NOTICE OF PROJECT CHANGE

Submitted Pursuant to Article 80-A of the Boston Zoning Code

HAYWARD PLACE

February 2, 2011

Submitted to:

Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201

Submitted by:

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A Venture of Millennium Partners-Boston

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1.0 PROJECT OVERVIEW

1.1 Introduction

This Notice of Project Change ("NPC") is being submitted in accordance with Article 80A-6 of the Boston Zoning Code (the "Code") by Millennium Hayward LLC, a venture of Millennium Partners-Boston, comprised of Millennium Partners and MDA Partners LLC (the "Proponent") for the proposed Hayward Place Project, a moderately scaled, mixed-use building, containing approximately 390,705 square feet of floor area including approximately 265 apartment units and approximately 12,000 square feet of ground floor retail uses, and an underground one-level garage with up to 125 parking spaces ("NPC Project"). The Site, consisting of approximately 39,083 square feet, is located at 580 Washington Street, and includes one full city block bounded by Washington Street, Avenue de Lafayette, Harrison Avenue Extension and Hayward Place in Boston's Downtown Crossing neighborhood ("Project Site"). See **Figure 1-1: Project Locus** and **Figure 1-2: Project Aerial**. The Project Site has been occupied by a surface parking lot since the mid-1980s, and by a publicly owned parking garage structure for many years before that. The Project Site is located one block east of the Boston Common and across Washington Street from the Ritz-Carlton Hotel and Towers. The proposed building design includes a 15-story building that has a height of 155 feet to the top of the highest occupied floor, with a mechanical penthouse on portions above measuring 20 to 30 feet in height.

On October 19, 2006, Millennium Hayward LLC received approval from the Boston Redevelopment Authority ("BRA") to construct a new 14-story residential and retail building with approximately 277 residential units, approximately 19,000 square feet of ground floor retail space and an underground two-level parking garage for up to 271 parking spaces ("BRA Approved Project"). Soon after that approval, both the capital markets and the residential real estate market deteriorated. Today, with the recent improvement in the capital markets for select proponents and because there is an adequate improvement in the residential market, the project has been modified to allow the Proponent to move forward with the construction of this project.

The Proponent conducted extensive outreach to City agencies, neighborhood representatives and groups, elected officials and other interested parties when project approvals were previously sought. The Proponent will continue this outreach during the NPC public comment period and the Article 80 NPC review process.

This NPC presents details about the NPC Project as modified, and provides an analysis of its relatively small changes relative to transportation, environmental protection, infrastructure, historic resources, and other project components. This NPC is intended to inform City agencies and neighborhood residents of the NPC Project, its potential impacts, and possible mitigation. Based on a comprehensive approach to this detailing of potential impacts, the Proponent believes that, after review of public and agency comments, the BRA may properly determine that further review under Article 80 will not be required

TETRA TECH RIZZO
One Grant Street
Framingham, MA 01701

Project Locus

Hayward Place
Boston, Massachusetts

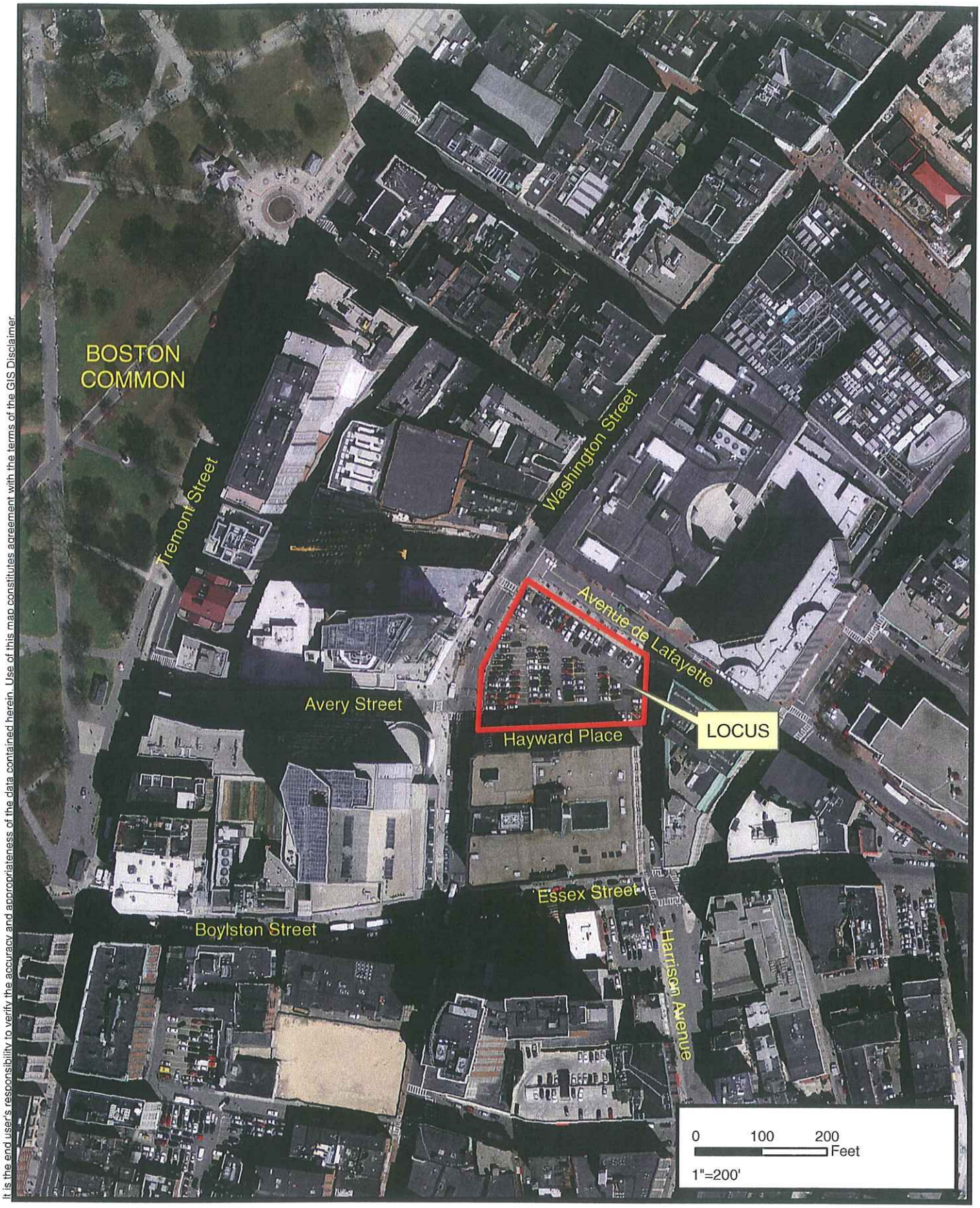
1/24/11

Source: MassGIS, USGS

Figure
1-1

Created by: JLP

2329 usgs.mxd



TETRA TECH RIZZO

One Grant Street
Framingham, MA 01701

Project Aerial (2008)

Hayward Place
Boston, Massachusetts

1/24/11

Source: MassGIS, DEP

Figure
1-2

Created by: JLP

2329 aerial.mxd

1.1 Applicant and Team Information

1.1.1 Project Proponent

The Project Proponent is Millennium Hayward LLC, a venture of Millennium Partners-Boston, which is comprised of Millennium Partners and MDA Partners LLC.

Millennium Partners has developed over five million square feet of high quality mixed-use space in major cities across the country. Millennium directs all phases of such development, including site selection, design, permitting, financing, direction of construction management, marketing, sales and leasing, and property management.

Millennium Partners joined MDA Partners, a seasoned local developer, to form Millennium Partners-Boston in 1997 for the purpose of developing first-class projects in Boston. Millennium Partners–Boston's projects include the 830,000 square foot 10 St. James Avenue office building with Galleria and the restored historic 75 Arlington Street (Paine Furniture Building); the 2.3 million square foot Millennium Place, now known as The Ritz-Carlton Hotel and Towers; the historic Ritz-Carlton Hotel on Arlington Street restored in 2000; and One Charles, a 400,000 square foot residential development in the Midtown Cultural District, which opened for initial occupancy in 2004; and, most recently, 179 Lincoln on the Greenway, a USGBC LEED Silver certified historic rehabilitation of the former Teradyne Headquarters.

1.1.2 Project and Team Information

Table 1.1: Project and Team Information

Project Name:	**Hayward Place**
Project Location:	580 Washington Street, Downtown Crossing
Project Proponent:	Millennium Hayward LLC 172 Tremont Street Suite 400 Boston, MA 02111-1001 Fax: 617-451-5065 Anthony Pangaro, 617-451-0300 apangaro@mdaboston.com Kathleen MacNeil, 617-451-0300 x111 kmacneil@mdaboston.com Joseph Larkin, 617-451-0300 x109 jlarkin@mdaboston.com

Architect:	Handel Architects LLP 150 Varick Street New York, NY 10013 Tel: 212-595-4112 Fax: 212-595-9032 Blake Middleton, AIA dbmiddleton@handelarchitects.com Deborah Moelis, AIA dmoelis@handelarchitects.com
Article 80 and MEPA Permitting Consultant:	Mitchell L. Fischman, AICP 41 Brush Hill Road Newton, MA 02461 Tel: 781-760-1726 mitch.fischman@tetratech,com
Legal Counsel:	DLA Piper LLP (US) 33 Arch Street, 26th Floor Boston, MA 02110 Tel: 617-406-6057 Fax: 617-406-6157 John E. Rattigan, Jr. john.rattigan@DLAPiper.com
Civil Engineer:	Parsons Brinckerhoff 75 Arlington Street Boston, MA 02116 Fax: 617-482-8487 Richard O'Brien, P.E. 617-960-4919 obrien@pbworld.com Jim Ferrara,617-960-4970 ferrara@pbworld.com
Transportation Consultant:	Howard/Stein-Hudson Associates, Inc. 38 Chauncy Street Boston, MA 02111 Tel: 617-482-7080 Fax: 617-482-7417 Guy Busa gbusa@hshassoc.com

Community Relations:	Dunn Associates 10 Derne Street Boston, MA 02108 Tel: 617-330-7630 Christine Dunn Cmd02110@aol.com
Mechanical Engineer/ Plumbing Engineer:	Cosentini Associates One Kendall Square, Suite B2204 Building 200, 2nd Floor Cambridge, MA 02139-1571 Fax: 718-321-1282 Alex Lemeshov, 617-234-1854 alemeshov@cosentini-ma.com
Structural Engineer:	DeSimone 18 West 18th Street New York, NY 10011 Fax: 212-481-6108 Joseph Savalli,212-532-2211 joseph.savalli@de-simone.com
Surveyor:	Harry R. Feldman, Inc. 112 Shawmut Avenue 4th Floor Boston, MA 02118 Fax: 617-357-1829 Robert Applegate, 617-357-9740 rga@harryfeldman.com
Pre-Construction Manager:	Suffolk Construction 65 Allerton Street Boston, MA 02119 Geoffrey Witheford, 617-517-4212 gwitheford@suffolkconstruction.com
Estimated Construction Commencement:	2nd Quarter, 2011
Approximate Construction Cost:	$125 million

1.1.3 NPC Project Description

The NPC Project consists of a mixed-use residential/retail development, and contains up to 390,705 FAR square feet in a building of 15 stories in height with approximately 12,000 FAR square feet of retail on the ground floor and approximately 265 residential rental or for-sale units. The main residential entry for this building will be located on Washington Street. Ground floor retail use is proposed along Washington Street and the Avenue de Lafayette. In addition, a one-level, below-grade parking garage with access//egress on Hayward Place will accommodate up to 125 spaces. A porte-cochere accessed from Hayward Place will provide space for drop-off/pick-up and access to the garage for residents and employees.

The NPC Project will integrate the existing MBTA emergency egress headhouse at the corner of Washington Street and Hayward Place into the project facade.

The NPC Project will provide needed dwelling units which will continue the transformation of the Downtown Crossing area into a viable and diverse residential neighborhood. This change began in 2001 with the completion of The Ritz-Carlton Hotel and Towers and continued with the restoration of the Opera House, Paramount Center and the Modern Theatre. These investments have created a thriving new neighborhood with active after office hour uses.

The Project Site is well serviced by public transportation including the nearby Essex/Chinatown Orange Line Station as well as the Downtown Crossing and the Boylston Street Stations and several MBTA bus lines, including the Silver Line which runs along Washington Street. The Project Site is also a short walk from the South Station transportation hub.

See **Table 1.2** below for a breakdown of square footage of the NPC project by floor and use.

1.1.4 NPC Project Data / Approximate Dimensions

Table 1.2: Hayward Place: Approximate Dimensions					
Site Area	39,083 SF				
FAR	10[1]				
ZFA	390,830				
Level	**Use**	**Height[2]**	**Gross Floor Area[3]**	**Deductions (4.25%)**	**Zoning Floor Area ("ZFA")**
B1	Parking/BOH	-16'-0"	35,450	35,450	-
1	Res/Retail/BOH	16'-2"	38,039	9,907	28,132
2	Residential	25'-10"	27,081	1,151	25,930
3	Residential	35'-6"	27,081	1,151	25,930
4	Residential	45'-2"	27,081	1,151	25,930
5	Residential	54'-10"	27,081	1,151	25,930
6	Residential	64'-6"	27,081	1,151	25,930
7	Residential	74'-2"	27,081	1,151	25,930
8	Residential	83'-10"	27,081	1,151	25,930
9	Residential	95'-0"	27,081	1,151	25,930
10	Residential	104'-8"	27,003	1,148	25,855
11	Residential	114'-4"	27,003	1,148	25,855
12	Residential	124'-0"	27,003	1,148	25,855
13	Residential	133'-8"	27,003	1,148	25,855
14	Residential	143'-4"	27,003	1,148	25,855
15	Residential	155'-0"	27,003	1,148	25,855
Roof	Mech/Head Houses	181'-0"	8,600	8,600	0
	Total		**460,755**	**70,050**	**390,705**
	Allowable ZFA				390,830

[1]F.A.R. Floor Area as defined by Boston Zoning Code.

[2]As measured to the top of the highest occupied floor.

[3]Porte Cochere and Garage ramp are deducted from Ground Floor Area.

1.2 Previous Article 80 and Other Permitting Review

On November 26, 2003, the Proponent filed a Letter of Intent in accordance with the BRA policy on mitigation. The BRA requested nominations for an Impact Advisory Committee ("IAG") from local elected officials to determine appropriate mitigation for impacts arising from the original BRA Approved Project. A total of six (6) community members were nominated and selected to serve as IAG members on February 11, 2004.

The Proponent filed a Project Notification Form ("PNF") in accordance with Article 80 of the Code for the BRA Approved Project on June 24, 2004, for a 373,000 sf mixed-use project.

Pursuant to Section 80B-5.3 of the Code, a scoping session was held on September 9, 2004 with the City's departments, at which time the proposed BRA Approved Project was reviewed and discussed. The PNF Notice and the PNF were sent to the City's departments pursuant to Section 80A-2 of the Code. (The PNF was also incorporated into the Environmental Notification Form transmitted to the Executive Office of Environmental Affair, MEPA Office on June 24, 2004). The Proponent also conducted a public meeting for the community's review and comment on September 21, 2004 at the Hyatt Regency Hotel, adjacent to the Project Site. The public meeting was advertised in several local/neighborhood newspapers. The BRA issued a Scoping Determination for submission of a Draft Project Impact Report ("DPIR") on November 17, 2004.

On April 1, 2005, the Proponent submitted a DPIR to the BRA. The DPIR submission initiated a forty-five (45) day public comment period, which ended on May 23, 2005. Notice of BRA's receipt of the DPIR was published in the *Boston Herald* on April 6, 2005. The DPIR was forwarded to the City's public agencies and the IAG. A meeting with the City's public agencies and the BRA review staff was held on April 27, 2005 at the offices of the BRA to review and discuss the DPIR. On May 11, 2005, the BRA hosted a second public meeting at the Hyatt Regency Hotel. This meeting was advertised in the Boston Courant, Sampan and the Mao Ping News. In addition, the Proponent made a presentation before the Park Plaza CAC on April 21, 2005. The BRA issued a Preliminary Adequacy Determination on June 21, 2005. On April 28, 2006, a Final Project Impact Report ("FPIR") was filed for the BRA Approved Project. The FPIR submission initiated a second forty-five (45) day public comment period, which ended on June 15, 2006. On May 23, 2006, the BRA hosted a third public meeting at the Hyatt Regency Hotel and members of the IAG were in attendance.

On October 11, 2006, the Proponent filed Additional Materials with the BRA, in response to a request from BRA staff. The Additional Materials filing contained the BRA Approved Project as presented to the BRA Board on October 19, 2006.

The Proponent and its design team made a presentation to the Boston Civic Design Commission ("BCDC") on August 1, 2006, at which various aspects of the BRA Approved Project were reviewed. At that time, the BCDC voted to refer the BRA Approved Project to the BCDC Design Committee. On October 3, 2006, at the recommendation of the Design Committee, the BCDC unanimously voted to approve the BRA Approved Project.

On October 19, 2006, the BRA Board considered the BRA Approved Project at its regularly scheduled public meeting. The Board voted to authorize the BRA Director to: (1) issue an Adequacy Determination pursuant to Article 80, Section 80B-5.5 of the Boston Zoning Code; (2) issue a Certification of Compliance under Section 80B-6 of the Code upon successful completion of the Article 80 review process; (3) execute and deliver a Cooperation Agreement, an Affordable Housing Agreement, a Boston Residents Construction Employment Plan and any and all other agreements and documents that the Director deemed appropriate and necessary; and (4) petition the Zoning Commission for approval of an amendment to Map Amendment No. 227, the effect of which was to remove the Project Site from the Planned Development Area designation associated with Planned Development Area No. 32 and recommendation (See **Appendix A** for BRA Certificate of Vote and Board Approval Memorandum, dated October 19, 2006).

The Proponent petitioned the Boston Zoning Board of Appeal ("BZA") for necessary exceptions and variances to the Zoning Code and the petition (BZC No. 28570) was subsequently approved by the ZBA on December 4, 2007. This approval has been extended by the BZA on October 20, 2009 for one year to expire on December 24, 2010 and was also extended by the Permit Extension Act to expire on December 24, 2012. (See **Appendix B** for BZA Extension of Appeal No. 28570, dated November 17, 2009, and original BZA decision, dated December 4, 2007.)

The Proponent executed a Transportation Access Plan Agreement with the Boston Transportation Department ("BTD") on December 5, 2007. The Proponent, as mitigation for the BRA Approved Project, agreed to complete measures as described below:

- Repair and/or reconstruct the sidewalks adjoining the Project Site;
- Install crosswalks and associated accessibility ramps at the Project Site;
- Remove the traffic signal equipment at the Washington Street and Avery Street intersection;
- Install streetscape improvements including street lights, street trees and public bicycle racks along sidewalks adjoining the Project Site;
- Maintain the existing Orange Line MBTA emergency exit within the envelope of the new building;
- Improve and upgrade the accessibility ramps and traffic signal equipment at the Essex Street/Chauncy Street intersection; and
- Implement a transportation demand management strategy for the BRA Approved Project.

These measures and requested changes are examined in **Section 5.0 -Transportation Component** of this NPC. In addition, the Proponent has received approval for a license from the Public Improvement Commission on September 6, 2007 to construct a temporary earth retention system and temporary support of subsurface construction for the BRA Approved Project (see **Appendix C).**

1.3 NPC Building Program and Comparison to BRA Approved Project

Table 1.3 on the following page presents square feet and height comparisons of the NPC and the BRA Approved Projects. While the number of stories has increased from 14 to 15 stories with the NPC Project, the F.A.R. of 10 and total zoning height of 155 feet have not changed

Table 1.3:
Comparison of Building Programs – BRA Approved and NPC Projects

	BRA Approved Project	NPC Hayward Place Project
Lot Area (square feet):	37,380± s.f.	39,083± s.f.
Building Height (1):	155 feet / 14-stories	.155 feet / 15-stories
Residential	277 Units	265 Units
Retail Gross Floor Area (F.A.R.)(2):	Up to 19,000 sf	Up to 12,000 sf
Total Gross Floor Area (F.A.R.)(2):	373,000 sf	390,705 sf
Floor Area Ratio (F.A.R.)(2):	10.0	10.0
Parking:	271 spaces	Up to 125 spaces

(1) As measured to the top of the highest occupied floor from grade as defined by Boston Zoning Code.

(2) F.A.R. Floor Area as defined by Boston Zoning Code.

(3) Area Square Footage changed due to land takings and discontinuances by BRA

1.4 Summary of Changes to Project Impacts and Mitigation

1.4.1 Urban Design and Sustainable Design Component

The mixed-use development of the Project Site continues to be consistent with the city's goals for the Chinatown, Lower Washington Street and Downtown Crossing areas. The NPC Project creates a lively new residential building with ground floor retail uses to complement the retail nature of Washington Street. The addition of the new NPC Project provides a gateway to Downtown Crossing from Chinatown and the Theatre District, and for continuity of uses on Washington Street. The NPC Project, through its height, massing and fenestration, complements, and is compatible with, surrounding structures.

The Proponent and the project design team, led by Handel Architects, are considering many sustainable design measures for the NPC Project. Millennium Partners and Handel Architects have LEED Accredited Professionals on staff and assigned to the project team. A preliminary LEED-NC Checklist is presented at the end of the **Section 3.0 - Urban Design/ Sustainable Design Component.** The project team will incorporate as many of the Boston Green Building Credits as possible. At this stage of the design process, the project design and construction team are developing the appropriate specific strategies to earn the selected credits.

1.4.2 Transportation Impacts

The NPC Project is not expected to result in a significant impact to area traffic operations. The traffic impacts were studied in the DPIR, and the NPC Project will have impacts which are the same or less than those of the previously BRA approved project. In an effort to mitigate any traffic impacts associated with the project, the Proponent committed to implementing a comprehensive traffic demand management plan aimed at reducing automobile dependency and encouraging travel by non-automobile modes. These measures will be facilitated by the NPC Project's proximity to workplaces and shopping areas as well as its transit advantaged location. The NPC Project will be developed pursuant to the Transportation Access Plan Agreement ("TAPA"), approved on December 5, 2007 for the BRA Approved Project.

1.4.3 Pedestrian-Level Wind Analysis

The pedestrian-level wind assessment in the DPIR concluded that the Project Site is sheltered from winds from most directions. Of the thirty-seven wind locations evaluated, there were no changes in PLW categories between existing conditions and the three proposed Build alternatives except at the corner of Avery and Washington Streets, at which the pedestrian level winds were expected to improve (with the PLW category expected to decrease from three to two). (See **Appendix D** for a full presentation of the DPIR qualitative pedestrian-level wind analysis for Alternative 3A Build (Residential/Retail) which has similar impacts to the NPC Project.)

The massing, height and footprint of the NPC Project will remains the same as in the BRA Approved Project and therefore the prior wind analysis findings will also apply to the NPC Project.

1.4.4 Shadow Analysis

Based on the DPIR analysis, new shadows from the NPC Project in the morning will be cast on Washington Street sidewalks abutting the Project Site and northwesterly toward the Ritz-Carlton Hotel and Towers and buildings in the Washington Street Theater District directly across from the Project Site: the Paramount Center, Adams House Annex, and the Opera House. This result is similar to that of the BRA Approved Project.

By 12:00 Noon and in the mid-day hours, new shadow extends onto Avenue de Lafayette sidewalks. By mid-afternoon, new shadow is no longer directed onto buildings in the Washington Street Theatre District. During this time period, new shadow largely fills in the gaps along the sidewalks of Avenue de Lafayette, Harrison Avenue extension, and Hayward Place that are not today in shadow from existing buildings. Late in the day, in June and September, the Textile Building in the Textile District is affected by a narrow band of shadow adjacent to shadow already cast by existing buildings.

The new shadow conditions described above would also result from any zoning as-of-right building at the Project Site. The NPC Project does not violate the "no new shadows" statutes for the Boston Common (see **Appendix E** for a full presentation of the DPIR/DEIR Shadow Impact

Analysis for Alternative 3A Build (Residential/Retail) which has similar impacts to the NPC Project).

1.4.5 Daylight Analysis

Although the BRA Approved Project and NPC Project will increase the amount of daylight obstruction because of the proposed new 155-foot building, daylight obstruction values will fall within the range of values for the context buildings and those in the as-of-right zoning envelope.

1.4.6 Solar Glare Analysis

Based on the DPIR analysis, the potential for reflected sunlight from the proposed Hayward Place project will be minor. This result is similar to that of the BRA Approved Residential Project.

Surrounding buildings prevent most reflected light from reaching ground level in the vicinity of the Project Site. When ground-level glare does occur, it affects only short stretches of several nearby side streets. Glare on Washington Street will usually be at the edge of, not center of, a driver's normal viewing range. The building design would further reduce solar glare impacts because of its masonry materials and by using special low "e coating" glass.

1.4.7 Air Quality Analysis

Based on the DPIR analysis, the "worst-case" air quality impacts from the NPC Project's parking garage and fuel combustion system will not have an adverse impact on air quality, particularly as the garage is only one-level below grade vs. the BRA Approved Project which had two levels and more parking spaces. The maximum carbon monoxide ("CO") concentrations inside the parking garage are predicted to be substantially less than any of the indoor air quality guideline concentrations. The maximum one-hour and eight-hour ambient CO impacts, at all locations around the Project Site, from motor vehicles operating inside the garage, the NPC Project's fuel combustion equipment, and including conservative background CO concentrations, are predicted to be safely in compliance with the NAAQS for CO.

The DPIR conservative air quality impact analysis of the NPC Project's loading dock demonstrated that the particulate matter emissions from trucks operating at the loading dock would not have a significant impact on air quality. Air pollutant emissions from loading/unloading would not be significant.

The DPIR traffic study for the BRA Approved Project showed that none of the twelve intersections in the study area required a microscale air quality analysis as all of the intersections will operate at overall Level of Service (LOS) C or better. The traffic analysis showed that the BRA Approved Project would have a very small impact on intersection delays and would therefore have an insignificant impact on the local air quality. The air quality in the

Project Site area would therefore remain safely in compliance with the NAAQS for CO after the NPC Project is built.

These results are similar to those of the BRA Approved Project.

The Proponent has committed to reasonable and feasible Transportation Demand Management ("TDM") measures to reduce the number of NPC Project-generated motor vehicle trips as documented in the Transportation Access Plan Agreement executed with the Boston Transportation Department. These measures will likely result in a small reduction of VOC and NOx emissions compared to the 2009 Build case. TDM will be facilitated by the NPC Project's proximity to offices, transit, and shopping. The NPC Project's location and consequent effect on reduced automobile usage will contribute to air quality improvements.

1.4.8 Solid and Hazardous Materials

Similar to commitments made for the BRA Approved Project, the Proponent will implement measures to handle the anticipated generation, storage, and disposal of solid waste generated by the NPC Project. Operational measures have been considered that will be employed to promote waste reduction and recycling. The NPC Project will accommodate recycling measures meeting or exceeding the City's recycling guidelines. In addition, the disposal and construction contracts will include specific language to ensure the contractor's compliance with City and State regulations. Demolition and construction debris will be recycled to the maximum extent possible.

Preliminary environmental testing performed in 2003 indicated low levels of certain chemical constituents in site soils typical of urban fill in the Boston area (e.g. so called "Boston Brown"). The planned excavation and removal activity, which is a commonly employed practice in the Boston area, will result in the removal of these soils.

1.4.9 Noise Analysis

As the type of mechanicals and rooftop locations for the NPC Project are similar to the BRA Approved Project, the DPIR findings that the noise analysis complied with the Massachusetts Department of Environmental Protection ("DEP") Noise Policy and City of Boston Noise Regulations, and Housing and Urban Development ("HUD") Residential Site Acceptability Standards is relevant to the NPC project.

The potential significant sources of exterior sound from the BRA Approved Project were identified as rooftop mechanical equipment (cooling towers, heat recovery units, and ventilation and exhaust fans) and one diesel-fired emergency electric generator. The cooling towers, heat recovery units, and fans will be of a low-noise design, where necessary. Where possible, equipment that can operate at reduced loads will still be selected to allow service to be provided without the equipment having to operate at full load. The emergency generator will likely need to be equipped with a hospital grade exhaust silencer for sound reduction and be enclosed in a sound mitigating enclosure. Acoustical louvers will likely be needed to mitigate the noise impacts from the garage exhaust vents.

The emergency generator will only be operated when electrical service to the buildings is interrupted and for occasional brief daytime periods for the minimum acceptable amount of testing designated by the manufacturer.

Overall, the NPC Project can be assumed to result in a 1 to 2 dBA increase in sound level increase at the closest modeled locations, which is similar to the findings of the DPIR analysis. These sound level increases will not likely be perceptible. The analysis demonstrated that the BRA Approved Project will not create a noise nuisance condition and will fully comply with the most stringent sound level limits set by the City of Boston noise regulations, ordinances and guidelines, the Massachusetts DEP Noise Policy, and the HUD Residential Site Acceptability Standards.

1.4.10 Flood Hazard Zones/Wetlands

Federal Emergency Management Agency's ("FEMA") Flood Insurance Rate Maps ("FIRM") for the City of Boston (Community Panel 250-286-0010C, effective date April 1, 1982) were reviewed to determine if the Project Site lies within the 100-year flood plain. The Project Site falls within a Zone C, defined by FEMA as an "area of minimal flooding." Thus, the NPC Project will not lead to an increased flood or storm damage risk.

There are no wetlands or flowed or filled tidelands located on the Project Site.

1.4.11 Water Quality and Drinking Water Resources

As discussed in the DPIR, the Project Site is located in downtown Boston and is not adjacent to any water resources. The NPC Project will not affect drinking water resources. During wet weather, the Project Site drains through the BWSC combined sewer system to the Fort Point Channel and the Boston Harbor. Since the NPC Project footprint will occupy most of the Project Site, stormwater management is focused on roof runoff. Similar to that in the BRA Approved Project, a "green roof" will be included, which will allow a portion of what would otherwise be runoff to be retained, released slowly, or evaporated. The will reduce the peak rate of runoff from that of the existing paved site.

1.4.12 Geotechnical and Groundwater Impacts

Subsurface investigations have been performed at the Project Site as part of the BRA Approved Project, and recommendations provided for excavation and below-grade construction methods and potential foundation design. Based on the preliminary engineering evaluations, the subsurface soil conditions are favorable for the support of foundations for the proposed building. Conventional construction methods are anticipated. The foundation system for the planned building is anticipated to consist of either reinforced concrete spread footings with a pressure-relieved slab-on-grade or a waterproofed reinforced concrete mat slab.

The presence of the adjacent MBTA Orange Line has been considered in the choice of foundation bearing levels to prevent lateral loading of the tunnel by the new foundations. The foundation system and construction approach has been designed to maintain operation and performance of the tunnel - that is, there will be no impact from the NPC Project.

Temporary excavation support systems for the NPC Project will be soldier piles and lagging. Cast-in-place concrete foundation walls will be constructed within the soldier piles and lagging wall utilizing conventional formwork.

Mitigation measures will be taken as part of the foundation design and construction, including measures to protect any nearby utilities, maintain groundwater levels, and monitor construction vibration, as necessary.

1.4.13 Construction Impacts

Similar to that of the BRA Approved Project, the construction period is estimated to last approximately 22 to 24 months. Construction management and scheduling will aim to minimize impacts on the surrounding environment. Construction methodologies that ensure public safety throughout the Project Site will be employed.

A Construction Management Plan ("CMP") will be submitted to the Boston Transportation Department ("BTD") for approval prior to the start of construction. The CMP will address construction worker commuting and parking, routing plans for trucks and deliveries, and control of dust generation. Construction truck traffic will not use Avery Street or the residential streets of Chinatown, and early morning construction activity will be strictly limited, subject to the approval of the Boston Transportation Department. Vehicle idling will be strictly controlled. The CMP will establish specific mitigation measures and staging plans to minimize impacts to the abutters. The NPC Project construction contractor will be bound by the CMP.

1.4.14 Historic Resources Component

As analyzed in the DPIR, the Project Site does not contain structures listed on the National or State Register, or which are designated as Landmarks by the Boston Landmarks Commission. The Project Site is within the boundaries of the Boston Theatre Multiple Resource Area ("MRA") encompassing an area containing four districts (in addition to the Washington Street Theatre District designated on March 19, 1979) and ten individual properties, including the Paramount Center. The Project Site is also in proximity to the Textile District. Neither the existing parking lot nor the MBTA headhouse is individually of historical significance or is listed as a contributing structure in the Boston Theatre MRA District.

The NPC Project will result in a new building to replace an underutilized surface parking lot that includes an MBTA emergency exit headhouse. The NPC Project design is compatible with its surrounding context in terms of height, massing, and materials, and will not detract from the historic properties in the vicinity.

It is also noted that the Massachusetts Historical Commission, in its letter dated May 5, 2005, to the Executive Office of Environmental Affairs determined that the BRA Approved Project would have "no adverse effect" on the surrounding historic properties (see **Appendix F**).

1.4.15 Infrastructure Systems Component

Site Plan Approval had been obtained from the Boston Water and Sewer Commission ("BWSC") for the BRA Approved Project in 2008. Discussions have been held with the other utility companies and there are available utilities to serve the NPC Project.

The Proponent will update its submission to BWSC and amend its General Service Application. The Proponent will meet DEP goals for the reduction of infiltration/inflow (I/I) for one of the planned reduction programs developed by the BWSC.

The Proponent and its engineer will continue to work with the utility companies to finalize the design of utility connections.

2.0 GENERAL INFORMATION

2.1 Public Benefits

The NPC Project will result in a number of public benefits for the Downtown Crossing neighborhood and overall for the City of Boston. These benefits include:

Create approximately 390,705 square feet of mixed-use development in the City of Boston, including residential and retail uses and transforming an existing surface parking lot site to a productive use.

- Increase annual tax payments for the Project Site by approximately $2,000,000 at stabilized occupancy.
- Generate approximately 48 permanent jobs and 250 construction jobs.
- Contribute to the City's Affordable Housing Trust.
- Incorporate green design features into the NPC Project to aid in storm water runoff and energy efficiency.
- Supply bike parking within the building for employees and residents as well as bike parking outside near the entrances.
- Clean up and integrate the existing MBTA Orange Line emergency egress head-house into the NPC Project's facade.
- Install a pan-tilt zoom camera at a nearby intersection location;
- Install new sidewalks, associated accessibility ramps, and crosswalk pavement markings around Project Site.
- Install streetscape improvements including streetlights, street trees and public bicycle racks along sidewalks adjoining the Site.
- Replace damaged street plantings on Avenue de Lafayette. Improve and upgrade the accessibility ramps and traffic signal equipment at the Essex Street/Chauncy Street intersection.
- Implement a transportation demand management strategy for the NPC Project. *(Completed)*
- Conduct a traffic circulation study of the immediate Project Site area for the BTD. *(Completed)*
- Provide 4:1 I/I removal in accordance with BWSC and Massachusetts Department of Environmental Protection requirements.

2.2 Regulatory Controls and Permits

2.2.1 Zoning Approvals

As discussed above and similar to that previously obtained, the NPC Project will need to amend the relief received from the Boston Board of Appeal in 2007.

The Project Site is located in the Midtown Cultural District, as described in Article 38 of the Boston Zoning Code (the "Code"). Zoning requirements for the Midtown Cultural District specify uses and dimensional standards, including visual design standards. An as-of-right maximum height of 155 feet and a maximum Floor Area Ratio ("FAR") of 10.0 is allowed for projects undergoing Large Project Review under Article 80. The Project Site also lies within the City's Restricted Parking Overlay District, which establishes parking accessory to commercial uses as a "conditional" use. Uses allowed as-of-right include, but are not limited to, office, residential and retail uses.

The NPC Project is consistent with the height and bulk requirements of the Code. Additional zoning relief will be sought for certain building design elements contained in Section 38-19 of the Code so that the design objectives for the building can be fulfilled. **Table 2-1** shows, based on the maximum study envelope of the alternatives, a list of such potential zoning relief required. The NPC Project will be subject to additional design review by the BRA and the Boston Civic Design Commission. As the Project design evolves through this process, each of the relief measures described in **Table 2-1** may not be necessary. Relief for the Section 38-19 design elements described in **Table 2-1** have already been obtained from the Board of Appeals under Section 6A of the Zoning Code for the BRA Approved Project, but will have to be reviewed again by the ZBA for the NPC Project's modified design.

Table 2.1: Zoning Code Dimensional[1] Regulations BRA Approved and NPC Projects			
Applicable Requirements	**Midtown Cultural District Requirements**	**BRA Approved Project Based on ZBA Approvals**	**Proposed NPC Project**
Maximum Floor Area Ratio	10.0	10.0	10.0
Maximum Building Height	155 feet	155 feet	155 feet
Article 38, Section 19.1 (b)	Street wall continuity with adjacent blocks	Relief granted	Relief requested
Article 38, Section 19.2	Maximum street wall height of 90 feet	Relief granted	Relief requested
Article 38, Section 19.3	Display windows	Relief granted	Relief requested at Harrison Ave. Ext. and Hayward Place
Article 38, Section 19.4 (a)	Provide setback on Washington Street above 90 feet	Relief granted	Relief requested
Article 38, Section 19.4(b)	Floor plate exceeds 25,000 sf	Relief granted	Relief requested. Floor plates are approx. 27,000 sf
Article 38, Section 19.4(d)	Corner Condition	Relief granted	Relief requested

[1]The dimensions described in this table may change as the Project undergoes design review

2.2.2 *Anticipated Permits and Approvals*

Table 2.2: Anticipated Permits and Approvals		
Agency Name	**Permit or Action**	**Anticipated Schedule**
State		
Mass. Executive Office of Environmental Affairs, MEPA Unit	Massachusetts Environmental Policy Act (MEPA) Review	Certificate on FEIR issued on 8/15/06; NPC to be submitted
Mass. Dept. of Environmental Protection, Div. of Water Pollution Control	Sewer Connection Permit, Cross Connection Permit.	Third Quarter, 2011
Mass. Dept. of Environmental Protection, Div. of Air Quality Control	Notice of Demolition and Commencement of Construction	Third Quarter, 2011
Massachusetts Water Resources Authority	Construction Dewatering Permit	Received and renewed
Mass. Bay Transportation Authority	Reconfiguration of Headhouse	Third Quarter, 2011
Massachusetts Historical Commission	Project Review	MHC issued "no adverse effect" letter dated 5/5/05; Project Review during Second Quarter, 2006; Revised PNF to be submitted to MHC
Local		
Boston Redevelopment Authority	Article 80 NPC Review & Execution of Related Agreements	BRA Approved (10/09/06); NPC submitted on (02/3/11)
Boston Civic Design Commission	Schematic Design Review	First Quarter, 2011
Boston Air Pollution Control Commission	Parking Freeze Determination for commercial spaces	Second Quarter, 2011
Boston Zoning Board of Appeal	Section 6A Exceptions to Section 38-19 design elements	BZA Decision (original design), dated December 7, 2007, and extended by Permit Extension Act to expire December 24, 2012; Revised Design will require revised exceptions
Boston Transportation Department	Transportation Access Plan Agreement; Construction Management Plan	Approved will amend Second Quarter 2011
Boston Department of Public Works, Public Improvement Commission	Street/Sidewalk Occupancy; Commercial Curb-Cut Permit; Streetscape Improvements	Second Quarter 2011
Boston Water and Sewer Commission	Sewer and Water Connection Permit; Site Plan Approval	Received
Boston Public Safety Commission, Committee on Licenses	License for Storage of Fuel in Gas Tanks; Garage Permit	Second Quarter 2012
Boston Fire Department	Flammable Storage Permit	Second Quarter 2012
Boston Department of Inspectional Services	Building Permits; Certificates of Occupancy; Other Construction Related Permits	Second Quarter 2011

*This is a preliminary list based on Project information currently available. It is possible that not all of these permits or actions will be required, or that additional permits may be needed

2.3 Legal Information

2.3.1 Legal Judgments or Actions Pending Concerning the Proposed NPC Project

The Proponent is not aware of any legal judgments or actions pending concerning the NPC Project.

2.3.2 History of Tax Arrears on Property Owned in Boston by the Applicant

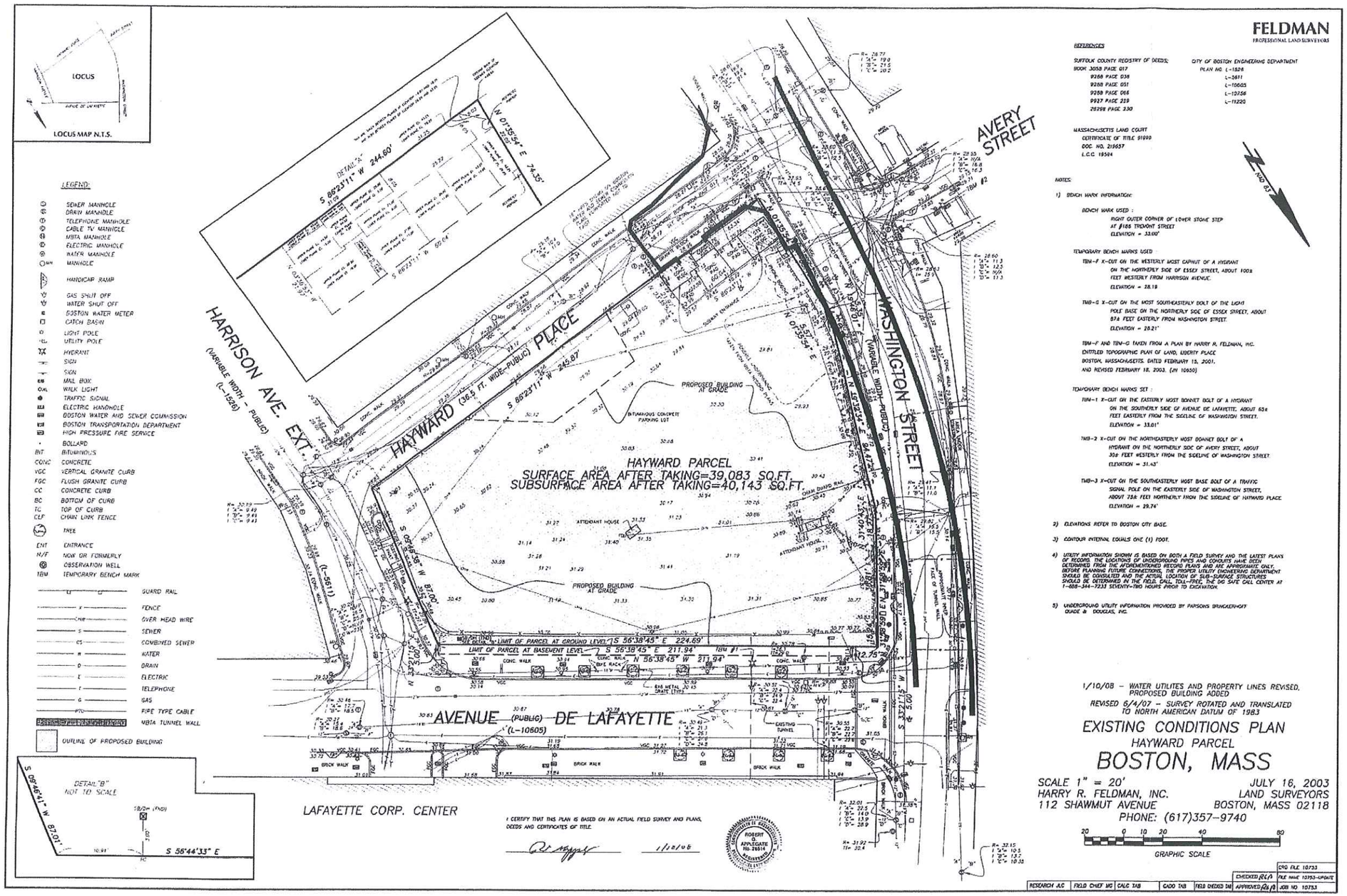
The Proponent owns no real estate in Boston on which real estate tax payments are in arrears.

2.3.3 Evidence of Site Control over the Project Area

Millennium Hayward LLC currently holds a ground lease for the Project Site with a right to purchase the site from the property owner, the Boston Redevelopment Authority

2.3.4 Nature and Extent of Any and All Public Easements

There exists, at the southwest corner of the Project Site, a subsurface and above grade easement taken by the City of Boston, for use by the Massachusetts Bay Transportation Authority ("MBTA"). The MBTA emergency exit which lies within that easement has been incorporated into the NPC Project.



FELDMAN
PROFESSIONAL LAND SURVEYORS

REFERENCES

SUFFOLK COUNTY REGISTRY OF DEEDS:
BOOK 3058 PAGE 017
9268 PAGE 038
9268 PAGE 051
9268 PAGE 066
9927 PAGE 229
26298 PAGE 230

CITY OF BOSTON ENGINEERING DEPARTMENT
PLAN NO. L-1526
L-5611
L-10605
L-10756
L-11220

MASSACHUSETTS LAND COURT
CERTIFICATE OF TITLE 91898
DOC. NO. 219657
L.C.C. 19584

NOTES:

1) BENCH MARK INFORMATION:

BENCH MARK USED :
RIGHT OUTER CORNER OF LOWER STONE STEP AT #186 TREMONT STREET
ELEVATION = 33.00'

TEMPORARY BENCH MARKS USED
TBM-F X-CUT ON THE WESTERLY MOST CAPNUT OF A HYDRANT ON THE NORTHERLY SIDE OF ESSEX STREET, ABOUT 100± FEET WESTERLY FROM HARRISON AVENUE.
ELEVATION = 28.18

TMB-G X-CUT ON THE MOST SOUTHEASTERLY BOLT OF THE LIGHT POLE BASE ON THE NORTHERLY SIDE OF ESSEX STREET, ABOUT 87± FEET EASTERLY FROM WASHINGTON STREET.
ELEVATION = 28.21'

TBM-F AND TBM-G TAKEN FROM A PLAN BY HARRY R. FELDMAN, INC. ENTITLED TOPOGRAPHIC PLAN OF LAND, LIBERTY PLACE BOSTON, MASSACHUSETTS. DATED FEBRUARY 15, 2001, AND REVISED FEBRUARY 18, 2003. (JN 10830)

TEMPORARY BENCH MARKS SET :
TBM-1 X-CUT ON THE EASTERLY MOST BONNET BOLT OF A HYDRANT ON THE SOUTHERLY SIDE OF AVENUE DE LAFAYETTE, ABOUT 63± FEET EASTERLY FROM THE SIDELINE OF WASHINGTON STREET.
ELEVATION = 33.01'

TMB-2 X-CUT ON THE NORTHEASTERLY MOST BONNET BOLT OF A HYDRANT ON THE NORTHERLY SIDE OF AVERY STREET, ABOUT 30± FEET WESTERLY FROM THE SIDELINE OF WASHINGTON STREET.
ELEVATION = 31.43'

TMB-3 X-CUT ON THE SOUTHEASTERLY MOST BASE BOLT OF A TRAFFIC SIGNAL POLE ON THE EASTERLY SIDE OF WASHINGTON STREET, ABOUT 75± FEET NORTHERLY FROM THE SIDELINE OF HAYWARD PLACE.
ELEVATION = 29.74'

2) ELEVATIONS REFER TO BOSTON CITY BASE.

3) CONTOUR INTERVAL EQUALS ONE (1) FOOT.

4) UTILITY INFORMATION SHOWN IS BASED ON BOTH A FIELD SURVEY AND THE LATEST PLANS OF RECORD. THE LOCATIONS OF UNDERGROUND PIPES AND CONDUITS HAVE BEEN DETERMINED FROM THE AFOREMENTIONED RECORD PLANS AND ARE APPROXIMATE ONLY. BEFORE PLANNING FUTURE CONNECTIONS, THE PROPER UTILITY ENGINEERING DEPARTMENT SHOULD BE CONSULTED AND THE ACTUAL LOCATION OF SUB-SURFACE STRUCTURES SHOULD BE DETERMINED IN THE FIELD. CALL TOLL-FREE, THE DIG SAFE CALL CENTER AT 1-888-344-7233 SEVENTY-TWO HOURS PRIOR TO EXCAVATION.

5) UNDERGROUND UTILITY INFORMATION PROVIDED BY PARSONS BRINCKERHOFF QUADE & DOUGLAS, INC.

1/10/08 - WATER UTILITES AND PROPERTY LINES REVISED, PROPOSED BUILDING ADDED
REVISED 6/4/07 - SURVEY ROTATED AND TRANSLATED TO NORTH AMERICAN DATUM OF 1983

EXISTING CONDITIONS PLAN
HAYWARD PARCEL
BOSTON, MASS

SCALE 1" = 20'
JULY 16, 2003
HARRY R. FELDMAN, INC.
LAND SURVEYORS
112 SHAWMUT AVENUE
BOSTON, MASS 02118
PHONE: (617)357-9740

GRAPHIC SCALE

RESEARCH JLC	FIELD CHIEF MG	CALC TAB	CADD TAB	FIELD CHECKED DAB	APPROVED RDA	CAD FILE 10753	CHECKED RDA	FILE NAME 10753-UPDATE	JOB NO 10753

SOURCE: FELDMAN, PROFESSIONAL LAND SURVEYORS

NOT TO SCALE

TETRA TECH
www.tetratech.com
One Grant Street
Framingham, MA 01701
PHONE: 508-903-2000 FAX: 508-903-2001

Drawing Description
Existing Conditions Plan

Hayward Place
Boston Ma

Project No.:	127-27070-11001
Date:	1-27-2011
Designed By:	
Drawing No.	2-1

Appendix A **BRA Certificate of Vote and Board Approval, October 19, 2006**

CERTIFICATE OF VOTE

The undersigned hereby certifies as follows:

(1) That he is the duly qualified Secretary of the Boston Redevelopment Authority, hereinafter called the Authority, and the keeper of the records, including the journal of proceedings of the Authority.

(2) That the following is a true and correct copy of a vote as finally adopted at a meeting of the Authority held on October 19, 2006 and duly recorded in this office:

Mr. Paul Foster recused himself.

Copies of a memorandum dated October 19, 2006 were distributed entitled "HAYWARD DOWNTOWN, PARCEL C-1, CENTRAL BUSINESS DISTRICT BEDFORD-WEST URBAN RENEWAL AREA", which included four proposed votes. Attached to said memorandum were two maps indicating the location of the proposed project.

Mr. Mark McGowan, Senior Project Manager, Mr. Tony Pangaro, Millenium Partners and Mr. Malay Shah, architect, addressed the Authority and answered the Members' question.

On a motion duly made and seconded, it was unanimously

VOTED: That the Director be, and hereby is, authorized to issue an Adequacy Determination under Section 80B-5.5(c) of the Boston Zoning Code (the "Code"), which finds that the Project Notification Form, the Draft Project Impact Report, and the Final Project Impact Report, and Additional Materials received on October 11, 2006 adequately describe the potential impacts arising from the Hayward Place project and provide sufficient mitigation measures to minimize those impacts, subject to continuing design review by the Boston Redevelopment Authority (the "Authority"); and

FURTHER VOTED: That the Director be, and hereby is, authorized to issue a Certification of Compliance for the Hayward Place project, upon the successful completion of the Article 80 process; and

FURTHER VOTED: That the Director be, and hereby is, authorized to execute a Cooperation Agreement, an Affordable Housing Agreement, a Boston Residents Construction Employment Plan, and any and all other agreements and documents which the Director deems appropriate and necessary in connection with the Hayward Place project, all upon terms and conditions determined to be in the best interests of the Authority; and

FURTHER VOTED: That pursuant to the provisions of Section 3-1A.a and Article 80C of the Boston Zoning Code, the Authority hereby authorizes the Director to petition the Zoning Commission for approval of an amendment to Map Amendment No. 227, the effect of which is to remove the Project Site from the Planned Development Area designation associated with Planned Development Area No. 32.

(3) That said meeting was duly convened and held in all respects in accordance with law, and to the extent required by law, due and proper notice of such meeting was given; that a legal quorum was present throughout the meeting and a legally sufficient number of members of the Authority voted in a proper manner and all other requirements and proceeding under law incident to the proper adoption or the passage of said vote have been duly fulfilled, carried out and otherwise observed.

(4) That the document to which this certificate is attached was authorized by the foregoing vote.

(5) That if an impression of the seal has been affixed below, it constitutes the official seal of the Boston Redevelopment Authority, and this certificate is hereby executed under such official seal.

(6) That Mark Maloney, is the Director of this Authority.

(7) That the undersigned is duly authorized to execute this certificate.

IN WITNESS WHEREOF, the undersigned hereunto has set his hand this 23nd day of January, 2007.

BOSTON REDEVELOPMENT AUTHORITY

By: _____
Harry R. Collings, Secretary

LS

BOARD APPROVED

MEMORANDUM

OCTOBER 19, 2006

TO: BOSTON REDEVELOPMENT AUTHORITY AND
MARK MALONEY, DIRECTOR

FROM: TOM MILLER, DIRECTOR OF ECONOMIC DEVELOPMENT
HEATHER CAMPISANO, DEPUTY DIRECTOR FOR DEVELOPMENT REVIEW
BOB KROIN, SENIOR ARCHITECT, URBAN DESIGN
MARK MCGOWAN, SENIOR PROJECT MANAGER

SUBJECT: HAYWARD PLACE, DOWNTOWN
PARCEL C-1, CENTRAL BUSINESS DISTRICT BEDFORD-WEST URBAN RENEWAL AREA

SUMMARY: This Memorandum requests that the Boston Redevelopment Authority ("BRA") authorize the Director to: (1) issue an Adequacy Determination ("AD") for the Hayward Place Project in Downtown Boston (the "Proposed Project") pursuant to the provisions of Article 80B, Section 80B-5.5(c) of the Boston Zoning Code ("Code"), subject to continuing design review by the BRA; (2) issue a Certification of Compliance for the Proposed Project under Section 80B-6 upon successful completion of the Article 80 review process; (3) execute and deliver a Cooperation Agreement, an Affordable Housing Agreement, and a Boston Residents Construction Employment Plan, and any and all other agreements in connection with the Proposed Project that the Director deems appropriate and necessary; (4) petition the Zoning Commission for approval an amendment to Map Amendment No. 227, the effect of which is to remove the Project Site from the Planned Development Area designation associated with Planned Development Area No. 32.

PROJECT SITE

The Hayward Place Project is proposed within the full city block bounded by Washington Street, Avenue de Lafayette, Harrison Avenue extension, and Hayward Place (the "Project Site") and consists of approximately 38,000 square feet of ground area. The Project Site is currently occupied by a surface parking lot, and is located one block east of Boston Common.

BACKGROUND

Millennium Hayward LLC (the "Proponent" or the "Developer"), a venture of Millennium Partners-Boston, which is comprised of Millennium Partners and MDA Partners LLC, proposes to develop a mixed-use development containing residences, retail space and a below-grade parking garage on the Project Site.

On January 16, 2003, the BRA tentatively designated the Proponent as the redeveloper of the Project Site. The Proponent entered into a ground lease with the BRA for the Project Site and is presently occupying the Project Site under such ground lease, which provides for the acquisition of the Project Site prior to the commencement of construction.

PROJECT DESCRIPTION

The Proponent, or an affiliated entity, proposes to construct a new fourteen-story residential and retail building with approximately 277 residential units, approximately 19,000 square feet of ground floor retail space and an underground two level parking garage for up to 271 parking spaces (the "Proposed Project").

The primary residential lobby is proposed to be accessed from Washington Street and predominantly faces Hayward Place with the Washington Street frontage reserved for retail activity. Access and egress for the parking facility is proposed on Hayward Place.

The Proposed Project will enhance the retail and residential vitality of the Downtown Crossing area and will create significant new economic and housing opportunities, in a manner consistent with transit-oriented development.

DEVELOPMENT TEAM

The development team consists of Millennium Hayward LLC as Developer, Handel Architects LLP as project architect, Daylor Consulting Group, Inc. as permitting consultant, Howard/Stein-Hudson Associates, Inc. as transportation consultant, and DLA Piper Rudnick Gray Cary US LLP, serving as legal counsel.

ARTICLE 80 REVIEW

On November 26, 2003, in accordance with the BRA's policy on mitigation as outlined in Mayor Thomas M. Menino's Executive Order Relative to the Provision of Mitigation by Development Projects in Boston, Millennium Partners-Boston (a joint venture of Millennium Partners and MDA Partners LLC) submitted a Letter of Intent to redevelop the Hayward Place parcel in the Midtown Cultural District.

On Tuesday, December 23, 2003, letters requesting nominations for the Impact Advisory Group ("IAG") for the proposed project were delivered to City Councilor James Kelly, State Senator Dianne Wilkerson, and State Representative Salvatore Dimasi, with a deadline of Monday, January 14, 2004. In addition, letters were sent to the Mayor's Office of Neighborhood Services and the City Councilors-at-large, providing an opportunity for their input.

The letters sought nominations or recommendations to the IAG by Monday, January 14, 2004. Nominations for the IAG were submitted by State Senator Diane Wilkerson and the Mayor's Office of Neighborhood Services. Six individuals were appointed to serve on the IAG on February 11, 2004.

On June 24, 2004, the Developer filed a Project Notification Form ("PNF") for the Proposed Project. The PNF proposed a new mixed-use building containing up to 40,000 square feet of retail space, up to 333,000 square feet of office space and a two-level underground garage with 153 parking spaces. Notice of the receipt by the BRA of the PNF was published in the Boston Herald. That notice initiated a public comment period, which was extended by the Proponent to September 30, 2004.

A scoping session was held on Tuesday, September 9, 2004 with the City's public agencies during which the Proposed Project was reviewed and discussed. The BRA also held a public meeting at the Hyatt Regency Hotel, adjacent to the Project Site, on September 21, 2004 for the community's review and comments. The public meeting was advertised in several local/neighborhood newspapers. The BRA issued a Scoping Determination on November 17, 2004.

On April 1, 2005 the Developer submitted a Draft Project Impact Report ("DPIR") to the BRA. The DPIR submission initiated a forty-five (45) day public comment period, which ended on May 23, 2005. Notice of the BRA' s receipt of the DPIR was published in the *Boston Herald* on April 6, 2005. The DPIR was forwarded to the City's public agencies and to the IAG. A meeting with the City's public agencies and the BRA review staff was held on April 27, 2005 at the offices of the BRA to review and discuss the DPIR. On May 11, 2005 the BRA hosted a public meeting at the Hyatt Regency Hotel. This meeting was advertised in the *Boston Courant, Sampan,* and the *Mao Ping News* . In addition, the Proponent made a presentation before the Park Plaza CAC on April 21, 2005. The BRA issued a Preliminary Adequacy Determination on June 21, 2005.
On April 28, 2006, a Final Project Impact Report ("FPIR") was filed for the Proposed Project. The FPIR submission initiated a forty-five (45) day public comment period, which ended on June 15, 2006. On May 23, 2006, the BRA hosted a public meeting at the Hyatt Regency Hotel. Members of the IAG were in attendance.

