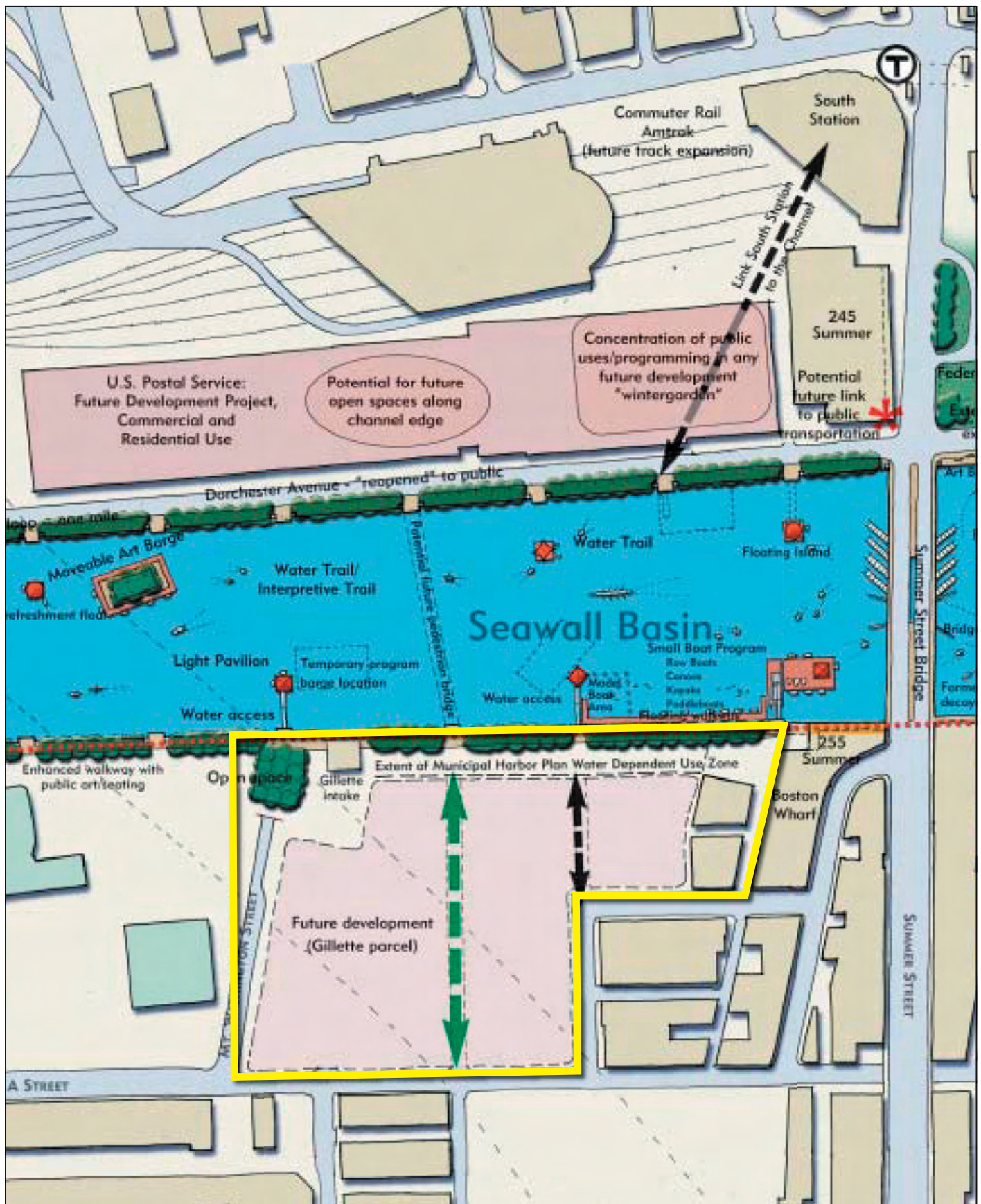
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 South Boston Municipal Harbor Plan Amendment
 Fort Point District South

Figure 4-1
 Fort Point Channel Planning Context



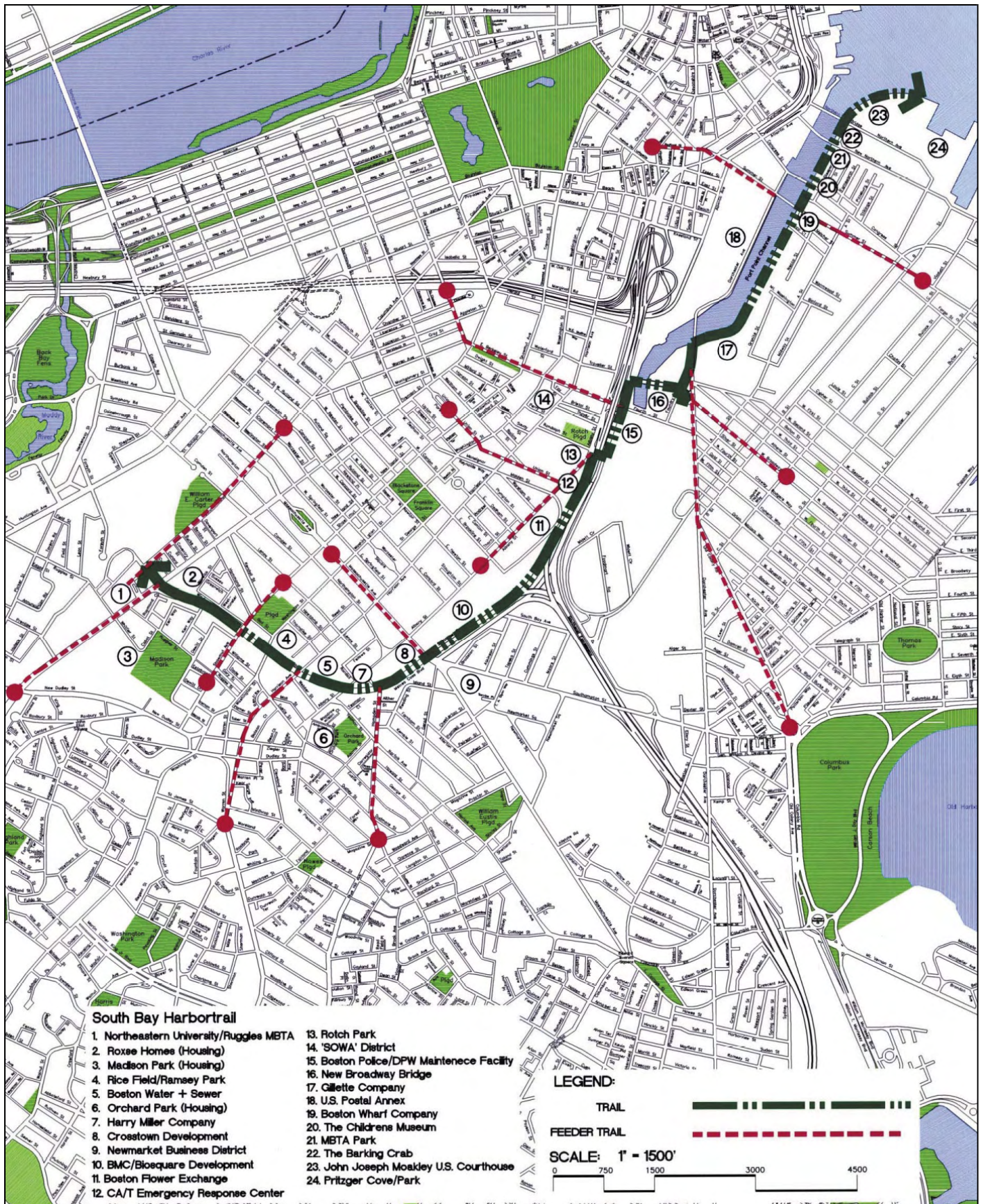
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 Fort Point District South
 Courtesy of Goody, Clancy & Associates

Figure 4-2
 Fort Point Channel Watersheet Activation Plan



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 South Boston Municipal Harbor Plan Amendment
 Fort Point District South
 Courtesy of Goody, Clancy & Associates

Figure 4-3
 Fort Point Channel Watersheet Activation Plan
 (Detail)



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 Fort Point District South

Figure 4-4
 South Boston Harbor Trail

5. SUMMARY OF THE 100 ACRES MASTER PLAN

The *100 Acres Master Plan* represents the culmination of over five years of collaboration between residents, property owners, city and state agencies, and other interested parties, which were initiated as a result of the conditions set forth by the Secretary of Environmental Affairs in his *Decision on The City of Boston's South Boston Waterfront District Municipal Harbor Plan (Decision)*, issued in December of 2000 (further described in *Section 1* of this document). Together these groups have created a vision for the 100 Acres area that incorporates a broad set of planning principles to guide future development, and that addresses concerns voiced by the community during the planning process.

The master plan provides the framework for growth in the 100 Acres area for the next 40 years. This growth is anticipated to substantially contribute to the local economy. Over 47 million dollars annually of incremental tax benefits and over 12 thousand permanent jobs on site are expected as a result. Over 2,300 new housing units will be created, of which at least 350 units will be affordable.

This *Fort Point District South Municipal Harbor Plan Amendment (MHP Amendment)* is focused in particular on those areas of the 100 Acres area that are subject to Chapter 91 jurisdiction, which occupy approximately 12 acres or 14% of the master plan's study area (see *Figure 5-1* at the end of this section). The *MHP Amendment* planning area is roughly bounded by A Street and Necco Street to the east, the Archon properties and Necco Court to the north, Fort Point Channel to the west, and the Gillette manufacturing plant to the south.

5.1 Planning Process Overview

Beginning in May 2001, The Boston Redevelopment Authority in conjunction with the Boston Transportation Department began to work with the Fort Point Working Group composed of property owners, residents, and other interested parties. The planning process began with an overview of all the previous and current planning efforts conducted for the South Boston Waterfront. Once the planning history and context for the 100 Acres were established, the Working Group reviewed issues related to the street grid system, access and transportation, open space, and land uses including public and civic activities. The key goal of the Working Group has been to reach consensus on a public realm plan that incorporates principles and guidelines for new development, and implementation strategies to achieve this common vision. The Municipal Harbor Plan Advisory Committee formed the core of the Working Group.

During the process, agencies, organizations and the large property owners in the area presented their plans and future visions for the 100 Acres. Such agencies and organizations included the Seaport Alliance for Neighborhood Design, Fort Point Cultural Coalition, Save the Harbor/Save the Bay and the Massachusetts Water Resource Authority. In addition to these presentations, the four major property owners [Gillette, Beacon Capital, Boston Wharf Company, (now Archon Group), and the U.S. Postal Service] were asked by the BRA to contribute to the transportation analysis of the area and recommend land uses, street network and open space scenarios for the district. The *100 Acres Master Plan* and the phasing of the buildout evolved as a result of this collaborative effort as based on available and projected transit infrastructure capacity.

Early in the planning process, The Gillette Company initiated traffic analyses of critical intersections involving potential access to and from its South Boston Manufacturing Center on A Street. The results of the analyses concluded that the planning initiatives to date did not adequately protect Gillette's ability to maintain satisfactory truck and other vehicular access to the South Boston Manufacturing Center. Additional transportation studies commissioned by other major landowners followed Gillette's report, culminating in the hiring of the transportation consultant firm of Cambridge Systematics, Inc. in early 2004. A Subcommittee of the Working Group was established as a liaison to the consultants, monitoring

their work and reporting back to the larger Working Group at Community Meetings. In June of 2004 the Subcommittee and the consultants presented the final transportation analysis of the *100 Acres Master Plan*, which provided the basis for the recommended buildout and development phasing.

5.2 Master Plan Concept

The *100 Acres Master Plan* proposes a dense and vibrant mixed-use district that reflects and complements the historic and unique architectural character of the surrounding areas, ultimately resulting in the development of up to 5.9 million square feet of new construction. Proposed land uses include office, retail, residential, tourism-related, cultural and civic uses, community facilities, manufacturing, warehouse, commercial, industrial, and research and development. Of these, approximately 1.9 million square feet will be located within the *MHP Amendment* planning area boundaries.

Two major open space corridors are proposed to link the 100 Acres to Fort Point Channel, South Boston and the Boston Convention and Exhibition Center. New street blocks consistent with the existing layout and historic district character will improve circulation through the district and will define visual corridors. A Street will be widened and enhanced with more generous landscaping and traffic improvements. A major new east-west connection between the Fort Point Channel and the South Boston Bypass/Haul Road will improve accessibility throughout the district. Fort Point Avenue is a new avenue envisioned to be the district's primary east-west pedestrian and vehicular spine. Additional links will be provided by extending the existing east-west streets, such as Binford Street and Necco Court, and by extending Richards Street to the South Boston Bypass/ Haul Road as the new "West Connector".

Visual corridors with defined street edges will be created, taking advantage of vistas available at the end of view corridors or open space, such as the vista at the end of Fort Point Avenue of the downtown skyline and the vista from the South Boston Bypass/ Haul Road of the Boston Convention and Exhibition Center. The key pedestrian corridor of the plan is the open space and promenade framed by Fort Point Avenue to the north and Wormwood Street to the south. This corridor will connect the Fort Point Channel and Harborwalk to A Street and to the Boston Convention and Exhibition Center (located beyond the boundaries of the *100 Acres Municipal Harbor Plan Amendment* site area). Fort Point Avenue and Wormwood Street become more pedestrian-friendly at Necco Street and become pedestrian promenades that define "Channel Park", which is the culmination of the open space corridor at the Channel's edge and comprises approximately 3.2 acres. The other key pedestrian connection is the Harborwalk itself, extending along the eastern side of the Fort Point Channel and forming part of the larger South Bay Harbor Trail System.

Proposed building heights range from approximately 100 feet along A Street to 180 feet on parcels that are not located directly above the I-90 Tunnel. Underground garages will accommodate parking on site within each development. Taller buildings will be set back from the water's edge, allowing for the creation of parks and green areas along the Harborwalk. The existing Gillette manufacturing buildings and various historic structures along the channel are not part of the density and height limitations contemplated by the master plan.

Transit service is provided by the Red Line, Silver Line, buses on A Street, and, in the future, by the Urban Ring.

5.3 Open Space and Pedestrian Network

Early planning efforts for the Fort Point Channel area emphasized the presence of the water as a public open space resource and recreational amenity. The Seaport Public Realm Plan (1999) proposed extending the sense of water inland through linear parks, view corridors, streets and pedestrian connections. It also recommended the creation of waterfront recreational open spaces along the Harborwalk for use by

residents and adjacent neighborhoods. It called for a large park connecting A Street to the Fort Point Channel and Harborwalk, and a pedestrian bridge over the channel connecting to Dorchester Avenue and South Station. Similarly, a pedestrian bridge over the South Boston Bypass/Haul Road would connect to the Boston Convention and Exhibition Center to the east.

These ideas have been advanced and incorporated into the *100 Acres Master Plan*, although the shape and location of the proposed open space and pedestrian bridges have been shifted as a result of the construction of the Central Artery/Massachusetts Turnpike (I-90) extension under Fort Point Channel, connecting to the Third Harbor Tunnel. The modified open space layout concentrates open space in areas above the tunnel and locates greater building density and heights in areas where the ground would support larger structures.

An Open Space Charrette was held in February 20004 in South Boston, which directly engaged the community in the discussion of public realm and design issues. As a result of the discussion, the following ideas were confirmed as planning and design goals for the 100 Acres:

- Use major open space to connect the Channel and Harborwalk to the areas east of A Street and the Boston Convention and Exhibition Center.
- Create different types of open spaces for different needs, such as passive open spaces and active recreational open spaces.
- Ensure connectivity between ground level uses and open spaces.
- Recognize that quality of open space is more important than quantity of open space.
- Employ open spaces to connect to and serve the traditional South Boston residential neighborhood.

The proposed network of open spaces and pedestrian connections is illustrated in *Figures 5-1 through 5-3*. Many difficult issues were addressed as part of the planning process, such as the trade-offs between the amount of open space and building heights, as well as economic feasibility and long-term maintenance costs. The master plan also proposes design guidelines aimed at enhancing the walking experience and the quality of the proposed pedestrian environment.

5.4 Land Use and Buildout

The overall approach for distributing land uses is based on three general principles:

- Existing industrial uses will be protected and their expansion accommodated and encouraged. Land uses immediately north and east of the Gillette will have to be compatible with the manufacturing plant. Offices, research and development facilities, and artist live/work spaces as well as thoughtful physical design of roadways and landscaping will provide a good transition to the industrial use.
- Commercial uses along Summer Street will be maintained.
- New residential uses should be located near and around the Channel and around open spaces, such as the proposed open space corridors.

The overall vision of the *Master Plan* is to create an active mixed-use neighborhood that retains and encourages expansion of appropriate existing industrial uses and employment but also builds on the

residential base that will support a greater diversity of uses and population. The plan calls for a 24-hour community that incorporates a variety of land uses. In order to ensure a good balance of uses, the City will implement a policy for the 100 Acres that will require that the total buildout have a minimum of one-third residential use. Other uses cannot be more than two thirds of the buildout and can be a combination of industrial, manufacturing, office, warehouse, research and development, retail, tourism related, cultural, and recreational uses.

The principle of clustering residential uses around parks and landscape amenities not only ensures easy access to them, but also fosters a sense of ownership by their users and residents. The significant residential uses proposed will require open spaces to be tailored for many different types of activities.

At the northern edge of the 100 Acres near Summer Street, significant office and commercial uses can be located to take advantage of Summer Street's commercial character and the proximity to the Boston Convention and Exhibition Center and the commercial development waterfront north of Summer Street.

In order to attract and maintain substantial public activity on the waterfront, Chapter 91 Waterways Regulations require that projects within its jurisdiction provide facilities of public accommodation at the ground level of all buildings containing nonwater-dependent facilities of private tenancy. The definition of public accommodation includes restaurants, theaters, hotels, fitness facilities, civic spaces, cultural and educational institutions, and retail. The *100 Acres Master Plan* proposes that, wherever possible, ground floors of all buildings should have publicly accessible uses that activate the abutting streets and open spaces.

The progressive buildout of the area's land use will have to be coordinated and monitored by the BRA to achieve a balanced mix of uses at every stage of the build out. This coordination is required to ensure that market forces are not the sole determinant of what is the right mix of uses, and that public interests are also met.

The following chart summarizes the approximate proposed building coverage, open space and street allocation for the *MHP Amendment* planning area:

Table 5-1
Building Coverage, Open Space and Street Allocation

	Land Area	Proportion of <i>MHP Amendment</i> planning area
	(acres)	(percent of total)
Building Coverage	5.1	42 %
Open Space	4.4	36 %
Streets	1.4	11 %
Sidewalks	1.3	11 %
TOTAL	12.2	100 %

5.5 Building Massing and Height

The *100 Acres Master Plan* envisions a skyline that reinforces the nineteenth century elevation of the historic Boston Wharf buildings, and exhibits taller buildings on the north along Summer Street that progressively step down towards the south and east, where the master planning area meets the traditional South Boston neighborhood.

This approach envisions three general height zones within the 100 Acres area. Each zone has different height limits. The first zone between Summer Street, Wormwood Street, Channel Street and a line extending to the Channel from the Wormwood/A Street intersection will have a height limit of 180 feet. The second zone north of Mount Washington Avenue and south of Wormwood Street limits buildings to 150 feet. The third zone south of Mount Washington Avenue restricts building heights to 125 feet. This last zone minimizes the building height impact to the existing neighborhood and provides a suitable transition to the surrounding urban fabric.

These height limits will only apply to new building structures within the 100 Acres. In order to ensure that the district's existing historic character and massing are maintained, demolition of historic buildings in the area is generally discouraged. Height limits corresponding to the prevailing heights of existing structures will be applied to the already built out areas subject to the provisions allowing "modest expansions" (e.g. on rooftops).

Within each of the three height zones, additional height will be permitted on specific sites identified in the planning process. On these special sites, building proposals will be eligible for additional height by providing exceptional public benefits. These benefits include:

- Proposing additional residential use over other uses on the site and adding to the housing supply of the 100 Acres, or exceeding the city's guidelines on affordability.
- Providing additional open space and public realm accommodations, and implementing green design.
- Contributing to area-wide transportation and transit improvements beyond the required traffic mitigation.
- Extending the City's requirement for community benefits and mitigations.

The special sites eligible for additional heights would be subject to Boston Zoning Article 80 development review and a strict set of design performance standards on environmental impacts, especially relating to shadow and wind impacts on the Channel and on the proposed new open spaces. Specific height limits on sites within Chapter 91 jurisdiction are discussed in more detail in *Section 6* of this document.

5.6 Design Guidelines

The *100 Acres Master Plan* establishes design guidelines that will reinforce the character of the physical elements, such as architecture, landscape and streetscape that will make part of the district, and contribute to the achievement of the plan's goal to maintain and enhance the district's special character.

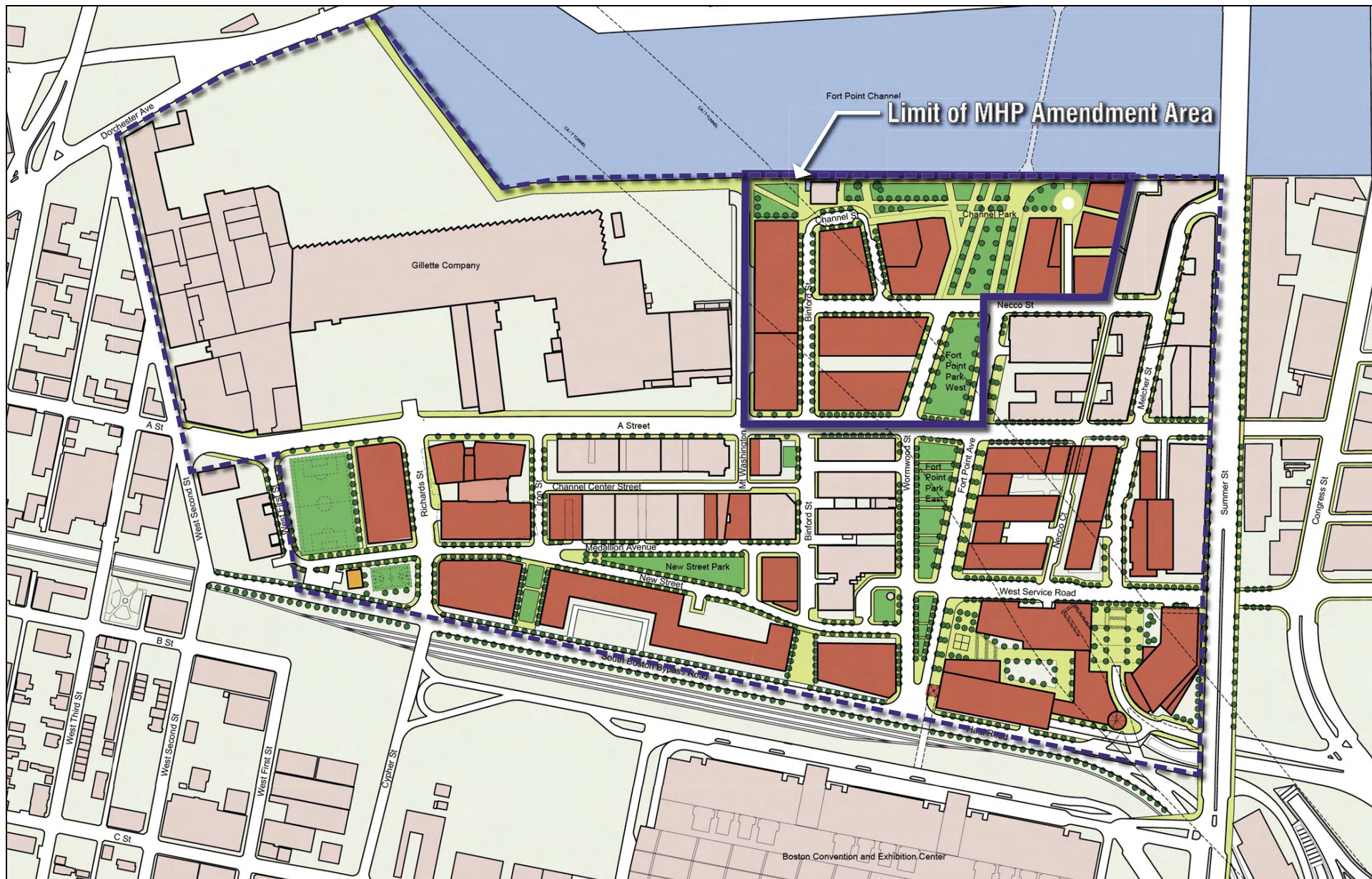
Building façades and street edges serve as the primary elements that shape the urban environment. The Fort Point district is characterized by narrow streets and continuous street walls. These street walls must be maintained and reinforced. Buildings must build to the back of sidewalk to define the street wall as much as possible.

Nineteenth century wharf buildings have a unique character visible in the proportions of their massing, window openings and elevations, as well as in their materials. Wharf buildings are typically brick structures with blocky massing of about 100 feet in height with large window openings. The *100 Acres Master Plan* calls for reinforcing the existing wharf building heights of approximately 100 feet as the primary new elevation. Selective taller building elements above this 100-foot datum may be appropriate at selected locations with fitting set back from existing cornices. The guidelines do not require new

buildings to replicate the style and materials of these historic structures, but new design should be contemporary and inventive interpretations of the warehouse typology.

5.7 Phasing and Implementation of the *100 Acres Master Plan*

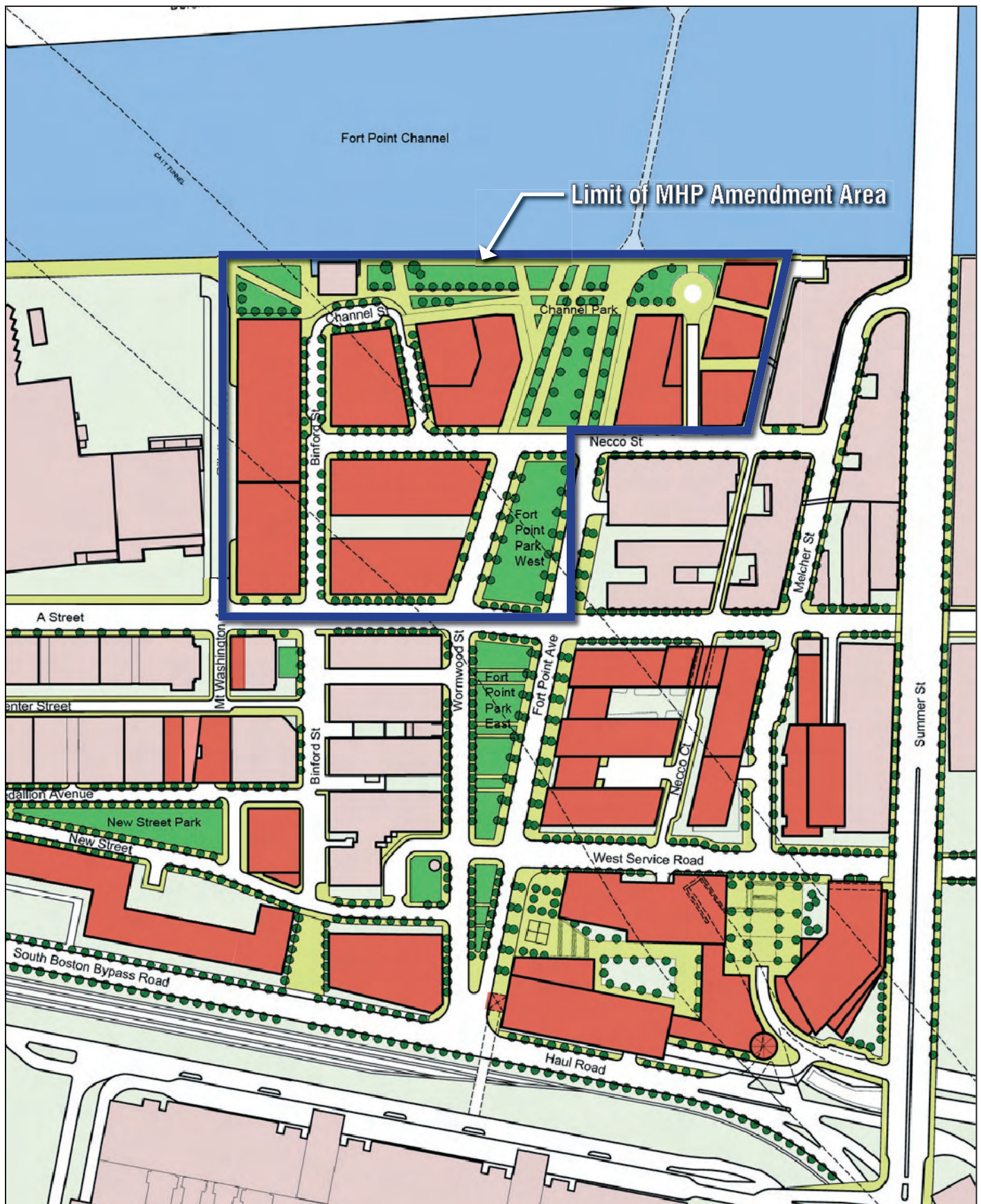
The *100 Acres Master Plan* anticipates that the private landowners will contribute the rights-of-way, construct streets and open spaces in phases as the landowners develop the building parcels. All open spaces and publicly oriented streets will be developed to high standards and will be fully accessible to the public. The landowners will be responsible for the long-term care and maintenance of the open spaces, while the City will maintain the streets. Phasing of those portions of the *100 Acres Master Plan* within Chapter 91 jurisdiction will be subject to additional reviews and approvals as described in this *MHP Plan Amendment*.



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 Fort Point District South

Figure 5-1
 100 Acres Master Plan





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 South Boston Municipal Harbor Plan Amendment
 Fort Point District South

Figure 5-2
 100 Acres Master Plan (Detail)





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South Boston Municipal Harbor Plan Amendment
Fort Point District South

Figure 5-3
100 Acres Three-Dimensional Model

6. SUBSTITUTE PROVISIONS, OFFSETTING BENEFITS, AND AMPLIFICATION

6.1 Overview

The *South Boston Waterfront District Municipal Harbor Plan (South Boston MHP)* adopted in the year 2000 contained substitute provisions that were organized according to the subdistricts in which they could be applied. The substitute provisions and associated offsetting benefits contained in the original *South Boston MHP* that previously would have been applicable to the Fort Point Historic Subdistrict South portion of the 100 Acres area will be superseded by the provisions contained in this *Fort Point District South Municipal Harbor Plan Amendment (MHP Amendment)*. These provisions expand the width of the walkway along the water's edge, adjust the location of the water-dependent use zone, and provide for the proposed building heights that are appropriate to this portion of the Boston Harbor. An amplification is employed to ensure that future facilities of public accommodation help support the implementation of the *Fort Point Channel Watersheet Activation Plan*. An initial discussion describes the substitute provisions. Subsequent discussion contains the offsetting public benefits that will comparably fulfill the public's tideland interests in the Fort Point District South. The final portion discusses the amplification.

6.2 Substitute Provisions

6.2.1 Substitute Provision for a Public Access Network

A substitute provision of the *South Boston MHP* modified the minimum width of the public access network as required in 310 CMR 9.52(1)(b) from 10 feet to 12 feet clear. This substitute standard is consistent with the City's Harborwalk width standard of 12 feet that is required along other portions of the waterfront. This concept is being enhanced in this *MHP Amendment* over what was approved in the Secretary's *Decision on the South Boston Waterfront District Municipal Harbor Plan (Decision)*. This MHP Amendment proposes a Harborwalk substitution to increase the required minimum width of Harborwalk from 10 feet to 18 feet clear where there is a water-dependent use zone that is at least 100 feet wide. The remainder of Harborwalk shall be 12 feet clear, consistent with what was approved in the *South Boston MHP*. This dimensional provision does not require an offsetting public benefit, as there is no public detriment.

6.2.2 Water-Dependent Use Zone (310 CMR 9.51(3)(c))

This *MHP Amendment* revises the water-dependent use zone within the *MHP Amendment* planning area as follows:

- Setbacks – The water-dependent use zone (WDUZ) will be comprised of that area between the project shoreline and a line that is the parallel and setback 110 feet, except for that portion of the WDUZ along the seaward edge of the land adjacent to 60 Necco Court. In this location, the setback will be 18 feet.
- Total area of the WDUZ – The total area of the WDUZ will be 96,800 square feet, or the same area that would be required by the baseline standards of 310 CMR 9.51(3)(c), whichever is greater. This calculation will be submitted and approved as part of any license application that proposes nonwater-dependent uses within the area of revised setbacks as provided above.

This substitute provision will allow the reconfiguration of the water-dependent use zone (WDUZ) to better preserve the area for water-dependent uses than would occur under the existing standards contained in 310 CMR 9.51(3)(c). The original regulatory standards would preserve an area that extends along the entire shoreline of the Fort Point channel, with a maximum depth ranging from approximately

80 feet to a depth of 100 feet, depending upon the dimensions of the potential land parcels that could be created in advance of Chapter 91 licensing.

The WDUZ area was revised in the Secretary's *Decision* on the *South Boston MHP*, which permitted an alternative depth of 18 feet along that portion of the waterfront identified as appropriate for a new building site at 60 Necco Court. This revised dimension was based on the associated Secretarial approval of a building height of 80 feet for this site and the context of revised proportions of the WDUZ area. This revised standard was conditioned upon the following requirements:

- Increased setbacks - Provision of increased WDUZ-related setbacks along the remaining waterfront of the Fort Point District South, so that the total area provided for water-dependent uses would be at least the same as protected by using the standards of 310 CMR 9.51(3)(c).
- Inclusion in a single license application and license – Inclusion of the revised WDUZ with all relevant calculations as part of a single plan, license application, and license for the entire area.

The *100 Acres Master Plan* provides the coordinated planning framework for this area of the harbor that was not available when the Secretary's *Decision* was issued in 2000. This *MHP Amendment* provides specific setback requirements along the entire WDUZ that lies within the *MHP Amendment* planning area. It also provides a mechanism, the Consolidated Written Determination (CWD), for allowing separate and sequential licensing of different projects and parcels within the *MHP Amendment* planning area, while ensuring that the reconfiguration of the WDUZ will be enforceable across the entire *MHP Amendment* planning area.

6.2.3 Building Height (310 CMR 9.51(3)(e))

The Chapter 91 regulations establish building height limits as a method of ensuring that the ground level environment be conducive to water-dependent uses and public access to tidelands. Substitute measures that provide alternate provisions that meet this purpose and are tailored to the circumstances of the particular harbor area are permitted. This *MHP Amendment* revises the building height standards for nonwater-dependent uses in the *MHP Amendment* planning area as follows:

- Maximum building heights – The maximum building heights area will be interpreted according to the diagram provided in *Figure 6-3*.
- Conformance with the 100 Acres Master Plan site disposition - These height limits will apply to the buildable land areas as indicated in the *100 Acres Master Plan* and portrayed in *Figure 6-3*. Minor discrepancies in limits of buildable areas from those portrayed in *Figure 6-3* will not affect the interpretation of these height limits, unless such a discrepancy would demonstrably diminish the capacity of the pedestrian level environment to provide for the access and use of the waterfront as envisioned by both the *South Boston MHP* and this *MHP Amendment*.
- Licensing of separate projects without net impact – Separate licenses for different projects or parcels may be issued, if they meet standards and procedures described in the discussion in Section 1.7 Project Phasing and Licensing. As described in that section, the maximum building heights of each separate project must conform with the diagram provided in this *MHP Amendment* for the project site. Secondly, shadow analyses submitted as part of the license application using the typical methodologies applied in similar circumstances along Boston Harbor must confirm that there would be no materially adverse impact on the ground level environment greater than would occur under the requirements of the regulations at 310 CMR 9.51(3)(e).

- Licensing of separate projects with net impact – If the analyses submitted as part of the license application for any project indicate that there would be a net new shadow impact on the ground level environment, then a license may be issued upon compliance with the guidelines for offsetting benefits as provided in the *South Boston MHP* and as further described in this *MHP Amendment*.

These revised height standards represent a modification of the standards that would apply to Chapter 91 licensing in the absence of an approved municipal harbor plan, contained in 310 CMR 9.51(3)(e) and represented in *Figure 6-2*. The standard regulations would allow building volumes that would be constrained by ascending limits, beginning with a maximum of 55 feet and rising as tall as 330 feet along the properties that border A Street.

The amended building height limits are a refinement of modified requirements that were approved for this area of the harbor in the Secretary's *Decision* on the *South Boston MHP*. This *MHP Amendment* supersedes the previous substitute provision as a result of the master planning undertaken during the course of the *100 Acres Master Plan* process, including responsiveness to the Secretary's condition that the master plan ensure compatibility of new development with the historic character of the built environment in this area of the harbor. This additional planning establishes clarification that will allow for permitting of individual projects, which had not been anticipated in the Secretary's *Decision*.

The approved *South Boston MHP* provided maximum building heights in four categories, and was depicted in *Figure 11-3* of that document. The modified building height standards approved in 2000 provided for a fairly uniform stepping of building heights that resulted in the tallest allowable structures being grouped along A Street and the existing historic fabric that is aligned along it. Maximum height for the parcel at 60 Necco Court was set at 80 feet. Heights for all other locations between 100 and 125 feet from the project shoreline would be permitted up to 75 feet. The remainder of the Fort Point Historic Subdistrict South would be constrained to either 100 feet (southerly portions), or 150 feet (northerly portions).

The refined standards described in this *MHP Amendment* reflect planning considerations intended to further reinforce compatibility with the historic context of this part of the harbor. The height limits contained in this *MHP Amendment* help accomplish the following:

- Skyline consistent with the context of the 19th century wharf – The overall skyline appearance is intended to generally provide for structures consistent with the fabric of historic commercial structures with maximum building heights of 100 feet. The height of existing structures within the *100 Acres Master Plan* area ranges from 70 feet to 135 feet.
- Transition from the traditional neighborhood to urban scale development – The 100 Acres Master Plan seeks to provide a gradual transition from lower-height limits nearest the traditional South Boston neighborhood near West First Street to the areas of greatest height and urban-scale development along Summer Street. The height limits within the *MHP Amendment* planning area are consistent with this overall approach.
- Transition along Necco Court – The height limits along Necco Court consist of 80 feet closest to the harbor, and 100 feet for the parcels landward. This approach provides continuity with the historic wharf structures along the Fort Point Channel to the east.
- Distribution of Location for Taller Structures – The composition of the open space network and building heights provides for two locations in the *MHP Amendment* planning area that are well suited for somewhat taller structures, because they are not as constrained by the weight-bearing capacity of the I-90 Tunnel Connector box that runs underneath the site. Two areas facing the

proposed Fort Point Park and Channel Park are designated for buildings with height limits of 180 feet. These locations will flank and frame the open space network formed by the parks. Both locations are set back from the perimeter of the planning area.

Three different types of analysis have been undertaken to consider the implications of the substitute provision on the capacity of the pedestrian level environment to support water-dependent uses (including public access) that are appropriate to this area of the harbor. The first two types evaluated the shadow and wind conditions relative to the environment that would be provided if the standard Chapter 91 height limits were employed. The third evaluation considers the revised maximum buildable volume relative to the volume that would be permitted under the standard provisions of 310 CMR 9.51(3)(e).

Shadow Analysis

A shadow analysis was performed for the building envelopes defined by the substitute provisions for buildable areas and height limits within the *MHP Amendment* planning area. This shadow analysis provides the basis for considering the maximum potential extent of detrimental net new shadow that would occur, using the methodologies that have been adopted for municipal harbor planning along Boston Harbor. This study employed a standard methodology based on the BRA's shadow impact policy for evaluation of shadow impacts along the Boston Harbor waterfront. In keeping with the methodology that has been employed by DEP and CZM, the shadow analysis compares proposed against Chapter-91 compliant conditions. The date of October 23 is employed as representative of seasonal conditions during which such shadow impacts might reasonably be considered a detriment.

