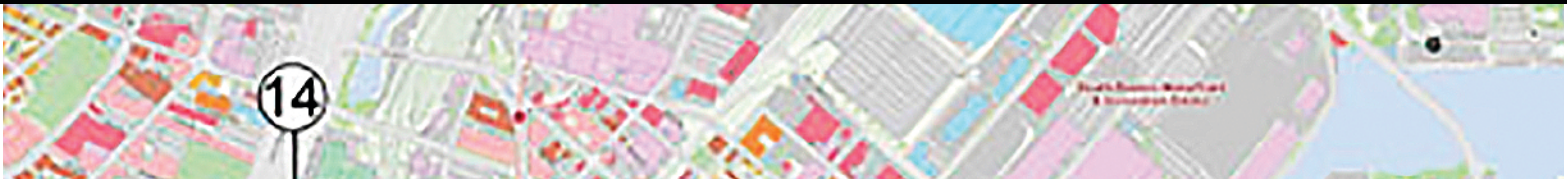
274 SOUTHAMPTON ST
BOSTON SELF STORAGE



Expanded Project Notification Form
Submitted Pursuant to Article 80 of the Boston Zoning Code

Prepared By: Peter Quinn Architects LLC

Submitted To: Boston Redevelopment Authority
One City Hall Square, Boston, MA 02201

Submitted By: Circle Development Co.

Legal Representated by: Sean O' Donovan, Atty

11 May 2015

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Chapter 1

Project Summary

1.1 Development Team

The Proposed Has enlisted a team of local professionals and consultants to assist them with the development of the Proposed Project. The Project Team is listed below:

Project Name	**Boston Self Storage**
Location	**274 Southampton Street** Newmarket Industrial District Boston MA, 02128
Developer/Owner	**Circle Development Co** 10988 Deerfield Road Cincinnati, OH 45242 Raymond Schneider
Legal Counsel	**Sean T. O'Donovan, Atty.** 10 Tremont Street, Suite 200 Boston, MA 02108 P. 617.206.7289 Sean O'Donovan
Architect	**Peter Quinn Architects LLC** 259 Elm Street, Suite 301 Somerville, MA 02144 P.617.354.3989 Peter S Quinn AIA, Principal Mark Nielsen, Senior Architect Annem Chan Waiy, Senior Designer

Construction Management	**Berkeley Building Company** 50 Main Street Wakefield, MA 01880 Emil Frei, LEED AP
Transportation	**Howard Stein-Hudson Assoc. Inc** 11 Beacon St. Suite 1010 Boston, MA 02108 Michael A. Santos, PE, PTOE
Civil Engineering	**GEOD Consulting** 24 Ray Avenue Burlington, MA Chris Emilius, PE
Structural Engineer	**D.M. Berg Associates** 570 Hillside Ave Needham, MA 02492 Ali R. Borojerdi, PE
Geotechnical Consultant	**Haley & Aldrich, Inc**. 465 Medford Street, Suite 2200 Boston, MA 02129 Bryan P Sweeney, PE, PhD Senior Vice President
Consulting Engineer (Wind)	**Rowan Williams Davies & Irwin Inc.** 650 Woodlawn Road West, Guelph, Ontario, Canada N1K 1B8 John Alberico, M.Sc. CCEP

Energy Consultant	**The Green Engineer** 54 Junction Square Dr Concord, MA 01742 Chris Schaffner, PE
Code Consultant	**R.W. Sullivan Engineering** 529 Main St. #203 Boston, MA 02129 Donald Contois
MEP FP Engineer	**R.W. Sullivan Engineering** 529 Main St. #203 Boston, MA 02129 Michael O'Rourke

1.2 Introduction

The Proposed Boston Self Storage Building is in Boston's Newmarket Industrial District, directly off I-93, an area becoming a hub for new businesses. For many years the Newmarket District has been one of Boston's primary industrial districts, making it an ideal place for new businesses and establishments to grow. The 90 acre area was recently re-zoned and is currently home to more than 700 companies representing numerous industries.

The Newmarket Industrial District is located at the crossroads of the Dorchester, South Boston, South End, and Roxbury neighborhoods offering needed services and employment to its businesses and surrounding residents.

274 Southampton Street, once the residence of Delta Beckwith Elevator Company, is currently the home of Boston Red Dog Pet Resort and Spa, which includes a state-of-the-art pet hotel, a veterinary hospital, and full service pet retail center, all under one roof. The Red Dog Resort is an innovation of the property's Owner, Circle Development, an Ohio based company that develops properties for commercial and residential uses. The Owner is proposing to add an adjoining building to establish Boston Self Storage. The proposed building would be an approximately 82,500 square foot facility with six floors of personal and small business storage units that would be linked to the Boston Red Dog Pet Resort and Spa.

The new Boston Self Storage will be conveniently located for city inhabitants that are limited in the amount of storage space at their apartment or condo complexes. This business will provide tenants with indoor climate controlled storage units (multiple standard sized units with varying square footage) as well as packing materials and storage boxes. Growing cities like Boston need more storage facilities. With many additional residential units coming on line at present, storage facilities will become more critical. Indeed, most of the existing storage facilities in the area are at maximum capacity and representatives of several current large scale developments have expressed a strong interest in partnering with Boston Self-Storage to offer their clients its first-class storage services. Boston Self Storage intents to address that need.

Circle Development has developed dozens of sites nationally. Their reputation is growing in the Boston area and they are developing strong relationships with contractors, suppliers, and local trades. Through its example of the Red Dog Resort, Circle Development hires locally and keeps

money circulating through the communities. They employ and train young people enabling them to become successful professionals. Their mission as a company will undoubtedly leave its mark on this project. Circle Development will be adding additional employment opportunities to the neighboring community.

Space is always a concern for people no matter where they are from or where they live. In a city growing in population and living in smaller spaces than previous generations, storage of belongings are becoming more vital to provide people with the ability to live in dense urban conditions. As an example, of these eight-or-so thousand residential units anticipated in the near future, it is estimated 20% will be occupied by families and couples returning to the urban lifestyle. These residents will be downsizing and want a local clean and secure environment in which to store excess goods.

1.3 Project Overview

Boston Self Storage at 274 Southampton Street in Boston will offer approximately 82,500 sqft of new high-quality, climate-controlled storage space to a rapidly growing housing sector. With existing self-storage facilities currently operating at 95+% capacity, there is a real demand for this project. To partially meet this demand Circle Development proposes to construct a state of the art high-rise structure which would be shared with the Red Dog Resort. The proposed use requires a Conditional Use Permit and will require approval under Article 80 for Large Project Review. Due to its prominence as a gateway structure into Boston from the south, it is expected to need approval from the Boston Civic Design Commission.

1.4 Existing Conditions

1.4.1 *Project Site*

The current site contains Boston Red Dog Pet Resort and Spa. Since opening in 2011, Red Dog has become a premier dog resort in the Northeast. The business contains everything for pets: daycare, boarding, grooming, training, supplies and a veterinary hospital. The business is housed in a two-story building on a 62,522 square foot parcel

of land. There are currently 65 parking spaces on the site, most of which are not used as the business rarely has more than 20 cars on site at any given time.

1.4.2 *Surrounding Community*

Southampton Street is located in the Newmarket neighborhood, officially part of South Boston. The immediate surrounding neighborhood has a rich mix of warehouses and industrial buildings, as well as the MBTA Police Headquarters. Southampton Street is aligned from east to west, connecting Andrews Square to Massachusetts Avenue and is a prime location for a much needed storage facility. The area includes the South Bay Mall, a mix of big box chain businesses and new restaurants built around this hub of activity.

1.5 *Proposed Project*

This Project Notification Form (PNF) was written to describe in full, Circle Development's proposal for 274 Southampton Street in Boston, MA. The project is located in the changing and improving Newmarket Industrial Commercial Neighborhood District, and the character of the surrounding community is remarkably diverse. The neighborhood has a mix of industrial, food processing and commercial businesses, as well as other storage facilities. The community's economic diversity is in large part the driving force behind this proposal and allows for a successful project of this scale and design.

The proposal calls for the development of an approximately 82,500 foot storage facility whose height will be 128 feet. The building will be a LEED certifiable building that will enhance the green values the community desires in the District. The project will be adjacent to the existing Boston Red Dog Resort and Spa, also owned by the owners of Circle Development LLC. The project will contain minimal office space as well as flexible storage spaces providing to the needs of Boston’s residents.

In summary, sufficient space is always a concern for people no matter where they live. In a city growing in population and well-being, storage facilities are becoming more vital to provide people with the space they need.

Figure 1.1, Locus Map (source – Google Maps)

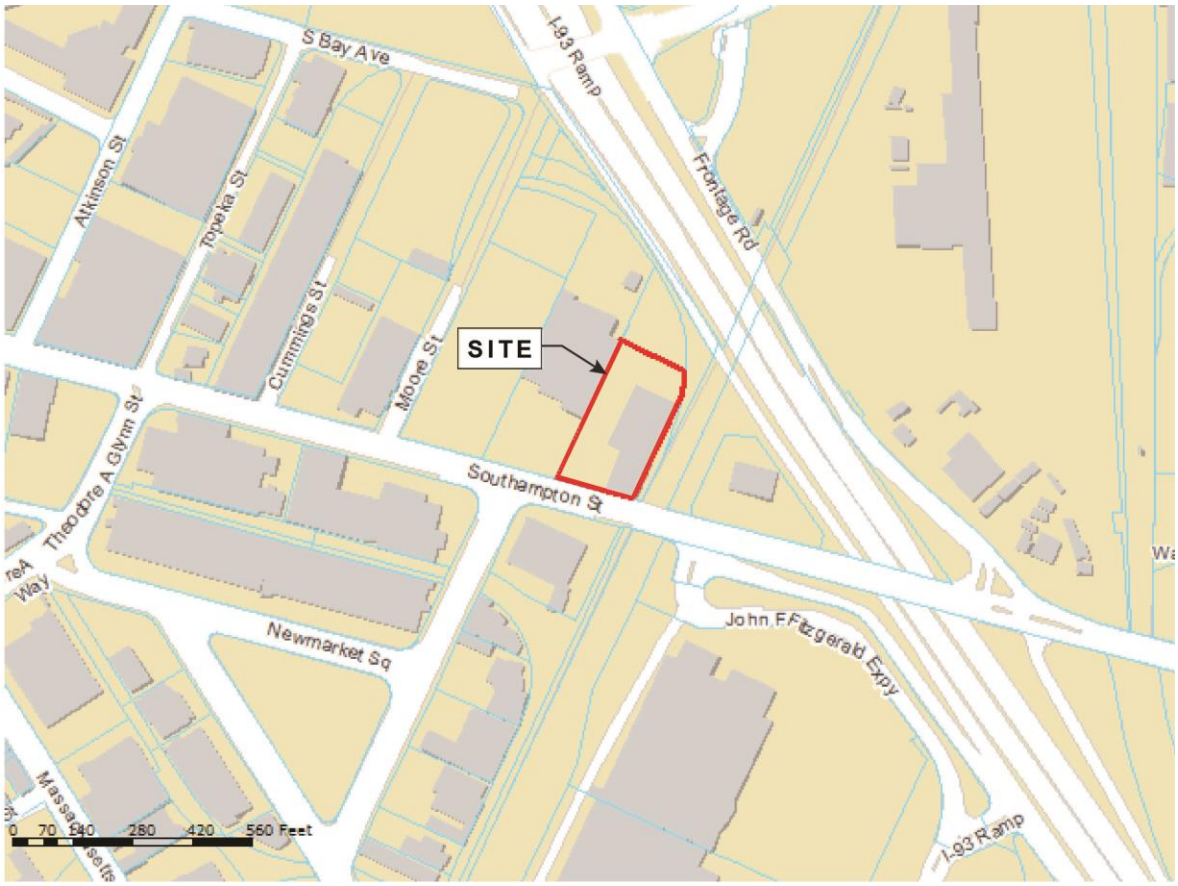


Figure 1.2, Locus Aerial Map (source – Google Maps)

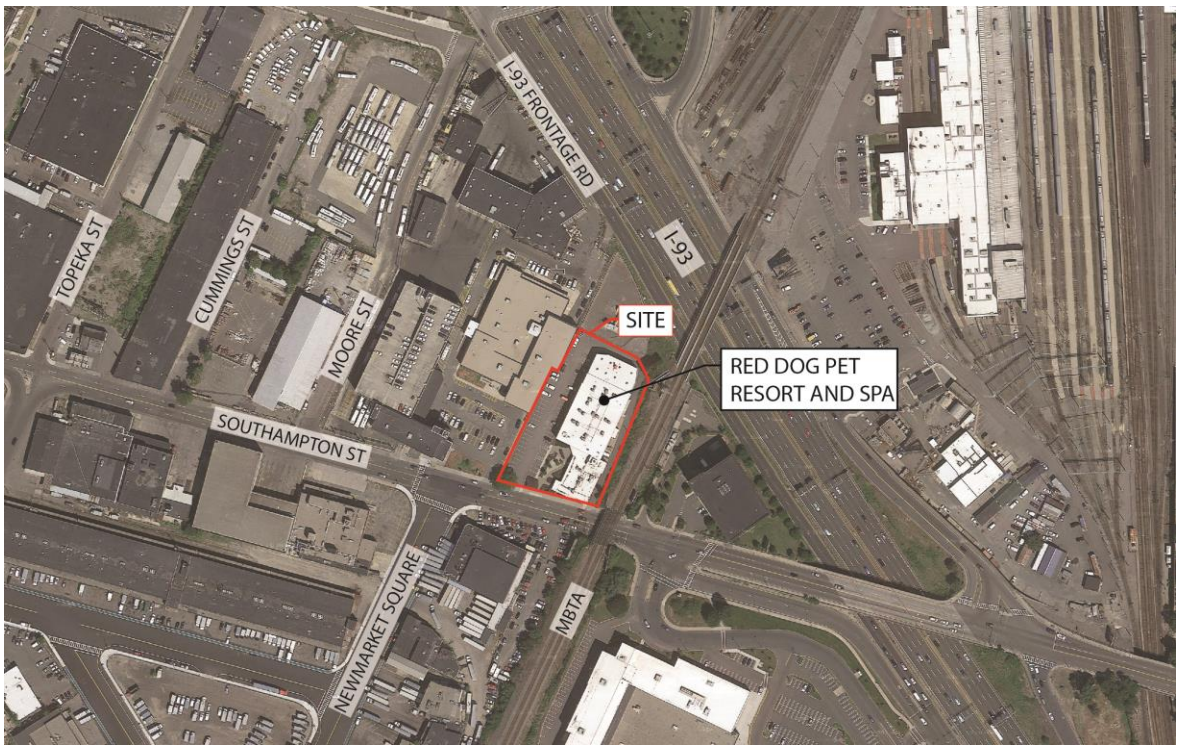
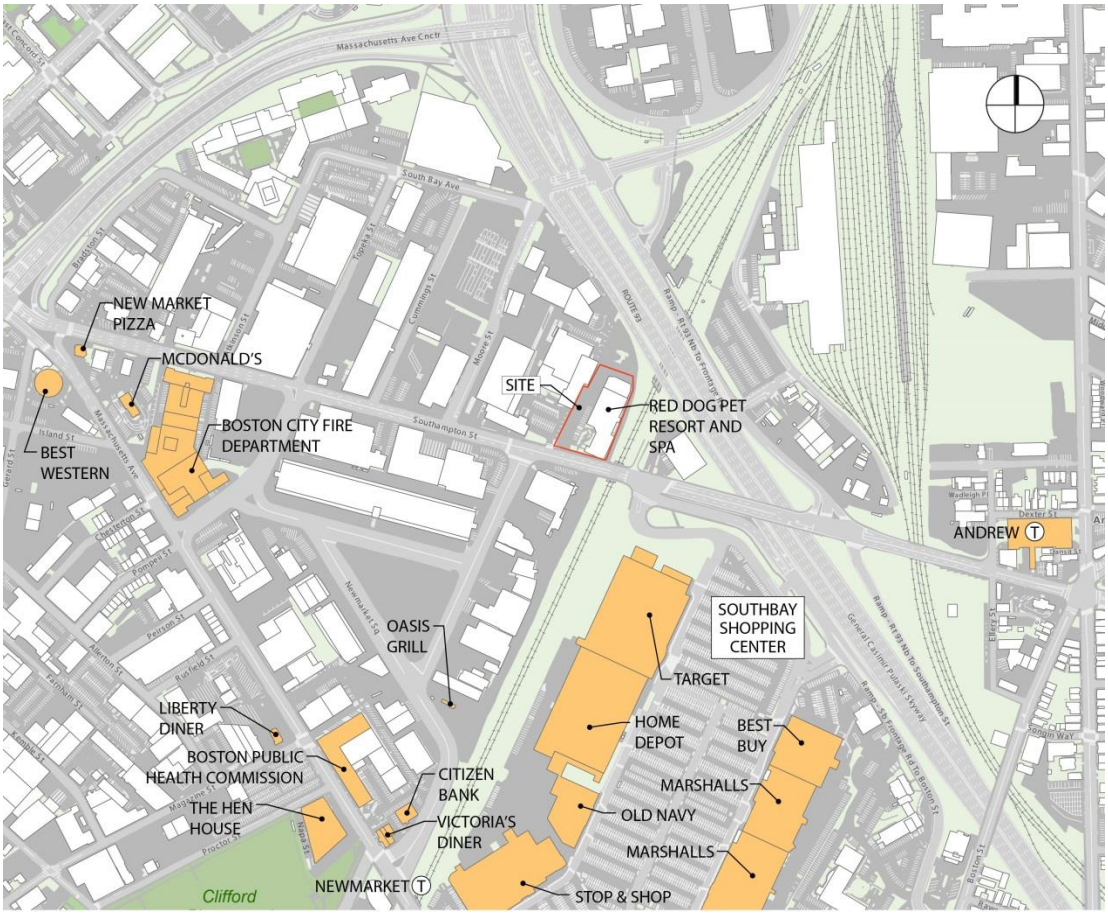


Figure 1.3, Community Context Map



1.6 *Public Benefits*

1.6.1 *Create Jobs*

Circle Development is a community builder and as such will strive to exceed the requirements of the Boston Residency Jobs Policy, which determines the minimum number of minorities, women, and Boston residents on a project job site. The program is monitored by the Mayor's Office of Jobs and Community Service through their Compliance Department and prior to and through construction, there will be a designated area on the Project Site for the obtainment of applications so that Boston residents can have access to potential employment opportunities on the job site. Circle Development is committed to going above and beyond the marketing requirements for this program and will work diligently with community leaders to make sure all Boston residents have an opportunity for employment on this project.

At the outset, it is anticipated that Boston Self Storage will create **eight to ten new jobs**, including managers, maintenance crew, and part-time employees

Following a brief period of establishment of the business, Cirle Developemnt intends to create a new associated moving company to provide an obvious needed service to its potential clients. This is expected to create **six to ten** well-paying jobs, including movers and office employees (manager, reception, accounting).

Furthering the job expansion, the new storage facility is expected to bring more business to the Red Dog complex (Boston Red Dog, Skipton Pet Center, & Boston Animal Hospital). Circle Development expects that this will result in about **five to ten more jobs** to the Red Dog business to accommodate this expansion.

In summary and though the synergies described, it is anticapted that between **19 and 30 new jobs** will be directly produced by the proposed business and development.

1.6.2 *Build a LEED New Construction Building*

Our team is committed to incorporating environmentally sensitive and sustainable design elements into the Boston Self Storage development. These elements will improve the quality of life for the workers in this project as well as the neighborhood, while helping to protect the global environment. Ultimately they will also reduce operating costs while increasing value for the project, improving its business viability.

We are committed to identifying opportunities presented by the redevelopment by setting proactive goals and ensuring to produce LEED certifiable as a minimum and satisfying the requirements of the City of Boston Environment Department (see Figure 1.6, LEED Checklist). It is anticipated that this development will incorporate LEED Design Elements totaling 54 credits equivalent to Silver level, including:

Sustainable Sites; 16 Credits

Water Efficiency; 4 Credits

Energy and Atmosphere; 15 Credits

Materials and Resources; 4 Credits

Indoor Environmental Quality; 8 Credits

Innovation in Design; 4 Credits

Regional Priority; 3 Credits

1.7 Review and Approvals

1.7.1 *Article 80 Review Process*

This document is being submitted to the BRA as part of the Article 80B, Large Project Review process. A preliminary scoping session was held with the BRA staff on March 13, 2015 and a final Scoping Determination is anticipated.

This project has been assigned an Impact Advisory Group (IAG) which will be made up of members of the community who are invested in their community and want to weigh in on the impacts of development in their community. The IAG members will be liaisons to their community serving as a credible intermediary between the developers and the community they are impacting.

1.7.2 *Boston Civic Design Commission*

The Project will not exceed 90,000 square feet which is the primary threshold of the Boston Civic Design Commission. However, as stated in Section 28 of the Code, any project that falls within a Design District, may be subject to the Commission's review. Given the prominence and location of the proposed Project, it was determined in the Scoping Session that the project is to be reviewed by the Commission. The Applicant request that this review be held concurrently with the Article 80b Review Process.

1.7.3 *Summary of Required Permits and Approvals*

The project expects to secure several local permits and approvals prior to commencement of construction. The following is a list of these anticipated permits and approvals:

Table 1.1: Anticipated Permits, Reviews and Approvals

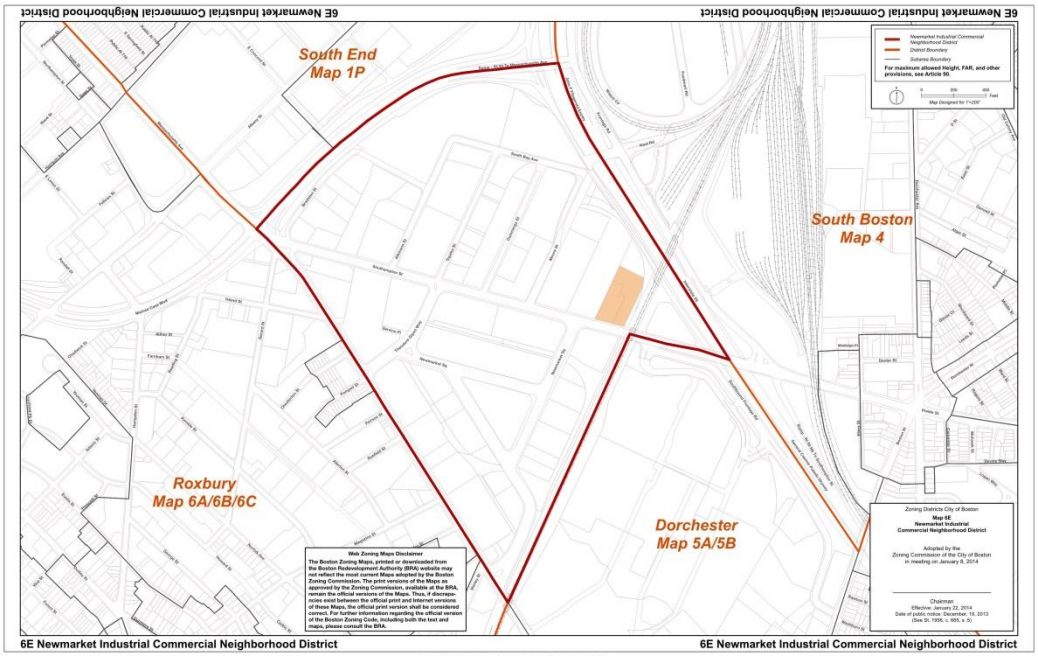
Agency Name		Permit, Review or Approval
FEDERAL		
	Environmental Protection Agency	National Pollution Discharge Elimination System
STATE		
	Executive Office of Environmental Affairs (MEPA Unit)	Secretary's Certificate
	Massachusetts Historical Commission	State Register Review
	Department of Environmental Protection, Division of Water Pollution Control	Sewer Connection and Extension Permit
	Massachusetts Water Resources Authority	Sewer Use Discharge Permit
LOCAL		
	Boston Redevelopment Authority	Article 80b Large Project Review
	Boston Civic Design Commission	Approval of Schematic Design
	Zoning Board of Appeals	Conditional Use Permit, Parking Relief
	Boston Transportation Department	Transportation Access Plan Agreement
	Boston Inspectional Services Department	Building and Occupancy Permits
	Boston Water and Sewer Commission	Sewer Extension/ Connection Permit
	Boston Committee on Licenses	Parking Garage License; Curb Cut Permits
	Public Works Department/Public Improvement Commission	Street Discontinuances and Acceptances; Specific Repairs

1.8 Consistency with Zoning

1.8.1 *Zoning Districts*

The Project Site is located in Newmarket Industrial Commercial Neighborhood District, governed by Article 90 (see Zoning District Map).

Figure 1.4, Zoning District Map



ZONING DISTRICT MAP

1.8.2 *Permitted Uses*

The Proposed Project proposes an addition of Self-Storage Use. Self-Storage Use is a Conditional Use (see Table 1-1 Article 90, Boston Zoning Code).

Table 1-2

Table A

Newmarket Industrial Commercial Neighborhood District

Use Regulations

Key: A = Allowed, C = Conditional, F = Forbidden incl = "Including but not limited to" PS1, PS2 and PS3 = See Article 90-9 for Performance Standards requirements	Newmarket Industrial Commercial Neighborhood District
COMPATIBLE, SUPPORTIVE NON-INDUSTRIAL USES	
Retail	A[5] | C[6] | F[7]
Accessory Retail	A[8]; otherwise C
Wholesalers, Durable Goods: incl: electronics, outdoor storage of lumber | motor vehicle sales is C	A[9 and PS1]
Wholesalers, Nondurable Goods	A
Restaurants: incl: sit-down, take-out	A
Special Food Services: incl: catering, food trucks	A
Office: incl: engineering, finance, insurance, construction, legal, management, public administration, staffing/temp	A[10]; otherwise C
Research & Development[11]: incl: research laboratory, product development, prototype manufacturing	A
Accessory Office	A
Accessory Fitness Centers	A
Technical and Trade Schools/Centers (Adult)	A
Transportation: incl: accessory/ancillary parking | bus/taxi is C | vehicle storage, junkyard, and primary parking lots are F	A
Warehousing (Indoor): incl: non-hazardous materials | self-storage is C	A

[5] Allowed if <20,000 Gross Square Feet
[6] Conditional if between 20,000-49,999 Gross Square Feet
[7] Forbidden if ≥50,000 Gross Square Feet
[8] Allowed if ≤25% of Gross Square Footage
[9] Allowed if <50,000 Gross Square Feet
[10] Allowed if <50,000 Gross Square Feet
[11] Provided that, where applicable, such Research and Development Use shall comply with: 1) all the guidelines and standards promulgated by the National Institutes of Health ("NIH") concerning the care and use of laboratory animals; and 2) all applicable federal and state requirements and regulations for operating labs as classified by the Center for Disease Control and Prevention ("CDC") and Boston Public Health Commission ("BPHC"). If such Research and Development Use is subject to and does not satisfy the requirements of items 1 and 2 of Footnote 4, such Research and Development Use shall be forbidden.

Article 90 – Newmarket Industrial Commercial Neighborhood District *19*

1.8.3 *Dimensional Requirements*

The Proposed Project will comply with all dimensional requirements (see Article 90, Section 90-8, Table 1-3).

Table 1-3

SECTION 90-8. **Dimensional Regulations Applicable in Newmarket Industrial-Commercial Neighborhood District**. Within the Newmarket Industrial-Commercial Neighborhood District, there is no maximum allowed Building Height and the maximum allowed Floor Area Ratio is two (2). The minimum allowed Lot Size, Lot Width, Lot Frontage, Front Yard, Side Yard, Rear Yard, and Usable Open Space are set forth in Table 1 below.

TABLE 1

Lot Size, Lot Area, Lot Width:	None
Max FAR:	2.0
Max Height Stories/Feet:	None
Usable Open Space:	None
Front Yard Min:	None [1]
Side Yard Min:	None [2]
Rear Yard Min:	12 feet

[1] Conformity with Existing Building Alignment.
[2] Except for side lots abutting residential or open space uses or zoning districts or subdistricts whereby the required minimum side yard requirement shall be that of the abutting (sub)district.

1.8.4 *Floor Area Ratio*

The Proposed Project will have a total ±124,627-SF Gross Floor Area resulting in 1.99 FAR, which complies per Article 90, Section 90-8, Table 1-3.

1.8.5 *Maximum Building Height*

There is no requirement for Building Height per Article 90, Section 90-8, Table 1-3.

1.8.6 *Dimensional Requirements: Not Applicable*

The following Dimensional Requirements are not applicable in the Newmarket Industrial Commercial Neighborhood District: Lot Size, Lot Area, Lot Width, Max Height, Max Number of Stories, Usable Open Space, Minimum Front Yard, Minimum Side Yard per Article 90, Section 90-8, Table 1-3.

1.8.7 *Off-Street Parking and Loading*

For any Proposed Project subject to or electing to comply with Large Project review, required off-street parking spaces and off-street loading facilities shall be determined

through such review in accordance with the provisions of Article 80 per Article 90, Section 90-13 (Table 1-3 above).

(f) Display of Permit Number and Posting Date. Each permanent Sign, including any Sign painted on or affixed to an awning, canopy, or marquee, shall display the Sign's building permit number clearly but unobtrusively, in letters and numbers not exceeding one (1) inch in height. Temporary signs shall display the date of posting.

^SECTION 90-13. **Off-Street Parking and Loading Requirements**. For any Proposed Project subject to or electing to comply with Large Project Review, required off-street parking spaces and off-street loading facilities shall be determined through such review in accordance with the provisions of Article 80. For any other Proposed Projects, the minimum required off-street parking spaces are as set forth in Table B and the minimum required off-street loading spaces are as set forth in Table C.

1. Outdoor Uses. For the purpose of computing required off-street parking spaces, where a main use on a Lot is an open-air use not enclosed in a Structure, the area of the part of the Lot actually devoted to such use shall constitute floor area.

2. Pre-Code Structures. If a Structure existing on the effective date of this Article is altered or extended so as to increase its Gross Floor Area or the number of Dwelling Units, only the additional Gross Floor Area or the additional number of Dwelling Units shall be counted in computing the offstreet parking facilities required; provided, however, that no additional offstreet parking facilities shall be required in connection with the alteration or extension of such a Structure for use as a Group Residence Limited, Homeless Shelter, or Lodging House.

3. Mixed Uses. If a Lot includes multiple uses, then the required number of offstreet parking spaces for such Lot shall be the total of the required number of off-street parking spaces for each use, and the required number of offstreet loading spaces shall be the total of the required number of off-street loading spaces for each use; provided, however, that, subject to the provisions of Sections 6-2, 6-3, and 6-4 and after public notice and hearing, the Board of Appeal may permit a reduction in the total number of required off-street parking spaces if the Board of Appeal determines that so-called "shared parking" arrangements, in which a single parking space may be counted for different uses whose peak parking use periods are not coincident, will adequately meet the parking demand associated with the Proposed Project.

4. Location.

(a) Except in the case of a Lot serviced by a common parking facility, the off-street parking facilities required by this Section shall be provided on the same Lot as the main use to which they are accessory; provided, however, that if the Board of Appeal shall be of the opinion that this is impractical with respect to a particular Lot, said Board, after public notice and hearing and subject to the provisions of Sections 6-2, 6-3, and 6-4, may grant permission for such facilities to be on another Lot in the same ownership in either of the following cases: (1) where the main use on the particular Lot is for Residential Uses and the other Lot is within four hundred (400) feet of the particular Lot; and (2) where the main use on the particular lot is for non-

Residential Uses and the other Lot is within twelve hundred (1,200) feet of the particular Lot.

(b) After public notice and hearing and subject to the provisions of Sections 6-2, 6-3 and 6-4, the Board of Appeal may grant permission for a common parking facility cooperatively established and operated to service two or more uses of the same or different types; provided that there is a permanent allocation of the requisite number of spaces for each use and that the total number of spaces is not less than the aggregate of the numbers required for each use, or the Board of Appeal may permit a reduction in the total number of required off-street parking spaces if the Board of Appeal determines that "shared-parking" arrangements, in which a single parking space may be counted for different uses whose peak parking use periods are not coincident, will adequately meet the parking demand associated with the Proposed Project.

(c) Off-street parking and loading spaces shall not be located in any part of a landscaped area required by this Article or in any part of a Front Yard, except as specifically provided in this Section 50-43. If a Lot is located in a Residential Subdistrict, a total of two (2) accessory parking spaces serving residential uses on such Lot may be located in that portion of the Front Yard that lies between the side yard and the Front Lot Line, provided that the total width of such Front Yard area used for parking does not exceed ten (10) feet.

5. Design. All off-street parking facilities provided to comply with this Article shall met the following specifications:

   (a) Such facilities shall have car spaces to the number specified by this Article, maneuvering areas, and appropriate means of vehicular access to a street, and shall be so designed as not to constitute a nuisance or a hazard or unreasonable impediment to traffic; and all lighting shall be so arranged as to shine downward and away from streets and residences.

   (b) Such facilities, whether open or enclosed in a structure, shall be so graded, surfaced, drained, and maintained as to prevent water and dust there from going upon any street or another Lot.

   (c) Such facilities shall not be used for automobile sales, dead storage, or repair work, dismantling, or servicing of any kind.

   (d) All car spaces shall be located entirely on the Lot. Fifty percent (50%) of the spaces may be no less than seven (7) feet in width and eighteen (18) feet in length, and the remainder shall be no less than eight and one-half (18-1/2) feet in width and twenty (20) feet in length, in both instances exclusive of maneuvering areas and access drives.

6. Maintenance. All off-street parking facilities provided to comply with this Article shall be maintained exclusively for the parking of motor vehicles so long as a use requiring them exists. Such facilities shall be used in such a manner as at no time to constitute a nuisance or a hazard or unreasonable impediment to traffic.

CHAPTER 2

Urban Design Narrative

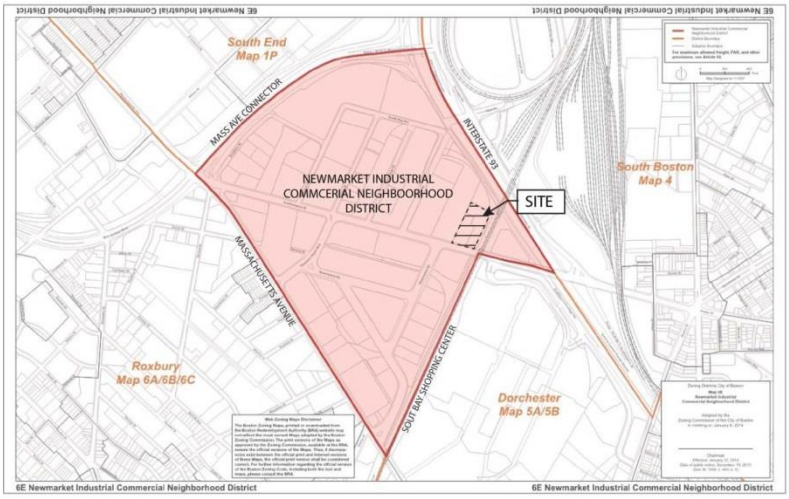
2.0 Proposed Location

2.1 *Newmarket Industrial District*

1. **Introduction** to Newmarket: Newmarket Industrial-Commercial Neighborhood District is a major center for production, distribution and manufacturing of goods. The Newmarket Square area was created in 1953 to relocate the meatpacking and food processing companies from the Faneuil Hall Market and Haymarket in downtown Boston. The businesses grew in the new location and the Newmarket Business Association was created by business owners who worked together to influence infrastructure changes. Today, the Boston Redevelopment Authority through its recent Newmarket district re-zoning has indicated that the district should grow and strengthen its identity and economy further. Newmarket is seen as Boston's "industrial backbone" and provides sustainable-wage jobs and encourages environmentally responsible businesses. The recent zoning updates mentioned initiatives to expand industries, development, and workforces within the district.

2. **Newmarket Zoning**. Current land use patterns in Newmarket are primarily light industrial, wholesale distribution and food processing companies. New zoning recently developed to evolve the district and allow industries previously not permitted. The code retains and protects the core industrial uses but welcomes scientific and technical businesses, healthcare facilities, green technology, beverage manufacturing, and creative industries. (See Figure 2.1)

Figure 2.1, Zoning Map



3. **The Built Environment**. The neighborhood of Newmarket currently consists of 1-3 story as well as multi-story masonry and concrete warehouse buildings. The immediate abutter is the MBTA Police Headquarters, which is a combination of parking garage, office and vehicle depot. The majority of the nearby existing structures have simple massing and sparse windows. The street edges in Newmarket vary greatly, many have little or no curbs between parcel and roads. Few buildings abut the street; most buildings are set back to allow for parking and truck loading dock accessibility close to street edge. Lots with open land frequently have storage of materials and trailers with high fences. Roads dominated by trucks have recently been upgraded with pedestrian safety improvements including sidewalks and crosswalks.

4. **Transportation in Newmarket.** The region is known for its production and distribution has an expansive transportation network. Newmarket is centrally located in Boston with easy access to Logan International Airport, downtown Boston, and Interstate 90 and 93.

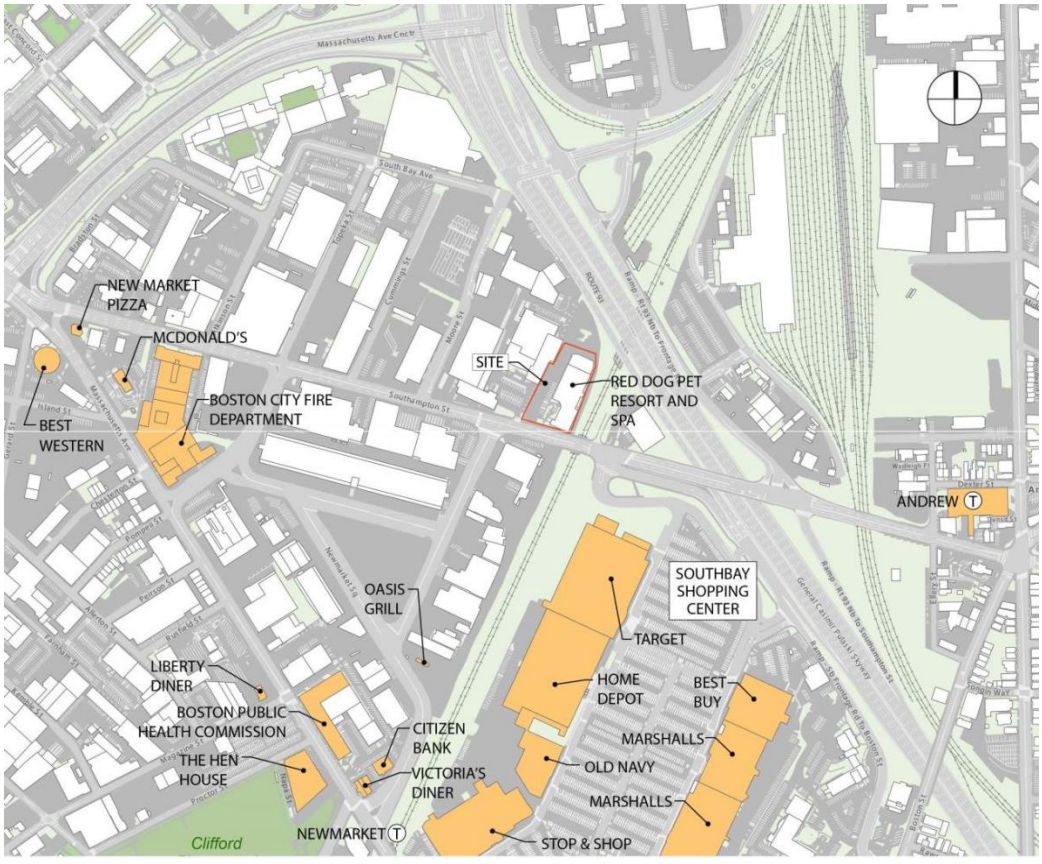
   The major public transit routes include MBTA bus routes, MBTA Newmarket commuter rail station off the Fairmount Line, and the Andrew Square T Station off the redline. All of these are within a short distance. The MBTA plans for a future high-speed transit line on the Fairmount Corridor which will become a valuable resource for Newmarket.

5. **Parking in Newmarket.** On-street parking is very common on side streets throughout Newmarket. However, Southampton Street does not have on-street parking near the proposed site. There are multiple private off-street parking lots and 2 garages that are not open to the public. In addition, there are 65 parking spaces currently available at the location, although only a fraction of these are used on a regular basis.

6. **Local Workforce Resources**: The current zoning does not permit housing of any type but the surrounding neighborhoods of Dorchester, Roxbury, South End and South Boston house employee resources with easy access. High quality public transportation in the district further expands the available work force.

7. **Amenities** – Newmarket has few retail and restaurants in the area, some including Victoria's Diner, The Hen House, Café 1010. The recently development of the South Bay Center has become an attraction for residents from adjacent districts. This includes big box retailers of Home Depot, Target and various restaurants. (See Figure 2.2)

Figure 2.2, Neighborhood Amenities Map



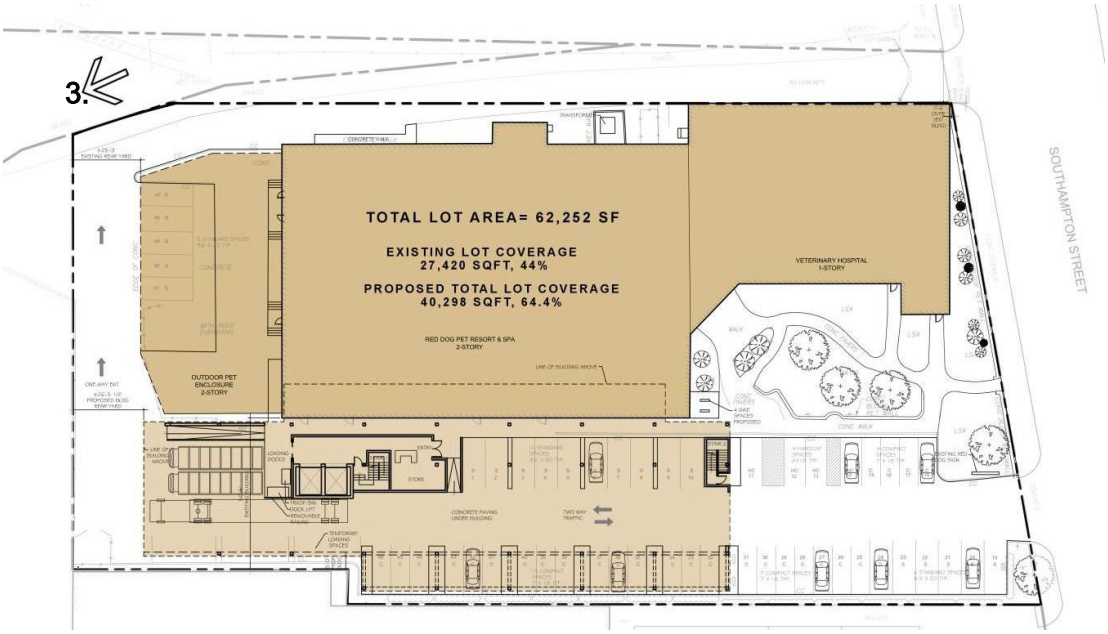
2.2 *Site*

1. **Existing Building Arrangement on Site**: The project is located at 274 Southampton Street in the Newmarket district of Boston. The site currently contains a building occupied by Red Dog Pet Resort & Spa. The existing structure is 1-story along Southampton Street and the rear portion of the building is 2-stories, approximately 25' in height. An addition was recently added to the rear of the building with a 2 story open structure. A portion of the existing building holds the street edge and the remainder of Southampton Street edge contains the curb cut for the parking lot. This layout is similar to many parcels around Newmarket with buildings pulled away from the street edge and large open space for parking and, as in the case of the Red Dog, for landscaping. (See Figure 2.3)

Figure 2.3, Aerial Map

2. **Site Density/Lot Coverage (Existing/Proposed)**. The current lot area is 62,252-SF, 44% of the lot is covered by the existing building. The proposed total lot coverage will be 40,298-SF or 64.4% of the lot area. (See Zoning Analysis Section) The proposed building is constructed on and above existing paved ground; the existing landscaped space is unchanged. (See Figure 2.4)

Figure 2.4, Lot Coverage Diagram

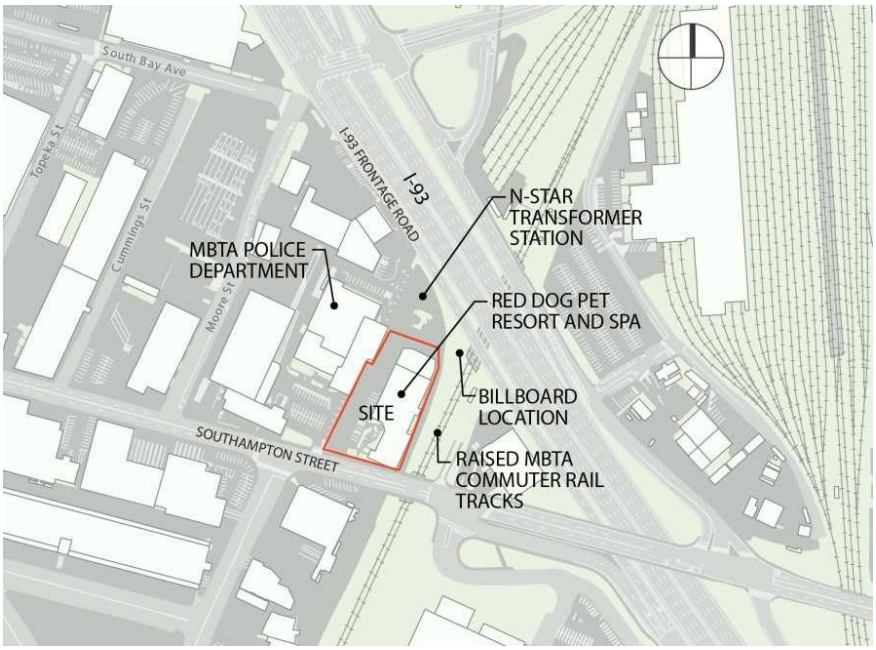


3. **Neighbor Adjacencies**: To the west of the site at 240 Southampton Street is the MBTA Transit Police Department. The Transit building is positioned to the rear of the site with the street edge being left open for parking. The portion of the structure adjacent to the proposed site is elevated off the ground allowing for vehicles to pass under. Vehicular access to the Transit building is from both Southampton Street and off Frontage Road. The overall height of the structure adjacent to the Storage building site is approximately 30 feet.