On October 11, 2006 the Developer filed Additional Materials with the BRA, in response to a request from BRA staff. The Additional Materials filing contains the Proposed Project as presented to the BRA Board on October 19, 2006. With the filing of the Additional Materials, it is the staff's recommendation that sufficient information exists to recommend the issuance of an Adequacy Determination.

The Developer made a presentation to the Boston Civic Design Commission ("BCDC") on August 1, 2006, at which various aspects of the Proposed Project were reviewed. At that time, the BCDC voted to refer the Proposed Project to the BCDC Design Committee. On October 3, 2006, at the recommendation of the Design Committee, the BCDC unanimously voted to approve the Proposed Project.

The IAG will continue to participate in the Article 80 process through its future review of a draft copy of the Cooperation Agreement.

AFFORDABLE HOUSING

The Hayward Place project will comply with the Mayor's Executive Order Relative to the Inclusionary Development Policy as amended on May 16, 2006.

The Developer is currently exploring the feasibility of the option of locating the affordable units off-site at 179 Lincoln Street. Any proposal for an off-site location would be subject to the approval of the BRA.

The Inclusionary Development Policy, effective May 16, 2006, is applicable to the Proposed Project and requires that the Affordable Units be made available to households earning between 130% and 160% of the Boston Median Household Income as determined by the American Community Survey conducted by the US Census Bureau ("BMI").

Preference for the Affordable Units will be given to applicants who meet the following criteria, weighted in the order below:

(1) Boston resident;
(2) Household Size (a minimum of (1) person per bedroom); and
(3) First-time homebuyers (if applicable).

The Developer will enter into an Affordable Housing Agreement and Restriction with the Authority for the Affordable Units. The Developer has agreed to submit a Marketing Plan (the "Plan") to the Boston Fair Housing Commission and the Authority for the Affordable Units, which shall be approved prior to the execution of the Affordable Housing Agreement. The Affordable Units will not be marketed prior to the submission and approval of the plan. A deed restriction will be placed on the

Affordable Units to maintain affordability for a period of fifty (50) years (thirty years plus a BRA twenty-year extension option). Any subsequent purchaser of an Affordable Unit during this fifty (50) year period must fall within 130% and 160% of BMI.

ZONING

The Project Site is in the Midtown Cultural District (Article 38) of the Code. The Project Site is also located within Planned Development Area No. 32, established for the Boston Crossing Project. This memorandum recommends that the BRA authorize the Director to petition the Zoning Commission to amend the zoning map to remove the Project Site from such planned development area.

The Proposed Project complies with the use, height and density requirements of the Midtown Cultural District, and is subject to design review by the BRA. Article 38 also includes certain design requirements for the Midtown Cultural District. Once the design is fully refined, the Proponent intends to seek exceptions from the Board of Appeals from certain of the design elements, pursuant to Article 6A of the Boston Zoning Code.

PUBLIC BENEFITS

The Proposed Project will yield a number of public benefits and mitigation measures, including but not limited to:

- The development of an underutilized site of crucial importance to the revitalization of Washington Street and the surrounding area.
- The increase annual real estate tax payments for the Project Site.
- The generation of approximately 250 construction jobs.
- Addition of resident consumers to the area, enhancing the economic vitality of the neighborhood.
- Enhancement of the Urban street wall along Washington Street.
- Replacement of the existing surface parking lot with a below-grade garage.
- Provision of active retail space on Washington Street, allowing for continuity of sidewalk-oriented retail activity.
- Addition of residential uses to the Downtown Crossing area.
- "Green Design" features will be incorporated into the Project to aid in storm water runoff retention and energy efficiency.

RECOMMENDATION

Approvals have been requested of the BRA for the issuance of an AD pursuant to Article 80B, Section 80B-5.5(c) of the Code, and for the issuance of a Certification of Compliance under Section 80B-6 upon successful completion of the Article 80 review process. In accordance with Section 80B-5.5 of the Code, the BRA may issue an AD if the FPIR, together with any additional material and comments received by the BRA prior to the issuance of an AD, adequately describes the impact of the Proposed Project and offers appropriate mitigation of such impacts.

BRA staff has determined that the PNF, the DPIR, the FPIR and the Additional Materials, project design changes, and accompanying mitigation commitments meet the criteria for the issuance of an AD. It is therefore recommended that the BRA approve the Proposed Project and authorize the Director to: (1) issue an AD pursuant to Article 80, Section 80B-5.5 of the Code; (2) issue a Certification of Compliance under Section 80B-6 of the Code upon successful completion of the Article 80 review process; (3) execute and deliver a Cooperation Agreement, an Affordable Housing Agreement, a Boston Residents Construction Employment Plan, and any and all other agreements and documents that the Director deems appropriate and necessary; and (4) petition the Zoning Commission for approval an amendment to Map Amendment No. 227, the effect of which is to remove the Project Site from the Planned Development Area designation associated with Planned Development Area No. 32.

Appropriate votes follow:

VOTED: That the Director be, and hereby is, authorized to issue an Adequacy Determination under Section 80B-5.5(c) of the Boston Zoning Code (the "Code"), which finds that the Project Notification Form, the Draft Project Impact Report, and the Final Project Impact Report, and Additional Materials received on October 11, 2006 adequately describe the potential impacts arising from the Hayward Place project and provide sufficient mitigation measures to minimize those impacts, subject to continuing design review by the Boston Redevelopment Authority (the "Authority"); and

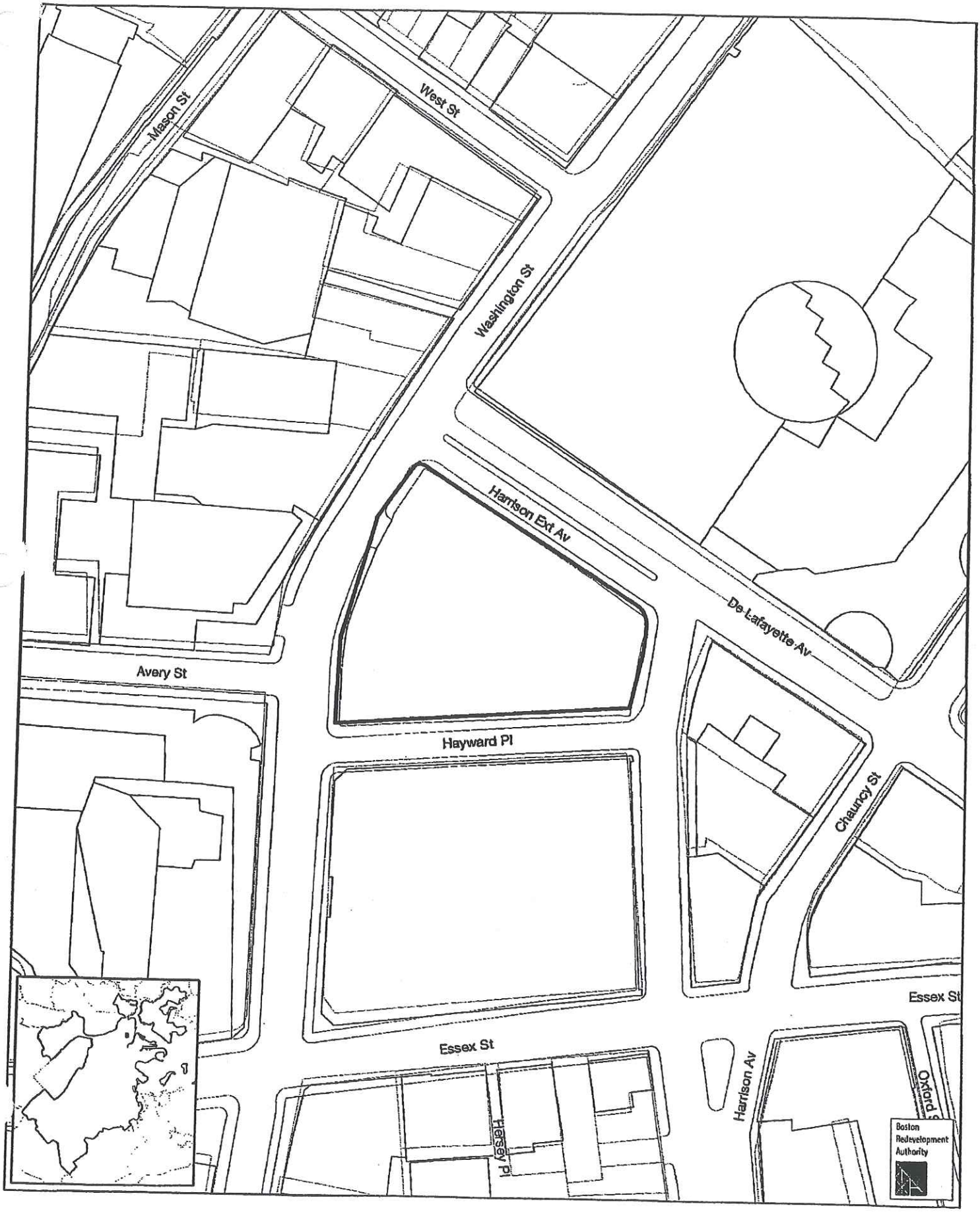
FURTHER VOTED: That the Director be, and hereby is, authorized to issue a Certification of Compliance for the Hayward Place project, upon the successful completion of the Article 80 process; and

FURTHER VOTED: That the Director be, and hereby is, authorized to execute a Cooperation Agreement, an Affordable Housing Agreement, a Boston Residents Construction Employment Plan, and any and all other agreements and documents which the Director deems appropriate and necessary in connection with the Hayward Place project, all upon terms and conditions determined to be in the best interests of the Authority; and

FURTHER VOTED: That pursuant to the provisions of Section 3-1A.a and Article 80C of the Boston Zoning Code, the Authority hereby authorizes the Director to petition the Zoning Commission for approval of an amendment to Map Amendment No. 227, the effect of which is to remove the Project Site from the Planned Development Area designation associated with Planned Development Area No. 32.

Hayward Place

1:1,200



Hayward Place

1:1,200
2003 BWOCS aerial

Boston Redevelopment Authority

Boston's Planning & Economic Development Office

Thomas M. Menino, *Mayor*
Clarence J. Jones, *Chairman*
Mark Maloney, *Director*

One City Hall Square
Boston, MA 02201-1007
Tel 617-722-4300
Fax 617-248-1937

November 8, 2006

pc: HJM
KCM
J. Kittiejan

Mr. Anthony Pangaro
Millennium Hayward LLC
172 Tremont Street, Suite 400
Boston, MA 02111-1001

Re: Adequacy Determination
Hayward Place Project
Downtown Boston, Massachusetts

Dear Mr. Pangaro:

This letter constitutes the Adequacy Determination (the "AD") of the Boston Redevelopment Authority (the "BRA") with respect to the Final Project Impact Report (the "FPIR") for the proposed Hayward Place Project located in the Midtown Cultural District, which was submitted by Millennium Hayward LLC (the "Proponent"), a venture of Millennium Partners-Boston, which is comprised of Millennium Partners and MDA Partners LLC, on April 28, 2006. The AD is being issued under Article 80, Section 80B-5.5 (c) of the Boston Zoning Code (the "Code").

The Proponent proposes to construct a new fourteen-story residential and retail building with approximately 277 residential units, approximately 19,000 square feet of ground floor retail space and an underground two level parking garage for up to 271 parking spaces (the "Proposed Project"). The Hayward Place Project is proposed within the full city block bounded by Washington Street, Avenue de Lafayette, Harrison Avenue extension, and Hayward Place (the "Project Site") and consists of approximately 38,000 square feet of ground area. The Project Site is currently occupied by a surface parking lot, and is located one block east of Boston Common.

Please be advised that on October 19, 2006, the BRA voted its authorization for the Director to issue an AD. Pursuant to said vote and in connection with the Proposed Project, I hereby (i) approve the FPIR pursuant to the requirements of Section 80B-5.5 (c) of the Code and (ii) issue this AD which finds that the Project Notification Form submitted to the BRA on June 24, 2004, the Draft Project Impact Report submitted to the BRA on April 1, 2005, the FPIR and the Additional Materials received by the BRA on October 11, 2006 adequately describe the potential impacts arising from the Proposed Project and provide sufficient mitigation measures to minimize the impacts, subject to continuing design review by the BRA.

To that end, please be advised that the following documentation, including without limitation, a Cooperation Agreement, an Affordable Housing Agreement, a Boston Residents Construction Employment Plan, a Transportation Access Plan Agreement and a Construction

Management Plan are required to be fully executed by the Proponent to permit the issuance of a Certification of Compliance under Article 80, Sections 80B of the Code.

Sincerely,

Mark Maloney
Director

2.4 Massachusetts Environmental Policy Act ("MEPA") Review and State Agency Action

The Proponent will review the need for a Notice of Project Change ("MEPA NPC") with the Massachusetts Executive Office of Energy and Environmental Affairs.

An Environmental Notification Form ("ENF") was filed on June 24, 2004 (EOEA #13301) with the Massachusetts Environmental Policy Act ("MEPA") office for the original 373,000 sf mixed-use office and retail Project The BRA Approved Project was subject to MEPA review because the project, as described in the ENF, exceeded transportation thresholds specified in the MEPA regulations with the generation of more than 3,000 new average daily trips calculated based on unadjusted ITE trip generation rates for all modes of travel (not taking into account transit trips).

MEPA issued a Certificate on the ENF, dated December 10, 2004, requiring the preparation of a Draft Environmental Impact Report ("DEIR"). Concurrently with the filing to the BRA, the Proponent submitted the Hayward Place DPIR/DEIR to the MEPA office on March 31, 2005.

On June 16, 2005, MEPA issued a Certificate on the Draft Environmental Impact Report that stated no major issues remained that warranted the preparation of a Final Environmental Impact Report, and that any of the three Build alternatives described in the DEIR may be selected by the Proponent as the Preferred Alternative and built without further MEPA review. The Draft EIR was noticed as a Final EIR in the July 7, 2005 Environmental Monitor. On August 15, 2005, MEPA issued a Certificate on the Final Environmental Impact Report that determined the project adequately and properly complies with the Massachusetts Environmental Policy Act and regulations.

The BRA Approved Project also involved Agency Action by the Boston Redevelopment Authority, acting as a Chapter 121B redevelopment agency, and it had been reviewed by the Massachusetts Historical Commission, which made a determination of "no adverse effect" of the project on surrounding historic resources.

A Massachusetts Department of Environmental Protection ("DEP") Sewer Connection/Extension Permit will be filed for the NPC Project's sewer connection to the existing Boston Water and Sewer Commission ("BWSC") system. Typically, this permit is filed simultaneously with the permit application to the BWSC. If sewage flow is above 50,000 gpd, a Major Sewer Connection Permit will be required.

BWSC will require a construction dewatering permit if site dewatering is to be discharged to the BWSC system. A permanent dewatering permit may be required from the Massachusetts Water Resources Authority ("MWRA") depending on the final building foundation design.

2.5 Public Review Process

The Proponent will continue to seek neighborhood input and continue outreach with public agencies, elected officials and community groups during the Article 80 NPC review process, as it did during the prior Article 80 process for the BRA Approved Project in 2006 and 2007.

3.0 URBAN DESIGN / SUSTAINABLE COMPONENT

3.1 Urban Design Elements

The urban design elements for the NPC Project are provided below.

3.2 NPC Building Program

The Hayward Place development program will include approximately 265 apartment units (approximately 262,500 sf), new retail ground floor space (approximately 12,000 sf), and up to a 125 space below-grade parking garage (approximately 35,000 sf), as outlined in **Table 3.1** below.

Table 3.1: NPC - Hayward Place Building Program: Summary of Uses

Type of Use	Approximate Square Footage (F.A.R.)
Residential Apartment Units	265 Units (262,500 SF)
Retail	Up to 12,000 SF
Parking (125 Spaces)	35,000 SF

3.2.1 Design Concept

The Hayward Place mixed-use development is consistent with the City's goals for the Chinatown, Lower Washington Street and Downtown Crossing areas. The NPC Project eliminates an empty lot and replaces it with a lively new building. The Hayward Place residential and retail uses contribute to the mixed-use and 18-hour/day activities of the neighborhood. This new building fills the missing link between Chinatown and the Theatre District, and Downtown Crossing and the "Ladder Blocks". The NPC Project, through its height, massing and fenestration, complements, and is compatible with, surrounding structures. The scale of its fenestration, masonry walls, street wall definition, and major building elements respond appropriately to its surroundings.

The overall design concept respects the complex geometry of existing streets and the varied massing of surrounding structures. The design further acknowledges the historic importance of Washington Street as "the Neck", the narrow strip of land connecting the historic Shawmut peninsula to the hinterlands by emphasizing the curvature and alignment of Washington Street. A design objective is to reflect this "back bone" of Boston, obvious before the Back Bay and other surrounding waters were filled in.

The proposed new building at Hayward Place will complete the spatial definition of the local area and will:

- Complete the Avenue de Lafayette and Washington Street street walls;
- Establish a strong visual terminus for Avery Street and a visual reference point from Boston Common;
- Clearly define the intersection "gateway" to the Theatre District at Avenue de Lafayette and Washington Streets; and
- Provide for continuity of sidewalk and building activity opposite the Paramount Center, the Modern Theatre, and the Opera House.

3.2.2 *Building Design*

Height and Massing

The zoning height of the NPC Project, similar to that of the BRA Approved Project, is 155 feet to the top of the highest occupied floor, excluding the screened rooftop mechanicals, which on portions of the roof will extend an additional 20 to 30 feet, all as permitted by the Zoning Ordinance. The scale and height of surrounding buildings offer a few clues or benchmarks from which to sculpt the mass of Hayward Place. There are heights at which several building components find neighbors. At 155 feet, the Hayward parcel finds commonality with sections of The Ritz-Carlton Hotel, which is a massing "bar" that stretches along Avery Street from Tremont to Washington Streets. The height of this portion of The Ritz-Carlton is often found throughout downtown, for example, at Emerson College's Ansin Building, Parkside East and at the Grand View Condominium, all nearby on Boylston Street.

The NPC Project design provides an important element of retail continuity along the principal facades on Washington Street and Avenue de Lafayette. Although higher than buildings immediately to the north and south, the proposed new structure will mediate between the taller Hyatt Hotel and Ritz-Carlton Towers. The Archstone/Smith Tower just to the south of the NPC Project is also significantly taller. The new Emerson College and Suffolk University buildings across Washington Street, although slightly shorter, also help provide a context for this 155-foot tall building.

The entrance to the residential lobby of the NPC Project occurs at the visual and spatial "center" of density for both existing and new buildings surrounding Ritz-Carlton Towers. From Downtown Crossing, the Hayward Place project will define an arrival into Theatre District and into The Ritz-Carlton Towers complex of retail, residential, hotel and cinema activity. Moving southward on Washington Street, the Washington-Essex Building (600 Washington Street) and the Ritz-Carlton Towers act together as a "gateway" into the Chinatown section of Washington Street.

Exterior Building Materials and Architectural Elements

The NPC Project will be constructed of masonry with a combination of punched windows and metal and glass window projections, often in the form of "bay windows." Its design uses unit masonry similar in scale to that of the Liberty Tree Building, Washington-Essex Building and Lafayette Corporate Center. In wall texture and massing, this scheme will belong more to the east side of Washington Street, including masonry buildings along Harrison Ave. Extension and Chauncy Street. It will not imitate the Ritz-Carlton Hotel and Towers, but rather will provide contrast - except, of course, in its modernity.

Views and Vistas

The NPC Project will provide a strong visual terminus to the Avery Street axial vista from Boston Common. The NPC Project's new residential entrance will be located directly across Washington Street from the center-line of Avery Street, reinforcing the character of Avery as an important link between Boston Common and Washington Street.

Relation to MBTA Headhouse

The MBTA emergency-exit's headhouse will be incorporated into the design of the building. This existing structure has no historic value and reads as an abandoned bunker. The headhouse functions an emergency exit only, and, as such, does not require prominent identification features, signage or a design "presence". The Proponent is coordinating with the MBTA in order to maintain the required emergency access.

3.3 Site Design

Public Open Space, Pedestrian Environment and Amenities

The NPC Project reinforces the street wall on Washington Street and Avenue de Lafayette. Pedestrian circulation is enhanced and encouraged by this continuity, which is currently lacking. The widths of the sidewalks will be at least as much as those in front of 600 Washington Street, and at many points along Washington Street it will be wider. Existing street planting on Avenue de Lafayette will be preserved or replaced and new Boston standard street lamps with shading to prevent up-lighting and sky glow will be installed throughout the perimeter of the Project Site.

The NPC Project's residential building entry will have a canopy of glass and metal. Storefronts will be at a scale that encourages multiple pedestrian access points, and shop fronts will be divisible if small unit shops are interested in the retail space. They will have signage integrated into the building facades and the capacity for folding shop windows if restaurants wish to become open-air in good weather. Display vitrenes will be located to visually enliven the street wall.

Vehicular Access and Circulation

The resident parking entrance and exit will be from Hayward Place. A loading dock with capacity to hold trucks inside the building envelope is located on Harrison Avenue Extension. Tenants of the building will have access to their cars from a passenger elevator accessible in the

ground floor lobby. Residents wishing to access their cars would exit the high-rise elevators and switch to the parking elevators that only run between the ground and basement floor.

The building will also be accessible from an open-air "porte-cochère" on Hayward Place to facilitate drop-off and pick-up of the residents. This porte-cochère connects to the main residential lobby that begins on Washington Street opposite Avery Street.

3.4 Sustainable Design

3.4.1 Sustainable Design Measures

The design team is considering many sustainable design measures for the NPC Project. Handel Architects and Millennium Partners have LEED Accredited Professionals on staff and assigned to the project team.

A preliminary **LEED-NC 3.0** Checklist appears at the end of section. At this stage of the design process, the project design and construction team still must investigate and develop appropriate specific strategies to earn the credits mentioned.

During the design process, the project design and construction team will continue to evaluate the potential to incorporate sustainable or green building features into the NPC Project, including the following, organized by the **LEED-NC 3.0** Green Building Rating System Credits:

Overview

The architect and project team will make reasonable efforts to design for the efficient use of resources, including energy, water, and building materials. The design will promote a healthy indoor environment with particular attention paid to minimizing contaminants and optimizing the use of daylight and fresh air. The Proponent will address these sustainable design and energy conservation measures as the design progresses and is incentivized by the LEED Certification process. Features currently expected to be implemented are listed in the paragraphs below.

Green Roof

Soil and planted areas over roof areas will reduce rainwater run-off and its impact on the city sewer system. This roof garden will also reduce thermal loss from the building and will be an amenity for residents.

Lighting

Natural lighting will be incorporated as much as possible into all building design concepts. Lighting design provides many opportunities to decrease energy consumption and will incorporate the most efficient lamps available. The family of lamps being considered includes electronic T8 and compact fluorescent fixtures. Incandescent lamps will be used sparingly in special lighting areas only. The state-mandated "Com-Check" will be utilized to verify that the lighting is within the required limits.

Heat Recovery from Building Exhaust

A heat recovery system will collect exhaust air from the building toilet and general exhaust systems. Before the exhaust air is "dumped" into the atmosphere, air will be passed over a heat recovery coil or heat wheel. Heating and cooling energy will be recovered and transferred to the fresh ventilation air. It is estimated that the amount of energy required to cool or heat outside air will be reduced by 50 to 75 percent.

Environmental Systems

The Proponent will incorporate multiple sustainable design elements into the heating, cooling, and circulation systems of the NPC Project. These elements will reduce the production of greenhouse gases and the use of non-renewable resources, and increase the efficiency of the heating, ventilation, and air conditioning ("HVAC") system. The NPC Project will include equipment that does not use CFC's (refrigerants that contribute to global warming).

Building Management System

A building management system ("BMS") will include the integration of building energy systems via sophisticated software to optimize the efficiency of the system. The BMS will control boilers and refrigeration equipment, pumps, and air-handling units. The BMS will oversee building mechanical operations, including start-up and shut-down, based on historical data, indoor and outdoor temperatures, space usage schedules, and so on. The control of each component can be manually overridden in the event of an unusual condition.

Building Materials

The NPC Project's design will use building materials and supplies that are non-toxic, made from recycled materials, and made with low-embodied energy.

Recyclable and recycled materials will be incorporated into the design and construction of the NPC Project as much as possible. Materials with recycled contents will result in reducing solid waste, pollution, and energy consumption. It will be necessary to verify that recycled materials will be technically acceptable and comparable in quality and cost to the non-recyclable equivalent.

New materials and systems that include post-consumer recycled content, such as drywall and ceiling systems, tile and carpet, concrete, and reinforcing and structural steel, will be encouraged.

Low or Zero-VOC paints, adhesives, and the like will be specified, and the use of locally produced materials will be encouraged.

Cool Roofing

Roofs will be well insulated for energy conservation. High albedo roofing systems will be employed where possible to reduce "heat island" effects.

Recycling Infrastructure

The NPC Project will incorporate measures to enable recycling programs to operate including easily accessible recycling areas. Space will be available in the housekeeping areas on each floor for collection and sorting of materials. An area for storage and pick-up will be available in the loading dock.

Water Conservation

Low-flow/auto shut-off water metering devices will be utilized. The design team will investigate a number of additional water conservation measures, beyond those required by law.

Building Adaptability

The building design is intended to be adaptable for the future inclusion of innovative energy and environmental technologies as they develop.

Audits

During its ownership of the building, the Proponent will conduct annual audits of energy consumption, waste streams, and the effectiveness of renewable technologies.

Energy Conservation Measures

The following measures will be considered for use in the building depending on a life cycle cost analysis to be performed during project design

HVAC Systems

- High efficiency electric motors
- Variable volume air distribution system
- Variable volume heating hot water pumping system
- DDC energy management system
- Variable speed drives in large fan motors
- Heat recovery system for ventilation systems
- Economizer operation for cooling system
- Unoccupied hours temperature setback for entire building
- Air distribution system temperature reset
- Water distribution system temperature reset
- Optimize duct and pipe size to reduce pressure drops and horsepower required

Electrical Systems

- Energy efficient lighting with automatic lighting controls (motion sensors, daylight sensing, etc.)
- Power correction factor equipment
- Use of fluorescent fixtures and high-efficiency transformers

HAYWARD PLACE

LEED NC-3.0 Scorecard

24-Jan-11

Available	Targeted	Possible	Less Likely	Not Viable	
					Certified 40 points **Silver** 50 points **Gold** 60 points **Platinum** 80 points
110	40	15	19	36	**Total Project Score**

Sustainable Sites — 26 Possible Points

Available	Targeted	Possible	Less Likely	Not Viable		
26	15	1	5	5		
Av.						
Y					Prereq 1	**Construction Activity Pollution Protection**
1	1				SS 1	**Site Selection**
5	5				SS 2	**Development Density and Community Connectivity**
1			1		SS 3	**Brownfield Redevelopment**
6	6				SS 4.1	**Alternative Transportation**, Public Transportation Access
1	1				SS 4.2	**Alternative Transportation**, Bicycle Storage & Changing Rooms
3			3		SS 4.3	**Alternative Transportation**, Low Emitting & Fuel Efficient Vehicles
2				2	SS 4.4	**Alternative Transportation**, Parking Capacity
1			1		SS 5.1	**Site Development**, Protect or Restore Habitat- 20% of site native/adaptive plantings
1		1			SS 5.2	**Site Development,** Maximize Open Space- Requires roof access by occupants, 20% of site vegetated/pedestrian
1				1	SS 6.1	**Stormwater Design**, Quantity
1				1	SS 6.2	**Stormwater Design**, Quality
1	1				SS 7.1	**Heat Island Effect**, Non-Roof
1	1				SS 7.2	**Heat Island Effect**, Roof
1				1	SS 8	**Light Pollution Reduction**

Water Efficiency — 10 Possible Points

Available	Targeted	Possible	Less Likely	Not Viable		
10	2		2	6		
Av.						
Y					WEp1	**Water Use Reduction,** 20% Reduction
4	2			2	WE 1.1-1.2	**Water Efficient Landscaping**, Reduce by 50% (2) No Potable (4)- Native/adaptive & stormwater irrigation
2				2	WE 2	**Innovative Wastewater Technologies**
4			2	2	WE 3	**Water Use Reduction**, 30% Reduction (2)-showerheads, 35% (1)-no, 40% (1)-no

Energy & Atmosphere — 35 Possible Points

Available	Targeted	Possible	C.P.	N. T.		
35	4	8	6	17		
Av.						
Y					Prereq 1	**Fundamental Commissioning of Building Energy Systems**
Y					Prereq 2	**Minimum Energy Performance** - 5% savings vs ASHRAE 90.1-2007
Y					Prereq 3	**Fundamental Refrigerant Management**
19		3	6	10	EA 1	**Optimize Energy Performance**
7				7	EA 2	**Onsite Renewable Energy**, 1% (1), 13% (7); 2% increments
2	2				EA 3	**Enhanced Commissioning**
2		2			EA 4	**Enhanced Refrigerant Management**
3		3			EA 5	**Measurement & Verification**
2	2				EA 6	**Green Power**

Materials & Resources — 14 Possible Points

Available	Targeted	Possible	Less Likely	Not Viable		
14	3	2	2	7		
Av.						
Y					Prereq 1	**Storage & Collection of Recyclables**
3				3	MR 1.1	**Building Reuse**, Maintain Shell/Structure: 55%, 75%, 95%
1				1	MR 1.2	**Building Reuse**, Maintain Interior Nonstructure, 50%
2	2				MR 2	**Construction Waste Management**, Divert 50%, 75%
2				2	MR 3	**Materials Reuse**, Specify 5% (1), 10% (2)
2		1	1		MR 4	**Recycled Content**, Specify 10% PC + PI (1), 20% PC + PI (2)
2	1	1			MR 5	**Regional Materials,** Manufactured & Harvested Locally: 10%, 20%
1				1	MR 6	**Rapidly Renewable Materials**
1			1		MR 7	**Certified Wood**

Indoor Environmental Quality — 15 Possible Points

Available	Targeted	Possible	Less Likely	Not Viable		
15	10	1	3	1		
Av.						
Y					Prereq 1	**Minimum IAQ Performance**
Y					Prereq 2	**Environmental Tobacco Smoke (ETS) Control**
1				1	EQ 1	**Outdoor Air Delivery Monitoring**
1			1		EQ 2	**Increased Ventilation**
1	1				EQ 3.1	**Construction IAQ Management Plan**, During Construction
1			1		EQ 3.2	**Construction IAQ Management Plan**, Before Occupancy
1	1				EQ 4.1	**Low-Emitting Materials**, Adhesives & Sealants
1	1				EQ 4.2	**Low-Emitting Materials**, Paints and Coatings
1	1				EQ 4.3	**Low-Emitting Materials**, Flooring Systems
1	1				EQ 4.4	**Low-Emitting Materials**, Composite Wood &Agrifiber
1	1				EQ 5	**Indoor Chemical & Pollutant Source Control**
1	1				EQ 6.1	**Controllability of Systems**, Lighting
1	1				EQ 6.2	**Controllability of Systems**, Thermal Comfort
1	1				EQ 7.1	**Thermal Comfort**, Design
1			1		EQ 7.2	**Thermal Comfort**, Verification (in addition to EQc7.1)
1		1			EQ 8.1	**Daylight & Views**, Daylight 75% of Spaces
1	1				EQ 8.2	**Daylight & Views**, Views for 90% of Spaces

Innovation & Design Process — 6 Possible Points

Available	Targeted	Possible	Less Likely	Not Viable			
6	5	1					
Av.						Maximum of 3 Exemplary Performance	
1	1				ID 1.1	**Innovation in Design**	Exemplary Development Density
1	1				ID 1.2	**Innovation in Design**	Exemplary Public Transit Access
1	1				ID 1.3	**Innovation in Design**	Green Cleaning and IPM
1	1				ID 1.4	**Innovation in Design**	Low Mercury Lighting
1		1			ID 1.5	**Innovation in Design**	Exemplary Performance Green Power
1	1				ID 2	**LEED™ Accredited Professional**	

Regional Priorities — 4 Possible Points

Available	Targeted	Possible	Less Likely	Not Viable		
4	1	2	1			
1	1				RP 1	**Regional Priority** – SSc2 Development Density
1		1			RP 2	**Regional Priority** – EAc4 (3%/25%) Enhanced Refrigerant Management
1		1			RP 3	**Regional Priority** –MRc5 Regional Materials
1			1		RP 4	**Regional Priority** – MRc7 Certified Wood

Prepared by Viridian Energy & Environmental LLC

3.5 Urban Design Submission and Project Drawings

The figures and photographs that follow illustrate the Urban Design narrative. They include:

- Context Plan
- Context Photographs
- Context Studies
- Ground Floor Plan
- Second Floor Plan
- Tenth Floor Plan
- Roof Penthouse Plan
- Roof Plan
- East Elevation
- West Elevation
- North Elevation
- South Elevation
- Building Section Looking East-West
- Building Section Looking North-South

HAYWARD PLACE
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CONTEXT PLAN
JANUARY 25, 2011
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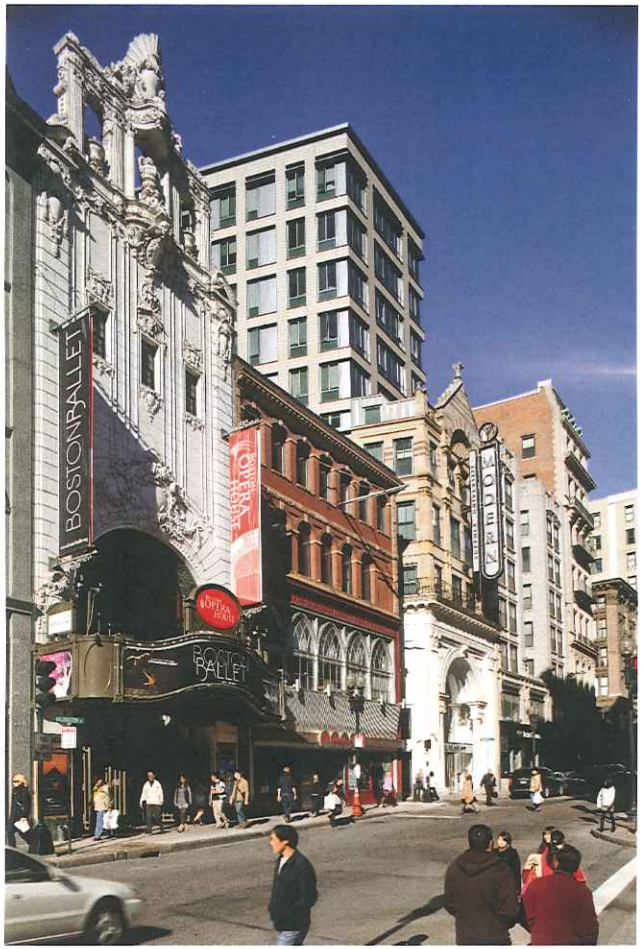
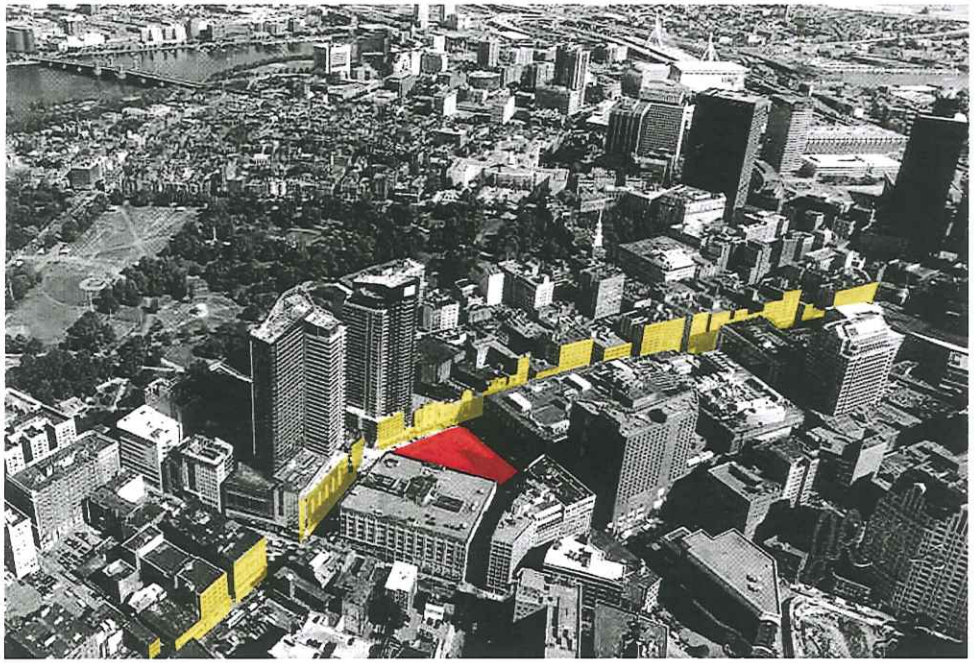

BOSTON BALLET
BOSTON BALLET


PARAMOUNT

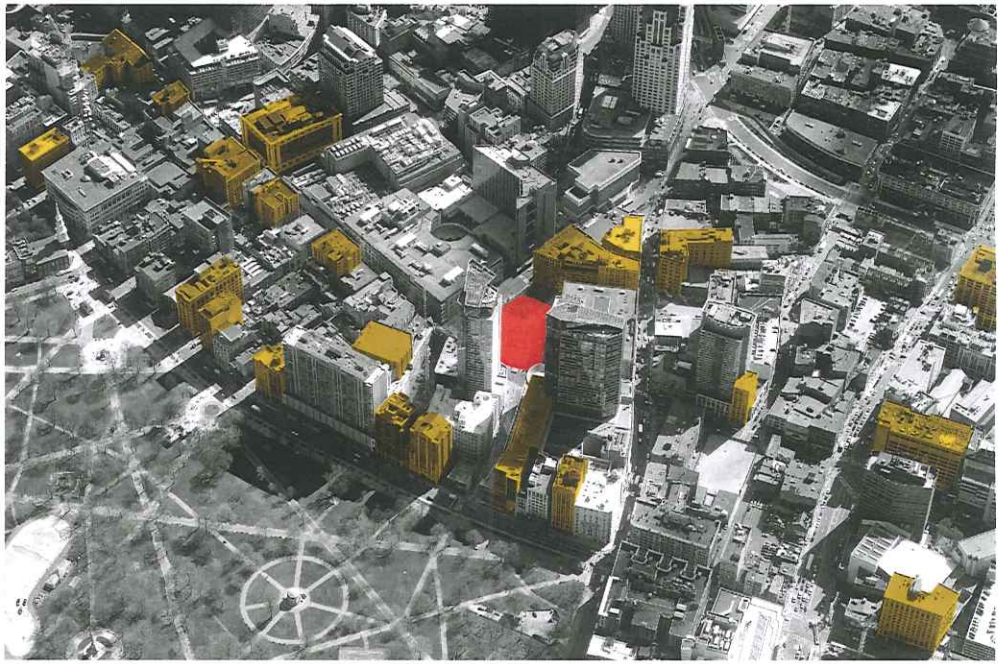

PARAMOUNT


PARAMOUNT
HYATT

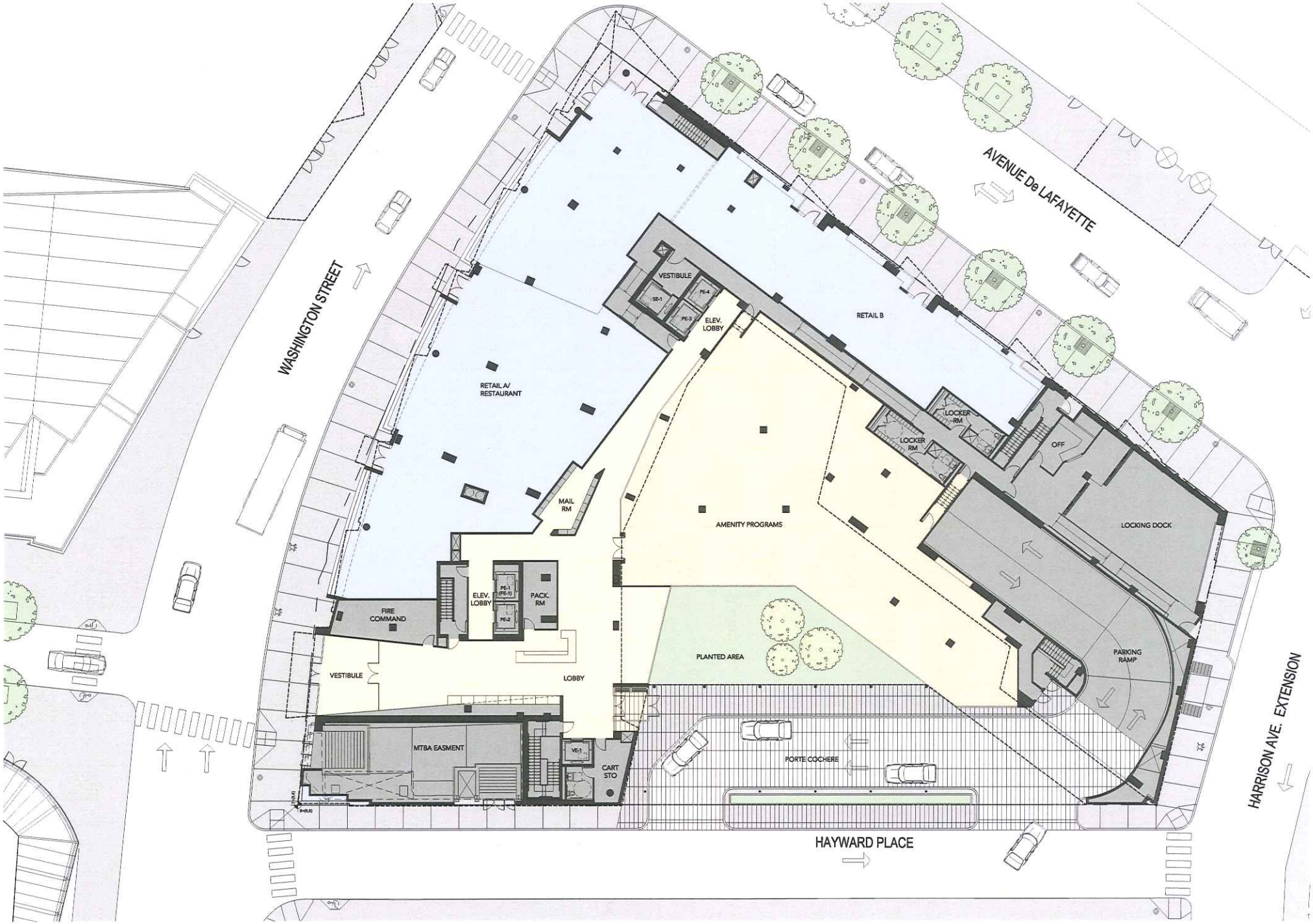
Washington Street Retail Facades



Streetwall Rhythm



130'-155' Height Context



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Ground Floor Plan

1/16"= 1'-0" JANUARY 25, 2011

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Second Floor Plan

1/16"= 1'-0" JANUARY 25, 2011

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Tenth Floor Plan

1/16"= 1'-0" JANUARY 25, 2011

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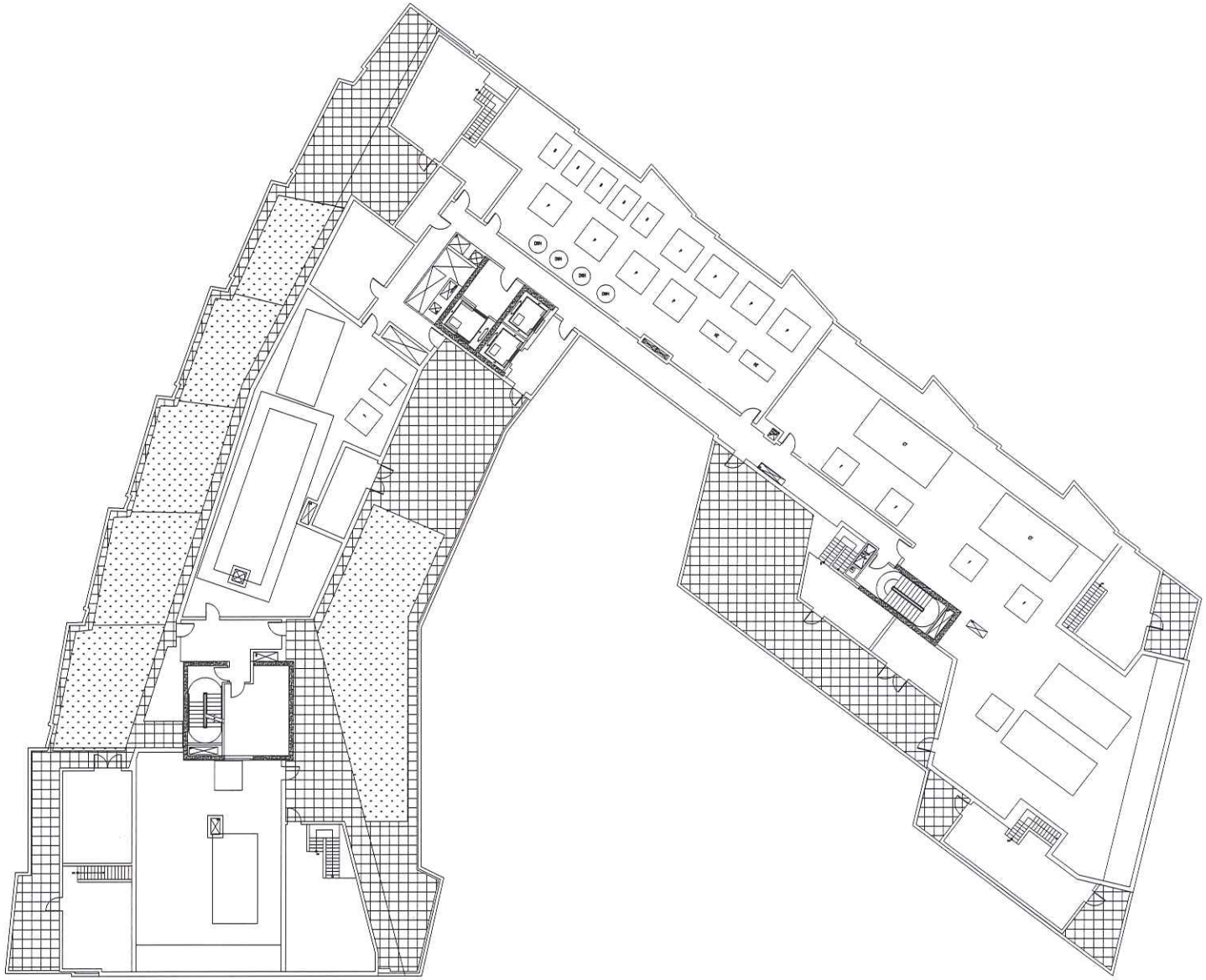

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Roof Penthouse Plan

1/16"= 1'-0" JANUARY 25, 2011

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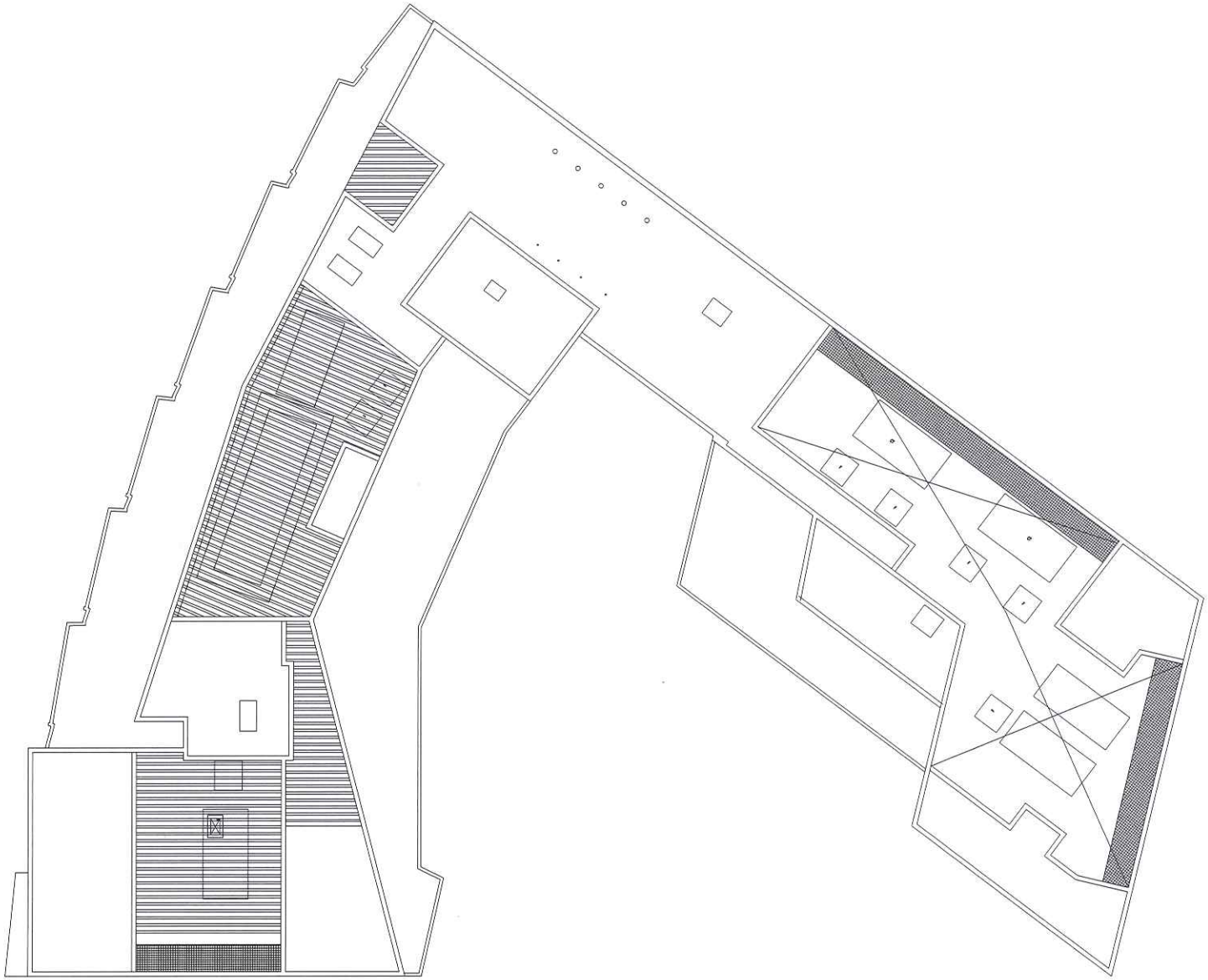

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Roof Plan

1/16"= 1'-0" JANUARY 25, 2011

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East Elevation

1/16" - 1'-0" JANUARY 25, 2011

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HAYWARD PLACE

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West Elevation

1/16" - 1'-0" JANUARY 25, 2011

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North Elevation

1/16" - 1'-0" JANUARY 25, 2011

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HAYWARD PLACE

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South Elevation

1/16" - 1'-0" JANUARY 25, 2011

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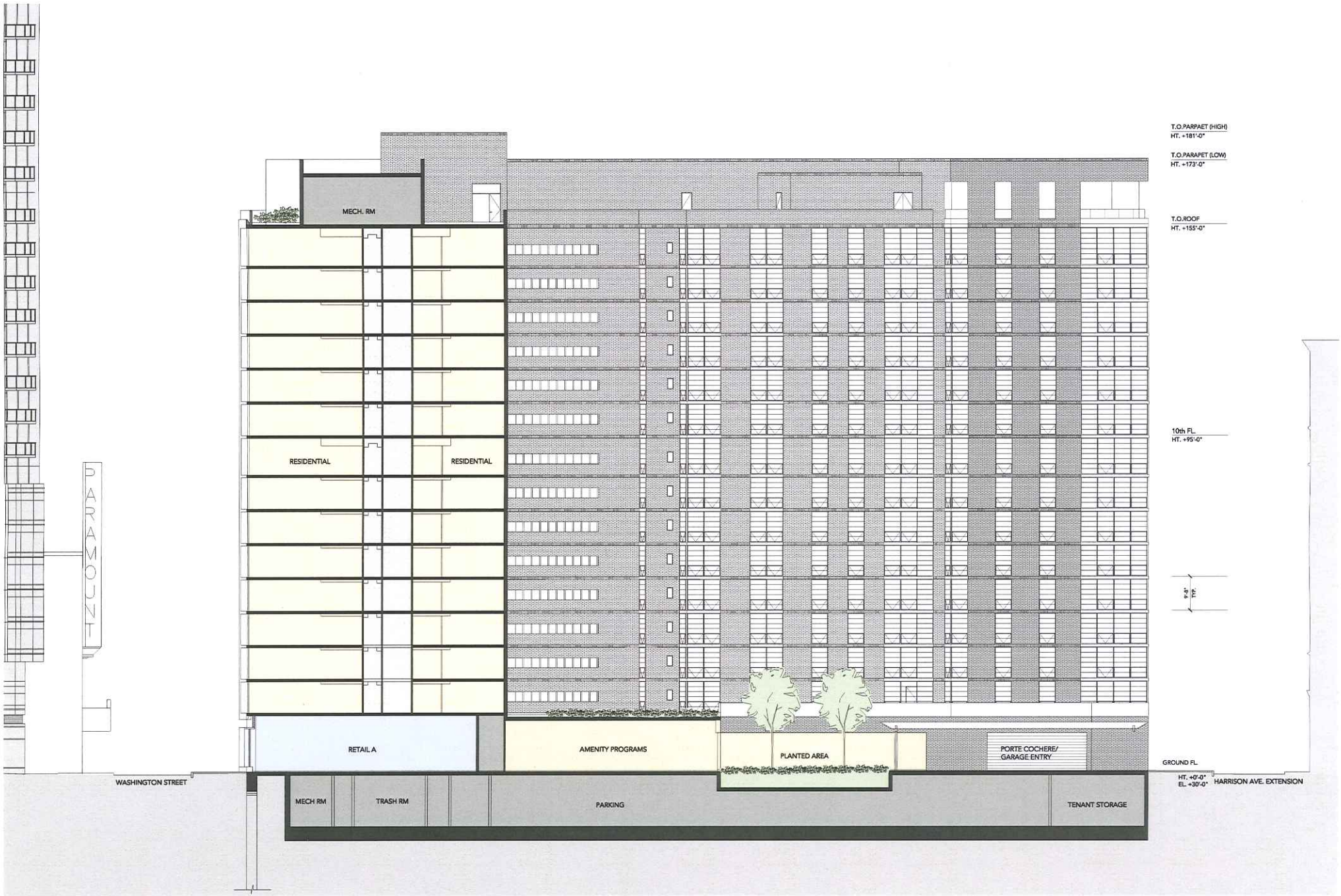

HAYWARD PLACE

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Building Section Looking East-West

1/16"= 1'-0" JANUARY 25, 2011

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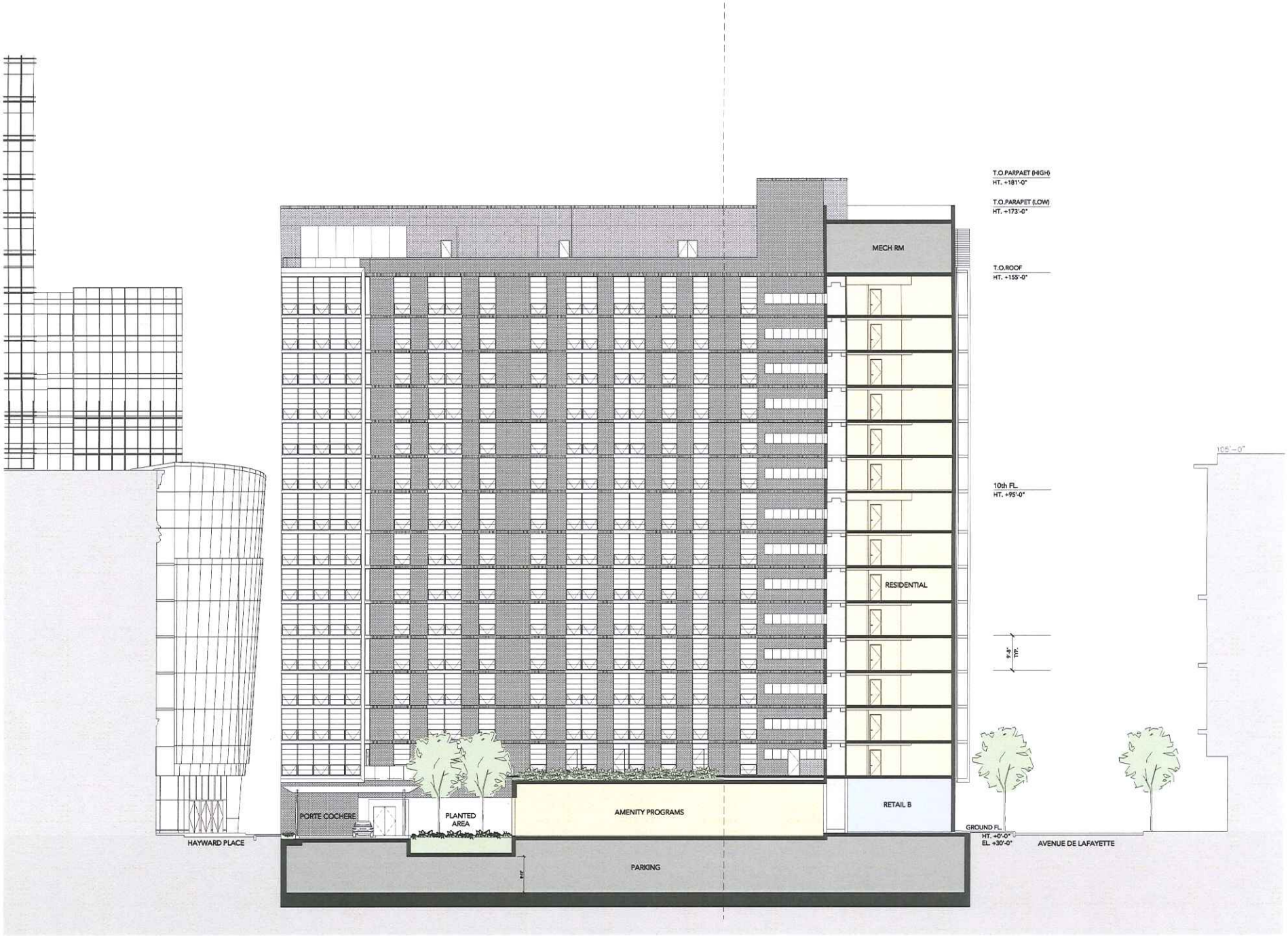

HAYWARD PLACE

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Building Section Looking North-South

1/16"= 1'-0" JANUARY 25, 2011

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4.0 ENVIRONMENTAL PROTECTION COMPONENT

4.1 Construction Impacts Analysis

The following section describes potential impacts that could result from the NPC Project's construction, outlines steps that will be taken to avoid or minimize those impacts, and provides an updated construction schedule. The Proponent will employ a construction manager that will be responsible for developing a construction phasing and staging plan and for coordinating construction activities with the appropriate regulatory agencies. The impacts of the NPC Project are slightly less than those of the Approved BRA Project since the foundations are only one level deep and not two levels as was formerly the case.

