SEAPORT SQUARE DEVELOPMENT COMPANY LLC
33 Boylston Street
Chestnut Hill, MA 02467

September 10, 2019

BY HAND DELIVERY

Mr. Brian P. Golden
Director
Boston Planning and Development Agency
One City Hall Square
Boston, MA 02201-1007

Re: Seaport Square Project, South Boston
Update & Notice of Project Change

Dear Director Golden:

On behalf of Seaport Square Development Company LLC and its affiliates, which are collectively the Proponent of the Seaport Square Project in South Boston's Seaport District, we are pleased to provide you with this project update and Notice of Project Change pursuant to Section 80A-6 of the City of Boston Zoning Code (the "2019 NPC"). Capitalized terms used but not defined herein shall have the meanings ascribed to them in the PDA Plan.

This 2019 NPC proposes a confirmatory change in the use program for a portion of the building to be constructed on Block N of the Seaport Square Project, to accommodate office and research and development uses, and describes certain other minor changes to the Seaport Square Project.

By way of background, office and research and development uses are currently allowed on Block N pursuant to the Amended and Restated PDA Development Plan for Planned Development Area No. 78 (the "PDA Plan"), which governs Seaport Square, but the Proponent's most recent Article 80 filings studied the environmental and other impacts of residential use on Block N, as part of a broader district-wide analysis of the Seaport Square Project's environmental impacts. The planned uses of the first two levels of the Block N building – retail, restaurant, entertainment, and/or other commercial uses – would remain unchanged in this NPC.

Project Background

Block N is located between Congress Street, West Service Road, and Summer Street. It is one of approximately 20 development sites within the Seaport Square Project Site, which consists of approximately 23.5 acres of land generally bounded by Northern Avenue and Seaport Boulevard (between Old Sleeper Street and Pier 4 Boulevard) and by Stillings Street, Boston Wharf Road, East Service Road and Pier 4 Boulevard and B Street (between Seaport Boulevard and Summer Street). In 2010, the Seaport Square Project received approval from the BPDA,

under Article 80B of the Code, for the construction of approximately 6,335,200 square feet of Gross Floor Area ("**GFA**") of mixed uses. The City of Boston Zoning Commission (the "BZC") approved a Planned Development Area Development Plan for Planned Development Area No. 78 on October 13, 2010 (the "Original PDA Plan").

Following the adoption of the Original PDA Plan, the Proponent's predecessor-in-interest, MS Boston Seaport, L.L.C. (the "Original Proponent"), constructed a number of public realm improvements, and conveyed Block A, Blocks B and C, Block H, Block K, Block J, Block L1, Block L2, and Blocks M1 and M2 to third party developers for the development of such Blocks.

The Proponent acquired the undeveloped Blocks and developed open spaces – Blocks D, F, G, L3-L6, N, P, and Q (the "NPC Blocks") – in October 2015, and proposed an updated and enhanced vision for the district (the "NPC Project"), detailed in a Notice of Project Change filed on February 7, 2017 and a Supplemental Impact Report filed on September 12, 2017 (collectively, the "2017 NPC"). The Proponent filed the PDA Plan on September 15, 2017. On November 16, 2017, the BPDA voted, pursuant to Section 80A-6.2 of the Code, to authorize the issuance of a Determination Waiving Further Review of the NPC and approval of the NPC Project as a Development Impact Project, and the BPDA issued such determination on November 1, 2018 (the "NPC Determination"). The BPDA also voted on November 16, 2017 to recommend that the BZC approve the PDA Plan, and the BZC approved the PDA Plan on December 13, 2017.

The term "Overall Project", as defined in the NPC Determination, describes the totality of the structures and other improvements within the Seaport Square Project that have already been completed or are currently underway as part of the Original Project (the Developed Blocks), as well as those planned as part of the NPC Project. Including the project changes contained in the approved 2017 NPC, the Seaport Square Project Site comprises approximately 1,023,396 square feet; the PDA Plan area comprises approximately 1,460,572 square feet. The project's current approvals allow the construction of 7,723,110 square feet of GA within the Overall Project, which would include approximately 3.2 million square feet of residential uses, 2.8 million square feet of office/research/innovation uses, 1.1 million square feet of retail/entertainment/ performing arts uses, 480,000 square feet of hotel uses, 19,700 square feet of civic uses, as well as cultural/community uses. The Overall Project will include up to approximately 5,500 underground parking spaces, reduced from approximately 6,375 spaces in the Original Project, and approximately 200 on-street parking spaces.

Project Updates and Completion Status

The Proponent has made substantial progress with respect to the build-out of the NPC Project and the delivery of numerous public benefits since the approval of the 2017 NPC in late 2017. Within the past 18 months alone, with respect to the NPC Blocks, the Proponent has delivered on the following public realm improvements and other public benefits commitments:

- Completed $8 million reconstruction of Seaport Boulevard, including new protected bicycle infrastructure, landscaping and sidewalks, mid-block crossings and pedestrian

improvements, traffic signals, and the installation of seven original sculptures by Spanish artist Okuda San Miguel;

- Contributed $1 million (out of a $2 million commitment) towards the reconstruction of the Old Northern Avenue Bridge;

- Contributing $1 million towards the maintenance of Martin's Park in September 2019;

- Contributed $400,000 towards the BPDA's South Boston Waterfront Strategic Transit Study, which is currently underway;

- Commenced construction on Block L-4 of the NPC Project, which will generate the creation of 2,000 technology jobs on the site and result in approximately $875,000 in funding for jobs training and $4.4 million in funding for affordable housing through Development Impact Project contributions;

- Initiated the Seaport Community Grant Program, which has provided $50,000 of grants to local non-profits in 2019 and will contribute similar amounts annually for the next 9 years;

- The Proponent is accelerating the construction of the central green area of Harbor Square Park to coincide with the completion of Block L4, instead of the completion of both Blocks L4 and L6, as required by the PDA.

- The Proponent has implemented numerous industry-leading climate change resiliency measures, both within individual buildings and throughout the Seaport Square project area. Examples of these resiliency measures include:

    - Raising all critical building systems to the 2nd or 3rd floor of each building to ensure resiliency;

    - Raising ground floor elevations of the Block L-4 building, which is the first of the NPC Blocks to commence construction, to elevation 19 above Boston City Base and public space elevations to approximately elevation 20 BCB (3+ feet above the 500-year flood elevation);

    - Reconstructing the Seaport Boulevard median with bermed and permeable landscaping and large trees to replace the former concrete pavement;

    - Capturing 1" – 1.25" of stormwater runoff from all impermeable surfaces on NPC Blocks and reusing for toilet flushing or storing this water on-site to reduce peak stormwater inflows into the BWSC storm system.

As described above, the Proponent has already made significant improvements to the public realm in the Seaport district in the past 18 months alone, meeting or accelerating its delivery of these improvements and other key public benefits for the NPC Project.

In general, projects completed or under construction within the Overall Project have begun delivering linkage payments that will total approximately $14 million in funds for affordable housing City-wide and approximately $4 million for jobs training programs City-wide. These contributions – which are less than half of the total linkage funds that will ultimately be paid by the Overall Project – represent the largest affordable housing and job training payments ever made by a single development project in Boston.