To the East of the site there is a +/- 20 foot paved right-of-way. Beyond the right of way is the MBTA commuter rail track, the tracks are raised creating an

embankment approximately 15' high. Southampton Street passes under the MBTA rail tracks. The north of the site is bound by a parcel of land controlled by Eversource that includes a transformer station surrounded by chain link fence. Beyond this is I-93 Frontage Road, and the south bound on-ramp to 93. Above the North East corner of the site resides a two-sided billboard on a 3' diameter stanchion. (See Figure 2.5)

Figure 2.5, Neighbor Adjacencies Map



4. **Impact and Connection** to the Existing Red Dog Pet Resort & Spa. The proposed self-storage structure adjacent to the Red Dog Pet Resort and Spa will potentially create value for both companies. The client base that utilizes the Red Dog is the same demographic that typically needs self-storage facility. Dog daycare is a discretionary service, one in which the client would need to have disposable income available in order to use. Clients generally value and utilize convenience and well-run service industries. Additional convenience services such as drop-off and pick-up at the dog center and adjacent veterinary services and pet supply shop, make it more attractive.

Like the Red Dog, the proposed storage facility is designed with the convenience-oriented client in mind. The architectural aesthetic and amenities rise above the competition into a market of premium storage. The storage clients will potentially utilize the Red Dog pet care services as well.

The facility will have accommodations for tenants' convenience including a small business center for the storage client's use. For many potential clients will be commercial and small business tenants, such as marketing professionals, this will be an attractive feature.

5. Site Circulation:

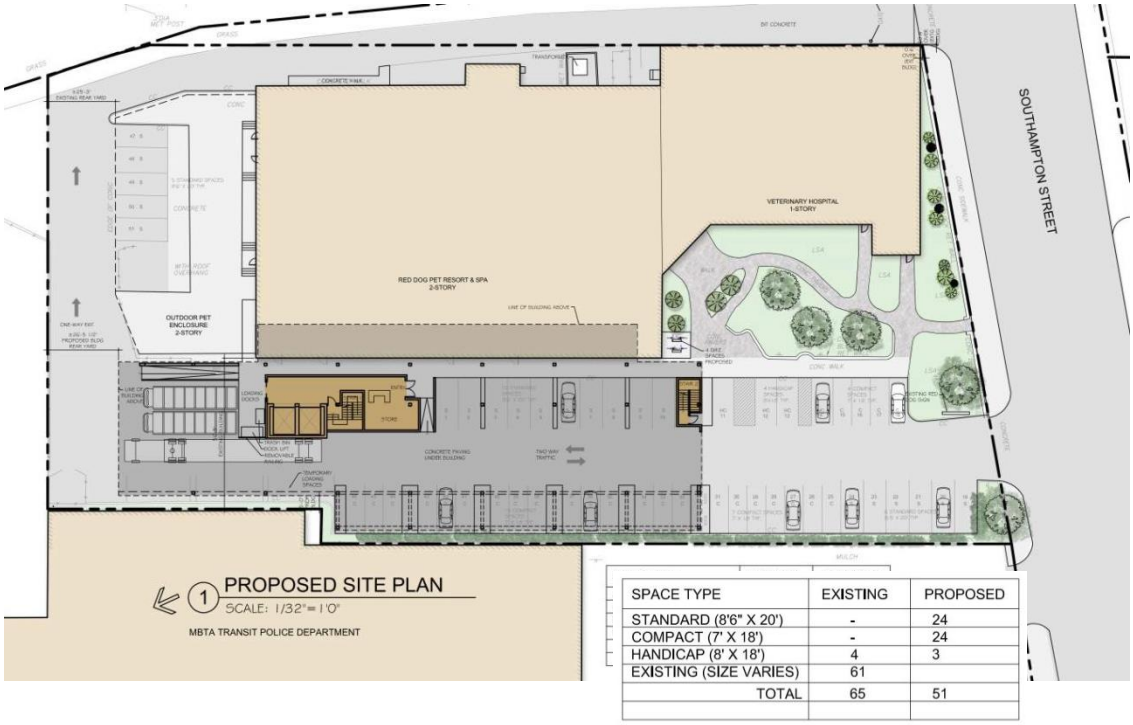
5a. Vehicular. The traffic and pedestrian flow of the site will not be greatly impacted by the proposed storage facility. The primary vehicular entry to the site is currently off Southampton Street, where it will remain. The curb cut will be improved and much, if not all, of the parking will be repaved with the conclusion of construction. The parking lot will maintain its function and the proposed structure will be raised above the lot and occupy a few of the existing parking spaces for its ground level footprint. Vehicles utilizing parking spaces and needing access to the storage buildings loading area under the volume of the proposed structure will enter through a large archway. Traffic will remain two-ways under the structure for vehicles to exit back onto Southampton Street. (See Figure 2.6, 2.7)

5b. Loading and Service: The loading docks for the proposed storage facility will be located to the North of the site on the rear of the building. The delivery and moving trucks will enter at the same location as patron vehicles, continue under the proposed structure through the arch to the rear of the building, and back into the dock area. There will be two loading bays capable of handling "26-ft" rental moving trucks (35'in total length) and one dock lift for tractor

trailer use. Beyond the patron parking spaces, the truck traffic flow will allow for the trucks to back in, unload their goods and continue around the building to exit onto Southampton Street on the east side of the existing structure. The truck loading area accommodates a dumpster for trash and recycling.

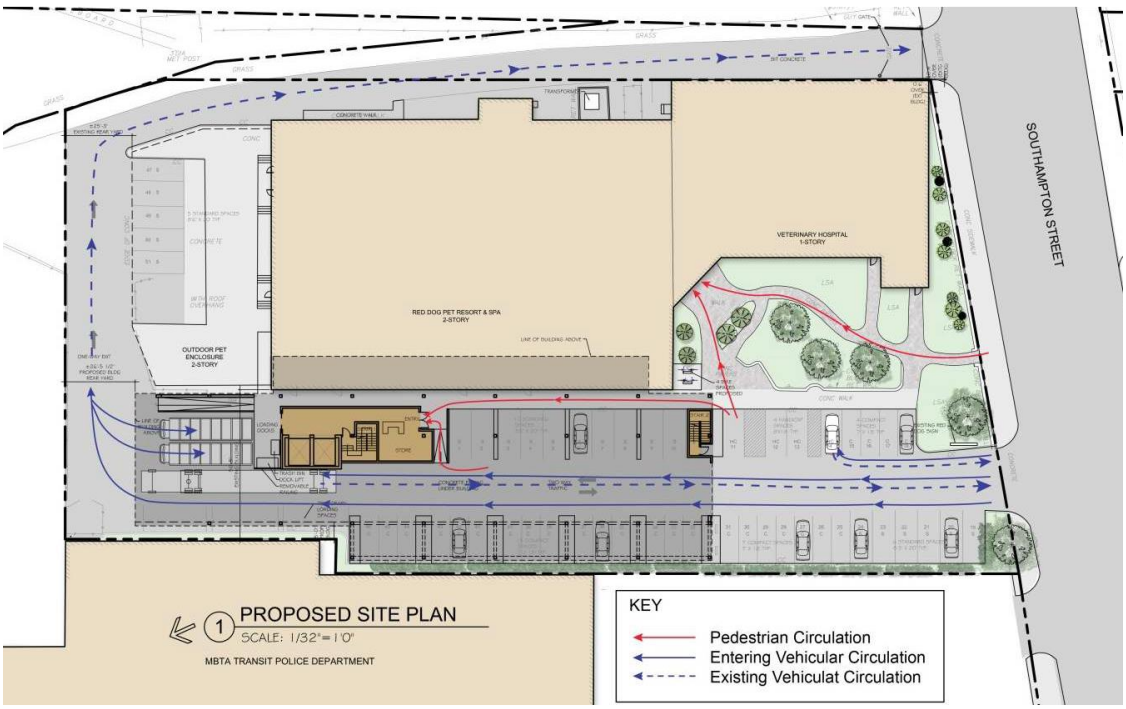
5c. Pedestrian. The existing site has a retaining wall along Southampton Street where the grade changes from the sidewalk and the existing Red Dog Pet Resort. Sidewalk entrance for pedestrians is located at an opening in the retaining wall and will remain in the same location alongside the vehicular driveway. The network of paths to enter the existing building will remain and be used to enter the storage facility. To reach the entry of the storage building pedestrians will walk under the proposed pedestrian arch located near the entry of the existing building. The entry to the storage office and store will be clearly located. (See Figure 2.6, 2.7) Storage facilities require security and monitored control of people entering and exiting the building. This programmatic challenge will be overcome with carefully organized entry points at the ground level. The technology for 24-hour access to the facility will control who is permitted and not permitted to enter the building.

Figure 2.6, Property Site Plan



SPACE TYPE	EXISTING	PROPOSED
STANDARD (8'6" X 20')	-	24
COMPACT (7' X 18')	-	24
HANDICAP (8' X 18')	4	3
EXISTING (SIZE VARIES)	61	
TOTAL	65	51

Figure 2.7, Site Circulation Diagram



6. **Street Edge.** The site plan proposed is fitting with other sites in the neighborhood. Leaving the street edge open for vehicular access gives open space and relief to the street and pedestrians.

7. **Signage.** The Red Dog Pet Resort will maintain its signage it currently has on the façade and along the sidewalk. The Self-Storage facility will have identifying and directional signage on the South façade facing Southampton Street. Additional building signage is proposed for the rest of the building and will require separate Special Permit approvals.

8. **Topography**. The topography at the site of 274 Southampton Street slightly slopes down from the street front to the rear of the site. The total grade change is 2 feet across the site.

9. **View Corridors**. Currently pedestrians on Southampton Street have a view corridor directly through the parking lot to the rear of the site. From Southampton Street the view at the rear of the lot is a chain link fence that runs along the edge of the site. Beyond the fence are large electrical transformers is I-93. From I-93 Frontage road there is a view through to Southampton Street. This view corridor that exists through the site may be slightly obstructed by the proposed building, but otherwise the large archway allows for a clear view to be retained. (See Figure 2.8, 2.9)

Figure 2.8

View from I-93 Frontage Rd to Southampton St

Figure 2.9

View From Southampton Street to I-93

2.3 *Transportation*

1. **Location of Site to Existing Transit Networks**. The project site is in a dense urban area on the busy and expanding neighborhood of Newmarket. The public transportation network is well developed around the site and there are multiple bus stops within walking distance. The closest stop is on Newmarket Square and Southampton Street which is serviced by multiple bus routes. The site is also easily accessed by the Newmarket stop on the MBTA Fairmount Commuter Rail line. The site is accessible via car or truck by exit 18 off route I-93. The location of the site is ideal for customers and employees.

2. **Visibility of Site from Transit**. The rear of the site abutting I-93 Frontage road becomes a visual resource for the Newmarket neighborhood. As envisioned by Boston Redevelopment Authority's Planning Initiative, growth in Newmarket will be that of prosperous industrial, green business. The designers of the proposed storage facility have taken great care in the elevations visible by I-93. The typology of self-storage does not require a lot of glazing on the façade of the building. With its distinctive colorful facades 274 Southampton Street will become an iconic, landmark building for the district of Newmarket along I93 existing and entering Boston as well as from the Fairmount train rail. (See Building Design – Chapter 3)

3. **Parking Requirements**:

   3a. Vehicular Parking: Parking requirements under Large Project Review will be determined under Article 80 per Section 90-13. A Parking analysis is provided with the application. The existing parking lot has 65 parking spaces and the proposed site plan provides for 51 spaces. The design of the shared parking configuration will be an optimal land use and will provide for both

uses. In comparison to other uses self-storage facilities in the area the proposed Boston Self-Storage facility will have more spaces than typically provided.

3b. **Bike Parking**. There are two bike racks totaling four bike spaces on the site. This is in compliance with the BTDs requirements for bicycle parking and will provide efficient accommodations for visitors and employees. (See Figure 2.6, Site Plan)

2.4 *Environmental*

1. **Shadow Effecting Neighborhood**. The shadow analysis examines the net new shadow impacts for the 9 AM, 12 PM, 3 PM, and 6PM hours during the Vernal and Autumnal Equinoxes (March 21 and September 21), Summer Solstice (June 21), and Winter Solstice (December 21). The analysis focuses in particular on nearby public open spaces and major pedestrian areas as well as sidewalks and bus stops adjacent to and in the vicinity of the Project Site. (See Figures 2.10-2.12)

   Even though the Project is in a densely built urban neighborhood, the shadows are minimal in impacting major pedestrian areas. The shadow study indicates that the Project will not cause substantial impacts to the surrounding area. Shadow impacts throughout the year are limited primarily to rooftops, the rear alley, and streets. Some new shadow will fall onto the sidewalk of adjacent streets. No open spaces will be adversely impacted by the net new shadow.

Figure 2.10, Autumn Equinox (March 21/Sept 21) Shadow Study

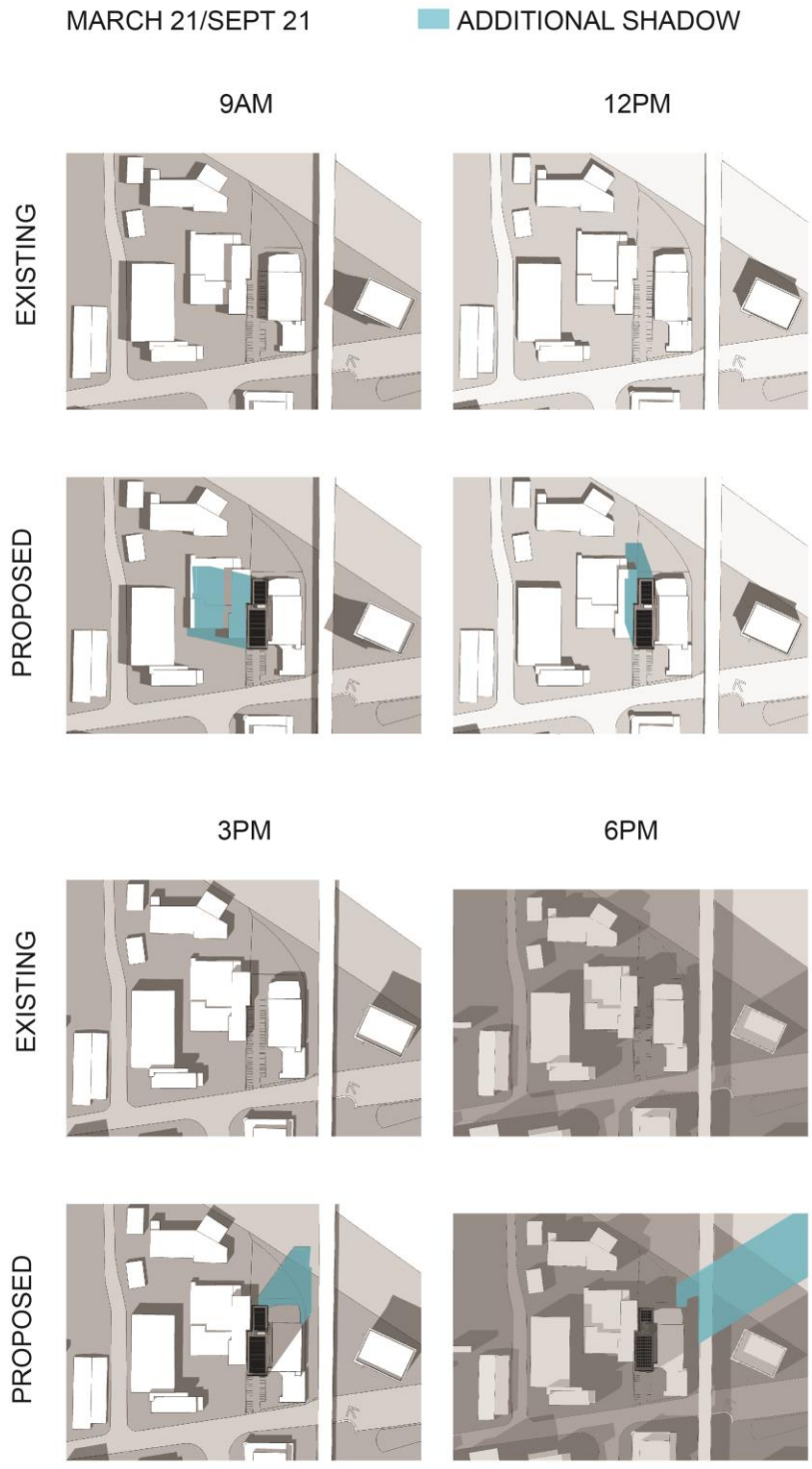


Figure 2.11, Summer Solstice (June 21) Shadow Study

Figure 2.12, Winter Solstice (December 21) Shadow Study

2. **Lighting Impacting Skyline**. The typology of self-storage does not require a lot of glazing on the façade of the building. This means there will be limited light shed from the interior lit spaces.Where glazing is provided, interior lighting will be limited.

3. **Environmental Pollution**. This industrial use is characterized as clean and generally compatible with the surrounding commercial uses. The building use of self-storage does not generate excessive noise, pollution, vibration, smoke, dust, odors or other hazards.

4.**Green Strategies**. The project is on course to accumulate 54 LEED points for a SILVER level "certifiable" building. (See LEED scorecard attached). Approximately 8,000 SF of rooftop will support large solar panel arrays to harvest energy for the use of the building. The predicted electrical production is 108,000 KWh/year. This is expected to produce close to 50% of the new building's annual energy requirments.

5. **Energy Consumption**. With few occupants, low fresh air changes and minimal windows, this building is well positioned to be very efficient in its energy consumption. The interior environmental will be controlled to maintain a relative humidity in the 50% range at all times and the interior air temperatures can vary between a low of 55 degrees in the winter and a high of 75 degrees in the summer.

2.5 *Use*

1. **Benefits of Use to Boston Context.** Boston is home to a large population residing in apartments and condominiums where space is at a premium. Those who need more space to store their belongings find it suitable to rent storage facilities. Another patron base for self-storage facilities are businesses that have merchandise to store or similarly, sales people who need to store samples and product information. The facility is designed to accommodate these many types of clients to better benefit the city it is located in. Based on industry generated data, current vacancy rate in similar self-storage facilities remain at 5% or under.

2. **Other Storage Facilities in Area**. Other Self-Storage facilities exist in the area around Newmarket. These include Planet Self-Storage, CubeSmart Self-Storage, U-Haul Moving & Self Storage at Mass Ave, Public Storage, and Fortress Self-Storage. A related building is the Greater Boston Food Bank, which is in close proximity.

3. **Access to Public**, Hours of Operation. The state-of-the art facility will provide Boston residents with normal business hour access to their storage units. The fully automated facility will be an inviting and trusted environment. It is planned that the building would be staffed from 9am to 5:30PM Monday through Friday and Saturday from 9am to 4pm. Additionally, the facility will offer pick-up and drop-off services to those who are unable to bring their belongings to the location.

4. **Zoning Code Regulating Use**. Self-Storage is a "conditional" use in the Newmarket district requiring a special permit. The building otherwise conforms to all dimensional criteria. As mentioned above, parking is subject to Article 80 review. No other relief is being requested. Permit for signage will be sought separately.

2.6 *Building Characterisitcs*

1. **Program**. (See Table 1-4) The program proposed is mainly storage space consisting of individual self-storage units. There is also a portion retail space on the ground level to provide retail packing supplies. The accessory business area is provided as an amenity for use by the tenants of the storage facility.

Table 2-1 Building Program Table

Use	Net Square Footage	Use Compliance
Storage	± 81,000-SF	Complies – Conditional Use
Accessory Retail	± 280-SF	Complies
Accessory Business Office	± 1,020-SF	Complies
Total	82,300-SF	Requires Conditional Use Permit

2. **Building Structure**. The building typology requires a unique building construction to accommodate individual storage units. There is little need for windows around the perimeter because most storage units are along the perimeter with corridors toward the interior. The partitions for the storage units are non-structural and can be arranged for the optimal unit layout. The floor-to-floor heights are purposely tall to accommodate future storage needs based on market demand.

3. **Massing**. The proposed high-rise project is a significant contribution to the existing low rise structures around it. It provides a compelling focus to the area as viewed from the highway and from adjoining neighborhoods. The integration of rooftop solar panels, the massing and colored insulated metal panels all have been carefully considered to create a dynamic, yet balanced, sculptural presence and is a strong statement about the commitment of the owner and the city to develop a gateway structure approaching Boston from the south that utilizes alternative sources of energy. (See Figure 2.13-2.17)

The footprint of the proposed building is largely the result of site conditions. The building is located on the site between the existing Red Dog Pet Resort and the adjacent lot occupied by the MBTA Police Station. The area between the two buildings is approximate 70 feet wide. Between the two buildings exists the Red Dog's parking lot which is to be maintained. The restriction of the two buildings and the need for parking requires the massing of the proposed building to be a long rectangle in shape lifted above the ground for vehicular circulation to continue below. The neighboring MBTA building has a similar raised structure with circulation below.

The Red Dog Resort is approximately 25 feet high and the MBTA Police Station's height is approximately 30 feet. The proposed rectangular massing of Boston Self Storage Facility is 127 feet. At this height the proposed building is taller than the immediate context but in a wider scope of the area the height is comparable to other structures. The South Bay House of Corrections located to the South of the Mass Ave Connector is at least 100 feet as are buildings on the Boston University Medical School.

The overall massing of the proposed building is broken down into three primary shapes, a central rectangular box flanked by two smaller bay projections on the east and west sides. These smaller volumes help to break down the scale of the building and set up regions on each facade that are further delineated with material selections.

The massing is lifted from the ground on braced columns primarily to allow parking and site circulation. It also serves to provide relief to the existing windows of the MBTA Police station allowing light and air to be maintained. Even though the windows of the MBTA structure are located on their property line, this of course is not allowed by building code and may be a grandfathered situation.

The west facade adjacent to the Red Dog Pet overhangs the existing roof by 12'. The two shorter sides of the massing are treated uniquely. The North side facing I-93 will become an icon for travelers entering the city. This facade has proposed elements of glazing giving visual connection to the program within the building.

The South facade along Southampton Street is scaled down with elements to a more appropriate for circulation and approach. This facade is the main point of entry for clients entering the new and existing parts on site. There is a clear arch opening to the parking under the structure at a scale appropriate for a vehicular and truck access. The entrance for pedestrians has an opening at the appropriate scale with signage to cue entry.

Figure 2.13, View From I-93 Northbound

Figure 2.14, View From I-93 Southbound

Figure 2.15, View West on Southampton Street

Figure 2.16, View North on Newmarket Square Road

Figure 2.17, View East on Southampton Street

4. **Height** (code, restrictions, necessity of height for development): There is no height restriction although there is an FAR of 2.0. The new structure plus the existing building will be under the FAR of 2.0. The proposed building is approximately 83,300 GFA and the existing structure is approximately 41,327 GFA and together this is below the threshold for development impact project designation. The project will be subject to a Large Project Review.

5. **Building Materials**. The building materials were chosen with consideration for environmental impact as well as visual aesthetics. One of the main materials for the facade is in intergrated insulated metal panel. The decrease in total building weight translates to less steel in the primary structure. The design of metal panel system is created to be long lasting and durable to withstand location impacts. The color and geometry of the metal panel was designed to transform large areas of facade and create visual interest. The scale of the design can be received by viewers near the building or from afar.

6. **Legibility of building function**. The proposed design will invigorate the area with an image of energy and modern industrial design. The portions of glass on the facade reveal storage unit doors to articulate the building use which can be seen from a far distance.

2.7 *Larger Urban Context*

1. **What the Building Means for Newmarket** (iconic, way finding landmark building). The city of Boston and the region of Newmarket can benefit from the iconic design of the proposed building. A building such as this serves to define a city entrance and make a statement about its character and ambitions. The effect can give residents a building to be proud of that is unique in design and symbolic values. The values that exist in the city and the time period focused on reducing environmental impacts and designing for a better future.

2. **Height Analysis of Buildings Around Site**. The public storage building to the east of the site is approximately 50-60 feet and abuts I-93 closely. The South Bay House of Corrections to the South of the Mass Ave Connector reaches a height approximately 100 feet. Boston University Medical School has multiple tall buildings on their campus including the parking garage adjacent to the Mass Ave Connector is approximately 100 feet tall.

3. **Impact on Skyline**. Many studies were done during design phase to understand the impact of the proposed storage building on the Boston skyline. The approach used was to take views from major thoroughfares entering and exiting Boston and place the proposed

structure to understand its presence. When leaving Boston, traveling south on I-93 the structure can be seen in the distance among the taller buildings along the Mass Ave connector. When entering Boston driving north on I-93 the building is generally out of view due to over passes and blocked largely by the existing public storage building at the edge of 93. (See Building Design – Chapter 3)

4. **Future Changes in Fairmount Line.** The Fairmont line of the MBTA Commuter Rail in Boston stops at Newmarket Station in close proximity to 274 Southampton Street Site. The plan being discussed by the city is to make the commuter rail into a rapid transit line running more frequently between Fairmount and South Station. This change would significantly increase the access to Boston and create economic growth along the Fairmount Corridor. This would positively impact the businesses at stops along the route.

5. **Impacts of Construction**. A Construction Management Plan in compliance with the City's Construction Management Program (CMP) will be submitted to the Boston Transportation Department (BTD) once final plans are developed and the construction schedule is determined, a draft version is submitted with this application. The CMP will include detailed information on construction activities, specific construction mitigation measures, and construction materials, access, and staging area plans to minimize impacts to abutters and the local community. The construction contractor will be required to comply with the details and conditions of the approved CMP.

6. **Construction Staging / Public Safety / Site Access**. Construction truck access to the Project site will be outlined in the CMP to be filed with the D in accordance with the City's transportation maintenance plan requirements. Secure fencing, signage, and covered walkways may be employed to ensure the safety and efficiency of all pedestrian and vehicular traffic flows. The Red Dog Pet Resort will remain open during construction and signage will be provided to ensure access to the building. Sidewalk areas and walkways near construction activities will be well marked to protect pedestrians and ensure their safety. When necessary, police details will be provided to facilitate traffic flow. Construction procedures will be designed to meet all OSHA safety standards for specific site construction activities. Brief Construction Managment Narrative provided in Chapter 7.

7. **Timeline of Development and Construction.** Construction of the Project is estimated to last approximately ten months. The City of Boston allows construction work from 7:00 AM to 6:00 PM Monday through Friday. Construction outside of those hours requires a permit. Typical construction hours for the Project will be in compliance with the City's regulations with no work anticipated on the weekends. In the event that weekend work is necessary, the Proponent will obtain required City approvals. The construction contractor will be responsible for coordinating construction activities during all phases of construction with City of Boston agencies in order to minimize potential scheduling and construction conflicts with other ongoing construction projects in the area. The demolition debris will be disposed of at a properly licensed solid waste disposal facility.

CHAPTER 3

BUILDING DESIGN

Including LEED Checklist, Zoning Analysis, and Accessibility Form

274 SOUTHAMPTON

BOSTON SELF-STORAGE

274 SOUTHAMPTON STREET
PROJECT NOTIFICATION FORM SUBMISSION
11 MAY 2015

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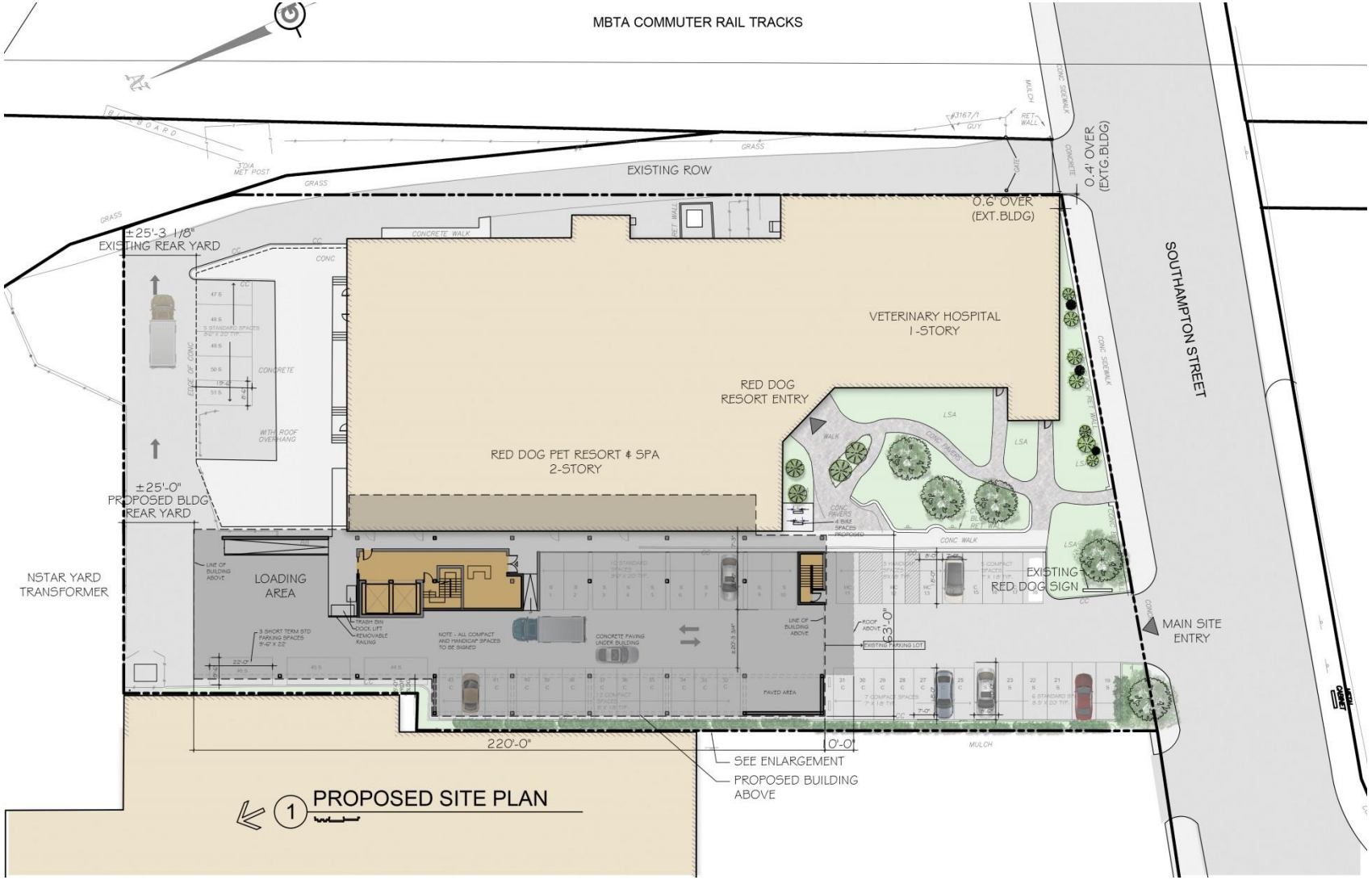

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SOUTH ELEVATION (SOUTHAMPTON ST)

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EAST ELEVATION (I-93)

NORTH ELEVATION (I-93)

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WEST ELEVATION (NEWMARKET SIDE)

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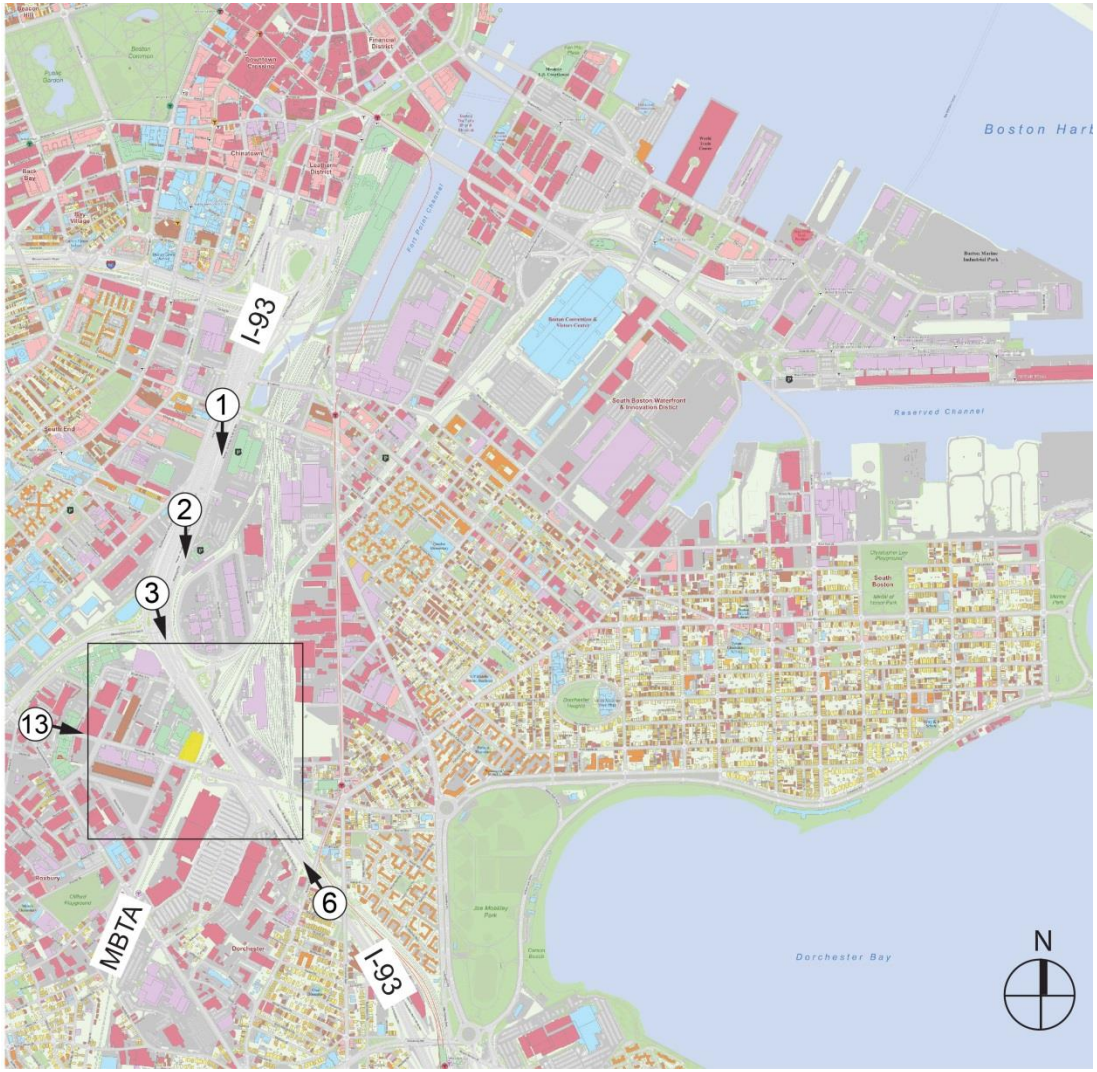

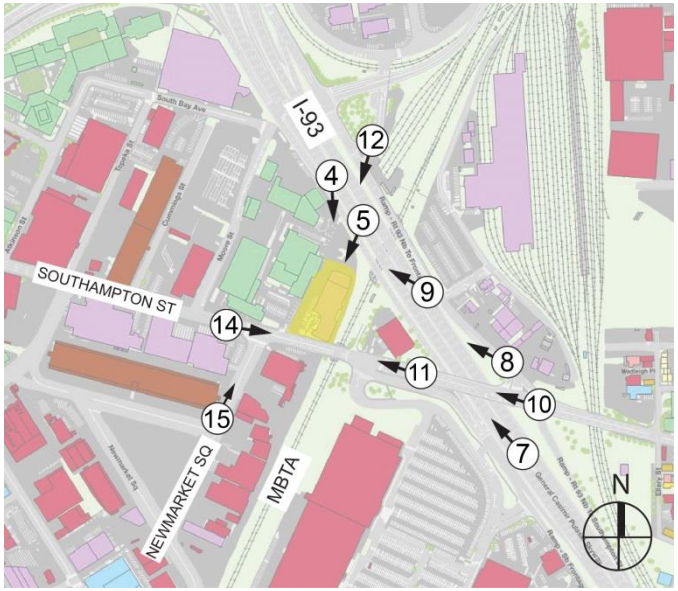

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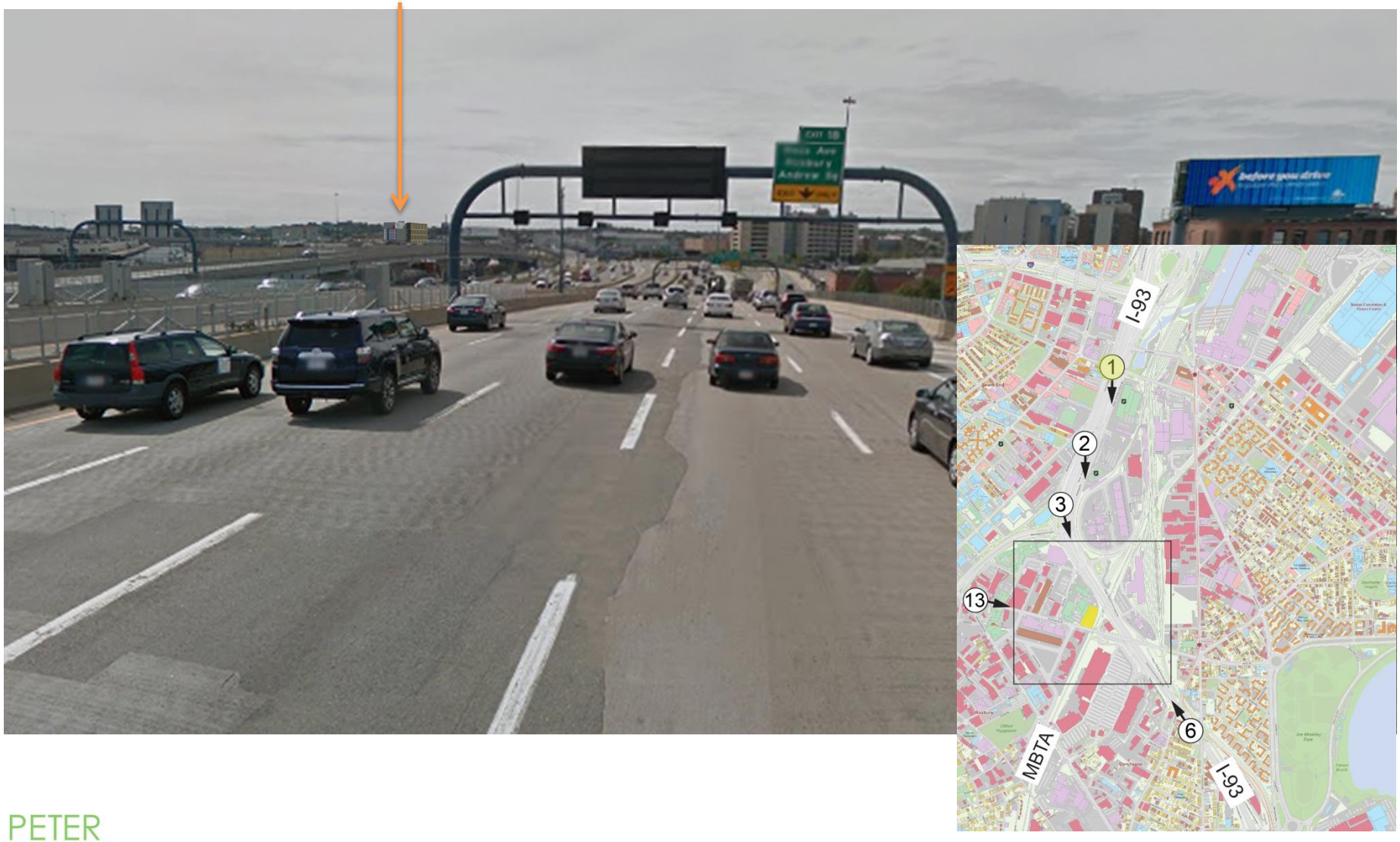
VIEW 1– SOUTHBOUND ON I-93

PROPOSED



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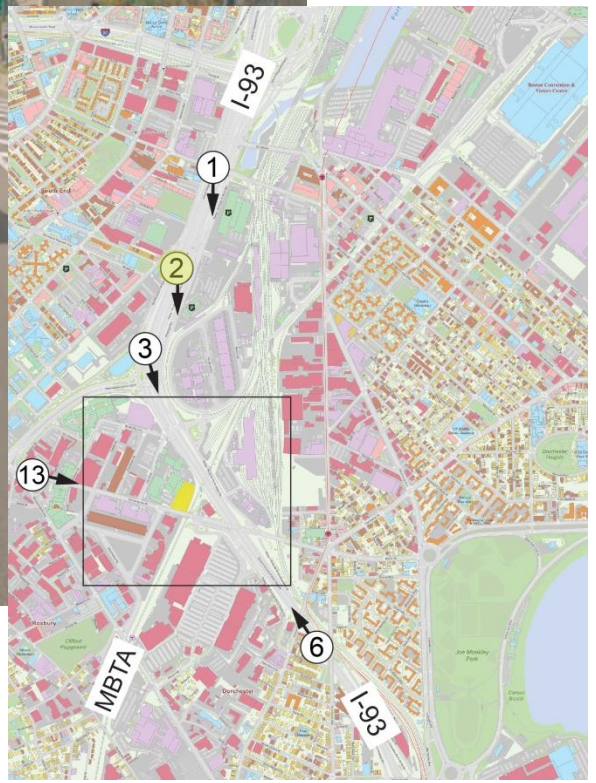
VIEW 2– SOUTHBOUND ON I-93