The analysis also considers the net potential shadow reduction that would result from substitute provisions constraining maximum building heights below that which could be provided using Chapter 91 standard provisions. By reducing potential building heights, the substitute provisions provide a calculable public benefit of net reduced shadow, which might also be considered as potential additional sunlight.

As described below, the shadow analyses then considered the implications of changes in shadow that endure for more than one hour. As noted in the *South Boston MHP*, of most concern are those areas where the impacts are not shadows of relatively short duration, but rather, "shadows of longer duration, as these can have a significant impact on the pedestrian environment." (*Section 8.7.3, p 122, South Boston MHP*). Similarly, this analysis recognizes that net additional sunlight would be most beneficial if it endures for at least one hour; benefits of shorter duration have been excluded from consideration.

It should be noted that the analyses represent a "worst case" scenario in regards to the potential net new shadow that would be produced by buildings constructed on the buildable sites within the *MHP Amendment* planning area. The analyses considered the entire buildable volume as though it would have been entirely filled by new building mass. In practice, some or all of the buildings that would be created may have configurations that do not employ the entire permissible volume.

The following conditions were evaluated:

- Existing Shadow: Conditions associated with the existing buildings and sites built prior to January 1, 2001.
- Proposed Shadows: Conditions associated with the substitute provisions in this *MHP Amendment*.
- Chapter 91 Building Shadow: Conditions associated with the standard provisions of Chapter 91 as might be applied to the *MHP Amendment* planning area.

The BRA has selected October 23 as the most appropriate date to evaluate shadow impacts on the pedestrian environment. The rationale for selecting October 23 is based on both the sun's position as well as the seasonal needs of pedestrians. Important dates in understanding sun access are the summer and winter solstices (June 21 and December 21), and the spring and autumn equinoxes (March 21 and September 21). An analysis of June 21 can be useful for understanding what type of sun access is provided on a summer day. June 21, however, receives more sun access than any other day of the year and therefore is not useful for setting shadow standards, since every other day of the year will receive less sun access and greater shadows. As the shortest day of the year, December 21 is not useful for setting standards because the sun is located at an angle that casts large shadows for any structure, including low-rise buildings.

In a climate such as Boston's, sun access is most important in the shoulder seasons of spring and fall, when radiation from the sun is capable of compensating for cool air temperatures. The BRA considered but rejected basing sun/shadow standards on either the spring or autumn equinox (March 21 or September 21). Sun/shadow impacts will be the exact same on either of these days, with a one-hour difference resulting from the fact that March 21 is in Eastern Standard Time and September 21 is in Eastern Daylight Time. Autumn, however, is when Boston is at its best. September 21 is the beginning of the autumn season and a time when the climate is very suitable for outdoor activities. As a result, the BRA determined that it is more appropriate to base sun/shadow standards at the end of what are traditionally considered the "outdoor months", when people often seek opportunities to spend time out-of-doors before the weather turns colder. For these reasons, the BRA has used October 23rd as the appropriate date to study shadow impacts and as a base for establishing shadow standards - a traditional practice that the BRA continues with this *MHP Amendment* as had also been employed in the *South Boston MHP*. Shadow impacts are assessed on both the land and the adjacent watersheet.

Shadow impacts are evaluated by comparing the shadows cast by a project under a Chapter 91 compliant scenario and under the proposed substitution scenario at incremental times throughout the day. Shadows cast by buildings that existed prior to January 1, 2001 were excluded from net new shadow calculations, as directed by the Secretary's *Decision*. The results of the analysis define two relevant conditions. In some locations, there will be a net decrease in the shadows due to the amended building height standards relative to Chapter 91 compliant building heights. In other circumstances, there will be net new shadow resulting from the height substitution. In the event that a proposed height substitution results in additional shadow impacts after accounting for any associated net decrease in shadow, an offset of that impact will be required. The results of the hourly shadow analysis are presented in *Appendix 2 – Shadow Studies (Figures A2-1 through A2-9)*.

Associated calculations for the analysis discussed above result in the estimated total of 221,250 square feet of net new shadows. The estimated total of net reduced shadow is 176,690 square feet. The difference between these two calculations indicates that approximately 44,560 square feet of short-term net shadow impacts may be produced upon buildout of the entire area, were it to be completely filled by the permissible building volumes. The analysis then focused on shadows would endure for more than one hour, by examining the overlapping patterns of net new shadows and reduced shadows. This analysis is indicated in Figure A2-10. As may be expected, a review of these conditions concludes that impacts associated with shadows enduring more than one hour will be substantially less than the impact of shadows enduring for less than an hour; net shadow impact may be negligible. Specific analyses will be conducted in conjunction with licensing of specific proposals, and may have marginally different results.

A review of the qualitative implications of the shadow analysis confirms the conclusions reached in a similar evaluation completed as part of the *South Boston MHP*.

Because of the orientation of the developable land along this portion of the Fort Point Channel, early morning conditions provide areas of extensive shadow along the edge of the channel and watersheet

under either the amended provisions or in a Chapter 91 compliant condition. At 9 AM, the advantages of the open space location and configuration of the *100 Acres Master Plan* become apparent. Although some areas of the Harborwalk and Fort Point Channel would remain in shadow at this hour, the entire length of the future Fort Point Parks, as well as the extension of this open space corridor across Channel Park, would be sunlit. The shadows decrease in length and shift towards the east as the morning progresses. Later in the day, the reduced shadow footprint afforded by the lowered building height limits becomes increasingly apparent, with the notable advantage of increased sunlight within the major open space amenity of Fort Point Park. By 1 PM, the majority of Channel Park will be sunlit - a condition that increases and will be maintained until the end the day, due to the favorable orientation of this portion of the harbor and the alignment of the Harborwalk and Channel Park in an east/west direction.

In general, the analysis of shadows within the *MHP Amendment* planning area indicates that there are numerous benefits associated with the massing and building heights that will result from implementing this *MHP Amendment*. There will be a significant reduction of potential shadows because of reduced building height limits than would occur if the standard building height limits contained in 310 CMR 9.51(3)(e) were employed. Land allocated to public park spaces has taken into account the solar orientation of this area of the harbor, providing broad areas of sunlight throughout the entire day, which entails a more beneficial environment for access and use of the waterfront than would occur in the baseline condition. A relatively small portion of the *MHP Amendment* planning area would have shadow impacts of at least one hour in duration.

Wind Analysis

An analysis of probable wind conditions at the ground level was prepared for the *MHP Amendment* planning area. This analysis was prepared by Frank H. Durgin, P.E. and is included in this document as *Appendix 3 – Wind Studies*. The wind analysis employed the maximum building envelopes and sites as portrayed in the *100 Acres Master Plan* and was used as the basis for this *MHP Amendment*. The qualitative analysis is based on categories of wind conditions that have been employed by the BRA since the 1980's and are listed below:

1. Comfortable for Long Periods of Standing or Sitting
2. Comfortable for Short Periods of Standing and Sitting
3. Comfortable for Walking
4. Uncomfortable for Walking
5. Dangerous and Unacceptable

This approach includes categories that are comfortable for activities such as walking or more passive uses (Category 3 and below). These categories are supportive of the activities planned for this portion of the harbor in the Network Plan and other planning and policy goals. The evaluation system includes categories rated as uncomfortable (Category 4 and above) that would be inconsistent with the intended ground level environment.

The analysis concludes that the composite effect of implementing the *100 Acres Master Plan* will likely result in improved wind conditions at the ground level within the *MHP Amendment* planning area. The study notes that the ground level environment is likely to benefit from the sheltering effects provided by multiple buildings that compose an urban environment. However, some of the locations studied in the evaluations indicated conditions that would be rated as uncomfortable for walking (Category 4 and above). These need to be considered and evaluated in connection with individual building designs.

The wind conditions associated with an individual building project could result in localized impacts that would be considered unacceptable according to the standards established by the BRA. There may also be potential unfavorable conditions that would occur in the course of incremental development of the 100

Acres area. As a result, any individual project will be required to prepare and submit an analysis of the incremental impacts that may be created, and building designs will be required to be modified to eliminate negative impacts. Since with this required mitigation there will be no adverse wind impact on the ground level environment, no Chapter 91 offsetting benefits would be required.

Buildable Volume

The Secretary's *Decision* on the *South Boston MHP* included a general direction that the cumulative massing (as measured in total square feet of development) allowed under a substitute provision for a subarea of the harbor must be no greater than would be allowed under the standard provisions of 310 CMR 9.51(3)(e). Such an analysis was performed for the refined diagram of buildable areas and height limits contained in this *MHP Amendment*. The results of this analysis indicate that the total buildable volume permissible by this *MHP Amendment* would be approximately 1.9 million square feet, in contrast to the 3.7 million to 4.5 million square feet that would be permissible applying the standard Chapter 91 regulatory framework. This is a relatively small proportion (about 50 percent) and fully meets the Secretary's criteria for approval.

Conclusions from the Height Substitution Analyses

The analytical evaluation of the height substitution provisions leads to a conclusion that there are a range of potential impacts of the substitute provisions according to the site and final design of individual buildings. In some locations, the revised provisions will likely result in an enhanced ground level environment relative to that which would occur under standard Chapter 91 provisions; in other cases, net changes associated with a project may result in conditions of greater net shadow, depending upon the specific location and design of a project. As a result, the final assessment of the suitability of each project must be separately considered as part of the licensing process, with offsetting public benefits provided only in those cases where public detriments are predicted to occur.

6.3 Offsetting Public Benefits

6.3.1 Water-Dependent Use Zone (310 CMR 9.51(3)(c))

The substitute provisions that define the amended WDUZ include a provision that ensures that the water-dependent use zone will be at least as large in extent and more appropriately located along this portion of the harbor. The offsetting public benefit includes a dimensional standard that provides for the future development of Channel Park with a greater depth from the shoreline than would otherwise occur. Channel Park is a key part of an open space framework that has been refined from the concepts presented in the *South Boston MHP* to provide a more generous, wide and connected series of parks and open spaces.

6.3.2 Building Height (310 CMR 9.51(3)(e))

The provisions of 310 CMR 9.51(3)(e) are intended to preserve a ground level environment conducive to the water-dependent activities and public access for this area of the waterfront.

This *MHP Amendment* provides offsetting measures consistent with those included in the approved *South Boston MHP*.

The required offsets are as follows:

- Offsets for buildings with reduced height standards - This required category of offsets considers the public benefits of projects where there will be reduced height limits relative to the standard provisions of Chapter 91. In keeping with the approach contained in the *South Boston MHP*,

public benefits will be considered to be attained on all of the land covered by buildings that adhere to reduced height standards. This produces a 1:1 ratio of offsetting benefits relative to the building footprint for projects that adhere to reduced height limits relative to Chapter 91 standards.

- Public open space offset for increased standards – The other category of offsets addresses buildings that adhere to revised height standards contained in this *MHP Amendment*, but that exceed the standards that would be applicable in the absence of an approved municipal harbor plan. This offset provision directs such projects to provide public open space that exceeds the proportions that would otherwise be required under the Chapter 91 standards. In keeping with the substitute provisions contained in the *South Boston MHP*, additional public open space may be provided at a ratio of 1:2 relative to the net new shadow associated with those portions of the building that exceed Chapter 91 height standards. So, for example, the offset will require an additional one square foot of open space above the Chapter 91 standards for 2 square feet of net new shadow associated with a project. This amount of this offset will be determined using the methods employed for similar projects in the Fort Point Channel and South Boston areas of the harbor.

In keeping with the practice in other areas of South Boston and along Boston Harbor, building and site design measures must be employed to avoid wind impacts for any project that would exceed the standards for an appropriate ground level environment as established by the BRA and described within this *MHP Amendment*. Such measures as are necessary to avoid unacceptable impacts must be incorporated into the project design and documented as part of the licensing process and will be a condition of license approval. As a result, no other provision need be established to provide offsetting benefits due to wind conditions.

Based on the evaluation of the potential buildout and planned open space for this area of the harbor, no additional offsetting measures will be required other than those described above. There is adequate opportunity to provide additional open space benefits above those required by the Chapter 91 standards. This is due, in part, to the modest increase in net new shadow potential relative to reduced shadow benefits associated with the master planning accomplished through the 100 Acres Master Plan and MHP master planning processes.

As noted in the analysis of the substitutions for the associated building height limits, there are likely to be buildable sites and associated projects submitted for licensing that can be approved without offsetting measures other than compliance with the revised height limit. This will occur if the project complies with the revised height standards and has no net new shadow impacts on the ground level environment that would exceed the conditions associated with compliance with the underlying standards, absent an approved municipal harbor plan.

6.4 Amplifications

Municipal Harbor Plans promote long-term, comprehensive, and municipally based planning of harbors and other waterways areas in a manner that incorporates fully state tidelands policy objectives. One of the primary benefits associated with the state Municipal Harbor Planning process is the flexibility provided to communities to tailor the Waterways Regulations in a manner that achieves a local vision for its waterfront through the use of “amplifications” (310 C.M.R. 23.05(2)(b)(1)-(3)). A state-approved MHP brings greater flexibility to the application of numerous Waterways requirements that are discretionary in nature by allowing municipalities to amplify or strengthen them in accordance with local conditions. Municipal Harbor Plans with proposed amplifications must identify clearly the corresponding Waterways discretionary requirement to which it applies, the nature and intent of the proposed clarification, and any guidance to DEP that may be helpful with regard to future licensing decision. When a project conforms

to a state-approved MHP, DEP will adhere to the greatest reasonable extent with any guidance provided by the municipality regarding the desired application of the “amplification” to the licensing process.

This section discusses how amplifications will be used to implement the *Fort Point Channel Watersheet Activation Plan*. With Plan approval, amplifications are applied by DEP in its review of Chapter 91 license applications for projects located in the harbor planning area.

6.4.1 Implementing the Fort Point Channel Watersheet Activation Plan

This amplification will provide guidance for all projects with WDUZs in the *South Boston Waterfront District Municipal Harbor Plan Amendment* area. The BRA and the Fort Point Channel stakeholders are committed to ensuring the implementation of the *FPCWAP*, which by its very nature is a means of developing water-dependent facilities and activities that will enhance the Channel itself and make it a special water-based destination spot.

Employing this amplification, all nonwater-dependent projects that have a WDUZ should contribute to the implementation of the *FPCWAP* as a baseline requirement. This approach will allow DEP to determine the appropriate allocation based on the scale, character, site conditions, and other pertinent circumstances of each license application. The BRA requests that DEP consult with the City regarding implementation of the *FPCWAP* as the basis for an extended license term. The appropriate designation of such benefits shall be determined on a case-by-case basis under this MHP Amendment and in the context of individual Chapter 91 licenses.

The BRA released the final version of its *FPCWAP*, completing an 18-month public planning process. The *FPCWAP*, detailed in Chapter 5 of the MHP began with basic planning principles including baseline Chapter 91 conditions 2 to activate the WDUZ and formed a menu of public benefits with a broader planning vision than the standard “project by project” Chapter 91 licensing review.

Among the improvements planned are the following:

Marine Infrastructure

- Watersheet access ramps
- Public Dockage
- Channel Walks

Seawall Basin Pedestrian Bridge

- Small Boat Program Facility
- Public Programming Barges
- Small Vessel Launches
- Marine Operations

Infrastructure Maintenance

- Watersheet Management
- Watersheet Maintenance
- Water Quality Improvements

Water Transportation

- Water Shuttle and Taxi Facilities
- Operating Subsidies

Channel-Wide Public Programming

6.4.2 Amplifying Shoreline Use and Tideland Activation for Projects with Water Dependent Use Zones (310 CMR 9.52 and 9.53)

The Waterways Regulations' require that nonwater-dependent use projects provide a "reasonable" amount of land to water-dependent uses, including public access. The regulations (310 CMR 9.52(1)(a) and 9.53(2)(a)) require that a project with a water-dependent use zone (WDUZ) needs to provide at least one facility that generates water-dependent activity and a pedestrian access network (310 CMR 9.52(1)(b)) or, in Commonwealth Tidelands, exterior open space for active or passive public recreation (310 CMR 9.53(2)(b)). An approved MHP may modify such regulatory provisions through amplifications.

The Waterways Regulations Sections 310 CMR 9.52 and 9.53 identify respectively the following facilities as means of generating water-dependent activities:

- Boat landing docks and launching ramps, marinas, fishing piers, waterfront boardwalks and esplanades for public recreation.
- Ferries, cruise ships, water shuttles, public landings and swimming/ fishing areas, excursion/charter/rental docks and community sailing centers.

The WDUZ regulations' requirement to generate water-dependent activities for projects in Private and Commonwealth Tidelands are considered "discretionary" because they do not specify numeric limitations and thus allow DEP the ability to determine which project elements do or do not comply with the regulatory principle of the regulation. An MHP may include Amplifications that provide direction to DEP on how to apply such discretionary regulations.

In applying these principles, this *MHP Amendment* amplifies the following aspects of the regulations:

6.4.3 Regulation Amplifications

Utilization of the Project Shoreline: Pedestrian Network (9.52)

These regulations require a facility that promotes active use of the project shoreline, and requires the provision of a pedestrian network of a kind and to a degree appropriate for project sites.

The amplification of these regulations directs the implementation of these regulations to the provision of the boating dock facility and pedestrian network envisioned in the *FPCWAP*.

Activation of Commonwealth Tidelands for Public Use (9.53)

The regulations in this portion of the Chapter 91 regulations requires that nonwater-dependent use projects located on Commonwealth Tidelands (except in DPAs) must promote public use and enjoyment of such lands to a degree that is fully commensurate with the proprietary rights of the Commonwealth and that ensures that private advantages of use are not primary but merely incidental to the achievement of public purposes.

Amplification of these requirements will provide public benefits recommended by the *FPCWAP* in the WDUZ and adjacent watershed to promote public uses and enjoyment of Commonwealth tidelands.

Provision for Public Activity 9.53(2)

The regulations in this section state that a project must attract and maintain substantial public activity on the site on a year-round basis, through the provision of water-related public benefits of a kind and to a

degree that is appropriate for the site given the nature of the project, conditions of the adjacent waterbody, and other relevant circumstances.

Amplification of these requirements will provide public benefits recommended by the *FPCWAP* to attract and maintain substantial public activity on the site on a year-round basis.

Facilities for Water-Based Public Activity 9.53(2)(a)

This requirement directs projects where there is a water-dependent use zone to include at least one facility that promotes water-based public activity.

Amplification of these requirements will provide at least one facility that promotes water-based public activity in the water-dependent use zone as recommended by the *FPCWAP*.

Interior Facilities of Public Accommodation 9.53(2)(c)

Chapter 91 regulations seek to activate historic Commonwealth tidelands by providing for interior facilities of public accommodation (FPAs) at the ground floor of buildings that include nonwater-dependent uses of private tenancy. The standard is contained in the provisions of 310 CMR 9.53(2)(c), which states,

“The project shall devote interior space to facilities of public accommodation, other than public parking, with special consideration given to facilities that enhance the destination value of the waterfront by serving significant community needs, attracting a broad range of people, or providing innovative amenities for public use; such public interior space shall be located at the ground level of all buildings containing nonwater-dependent facilities of private tenancy, unless the Department determines that an alternative location would more effectively promote public use and enjoyment of the project site or is appropriate to make ground level space available for water-dependent use or upper floor accessory services.”

Some of the uses that will serve to implement this plan are likely to require interior spaces within the area of the harbor addressed by this MHP Amendment.

Amplification of these requirements will provide that facilities of public accommodation should include those interior space needs and interior uses required to implement the *Fort Point Channel Watersheet Activation Plan*.

The types of uses and interior space needs envisioned include:

- Locations to support and provide services associated with boat landings
- Storage space for seasonal or year-round needs for water-based activities
- Restaurants or active uses that attract people to the waterfront
- Interpretive or wayfinding facilities
- Rental locations for kayaks or small boats
- Changing rooms for the South Bay Harbor Trail network
- Other watersheet or public access network amenities

Management Plan 9.53(2)(d)

The regulations require that projects include a management plan for all on-site facilities offering water-related benefits to the public, to ensure that the quantity and quality of such benefits will be sustained effectively.

Amplification of these regulations will ensure that applicants shall provide management plans for water based activities consistent with the *FCWAP*, to ensure coordination with other water based activities and preclude interference with water transportation services.

Off-Site Benefits 9.53(2)(e)

According to the regulations, DEP may consider measures provided by the applicant to provide benefits elsewhere in the harbor or in the vicinity of the site if the water-related public benefits that can reasonably be provided onsite are not appropriate or sufficient.

Amplification of these regulations will provide public benefits recommended by the *FPCWAP* elsewhere in the Fort Point Channel if the water-related public benefits that can reasonably be provided on-site are not appropriate or sufficient.

6.5 Summary of Proposed Substitutions, Offsets, and Amplifications

The following table summarizes the proposed substitutions and the associated public benefits that would offset those substitutions should they be required as a consequence of a proposed project. Additional descriptions and guidance regarding the *Fort Point Channel Watersheet Activation Plan* are contained in both Section 8 and Appendix 1 of this *MHP Amendment*.

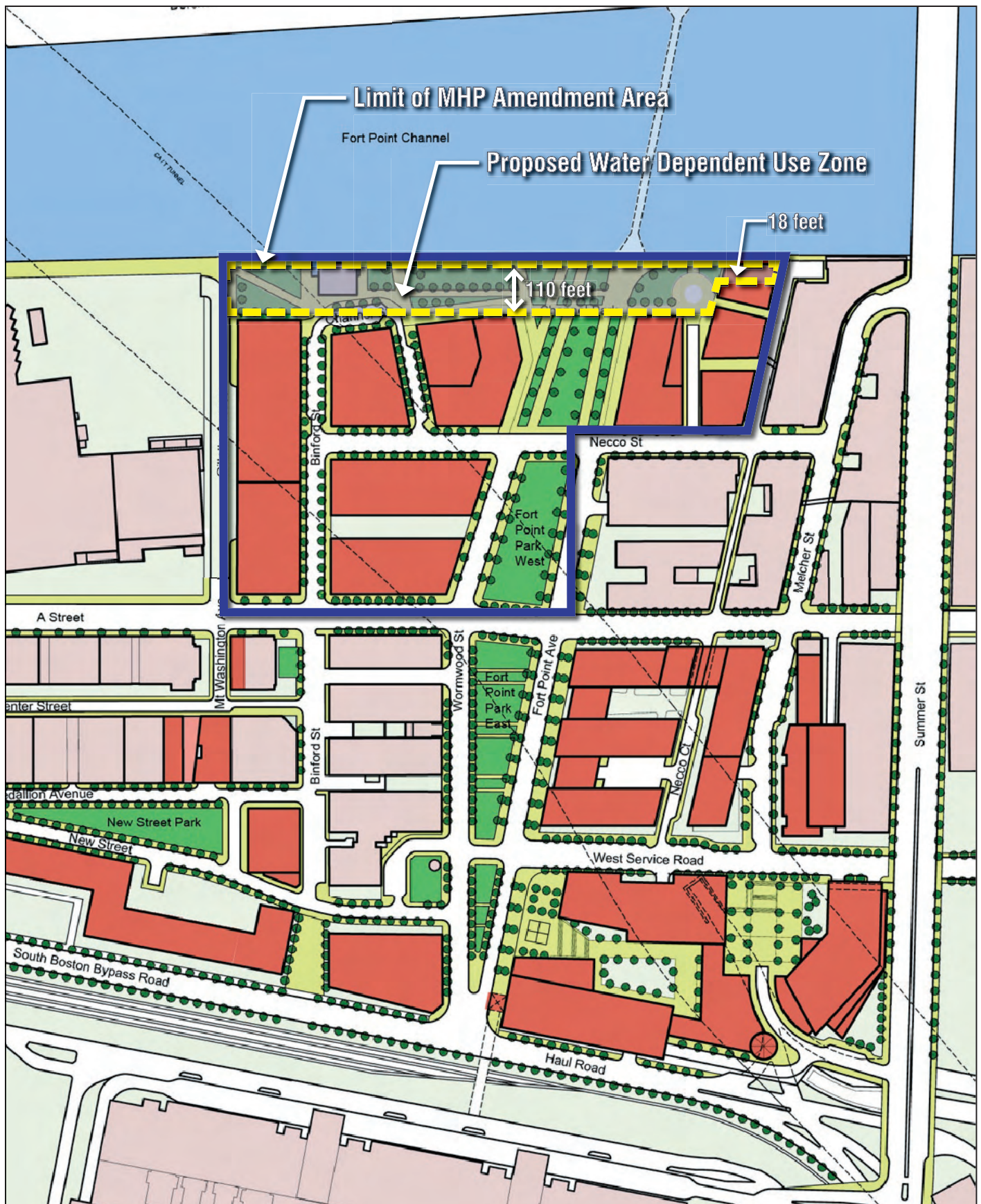
Table 6-1: Summary of Chapter 91 Substitutions, Offsets , and Amplification

Regulatory Provision	Standard Requiring Substitution	Substitution	Public Benefits and Offsets
310 CMR 9.52(b)(1) Public Access Network ⁽²⁾	<i>“...walkways and related facilities along the entire length of the water-dependent use zone; wherever feasible, such walkways shall be adjacent to the project shoreline and, except as otherwise provided in a municipal harbor plan, shall be no less than ten feet in width...”</i>	The minimum standard will be widened to eighteen (18) feet clear in areas where the WDUZ is at least 100 feet wide and 12 feet clear along the remainder of the shoreline. These enhancements shall replace the existing standard of ten (10) feet.	The substitution directly benefits the public through enhanced access (open 24 hours/7 days per week); no offsetting public benefit is required.

Regulatory Provision	Standard Requiring Substitution	Substitution	Public Benefits and Offsets
310 CMR 9.51(3)(c) Setback/Water-Dependent Use Zone ⁽²⁾	<i>"New or expanded buildings for non-water-dependent use ... shall not be located within a water-dependent use zone."</i> The water-dependent use zone in the <i>MHP Amendment</i> planning area includes a setback for nonwater-dependent uses that would vary from 80 feet to 100 feet, depending upon location and characteristics of projects that may be proposed.	An alternative WDUZ will be established that generally increases the minimum setback to 110 feet from the project shoreline, except for that portion of the planning area between the Fort Point Channel and Necco Street, which will require a setback or 18 feet. The substitution will allow separate licensing of individual projects.	The substitute provision provides the offsetting benefit of a reconfigured WDUZ that has at least the same land area as would occur under the standard provisions, is deeper along substantial portions of waterfront that are aligned with an extensive park network that helps connect this portion of the waterfront with the surrounding district, and key destinations in South Boston and the Fort Point Channel.

Regulatory Provision	Standard Requiring Substitution	Substitution	Public Benefits and Offsets
310 CMR 9.51(3)(e) Height Limitations and the Ground Level Environment⁽²⁾	<i>“New or expanded buildings for non-water-dependent use shall not exceed 55 feet in height if located ... within 100 feet landward of the high water mark; at greater landward distances, the height of such buildings shall not exceed 55 feet plus one-half foot for every additional foot of separation from the high water mark; the Department shall waive such height limits if the project conforms to a municipal harbor plan.”</i> The standard building height formula would produce building heights ranging from 55 feet to 330 feet.	The refined building height limits supports a building massing that is more moderate in scale, ranging from 80 feet to a maximum of 180 feet. The organization of building heights and allowable massing is more compatible with the historic context than would be provided with Chapter 91 compliant-building heights. The substitution will allow separate licensing of individual projects.	This provision results in a total buildable volume along this portion of the harbor that is approximately one half of that which could be created in the absence of an approved municipal harbor plan and this <i>MHP Amendment</i>. The refined height limits provide an offset because they substantially reduce the potential for net new shadow in many locations relative to shadow impacts than could occur using the standard Chapter 91 provisions. The refined height limits include securing commitments for those portions of building footprints that would be constructed using reduced Chapter 91 height limits as a result of this <i>MHP Amendment</i>. The refined standard results in a required offset for net new shadows in cases where a project results in net new shadow relative to a Chapter 91 compliant condition, taking into account the benefits that would also occur because of potential shadow reduction due to reduced height limits. This offset is permitted on a 1:2 ratio of additional open space to net new shadow area. No offsetting measures will be provided for wind impacts, as no project may be approved which does not meet the wind criteria as described in this <i>MHP Amendment</i>.

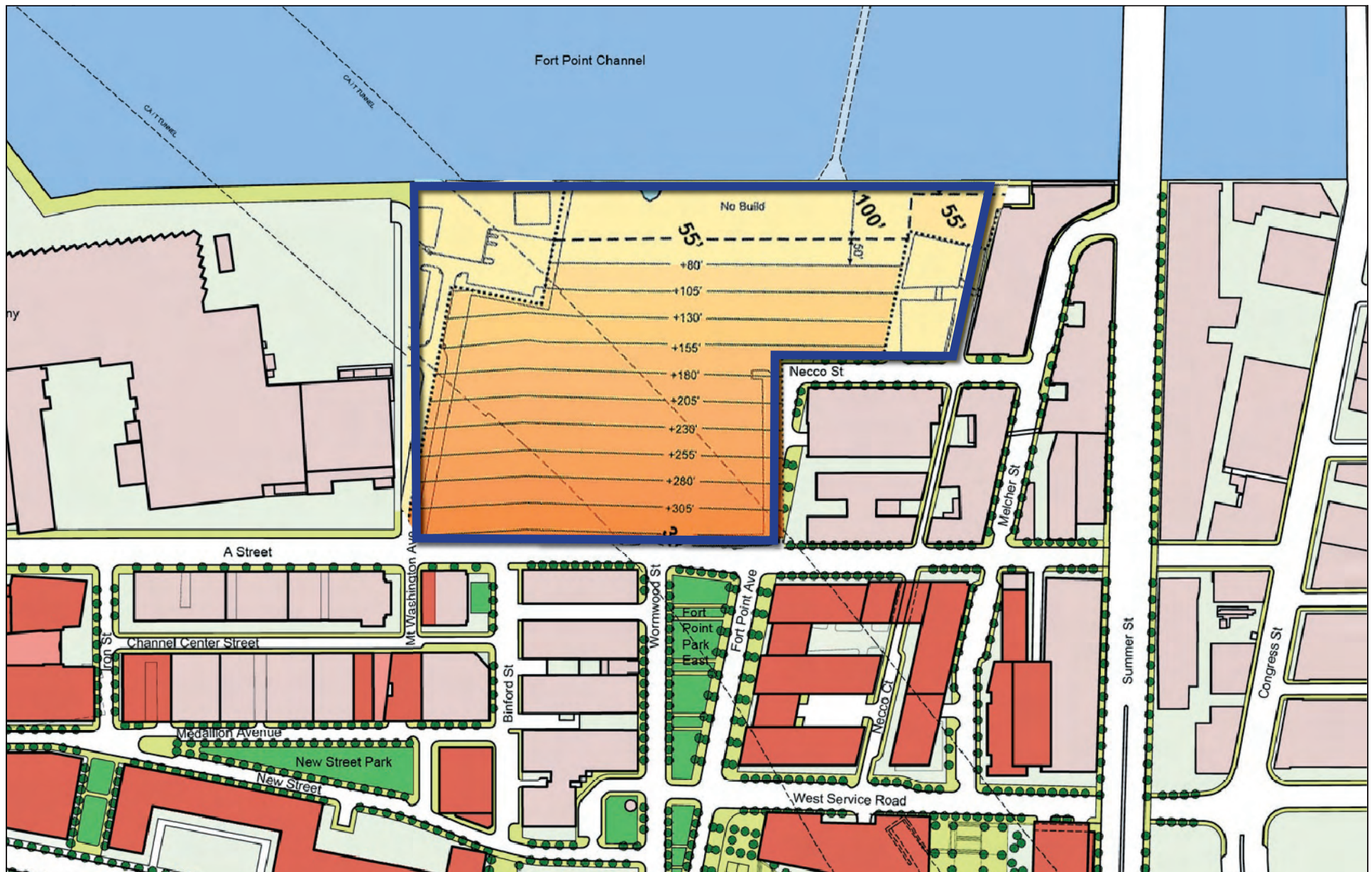
Regulatory Provision	Standard	Amplification	Description
310 CMR 9.51 Utilization of the Project Shoreline: Pedestrian Network	These regulations require a facility that promotes active use of the project shoreline, and requires the provision of a pedestrian network of a kind and to a degree appropriate for project sites.	The amplification of these regulations directs the implementation of these regulations to the provision of the boating dock facility and pedestrian network envisioned in the FPCWAP.	The FCWAP includes recommendations for the location and purposes associated with a boat dock facility and the pedestrian network for this area of the harbor.
310 CMR 9.53 Activation of Commonwealth Tidelands for Public Use	The regulations in this portion of the Chapter 91 regulations requires that nonwater-dependent use projects located on Commonwealth Tidelands (except in DPAs) must promote public use and enjoyment of such lands to a degree that is fully commensurate with the proprietary rights of the Commonwealth and that ensures that private advantages of use are not primary but merely incidental to the achievement of public purposes.	Amplification of these requirements will provide public benefits recommended by the FPCWAP in the WDUZ and adjacent watersheet to promote public uses and enjoyment of Commonwealth tidelands.	The FCWAP includes recommendations for the location and purposes associated with a wide range of uses and activities intended to help activate this portion of the harbor. Amplification of these requirements will provide at least one facility that promotes water-based public activity in the water-dependent use zone as recommended by the FPCWAP. By directing some of the required facilities of public accommodation towards the implementation of that plan, this amplification may assist in providing interior facilities to support the implementation of the FPCWAP. Amplification of these regulations will ensure that applicants shall provide management plans for water-based activities consistent with the FCWAP. The amplification will provide public benefits recommended by the FPCWAP elsewhere in the Fort Point Channel if the water-related public benefits that can reasonably be provided on-site are not appropriate or sufficient.



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 South Boston Municipal Harbor Plan Amendment
 Fort Point District South

Figure 6-1
 100 Acres Master Plan (Detail)

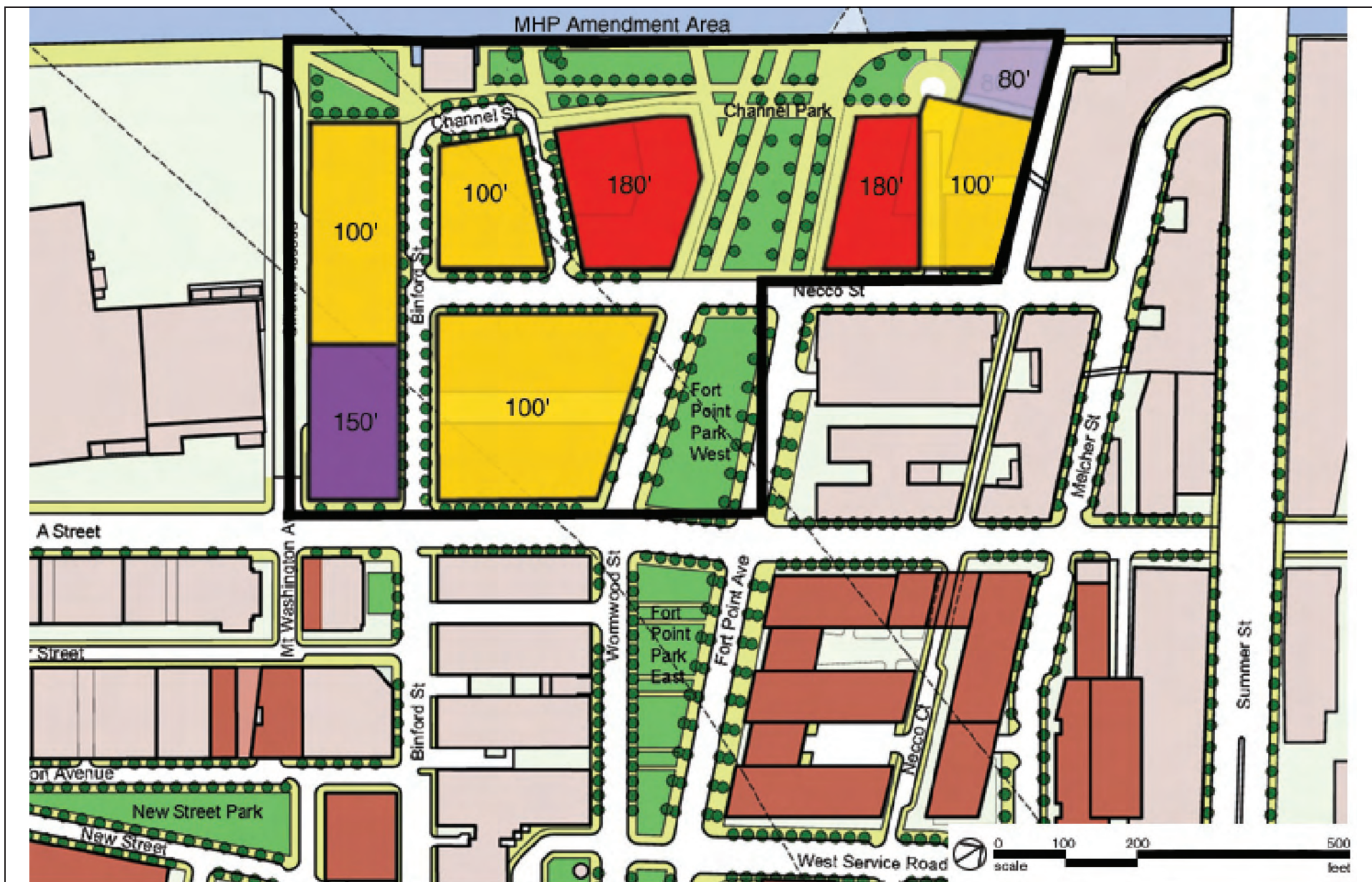




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 Fort Point District South

Figure 6-2
 Chapter 91 Height Limits





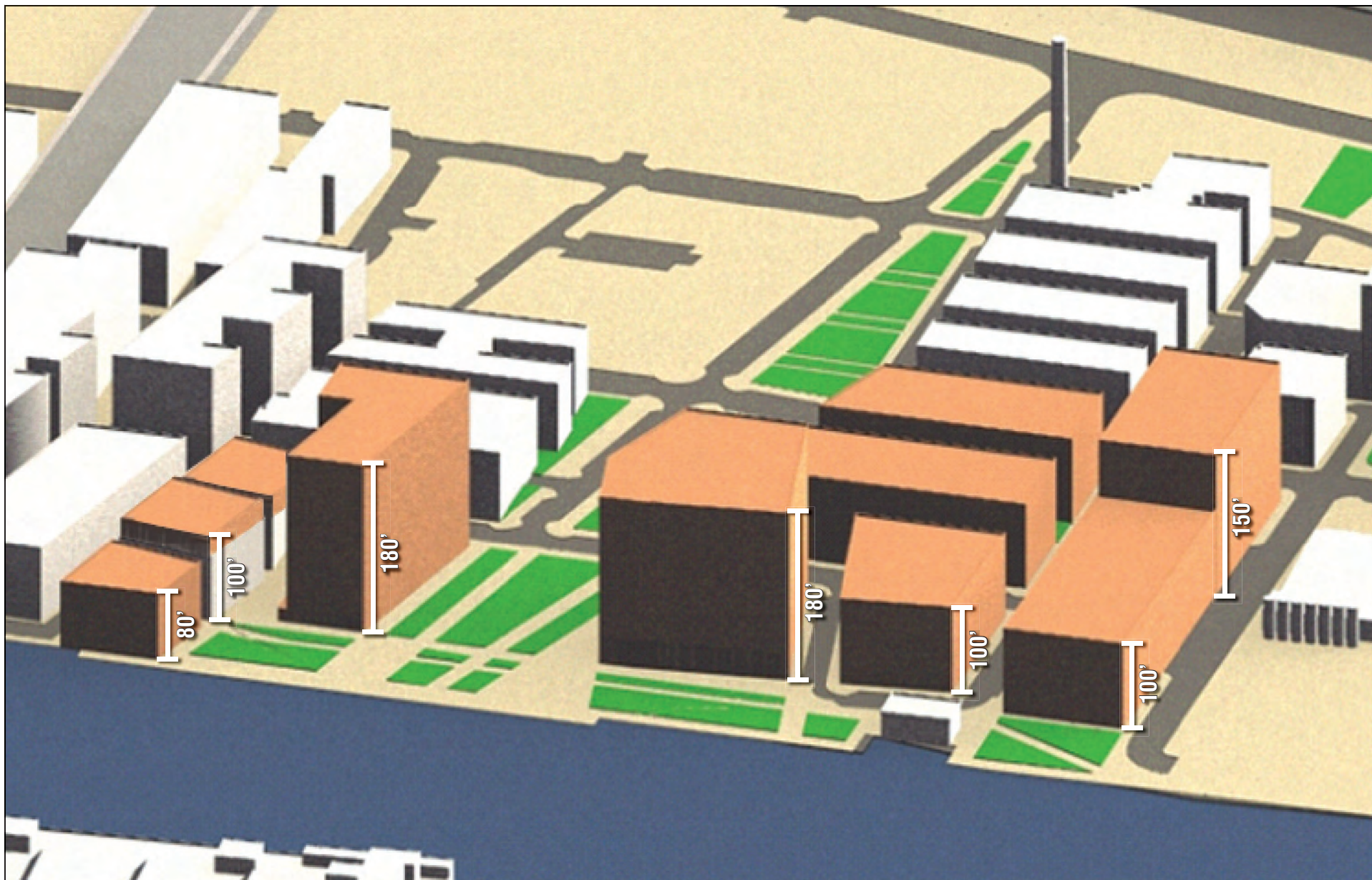
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 Fort Point District South