Proposed Project Change and Changes to Impacts

In order to study the impacts of the NPC Project, the 2017 NPC specified a program of uses for each NPC Block, while noting that given the multi-phase, mixed-use nature of the NPC Project, the uses of each Block might change from the assumptions used in the 2017 NPC. The 2017 NPC studied the impacts of a Block N building program comprised of approximately 72,000 square feet of Retail/Entertainment/Restaurant/Service Uses and 350,000 square feet of Residential Uses. Given the opportunity to further contribute to the robust economic development underway in the district and also provide an opportunity for innovation and life sciences companies that already call the Seaport home room to grow in close proximity to their other facilities, the Proponent expects to secure commitments from one or more major office and/or research and development tenants for Block N. The current preliminary design of the Block N building includes approximately 38,000 square feet of Retail/Entertainment/ Restaurant/Service Uses and approximately 384,000 square feet of office and/or research and development uses. This Block N NPC provides a summary of changes to the impacts that office or research uses on the site will generate when compared to the residential uses studied in the 2017 NPC.

The overall number of residential units to be created by the Seaport Square project is anticipated to be maintained at approximately 3,200 units. To date, nearly 2,000 units have been completed or are currently under construction within the Seaport Square project area, accounting for nearly 60% of the completed (or nearly completed, in the case of Blocks M1 & M2) floor area within Seaport Square. This front-loading of the residential use component of Seaport Square has already resulted in the emergence of a vibrant 24/7 district that is home to thousands of new residents alongside new retailers, employees, and visitors to the district. The remaining residential units to be constructed within the Seaport Square project area will be accommodated on future development Blocks owned by the Proponent, specifically Blocks G and L3. The residential units originally contemplated for Block N will be constructed on other Blocks, and the number of units project-wide will be maintained at approximately 3,200, in part by shifting the mix of unit types to include more smaller, lower-priced units and fewer large luxury units. This shift also reflects the need for a greater density of more affordable homes city-wide, and will better serve the employment base in the Seaport District.

The adjustment to the proposed use of Block N will result in new payments of Development Impact Project funds in connection with the new office/laboratory use, in the amount of approximately $3.0 million in housing linkage funds and approximately $600,000 in jobs training linkage funds. These amounts, which are additional to the linkage projections in the 2017 project approvals, will help to further support the creation of affordable housing and job training programs city-wide.

No changes to the Project's obligations regarding Affordable Housing or Innovation Housing are proposed as part of this NPC. As has been previously committed, all of the affordable housing units required in connection with the residential NPC Blocks will be provided on site, adding to the nearly 150 affordable homes that have already been created and occupied on the completed Blocks.

This NPC also includes as part of its analysis certain other adjustments to building programs within the Overall Project to reflect now as-built or as-proposed conditions that have emerged since the approval of the 2017 NPC in 2017, which adjustments are listed below. All of these adjustments remain consistent with the approved PDA Plan:

- Reduction in the GFA on Block L4, which is under construction, from the 523,500 sf projected in the 2017 NPC to approximately 500,000 sf of GFA, comprised of approximately 70,000 square feet of retail space and 430,000 square feet of office space. In order to study the transportation impacts of the GFA allowed but not constructed on Block L4, which may be incorporated in other NPC Block buildings, the transportation study enclosed herewith allocates 580,000 sf of Office uses on Block P, even though current plans show only approximately 560,000 sf.

- Reduction in the GFA of Retail/Entertainment/Restaurant/Service Uses within the Overall Project from the approximately 1.12 million sf contemplated in the 2017 NPC to approximately 1.0 million sf. The Proponent anticipates that approximately 0.12 million sf of primarily upper-story Retail/Entertainment/Restaurant/Service Uses planned across the NPC Blocks (including Block N) in the 2017 NPC will be shifted to accommodate other uses including but not limited to Residential, Office, Hotel, and Innovation uses on such Blocks.

Although the use of Block N analyzed as part of the Overall Project's impact analysis has changed to office or research use, the dimensions of the proposed building have not changed in any material way and remain consistent with the approved PDA Plan. Similarly, the uses proposed in this Block N NPC are consistent with the PDA Plan. Wind, shadow, solar glare, and other impacts relating to the dimensions of the Block N building will not change from the impacts studied in the 2017 NPC, and the sustainable design, climate change preparedness, accessibility, and urban design considerations relating to the planned building remain as described in the 2017 NPC.

The change from residential to office use on Block N and other proposed modifications described above will change the infrastructure analysis – wastewater, water supply, and stormwater – as follows:

- Wastewater: The proposed 2019 NPC will result in a net reduction in wastewater flows by approximately 90,000 gallons per day and a net reduction in water usage of approximately 99,000 gallons per day.

- Stormwater: The proposed 2019 NPC will not have any impact on stormwater flows into the BWSC system, as the combined Block N/P project will capture and retain

1.25” of stormwater for re-use on-site, consistent with the BPDA’s 2018 Smart Utilities policy.

- Transportation: The proposed 2019 NPC will have a modest beneficial effect on transportation flows in the Seaport district as the proposed changes in land use will result in a net reduction of 98 daily trips (unadjusted) into and out of the district, as well as a reduction in vehicular traffic flows district-wide at many intersections. A memorandum prepared by Howard Stein-Hudson containing a detailed analysis of the 2019 NPC’s impacts on transportation is enclosed herewith.

Overall, the proposed 2019 NPC will result in either unchanged conditions or net reduction in environmental impacts associated with the Seaport Square project.

Design

Consistent with the Proponent’s commitment to excellence in urban design and building architecture throughout the Seaport Square Project Site, the Proponent has engaged Morris Adjmi Architects of New York to design the Block N building, and a package of design materials is attached hereto for reference and review. These materials are being submitted to the BPDA and the Boston Civic Design Commission for design review in accordance with Articles 80B and Article 28, respectively, concurrent with this the submission of this Block N NPC.

The design of the proposed Block N building is intended to be highly contextual and very respectful of its location adjacent to (though outside of) the Fort Point Channel Landmark District. To this end, the building is proposed with a richly textured brick masonry façade and brick arch-top windows that present a contemporary interpretation of the area’s industrial heritage and tradition of craftsmanship in the application of brick masonry. The proposed Block N building would also create a modestly-scaled (4- to 5- story) streetwall along both Summer and Congress Streets, to help create a continuous and human-scaled pedestrian experience along both of these important pedestrian routes.

It is the Proponent’s hope that the proposed Block N building design helps to create a seamless pedestrian and visual transition between the historic Fort Point Channel Landmark District and the Seaport Square Project along both Summer and Congress Streets. The building has been designed to bring the scale, texture, and authenticity of materials east from Fort Point and towards the Boston Convention & Exhibition Center, so that conventiongoers and other visitors will be better connected to the Fort Point Channel neighborhood’s rich history and cultural context.

Other Overall Project Benefits and Clarifications

In connection with this 2019 NPC, the Proponent is committing to several additional public benefits commitments, as well as providing confirmation and clarification of several prior commitments associated with the 2017 NPC, as follows:

New Public Benefits Commitments:

- The Proponent will accelerate the payment of the $7.5 million SeaPAC Contribution (as defined in the PDA), so that the contribution will be made upon the start of construction of the Block in which the SeaPAC is located, rather than the completion of construction of such Block. As described in the PDA, the SeaPAC Contribution may be applied to support programming of the SeaPAC and/or other civic/educational/cultural uses or endeavors within the NPC Blocks; in the event that the contribution funds such other programming or endeavors, such amounts will be funded concurrently with the introduction of those activities.