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VIEW 3– SOUTHBOUND ON I-93

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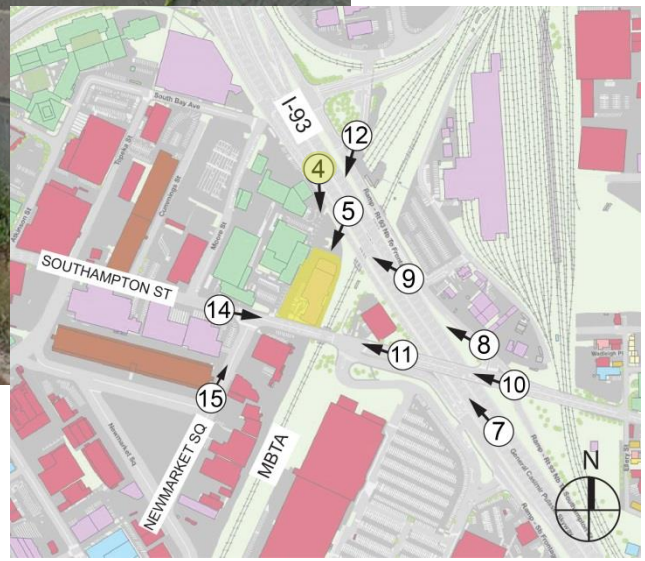
VIEW 4– SOUTHBOUND ON I-93



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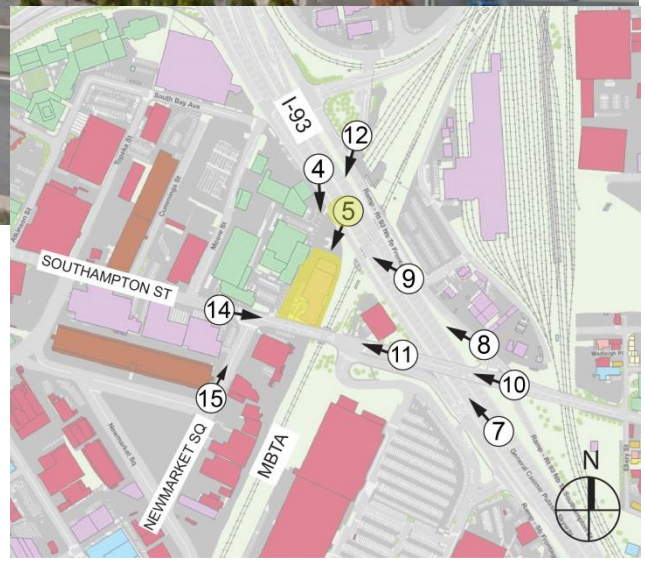
VIEW 5 – ON I-93



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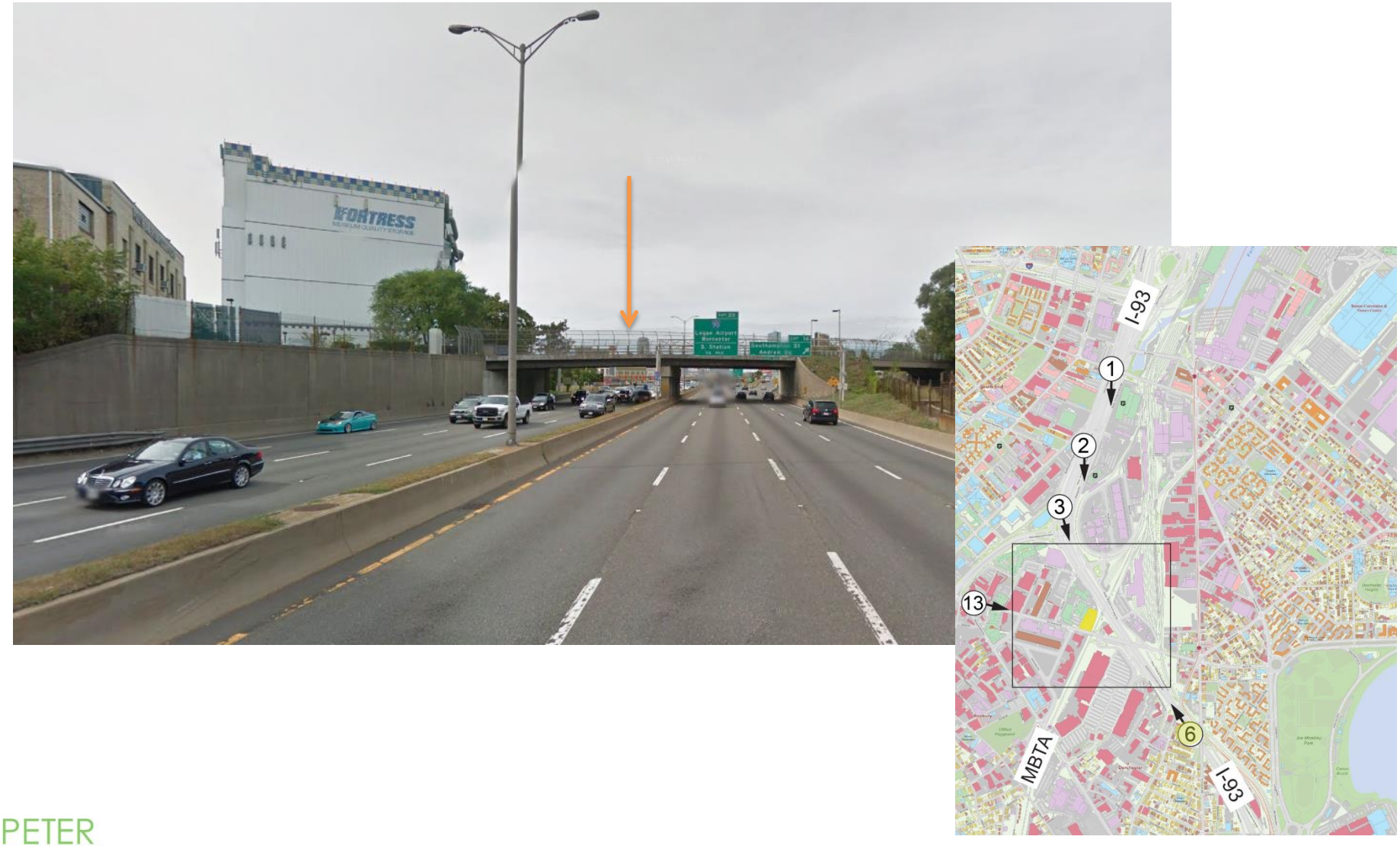
VIEW 6 – NORTHBOUND ON I-93



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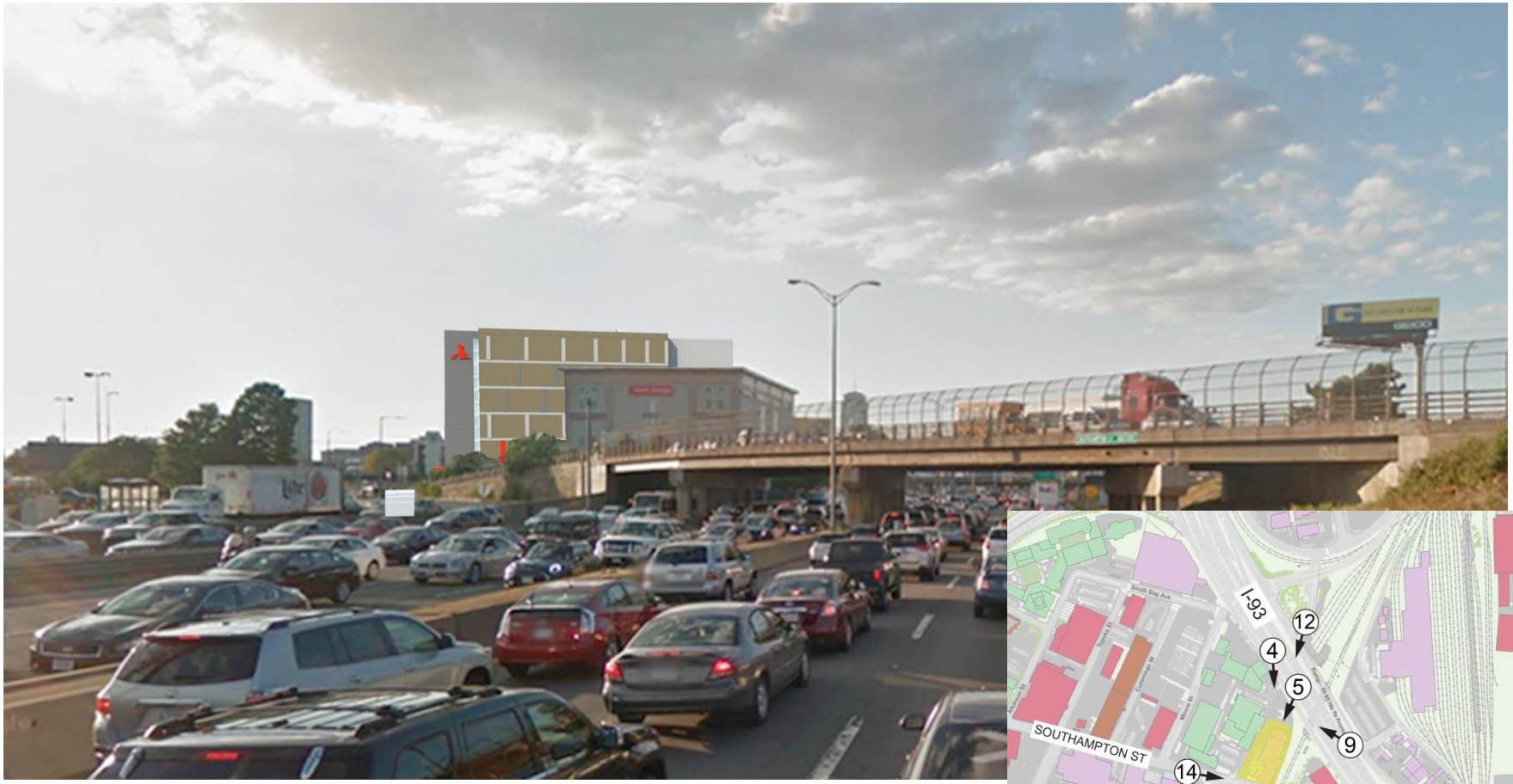
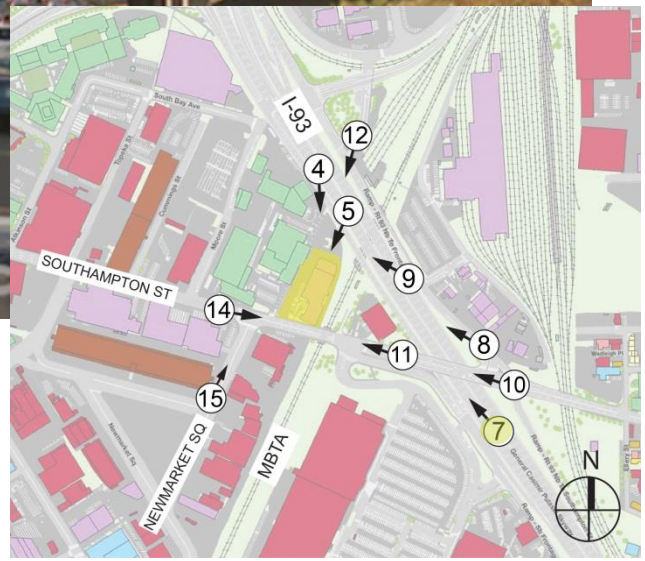
VIEW 7 – NORTHBOUND ON I-93





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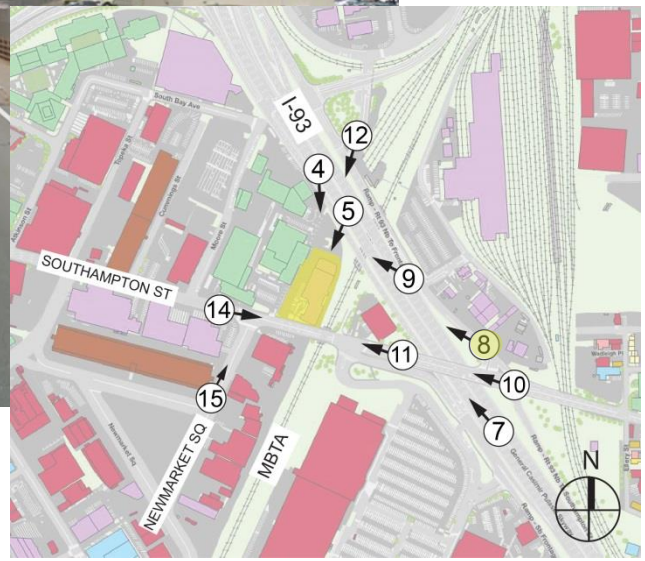
VIEW 8 – NORTHBOUND I-93 FRONTAGE ROAD



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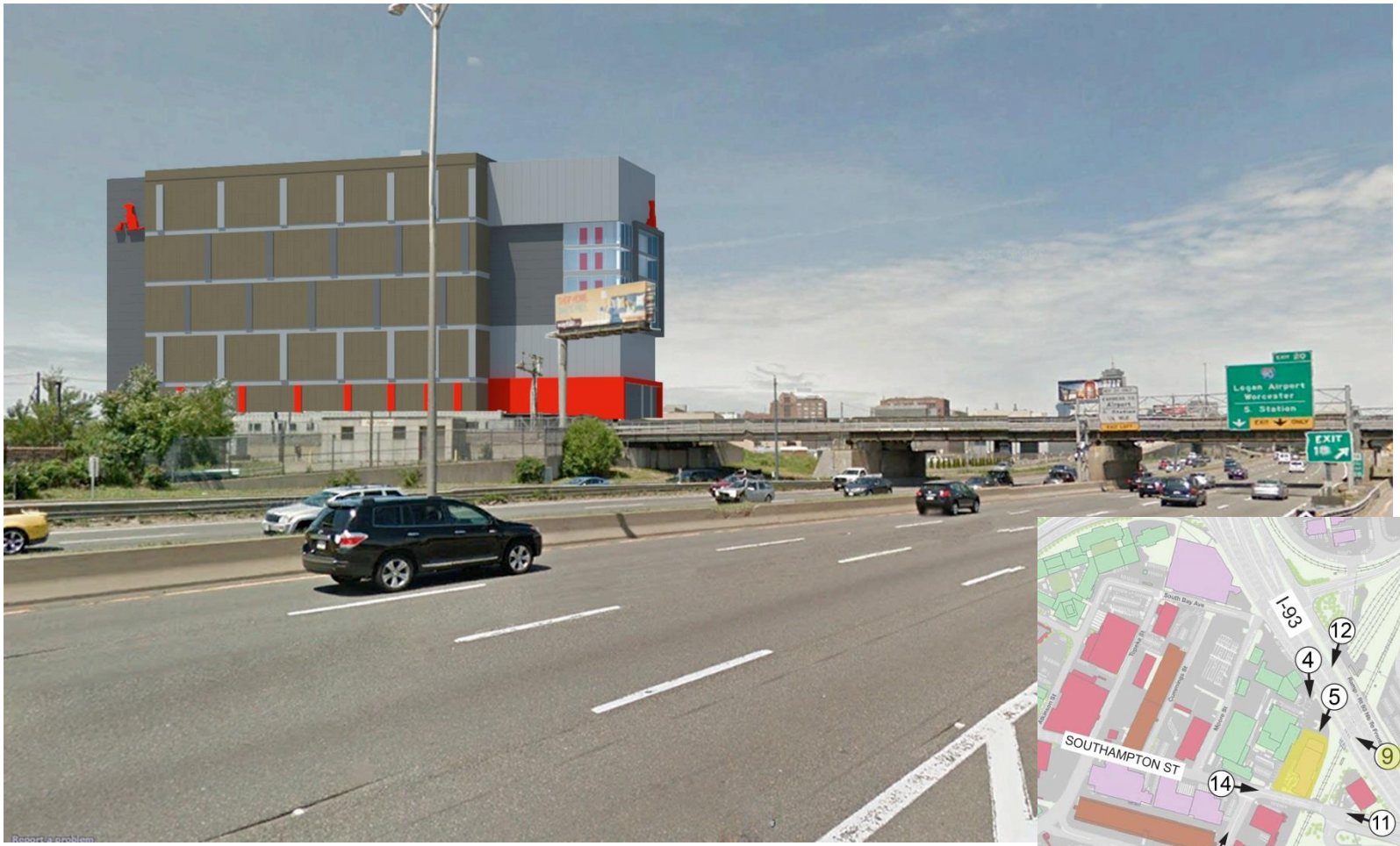
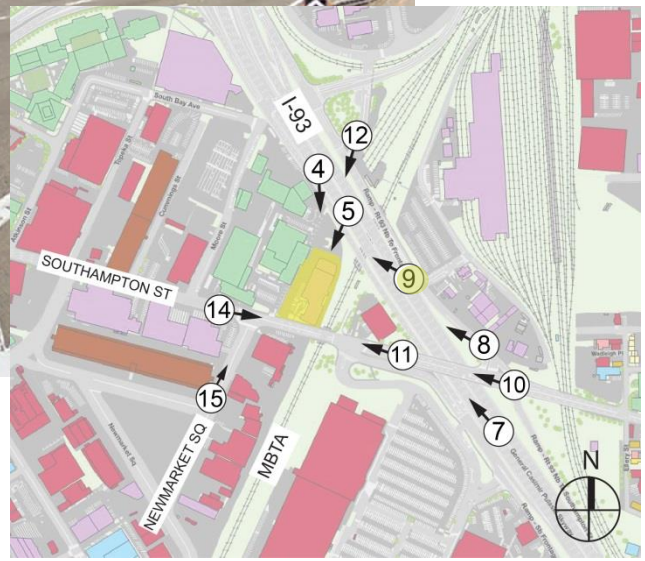
VIEW 9 – NORTHBOUND I-93 AT EXIT 18





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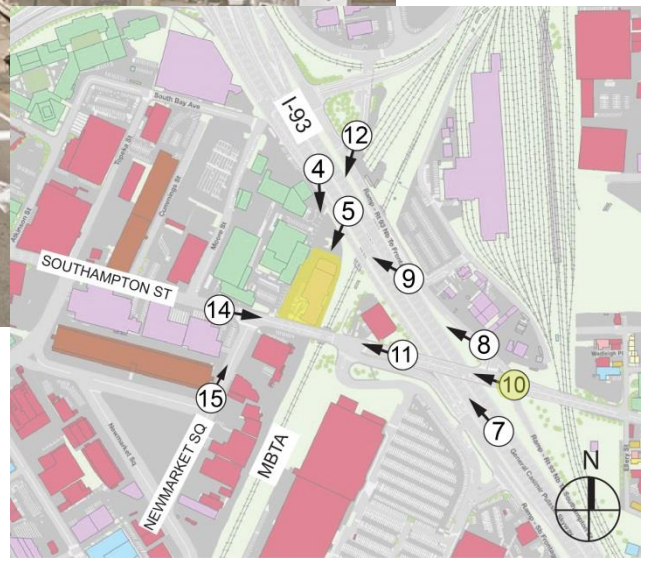
VIEW 10 – WEST ON SOUTHAMPTON SREET LEAVING ANDREWS SQ



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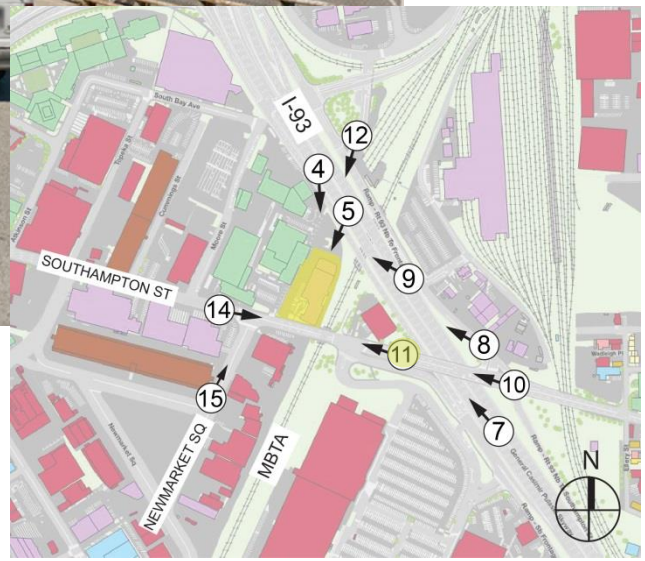
VIEW 11 – WEST ON SOUTHAMPTON STREET - OVERPASS I-93



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COMMUNITY DESIGN
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VIEW 12 – SOUTH ON ACCESS ROAD LOOKING OVER I-93

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PLANNING
COMMUNITY DESIGN
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VIEW 13 – SOUTHAMPTON STREET AT MASSACHUSETTS AVE.

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PLANNING
COMMUNITY DESIGN
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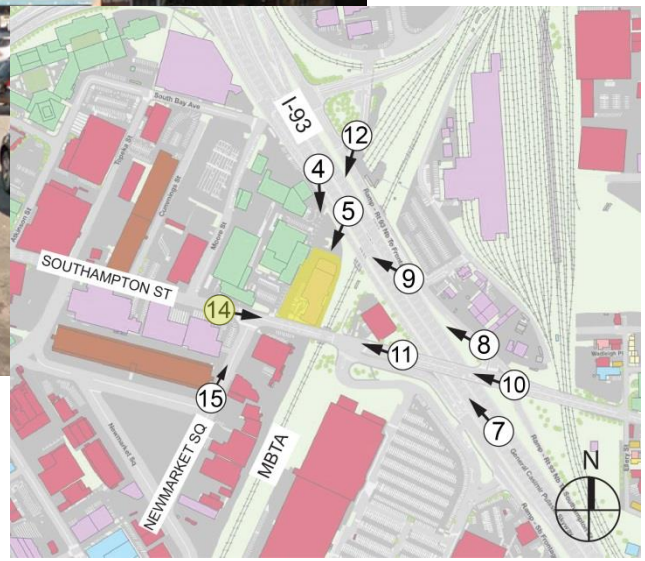
VIEW 14 – EAST ON SOUTHAMPTON STREET



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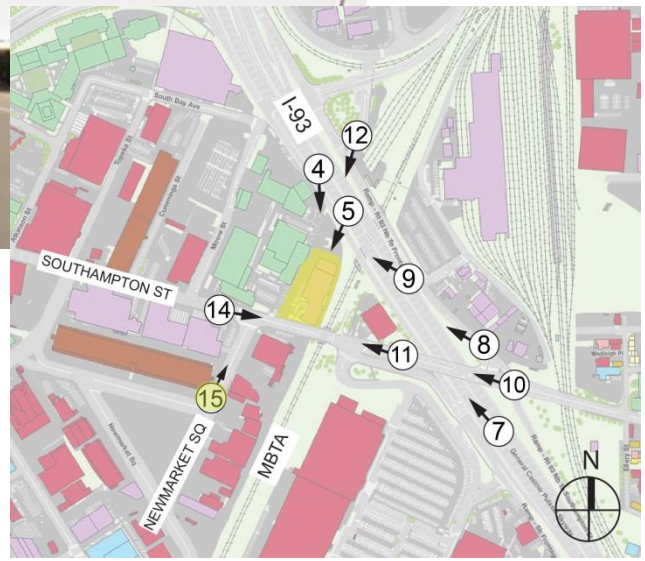
ARCHITECTURE
PLANNING
COMMUNITY DESIGN
PQARCH.COM

VIEW 15 – NORTH ON NEWMARKET SQUARE



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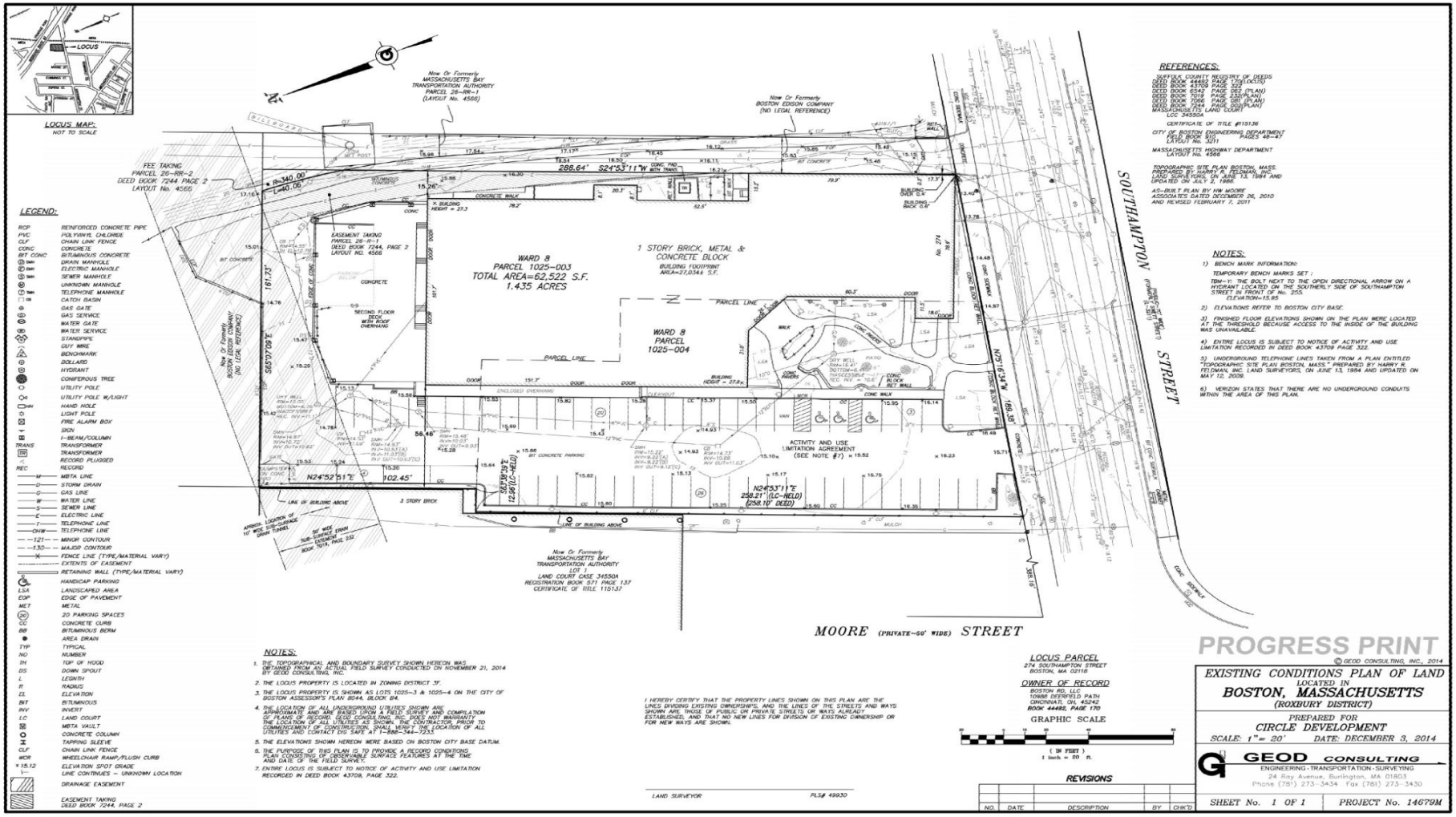
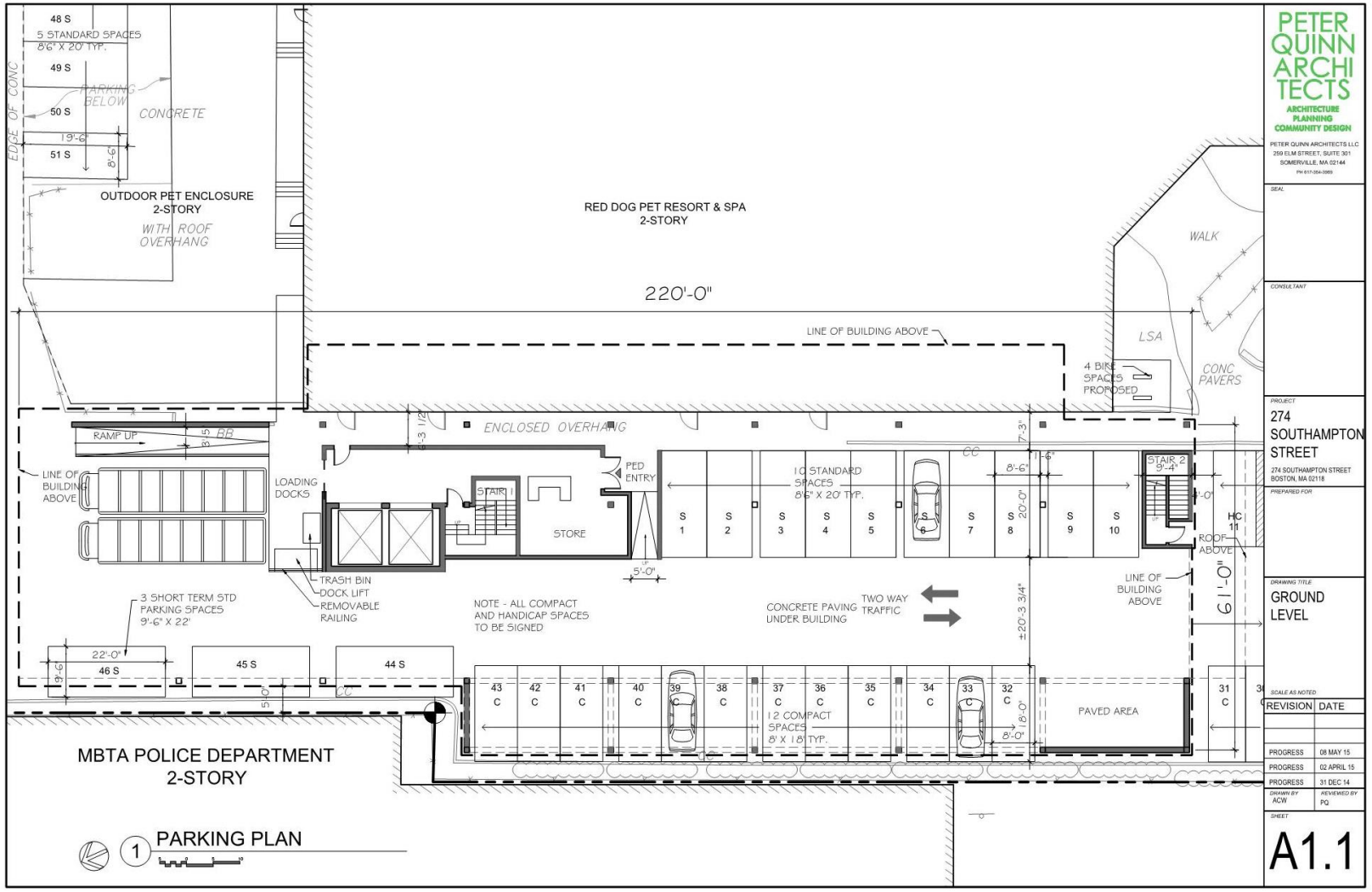
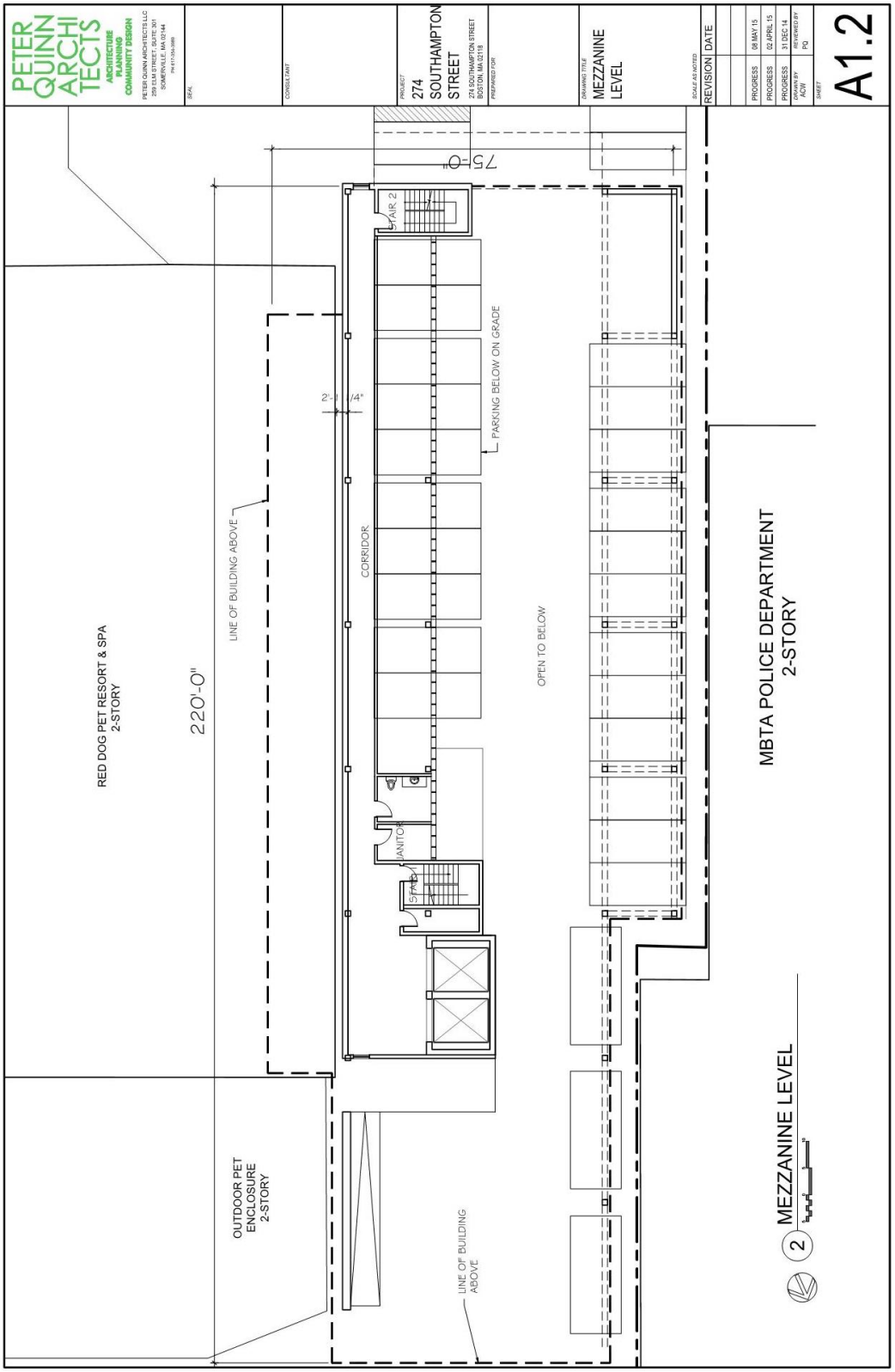
PLANNING
COMMUNITY DESIGN
PQARCH.COM

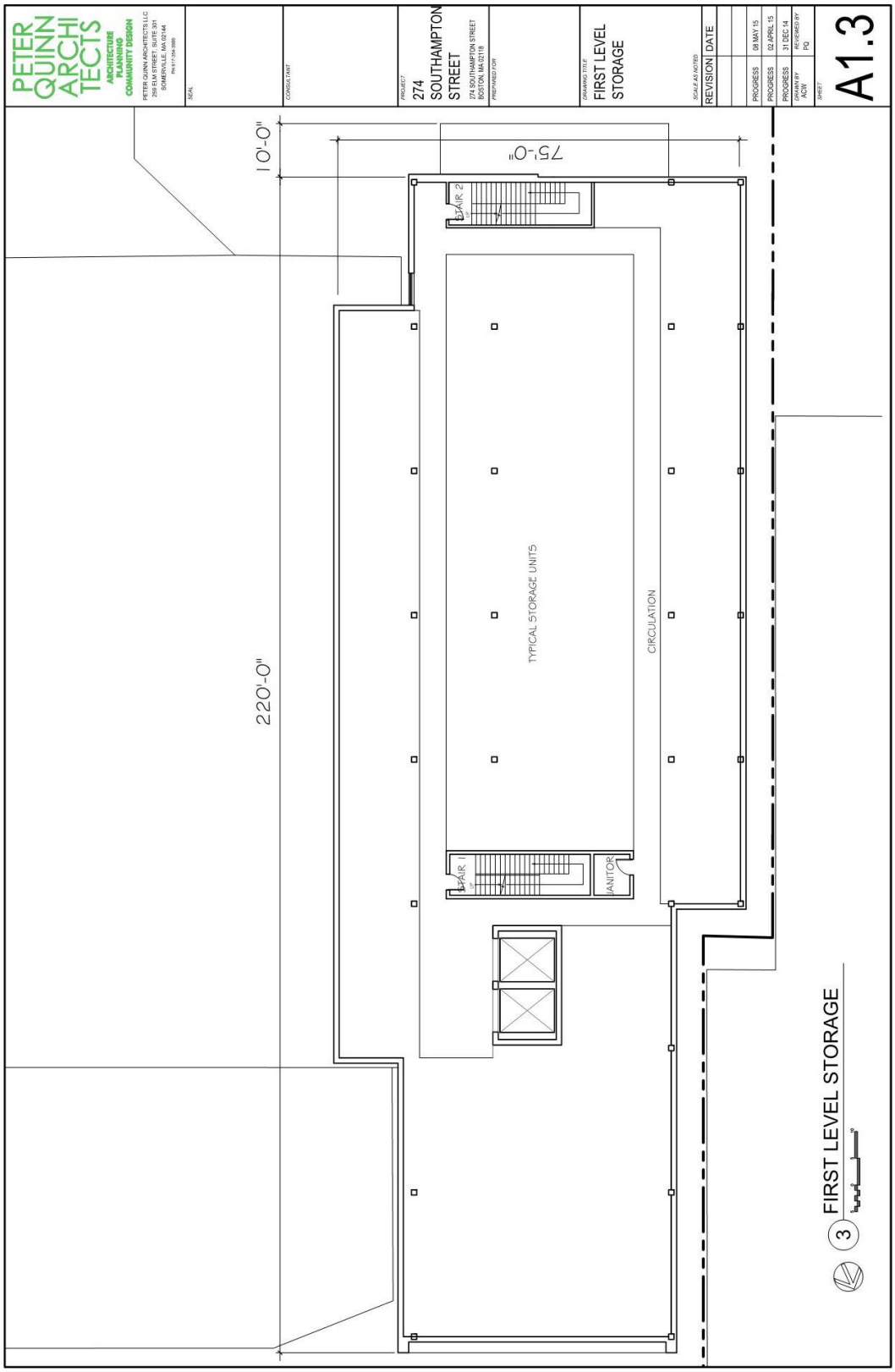

LOCUS MAP:
NOT TO SCALE
LEGEND:
REFERENCES:
NOTES:
WARD 8
PARCEL 1025-003
TOTAL AREA=62,522 S.F.
1.435 ACRES
1 STORY BRICK, METAL & CONCRETE BLOCK
BUILDING FOOTPRINT AREA=27,034± S.F.
WARD 8
PARCEL
1025-004
ACTIVITY AND USE LIMITATION AGREEMENT (SEE NOTE #7)
SOUTHAMPTON STREET
MOORE (PRIVATE-50' WIDE) STREET
PROGRESS PRINT
EXISTING CONDITIONS PLAN OF LAND
LOCATED IN
BOSTON, MASSACHUSETTS
(ROXBURY DISTRICT)
PREPARED FOR
CIRCLE DEVELOPMENT
SCALE: 1" = 20'
DATE: DECEMBER 3, 2014
GEOD CONSULTING
ENGINEERING · TRANSPORTATION · SURVEYING
24 Ray Avenue, Burlington, MA 01803
Phone (781) 273-3434 Fax (781) 273-3430
SHEET No. 1 OF 1
PROJECT No. 14679M
LOCUS PARCEL
274 SOUTHAMPTON STREET
BOSTON, MA 02118
OWNER OF RECORD
BOSTON RD, LLC
10988 DEERFIELD PATH
CINCINNATI, OH, 45242
BOOK 44492, PAGE 170
GRAPHIC SCALE
REVISIONS