Figure 6-3
 Proposed Building Height Limits



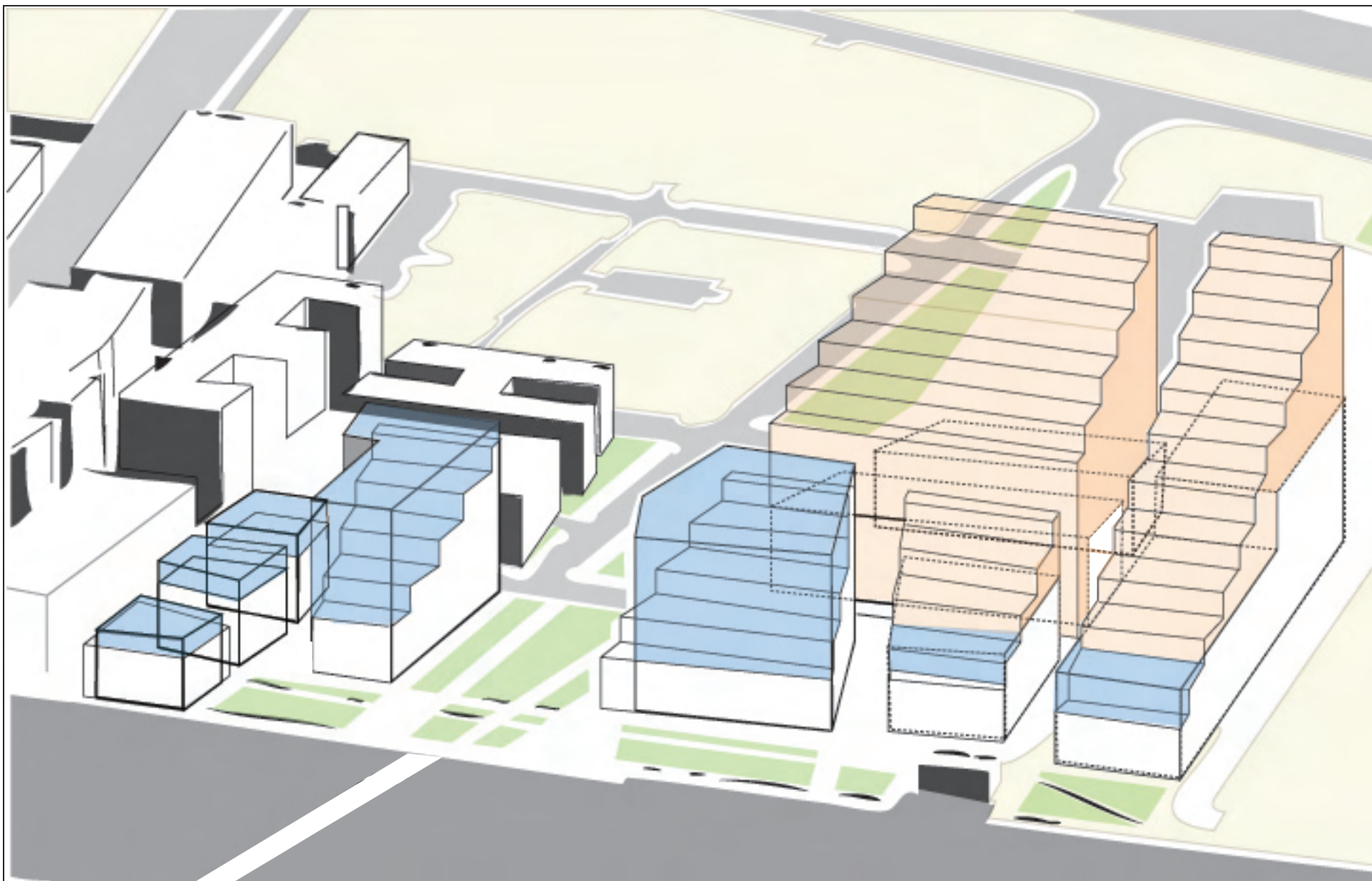
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Figure 6-4
Chapter 91 Buildable Volume



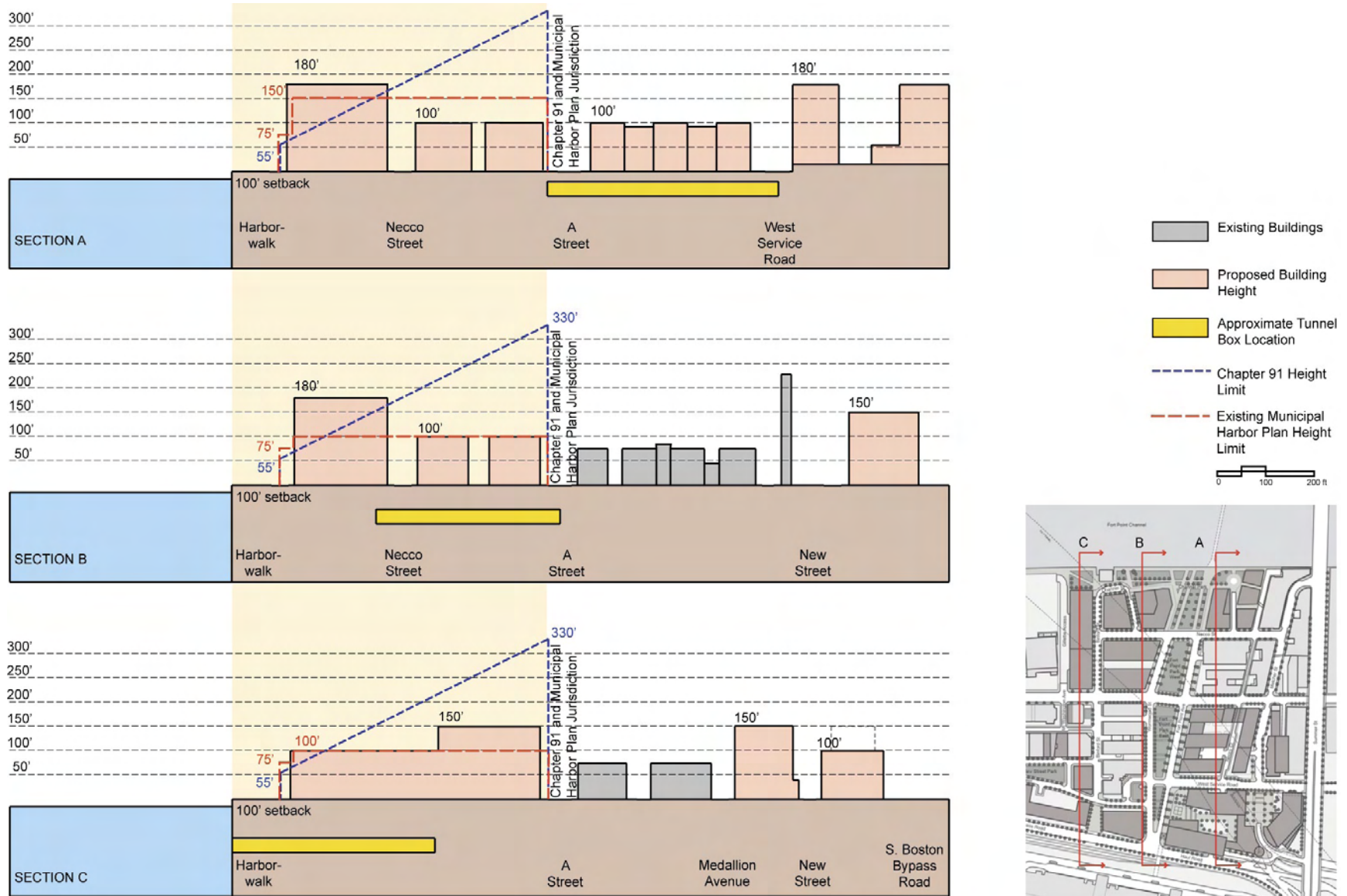
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Figure 6-5
Proposed Buildable Volume



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South Boston Municipal Harbor Plan Amendment
Fort Point District South

Figure 6-6
Chapter 91 with Proposed Buildable Volume



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 Fort Point District South

Figure 6-7
 Proposed Building Massing and Heights

7. OPEN SPACE AND PUBLIC ACCESS GUIDANCE

This section provides guidance for improvements and uses associated with open space and public access in the *Fort Point District South Municipal Harbor Plan Amendment (MHP Amendment)* planning area. The intent of this section is to support the Waterways Regulations by optimizing public access to the waterfront and promoting water-dependent uses, and to help ensure quality redevelopment within the Municipal Harbor Plan (MHP) planning area trust lands. The following goals and guidelines are consistent with the Waterways Regulations and ensure that development along the waterfront provides the public with extensive quality open space and meaningful access to the waterfront. This section conforms to the purpose of the state approved Municipal Harbor Plans as stated in 301 CMR 23.01(2), Review and Approval of Municipal Harbor Plans. The goals and guidelines will provide guidance to EOE agencies, particularly the Department of Environmental Protection, in matters relating to waterways regulation through the Chapter 91 licensing process.

Some of these open space goals, guidelines and requirements were developed as part of other Municipal Harbor Plans in South Boston and East Boston and are incorporated in this submittal because of their general relevance to the overall Harbor; however, they have been modified to suit the characteristics of this *MHP Amendment* planning area.

7.1 Open Space and Public Access Guidelines

The term “open space” can be broadly defined to include both public and private space and can describe a variety of different types and scales of spaces, from plazas, walkways and parks to driveways, streets, and roads. This *MHP Amendment* establishes an open space network system to guide property owners in the development of their property and to guide DEP in issuing Chapter 91 licenses for these parcels. These proposed guidelines are consistent with the *Boston Parks and Recreation Department’s Open Space Plan 2002- 2006, “Part 5 Resource Protection Mission.”*

Design and programming of open spaces must be consistent with the MHP, helping to create a highly accessible and well-maintained open space network that is supported by an array of public amenities and that is characterized by an ease of movement. The open space network should be a unified, cohesive system that celebrates and enhances the waterfront while respecting its water-dependent abutters. The elements of the open space network include the following:

- Public access and view corridors to the Harbor
- Harborwalk
- Programming and activation of public spaces
- Public space amenities
- 24-hour public access
- Maintenance and implementation standards

7.1.1 Public Access and View Corridors to the Harbor

Public access usually consists of pedestrian access to and along the waterfront, but can also be used to describe access by bicycles, rollerblades, and other recreational means where sufficient area exists to ensure compatibility with pedestrian uses. Historically, the general public has had inadequate public access to the waterfront in the Fort Point Channel because the area was primarily given over to railroads and shipping. A primary goal of the open space network system is to ensure that workers, residents, and visitors enjoy

the benefits of public access to the waterfront. Because most of the properties along this section of the waterfront are undergoing changes, the guidelines of this plan are designed to meet this challenge and achieve compatibility between the varying interests and needs of the waterfront's users.

7.1.2 Harborwalk

The centerpiece of the City's goal to provide public access to the waterfront is the Harborwalk. From the initiation of the Harborpark concept by the BRA in the early 1980s, when the City first set the goal of a creating a continuous some 47-mile waterfront walkway along Boston Harbor, the City has been working diligently in partnership with private developers, property owners and Harbor advocates to improve waterfront sites and to realize this goal.

Site-Specific Harborwalk Guidelines

- The Harborwalk should connect effortlessly to other pedestrian systems and be universally accessible from other public ways, bridges, adjacent land uses and redevelopment sites.
- The Harborwalk should provide unobstructed access along the Fort Point Channel and to adjoining open space.
- The Harborwalk should be universally accessible and connected to vertical access to the watersheet and docking facilities at key points along the Fort Point District South.
- The Harborwalk should embrace the universal design principles to not only meet accessibility code requirement but also to create an environment that welcomes people of all ages and abilities throughout individual Harborwalk sections and at the water's edge.

Although the Waterways Regulations require a minimum walkway width of ten feet, the City's Harborwalk standards require a minimum walkway width of 12 feet (10 feet clear). Whenever possible, a wider Harborwalk should be created.

Harborwalk Signage Guidelines

The City's Harborwalk signage program is another important component of the Harborwalk. The signage program is a graphic system developed to direct people to and along the Harborwalk and to nearby public amenities, such as a water transit facility or public restrooms, to parks and open spaces, cultural venues, and historic exhibits – in essence to help pedestrians make the most of their waterfront experience. Property owners will be required to incorporate appropriate Harborwalk signage throughout their sites in conformance with the Waterways Regulations 310 CMR 9.35(5)(b). Signage is particularly important and should be continued along the inland connections to the Harborwalk and along the Harbor. The Harborwalk signage for the Fort Point District South should:

- Incorporate the City's standards and Harborwalk signage requirements.
- Include, where appropriate, tactile signage and contextual maps to surrounding areas.
- Communicate effectively and be readable.
- Be visible to all and include a tactile element.
- Be highly imageable, with contrasting background for text, consistent, and identifiable.
- Be attractive, durable and functional.

- Reinforce circulation patterns that improve the visitor experience.
- Complement architectural character of the surrounding Fort Point Channel urban fabric.
- Complement other abutting and nearby landscaping efforts.

7.1.3 Interior Public Spaces

A system of enclosed open spaces open to the public with amenities and interpretive elements, where appropriate, should be incorporated in the form of pedestrian ways and public corridors to provide alternative protected routes during foul weather.

In new development, additional space for public use should be provided whenever possible and appropriate, especially along retail and commercial uses to encourage them to “spill” out from the indoors to outdoors and promote activity without overwhelming the areas provided for public use, creating pedestrian flow choke points, and obstructing free access and use of the waterfront. For example, providing furnished areas available for plaza spaces adjacent to buildings allows outdoor café seating or small performance spaces as well as free street furniture for sitting and viewing without requiring users to pay for the view. To be an integral part of the master plan design, the design of public open space, interior spaces, and pedestrian ways should be focused on the diverse abilities of the public.

New space for public enjoyment should be of a type, size, and character appropriate to its use and context, particularly within large developments. Historic interpretation and art features should be encouraged in spaces for public use. Food service, performing arts, civic activities, and recreation facilities should also be accommodated where appropriate. Special features such as arcades, building overhangs, promontories, fountains, facade lighting, and environmental art are encouraged.

7.1.4 Public Space Amenities

In order to maximize the public’s use and enjoyment of the waterfront, a mix of public amenities should be located throughout the site. Residents and visitors must have places to purchase ferry tickets, access a phone booth, use a public restroom, call a water taxi, purchase snacks, rent small watercraft or fishing gear and to buy bait, and to enjoy the harbor and the Fort Point Channel. Other amenities include interpretive features and signage, temporary and permanent art, binoculars, picnic tables, and “Mutt Mitt” stations. Boaters should have access to shower facilities. Not every use is appropriate for every site, nor is this intended as an exhaustive list, but these are the types of public amenities that are critical. Also, given New England weather patterns, it is important to have protected areas where the public can wait for water transit or just relax and enjoy the Harbor, helping to activate the waterfront during periods of less hospitable climate. In some instances, these supporting amenities will be located within the ground floor of a larger development. In other instances, it may be appropriate to place some or a combination of these amenities in small structures located within a site’s open space areas. For example, wind and shade structures in strategic locations can help to extend the appeal of being close to or on the water later in the season. Some of these structures could be erected on a seasonal basis.

Some amenities, such as showers for boaters and restroom facilities, might be directly accessible from docks. It is important, however, that these small structures do not comprise a significant portion of a site’s open space. Some of those visitor services amenities, such as restrooms including a family/unisex restroom, should be opened to the larger public. Within private developments abutting the Harbor, covered public facilities and internal passageways, including elevators and stairs, should remain open to the public 24 hours a day and offer public amenities. In considering open space design and programming, decisions must be made in the larger context of the design and programming of the entire site’s exterior and interior public areas. Because the Municipal Harbor Plan is not a master plan review process,

determination of the appropriate number, size, and design of these types of structures will be left to the City's Article 80 development review process.

7.1.5 Creative Programming of Open Space and Other Public Areas

Creative programming for open space and other public areas focusing on low or no-cost events can contribute greatly to the activation of a site. The term "programming" can mean many different things, from providing amenities that support passive recreation to hosting special events, such as a waterfront festival. The Fort Point District South can accommodate a range of programming options that will engage both land and edges of the water.

Emphasis should be placed on the following aspects:

- Ensuring that the waterfront provides basic amenities such as seating, lighting and places for refreshments and restrooms, including a family/unisex restroom, to accommodate the public as well as facilities for boaters where appropriate.
- Ensuring that the infrastructure can accommodate periodic events that serve to introduce residents and visitors to the accessibility of the waterfront and encourage them to return any time on their own.
- The waterfront should not be overly programmed to a degree that the tranquility and beauty of the urban harbor are spoiled, and freedom to sit and read, fish, or watch vessels go by is hindered.

Property owners developing a master plan subject to the City of Boston's Article 80 Large Project Review process should be required to develop programming strategies for their sites that will provide the public with an assortment of program options, from passive recreation to special events, and to take into account the infrastructure needs of the entire range of options. Developers of smaller projects that are not subject to the Article 80 Large Project review process should be encouraged to develop strategies that will attract the public to the water's edge. Though property owners may wish to develop programs that reflect the unique characteristics of their sites, to the extent feasible, individual programming efforts should be coordinated and managed to maximize the overall impact of such activities and improvements, to activate the watershed and to attract the public to the area.

In addition to providing for special event programming where appropriate, property owners also will be required to incorporate more passive recreational elements into their projects. Such elements should focus on providing cultural, educational and/or historic programming and uses that will enhance the waterfront area and draw people at all times of the year and in all kinds of weather, such as those elements discussed below. For larger sites, an integrated combination of new cultural, educational and historic programming may be appropriate, while owners of smaller sites may be required to incorporate only one or two such elements into their projects. Appropriate number and scale of these programming elements will be reviewed and determined during the Article 80 review process. Facilities of Public Accommodation required by Waterways Regulations for nonwater-dependent uses located in Commonwealth Tidelands play an important role in activating the waterfront.

Landside Public Realm Guidelines

- Encourage active waterfront use such as fishing, boating, outdoor exhibits, viewing areas, binoculars, and land and water transportation.
- Provide informal sitting and viewing areas.

- Provide a variety of public space amenities such as seating, tables, and shade shelters, heated waiting areas, bathrooms, performance space and trash receptacles.
- Avoid the installation of fixed, obstructing structures and amenities and provide flexibility to allow for large events and public gathering during watersheet festivals.
- Provide native salt-tolerant plant species, shade trees and year-round vegetation.
- Coordinate landscaping and design of public spaces on the Fort Point Channel waterfront.
- Coordinate furniture, signage and lighting along the Harborwalk and with developers.
- Activate pedestrian plazas along Fort Point Channel and through-blocks and alleys with ground floor shops, and concessions for food, beverage and other vendors.

7.1.6 24-Hour Public Access

All pedestrian open space areas established within the *MHP Amendment* planning area must be open and accessible to the public 24 hours per day in accordance with the Waterways Regulations 310 CMR 9.35 (a) and (c). No gates, fences or barriers may be placed on the open space in a manner that would impede or discourage the free flow of pedestrian movement, except in order to accommodate construction and maintenance of buildings and related improvements on adjacent parcels. Only temporary access restrictions in pedestrian open space areas, as may be required in emergencies, special events, or in connection with construction or maintenance, are permitted, and then only if such interference is minimized to the extent reasonably practicable and consistent with public safety, and such barriers are in place no longer than necessary.

It is important to ensure that segments of the Harborwalk that are open-air passageways through buildings remain open 24 hours per day, seven days a week, and that covered, open spaces and amenities such as bathrooms and phones are available for public use during most hours, seven days a week, and do not become privatized.

7.1.7 Management and Implementation Standards

In order to ensure that a site's interior and exterior public areas are maintained at a level that will ensure that these areas remain attractive, safe, and accessible to the public, this submittal of this *MHP Amendment* requires the preparation of a Management Plan in accordance with Waterways Regulation 310 CMR 9.35(5).

During the *South Boston Waterfront District Municipal Harbor Plan (South Boston MHP)* study, a sub-committee of the Municipal Harbor Plan Advisory Committee focused on developing these baseline standards, which address maintenance of parks, Harborwalk, streets, sidewalks, landscaped areas, public restrooms, park and sidewalk furniture, and the watersheet.

- Create a maintenance plan for the Harbor public spaces on waterside and landside.
- Maintenance of private space opened to the public would be the responsibility of private owners.
- Ensure that the Harbor is cleaned up and that debris is removed regularly.
- Coordinate private security and safety of private space available for public use including floating docks.

7.2 Requirements for Open Space and Public Access Plan Submittals

In order to enable the BRA to adequately review a master plan and ensure that open space and other spaces available for public use serve the public's access to and enjoyment of the waterfront, any master plan subject to Article 80 Small Project or Large Project Review will be required to submit to the BRA an Open Space and Public Access Plan.

The Open Space and Public Access system should include plans, drawings, specifications, descriptions of open space and exterior and interior public spaces and uses, and descriptions of proposed management measures and access-related rules and regulations, if any, sufficient to permit the BRA to:

- Determine the compliance of the master plan with guidelines consistent in this chapter.
- Determine compliance with interim or final zoning adopted for the area.
- Make a Section 18 Recommendation.

7.3 Sustainability

Development in the 100 Acres area, including the *MHP Amendment* planning area, should incorporate currently available economic and manageable sustainable technologies in order to reduce pollution, energy costs and impacts on the environment. Such projects should also be guided by the Transit-Oriented principles. New and renovated developments within this planning area shall strive for LEED certification.

7.4 Universal Accessibility

The City of Boston has a longstanding commitment to accessibility through Universal Design principles. Accordingly, transportation, open space, access to the Harbor, pedestrian facilities and residential, civic and commercial buildings should be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design. The following outcome standards are organized according to the seven principles of universal design, and provide specific guidance regarding space usability.

7.4.1 Equitable Use

The design is equally useful, appealing and safe for all users.

- Harborwalk provides for safe enjoyment of all users by differentiating areas for pedestrians, cyclists and users of other recreational equipment.
- All indoor and outdoor paths of travel are stable, firm and slip resistant regardless of the weather. Rough and/or irregularly shaped bricks, cobbles, and crushed stone are not suitable walk surfaces but may be used as decorative borders or to identify areas where pedestrians are not welcome. If used, imprinted asphalt or concrete and boardwalk require the use of premium materials including wearing and subsurfaces to prevent horizontal and vertical changes such as pillowing, warping, and cracks of more than 1/4". Such materials also require a continuous high level of maintenance and regular replacement.
- Street furniture accommodates differing abilities and sizes of users and is placed at distances convenient for people with limited stamina or mobility.
- Street furniture does not enter the path of travel.

- Standard street furniture toilets are unisex, fully accessible, clearly labeled through instructional symbols, self-cleaning, usable by children and adults, and designed for comfort and security of any user.
- Benches are offered in multiple designs and heights, some with backs, arms and some without. Benches, seat walls, and perched seating should be spaced at most 175 feet apart. Seating, including seat walls should be designed to allow persons utilizing mobility aids to sit alongside their companions. Designs should also include places where older residents can perch or lean and some locations should offer protection from the weather or sun
- To maximize weather protection for users, transportation shelter designs should not have openings between individual wall panels or between walls and the ground/roof. Shelters should also have enough width to accommodate scooters and wheelchairs. Heater elements are encouraged.
- Pedestrian signal timing at crosswalks is set to allow all users to cross the street safely during a walk signal, including small children and people using wheelchairs and canes, generally moving at 3 feet per second.
- Pedestrian signals include accessible audible features as recommended by the *US Access Board's Pedestrian Rights of Way 2005 Draft* (chirping bird features are not allowed).
- Vertical transportation options (stairs, elevators, escalators) are visible from lobby and are included in a single signage system.
- At least one restroom in each area of public accommodation is fully accessible and unisex to allow companion care and comfort for a diversity of users. Said restroom should also provide baby changing facilities.
- Sliding/pocket doors are encouraged as a means of entry.
- All building design, construction, interior design, maintenance and management is attentive to providing the best possible indoor air quality by minimizing the use of potential contaminants and maximizing mitigating measures such as ventilation.
- Retail businesses should display merchandise at varying and easy to reach heights, as well as allow a clear width of 3'6" for ease of movement throughout interior.
- Housing units are designed for aging in place and thus do not require future adaptation.

7.4.2 Flexibility in Use

The design accommodates a wide range of individual preferences and abilities.

- Design sidewalks wide enough to be used as gathering spaces without impeding other pedestrians.
- Intersections use multi-sensory (sight, sound, touch) indicators for safe crossing.
- Include multi-sensory elements (sight, sound, touch) in landscape features outdoors and indoors.
- Include counters at varying heights to allow transactions and comfortable sightlines for a variety of standing and seated users at outdoor vending places and indoor food outlets.

- Offer options of unfixed seats in restaurants and bars and, if using a high stool option, provide standard height seating also.
- Restaurant bars that are of standing height should feature a lowered section for shorter stature customers.
- Offer tactile (raised letters and Braille) and/or audio option for accessing information at historical markers and interpretive signage along the Harborwalk.
- Make lighting in places of public accommodation adjustable in brightness for areas in which visitors require task lighting (e.g., registration, menu reading, lip-reading).

7.5.3 Simple and Intuitive Use

Design is easy to understand, regardless of user's experience, knowledge, language skills, or current concentration level.

- Standardize signs and symbols for public parking places throughout the district or development area.
- Install digital or two-dimensional district maps with clear indications of landmarks, routes and public restrooms; include audio and tactile options.
- Create visual *and* tactile markers to direct visitors to destination sites.

7.5.4 Perceptible Information

The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.

- A uniform and legible system of wayfinding includes signs with standard fonts, size and color, use of landmarks as cues to orientation, and standardization of symbols and terminology throughout the district.
- Clear schedules and fares are posted for all water recreation and transportation vehicles at the waiting area and installed at a height readable by a seated person.
- Lobbies and public spaces will be designed to maximize acoustical conditions that minimize ambient noise and enhance voice clarity.
- Define edges out of doors, especially at the Harbor's edge and on docks by adding a change in texture and/or color or by illuminating the outer edge.

7.5.5 Tolerance for Error

The design minimizes hazards and the adverse consequences of accidental or unintended actions.

- Pedestrian crossings include wide flush curbs and bollards instead of narrow minimally dimensioned curb cuts.
- Design sidewalks with standard 'zones' for curb, furnishings, pedestrians, and frontage. In doing so, ensure that driveway aprons do not introduce cross-slopes into the sidewalk's path of travel and minimize curb returns at driveway aprons to 2 feet or less.

- Minimize glare on large vertical glass surfaces, delineate doors with color contrast, and mark surface with designs to indicate presence of transparent surface.
- Install mirrors at entry and exit points to parking garages as well as visual and sound alarms to alert pedestrians passing entries and exits.
- Select stable matte finishes for indoor flooring and minimize glare.
- Install handrails and guardrails on the landside of flat docks for stability and safety for adults and children.

7.5.6 Low Physical Effort

The design can be used effectively and comfortably and with a minimum of fatigue.

- Exterior doors will be a minimum of 36" wide and designed to allow easy opening with a minimum of strength and no need to grip.
- Each exterior public entrance will include automatic door openers, preferably via an electric eye on the main door.
- Eliminate obstructions in front of mirrors in public restrooms and provide mirrors for people seated or of short stature.
- Provide both wind and rain shelter and seating at public transit stops for ground and water transportation. Shelters shall provide suitable locations to post large print schedules and route maps.
- Design street crossings with protected median areas to allow safe crossing for pedestrians at multi-lane, two-way arteries. Where possible, raised crosswalks or intersections should be utilized.
- Access to the watershed may be achieved by a permanently fixed 1:12 fixed ramp from landside to within 10' of the mean tide level. From there, an 80-100 foot gangway can be installed in order for the docking facility to meet the proposed *Americans with Disability Act Accessibility Guidelines for Buildings and Facilities (ADAAG)* regulations. While at certain extreme times the slope may exceed 1:12, the design will be easily and safely accessed by all in a variety of weather conditions.

7.5.7 Size and Space for Approach and Use

Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.

- Design all public spaces with sufficient turn-around space for strollers, scooters, crutches, wheelchairs, walkers and guide dogs.
- Distribute accessible seating in all venues, including entertainment and sports venues, to permit choice of seating at varying heights and distances for all users without forfeiting line of sight.
- Create pedestrian access corridors between destinations and parking or public transportation sites that do not use stairs but level access or elevators.

8. IMPLEMENTATION GUIDANCE: *THE FORT POINT CHANNEL WATERSHEET ACTIVATION PLAN*

This section provides guidance in regards to implementation of the *MHP Amendment*. The information is assembled to provide additional direction in the application and issuance of Chapter 91 licenses in this area of South Boston Harbor.

8.1 Applicability of the *Fort Point Channel Watersheet Activation Plan*

The *Fort Point Channel Watersheet Activation Plan* should be employed for amplifications of existing regulations or for the provision of additional public benefits in this area of the harbor. Applicable projects should provide those portions of the implementation program articulated in the existing, adopted *Fort Point Channel Watersheet Activation Plan*, or as it may be amended and current at the date of initiation of a Chapter 91 license application. Payments or other benefits should be directed through the management structure that has been established for the Fort Point Channel area. This approach recognizes that discretion will be required to provide the most effective use of future benefits, so that they can be coordinated with other resources and opportunities in a managed manner. Projects, programs or improvements need not be constrained to any subarea or location within the Fort Point Channel, but may be applied where the greatest public benefit will be derived in concert with other plans, programs and activities for the Channel as a whole.

8.2 Guidance for Amplifications

This *MHP Amendment* amplifies certain requirements for projects that include a water-dependent use zone as described in Section 6 of this document. This *MHP Amendment* directs that the *Fort Point Channel Watersheet Activation Plan* be employed as the basis for directing applicable licenses for review and approval. Appendix 1 provides additional reference information for use in the planning, design and licensing of projects to which this amplification will apply.

8.3 Guidance for Additional Public Benefits

The Chapter 91 licensing process is intended to ensure that the public benefits associated with the use of either private or Commonwealth tidelands are in balance with the detriments to the public rights that are articulated in the Waterways Regulations (310 CMR 9.00). The existing regulations and the requirements that are modified in this *MHP Amendment* have been established to set standards that will accomplish this balance through a process of licensing that will take into account the entire area as well as the requirements associated with individual projects.

In many cases, the existing and modified standards provide for well-defined measures that must be directly incorporated into the design, use, operation and management of the projects themselves. In some cases, however, public benefits may take the form of off-site contributions to the public benefit.

This *MHP Amendment* directs that all future offsite public benefits associated with Chapter 91 licenses for this area of the Harbor be directed to the implementation of the *Fort Point Channel Watersheet Activation Plan* (refer to Appendix 1, for detailed discussion of the *Watersheet Activation Plan* related to implementation). In addition, if the Secretary of Environmental Affairs or the Department of Environmental Protection concludes that additional public benefits are required for any license in the area, that such additional benefits be directed towards the *Fort Point Channel Watersheet Activation Plan* rather than additional on-site provisions.

This direction is intended to include future payments, provision of in-kind improvements, services, and other benefits. Sources for potential public benefits include, but are not limited to:

- Payments, if any, that may be associated with extended Chapter 91 license terms.
- Payments or public benefits that may be associated with future policy directives, similar to the *DEP Draft Water Transportation Policy* or other supplementary requirements that are found to be necessary for the approval of a Chapter 91 licensing in this area.

Appendix 1 provides additional reference information for use in the planning, design and licensing of projects for which additional public benefits are required.

9. CONSISTENCY WITH COASTAL ZONE MANAGEMENT POLICIES AND PRINCIPLES

These *Fort Point District South Municipal Harbor Plan Amendment (MHP Amendment)* and the *100 Acres Master Plan* concept for the *MHP Amendment* planning area will be in compliance with the enforceable policies of the approved Massachusetts Coastal Zone Management (MCZM) program and will be conducted in a manner consistent with such policies. A summary of the regulatory and non-regulatory MCZM policies and the consistency of the *MHP Amendment* and the proposed master plan concept with the applicable policies are presented below.

9.1 Water Quality

Water Quality Policy #1 – *Ensure that point-source discharges in or affecting the coastal zone are consistent with federally approved state effluent limitations and water quality standards.*

No point source discharges are associated with the *MHP Amendment* planning area or the *100 Acres Master Plan*.

As part of the Massachusetts Water Resources Authority (MWRA) Combined Sewer Overflow (CSO) Control Program for Fort Point Channel, two CSO control projects have been planned to address the most significant discharges into the Channel (described in *Section 4.6* of this document).

Water Quality Policy #2 – *Ensure that nonpoint pollution controls promote the attainment of state surface water quality standards in the coastal zone.*

The nonpoint discharge associated with the *MHP Amendment* planning area and the *100 Acres Master Plan* concept for the Fort Point District South area will be stormwater runoff. Currently, the area is vacant and unpaved, although it was mostly impervious a few years ago when it was used for parking.

Development in the 100 Acres area will be designed to comply with all applicable provisions of the Stormwater Management Standards. The Boston Water and Sewer Commission (BWSC) has commenced construction on the installation of new storm drainage pipes in a number of streets in the 100 Acres area, including Summer Street, Melcher Street, Necco Street, and Necco Court, where the pipes are being connected to other major drainage systems operated by BWSC. It is anticipated that these improvements will address the existing issues appropriately.

Catch basins installed will be standard BWSC catch basins with deep sediment sumps and traps. BWSC “Don’t Dump – Drains to Boston Harbor” plaques will be installed at new catch basins, or at existing catch basins if not already present. Existing drainage structures to remain will be cleaned of debris.

Water Quality Policy #3 – *Ensure that activities in or affecting the coastal zone conform to applicable state and federal requirements governing subsurface waste discharges.*

No subsurface waste discharge will occur as part of this *MHP Amendment* or the *100 Acres Master Plan*.

9.2 Habitat

Habitat Policy #1 – *Protect coastal resource areas including salt marshes, shellfish beds, dunes, beaches, barrier beaches, salt ponds, eelgrass beds, and freshwater wetlands for their important role as natural habitats.*

The *MHP Amendment* planning area and the *100 Acres Master Plan* are not located in and will not impact any of the listed coastal resource areas.

Habitat Policy #2 – Restore degraded or former wetland resources in coastal areas and ensure that activities in coastal areas do not further wetland degradation, but instead take advantage of opportunities to engage in wetland restoration.

Neither this *MHP Amendment* nor the *100 Acres Master Plan* will further wetland degradation, but will assist in promoting passive use and enjoyment of wetland resources near the site. A 100-foot buffer zone extends from the top of the coastal bank. The top of the coastal bank is defined by an existing seawall along the Fort Point Channel.

Potential wetland resource impacts may include improvements to the existing Harborwalk, the construction of floating structures for a small boat landing or boating program, and seawall repairs or reconstruction in deteriorated areas.

All construction will follow Best Management Practices to avoid negative impacts to wetland resources. During demolition and construction, the entire work area will be contained within a floating siltation curtain and debris boom. The floating siltation curtain will minimize turbidity to the localized area of construction. The contractor will be required to clean the water surface and any areas confined within the floating debris boom on a daily basis.

The existing Harborwalk may be temporarily removed when construction begins. Once the new Harborwalk is complete, a permanent Harborwalk and publicly accessible promenade and open space will be present on site to promote use and enjoyment of the water's edge.

9.3 Protected Areas

Protected Areas Policy #1 – Preserve, restore, and enhance complexes of coastal resources of regional or statewide significance through the Areas of Critical Environmental Concern program.

The *MHP Amendment* planning area and the *100 Acres Master Plan* are not located within an Area of Critical Environmental Concern; therefore, this policy does not apply.

Protected Areas Policy #2 – Protect state and locally designated scenic rivers and state classified scenic rivers in the coastal zone.

The *MHP Amendment* planning area and the *100 Acres Master Plan* are not located within any state or locally designated, scenic river; therefore, this policy does not apply.

Protected Areas Policy #3 – Ensure that proposed developments in or near designated or registered historic districts or sites respect the preservation intent of the designation and that potential adverse effects are minimized.

The *MHP Amendment* planning area includes two existing buildings on Necco Court, both of which are located within the Fort Point Historic Subdistrict South, as identified in the *South Boston Waterfront District Municipal Harbor Plan (South Boston MHP)* (see Section 4.5 of this document for more detail).

The Boston Landmarks Commission (BLC) received a petition for a proposed Fort Point Channel Local Landmark District that was accepted for further study by a vote of the Commission in April 2001. The BLC completed a survey of the proposed district in September 2003. The survey describes the historic, architectural and cultural significance of the area.

Mayor Thomas M. Menino appointed a study committee in January 2006 made up of residents, property owners and BLC commissioners. The study committee will review the survey and other relevant

information on the district including zoning and planning documents. Through the final study, the committee and the BLC will determine the type of district and its level of architectural and historical/cultural significance. The final study will establish the boundaries of the district and draft standards and design guidelines.

The renovation of the existing buildings will be developed according with any applicable design guidelines and historic regulations.

9.4 Coastal Hazards

Coastal Hazard Policy #1 – Preserve, protect, restore, and enhance the beneficial functions of storm damage prevention and flood control provided by natural coastal landforms, such as dunes, beaches, barrier beaches, coastal banks, land subject to coastal storm flowage, salt marshes, and land under the ocean.

Natural coastal landforms in the *MHP Amendment* planning area, such as coastal bank and land subject to coastal storm flowage, have been altered extensively. The coastal bank consists primarily of a man-made stonewall bulkhead. Due to the deteriorated condition of the stonewall, repairs will need to be made in the mid-term future. This action will improve the condition of the existing man-made coastal bank. No other changes to the man-made coastal bank components are proposed; therefore, no negative impacts to the flood control and storm damage prevention are anticipated.

Coastal Hazard Policy #2 – Ensure that construction in water bodies and contiguous land areas will minimize interference with water circulation and sediment transport. Approve permits for flood or erosion control projects only when it has been determined that there will be no significant adverse effects on the master plan site or adjacent or downcoast areas.

It is anticipated that all construction and demolition associated with the redevelopment of the *MHP Amendment* planning area along the water will follow Best Management Practices and will occur within the confines of a floating siltation curtain and debris boom. No significant interference with water circulation or sediment transport is anticipated. No flood or erosion control projects are associated with the development of the *100 Acres Master Plan*.