- In addition to affirming the location of the SeaPAC, described below, the Proponent will increase the amount of the SeaPAC Contribution from $7.5 million to $8.5 million, payable as set forth above. This accelerated and increased commitment to supporting the performing arts and civic uses in the Seaport will help to ensure that the neighborhood, at full build-out, will play a central and sustainable role in the cultural landscape of the entire City.

- The Proponent will make a voluntary Inclusionary Development Policy (IDP) contribution of $1.0 million (in addition to the new Development Impact Project linkage funds of approximately $3.0 million) to fund the construction of affordable housing City-wide. This contribution will be made prior to the completion of the Block N building.

- Other public benefits and/or mitigation commitments, most likely focused on housing and climate change resiliency, will also be explored during the review period for this NPC.

Additional Mitigation/Public Benefits Confirmations/Clarifications:

- The Proponent will construct the SeaPAC on Block L5 of the Seaport Square Project. The SeaPAC, as described in the PDA Plan, is a major performing arts venue comprising approximately 600 seats in two state-of-the-art, flexible venues that will be suitable for a variety of performance types and audience configurations. The SeaPAC's construction, which is being re-affirmed in this NPC along with the future construction of the 150-seat Fort Point Community Theater, will contribute greatly to the landscape of performing arts venues available in Boston and will become a pillar of the cultural and civic realm not only in the Seaport but also City-wide.

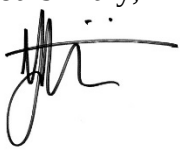
- Notwithstanding the Commonwealth's commitment of $20 million in funding for certain transportation, infrastructure, and public realm improvements, as set forth in the Commitment for Commonwealth Funding dated April 25, 2018 (the "State Commitment"), the Proponent remains responsible for the completion of such improvements pursuant to the PDA Plan, and the Proponent will not retain any portion of the $20 million State Commitment.

Conclusion

We hereby request that the Authority issue a determination pursuant to Section 80A-6.2 of the Code finding that the changes described herein do not significantly increase the impacts of

the previously-approved NPC Project and that no further review of the project is required, and authorizing the Director to enter into Article 80B project agreements and Partial Certifications of Compliance and Consistency for Block N reflecting this project change. We look forward to working with you and your staff in your review of this matter.

Yours Truly,



Yanni Tsipis
Senior Vice President - Seaport

cc: Aisling Kerr, BPDA
Peter Kochansky, Goulston & Storrs

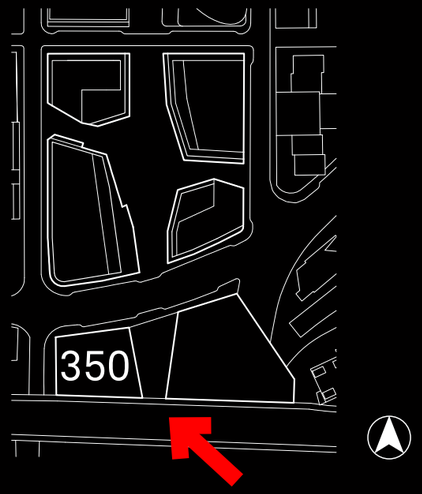
350 SUMMER STREET

NPC DESIGN SUBMISSION / SEPTEMBER 2019

Morris Adjmi Architects
www.ma.com

Stantec

WSDEVELOPMENT



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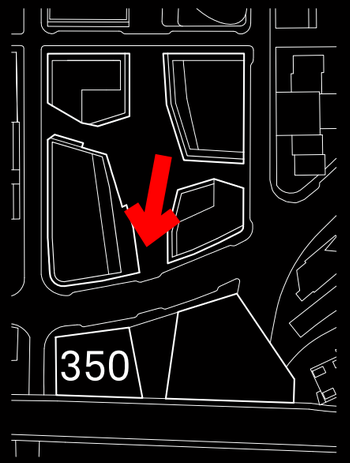
SUMMER STREET LOOKING WEST



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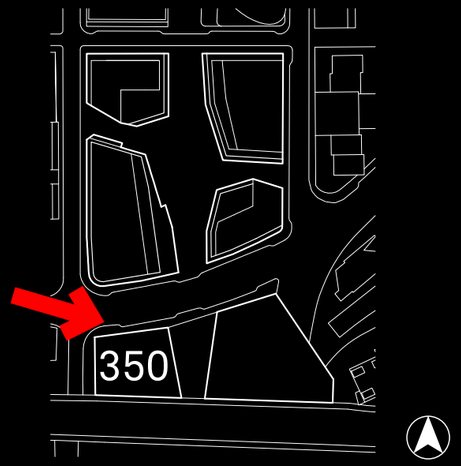
350 SUMMER STREET



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CONGRESS STREET LOOKING SOUTHEAST

FACADE ARTICULATION

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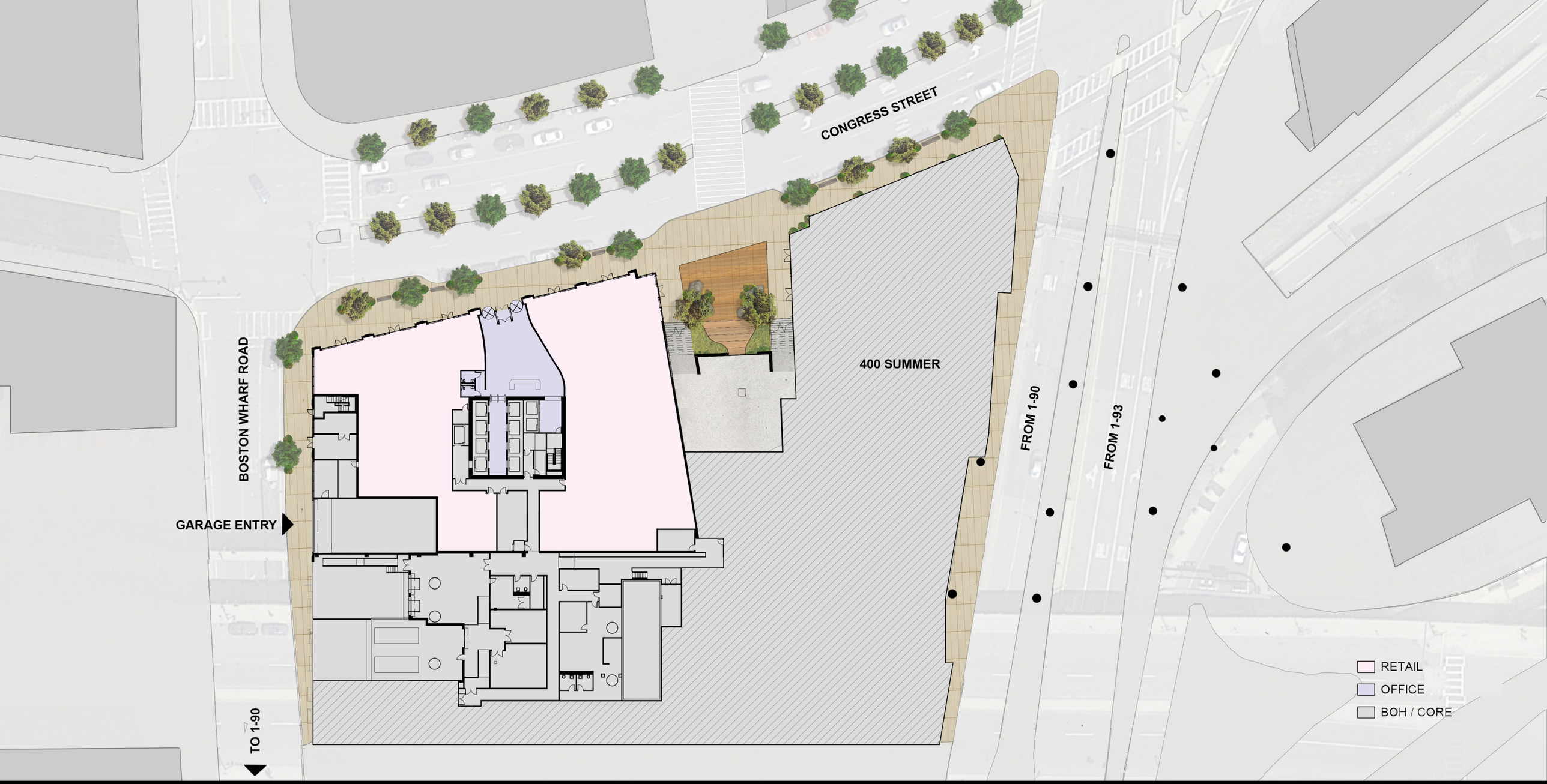