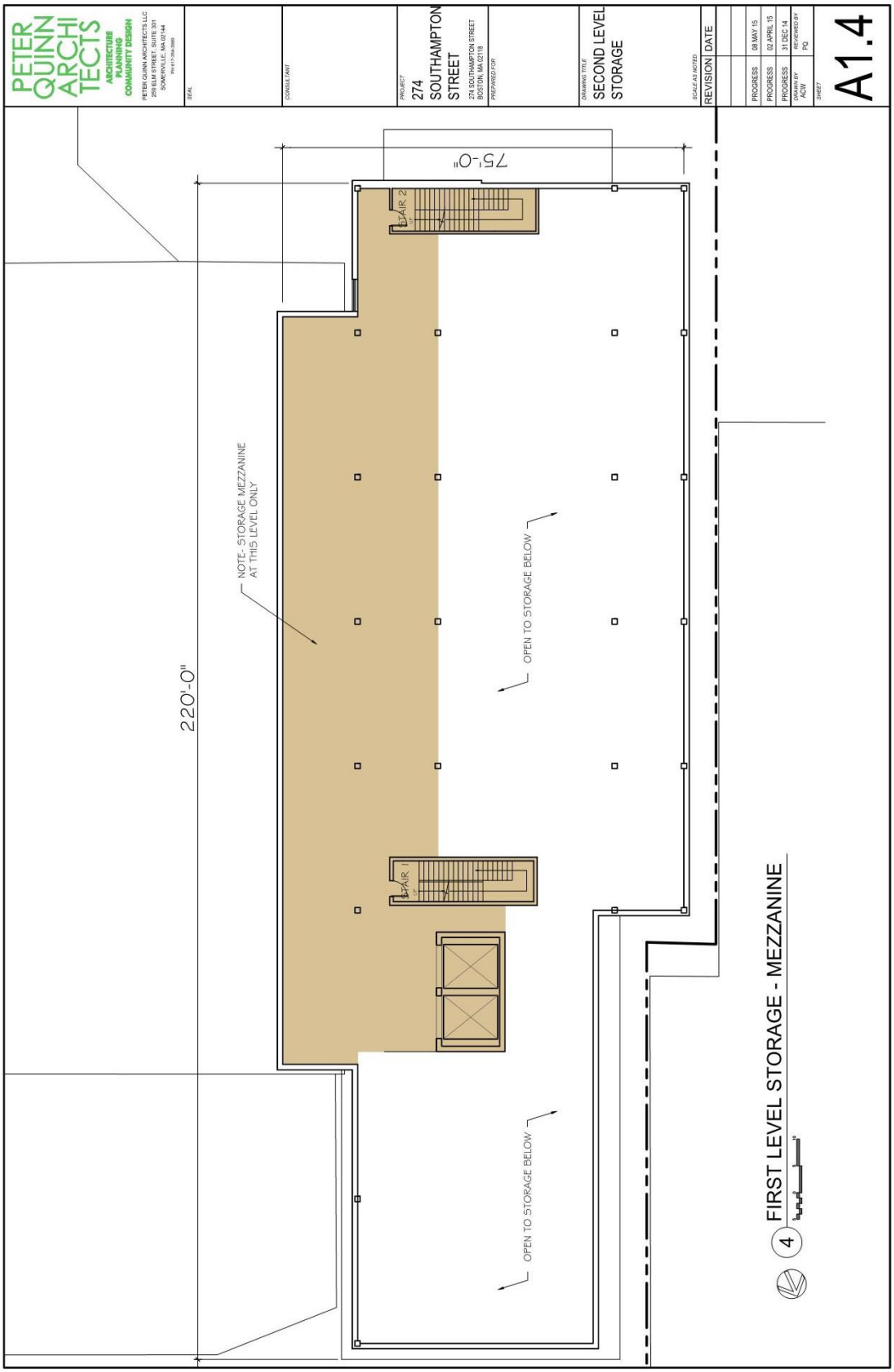
E.C. PLOT PLAN

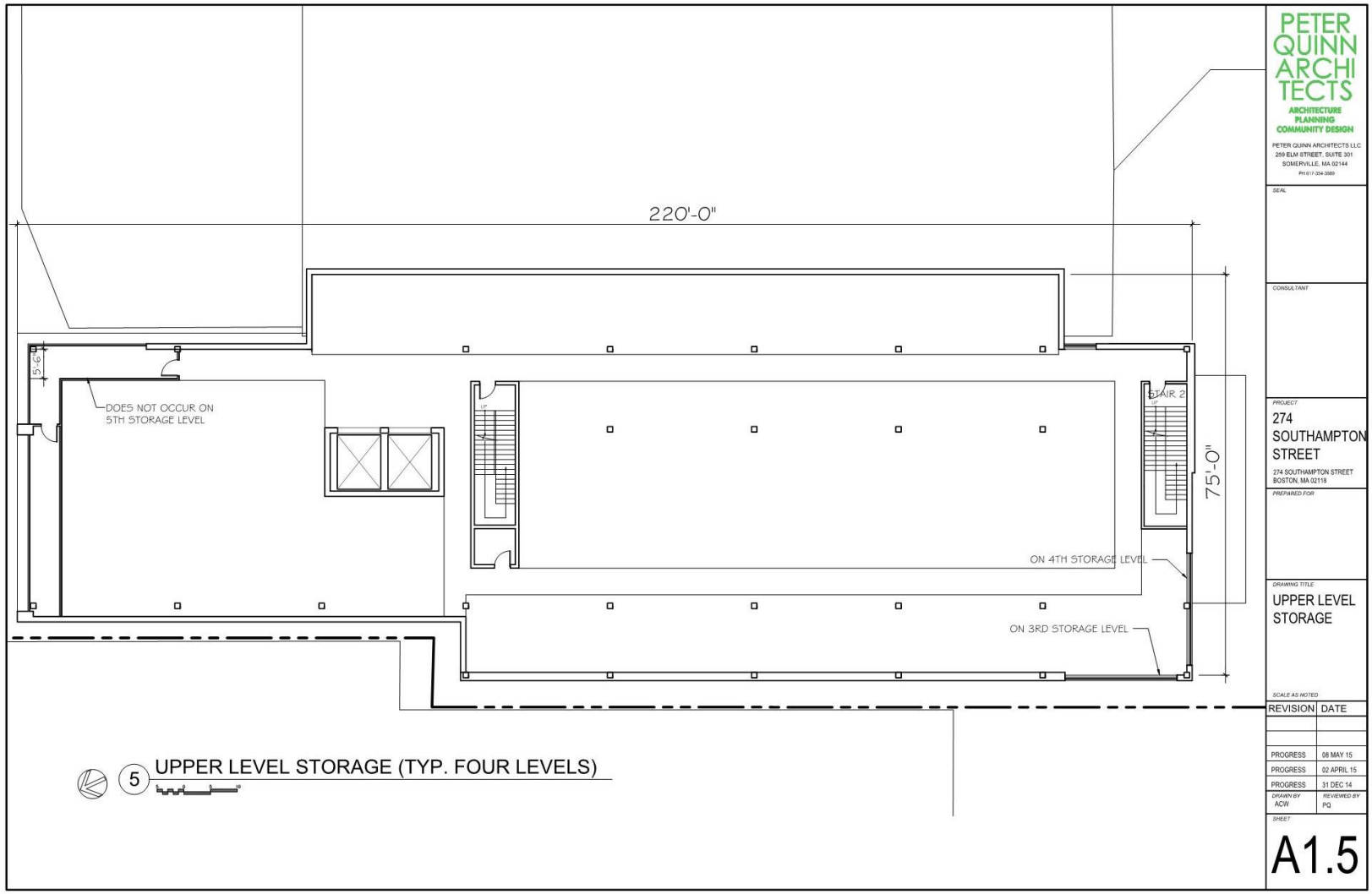


274 SOUTHAMPTON

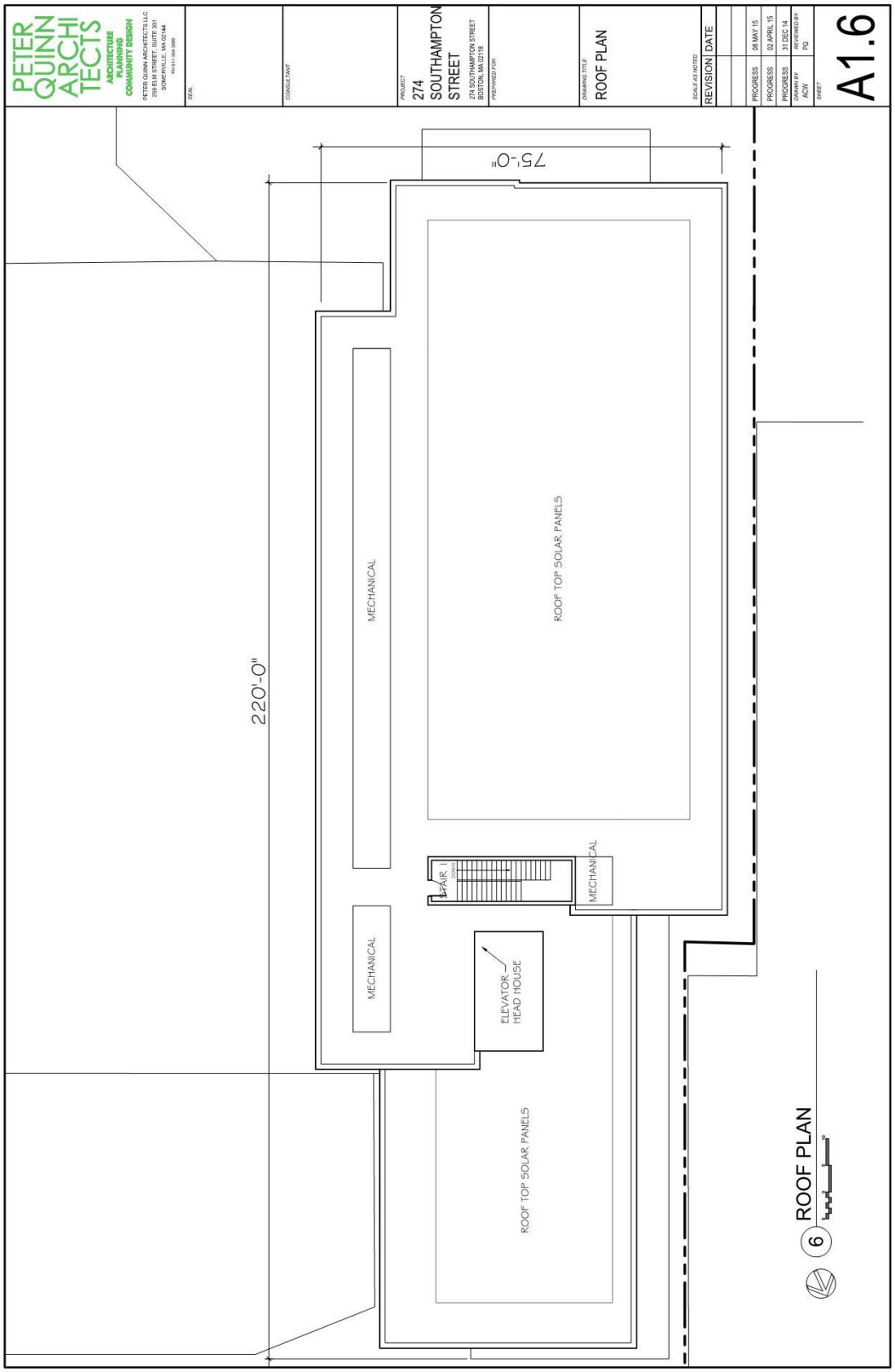

PETER QUINN ARCHITECTS
ARCHITECTURE PLANNING COMMUNITY DESIGN
PROJECT
274 SOUTHAMPTON STREET
274 SOUTHAMPTON STREET BOSTON, MA 02118
PREPARED FOR
DRAWING TITLE
MEZZANINE LEVEL
SCALE AS NOTED
REVISION DATE
PROGRESS 08 MAY 15
PROGRESS 02 APRIL 15
PROGRESS 31 DEC 14
DRAWN BY AKM
REVIEWED BY PQ
SHEET
A1.2
75'-0"
STAIR 2
PARKING BELOW ON GRADE
2'-1 1/4"
CORRIDOR
LINE OF BUILDING ABOVE
220'-0"
RED DOG PET RESORT & SPA
2-STORY
OPEN TO BELOW
JANITOR
STAIR
MBTA POLICE DEPARTMENT
2-STORY
OUTDOOR PET ENCLOSURE
2-STORY
LINE OF BUILDING ABOVE
2 MEZZANINE LEVEL

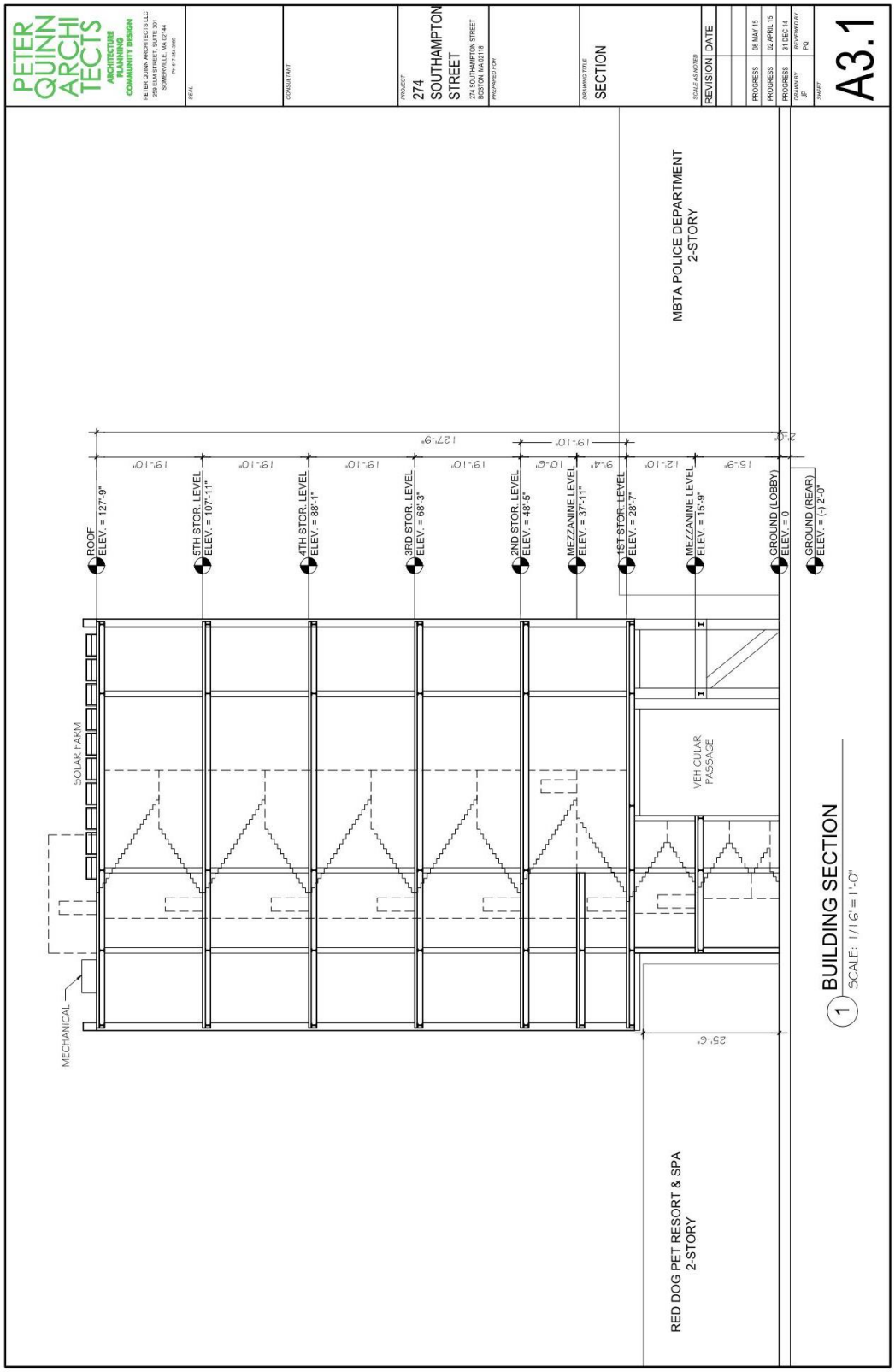

PETER QUINN ARCHITECTS
ARCHITECTURE
PLANNING
COMMUNITY DESIGN
PROJECT
274 SOUTHAMPTON STREET
274 SOUTHAMPTON STREET
BOSTON, MA 02118
PREPARED FOR
DRAWING TITLE
FIRST LEVEL STORAGE
SCALE: AS NOTED
REVISION | DATE
PROGRESS 08 MAY 15
PROGRESS 02 APRIL 15
PROGRESS 31 DEC 14
DRAWN BY PQA
REVIEWED BY PQ
SHEET
A1.3
220'-0"
10'-0"
75'-0"
TYPICAL STORAGE UNITS
CIRCULATION
STAIR 2
STAIR 1
JANITOR
3 FIRST LEVEL STORAGE


PETER QUINN ARCHITECTS
ARCHITECTURE
PLANNING
COMMUNITY DESIGN
PETER QUINN ARCHITECTS LLC
259 ELM STREET, SUITE 301
SOMERVILLE, MA 02144
SEAL
CONSULTANT
PROJECT
274 SOUTHAMPTON STREET
274 SOUTHAMPTON STREET
BOSTON, MA 02128
PREPARED FOR
DRAWING TITLE
SECOND LEVEL STORAGE
SCALE: AS NOTED
REVISION
DATE
PROGRESS
08 MAY 15
PROGRESS
02 APRIL 15
PROGRESS
31 DEC 14
DRAWN BY
ACM
REVIEWED BY
PQ
SHEET
A1.4
75'-0"
220'-0"
NOTE- STORAGE MEZZANINE AT THIS LEVEL ONLY
OPEN TO STORAGE BELOW
OPEN TO STORAGE BELOW
STAIR 1
STAIR 2
4
FIRST LEVEL STORAGE - MEZZANINE



PETER QUINN ARCHITECTS
ARCHITECTURE
PLANNING
COMMUNITY DESIGN
PQARCH.COM


PETER QUINN ARCHITECTS
ARCHITECTURE
PLANNING
COMMUNITY DESIGN
PETER QUINN ARCHITECTS LLC
259 ELM STREET, SUITE 301
SOMERVILLE, MA 02144
SEAL
CONSULTANT
PROJECT
274 SOUTHAMPTON STREET
274 SOUTHAMPTON STREET
BOSTON, MA 02118
PREPARED FOR
DRAWING TITLE
ROOF PLAN
SCALE AS NOTED
REVISION
DATE
PROGRESS 08 MAY 15
PROGRESS 02 APRIL 15
PROGRESS 31 DEC 14
DRAWN BY ACW
REVIEWED BY PQ
SHEET
A1.6
75'-0"
220'-0"
MECHANICAL
ROOF TOP SOLAR PANELS
MECHANICAL
MECHANICAL
ELEVATOR HEAD HOUSE
ROOF TOP SOLAR PANELS
6 ROOF PLAN


PETER QUINN ARCHITECTS
ARCHITECTURE
PLANNING
COMMUNITY DESIGN
PETER QUINN ARCHITECTS LLC
259 ELM STREET, SUITE 301
SOMERVILLE, MA 02144
617-764-2666
IDEAL
CONSULTANT
PROJECT
274 SOUTHAMPTON STREET
274 SOUTHAMPTON STREET
BOSTON, MA 02118
PREPARED FOR
DRAWING TITLE
SECTION
SCALE AS NOTED
REVISION
DATE
PROGRESS 08 MAY 15
PROGRESS 02 APRIL 15
PROGRESS 31 DEC '14
DRAWN BY JK
REVIEWED BY PQ
SHEET
A3.1
MBTA POLICE DEPARTMENT
2-STORY
ROOF
ELEV. = 127'-9"
5TH STOR. LEVEL
ELEV. = 107'-11"
4TH STOR. LEVEL
ELEV. = 88'-1"
3RD STOR. LEVEL
ELEV. = 68'-3"
2ND STOR. LEVEL
ELEV. = 48'-5"
MEZZANINE LEVEL
ELEV. = 37'-11"
1ST STOR. LEVEL
ELEV. = 28'-7"
MEZZANINE LEVEL
ELEV. = 15'-9"
GROUND (LOBBY)
ELEV. = 0
GROUND (REAR)
ELEV. = (-) 2'-0"
127'-9"
19'-10"
19'-10"
19'-10"
19'-10"
19'-10"
10'-6"
9'-4"
12'-10"
15'-9"
19'-10"
2'-0"
25'-6"
SOLAR FARM
MECHANICAL
VEHICULAR PASSAGE
RED DOG PET RESORT & SPA
2-STORY
1 BUILDING SECTION
SCALE: 1/16"= 1'-0"

ROOF TOP SOLAR PANELS BEHIND PARAPET

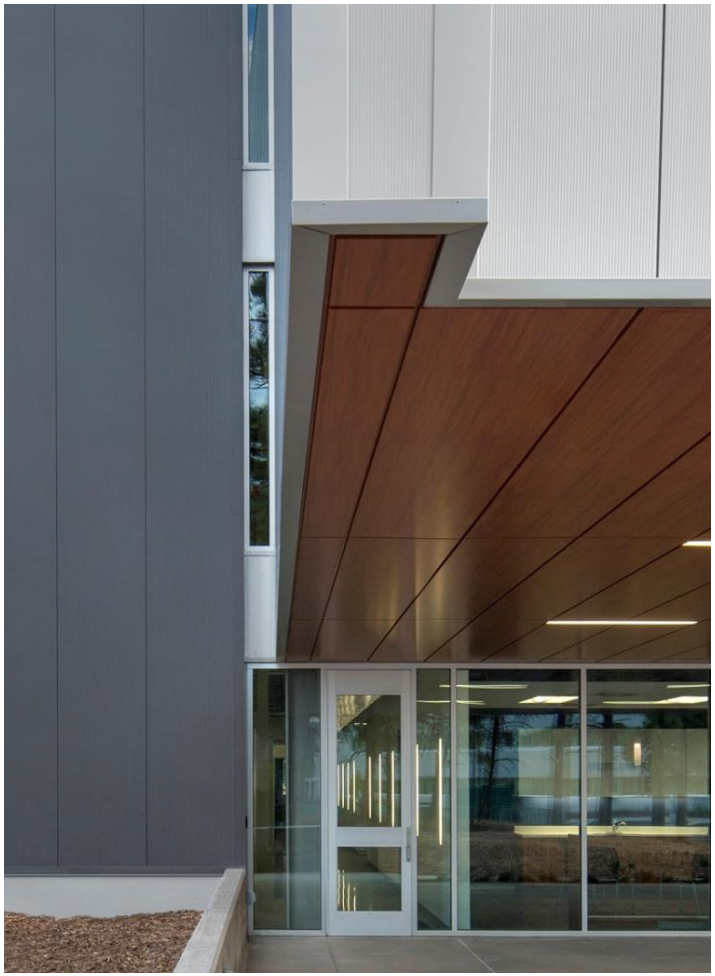
INSULATED METAL PANEL WITH SECONDARY METAL RAINSCREEN SYSTEM

MULLION GLAZING SYSTEM

INSULATED METAL PANEL SYSTEM

INSULATED TRANSLUCENT PANEL SYSTEM

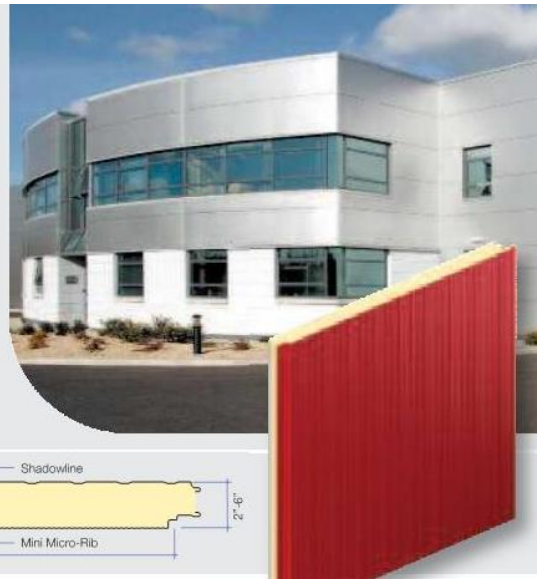
INSULATED METAL PANEL



Mini Micro-Rib insulated metal wall systems create a highly attractive solution with a fine line appearance.

Product Specification

Panel Lengths:	8'-0" to 52'-0"
Panel Joint:	Double tongue and groove interlocking rainscreen joint
Exterior Face:	24 or 22 Ga. Mini Micro-Rib profiled embossed Galvalume® or G-90 galvanized pre-painted steel
Application:	Vertical and horizontal
Cover Widths:	24" 30" 36" 42" (Standard)
Panel Thickness:	2" 2½" 3" 4" 5" 6"
R-value:	7.5 per inch
Interior Face:	26, 24 or 22 Ga. Shadowline profiled embossed Galvalume® or G-90 galvanized pre-painted steel



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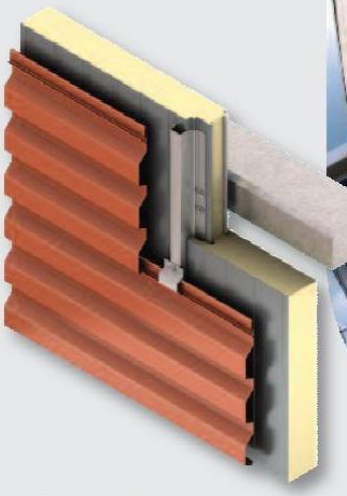
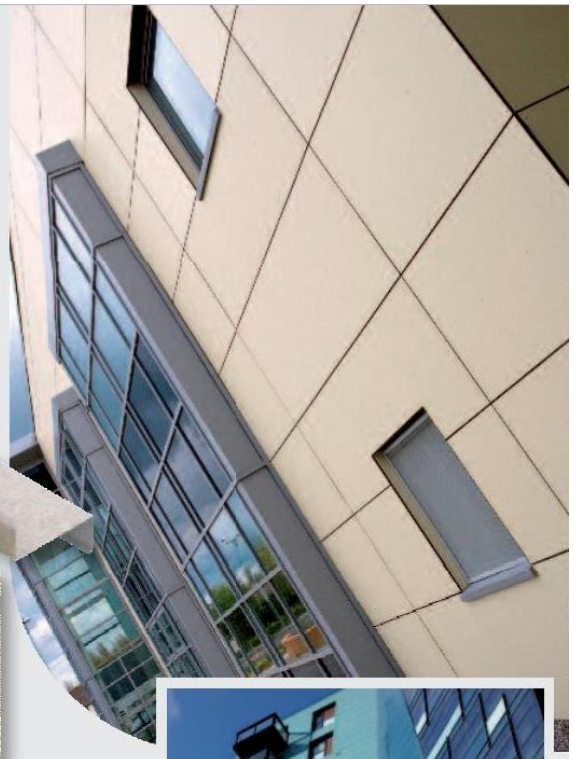
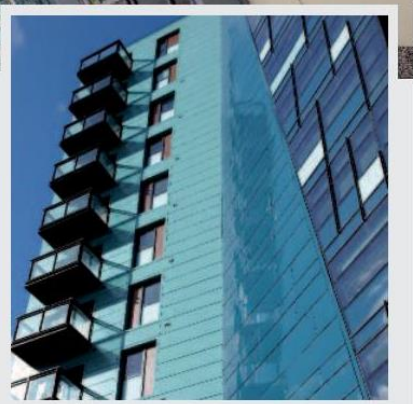
INSULATED METAL PANEL WITH SECONDARY METAL RAINSCREEN SYSTEM

Kingspan KarrierPanel™ is a cost effective universal barrier wall alternative solution to traditional multi-component wall systems. Comprising of a KS Series panel and integrated rail, Kingspan KarrierPanel™ is the ideal barrier wall to support secondary rainscreen systems such as metal, tile or brick façades.



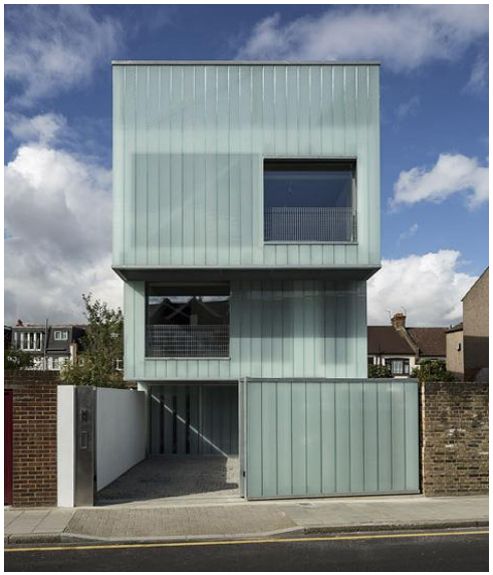


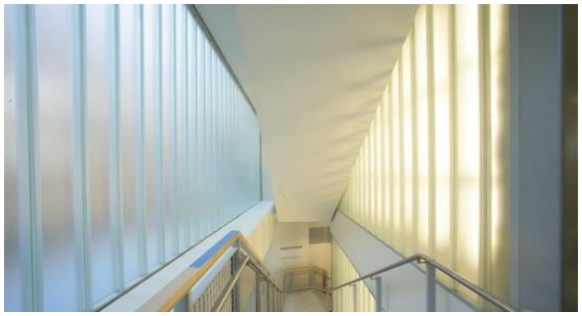


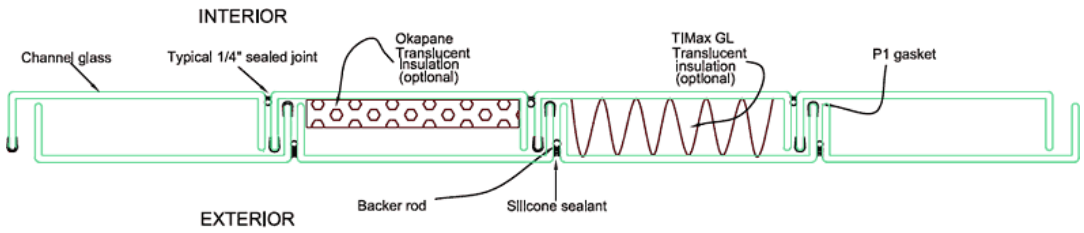
Product Specification

Cover Widths:	24"	30"	36"	42" (Standard)		
Panel Thickness:	2"	2½"	3"	4"	5"	6"
R-value:	7.5 per inch					
Panel Lengths:	6'-0" to 52'-0"					
Panel Joint:	Double tongue and groove interlocking rainscreen joint					
Reveal Choice:	⅜ reveal					
Exterior Face:	26, 24 or 22 Ga. Shadowline profiled embossed Galvalume® pre-painted steel					
Interior Face:	26, 24 or 22 Ga. Shadowline profiled embossed Galvalume® pre-painted steel					
Application:	Vertical and horizontal					
Rail:	Custom Kingspan KarrierRail™					

GLASS CHANNEL WALL – BENDHEIM WALL SYSTEM (AT BUSINESS MEZZANINE LEVEL







274 SOUTHAMPTON

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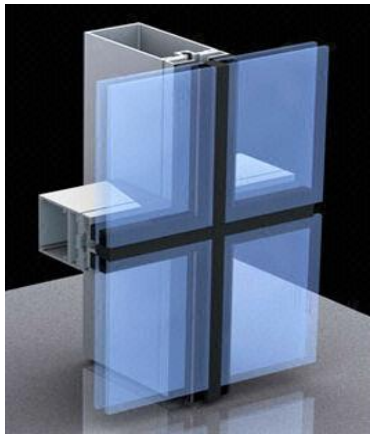
GLASS CHANNEL WALL – BENDHEIM WALL SYSTEM (AT BUSINESS MEZZANINE LEVEL

HIDDEN MULLION GLAZING SYSTEM

Kawneer 2500-PG Wall with 4ssg option.

The look means that the mullions are behind the glass plane and a black gasket is showing between the glass plates. The system can run around the exterior of the columns so you can get a really clean knife edge out of the system



CHAPTER 3.5

Building Design LEED Checklist

LEED v3 for New Construction and Major Renovations
Project Scorecard

Project Name: Boston Self Storage
Project Address: 274 Southampton
Date of Review: December 4, 2014

General Notes

LEED Goal:	Certifiable
Bldg Area:	82,500 SF
Parking:	51 Spaces
Site Area:	62,522 SF
FTE:	8
Visitors:	Varies

TOTALS

Yes	?	No
54	34	22

Certified: 40-49 points Silver: 50-59 points Gold: 60-79 points Platinum: 80+ points

	GENERAL PROJECT DOCUMENTATION		Responsible	12/4 - Notes
Y	PI form 1	Minimum Program Requirements	Required	Owner	
Y	PI form 2	Project Summary Details	Required	Architect/TGE	
Y	PI form 3	Occupant Usage Data	Required	Architect/TGE	
Y	PI form 4	Schedule and Overview Documents	Required	Architect/MEP	

Phase	Yes	?	No	SUSTAINABLE SITES		26	Responsible	12/4 - Notes
C	Y			Prereq 1	**Construction Activity Pollution Prevention**	Required	Civil	
D	1			Credit 1	**Site Selection**	1	TGE	
D	5			Credit 2	**Development Density and Community Connectivity**	5	TGE	
D			1	Credit 3	**Brownfield Redevelopment**	1	-	
D	6			Credit 4.1	**Alternative Transportation - Public Transportation Access**	6	TGE	Andrew Sq Station
D		1		Credit 4.2	**Alternative Transportation - Bicycle Storage and Changing Rooms**	1	TGE/Architect	Possible Access to Shower in Red Dog
D		3		Credit 4.3	**Alternative Transportation - Low-Emitting and Fuel-Efficient Vehicles**	3	Architect	Requires "preferred" spaces
D	2			Credit 4.4	**Alternative Transportation - Parking Capacity**	2	Architect/Owner	
C			1	Credit 5.1	**Site Development - Protect or Restore Habitat**	1	LA/Civil	
D			1	Credit 5.2	**Site Development - Maximize Open Space**	1	LA	
D			1	Credit 6.1	**Stormwater Design - Quantity Control**	1	Civil	
D			1	Credit 6.2	**Stormwater Design - Quality Control**	1	Civil	
C	1			Credit 7.1	**Heat Island Effect - Nonroof**	1	Civil/LA	more than 50% of parking under building
D	1			Credit 7.2	**Heat Island Effect - Roof**	1	Architect	
D			1	Credit 8	**Light Pollution Reduction**	1	-	

	Yes	?	No	WATER EFFICIENCY		10	Responsible	12/4 - Notes
D	Y			Prereq 1	**Water Use Reduction - 20% minimum**	Required	MEP/TGE	
D			4	Credit 1	**Water Efficient Landscaping - Reduce by 50%, No Irrigation**	4	Civil/LA	not enough landscaped area
D			2	Credit 2	**Innovative Wastewater Technologies**	2	MEP/Architect	
D	4			Credit 3	**Water Use Reduction - 30% (2), 35% (3), 40% (4)**	4	MEP/TGE	

	Yes	?	No	ENERGY & ATMOSPHERE		35	Responsible	12/4 - Notes
C	Y			Prereq 1	**Fundamental Commissioning of Building Energy Systems**	Required	CxA	
D	Y			Prereq 2	**Minimum Energy Performance**	Required	MEP/Architect	
D	Y			Prereq 3	**Fundamental Refrigerant Management**	Required	MEP	
D	10	9		Credit 1	**Optimize Energy Performance**	19	MEP/Architect	based on 30% better than code
D	2	5		Credit 2	**On-Site Renewable Energy**	7	TGE	pending study
C		2		Credit 3	**Enhanced Commissioning**	2	CxA	
D	2			Credit 4	**Enhanced Refrigerant Management**	2	MEP	
C	1	2		Credit 5	**Measurement and Verification**	3	MEP/Owner	
C		2		Credit 6	**Green Power**	2	Owner	

Phase	Yes	?	No					
	4	3	7	**MATERIALS & RESOURCES**		14	Responsible	12/4 - Notes
D	Y			Prereq 1	**Storage and Collection of Recyclables**	Required	Architect	
C			3	Credit 1.1	**Building Reuse - Maintain Existing Walls, Floors & Roof**	3	-	
C			1	Credit 1.2	**Building Reuse - Maintain Interior Non-Structural Elements**	1	-	
C	2			Credit 2	**Construction Waste Management - Divert 50% (1), 75% (2)**	2	CA	
C			2	Credit 3	**Materials Reuse**	2	-	
C	1			Credit 4.1	**Recycled Content - 10%**	1	CA	Based on typical project
		1		Credit 4.2	**Recycled Content - 20%**	1	CA	
C	1			Credit 5.1	**Regional Materials - 10%**	1	CA	
		1		Credit 5.2	**Regional Materials - 20%**	1	CA	
C			1	Credit 6	**Rapidly Renewable Materials**	1	-	
C		1		Credit 7	**Certified Wood**	1	CA	limited wood on proect

Phase	Yes	?	No					
	8	5	2	**INDOOR ENVIROMENTAL QUALITY**		15	Responsible	12/4 - Notes
D	Y			Prereq 1	**Minimum Indoor Air Quality Performance**	Required	MEP	
D	Y			Prereq 2	**Environmental Tobacco Smoke (ETS) Control**	Required	Owner/Architect	
D		1		Credit 1	**Outdoor Air Delivery Monitoring**	1	MEP	
D			1	Credit 2	**Increased Ventilation**	1	-	
C	1			Credit 3.1	**Construction Indoor Air Quality Management Plan - During Const.**	1	CA	
C		1		Credit 3.2	**Construction Indoor Air Quality Management Plan - Before Occupancy**	1	CA	
C	1			Credit 4.1	**Low-Emitting Materials - Adhesives & Sealants**	1	CA	
C	1			Credit 4.2	**Low-Emitting Materials -Paints & Coatings**	1	CA	
C	1			Credit 4.3	**Low-Emitting Materials - Floor Systems**	1	CA	
C	1			Credit 4.4	**Low-Emitting Materials - Composite Wood**	1	CA	
D		1		Credit 5	**Indoor Chemical and Pollutant Source Control**	1	MEP/Architect	
D	1			Credit 6.1	**Controllability of Systems - Lighting**	1	MEP	
D	1			Credit 6.2	**Controllability of Systems - Thermal Comfort**	1	MEP	
D	1			Credit 7.1	**Thermal Comfort - Design**	1	MEP	
D		1		Credit 7.2	**Thermal Comfort - Verification**	1	Owner/TGE	
D			1	Credit 8.1	**Daylight and Views - Daylight - 75%**	1	Architect	
D		1		Credit 8.2	**Daylight and Views - Views 90%**	1	Architect/TGE	

Phase	Yes	?	No					
	4	2	0	**INNOVATION IN DESIGN**		6	Responsible	12/4 - Notes
C	1			Credit 1.1	**Innovation in Design: To be determined**	1	TGE	EP for Public Transit
C	1			Credit 1.2	**Innovation in Design: To be determined**	1	Whole Team	Low Mercury Lighting
C	1			Credit 1.3	**Innovation in Design: To be determined**	1	Whole Team	Green Housekeeping
		1		Credit 1.4	**Innovation in Design: To be determined**	1	Whole Team	
C		1		Credit 1.5	**Innovation in Design: To be determined**	1	Whole Team	
C	1			Credit 2	**LEED® Accredited Professional**	1	TGE	

Phase	Yes	?	No					
	3	0	1	**REGIONAL PRIORITY - [ZIP CODE]**		4	Responsible	12/4 - Notes
D	1			Credit 1.1	**Regional Priority for 02118 SSc3, SSc6.1, SSc7.1, SSc7.2, EAc2, MRc1.1**	1	-	SSc7.1
D	1			Credit 1.2	**Regional Priority for 02118 SSc3, SSc6.1, SSc7.1, SSc7.2, EAc2, MRc1.1**	1	-	
D	1			Credit 1.3	**Regional Priority for 02118 SSc3, SSc6.1, SSc7.1, SSc7.2, EAc2, MRc1.1**	1	-	
D			1	Credit 1.4	**Regional Priority for 02118 SSc3, SSc6.1, SSc7.1, SSc7.2, EAc2, MRc1.1**	1	-	

Yes	?	No		
54	34	22	**PROJECT TOTALS (Certification Estimates)**	#REF!

Certified: 40-49 points Silver: 50-59 points Gold: 60-79 points Platinum: 80+ points

CHAPTER 3.6

Building Design Zoning Analysis

274 Southampton St, Boston Self-Storage
Zoning Dimensional Table
Newmarket Industrial-Commercial Neighborhood District – Subject to Large Project Review

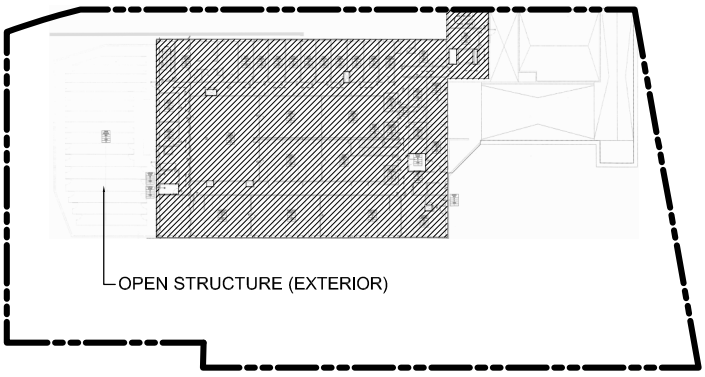
Section 80B-2.1 Within the Downtown, Large Project Review shall apply to any Proposed Project: (a) to erect a building or structure having a gross floor area of fifty thousand (50,000) or more square feet.

All dimensions are approximate, subject to field confirmation.

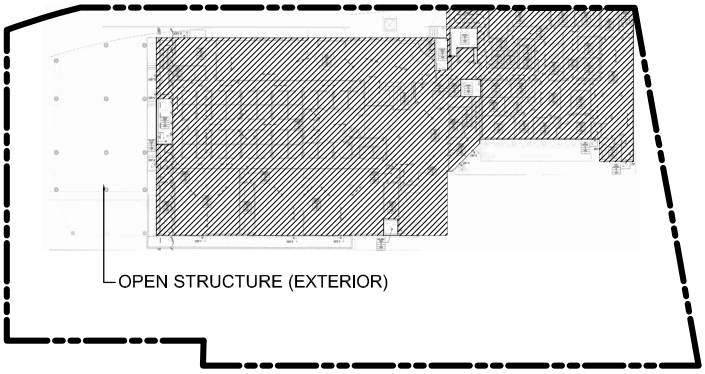
Item	Allowed/ Required	Existing Building	Proposed Building	Proposed & Existing	Compliance
Existing Uses: Services (Dog Day Care and Vet.) Accessory Retail (less than 25%)	 Allowed Allowed	 Allowed Allowed		N/A	Complies
Proposed New Uses: Warehousing (indoor): Self Storage	Conditional		Conditional	N/A	Approval Required
Lot Size	None	±62,522-SF	No Change	No Change	Complies
FAR max	2.0	0.66	1.33	1.99	Complies
Lot Width	None	±205.6'	No Change	No Change	Complies
Lot Frontage	N/A	+/- 189.38'	No Change	No Change	Complies
Gross Floor Area	±125,044-SF Max	±41,327-SF	±83,500-SF	±124,827-SF	Complies
Max Height Stories/Feet	None	2 / ±27'	6 / ±128'	6 / ±128'	Complies
Front Yard min	None	±0.6' over-South	No Change	No Change	Complies
Side Yard min	None	±56.6'-West	5.0'-West	5.0'-West	Complies
	None	±0.4' over-East	No Change	No Change	Complies
Rear Yard min	12'	±25.3'-North	±24.4'	±24.4'	Complies
Usable Open Space	None	None	No Change	No Change	Complies
Parking	Section 90-13 See Note 1:	65	51	51	Approval Required

Note 1:
SECTION 90-13 OFF STREET PARKING AND LOADING REQIREMENTS

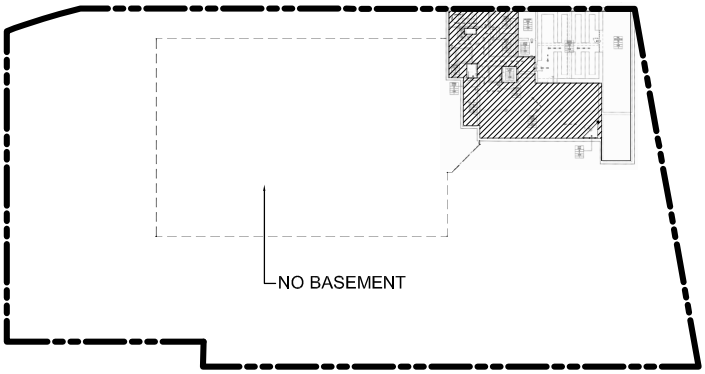
For any Proposed Project subject to or electing to comply with Large Project review, required off-street parking spaces and off-street loading facilities shall be determined through such review in accordance with the provisions of Article 80.