A Construction Management Plan ("CMP") will be submitted to the Boston Transportation Department ("BTD") for approval prior to the start of construction. The CMP commits the Proponent to specific mitigation measures and staging plans to minimize impacts to abutters and neighbors. In addition, the Project's geotechnical consultant will provide consulting services associated with foundation design recommendations, prepare geotechnical specifications, and review the construction contractor's proposed procedures. Also, the Boston Public Improvements Commission and Boston Transportation Department will approve any major measures such as temporary street closings and utility relocations.

4.1.1 Proposed Construction Activities

The Project requires demolition of the existing surface parking lot and below grade excavation in order to construct the foundation and parking garage beneath the proposed building. Excavation is not expected to have significant impacts for the following reasons:

- Excavation will proceed substantially within the confines of the site property;
- Excavated material will be transported in covered trucks to off-site facilities such as landfills, recycling/treatment facilities, or other approved off-site locations. Some small quantities of "clean" excavated soils may be re-used locally on-site;
- Appropriate measures will be taken to minimize impact on subsurface utilities and to protect the adjacent MBTA Orange line tunnel.

Preliminary environmental testing performed for the DPIR in 2003 indicated low levels of certain chemical constituents in site soils typical of urban fill in the Boston area (e.g. "Boston brown"). The planned excavation and removal activity, a commonly employed practice in the Boston area, will result in the removal of these soils.

The construction period for the Project is expected to last approximately 22 to 24 months. Typical construction hours will be from 7:00 A.M. to 6:00 P.M., Monday through Friday. Weekend and night activity may occur as a way of minimizing the construction duration and

therefore impact on vehicular and pedestrian traffic, or may also occur under other special and limited circumstances only. **Table 4.1** contains the preliminary construction schedule for the Project.

Table 4.1: Proposed Construction Schedule	
Excavation/Foundation*	Months 1 – 8
Superstructure*	Months 8 – 15
Building Interior*	Months 10 – 22
Punch List/Close-Out*	Months 22 – 24

*Some overlap of activity may occur

4.1.2 Construction Practices

The Proponent will comply with applicable state and local regulations governing the construction of the Project. Pre-construction planning will engage surrounding neighbors. Construction Staging Areas

Specific construction timing and staging details for each phase of construction will be reviewed with BTD. The Proponent and the building's construction manger will work to ensure that staging areas are located to minimize impact to pedestrians and vehicular flow. Secure fences and barricades with site lighting will be used to isolate the Project Site. The erection of the building's structural elements will be accomplished using both cranes and scaffolding. Cranes and hoists will be located within closed areas of sidewalks and adjacent street lanes. These provisions will be included in the Construction Management Plan. Staging area on streets will be designed and located so as not to have significant effects on vehicular or pedestrian circulation.

Staging will not occur on any land belonging to abutters unless approved in the CMP, and on other than on sidewalks or streets if approved in advance by the City. Contractors will not stockpile fill, equipment or materials, including pipe, overnight or on weekends on any public property or ways unless approved in advance by the City.

Signage will include construction manager contact information with emergency contact phone numbers.

Pedestrian Traffic Management

Since the Project Site occupies a full city block, it is anticipated that all sidewalks immediately adjacent to the Project Site will be closed to pedestrian traffic. Pedestrian traffic will be re-routed to the opposite side of the adjoining streets at existing crosswalks. The crosswalks on Washington Street, Avenue de Lafayette, Harrison Avenue extension, and Hayward Place that lead to the property will be removed during construction. A portion of Avenue de Lafayette and Harrison Avenue extension adjacent to the Project Site may be closed for equipment loading and

unloading, as approved by advance by the City and as to be described in the Construction Management Plan. Police details will be provided as necessary to facilitate traffic flow. Best Management Practices

Best Management Practices for the control of erosion and the discharge of sediment to water bodies during construction will be followed. Typically this will include the use of filter fabrics around catch basins, stabilization of all slopes, the use of washers for wheels on construction vehicles, and mechanical street sweeping around the Project Site and proximate streets.

Recycling of Construction and Demolition Debris

To the extent possible, the Proponent will take an active role to assure the reprocessing and recycling of construction waste, including asphalt. The disposal contract will include specific requirements to ensure that construction procedures allow for the feasible segregation, reprocessing, reuse, and recycling of materials. Solid waste that cannot be recycled, will be transported in covered trucks to an approved solid waste facility, per DEP's Regulations for Solid Waste Facilities, 310 CMR 19.00. This requirement will be specified in the disposal contract.

4.1.3 *Transportation Impacts During Construction*

Trip Generation and Worker Parking

The number of workers required during the construction period will vary, with an estimated average daily work force ranging from approximately 25 workers during the excavation and foundation period to as many as 200 workers during the peak of construction. Because of the accessibility of the Project Site to public transportation, the majority of construction personnel will be able to arrive at the job site by MBTA trains and/or buses. Workers who drive to the job will park at off-site lots. Construction contracts will specify that workers are not to park on local residential streets or at nearby meter spaces.

The Proponent is willing to meet with representatives of neighborhood associations to detail monitoring of traffic conditions or other construction mitigation to be considered. This will be finalized after further discussions with the BRA, BTD, and neighborhood representatives.

Truck Routes and Volumes

Construction truck traffic will not use Avery Street or residential streets in Chinatown, and early morning construction activity will be strictly limited, subject to the approval of the Boston Transportation Department. Trucks will access the Project Site primarily from major highways and primary streets including the Massachusetts Turnpike and the Central Artery (I-93), and Washington and Essex Streets. Once construction contractors are identified, the Proponent will commit to the specific truck routes in its Construction Management Plan, to be submitted to Boston Transportation Department. Maps showing approved truck routes will be provided to all subcontractors, and exclusive use of the approved routes will be specified.

Deliveries of material will be scheduled to avoid peak traffic periods in order to minimize traffic impacts. Truck traffic will vary throughout the construction period, depending on the activity. The frequency of material deliveries will range from about 5 trucks/day during typical periods up to 15 trucks/day during the peak periods.

4.1.4 Construction Air Quality and Mitigation

Construction activities have the potential to generate fugitive dust, which will result in a localized increase of airborne particle levels. Fugitive dust emission from construction activities depends on such factors as the properties of the emitting surface (e.g. moisture content), meteorological variables, and construction practices employed.

To reduce emission of fugitive dust and minimize impacts on the local environment, the construction contractor will adhere to several strictly enforceable mitigation measures. These include:

- Wetting agents will be used regularly to control and suppress dust that may come from construction materials;
- All trucks transporting construction debris, soils, or other potentially dusty material will be fully covered;
- Storage of construction debris on-site will be kept to a minimum. This debris will be covered if it appears to be generating significant levels of dust;
- Actual construction practices will be monitored to ensure that unnecessary transfers and mechanical disturbances of loose materials are minimized and to ensure that any emissions of dust are negligible; and
- Streets and sidewalks will be cleaned regularly to minimize dust accumulations.

Emissions from vehicles and machinery are a second potential source of construction-related air quality impacts. These emissions will be minimized by strictly enforcing the state's five-minute idle law for both vehicles and machinery.

Further, the Proponent will provide in its construction specifications that the contractors contact the Massachusetts Department of Environmental Protection ("DEP") to consider the Voluntary Diesel Retrofit Program ("VDRP") of the Massachusetts Clean Air Construction Impact Initiative ("CACI"). The VDRP is intended to offer contractors a cost-effective way to reduce adverse emissions from heavy-duty diesel powered construction equipment.

4.1.5 Construction Noise Impacts and Mitigation

Similar to the BRA Approved Project, construction of the NPC Project will not require a significant amount of noise producing construction equipment. Reasonable efforts will be made to minimize the noise impact of construction activities. Mitigation measures will include:

- Using appropriate mufflers on all equipment and maintaining equipment to minimize noise generation.
- Providing muffling enclosures on continuously running equipment, such as air compressors and welding generators.
- Replacing specific construction operations and techniques by less noisy ones where feasible (e.g., mixing concrete off-site instead of on-site).
- Placing stationary noise producing equipment as far away as possible from sensitive receptors, and to places where the building will shield the neighborhood from noisy equipment.
- Selecting the quietest of alternative items of equipment (e.g., electric instead of diesel powered equipment, hydraulic tools instead of pneumatic impact tools).
- Scheduling equipment operations to keep average levels low, to synchronize noisiest operations with times of highest ambient levels, and to maintain relatively uniform noise levels.
- Turning off equipment when not in use.
- Using as small a hydraulic ram as necessary for removing debris, and powering the ram only to the degree necessary to perform the work.
- Installing site barricades.

4.1.6 Other Potential Impacts

Rodent Control

The City of Boston enforces the requirements established under the Massachusetts State Sanitary Code, Chapter 11, 105 CMR 410.550. This policy establishes that the elimination of rodents is required for issuance of any building permits. During construction, rodent control service visits will be made by a certified rodent control firm to monitor the situation.

Utilities

During construction, existing utilities will be protected using sheeting and shoring, temporary relocation(s) and construction staging methods. The construction contractor will coordinate the protection of utilities with the affected utility company or appropriate agency.

Street opening permits and/or curb cut permits may be required. If these permits are needed, applications will be submitted for approval to the Boston Public Improvements Commission and reviewed with the Public Works Department and representatives of the utilities.

Coordination with Other Projects

The Proponent and construction manager will coordinate as needed with other projects that may be under construction at the same time, and that are in close proximity to the Project Site via the

CMP approval process by BTD, and similar street closing approval procedures via the Boston Public Improvements Commission.

As design progresses, at the time that the Proponent submits the CMP for approval, more details will be available on the timing and extent of construction activities such as truck deliveries. At the present time, it appears that the local street capacities are sufficient for the extent of the construction deliveries. It should also be noted that major deliveries are of limited duration.

5.0 TRANSPORTATION COMPONENT

5.1 Background

5.1.1 Draft Project Impact Report ("DPIR")

The March 2005 Draft Project Impact Report (DPIR) for Hayward Place contained a comprehensive transportation analysis by Howard/Stein-Hudson Associates, Inc ("HSH"). The development program as proposed in the DPIR included new construction of a 14-story building with 277 residential units, 19,000 square feet (sf) of retail on the ground floor, and up to three levels of underground parking, accommodating up to 225 parking spaces. The existing site consists of a 165-space parking lot with access and egress on Washington Street.

For the transportation section of the DPIR, HSH used Institute of Transportation Engineers' rates, Boston Transportation Department ("BTD") mode share data, 2000 US Census data, and national occupancy vehicle rates to develop trip generation, vehicle occupancy, and mode use estimates for the proposed development program.

Although the building program produced a relatively small number of vehicle trips, a detailed traffic analysis was completed for the DPIR. The recommended mitigation measures focused on the pedestrian environment in the vicinity of the site and included improvements to the sidewalks and crosswalks/accessibility ramps. Several transportation-related improvements are codified in the Transportation Access Plan Agreement ("TAPA") between the Proponent and the Boston Transportation Department, executed on December 5, 2007 for the BRA Approved Project.

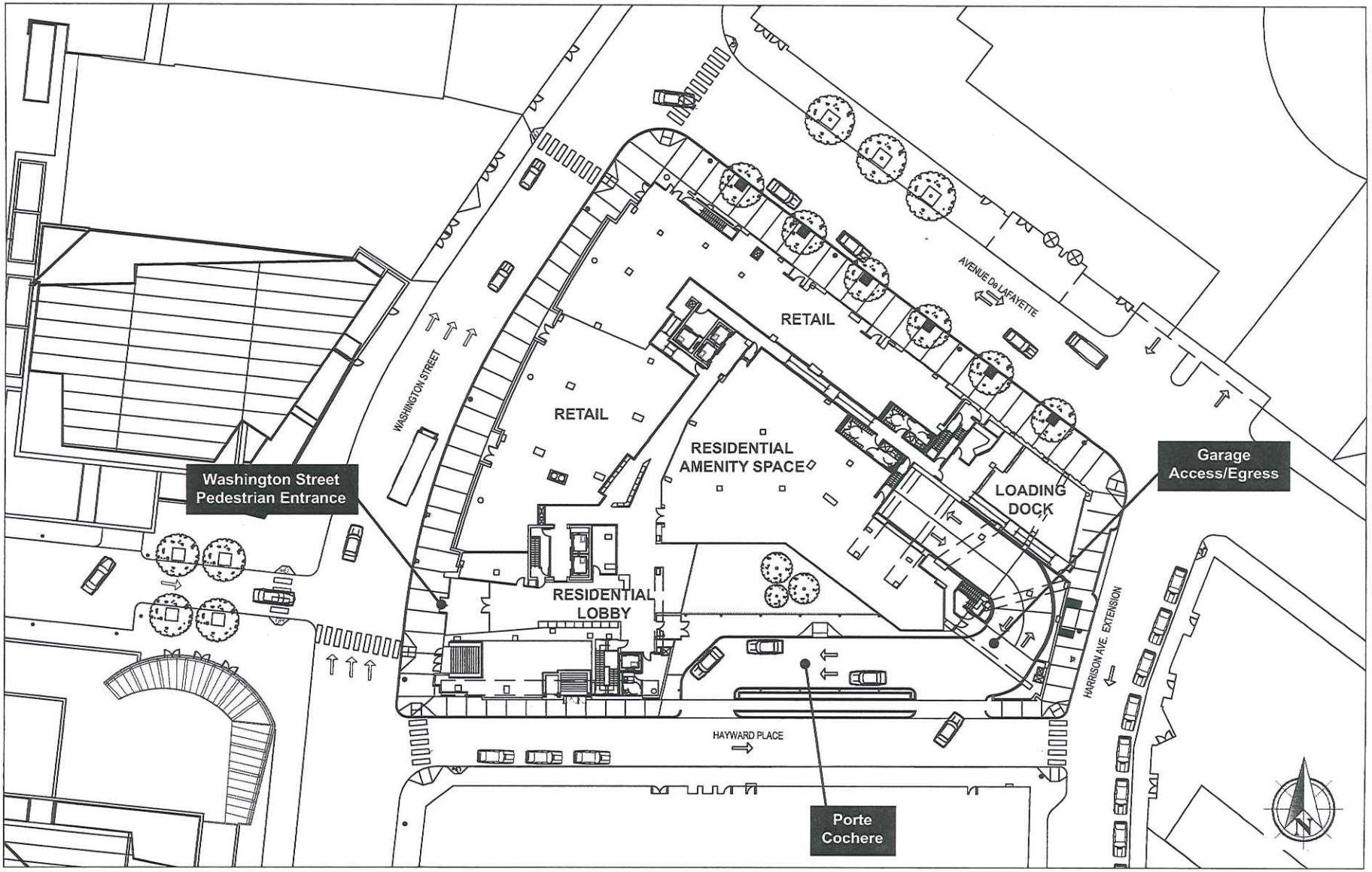
The DPIR program is herein referred to as the BRA Approved Project.

5.1.2 Notice of Project Change ("NPC")

The Proponent is currently proposing to construct a 14-story building with approximately 265 residential apartment units and 12,000 sf of ground floor retail. Up to 125 parking spaces will be provided on-site in an underground garage, with additional parking available off-site. The site plan is shown in **Figure 5-1.** This section of the NPC addresses transportation issues related to changes under the Proposed NPC Project including trip generation, vehicular access, pedestrian access, parking, loading and service, travel demand management, Transportation Access Plan Agreement ("TAPA"), Construction Management Plan ("CMP"), and Public Improvements Commission ("PIC").

The comparative building programs for the NPC and BRA Approved Projects are shown and compared in **Table 5.1**, which also outlines the existing conditions.

Figure 5-1. Site Plan



Howard/Stein-Hudson Associates, Inc.

Table 5.1. Building Program Comparison

	A	B	C	D = C minus B
Program Description	**Existing Parking Lot**	**DPIR: BRA Approved Project**	**NPC: Proposed Project**	**Change: NPC compared to DPIR**
Residential	0	277 condominium units	265 units	**-12 units**
Retail	0	19,000 sf	12,000 sf	**-7,000 sf**
Parking Spaces	165 on-site	225 on-site	Up to 125 on-site, with additional parking off-site	**-100 on-site**
Bicycle Parking (rack capacity)	0	45	250	**+205**

5.1.3 Trip Generation

Trip generation estimates for the BRA Approved Project were based on rates derived from ITE's *Trip Generation (*7th edition, 2003) average trip rates for land use codes (LUC) *LUC 230—Condominium/Townhouse, and LUC 820—Shopping Center/Retail.* The ITE rates produce vehicle trip estimates, which are then converted to person trips based on vehicle occupancy rates (VOR). Using appropriate mode split information for this area, the total person trips are then allocated to vehicle, transit, and walk trips.

Since the time of the DPIR filing, an updated version (8th edition, 2009) of the Trip Generation manual has become the industry standard for estimating trips. For the NPC, the updated version was used to estimate trips for *LUC 220—Residential Apartment and LUC 820—Shopping Center/Retail.*

The vehicle trip generation for the existing parking lot (obtained from vehicular traffic counts), the BRA Approved Project, and the Proposed NPC Project are compared in **Table 5.2.**

Table 5.2. Vehicle Trip Generation Comparison

	A	B	C	D = C minus B
Time Period	Existing Parking Lot	DPIR: BRA Approved Project[1]	NPC: Proposed Project	Vehicle Trip Change: NPC Compared to DPIR
Daily				
In	517	278	234	**-44**
Out	517	278	234	**-44**
Total	1,034	556	456	**-88**
a.m. peak				
In	45	8	7	**-1**
Out	4	25	25	**0**
Total	49	33	32	**-1**
p.m. peak				
In	20	30	27	**-3**
Out	29	20	16	**-4**
Total	49	50	43	**-7**

[1)] The DPIR Trip generation assumed a "highest impact case" scenario of 300 residential condominium units and 30,000 sf of retail.

As shown in Column D of **Table 5-2**, the NPC Project would result in 88 fewer daily vehicle trips as compared to the BRA Approved Project.. During the peak hours, there would be 1 fewer vehicle trip in the a.m. peak hour and 7 fewer vehicle trips in the p.m. peak hour.

Table 5-3 shows a similar comparison of transit trip generation for the existing parking lot, the BRA Approved Project and Proposed NPC Project. As shown in Column D, the difference between the BRA Approved Project and the NPC Project, transit trips would decrease by 88 over the day, decrease by 1 trip in the a.m. peak hour and decrease by 6 in the p.m. peak hour.

Table 5-4 similarly shows the walk trip generation for alternative programs. As shown in Column D, walk trips would decrease by 282 over the day, decrease by 2 in the a.m. peak hour and decrease by 22 in the p.m. peak hour.

Table 5.3. Transit Trip Generation Comparison

	A	B	C	D = C minus B
Time Period	Existing Parking Lot	DPIR: BRA Approved Project	NPC: Proposed Project	Transit-Trip Change: NPC compared to DPIR
Daily				
In	0	439	395	**-44**
Out	0	439	395	**-44**
Total	0	878	790	**-88**
a.m. peak				
In	0	12	12	**0**
Out	0	43	44	**-1**
Total	0	55	56	**-1**
p.m. peak				
In	0	49	46	**-3**
Out	0	30	27	**-3**
Total	0	79	73	**-6**

Table 5.4. Walk Trip Generation Comparison

	A	B	C	D = C minus B
Time Period	Existing Parking Lot	DPIR: BRA Approved Project	NPC: Proposed Project	Walk-Trip Change: NPC compared to DPIR
Daily				
In	621	701	560	**-141**
Out	621	701	560	**-141**
Total	1,242	1,402	1,120	**-282**
a.m. peak				
In	54	19	17	**-3**
Out	5	57	57	**-1**
Total	59	76	74	**-4**
p.m. peak				
In	24	74	64	**-10**
Out	35	51	39	**-12**
Total	59	125	103	**-22**

Existing walk trips are based on driver/passenger pedestrian activity using an automobile occupancy of 1.2 persons per vehicle.

5.1.4 Vehicular Access and Circulation

As shown in the NPC site plan (**Figure 5-1**), the porte-cochere will be used for all vehicular drop-off and pick-up activity and is located along Hayward Place. Hayward Place is currently a one-

way eastbound street connecting Washington Street to Harrison Avenue Extension. The garage driveway will be at the eastern end of the porte-cochere.

The porte-cochere will have one-way circulation, with vehicles entering from the eastern most curb cut (closest to Harrison Avenue Extension) and reversing direction to exit from the western curb cut (closest to Washington Street). The eastern most curb cut will allow for two-way traffic for vehicles to enter and exit the garage without traversing the porte-cochere.

As discussed in the parking management section below, the Project may require off-site parking, available in the immediate vicinity, to completely serve demand.

In order to minimize both travel time and local area traffic impacts, the Project will continue to seek to convert the portion of Harrison Avenue Extension between Avenue de Lafayette and Hayward Place to two-way vehicle operations. Allowing two-way travel on this segment also gives drivers with an alternative egress route which provides more direct access to Washington Street and, ultimately, other downtown arterials and regional facilities. This modification can be done within the cross-section as previously proposed which included widening the Harrison Avenue Extension sidewalk along the Project site. This circulation change was documented in the *Hayward Place – BTD Traffic Circulation Study, March 16, 2006* conducted by the Proponent as part of the mitigation commitments for the previously BRA Approved Project. This circulation change has been examined and was determined not to have any appreciable effect on traffic operations at local area intersections.

5.1.5 Pedestrian Access

The primary pedestrian access for residents will be located on Washington Street opposite Avery Street at the centroid of the Millennium Place Project. A secondary entrance will be located at the porte-cochere on Hayward Place. Access for the ground floor retail will be at several potential locations along both Washington Street and Avenue de Lafayette.

5.1.6 Parking Management

The Boston Transportation Department (BTD) has established parking space guidelines throughout the City to ensure that the proper parking capacity is provided with new buildings. The BTD recommended maximum parking ratio for residential use in the Downtown Crossing/Chinatown districts ranges between 0.50 – 1.0 parking spaces per unit. Current downtown Boston trends for parking demand at rental apartments range from 0.38 to 0.74, with an average of 0.50 spaces per apartment dwelling unit[1]. The parking ratio to be provided on-site at Hayward Place is 0.47 spaces per unit (125 spaces for 265 units). Provisions will be made to offer additional parking, should it be needed, at the Ritz-Carlton Garage, a facility owned and operated by the Project proponent, located across Washington Street from the site. Sufficient capacity exists at the Ritz-Carlton Garage, and other area garages, should capacity of the Hayward Place garage not meet the parking demand by this Project.

[1] Survey of property owners/managers, HSH, Summer 2010.

The on-site parking garage will be a single level below-grade facility and have a capacity of up to 125 spaces. The garage will be mainly for valet parking and consist of single spaces, tandem spaces, and stacker spaces. Parking will be allowed for residents, guests, and employees at the Hayward Place Project. Residents and employees will have key card or transponder garage access and drop-off and pick-up their vehicles by valet attendant directly on the garage level. Guests will be required to use the porte-cochere for garage valet service.

5.1.7 Loading and Service Access

The loading dock is located on Harrison Avenue Extension adjacent to the intersection of Avenue de Lafayette. An SU-36 (single-unit, 36-foot-long truck), equivalent to a trash truck, is the design vehicle used for the truck turning diagrams for loading dock operations. Larger-sized vehicles are not expected. Urban loading docks are actively managed, and most deliveries are scheduled—allowing building management to dictate the size of the delivery truck, if necessary.

As shown in **Figure 5-1**, the loading dock consists of two loading bays and an area for a trash compactor. Loading Bay 1 has the capacity to handle an SU-30 size vehicle (single unit, 30 foot-long truck) with Loading Bay 2 able to provide for the SU-36 design vehicle. Trucks will access the loading dock by backing in from Hayward Place while smaller delivery vehicles can pull into the loading dock and back out.

Based on research of the National Cooperative Highway Research Program (NCHRP)[2] and on Boston specific data, the Proposed NPC Project is expected to generate about 9 truck deliveries/day. Building management will encourage all loading and service activities to occur during off-peak times of traffic with most deliveries anticipated between 7:00 a.m. and 1:00 p.m., or, on average, about 1 to 2 trucks per hour during this period.

The designated loading area on Harrison Avenue Extension will be sufficient to handle the loading demands of the Project. Certain quick deliveries, such as prepared food (pizza, etc.), can, and probably will, occur at the porte-cochere, particularly after normal business day activities. Permanent "No Idling" signs will be posted in the loading areas.

5.1.8 Mitigation and Travel Demand Management

The Proponent remains committed to the traffic mitigation components and travel demand management ("TDM") measures documented in the Transportation Access Plan Agreement ("TAPA") signed by the Proponent and the Boston Transportation Department (BTD) on December 5, 2007 for the BRA Approved Project. Specific mitigation measures include:

- Repairing and/or reconstructing the sidewalks adjoining the Project Site;
- Installing crosswalks and associated accessibility ramps at the Project Site;

[2] Truck Trip Generation Data—Synthesis 298. National Cooperative Highway Research Program (NCHRP) and Transportation Research Board. 2001.

- Removing the traffic signal equipment at the Washington Street and Avery Street intersection (since submission of the TAPA, the Proponent has studied this intersection with BTD and has determined that this traffic signal is no longer warranted, should not be upgraded, and should be removed, and the Proponent has agreed to implement this mitigation.) Pedestrian crosswalks will remain;
- Installing streetscape improvements including street lights, street trees and public bicycle racks along sidewalks adjoining the Project Site;
- Maintaining the existing Chinatown Station emergency exit within the envelope of the new building;
- Installing a pan-tilt zoom camera at a nearby intersection location. (The TAPA had identified the installation of a PTZ camera at the intersection of Washington Street and Avery Street.);
- Improving and upgrading the accessibility ramps and traffic signal equipment at the Essex Street/Chauncy Street intersection; and
- Conducting a traffic circulation study of the immediate Project area for the BTD. *(This study has been completed, and the submission to BTD on March 16, 2006 constituted satisfaction of this obligation.)*

The Proponent will implement a TDM strategy and intends to emphasize the Project's excellent pedestrian and transit access in its marketing, sales, and leasing efforts. On-site management will provide transit information (schedules, maps, fare information) in the building lobbies for residents and guests. On-site management will also work with tenants as they move in to raise awareness of public transportation options.

Because the Project is primarily residential, its trip generation is already lower than that of an office or larger retail use project. TDM will be facilitated by the nature and location of the proposed Project. The site's proximity to workplaces, shopping, and transit will help reduce auto use by visitors and residents alike. The Proponent is committed to implementing a TDM program that supports the City's efforts to reduce dependency on the automobile by encouraging travelers to use alternatives to driving alone, especially during peak time periods through the following TDM commitments listed below:

- Proponent will become a member of the local Transportation Management Association within 6 months of issuance of a Certificate of Occupancy;
- Proponent will offer a "guaranteed ride home" and encourage ridesharing /carpooling for building employees and commercial tenants through participation in the TMA;
- Proponent will designate a Transportation Coordinator to manage TDM commitments and building loading and service activities;

- Proponent will make available a 50 percent subsidy of an MBTA subway pass to each residential unit for the first six months of residency;
- Proponent will encourage retail tenants to provide 50% subsidy of an MBTA pass to employees; and
- Proponent will provide orientation packets to new residents containing information on the available transportation choices, including transit routes and schedules.

5.1.9 Transportation Access Plan Agreement ("TAPA")

A TAPA was signed by the Proponent and the City of Boston on December 5, 2007 for the BRA Approved Project. For the NPC, the Proponent will submit an amendment to the TAPA for review and approval by the Boston Transportation Department. This amendment will codify the specific measures, mitigations, and agreements between the Proponent and the City of Boston through its agent, the Boston Transportation Department, for the current Proposed NPC Project.

5.1.10 Construction Management Plan

The Proponent will produce a Construction Management Plan (CMP) for review and approval by BTD. The CMP will detail the schedule, staging, parking, delivery, and other associated impacts of the construction of the project.

5.1.11 Public Improvement Commission

Certain streetscape improvements along Washington Street, Avenue de Lafayette, Harrison Avenue Extension, and Hayward Place will require additional Public Improvement Commission ("PIC") review and approval.

6.0 INFRASTRUCTURE SYSTEMS COMPONENT

6.1 Introduction/Agency Coordination

This section presents an updated evaluation of the NPC Project's impact on the capacity and adequacy of the various existing utility systems. Existing utility systems in the Project area are shown on **Figure 6-1**. As the Project design progresses, the Proponent will continue to maintain contact and coordination with the various agencies and utility owners regarding the details of the service connections to the new building. Required permits and proposed mitigation and conservation measures are discussed, below, for each of the infrastructure systems. The Proponent has already secured a license to construct a temporary earth retention system and temporary support of subsurface construction from the Boston Public Improvements Commission (September 6, 2007).

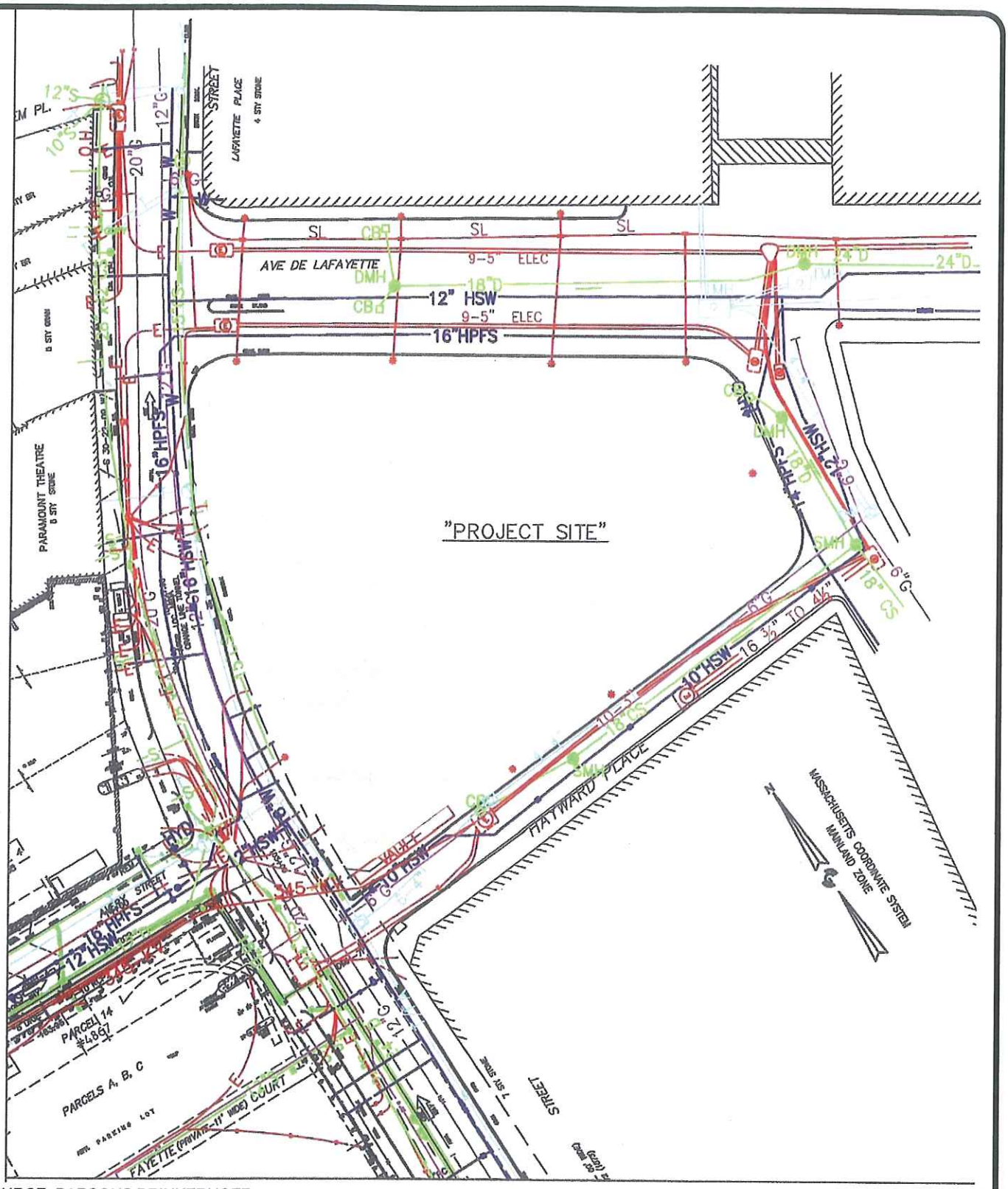
Similar to the evaluation for BRA Approved Project, the existing utility systems surrounding the Project Site have adequate capacity to handle the utility demands of the NPC Project.

6.2 Sanitary Sewer System

6.2.1 Existing Sewer System

There are two combined sewers in Washington Street, located on either side of the MBTA Orange Line Train Tunnel. There is a 28-inch x 42-inch combined sewer on the west side of the tunnel and a 15-inch combined sewer on the east side of the tunnel, adjacent to the Project Site. Both combined sewers flow north toward Summer Street. There is an 18-inch combined sewer in Hayward Place that flows toward Harrison Avenue extension and then south toward Essex Street. According to Boston Water and Sewer Commission ("BWSC") records, there are no sanitary or combined sewer facilities in either Avenue de Lafayette or the section of Harrison Avenue extension between Avenue de Lafayette and Hayward Place. However, there is a 12-inch sanitary sewer in Avenue de Lafayette on the east side of Harrison Avenue extension. This sewer flows toward Chauncy Street. The sanitary sewer system ultimately connects to the Deer Island Wastewater Treatment Plant, where it is treated and discharged to Boston Harbor.

The sewer services adjacent to the Project Site are shown on **Figure 6-2**.



SOURCE: PARSONS BRINKERHOFF

NOT TO SCALE

TETRA TECH

www.tetratech.com

One Grant Street
Framingham, MA 01701
PHONE: 508-903-2000 FAX: 508-903-2001

Drawing Description

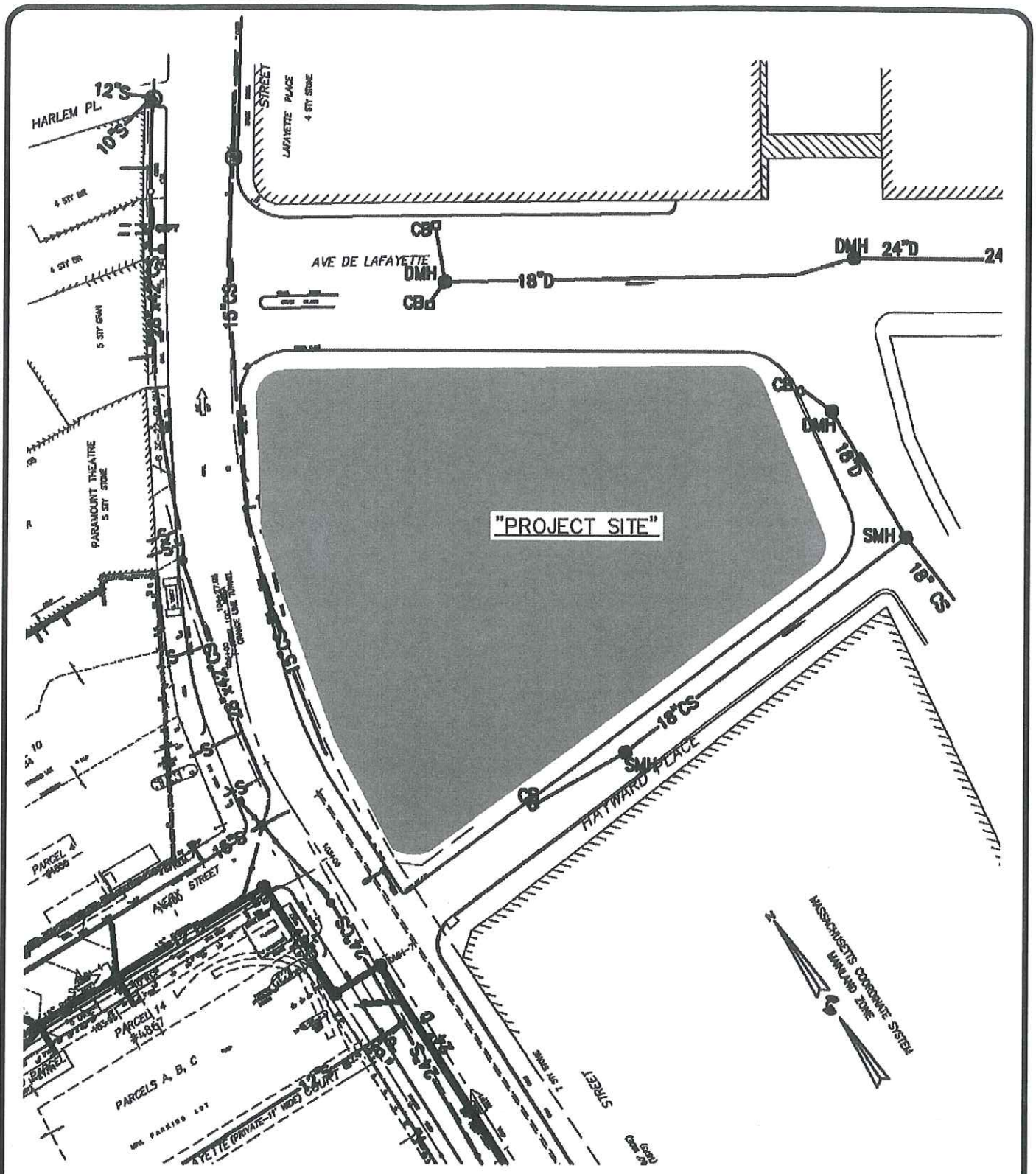
Composite Existing Utilities

Hayward Place
Boston, Ma

Project No.:	127-27070-11001
Date:	1-27-2011
Designed By:	

Figure

6-1



SOURCE: PARSONS BRINKERHOFF

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TETRA TECH
www.tetratech.com
One Grant Street
Framingham, MA 01701
PHONE: 508-903-2000 FAX: 508-903-2001

Drawing Description

Existing Sewer & Storm Drain Plan

Hayward Place
Boston, Ma

Project No.:	127-27070-11001
Date:	1-27-2011
Designed By:	

Figure

6-2

6.2.2 Sewer System – NPC Proposed Conditions

As shown in **Table 6.1**, the total sewage generation from the NPC Project is estimated to be approximately 59,780 gallons per day, based on 310 CMR 15.203 (Title V). This compares to 74,000 gpd for the BRA Approved Project.

Table 6.1: Estimated Av. Daily Sewer Flow, NPC Project

	Units		Rate per unit	Estimated Average Flow GPD
NPC Project Build				
Residential: 261 units *(76 – bedroom; 130 – 2 bedroom; 55 – 3 bedroom)*	501	Bedrooms	110	55,110
Retail Space, 10,400 GSF (Net) *(assume Restaurant)*	52	Seats	35	1,820
Subtotal				56,930
Parking Garage *(5% of subtotal)*				2,850
Total				***59,780***

Sanitary sewage discharge is expected to connect to the existing 15-inch combined sewer in Washington Street using a new sanitary connection to the main. The sanitary connection will be separate from the storm drain connection.

The Massachusetts Department of Environmental Protection ("DEP") will require a Sewer Connection Permit because the sewage flow is above 50,000 gpd. New sewer connections will conform to BWSC standards and specifications. The Proponent will also submit a General Service Application and Site Plan to the BWSC for review and approval.

6.2.3 Sewer Capacity Analysis

There will be no change for the NPC Project from the BRA Approved Project.

The capacity of the existing 15-inch combined sewer in Washington Street is approximately 3 cfs (cubic feet per second) or 1,400 gpm (gallons per minute). Since there is no current sewer load from the existing Project Site, this line only picks up one catch basin near the corner of Washington Street and Hayward Place. As the following calculation indicates, the 15-inch combined sewer is more than adequate for the proposed sanitary sewer flows from the Project Site, even without sewer separation.

Table 6-2: Sewer Capacity Calculation, NPCProject		
Contribution	**Flow (gpm)**	**Comments**
Existing catch basin	200	10-year storm
Project Site	155	Using the NPC Project converted to gpm with peaking factor of 3.0
Total Flow in 15"	355	
Capacity of 15"	1,400	

The existing 15-inch combined sewer in Washington Street currently has adequate capacity to handle the Project sewer demand. The DPIR analysis shows that no mitigation is required for this Project. Notwithstanding that the Proponent will provide new, appropriately-sized, separate storm drains in Washington Street and in Hayward Place, as requested by EOEA in the DPIR scoping document, to contribute to on-going infrastructure maintenance and upgrading and to ease further "smart-growth" development in central Boston. This will eliminate the 200 gpm from the existing catch basin. With separation, the only sewage contribution to the 15-inch line will be from the Project Site. The total flow in the 15-inch line will be 155 gpm as compared to the capacity of 1,400 gpm. The existing 15-inch combined sewer in Washington Street will then have an even greater margin of adequate capacity to handle the Project sewer demand. Final analysis of the sewer capacity calculation will be reviewed with BWSC prior to project approval.

This new storm drain proposed as mitigation will be approximately 300 linear feet of 15-inch diameter pipe.

6.2.4 *Sewer Conservation and Mitigation Measures*

The NPC Project, similar to the BRA Approved Project, incorporates the following measures:

- *Conservation*: To help conserve water and reduce the amount of wastewater generated by the Project, it is anticipated that water conservation devices such as low-flow toilets and flow-restricting showerheads and faucets will be used within the building.
- *Garage Oil/Water Trap*: Massachusetts Water Resources Authority ("MWRA")-approved oil water separators (traps) will be used for all storm drainage from the parking garage, in accordance with the BWSC's Requirements for Site Plans, so that hydrocarbons and other contaminants are collected prior to discharge to the BWSC sanitary sewer system. These devices will be approved through the MWRA permit process.
- *Grease Trap*: Any restaurant, as well as any cafeteria or food service facility built as part of this Project will require the use of grease traps prior to discharge to the BWSC system, in accordance with the Commission's Sewer Use Regulations.

- *I/I Reduction*: In accordance with the BWSC request and State DEP policy to have new development projects provide funding for the reduction of sewer infiltration/inflow (I/I), the Proponent will comply by providing a portion of the funding for one of the planned I/I reduction programs developed by the Boston Water and Sewer Commission.

6.3 Water Supply System

6.3.1 Existing Water Service

The BWSC has a 16-inch cast iron main in Washington Street, a 12-inch cement-lined ductile iron ("CLDI") main in Avenue de Lafayette, and 10-inch cast iron mains in both Hayward Place and Harrison Avenue extension. All of these mains are inter-connected on the high service ("HS") system and form a water distribution loop around the Project Area. BWSC records indicate that the 16-inch HS in Washington Street was installed in 1906 and cement-lined in 2000. The 12-inch CLDI main in Avenue de Lafayette was installed in 1983. The 10-inch unlined cast iron mains in Hayward Street and Harrison Avenue extension were installed in 1905 and 1902 respectively.

Existing water service in the area is shown on **Figure 6-3**.

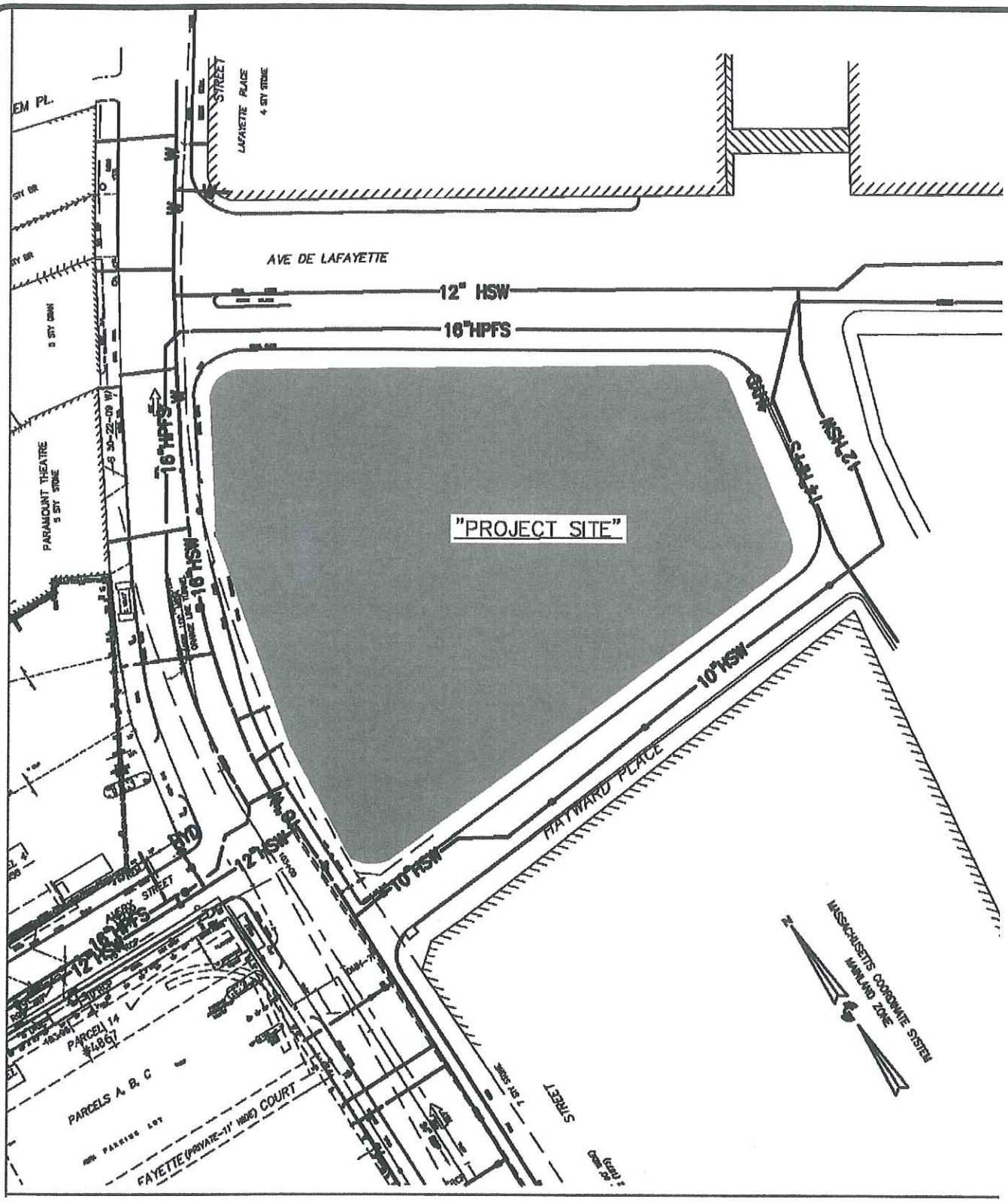
This figure shows two abandoned services stubs into the Project Site from Washington Street. In accordance with BWSC standards, these lines will be cut and capped at the main.

6.3.2 Proposed Water Service

Water consumption is based on sewage generation with an added factor of 10% for system losses plus requirements for the Project's cooling system. Based upon the projected sewage generation shown in **Table 6.3**, it is estimated that the Project will require from approximately 66,000 gpd to 81,000 gpd of water, depending on the program of office, residential and retail use. This total includes an estimated volume of air conditioning make-up water of 13,000 to 16,000 gpd.

Table 6.3: Estimated Average Daily Water Consumption- NPC Project

110% of Average Sewer Flow	65,760 gpd
Air Conditioning Make-up Water	15,000 gpd
Total	**80,760 gpd**



SOURCE: PARSONS BRINKERHOFF

NOT TO SCALE

TETRA TECH

www.tetratech.com

One Grant Street
Framingham, MA 01701
PHONE: 508-903-2000 FAX: 508-903-2001

Drawing Description

Existing Water & Fire System Plan

Hayward Place
Boston, Ma

Project No.:	127-27070-11001
Date:	1-27-2011
Designed By:	

Figure

6-3

Domestic water and fire service will be provided from the existing 16-inch high-service water main in Washington Street, a 12-inch high service main in Avenue de Lafayette and 10-inch high service mains in Hayward Place and Harrison Avenue extension.

Preliminary discussions with BWSC have indicated more than adequate capacity in the water supply system to serve the Project. Flow tests will be performed for final design of the proposed building fire suppression system during the detailed design phase. New water services will conform to BWSC standards and specifications. The Proponent will also submit a General Service Application and Site Plan to the BWSC for review and approval.

6.3.3 Water Supply Conservation and Mitigation Measures

The State Building Code requires the use of water-conserving fixtures. To help conserve water and reduce the amount of wastewater generated by the Project, it is anticipated that water conservation devices such as low-flow toilets and flow-restricting showerheads and faucets will be used within the building. Sensor-operated faucets and toilets will be used in any public restrooms.

Water service to the building will be metered in accordance with the BWSC's Site Plan Requirements. The Proponent will provide for the connection of the meter to the BWSC's automatic meter reading system. The property owner will provide a meter interface unit ("MIU"), approved by the BWSC and mounted near the meter, a telephone line and jack near the meter, and an outside meter reading device.

A backflow preventer will be installed on the water services. Water supply systems servicing the Project will be gated so as to minimize public hazard or inconvenience in the event of a water main break.

Fire protection connections for the Project will need approval by the Fire Chief. The Proponent will also submit a General Service Application and Site Plan to the BWSC for review and approval.

6.4 Storm Drainage System

6.4.1 Existing Storm Drainage

Storm drainage for the Project Site is provided by an existing 18-inch storm drain in Avenue de Lafayette, an 18-inch combined sewer in Hayward Place, plus the combined sewers in Washington Street, described under **Section 6.2.1**. The 18-inch storm drain in Avenue de Lafayette flows east to a storm drain manhole at the intersection of Harrison Avenue extension and Avenue de Lafayette. This storm drain manhole has two outlet pipes. A 24-inch storm drain continues east in Avenue de Lafayette, toward Chauncy Street, and an 18-inch storm drain runs south in Harrison Avenue extension, where it connects with the 18-inch combined sewer in Hayward Place. Both of these lines eventually reach the New East Side Interceptor in Atlantic

Avenue. The combined sewer line in Harrison Avenue extension reaches Regulator 065-2 at Atlantic Avenue and Kneeland Street where wet weather overflows discharge to the Fort Point Channel at outfall BOS 065, while dry weather flow reach the East Side Interceptor. The East Side Interceptor drains to the New Boston Main Interceptor, which drains to the Calf Pasture Pump Station, with flows ultimately going to the Deer Island Treatment Plant.

In addition to these storm drains, there is a 24-inch RCP storm drain in the west side of Washington Street, which originates in Avery Street as an 18-inch RCP, and flows south toward Essex Street. This storm drain was constructed as part of the Millennium Place Project. This line connects to the existing combined sewer in Washington Street, which also eventually drains the East Side Interceptor and Deer Island, as described above.

The Project Site consists essentially of impervious surfaces, mostly an open-air paved parking lot and an MBTA subway exit structure. The existing Project Site presently does not recharge any runoff.

The existing storm drain services adjacent to the project site are shown on **Figure 6-3**.

6.4.2 Proposed Storm Drainage

The NPC Project, similar to the BRA Approved Project, will reduce the peak rate of runoff from the Project Site (See **Table 6.4**). The existing site is entirely paved and drains to the surrounding streets. The Project will feature a landscaped "green roof," which will significantly reduce the quantity of roof drainage.

Following is an estimated summary of the existing and proposed site runoff. Because the "green roof" is not designed at this point, it is not possible to know the exact runoff from the roof. Therefore, the final storm drainage analysis will be reviewed with BWSC prior to project approval. In very small storms, it is likely there may be no runoff from the planted roof areas. In larger storms, a portion of the rainfall will be retained while a portion will be discharged. For the proposed condition, the anticipated runoff is indicated as a range. When the detailed design is performed on the "green roof," the runoff calculations can be refined.

Table 6.4: Existing vs. Proposed Runoff

Storm Event	Existing Runoff (cfs)	Proposed Runoff (cfs)
10-year	4.1	0.9 to 2.7
25-year	4.5	1.0 to 3.0
100-year	5.6	1.3 to 3.8

The NPC Project will have a storm drain connection to the 18-inch storm drain in Avenue de Lafayette using a new piped connection. The storm drain connection will be separate from the sanitary sewer connection. The 18-inch line has a capacity of approximately 8 cfs. Two catch basins currently contribute approximately 2.3 cfs to this line in a 10-year storm. Adding in the maximum proposed runoff from the roof, the total flow would be 5 cfs, compared to the 8 cfs capacity. Therefore this line is adequate to accept storm flow from the Project Site.

Besides the new connection for site drainage, the Proponent will also provide new, appropriately-sized, separate storm drains in Washington Street and in Hayward Place, as requested by EOEA in its Certificate on the ENF.

Any new catch basins installed by the NPC Project will be standard BWSC catch basins with deep sediment sumps and traps. In the four streets surrounding the Project Site, existing structures to remain will be cleaned of debris. As all the existing catch basins connect directly or indirectly to **a** combined sewer, they will have already been fitted with traps which prevent sewer gas venting. Therefore, the existing catch basins to remain will not need to be retrofitted with traps. If not already in place in the sidewalks surround the Project Site, BWSC plaques will be installed at catch basins that bear the warning "Don't Dump – Drains to Boston Harbor."

The Proponent will also submit a General Service Application and Site Plan to the BWSC for review and approval.

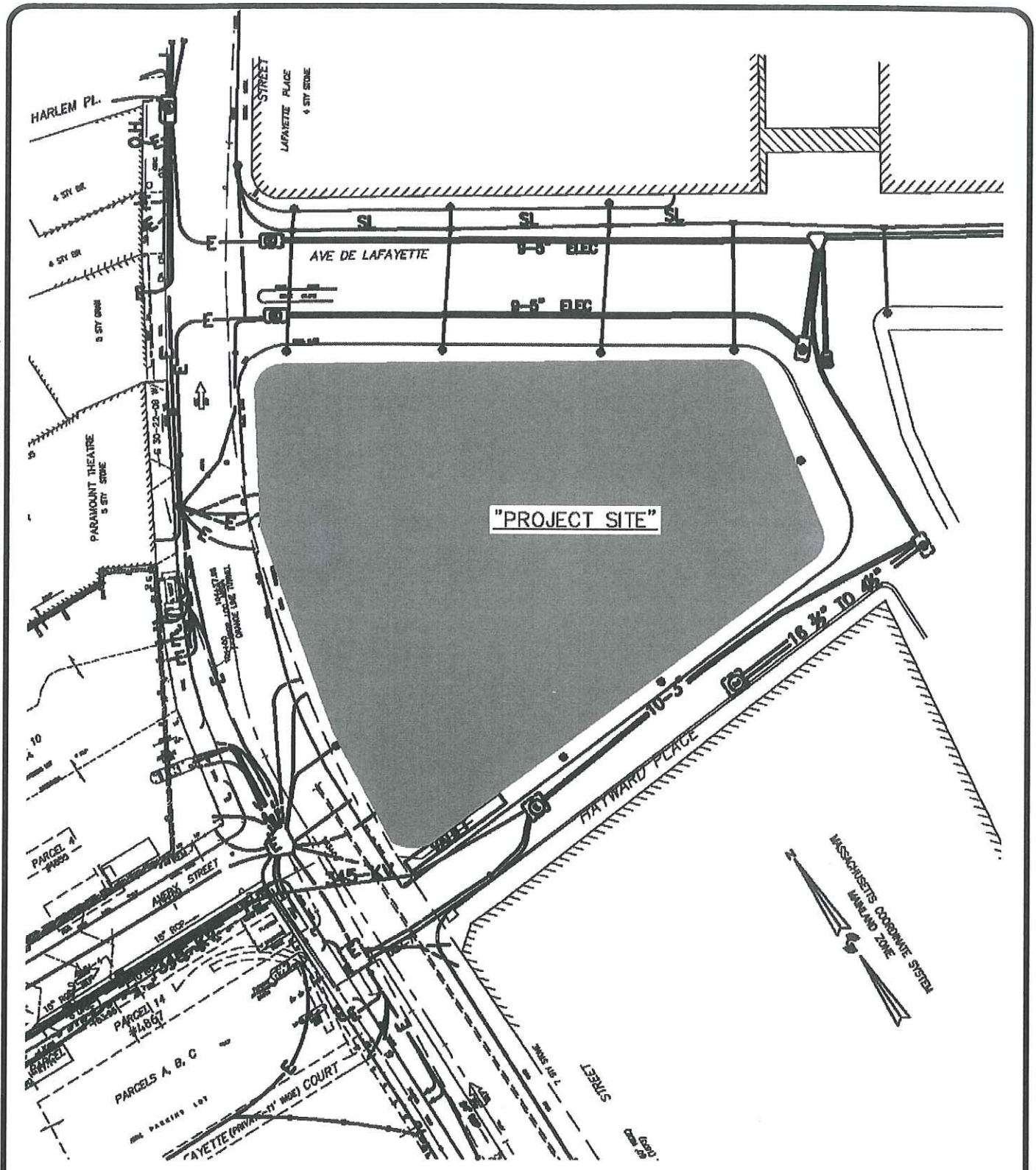
6.5 Electrical Systems

Electrical service to the Project Site will be provided from the electrical transmission system within Washington Street, Avenue de Lafayette, Harrison Avenue extension, and Hayward Place, which is maintained by NStar.

Existing electrical service in the area is shown on **Figure 6-4**. The electrical demand is estimated as 4,500 kW.

It is proposed that the Project be served via transformers installed in a vault in the building or underneath an adjacent sidewalk. Consequently, transformer placement or other pads or vaults required for electrical distribution ventilation are not expected to disrupt pedestrian paths or public improvements in the vicinity or abutting the Project Site.

It is anticipated that NStar can provide electrical services for this Project from the ductbanks surrounding the Project Site. Local power comes from nearby Substation 415 at Kingston Street. It is anticipated that the building service will be tapped-off from one of the existing NStar duct lines in Avenue de Lafayette.



SOURCE: PARSONS BRINKERHOFF

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TETRA TECH
www.tetratech.com
One Grant Street
Framingham, MA 01701
PHONE: 508-903-2000 FAX: 508-903-2001

Drawing Description
Existing
Electrical Plan

Hayward Place
Boston, Ma

Project No.:	127-27070-11001
Date:	1-27-2011
Designed By:	

Figure
6-4

6.6 Gas Systems

National Grid Energy provides natural gas service in the Project area. There are existing 12-inch and 20-inch gas lines in Washington Street and a 6-inch gas main in Harrison Avenue Extension. It is anticipated that National Grid will provide gas service to the Project Site from one of the existing gas lines in Washington Street. Existing gas service in the area is shown on **Figure 6-5**.