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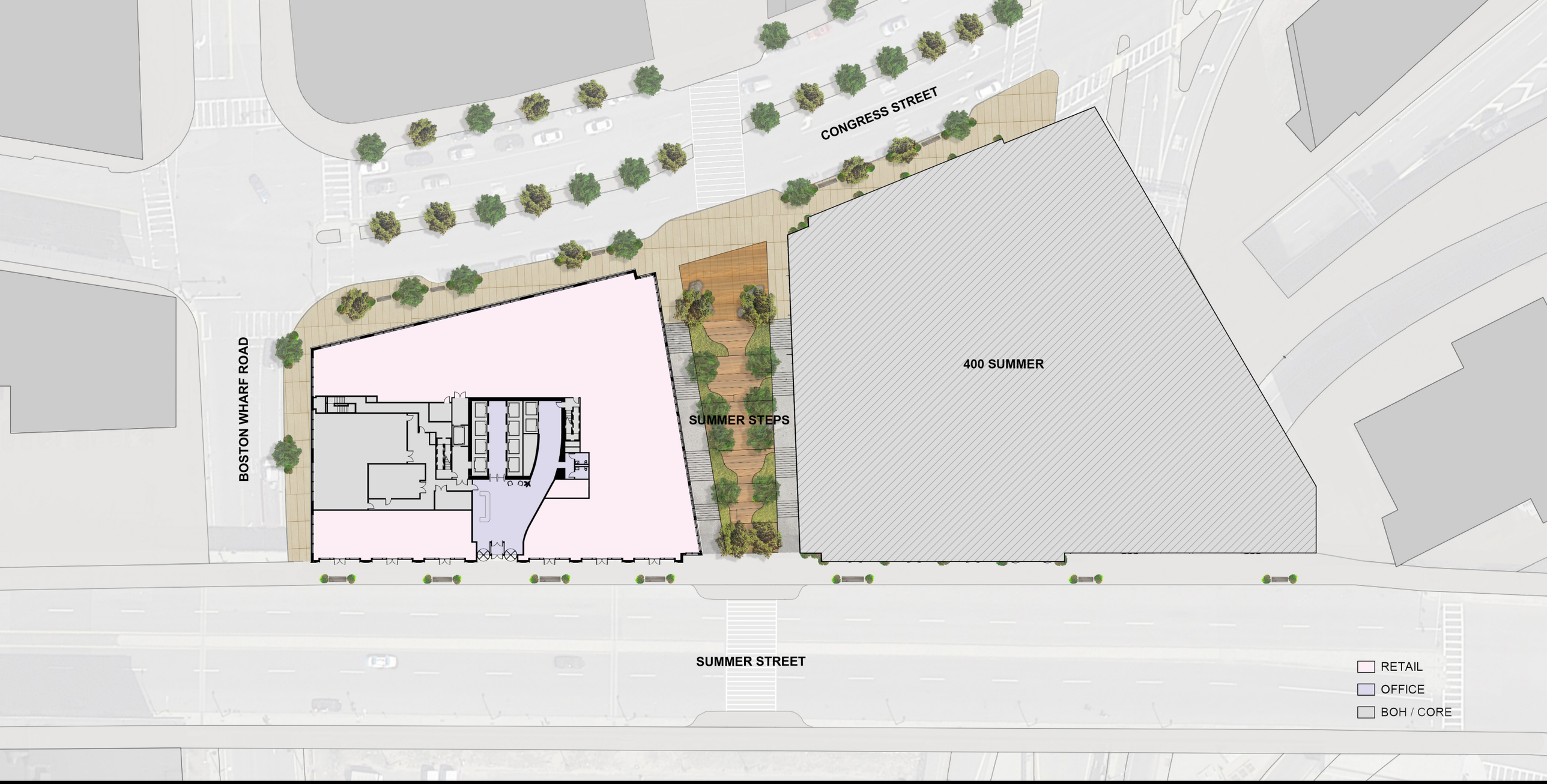
FIRST FLOOR PLAN



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SECOND FLOOR PLAN

TYPICAL PODIUM PLAN

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TYPICAL TOWER PLAN

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NORTH ELEVATION

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SOUTH ELEVATION

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WEST ELEVATION

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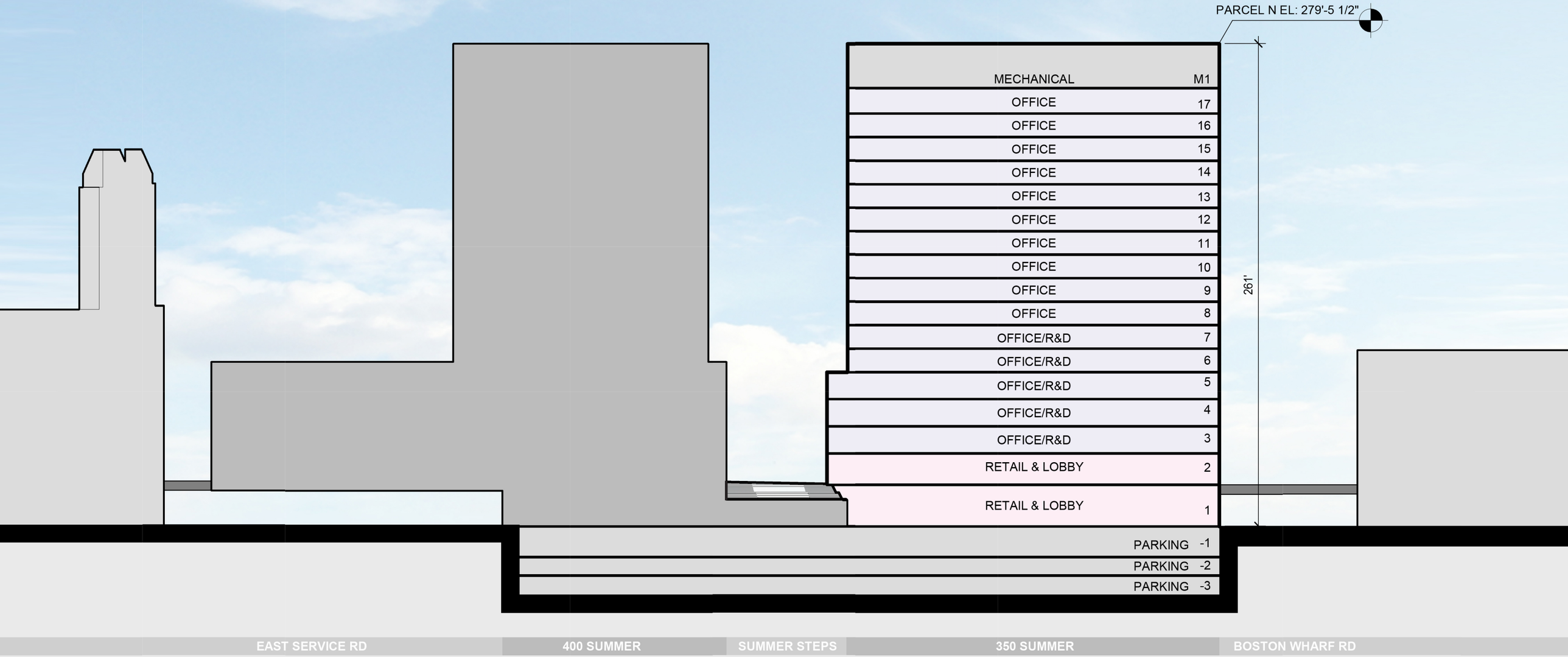
EAST ELEVATION