2ND LEVEL: 16,100-GSF



GROUND LEVEL: 21,926-GSF

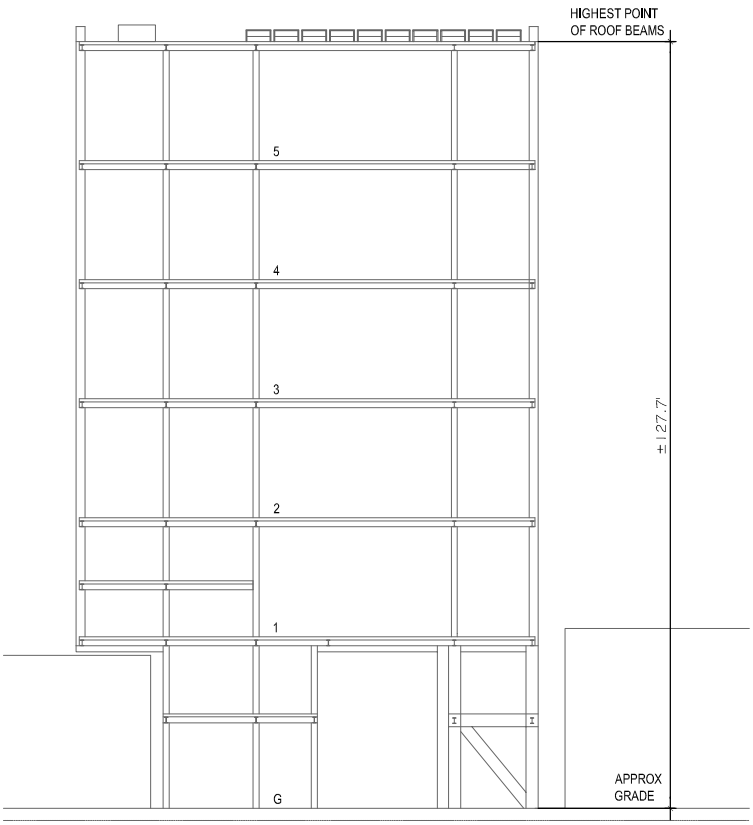


BASEMENT LEVEL: 3,301-GSF

PLAN NORTH

1 EXISTING GSF CALCULATION

SCALE: 1"=100'-0"

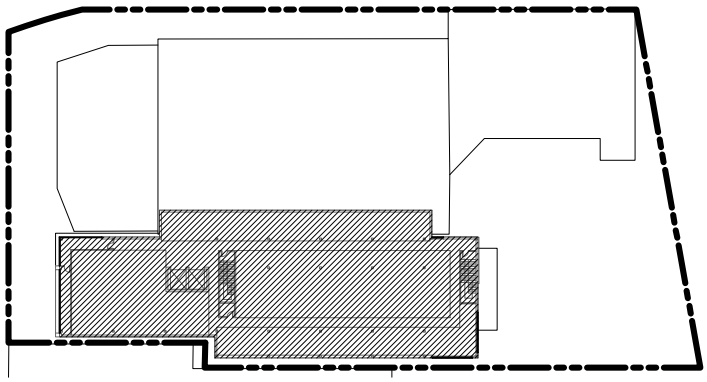


2 BUILDING HEIGHT

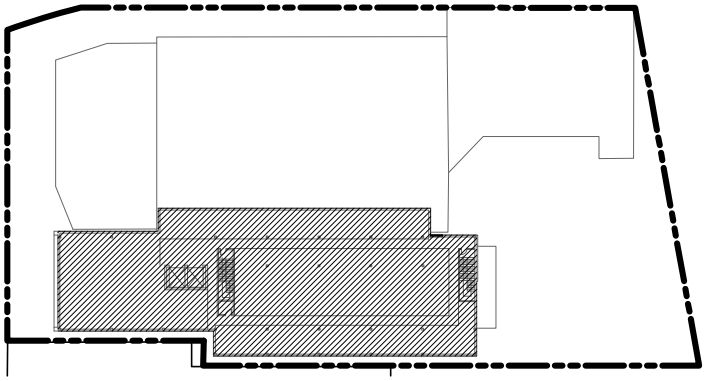
SCALE: 1/32"=1'-0"

EXISTING BUILDING GSF

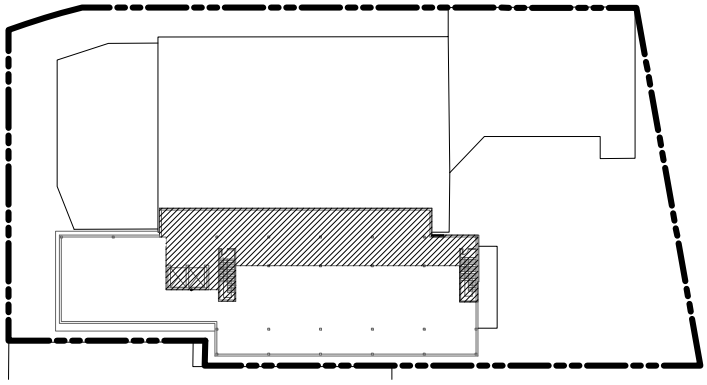
FLOOR	GSF
2ND FLOOR	16,100
GROUND FLOOR	21,926
BASEMENT FLOOR	3,301
TOTAL EXISTING BUILDING GSF=	41,327-GSF



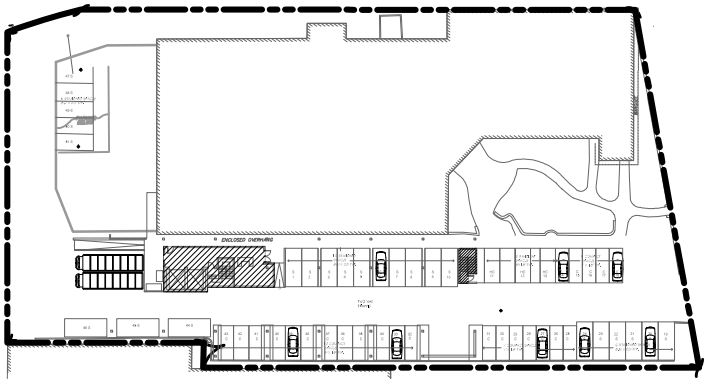
UPPER LEVEL STORAGE FLOORS: 14,690-GSF (4 LEVELS TOTAL) = 58,760-GSF



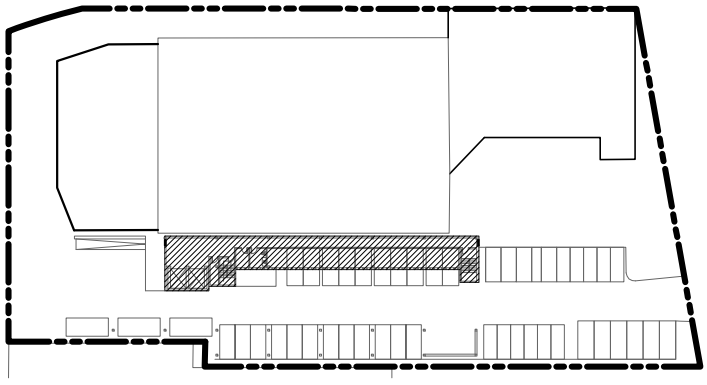
1ST LEVEL STORAGE FLOOR: 14,770-GSF



1SF LEVEL STORAGE-MEZZANINE: 5,280-GSF



GROUND LEVEL: 1,390-GSF



GROUND LEVEL-MEZZANINE: 3,300-GSF

NEW BUILDING GSF

FLOOR	GSF
UPPER LEVEL STORAGE FLOOR (X4)	58,760
1ST LEVEL STORAGE-MEZZANINE	5,280
1ST LEVEL STORAGE FLOOR	14,770
GROUND LEVEL MEZZANINE	3,300
GROUND LEVEL	1,390
TOTAL NEW BUILDING GSF=	83,500-GSF

PLAN NORTH

1 PROPOSED GSF CALCULATION

SCALE: 1"=100'-0"

CHAPTER 3.7

Building Design Accessibility Form

Accessibility Checklist

(to be added to the BRA Development Review Guidelines)

In 2009, a nine-member Advisory Board was appointed to the Commission for Persons with Disabilities in an effort to reduce architectural, procedural, attitudinal, and communication barriers affecting persons with disabilities in the City of Boston. These efforts were instituted to work toward creating universal access in the built environment.

In line with these priorities, the Accessibility Checklist aims to support the inclusion of people with disabilities. In order to complete the Checklist, you must provide specific detail, including descriptions, diagrams and data, of the universal access elements that will ensure all individuals have an equal experience that includes full participation in the built environment throughout the proposed buildings and open space.

In conformance with this directive, all development projects subject to Boston Zoning Article 80 Small and Large Project Review, including all Institutional Master Plan modifications and updates, are to complete the following checklist and provide any necessary responses regarding the following:

- improvements for pedestrian and vehicular circulation and access;
- encourage new buildings and public spaces to be designed to enhance and preserve Boston's system of parks, squares, walkways, and active shopping streets;
- ensure that persons with disabilities have full access to buildings open to the public;
- afford such persons the educational, employment, and recreational opportunities available to all citizens; and
- preserve and increase the supply of living space accessible to persons with disabilities.

We would like to thank you in advance for your time and effort in advancing best practices and progressive approaches to expand accessibility throughout Boston's built environment.

Accessibility Analysis Information Sources:

1. Americans with Disabilities Act – 2010 ADA Standards for Accessible Design
    a. http://www.ada.gov/2010ADAstandards_index.htm
2. Massachusetts Architectural Access Board 521 CMR
    a. http://www.mass.gov/eopss/consumer-prot-and-bus-lic/license-type/aab/aab-rules-and-regulations-pdf.html
3. Boston Complete Street Guidelines
    a. http://bostoncompletestreets.org/
4. City of Boston Mayors Commission for Persons with Disabilities Advisory Board
    a. http://www.cityofboston.gov/Disability
5. City of Boston – Public Works Sidewalk Reconstruction Policy
    a. http://www.cityofboston.gov/images_documents/sidewalk%20policy%200114_tcm3-41668.pdf
6. Massachusetts Office On Disability Accessible Parking Requirements
    a. www.mass.gov/anf/docs/mod/hp-parking-regulations-mod.doc
7. MBTA Fixed Route Accessible Transit Stations
    a. http://www.mbta.com/about_the_mbta/accessibility/

Project Information

Project Name:	**Boston Self Storage**
Project Address Primary:	**274 Southampton St, Boston, MA 02118**
Project Address Additional:	**NA**
Project Contact (name / Title / Company / email / phone):	**Peter Quinn, AIA** Architect, Principal in Charge **Peter Quinn Architects, LLC** 259 Elm Street, Suite 301 Somerville, MA 02144 pquinn@pqarch.com 617-354-3989

Team Description

Owner / Developer:	**Raymond Schneider,** Owner Circle Storage 10988 Deerfield Road Cincinnati, OH 45242
Architect:	**Peter Quinn Architects, LLC** 259 Elm Street, Suite 301 Somerville, MA 02144
Engineer (building systems):	**R.W. Sullivan Engineering** 529 Main St #203, Boston, MA 02129
Sustainability / LEED:	**The Green Engineer** 54 Junction Square Dr, Concord, MA 01742
Permitting:	**Sean T. O'Donovan, Atty.** 10 Tremont Street, Suite 200 Boston, MA 02108 P. 617.206.7289
Construction Management:	**Berkeley Building Company** 50 Main Street Wakefield, MA 01880

Article 80 | ACCESSIBILTY CHECKLIST

Project Permitting and Phase

At what phase is the project – at time of this questionnaire?

PNF / Expanded PNF Submitted	Draft / Final Project Impact Report Submitted	BRA Board Approved
BRA Design Approved	Under Construction	Construction just completed:

Building Classification and Description

What are the principal Building Uses - select all appropriate uses?

Residential – One to Three Unit	Residential - Multi-unit, Four +	Institutional	Education
Commercial	Office	Retail	Assembly
Laboratory / Medical	Manufacturing / Industrial	Mercantile	Storage, Utility and Other
First Floor Uses (List)			

What is the Construction Type – select most appropriate type?

Wood Frame	Masonry	Steel Frame	Concrete

Describe the building?

Site Area:	*62,522 SF*	Building Area:	*82,500 SF*
Building Height:	*128 Ft.*	Number of Stories:	*8 including 2 mezz levels Flrs.*
First Floor Elevation:	*Called 0 Elev.*	Are there below grade spaces:	*Yes / No*

Assessment of Existing Infrastructure for Accessibility:

Article 80 | ACCESSIBILTY CHECKLIST

This section explores the proximity to accessible transit lines and proximate institutions such as, but not limited to hospitals, elderly and disabled housing, and general neighborhood information. The proponent should identify how the area surrounding the development is accessible for people with mobility impairments and should analyze the existing condition of the accessible routes through sidewalk and pedestrian ramp reports.

Provide a description of the development neighborhood and identifying characteristics.	In general the neighborhood is an industrial zone with sidewalks that accommodate wheel chair access but that may not be consistently compliant. This area accommodates a tremendous amount of truck activity related to shipping and receiving for warehouse activities.
List the surrounding ADA compliant MBTA transit lines and the proximity to the development site: Commuter rail, subway, bus, etc.	Andrew Station on the MBTA Red Line and Buses 5,9,10,16,17,18,171,9702,CT3, 8 minutes walk 0.4 miles. Amtrak Newmarket Station, 7 minute walk 0.3 miles. Silver Line at Mass Ave., 17 minute walk 0.8 miles
List the surrounding institutions: hospitals, public housing and elderly and disabled housing developments, educational facilities, etc.	None.
Is the proposed development on a priority accessible route to a key public use facility? List the surrounding: government buildings, libraries, community centers and recreational facilities and other related facilities.	No. Abutting our site is the MBTA police headquarters building. There are no libraries, community centers, or recreational facilities in the area. On site is the Red Dog Pet Resort and Spa and related vet clinic.

Surrounding Site Conditions – Existing:

This section identifies the current condition of the sidewalks and pedestrian ramps around the development site.

Are there sidewalks and pedestrian ramps existing at the development site?	Yes, sidewalks and curb cuts. No ramps required.
If yes above, list the existing sidewalk and pedestrian ramp materials and physical condition at the development site.	Access to the existing Red Dog Pet Resort and Spa provides HC accessible parking spaces concrete curb cuts and walkways to on grade front door.

Are the sidewalks and pedestrian ramps existing-to-remain? If yes, have the sidewalks and pedestrian ramps been verified as compliant? If yes, please provide surveyors report.	The location of the existing walkways is expected to remain however it is anticipated that the parking will be repaved and the sidewalks will be repaired / replaced as required to comply with the AAB and ADA codes.
Is the development site within a historic district? If yes, please identify.	No.

Surrounding Site Conditions – Proposed

This section identifies the proposed condition of the walkways and pedestrian ramps in and around the development site. The width of the sidewalk contributes to the degree of comfort and enjoyment of walking along a street. Narrow sidewalks do not support lively pedestrian activity, and may create dangerous conditions that force people to walk in the street. Typically, a five foot wide Pedestrian Zone supports two people walking side by side or two wheelchairs passing each other. An eight foot wide Pedestrian Zone allows two pairs of people to comfortable pass each other, and a ten foot or wider Pedestrian Zone can support high volumes of pedestrians.

Are the proposed sidewalks consistent with the Boston Complete Street Guidelines? See: www.bostoncompletestreets.org	Yes.
If yes above, choose which Street Type was applied: Downtown Commercial, Downtown Mixed-use, Neighborhood Main, Connector, Residential, Industrial, Shared Street, Parkway, Boulevard.	Industrial
What is the total width of the proposed sidewalk? List the widths of the proposed zones: Frontage, Pedestrian and Furnishing Zone.	Frontage Zone varies from 2' to 0' Pedestrian zone is 5' Furnishing zone is 18" Curb zone is 6" Total width varies from 9' to 7'
List the proposed materials for each Zone. Will the proposed materials be on private property or will the proposed materials be on the City of Boston pedestrian right-of-way?	Frontage Zone existing is stacked block retaining wall of varying heights with planting and mulch between existing structure and wall. Pedestrian zone is concrete. Furnishing zone is concrete. Curb Zone is granite. The existing front sidewalk is located on city property. New walks will be located on private property.

If the pedestrian right-of-way is on private property, will the proponent seek a pedestrian easement with the City of Boston Public Improvement Commission?	No.
Will sidewalk cafes or other furnishings be programmed for the pedestrian right-of-way?	No.
If yes above, what are the proposed dimensions of the sidewalk café or furnishings and what will the right-of-way clearance be?	

Proposed Accessible Parking:

See Massachusetts Architectural Access Board Rules and Regulations 521 CMR Section 23.00 regarding accessible parking requirement counts and the Massachusetts Office of Disability Handicap Parking Regulations.

What is the total number of parking spaces provided at the development site parking lot or garage?	51
What is the total number of accessible spaces provided at the development site?	4 including a van space.
Will any on street accessible parking spaces be required? **If yes,** has the proponent contacted the Commission for Persons with Disabilities and City of Boston Transportation Department regarding this need?	No.
Where is accessible visitor parking located?	Together, roughly equidistant to three separate entries, one entry for the Vet, one entry for Red Dog Pet Resort and one entry to proposed Boston Self Storage.
Has a drop-off area been identified? **If yes,** will it be	No.

accessible?	
Include a diagram of the accessible routes to and from the accessible parking lot/garage and drop-off areas to the development entry locations. Please include route distances.	See Diagram.

Circulation and Accessible Routes:

The primary objective in designing smooth and continuous paths of travel is to accommodate persons of all abilities that allow for universal access to entryways, common spaces and the visit-ability* of neighbors.

**Visit-ability – Neighbors ability to access and visit with neighbors without architectural barrier limitations*

Provide a diagram of the accessible route connections through the site.	See Diagram
Describe accessibility at each entryway: Flush Condition, Stairs, Ramp Elevator.	Vet Entry - Flush condition. Red Dog Entry – Flush Condition with access to elevator Proposed Boston Storage Entry – Flush with access to elevator.
Are the accessible entrance and the standard entrance integrated?	Yes.
If no above, what is the reason?	
Will there be a roof deck or outdoor courtyard space? If yes, include diagram of the accessible route.	No.
Has an accessible routes way-finding and signage package been developed? If yes, please describe.	No.

Accessible Units: (If applicable)

In order to facilitate access to housing opportunities this section addresses the number of accessible units that are proposed for the development site that remove barriers to housing choice.

What is the total number of proposed units for the development?	NA
How many units are for sale; how many are for rent? What is the market value vs. affordable breakdown?	NA
How many accessible units are being proposed?	NA
Please provide plan and diagram of the accessible units.	NA
How many accessible units will also be affordable? If none, please describe reason.	NA
Do standard units have architectural barriers that would prevent entry or use of common space for persons with mobility impairments? Example: stairs at entry or step to balcony. If yes, please provide reason.	NA
Has the proponent reviewed or presented the proposed plan to the City of Boston Mayor's Commission for Persons with Disabilities Advisory Board?	NA
Did the Advisory Board vote to support this project? If no, what recommendations did the Advisory Board give to make this project more accessible?	NA

MBTA COMMUTER RAIL TRACKS

BILLBOARD

3'DIA MET POST

GRASS

EXISTING ROW

#3167/1 GUY

RET WALL

MULCH

CONC SIDEWALK

CONCRETE

GATE

0.4' OVER (EXTG.BLDG)

0.6' OVER (EXT.BLDG)

SOUTHAMPTON STREET

±25'-3 1/8" EXISTING REAR YARD

CONCRETE WALK

CONC

CC

47 S

48 S

5 STANDARD SPACES 8'6" X 20' TYP.

49 S

50 S

51 S

EDGE OF CONC

CONCRETE

19'-6"

9'-0"

WITH ROOF OVERHANG

RED DOG PET RESORT & SPA 2-STORY

BOSTON ANIMAL HOSPITAL ENTRY - 83'

RED DOG ENTRY - 44.5'

LSA

CONC PAVERS

CONC WALK

ACCESSIBLE ROUTE

±25'-0" PROPOSED BLDG REAR YARD

BOSTON SELF-STORAGE ENTRY - 105'

LINE OF BUILDING ABOVE

LOADING AREA

10 STANDARD SPACES 8'6" X 20' TYP.

3 HANDICAP SPACES 8'X18' TYP.

5 COMPACT SPACES 7' X 18' TYP.

EXISTING RED DOG SIGN

MAIN SITE ENTRY

NSTAR YARD TRANSFORMER

TRASH BIN DOCK LIFT REMOVABLE RAILING

3 SHORT TERM STD PARKING SPACES 9'-6" X 22'

NOTE - ALL COMPACT AND HANDICAP SPACES TO BE SIGNED

CONCRETE PAVING UNDER BUILDING

±20'-3 3/4"

ROOF ABOVE

EXISTING PARKING LOT

3 HC SPACES

12 COMPACT SPACES 8' X 18' TYP.

PAVED AREA

7 COMPACT SPACES 7' X 18' TYP.

6 STANDARD SPACES 8.5' X 20' TYP.

MULCH

220'-0"

0'-0"

SEE ENLARGEMENT

PROPOSED BUILDING ABOVE

1 PROPOSED SITE PLAN

274 Southampton - Boston Self Storage - PNF Submission - 11 May 2015

Transportation

4.0 Introduction

Howard Stein Hudson (HSH) has conducted an evaluation of the transportation impacts of a proposed self-storage facility to be located at 274 Southampton Street (the "Project" and/or "Site"), in the Newmarket District of Boston's Dorchester neighborhood. This transportation study adheres to the Boston Transportation Department (BTD) *Transportation Access Plan Guidelines* and the Boston Redevelopment Authority's Article 80 development review process. The study includes an evaluation of existing conditions, future conditions with and without the Project, projected parking demand, transit services, and pedestrian and bicycle activity. The intersections studied, under the full Build Condition, will continue to operate at the same Level of Service as under the No-Build Condition during both the weekday a.m. and p.m. peak hours. The Project will have a minimal impact on the study area intersections, the public transportation network, and pedestrian facilities in the area.

4.1 PROJECT DESCRIPTION

The Project site is located on the north side of Southampton Street between the MBTA Transit Police Department to the west and the Fairmont Line MBTA commuter rail tracks to the east. The Project site is approximately a third of a mile north of the Newmarket Commuter Rail Station on the Fairmont Line and less than 1,000 feet from Interstate 93 (I-93), providing convenient access to public transportation and the regional highway network.

The site currently contains the Boston Animal Hospital and the Boston Red Dog Pet Resort and Spa. The Site currently has 65 surface parking spaces that are shared by the Boston Animal Hospital and the Boston Red Dog Pet Resort and Spa. Existing vehicular access to the parking lot is provided by two curb cuts along the north side of Southampton Street. Pedestrian access to the main entrance is located on the southwest corner of the building.

The Project will include the construction of a structure measuring approximately 128 feet in height, including an additional approximate 83,300 gross square feet (gsf) of self-storage space. The proposed building will be located above the existing parking area. The parking lot will be reconfigured to contain a total of 51 parking spaces (a reduction of 14 spaces) that will be shared between all uses on the site. Vehicular and pedestrian access will remain unchanged from the existing layout. Two loading docks will be located in the northwest corner of the parking lot and will accommodate SU-36 box trucks (measuring approximately 40 feet in length).

The Newmarket District is generally industrial in nature, with food distributors, warehousing, and big box stores composing the majority of the land uses in the area. The South Bay Shopping Center,

located across the street to the southwest of the Site, is a major retail destination in the area. Other larger destinations include The Greater Boston Food Bank, the MBTA Transit Police Department, the Boston Public Health Commission, and the South Bay House of Corrections.

4.1.1 STUDY METHODOLOGY

The transportation study and supporting analyses were conducted in accordance with BTD guidelines and is described below.

The existing Condition analysis includes an inventory of the existing (2014) transportation conditions such as traffic characteristics, parking, curb usage, transit, pedestrian circulation, bicycle facilities, loading, and site conditions. Existing counts for vehicles, bicycles, and pedestrians were collected at the study area intersections on December 9, 2014. The traffic counts form the basis for the transportation analysis conducted as part of this evaluation.

The future conditions analysis evaluates potential transportation impacts associated with the Project. Long-term impacts are evaluated for the year 2020, based on a five-year horizon from the year of the filing of this traffic study. Expected roadway, parking, transit, pedestrian, bicycle accommodation, and loading capabilities and deficiencies are identified. The future conditions include the following scenarios:

- The 2020 No-Build Condition scenario includes both general background traffic growth, traffic growth associated with specific developments, and transportation improvements that are planned in the vicinity of the Project site.
- The 2020 Build Condition scenario includes Project-generated traffic volume estimates added to the traffic volumes developed as part of the 2020 No-Build Condition scenario.

The final part of the transportation study identifies measures to mitigate Project-related impacts and to address any traffic, pedestrian, bicycle, transit, safety, or construction related issues that are necessary to accommodate the Project.

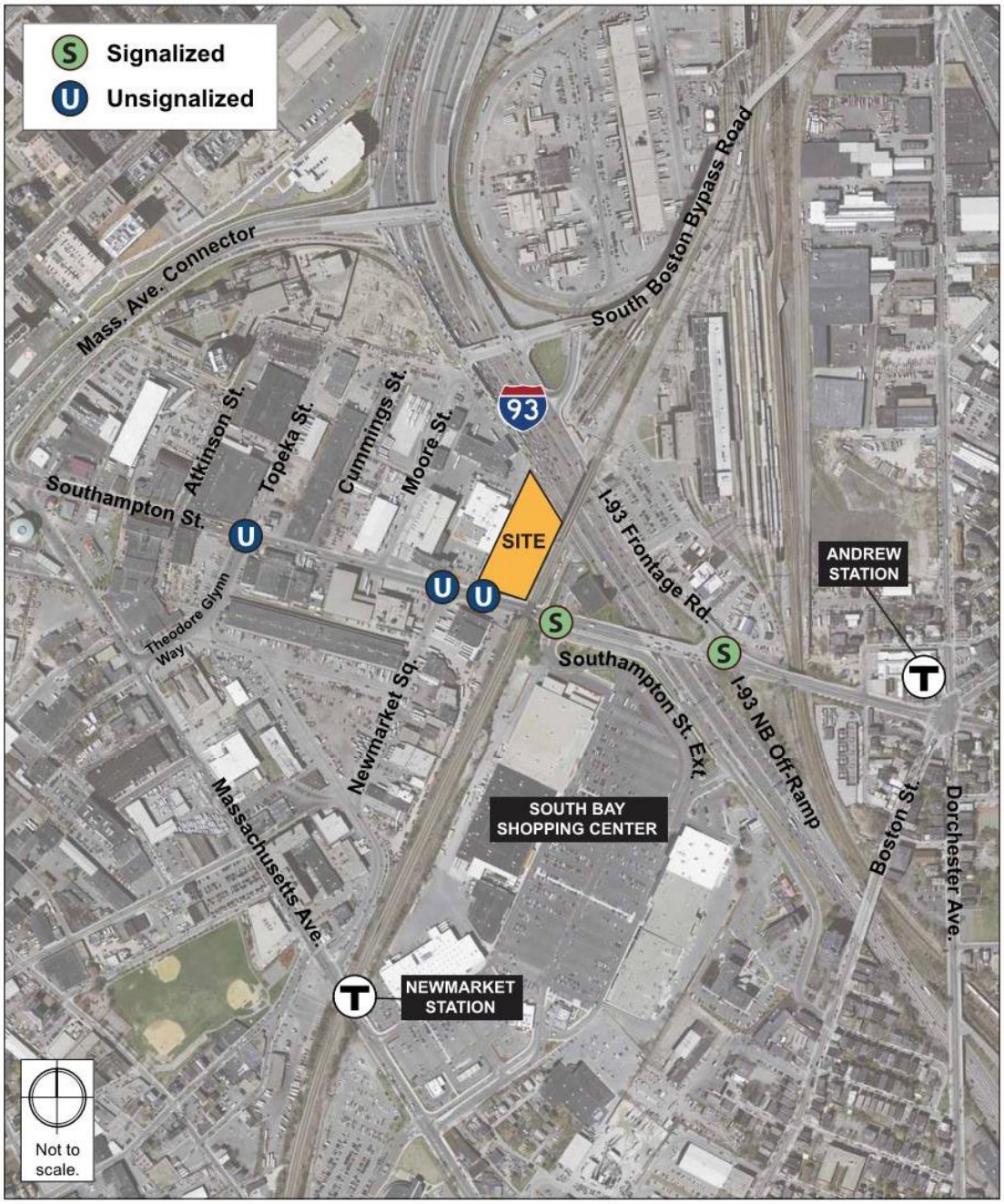
An evaluation of short-term traffic impacts associated with construction activities is also provided.

4.1.2 STUDY AREA

The study area consists of the following five intersections in the vicinity of the Project site, also shown on **Figure 4.1**.

- Southampton Street / South Bay Shopping Center Driveway / Southampton Street Extension (signalized);
- Southampton Street / I-93 NB Frontage Road/I-93 NB Off-Ramp (signalized);
- Southampton Street / Newmarket Square / Transit Police Driveway (unsignalized);
- Southampton Street / Theodore Glynn Way / Topeka Street (unsignalized); and
- Southampton Street / Site Driveway.

Figure 4.1 / Study Area Intersections



4.2 Existing Conditions

4.2.1 EXISTING ROADWAY CONDITIONS

The study area includes the following roadways, which are categorized according to the Massachusetts Department of Transportation (MassDOT) Office of Transportation Planning functional classifications:

Southampton Street

Southampton Street is a two-way, four lane roadway located adjacent to the south of the Project site. Southampton Street is classified as an urban principal arterial roadway under BTD jurisdiction and runs in a predominately east-west direction between Massachusetts Avenue to the west and Dorchester Avenue to the east. Within the study area, on-street parking is restricted and sidewalks are provided on both sides of the roadway.

Southampton Street Extension

Southampton Street Extension is a one-way, two lane roadway located to the east of the Project site. Southampton Street Extension is classified as an urban principal arterial under BTD jurisdiction and runs one-way in the eastbound direction from Southampton Street in the west to I-93 in the east. Southampton Street Extension serves as an on-ramp for I-93 for vehicles entering the highway in the southbound direction. On-street parking is restricted along the roadway and sidewalks are only provided on the south side of the roadway.

I-93 NB Frontage Road

I-93 NB Frontage Road is a one-way, three lane roadway located to the east of the Project site. I-93 NB Frontage Road is classified as an urban principal arterial under BTD jurisdiction and runs one-way in the northbound direction from Albany Street in the north to I-93 in the south. I-93 NB Frontage Road serves as a collector-distributor road for I-93 for vehicles entering or exiting the highway in the northbound direction. On-street parking is restricted along the roadway and sidewalks are limitedly provided only on the east side of the roadway.

Theodore Glynn Way

Theodore Glynn Way is a one-way, four lane roadway located to the west of the Project site. Theodore Glynn Way is classified as a local roadway under BTD jurisdiction and runs one-way in the northbound direction from Massachusetts Avenue in the south to Southampton Street in the north. On-street parking and sidewalks are only provided on the west side of the roadway. No pavement marking are provided along Theodore Glynn Way.

Newmarket Square

Newmarket Square is a two-way, two lane roadway located to the south of the Project site. Newmarket Square is classified as a local roadway under BTD jurisdiction and runs in a predominately north-south direction between Southampton Street to the north and Massachusetts Avenue in the south. On-street parking is provided on several segments of both sides of the roadway. Sidewalks are provided on the west side of the roadway. On the east side of the roadway, a green painted sidewalk is provided with no curb. The functionality of the painted sidewalk is frequently diminished due to cars and trucks that park on the painted area.

Topeka Street

Topeka Street is a two-way, two lane roadway located to the west of the Project site. Topeka Street is classified as a local roadway under BTD jurisdiction and runs in a predominately north-south direction between Southampton Street to the south and South Bay Avenue to the north. On-street parking is restricted along both sides of the roadway. Sidewalks are provided but are in poor condition. No pavement marking are provided along Topeka Street.

South Bay Shopping Center Driveway

South Bay Shopping Center Driveway is a two-way, two lane roadway located to the east of the Project site. The South Bay Shopping Center Driveway is a private road that provides vehicular circulation throughout the South Bay Shopping Center. On-street parking is restricted along the roadway and sidewalks limitedly provided where necessary along the roadway.

4.2.2 EXISTING INTERSECTION CONDITIONS

Existing conditions at the study area intersection are described below.

Southampton Street/South Bay Shopping Center Driveway/Southampton Street Extension

Southampton Street/South Bay Shopping Center Driveway/Southampton Street Extension is a three approach, signalized intersection, located to the east of the Project site. The Southampton Street eastbound approach consists of a shared left-turn/through lane and a through lane. The Southampton Street westbound approach consists of a through lane and a shared through/right-turn lane. The South Bay Shopping Center Driveway northbound approach consists of two unmarked lanes that accommodate left-turns and right-turns. Additionally, the Southampton Street Extension is one-way in the southeast direction departing the intersection that functions as an on-ramp to I-93 southbound. On-street parking is restricted on all approaches. Crosswalks are provided along the east and south legs of the intersection. Wheelchair ramps and pedestrian indication equipment are provided at all crosswalks.

Southampton Street/I-93 NB Frontage Road/I-93 NB Off-Ramp

Southampton Street/I-93 NB Frontage Road/I-93 NB Off-Ramp is a four approach, signalized intersection, located to the east of the Project site. The Southampton Street eastbound approach consists of an exclusive left-turn lane and a shared left-turn/through lane. The Southampton Street westbound approach consists of two through lanes and an exclusive right-turn lane, which provides queue storage for approximately two to three vehicles. The I-93 NB Off-Ramp northbound approach consists of one wide lane that functions as an exclusive left-turn lane and a shared left-turn/through/right-turn lane. The I-93 NB Frontage Road southbound approach consists of an exclusive, channelized right-turn only lane. The travel lanes along the northern leg of the intersection are separated by a raised median and a raised island, creating a three-stage crossing for pedestrians. Crosswalks are provided across the north and south legs of the intersection. Wheelchair ramps are provided at all crosswalks. Pedestrian signal equipment is not provided at the intersection.

Southampton Street/Newmarket Square/Transit Police Driveway

Southampton Street/Newmarket Square is a four approach, unsignalized intersection, located to the west of the Project site. The Southampton Street eastbound approach consists of a shared left-turn/through lane and a shared through/right-turn lane. The Southampton Street westbound approach consists of a shared left-turn/through lane and a shared through/right-turn lane. The Newmarket Street northbound approach is stop controlled and consists of one wide lane that functions as two lanes, a shared left-turn/through lane and an exclusive right-turn lane. The Transit Police Driveway southbound approach is stop controlled and consists of one lane, a shared left-turn/through/right-turn lane. Crosswalks with wheelchair ramps are provided across the west and south legs of the intersection.

Southampton Street/Theodore Glynn Way/Topeka Street

Southampton Street/Theodore Glynn Way/Topeka Street is a three approach, unsignalized intersection, located to the west of the Project site. The Southampton Street westbound approach consists of a through lane and a shared through/right-turn lane. The Theodore Glynn Way northbound approach consists of two exclusive left-turn lanes under free control, one through lane under stop control, and one exclusive right-turn lane under free control. The Topeka southbound approach consists of a single lane under stop control accommodating left-turn/through/right-turn movements. Crosswalks with wheelchair ramps are provided across the north leg of the intersection.

Southampton Street/Site Driveway

Southampton Street/Site Driveway is a three approach, unsignalized intersection, located adjacent to the south of the Project site. The Southampton Street eastbound approach consists of a shared left-turn/through lane and a through lane. The Southampton Street westbound approach consists of a through lane and a shared through/right-turn lane. The Site Driveway southbound approach consists

of one lane under stop control accommodating left-turn/right-turn movements. There are no crosswalks at the intersection. The Site Driveway is raised to meet the sidewalk grade, eliminating the need to provide wheelchair ramps.

4.2.3 EXISTING TRAFFIC CONDITIONS

Traffic movement data was collected at the study area intersections on December 9, 2014. Manual turning movement counts (TMCs) and vehicle classification counts were conducted during the weekday a.m. and p.m. peak periods (7:00 – 9:00 a.m. and 4:00 – 6:00 p.m., respectively) at the study area intersections.

The vehicle classification counts included car, truck, pedestrian, and bicycle movements. Based on the TMCs, the peak hours of vehicular traffic throughout the study area are 7:30 a.m. – 8:30 a.m. and 4:45 p.m. – 5:45 p.m. The 2014 Existing weekday a.m. and p.m. peak hour traffic volumes are shown in **Figure 4.2** and **Figure 4.3**, respectively. The detailed traffic counts are provided in the **Appendix**.

Figure 4.2 / Existing Condition (2014) Turning Movement Volumes, a.m. Peak Hour (7:30 a.m. – 8:30 a.m.)

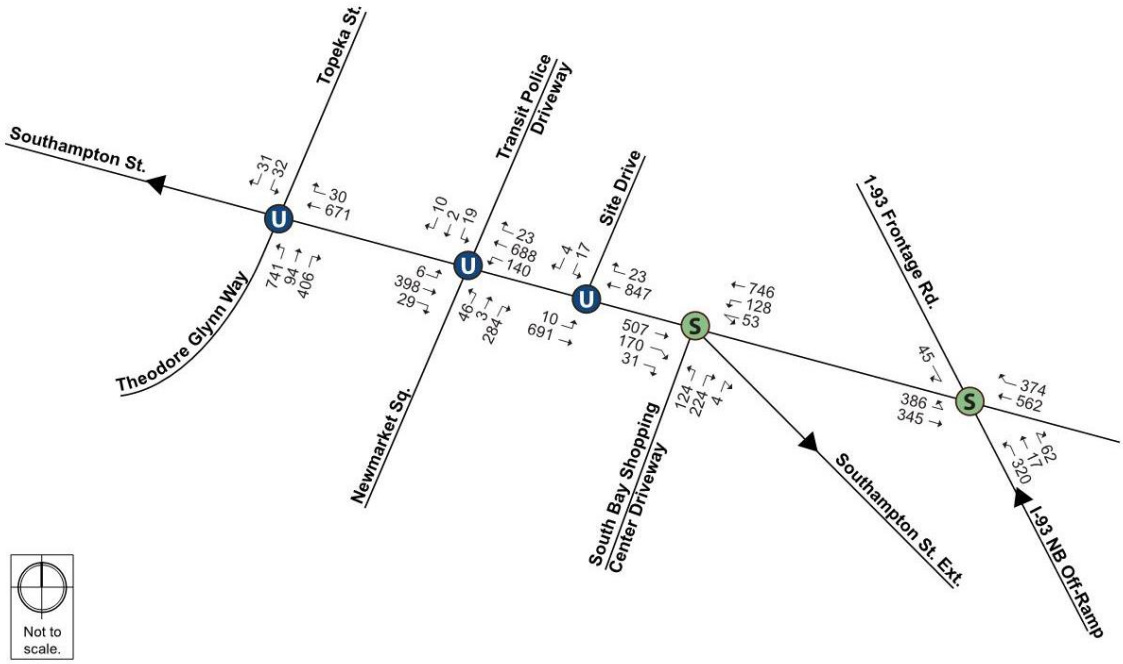
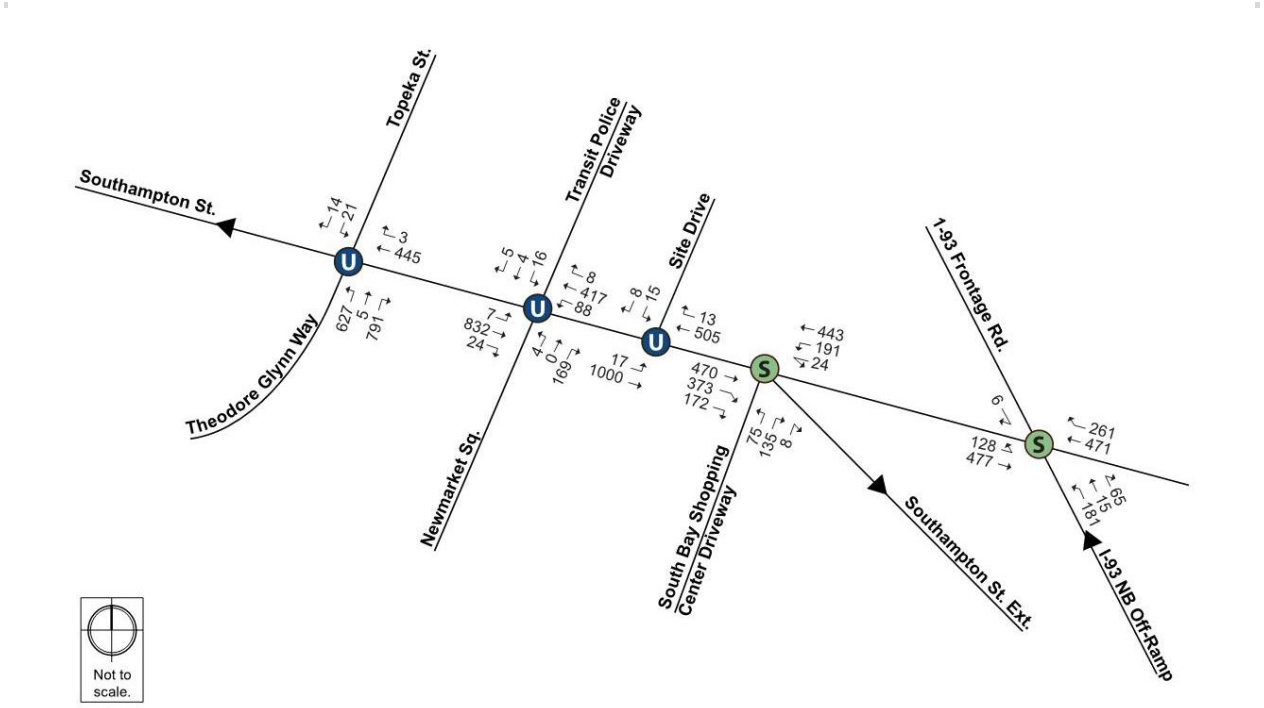


Figure 4.3 / Existing Condition (2014) Turning Movement Volumes, p.m. Peak Hour (4:45 p.m. – 5:45 p.m.)



4.2.4 EXISTING TRAFFIC OPERATIONS

The criterion for evaluating traffic operations is level of service (LOS), which is determined by assessing average delay experienced by vehicles at intersections and along intersection approaches. Trafficware's Synchro (version 8) software package was used to calculate average delay and associated LOS at the study area intersections. This software is based on the traffic operational analysis methodology of the Transportation Research Board's 2000 Highway Capacity Manual (HCM). Field observations were performed by HSH to collect intersection geometry such as number of turning lanes, lane length, and lane width that were then incorporated into the operations analysis.

LOS designations are based on average delay per vehicle for all vehicles entering an intersection. **Table 4-1** displays the intersection LOS criteria. LOS A indicates the most favorable condition, with minimum traffic delay, while LOS F represents the worst condition.

Table 4-1 Level of Service Criteria

Level of Service	Average Stopped Delay (sec./veh.)	
	Signalized Intersections	Unsignalized Intersections
A	≤10	≤10
B	>10 and ≤20	>10 and ≤15
C	>20 and ≤35	>15 and ≤25
D	>35 and ≤55	>25 and ≤35
E	>55 and ≤80	>35 and ≤50
F	>80	>50
Source: 2000 Highway Capacity Manual, Transportation Research Board.		

In addition to delay and LOS, the operational capacity and vehicular queues are calculated and used to further quantify traffic operations at intersections. The following describes these other calculated measures.

The volume-to-capacity (v/c) ratio is a measure of congestion at an intersection approach. A v/c ratio below one indicates that the intersection approach has available capacity to process the arriving traffic volumes over the course of an hour. A v/c ratio of one or greater indicates that the traffic volume on the intersection approach exceeds capacity during the peak 15 minute period.

The 50th percentile queue length, measured in feet, represents the maximum queue length during a cycle of the traffic signal with typical (or median) entering traffic volumes.

The 95th percentile queue length, measured in feet, represents the farthest extent of the vehicle queue (to the last stopped vehicle) upstream from the stop line during five percent of all signal cycles. The 95th percentile queue will not be seen during each cycle. The queue would be this long only five percent of the time and would typically not occur during off-peak hours. Since volumes fluctuate throughout the hour, the 95th percentile queue represents what can be considered a "worst case" scenario. Queues at the intersection are generally below the 95th percentile queue throughout the course of the peak hour. It is also unlikely that the 95th percentile queues for each approach to the intersection will occur simultaneously.

Table 4-2 and **Table 4-3** present the 2014 Existing Condition capacity analysis for the study area intersection during the a.m. and p.m. peak hours, respectively. The detailed analysis sheets are provided in **Appendix**.

Table 4-2 Existing Condition (2014), Capacity Analysis Summary, a.m. Peak Hour

Intersection	LOS	Delay (seconds)	V/C Ratio	50th Percentile Queue Length (ft)	95th Percentile Queue Length (ft)
Signalized					
Southampton Street/South Bay Shopping Center/Southampton Street Extension	D	49.2	-	-	-
Southampton Street EB thru|thru/right	D	48.6	0.82	318	421
Southampton Street WB left/thru|thru	D	44.3	0.92	~338	#516
South Bay Shopping Center NB left	D	49.5	0.42	99	181
South Bay Shopping Center NB right	E	69.9	0.82	201	#355
Southampton Street/I-93 NB Frontage Road/I-93 NB Off-Ramp	C	32.0	-	-	-
Southampton Street EB left	C	29.7	0.74	123	#253
Southampton Street EB left/thru	C	26.6	0.76	185	#285
Southampton Street WB thru|thru	D	43.4	0.76	184	247
Southampton Street WB right	D	35.6	0.82	134	#292
I-93 NB Off-Ramp NB left	C	31.9	0.59	183	277
I-93 NB Off-Ramp NB thru	C	22.3	0.03	8	24
I-93 NB Off-Ramp NB right	A	0.4	0.11	0	1
I-93 Frontage Road SB right	A	0.7	0.16	0	0
Unsignalized					
Southampton Street/Newmarket Street/Transit Police Driveway	-	-	-	-	-
Southampton Street EB left/thru|thru/right	A	0.3	0.14	-	1
Southampton Street WB left/thru|thru/right	A	4.1	0.24	-	14
Newmarket Street NB left/thru|right	C	18.3	0.51	-	74
Transit Police Driveway SB left/thru/right	F	>50.0	0.55	-	60
Southampton Street/Theodore Glynn Way/Topeka Street	-	-	-	-	-
Southampton Street WB thru|thru/right	A	0.0	0.29	-	0
Theodore Glynn Way NB left|left	A	0.0	0.00	-	0
Theodore Glynn Way NB thru	C	22.9	0.34	-	36
Theodore Glynn Way NB right	A	0.0	0.00	-	0
Topeka Street SB left/right	F	>50.0	0.69	-	85
Southampton Street/Site Driveway	-	-	-	-	-
Southampton Street EB left/thru|thru	A	0.6	0.30	-	1
Southampton Street WB thru|thru/right	A	0.0	0.37	-	0
Site Driveway SB left/right	D	28.9	0.23	-	21

~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is the maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is the maximum after two cycles.
Gray shading indicates LOS E or LOS F.