Coastal Hazard Policy #3 – Ensure that state and federally funded public works projects proposed for location within the coastal zone will:

- *not exacerbate existing hazards or damage natural buffers or other natural resources,*
- *be reasonably safe from flood and erosion related damage,*
- *not promote growth and development in hazard-prone or buffer areas, especially in Velocity zones and ACECs, and*
- *not be used on Coastal Barrier Resource Units for new or substantial reconstruction of structures in a manner inconsistent with the Coastal Barrier Resource/Improvements Acts.*

This *MHP Amendment* and the *100 Acres Master Plan* are not a state or federally funded public works project. Therefore, the above policy does not apply.

Coastal Hazard Policy #4 – Prioritize public funds for acquisition of hazardous coastal areas for conservation or recreation use, and relocation of structures out of coastal high hazard areas, giving due consideration to the effects of coastal hazards at the location to the use and manageability of the area.

The *MHP Amendment* planning area and the *100 Acres Master Plan* do not involve the use of public funds and the master plan is not within a coastal high hazard area; therefore, the above policy does not apply.

9.5 Port and Harbor Infrastructure

Ports Policy #1 – *Ensure that dredging and disposal of dredged material minimize adverse effects on water quality, physical processes, marine productivity and public health.*

Dredging is not proposed as part of this *MHP Amendment* or the *100 Acres Master Plan*; therefore, the above policy does not apply.

Ports Policy #2 – *Obtain the widest possible public benefit from channel dredging, ensuring that designated ports and developed harbors are given highest priority in the allocation of federal and state dredging funds. Ensure that this dredging is consistent with marine environment policies.*

Dredging is not proposed as part of this *MHP Amendment* or the *100 Acres Master Plan*; therefore, the above policy does not apply.

Ports Policy #3 – *Preserve and enhance the capacity of Designated Port Areas (DPAs) to accommodate water-dependent industrial uses, and prevent the exclusion of such uses from tidelands and any other DPA lands over which a state agency exerts control by virtue of ownership, regulatory authority, or other legal jurisdiction.*

Neither the *MHP Amendment* planning area nor the *100 Acres Master Plan* is located within a DPA, and neither involves water-dependent industrial uses; therefore, the above policy does not apply.

Ports Management Principle #1 – *Encourage, through technical and financial assistance, expansion of water-dependent uses in designated ports and developed harbors, re-development of urban waterfronts, and expansion of visual access.*

This *MHP Amendment* and the *100 Acres Master Plan* provide for a significant redevelopment of an underutilized urban waterfront that could not occur without adoption of the amended MHP. The master plan proposes mixed-use redevelopment of this underutilized property and offers the opportunity for historic preservation and adaptive reuse of identified historic buildings. Furthermore, the master plan will extend the Harborwalk adjacent to the master plan and along the Fort Point Channel, create vistas and access to the Fort Point Channel, and create public space along the harbor. Public amenities at the ground level of the buildings or on the wharf, such as retail, restaurant, and fitness center uses, will be available. Thus, the proposed work will promote expanded use and enjoyment of the water's edge by both the general public and those residing on the master plan area.

9.6 Public Access

Public Access Policy #1 – *Ensure that developments proposed near existing public recreation sites minimize their adverse effects.*

Public open space or recreation sites proximate to the site include:

- A redesigned and enhanced Harborwalk along Fort Point Channel
- Open space and park areas occupying a substantial part of the reconfigured water-dependent use zone

- An open space corridor connecting the Fort Point Channel waterfront to A-Street and the Boston Convention and Exhibition Center further south
- The Fort Point Channel watersheet

This *MHP Amendment* and the *100 Acres Master Plan* will not have any adverse impacts on these existing or planned public recreation sites, but will instead serve to further interconnect and enhance these (and other) existing and planned public open spaces, in part as a result of the substitute provisions and offsets contained in this *MHP Amendment*. The master plan will promote passive use and enjoyment of the waterfront by enhancing the Harborwalk along the entire length of the master plan area, creating vistas and access to the Fort Point Channel, and creating new publicly accessible retail and restaurant space along the harbor.

Public Access Management Principle #1 – Improve public access to coastal recreation facilities and alleviate auto traffic and parking problems through improvements in public transportation. Link existing coastal recreation sites to each other or to nearby coastal inland facilities via trails for bicyclists, hikers, and equestrians, and via rivers for boaters.

This *MHP Amendment* and the *100 Acres Master Plan* include the enhancement of the Harborwalk within the Fort Point District South and along the Fort Point Channel, which will be linked to other coastal recreation facilities including the South Bay Harbor Trail System. This consists of a proposed 3.5-mile pedestrian and bicycle trail connecting Ruggles Station, Lower Roxbury and the South End to Fort Point Channel and ultimately out to the Fan Pier (the system is further described in *Section 4.4* of this document). Through this Amendment, a new public open space and accessible link will be created to this network. Additionally, the *MHP Amendment* planning area is proximate to the major regional transit hub at South Station as well as local subway lines and the proposed *100 Acres Master Plan* concept will create new connections to them for pedestrians along the waterfront.

Public Access Management Principle #2 – Increase capacity of existing recreation areas by facilitating multiple uses and by improving management, maintenance and public support facilities. Resolve conflicting uses whenever possible through improved management rather than through exclusion of uses.

Through the approach to substitute provisions and offsetting public benefits, this *MHP Amendment* and the *100 Acres Master Plan* concept will create approximately 3.8 acres of green space and passive recreation area within the *MHP Amendment* planning area. Management, maintenance and operation of the public open space and associated facilities will be incorporated into the maintenance plans and program for new developments. This will ensure the long-term viability of the proposed open space, as well as offer the benefit of connectivity between Fort Point Channel and the new Boston Convention and Exhibition Center.

Public Access Management Principle #3 – Provide technical assistance to developers of private recreational facilities and sites that increase public access to the shoreline.

The City of Boston and the BRA will provide technical assistance to developers of recreational facilities in the *MHP Amendment* planning area through design review processes associated with zoning approvals and the implementation of the MHP. The proposed approach to substitutions and offsets will provide maintenance and programmatic support for the Fort Point Avenue open space corridor (“Fort Point Park East”) as well as the water-dependent and public open space activities that will occur along the Fort Point Channel (“Channel Park”).

Public Access Management Principle #4 – Expand existing recreation facilities and acquire and develop new public areas for coastal recreational activities. Give highest priority to expansions or new acquisitions in regions

of high need or limited site availability. Assure that both transportation access and the recreational facilities are compatible with social and environmental characteristics of surrounding communities.

This *MHP Amendment* and the *100 Acres Master Plan* will result in the privately funded reconstruction of the Harborwalk, an improved public amenity. Opportunities for water access and water transportation will be provided as part of the activation program for the Fort Point Channel watershed. Transportation access to these new public waterfront spaces at the site will be available by foot, bicycle, limited vehicle access, and water taxis.

This development is fully consistent with social and environmental characteristics of surrounding areas, as contemplated in planning initiatives such as: the City of Boston's Municipal Harbor Plan ("MHP" or "Harborpark Plan") for the master plan area; the *South Boston MHP*; the Fort Point Channel Water Activation Sheet; and other City of Boston planning initiatives (see *Sections 3 and 4* of this document for additional information).

The proposed *100 Acres Master Plan* is entirely consistent with these municipal and regional plans as it will result in active residential and ground floor retail uses at the site (which in recent history has been underutilized for residential use, offices, storage, and surface parking), improve the City's Harborwalk along the Fort Point Channel, thereby allowing public access not only to the site but to adjacent open spaces and water-dependent uses, and adaptively reuse historic waterfront properties.

9.7 Energy

Energy Policy #1 – For coastally dependent energy facilities, consider siting in alternative coastal locations. For non-coastally dependent energy facilities, consider siting in areas outside of the coastal zone. Weigh the environmental and safety impacts of locating proposed energy facilities at alternative sites.

Since the *MHP Amendment* planning area and the *100 Acres Master Plan* are not an energy facility, the above policy does not apply.

Energy Management Principle #1 – Encourage energy conservation and the use of alternative sources such as solar and wind power in order to assist in meeting the energy needs of the Commonwealth.

As part of the implementation of the *100 Acres Master Plan*, development will be called to incorporate LEED standards in the design of sustainable buildings and public spaces. These support the creation of high performance buildings that employ energy and resource conservation materials, technologies and practices; however, solar and wind power are not practicable or available for this project.

9.8 Ocean Resources

Ocean Resources Policy #1 – Support the development of environmentally sustainable aquaculture, both for commercial and enhancement (public shellfish stocking) purposes. Ensure that the review process regulating aquaculture facility sites (and access routes to those areas) protects ecologically significant resources (salt marshes, dunes, beaches, barrier beaches, and salt ponds) and minimizes adverse impacts upon the coastal and marine environment.

This *MHP Amendment* and the *100 Acres Master Plan* do not involve the development of aquaculture.

Ocean Resources Policy #2 – Extraction of marine minerals will be considered in areas of state jurisdiction, except where prohibited by the MA Ocean Sanctuaries Act, where and when the protection of fisheries, air and marine water quality, marine resources, navigation and recreation can be assured.

This *MHP Amendment* and the *100 Acres Master Plan* will not involve the extraction of marine minerals.

Ocean Resources Policy #3 – Accommodate offshore sand and gravel mining needs in areas and in ways that will not adversely affect shoreline areas due to alteration of wave direction and dynamics, marine resources and navigation. Mining of sand and gravel, when and where permitted, will be primarily for the purpose of beach nourishment.

No offshore sand and gravel mining is proposed in conjunction with this *MHP Amendment* or the *100 Acres Master Plan*.

9.9 Growth Management

Growth Management Principle #1 – Encourage, through technical assistance and review of publicly funded development, compatibility of proposed development with local community character and scenic resources.

This *MHP Amendment* and the *100 Acres Master Plan* do not involve publicly funded development; therefore, this policy does not apply.

Growth Management Principle #2 – Ensure that state and federally funded transportation and wastewater projects primarily serve existing developed areas, assigning highest priority to projects that meet the needs of urban and community development centers.

This *MHP Amendment* and the master plan do not involve a state or federally funded transportation or wastewater project.

Growth Management Principle #3 – Encourage the revitalization and enhancement of existing development centers in the coastal zone through technical assistance and federal and state financial support for residential, commercial and industrial development.

This *MHP Amendment* and the *100 Acres Master Plan* provide for the revitalization of an existing, underutilized waterfront development area through the addition of new residential and commercial development. The plan, which includes the creation of new publicly accessible space along the Fort Point Channel and enhancement of the Harborwalk along the master plan area, is privately funded in its entirety.

APPENDIX 1 – REFERENCE INFORMATION: FORT POINT CHANNEL WATERSHEET ACTIVATION PLAN

This appendix contains relevant information regarding the *Fort Point Channel Watersheet Activation Plan* that should be used as a reference in the implementation of this *MHP Amendment*. This appendix describes the framework of improvements and programs that will extend into the portion of the harbor addressed by this Amendment.

This appendix includes:

- A summary of the Fort Point Channel Watersheet Activation Plan
- A description of the approach to Watersheet Management
- Specific recommendations for use of amplifications to implement the *Fort Point Channel Watersheet Activation Plan*
- Graphic diagrams regarding planning concepts and potential projects associated with implementing the *Fort Point Channel Watersheet Activation Plan*.

A1.1 Summary of the Fort Point Channel Watersheet Activation Plan

The following framework describes key recommendations and the methods that may be used to implement the *Fort Point Channel Watersheet Activation Plan (FPCWAP)*.

A1.1.1 Introduction

The Boston Redevelopment Authority, in partnership with the Fort Point Channel Abutters Group and the Fort Point Channel Working Group, completed and published the *FPCWAP* in May 2002. The plan aims to activate the Fort Point Channel and provide for special destinations to attract the public and generate activity on a year round basis. The premise for this initiative was to approach planning for watersheet activities on and along the Fort Point Channel with an area-wide perspective to maximize the Channel's potential to achieve public benefits protected under the Waterways Regulations.

The *FPCWAP* is envisioned as serving several planning purposes for the City and the Commonwealth as the MHP Planning Area is redeveloped. The plan provides a blueprint for the development of new uses and public structures that will make the Fort Point Channel a great civic space. New development will provide the funding for most of the implementation of the *FPCWAP*. The City will use the plan as guidance when reviewing projects subject to Article 80 of the Boston Zoning Code. The plan will also provide guidance to DEP in making decisions regarding Chapter 91 licenses and establishing baseline requirements for water-related public benefits. Finally, through the Municipal Harbor Planning process, it will be one of the sources of offsets for any adverse impact of substitute provisions that are granted for properties located within the Planning Area.

The integration of the *FPCWAP* into *Phases 1 and 2* of the *Fort Point Downtown Waterfront Municipal Harbor Plan* as a source of offsets and amplifications greatly supported the BRA's efforts to conduct harbor planning for this area while maintaining the goals to effectively promote state tidelands objectives. The BRA seeks to integrate the *FPCWAP* into the *South Boston Waterfront District Municipal Harbor Plan* as source of amplifications.

A1.1.2 The Planning Process

The idea for developing a plan for the Fort Point Channel itself arose during the preparation of the *South Boston Municipal Harbor Plan*. Members of the Advisory Committee began to meet informally to discuss the challenges and opportunities presented by this special body of water. Out of these informal discussions, came the idea to develop a *Watersheet Activation Plan* for the Channel to position it as a special citywide destination. A three-part collaboration was formed comprised of the BRA, the Fort Point Channel Working Group, consisting of cultural institutions, harbor advocates, maritime interests, and the general public, and the Fort Point Channel Abutters Group, represented by the Children's Museum, and property owners with holdings along the Channel. The funding for the plan reflects a public-private partnership. A total of \$250,000 was committed: \$125,000 by the BRA and \$125,000 by the Fort Point Channel Abutters Group.

To assist this public-private partnership in developing the plan, a consultant team led by Goody, Clancy & Associates was chosen in response to a Request for Proposals. Goody, Clancy teamed up with a skillful group of sub-consultants with expertise in waterfront planning, economics, marine engineering, transportation, permitting, financing, and public art.

A1.1.3 The Plan

The plan was developed over two years during which time two public charrettes and monthly public meetings were held to gain input and advice from the public.

The study encompasses the Channel watersheet, the edges of the Channel, and connections to the Channel (see *Figure 4-2, Watersheet Activation Plan* at the end of *Section 4* of this *MHP Amendment*). The following are key elements of the *FPCWAP*:

- Identifies and prioritizes year-round land and water public uses that will ensure that Fort Point Channel retains and enhances its role as a special destination.
- Addresses the needs of water-dependent uses in Fort Point Channel, such as Hook Lobster, Neptune Marine Services, and the Gillette Company.
- Recommends locations for docks, landings, floating barges, fishing piers, moorings, public marinas, boat houses, permanently-moored vessels, water transportation terminals, and water taxi docks, as appropriate. The Plan identifies floating structures for programmed activities, education, entertainment, public art and the like.
- Includes recommendations for landside facilities that will be needed to support the activation of the watersheet.
- Recommends programming opportunities for the Fort Point Channel for recreation, education, culture and entertainment.
- Identifies points of access to the Fort Point Channel from surrounding areas and neighborhoods by various modes, including vehicular, pedestrian, transit, water transportation, bicycle and also links to other open spaces, waterfront areas, and destinations.

Just as important as the new uses that will be encouraged for the Channel are the recommendations for prohibited uses, such as houseboats and live-aboard vessels and floating nonwater-dependent office space, as these reflect private uses of the watersheet.

Channel-wide Concepts

The *FPCWAP* treats the water conceptually as a new, fifty-acre public park on the water.

This park is best understood as three distinct areas: “Hub of the Channel (located in the Channel area north of Summer Street Bridge);” “Seawall Basin (located in the Channel area south of Summer Street Bridge);” and “South Bay Urban Industrial Wild (located between Dorchester Avenue and West Fourth Street Bridges).” Each area brings with it its own challenges as well as great potential:

“Hub of the Channel”

The majority of the water-based activities will take place in this area of the Channel (located north of the Summer Street Bridge) due to its close proximity to South Station and its hosting of the four major bridges that link downtown to South Boston. Among other things, this basin will be home to the new water transportation terminal, water taxi landings, and educational vessels and floating structures. In addition, a Channel Walk at water level is planned to link the Congress Street Bridge to the Evelyn Moakley Bridge and provide access to the water from street level. An Art Basin located between the Congress Street Bridge and the Summer Street Bridge will function as an outdoor art gallery with changing floating art installations.

“Seawall Basin”

This passive area of the Channel (located south of Summer Street to the Gillette property), named for its impressive granite seawalls, could become one of the city’s most interesting open space and recreational destinations. The Seawall Basin will host major festivals, boating events, and boating contests. The Seawall Basin will be home, among other things, to new pedestrian bridge floating islands, floating parks, and a model boat basin. Docking facilities and points of water access for the use of rowboats, kayaks and paddleboats throughout the Seawall Basin will draw the public to the Channel for active pursuits. In addition, the youth boating programs envisioned for this basin will enable it to grow as a family destination.

“South Bay Urban Industrial Wild”

This area of the Channel south of Dorchester Avenue is particularly unique, in that it will offer a look at the development and transportation infrastructure of the City of Boston from smaller, more exploratory boats. The landside is accessible only at certain points, so the main activity in this area would be from the water.

Implementation

The cooperative effort between the BRA, the Fort Point Channel Abutters Group, and the Fort Point Channel Working Group has evolved into the formation the Friend’s of the Fort Point Channel, a not-for-profit organization whose mission would be to promote watersheet activities and to coordinate program events on the Channel.

Also an Operations Board is being formed to provide project implementation and ongoing management services for watersheet activation projects. The Fort Point Channel Operations Board is being formed to ensure effective input and oversight in the implementation of the *FPCWAP*. The Board will be established by the City of Boston and consist of three appointed members – a designee of the BRA from the Mayors Office of Arts Tourism and Special Events, a designee of the Secretary of Environmental Affairs, and a representative of the Fort Point Channel. The Operations Board shall oversee operations and expenditures from the legally established fund or escrow account created with contributions through

the municipal harbor plans for the Fort Point Channel. The funds are available for planning, programming, designing, constructing, and maintaining elements identified in the *FPCWAP*.

Capital costs associated with the *FPCWAP* are estimated at approximately \$11 million and annual operating costs are in the \$435,000- \$610,000 range. These costs are modest relative to the value of surrounding real estate and the level of public investment in the Channel to date.

The *FPCWAP* will provide for both the *Downtown* and *South Boston Municipal Harbor Plans*, and the partnership will continue to work with the DEP and CZM on plan implementation and coordination.

Although the *FPCWAP* is offered as a source of offsets and amplifications, the BRA plans to pursue additional methods of implementation not necessarily tied to the Waterways Regulations. Such methods will be developed to provide equitable financial responsibilities of property owners along the Channel.

Among the next steps is an analysis of the state Harbor Line within Fort Point Channel. The Harbor Line is a legacy of a very different era in shipping when large vessels moved through the Channel bridges to reach South Bay. The BRA will take the lead with the partnership to pursue legislative Harbor Line exemptions to enable projects that serve a clear public purpose and are consistent with the *FPCWAP* to be evaluated by DEP through the Chapter 91 permitting process.

A1.2 Watersheet Management

A1.2.1 Purpose and Overview

The purpose of this section is to establish a framework for a management plan and planning guidelines for watersheet activation.

This chapter is for planning purposes and does not provide DEP with guidance in making decisions regarding use and development of tideland areas. The BRA on behalf of the City of Boston will continue to coordinate with regulators, abutters and the Fort Point Channel Operations Board to formalize a *Watersheet Management Plan* that will provide guidance for management of landside and waterside components of the *FPCWAP*. Included are various water transportation options, such as ferries and water taxis, as well as other complementary watersheet infrastructure elements to support and stimulate a vibrant mix of watersheet activities within the planning area. The watersheet management plan will be a blueprint for implementation, phasing and ongoing administration of the watersheet activation plan elements described in *FPCWAP*. The formation of a management and implementation plan also responds to issues and concerns articulated in the Notice to Proceed for the Municipal Harbor Plan process including coordination of uses proposed in the *FPCWAP* with existing water-dependent uses and the proposed water transit terminal and service from 500 Atlantic Avenue.

It should be noted that the actual watersheet components of the activation and management plan framework are described in greater detail than the landside components since the water area between the Harbor Lines is now and will remain in public ownership, while much of the landside area is in private ownership.

The *Watersheet Activation Management Plan* is one critical element of the blueprint for the development of new uses and public structures that will make the Fort Point Channel a great civic space. New development will provide the funding for most of the components of the *Watersheet Plan*. The *Watersheet Plan* builds upon the extensive public investment of infrastructure in the Fort Point Channel area including the CA/T Project and the MBTA Transitway Project. The management plan framework identifies a range of responsibilities and actions for the coordinated efforts of the public and private sectors. The BRA on behalf of the City will initiate new regulatory and planning measures such as

exemptions or revisions to the Harbor Line and establishment of new channels and fairways. The BRA will use the management plan and planning guidelines when reviewing projects subject to Article 80. The management plan will also provide guidance to DEP in making decisions regarding Chapter 91 licenses and establishing baseline requirements for water-related public benefits. The inclusion of a watershed management and implementation planning framework into *South Boston Waterfront District Municipal Harbor Plan* supports the BRA's efforts to implement the watershed activation plans for the area. The management program is founded on the base articulated in the *FPCWAP*, and further expands the recommendations of that plan where appropriate. The management plan is described in terms of the following sections:

1. *Composite Watersheet Activation and Access Implementation Plans*
2. *Watersheet Activation Plan Guidelines and Component Framework*
3. *Watersheet Management Plan*
4. *Watersheet Implementation Phasing Plan*

Watersheet Activation Component Framework

The *FPCWAP* includes various related landside and waterside infrastructure and use components that comprise the framework. The watershed activation implementation plan is intended to provide a physical definition of the proposed use areas for all public and private watershed activities as well as for related adjacent landside public realm and private activities. The elements proposed for the different action areas include use zones and guidelines as well as specific project elements. Watersheet activation implementation planning is divided into six interrelated waterside and landside activity groups:

- Watersheet Public Uses (such as recreational boating zones)
- Watersheet Private Uses (such as water intake and berthing/docking areas for water-dependent industries)
- Watersheet Public Access (such as water transportation docks and ferry services)
- Landside Public Realm Uses (such as public landing support facilities and pedestrian bridge)
- Landside Private Uses (such as private vessel rental concession support facilities available to the public)
- Landside Public Access (such as fishing and overlook platforms)

Watersheet Activation Action Plan Elements

The components of the Watersheet Activation Management Plan are described in terms of the above lists of elements allocated to specific watershed activity areas. The activation elements are depicted graphically in two composite graphics: the *Watersheet Activation Implementation Plan (Figure A1-1)* and the *Watersheet Access Implementation Plan (Figure A1-2)* located at the end of this Appendix section.

Figure A1-1, Composite Watersheet Activation Implementation Plan

This composite plan includes the key activation elements from the individual watershed and landside use plans that follow. The composite and area plans consist of the Seawall and Hub of the Channel Basin area plans from the 2002 *FPCWAP* report. Included in the amplified composite plan shown in *Figure A1-1* are the following key activation elements:

- Watersheet Activation Impact Area
- Delineation of proposed Harbor Line exemptions/modifications
- Existing and proposed Harborwalk sections
- Harborwalk links to Downtown, the Wharf District, South Boston Waterfront, and South Bay Trail
- Vertical land/water circulation sites
- Water-dependent business water intake protection zones
- Water quality improvement program
- Berths for visiting historic vessels and floating educational facilities
- Interpretive water trail for excursion and self-guided boat trips connecting all basins
- Watersheet view corridors to be preserved
- Water related performance venues and celebration areas

Figure A1-2, Watersheet Access Implementation Plan

This composite plan includes the key elements from the individual watersheet and landside access plans following below. The composite access plans consist of the Seawall Basin and channel-wide area plans from the 2002 *FPCWAP*, as well as the water transit components of the *Boston Inner Harbor Passenger Water Transportation Plan* as applicable or modified to reflect current conditions. Included in the plan shown in *Figure A1-2* are the following key access elements:

Watersheet Transit

- Navigable Watersheet
- Navigable channel boundaries and proposed modifications, with guidelines to conform with Boston Harbor regulations
- Definition of related fairways by basin and use guidelines to conform with Boston Harbor regulations
- Modified Harbor Line boundaries and/or proposed exemptions to accommodate for floating water-dependent uses
- Navigation hazards for removal including obsolete utility and bridge structures, sunken vessels, pile fields and other obstacles

Landside Access to Watersheet

- Water transit, water taxi, and public landing area locations
- Inner Harbor shuttle and water taxi routes

- Short term public landings and berth locations for visiting small boats and dinghies
- Existing and proposed Harborwalk sections, with links to Downtown and South Boston Waterfront, including completion of a sequence of basin loops
- Public floating walkway locations and design guidelines
- Landside transit terminals and bus routes
- Excursion/trolley drop-off, bus/shuttle routes and stops, and taxi stands
- Public parking sites
- Seawall Basin Pedestrian Bridge

A1.2.2. Watersheet Activation Plan Guidelines and Component Framework

Watersheet Activation Plan Goals and Guidelines

The watersheet uses and infrastructure described in this section are in response to the planning goals set forth in the *FPCWAP*. The Channel goals include actions needed on both the watersheet and the landside.

Goals

The *FPCWAP*'s goals can be summarized and amplified as follows:

- Preserve and enhance existing water-dependent uses such as the Gillette Company, Hook Lobster, Neptune Marine Services, and the Boston Tea Party Ship & Museum.
- Enhance Fort Point Channel for a variety of existing and new water-dependent uses, such as water transportation, recreational boating, and as a safe haven for vessels during coastal storms.
- Activate the Channel and its edges by creating a special destination to attract the public and generate activity on a year-round basis.
- Enhance public access by land and by water from all Boston neighborhoods, and from the downtown and South Boston to the Fort Point Channel.
- Enhance the civic role of the Channel by connecting with other nearby public venues, including the Harborwalk, the planned Rose Kennedy Greenway Crossroads Initiative, Massachusetts Horticulture Society's Garden Under Glass, South Station, Children's Wharf, Moakley
- Court House/Boston Harbor Islands Discovery Center, the new Convention Center, and the South Bay Harbor Trail.
- Create land and water connections to existing and planned open spaces within walking distance of the Channel.
- Preserve and enhance the historic character of the Channel including the historic seawalls, bridges, and the architecture of historic buildings and the Boston Wharf District.

- Establish strong connections between the Channel, the Harborwalk, and other downtown and South Boston Waterfront destinations.
- Develop a detailed and realistic implementation strategy for the *FPCWAP*.

Watersheet Activation Area Planning Guidelines

Planning guidelines are provided for both the watersheet as a whole as well as for the individual basin areas. The guidelines are highlighted as related to specific uses at the end of the following sections under the title of Specific Recommended Actions.

Watersheet Public Uses (Figure A1-3)

Component Descriptions

The watersheet public uses and infrastructure needs include a wide range of activities and facilities available to the public by water and by land. These activities and categories can be broken down into two categories, permanent and temporary/seasonal. Exemptions/modifications may be needed to such regulatory conditions as the location of the state maintained historic Harbor Line to allow for many of the permanent facilities.

Temporary and seasonal activities and facilities, including floating performance stages, may be authorized through yearly Harbormaster permits. The implementation plan would include such elements as:

- Harbor Line exemptions/modifications by basin to allow for additional variety and areas of public watersheet activities and uses to include:
- Area limits of vessel floats and berthing.
- Area limits of designated public floating marine infrastructure elements (such as access ramping, educational and visiting vessel berths, small boat berthing and storage).
- Annual Harbormaster permits to allow for additional variety and areas of public watersheet activities and uses, including flexible use platforms for public art, floating performance stages, etc.
- Recreational boating areas would be designated for different vessel types for watersheet areas including channels, fairways, and other zones between the seawalls. The Channel is one of the most protected tidal basins in the Inner Harbor and with very low exposure to wave and wake is well suited for small boating activities such as rowing, kayaking, and dinghy sail boating, particularly in the Seawall Basin. Specific basin areas can be made available for such activities by well thought-out placement of channels, fairways and Harbor Line limits.
- Designated recreational boating areas would be limited to non-powered, selfpropelled small vessels such as kayaks, rowing boats, canoes, paddleboats, etc.
- Jet skis, jet boards and other powered personal watercraft would not be permitted in any basin for safety and environmental purposes.
- Harbor wake and speed limits to be strictly enforced for all other powered vessels in recreational boating areas.

- Harbor regulatory management would be the cooperative responsibility of DEP, the Harbormaster, and Coast Guard.
- City and state coordinated review of yearly Chapter 91 section 9A permits.
- Channel interpretive water trail facilities (landings, vessel berthing) and interpretive elements (signage, floating markers) for self-guided or concession excursion tours that include all basins.
- Berthing areas for medium-sized visiting historic, educational and cultural vessels in Hub of the Channel Basin (subject to approximately 26-foot low-tide clearance at the Evelyn Moakley and Northern Ave. Bridges).
- Identification and protection of areas of environmental and water quality sensitivity and improvement. These areas would be marked on charts of the Channel and noted by signs along the shoreline bulkhead. Included would be such locations as intake structures and CSOs, as well as CA/T Project and Transitway tunnel zones.

Specific Recommended Actions

In order to achieve these activation objectives, the following actions are recommended:

1. Preparation of a technical definition and use plan for seeking exemptions to or modifying the limits of the Harbor Line which currently coincides with the seawall and wharf line along the edge of the Channel as described in the proposed Municipal Harbor Plan for the Hub of the Channel Basin and Seawall Basin. The City and BRA would be responsible for initiating legislative proceedings. The Fort Point Channel Harbor Line exemptions/modifications would be specific to the basins as shown in *Figure A1-3*. The Harbor Line exemptions/modifications would allow for approved public water-dependent watersheet uses and would not exceed 100 feet from the shoreline, to insure adequate fairways and vessel navigation space.
2. Guidelines and assigned management/maintenance responsibilities for all public water-based floats and facilities.
3. Preparation of a Fort Point Channel navigation and public realm chart for use by water and land visitors with a description of rules of the road (watersheet/boaters guide).
4. Water quality improvement and monitoring program to be coordinated with appropriate public and private entities.
5. Educational programs to be coordinated with Channel institutions, the Boston Public Schools system, and community-based interpretive programs.

Watersheet Private Uses (*Figure A1-4*)

Component Descriptions

There is also a set of watersheet uses that would be permitted as privately operated or maintained services for public use. However, such uses as houseboats, offices, or restaurants, and long-term marina slip rentals should be excluded because they effectively privatize the watersheet. The implementation plan would include such privately maintained or operated water-dependent use elements as:

- Water intake clear zones for water-dependent businesses to avoid impacts including sediment and turbidity for such businesses as Hook Lobster, Neptune Marine Services, and the Gillette Company. (Locations and watershed areas to be coordinated with water-dependent businesses).
- Water-dependent business vessel access areas for such businesses as Hook Lobster, Neptune Marine Services, Gillette, Boston Tea Party Ship & Museum. (Locations to be coordinated with water-dependent businesses).
- Floating concession locations for designated water-dependent uses that would be privately operated and maintained, such as boat rentals, fishing support, museum-related activities, and other permitted activities.
- Small boat rental concessions and rowing clubs would be located in the Seawall Basin with such uses allowed upstream of the Congress Street Bridge.
- Designated recreational boating areas/concessions would be limited to nonpowered, self-propelled small vessels such as kayaks, rowing boats, canoes, sailing dinghies, paddleboats, etc.
- Concessions for small boats that can be capsized (sail, canoe, kayak, etc.) would be contingent on water quality and regular monitoring. Small boat safety and rescue would be the responsibility of the respective small boat concessions or rowing clubs.
- Marina slip locations for transient vessel rental use, privately maintained and operated for public use.
- Marina slip locations for seasonal charter vessel rental use, privately maintained and operated for public use.
- Locations for pump-out facilities and other supporting uses for marinas and visiting vessels.
- Berthing locations for visiting historical vessels, floating educational classrooms, and cultural vessels.
- Berthing and tie-up locations for short term private small vessel docking with specified time limits to allow for visits to restaurants, museums, shops and other Channel edge activities. These locations would be privately maintained and operated for public use on first-come, first-served basis.

Specific Recommended Actions

In order to achieve these activation objectives, the following actions should be undertaken:

1. Definition of water-dependent business use protection and access areas, including water intake/discharge sites and vessel access points (for existing businesses including Gillette, Hook Lobster, Neptune Marine Services and the Boston Tea Party Ship & Museum, and for any potential future water-dependent business sites) Figure A1-4.
2. Marina slip and berthing management guidelines with owner agreements to define and limit slip rental duration, and to encourage the maximum amount of turnover, activation, and public access.
3. Watersheet concession management guidelines and agreements.

Watersheet Public Access (Figure A1-2)

Component Descriptions

Provision of maximum types and amount of access to the watersheet at the earliest possible date is critical to the activation objectives. During CA/T Project and MBTA Transitway construction periods, watersheet activation of and access to the Hub of the Channel and Seawall Basins have been severely limited. With major tunnel and restoration projects coming to an end during the next 12 months, many opportunities will open up to accelerate the activation programs. Watersheet access includes such components as on-water definition of waterways and use areas, and ramp locations for pedestrian/equipment access from the Harborwalk and street level to the water uses. Primary vertical access facilities will need to meet state and federal access regulations. The priority components of the watersheet public access implementation plan would include the following initiatives:

- Navigable Federal Channel boundary assessment and proposed modifications to meet current navigation needs.
- Channel and basin specific guidelines and “rules of the road” to conform to current Boston Harbor Mooring and Operating Regulations.
- Definition of related new fairways by basin and use guidelines to conform to current Boston Harbor Mooring and Operating Regulations. Included would be the definition of a central fairway in the Seawall Basin connecting from the end of the Federal channel at the Summer Street Bridge to the Gillette as shown in *Figure A1-2*.
- Plan and process for removal of navigation hazards and debris including obsolete utility lines and sunken vessels, pile fields, debris and other obstacles.
- Water transportation management guidelines and agreements for water transit terminals, water taxi, and public landing area locations (based on the BIHPWTP as applicable under current conditions).
- Public dock management guidelines and agreements for short term, touch-and-go public landings for visiting small boats, and public berth locations for dinghy tie-up.
- Public floating walkway management guidelines and construction responsibilities for watersheet locations and vertical access ramps.

Specific Recommended Actions

In order to achieve these activation objectives, the following actions should be undertaken:

1. Federal Channel assessment and redefinition to rationalize the width and linear continuity for optimal use of the watersheet. The City, the BRA and Harbormaster should initiate the process of discussing refinements with the Army Corps of Engineers jointly, after completion of a user needs analysis and proposed refinements.

The current channel is over-wide and irregular, particularly in the Hub of the Channel Basin, and is discontinuous in the Seawall Basin. Research is required on current federal jurisdiction if any, and a layout plan for a new channel consistent with other watersheet use designations. While the historic shipping interests are no longer active because of the bridge limitations and

channel edge uses, there are periodic demands for barge access to water-dependent businesses, including Gillette, and for periodic construction projects.

2. An implementation plan for phased public passenger water transportation service on completion of the new ferry landing at 500 Atlantic to include weekday commuter service and off-peak and seasonal harbor loop service. Plans will need to be consistent with the MBTA's Inner Harbor shuttle services, the City's *Boston Inner Harbor Passenger Water Transportation Plan* of 2000, and the 2003 EOTC report, *Water Transportation Planning for Eastern Massachusetts*. Possible scheduled water shuttle services for the new 500 Atlantic Avenue (referred to in many studies as "Russia Wharf/500 Atlantic") terminal that have been identified in these and other feasibility studies include:
 - 500 Atlantic Avenue to North Station/Lovejoy Wharf.
 - 500 Atlantic Avenue to Charlestown Navy Yard commuter shuttle.
 - 500 Atlantic Avenue to Lewis Mall/E. Boston commuter shuttle.
 - 500 Atlantic Avenue to Logan Airport shuttle.
 - Inner Harbor off-peak loop service with stop at Russia/500 Atlantic (would include shuttle to Boston Harbor Islands National Park Area ferry gateway at Long Wharf).
 - Inner Harbor Cultural Loop linking major cultural institutions, parks and visitor destinations with stop at 500 Atlantic Avenue and Children's Wharf.
3. Implementation plan for water taxi docks and public landings consistent with the *FPCWAP* and the *Boston Inner Harbor Passenger Water Transportation Plan* of 2000. The plan should include management agreements, landing rights and locations for water taxi service and public landings.
4. Watersheet Clean-up Management and Maintenance Plan to include survey, plans and permits (city and state) for removal of navigational hazards and debris.

Proposed Landside Public Realm Support Area Planning Guidelines

Activation of the watersheet will also require planning guidelines for supporting landside infrastructure and facilities. Such guidelines are highlighted as related to specific uses at the end of the following sections under the title Specific Recommended Actions.

Landside Public Realm Uses (Figure A1-5)

Component Descriptions

The landside public realm uses generally support many of the watersheet activation objectives by providing visual and physical access to the Channel and by accommodating the pedestrian needs. The broad array of public realm features is described in Section 9 on open space. However, there are several landside components that will require specific guidelines and management attention in support of watersheet uses. The implementation plan for specific landside public realm areas and facilities for support of watersheet activation would include such elements as:

- Water transit landside support including ticketing, information, waiting and maintenance storage.
- Water taxi landside support including information, call box, etc.
- Public transient boating facility support facilities.
- Watersheet access locations, including linear floating Harborwalk access.
- Public safety stations including life preservers, ladders, information, etc.
- Watersheet performance and exhibit area locations.
- Fishing platform/overlook locations and guidelines.
- Viewing platform/overlook locations and guidelines.
- Harborwalk continuity guidelines (specific missing links – 470 Atlantic Avenue to the Evelyn Moakley Bridge, Hook Lobster, 303 Congress Street to Summer Street, Summer Street to Gillette Harborwalk, etc.).
- Public restroom locations near dock access.

Specific Recommended Actions

In order to achieve these activation objectives the following actions should be undertaken:

1. Harborwalk plan for watersheet access locations and specific support facility needs, including public restrooms, or guideline modifications to insure optimal watersheet activation.
2. Bulkhead modification guidelines for platform extensions (pile supported or cantilever) to accommodate ramps, overlooks, fishing areas, etc.

Landside Private Uses (Figure A1-6)

Component Descriptions

As with the public uses, the specific private landside uses related to access and support of watersheet activation may require particular guidelines and management steps. The implementation plan for landside private uses would include the following elements. The illustrative plan for landside private uses is combined with plan for the watersheet private uses in *Figure A1-6*.

- Pushcart concession area guidelines relative to dock access points (for food, arts and crafts, souvenirs, etc.).
- Excursion vessel, interpretive trails, and bus tour transportation kiosks.
- Managing limits of “for pay” entertainment and food venues for paid admission.
- Public pay phones proximate to dock access.
- Charter or excursion vessel information and ticketing proximate to dock locations.

- Potential rental kiosks for small boats.

Specific Recommended Actions

In order to achieve these activation objectives the following actions should be undertaken:

1. Pushcart and market plan and concession management and license agreements need to be coordinated with dock locations and access paths; management agreements with appropriate public and private entities.
2. Plan needs to be prepared for private watersheet activity vendor locations, service requirements and support facility needs. Management and maintenance agreements are needed with appropriate private landowners proximate to dock sites.
3. Harborwalk design guidelines need to be applied to the specific private vendor sites. A comparable example is the BRA management of the Harborwalk segment along Old Atlantic Avenue at the new Long Wharf shuttle terminal that includes a variety of pushcarts, visitor concession information kiosks, and The Wall street furniture installations.