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STACKING DIAGRAM

TO:	Yanni Tsipis Amy Prange	DATE:	September 9, 2019
FROM:	Brian Beisel, PTP Andrew Fabiszewski	HSH PROJECT NO.:	Project # 2006233.28
SUBJECT:	Seaport Square 2019 NPC		

In 2010, the Seaport Square Project received approval from the BPDA, under Article 80B of the Code, for the construction of approximately 6,335,200 square feet of Gross Floor Area of mixed uses within the South Boston Waterfront neighborhood of Boston. The City of Boston Zoning Commission (the "BZC") approved a Planned Development Area Development Plan for Planned Development Area No. 78 on October 13, 2010 (the "Original PDA Plan"). The current Proponent of the project is Seaport Square Development Company LLC and its affiliates.

Following the approval of the Original PDA Plan, the original proponent constructed a number of public realm improvements, and conveyed Block A, Blocks B and C, Block H, Block K, Block J, Block L1, Block L2, and Blocks M1 and M2 to third party developers for the development of such Blocks.

The Proponent acquired the undeveloped Blocks and developed open spaces – Blocks D, F, G, L3-L6, N, P, and Q (the "NPC Blocks") – in October 2015, and proposed an updated and enhanced vision for the district (the "2017 NPC Project"), detailed in a Notice of Project Change filed on February 7, 2017 and a Supplemental Impact Report filed on September 12, 2017 (collectively, the "2017 NPC"). In conjunction with those project changes, the Proponent filed an Amended and Restated PDA Plan, which was approved by the BPDA on November 16, 2017 and by the BZC on December 13, 2017 (the "PDA Plan").

The term "Overall Project", as defined in the BPDA's approval of the 2017 NPC, describes the totality of the structures and other improvements within the Seaport Square Project that have already been completed or are currently underway as part of the Original Project (the Developed Blocks), as well as those planned as part of the 2017 NPC Project. The Overall Project's current approvals allow the construction of 7,723,110 square feet of Gross Floor Area, which would include approximately 3.2 million square feet of residential uses, 2.8 million square feet of office/research/ innovation uses, 1.1 million square feet of retail/entertainment/ performing arts uses, 480,000 square feet of hotel uses, 19,700 square feet of civic uses, as well as cultural/community uses. The Overall Project includes up to approximately 5,500 underground parking spaces, reduced from approximately 6,375 spaces in the Original Project, and approximately 200 on-street parking spaces.

The Proponent engaged Howard Stein Hudson (HSH) to conduct an evaluation of the transportation impacts of the changes in land uses described in the 2019 NPC. This transportation study adheres to the Boston Transportation Department (BTD) Transportation Access Plan Guidelines and Boston Planning and Development Agency (BPDA) Article 80 Large Project Review process. This study includes an evaluation of future conditions with the 2019 NPC Project comparing it to the previously approved 2017 NPC Project.

Project Description

The changes described in the 2019 NPC would result in a building program summarized below (the "2019 NPC Project"). Table 1 compares the 2017 NPC Project development program with the current proposed 2019 NPC Project building program.

Table 1. Building Program Comparison

Land Use	2017 NPC Approved	2019 NPC	Net
Retail	1,122,995 sf	1,000,535 sf	-122,460 sf
Office / Research	2,781,515 sf	3,253,975 sf	+472,460 sf
Residential	3,206,000 sf	2,856,000 sf	-350,000 sf**
Hotel	470,800 sf	470,800 sf	No Change
Cultural	19,700 sf	19,700 sf	No Change
Total	**7,601,010 sf***	**7,601,010 sf**	No Change

** Consistent with the 2017 Article 80 filings, this study includes the approximately 980,000 sf of gross floor area constructed on Blocks B and C, rather than the maximum approved GFA of 1,100,000.*
*** Overall residential unit count within Seaport Square does not change due to reallocation of unit sizes at other development blocks within the project area.*

As shown in Table 1, the proposed change in uses results in no change to the total square footage of the development and mainly consists of the reallocation of square footage from residential and retail to office. This 2019 NPC study examines the same blocks as the 2017 NPC (Blocks D, F, G, L3, L4, L5, L6, N, and P). This transportation study will determine the impacts of the 2019 NPC Project and compare it to the previously approved 2017 NPC Project.

Study Area

As shown in Figure 1, the study area is comprised of the same intersections that were assessed in the 2017 NPC and consists of the following 23 intersections, categorized by their current traffic control devices.

Seaport Square **Boston, Massachusetts**

SEAPORT

Figure 1
Study Area Intersections

- Northern Avenue/Sleeper Street (unsignalized);
- Northern Avenue/Courthouse Way (unsignalized);
- Northern Avenue/Fan Pier Boulevard (unsignalized);
- Northern Avenue/Marina Park Drive (unsignalized);
- Northern Avenue/Harbor Shore Drive (unsignalized);
- Northern Avenue/Pier 4 Boulevard (signalized);
- Seaport Boulevard/Sleeper Street (signalized);
- Seaport Boulevard/Fan Pier Boulevard (signalized);
- Seaport Boulevard/Boston Wharf Road (signalized);
- Seaport Boulevard/East Service Road/Pier 4 Boulevard (signalized);
- Seaport Boulevard/B Street (signalized);
- Seaport Boulevard/Seaport Lane (unsignalized);
- Seaport Boulevard/Northern Avenue/D Street/Boston Fish Pier (signalized);
- Congress Street/Sleeper Street (unsignalized);
- Congress Street/Farnsworth Street (unsignalized);
- Congress Street/Thomson Place/A Street (signalized);
- Congress Street/Boston Wharf Road/West Service Road (signalized);
- Congress Street/I-90 EB Off-Ramp/I-93 NB Off-Ramp/East Service Road (signalized);
- Congress Street/B Street/I-93 On-Ramps/I-90 Off-Ramps (signalized);
- Congress Street/D Street (signalized);
- D Street/Silver Line Way (signalized);
- D Street/Massport Haul Road (I-90 On-Ramps) (signalized); and
- Summer Street/D Street (signalized).

Study Methodology

This transportation study and its supporting analyses were conducted in accordance with BTD guidelines and are described below. The New Build (2023) Condition analysis includes the change in the 2019 NPC Project-generated trips to the No-Build (2023) Condition submitted in previous 2017 filings. The transportation study identifies expected impacts to traffic operations and transit capacity.