Table 4-3 Existing Condition (2014), Capacity Analysis Summary, p.m. Peak Hour

Intersection	LOS	Delay (seconds)	V/C Ratio	50th Percentile Queue Length (ft)	95th Percentile Queue Length (ft)
Signalized					
Southampton Street/South Bay Shopping Center/Southampton Street Extension	D	40.2	-	-	-
Southampton Street EB thru|thru/right	D	46.0	0.92dr	482	#700
Southampton Street WB left/thru|thru	C	20.6	0.59	183	262
South Bay Shopping Center NB left	E	57.2	0.38	67	119
South Bay Shopping Center NB right	E	78.7	0.77	136	216
Southampton Street/I-93 NB Frontage Road/I-93 NB Off-Ramp	C	26.5	-	-	-
Southampton Street EB left	B	14.3	0.26	40	72
Southampton Street EB left/thru	C	23.8	0.70	225	337
Southampton Street WB thru|thru	D	39.4	0.64	150	205
Southampton Street WB right	C	21.8	0.60	68	156
I-93 NB Off-Ramp NB left	C	26.4	0.33	93	153
I-93 NB Off-Ramp NB thru	C	22.2	0.03	7	21
I-93 NB Off-Ramp NB right	A	0.7	0.12	0	3
I-93 Frontage Road SB right	A	0.0	0.02	0	0
Unsignalized					
Southampton Street/Newmarket Street/Transit Police Driveway	-	-	-	-	-
Southampton Street EB left/thru|thru/right	A	0.2	0.28	-	1
Southampton Street WB left/thru|thru/right	A	5.0	0.16	-	14
Newmarket Street NB left/thru|right	C	18.2	0.43	-	54
Transit Police Driveway SB left/thru/right	F	>50.0	0.43	-	44
Southampton Street/Theodore Glynn Way/Topeka Street	-	-	-	-	-
Southampton Street WB thru|thru/right	A	0.0	0.19	-	0
Theodore Glynn Way NB left|left	A	0.0	0.00	-	0
Theodore Glynn Way NB thru	B	13.2	0.01	-	1
Theodore Glynn Way NB right	A	0.0	0.00	-	0
Topeka Street SB left/right	F	>50.0	>1.00	-	101
Southampton Street/Site Driveway	-	-	-	-	-
Southampton Street EB left/thru|thru	A	0.6	0.44	-	1
Southampton Street WB thru|thru/right	A	0.0	0.22	-	0
Site Driveway SB left/right	C	23.6	0.20	-	18

dr Defacto right turn lane
 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is the maximum after two cycles.
Gray shading indicates LOS E or LOS F.

As shown in **Table 4-2** and **Table 4-3**, the signalized intersection of **Southampton Street/South Bay Shopping Center/Southampton Street** currently operates at LOS D during both the weekday a.m. and p.m. peak hours. The South Bay Shopping Center northbound left-turn movements currently operate at LOS E during the weekday p.m. peak hour. The South Bay Shopping Center northbound right-turn movements currently operate at LOS E during both the weekday a.m. and p.m. peak hours. The longest queues occur along the Southampton Street westbound approach during the weekday a.m. peak hour and along the Southampton Street eastbound approach during the weekday p.m. peak hour.

The signalized intersection of **Southampton Street/I-93 NB Frontage Road/I-93 NB Off-Ramp** currently operates at LOS C during both the weekday a.m. and p.m. peak hours. All approaches currently operate at LOS D or better during both the weekday a.m. and p.m. peak hours. The longest queues currently occur along the Southampton Street westbound approach during the weekday a.m. peak hour and along the Southampton Street eastbound approach during the weekday p.m. peak hour.

The critical movements at the unsignalized intersection of **Southampton Street/Newmarket Street/Transit Police Driveway** (the Transit Police Driveway southbound left/thru/right approach) currently operate at LOS F during both the weekday a.m. and p.m. peak hours. The longest queues currently occur at the Newmarket Square northbound approach during both the weekday a.m. and p.m. peak hours.

The critical movements at the unsignalized intersection of **Southampton Street/ Theodore Glynn Way/Topeka Street** (the Topeka Street southbound left/right approach) currently operate at LOS F during both the weekday a.m. and p.m. peak hours. The longest queues currently occur at the Topeka southbound approach during both the weekday a.m. and p.m. peak hours.

All movements at the unsignalized intersection of **Southampton Street/Site Driveway**, currently operate at LOS D or better during both the weekday a.m. and p.m. peak hours. The longest queues currently occur at the Site Driveway southbound approach during both the weekday a.m. and p.m. peak hours.

4.2.5 EXISTING PUBLIC TRANSPORTATION

The Project site is located in close proximity to several public transportation opportunities. The Site is located in proximity to Andrew Station along the MBTA Red Line, Newmarket Station along the MBTA Commuter Rail Fairmont Line, and several bus routes. The following describes each public transportation route located in the vicinity of the Project site. The nearby public transit services are shown in **Figure 4.4**.

MBTA Red Line

The Red Line of the MBTA subway system stops at Andrew Station located at the intersection of Southampton Street/Dorchester Avenue/Dorchester Street/Preble Street, also known as Andrew Square. Andrew Station is located approximately a third of a mile east of the Project site. The Red Line runs between Alewife Station in North Cambridge to the north and Braintree Station in Braintree and Ashmont Station in Mattapan to the south. The Red Line operates with peak hour headways of approximately 8 to 9 minutes. Weekday service runs from approximately 5:15 a.m. to 12:30 a.m., with extended Friday and Saturday service running until approximately 2:30 a.m.

MBTA Fairmont Line

The Fairmont Line of the MBTA commuter rail system stops at Newmarket Station located at the intersection of Massachusetts Avenue/Newmarket Square adjacent to the South Bay Shopping Center. Newmarket Station is located approximately a third of a mile south of the Project site. The Fairmont Line runs between South Station in Boston to the north and Readville Station in Readville to the south. The Fairmont Line operates with weekday service from 5:48 a.m. to 9:50 p.m. with 30-60 minutes headways. Weekend service runs from 6:50 a.m. to 10:55 with 60 minute headways.

MBTA Bus Routes

There are three different bus lines that stop adjacent to the south of the Project site at the intersection of Southampton Street/Newmarket Square The summaries of the bus routes are shown in **Table 4-4**.

Table 4-4 MBTA Bus Routes

Bus Route	Route	Peak Headway (min)
CT3	Beth Israel Deaconess Medical Center - Andrew Station via B.U. Medical Center	20
8	Harbor Point/UMass - Kenmore Station via B.U. Medical Center & Dudley Station	14-15
10	City Point - Copley Square via Andrew Station & B.U. Medical Center	10

Figure 4.4 / Public Transportation

4.2.6 EXISTING PARKING AND CURB USAGE

The curb usage and on-street parking surrounding the Project site generally consists of unrestricted parking, two-hour parking, no parking, and areas where a curb is not provided. In the areas where no curb is provided, loading zones are typically located along the side of the roadway, with green pavement markings designating the sidewalk. The on-street parking regulations within the study area are shown on **Figure 4.5**.

4.2.7 EXISTING PEDESTRIAN CONDITIONS

The Project site is located adjacent to the north of Southampton Street in the Newmarket District of Boston. The Newmarket District is comprised of primarily industrial land uses that generate many heavy vehicles that travel through the study area. Additionally, most buildings have loading docks located adjacent to the roadway, creating many curb cuts and, in most cases, no curb at all. Pedestrian travel is accommodated by painted green walkways along some roadways and raised sidewalk separated by curbs along some roadways.

To estimate the amount of pedestrian activity within the study area, pedestrian counts were conducted concurrent with the TMCs on December 9, 2014 at the study area intersections and are presented in **Figure 4.6**.

4.2.8 EXISTING BICYCLE CONDITIONS

As mentioned above, the study area is generally industrial with limited use of curbs. There are also no formal bike facilities within the study area. According to Boston's "Bike Routes of Boston" map both Southampton Street and Theodore Glynn Way are designated as an advanced bicycle routes, for experienced and traffic-confident cyclists only.

Bicycle counts were conducted concurrent with the vehicular TMCs on December 9, 2014, and are presented in **Figure 4.7**.

Figure 4.5 / On-Street Parking

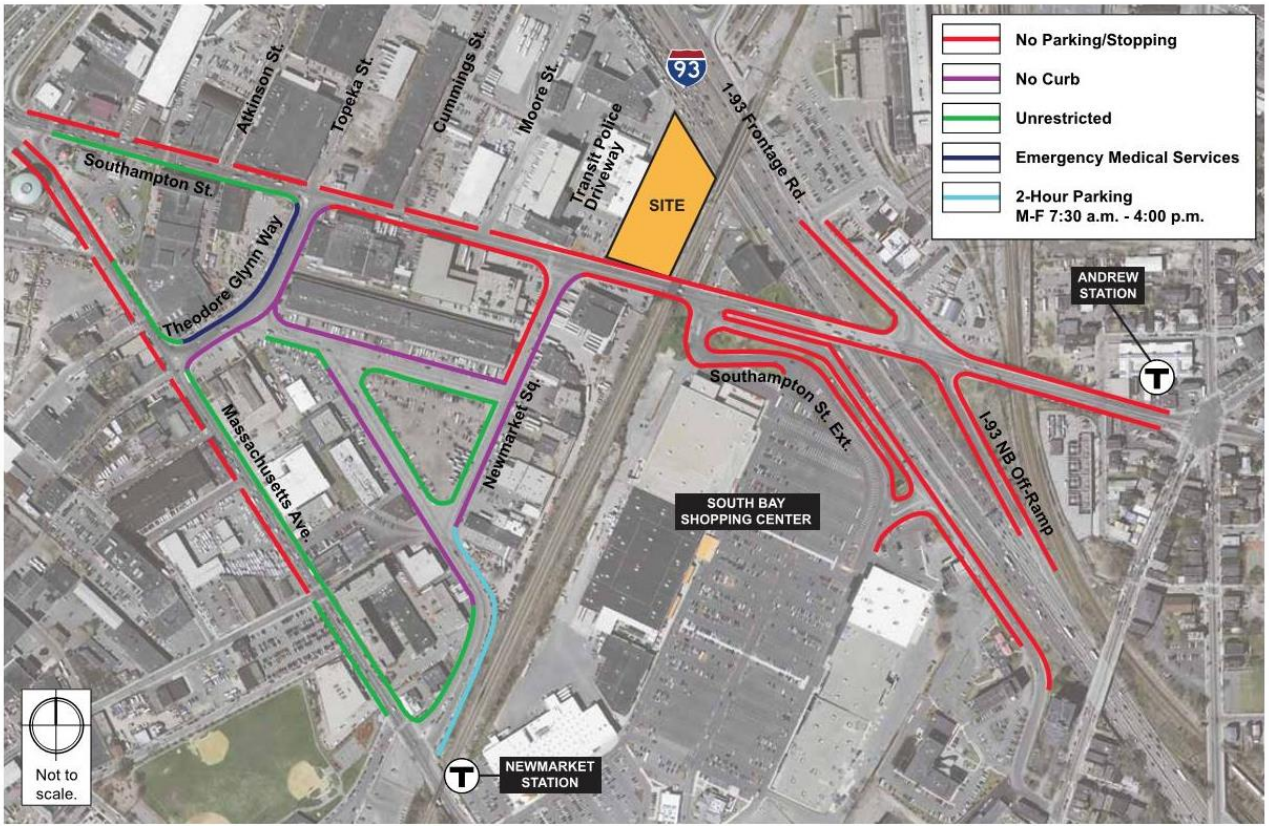


Figure 4.6 / Existing Pedestrian (2014) Volumes, a.m. and p.m. Peak Hours

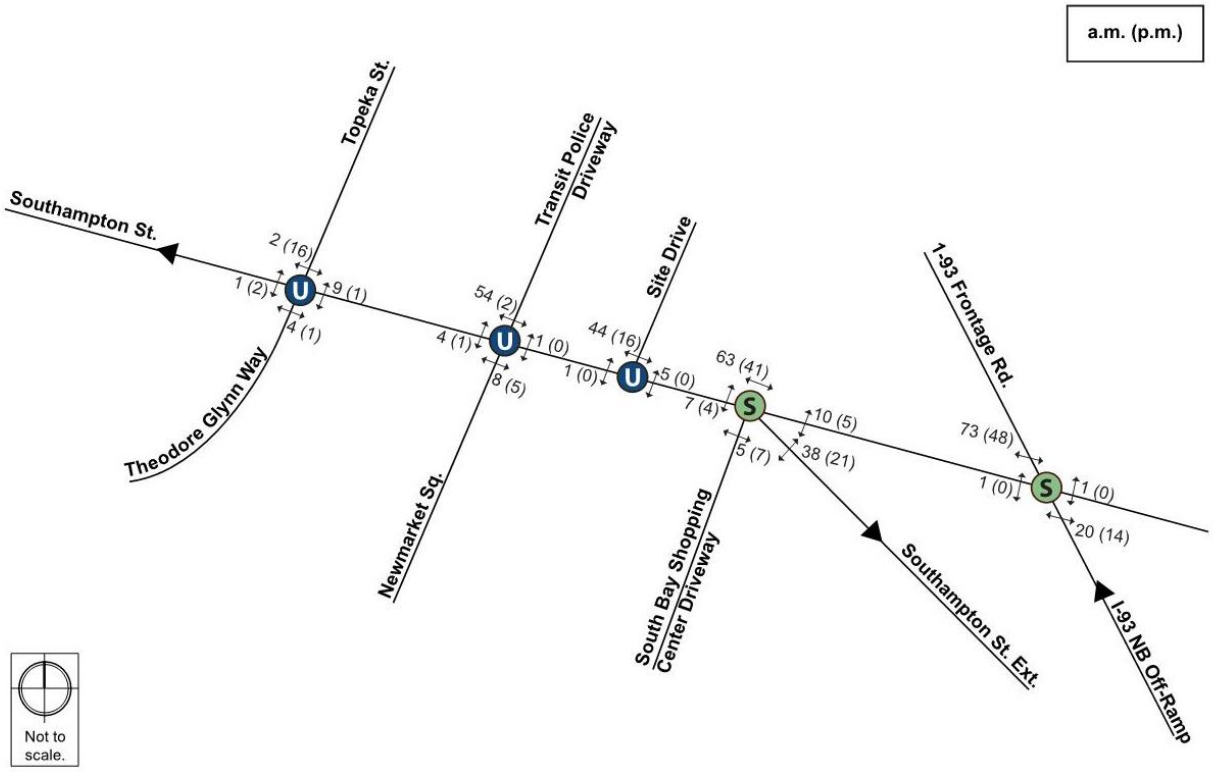
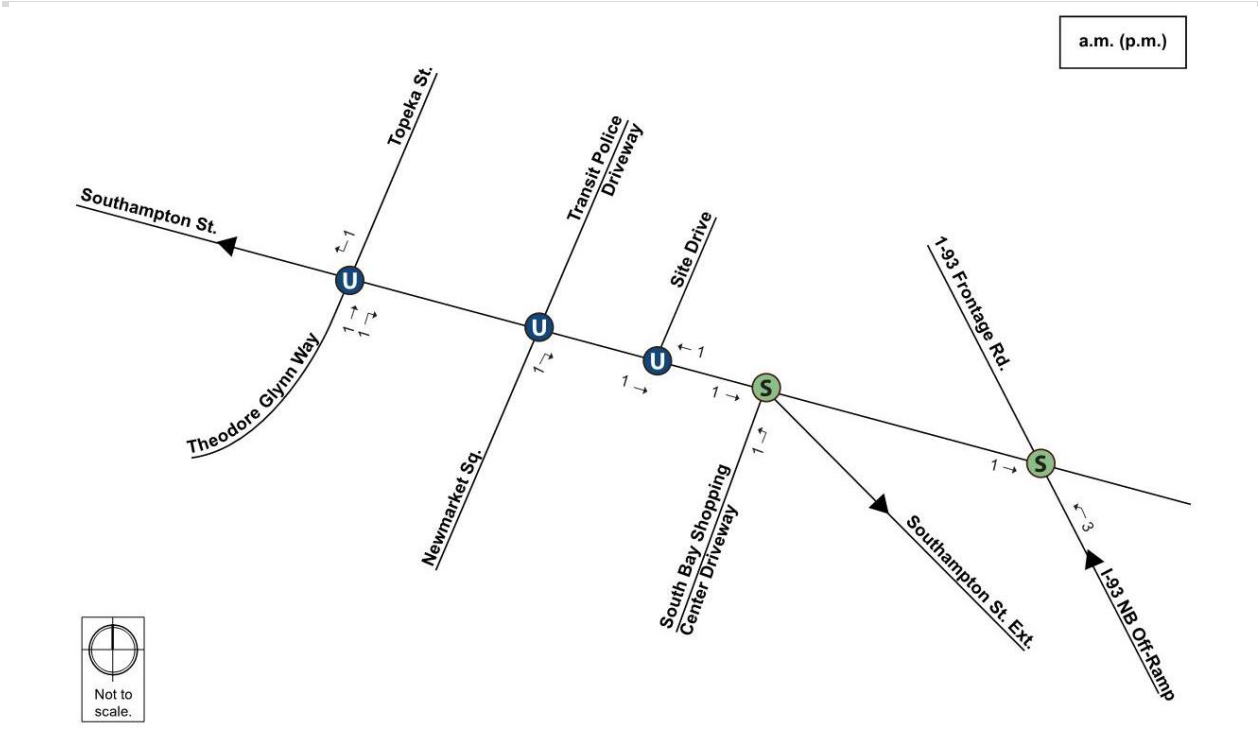


Figure 4.7 / Existing Bicycle (2014) Volumes, a.m. and p.m. Peak Hours

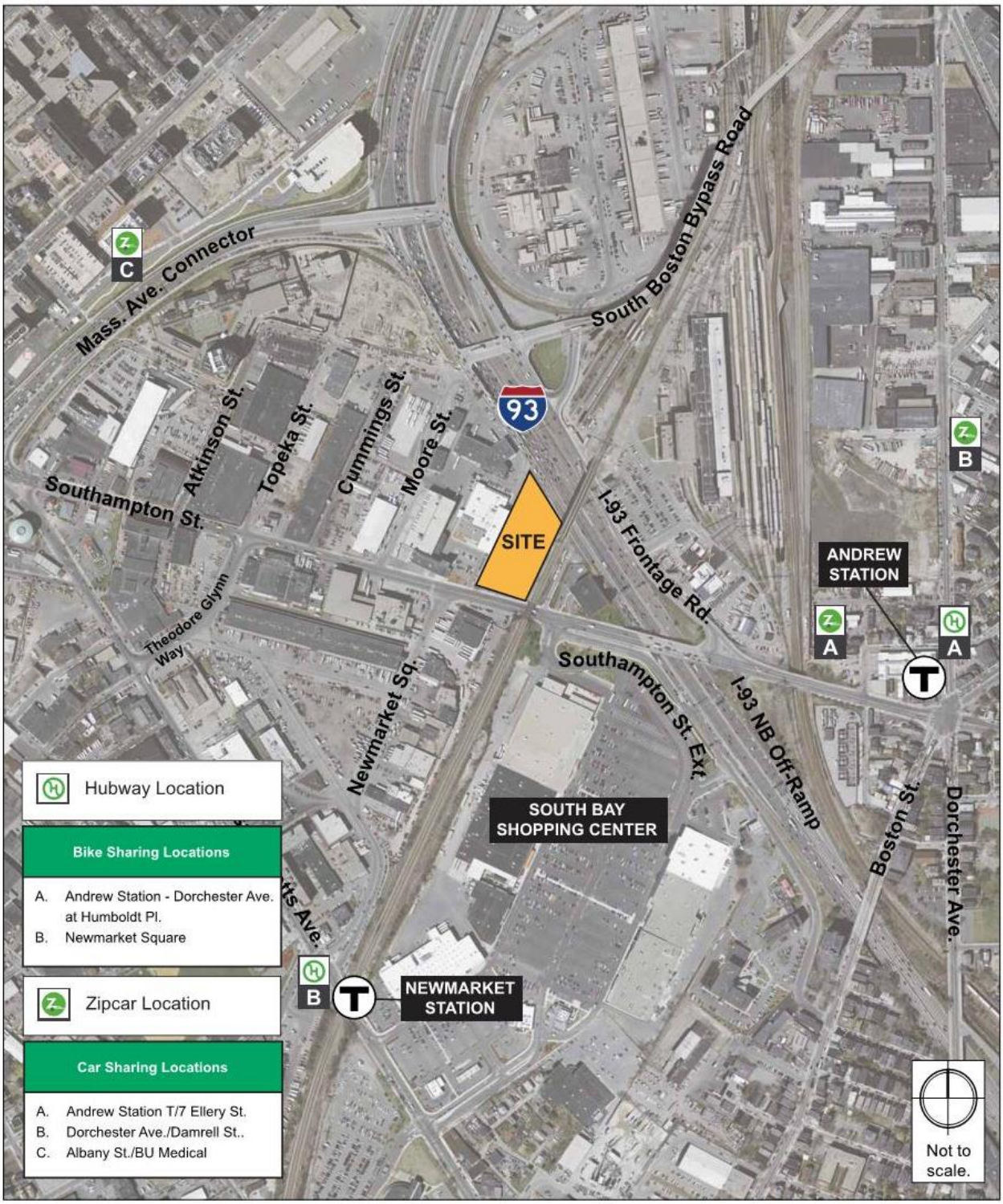


4.2.9 CAR AND BIKE SHARING SERVICES

Car sharing enables easy access to short term vehicular transportation. Vehicles are rented on an hourly or daily basis, and all vehicle costs (gas, maintenance, insurance, and parking) are included in the rental fee. Vehicles are checked out for a specific time period and returned to their designated location. Zipcar is the only company that provides car sharing services within the project area. The nearby Zipcar locations are shown in **Figure 4.8**.

The Project site is also located in proximity to bicycle sharing stations provided by Hubway at Andrew Station and Newmarket Station. Hubway is the bicycle sharing system in the Boston area, which was launched in 2011, enabling members to check out a bicycle for one-half hour for a base charge. The Boston Hubway system consists of over 140 stations and 1,300 bicycles and continues to expand. The nearby Hubway locations are shown in **Figure 4.8**.

Figure 4.8 / Car and Bicycle Sharing Services



4.3 Future Conditions

For transportation impact analyses, it is standard practice to evaluate two future conditions: The No-Build Condition (without the proposed project) and the Build Condition (with the proposed project). In accordance with BTD guidelines, these conditions are projected to a future date, five years from the current year. For the evaluation of this Project, 2020 was selected as the horizon year for the future conditions analyses.

This section presents a description of the 2020 future conditions scenarios and includes an evaluation of the transportation facilities under the No-Build Condition and the Build Condition.

4.3.1 NO-BUILD CONDITION

The No-Build Condition reflect a future scenario that incorporates anticipated traffic volume changes independent of the Project, and planned infrastructure improvements that will affect travel patterns throughout the study area. Infrastructure improvements include roadway, public transportation, pedestrian and bicycle improvements. The methodology to account for future traffic growth, independent of the Project, consists of two parts. A background traffic growth rate and growth associated with specific developments near the Project.

Background Traffic Growth

The first part of the methodology accounts for general background traffic growth that may be affected by changes in demographics, automobile usage, and automobile ownership. Based on a review of recent and historic traffic data collected for nearby projects and to account for any additional unforeseen traffic growth, a half-percent per year annual traffic growth rate was used to develop the future conditions traffic volumes.

Background Projects

The second part of the methodology identifies any specific planned developments that are expected to affect traffic patterns throughout the study area within the future analysis time horizon. The following projects are located in the vicinity of the study area:

Boston University Medical Center (BUMC) Institutional Master Plan (IMP) – This project consists of the 6 projects part of the BUMC IMP. The BUMC is located west of the Project Site along Harrison Avenue and Albany Street. In total, these projects consist of approximately 433,100 sf of medical space, 195,000 sf of research and development space, and 160 sf of office space. The projects, the building program and the status are listed below:

- ***Biosquare II NEIDL*** – 195,000 SF Research and Development – Construction Complete

- ***BUMC Administration and Clinical Building*** – 160,000 SF Office – BRA Board Approved
- ***BUMC Energy Facility*** – 38,500 SF Energy Plant – BRA Board Approved
- ***BUMC Moakley Cancer Center Addition*** – 27,800 SF Hospital – BRA Board Approved
- ***BUMC New Inpatient Building (Phase 1)*** – 82,300 SF Hospital – BRA Board Approved
- ***BUMC New Inpatient Building (Phase 2)*** – 323,000 SF Hospital – BRA Board Approved

Northampton Square – This project is located to the west of the project site and calls for the rehabilitation of the existing 102 unit rental building located at 860 Harrison Avenue and the construction of a new, 211-unit tower at the corner of Albany Street and Northampton Street. This project has been approved by the BRA.

488 Dorchester Avenue – This project is located northeast of the Project site and will consist of the construction of 33 condominiums, approximately 2,091 sf of ground floor retail with 33 parking spaces. This project has been approved by the BRA.

A map of the background projects are shown in **Figure 4.9**.

Proposed Infrastructure Improvements

A review of planned improvements to roadway, transit, bicycle, and pedestrian facilities was conducted to determine if there are any nearby improvement projects in the vicinity of the study area. Based on this review, there are no proposed improvement projects in the vicinity of the study area.

No-Build Condition Traffic Conditions

The half-percent per year annual growth rate was applied to the 2014 Existing Condition traffic volumes, then the traffic volumes associated with the background development projects were added to develop the 2020 No-Build Condition traffic volumes. The 2020 No-Build a.m. and p.m. peak hour traffic volumes are shown on **Figure 4.10** and **Figure 4.11**, respectively.

Figure 4.9 / Background Projects

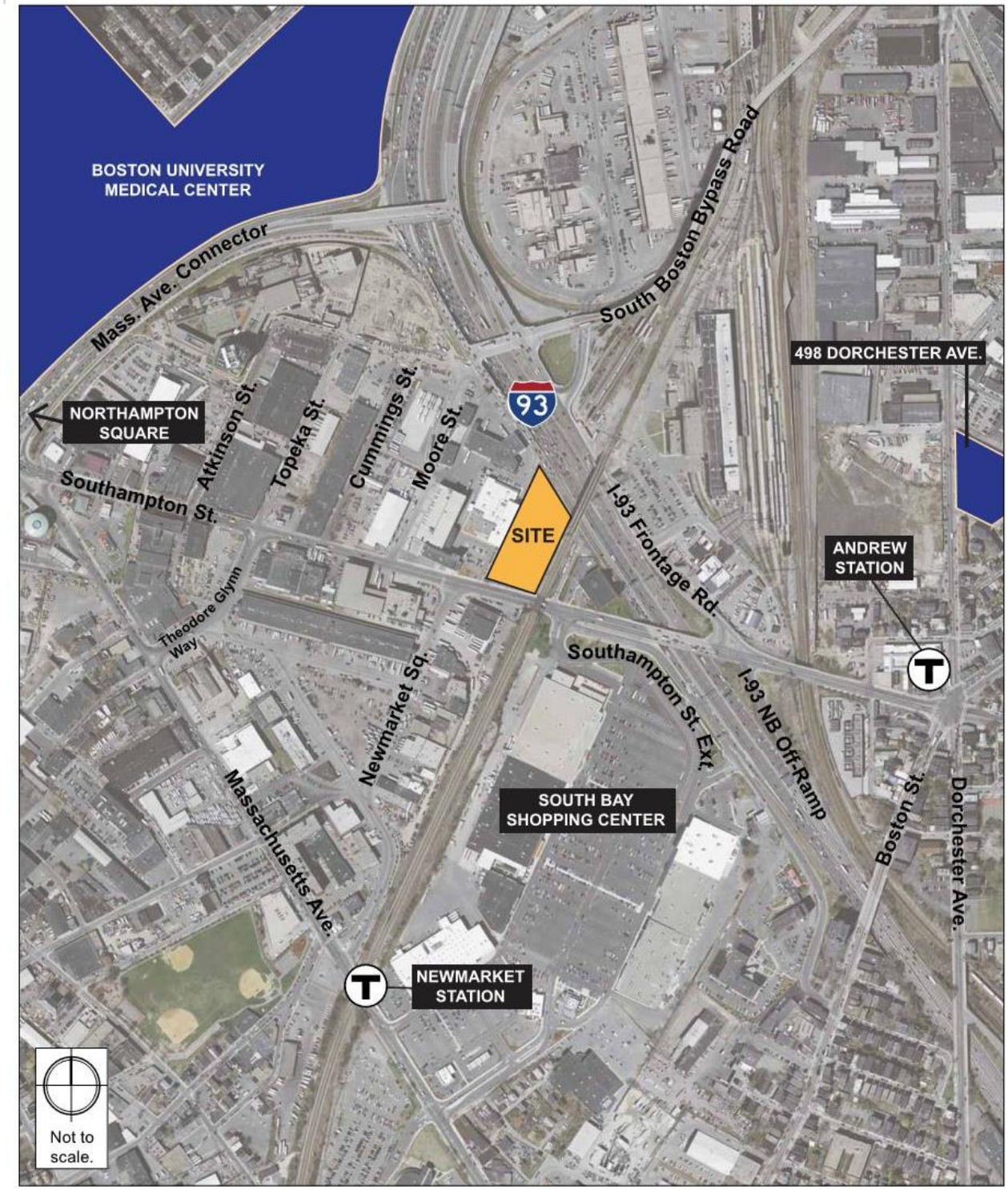


Figure 4.10 / No-Build Condition (2020) Turning Movement Volumes, a.m. Peak Hour

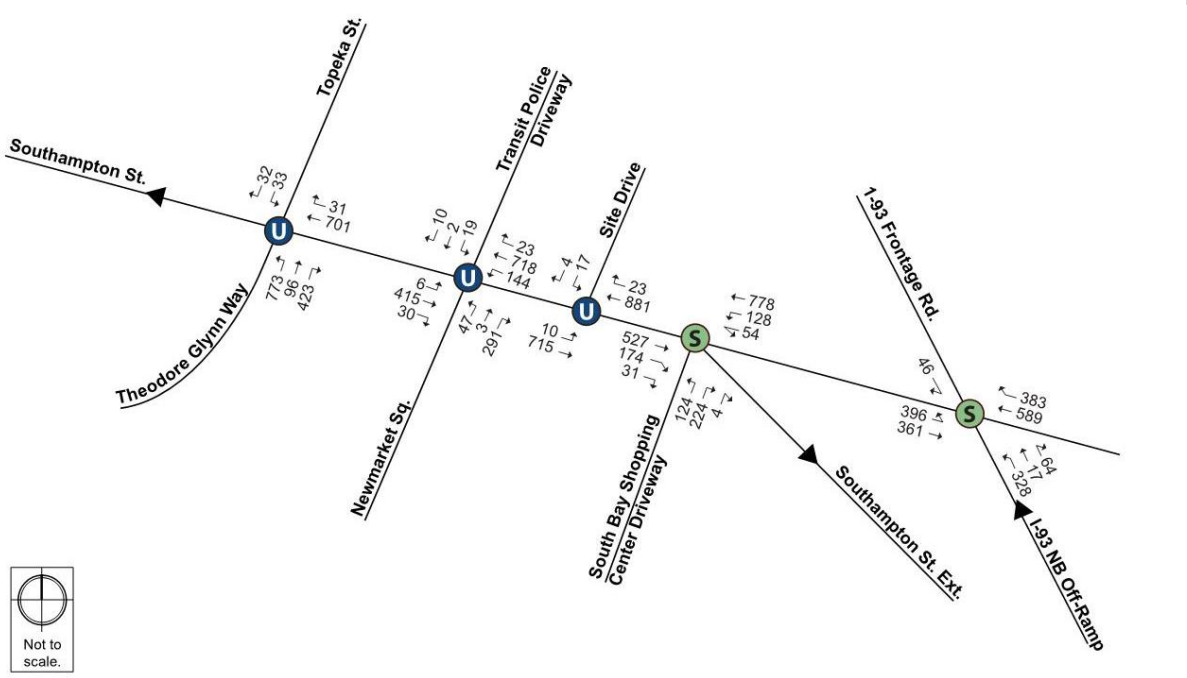
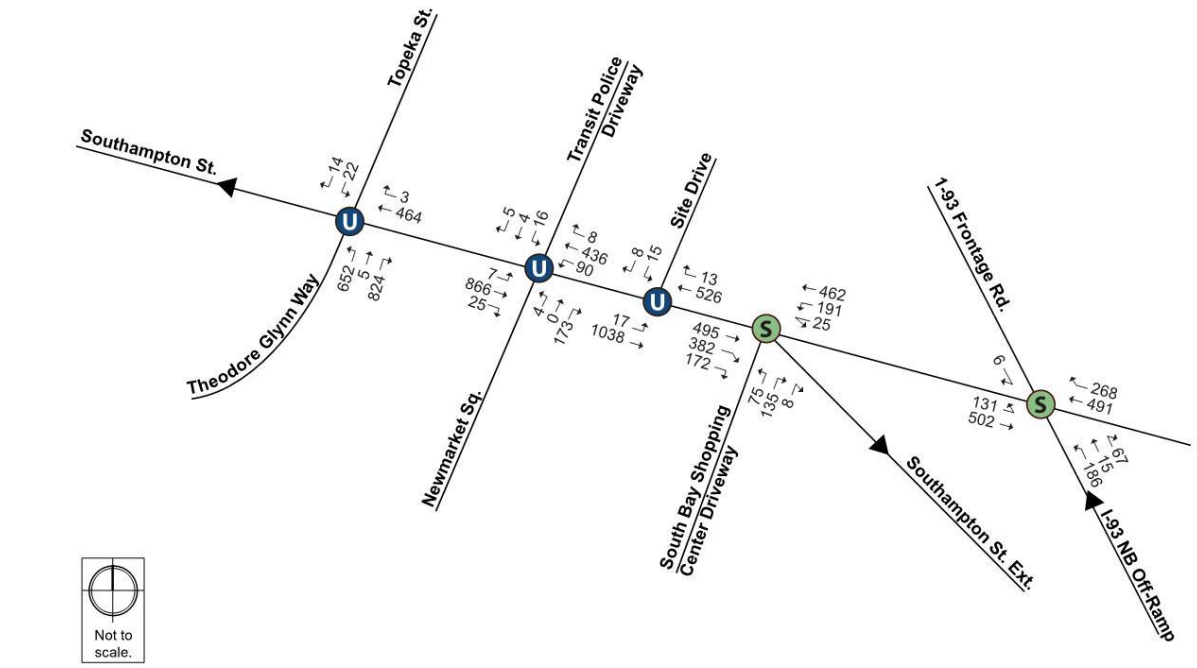


Figure 4.11 / No-Build Condition (2020) Turning Movement Volumes, p.m. Peak Hour



No-Build Condition Traffic Operations

The 2020 No-Build Condition scenario analysis uses the same methodology as the 2014 Existing Condition scenario analysis. **Table 5** and **Table 6** present the 2020 No-Build Condition operations analysis for the a.m. and p.m. peak hours, respectively. The detailed analysis sheets are provided in the **Appendix**.

Table 4-5 No-Build Condition (2020), Capacity Analysis Summary, a.m. Peak Hour

Intersection	LOS	Delay (seconds)	V/C Ratio	50th Percentile Queue Length (ft)	95th Percentile Queue Length (ft)
Signalized					
Southampton Street/South Bay Shopping Center/Southampton Street Extension	D	49.1	-	-	-
Southampton Street EB thru|thru/right	D	45.6	0.77	335	437
Southampton Street WB left/thru|thru	D	45.1	0.93	~370	#546
South Bay Shopping Center NB left	D	50.9	0.44	101	185
South Bay Shopping Center NB right	E	75.5	0.85	206	#367
Southampton Street/I-93 NB Frontage Road/I-93 NB Off-Ramp	C	34.6	-	-	-
Southampton Street EB left	C	33.6	0.77	135	#278
Southampton Street EB left/thru	C	31.2	0.82	197	#311
Southampton Street WB thru|thru	D	45.3	0.79	195	260
Southampton Street WB right	D	38.7	0.85	144	#309
I-93 NB Off-Ramp NB left	C	32.3	0.60	188	284
I-93 NB Off-Ramp NB thru	C	22.3	0.03	8	24
I-93 NB Off-Ramp NB right	A	0.6	0.12	0	3
I-93 Frontage Road SB right	A	0.7	0.17	0	0
Unsignalized					
Southampton Street/Newmarket Street/Transit Police Driveway	-	-	-	-	-
Southampton Street EB left/thru|thru/right	A	0.3	0.15	-	1
Southampton Street WB left/thru|thru/right	A	4.2	0.25	-	15
Newmarket Street NB left/thru/right	C	19.4	0.53	-	80
Transit Police Driveway SB left/thru/right	F	>50.0	0.63	-	70
Southampton Street/Theodore Glynn Way/Topeka Street	-	-	-	-	-
Southampton Street WB thru|thru/right	A	0.0	0.31	-	0
Theodore Glynn Way NB left|left	A	0.0	0.0	-	0
Theodore Glynn Way NB thru	C	24.4	0.36	-	39
Theodore Glynn Way NB right	A	0.0	0.0	-	0
Topeka Street SB left/right	F	>50.0	0.82	-	103
Southampton Street/Site Driveway	-	-	-	-	-
Southampton Street EB left/thru|thru	A	0.6	0.32	-	1
Southampton Street WB thru|thru/right	A	0.0	0.39	-	0
Site Driveway SB left/right	D	31.6	0.25	-	23

~ *Volume exceeds capacity, queue is theoretically infinite. Queue shown is the maximum after two cycles.*
\# *95th percentile volume exceeds capacity, queue may be longer. Queue shown is the maximum after two cycles.*

Table 4-6 No-Build Condition (2020), Capacity Analysis Summary, p.m. Peak Hour

Intersection	LOS	Delay (seconds)	V/C Ratio	50th Percentile Queue Length (ft)	95th Percentile Queue Length (ft)
Signalized					
Southampton Street/South Bay Shopping Center/Southampton Street Extension	D	41.3	-	-	-
Southampton Street EB thru|thru/right	D	47.7	0.92dr	508	#737
Southampton Street WB left/thru|thru	C	21.0	0.61	190	272
South Bay Shopping Center NB left	E	57.2	0.38	67	119
South Bay Shopping Center NB right	E	79.4	0.77	136	216
Southampton Street/I-93 NB Frontage Road/I-93 NB Off-Ramp	C	27.5	-	-	-
Southampton Street EB left	B	14.4	0.27	40	73
Southampton Street EB left/thru	C	25.5	0.74	244	363
Southampton Street WB thru|thru	D	40.1	0.66	156	214
Southampton Street WB right	C	23.1	0.62	74	164
I-93 NB Off-Ramp NB left	C	26.5	0.34	96	157
I-93 NB Off-Ramp NB thru	C	22.2	0.03	7	21
I-93 NB Off-Ramp NB right	A	0.9	0.12	0	5
I-93 Frontage Road SB right	A	0.0	0.02	0	0
Unsignalized					
Southampton Street/Newmarket Street/Transit Police Driveway	-	-	-	-	-
Southampton Street EB left/thru|thru/right	A	0.2	0.29	-	1
Southampton Street WB left/thru|thru/right	A	5.2	0.16	-	15
Newmarket Street NB left/thru/right	C	19.2	0.46	-	59
Transit Police Driveway SB left/thru/right	F	>50.0	0.48	-	50
Southampton Street/Theodore Glynn Way/Topeka Street	-	-	-	-	-
Southampton Street WB thru|thru/right	A	0.0	0.20	-	0
Theodore Glynn Way NB left|left	A	0.0	0.00	-	0
Theodore Glynn Way NB thru	B	13.5	0.01	-	1
Theodore Glynn Way NB right	A	0.0	0.00	-	0
Topeka Street SB left/right	F	>50.0	>1.00	-	120
Southampton Street/Site Driveway	-	-	-	-	-
Southampton Street EB left/thru|thru	A	0.6	0.46	-	1
Southampton Street WB thru|thru/right	A	0.0	0.23	-	0
Site Driveway SB left/right	C	24.9	0.21	-	19

dr Defacto right turn lane
 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is the maximum after two cycles.

As shown in **Table 4-5** and **Table 4-6**, the signalized intersection of Southampton Street/South Bay Shopping Center/Southampton Street will continue to operate at LOS D during both the weekday a.m. and p.m. peak hours under the No-Build Condition. All approaches will continue to operate at the same LOS under the No-Build Condition as the Existing Condition during both the weekday a.m. and p.m. peak hours. The longest queues will continue to occur along the Southampton Street westbound approach during the weekday a.m. peak hour and along the Southampton Street eastbound approach during the weekday p.m. peak hour.

The signalized intersection of **Southampton Street/I-93 NB Frontage Road/I-93 NB Off-Ramp** will continue to operate at LOS C during both the weekday a.m. and p.m. peak hours under the No-Build Condition. All approaches will continue to operate at the same LOS under the No-Build Condition as compared to the Existing Condition during both the weekday a.m. and p.m. peak hours. The longest queues will occur along the Southampton Street eastbound approach during the weekday a.m. peak hour and along the Southampton Street eastbound approach during the weekday p.m. peak hour.

The critical movements at the unsignalized intersection of **Southampton Street/ Newmarket Street/Transit Police Driveway** (the Transit Police Driveway southbound left/thru/right approach) will continue to operate at LOS F during both the weekday a.m. and p.m. peak hours under the No-Build Condition. The longest queues will continue to occur along the Newmarket Square northbound approach during both the weekday a.m. and p.m. peak hours.

The critical movements at the unsignalized intersection of **Southampton Street/ Theodore Glynn Way/Topeka Street** (the Topeka Street southbound left/right approach) will continue to operate at LOS F during both the weekday a.m. and p.m. peak hours under the No-Build Condition. The longest queues will continue to occur along the Topeka southbound approach during both the weekday a.m. and p.m. peak hours.

All movements at the unsignalized intersection of **Southampton Street/Site Driveway**, will continue to operate at LOS D or better during both the weekday a.m. and p.m. peak hours. The longest queues will continue to occur along the Site Driveway southbound approach during both the weekday a.m. and p.m. peak hours.

In general, operations at the study area intersections under the No-Build Condition will continue to operate similar to the Existing Condition.