Landside Public Access (Figure A1-2):

Component Descriptions

The landside public access to specific watersheet activities and uses will similarly require planning guidelines and management steps. The landside locations of watersheet access points have been outlined in the *FPCWAP*. The implementation plan for use specific landside public access components for support of watersheet activation would include such elements as:

- Complete and open Harborwalk pedestrian loops around basin areas at the earliest possible date. Although future plans include such essential channel edge loops, there are no complete pedestrian loop segments open at present.
- Designate, articulate and mark key pedestrian gateways and approaches including (east to west) 1) Northern Avenue Bridge/Old Northern Avenue, 2) Evelyn Moakley/New Northern Avenue, 3) 500 Atlantic Avenue/CA/T Project Public Accessway, 4) Congress Street Bridge/Congress Street, 5) Summer Street Bridge/Summer Street, 6) Dorchester Avenue, and 7) Broadway Bridge.
- Designate, articulate and mark key auto approach gateways and parking areas.
- Articulate and mark key public transit approaches and gateways including specific bus stops and water transit in Fort Point Channel and immediately adjacent Fan Pier and Rowes Wharf.
- Identify private transit approaches and drop-off areas by basin and street (Summer St., Congress St., Dorchester Ave).
- Preserve city street view corridors at the Channel edge.
- Preserve and enhance bridge view corridors.

Specific Recommended Actions

In order to achieve these activation objectives, the proposed *Watersheet Management Plan* should include the development of:

1. *Harborwalk Missing Link Plans*, including design, permitting, construction and maintenance agreements for missing Harborwalk links to provide horizontal continuity. Sites would include the 470 Atlantic/Evelyn Moakley Bridge connection, a Harborwalk segment landward of Hook Lobster, and enhanced crosswalks at Congress Street and Summer Street to Dorchester Avenue and at Congress Street at the Children's Museum. The CA/T Project is preparing the sidewalk/curb-cut plan will be developed in coordination with the CA/T Project Surface Restoration contracts for the perimeter of the Hook Lobster site. This will be a landside substitute for a waterfront Harborwalk of this water-dependent industrial business. Harborwalk improvements are the responsibility of the property owner subject to regulatory conditions. Crosswalk improvements would include combinations of re-stripping, signalization, and sidewalk neck-downs.
2. *Harborwalk Loop Continuity Plans*, including permitting, construction and maintenance agreements for a sequence of basin-specific pedestrian loops including: 1) Old Northern Avenue Bridge to Evelyn Moakley Bridge, 2) Evelyn Moakley Bridge to Congress Street Bridge, 3) Congress Street Bridge to Summer Street Bridge, 4) Summer Street Bridge to 10 Dorchester Avenue Bridge, 5) Dorchester Avenue Bridge around the South Bay Urban Industrial Wild, 6) 303 Congress Street to Summer Street, and 7) Summer Street to Gillette Harborwalk. Many of these items have been initiated by the CA/T Project, including the permitting, and maintenance agreements.
3. *Annual Channel Access Plan*, including a digital plan to define Channel landside and waterside access opportunities on an annual basis that could be distributed at transit stations, hotels, restaurants and other public gathering places. Enlargements of such plans could also be located as directional and orientation signs along the Harborwalk.

A1.2.3. Watersheet Management Policy and Plan

The watersheet management planning and related implementation policies are intended to correspond to and expand on the principles included in the *FPCWAP*. Jurisdictional responsibilities need to be defined for project initiation as well as for ongoing management of proposed activation programs. For example, on the waterside, responsibilities for such elements as watersheet navigation, dock management, public recreation concessions, and art-in-the-water exhibits (temporary, moveable, bottom-anchored barges) should be defined and assigned to appropriate public and private entities best equipped for their implementation and ongoing management. On the landside, management and maintenance responsibilities will include such activities as dock management and security, performance venue management, and Harborwalk security and maintenance. The management responsibilities may be viewed in terms of layers of overlapping public and private implementation actions and ongoing coordination activities. The management responsibilities are described in terms of three elements:

- Public Sector, including all applicable city, federal, and state mandates.
- Private Sector, including individual private property ownership (such as the Fort Point Channel Abutters Group).
- Public/Private Sector (non-profit, public/private) collaborative management and planning entities, including the Fort Point Channel Operations Board, Friends of the Fort Point Channel

Fort Point Cultural Coalition, Fort Point Artist Community and Fort Point Neighborhood Association.

Potential Management Entities

Public Sector

The broad Public Sector management responsibilities of entities require coordination of regulatory and funding actions for new watersheet projects by the City of Boston, and Commonwealth of Massachusetts including permitting and approvals for new structures and uses (Chapter 91, Article 80, Boston Water and Sewer Commission, etc.). Public sector management responsibilities will also include ongoing public services such as the U.S. Coast Guard and Homeland Security Agency, fire and public safety, and emergency response services. Of the city agencies, the Boston Redevelopment Authority will continue to play a central role in the planning and design review of new Channel projects as they evolve, as well as defined management participation.

Private Sector

The more site specific Private Sector responsibilities will include individual owners' and/or lessees' assumed roles for managing the public realm on and adjacent to their properties including the Harborwalk, vessel landings and slips, sidewalks, and in some cases open space (such as the Children's Wharf Park). Many of these responsibilities are or will be included in terms of permits and licenses granted by the City and Commonwealth. Channel property owners will also have a defined role in umbrella public/private management activities. Other responsibilities may need to be forged as the watersheet activation and phases of development proceed.

Non-Profit, Public/Private Entities

The configuration of management entities developed for the Fort Point Channel public realm includes the Fort Point Channel Operations Board, Fort Point Channel Abutters Group (FPCAG), and the Friends of the Fort Point Channel.

The three entities described so far include the already active Fort Point Channel Abutters Group (FPCAG) and Friends of the Fort Point Channel (FFPC). Coordination will be needed with other established entities such as the Fort Point community and Fort Point Artists Community (FPAC) organizations.

In addition to these entities, a new Fort Point Channel Operations Board is being formed to provide project implementation and ongoing management services for watersheet activation projects. Modeled after such public/private entities as the Rowes Wharf Operations Board and the Long Wharf Management Board, the Operations Board will have a representative of the property owners, the City, and the Commonwealth. It may need staff to take on day to day fiscal and management responsibilities to oversee coordination of watersheet projects from inception through construction and maintenance. The Operations Board would work closely with the Friends Group, providing the implementation capacity to complement the Friends' planning, programming and promotional activities.

Watersheet Management Plan and Responsibilities

The watersheet elements of the *Watersheet Management Plan* need to be addressed in terms of assigning responsibilities to appropriate public, private, and non-profit, public/private sector entities. In addition to the mandated public sector responsibilities, the proposed Channel-based stakeholder managing and implementation entities including the Abutters Group (FPCAG), the Friends of the Fort Point Channel

(FFPC) and the Fort Point Channel Operations Group (FPCOG) would all have prescribed assignments, as would individual stakeholder entities. The elements will need to be divided into adjacent property specific and general watersheet public realm type responsibilities. Suggested management components and responsibilities include Channel-wide and Basin-specific components, limited to those within the *Municipal Harbor Plan Phase 2* area.

Channel-wide Management Elements

- Channel Security and Navigation Supervision: Boston Harbormaster assisted by individual dock masters.
- Arts Programs: Operations Group with Fort Point Cultural Coalition, Fort Point Artist Community, Fort Point Neighborhood Association (FPNA), Fort Point Artists Community (FPAC), and Boston Virtuosi..
- Channel water quality monitoring: City Environment Department.
- Channel Maintenance and Cleanup: Adjacent property owners and MWRA, BWSC and the City Environment Department.
- Water Transportation: Various entities including MBTA, private operators and water taxi operators.
- Boat Rental Concessions: Property owners/abutters with approval of FFPC.
- Special Water Events: FFPC, Operations Board Fort Point Cultural Coalition, Fort Point Artist Community and Abutters with city and State Approvals.

Basin Specific Management Elements (not included in Channel-wide)

1. Hub of the Channel: Major responsibilities will be assumed by to the abutting properties in terms of maintenance and supervision of the Harborwalk, open space and related adjacent watersheet facilities. Many of these responsibilities will be defined in the Chapter 91 and city permits and licenses. Other emerging responsibilities may need to be assigned through the cooperative FFPC and Operations Board actions.
 - Ferry Landing Dock Management: MBTA and owners of 500 Atlantic Avenue.
 - Water Taxi Landings: Property abutters/owners including Russia Wharf, Children's Museum, etc.
 - Floating Harborwalk: Abutters.
 - Boat Slips and Wharfage: Property owners/abutters.
2. Seawall Basin: As with the Hub of the Channel Basin, major responsibilities will be assigned to the abutting properties in terms of maintenance and supervision of the Harborwalk, open space and related adjacent watersheet facilities. However, since the redevelopment of the USPS site may take some time, there may need to be interim management agreements, particularly for the actual watersheet activities. Many of the longer-term responsibilities will eventually be defined in the Chapter 91 and city permits and licenses. Cooperative agreements will also be critical with the property owners on the east side of the Channel, to insure full

realization of the watershed activation plan. It is suggested that the non-profit, public/private entities include the east side interests at such time as the new private development occurs. Other ongoing emerging responsibilities may need to be assigned through the cooperative FFPC Fort Point Cultural Coalition, Fort Point Artist Community and Operations Board actions.

- Water Taxi Landings: Property abutters/owners including Post Office property.
 - Small Boat Concessions and Clubs/Programs: Boating entities managed with Harbormaster approval.
 - Interpretive trail implementation and maintenance.
 - Public and performing arts program implementation, promotion and management.
3. South Bay Urban Industrial Wild: The head of the Channel area may require a different combination of management strategies because of the absence of abutting private or public property uses using the watershed. Management elements will include:
- Interpretive trail implementation and maintenance.
 - Boat landing maintenance and supervision.
 - Harborwalk, South Bay Trail and open space maintenance and supervision.

Landside Public Realm Management Plan and Responsibilities:

The landside components of the management plan will also need to be addressed in terms of assigning responsibilities to appropriate public, private and non-profit, public/private sector entities.

Transportation and Access Elements

Phased implementation of the transportation components includes coordination with various public agencies as well as with the individual property owners to insure optimum access to the Channel. The Friends Group and Operations Board will need to advocate for and assist in the implementation of the landside access improvements. Pedestrian access will require implementation of missing Harborwalk segments and completion of basin loops to be coordinated by the BRA with public and private property owners. Ground transportation will need to be coordinated with BTB and MBTA for the street level improvements, and with private carriers for trolley and taxi curb areas. The City will be responsible for managing the improvements to Congress Street and Northern Avenue Bridges.

Performance Infrastructure Elements

The Friends Group and Operations Board will need to program and assist in the implementation of the public performance and art infrastructure on the landside. The management groups will need to coordinate with private property owners on special events and scheduling of activities for maximum impact.

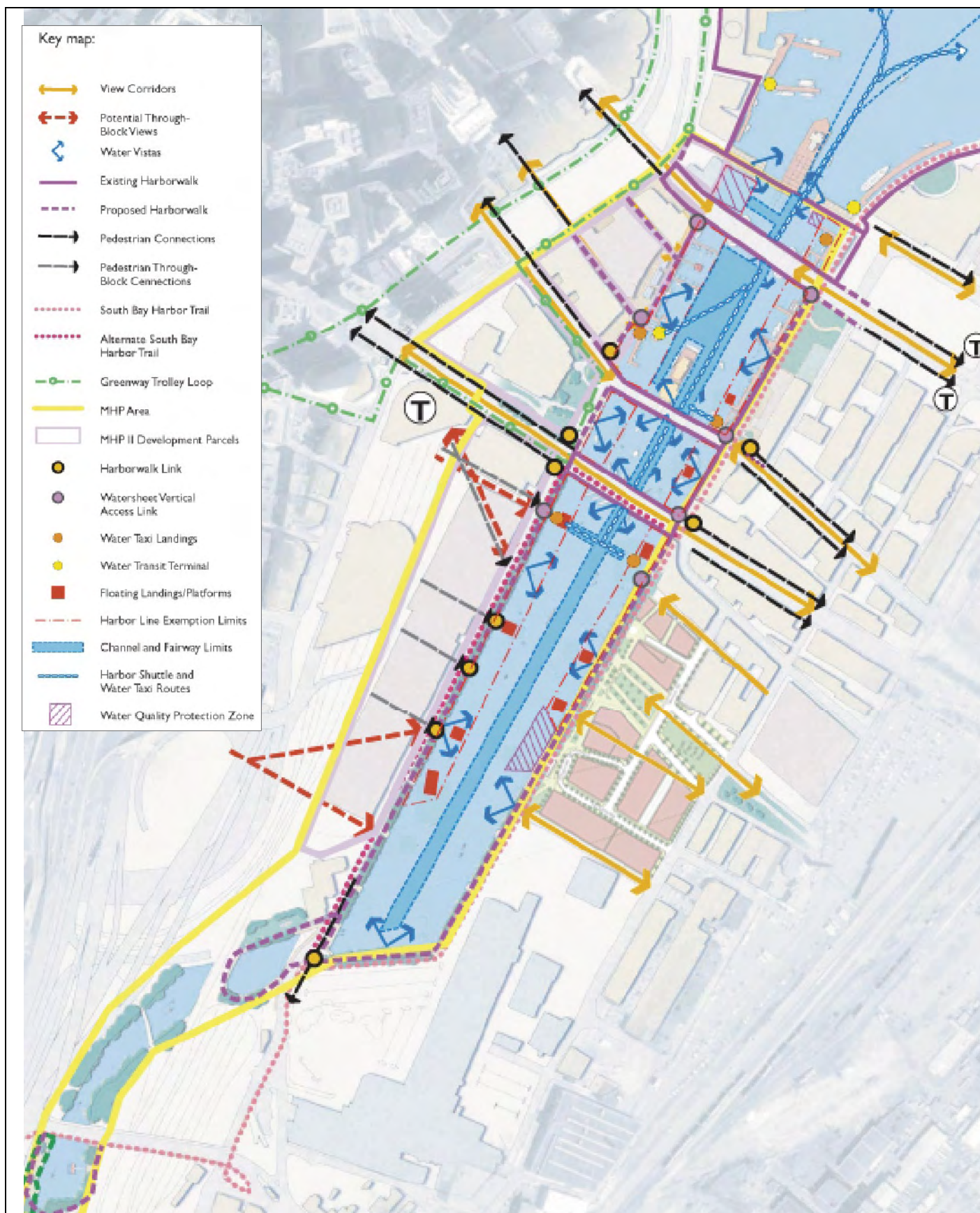
Concession Elements

Phased implementation of land and water concessions will need to be coordinated by the Friends Group and Operations Board. Harborwalk vendor locations and management will need to be coordinated

between the City, the Operations Board, and individual property owners to optimize the mix and quality of such concessions.

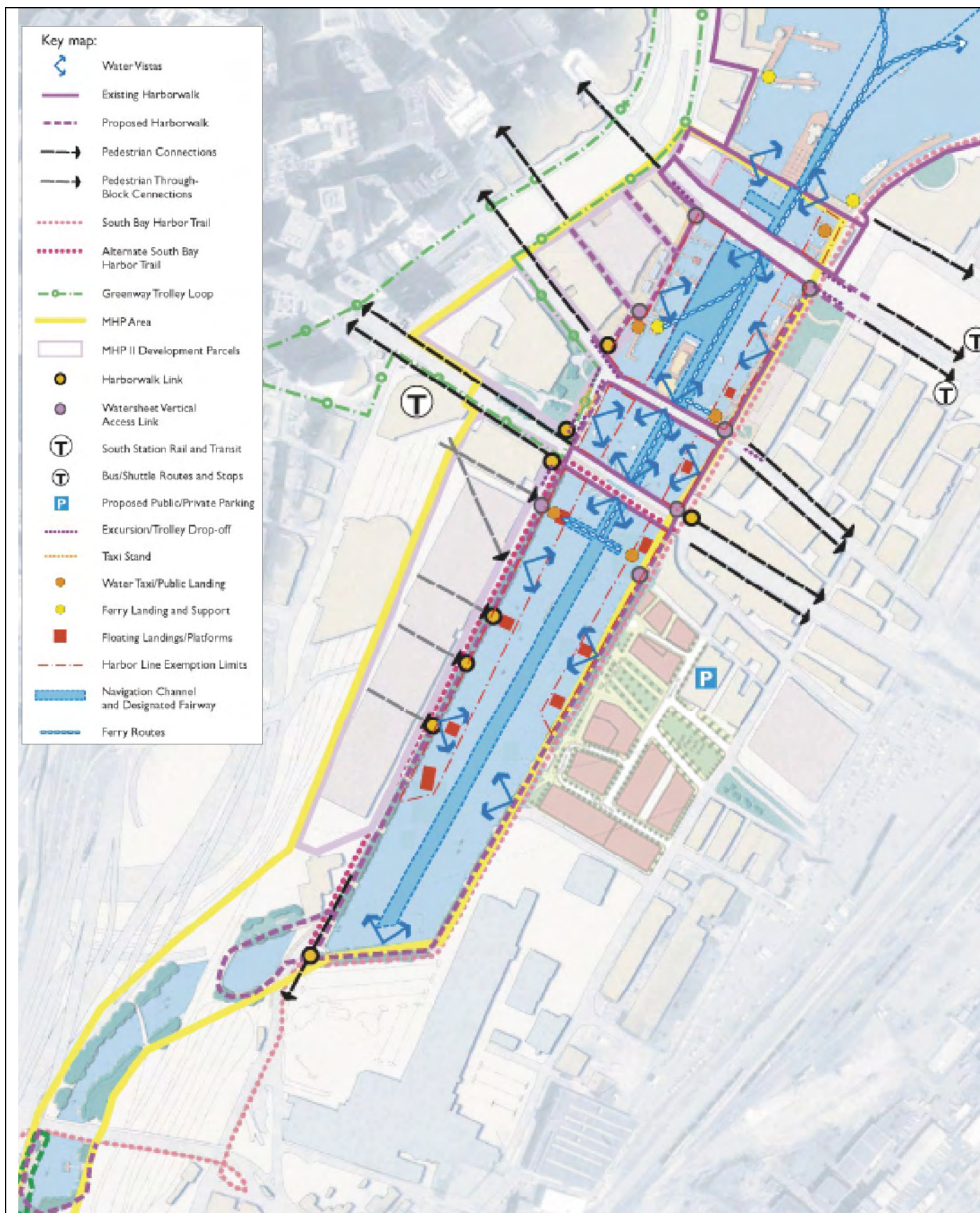
Seasonal Program Elements

The staging of seasonal programs and festivals to attract the public to the Channel will be an important responsibility of the Friends Group as planners and programmers.



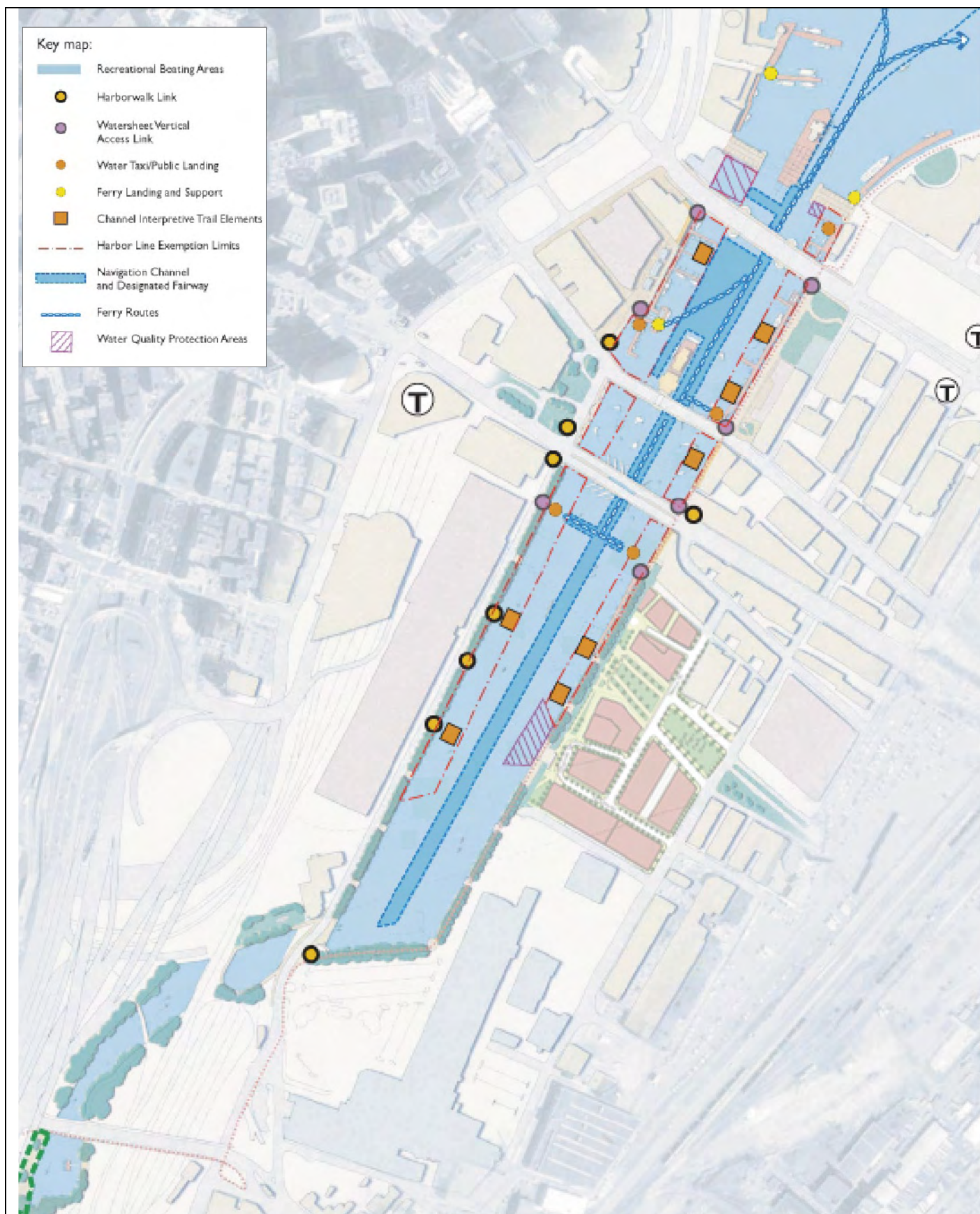
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Figure A1-1
 Composite Watersheet Implementation Plan



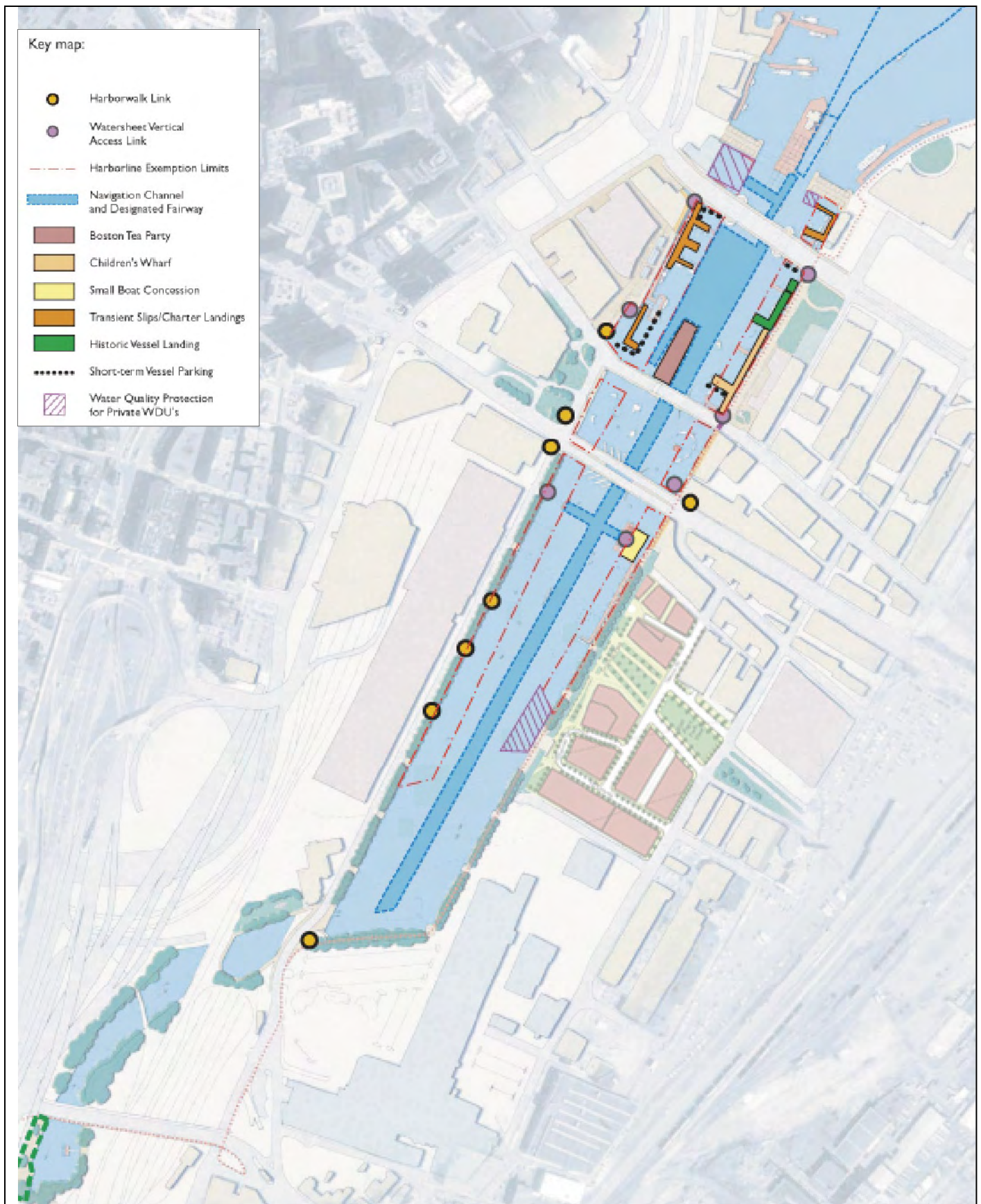
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Figure A1-2
 Watersheet Access Implementation Plan



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Figure A1-3
 Watersheet Public Uses



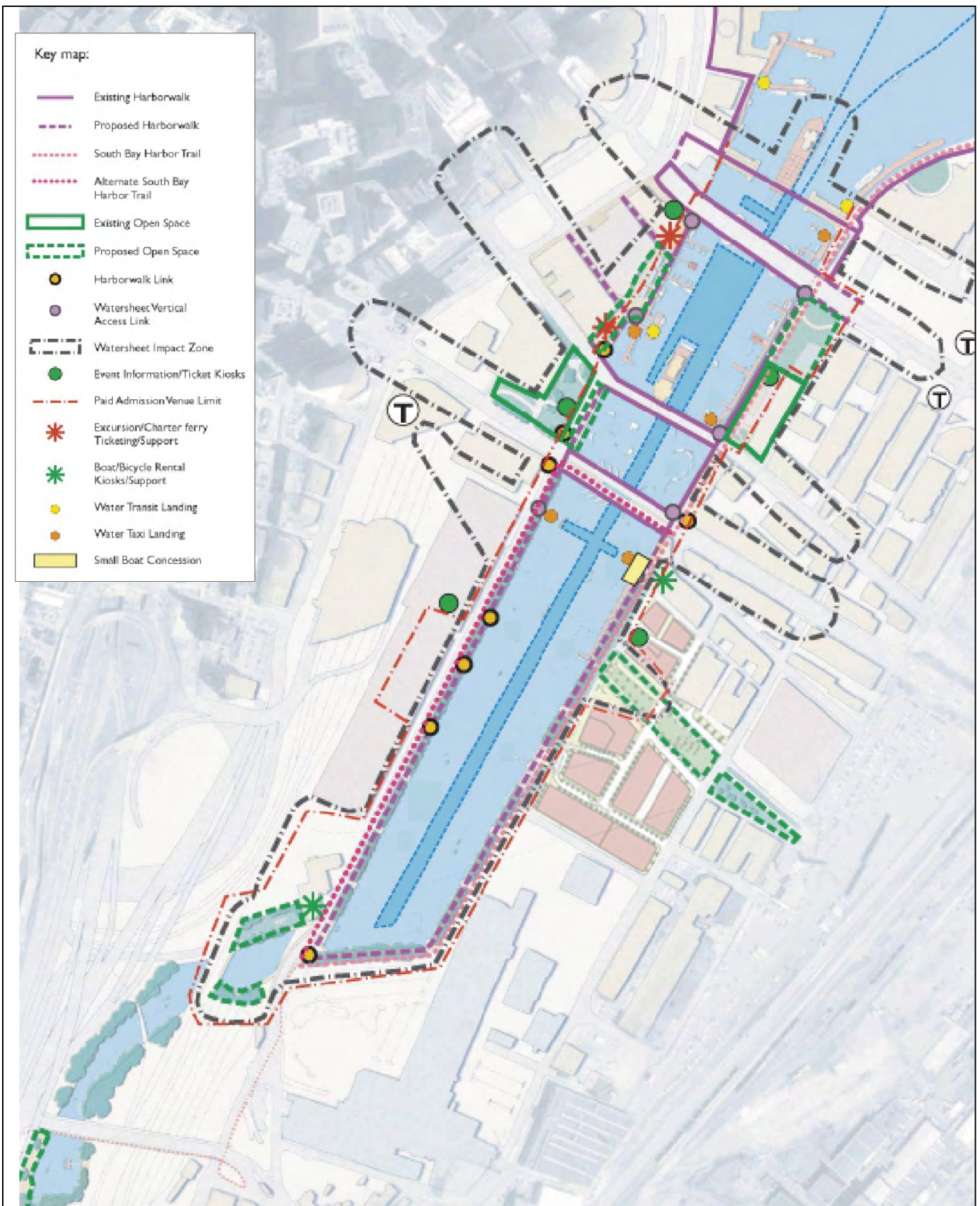
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Figure A1-4
 Watersheet Private Uses



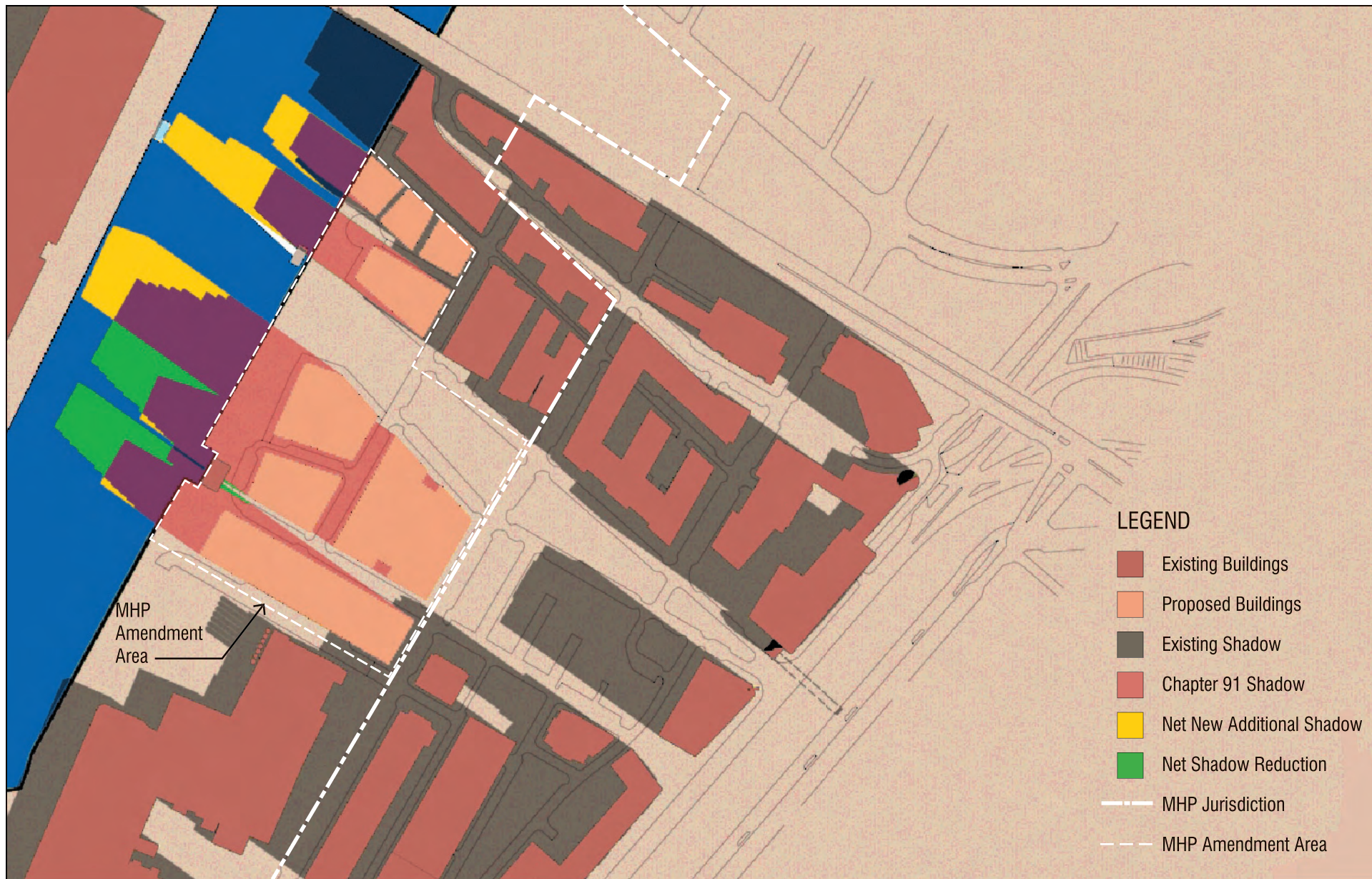
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Figure A1-5
 Landside Public Realm Uses



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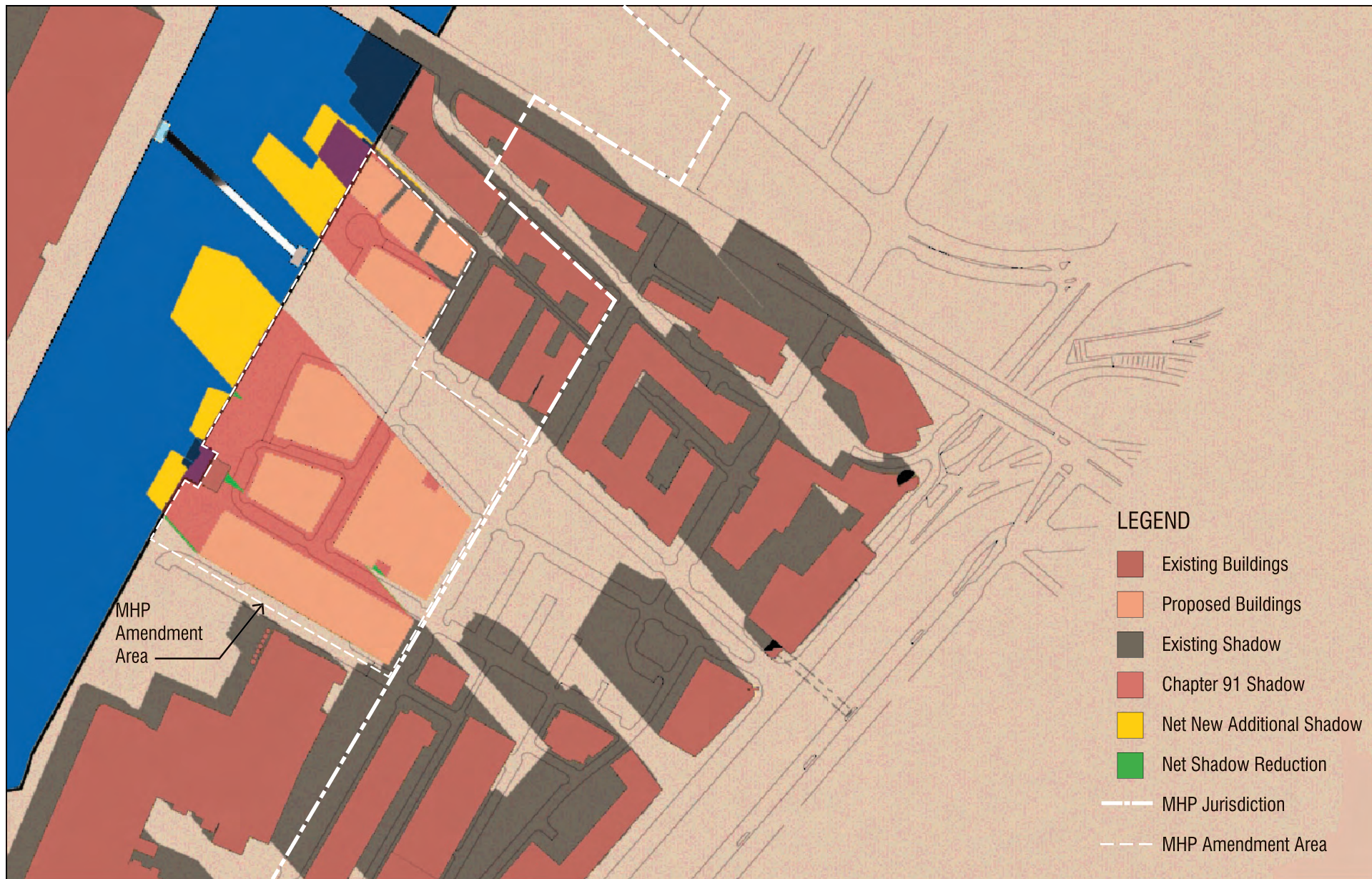
Figure A1-6
 Landside Private Uses Supporting Watersheet



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Figure A2-1
 Shadow Studies: 9AM, October 23

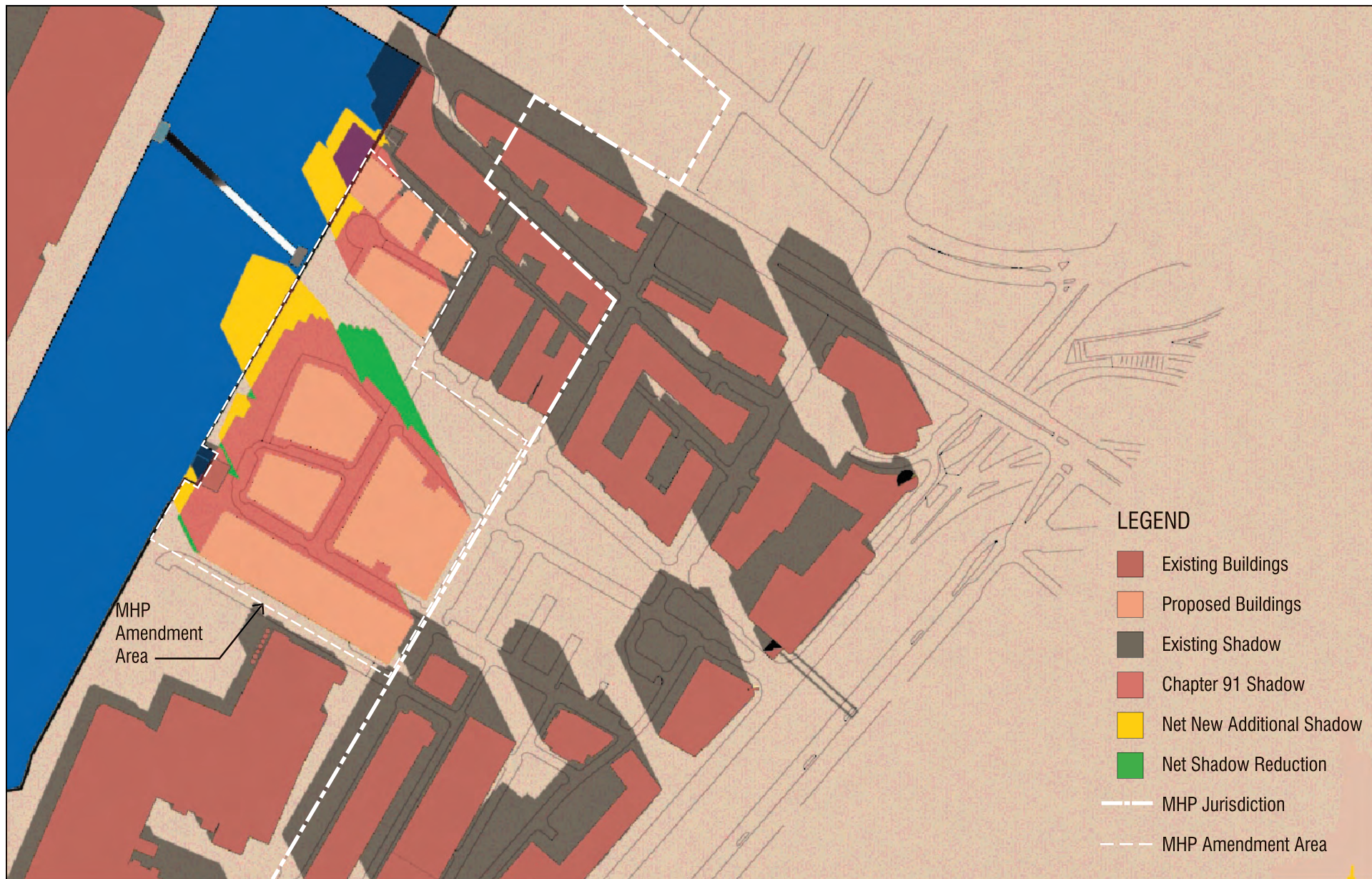




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Figure A2-2
 Shadow Studies: 10AM, October 23