New Build (2023) Condition

To supplement the ITE trip generation rates, HSH performed detailed field counts on November 1, 2016 to determine the trip rates and mode share percentages for the occupied Block K residential building (Watermark) and Block L1 office building (PWC). The counts and resulting trip generation rates were used to determine the trip rates for the proposed residential and office uses of the NPC Project. For the other land uses (retail and hotel), the ITE trip rates were used. Determining the future trip generation of a project is a complex, multi-step process that produces an estimate of vehicle trips, transit trips, and walk/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 site.

Trip Generation Methodology

To estimate the number of trips expected to be generated by the 2017 NPC Project and the 2019 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 a project. The following ITE land use codes (LUCs) were used:

Land Use Code 221 – Multifamily Housing (Mid-Rise). Mid-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have between three and ten floors. Calculations of the number of trips use a combination of HSH field data collection rates for the peak hours and ITE's average rate per dwelling unit for the daily trips.

Land Use Code 710 – General Office Building. A general office building houses multiple tenants and is a location where affairs of businesses, commercial, or industrial organizations are conducted. Calculations of the number of trips use a combination of HSH field data collection rates for the peak hours and ITE's average rate per 1,000 square feet for the daily trips.

Land Use Code 310 – Hotel. Hotels are places of lodging that provide sleeping accommodations and supporting facilities such as restaurants, cocktail lounges, meeting and banquet rooms or convention facilities, limited recreational facilities (pool, fitness room), and/or other retail and service shops. Calculations of the number of trips use ITE's average rate per 1,000 sf.

[1] Trip Generation Manual, 10th Edition; Institute of Transportation Engineers; Washington, D.C.; 2017.

Land Use Code 820 – Shopping Center. The Shopping Center land use code is defined as an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Shopping center trip generation estimates are based on average vehicle rates per square footage of retail space. Calculations of the number of trips use ITE's average rate per 1,000 sf.

It should be noted that since the 2017 NPC filing, a new 10th Edition of the ITE *Trip Generation Manual* was released that provides updated trip rates. These new trip rates were utilized in this study, as per industry standard, to provide the most up to date trip generation assessment for the both the 2017 NPC Project and the 2019 NPC Project. Therefore, the 2017 NPC Project trips presented in this study do not match the trips presented in previous submissions, however there is consistency for the comparison purposes.

Unadjusted Trip Generation Comparison

For the purposes of state review under the Massachusetts Environmental Policy Act (MEPA) and to give relative comparisons of the magnitude of the building programs, the unadjusted (mode shares not accounted for) project-generated vehicle trips for both the approved 2017 NPC and the current proposed 2019 Project are summarized below in Table 2.

Table 2. Unadjusted Project Trip Generation Comparison

Direction	*2017 NPC Approved*	*Proposed NPC*	*Net*
In	27,152	27,103	-49
Out	27,152	27,103	-49
Total	**54,304**	**54,206**	**-98**

As shown in the table above, the proposed building program results in a slight decrease in unadjusted daily trips compared to the previously approved 2017 NPC building program due to the reallocation of land uses in the 2019 NPC.

Mode Share

The mode shares established in the 2017 NPC filings are the same ones that are used for this analysis. As with the 2010 Project and 2017 Project, the standard BTD mode share data was not used for this study because the mode share zone (Zone 13) that Seaport Square is in is a large zone that covers the South Boston Waterfront area as well as the Boston Marine Industrial Park (BMIP) and the traditional South Boston residential neighborhood. Since these neighborhoods are not conveniently located next to downtown Boston, the overall Zone 13 mode share does not adequately represent the transit and walk/bike modes.

The results of these observations indicated that the mode shares used in the 2010 Project were consistent with the existing conditions, but with the addition of rideshare and shuttle services to the vehicle mode split. The mode shares are shown in Table 3.

Table 3. Travel Mode Share

Land Use		Walk/Bicycle Share	Transit Share	Shuttle Share	Rideshare/ Taxi Share	Auto Share
Daily						
Residential	In	39%	35%	0%	9%	17%
	Out	39%	35%	0%	9%	17%
Office	In	19%	55%	9%	7%	10%
	Out	19%	55%	9%	7%	10%
Hotel	In	39%	27%	0%	10%	24%
	Out	39%	27%	0%	10%	24%
Retail	In	39%	27%	0%	0%	34%
	Out	39%	27%	0%	0%	34%
a.m. Peak						
Residential	In	39%	35%	0%	9%	17%
	Out	39%	35%	0%	9%	17%
Office	In	19%	55%	9%	7%	10%
	Out	19%	55%	9%	7%	10%
Hotel	In	39%	27%	0%	10%	24%
	Out	39%	27%	0%	10%	24%
Retail	In	39%	27%	0%	0%	34%
	Out	39%	27%	0%	0%	34%
p.m. Peak						
Residential	In	39%	35%	0%	9%	17%
	Out	39%	35%	0%	9%	17%
Office	In	19%	55%	9%	7%	10%
	Out	19%	55%	9%	7%	10%
Hotel	In	39%	27%	0%	10%	24%
	Out	39%	27%	0%	10%	24%
Retail	In	39%	27%	0%	0%	34%
	Out	39%	27%	0%	0%	34%

Vehicle Occupancy Rates

The field observations also determined vehicle occupancy rates (VOR) for each of the vehicular mode share options for the residential and office land uses. Table 4 summarizes the VOR for each land use by vehicle option.

Table 4. Vehicle Occupancy Rates

Land Use		Shuttle Vehicle Occupancy Rate	Rideshare/Taxi Vehicle Occupancy Rate	Private Auto Vehicle Occupancy Rate
Residential	In	N/A	1.10	1.13
	Out	N/A	1.10	1.13
Office	In	14.00	1.10	1.13
	Out	14.00	1.10	1.13
Hotel	In	N/A	1.20	1.84
	Out	N/A	1.20	1.84
Retail	In	N/A	N/A	1.78
	Out	N/A	N/A	1.78

Existing Trip Generation

The 2017 NPC took into account 1,355 surface lot spaces that are publicly used within the Project Area. These parking spaces, located in Blocks L3-6, N, & P will be built over in the Build Condition. The traffic volumes in and out of the surface parking lots were counted on November 1, 2016 along with the rest of the traffic counts. These volumes were removed from their respective future condition.

2019 Project Trip Generation

The mode share percentages shown in Table 3 and VOR and Table 4 were applied to the number of person trips to develop walk/bicycle, transit, and vehicle (including shuttle and automobile) trip generation estimates for the Project. The trip generation for the Project by mode is shown in Table 5. The detailed trip generation information is provided in the Appendix.