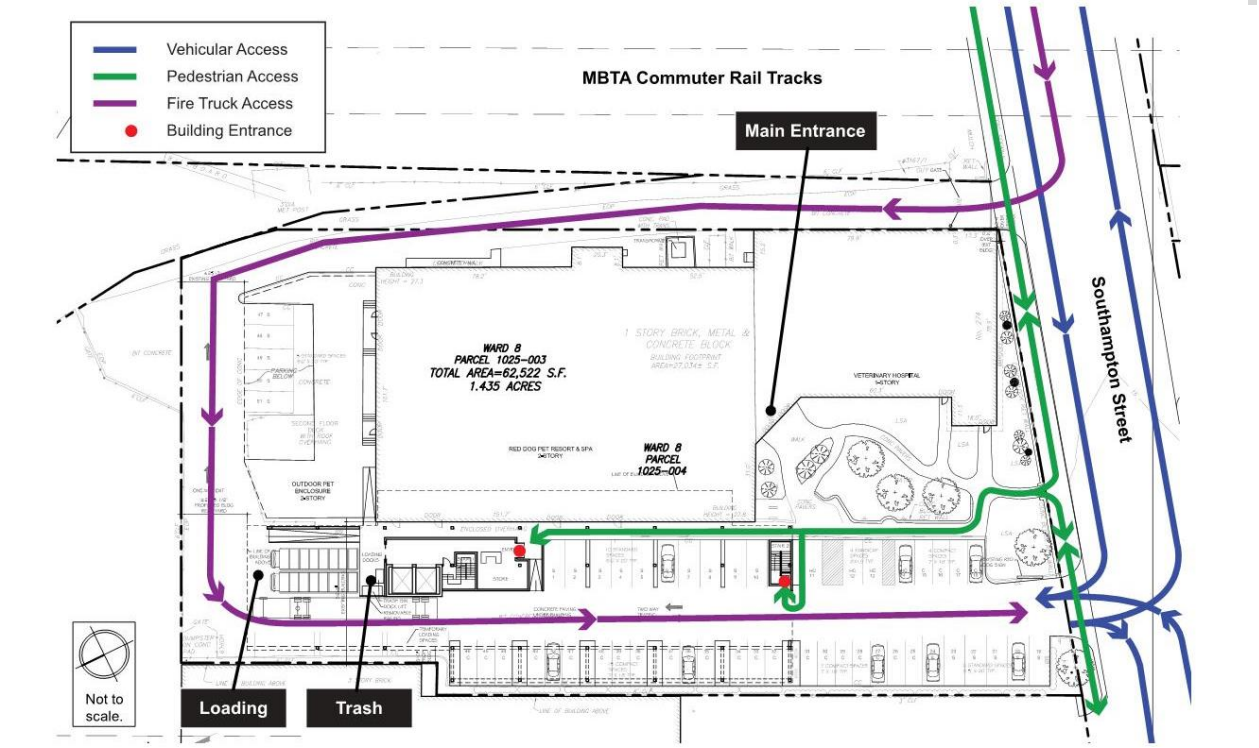
4.3.2 BUILD CONDITION

As previously summarized, the Project will expand the existing building with the construction of six new floors containing 83,300 square feet of self-storage space. The self-storage space will be located above the existing parking area. The parking will be reconfigured to contain a total of 51 parking spaces (a reduction of 14 spaces from existing), and two loading docks.

Site Access and Circulation

As shown in the Project site plan in **Figure 4.12**, vehicular access to the parking lot will continue to be provided by the two existing curb cuts along Southampton Street that serve the site. Primary pedestrian access to the building will also continue to be provided by the main entrance on the southwest corner of the building as well as additional entrances to the self-storage facility through that can be accessed through the reconfigured parking area. The site will be able to accommodate a fire truck to circle the site in a counterclockwise direction, entering through the gate located adjacent to the east of the Project site.

Figure 4.12 / Site Access Plan



Trip Generation Methodology

Trip generation is a complex, multi-step process that produces an estimate of vehicle trips, transit trips, walk trips, and bicycle trips associated with a proposed development and a specific land use program. A project's location and proximity to different travel modes determines how people will travel to and from a project site.

To estimate the number of trips expected to be generated by the Project, data published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual*[1] were used. ITE provides data to estimate the total number of unadjusted vehicular trips associated with the Project. In an urban setting well-served by transit, adjustments are necessary to account for other travel mode shares such as walking, bicycling, and transit.

To estimate the number of trips for the Project, the following ITE land use code (LUCs) was used:

Industrial Uses: LUC 151 – Mini-Warehouse

The Mini-Warehouse land use is defined as buildings in which a number of storage units or vaults are rented for the storage of goods. They are typically referred to as "self-storage" facilities. Each unit is physically separated from other units, and access is usually provided through an overhead door or other common access point. Trip generation estimates are based on average vehicle rates per 1,000 sf gross floor area.

Mode Share

The BTD publishes vehicle, transit, and walking/bicycling mode split rates for different areas of Boston. However, due to the nature of self-storage facilities, the BTD mode split data was not used and it was assumed that all trips to/from the site will be made by vehicle.

Trip Generation

The mode share was assumed to be 100% auto trips, therefore there are no walk/bike trips or transit trips associated with the project. The trips associated with the current pet hospital, pet kennel, and pet resort were assumed to remain on the roadway network, as the existing land uses remain unchanged. The Project-generated vehicle trips are summarized in **Table 7**. The detailed trip generation information is provided in the **Appendix**.

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[1] *Trip Generation Manual*, 9th Edition; Institute of Transportation Engineers; Washington, D.C.; 2012.

Table 4-7 Project Vehicle Trip Generation

Time Period	Direction	Existing Uses[1]	Industrial[2]
Daily	In Out Total	Not Available	104 104 208
a.m. Peak Hour	In Out Total	43 21 64	7 5 12
p.m. Peak Hour	In Out Total	30 23 53	11 11 21

Based on counts at the site driveway conducted in December 2014.
Based on ITE LUC 151 – Mini-Warehouse for 83,300 gsf; average rate.

As shown in **Table 4-7**, the Project is expected to generate approximately 208 daily vehicle trips (104 entering and 104 exiting), with 12 vehicle trips during the a.m. peak hour (7 entering and 5 exiting) and 22 vehicle trips during the p.m. peak hour (11 entering and 11 exiting). The Project is expected to generate approximately 1 trip every 6 minutes during the a.m. peak hour and approximately 1 trip every 3 minutes during the p.m. peak hour.

Trip Distribution

The trip distribution identifies the various travel paths for vehicles arriving and leaving the Project site. Trip distribution patterns for the Project were based on BTD's origin-destination data for Area 15 and trip distribution patterns presented in traffic studies for nearby projects. The trip distribution patterns for the Project are illustrated in **Figure 4.13**.

The Project-generated vehicle trips, assigned to the study area roadway network based on the trip distribution patterns, are shown in **Figure 4.14** and **Figure 4.15** for the a.m. and p.m. peak hours, respectively. The Project-generated trips were added to the 2020 No-Build Condition traffic volumes to develop the 2020 Build Condition peak hour traffic volume networks, and are shown in **Figure 4.16** and **Figure 4.17** for the a.m. and p.m. peak hours, respectively.

Figure 4.13 / Vehicle Trip Distribution

Figure 4.14 / Project Generated Trips, a.m. Peak Hour

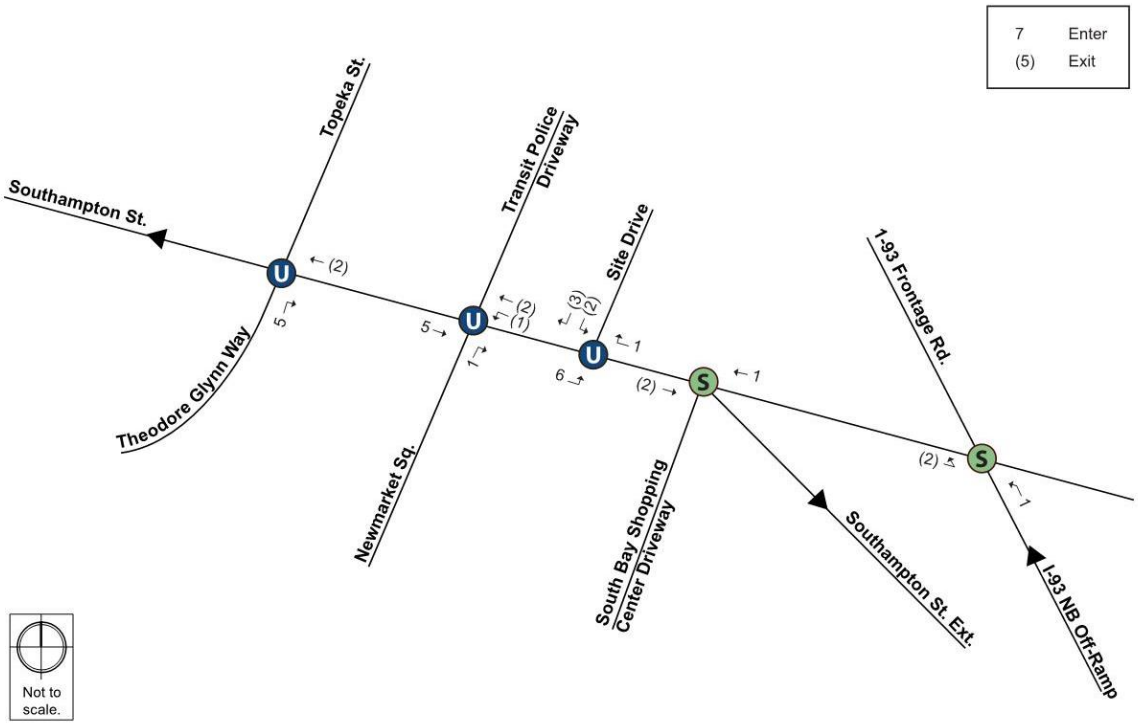


Figure 4.15 / Project Generated Trips, p.m. Peak Hour

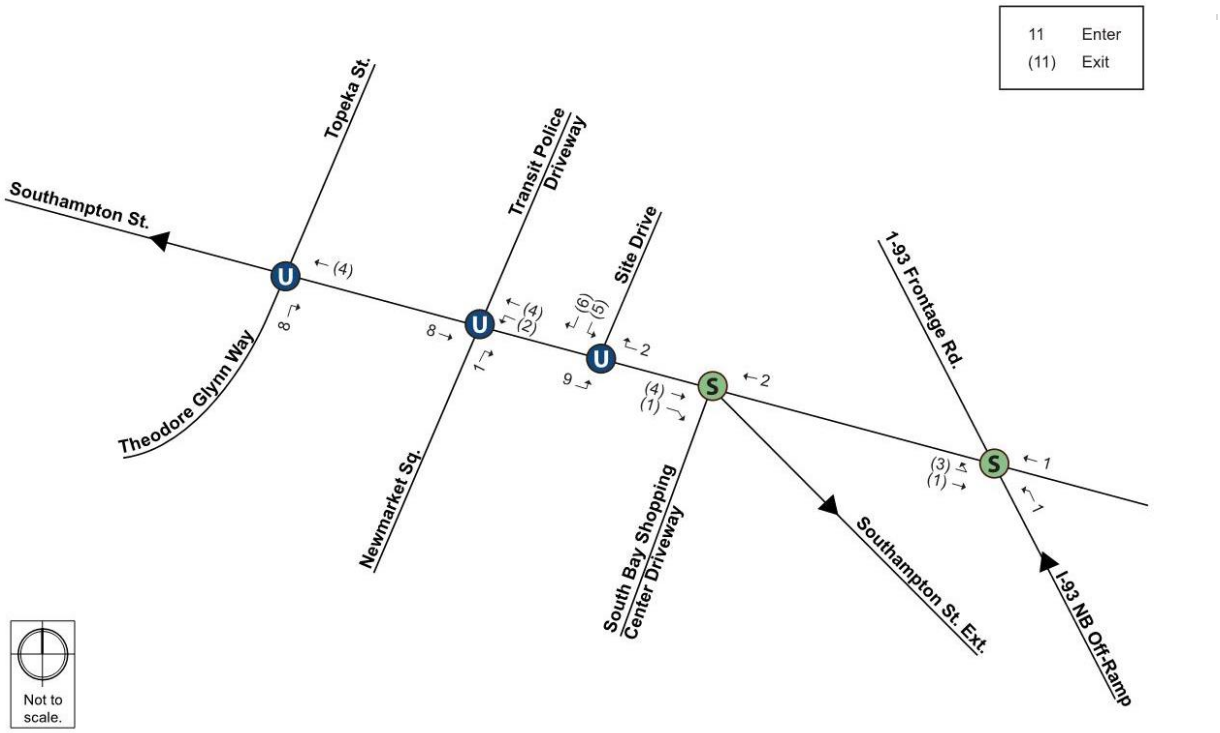


Figure 4.16 / Build Condition (2019) Turning Movement Volumes, a.m. Peak Hour

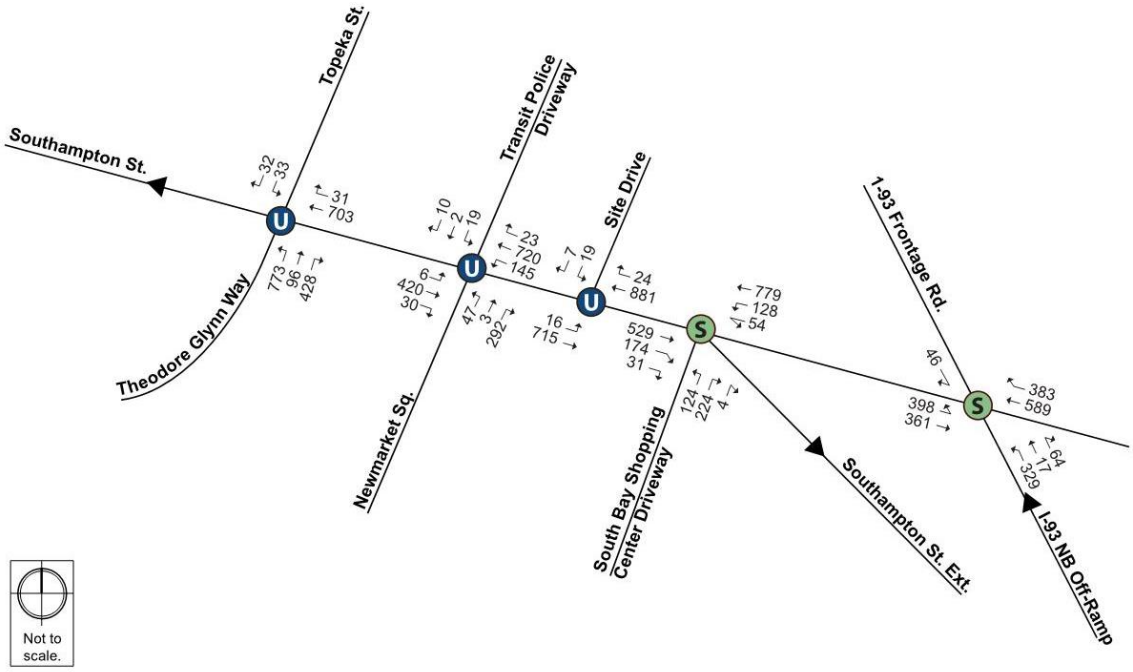
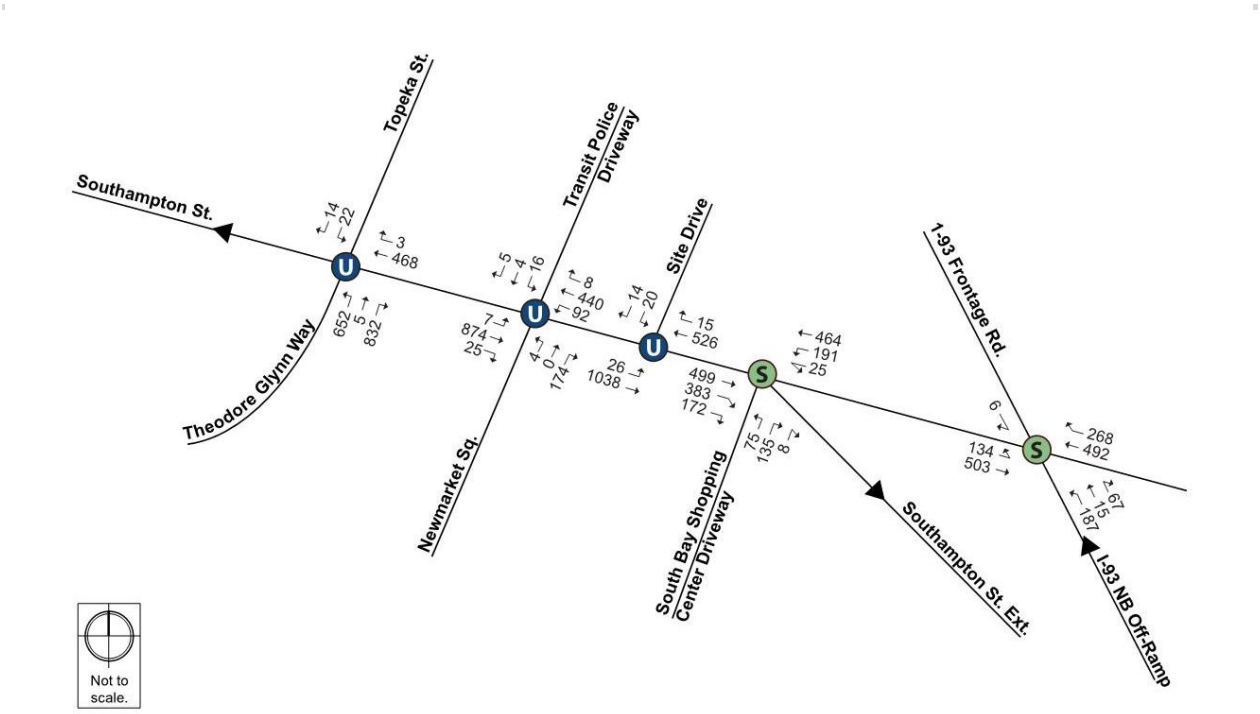


Figure 4.17 / Build Condition (2019) Turning Movement Volumes, p.m. Peak Hour



Build Condition Traffic Operations

The 2020 Build Condition scenario analysis uses the same methodology as the 2014 Existing Condition and the 2020 No-Build Condition scenario analyses. The results of the 2020 Build Condition traffic analysis at study area intersections are presented in **Table 8** and **Table 9** for the a.m. and p.m. peak hours, respectively. The detailed analysis sheets are provided in the **Appendix**. Based on the analysis, the Project is expected to have a minimal impact upon intersection operations throughout the study area.

Table 4-8 Build Condition (2020), Capacity Analysis Summary, a.m. Peak Hour

Intersection	LOS	Delay (seconds)	V/C Ratio	50th Percentile Queue Length (ft)	95th Percentile Queue Length (ft)
Signalized					
Southampton Street/South Bay Shopping Center/Southampton Street Extension	D	49.2	-	-	-
Southampton Street EB thru|thru/right	D	45.6	0.77	336	438
Southampton Street WB left/thru|thru	D	45.3	0.93	~371	#548
South Bay Shopping Center NB left	D	51.0	0.44	102	185
South Bay Shopping Center NB right	E	75.7	0.85	206	#367
Southampton Street/I-93 NB Frontage Road/I-93 NB Off-Ramp	D	35.0	-	-	-
Southampton Street EB left	C	33.3	0.77	134	#276
Southampton Street EB left/thru	C	33.2	0.84	200	#328
Southampton Street WB thru|thru	D	45.3	0.79	195	260
Southampton Street WB right	D	38.7	0.85	144	#309
I-93 NB Off-Ramp NB left	C	32.4	0.60	190	287
I-93 NB Off-Ramp NB thru	C	22.3	0.03	8	24
I-93 NB Off-Ramp NB right	A	0.6	0.12	0	3
I-93 Frontage Road SB right	A	0.7	0.17	0	0
Unsignalized					
Southampton Street/Newmarket Street/Transit Police Driveway	-	-	-	-	-
Southampton Street EB left/thru|thru/right	A	0.3	0.15	-	1
Southampton Street WB left/thru|thru/right	A	4.3	0.25	-	15
Newmarket Street NB left/thru|right	C	19.7	0.54	-	81
Transit Police Driveway SB left/thru/right	F	>50.0	0.65	-	72
Southampton Street/Theodore Glynn Way/Topeka Street	-	-	-	-	-
Southampton Street WB thru|thru/right	A	0.0	0.31	-	0
Theodore Glynn Way NB left|left	A	0.0	0.00	-	0
Theodore Glynn Way NB thru	C	24.5	0.36	-	40
Theodore Glynn Way NB right	A	0.0	0.00	-	0
Topeka Street SB left/right	F	>50.0	0.83	-	106
Southampton Street/Site Driveway	-	-	-	-	-
Southampton Street EB left/thru|thru	A	0.9	0.32	-	2
Southampton Street WB thru|thru/right	A	0.0	0.39	-	0
Site Driveway SB left/right	D	31.9	0.29	-	29

~ *Volume exceeds capacity, queue is theoretically infinite. Queue shown is the maximum after two cycles.*
\# *95th percentile volume exceeds capacity, queue may be longer. Queue shown is the maximum after two cycles.*

Table 4-9 Build Condition (2020), Capacity Analysis Summary, p.m. Peak Hour

Intersection	LOS	Delay (seconds)	V/C Ratio	50th Percentile Queue Length (ft)	95th Percentile Queue Length (ft)
Signalized					
Southampton Street/South Bay Shopping Center/Southampton Street Extension	D	41.5	-	-	-
Southampton Street EB thru|thru/right	D	48.1	0.93dr	512	#744
Southampton Street WB left/thru|thru	C	21.1	0.61	191	273
South Bay Shopping Center NB left	E	57.2	0.38	67	119
South Bay Shopping Center NB right	E	79.4	0.77	136	216
Southampton Street/I-93 NB Frontage Road/I-93 NB Off-Ramp	C	27.5	-	-	-
Southampton Street EB left	B	14.5	0.28	42	75
Southampton Street EB left/thru	C	25.6	0.74	244	364
Southampton Street WB thru|thru	D	40.1	0.66	157	214
Southampton Street WB right	C	23.1	0.62	74	164
I-93 NB Off-Ramp NB left	C	26.6	0.34	96	157
I-93 NB Off-Ramp NB thru	C	22.2	0.03	7	21
I-93 NB Off-Ramp NB right	A	0.9	0.12	0	5
I-93 Frontage Road SB right	A	0.0	0.02	0	0
Unsignalized					
Southampton Street/Newmarket Street/Transit Police Driveway	-	-	-	-	-
Southampton Street EB left/thru|thru/right	A	0.2	0.29	-	1
Southampton Street WB left/thru|thru/right	A	5.3	0.17	-	15
Newmarket Street NB left/thru|right	C	19.5	0.46	-	60
Transit Police Driveway SB left/thru/right	F	>50.0	0.50	-	52
Southampton Street/Theodore Glynn Way/Topeka Street	-	-	-	-	-
Southampton Street WB thru|thru/right	A	0.0	0.20	-	0
Theodore Glynn Way NB left|left	A	0.0	0.00	-	0
Theodore Glynn Way NB thru	B	13.5	0.01	-	1
Theodore Glynn Way NB right	A	0.0	0.00	-	0
Topeka Street SB left/right	F	>50.0	>1.00	-	123
Southampton Street/Site Driveway	-	-	-	-	-
Southampton Street EB left/thru|thru	A	0.9	0.46	-	2
Southampton Street WB thru|thru/right	A	0.0	0.23	-	0
Site Driveway SB left/right	D	26.6	0.30	-	30

dr Defacto right turn lane
 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is the maximum after two cycles.

As shown in **Table 4-8** and **Table 4-9**, the signalized intersection of **Southampton Street/South Bay Shopping Center/Southampton Street** will continue to operate at LOS D during both the weekday a.m. and p.m. peak hours under the Build Condition. All approaches will continue to operate at the same LOS during the Build Condition as the No-Build Condition during both the weekday a.m. and p.m. peak hours. The longest queues will continue to occur at the Southampton Street westbound approach during the weekday a.m. peak hour and will continue to at the Southampton Street eastbound approach during the weekday p.m. peak hour.

The signalized intersection of **Southampton Street/I-93 NB Frontage Road/I-93 NB Off-Ramp** will continue to operate at LOS D or better during both the weekday a.m. and p.m. peak hours under the Build Condition. All approaches will continue to operate at the same LOS during the Build Condition as compared to the No-Build Condition during both the weekday a.m. and p.m. peak hours. The longest queues will continue to occur along the Southampton Street eastbound approach during the weekday a.m. peak hour and along the Southampton Street eastbound approach during the weekday p.m. peak hour.

The critical movements at the unsignalized intersection of **Southampton Street/ Newmarket Street/Transit Police Driveway** (the Transit Police Driveway southbound left/thru/right approach) will continue to operate at LOS F during both the weekday a.m. and p.m. peak hours. The longest queues will continue to occur along the Newmarket Square northbound approach during both the weekday a.m. and p.m. peak hours.

The critical movements at the unsignalized intersection of **Southampton Street/ Theodore Glynn Way/Topeka Street** (the Topeka Street southbound left/right approach) will continue to operate at LOS F during both the weekday a.m. and p.m. peak hours. The longest queues will continue to occur along the Topeka southbound approach during both the weekday a.m. and p.m. peak hours.

All movements at the unsignalized intersection of **Southampton Street/Site Driveway**, will continue to operate at LOS D or better under the Build Condition during both the weekday a.m. and p.m. peak hours. The longest queues will continue to occur along the Site Driveway southbound approach during both the weekday a.m. and p.m. peak hours.

Parking

This section presents the Project's parking supply and an evaluation of the Project's parking demand. Currently the parking lot is an open surface lot containing 65 parking spaces. The parking will be reconfigured with the Project and will continue to be provided in the western portion of the site by at-grade spaces located under the propose self-storage facility. The Project will have 51 parking spaces for all of the uses on the site. Of those spaces, 21 spaces are designated as standard spaces (20 ft by 8.5 ft). An additional 26 spaces are proposed to be designated as compact spaces (18 ft by 7 ft). The remaining four spaces are proposed to be designated as handicapped spaces (18 ft by 8 ft). This results in a parking ratio of approximately 0.4 spaces per 1,000 square feet for all uses on the site. The self-storage facility is a relatively low parking generator and only requires minimal parking supply. Additionally, it is expected that the peak parking demands for the uses on the site will not coincide with each other.

Loading and Service Activity

Loading and service operations function as a critical component to a self-storage facility due to the users that require move-in/move-out services. Loading will take place on the Project site in the northwest corner of the site at the two proposed loading docks. The loading docks will be able to accommodate an SU-36 box truck (the typical size of a large moving truck or U-Haul). Trash pick-up will take place on the Project site in the northwest corner of the site near the loading docks. Deliveries and will remain unchanged and will take place on the Project site in front of the main entrance. Mail delivery will take place in the driveway next to the main entrance. The Project site plan is shown in **Figure 12**.

4.4 Transportation Mitigation Measures

While the traffic impacts associated with the new Project generated trips are minimal, the Proponent will continue to work with the City of Boston to create a Project that efficiently serves vehicle trips, improves the pedestrian environment, and encourages transit and bicycle use. As part of the Project, the Proponent will bring all abutting sidewalks and pedestrian ramps to the City of Boston standards in accordance with the Boston Complete Streets design guidelines. This will include the reconstruction and widening of the sidewalks where possible, the installation of new, accessible ramps, improvements to street lighting where necessary, planting of street trees, and providing bicycle storage racks surrounding the site, where appropriate.

The Proponent is responsible for preparation of the Transportation Access Plan Agreement (TAPA), a formal legal agreement between the Proponent and the BTD. The TAPA formalizes the findings of the transportation study, mitigation commitments, elements of access and physical design, travel demand management measures, and any other responsibilities that are agreed to by both the Proponent and the BTD. Because the TAPA must incorporate the results of the technical analysis, it must be executed after these other processes have been completed. The proposed measures listed above and any additional transportation improvements to be undertaken as part of this Project will be defined and documented in the TAPA.

The Proponent will also 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.

4.5 Transportation Demand Management

The Proponent is committed to implementing Transportation Demand Management (TDM) measures to minimize automobile usage and Project related traffic impacts. TDM will be facilitated by the nature of the Project (which does not generate significant peak hour trips) and its proximity to numerous public transit alternatives.

On-site management will keep a supply of transit information (schedules, maps, and fare information) to be made available to the employees and users of the site. The Proponent will work with the City to develop a TDM program appropriate to the Project and consistent with its level of impact.

The TDM measures for the Project may include but are not limited to the following:

- **Orientation Packets**: The Proponent will provide orientation packets to employees containing information on available transportation choices, including transit routes/schedules and nearby vehicle sharing and bicycle sharing locations. On-site management will work with residents and tenants as they move in to help facilitate transportation for new arrivals.
- **Bicycle Accommodation**: The Proponent will provide bicycle storage in secure, sheltered areas for employees. Subject to necessary approvals, public use bicycle racks for visitors will be placed near building entrances.
- **Transportation Coordinator**: The Proponent will designate a transportation coordinator to oversee transportation issues, including parking, service and loading, and deliveries, and will work with patrons and employees to raise awareness of public transportation, bicycling, and walking opportunities.
- **Project Web Site**: The web site will include transportation-related information for residents, workers, and visitors.
- **Vehicle Sharing Program:** The Proponent is actively pursuing the feasibility of providing parking in the garage for a car sharing service.

4.6 Evaluation of Short-term Construction Impacts

Details of the overall construction schedule, working hours, number of construction workers, worker transportation and parking, number of construction vehicles, and routes will be addressed in detail in a CMP to be filed with BTD in accordance with the City's transportation maintenance plan requirements. The CMP will also address the need for pedestrian detours, lane closures, and/or parking restrictions, if necessary to accommodate a safe and secure work zone.

To minimize transportation impacts during the construction period, the following measures will be considered for the CMP:

- Construction workers will be encouraged to use public transportation and/or carpool;
- A subsidy for MBTA passes will be considered for full-time construction employees; and
- Secure spaces will be provided on-site for workers' supplies and tools so they do not need to be brought to the site each day.

The CMP will be executed with the City prior to commencement of construction and will document all committed measures.

5.0 INFRASTRUCTURE SYSTEMS

5.0 Introduction

The client proposes to construct a self storage facility in the Newmarket Industrial-Commercial District of Boston at 274 Southampton Street. The structure will be constructed in the open parking area between two existing 2 story buildings.

Parking for both the existing businesses Red Dog Pet Resort and Veterinarian service and the new structure will be shared on grade. The proposed new structure will span above the parking.

The proposed building will be classified as a high-rise structure, type 1B construction and use group S-1 Moderate Storage. The structure will be independent of the existing building. The overall building dimensions are 218' x 75' x 128' high. The building orients in the long direction essentially north to south. There are 8 floors, the first 2 floors have a small retail and cubicle component and the top 6 are designated for self storage. The proposed building is 82,500 gsf.

The Proponent's Engineer will initiate contact with those responsible for the area's utility systems, including the Boston Water and Sewer Commission ("BWSC") to understand and evaluate each system and design the Project to prevent disruption of utility services. A Boston Water and Sewer Commission Site Plan and General Service Application is required for the proposed new water, sewer and drain connections. In addition, a Pollution Prevention Plan will be submitted specifying best management measures for protecting the BWSC drainage system during construction. A Drainage Discharge permit will also be required prior to discharge of any construction dewatering. The entire site is subject to notice of Activity and Use Limitation. Updated design information on the proposed utility connections, as appropriate, will be provided to the BWSC and other permitting agencies as required.

The following is a description of the existing utility systems in the area surrounding the project site and the proposed infrastructure to support the new development.

5.1 Sanitary Sewer System

5.1.1 Existing Sewer System

BWSC owns, operates, and maintains the sewer system in the area serving the proposed project. Currently the site is serviced by 2 sanitary sewer lines connected to an 18" sewer main line located in Southampton Street. The 18" sanitary sewer line which runs in an easterly direction in the center of the road continues down Southampton Street and services both sides of the street. A 12" sewer line from the southerly side of the street runs in a westerly direction and joins the 18"

line to a manhole then continues flowing easterly. **Figure 1. Existing Conditions Plan of Land** showing sanitary sewer system in the project area.

5.1.2 Project-Generated Sewage Flow

The Project's sanitary sewage system will connect to the existing BWSC sanitary sewage system located in Southampton Street. The Proposed Project is estimated to generate approximately 475 gallons per day (gpd) based on sewage generation rates provided in 310 CMR 15.203 (Title V) and in 314 CMR 7.00 Sewer System Extension and Connection Permit Program. Sewer generation rates are as follows: 1) 15 gallons per day (gpd) per person for Dry Storage Space without cafeteria, assuming 2 employees and 3 storage space users; 2). 75 gallons per day (gpd) per 1,000 sq.ft. for Office Space with minimum allowable of 200 gpd; 3) 50 gallons per day (gpd) per 1,000 sq.ft. for Retail Store with a minimum allowable of 200 gpd.

5 people @ 15 gallons per day (gpd) per person =	75 gpd
280 sf/1,000 sf @ 75 gpd, min. 200 gpd =	200 gpd
1,100 sf/1,000 sf @ 50 gpd, min. 200 gpd =	200 gpd
Total gallons per day (gpd) =	**475 gpd**

The Proponent's civil engineer, GEOD Consulting, Inc. will adjust and provide updated sewage flows to the BWSC if more exact commercial, office, and retail use is determined and when the General Services Application is submitted for the Project.

The Project does not propose industrial uses and flows are expected to be under the 50,000 gpd that would require filing with the Massachusetts Department of Environmental Protection for a Sewer Connection Permit or Compliance Certificate, respectively.

5.1.3 Sanitary Sewage Connection

It is expected that the proposed connection from the development to the BWSC sanitary sewer system will be to the 18" sanitary sewer line on Market Street. The existing sanitary sewer service from the site will be evaluated to assess its size and condition in order to determine if will be acceptable to support the proposed development. Depending upon the outcome of the analysis, the service will be either maintained or replaced. The Proponent's engineer will submit a Site Plan to the BWSC for review and approval. The capacity and the projected flows anticipated for potential connection will be reviewed with the BWSC and the preferred connection incorporated into the final analysis.

5.1.4 Proposed Effluent Quality

The Project is not anticipated to generate any industrial wastes. Floor drains in the lower level parking facility will be used to collect flows and direct them to oil and grease separators where they will be treated before discharging to the BWSC sanitary sewer system.

5.1.5 Sewer System Mitigation

The Project Proponent will investigate the use of water conservation devices such as low-flow toilets and flow restricting faucets in an effort to conserve water and reduce the amount of wastewater which the Project will generate.

5.2 Water System

5.2.1 Existing Water Service

The water mains in the vicinity of the Project Site are owned and maintained by the BWSC. The site is currently serviced by 3 water lines that connect to a 16" water main located on the southerly side of Southampton Street. A second 30" water main is located in the center of the road but there appears to be no connection to the site. The Proponent's engineer will determine if the existing lines are sufficient to meet the needs of the proposed domestic use with the BWSC. A fire hydrant is located on the southerly side of Southampton Street directly across from the site. The Proponent's engineer will determine if the location is sufficient for fire protection needs with the BWSC and Fire Department during the detailed project design phase. **Figure 1 Existing Conditions Plan of Land** shows the existing water distribution system in the project area.

5.2.2 Anticipated Water Consumption

The Maximum daily water demand is based on the sewage flow estimate identified in Section 1.2.2 of 475 gallons per day.

Since the heating and cooling systems for the building have not yet been designed, the water usage estimates may be adjusted during the design phase of the Project.

The project's civil engineer, GEOD Consulting, Inc., will adjust and provide updated water consumption estimates to the BWSC when the building systems are finalized and the General Services Application is submitted for the Project.

5.2.3 Proposed Water Service

It is anticipated that the domestic water and fire service could be provided from the existing 18-inch water main in Southampton Street. It is anticipated that a 2-inch domestic service and a 6-inch fire protection service will connect to the existing 18-inch water main.

Flow tests will be performed for final design of the proposed building fire suppression system during the detailed design phase.

Water service to the building will be metered in accordance with the Commission's Site Plan Requirements. The Proponent will provide for the connection of the meter to the Commission's automatic meter reading system. The property owner will provide a meter transmission unit ("MTU"), approved by the Commission 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 fire protection service. Fire protection connections for the proposed project will need approval by the Fire Chief. The Proponent's engineer will also submit a Site Plan to the BWSC for review and approval. In addition, a hydrant permit will be obtained if hydrant use is anticipated during the construction phase of the proposed project. The Proponent will also provide the Commission with the breakdown of water usage during the design development phase.

In addition to the new building fire suppression system, the proposed structure will also continue to be serviced by an existing hydrant connected to the water main in Southampton Street.

5.2.4 Water Supply System Mitigation

The State Building Code requires the use of water-conserving fixtures. The Proponent is evaluating water conservation measures such as low-flow toilets and restricted flow faucets which will help reduce the domestic water demand on the existing distribution system.

5.3 Storm Drainage System

5.3.1 Existing Storm Drainage System

The existing site consists primarily of impervious areas associated with the building roof and parking area. The building and parking area cover almost the entire site except for a landscaped entrance to the building. Based on the date of the previous As-Built in 2011, and the current conditions and observation at the site, it appears the existing site provides stormwater recharge and met the BWSC stormwater standards at the time of construction.

Runoff from the Project Site is currently collected and conveyed to the stormwater drain system located in Southampton Street. The current terrain of the existing site is relatively flat and is comprised of a series of contoured depressions with catchbasins that collect stormwater run-off. The collection system conveys the surface run-off through a 12" drain line from the northerly end of the site at the rear of the building along the westerly side of the building through the parking area to the southerly side of the lot where it connects to a 60" drain line running in an easterly direction down the center of Southampton Street. Included in conveyance system are roof-top connections and two dry wells that provide recharge to the site.

Figure 1 Existing Conditions Plan of Land shows existing stormwater system in the project area.

Currently, the on-site stormwater management system appears to provide recharge, water quality measures, and attenuates peak flows.

5.3.2 Proposed Storm Drainage

The proposed building with at-grade parking will not change the characteristics of the site with regard to pervious and impervious areas. The proposed roof-top structure will, however, improve the on-site water quality by replacing the amount of paved area used to calculate the Total Suspended Solids (TSS) value. A portion of the existing paved parking area will now be covered by an overhead of the proposed building causing the area underneath to be considered a garage and drain to the BWSC sewer system. The proposed roof-top will drain into the revised existing drainage system. The existing drainage system will be redesigned and constructed to accommodate the new construction.

After consultation with BWSC, if stormwater management improvements made in 2011 are not sufficient, additional measures will be taken to comply with the BWSC regulations. It is anticipated that as a result of a BWSC regulation adopted in 2013, which mandates the retention of stormwater on-site, the first one inch of rainfall multiplied by the impervious areas will be infiltrated prior to discharge to a storm drain. Therefore, it is likely that recharge devices will be provided and installed into the existing stormwater management system in order to meet the new mitigation requirement.

In order to mitigate the effects of stormwater runoff, a series of devices will be installed to improve water quality and to maintain or reduce peak flows and volume from the site. To accomplish this, a drain line may be installed around the perimeter of the building to collect small confined drainage areas and convey runoff to the Southampton Street drainage system. Deep sump catchbasins will be installed at low points around the perimeter of the building in order to prevent localized flooding and to provide Total Suspended Solid (TSS) removal. An infiltration unit will be installed to collect rooftop runoff and provide the necessary recharge required under stormwater management guidelines. An outlet control device will regulate peak flows and volume from the infiltration unit and the discharge will connect to the surface area drain line that conveys runoff to Southampton Street.

The stormwater management system will be designed in accordance with BWSC's design standards and BWSC Requirements for Site Plans. A Site Plan will be submitted for BWSC approval and a General Service Application will be completed prior to any on-site drain work.

5.3.3 Water Quality

No negative water quality impacts are expected as a result of the proposed project. Since the proposed site will be comprised of a new building with rooftop, an existing building with rooftop,

reduced parking surface, and maintaining the existing open landscaped area, the necessary TSS removal associated with parking areas is not required. The proposed roof runoff will be collected and recharged.

It is the intention of the MassDEP to apply the Stormwater Management Standards during Project review under the Wetlands Protection Act (MGL Ch. 31, s. 40). Since this Project does not require review under the Wetlands Protections Act, the Standards are not specifically addressed in this document.

5.3.4 Mitigation Measures

The Project will control sediment during construction through the use of hay bales, silt fence and catch basin filters.

A Drainage Calculations will be submitted to the BWSC with the Site Plan submittal. The calculations will compare existing and proposed hydrological conditions and will be used in the design of the Stormwater Management System. The Site Plan will address the sediment and pollutant control measures and recommended maintenance proposed by the Project as well as indicate the storage or treatment of contaminated soils, if any.

The Proponent will also submit a dewatering plan and Drainage Discharge Permit Application if dewatering is required.

5.4 Electric Systems

Electric Service to the site is provided by NSTAR. Service is currently provided to the existing building from a manhole located in Southampton Street, a second manhole in Southampton Street also provides power to a transformer located adjacent to the existing building and appears to provide power to the building.

The electrical, space heating and energy systems for the proposed project have not yet been designed. Electrical power supply design will be coordinated with NSTAR as the project design progresses.

If a new transformer for the project is required, the final location of the transformer will be coordinated with NSTAR during the final design phase.

Energy conservation measures will be incorporated into the building design and construction. The Proponent will investigate the installation of energy efficient lighting, heating and cooling systems in the design for the building.

5.5 Street Lighting

Existing street light conduits and streetlights are owned, operated and maintained by the Boston Public Works Department, Street Lighting Division. Currently, there is existing street lighting in the vicinity of the project on Southampton Street. No changes or modifications are anticipated to the lighting system.

The project engineer will coordinate any modifications to the existing system with the Boston Public Works Department.

5.6 Telephone Systems

Telephone service to the site is provided underground by Verizon. The service travels underground on the southerly side of Southampton Street to a telephone manhole located in the sidewalk across the street from the site. From the manhole, the service crosses the street to an electric manhole adjacent to the existing building from which the service presumable enters the building.

Verizon can provide service for the project address as needed. New overhead or underground telephone service connections will be determined and coordinated with Verizon as the project progresses.

5.7 Cable Systems

Cable service to the site may be available by overhead or underground from Comcast. A series of utility poles make their way along the easterly side of the existing building on property owned by Boston Edison Company where an overhead wire is feed from a utility pole to the existing building possibly creating a path for Comcast. Lines could be provided in the telephone system in Southampton Street and fed to the building from a manhole.

Comcast can provide service for the project address as needed. New overhead or underground telephone service connections will be determined and coordinated with Comcast as the project progresses.

5.8 Gas Systems

Gas service to the site is provided by National Grid. Gas service appears to be provided to the existing building by a 3 inch line that is fed from a 24 inch main that runs along Southampton Street.

The gas demand will be determined during the design phase of the Project. The project engineer will coordinate with National Grid to determine if a new gas service will be required.

5.9 Utility Protection During Construction

During construction, infrastructure 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 their utility. Also, in the event a utility cannot be maintained in service during switch over 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.

CHAPTER 6

WIND ANALYSIS

Boston Self Storage Facility

274 Southampton Street
Boston, MA

Pedestrian Wind Assessment

RWDI # 1500848
May 7, 2015

SUBMITTED TO

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Image Courtesy of the Design Team

1. Introduction

Rowan Williams Davies & Irwin Inc. (RWDI) was retained by Circle Development of Cincinnati to conduct a pedestrian wind assessment for the proposed Boston Self Storage Facility at 274 Southampton Street in Boston, MA. The objective of this assessment was to provide a qualitative evaluation of wind comfort conditions on and around the development as required by the Boston Redevelopment Authority (BRA), and recommend mitigation measures, where necessary, to alleviate adverse wind conditions.

This qualitative assessment is based on the following:

- a review of regional long-term meteorological data for Boston;
- our previous wind-tunnel tests on buildings in the Boston area;
- design drawings received by RWDI on January 1, 2015;
- our engineering judgment and expert knowledge of wind flows around buildings[1-3]; and
- The use of software developed by RWDI (*Windestimator*[2]) for estimating the potential wind comfort conditions around generalized building forms.

This qualitative approach provides a screening-level estimation of potential wind conditions. To quantify these conditions or refine any conceptual mitigation measures, physical scale model tests would typically be required. Note that other wind issues, such as those related to door pressures, exhaust re-entrainment, snowdrifts, wind loading, etc. are not considered in the scope of this assessment.