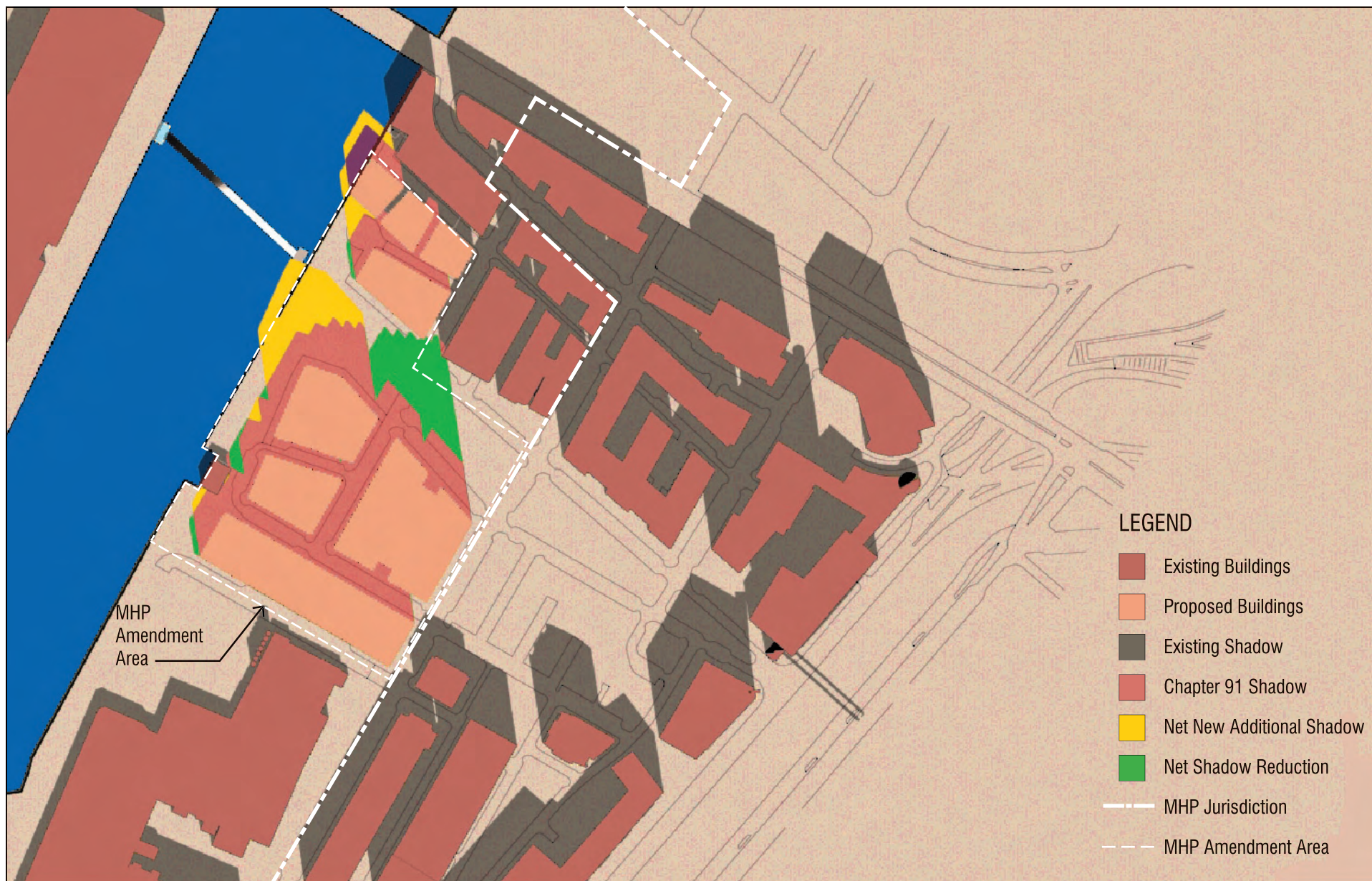




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Figure A2-3
 Shadow Studies: 11AM, October 23

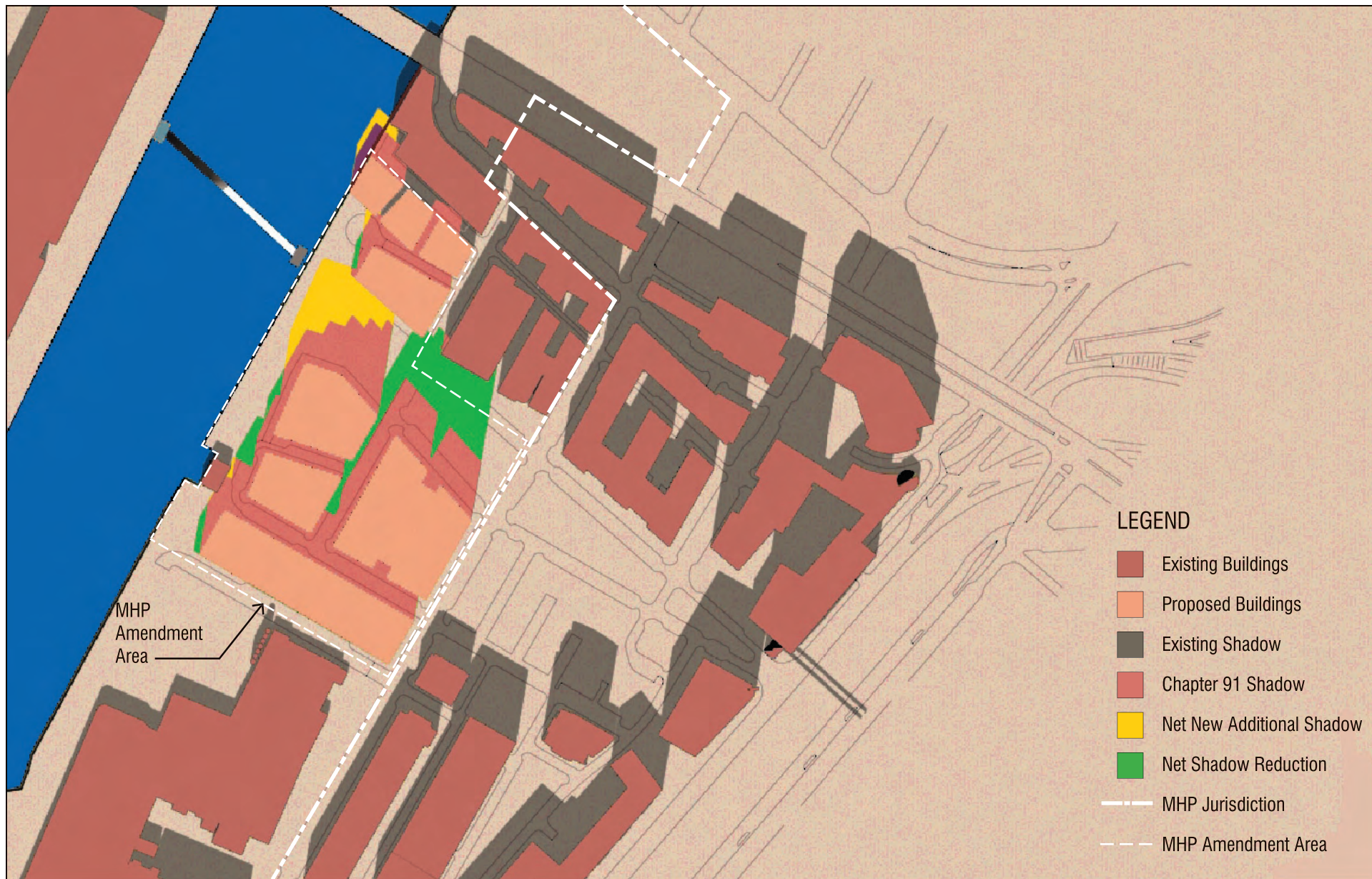




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Figure A2-4
 Shadow Studies: 12PM, October 23

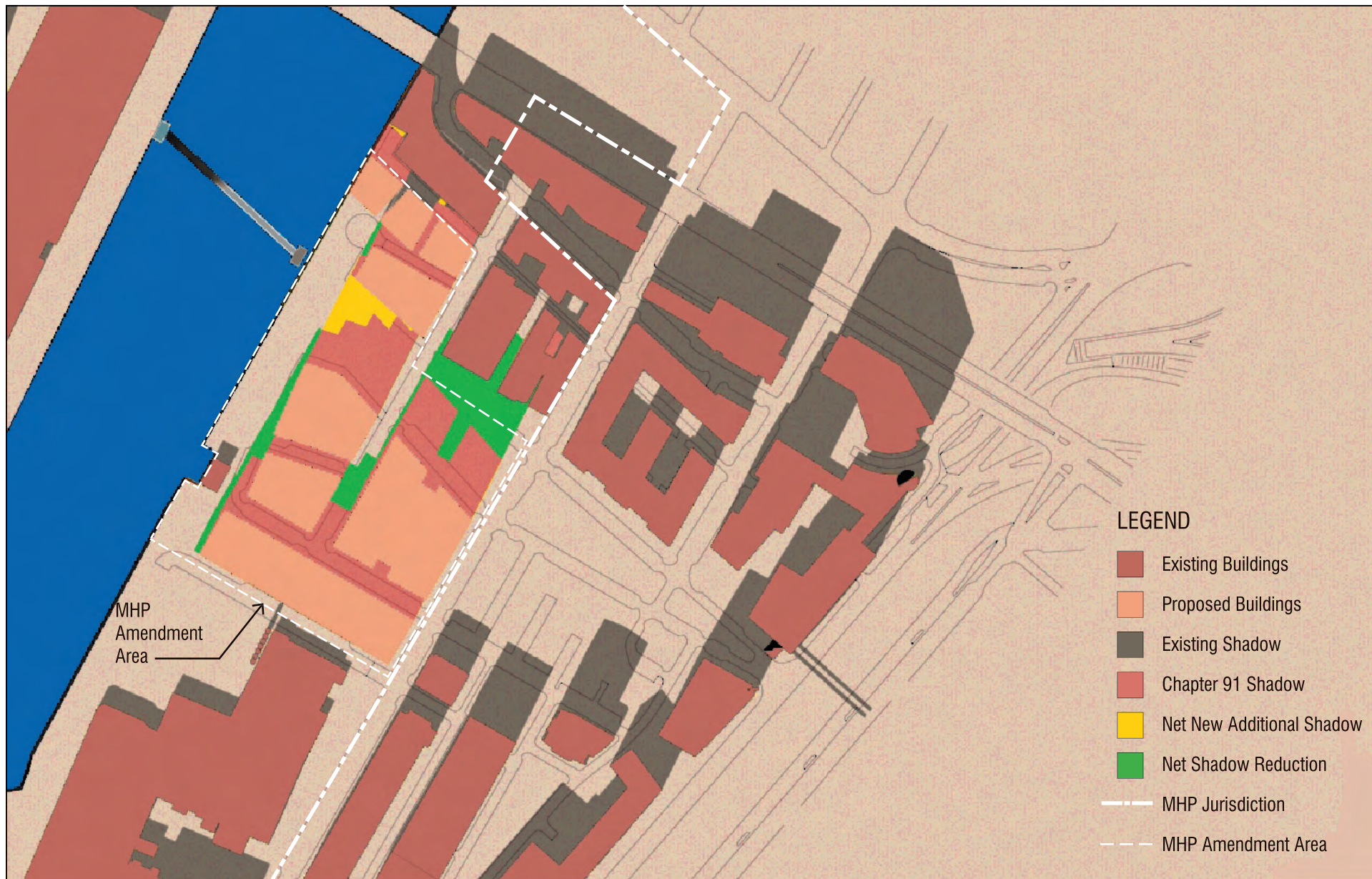




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Figure A2-5
 Shadow Studies: 1PM, October 23

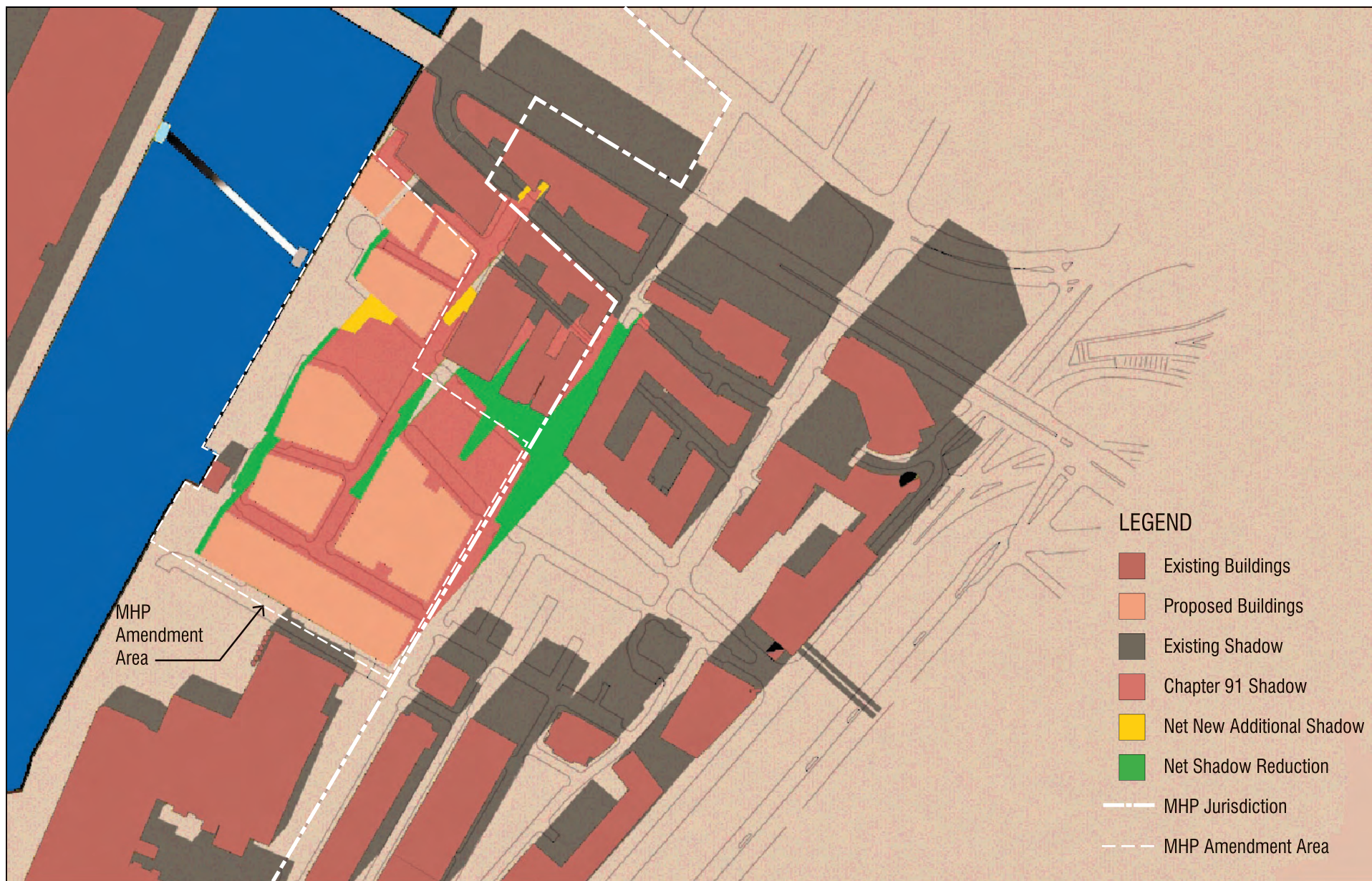




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Figure A2-6
 Shadow Studies: 2PM, October 23

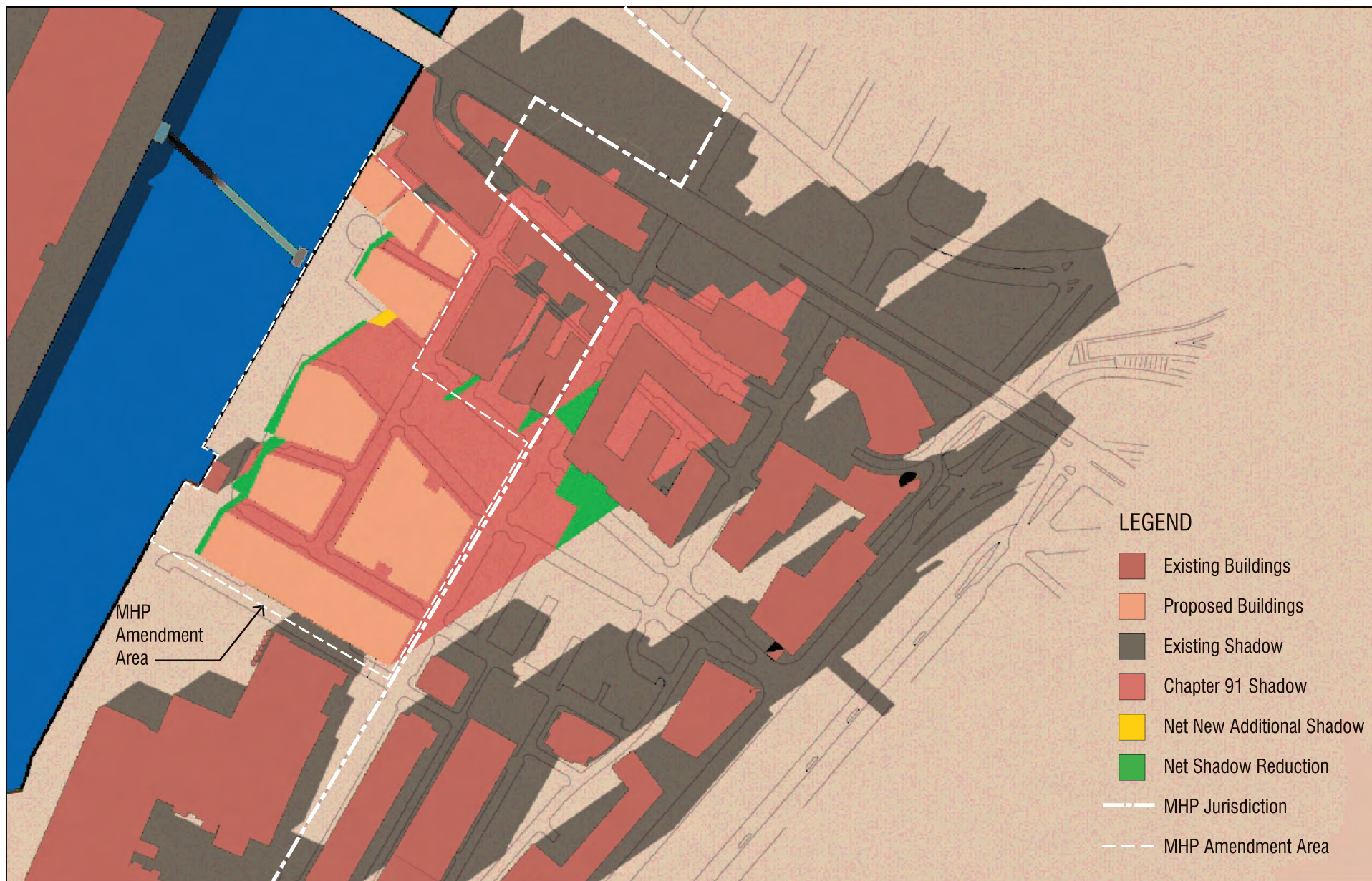




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Figure A2-7
 Shadow Studies: 3PM, October 23

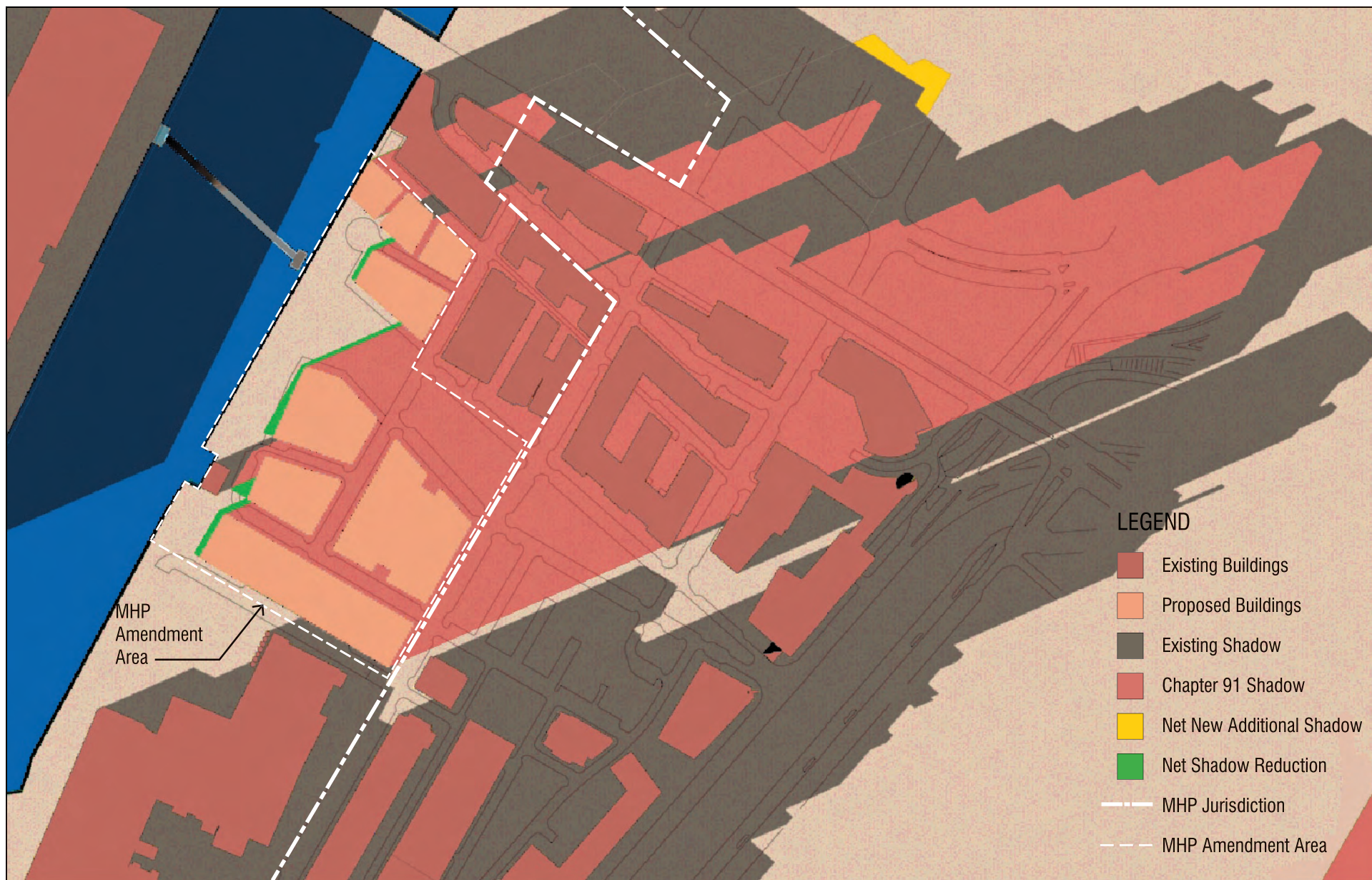




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Figure A2-8
 Shadow Studies: 4PM, October 23

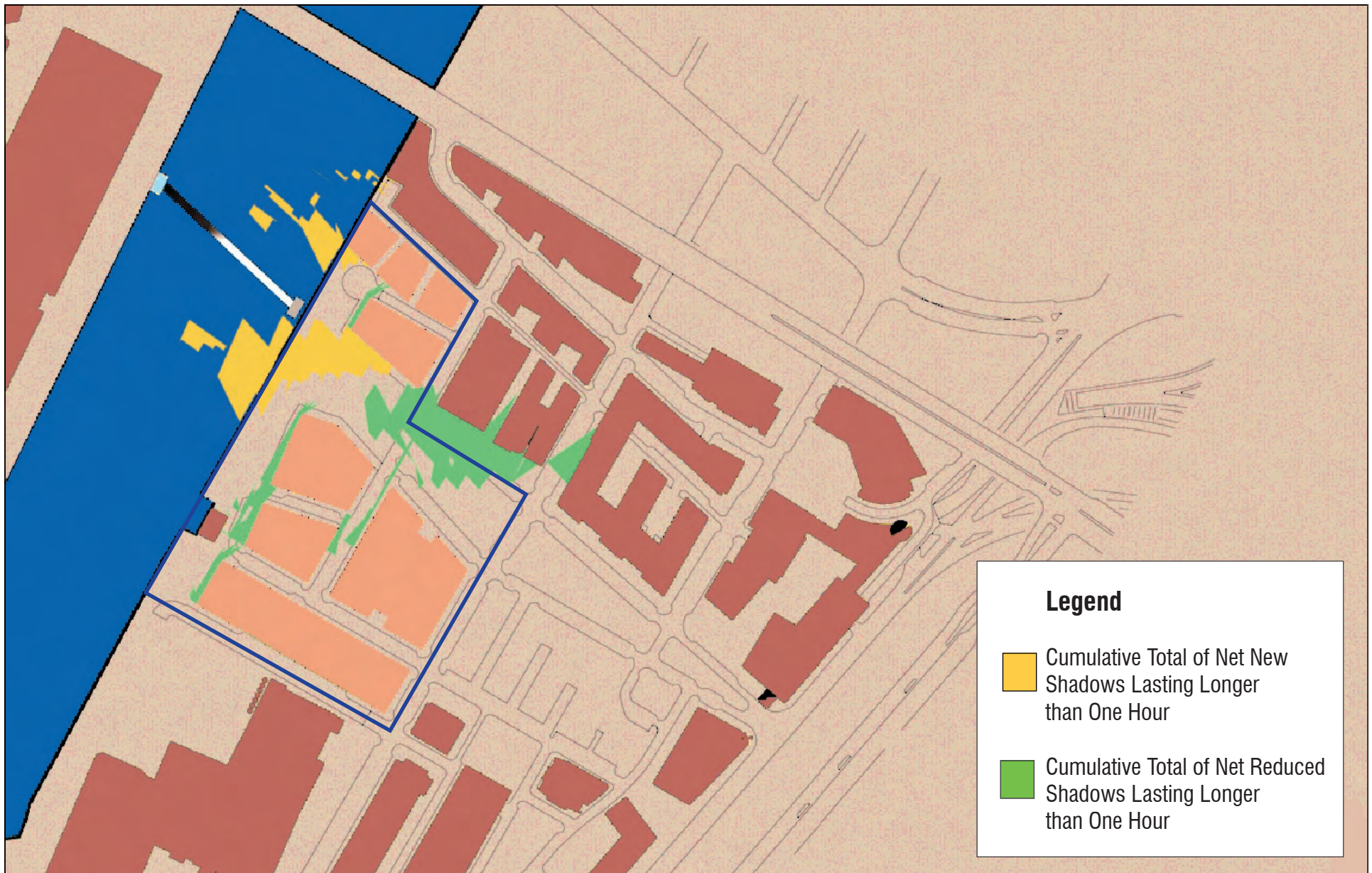




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Figure A2-9
 Shadow Studies: 5PM, October 23





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Figure A2-10
 Shadow Studies: Net New Shadow and Shadow Reduction
 Lasting Longer than One Hour



APPENDIX 3 – WIND STUDIES

This Appendix presents the results and conclusions of a qualitative assessment of pedestrian-level winds performed for the *100 Acres Master Plan* study area by Frank H. Durgin, P.E., in May of 2006.

A QUALITATIVE ASSESSMENT OF PEDESTRIAN LEVEL WINDS FOR THE BOSTON REDEVELOPMENT AUTHORITY 100 ACRE DEVELOPMENT IN SOUTH BOSTON, MASSACHUSETTS

BY FRANK H. DURGIN, P.E.

1.0 SUMMARY

This is a qualitative assessment of pedestrian level winds (PLWs). The effects of the Boston Redevelopment Authority (BRA) 100 Acre Development Plan in South Boston on PLWs in the site was investigated at eighty-nine locations in the site. Results for existing and build conditions were investigated for locations along the Harbor Walk, in parks, and at most street intersections.

None of the eighty-nine locations is estimated to have PLWs that may exceed the BRA guideline wind speed of 31 mph oftener than once in 100 hours for existing or the build conditions.

Detailed results are presented in Figures 13-20 and Tables 1 and 2. In Figure 12, the site is divided into eight separate areas to make interpretation of the results easier. This investigation assumes that all the proposed buildings are in place. The results indicate that the net effect of the proposed buildings is to reduce windiness in many places in the site including the proposed park areas. Because there are many buildings they tend to shelter one another. As individual buildings are built, PLWs can be expected to be increased locally over those predicted herein.

2.0 INTRODUCTION

This is an assessment of PLWs in the site of the proposed BRA 100 Acre Development in South Boston. The assessment is based on:

- 1 Two previous studies of different planned buildings for the 100 Acres site [1, 2];
- 2 Development plans supplied by the BRA;
- 3 Three site visits;
- 4 36 photographs taken for the first two studies and four taken for this study;
- 5 An evaluation of the urban context of the project site;
- 6 A review of the Boston wind climate; and
- 7 The author's 30 years of experience dealing with PLWs.

The interaction of the wind with buildings and structures is very complicated and, at times, difficult to predict, especially for an urban area with a mixture of low-rise and mid-rise buildings. Thus this evaluation provides a qualitative assessment of PLWs.

3.0 LOCATION AND DESCRIPTION OF THE BRA 100 ACRE DEVELOPMENT AND ITS SURROUNDING AREA

3.1 DESCRIPTION OF BRA 100 ACRE SITE (Figure 1)

The BRA 100 Acre Development is located in South Boston. It is bounded by the Fort Point Channel, Summer Street, Haul Road, South Boston Bypass Road, West Second Street, A Street, and Mount Washington Street. Currently the site is mostly open and used for parking. There are buildings along Summer Street that extend from the Fort Point Channel to the West Service Road. Also, there are buildings on the site between A Street and East New Street from Richard Street to Wormwood Street. The locations and approximate heights of those existing buildings, as well as the numbers of the eighty-nine locations considered, are indicated in Figure 1.

3.2 DESCRIPTION OF THE PROPOSED BRA 100 ACRE BUILDINGS (Figures 2, 3 and 4)

There are no detailed plans for the proposed buildings at this time, so only the approximate massing and heights are shown in Figure 2. The heights of the taller parts of the proposed buildings vary between 100 and 180 feet. The eighty-nine locations investigated are also indicated in Figure 2.

3.3 THE SURROUNDING AREA (Figures 2, 3 and 4)

There are no high-rise buildings in the immediate area surrounding the site, but the Financial District with its many 300- to 500-foot buildings is the other side of the Fort Point Channel about one-half mile to the NNW. To the N, NE, and E are mostly five- to ten-story buildings. The Boston Convention and Exhibition Center lies to the immediate SE. In the other directions, the nearby buildings are mostly from three to six stories

4.0 THE WIND CLIMATE

4.1 THE VARIATION OF WIND SPEED WITH HEIGHT

In general, the natural wind is unsteady (*i.e.*, it is gusty) and its average speed increases with height above the ground [3]. Figure 3 depicts how the average wind speed varies with height for different types of terrain. While generally it does not happen, when one puts up any building, the possibility exists that the building will bring the higher speed winds at the top of the building down to ground level.

Figure 4 shows schematically how an isolated building typically interacts with the wind. Because the wind speed increases with height, as the wind is forced to a stop at the upwind façade, the pressure recovered on that façade is higher near the top than at the bottom of the façade. As a result, the wind flows down the windward façade and forms the vortex upwind of the building shown in the figure. This vortex is stretched and accelerated as it goes around the two upwind lower corners, causing the accelerated flow areas (A) shown on the left hand side of Figure 4. Similar accelerated areas also occur for winds blowing at the corners of the building (B in Figure 4). Because the NW wind blows directly at the proposed buildings along the Fort Point Channel, the interaction of the NW wind with the buildings along the Channel will behave in ways similar to those shown in Figure 6.

Monolithic buildings (*i.e.*, those that do not change shape with height), if they are significantly taller than most of the surrounding buildings, almost invariably will be windy at their bases. However, when there are many buildings of similar height in an area, they tend to shelter one another. Once all the proposed buildings are in place, those in the middle of the site will be

sheltered by the outer buildings or those existing buildings on or next to the site.

4.2 STATISTICAL DESCRIPTION OF THE BOSTON WIND CLIMATE

The project site is located about 2 miles SSW of Logan Airfield. Thus, the wind data from Logan Airfield, usually used to define the winds for Boston, is applicable. Figure 5 depicts a wind rose for Boston. The wind speeds are estimated at pedestrian level at the airport. The length of each line radiating from the center of the figure to the outermost crossing line is proportional to the total time the wind comes from that direction. The other lines crossing the radial lines indicate the frequency of winds less than 7, 10, and 15 mph. As noted in the figure, the wind rose is based on surface wind data from Logan Airfield taken from 1945 to 1965. Data from 1965 to 2005 is also available, but it is not believed to be as representative of the true winds in Boston. Many 25- to 40-story buildings have been built in the financial district of Boston since 1965. The financial district with its many 300- to 500-foot buildings is just one and one-half miles WSW of Logan Airfield.

Figure 5 shows that the winds in Boston come primarily from the NW, W, and SW. Figures 6 through 9 show pedestrian level wind roses for Boston for winter (Dec., Jan., and Feb.), spring (Mar., Apr., and May), summer (Jun., Jul., and Aug.), and fall (Sept., Oct., and Nov.). These figures show that NW winds tend to occur during the colder months and SW winds during the warmer months. Spring and fall are transitional, but winds are stronger in the spring than in the fall. Strong easterly winds usually occur during storms when there is precipitation.

The average wind speed at Logan Airfield at 58 feet (the average height at which the data was taken) is 12.9 mph. At pedestrian height (*i.e.*, at chest height, 4.5 feet) it is about 8.6 mph. The average wind speeds at 58 and 4.5 feet at Logan Airfield for each month are shown in Figure 12. Seasonally, the average wind speed at pedestrian level is 9.4 mph in the winter, 9.2 mph in the spring, 7.4 mph in the summer, and 8.2 mph in the fall.

5.0 CRITERIA

Since the early 1980s, the BRA has used a guideline criterion for acceptable winds of not exceeding a 31 mph effective gust more often than once in one hundred hours. The effective gust is defined as the average wind speed plus 1.5 times the root mean square variation about the average. The effective gust can be shown to be about the fastest one-minute gust in an hour. When many locations are considered, the effective gust averages about 1.4 times the average hourly wind speed [4]. However, that ratio can vary widely from 1.4 for individual locations.

In 1978, Melbourne [5] developed probabilistic criteria for average and peak PLWs, which accounted for different types of pedestrian activity as well as the safety aspects of such winds. Durgin [4] suggested the use of an Equivalent Average which combines the effects of average, gusting, and peak winds and later [6] reinterpreted Melbourne's criteria to apply to Equivalent Average winds (Figure 11). The Equivalent Average used in this figure is similar to an hourly average, but combines the effects of steady and gusting winds. Five categories of PLWs are defined:

- 1) Comfortable for Long Periods of Standing or Sitting;¹
- 2) Comfortable for Short Periods of Standing and Sitting;
- 3) Comfortable for Walking;
- 4) Uncomfortable for Walking;
- 5) Dangerous and Unacceptable.

These criteria are not absolute (any location can have dangerous winds in a major storm or hurricane). Rather, they imply that the location would have wind speeds such that the activity suggested could be undertaken comfortably most of the time, and would be perceived² as such, by most people who frequent the location. For example, the PLWs at Logan Airfield are on the dividing line between Category 4 (uncomfortable for walking) and Category 3 (comfortable for walking) (see Figure 13). But they are well under the BRA 31 mph effective gust wind speed guideline (converted to an equivalent average wind), which is in the middle of Category 4. Therefore, most people would perceive conditions in the open at Logan Airfield as marginally comfortable for walking.

¹ The numbering system for the Categories was reversed in December, 1999. Before December, 1999, the slowest winds were in Category 5 and the fastest in Category 1. Since the December, 1999, the slowest are in Category 1 and the fastest in Category 5.

² On a somewhat windy day, a person familiar with the location would choose not to go there for the specified activity.

6.0 PEDESTRIAN LEVEL WINDS AT THE SITE

6.1 INTRODUCTION

The objective of this study was to determine how the BRA planned buildings in the BRA 100 Acre planned developments will effect PLWs in the site. To aid in interpreting the results of the study the 100 Acre area is divided into eight separate areas as shown in Figure 12 and described below.

Area	Description and Boundaries
1	The park and Harbor Walk along the Fort Point Channel.
2	The area bordered by the park along the Fort Point Channel, Wormwood Street, A Street, and Mount Washington Street.
3	The Park between Wormwood Street and Fort Point Avenue that extends from the Fort Point Channel Park to the South Boston Bypass Road.
4	The area bordered by Fort Point Channel, Summer Street, A Street, and Fort Point Avenue.
5	An el shaped area bordered by A Street, Wormwood Street, South Boston Bypass Road, Richards Street, Medallion Street, East New Street, New Court, Medallion Street, and Binford Street.
6	The area bordered by A Street, Summer Street, Haul Road, and Fort Point Avenue.
7	The small triangular park bordered by Medallion Street, New Court, and East New Street.
8	The area surrounded by A Street, Richard Street, South Boston Bypass Road, and West First Street that will contain two playing fields.

In the following sections, the effects of NW winter winds, SW summer winds, and easterly storm winds will be compared for existing and build conditions for the whole site and the eight sections described above. The results from the three general directions will be summarized by an estimated prediction of annual PLWs at each location for each of the eight areas described above.

The estimated categories at each location considered are shown in Figures 13 to 20 for all eighty-nine locations for existing and build conditions. Categories for NW, SW, easterly storm, and annual winds are given. These

same results are tabulated in Tables 1 and 2. The results for each of the eight areas are given in Tables 2 A and B.

For the most part the weather in New England is dominated by either large coastal storms (fall, winter, and spring) or the Bermuda High (summer). Typically, when a coastal storm occurs, it rains or snows for 4 to 12 hours, then it clears, and, as the storm moves to the NE, the winds blow from the NW for three or four days until the next weather system arrives. These storms and the NW winds following them occur mostly in the fall, winter, and spring. NW winds are particularly uncomfortable in the winter, when typically they occur on cold days. The Bermuda High is generally responsible for the SW winds that occur in the summer.

6.2 NORTHWEST (WINTER) WINDS

6.2.1 Introduction

NW winds blow perpendicular to the shore of the site along the Fort Point Channel. (Figure 13). The estimated categories for all locations for the existing and build conditions are shown in Figures 13 and 14 (also see Tables 1 and 2A& B).