Table 5. Net 2019 NPC Project Trip Generation

Land Use		*Walk/Bicycle Trips*	*Transit Trips*	*Shuttle Trips*	*Vehicle Trips*
Daily					
Residential[1]	In	1,551	1,392	-	916
	Out	1,551	1,392	-	916
Retail[2]	In	5,282	3,653	-	2,585
	Out	5,282	3,653	-	2,585
Office[3]	In	2,544	7,357	85	2,098
	Out	2,544	7,357	85	2,098
Hotel[4]	In	1,152	797	-	633
	Out	1,152	797	-	633
Existing Parking[5]	In	-	-	-	-
	Out	-	-	-	-
Total Net New Project Generated	In	10,529	13,199	85	6,232
	Out	10,529	13,199	85	6,232
a.m. Peak Hour					
Residential[1]	In	28	26	-	16
	Out	110	97	-	64
Retail[2]	In	183	126	-	91
	Out	101	69	-	49
Office[3]	In	1,012	2,921	34	832
	Out	46	134	0	36
Hotel[4]	In	76	53	-	42
	Out	53	37	-	29
Existing Parking[5]	In	-	-	-	-178
	Out	-	-	-	-11
Total Net New Project Generated	In	1,299	3,126	34	803
	Out	310	337	0	167

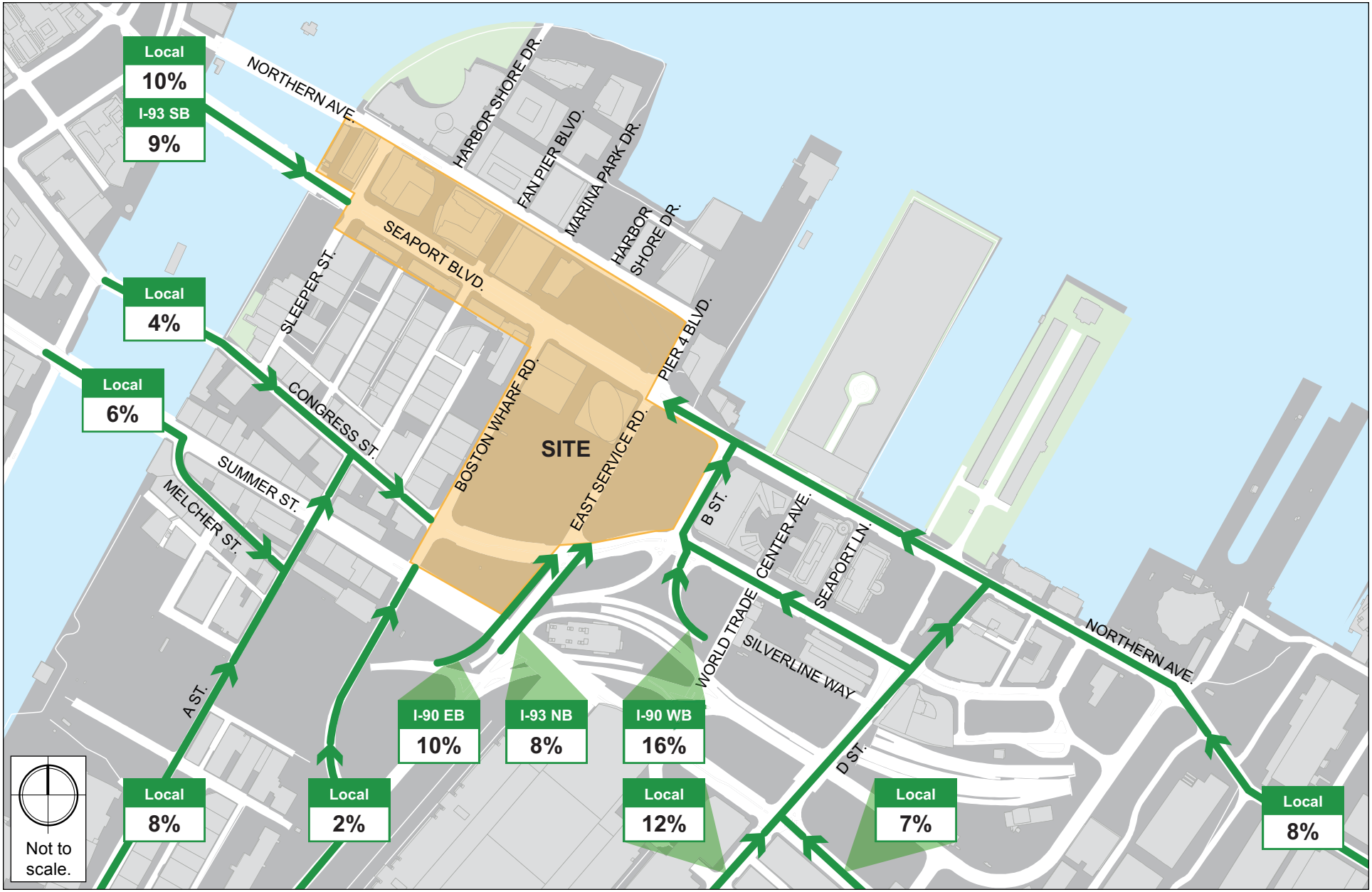
Land Use		*Walk/Bicycle Trips*	*Transit Trips*	*Shuttle Trips*	*Vehicle Trips*
p.m. Peak Hour					
Residential[1]	In	86	76	-	50
	Out	51	47	-	30
Retail[2]	In	510	355	-	251
	Out	568	390	-	280
Office[3]	In	51	147	0	41
	Out	959	2,774	32	791
Hotel[4]	In	84	59	-	46
	Out	81	56	-	45
Existing Parking[5]	In	-	-	-	-14
	Out	-	-	-	-188
Total Net New Project Generated	In	731	640	0	374
	Out	1,659	3,267	32	958

1. HSH Field Count Rate (Apartment), 1294 units.
2. ITE Trip Generation Rate, 10th Edition, LUC 820 (Shopping Center), 537,240 square feet.
3. HSH Field Count Rate (Office Building), 2,485,000 square feet.
4. ITE Trip Generation Rate, 10th Edition, LUC 310 (Hotel), 384 rooms.
5. Traffic counts conducted on November 1, 2016 for the 1,355 parking spaces.

As shown in Table 5, there is expected to be 21,058 new pedestrian/bicycle trips, 26,398 new transit trips, and 12,464 new vehicle trips throughout the day. During the a.m. peak hour, there is expected to be 1,609 pedestrian trips (1,299 in and 310 out), 3,463 transit trips (3,126 in and 337 out), and 970 vehicle trips (803 in and 167 out). During the p.m. peak hour, there is expected to be 2,390 pedestrian trips (731 in and 1,659 out), 3,907 transit trips (640 in and 3,267 out), and 1,332 vehicle trips (374 in and 958 out).

Trip Distribution

The trip distribution identifies the various travel paths for vehicles associated with the Project. Trip distribution patterns for the Project were based on BTD's origin-destination data for Area 15 and trip distribution patterns presented in the 2010 Project. The trip distribution patterns for the Project are illustrated in Figure 2 and Figure 3.