Natural gas is expected to be used for space heating and domestic hot water. Estimated peak demands are 20 M BTU.

Based on the size of the gas mains in Washington Street, it is anticipated that National Grid can provide the necessary gas services to meet the NPC Project demand.

6.7 Telephone and Cable Systems

Verizon New England provides telephone service in the Project area. There are existing telephone manholes and telephone lines in all four streets surrounding the Project Site. Approximately ten manholes are available for future service connections. All the telephone facilities in this area are underground and consist primarily of copper and fiber-optic cables. It is anticipated that Verizon can provide telephone service to meet the needs of the Project.

Comcast (formerly AT&T Broadband and previously Cablevision of Boston), and RCN provide cable service in the Project area. It is anticipated that Comcast and/or RCN will provide cable to the Project Site from its existing vaults and cable lines.

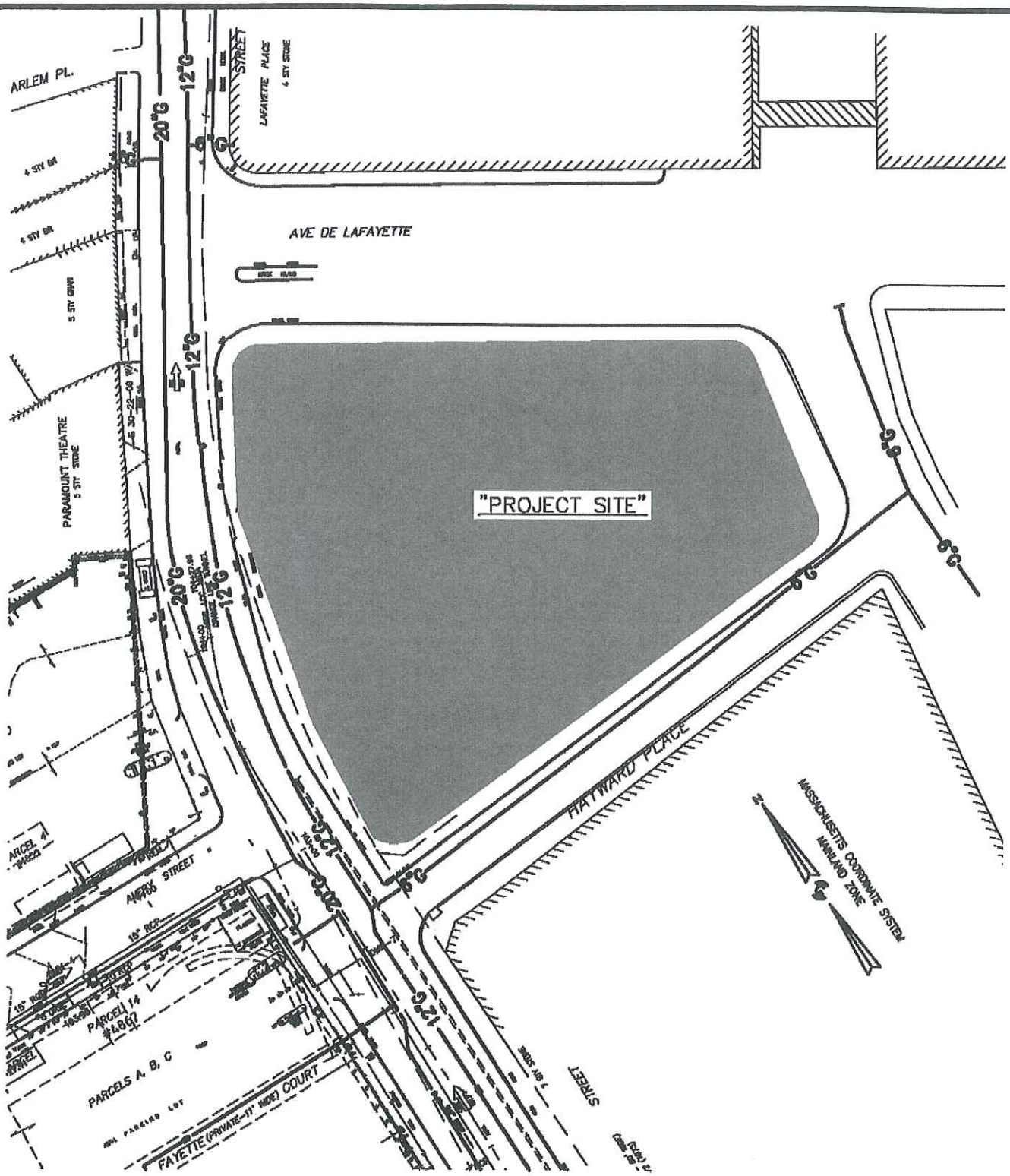
Existing telephone and cable service in the area is shown on **Figure 6-6**.

6.8 Steam Systems

There are no steam services in this immediate area and it is not proposed that steam be used to service this building.

6.9 Utility Protection During Construction

During construction, utilities will be protected using sheeting and shoring, temporary relocations, and construction staging as required. The contractor will be required to coordinate all protection measures, temporary supports, and temporary shutdowns of all utilities with the appropriate utility owners and/or agencies. The contractor will also be required to provide adequate notification to the utility owner prior to any work commencing on its utility. Also, in the event a utility cannot be maintained in service during switchover to a temporary or permanent system, the contractor will be required to coordinate the shutdown with the utility owners and Project abutters to minimize impacts and inconveniences accordingly.



SOURCE: PARSONS BRINKERHOFF

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TETRA TECH

www.tetratech.com

One Grant Street
Framingham, MA 01701
PHONE: 508-903-2000 FAX: 508-903-2001

Drawing Description

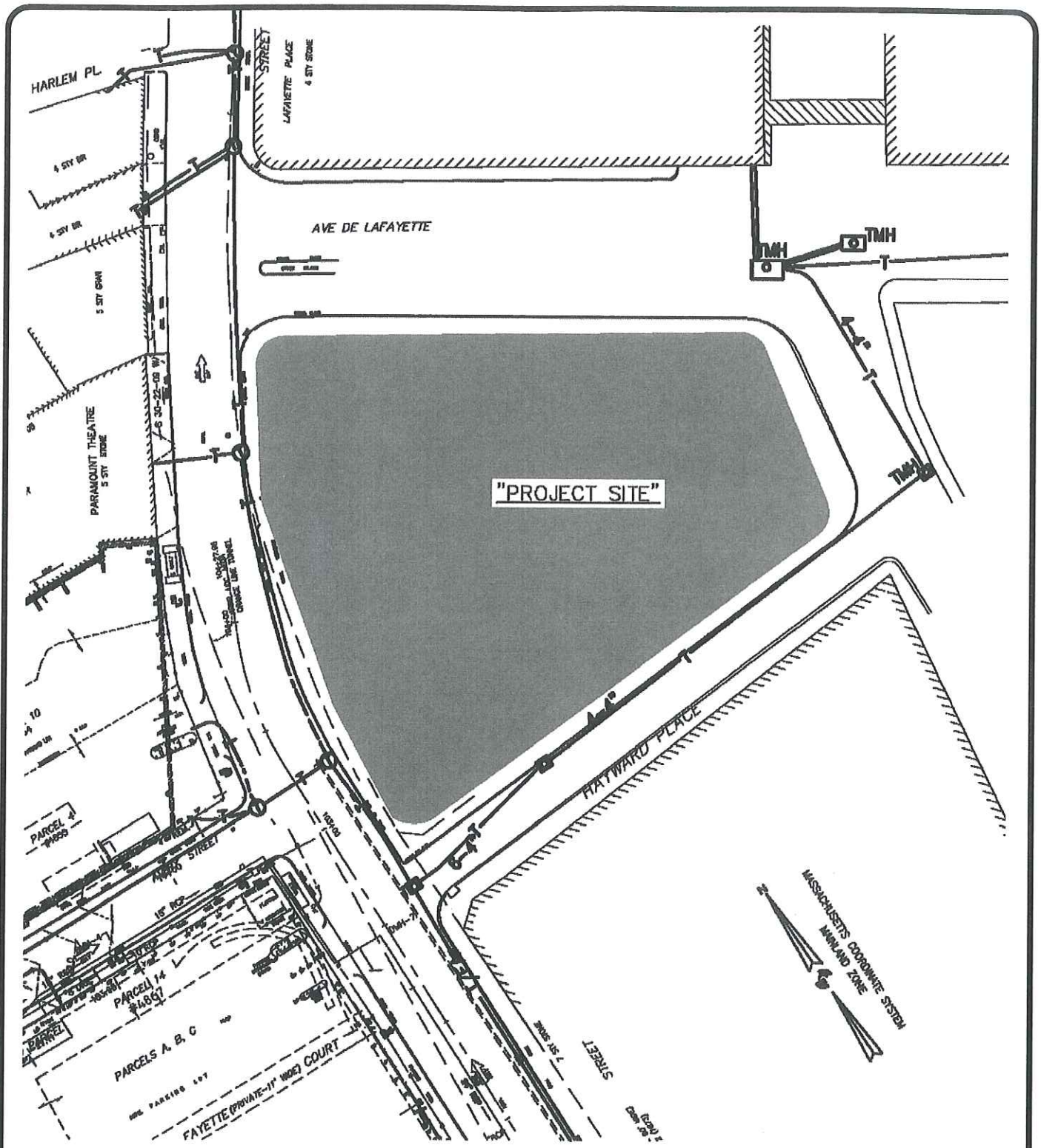
Existing Natural Gas Plan

Hayward Place
Boston, Ma

Project No.:	127-27070-11001
Date:	1-27-2011
Designed By:	

Figure

6-5



SOURCE: PARSONS BRINKERHOFF

NOT TO SCALE

TETRA TECH
www.tetratech.com
One Grant Street
Framingham, MA 01701
PHONE: 508-903-2000 FAX: 508-903-2001

Drawing Description
Existing Telephone Plan
Hayward Place
Boston, Ma

Project No.: 127-27070-11001
Date: 1-27-2011
Designed By:

Figure
6-6

Appendix B

Appendix B **BZA Extension of Appeal No. 28570, dated November 17, 2009, and original BZA decision, dated December 4, 2007**

DLA Piper LLP (US)
33 Arch Street, 26th Floor
Boston, Massachusetts 02110-1447
www.dlapiper.com

John E. Rattigan, Jr.
john.rattigan@dlapiper.com
T 617.406.6057
F 617.406.6157

October 20, 2009

VIA HAND DELIVERY

City of Boston
Board of Appeal – Office of the Board of Appeal
1010 Massachusetts Avenue, 4th Floor
Boston, Massachusetts 02118
Attention: Derric Small

BOARD OF APPEALS
2009 OCT 20 A 10:42

Re: 580 Washington Street, Boston, MA (Hayward Place)

Dear Mr. Small:

On behalf of my client Millennium Hayward, LLC (the "Appellant"), the developer of the project known as Hayward Place and located at 580 Washington Street, Ward 3 (the "Project"), I am writing to request that the Zoning Board of Appeal (the "Board") grant an extension of the zoning decision for the Project (BZC # 28570) (the "Decision") through the Board as Final Arbiter process for one (1) year to December 24, 2010. A copy of the Decision is attached as Exhibit A to this letter.

Appellant filed an Application for Permit No. 07-1950 with the Inspectional Services Department on December 12, 2006. The Inspectional Services Department rejected the Application by refusal letter dated January 2, 2007 (revised on June 25, 2007 and July 3, 2007) and attached as Exhibit B to this letter on account of the need for the zoning relief described therein. The Appellant filed an appeal on July 17, 2007 and the Board voted to grant the relief requested on October 30, 2007. The Decision was filed with the Commissioner of the Inspectional Services Department on December 24, 2007. Pursuant to Articles 6A and 7 of the Boston Zoning Code, the Decision will lapse if not used within two (2) years of such filing, on December 24, 2009.

As I am sure you are aware, these are challenging times for large scale real estate development projects in Boston and in the Downtown Crossing neighborhood particularly, and the Project has not been immune to the severe decline in the market for new residential and retail development. Although the Appellant has made significant progress toward construction of the Project – all final design and construction documents were complete and contractors well into the final bidding of subcontracts prior to the severe decline in the marketplace for construction financing – the difficulty of securing adequate financing continues to impede the Appellant's efforts to move forward. Consequently, no building permit has been granted for the Project.

DLA PIPER

The Appellant continues to work diligently towards the ultimate completion of the Project. However, it is unlikely that work will commence within the next six (6) months. In order to prevent the Decision from lapsing, the Appellant requests that the Board act as a final arbiter and grant an extension of the Decision for one (1) year.

Please feel free to contact me should you have any questions or require any further information. Many thanks for your attention to this matter.

Very truly yours,

John E. Rattigan, Jr.

Enclosures
EAST\42563336.5
358326-00000

This is not a Permit.
Permit must be obtained
from the Commissioner
Inspectional Servi...

NOV 17 2009

Board Final Arbiter.
At its regularly scheduled hearing date of November 17, 2009, the Board of Appeal members sitting for this appeal voted to approve an extension of the decision until December 24, 2010.

SIGNED

CHRISTINE ARAUJO-SECRETARY

ANGELO BUONOPANE

PETER CHIN

BRUCE BICKERSTAFF

MICHAEL MONAHAN

ANTHONY PISANI-AIA

ROBERT SHORTSLEEVE-CHAIRMAN

A True Copy,
Attest

DERRIC SMALL
Principal Administrative Asst.

CITY OF BOSTON

BOARD OF APPEAL

OFFICE OF THE BOARD OF APPEAL

October 30, 2007
DATE

Decision of the Board of Appeal on the Appeal of

The Boston Redevelopment Authority

to vary the terms of the Boston Zoning Code, under Statute 1956, Chapter 665, as amended, Section 8, at premises:

580 Washington Street, Ward 3

in the following respect: Variance

Article(s): 38(38-19.1(6) 38(38-19.2) 38(38-19.3) 38(38-19.4 (b) 38(38-19.4)

Erect two-hundred residential units, retail stores, restaurant and a garage.

In his formal appeal, the Appellant states briefly in writing the grounds of and the reasons for his appeal from the refusal of the Building Commissioner, as set forth in papers on file numbered BZC-28570 and made a part of this record.

In conformity with the law, the Board mailed reasonable notice of the public hearing to the petitioner and to the owners of all property deemed by the Board to be affected thereby, as they appeared on the then most recent local tax lists, which notice of public hearing was duly advertised in a daily newspaper published in the City of Boston, namely:

THE BOSTON HERALD on Tuesday, October 9, 2007

The Board took a view of the petitioner's land, examined its location, layout and other characteristics.

The Boston Redevelopment Authority was sent notice of the appeal by the Building Department and the legal required period of time was allotted to enable the BRA to render a recommendation to the Board, as prescribed in the Code.

After hearing all the facts and evidence presented at the public hearing held on Tuesday, October 30, 2007 in accordance with notice and advertisement aforementioned, the Board finds as follows:

The Appellant appeals to be relieved of complying with the aforementioned section of the Boston Zoning Code, all as per Application for Permit #07-1950dated, December 12, 2006 and plans submitted to the Board at its hearing and now on file in the Building Department.

DN

CITY OF BOSTON

BOARD OF APPEAL

OFFICE OF THE BOARD OF APPEAL

Decision of the Board of Appeal on the Appeal of

Alignment can be measured. Avenue de Lafayette does not comply with Section 19.1(b) as applied to the adjacent 99 Chauncy Street building due to the location of the Property's lot line along Avenue de Lafayette. Therefore, the Project cannot comply with Section 19.1(b) due to its alignment with the surrounding blocks. In accordance with Section 6A of the Code, the Appellant requested that the Board of Appeal grant an exception from Section 19.1(b) so that the Project can proceed as designed.

2. Article 38, Section 19.2. Section 19.2 of Article 38 of the Code provides a Street Wall Height requirement in the District. As a result of the Article 80 review process, review with Boston Civic Design Commission and consultation with the community, the Project has been designed to contain three distinct tower elements to facilitate light and air reaching the street level around the Property. This design feature pushes the three elements to the edges of the Project, therefore causing the Project to exceed the Street Wall Height requirement. In accordance with Section 6A of the Code, the Appellant requested that the Board of Appeal grant an exception from Section 19.2 so that the Project can proceed as designed.

3. Article 38, Section 19.3. Section 19.3 of Article 38 of the Code provides Display Window Area regulations. The Project complies with these regulations along Washington Street. The Project does not comply with the Display Window Area regulations along Hayward Place due to the MBTA Orange Line easement for the existing head house located on Hayward Place, the porte cochere drop off area and the garage entry for the Project. The drop off area and garage entry have been designed to be internal to the site to minimize traffic disruptions along the street. The Project does not comply along Harrison Avenue Extension due to the internal garage ramp and the loading area which were also designed to minimize traffic disruptions off of the Property site. The Project complies along approximately eighty percent (80%) of Avenue de Lafayette, but twenty percent (20%) is impacted by the Project's loading area. The Project cannot therefore comply with the Display Window Area regulations at certain points around the Building. In accordance with Section 6A of the Code, the Appellant requested that the Board of Appeal grant an exception from Section 19.3 so that the Project can proceed as designed.

4. Article 38, Section 19.4(a). Section 19.4(a) of Article 38 of the Code provides Sky Plane Setback requirements. As a result of the Article 80 process and work within the community, the Project has been designed as three distinct elements to facilitate light and air reaching the street level of the Project. These three distinct elements have been shifted to the

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OFFICE OF THE BOARD OF APPEAL

Address: 580 Washington Street, Ward 3
BZC - 28570
Date of Hearing: October 30, 2007
Permit Application No. 07-1950

Decision of the Board of Appeal on the Appeal of

exterior edges of the property to allow light and air to penetrate this full block site. Due to this design feature, the Project does not meet with Sky Plane Setback requirements at the points at which the three elements are located. In accordance with Section 6A of the Code, the Appellant requested that the Board of Appeal grant an exception from Section 19.4(a) so that the Project can proceed as designed.

5. Article 38, Section 19.4(b). Section 19.4(b) of Article 38 of the Code provides that above 125 feet the average gross floor area per floor of separate elements of a proposed project will not exceed 22,500 gross square feet and no single floor shall exceed 25,000 square feet. The average Project floor plates above 125 feet in each of the Project's three elements are 8,033 square feet, 7,805 square feet, and 9,966 square feet, each well below the requirement, but in the aggregate the floor plates for the three elements total 25,804 square feet, which is above the 22,500 square foot threshold. The three elements and their sizes were developed to achieve the objective of this requirement, by creating three smaller elements rather than a single, bulky building. These floor plates allow for the design to facilitate a more open site that will permit light and air to penetrate the Building and the Property. Since the three elements are connected at the base, they may not be considered to be separate elements for purposes of this requirement, so in accordance with Section 6A of the Code, the Appellant requested that the Board of Appeal grant an exception from Section 19.4(b) so that the Project can proceed as designed.

6. Article 38, Section 19.4(d). Section 19.4(d) of Article 38 of the Code provides requirements for Corner Conditions for Corner Lot Buildings. The Project cannot meet these requirements due to the MBTA Orange Line easement for the existing head house that is located adjacent to the Property, the need for functional retail frontage on Lafayette and Washington Streets, the off-street loading requirements for the Project and the internal porte-cochere drop-off area that facilitates the flow of traffic along Hayward Place. In accordance with Section 6A of the Code, the Appellant requested that the Board of Appeal grant an exception from Section 19.4(d) so that the Project can proceed as designed.

The Board of Appeal finds that all of the following conditions are met:

(a) That there are special circumstances or conditions, fully described in the findings, applying to the land or structure for which the requested relief is sought (such as, but not limited to, the exceptional narrowness, shallowness or shape of the lot, or exceptional topographic conditions thereof), which

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circumstances or conditions are peculiar to such land or structure but not the neighborhood, and that said circumstances or conditions are such that the application of the provisions of this Code would deprive the Appellant of the reasonable use of such land or structure; and

(b) That for reasons of practical difficulty and demonstrable and substantial hardship, fully described in the findings, the granting of the requested relief is necessary for the reasonable use of the land or structure and that the variance as granted by the Board is the minimum variance that will accomplish this purpose; and

(c) That the granting of the requested relief will be in harmony with the general purpose and intent of this Code, and will not be injurious to the neighborhood or otherwise detrimental to the public welfare.

For the foregoing reasons, and for other reasons stated at the hearing before the Board of Appeal, the Board of Appeal makes the following findings in connection with the Appellant's request for exceptions for the Project to Sections 19.1(b), 19.2, 19.3, 19.4(a), 19.4(b) and 19.4(d) of Article 38 of the Code:

(a) That such exceptions are in harmony with the general purpose and intent of the Code;

(b) That the exceptions requested are in conformity with the Central Business District – Bedford-West Urban Renewal Plan and the plan adopted by the Boston Redevelopment Authority for the District and such conformity has been certified to by the Boston Redevelopment Authority; and

(c) The Project is not a Development Impact Project, as defined in Section 80B-7 of the Code.

In determining its findings, the Board of Appeal has taken into account: (1) the number of persons residing or working upon such land or in such structure; (2) the character and use of adjoining lots and those in the neighborhood; and (3) traffic conditions in the neighborhood.

CITY OF BOSTON

BOARD OF APPEAL

OFFICE OF THE BOARD OF APPEAL

Address: 580 Washington Street, Ward 3
BZC - 28570
Date of Hearing: October 30, 2007
Permit Application No. 07-1950

Decision of the Board of Appeal on the Appeal of

The Board is of the opinion that all conditions required for the granting of the foregoing variance under Article 7 of the Code and exceptions under Article 6A, Section 6A-3 of the Code have been met and that the granting of the variance and exceptions as outlined above will not conflict with the intent and spirit of the Zoning Code. Therefore, acting under its discretionary power, the Board (the members and/or substitute members sitting on this appeal) unanimously voted to grant the requested variance exceptions as described above, annuls the refusal of the Building Commissioner and orders him to grant a permit, in accordance with this decision, with the following proviso(s) which, if not complied with, shall render this decision null and void.

PROVISO(S): Subject to design review by the Boston Redevelopment Authority.

APPROVED AS TO FORM:

Assistant Corporation Counsel

A True Copy,
Attest

DERRIC SMALL
Principal Administrative Asst.

This is not a Permit.
Permit must be obtained
from the Commissioner,
Inspectional Services

DEC 04 2007

SIGNED

CHRISTINE ARAUJO - SECRETARY

ANGELO BUONOPANE

PETER CHIN

MICHAEL MONAHAN

ANTHONY PISANI - Dissent

ROBERT SHORTSLEEVE - Chairman

Appendix C **PIC Licenses to Construct Temporary Earth Retention System and Temporary Support of Subsurface Construction, September 6, 2007**

AGREEMENT RE: NON EXCLUSIVE PERMIT TO CONSTRUCT
TEMPORARY EARTH RETENTION SYSTEM AND
TEMPORARY SUPPORT OF SUBSURFACE CONSTRUCTION
(Hayward Place Project, Washington Street, Avenue de Lafayette, Harrison Avenue Extension and Hayward Place)

THIS AGREEMENT is made as of September 6, 2007, by and between the CITY OF BOSTON (hereinafter called the "City"), and Millennium Hayward LLC, a Delaware limited liability company having an address of 172 Tremont Street, Suite 400, Boston, Massachusetts 02111 (hereinafter called the "Licensee").

WITNESSETH THAT:

WHEREAS, the Licensee is constructing a fourteen-story residential and retail building with up to 277 condominium units and up to 19,000 square feet of ground floor retail space. The project will also include up to two hundred seventy-one (271) parking spaces in two (2) levels of below-grade parking (the "Project") on land located on one full city block bounded by Washington Street, Avenue de Lafayette, Harrison Avenue Extension and Hayward Place (the "Project Site"); and

WHEREAS, the City, by duly authorized action of the Public Improvement Commission (the "PIC") taken at a duly convened meeting held on September 6, 2007, authorized the installation of the System (defined below) to serve as temporary support of the subsurface construction, which will be partially within the boundaries of Washington Street, Avenue de Lafayette, Harrison Avenue Extension and Hayward Place (the "Streets"), which are public streets in the Downtown Crossing neighborhood; and

NOW THEREFORE, in consideration of the vote taken by the PIC, and the covenants and promises hereinafter made, the parties agree as follows:

1. Permitted Activities: The license granted under this Agreement grants the Licensee the right to temporarily occupy and excavate the Streets for the purpose of installing and maintaining the System.

2. The System: The System shall be comprised of the following elements:

   a. steel soldier piles and timber lagging; and

   b. internal horizontal or inclined bracing members for lateral support of the soldier piles.

The location and installation of the System shall be in accordance with the plan prepared by Haley & Aldrich, Inc., entitled "City of Boston Public Works Department, Engineering Division, Hayward Place, Earth Retention System" dated July, 2007 (the "Plan"). A copy of the

Plan is on file with the Public Improvement Commission, City Hall, Room 714, Boston, MA 02201.

3. Term:

a. The license issued under this Agreement shall run from September 6, 2007 until December 31, 2017, unless otherwise terminated pursuant to Section 9 herein.

4. Installation and Maintenance of the System:

a. The Licensee shall install the System in accordance with the Plan.

b. After installation of the System is complete the Licensee shall, during the term of this Agreement, maintain and keep it in good and safe condition and repair.

c. Installation and repair shall be in accordance with all applicable federal, state and local rules, regulations, laws and permit requirements in effect as of the date of this Agreement, as amended from time to time.

5. Removal of the System:

a. The Licensee shall remove the System by cutting to a depth of six (6) feet those parts of the System that are located below any City sidewalk.

6. Acceptance of the Street Condition After Removal of the System:

a. The condition of the Streets affected by the installation of the System will be accepted by the City upon the occurrence of the following:

(i) the Licensee removes the System in accordance with Section 5; and

(ii) the Licensee restores the Streets to their previously-existing condition, except that the Licensee shall have the obligation to re-pave, in kind, from curb to curb, if (i) Licensee disturbs a Street that has been re-surfaced by the City within three (3) years preceding the date of this Agreement, or (ii) the Licensee damages a Street which the City has re-surfaced during the term of this Agreement; and

(iii) The City sends written notice to the Licensee that, after inspection, the Streets were found in an acceptable condition. If such notice is not received by the Licensee within ninety (90) days after receipt by the City of a written request for inspection from Licensee, then the Streets shall be

deemed to be in acceptable condition, and the Licensee shall be under no further obligation to the City.

7. Default:

a. The Licensee shall be deemed to be in default of the terms of this Agreement if it fails to install and maintain the System as required hereunder, or violates any other term or condition of this Agreement; or

b. Fails to pay any of the permit fees associated with the Project.

8. Licensee's Ability to Cure:

a. After the City sends notice to the Licensee that it is in violation of any term or condition of this Agreement, the Licensee shall have the opportunity to cure as follows:

(i) The Licensee shall have three (3) days from the date notice is received to make temporary repairs that ensure the safety of the public.

(ii) The Licensee shall have fourteen (14) days from the date notice is received to permanently cure the violation(s).

b. If it is a practical impossibility for the Licensee to cure the violation(s) in accordance with the time periods set forth in Section 8(a), the City will not find the Licensee in default provided that:

(i) The Licensee requests additional time in writing to cure the violation(s); and

(ii) The Licensee explains in writing why it cannot comply with the time periods set forth in Section 8(a).

(iii) The City will determine how much additional time is necessary on a case-by-case basis.

9. Termination: This Agreement shall terminate upon the occurrence of one of the following:

a. The Licensee performs (or pursuant to Section 6(a)(iii), is deemed to perform) its obligations pursuant to Section 5 and Section 6; or

b. Upon any default by the Licensee pursuant to Section 7 which is not cured within the time periods provided in Section 8.

10. Costs and Expenses:

a. All costs and expenses related to (i) the construction of the System, and (ii) the maintenance and repair of the System shall be the sole responsibility of the Licensee.

b. In the event (i) the construction of the System or (ii) the repair or maintenance of the System causes damage to any City property, the Licensee shall bear the responsibility for the cost of repair, which repairs may include but are not limited to, repaving and reconstruction of curbs, sidewalks and/or roadways.

c. In the event re-paving of the street(s) is required in accordance with Section 6(a)(ii), the Licensee shall make arrangements with the Public Works Department to perform such work and for payment of such costs.

d. If the Licensee fails to comply with the Removal requirements and the City removes the System accordingly, then the Licensee shall reimburse the City for all costs and expenses incurred as part of the removal.

e. The Licensee shall also pay the City's reasonable attorney's fees, costs and expenses if the City pursues any action, including any legal recourse, to enforce the terms of this Agreement.

f. The Licensee shall pay all costs and expenses payable hereunder to the City within thirty (30) days written demand therefor.

11. Indemnification:

a. The Licensee shall defend, indemnify and hold harmless the City from and against all claims, demands, liabilities, causes of action, suits, judgments and expenses (including reasonable attorneys' fees and costs) (collectively referred to as "Claims"), arising from or related to any injury to or death of any person or damage to property or for compensation on account of, or in any way growing out of or related to:

(i) the design, construction, or installation of the System; or

(ii) the maintenance and continued presence of any part of the System on the Streets; or

(iii) any act, failure to act or neglect of the Licensee pursuant to the provisions hereof; or

(iv) by reason of any violation by Licensee or any agent or contractor of Licensee of any term or specification contained in this Agreement; or

(v) on account of, or in any way growing out of the leakage of gas, sewage or water into or upon the City's property or the property of third parties caused by any act, failure to act or neglect by Licensee or any agent or contractor of Licensee, and which are related to the Permitted Activities carried out by the Licensee.

The provisions of Section 11.a (i) through (v) shall not apply when the events so described are caused by the sole negligence or willful act of the City, its agents, contractors, subcontractors and/or employees.

b. No director, officer, shareholder, manager, member, partner, trustee, agent or employee of the Licensee or any of its members shall have any personal liability hereunder. The City's recourse hereunder shall be limited solely to Licensee's interest in the Project and the Project Site. No holder of any mortgage on the Project shall have any liability hereunder unless such mortgagee takes title to the Project Site.

c. The City shall give written notice of any such Claims to the Licensee. In the event that any such Claims arise for which the City has the right to seek indemnification hereunder, then the Licensee shall have the obligation to forthwith assume the defense of the City in connection therewith.

12. Insurance:

a. For the term of this Agreement the Licensee shall maintain the following policies of insurance in commercially reasonable limits:

(i) General liability coverage, including coverage for products/completed operations and pollution for the activities of employees, agents, subcontractors, and representatives; and

(ii) Workers' Compensation and Employer's Liability as required by law.

b. All policies of insurance shall name the City as additional insured and payee with respect to the work undertaken in accordance with this Agreement. Evidence of these policies of insurance must be submitted to the City together with the Agreement. The Licensee shall submit to the City renewal certificates on an expiring insurance policy required hereunder within ten (10) days of the date of expiration thereof. Each insurance policy shall contain a valid provision or endorsement that the policy may not be cancelled, terminated, or amended without the provision of at least ten (10) days' written notice thereof to the City. Further, the Licensee's shall not cancel, terminate, or amend any policy of insurance required hereunder unless it has another policy in place that complies with this Agreement.

13. Non-Exclusivity of License: The license granted in connection with this Agreement is not exclusive to the Licensee. The City reserves the right to use the Streets for any purpose for which public ways are used in Boston.

14. The Licensee makes the following representations:

a. That the Licensee shall, prior to commencing installation of the System, reach agreement with all utilities affected by the Project/System, if any, with respect to relocation or replacement of their respective utility system and payment for any relocation or replacement costs. An engineering report with respect to the same has been submitted to the City.

b. That the Licensee shall obtain prior to commencing installation, repair or maintenance on the System all City of Boston permits, and approval of all construction schedules, if any, including a Transportation Access Plan Agreement ("TAPA"), so as to ensure the continuous and orderly flow of traffic near or around the Project Site.

c. Any hazardous waste/material encountered during the installation of the System shall be removed by the Licensee or its agents, at the Licensee's expense, to the extent required under applicable local or state rules, regulations, and statutes.

d. Upon reasonable notice to the Licensee, the Licensee shall permit the City to enter the Project Site during the installation of, or during and any testing of the System located in the Streets.

e. If removal of those parts not so removed pursuant to Section 5 require removal, the Licensee shall pay all costs associated with said removal.

f. The Licensee shall provide to the City copies of all field installation records and "as-built" plans relating to the System and any part of the System that remains in the Street that are maintained by the Licensee or its contractor(s).

15. Transferability: This Agreement may be transferred or assigned subject to the provisions of Section 16 below.

16. Assignment:

a. This Agreement shall be binding upon and shall inure to the benefit of the Licensee's successors and assigns, but only if the Licensee delivers to the City (i) written notice of the transfer of all of its rights and obligations under this Agreement within five (5) business days of any such transfer, and (ii) a true and complete copy of a final executed "Assignment and Assumption" instrument, which instrument shall provide that the entity comprising Licensee's successor or assign agrees to perform and observe all of the terms, covenants, and conditions of this Agreement (collectively the "Transfer Notice").

b. Notwithstanding the foregoing, nothing in this Agreement shall be construed to permit the Licensee to transfer its rights and obligations under this Agreement except in connection with a transfer or financing of all or any portion of the Project or Project Site.

c. If the Transfer Notice is not received by the City within five (5) business days of such transfer, then such transfer shall have no force and effect, and the Licensee shall continue its obligations as enumerated in this Agreement until the Transfer Notice (including the executed "Assignment and Assumption" instrument) is received by the City and is then rendered effective.

17. Any notice required to be given under this Agreement shall be in writing and by certified or registered mail, and sent as follows:

If to Licensee:
Millennium Hayward LLC
c/o Millennium Partners-Boston
172 Tremont Street, Suite 400
Boston, MA 02111
Attn: Anthony Pangaro

with a copy to:
Millennium Hayward LLC
c/o Millennium Partners

1995 Broadway
New York, NY 10023
Attn: Chief Financial Officer

with a copy to:

DLA Piper US LLP
33 Arch Street, 26th Floor
Boston, Massachusetts 02110-1447
Attn: John E. Rattigan, Jr., Esq.

And if to the Licensor, at:

Public Improvement Commission
Public Works Department
City Hall - Room 714
Boston, MA 02201
Attention: Chief Engineer – PIC

18. Governing Law: This Agreement shall be governed and construed in accordance with the laws of the Commonwealth of Massachusetts, without regard to principles of conflicts of laws. This Agreement may be executed in counterparts which together, shall constitute but one original. This Agreement may be amended only in a writing executed by the City and the Licensee.

19. The term "City" shall be interpreted to include the City's successors and/or assigns. The term "Licensee" shall be interpreted to include the Licensee's successors and or assigns, including but not limited to contractors, sub-contractors, and/or agents.

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year first above written.

LICENSEE:

MILLENNIUM HAYWARD LLC

By: _____

LICENSOR:

CITY OF BOSTON acting by and through its PUBLIC IMPROVEMENT COMMISSION

By: _____
Dennis E. Royer, Chairman

By: _____
Commissioner

By: _____
Commissioner

By: _____
Commissioner

By: _____
Commissioner

Approved as to form:

_____
City of Boston
Assistant Corporation Counsel

Date: _____, 2006

Appendix D **DPIR/DEIR Qualitative Pedestrian-Level Wind Analysis**

5.0 ENVIRONMENTAL PROTECTION COMPONENT

5.1 Qualitative Pedestrian-Level Wind Analysis

5.1.1 Introduction

A qualitative wind assessment was performed to evaluate the No-Build condition and to determine the effect of the Project on pedestrian level winds ("PLWs") in the Project vicinity. The study considered all three mixed-use Build alternatives: Alternative 2 (Office/Retail); Alternative 3A (Residential/Retail); and Alternative 3B (Office/Residential/Retail). PLWs were considered at 37 locations in and near the Project Site.

Detailed results are presented in **Figures 5.1-14** to **5.1-25** and **Table 5.1-1**. The Project Site is quite sheltered from winds from most directions. The proposed three Build alternatives are substantially lower in height than the nearby Ritz-Carlton Hotel and Towers, the Millennium Place tower, and the Hyatt Hotel buildings, but are somewhat taller than some of the other directly adjacent buildings (for example, the Washington-Essex Building at 600 Washington Street and Lafayette Corporate Center). Thus it should not be surprising that all three of the proposed Build alternatives have very little or no effect on PLWs at any of the thirty-seven locations considered. Annually, there are no changes in PLW category between existing conditions and any of the three proposed Build alternatives except at the corner of Avery and Washington Street (location 18), at which the PLW category is estimated to decrease from three to two.

One of the 37 locations, location 36 (at the corner of Washington Street and Boylston Street) is estimated to have PLWs that may exceed the Boston Redevelopment Authority ("BRA") guideline wind speed of 31 mph oftener than once in 100 hours. However, predicted PLWs at location 36 are estimated to be the same for existing and all three Build alternatives. Otherwise, the net effect of any of the three alternatives is to slightly reduce PLWs.

The wind assessment is based on:

- Elevations and floor and roof plans, dated January 28, 2005, prepared by Handel Architects;
- A map of the Hayward Place site and surrounding area as compiled from the Mass GIS database;
- One visit to the Project Site and 9 photographs taken during a site visit by Frank Durgin, P.E.;
- An evaluation of the urban context of the Project Site;
- A review of the Boston wind climate; and

- Frank Durgin'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, mid-rise, and high-rise buildings. Thus, this evaluation provides a qualitative assessment of PLWs.

5.1.2 *Location and Description of the Project and the Surrounding Area*

Description of the Hayward Place Site (**Figure 5.1-1**)

Hayward Place (the "Project Site") is located in downtown Boston. It is bounded by Washington Street, Avenue de Lafayette, Harrison Avenue extension, and Hayward Place. Currently, the Project Site is empty and used as a parking lot. The 37 locations at which PLWs have been evaluated are shown and numbered in **Figure 5.1-1**. These locations were chosen to be at pedestrian entrances and other areas of expected pedestrian traffic. Consideration was also given to adjacent or proximate historic resources (i.e. the Washington Street Theater District) in the selection of locations.

Description of the Proposed Development (**Figures 5.1-2, 5.1-3, and 5.1-4**)

This wind analysis examines the No-Build condition (Alternative 1) and the three Build alternatives which are evaluated in this DPIR/DEIR. The first alternative, Alternative 2, proposes retail use on the first and second floor and offices in floors above (**Figure 5.1-2**). The second alternative, Alternative 3A, proposes retail use on the first floor and 13 floors of residences above (**Figure 5.1-3**). The third alternative, Alternative 3B, again proposes retail use on the first floor, three floors of offices, and then nine floors of residences (**Figure 5.1-4**). All three alternative buildings are proposed to be 155 feet high, but each has slightly different footprints and massing. The massing of the second and third alternatives (3A and 3B) was deemed to be sufficiently similar for the purposes of the qualitative wind analysis that only the first and third alternatives are analyzed herein. The effect on PLWs for the Alternative 3A and 3B are predicted to be the same. The locations considered next to the Project Site are at the pedestrian entrances to all three alternatives or at corners of the building.

The Surrounding Area

There are some mid-rise and high-rise buildings near the Project Site. The 22-story Tremont-on-the-Common building is to the NW. The 36-story Ritz Carlton Hotel and Towers is to the W, including the 39-story Millennium Place building to the SW. There will be the 33-story Kensington Place building to the SSW and the 30-story Liberty Place building (under construction) will be located to the S. Further, there is the 21-story Hyatt Hotel to the ENE. In addition, there are 6- to 11-story buildings in the immediately surrounding area.

5.1.3 *The Wind Climate*

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 [1]. **Figure 5.1-5** 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 5.1-6 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 5.1-6**. Similar accelerated areas also occur for winds blowing at the corners of the building (B in **Figure 5.1-6**). Other than Boston Common, which is too distant to be impacted by the Project, there are no significant open areas in close proximity the Project Site; thus none of the alternatives will have interactions with the wind exactly like those indicated in **Figure 5.1-6**.

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. The Project Site is quite sheltered by all the various surrounding buildings.

Statistical Description of the Boston Wind Climate

The Project Site is located about 2.5 miles SW of Logan Airport. Thus, the wind data from Logan Airport, usually used to define the winds for Boston, is applicable. **Figure 5.1-7** 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 Airport taken from 1945 to 1965. Data from 1965 to 2003 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 is just one mile W of Logan Airport.

Figure 5.1-7 shows that the winds in Boston come primarily from the NW, W, and SW. Figures **5.1-8** through **5.1-11** 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 Airport 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 Airport for each month are shown in **Figure 5.1-12**. 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.

5.1.4 Pedestrian Wind Criteria

Since the early 1980s, the BRA has used a guideline criterion for acceptable winds of not exceeding a 31mph 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 [2]. However, that ratio can vary widely from 1.4 for individual locations.

In 1978, Melbourne [3] 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 [2] suggested the use of an Equivalent Average which combines the effects of average, gusting, and peak winds and later [4] reinterpreted Melbourne's criteria to apply to Equivalent Average winds (**Figure 5.1-13**). 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 or 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 perceived[2] as such, by most people who frequent the location. For example, the PLWs at Logan Airport are on the dividing line between Category 4 (uncomfortable for walking) and Category 3 (comfortable for walking) (see **Figure 5.1-13**). 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.

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[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.

Therefore, most people would perceive conditions in the open at Logan Airport as marginally comfortable for walking.

5.1.5 *Pedestrian Level Winds at the Project Site*

Introduction

The objective of this study was to prepare a qualitative assessment of PLWs for existing conditions and determine how the three proposed Hayward Place Build alternatives will affect PLWs in their vicinity.

In the following sections, the effects of NW winter winds, SW summer winds, and easterly storm winds will be compared for existing and the three Build alternatives. The results from the three general directions will be summarized by an estimated prediction of annual PLWs at each location for each of the three alternatives.

The estimated categories are shown in **Figures 5.1-14** to **5.1-25** for all 37 locations for existing and two of the three Build alternatives. Categories for NW, SW, easterly storm, and annual winds are given. These same results are tabulated in **Table 5.1-1**.

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.

Northwest (Winter) Winds

NW winds blow diagonally at the Project Site from Boston Common and the Tremont-on-the-Common building (see **Figure 5.1-14**). The estimated categories for all locations for the existing and two Build conditions are shown in **Figures 5.1-14, 5.1-15**, and **5.1-16** (also see **Table 5.1-1**).

NW Winds: Discussion (**Figures 5.1-14, 5.1-15**, and **5.1-16**)

Much of the Project Site is sheltered from NW winds. Although there probably are small differences in actual PLWs, the predicted PLW categories for both alternatives considered are predicted to be the same. At all but seven locations, the PLW category between existing conditions and either alternative considered is unchanged. At two locations (12 and 25), PLWs are estimated to be increased by one category (from 1 to 2). On the other hand, at locations 23, 27, 30, 32, and 33, the PLW category is decreased from 2 to 1 due to sheltering effects of the two Build alternatives.

Southwest (Summer) Winds

The prevailing winds in the summer are from the SW. SW winds blow almost diagonally from the Ritz-Carlton (Millennium) Towers towards the Project Site. (**Figure 5.1-17**). The estimated categories for all locations for existing and Build conditions are shown in **Figures 5.1-17, 5.1-18,** and **5.1-19** (also see **Table 5.1-1**).

SW Winds: Discussion (**Figures 5.1-17, 5.1-18,** and **5.1-19**)

For SW winds the predicted PLW categories for the two alternatives considered are again the same. The PLW category remains unchanged at all but six of the thirty-seven locations. At all but six locations, the PLW category between existing conditions and either alternative considered is unchanged. The PLW category at two of the thirty-seven locations (6 and 23) increases. Both are at corners of the two alternatives. At location six, the PLW category increases from one to two and at location 23 from two to three. At the other four locations that change PLW category (13, 14, 20, and 28), the category is decreased from two to one, due to sheltering effects of the two Build alternatives considered.

Easterly Storm Winds

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 to 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.

Easterly Storm Winds: Discussion (**Figures 5.1-20, 5.1-21,** and **5.1-22**)

For easterly storm winds again there is no change in PLW category between the two Build alternatives considered. At all but four locations the PLW category between existing conditions and either alternative considered is unchanged. The PLW category at location 14 increases from one to two. At the other three that change category (17, 25, and 28), all decrease from PLW category two to one.

Annual Winds

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 37 locations considered. The resulting estimated categories for each location for existing and Build conditions are listed in the last two columns in **Table 5.1-1**. In comparing these annual estimates with those for the three specific directions, one must remember that the total occurrence of winds from the easterly directions is roughly equal to that for either NW or SW. These annual estimates are qualitative and must be treated as such.

Annual Winds: Discussion (**Figures 5.1-23, 5.1-24,** and **5.1-25**)

Annually, the PLW category at thirty-six of the thirty-seven locations considered are the same for existing and either Build alternative considered. At location 18, at the corner of Avery and Washington Street, the PLW category decreases from three to two due to the sheltering effects of both alternatives for easterly winds.

5.1.6 Summary

The existing No-Build condition and the effects of the proposed Hayward Place development (and the Alternatives 2, Office/Retail; Alternative 3A, Residential/Retail; and Alternative 3B, Office/Residential/Retail) on PLWs has been investigated at 37 locations in and near the Project Site.

One of the 37 locations (location 36) is estimated to have PLWs that may exceed the Boston Redevelopment Authority (BRA) guideline wind speed of 31 mph oftener than once in 100 hours. Predicted PLWs at that location are estimated to be the same for existing and all three Build alternatives. Otherwise, the net effect of any of the three alternatives is to slightly reduce PLWs.

Detailed results are presented in **Figures 5.1-14** to **5.1-25** and **Table 5.1-1**. The Project Site is quite sheltered from winds from most directions. The proposed three Build alternatives are not are not nearly so tall as the nearby Ritz-Carlton Hotel and Towers, the Millennium Place tower, and the Hyatt Hotel buildings, but are somewhat taller than some of the other nearby buildings. Thus it should not be surprising that all three of the proposed Build alternatives have very little or no effect on PLWs at any of the thirty-seven locations considered. Annually, there are no changes in PLW category between existing conditions and any of the three proposed Build alternatives except at location 18, at which the PLW category is estimated to decrease from three to two.

5.1.7 References

1) Davenport, A.G., and Isyumov, N., "The Application of the Boundary Layer Wind Tunnel to the Prediction of Wind Loading," Proceedings of Intl. Seminar on Wind Effects on Buildings and Structures, Ottawa, Canada, September, 1967.

2) Durgin, F.H., "Use of the Equivalent Average for Evaluating Pedestrian Level Winds", Presented at the Sixth U.S. National Conf. On Wind Engineering, University of Houston, Houston, Texas, March 7-10, 1989, Journal of Wind Engineering, Vol. 36, pp. 817-828, 1990.

3) Melbourne, W.H., "Criteria for Environmental Wind Conditions," Journal of Industrial Aerodynamics, Vol. 3, 1978, pp. 241-249.

4) Durgin, F.H., "Pedestrian Level Wind Criteria Using the Equivalent Average", Journal of Wind Engineering and Industrial Aerodynamics, Vol. 66 (1997), pp. 215-226.

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

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Estimated Categories for NW, SW, Storm, and Annual Winds for Hayward Place Existing, and Retail/Office (RO) And Retail/Office/Residential (ROR) Build Condtions

Source: Frank H. Durgin, P.E.

Table 5.1-1

2329Wind.dwg

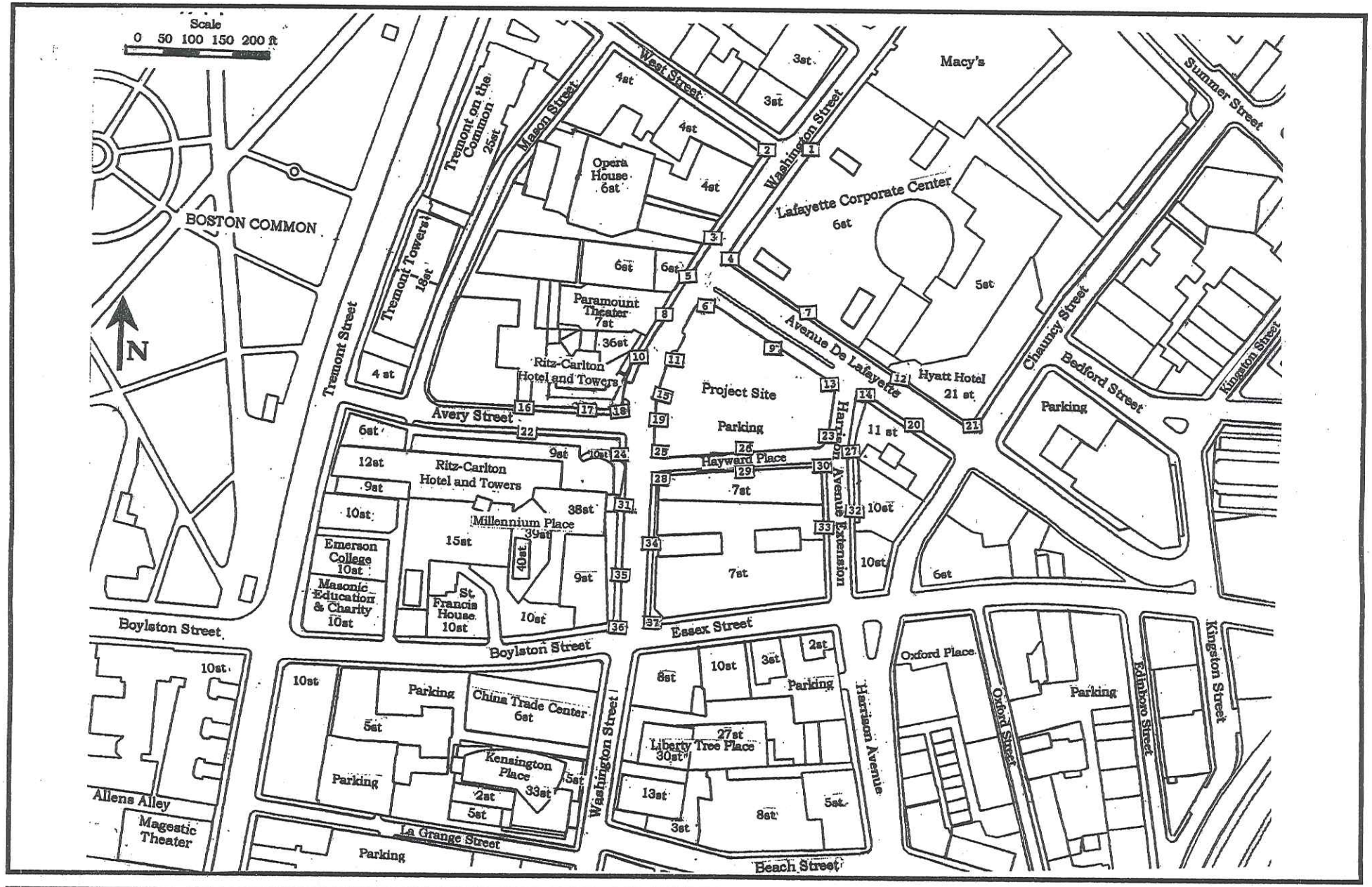

Figure 5.1-1

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Ten Forbes Road Braintree, MA 02184 781-849-7070

Existing Conditions for Hayward Place Development Showing PLW Location Numbers

Source: Frank H. Durgin, P.E.

2329Wind.dwg

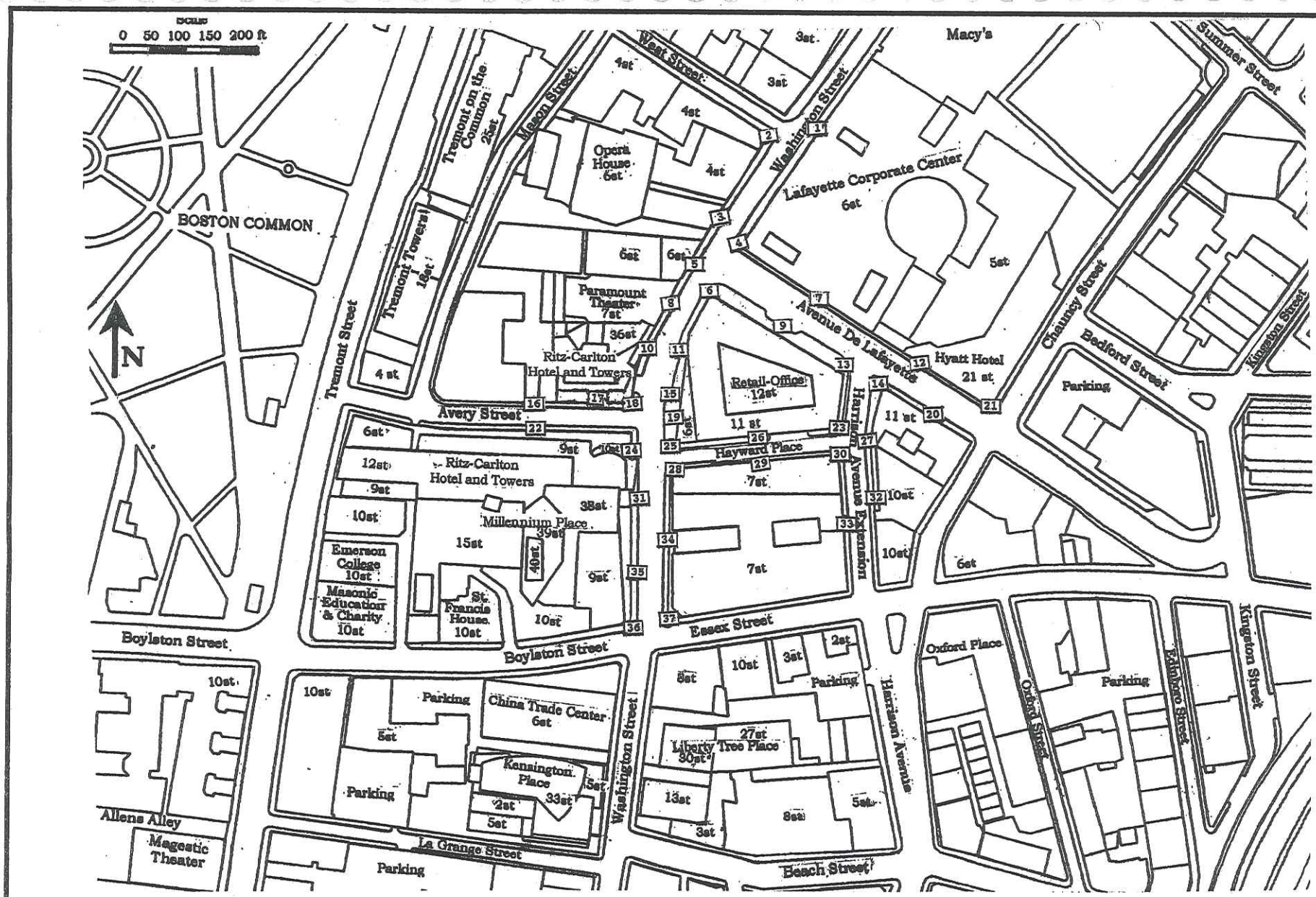

Figure 5.1-2

2329Wind.dwg

Daylor Consulting Group Inc.

Ten Forbes Road Braintree, MA 02184 781-849-7070

Build Conditions for Hayward Place Development Showing PLW Location Numbers

Source: Frank H. Durgin, P.E.

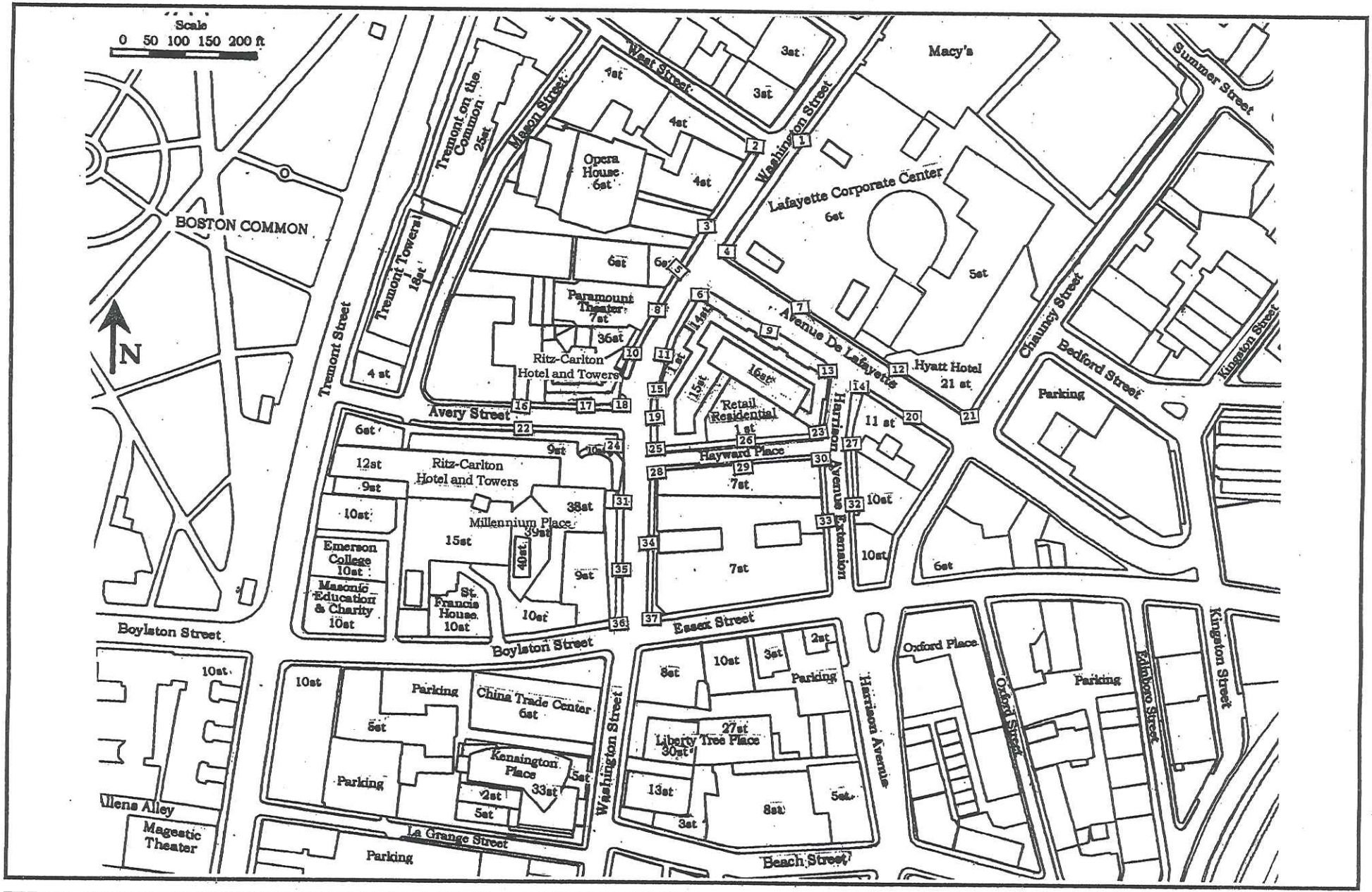

Figure 5.1-3

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Ten Forbes Road Braintree, MA 02184 781-849-7070

Hayward Place Retail/Residential Conditions Including PLW Location Numbers

Source: Frank H. Durgin, P.E.