6.2.2 NW Winds: Discussion (Figures 13 and 14)

Because of the Fort Point Channel, the site is quite exposed to NW winds. The Harbor Walk and Park in area 1 is moderately windy (high Category 3) for both existing and build conditions. As pointed out in section 4.1, winds near the proposed buildings along the Fort Point Channel will behave in ways similar to the way the wind interacts with the isolated building in Figure 4.

Overall, the PLW Category at forty-six of the eighty-nine locations considered remained unchanged. Of the remainder, the PLW Category at eight locations increased by 1, the PLW Category at twenty-eight decreased by 1, and the PLW Category at four decreased by 2.

Considering areas 1, 3, 7, and 8, which contain all the parks:

- Area 1) The PLW Category does not change for any of the nine locations;
- Area 3) Five of the nine locations did not change PLW Category, and at four the PLW Category decreased from 3 to 2;
- Area 7) Both locations remained in PLW Category 1; and
- Area 8) The PLW Category at locations 74 and 75 did not change but that at location 81 dropped from Category 3 to 1.

Considering Areas 2, 4, 5, and 6 which contain all the proposed buildings:

Area 2) The PLW Category did not change at three of the twenty-one locations, but it increased by 1 at three locations, decreased by 1 at ten locations, and decreased by 2 at five locations;

Area 4) The PLW category stayed the same at four of the twelve locations, increased by 1 at four, and decreased by 1 at another four;

Area 5) The PLW Category stayed the same at twelve of the seventeen locations, decreased by 1 at four locations and decreased by 2 at one location; and

Area 6) The PLW Category stayed the same at nine of the sixteen locations, increased by 1 at one location, and decreased by 1 at six locations

Thus the net effect of the buildings is to decrease PLWs in the site for NW winds.

6.3 SOUTHWEST (SUMMER) WINDS

6.3.1 Introduction

The prevailing winds in the summer are from the SW. SW winds blow almost parallel to the Fort Point Channel from Mount Washington Street toward Summer Street. (Figure 14). The estimated categories for all locations for existing and build conditions are shown in Figures 15 and 16 (also see Tables 1 and 2A and B).

6.3.2 SW Winds: Discussion (Figures 15 - 16)

Overall, the PLW Category at thirty-five of the eighty-nine locations considered remained unchanged. Of the remainder, the PLW Category at four locations increased by 1, the PLW Category at thirty-three decreased by 1, and the PLW Category at seventeen decreased by 2.

Considering areas 1, 3, 7, and 8 which contain all the parks:

Area 1) There were no changes in PLW Category for the nine locations;

Area 3) Three of the nine locations did not change category, at four the category decreased by one, and at two it decreased by two.

Area 7) Both of the locations remained in Category 2; and

Area 8) PLW Category at locations 74 and 75 did not change but that at location 81 dropped from category 3 to 2.

Considering Areas 2, 4, 5, and 6 which contain all the proposed buildings:

Area 2) One of the twenty-one locations considered did not change PLW Category, at one location it increased by 1, at eight it decreased by 1, and at eleven it decreased by 2;

Area 4) Six of the twelve locations did not change PLW Category, and the at the other six decreased by one;

Area 5) Eight of the seventeen locations did not change the PLW Category, at two locations the category increased by 1, at six it decreased by 1 and at one location it decreased by two; and

Area 6) Four of the sixteen locations did not change PLW Category, at one location the category increased by 1, at eight locations it decreased by 1, and at three locations it decreased by 2.

Thus the net effect of the buildings is to decrease PLWs in the site for SW winds.

6.4 EASTERLY STORM WINDS

6.4.1 Introduction

Easterly winds occur about one third of the time. Light easterly winds occur as a storm starts or in the summer as a sea breeze. During the first 4-12 hours of a typical coastal storm, it rains or snows depending on the temperature. The wind is from the NE or SE depending on whether the center of the storm passes to the east or west of the city.

For strong easterly winds, it will generally be raining or snowing, and people expect it to be windy. Easterly winds cover the NE, E, and SE wind directions. The Categories for each of these wind directions were determined and have been combined to obtain a single result for easterly winds. Bear in mind that the total time the winds come from all three of these easterly directions is about the same as the time the wind comes from either the NW or SW.

6.4.2 Easterly Storm Winds: Discussion. (Figures 17 and 18)

Overall, the PLW Category at thirty-five of the eighty-nine locations considered remained unchanged. Of the remainder, the PLW category at four locations increased by 1, the PLW Category at forty-one locations decreased by 1, and the PLW Category at nine locations decreased by 2.

Considering areas 1, 3, 7, and 8 which contain all the parks:

Area 1) there were no changes in PLW category for the 9 locations;

Area 3) One of the nine locations did not change category, at five the category decreased by 1, and at three it decreased by 2.

Area 7) At location 80 the PLW Category remained in category 1, and that at location 79 decreased from Category 2 to 1; and

Area 8) At locations 74 and 75 the PLW Category decreased from 3 to 2 and at location 81 it decreased from 3 to 1.

Considering Areas 2, 4, 5, and 6 which contain all the proposed buildings:

Area 2) At nine of the twenty-one locations considered the PLW Category did not change, but at eight locations the PLW Category decreased by 1 and at four it decreased by 2;

Area 4) At ten of the twelve locations, the PLW category stayed the same, at one location it increased by 1, and at another it decreased by 1;

Area 5) At three of the seventeen the PLW Category stayed the same, at two locations it increased by 1, and at twelve locations it decreased by 1; and

Area 6) At eight of the sixteen locations the PLW Category stayed the same, at one location it increased by 1, at six locations it decreased by 1, and at one location it decreased by 2.

Thus, again, the net effect of the buildings is to decrease PLWs in the site for SW winds.

6.5 Annual Winds

6.5.1 Introduction

In the above discussion, only winds from three general wind directions are discussed. While specific important directions are considered, one cannot infer the overall annual windiness at any location. To remedy this situation, PLW categories were estimated for the missing S, W, and N wind directions. Those categories, along with the five for the other wind directions, were then used with an eight compass point statistical description of the Boston wind climate to estimate the overall annual category for each of the fifty-six locations considered. The resulting estimated categories for each location for existing conditions and the three build options are listed in the last four columns in Table 1. In comparing these annual estimates with those for the three specific directions, one must remember that the total occurrence of winds from easterly directions is roughly equal to that for either the NW or SW direction. These annual estimates are qualitative and must be treated as such.

6.5.2 Discussion (Figures 19 and 20)

Overall, annually the PLW Category at forty of the eighty-nine locations considered remained unchanged. Of the remainder, the PLW category at two locations increased by 1, the PLW Category at forty-five locations decreased by 1, and the PLW Category at two locations decreased by 2.

Considering areas 1, 3, 7, and 8 which contain all the parks:

Area 1) At eight of the nine there were no changes in PLW Category, and at the ninth location the category decreased from 3 to 2;

Area 3) One of the nine locations did not change category, and at the other eight locations the PLW Category decreased by one category;

Area 7) At location 80 the Category remained in category 1 and at location 79 it decreased from category 2 to 1; and

Area 8) At locations 74 and 75 the PLW Category did not change, but that at location 81 decreased from 3 to 2.

Considering Areas 2, 4, 5, and 6 which contain all the proposed buildings:

Area 2) At nine of the twenty-one locations considered, the PLW Category did not change, but at five locations it decreased by 1;

Area 4) At seven of the twelve locations the PLW category stayed the same, at one location it increased by 1, and at another it decreased by 1;

Area 5) At six of the seventeen locations the PLW Category stayed the same, at two locations it increased by 1, and at nine locations it decreased by 1; and

Area 6) At six of the sixteen locations the PLW Category stayed the same, and at ten locations it decreased by 1.

Thus, for annual winds, the net effect of the planned buildings is to decrease PLWs in the site. It is suggested in Section 4.1 that when there are many buildings close together, they tend to shelter each other. This is the case here.

7.0 SUMMARY, CONCLUSIONS, AND COMMENTS

This is a qualitative assessment of PLWs. The effects of the BRA 100 Acre Development Plan in South Boston on PLWs in the site was investigated at eighty-nine locations in the site. Results for existing and build conditions were examined for locations along the Harbor Walk, in parks, and at most street intersections.

None of the eighty-nine locations is estimated to have PLWs that may exceed the BRA guideline wind speed of 31 mph oftener than once in 100 hours for existing or the build options.

Detailed results are presented in Figures 13-20 and Tables 1 and 2A & B. In Figure 12, the site is divided into eight separate areas to make interpretation of the results easier. This investigation assumes that all the proposed buildings are in place. The results indicate that the net effect of the proposed buildings is to reduce windiness in many places in the site including the proposed park areas. Because there are many buildings they tend to shelter one another. As individual buildings are built, PLWs can be expected to be increased locally over those predicted herein.

8.0 REFERENCES

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- 4) Durgin, F.H., "Use of the Equivalent Average for Evaluating Pedestrian Level Winds", Presented at the Sixth U.S. National Conference On Wind Engineering, University of Houston, Houston, Texas, March 7-10, 1989, *Journal of Wind Engineering*, Vol. 36, pp. 817-828, 1990.
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**ESTIMATED CATEGORIES FOR NW, SW, STORM, AND ANNUAL WINDS
FOR EXISTING (EX) AND BUILD (BLD) CONDITIONS**

Loc.	NW		SW		STORM		ANNUAL		Loc.
No.	EX	BLD	EX	BLD	EX	BLD	EX	BLD	No.
1	3	3	3	3	3	2	3	3	1
2	3	3	3	3	2	2	3	3	2
3	3	3	2	2	3	2	3	3	3
4	3	3	3	3	3	2	3	3	4
5	3	3	3	3	3	2	3	3	5
6	3	3	3	3	2	2	3	3	6
7	3	3	3	3	3	2	3	3	7
8	1	1	2	2	3	2	3	2	8
9	3	3	3	3	3	3	3	3	9
10	3	3	3	2	3	2	3	3	10
11	3	4	3	2	3	2	3	3	11
12	3	4	3	2	3	2	3	3	12
13	3	4	3	3	3	2	3	3	13
14	3	3	3	2	2	2	3	3	14
15	3	4	3	3	2	2	3	3	15
16	3	4	3	3	2	1	3	3	16
17	3	3	3	1	2	2	3	3	17
18	3	2	3	1	3	1	3	2	18
19	3	2	3	1	3	1	3	3	19
20	3	2	3	1	3	2	3	2	20
21	3	2	3	1	3	2	3	2	21
22	3	2	3	2	3	2	3	2	22
23	3	3	3	1	2	2	3	3	23
24	3	3	3	2	2	1	3	2	24
25	3	3	3	3	2	2	3	3	25
26	3	2	3	2	1	2	3	2	26
27	2	2	2	2	1	1	3	2	27
28	1	2	2	2	1	1	2	2	28
29	1	2	2	2	1	1	2	2	29
30	3	2	3	1	3	2	3	2	30
31	3	1	3	1	2	2	3	1	31
32	3	2	3	2	2	2	3	3	32
33	3	2	3	2	2	2	3	2	33
34	2	1	3	2	2	2	3	2	34
35	3	2	3	1	2	1	3	2	35
36	3	2	3	1	3	1	3	1	36
37	3	2	3	1	3	1	3	2	37
38	3	1	3	1	2	2	3	2	38
39	3	2	3	1	2	1	3	2	39
40	3	2	3	1	2	1	3	2	40
41	3	2	2	3	2	2	3	3	41
42	3	1	2	1	2	2	3	2	42
43	3	1	2	1	2	2	3	2	43
44	3	1	2	1	3	3	3	2	44
45	3	2	3	2	2	2	3	2	45

TABLE 1 Cont'd**ESTIMATED CATEGORIES FOR NW, SW, STORM, AND ANNUAL WINDS
FOR EXISTING (EX) AND BUILD (BLD) CONDITIONS**

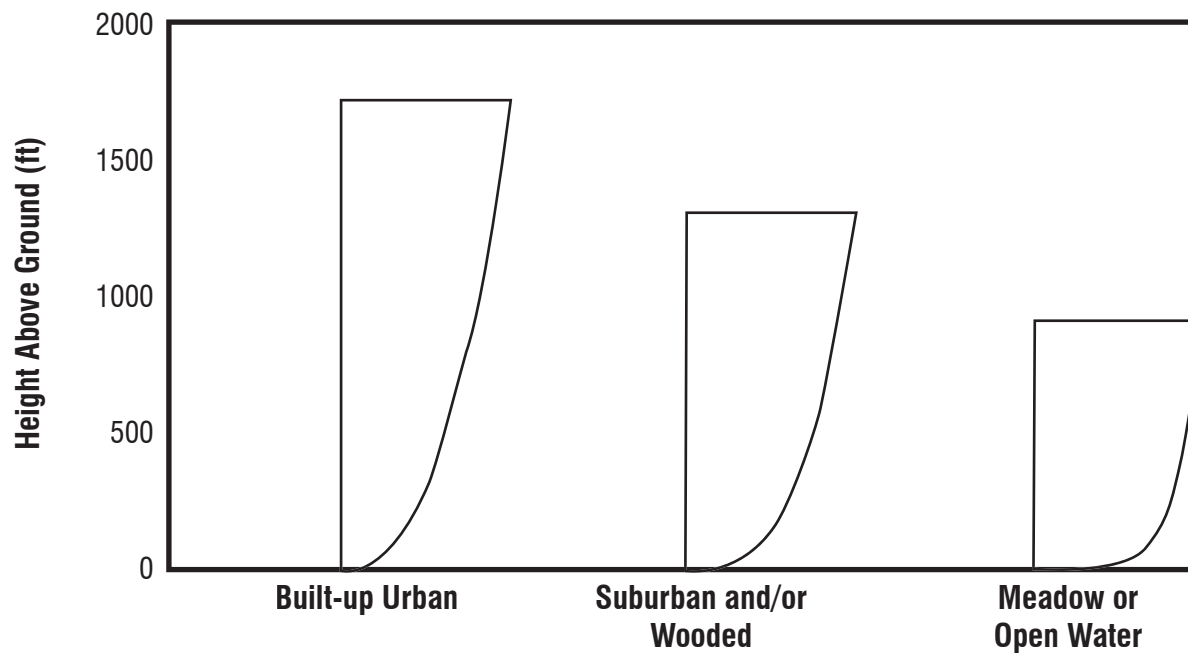
Loc.	NW		SW		STORM		ANNUAL		Loc.
No.	EX	BLD	EX	BLD	EX	BLD	EX	BLD	No.
46	1	1	2	1	2	2	2	2	46
47	2	2	2	1	2	2	2	2	47
48	3	1	2	2	3	2	3	2	48
49	3	2	3	2	3	2	3	2	49
50	1	1	3	1	1	2	2	1	50
51	1	2	2	2	2	2	2	2	51
52	1	1	2	1	2	2	3	2	52
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55	2	2	1	1	3	2	3	2	55
56	3	2	1	1	3	1	3	2	56
57	3	3	2	2	3	1	3	3	57
58	2	1	3	1	1	1	2	1	58
59	2	2	1	1	2	1	2	2	59
60	2	2	1	1	3	1	3	2	60
61	2	2	1	1	3	2	3	2	61
62	3	3	1	2	3	2	3	3	62
63	3	2	2	2	2	2	3	2	63
64	2	2	3	2	2	2	3	2	64
65	2	2	3	2	2	2	3	2	65
66	3	2	2	2	3	2	3	2	66
67	2	2	2	1	3	3	3	3	67
68	2	2	2	2	3	2	3	2	68
69	2	2	2	2	3	1	3	2	69
70	2	2	3	1	3	2	3	3	70
71	2	2	3	2	3	2	3	3	71
72	3	2	3	2	3	2	3	2	72
73	3	2	3	2	3	3	3	3	73
74	3	3	3	3	3	2	3	3	74
75	3	3	3	3	3	2	3	3	75
76	1	1	2	3	1	2	2	3	76
77	3	2	3	2	3	2	3	3	77
78	3	2	3	2	2	2	3	2	78
79	1	1	2	2	2	1	2	1	79
80	1	1	2	2	1	1	2	2	80
81	3	1	3	2	3	1	3	2	81
82	1	1	2	2	2	2	2	2	82
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84	3	2	3	4	3	2	3	3	84
85	2	2	3	2	3	2	3	2	85
86	1	1	2	2	2	1	2	2	86
87	2	2	3	1	2	2	3	2	87
88	2	1	3	2	3	2	3	2	88
89	2	2	3	2	3	2	3	2	89

TABLE 2 A**ESTIMATED CATEGORIES FOR NW, SW, STORM, AND ANNUAL WINDS
FOR EXISTING (EX) AND BUILD (BLD) CONDITIONS BY AREA**

	Loc.	NW		SW		Storm		Annual		Loc.
AREA	NO.	EX	BLD	EX	BLD	EX	BLD	EX	BLD	No.
1	1	3	3	3	3	3	2	3	3	1
1	2	3	3	3	3	2	2	3	3	2
1	3	3	3	2	2	3	2	3	3	3
1	4	3	3	3	3	3	2	3	3	4
1	5	3	3	3	3	3	2	3	3	5
1	6	3	3	3	3	2	2	3	3	6
1	7	3	3	3	3	3	2	3	3	7
1	8	1	1	2	2	3	2	3	2	8
1	9	3	3	3	3	3	3	3	3	9
3	14	3	3	3	2	2	2	3	3	14
3	24	3	3	3	2	2	1	3	2	24
3	35	3	3	2	1	2	1	3	2	35
3	39	3	2	3	1	2	1	3	2	39
3	40	3	2	3	1	2	1	3	2	40
3	53	3	2	2	1	3	1	3	2	53
3	56	3	2	1	1	3	1	3	2	56
3	60	2	2	1	1	3	1	3	2	60
3	68	2	2	2	2	3	2	3	2	68
7	79	1	1	2	2	2	1	2	1	79
7	80	1	1	2	2	1	1	2	2	80
8	74	3	3	3	3	3	2	3	3	74
8	75	3	3	3	3	3	2	3	3	75
8	81	3	1	3	2	3	1	3	2	81
2	10	3	3	3	2	3	2	3	3	10
2	11	3	4	3	2	3	2	3	3	11
2	12	3	4	3	2	3	2	3	3	12
2	13	3	4	3	3	3	2	3	3	13
2	17	3	3	3	1	2	2	3	3	17
2	18	3	2	3	1	3	1	3	2	18
2	19	3	2	3	1	3	1	3	3	19
2	20	3	2	3	1	3	2	3	2	20
2	21	3	2	3	1	3	2	3	2	21
2	22	3	2	3	2	3	2	3	2	22
2	23	3	3	3	1	2	2	3	3	23
2	30	3	2	3	1	3	2	3	2	30
2	31	3	1	3	1	2	2	3	1	31
2	32	3	2	3	2	2	2	3	3	32
2	36	3	2	3	1	3	1	3	1	36
2	37	3	2	3	1	3	1	3	2	37
2	38	3	1	3	1	2	2	3	2	38
2	41	3	2	2	3	2	2	3	3	41
2	42	3	1	2	1	2	2	3	2	42
2	43	3	1	2	1	2	2	3	2	43
2	44	3	1	2	1	3	3	3	2	44

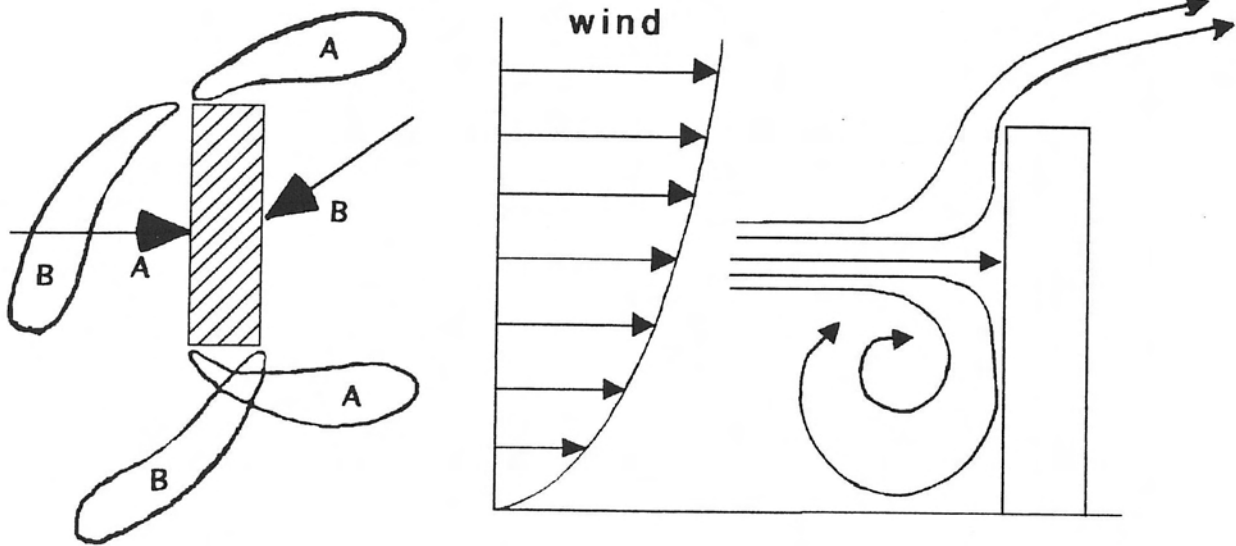
TABLE 2B
ESTIMATED CATEGORIES FOR NW, SW, STORM, AND ANNUAL WINDS
FOR EXISTING (EX) AND BUILD (BLD) CONDITIONS BY AREA

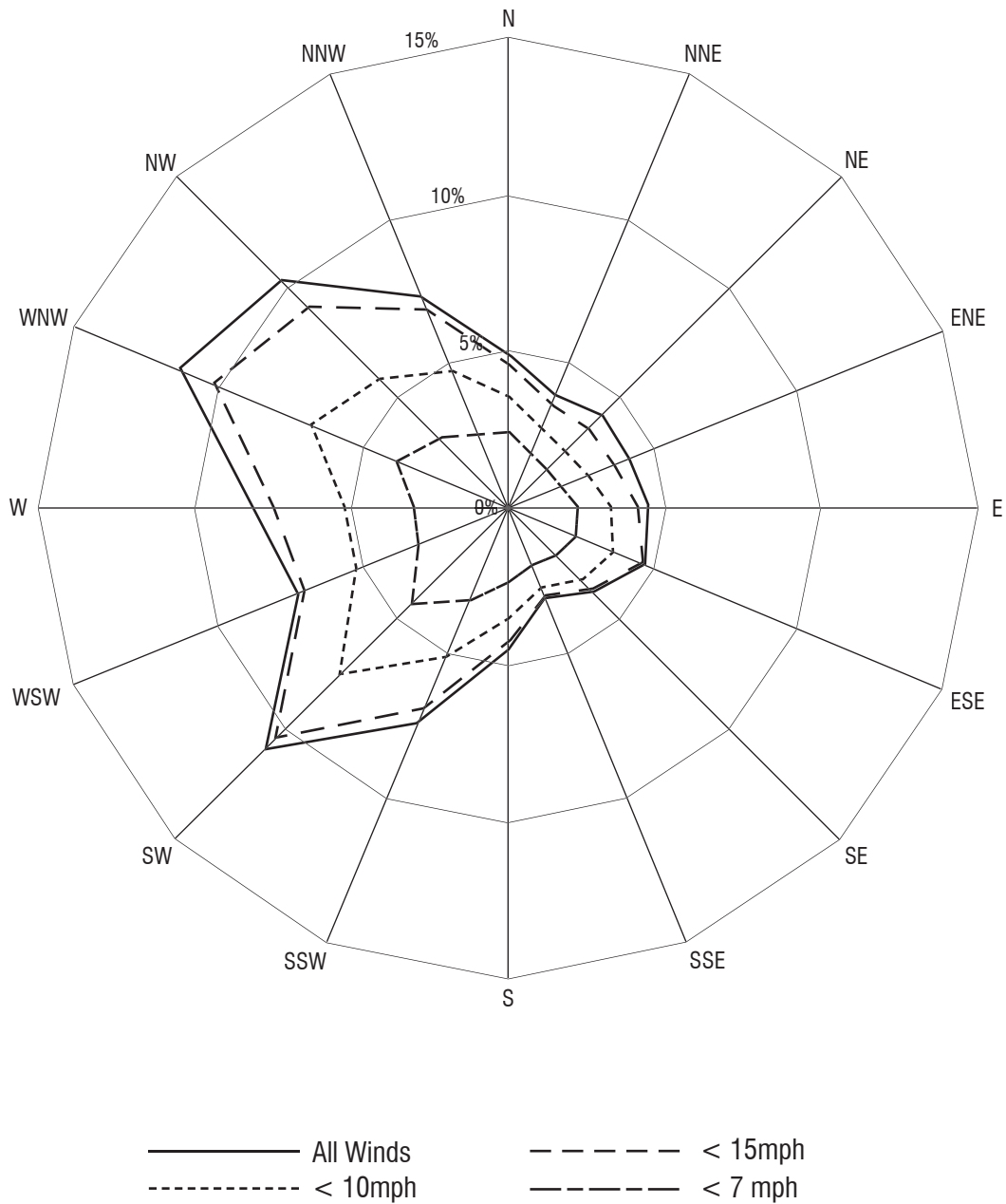
AREA	Loc.	NW		SW		STORM		ANNUAL		Loc.
	No.	EX	BLD	EX	BLD	EX	BLD	EX	BLD	No.
4	15	3	4	3	3	2	2	3	3	15
4	16	3	4	3	3	2	1	3	3	16
4	25	3	3	3	3	2	2	3	3	25
4	26	3	2	3	2	1	2	3	2	26
4	27	2	2	2	2	1	1	3	2	27
4	28	1	2	2	2	1	1	2	2	28
4	29	1	2	2	2	1	1	2	2	29
4	33	3	2	3	2	2	2	3	2	33
4	34	2	1	3	2	2	2	3	2	34
4	45	3	2	3	2	2	2	3	2	45
4	46	1	1	2	1	2	2	2	2	46
4	47	2	2	2	1	2	2	2	2	47
5	48	3	1	2	2	3	2	3	2	48
5	55	2	2	1	1	3	2	3	2	55
5	59	2	2	1	1	2	1	2	2	59
5	61	2	2	1	1	3	2	3	2	61
5	69	2	2	2	2	3	1	3	2	69
5	71	2	2	3	2	3	2	3	3	71
5	76	1	1	2	3	1	2	2	3	76
5	77	3	2	3	2	3	2	3	3	77
5	78	3	2	3	2	2	2	3	2	78
5	82	1	1	2	2	2	2	2	2	82
5	83	1	1	3	3	1	2	2	3	83
5	84	3	2	3	4	3	2	3	3	84
5	85	2	2	3	2	3	2	3	2	85
5	86	1	1	2	2	2	1	2	2	86
5	87	2	2	3	1	2	2	3	2	87
5	88	2	1	3	2	3	2	3	2	88
5	89	2	2	3	2	3	2	3	2	89
6	49	3	2	3	2	3	2	3	2	49
6	50	1	1	3	1	1	2	2	1	50
6	51	1	2	2	2	2	2	2	2	51
6	52	1	1	2	1	2	2	3	2	52
6	54	1	1	2	1	2	1	2	1	54
6	57	3	3	2	2	3	1	3	3	57
6	58	2	1	3	1	1	1	2	1	58
6	62	3	3	1	2	3	2	3	3	62
6	63	3	2	2	2	2	2	3	2	63
6	64	2	2	3	2	2	2	3	2	64
6	65	2	2	3	2	2	2	3	2	65
6	66	3	2	2	2	3	2	3	2	66
6	67	2	2	2	1	3	3	3	3	67
6	70	2	2	3	1	3	2	3	3	70
6	72	3	2	3	2	3	2	3	2	72
6	73	3	2	3	2	3	3	3	3	73

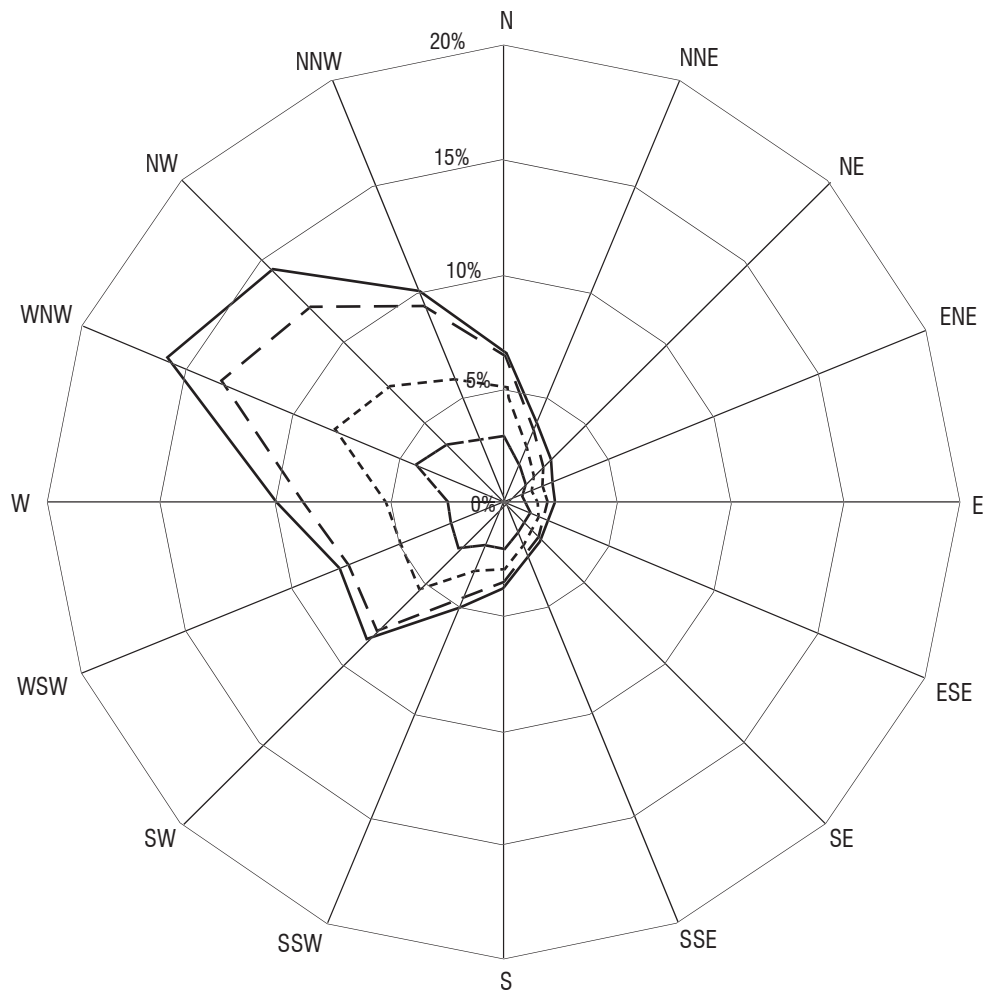


Frank H. Durgin, P.E.