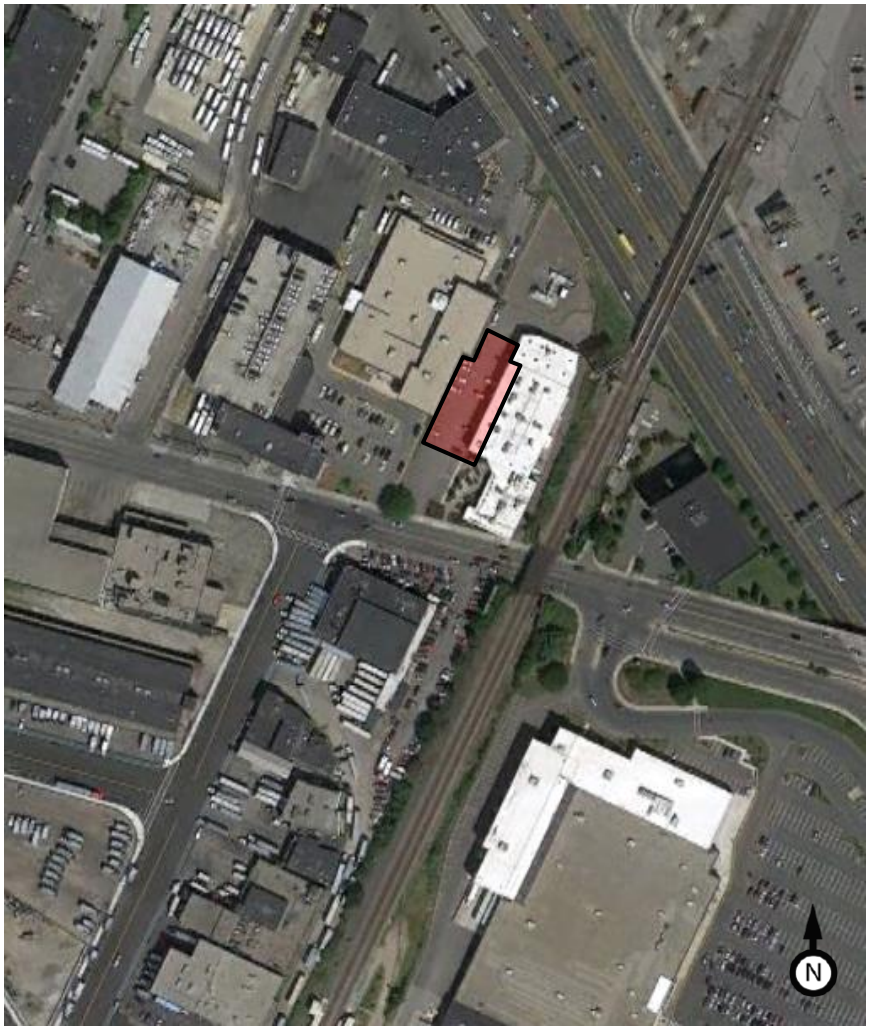


Image 1 – Existing Site and Surroundings

1. H. Wu and F. Kriksic (2012). "Designing for Pedestrian Comfort in Response to Local Climate", *Journal of Wind Engineering and Industrial Aerodynamics*, vol.104-106, pp.397-407.
2. H. Wu, C.J. Williams, H.A. Baker and W.F. Waechter (2004), "Knowledge-based Desk-Top Analysis of Pedestrian Wind Conditions", *ASCE Structure Congress 2004,* Nashville, Tennessee.
3. C.J. Williams, H. Wu, W.F. Waechter and H.A. Baker (1999), "Experience with Remedial Solutions to Control Pedestrian Wind Problems", *10th International Conference on Wind Engineering*, Copenhagen, Denmark.

2. Building and Site Information

The proposed Boston Self Storage Facility site will be located at 274 Southampton Street in Boston, MA. The project site is located near the intersection of I-93 Frontage Road and Southampton Street and railway line (see Image 1).

The current site is currently occupied by a parking lot, and immediately surrounded by industrial low-rise buildings. Farther away from the site are low-rise buildings and roadways, with Boston downtown to the distant north and Quincy Bay to the east.

The proposed building consists of seven stories plus a mechanical penthouse, with the roof at 128 ft above grade (see Image 2).

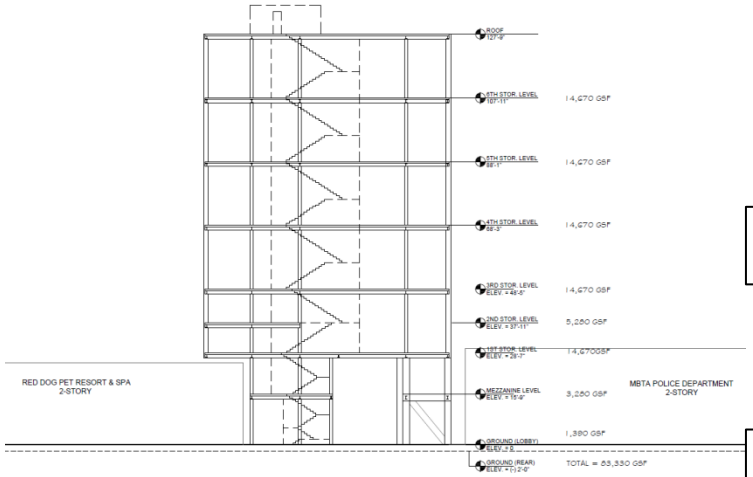


Image 2 – Building Section

Pedestrian areas around the site include the building entrance and loading dock, entrances to the veterinary hospital and MBTA Transit Police building, service entrances to the Red Dog Pet Resort & Spa, green space adjacent to the veterinary hospital and sidewalks surrounding the site (see Image 3).

The majority of the first floor of the building is open to allow vehicles to pass under the building and access the loading dock on the north side of the building.

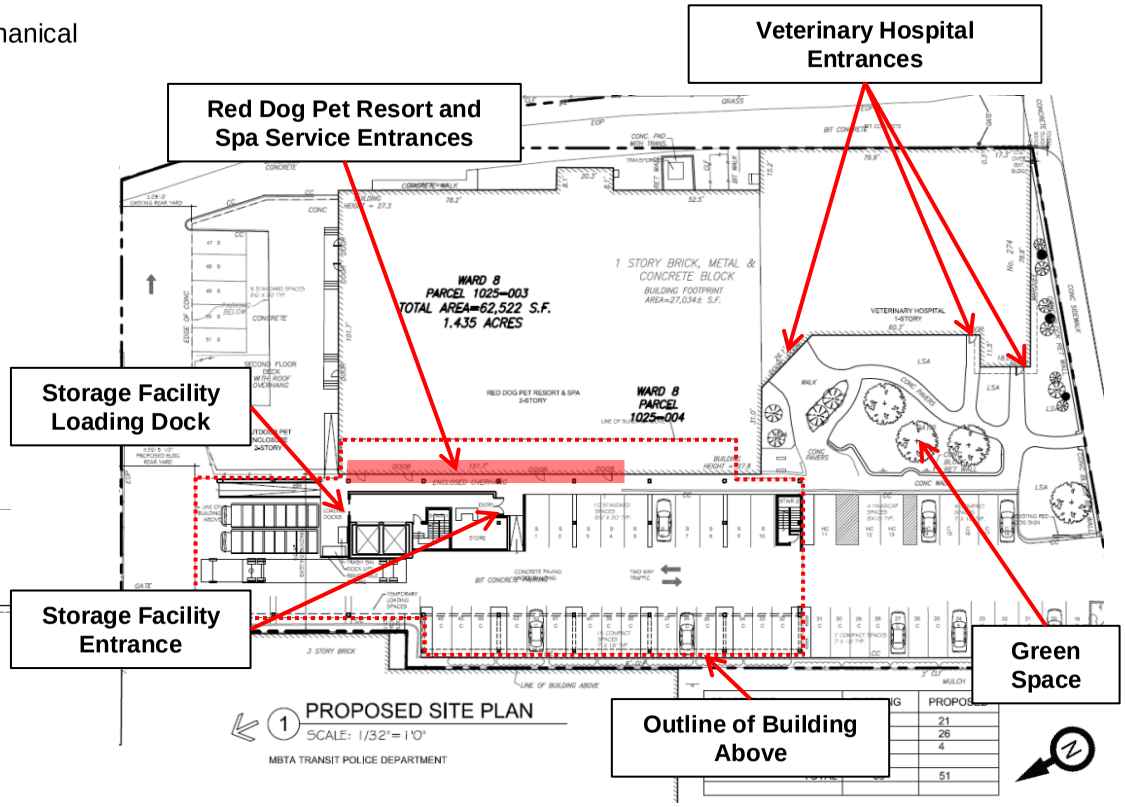


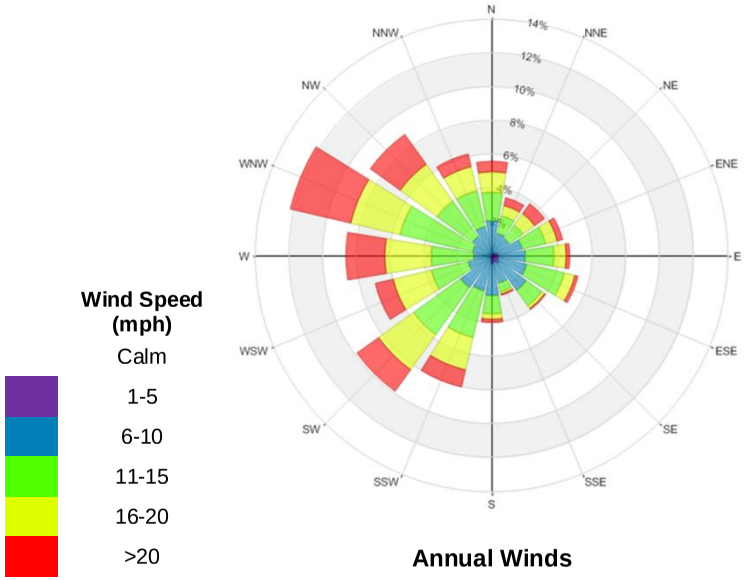
Image 3 – Ground Floor Plan showing Pedestrian Locations

3. Meteorological Data

Wind statistics at the Boston-Logan International Airport between 1981 and 2011 were analyzed for the spring (March to May), summer (June to August), fall (September to November) and winter (December to February) seasons. Image 4 graphically depicts the distributions of wind frequency and directionality for these four seasons and for the annual period. When all winds are considered, winds from the northwest and southwest quadrants are predominant. The northeasterly winds are also frequent and strong, especially in the spring.

Strong winds with mean speeds greater than 20 mph (red bands) measured at the airport are prevalently from the northwesterly directions throughout the year, while the southwesterly and northeasterly winds are also frequent.

Therefore, winds from the northwest, southwest and northeast directions are considered most relevant to the current study, while winds from other directions are also considered in our analysis.



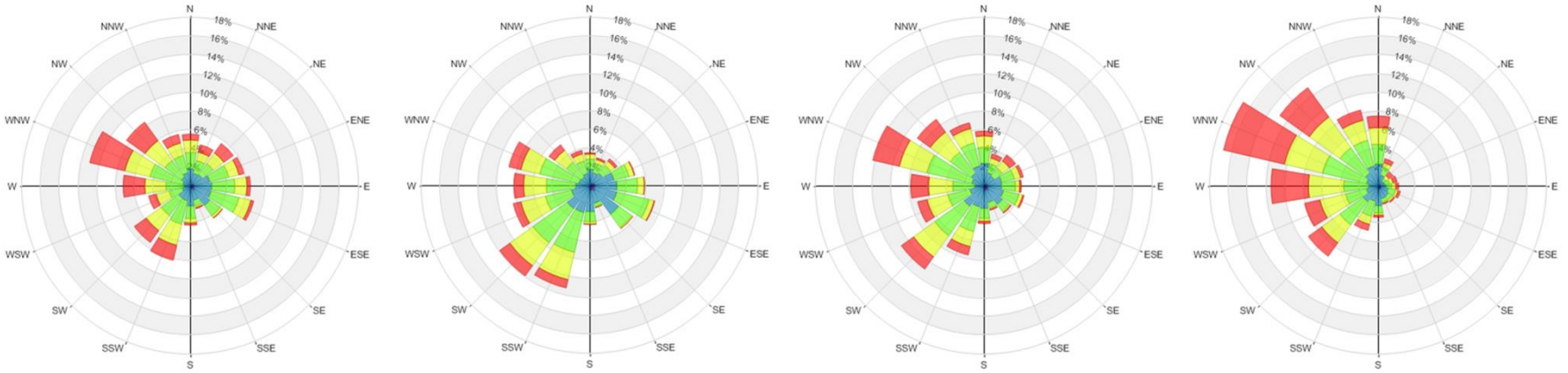


Image 4 – Directional Distribution (%) of Winds (Blowing from) – Boston Logan International Airport (1981 to 2011)

4. Explanation of Applicable Criteria

The BRA has adopted two criteria for assessing the relative wind comfort of pedestrians. First, the BRA wind design guidance criterion states that an effective gust velocity (hourly mean wind speed +1.5 times the root mean square wind speed) of 31 mph should not be exceeded more than one percent of the time.

The second set of criteria used by the BRA to determine the acceptability of specific locations are based on the work of Melbourne[4]. This set of criteria are used to determine the relative level of pedestrian wind comfort for activities such as sitting, standing, or walking. The criteria are expressed in terms of benchmarks for the 1-hour mean wind speed exceeded 1% of the time (i.e., the 99-percentile mean wind speed). They are summarized in Table 1.

Table 1: BRA Mean Wind Criteria *

Dangerous	*> 27 mph*
Uncomfortable for Walking	*> 19 and ≤ 27 mph*
Comfortable for Walking	*> 15 and ≤ 19 mph*
Comfortable for Standing	*> 12 and ≤ 15 mph*
Comfortable for Sitting	*< 12 mph*

* Applicable to the hourly mean wind speed exceeded one percent of the time.

Pedestrians on sidewalks, loading docks and parking lots will be active and wind speeds comfortable for walking are appropriate. Lower wind speeds comfortable for standing are desired for building entrances where people are apt to linger. For outdoor green spaces, low wind speeds comfortable for sitting are desired during the summer. In the winter, wind conditions in these areas may not be of a serious concern due to limited usage.

The wind climate found in a typical downtown location in Boston is generally comfortable for the pedestrian use of sidewalks and thoroughfares and meets the BRA effective gust velocity criterion of 31 mph. However, without any mitigation measures, this wind climate is likely to be frequently unsuitable for more passive activities such as sitting.

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

5. Pedestrian Wind Conditions

5.1 Background

Predicting wind speeds and occurrence frequencies is complicated. It involves building geometry, orientation, position and height of surrounding buildings, upstream terrain and the local wind climate. Over the years, RWDI has conducted more than 2,500 wind tunnel model studies on pedestrian wind conditions around buildings, including several hundred in Boston, yielding a broad knowledge base. This knowledge has been incorporated into RWDI's proprietary software that allows, in many situations, for a qualitative, screening-level numerical estimation of pedestrian wind conditions without wind tunnel testing.

As indicated in the elevations on the cover page and Image 2, the proposed Boston Self Storage Facility will be notably taller than the adjacent MBTA Police and the Red Dog Resort buildings. The presence of these two structure will act as podium structures, and help shelter grade-level areas from the prevailing northwest, west and most northeasterly winds (see Image 5) that will be intercepted by and re-directed downward by the taller Storage Facility (i.e., downwashing flows as shown in Image 6).

However, winds from the southwesterly direction and some of the northeasterly winds, primarily during the summer and fall seasons may be re-directed into the passageway through the Storage Facility in a channeling flow (see Images 5 and 7). As a result of the channeling and downwashing wind flows, wind conditions on the development site are likely to be comfortable for standing or walking on an annual basis. Uncomfortable or unacceptable wind conditions may occur occasionally at the north and south ends of the Storage Facility in the winter. More details on wind flow patterns and resultant conditions are provided in Section 5.2.

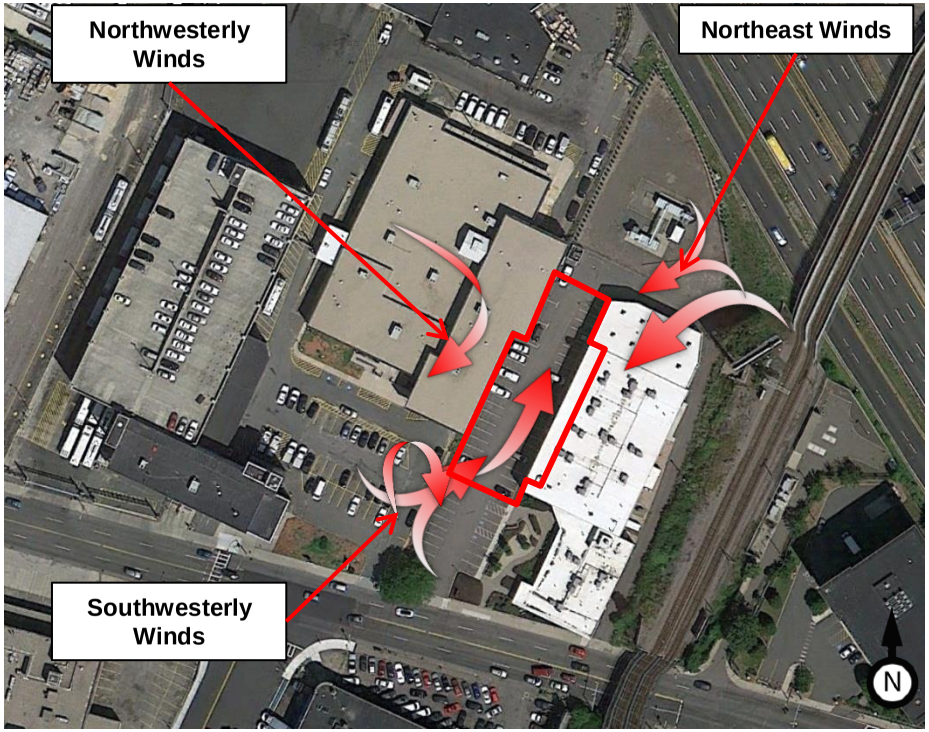


Image 5 – Wind Flows between Existing and Proposed Buildings

Image 6 – Downwashing Flows

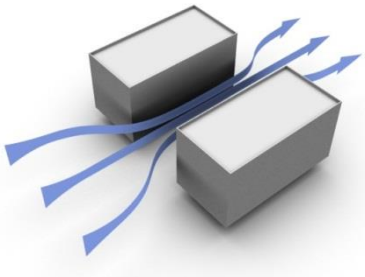


Image 7 – Channeling Flows

5.2 Potential Wind Conditions

Given the building height, position and the local wind climate, it is our prediction that the potential wind conditions at all pedestrian areas, including entrances, sidewalks and green space, will meet the mean speed and effective gust criteria. The following discussions on wind conditions focus on those areas as labeled in Image 3.

5.2.1 On-Site Building Entrances

The main entrance and loading dock of the Boston Self Storage Facility are located well within the building overhang (see Image 3). These entrances, being located within the recessed areas of the building are well sheltered from direct exposure to prevailing winds from the northwest, northeast and southwest directions.

The emergency egress exit at stair 2 located at the southeast corner of the building is more exposed to southwesterly winds. The design team has extended the south wall to shelter the door way. This design detail is expected to improve wind conditions at the exit, and should be retained in the final design.

Winds from the southwest and northeast directions are expected to be channeled through the pathway under the Storage Facility (see Image 7). Wind conditions within this area are expected to be comfortable for walking throughout the year, although higher winds may occur during the spring and summer from time to time, particularly closer to the southeast emergency egress door. As the southeast emergency egress exit is not expected to see regular use, these wind conditions are considered acceptable.

5.2.2. Off-site Building Entrances

Wind conditions at the service entrances to the Red Dog Resort are expected to be similar to existing wind conditions, as they are recessed within the footprint of the Storage Facility and may be protected from the prevailing winds.

Wind conditions at the Veterinary Hospital are expected to be similar, although slightly higher winds speeds may occur at the main entrance as a result of southwest winds being downwashed along the façade of the Storage Facility. However, the resultant wind conditions are expected to be satisfactory.

Wind conditions at the main entrance to the MBTA Transit Police building are expected to be similar to existing conditions.

5.2.3 Sidewalks and Green Space

Based on the above discussion on entrances, similar and, thus, suitable wind conditions are predicted on sidewalks along Southampton Street to the south of the proposed development. Slightly higher winds speeds are predicted along the sidewalk leading to the Storage Facility and within the green space near the Veterinary Hospital as winds from the northwest, northeast and southwest are expected to be re-directed by the east and south facades of the building, respectively, and flow through these areas. Wind conditions are expected to be comfortable for standing or walking on an annual basis, but may be uncomfortable from time to time in the winter and spring. This is acceptable due to reduced outdoor usage of the green space during the colder seasons.

Due to the location and size of the proposed development, it is unlikely that wind conditions farther away from the site will be negatively affected by the proposed development. It is our opinion that no further wind study is required for the proposed development.

6. Summary

As the Boston Self Storage Facility building overhangs and abuts the MBTA Police and Red Dog Resort buildings, these adjacent buildings will act as a podium that will protect grade-level locations from most of the prevailing winds that are downwashed by the taller Storage Facility. Therefore, wind conditions are expected to be similar to existing conditions.

The design team has recessed entrances well within the overhanging structure, and included localized features that are expected to improve wind conditions, specifically extended a wall to shelter the southeast emergency egress exit.

Similar wind conditions are expected for offsite entrances and sidewalks, although slightly higher winds are expected at the main entrance to the Veterinary Clinic and within the adjacent green space. These winds are expected to be comfortable for walking or standing on an annual basis, but may be uncomfortable from time to time during the spring and winter, which is not of concern due to reduced usage in these colder seasons.

The proposed development will not negatively affect wind conditions farther away from the site.

It is our opinion that no further wind study is required for the proposed development.

7. Applicability Of Results

In the event of any significant changes to the design, construction or operation of the building or addition of surroundings in the future, RWDI could provide an assessment of their impact on the design considered in this report. It is the responsibility of others to contact RWDI to initiate this process.

BERKELEY BUILDING COMPANY

Construction Management Plan for Red Dog Self-Storage

274 Southampton Street, Boston MA

Proposed Start Date: August 2015

7.0 Introduction

Project Description

The owner plans to erect a 6 story storage facility project. Since the building exceeds 70' from mean grade to top of roof structure it is considered a high-rise building. The construction type is1B, user group classification is Business, Moderate-Hazard Storage (B, S-1). The proposed project will therefore be provided with high-rise life-safety features described in 780 CMR 403.0 The building will contain 2 new elevators, and 2 enclosed stair towers. There will be open air parking on grade, a mezzanine level with office and business space. The Balance of the floors will consist of mainly storage with convenience bathrooms.

This Construction Management Plan (CMP) has been prepared for Boston Transportation Department (BTD) for review and approval prior to start of construction. The CMP includes detailed information on construction activities, specific construction mitigation measures and construction material access and staging plans to minimize impact to abutters and local community. Berkeley Building Company (BBC) and its Subcontractors will comply with the details and conditions of the approved CMP.

Proper preplanning with the City and neighborhood has been essential. BBC's methodologies ensure public safety and will protect the nearby residences and businesses. Techniques such as barricades, walkways and signage will be used. This will be addressed with diligence similar to what was done on previous projects in the City.

BERKELEY BUILDING COMPANY

7.1 Construction Schedule

The construction schedule is very aggressive in order to minimize the time the neighborhood will be impacted. The area around the Building will be impacted in varying degrees from June 2015 - March 2016.

Phasing

•	Mobilization	August 2015
•	Friction Pile / Foundations	August 1, 2015 – October 31, 2015
•	Steel Erection	October 31, 2015 – January 1, 2016
•	Concrete Placement	Concurrent with steel erection
•	Building Façade and Roof	January 1, 2016- March 31, 2016
•	Street Utilities Tie-in	On site during finish construction
•	Interior fit-out and completion	March 1, 2016- May 31, 2016

Hours of Construction Operation

Typical hours of construction operation shall be from 7:00AM to 6:00PM Monday through Friday, per City of Boston Noise Regulation. Weekend work may be required from time to time to meet the schedule and shall be perform by permit approval/notification from Boston Inspectional Services, BTD, and ONS .

BERKELEY BUILDING COMPANY

7.2 Construction Logistics

Logistics Plan

Berkeley Building Company has prepared a detailed site logistic plan (see attached) in order to isolate construction while providing safe access for pedestrians and vehicles during construction, normal day to day activities and emergencies

- The entire site is enclosed by existing structures and/or a 6' foot high chain-link fence with debris screening in the areas under construction.
- The main construction area will be accessed from Southampton Street.
- Construction fencing will be installed from the curb line on Southampton Street, North along property line protecting train tracks, turning west protecting NSTAR substation into Adjacent building. Fencing and Gates will also be installed in the parking area directly in front of proposed structure, as shown on the logistics plan attached.
- There will be a gate located at the southeast side of the site at Southampton Street for vehicles to access the site. All deliveries will be accepted through this gate.
- Dumpster for trash debris will be located in the enclosed area in the parking lot.
- All delivery truck traffic will access the site via Massachusetts Ave, to Theodore Glynn Way., following the same designated truck routes and will exit Southampton Street via the Traffic signal at Massachusetts Avenue, and or Southampton to Frontage road.
- Emergency vehicle access on all streets will be maintained at all times thought the project. If from time to time the streets are restricted, permits to do so will be obtained from BTD and DPW and Boston Police details will be utilized.
- Approved signage will be installed for sidewalk and street closures.
- All crane and concrete pumping operations will be done in the same manner as stated above.
- Utility connections; sewer, water, drain, electrical, and gas will occur during construction by separate permit. These connections will if needed be done with the minimum interruption to abutters and neighbors

Site Office

The site office will be located at branch off at Burbank Street as shown on logistic plan. The office will be occupied by project management staff and will be clearly marked with the appropriate signage.

BERKELEY BUILDING COMPANY

Geotechnical and Groundwater Impacts

The excavation for the new footings will require Asphalt removal from the existing parking lot, and the installation of friction Piles. There will be excavation to support the new elevator, but no dewatering will be anticipated as we believe we are well above the waterline. If required a ground water infiltration system design, approved by the GCOD and the BWSC will also be installed as part of the interior excavation work. If required, the on-site dewatering will be monitored to confirm quality.

7.3 Vehicle and Pedestrian Traffic

Construction Trip Generation and Worker Parking

The number of workers required during construction will vary with an estimated daily workforce of 40 at peak construction. The workforce will arrive prior to peak traffic periods and are not expected to substantially impact traffic conditions. No personal vehicles will be allowed to park at the project site, or neighboring locations. Jobsite personnel will be encouraged to utilize public transportation. Construction workers will utilize the area public parking facilities and will be discouraged from using the meter spaces.

Truck Routes and Deliveries

Truck traffic will vary throughout the construction period, depending on activities. The peak traffic is expected to be around 8 trucks per day during steel erection, and building Façade installation. These trucks will be spread evenly throughout the day. All truck and deliveries will be move immediately into the fenced in construction area designated for deliveries. Due to limited access to the site and the need to maintain traffic and pedestrian flow, BBC will not have any trucks queuing or marshalling without permission from BTD and DPW.

Southampton Street will be the main access to the site for all deliveries and emergency response.

Berkeley Building Company does not anticipate any significant overlap with adjacent construction projects that would cause adverse impacts to existing vehicular and pedestrian traffic patterns.

BERKELEY BUILDING COMPANY

7.4 Public Safety

Safety program

Berkeley Building Company has a full site specific safety program that will be implemented and monitored by Berkeley Building Company Safety Department. All procedures for the protection of the public will be strictly adhered to and monitored on a daily basis. In general, secure fencing and barricades will be used to isolate construction areas from pedestrians and vehicular traffic near the site. Temporary approved signage will be utilized to inform pedestrians of any changes to the pedestrian patterns. Police details will be utilized as needed to direct traffic and access in and out of the jobsite. Construction procedures will be designed to meet all OSHA safety standards for specific construction activities.

Construction Air Quality and Dust Control

In order to reduce emissions of fugitive dust and minimize impacts on the local environment, Berkeley Building Company will adhere to the following mitigation measures:

- All trucks for transportation of construction debris will be fully covered
- Wetting agents will be used regularly to control and suppress dust that may come from construction activities.
- Storage of construction debris will be limited on site. Construction practices will be monitored to ensure that unnecessary transfers and mechanical disturbances of loose materials are minimized.
- Streets and sidewalks will be cleaned regularly to minimize dust accumulation.
- All fencing will have Scrim screening to minimize dust and debris migration.

Erosion Control

In order to reduce the transport of runoff and soil from the project site and minimize impacts on the local environment, Berkeley Building Company will adhere to the following mitigation measures:

- Prior to the start of demolition and excavation erosion measures such as silt fence and hay bales shall be appropriately placed along the perimeter site fence as needed.
- Silt sacks will be installed in all drainage basins with in the project site.
- Temporary erosion measures shall be removed only after permanent measures are fully established.

BERKELEY BUILDING COMPANY

Construction Noise Mitigation

This construction project will require the use of equipment that can be heard in off-site locations. The area has significant ambient noise due to urban activities: however paying careful attention to both the equipment and the time frames of particular construction activities will minimize the noise generated for the project site. Construction on this project is scheduled to commence in June 2015 and run until March of 2016. The entire construction project has been design around the constraints of the site. The exact pieces of equipment will be finalized after subcontractor selection is completed. In general construction will occur within typical time frames daytime hours defined by the Boston Noise Regulation and in some instances a second shift may be required as event arise, all permits will be in place from the Boston Inspectional Service Department. Berkeley Building Company is committed to mitigate noise impacts of the construction activities by various methods including but not limited to turning off idling equipment, utilizing mufflers on equipment, and locating noisy equipment as far away as possible for sensitive areas where feasible.

Construction Waste

Berkeley Building Company will take an active role with regard to reprocessing and recycling of construction debris. The disposal contract will include specific requirements that will ensure construction procedures allow for necessary segregation, reprocessing, reuse and recycling of materials. This project is aspiring for LEED accreditation waste management and recycling and it is an important factor of the Berkeley Building Company program.

Rodent Control

The City of Boston has declared the infestation of rodents is a serious problem in the City. In order to control this infestation, the City enforces the requirement established under Massachusetts State Sanitary Code, Chapter 11, 105 CMR 410.550 and the State Building Code 780 CMR &7th Edition, section i08.6. Boston Policy Number 87-4 established that extermination of rodents should be required for issuance of permits for demolition, excavation, and foundation and basement rehabilitation.

The proposed project will develop a rodent control program prior to the start of construction. The program will include performance of extermination and control procedures on a bi-weekly basis, and the placement of tamper resistant bait boxes around the perimeter of the site. This program will be monitored and modified as required as construction progresses. Berkeley Building Company will comply with all city and state regulatory requirements.

BERKELEY BUILDING COMPANY

7.5 Construction Team

Construction Managers

Berkeley Building Company 1-781-246-3353
50 Main Street
Wakefield MA 01880

Berkeley Building Management team

• Mike Capozzi	Sr. Superintendent	1-978-882-2667
• Scott LaFlamme	Site Superintendent	1-617-262-0773
• Alan Slotnick	Safety Officer	1-987-994-3130
• Chris Howe	Project Manager	1-978-502-5489
• Emil Frei	President	1-978-886-8660

Design Team

Peter Quinn Architects 1-617-354-3989
259 Elm Street #301
Somerville, MA 02144

A 24 hour emergency contact list will be distributed to all parties involved with the project prior to the start of construction

BERKELEY BUILDING COMPANY

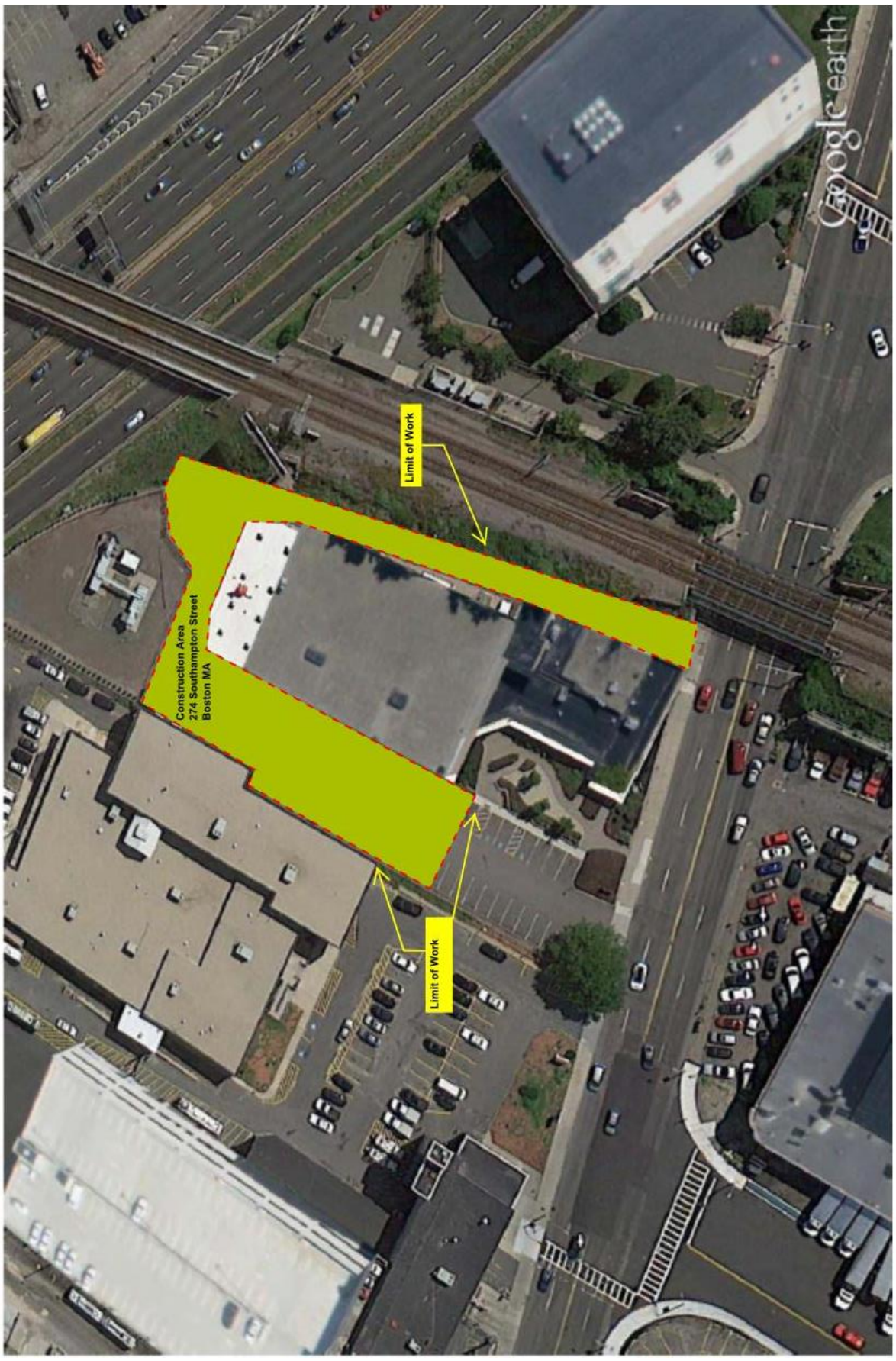
Construction Management Plan for Red Dog Self-Storage

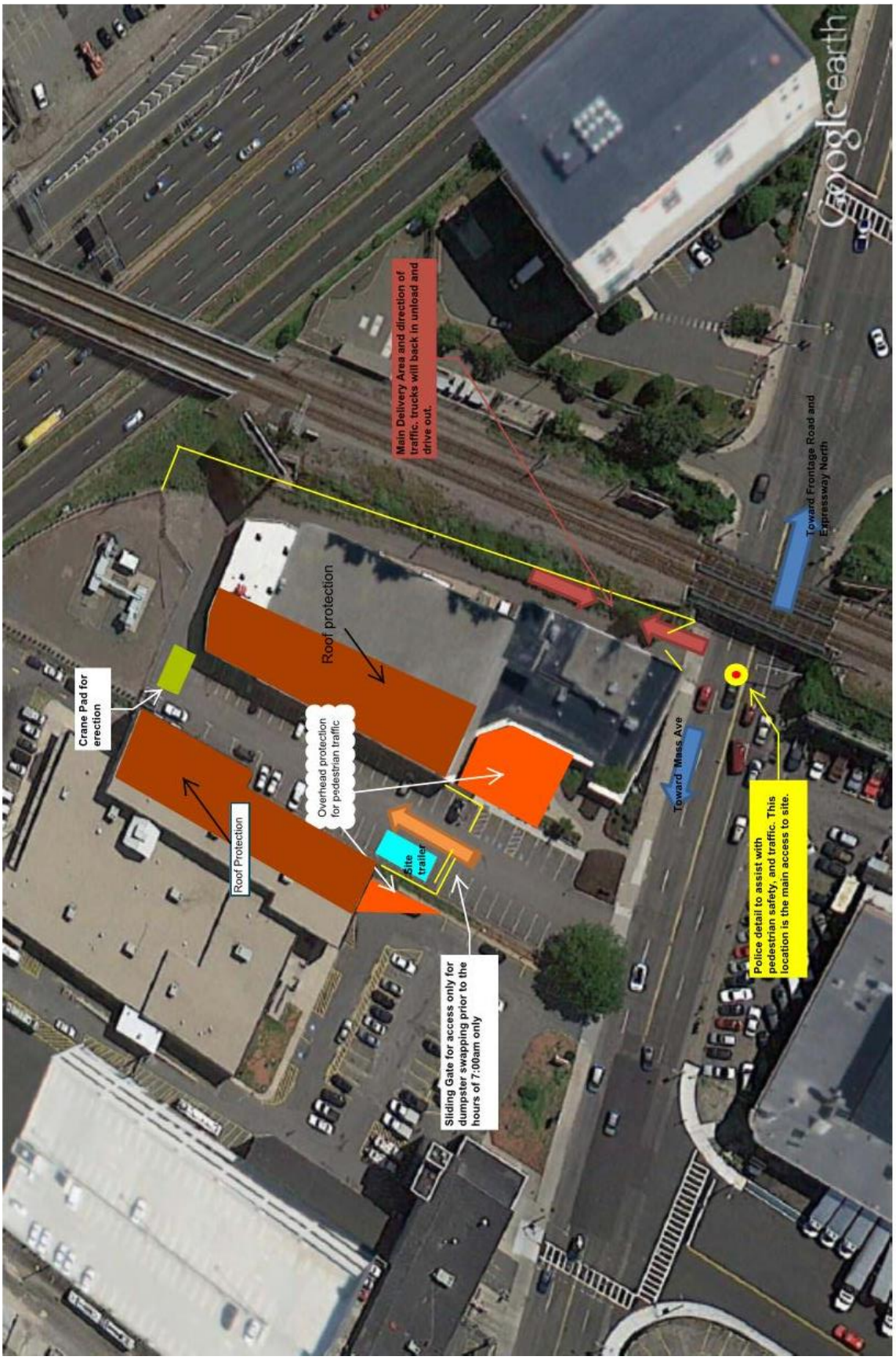
274 Southampton Street, Boston Ma

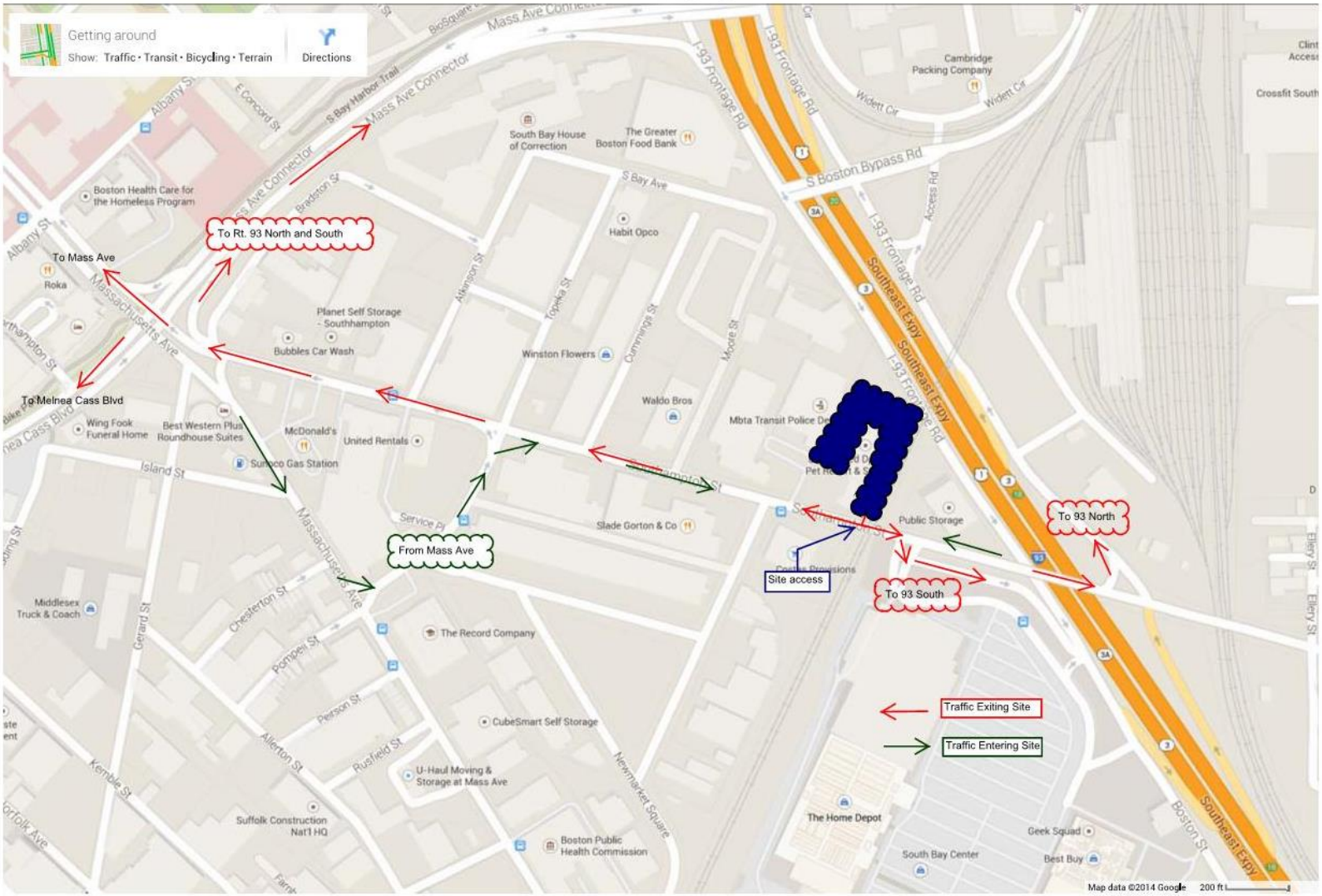
Proposed Start Date: August, 2015

7.6 Approval

SUBMITTED:	**APPROVED:**
_____	_____
Berkeley Building Company	**Boston Transportation Department**
Mike Capozzi	
_____	_____
Date	**Date**


Limit of Work
Construction Area
274 Southampton Street
Boston MA
Limit of Work
Google earth


Google earth
Main Delivery Area and direction of traffic. trucks will back in unload and drive out.
Toward Frontage Road and Expressway North
Roof protection
Crane Pad for erection
Overhead protection for pedestrian traffic
Roof Protection
Site trailer
Toward Mass Ave
Police detail to assist with pedestrian safety, and traffic. This location is the main access to site.
Sliding Gate for access only for dumpster swapping prior to the hours of 7:00am only


Getting around
Show: Traffic · Transit · Bicycling · Terrain
Directions
To Rt. 93 North and South
To Mass Ave
To Melnea Cass Blvd
From Mass Ave
Site access
To 93 North
To 93 South
Traffic Exiting Site
Traffic Entering Site
Map data ©2014 Google
200 ft