2329Wind.dwg

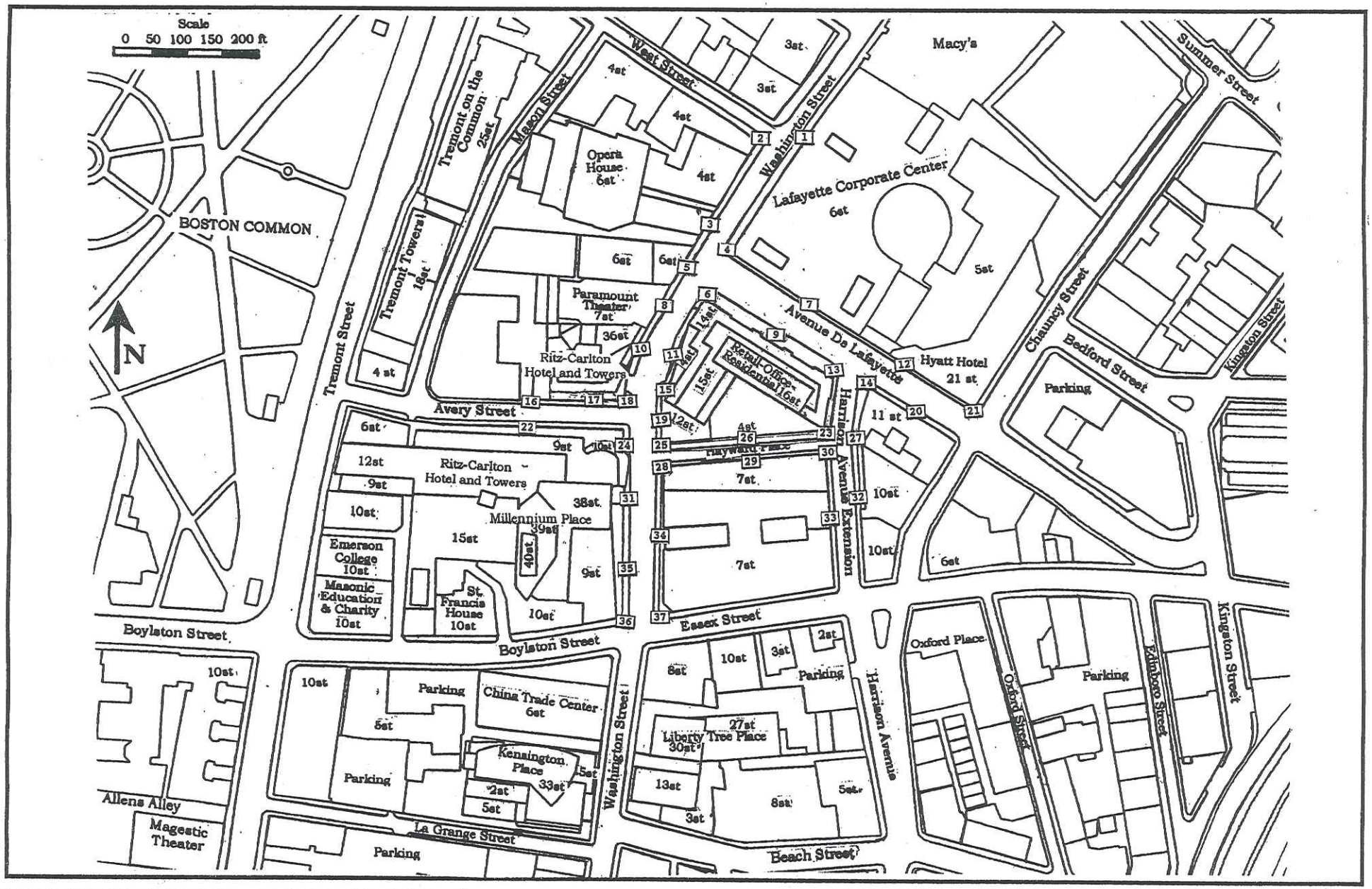

Figure 5.1-4

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Ten Forbes Road Braintree, MA 02184 781-849-7070

Hayward Place Retail/Residential and Retail/Residential/Office Conditions Including PLW Location Numbers

Source: Frank H. Durgin, P.E.

2329Wind.dwg

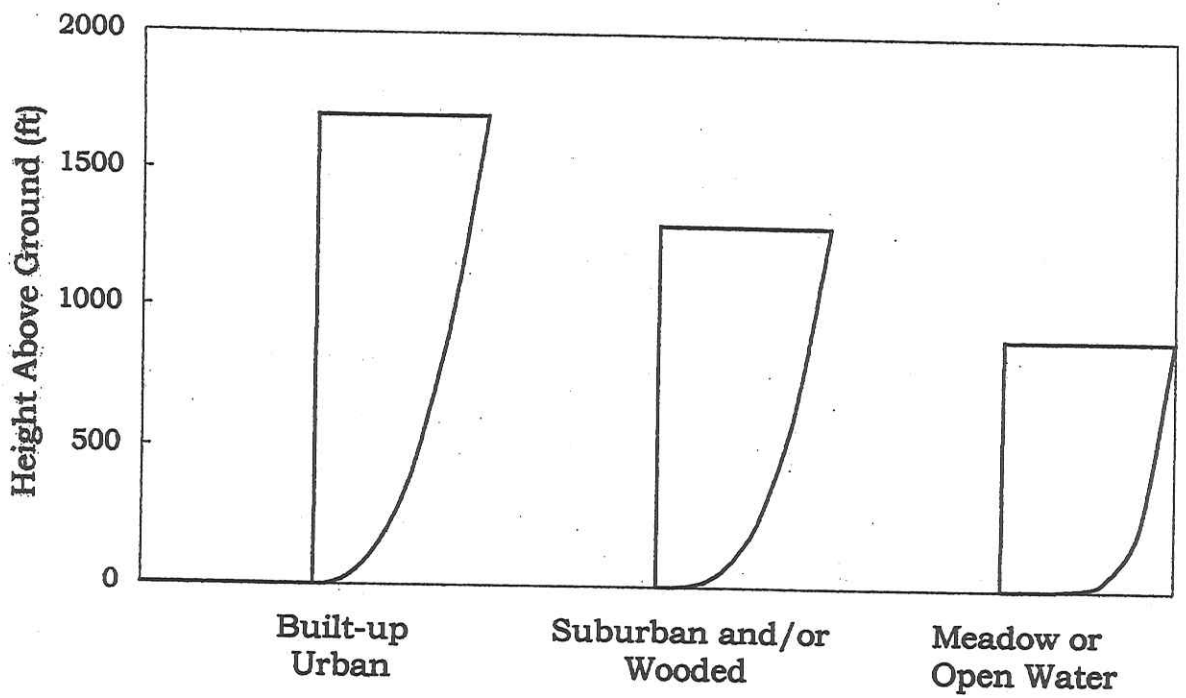

Figure 5.1-5

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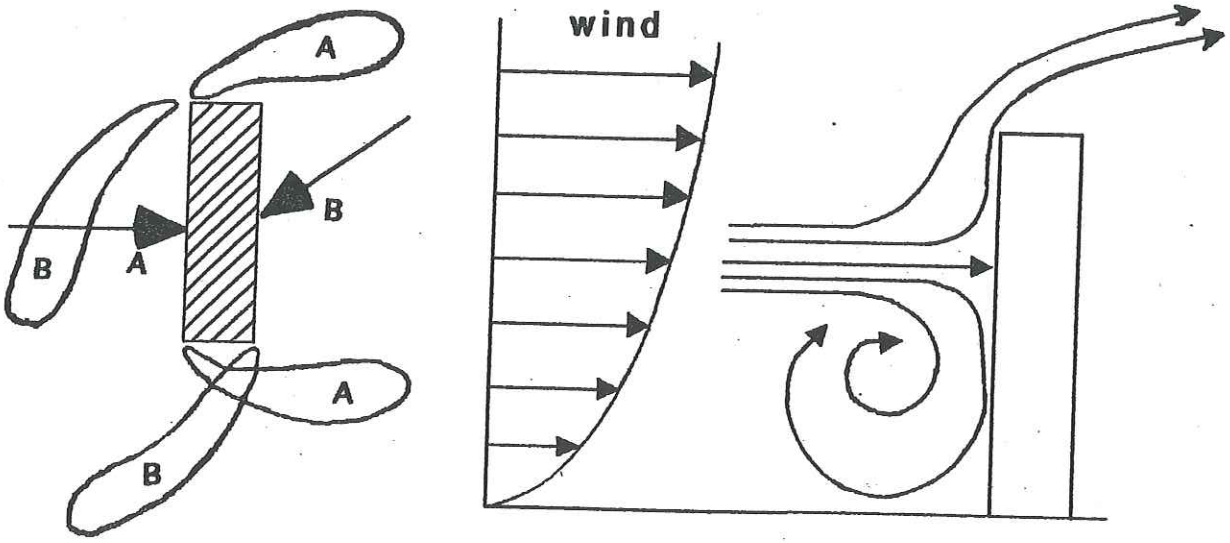
Types of Earth's Boundary Layers After Davenport (1)

Source: Frank H. Durgin, P.E.

2329Wind.dwg



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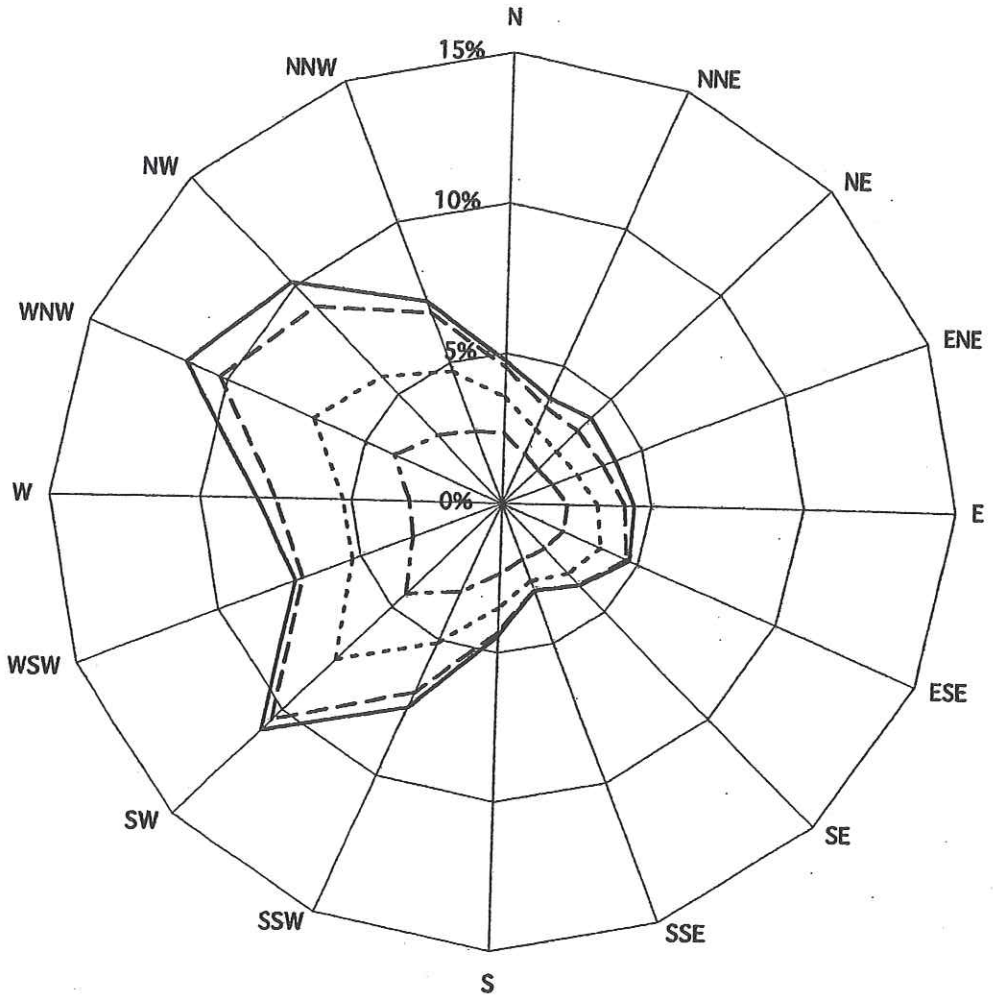
Schematic of How the Wind Interacts with an Isolated Building

Source: Frank H. Durgin, P.E.

Figure 5.1-6

2329Wind.dwg



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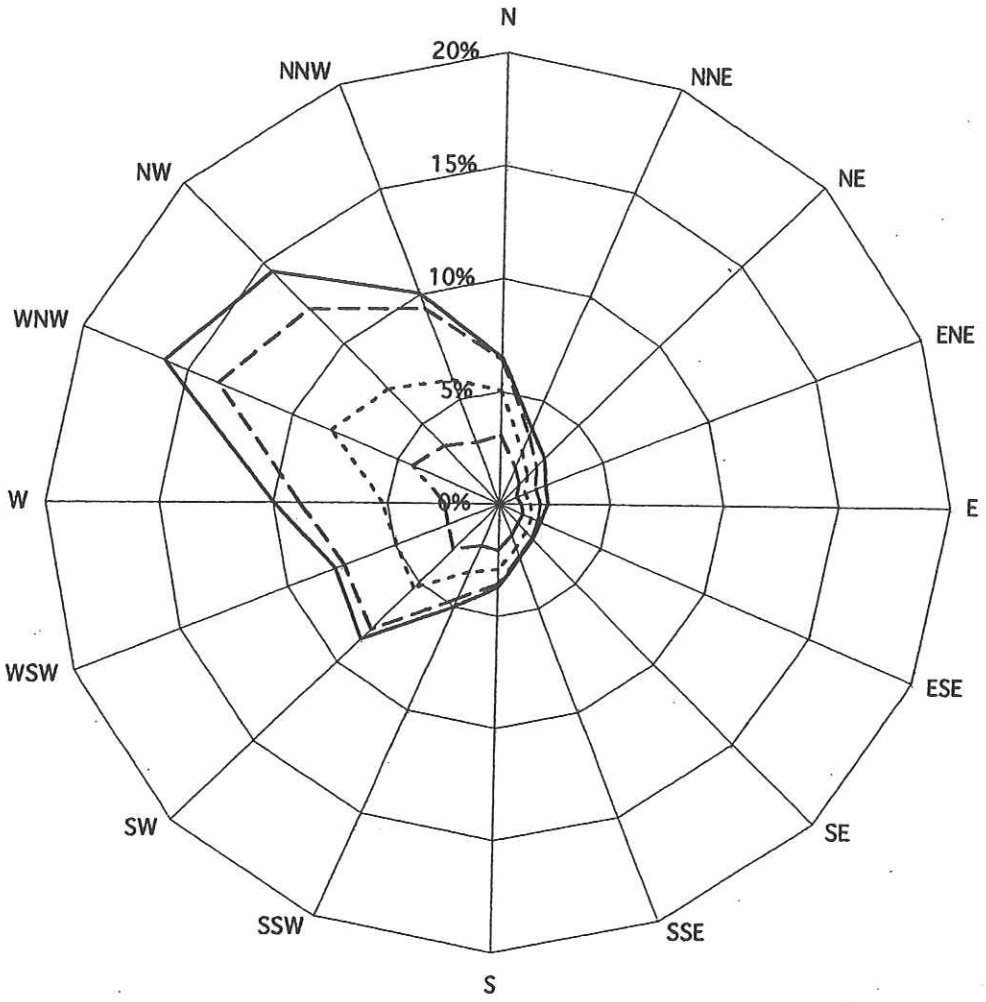
Annual Pedestrian Level Wind Rose For Boston Based on Surface Data From Logan Airfield 1945-1965

Source: Frank H. Durgin, P.E.

Figure 5.1-7

2329Wind.dwg



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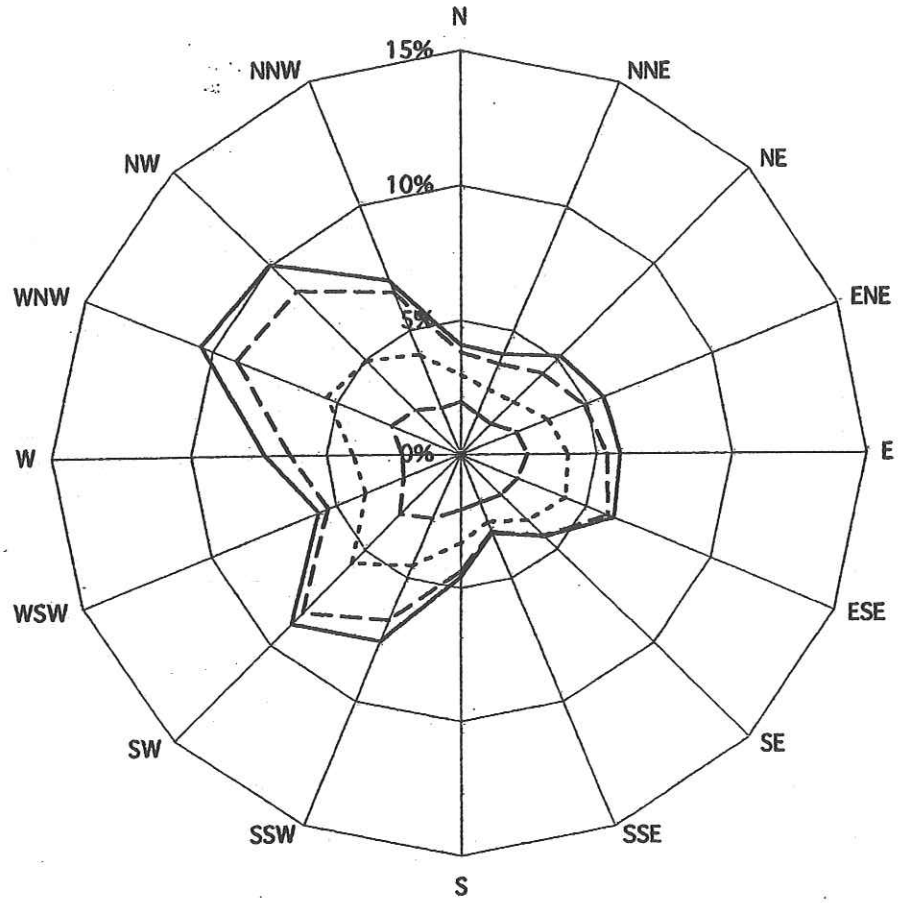
Winter (Dec., Jan., Feb.) Pedestrian Level Wind Rose for Boston Based on Surface Data from Logan Airfield 1945-1965

Source: Frank H. Durgin, P.E.

Figure 5.1-8

2329Wind.dwg



——— All Winds – – – < 15 mph ------ < 10 mph —·—· < 7 mph

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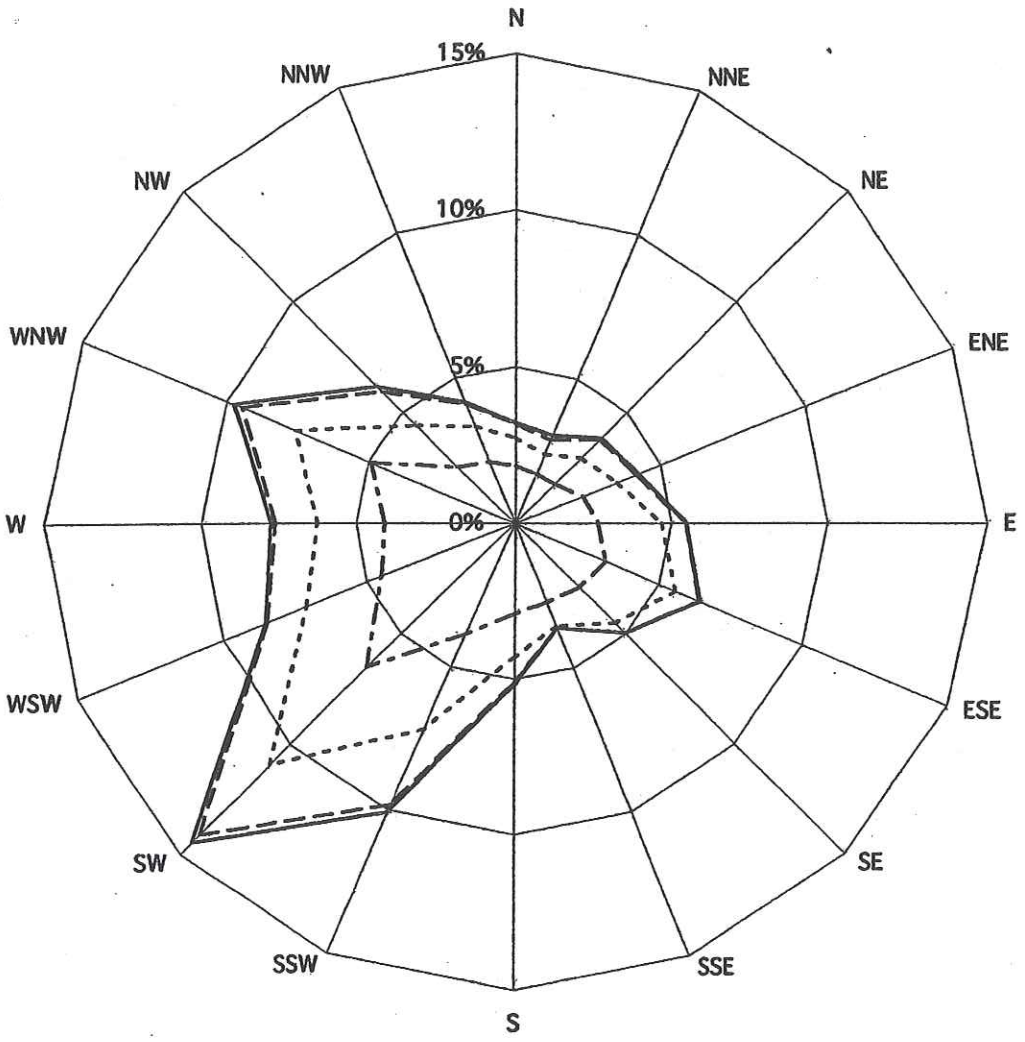
Spring (Mar., Apr., May) Pedestrian Level Wind Rose for Boston Based on Surface Data from Logan Airfield 1945–1965

Source: Frank H. Durgin, P.E.

Figure 5.1-9

2329Wind.dwg



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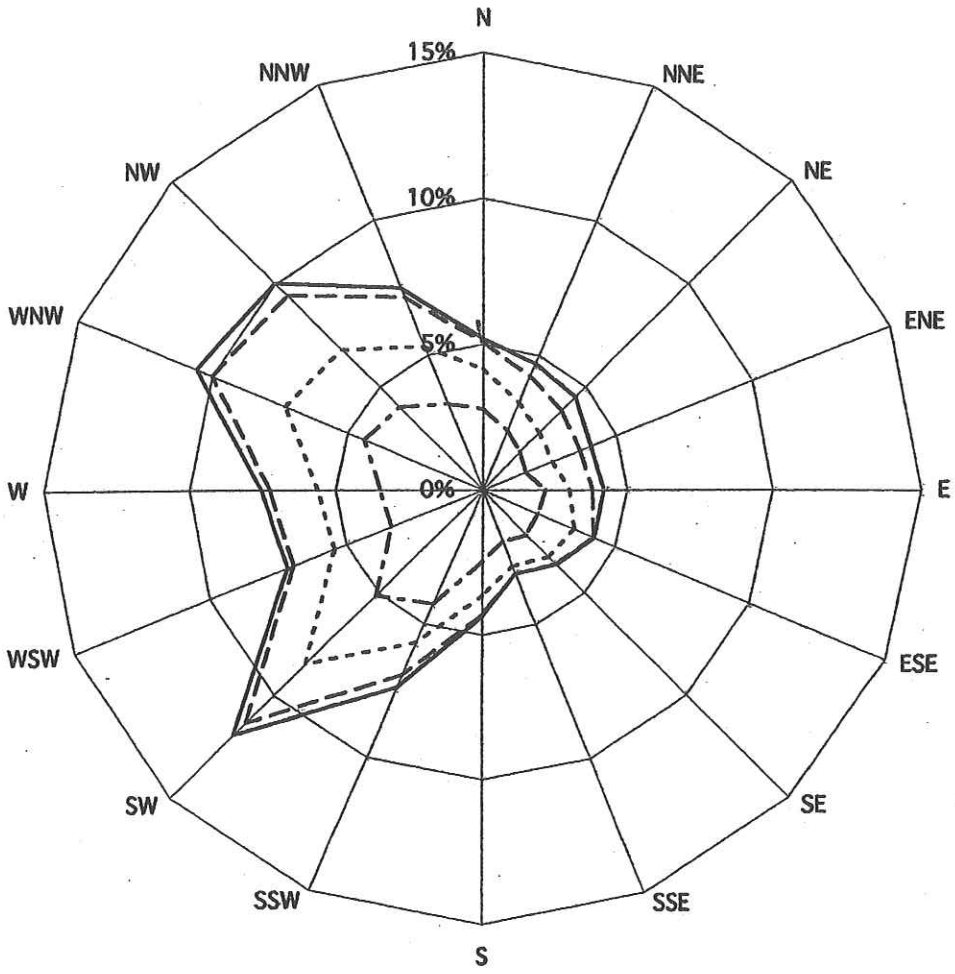
Summer (June, July, Aug.) Pedestrian Level Wind Rose for Boston Based on Surface Data from Logan Airfield 1945-1965

Source: Frank H. Durgin, P.E.

Figure 5.1-10

2329Wind.dwg



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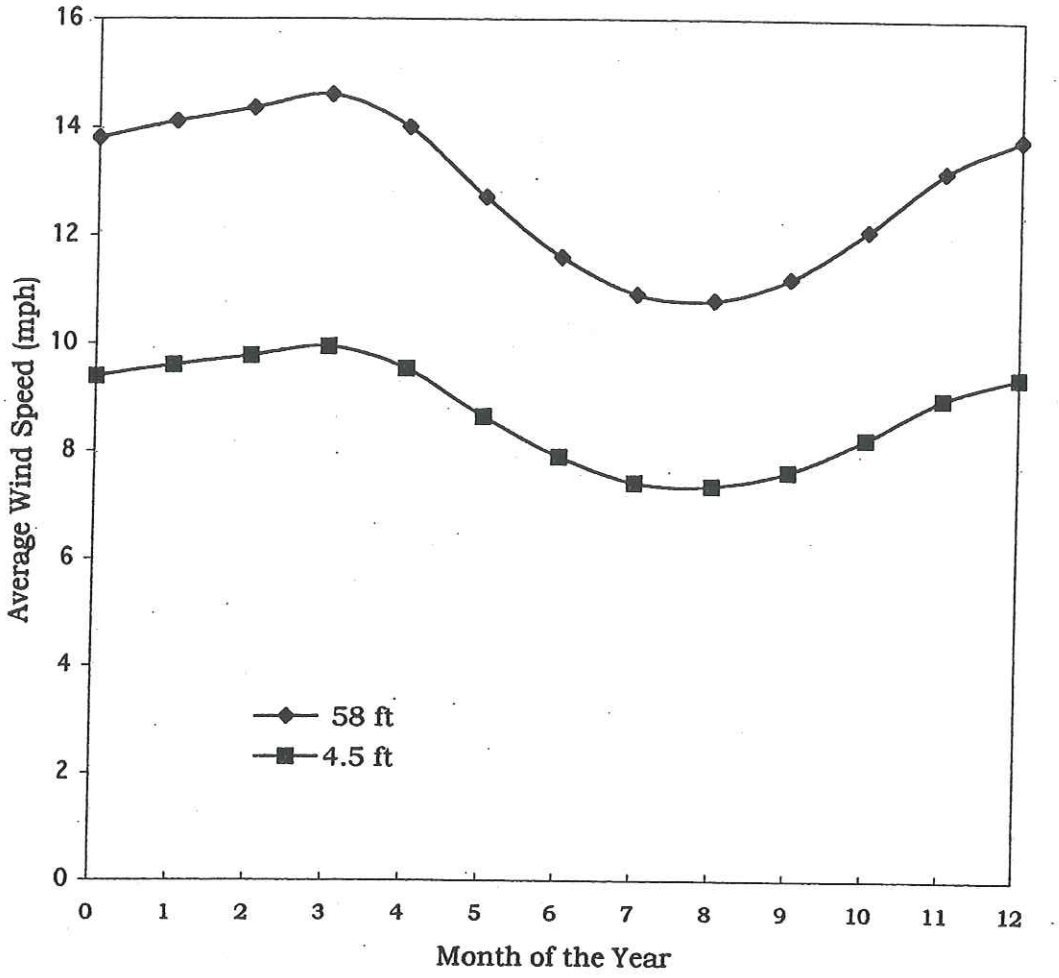
Fall (Sept., Oct., Nov.) Pedestrian Level Wind Rose for Boston Based on Surface Data from Logan Airfield 1945-1965

Source: Frank H. Durgin, P.E.

Figure 5.1-11

2329Wind.dwg



Yearly Average is 12.9 mph at 58 feet

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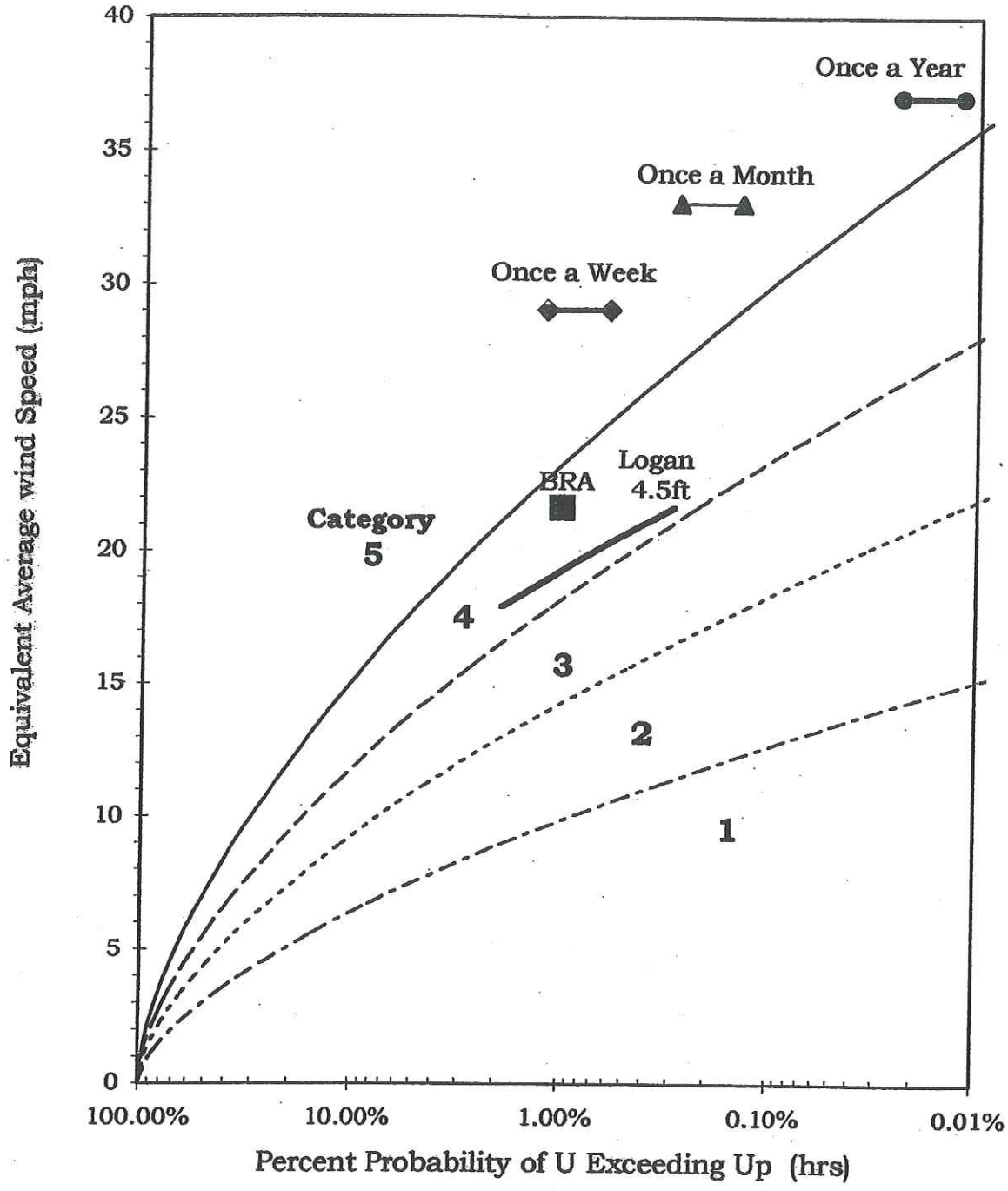
Average Wind Speed at Logan Airfield Based on Surface Data from 1945-1965

Source: Frank H. Durgin, P.E.

Figure 5.1-12

2329Wind.dwg



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Pedestrian Level Wind Criteria For Equivalent Average Winds

Source: Frank H. Durgin, P.E.

Figure 5.1-13

2329Wind.dwg

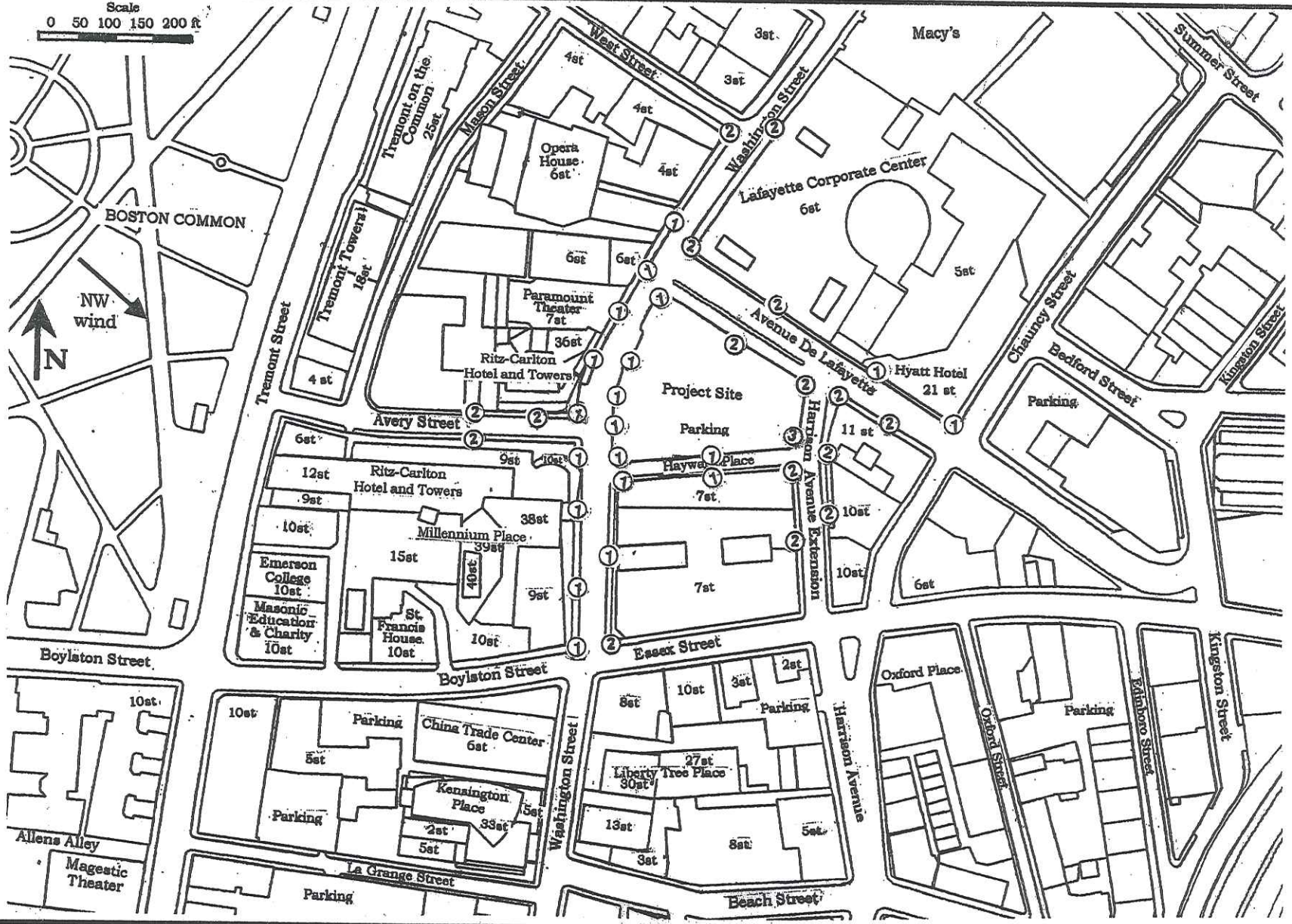

Figure 5.1-14

2329Wind.dwg

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PLW Categories for Hayward Place Existing Conditions and NW Winds

Source: Frank H. Durgin, P.E.

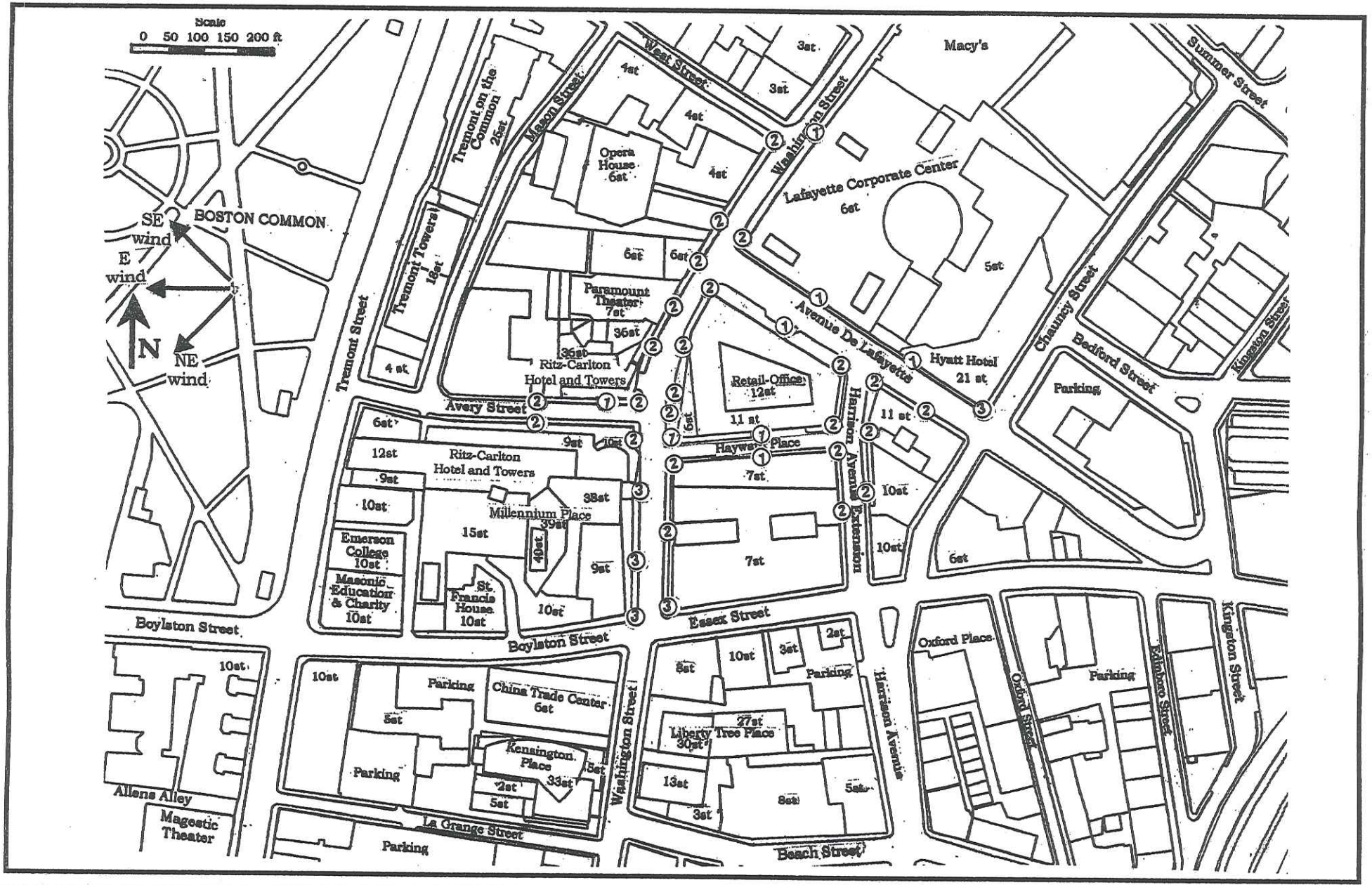

Figure 5.1-21

2329Wind.dwg

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PLW Categories for Hayward Place Retail/Office Conditions and Easterly Storm Winds

Source: Frank H. Durgin, P.E.

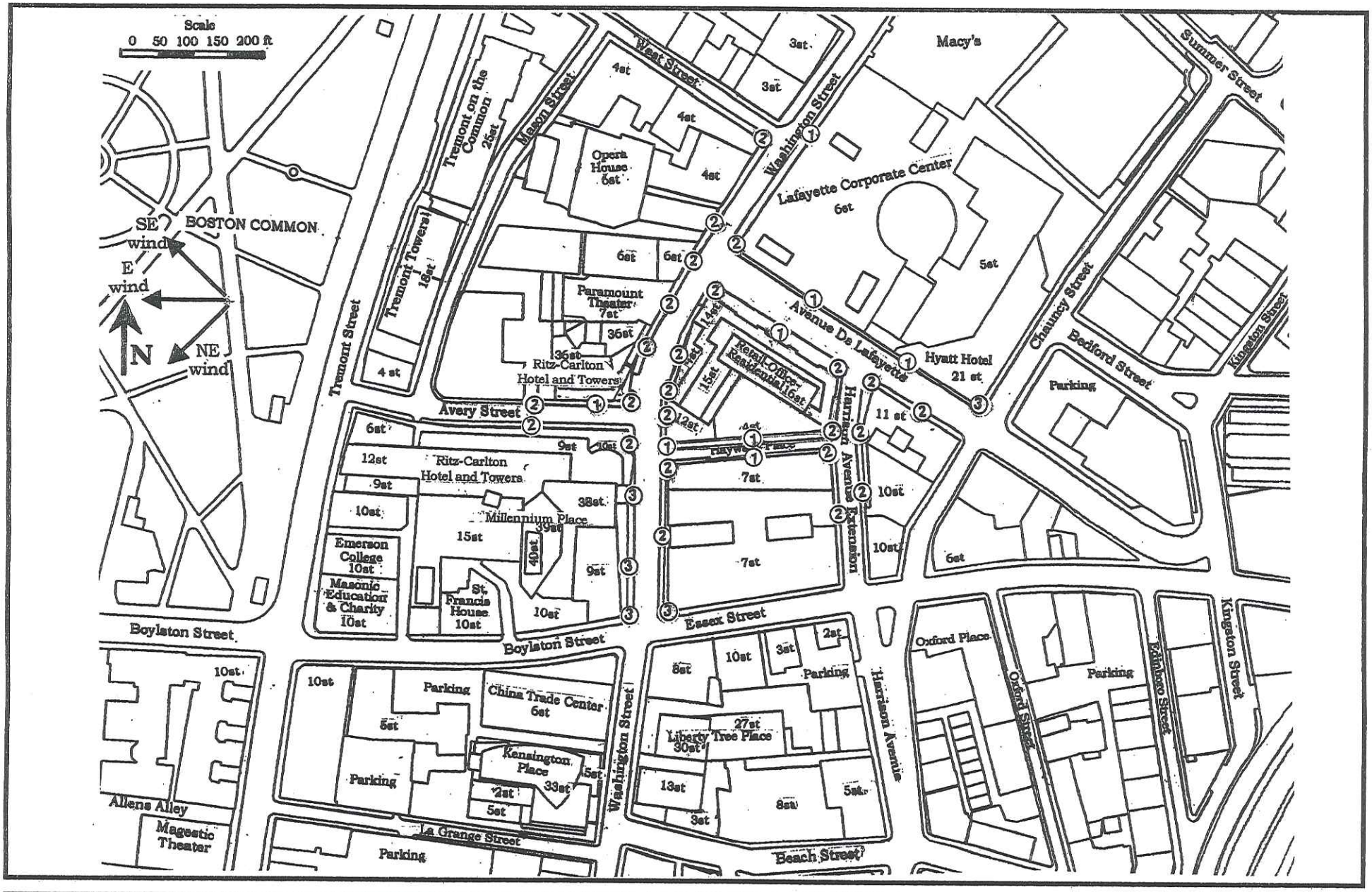

Figure 5.1-22

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PLW Categories for Hayward Place Retail/Residential and Retail/Office/Residential Conditions and Easterly Storm Winds

Source: Frank H. Durgin, P.E.

2329Wind.dwg

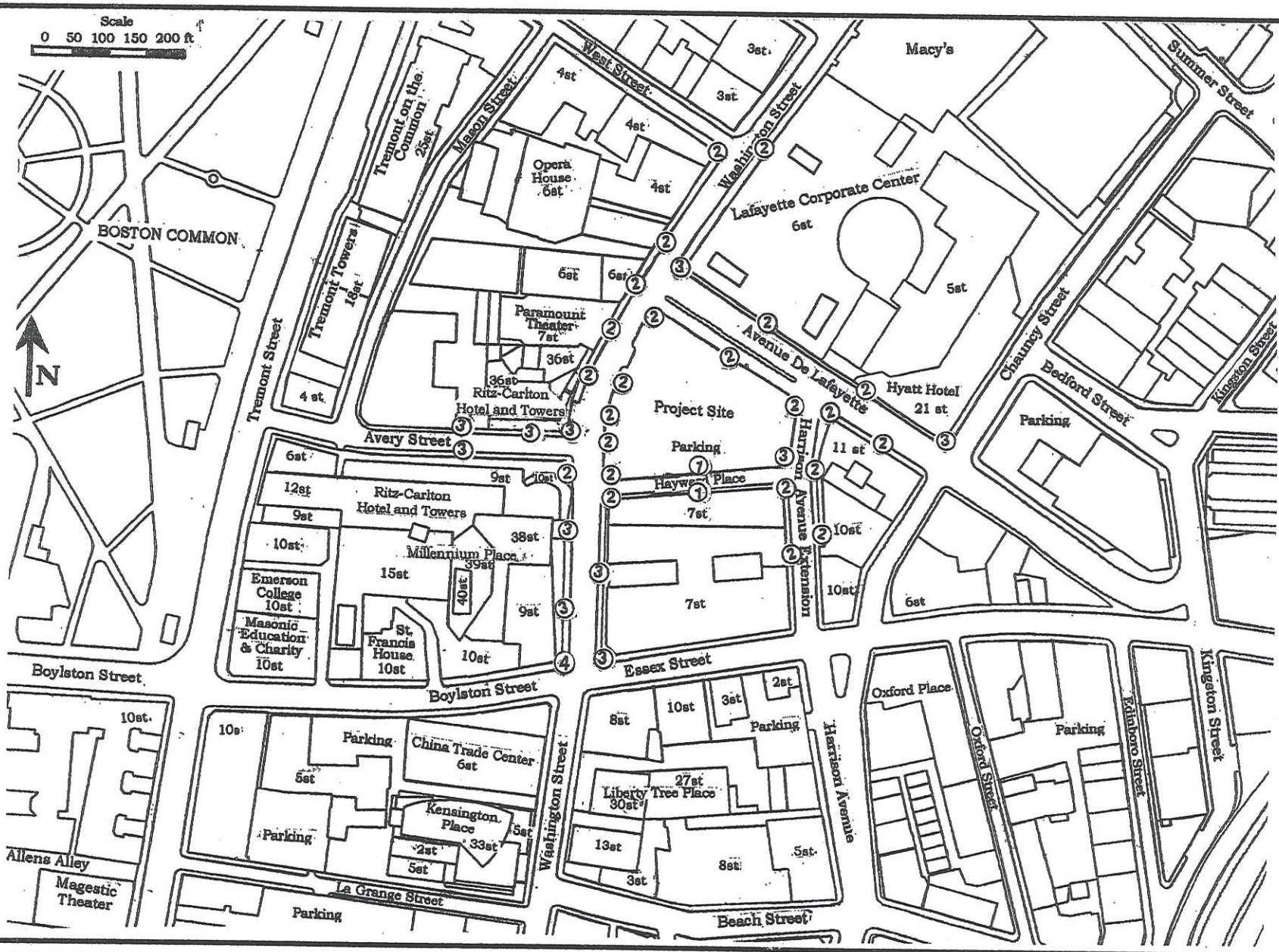

Figure 5.1-23

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Ten Forbes Road Braintree, MA 02184 781-849-7070

Annual PLW Categories for Hayward Place
Existing Conditions

Source: Frank H. Durgin, P.E.

2329Wind.dwg

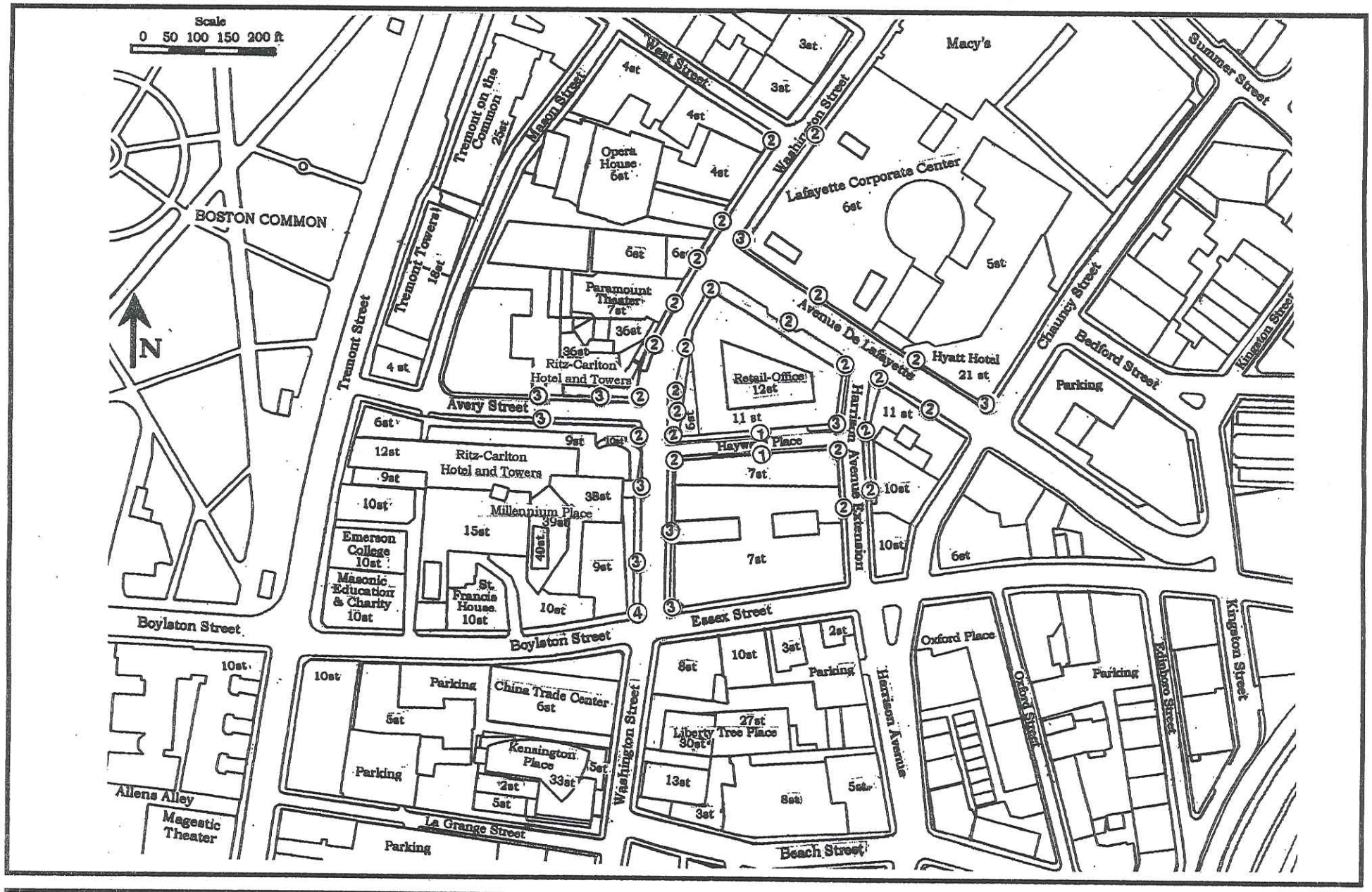

Figure 5.1-24

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Annual PLW Categories for Hayward Place Retail/Office Conditions

Source: Frank H. Durgin, P.E.

2329Wind.dwg

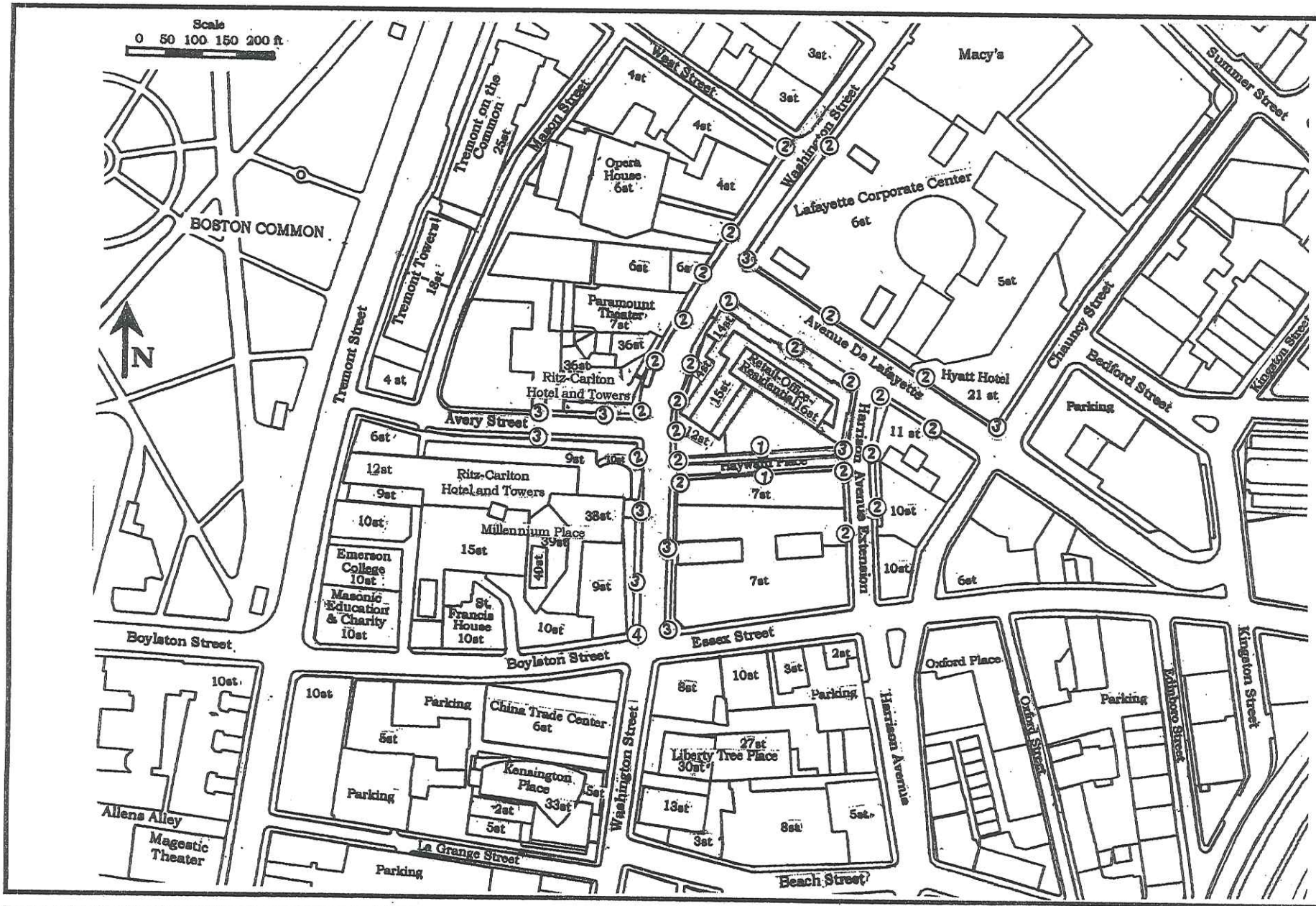

Figure 5.1-25

Daylor Consulting Group Inc.

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2329Wind.dwg

Annual PLW Categories for Hayward Place Retail/Residential and Retail/Office/Residential Conditions

Source: Frank H. Durgin, P.E.

Appendix E **DPIR/DEIR Shadow Impact Analysis**

5.2 Shadow Impact Analysis

5.2.1 Introduction

As typically required by the BRA pursuant to Article 80, the following analysis describes and depicts graphically the anticipated shadow impacts from the Project during the morning (9:00 AM), midday (12:00 Noon), and mid-afternoon (3:00 PM) time periods during the vernal equinox (March 21), summer solstice (June 21), autumnal equinox (September 21), and winter solstice (December 21). For the summer and autumnal equinoxes, a 6:00 PM shadow is also shown. In addition, shadow impacts are depicted between 8:00 AM and 8:45 AM on October 21, which is the worst-case condition for shadows on Boston Common. All times refer to local time.

For each time of the day, shadows are depicted for Alternative 1, the No-Build (existing) condition, Alternative 2 Build (Office/Retail) and Alternative 3A Build (Residential/Retail). Shadow figures for the third Build alternative, Alternative 3B (Office/Residential/Retail) are not separately presented, because the building massing for that alternative is essentially identical to Alternative 3A. Shadow diagrams are included as **Figures 5.2-1** through **5.2-46** at the end of the shadow analysis.

Shadow Study Area

Particular attention is given to public open spaces (e.g. Boston Common) and pedestrian areas, including, but not limited to, sidewalks and pedestrian walkways in the vicinity of the Project. The shadow analysis assesses compliance with the "no new shadow" statutes for Boston Common (Chapter 362 of the Acts of 1990 "An Act Protecting Certain Public Commons" and Chapter 384 of the Acts of 1992 "An Act Protecting the Boston Public Garden"). These provisions essentially prohibit new shadow on Boston Common for more than two hours from 8:00 A.M. to 2:30 P.M. on any day from March 21 to October 21.