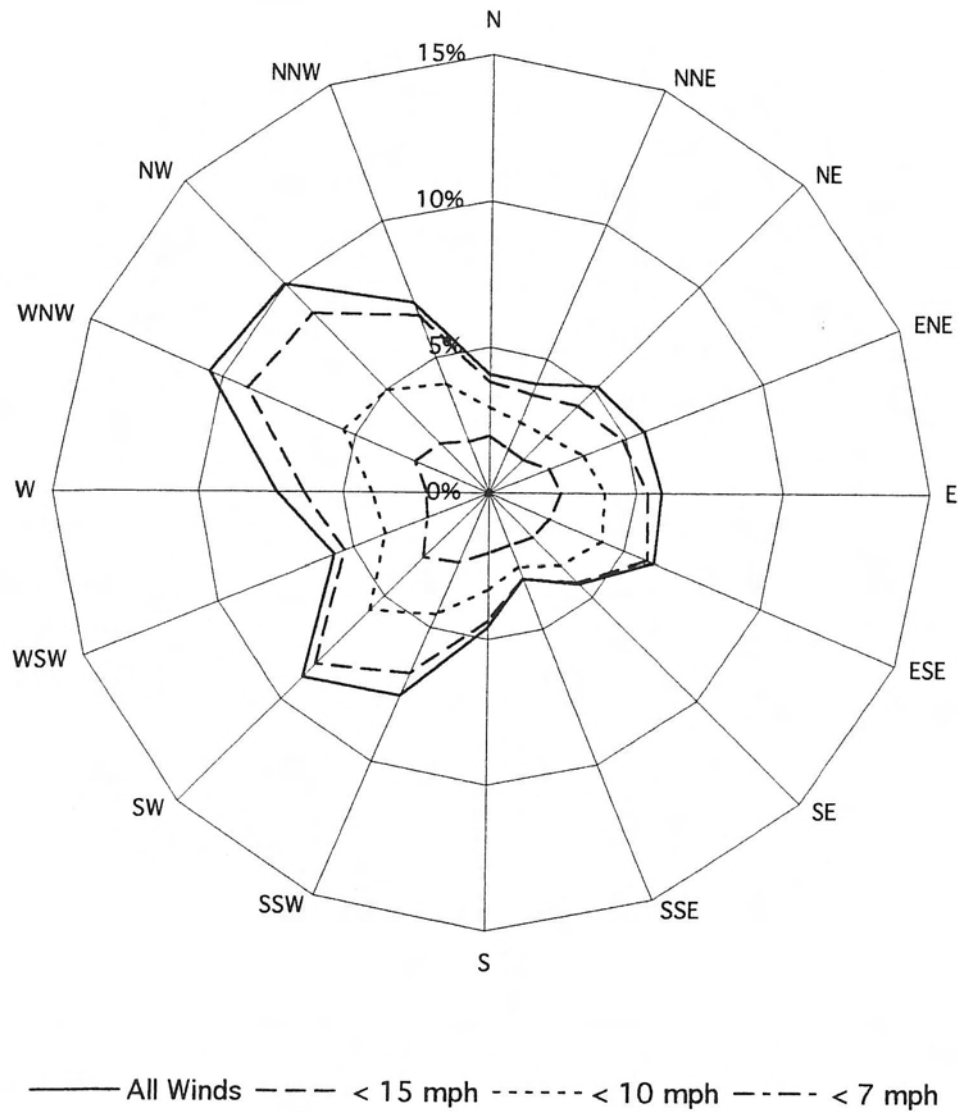
5/11/06

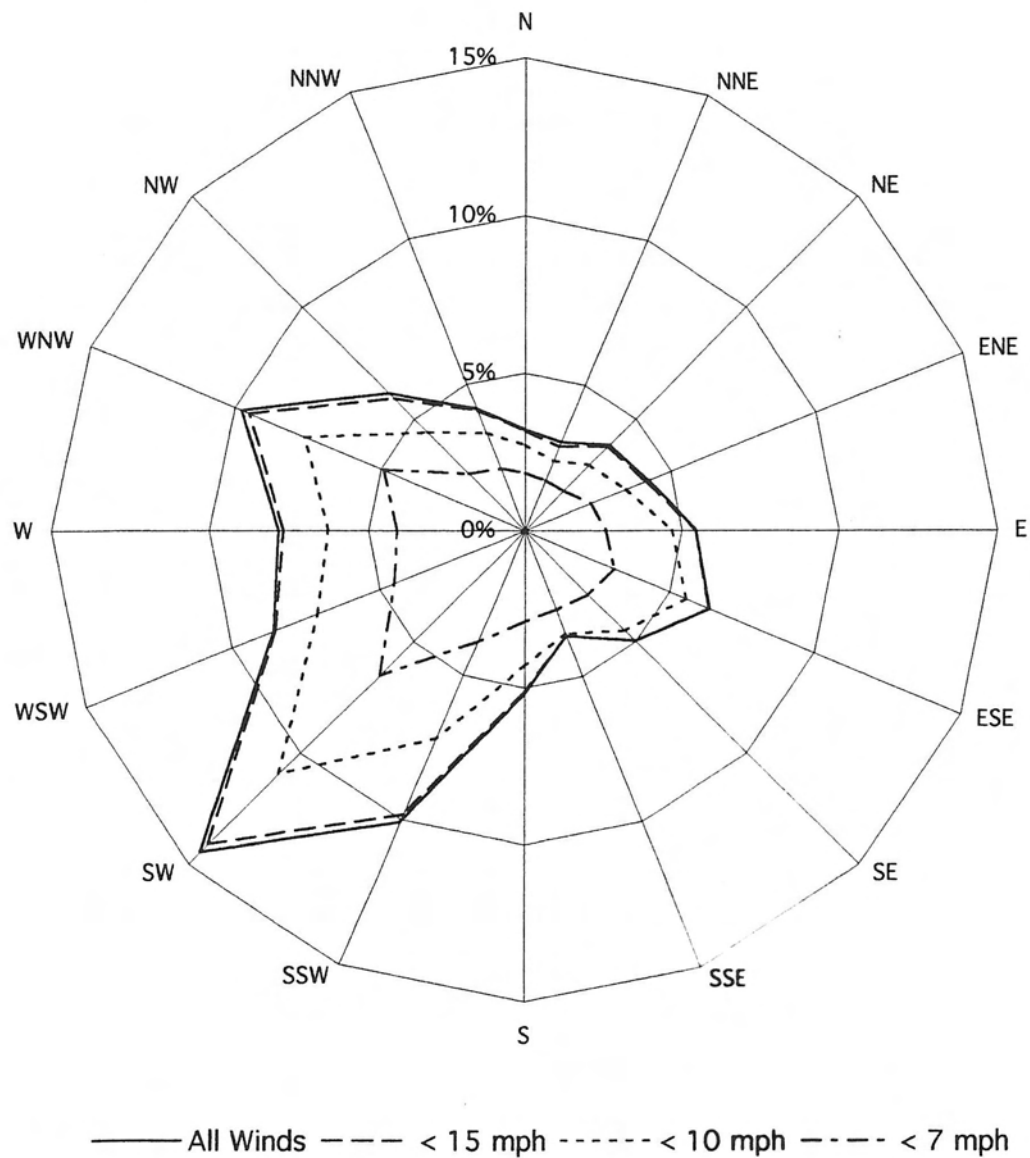


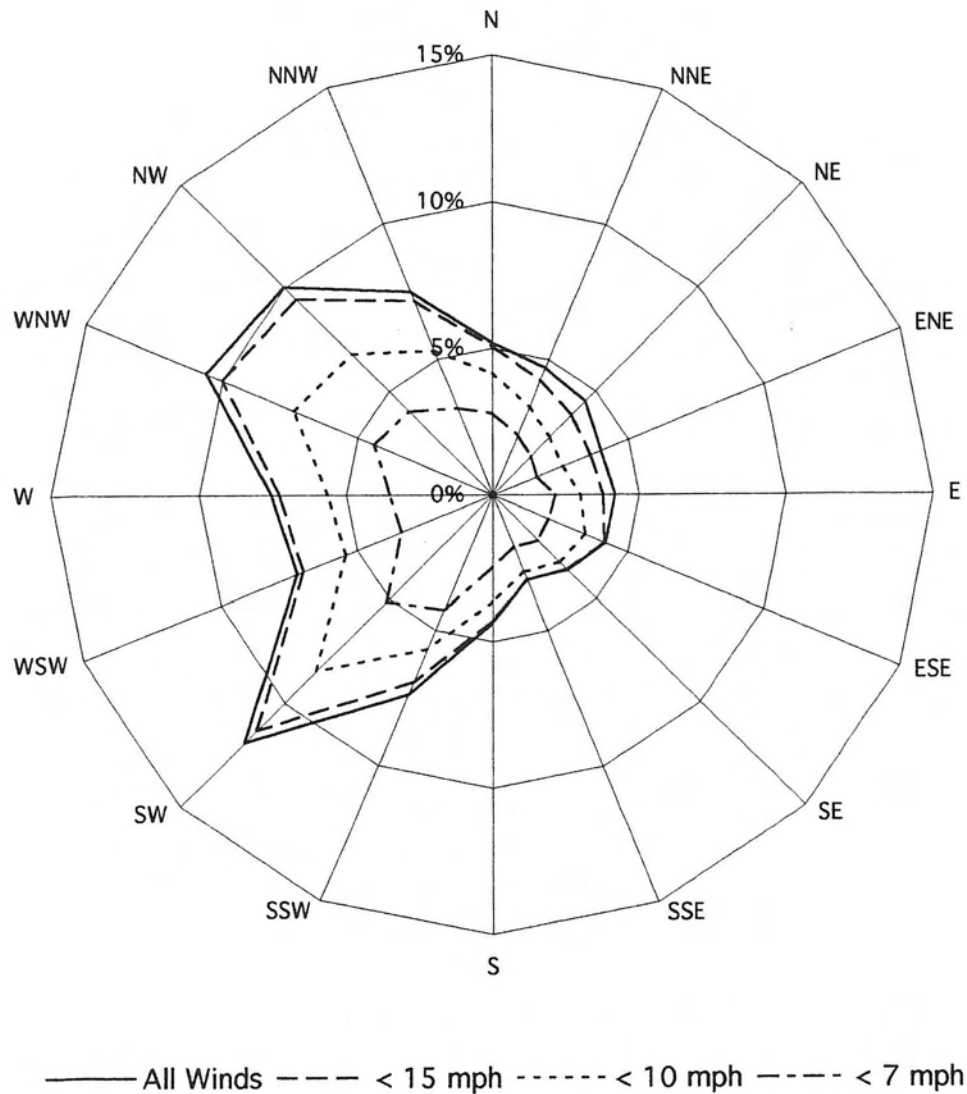


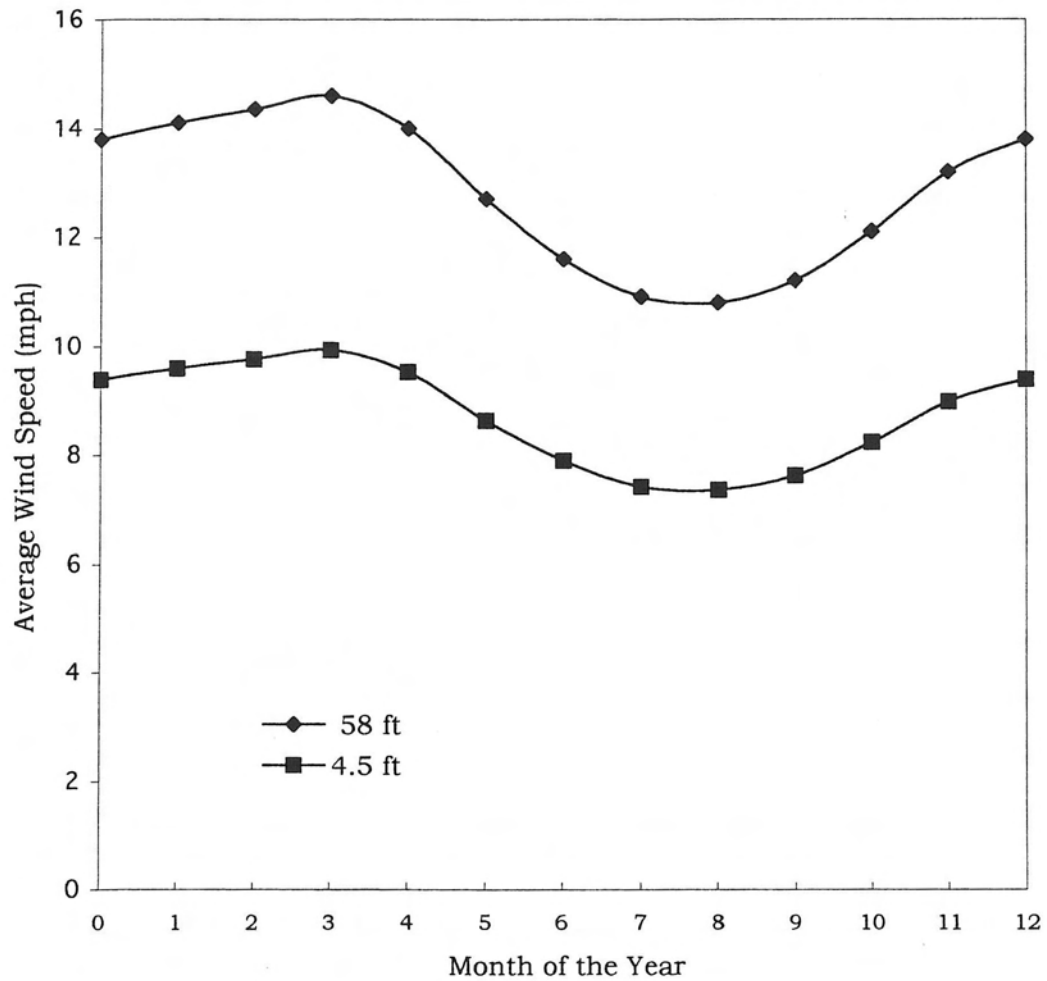


All Winds
 < 15mph
 < 7 mph

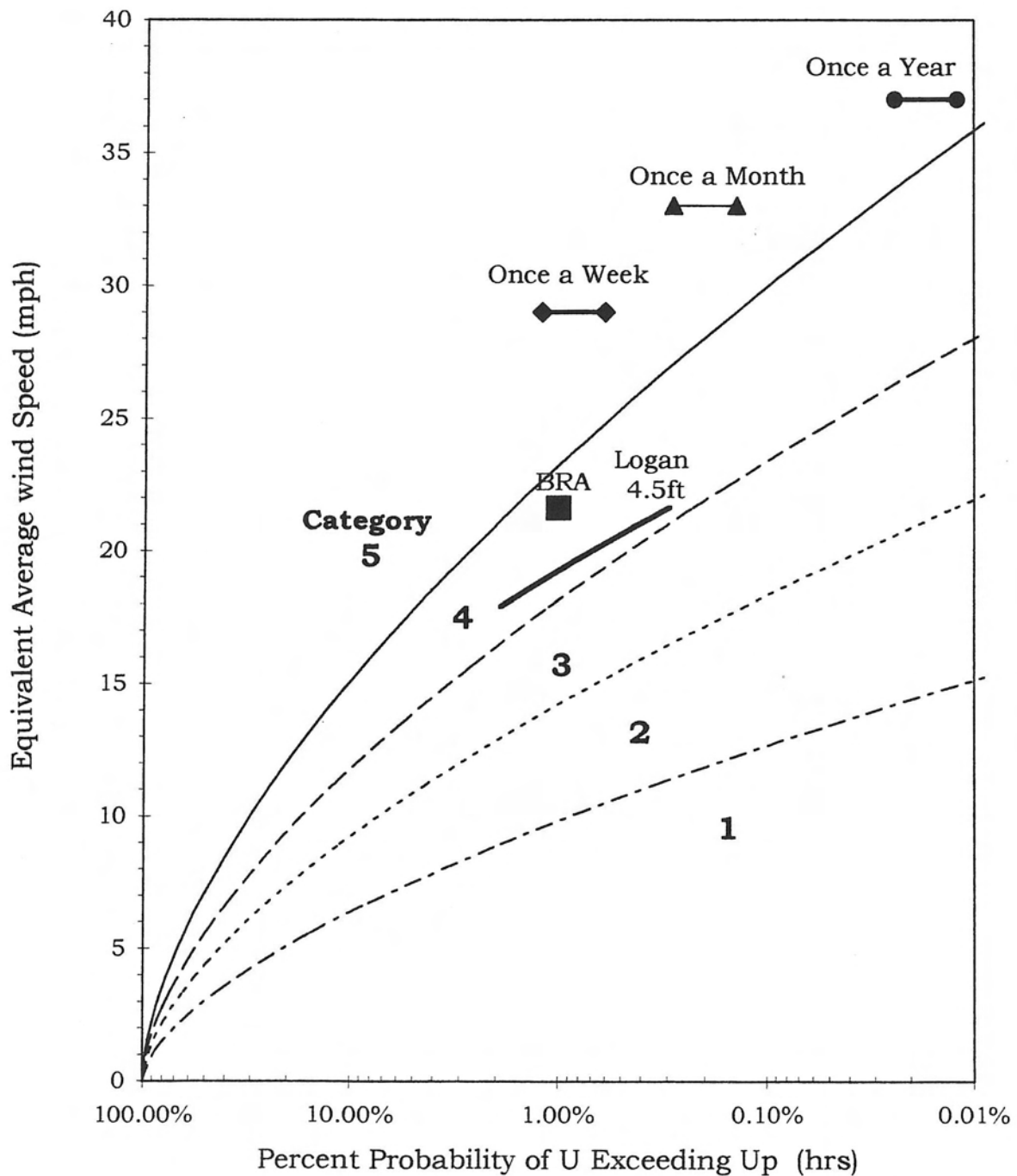


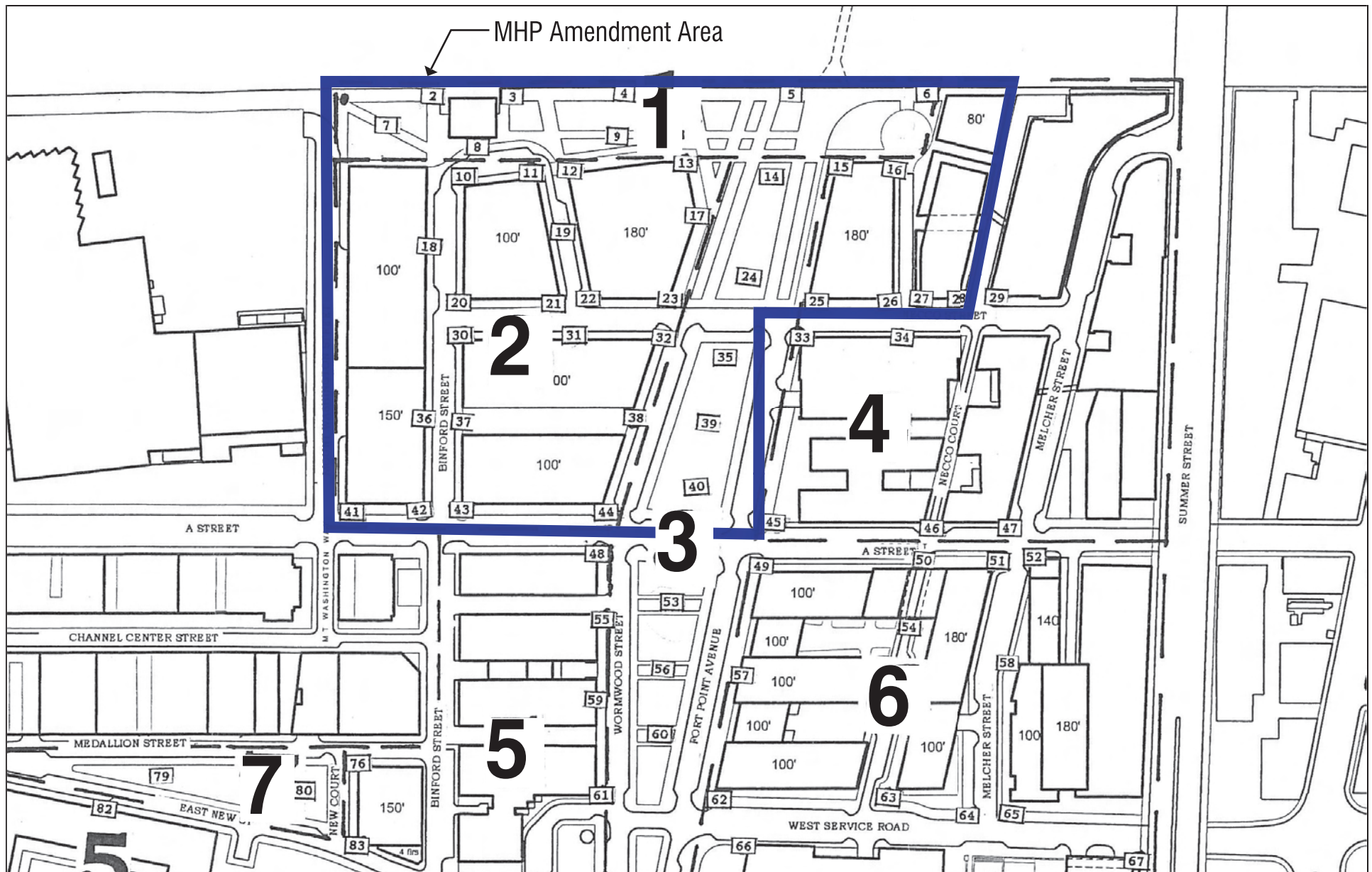






Yearly Average is 12.9 mph at 58 feet

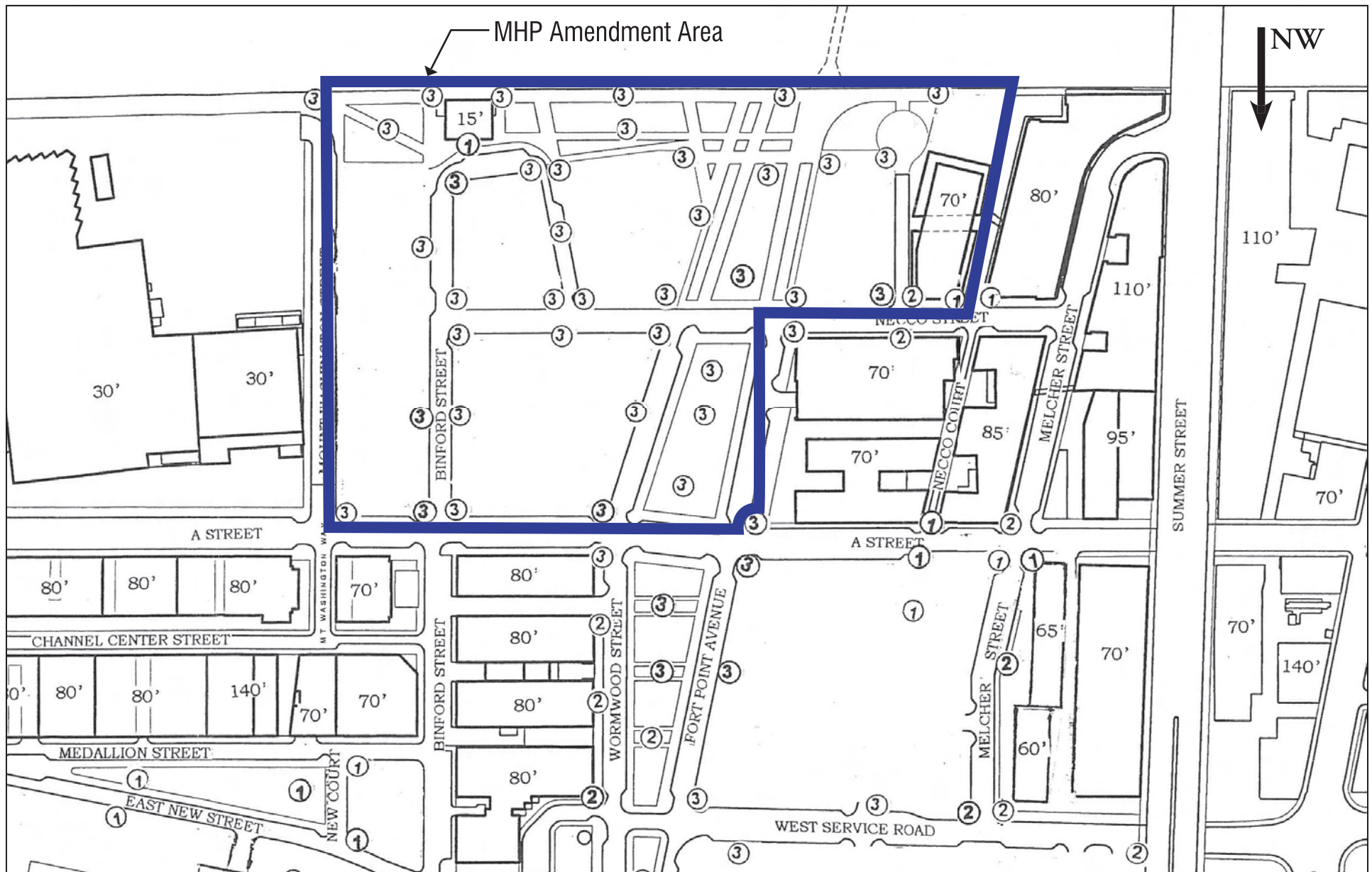




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Figure A3-12
 Wind Studies: Map Dividing the MHP Planning Area into Separate Areas

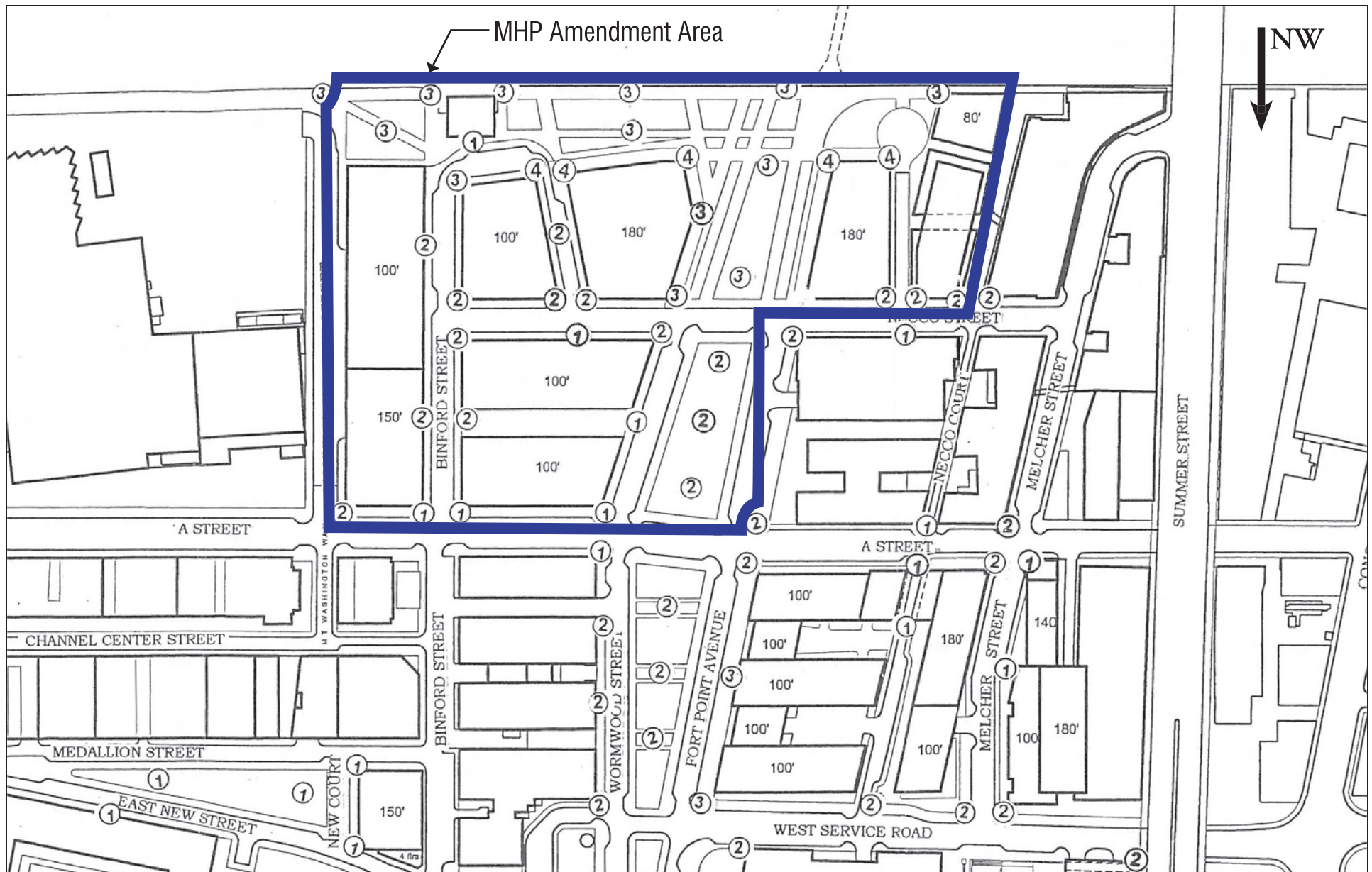




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Figure A3-13
 Wind Studies: PLW Categories for Existing Conditions and NW Winds

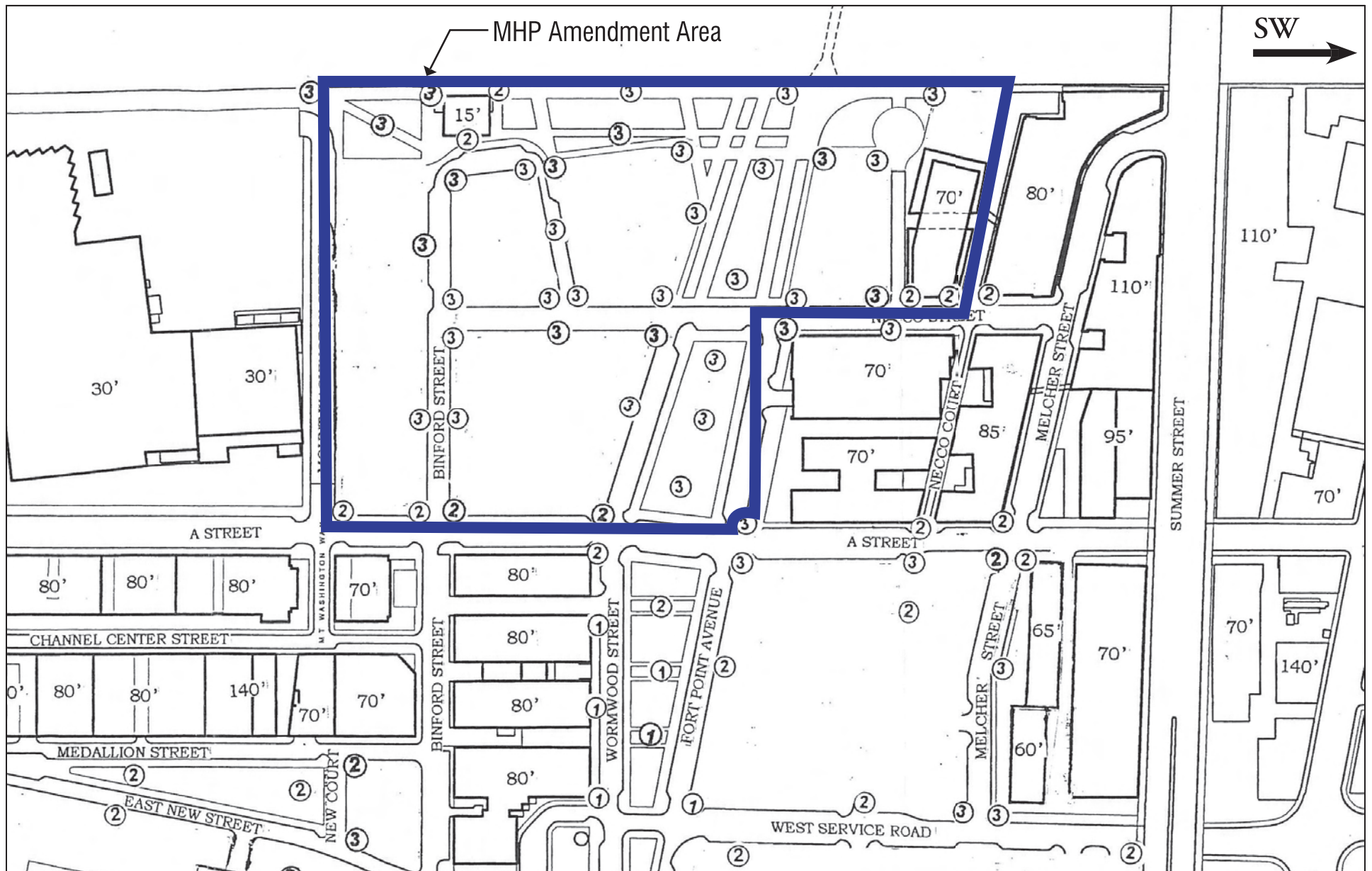




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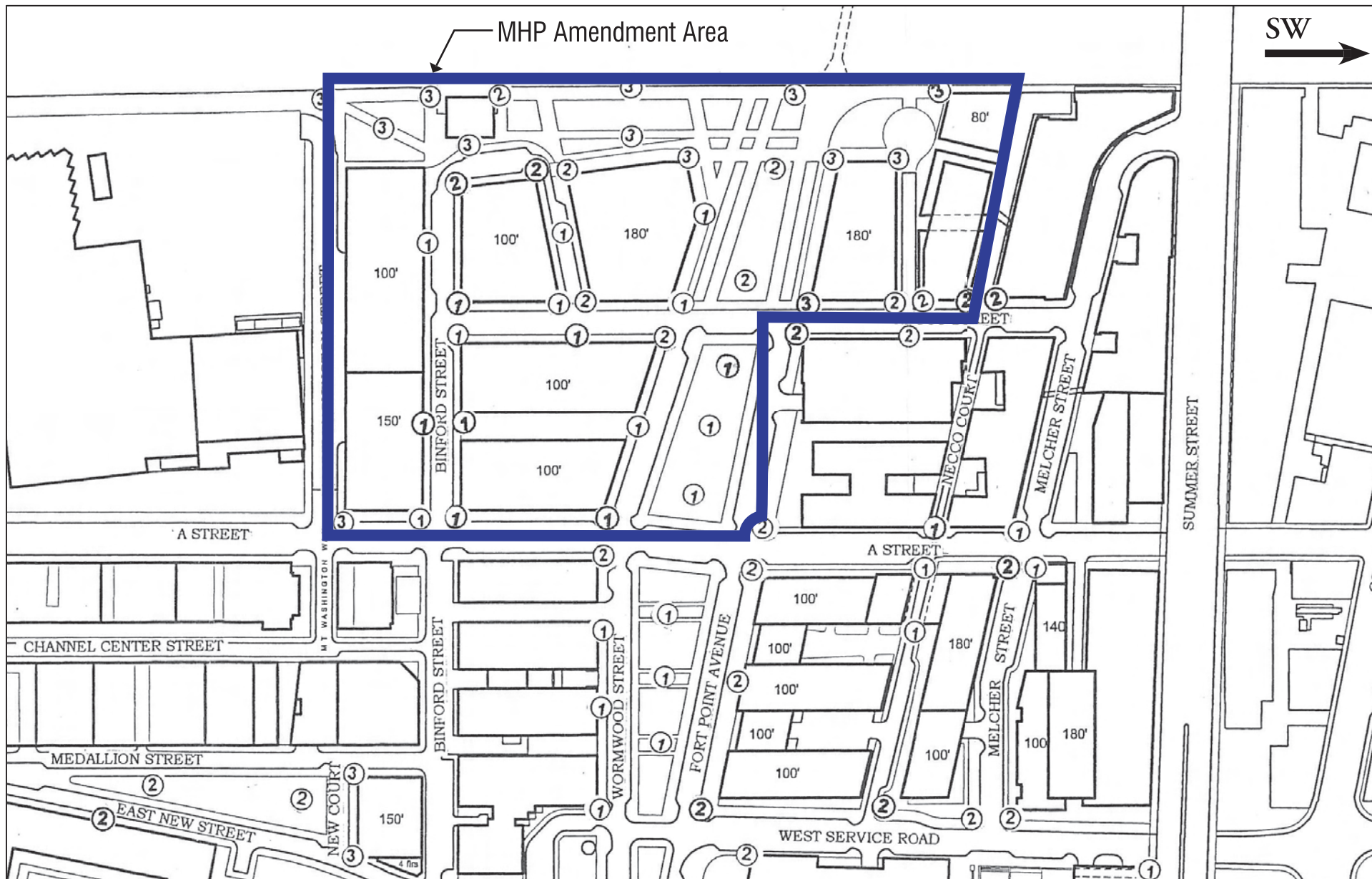
Figure A3-14
 Wind Studies: PLW Categories for Build Conditions and NW Winds





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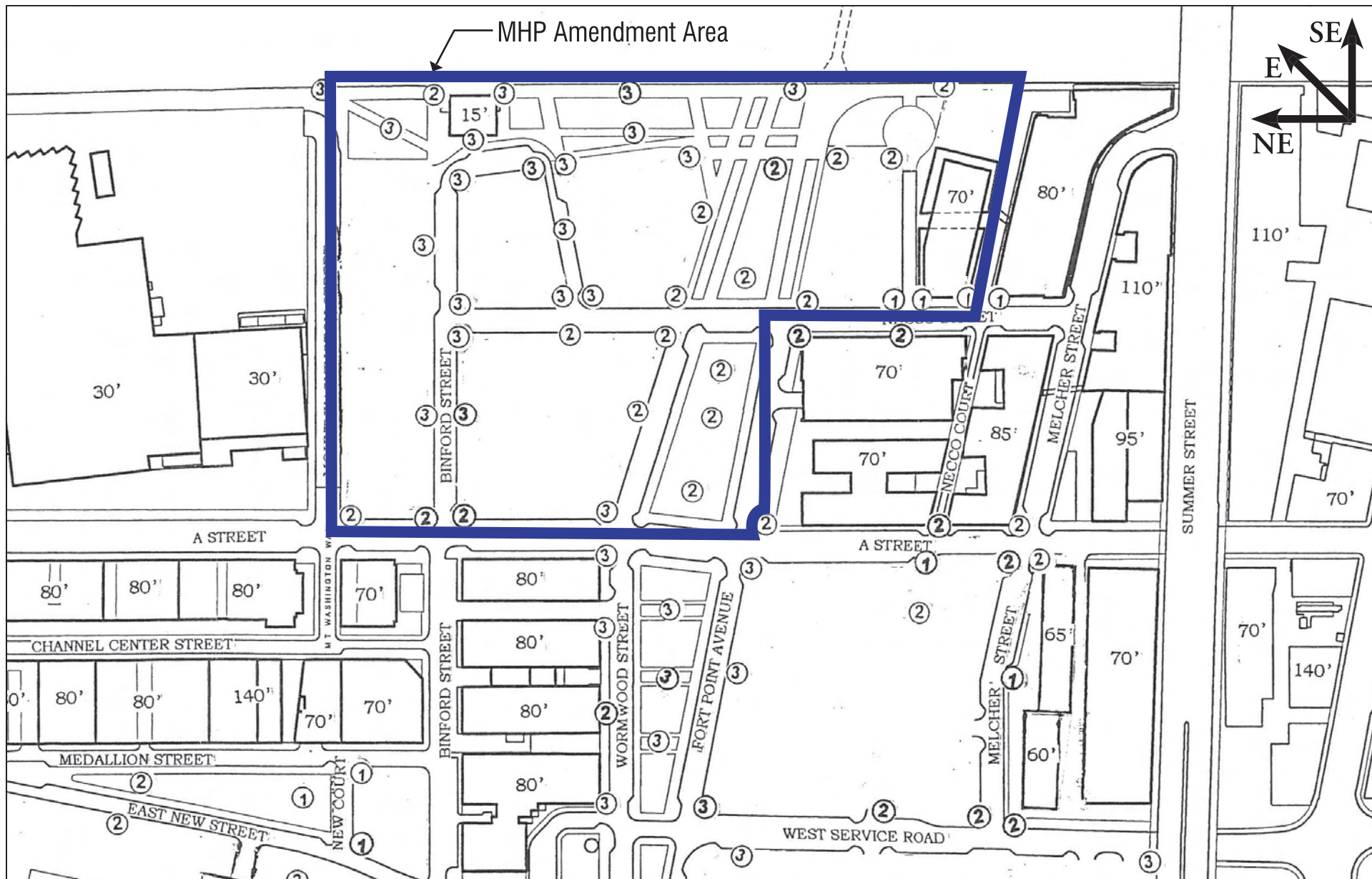
Figure A3-15
 Wind Studies: PLW Categories for Existing Conditions and SW Winds



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Figure A3-16
 Wind Studies: PLW Categories for Build Conditions and SW Winds

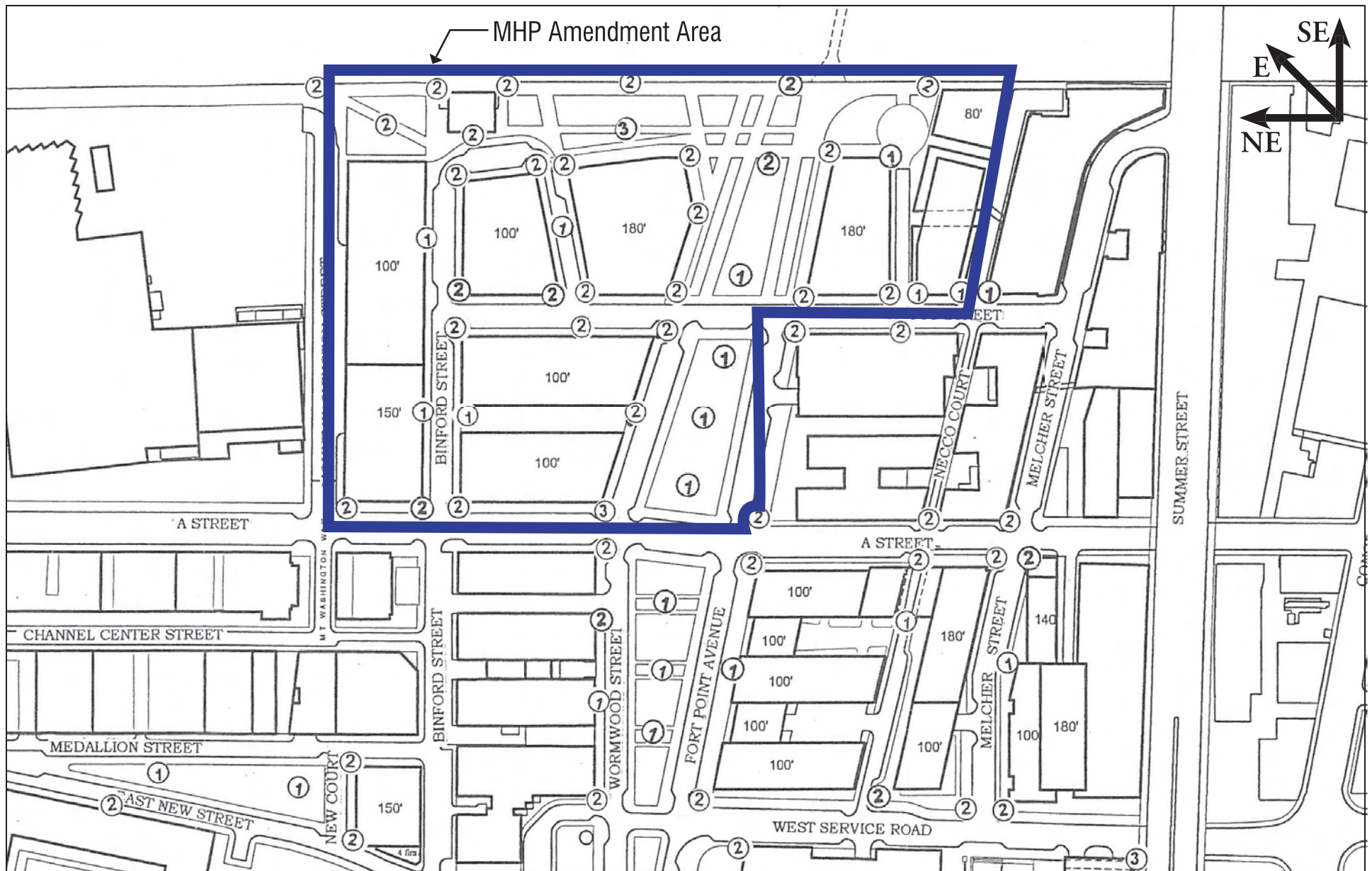




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Figure A3-17
 Wind Studies: PLW Categories for Existing Conditions and Easterly Storm Winds



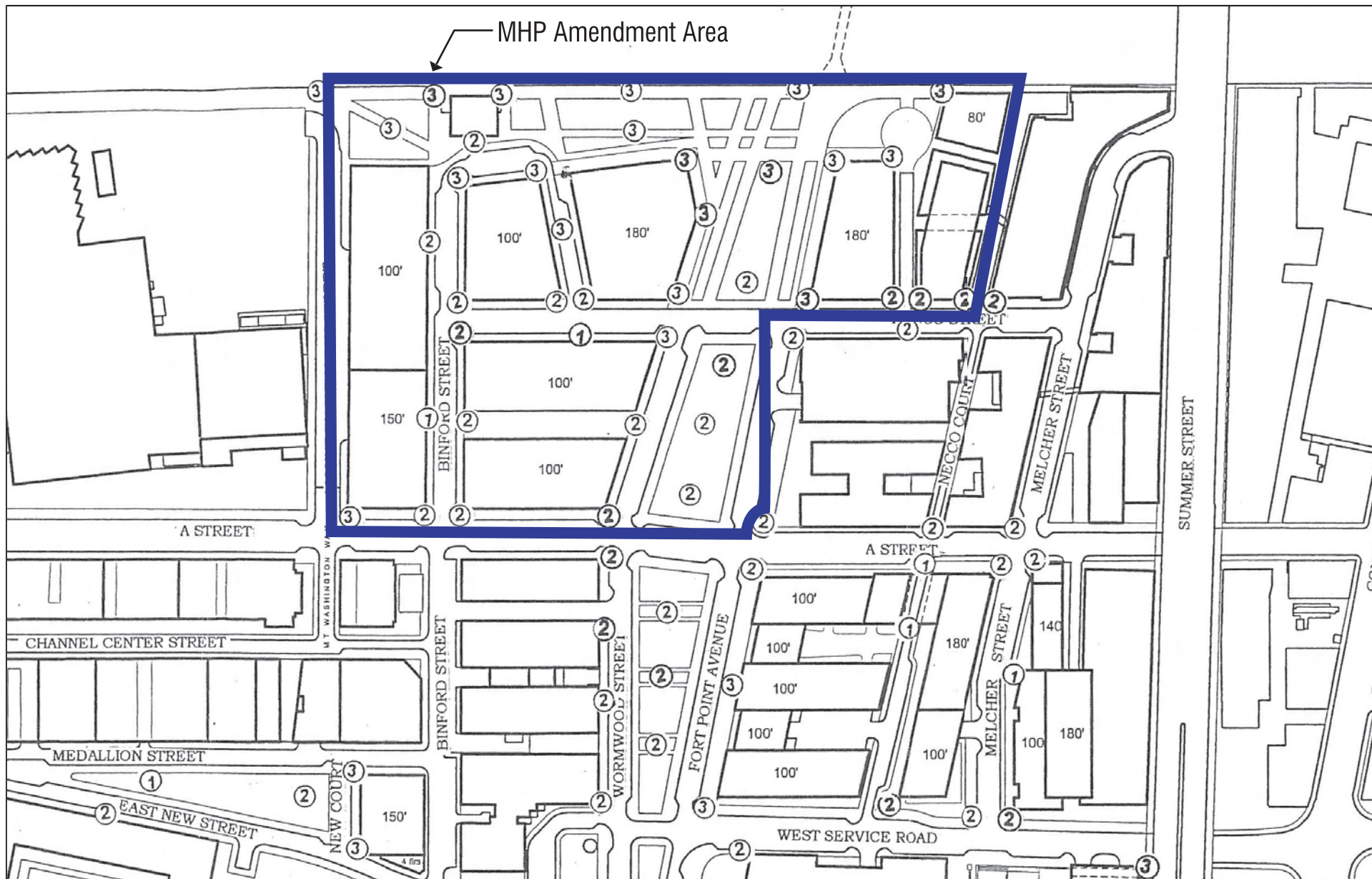


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Figure A3-18
 Wind Studies: PLW Categories for Build Conditions and Easterly Storm Winds







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Figure A3-20
 Wind Studies: Annual PLW Conditions for Build Conditions





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