In addition, the shadow study addresses impacts to historic resources, including building facades, in the vicinity of the Project Site (see **Figure 8-1** in **Section 8.0** of this DPIR/DEIR which shows historic resources in the vicinity). Labeled on the shadow figures are the Washington Street Theatre District, a designated Historic District, located northwest of the Project Site. The Textile District, located southeast of the Project across Harrison Avenue extension, is also adjacent to the Project Site.

5.2.2 Vernal Equinox (March 21)

Figures 5.2-1 through **5.2-9** depict shadows on March 21.

At 9:00 AM, shadows are cast in a northwesterly direction. In the morning, existing shadow covers a portion of the Project Site, Hayward Place, Harrison Avenue extension, and portions of

Washington Street and its sidewalks. Building facades within the Washington Street Theatre District north of Avenue de Lafayette are in shadow from existing structures, as well as portions of Boston Common adjacent to Tremont Street.

At 9:00 AM, for both Build alternatives, new shadow is cast on Washington Street sidewalks directly adjacent to the Project Site, and next to sidewalks that are in shadow from existing buildings. New shadow also falls on a small portion of the Washington Street Theatre District (Paramount Theater and Adams House Annex at 543-547 Washington Street) and the lower stories of the Ritz-Carlton Hotel and Towers. There are no new shadows on Boston Common.

At 12:00 Noon existing shadow remains on the north end of the Washington Street Theater District and on Hayward Place. New shadow will fall onto Avenue de Lafayette sidewalks west of Harrison Avenue extension, portions of the Washington Street sidewalks adjacent to the Project Site and buildings and sidewalks directly across from Avenue de Lafayette, including Opera House façade.

At 3:00 PM the existing shadow extends to most of the sidewalks abutting the Project Site portion as well as the existing Project Site. For both Build alternatives, new shadows are limited to a small portion of Avenue de Lafayette not already in shadow from existing buildings.

5.2.3 Summer Solstice (June 21)

Figures 5.2-10 through **5.2-21** depict shadows on June 21.

At 9:00 AM, existing shadow covers a portion of the Project Site and Hayward Place, extending onto both sides of Avenue de Lafayette and Harrison Avenue extension sidewalks. Building facades within the Washington Street Theatre District north of Avenue de Lafayette are in shadow from existing buildings, as well as portions of Boston Common adjacent to Tremont Street.

In the morning, new shadows are limited to the portion of Washington Street immediately west of the Project Site and a portion of Avery Street. Alternative 3A, the Residential/Retail alternative, casts slightly more shadow on Avery Street sidewalks than Alternative 2, the Office/Retail alternative. New shadow is cast on a portion of the Paramount Theater façade and the lower stories of the Ritz-Carlton Hotel and Towers.

By 12:00 Noon, new shadow extends onto Avenue de Lafayette sidewalks on the south side of the street and the Washington Street sidewalks abutting the Project Site. In addition, a small area of new shadow extends across Washington Street in front of the Paramount Theater and adjacent Adams House Annex. There is slightly more shadow cast from Alternative 3A onto Washington Street itself.

At 3:00 PM, new shadow fills in a gap along Avenue de Lafayette that is adjacent to areas that are in the shadow of existing buildings. In addition, new shadow is cast on Harrison Avenue

extension sidewalks immediately adjacent to the Project Site. A sliver of new shadow falls on the corner of the Textile Building (89-99 Chauncy Street) a contributing building in the Textile District and the sidewalk at the corner of Harrison Avenue extension and Avenue de Lafayette.

At 6:00 PM, new shadows are limited to a small portion of Avenue de Lafayette, Hayward Place and a small portion of Harrison Avenue extension adjacent to the Textile District. These new slivers of shadow are adjacent to areas that are in shadow from existing buildings.

5.2.4 *Autumnal Equinox (September 21)*

Figures 5.2-22 through **5.2-33** depict shadows on September 21.

In the morning, existing shadow covers the majority of the Project Site and Hayward Place, and Harrison Avenue extension sidewalks directly adjacent to it. Building facades within the Washington Street Theatre District north of Avenue de Lafayette are in shadow from existing buildings, as well as portions of Boston Common adjacent to Tremont Street.

At 9:00 AM, new shadows for both Build alternatives are limited to the area of Washington Street between Avery Street and Avenue De Lafayette that is not already impacted by existing shadow. New shadows are also cast onto the Paramount Theatre façade and the lower stories of the Ritz-Carlton Hotel and Towers.

At 12:00 Noon, existing shadow remains on the north end of the Washington Street Theater District and on Hayward Place. New shadow will fall onto Avenue de Lafayette sidewalks west of Harrison Avenue extension, portions of the Washington Street sidewalks adjacent to the Project Site, and buildings and sidewalks directly across from Avenue de Lafayette, including Opera House façade.

At 3:00 PM, new shadow from both Build alternatives fill in the gap along Avenue de Lafayette and a small section of the northerly end of Harrison Avenue extension that is not already affected by existing shadow.

At 6:00 PM, new ground-level shadow is limited to a tiny sliver of Avenue de Lafayette, the roof and façade of the Textile Building (in the Textile District) and the roof of the Lafayette Corporate Center.

5.2.5 *Winter Solstice (December 21)*

Figures 5.2-34 through **5.2-42** depict shadows on December 21. Winter sun casts the longest shadows of the year.

At 9:00 AM, existing shadows extend to all sidewalks abutting the property and the facades of buildings in the Washington Street Theater District. In the morning, new shadow is restricted to

the roofs and façades of contributing buildings in the Washington Street Theatre District, including the Paramount Theatre and the Opera House.

By 12:00 Noon, new shadows are limited to a small portion of Avenue de Lafayette and Washington Street sidewalks near the street intersections and near the center of Lafayette Corporate Center. Shadows affecting the Washington Street Theatre District are limited to street level and façade shading largely in the area across from Avenue de Lafayette. In addition, a small portion of the Lafayette Corporate Center roof is shadowed.

At 3:00 PM, much of the site vicinity is covered by existing shadow, including Washington Street, Avenue De Lafayette, Harrison Avenue extension, and Hayward Place. New shadows during the late afternoon in winter are limited to the roof of the Lafayette Corporate Center.

5.2.6 *Boston Common Impacts*

Article 38 (Midtown Cultural District) of the Zoning Code and Chapter 362 of the Acts of 1990 prohibit new shadow on Boston Common for more than two hours from 8:00 AM to 2:30 PM on any day from March 21 to October 21. Due to the location of the Project Site east of Boston Common, the potential for new shadow exists only during the morning hours. Worst-case conditions for this location occur on October 21 as opposed to March 21, due to daylight savings time still being in effect. **Figures 5.2-43** through **5.2-46** show the new shadow cast at 8:00 AM, 8:15 AM, 8:30 AM, and 8:45 AM.

At 8:00 AM, there is a small sliver of new shadow cast on Boston Common. Alternative 3A, the Residential/Retail alternative casts slightly more shadow due to the different building mass arrangement. At 8:15 AM, the shadow has decreased by almost half. At 8:30 AM, new shadow has decreased substantially and has moved closer to Tremont Street. By 8:45 AM there is no new shadow cast on Boston Common due to the interference of the intervening buildings. The shadow analysis shows that the proposed Project does not violate these statutes.

5.2.7 Conclusions

The Project replaces an existing parking lot that largely casts no shadow with a new building approximately 155-feet in height. Any construction on the Project Site would result in new shadow compared to the No-Build alternative. In general, in the morning, new shadows from the Project will be cast on Washington Street sidewalks abutting the Project Site, and northwesterly towards the Ritz-Carlton Hotel and Towers and contributing buildings in the Washington Street Theater District directly across from the Project Site: the Paramount Theater, Adams House Annex, and the Opera House.

By 12:00 Noon and in the mid-day hours, new shadow extends onto Avenue de Lafayette sidewalks. By mid-afternoon, new shadow is no longer directed onto buildings in the Washington Street Theater District. During this time period, new shadow largely fills in the gaps along the sidewalks of Avenue de Lafayette, Harrison Avenue extension, and Hayward Place that are not in shadow from existing buildings. Late in the day, in June and September, the Textile Building in the Textile District, is affected by a narrow band of shadow adjacent to shadow cast by existing buildings.

The Project does not violate the "no new shadows" statutes for Boston Common.

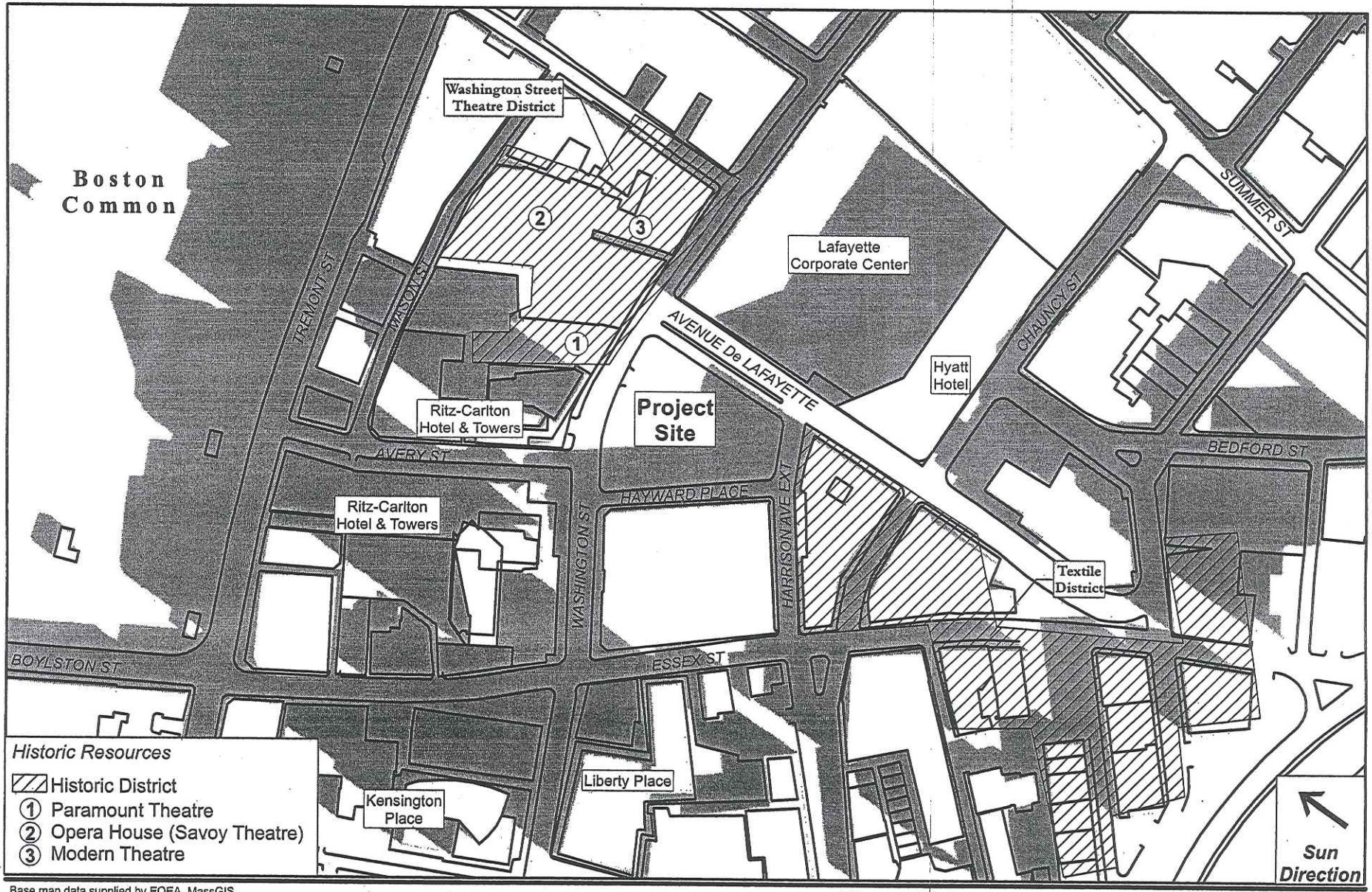
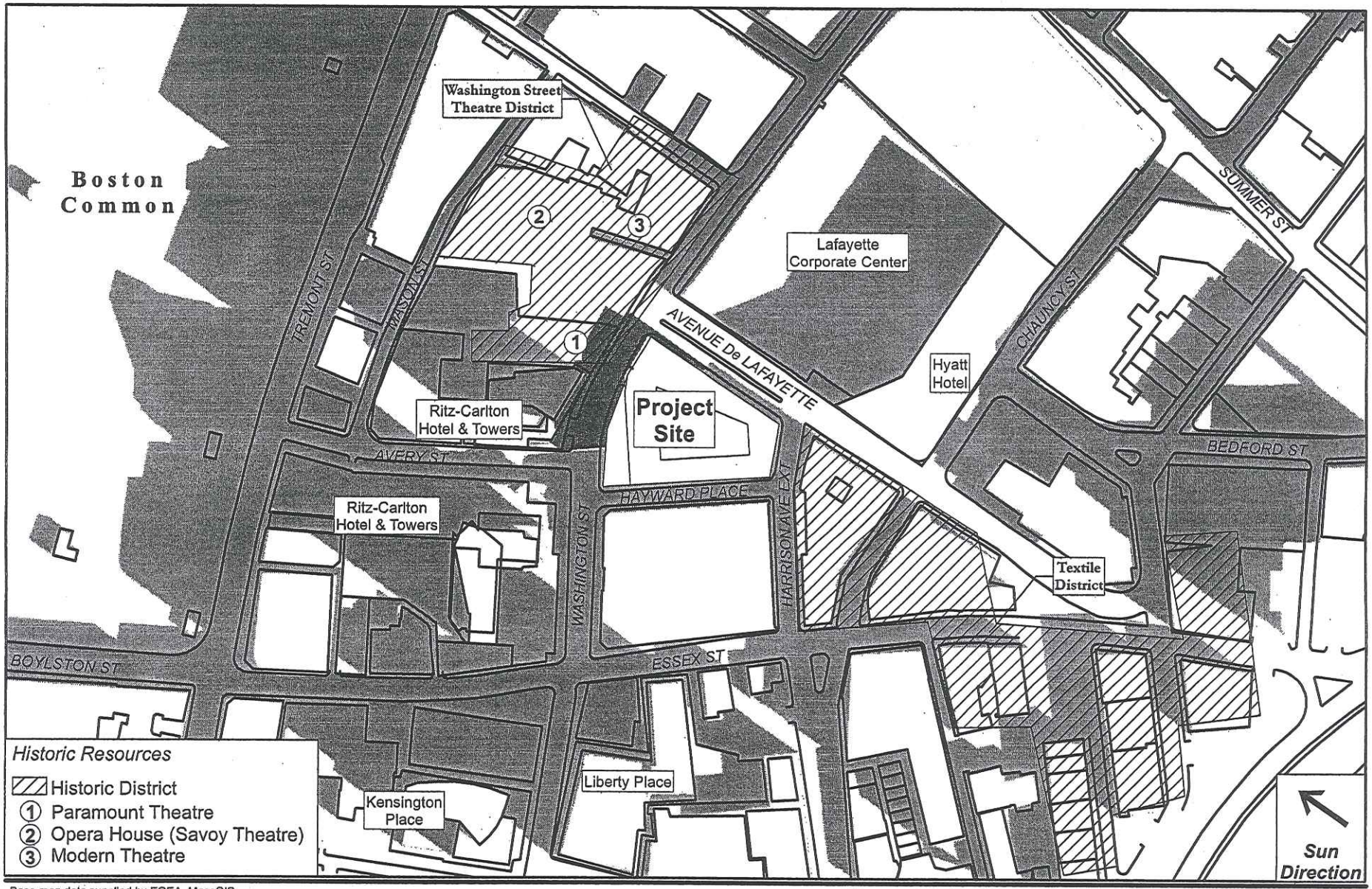


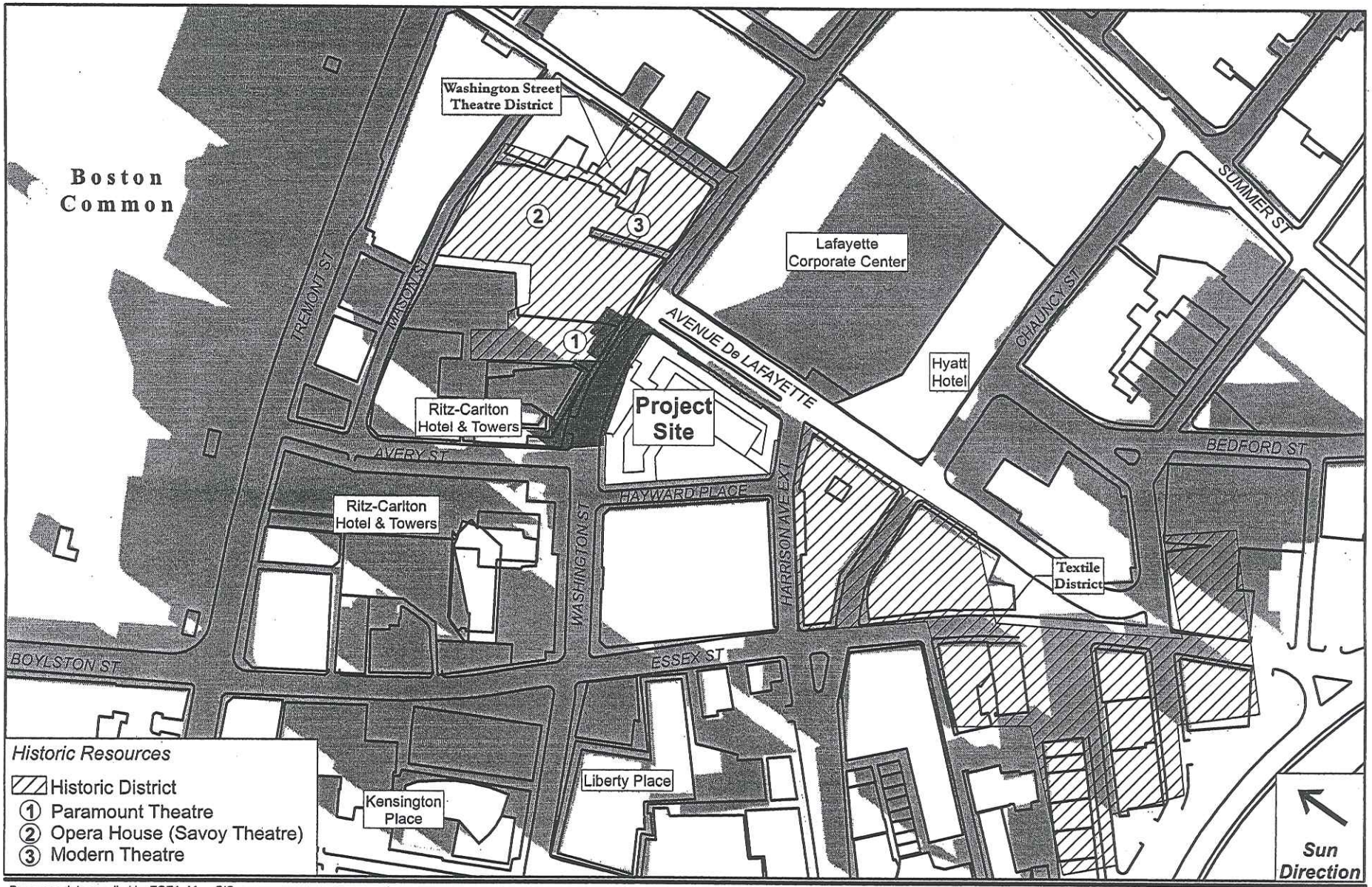
Figure 5.2-1
Hayward Place Shadow Impact Study
No-Build Conditions
March 21st 9:00 AM



Base map data supplied by EOEA, MassGIS.

Figure 5.2-2
Hayward Place Shadow Impact Study
Mixed Use: Office/Retail
March 21st 9:00 AM

EarthTech



Base map data supplied by EOEA, MassGIS.

Figure 5.2-3
Hayward Place Shadow Impact Study
Mixed Use: Residential/Retail
March 21st 9:00 AM

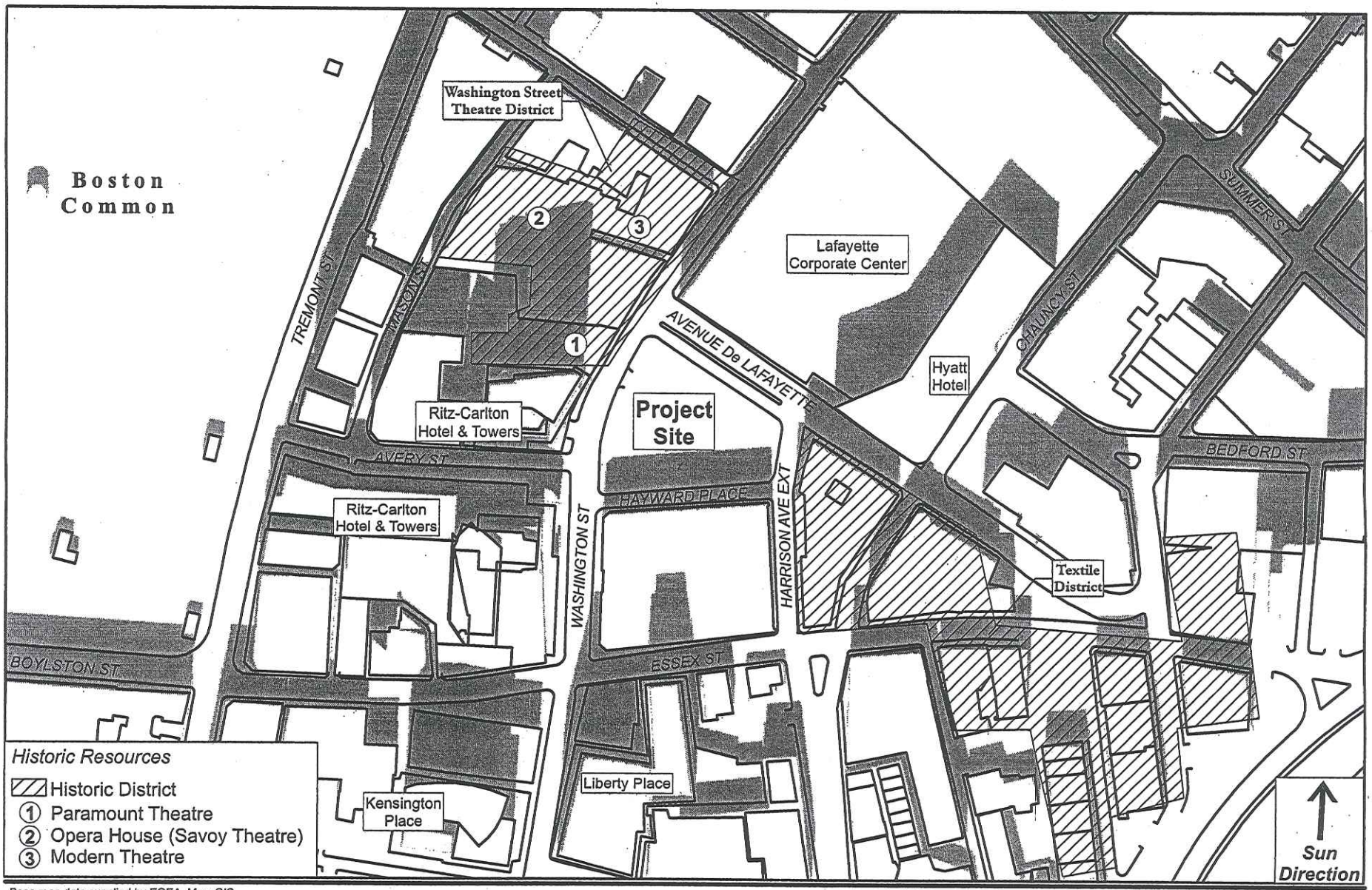
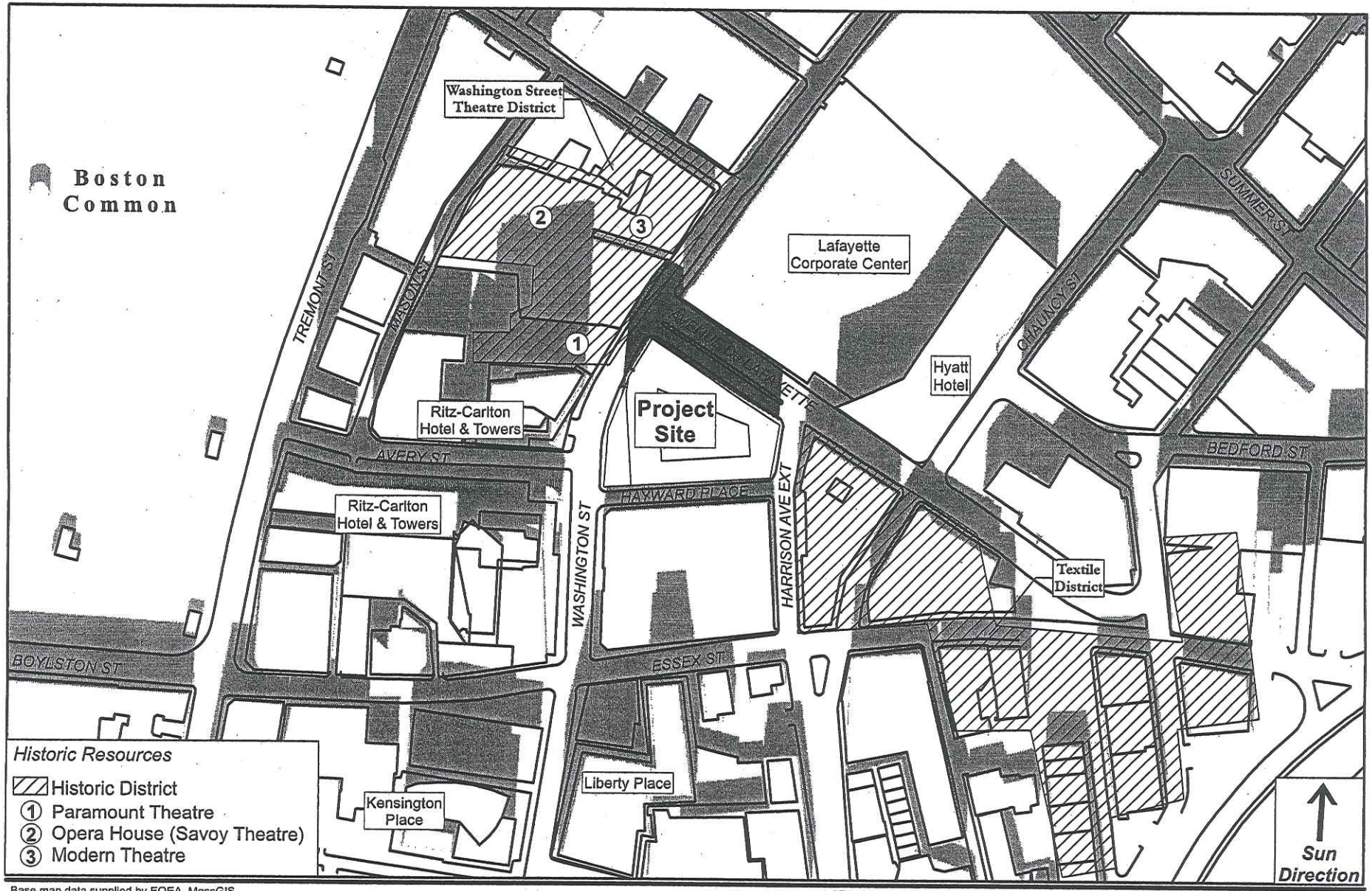


Figure 5.2-4
Hayward Place Shadow Impact Study
No-Build Condition
March 21st Noon



Base map data supplied by EOEA, MassGIS.

Figure 5.2-5
Hayward Place Shadow Impact Study
Mixed Use: Office/Retail
March 21st Noon

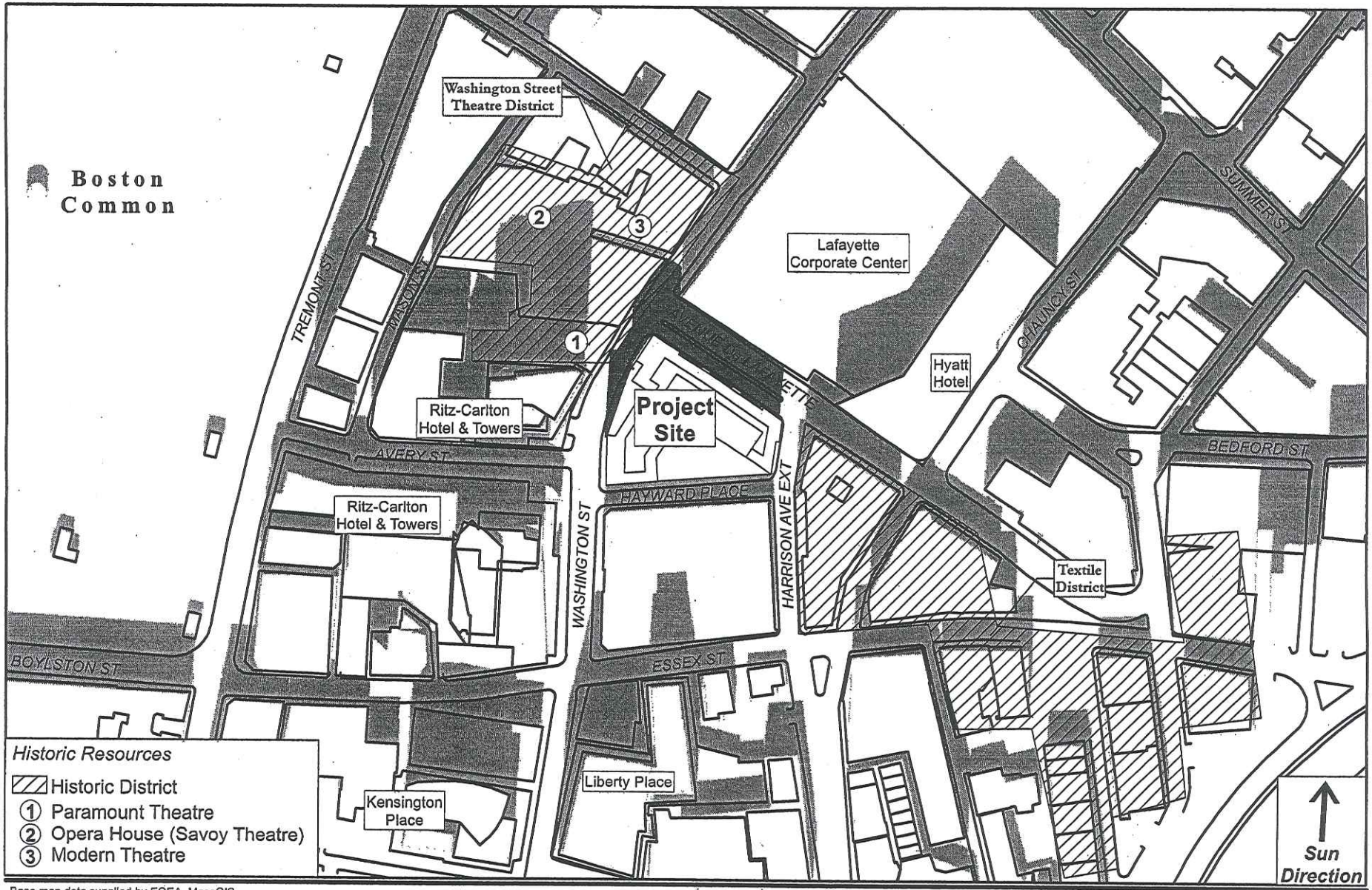
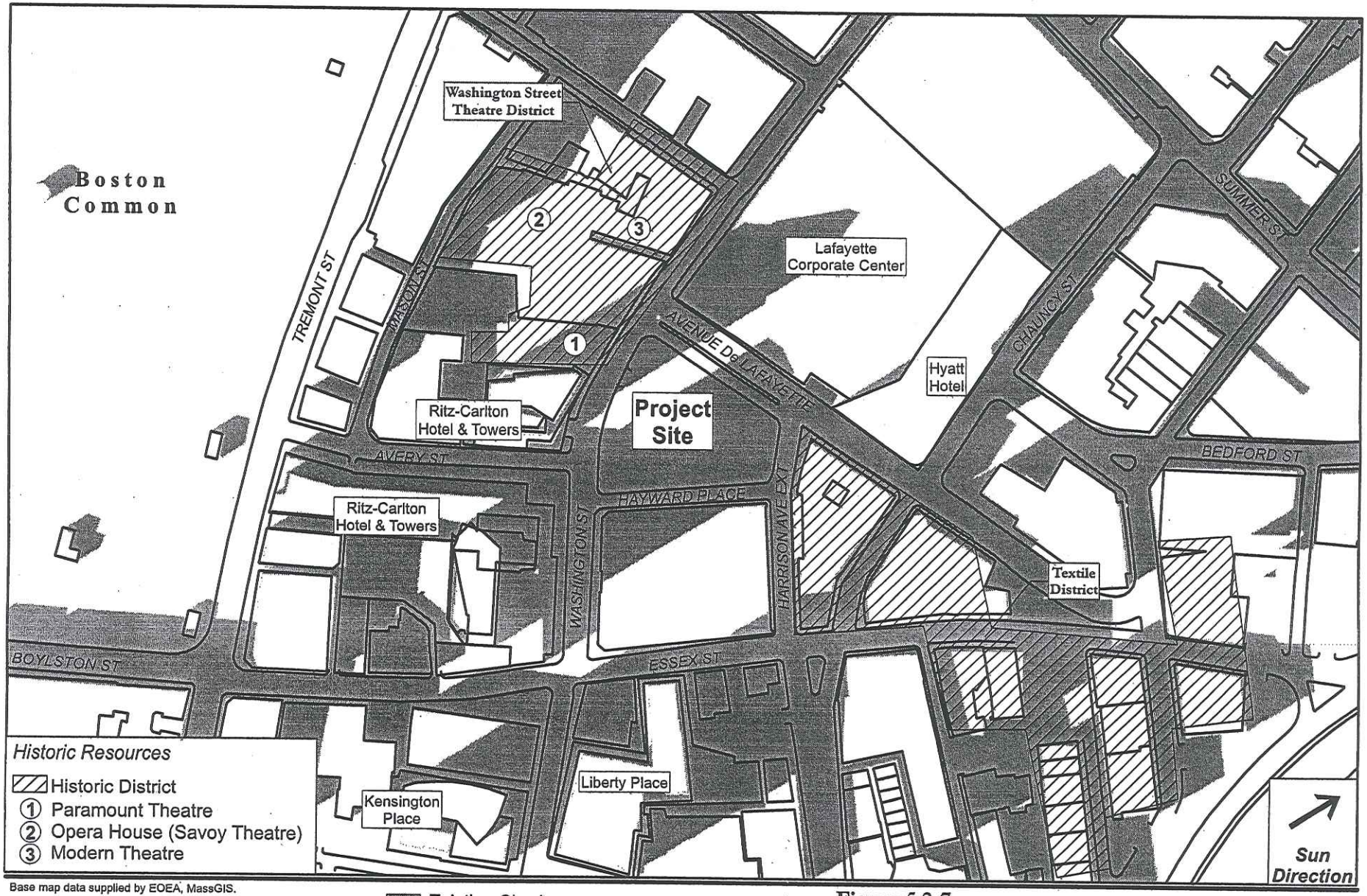


Figure 5.2-6
Hayward Place Shadow Impact Study
Mixed Use: Residential/Retail
March 21st Noon

EarthTech



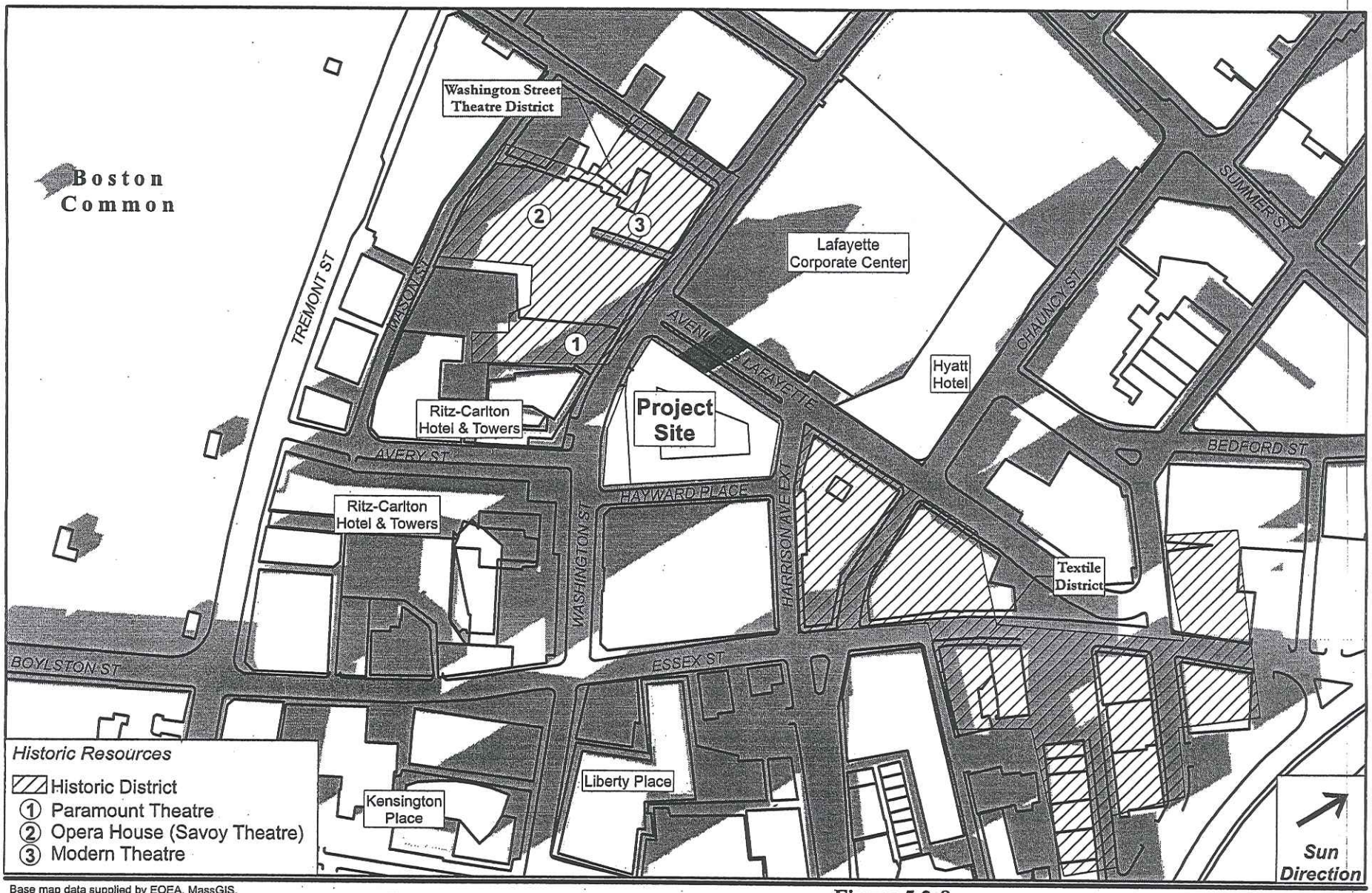
Base map data supplied by EOEA, MassGIS.

0 100 200 400
Feet

Existing Shadow
New Shadow

Figure 5.2-7
Hayward Place Shadow Impact Study
No-Build Condition
March 21st 3:00 PM

EarthTech



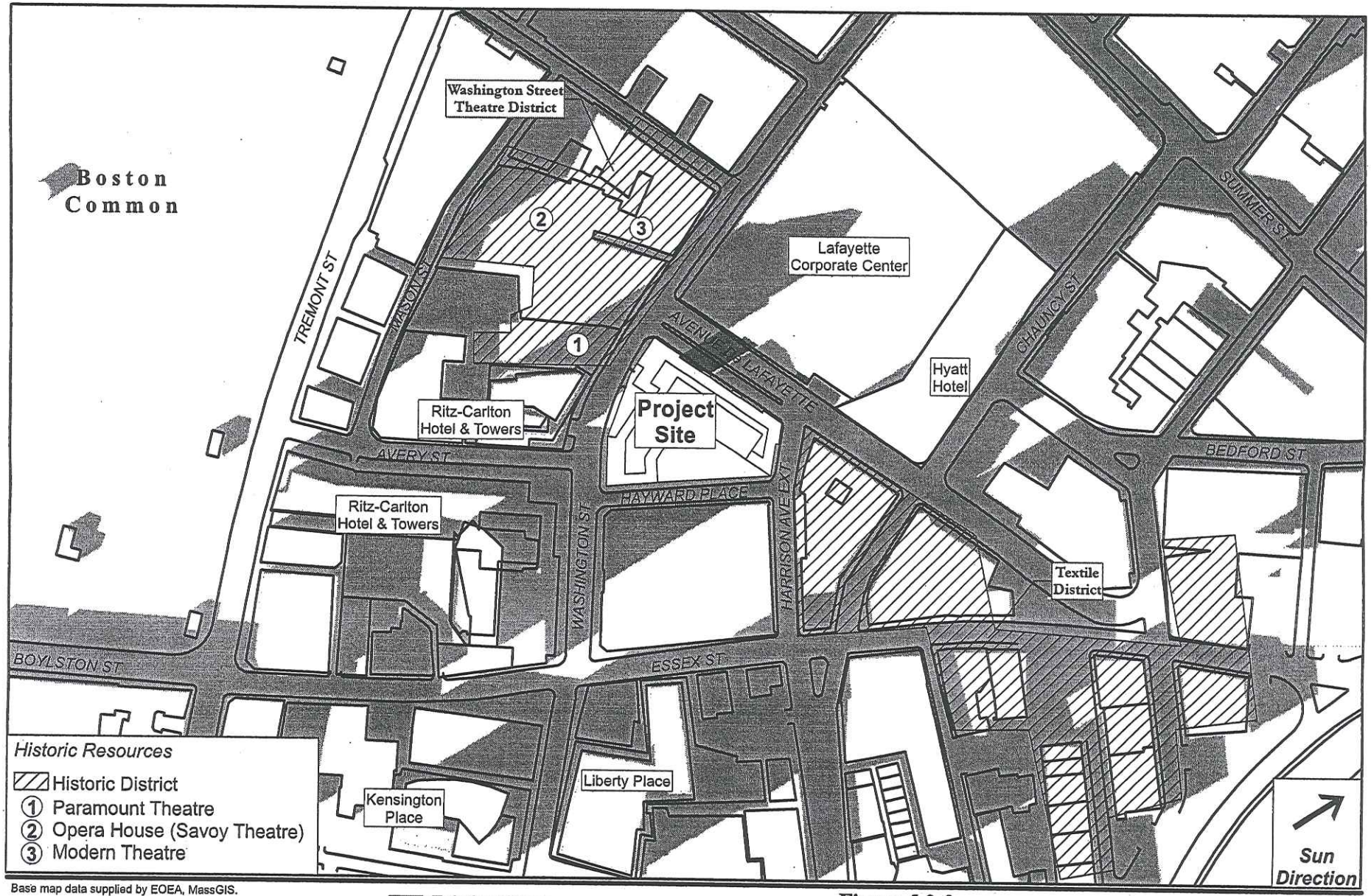
Base map data supplied by EOEA, MassGIS.

0 100 200 400
Feet

Existing Shadow
New Shadow

Figure 5.2-8
Hayward Place Shadow Impact Study
Mixed Use: Office/Retail
March 21st 3:00 PM

EarthTech

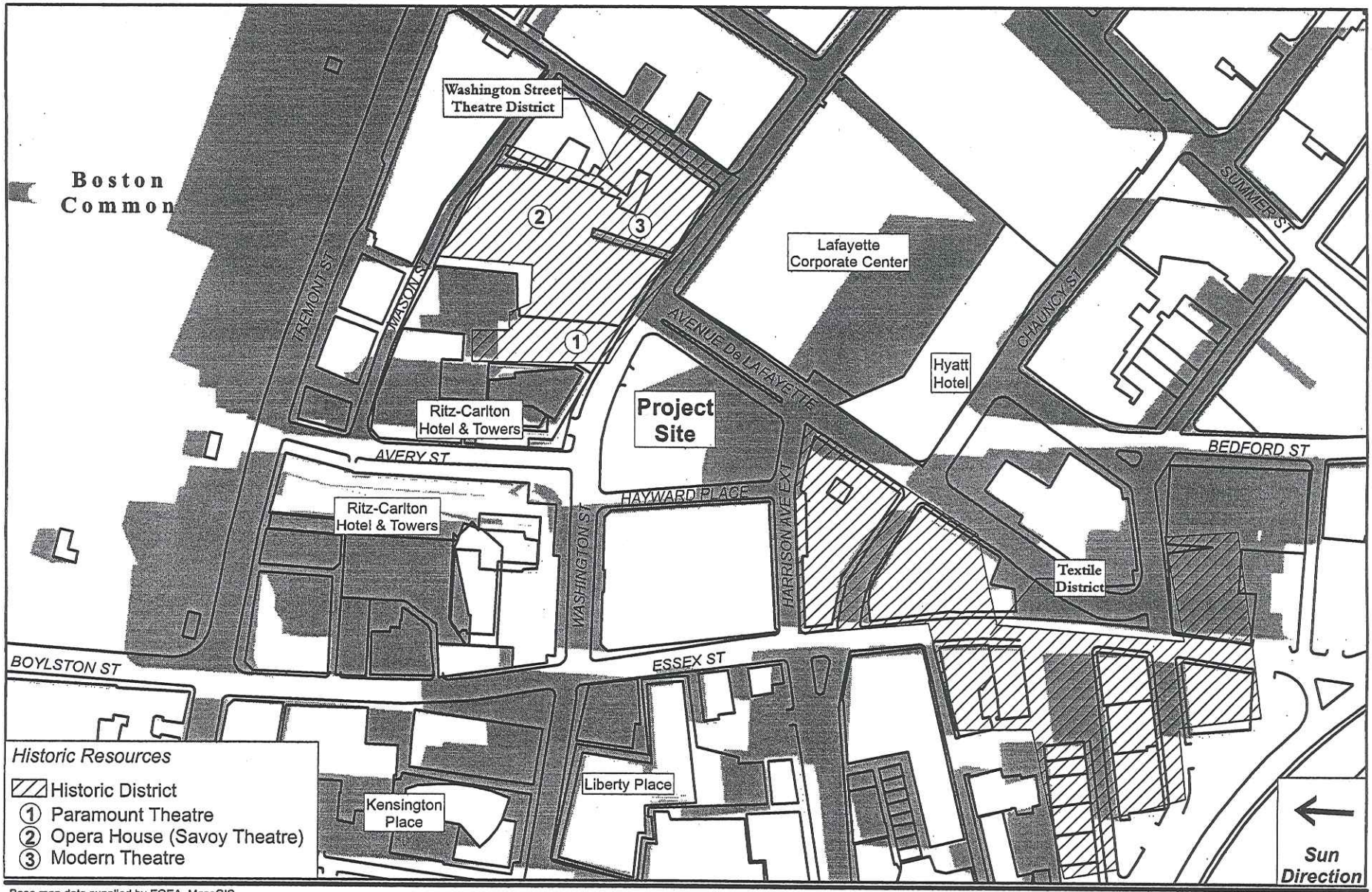


Base map data supplied by EOEA, MassGIS.

0 100 200 400
Feet

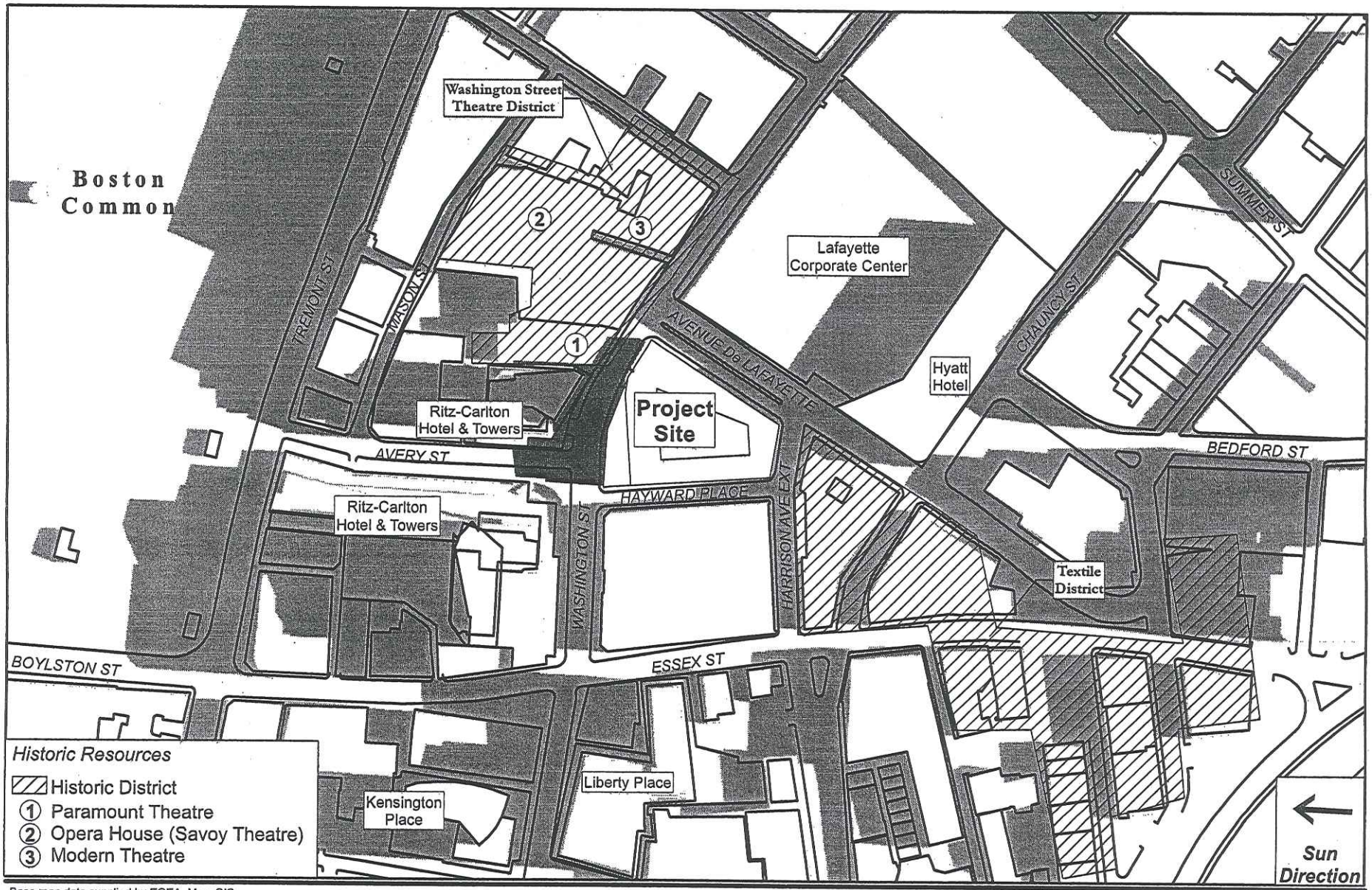
Existing Shadow
New Shadow

Figure 5.2-9
Hayward Place Shadow Impact Study
Mixed Use: Residential/Retail
March 21st 3:00 PM



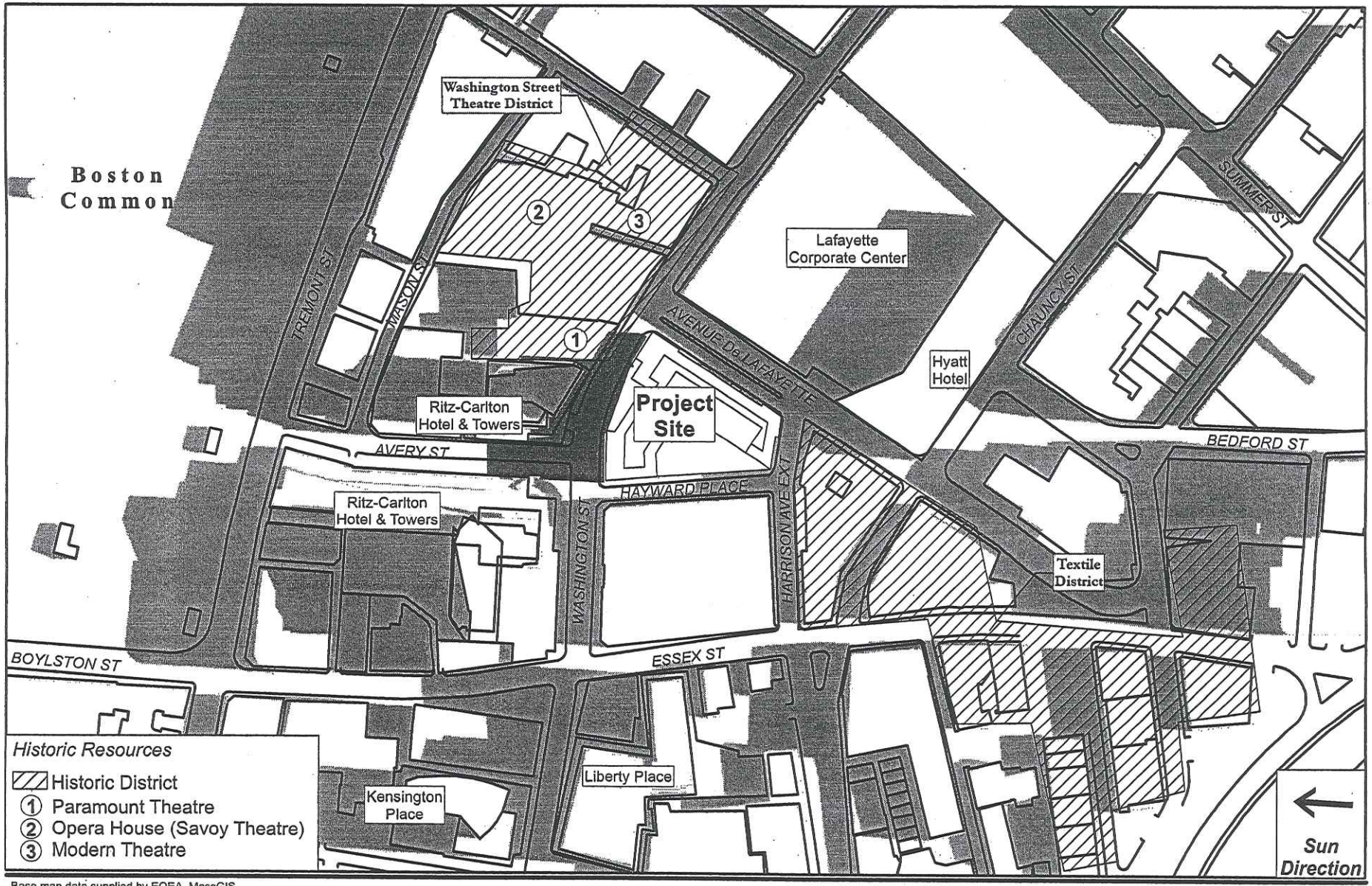
Base map data supplied by EOEA, MassGIS.

Figure 5.2-10
Hayward Place Shadow Impact Study
No-Build Condition
June 21st 9:00 AM



Base map data supplied by EOEA, MassGIS.

Figure 5.2-11
Hayward Place Shadow Impact Study
Mixed Use: Office/Retail
June 21st 9:00 AM



Base map data supplied by EOEA, MassGIS.

0 100 200 400
Feet

Existing Shadow
New Shadow

Figure 5.2-12
Hayward Place Shadow Impact Study
Mixed Use: Residential/Retail
June 21st 9:00 AM

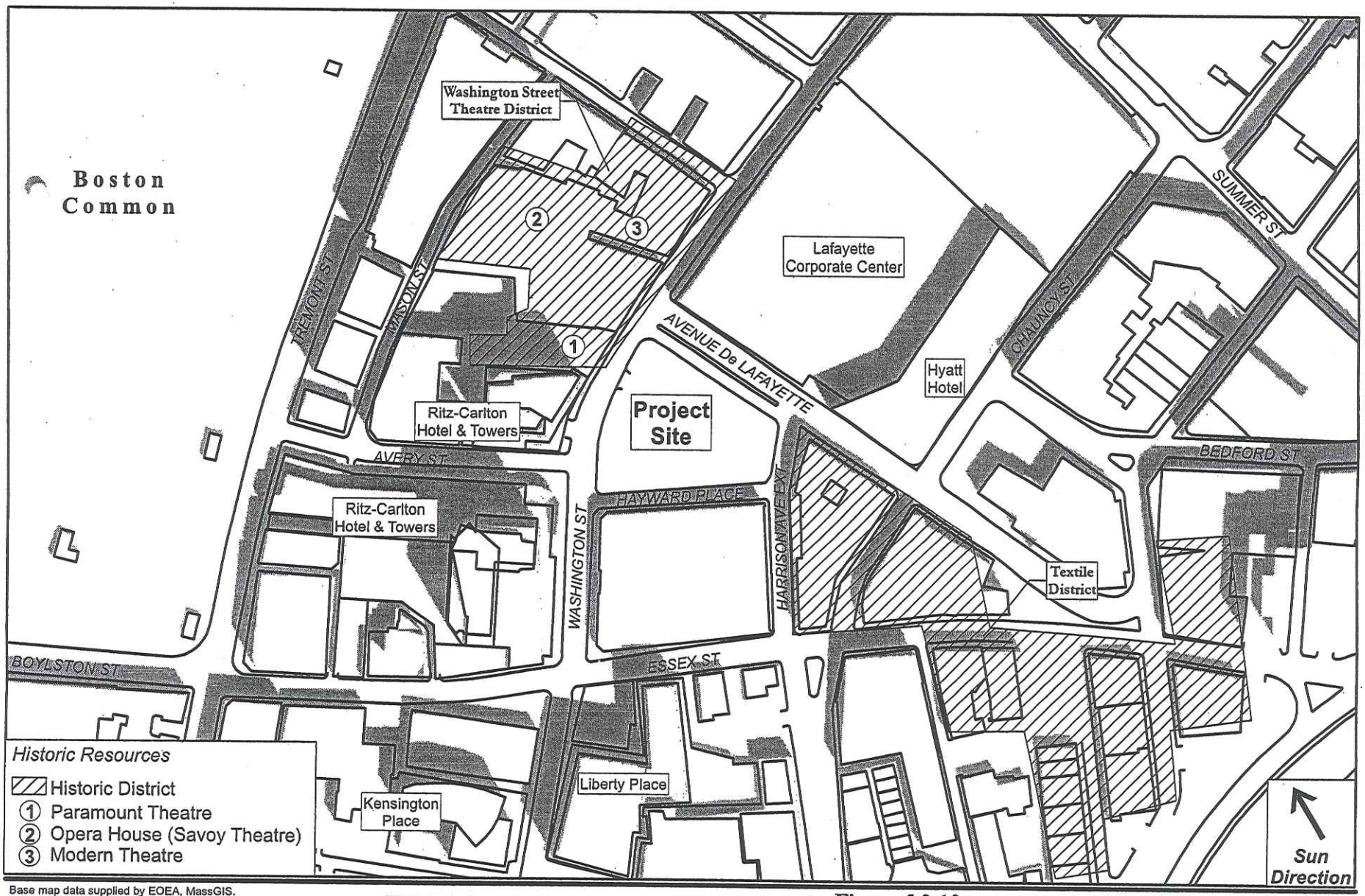


Figure 5.2-13
Hayward Place Shadow Impact Study
No-Build Condition
June 21st Noon

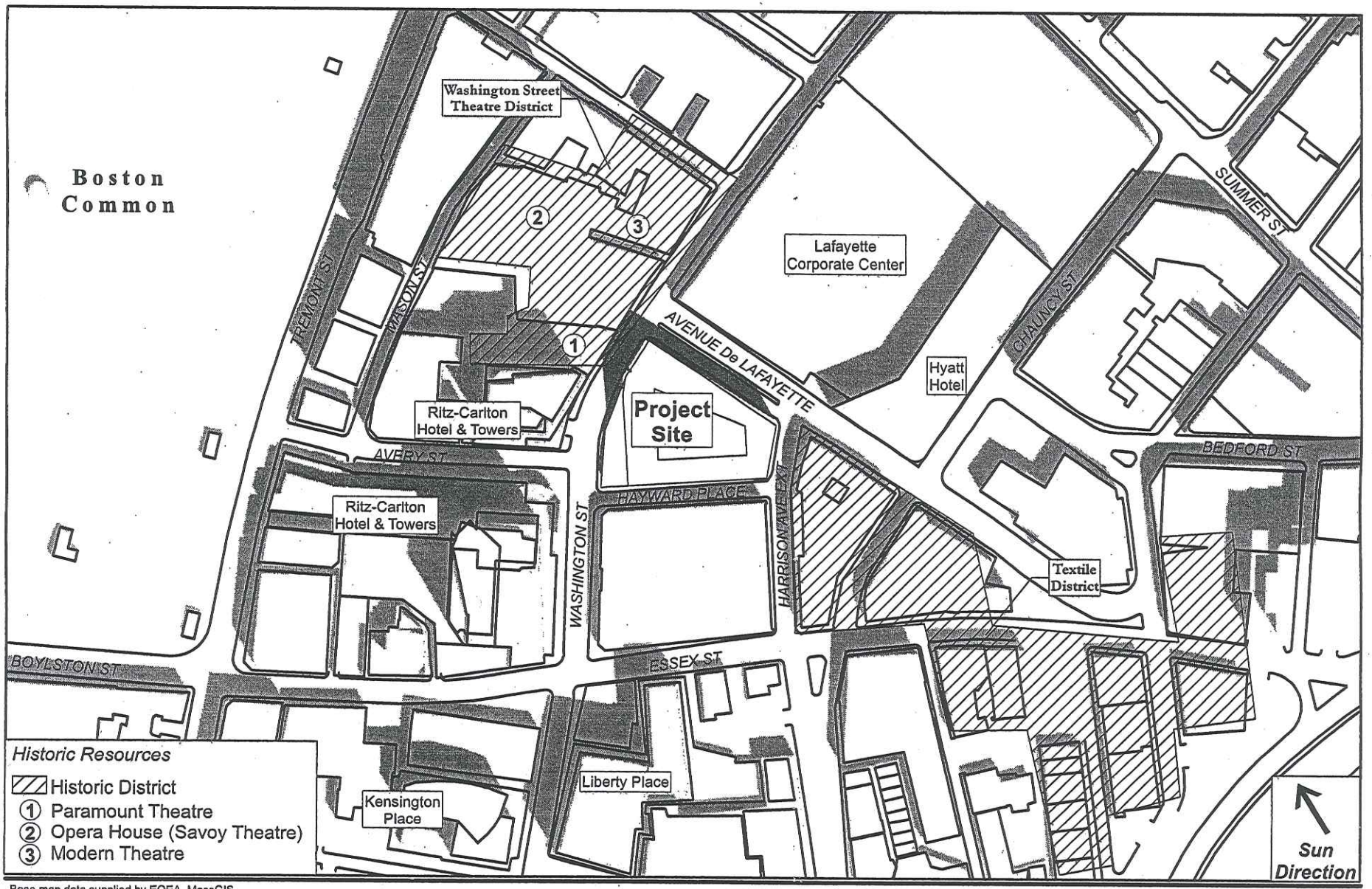


Figure 5.2-14
Hayward Place Shadow Impact Study
Mixed Use: Office/Retail
June 21st Noon

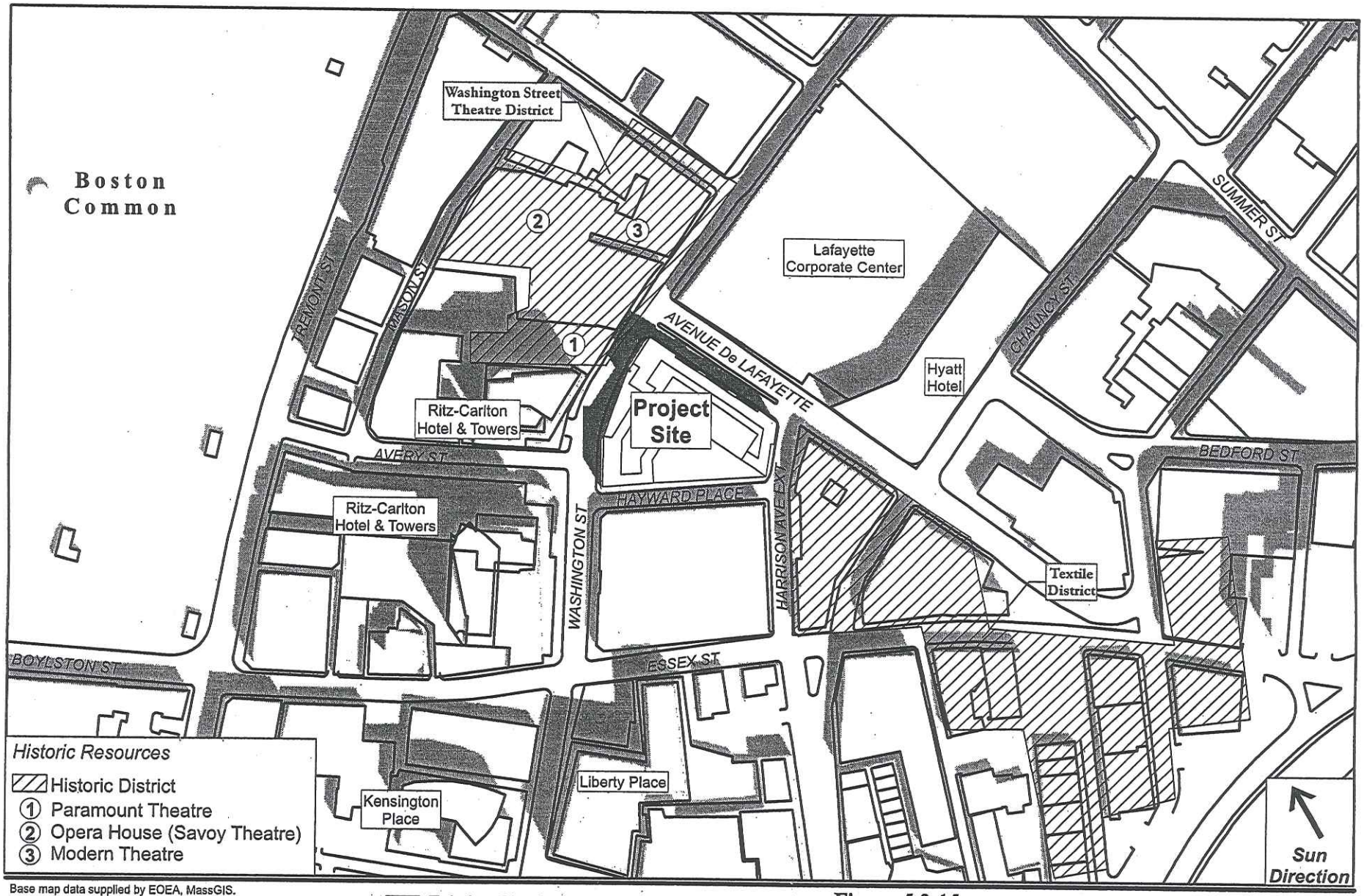
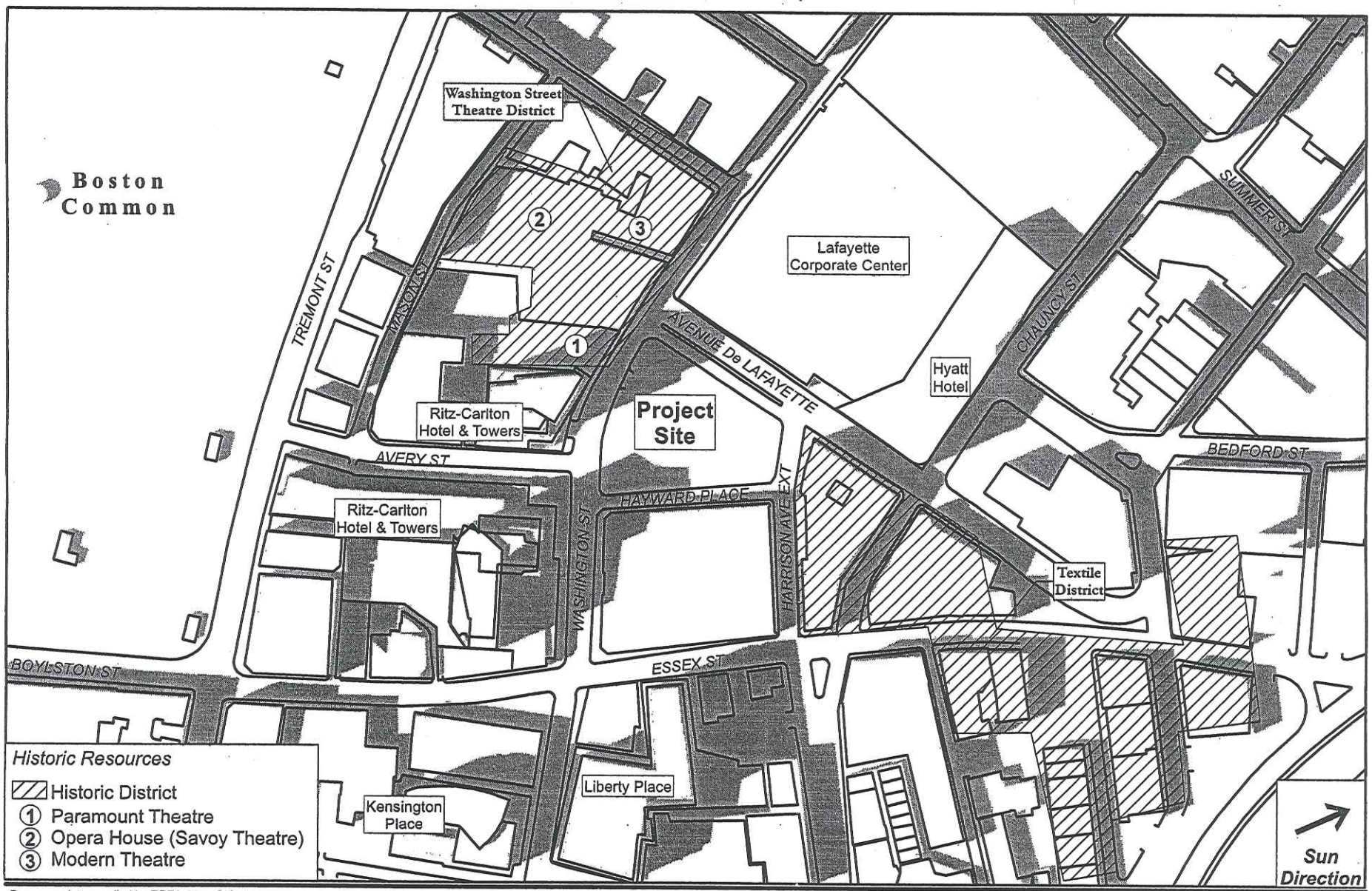


Figure 5.2-15
Hayward Place Shadow Impact Study
Mixed Use: Residential/Retail
June 21st Noon

EarthTech



Base map data supplied by EOEA, MassGIS.

0 100 200 400
Feet

Existing Shadow
New Shadow

Figure 5.2-16
Hayward Place Shadow Impact Study
No-Build Condition
June 21st 3:00 PM

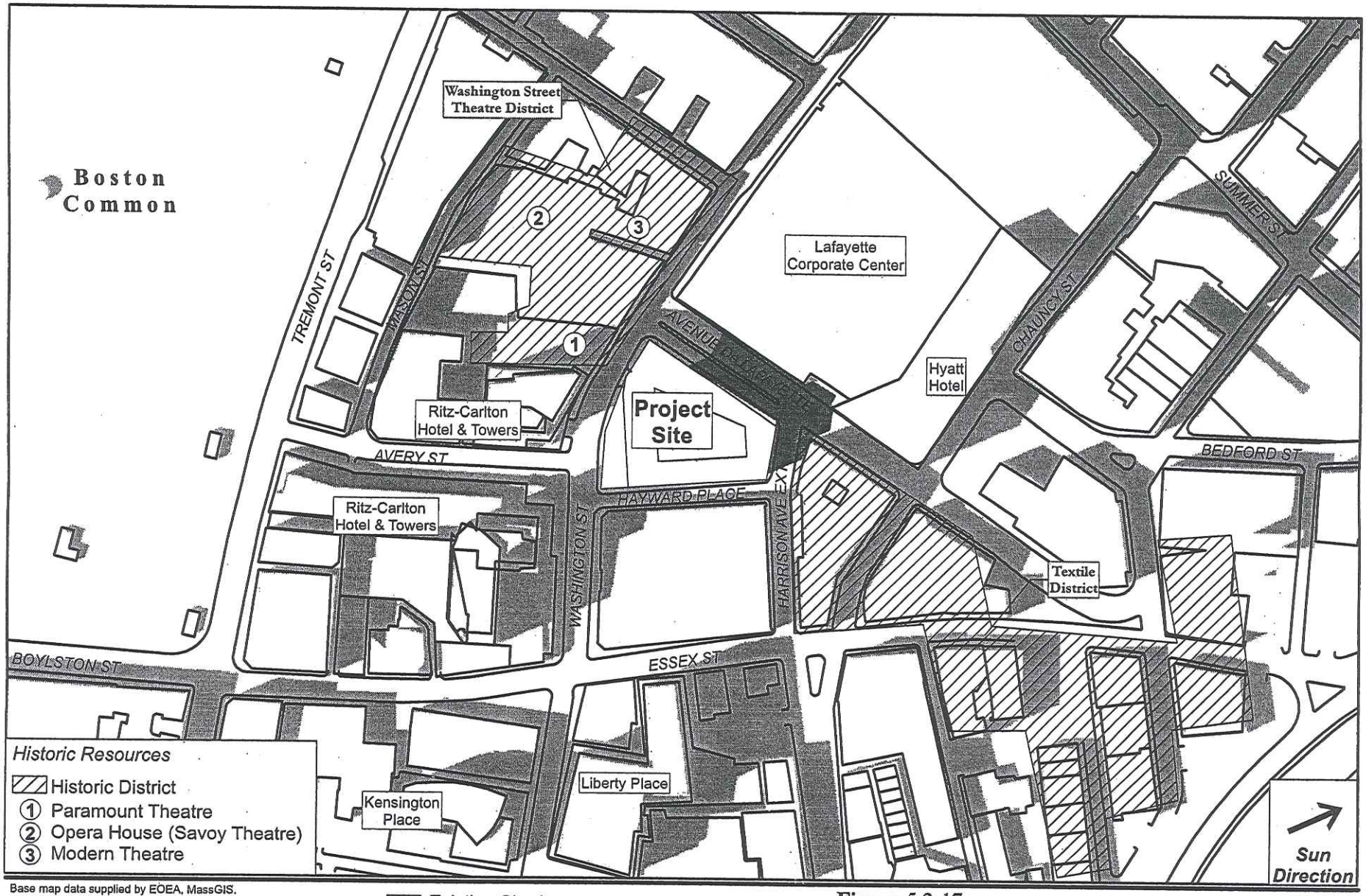


Figure 5.2-17
Hayward Place Shadow Impact Study
Mixed Use: Office/Retail
June 21st 3:00 PM

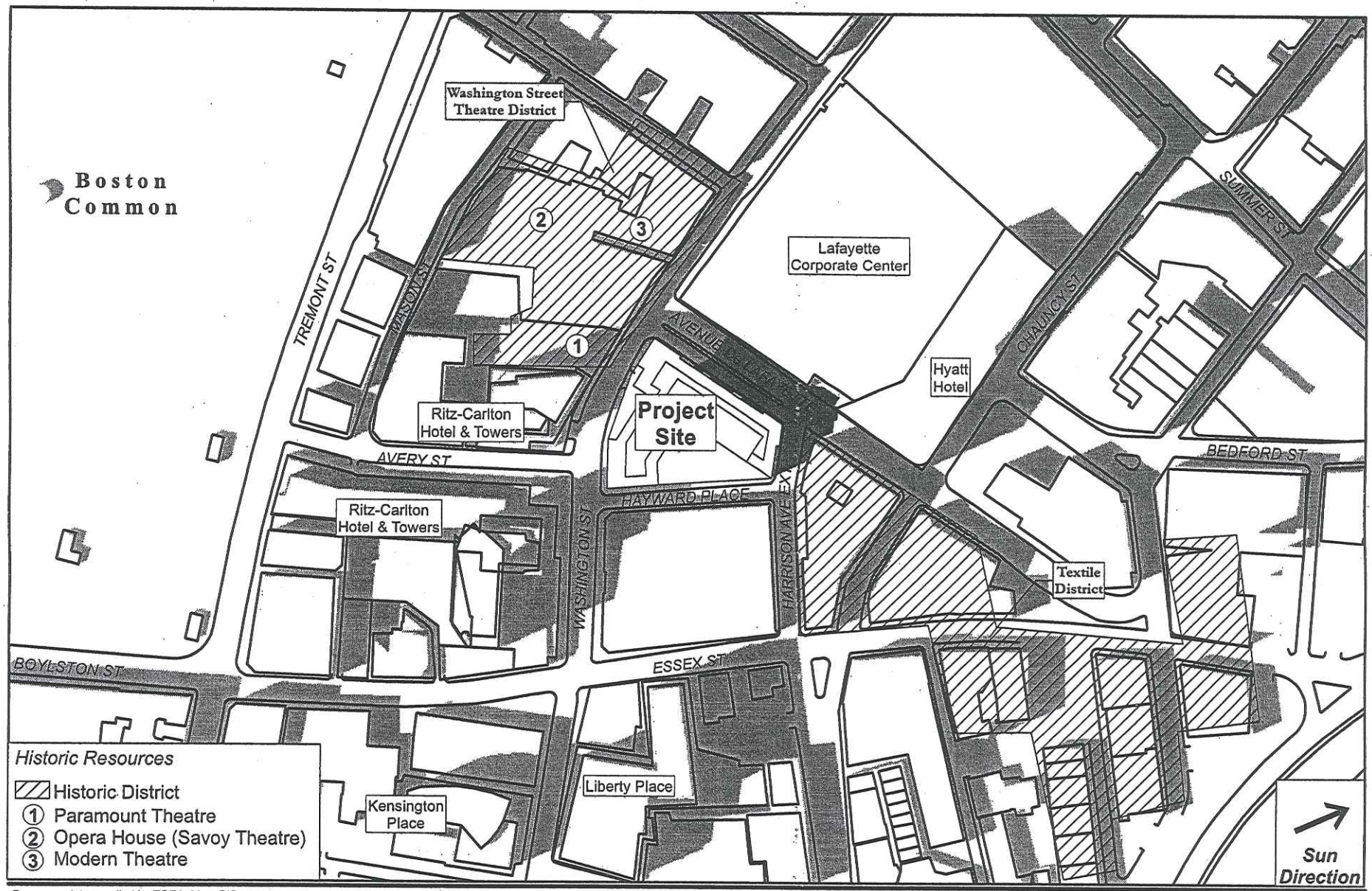


Figure 5.2-18
Hayward Place Shadow Impact Study
Mixed Use: Residential/Retail
June 21st 3:00 PM

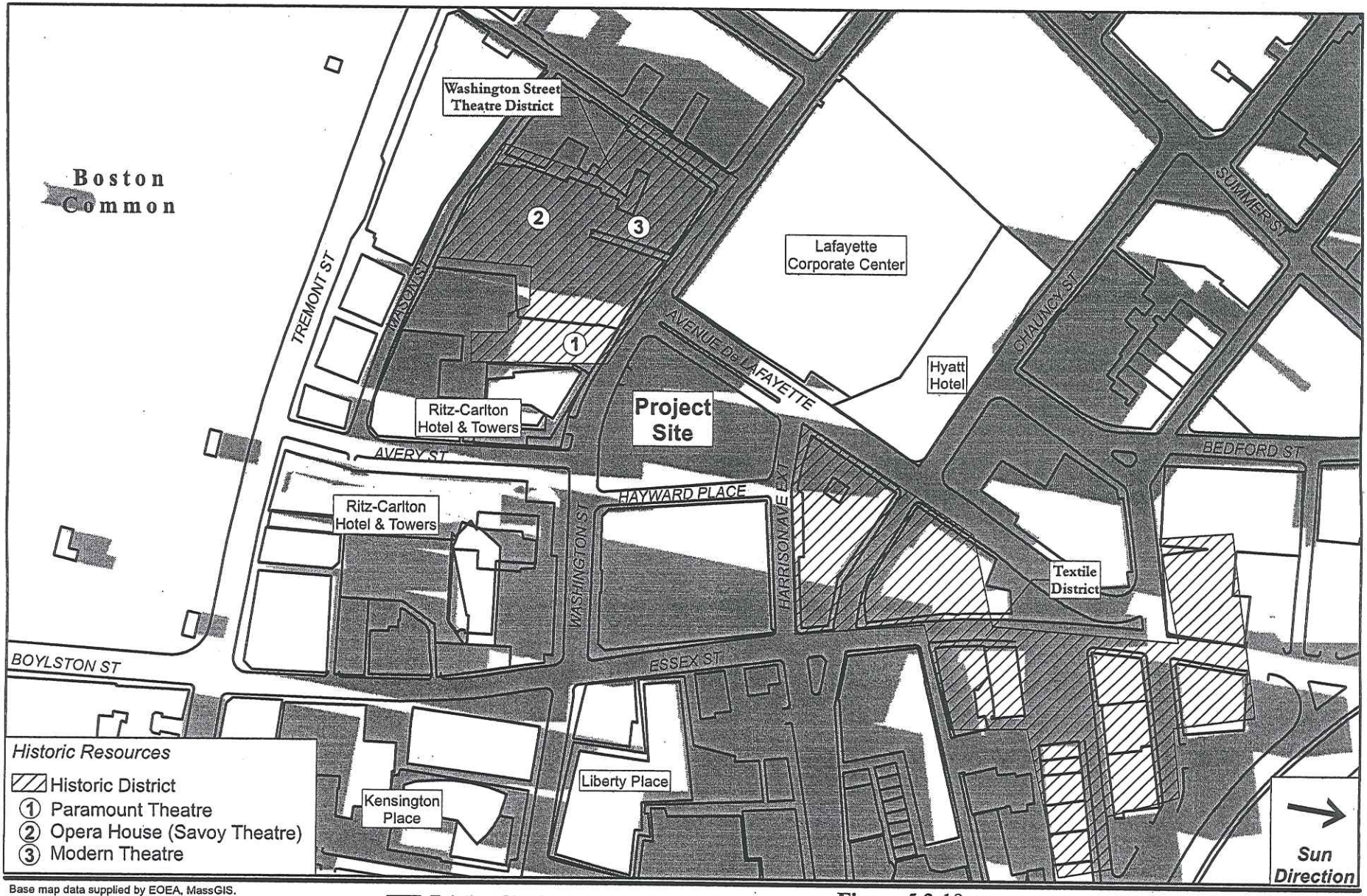
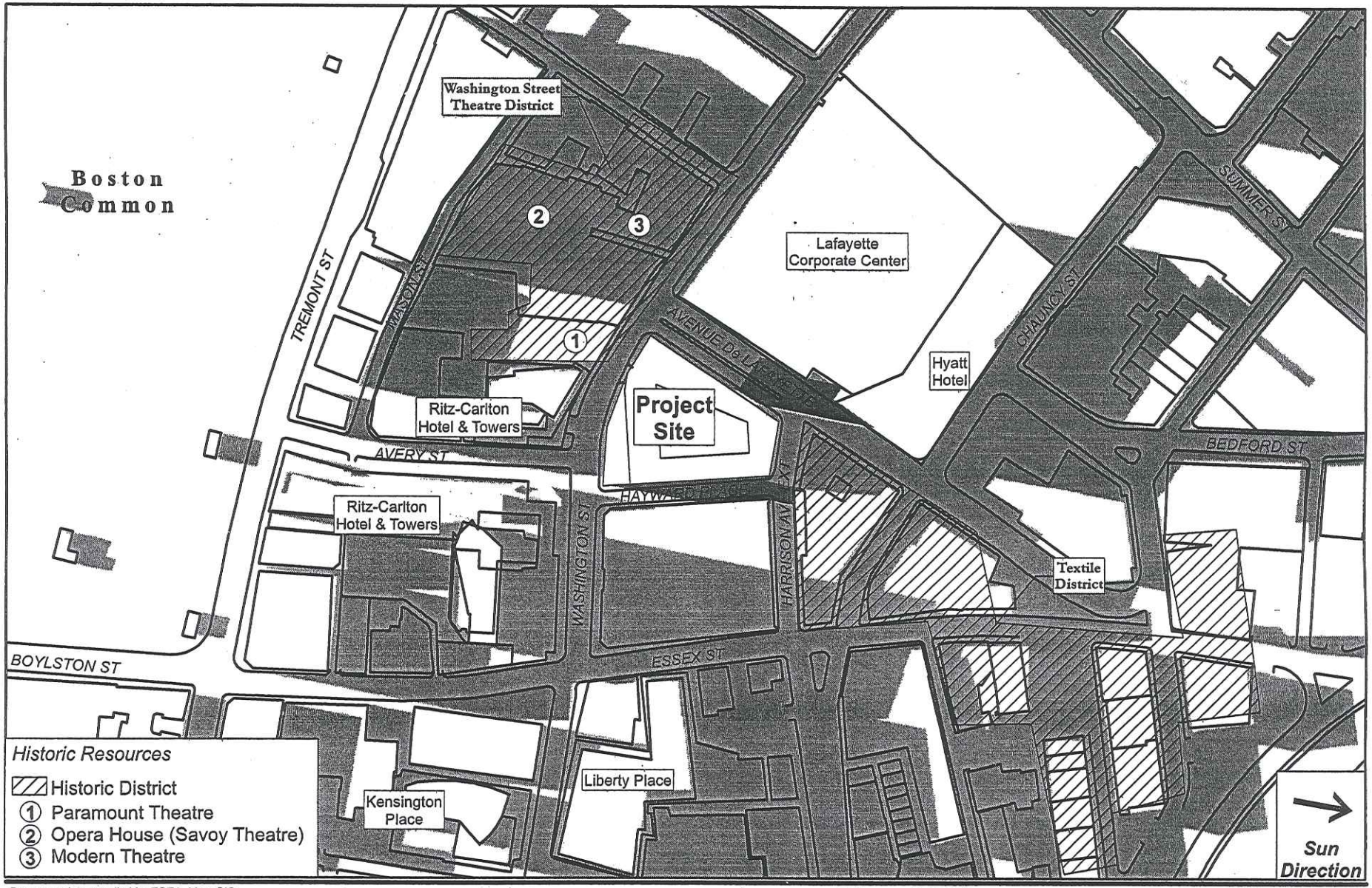
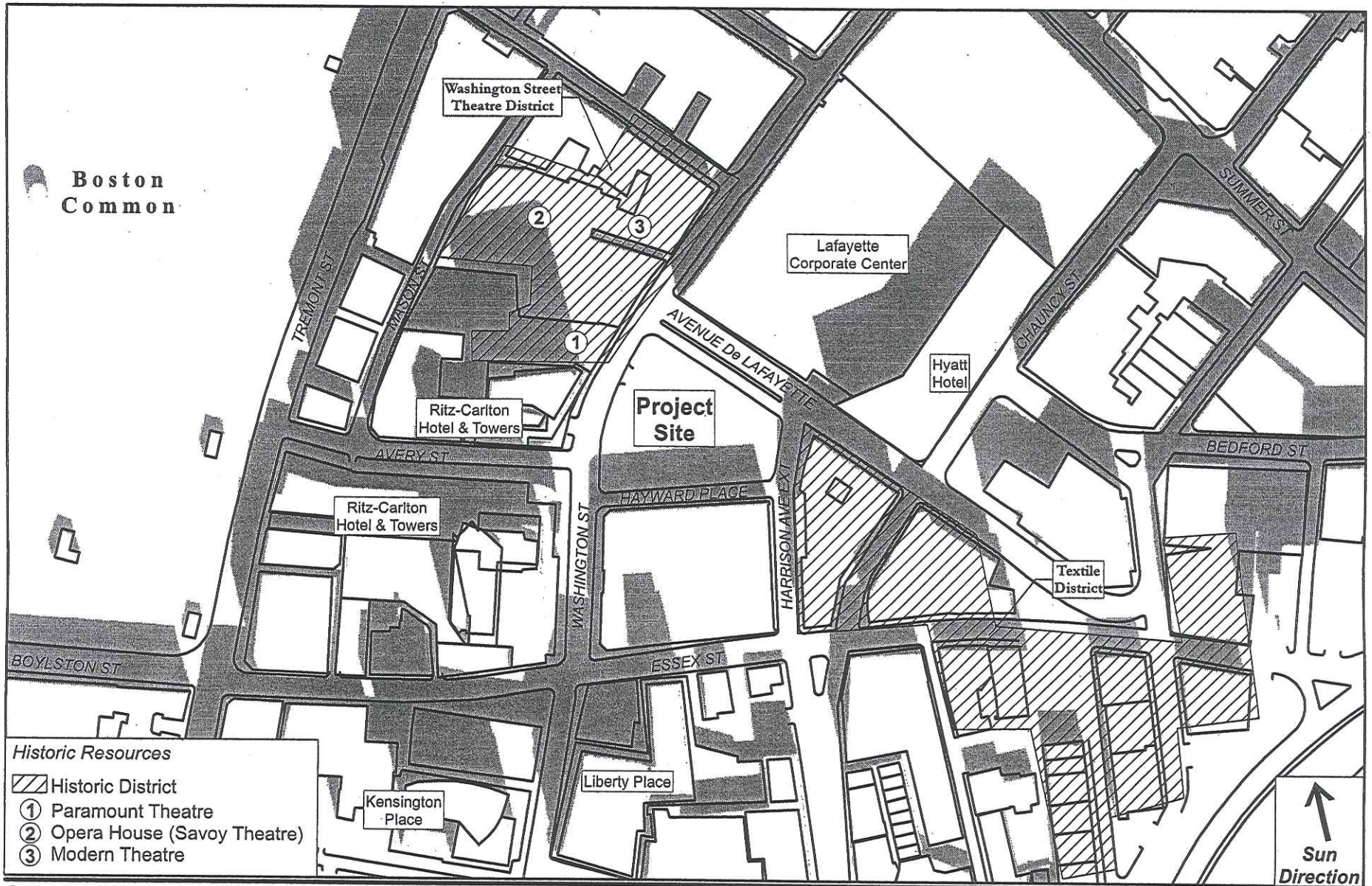


Figure 5.2-19
Hayward Place Shadow Impact Study
No Build Condition
June 21st 6:00 PM



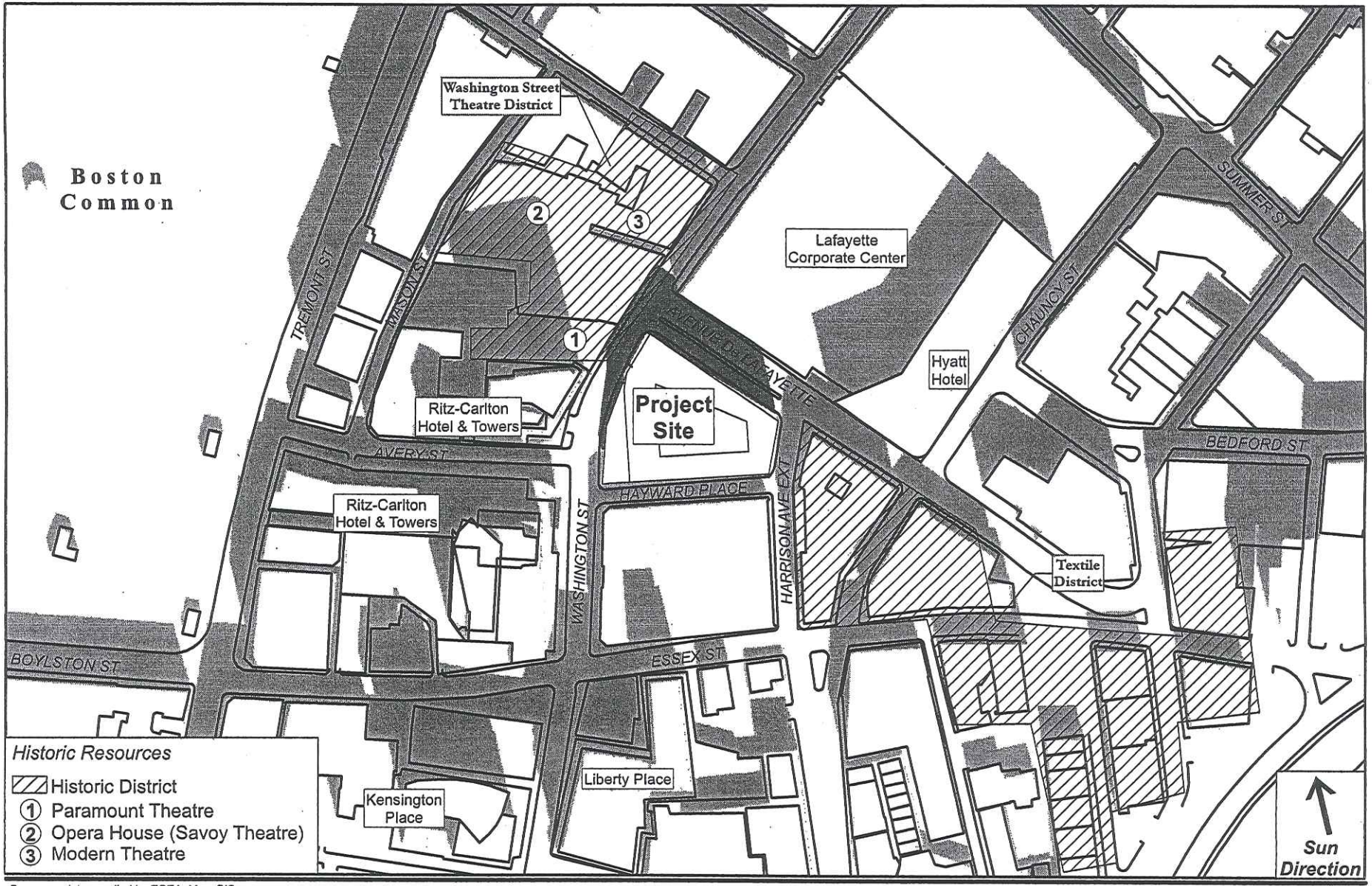
Base map data supplied by EOEA, MassGIS.

Figure 5.2-20
Hayward Place Shadow Impact Study
Mixed Use: Office/Retail
June 21st 6:00 PM



Base map data supplied by EOEA, MassGIS.

Figure 5.2-25
Hayward Place Shadow Impact Study
No-Build Condition
September 21st Noon



Base map data supplied by EOEA, MassGIS.

0 100 200 400
Feet

Existing Shadow
New Shadow

Figure 5.2-26
Hayward Place Shadow Impact Study
Mixed Use: Office/Retail
September 21st Noon

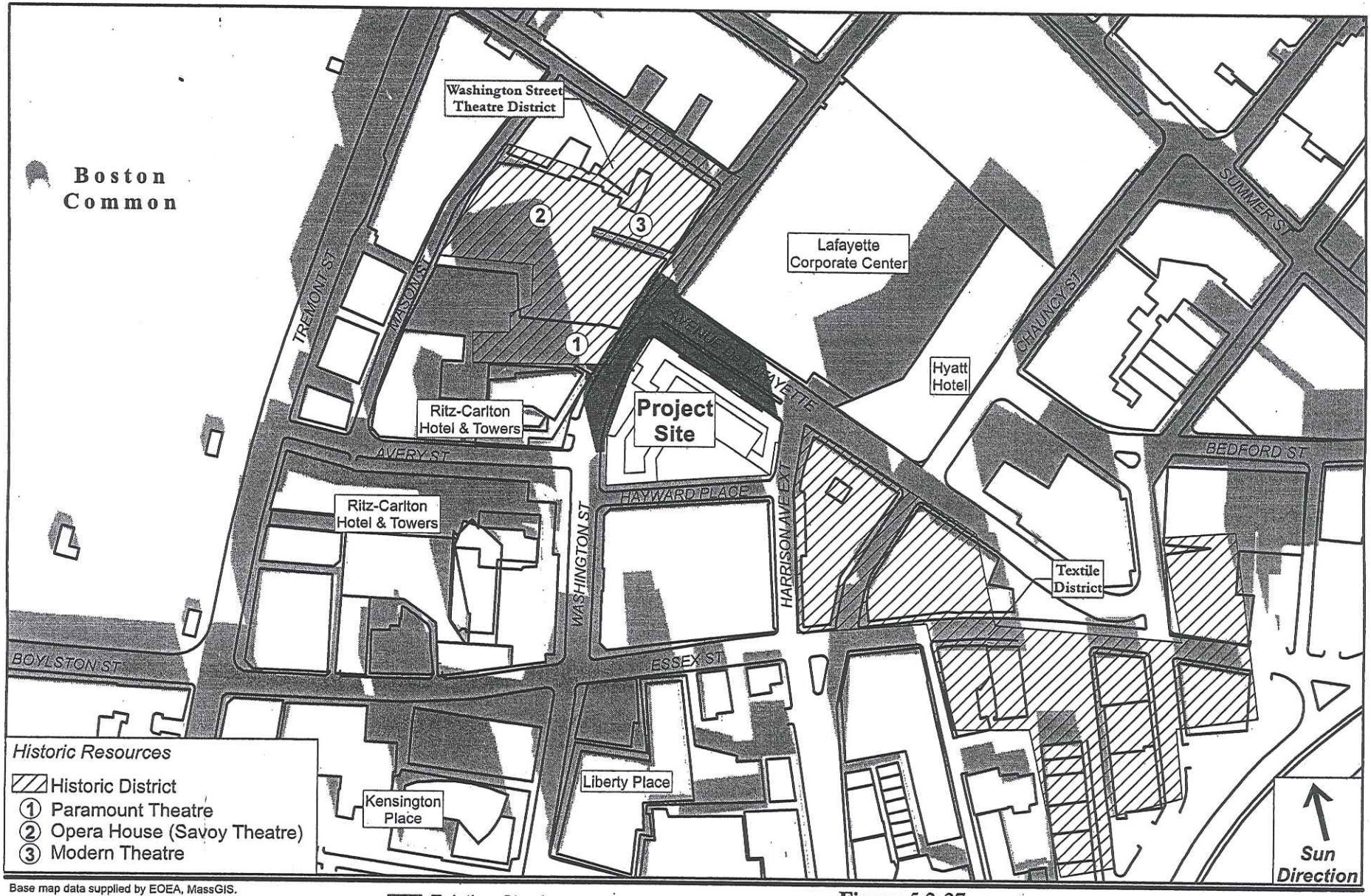
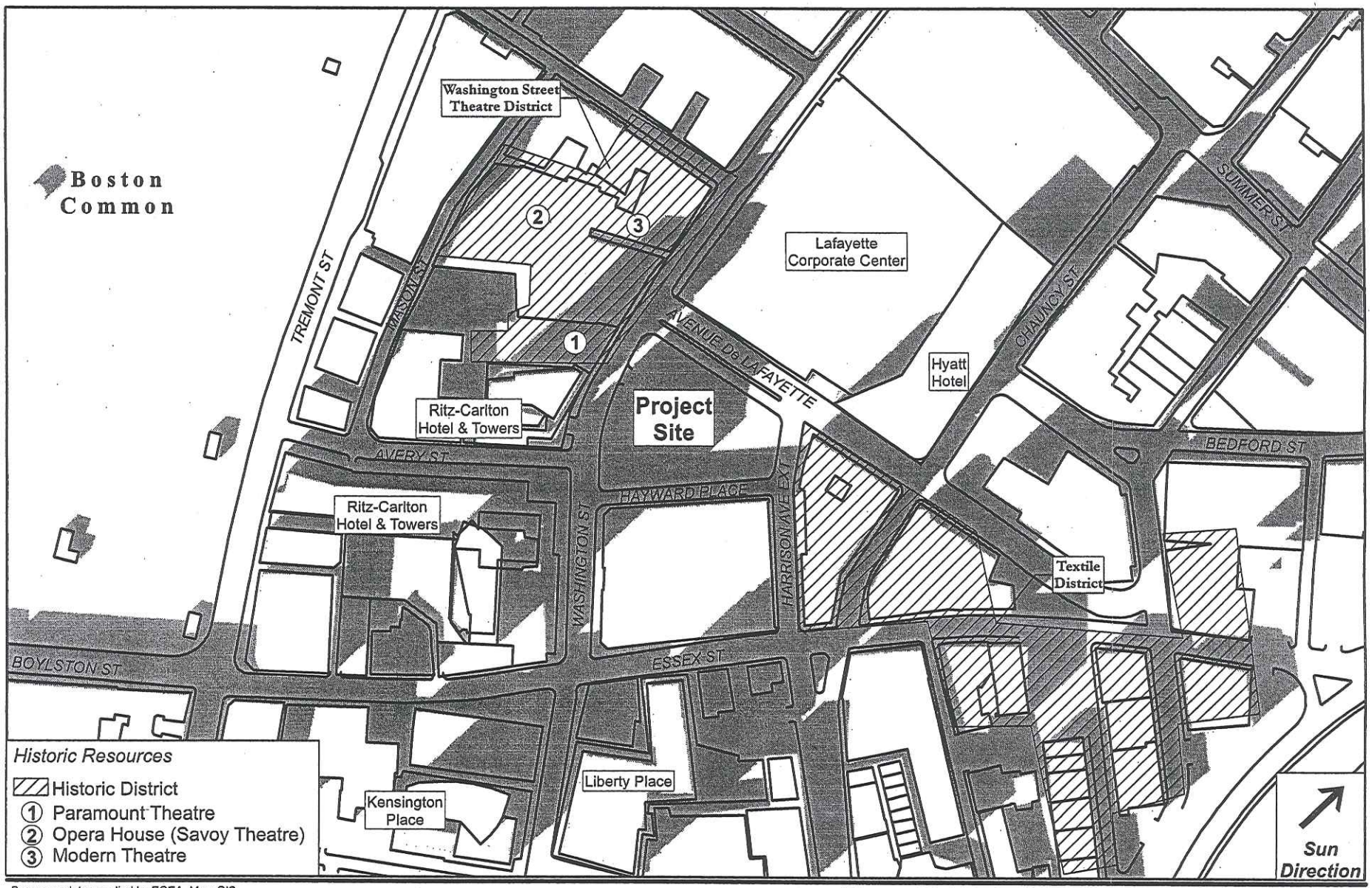


Figure 5.2-27
Hayward Place Shadow Impact Study
Mixed Use: Residential/Retail
September 21st Noon

EarthTech



Base map data supplied by EOEA, MassGIS.

0 100 200 400
Feet

Existing Shadow
New Shadow

Figure 5.2-28
Hayward Place Shadow Impact Study
No-Build Condition
September 21st 3:00 PM

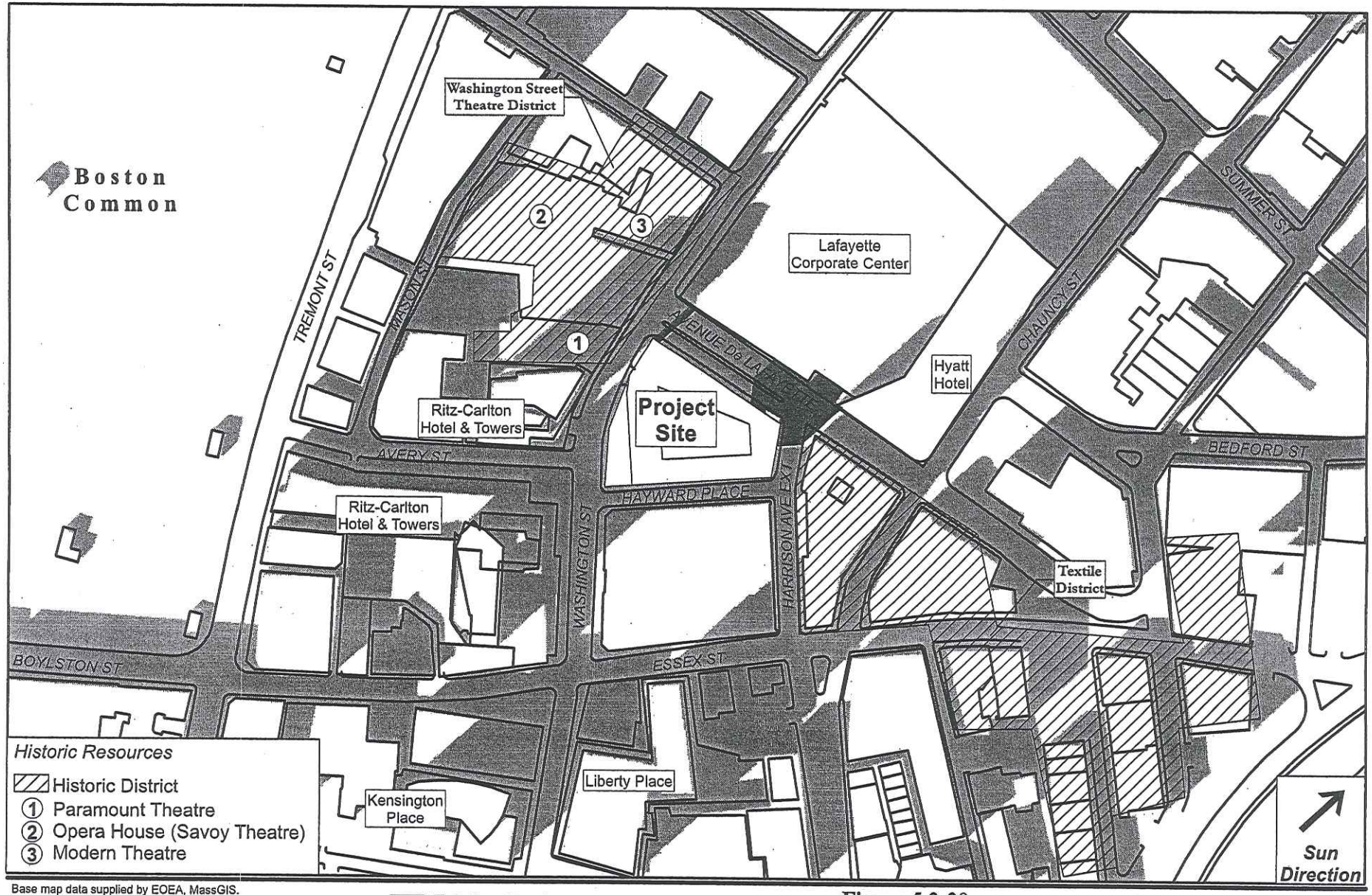
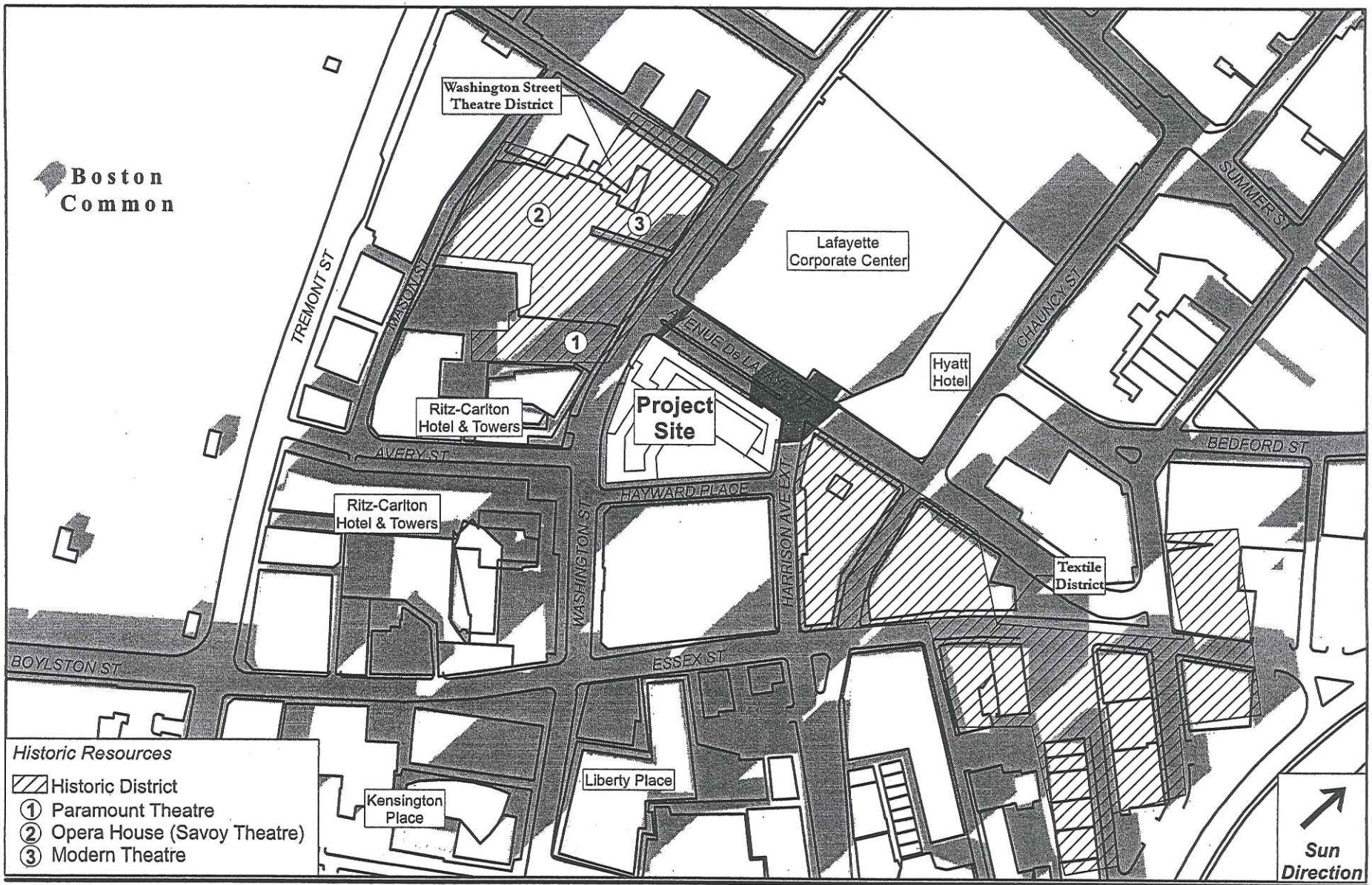


Figure 5.2-29
Hayward Place Shadow Impact Study
Mixed Use: Office/Retail
September 21st 3:00 PM

EarthTech



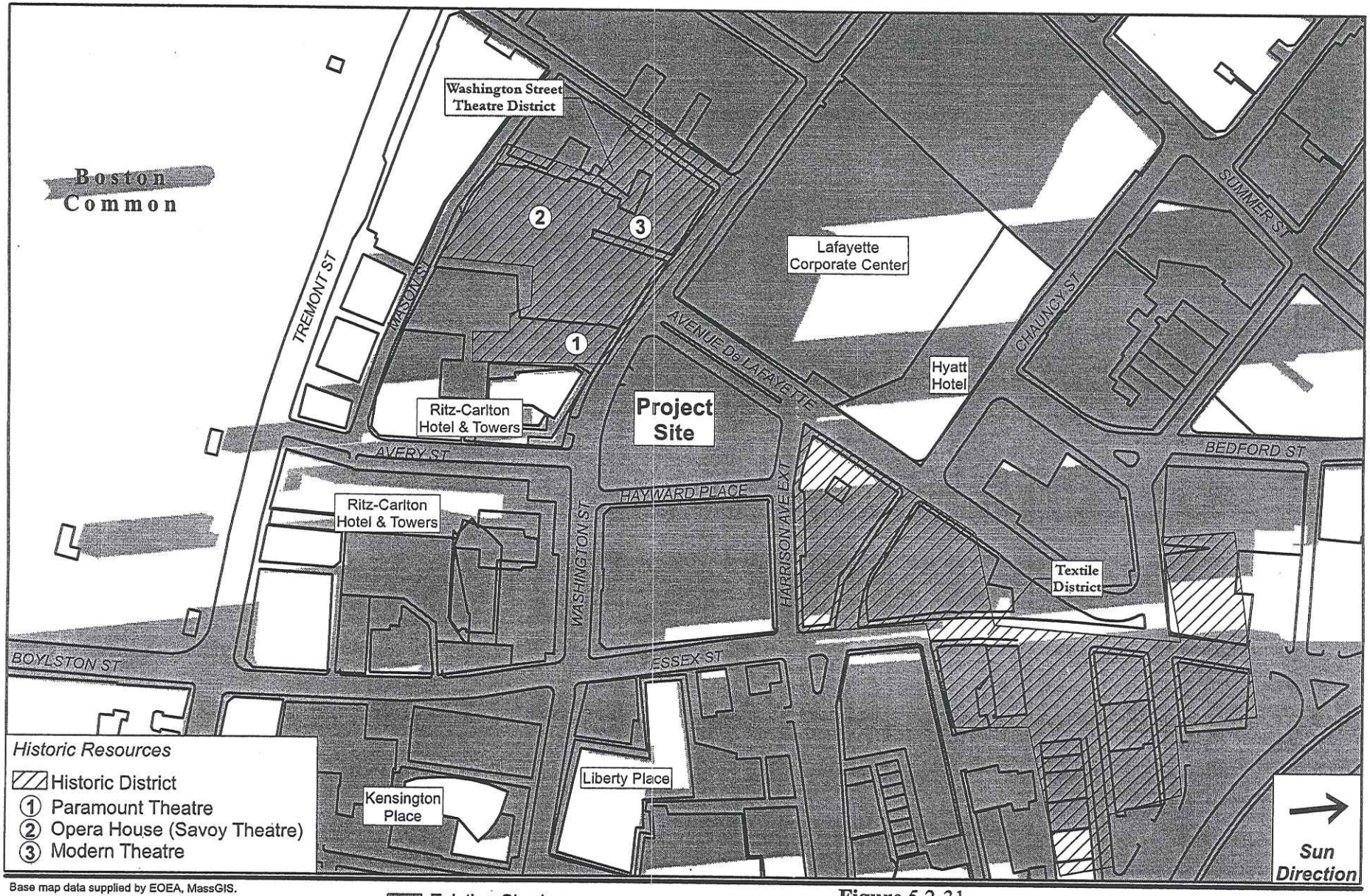
Base map data supplied by EOEA, MassGIS.

0 100 200 400
Feet

Existing Shadow
New Shadow

Figure 5.2-30
Hayward Place Shadow Impact Study
Mixed Use: Residential/Retail
September 21st 3:00 PM

EarthTech



Base map data supplied by EOEA, MassGIS.

0 100 200 400
Feet

Existing Shadow
New Shadow

Figure 5.2-31
Hayward Place Shadow Impact Study
No-Build Condition
September 21st 6:00 PM

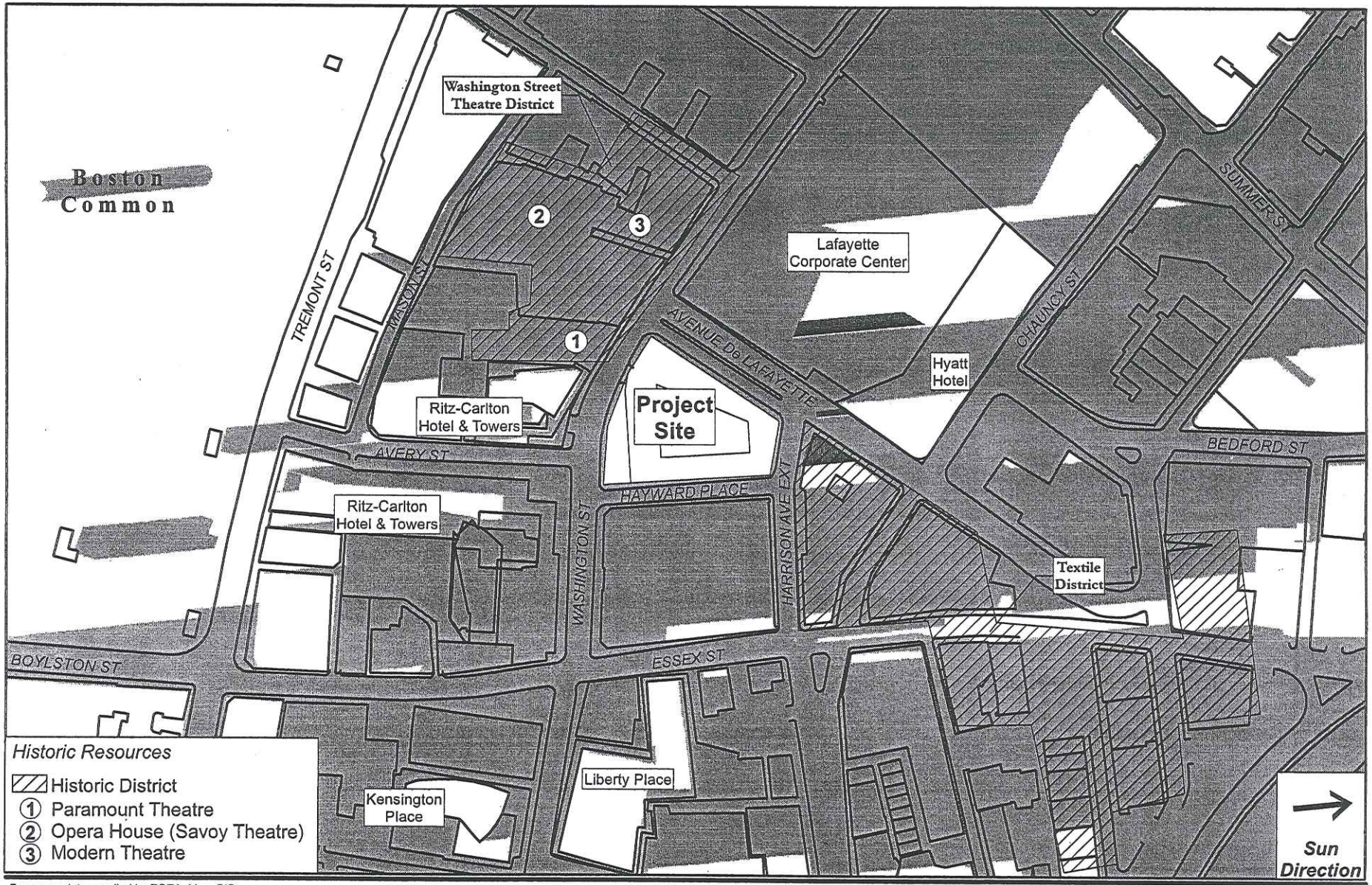
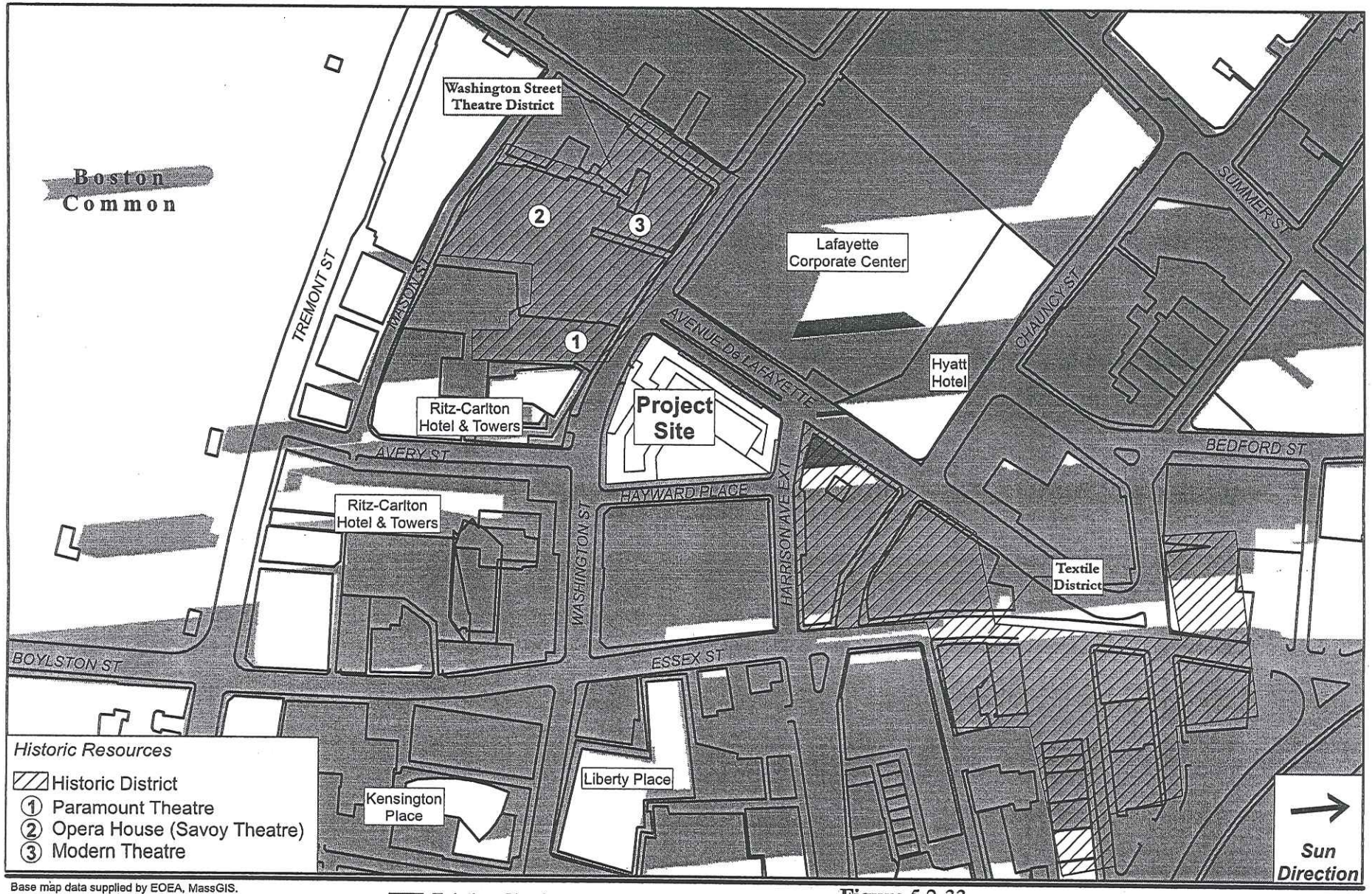


Figure 5.2-32
Hayward Place Shadow Impact Study
Mixed Use: Office/Retail
September 21st 6:00 PM

EarthTech



Base map data supplied by EOEA, MassGIS.

0 100 200 400
Feet

Existing Shadow
New Shadow

Figure 5.2-33
Hayward Place Shadow Impact Study
Mixed Use: Residential/Retail
September 21st 6:00 PM

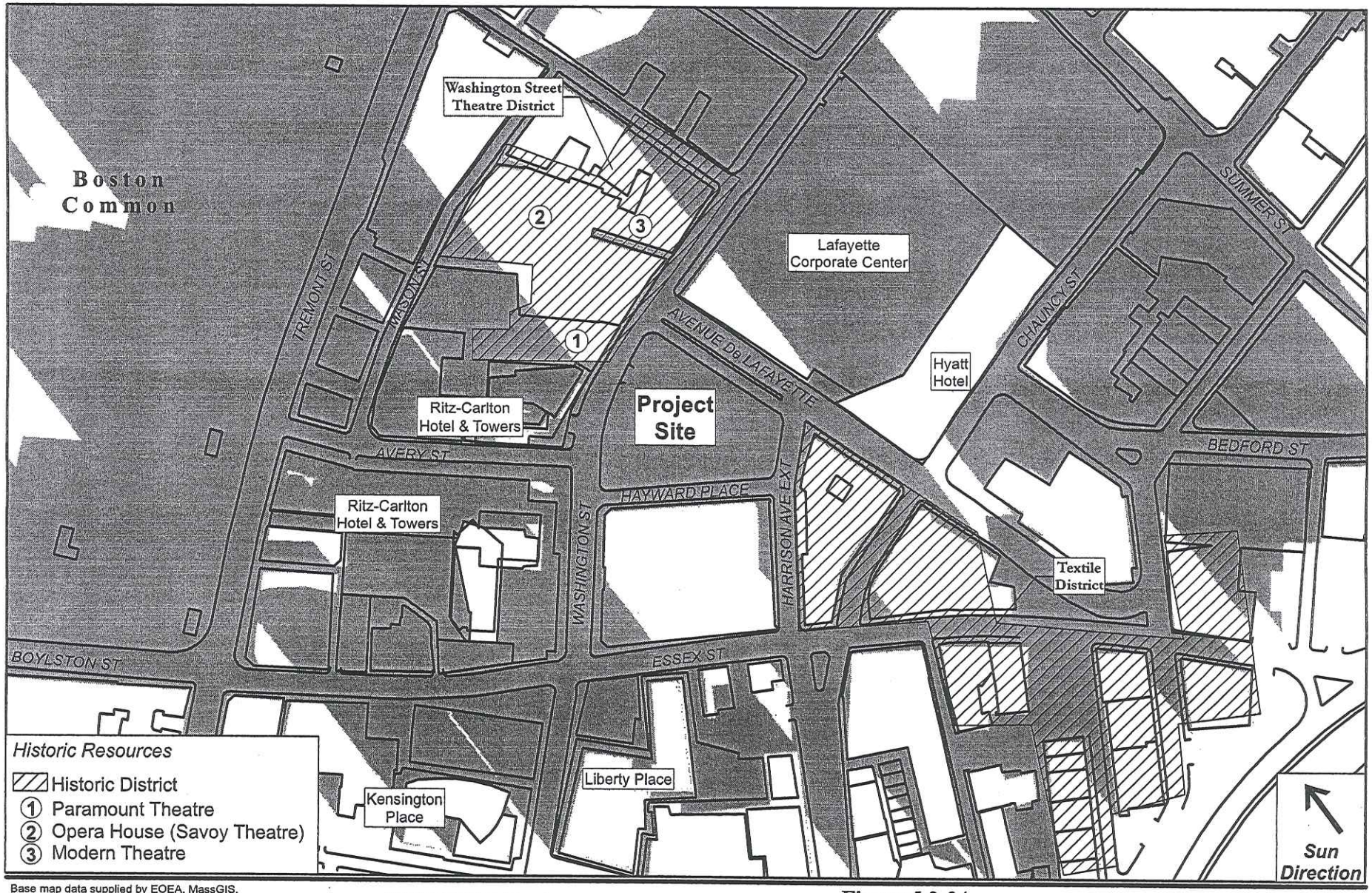
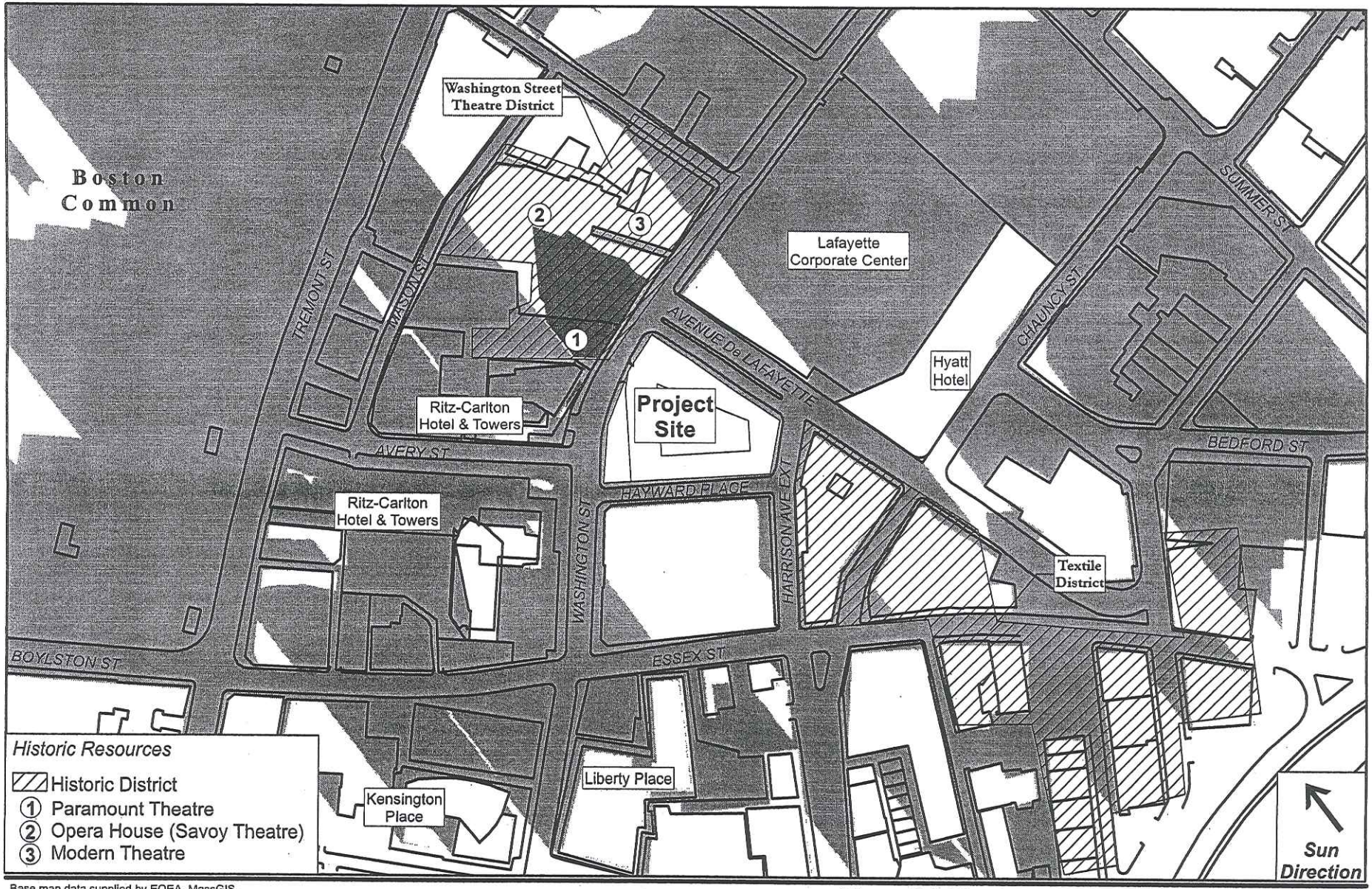


Figure 5.2-34
Hayward Place Shadow Impact Study
No-Build Condition
December 21st 9:00 AM



Base map data supplied by EOEA, MassGIS.

Figure 5.2-35
Hayward Place Shadow Impact Study
Mixed Use: Office/Retail
December 21st 9:00 AM

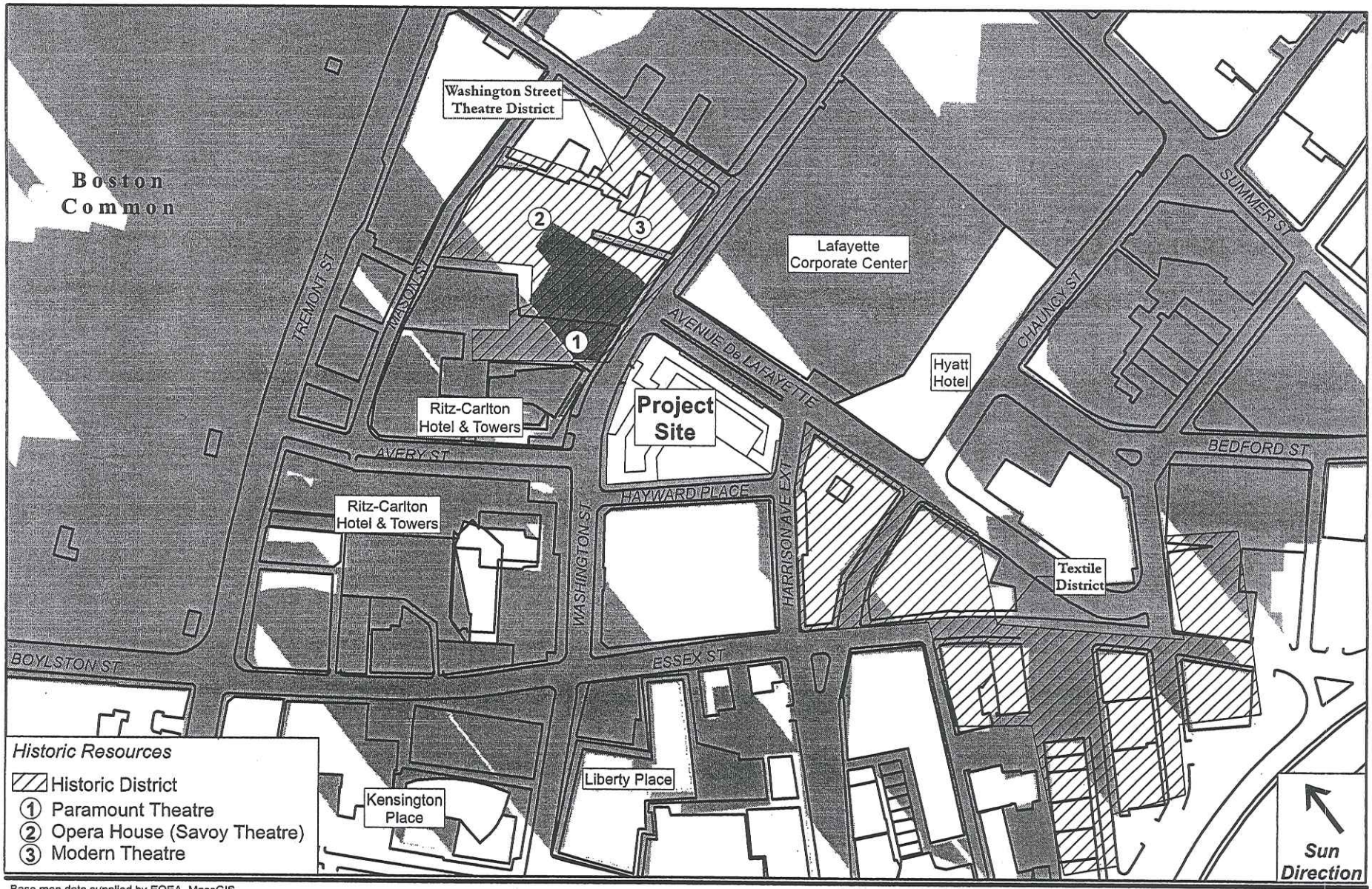
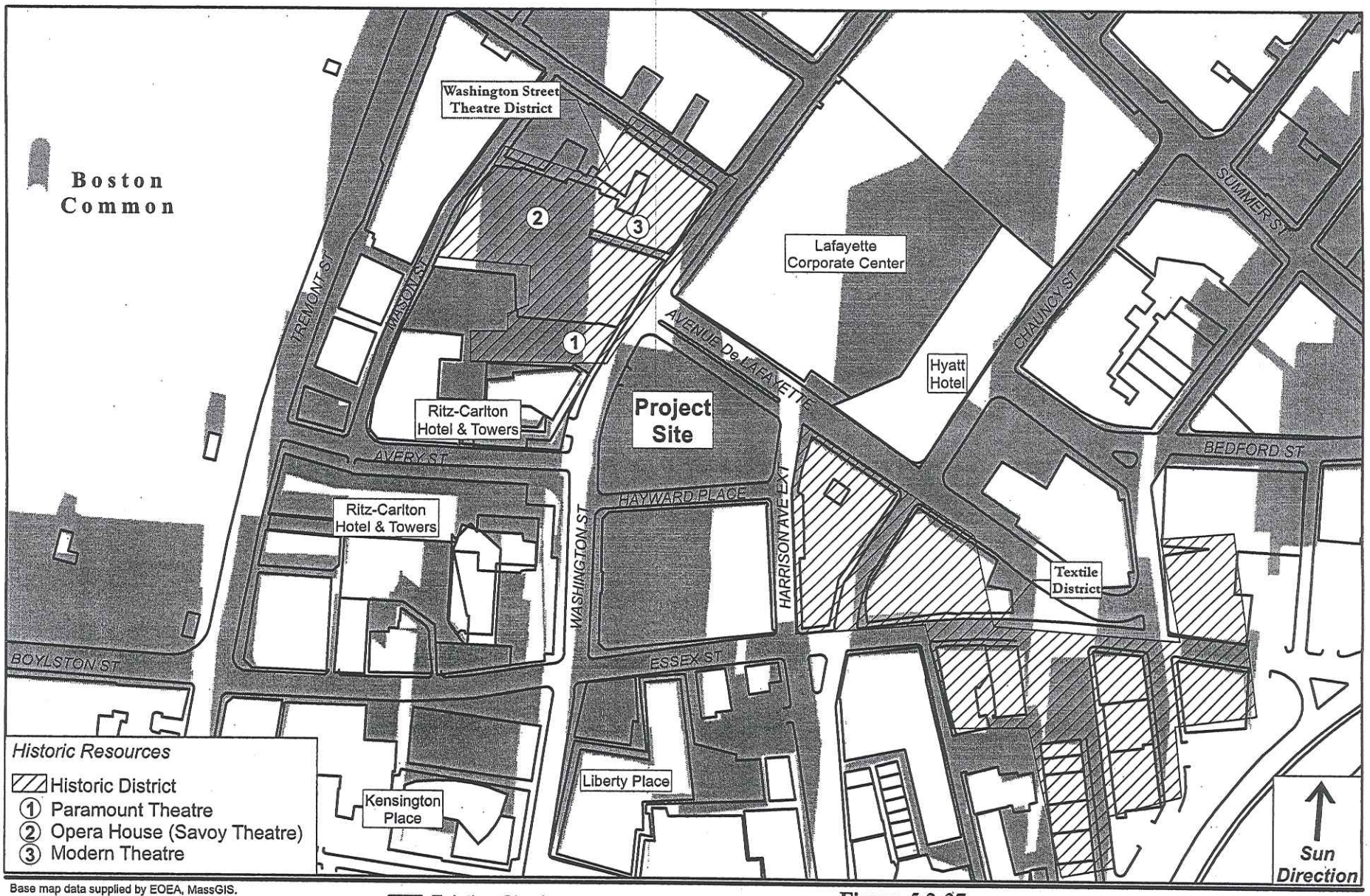


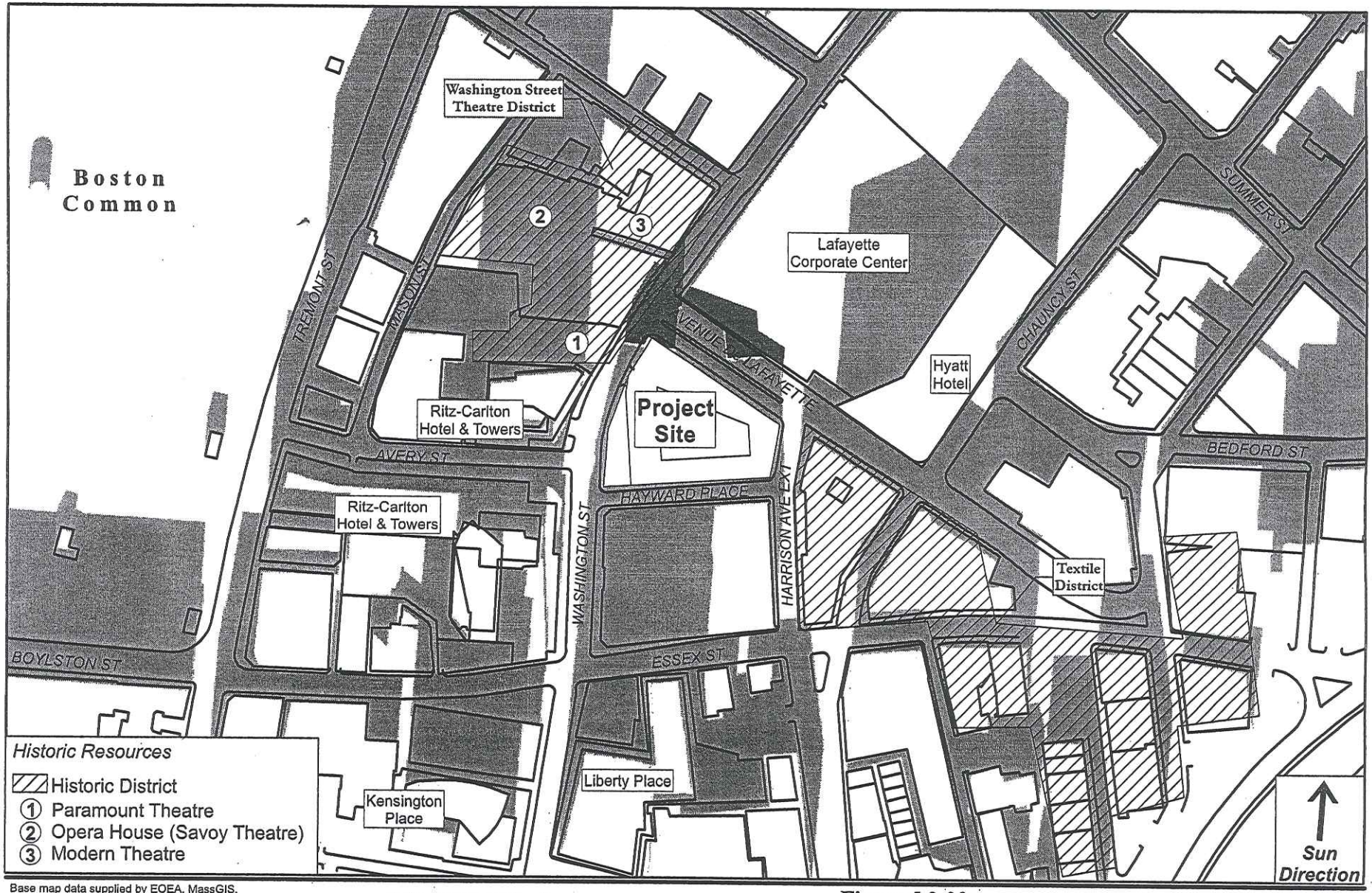
Figure 5.2-36
Hayward Place Shadow Impact Study
Mixed Use: Residential/Retail
December 21st 9:00 AM

EarthTech



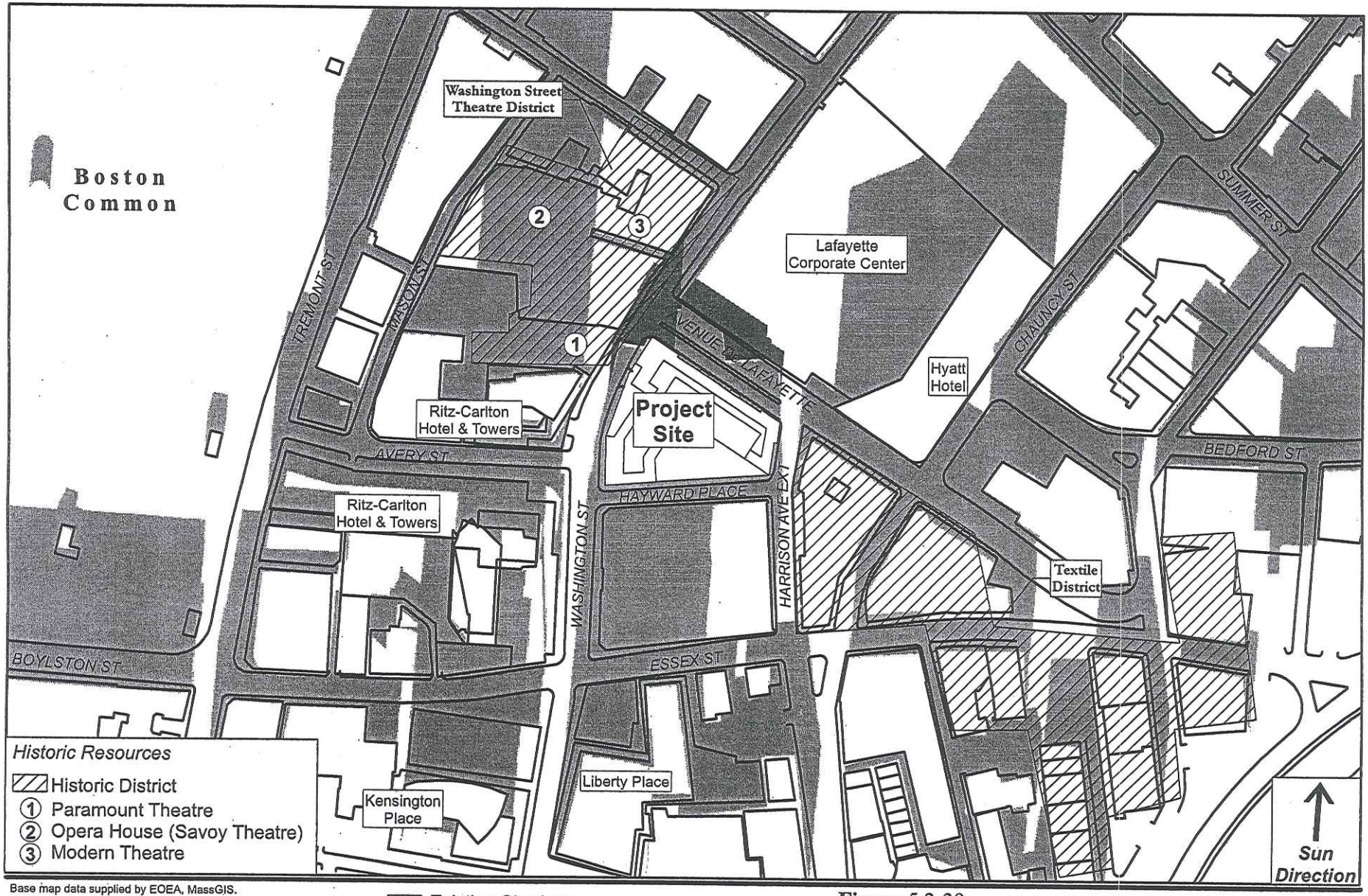
Base map data supplied by EOEA, MassGIS.

Figure 5.2-37
Hayward Place Shadow Impact Study
No-Build Condition
December 21st Noon



Base map data supplied by EOEA, MassGIS.

Figure 5.2-38
Hayward Place Shadow Impact Study
Mixed Use: Office/Retail
December 21st Noon



Base map data supplied by EOEA, MassGIS.

Figure 5.2-39
Hayward Place Shadow Impact Study
Mixed Use: Residential/Retail
December 21st Noon

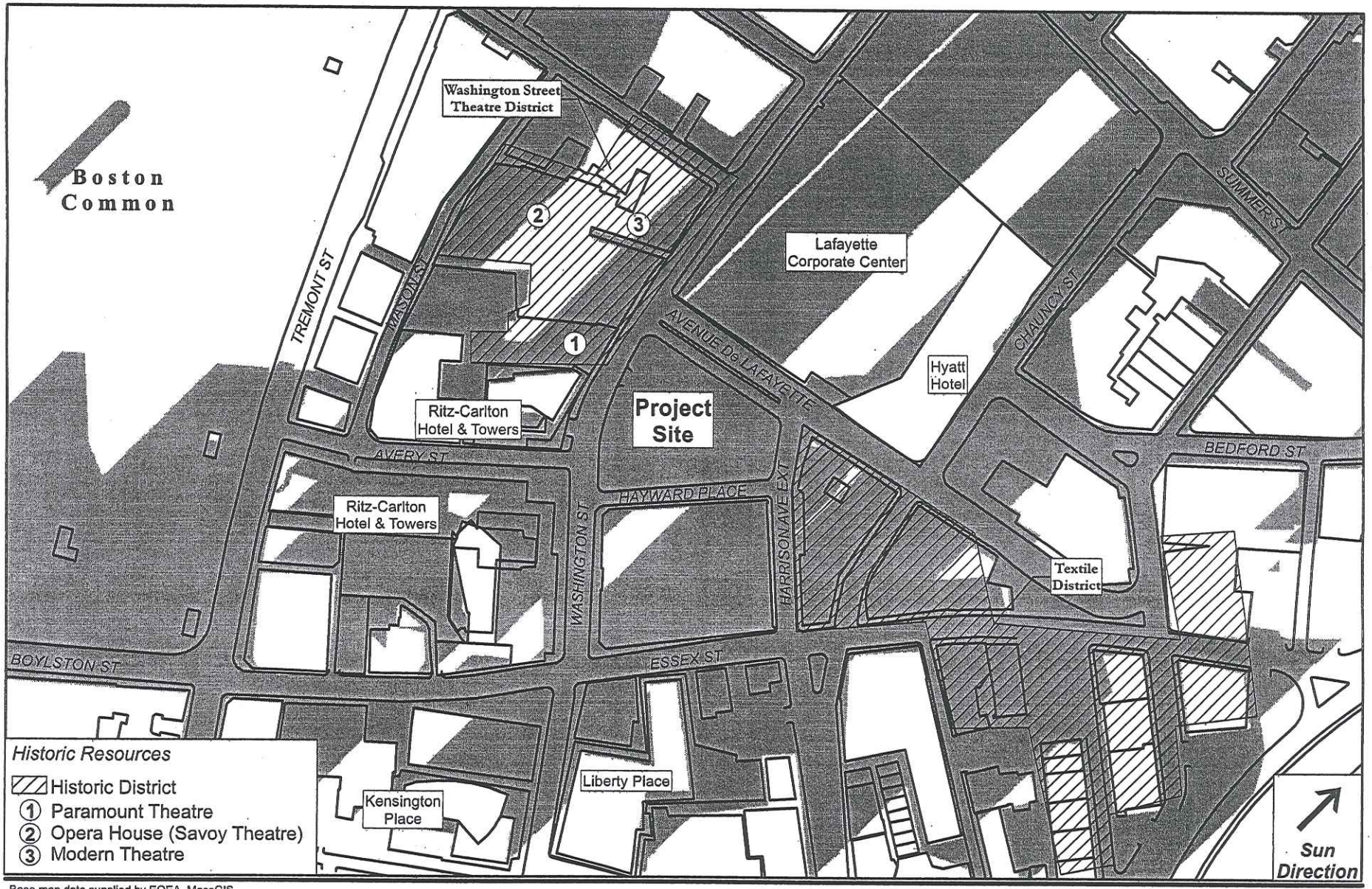
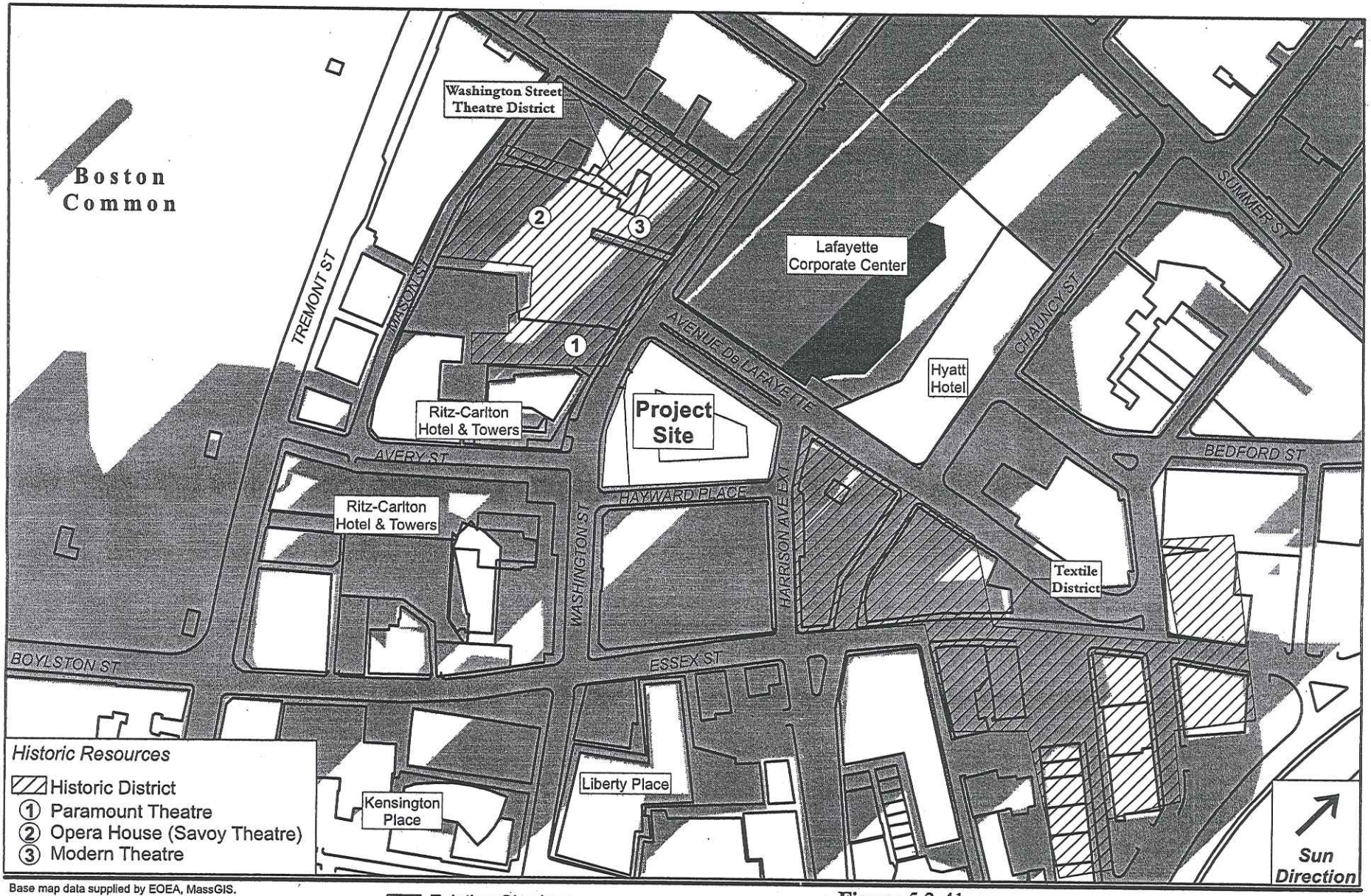


Figure 5.2-40
Hayward Place Shadow Impact Study
No-Build Condition
December 21st 3:00 PM

EarthTech



Base map data supplied by EOEA, MassGIS.

0 100 200 400
Feet

Existing Shadow
New Shadow

Figure 5.2-41
Hayward Place Shadow Impact Study
Mixed Use: Office/Retail
December 21st 3:00 PM

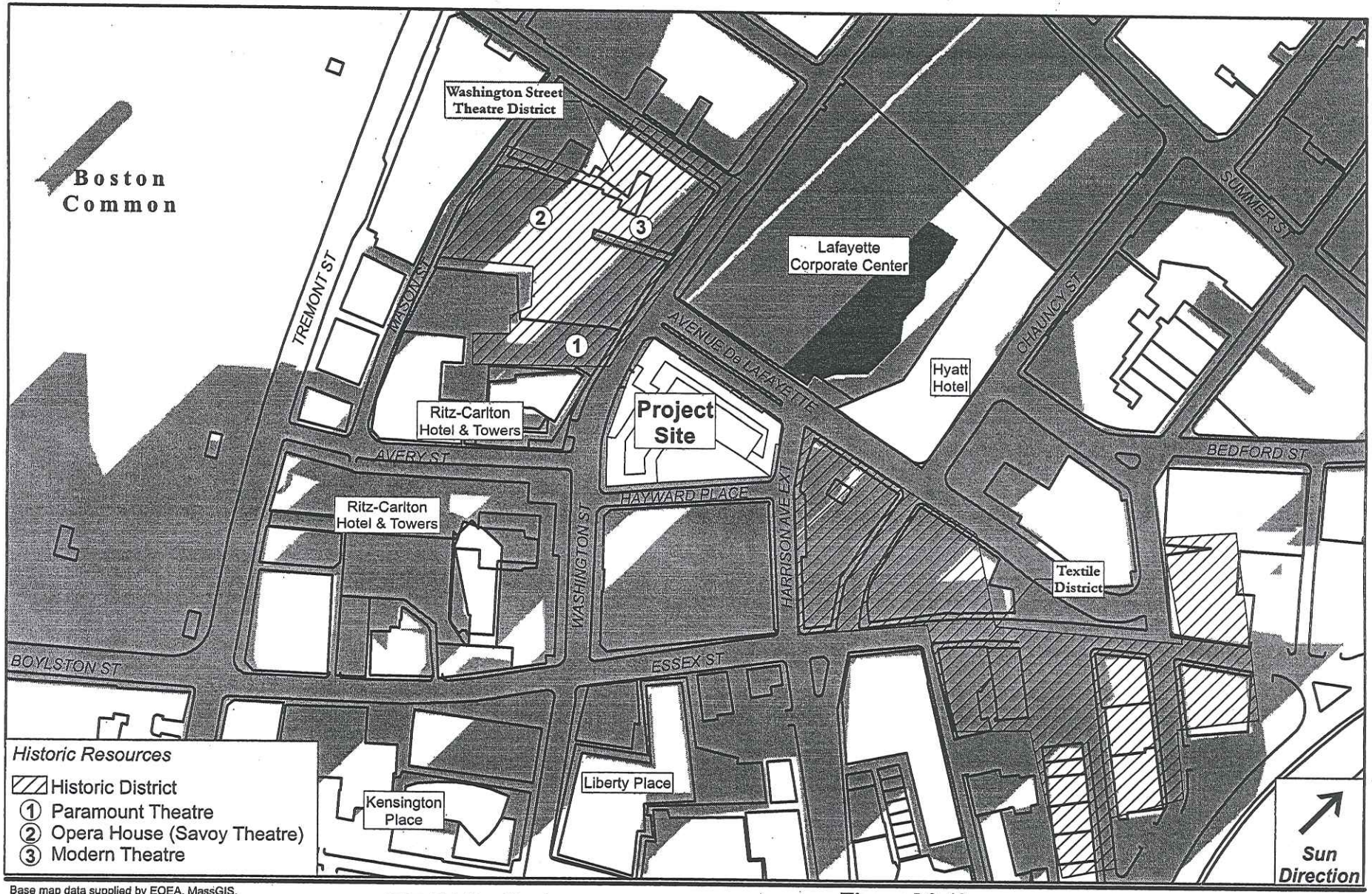
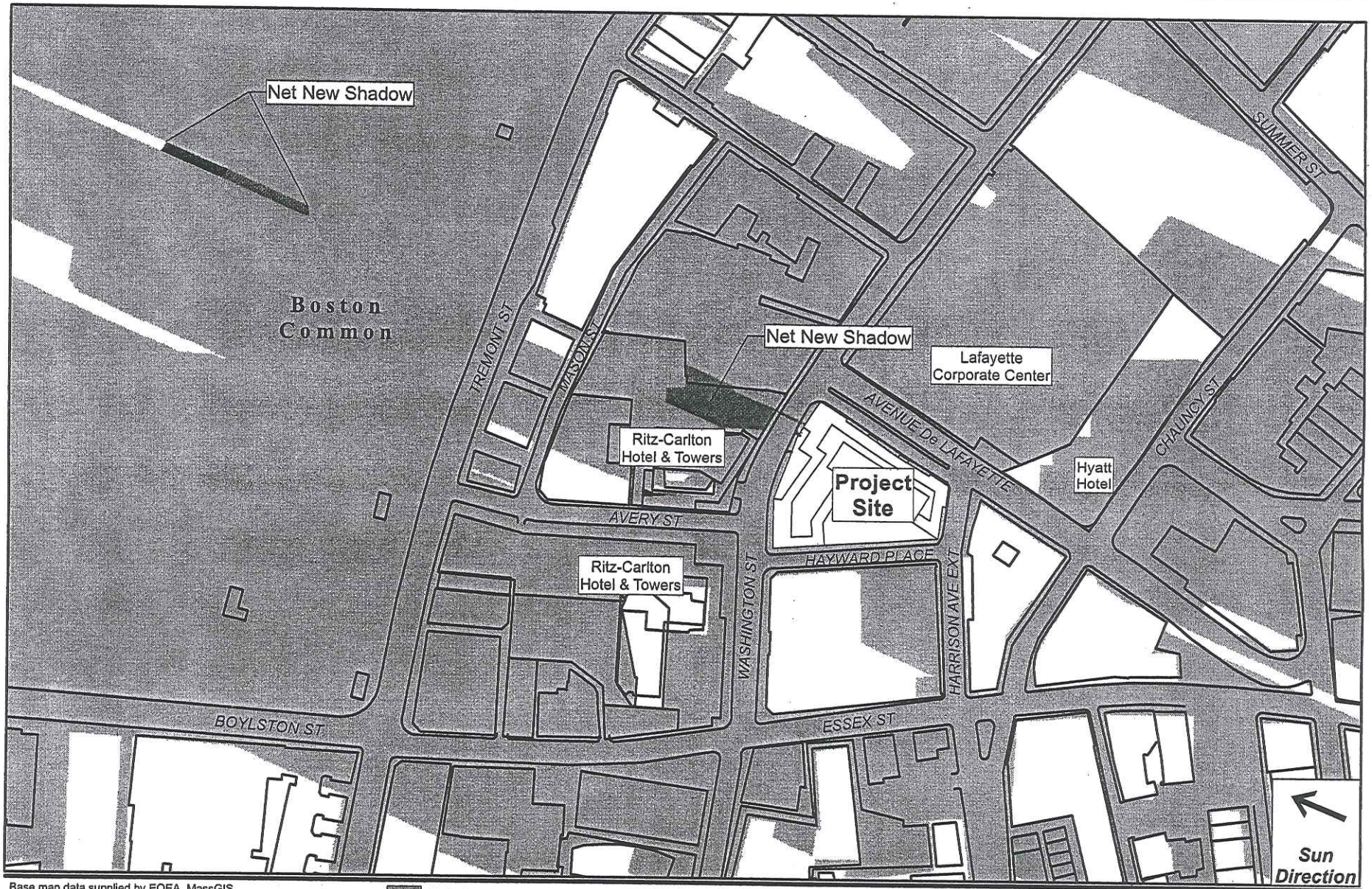


Figure 5.2-42
Hayward Place Shadow Impact Study
Mixed Use: Residential/Retail
December 21st 3:00 PM



Base map data supplied by EOEA, MassGIS.

0 100 200 400
Feet

Existing Shadow
New Shadow: Mixed Use: Office/Retail
New Shadow: Mixed Use: Residential/Retail

Figure 5.2-43
Hayward Place Shadow Impact Study
Boston Common Impacts
October 21st 8:00 AM

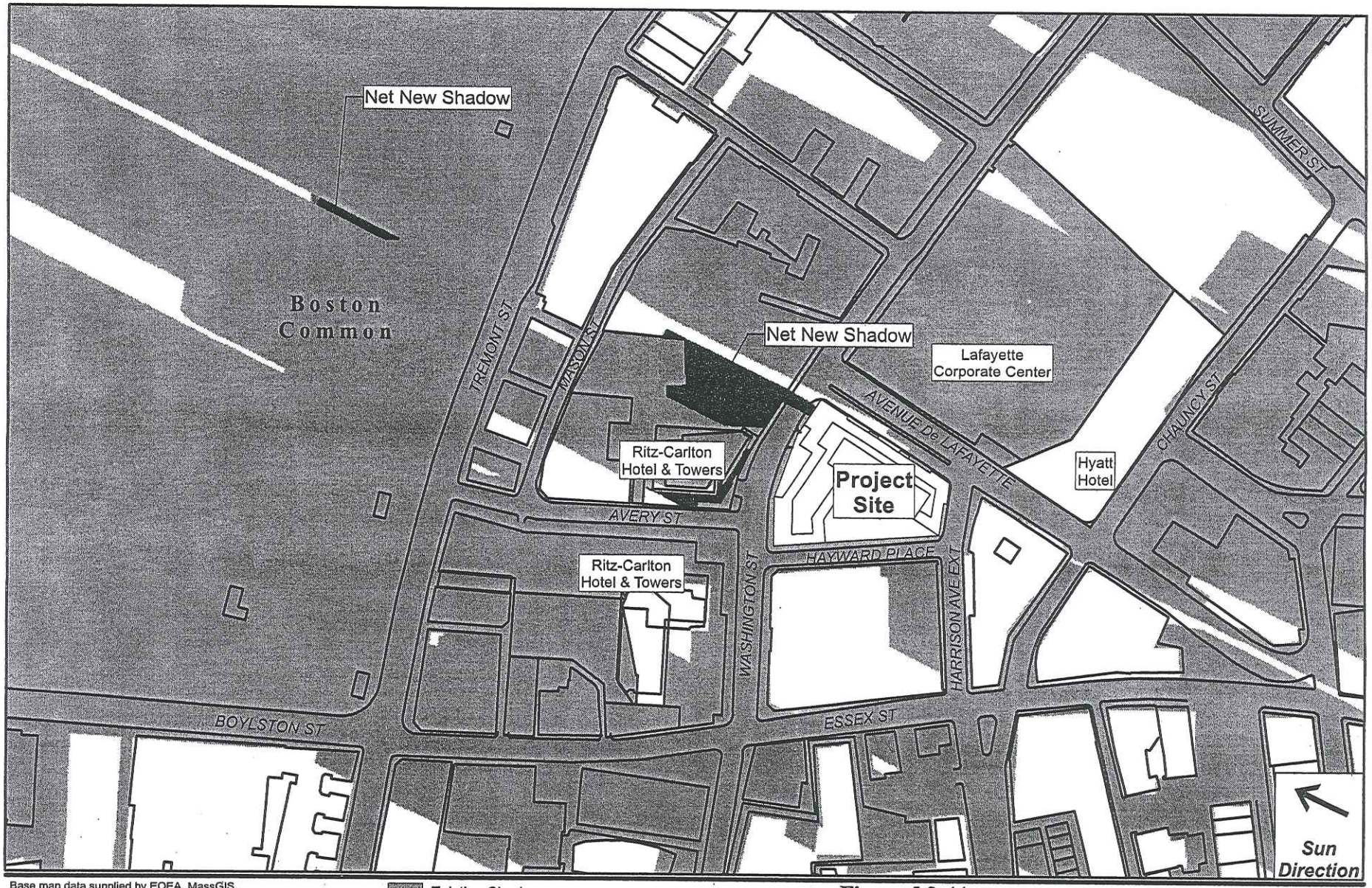


Figure 5.2-44
Hayward Place Shadow Impact Study
Boston Common Impacts
October 21st 8:15 AM

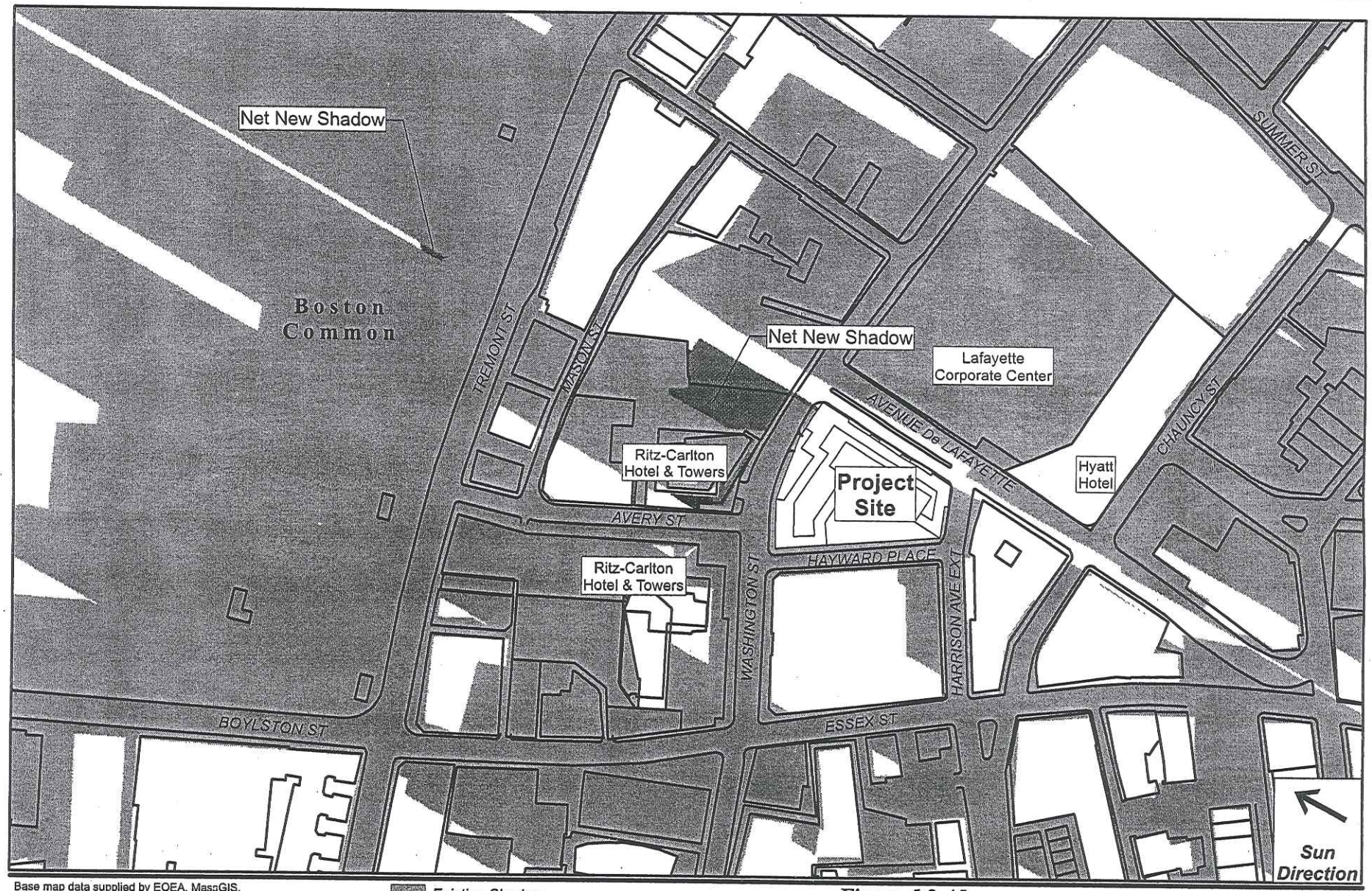
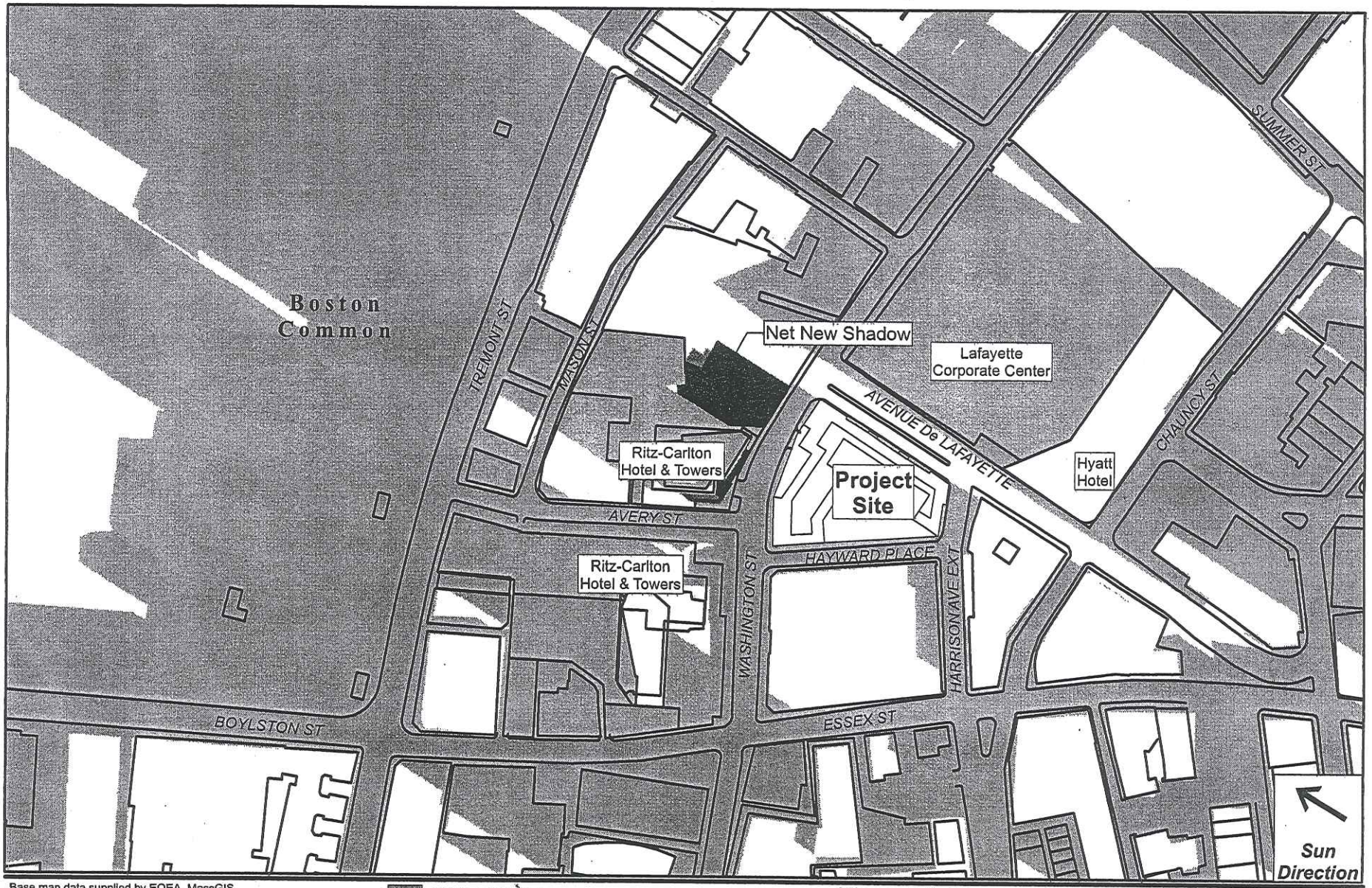


Figure 5.2-45
Hayward Place Shadow Impact Study
Boston Common Impacts
October 21st 8:30 AM



Base map data supplied by EOEA, MassGIS.

0 100 200 400
Feet

Existing Shadow
New Shadow: Mixed Use: Office/Retail
New Shadow: Mixed Use: Residential/Retail

Figure 5.2-46
Hayward Place Shadow Impact Study
Boston Common Impacts
October 21st 8:45 AM

Appendix F **Massachusetts Historical Commission Letter, dated May 5, 2005, Determining "No Adverse Effect" from the BRA Approved Project**

RECEIVED
MAY - 9 2005

The Commonwealth of Massachusetts
William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

May 5, 2005

Secretary Ellen Roy Herzfelder
Executive Office of Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

ATTN: Bill Gage, MEPA Unit

RE: Hayward Place, Boston, MA; MHC# 35448 and EOEA# 13301

Dear Secretary Herzfelder:

The Massachusetts Historical Commission has reviewed the Draft Environmental Impact Report (DEIR) for the above-referenced project. The proposed project site is within the Boston Theater Multiple Resource Area Historic District and is within close proximity, specifically, to the Paramount Theatre. The project is also within proximity to the Textile District Historic District and the Leather District Historic District. The project is also adjacent to 600 Washington Street.

The MHC understands that the proposal consists of an 11 story building to be constructed on a vacant site.

The DEIR provides sufficient information concerning the massing and height of the building. After a review of materials submitted, I have determined that the proposed project will have "no adverse effect" on the surrounding historic properties referenced above provided that more refined design documents are submitted to the MHC and the Boston Landmarks Commission for review and comment.

These comments are offered to assist in compliance M.G.L. Chapter 9, Section 26-27C, as amended by Chapter 254 of the Acts of 1988 (950 CMR 71.00). Please do not hesitate to contact Ann Lattinville of my staff if you have any questions.

Sincerely,

Brona Simon

Brona Simon
Deputy State Historic Preservation Officer
Massachusetts Historical Commission

xc: John Felix, DEP
Ellen Lipsey, Boston Landmarks Commission
Mitchell Fischman, Daylor Consulting

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