Seaport Square **Boston, Massachusetts**

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Figure 2

Trip Distribution: Entering

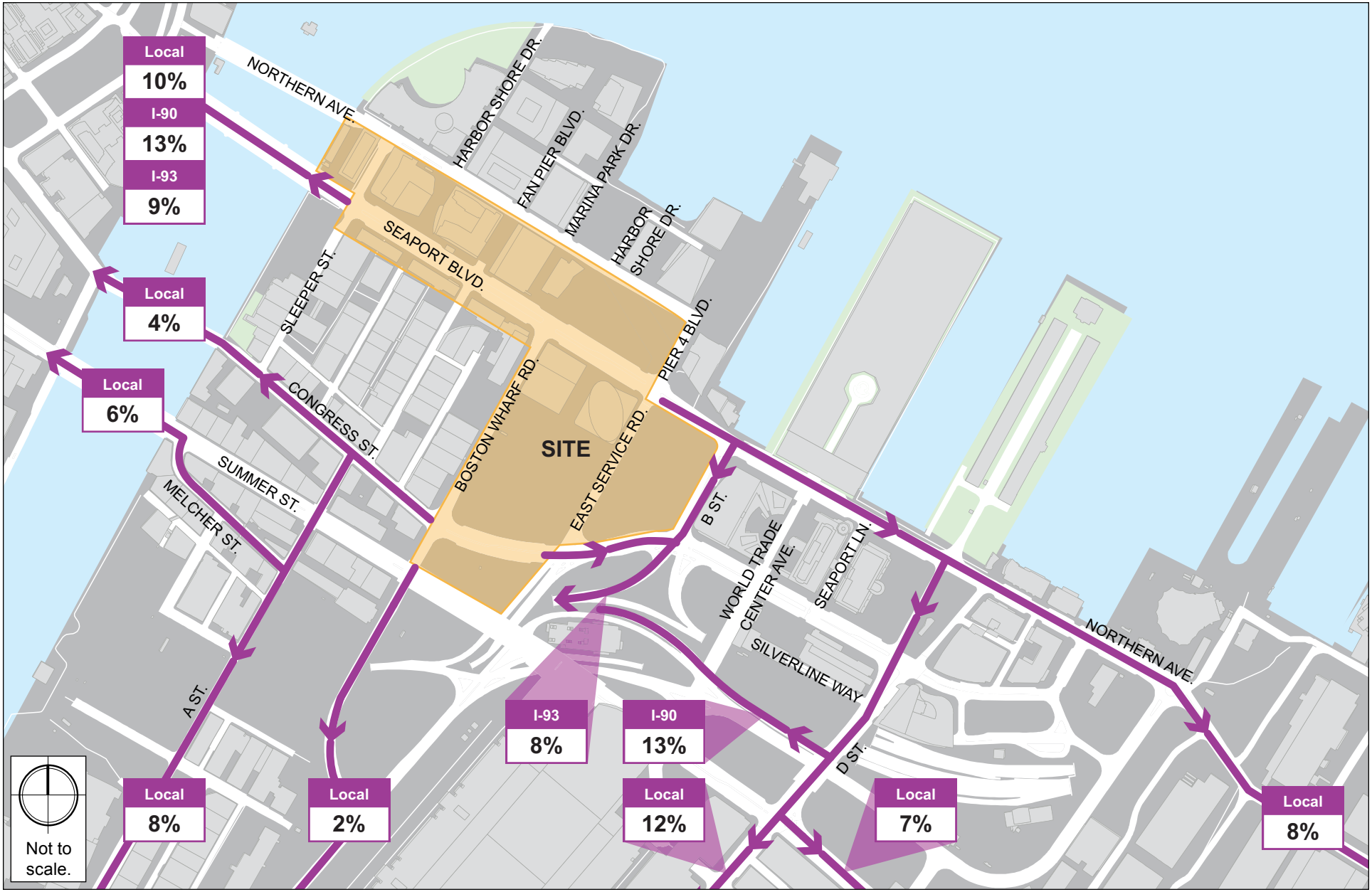

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Figure 3
Trip Distribution: Exiting

Build Traffic Volumes

The vehicle trips were distributed through the study area. The Project-generated trips for the a.m. and p.m. peak hours are shown in Figure 4 and Figure 5, respectively. A comparison of the net volumes between the NPC approved and the New Build project generated trips are shown in Figure 6 and 7, respectively. The trip assignments were added to the No-Build (2023) Condition vehicular traffic volumes from the previous filing to develop the New Build (2023) Condition vehicular traffic volumes. The New Build (2023) Condition a.m. and p.m. peak hour traffic volumes are shown on Figure 8 and Figure 9, respectively.

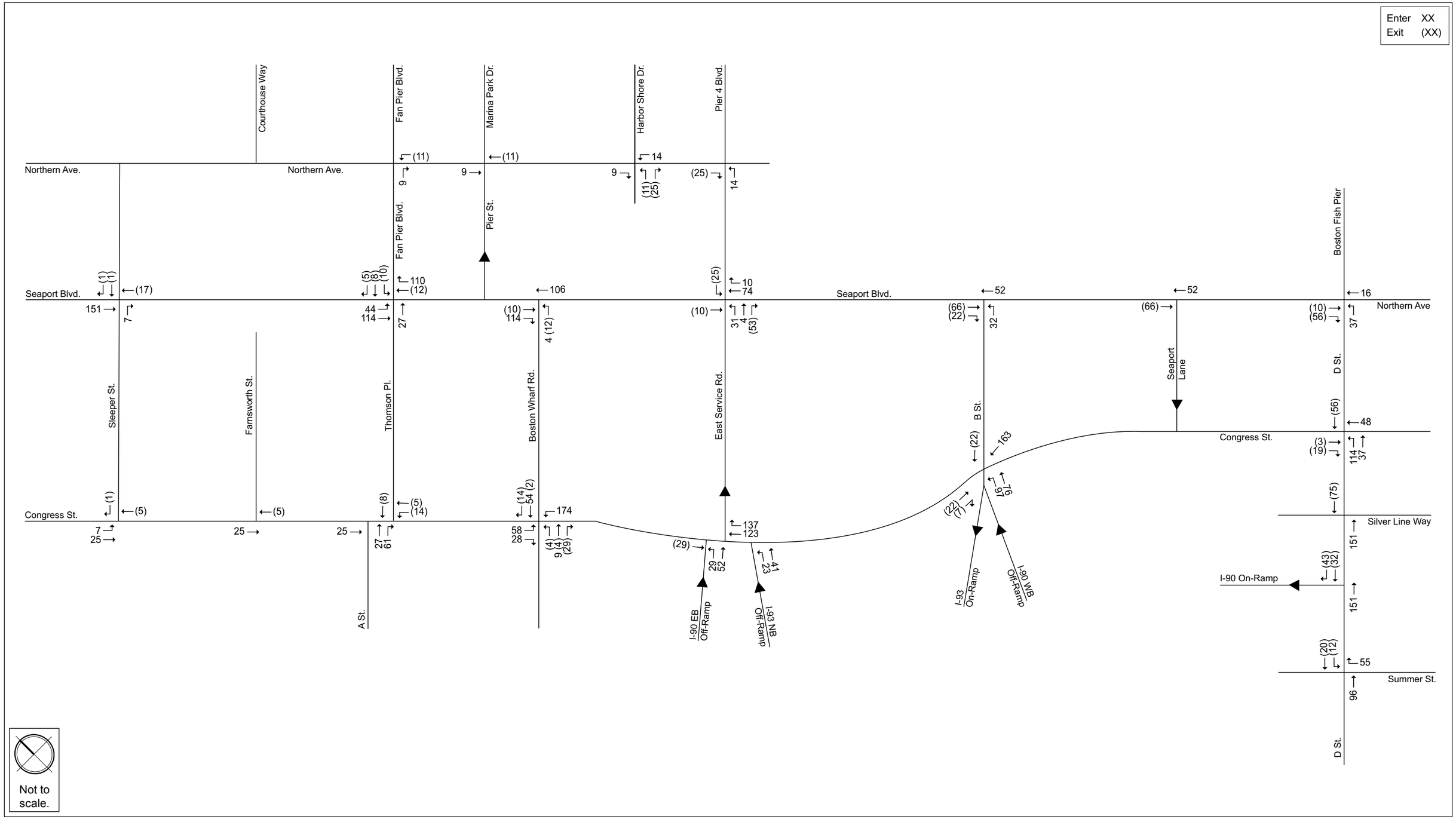

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Figure 4
Project-generated Trips, a.m. Peak Hour

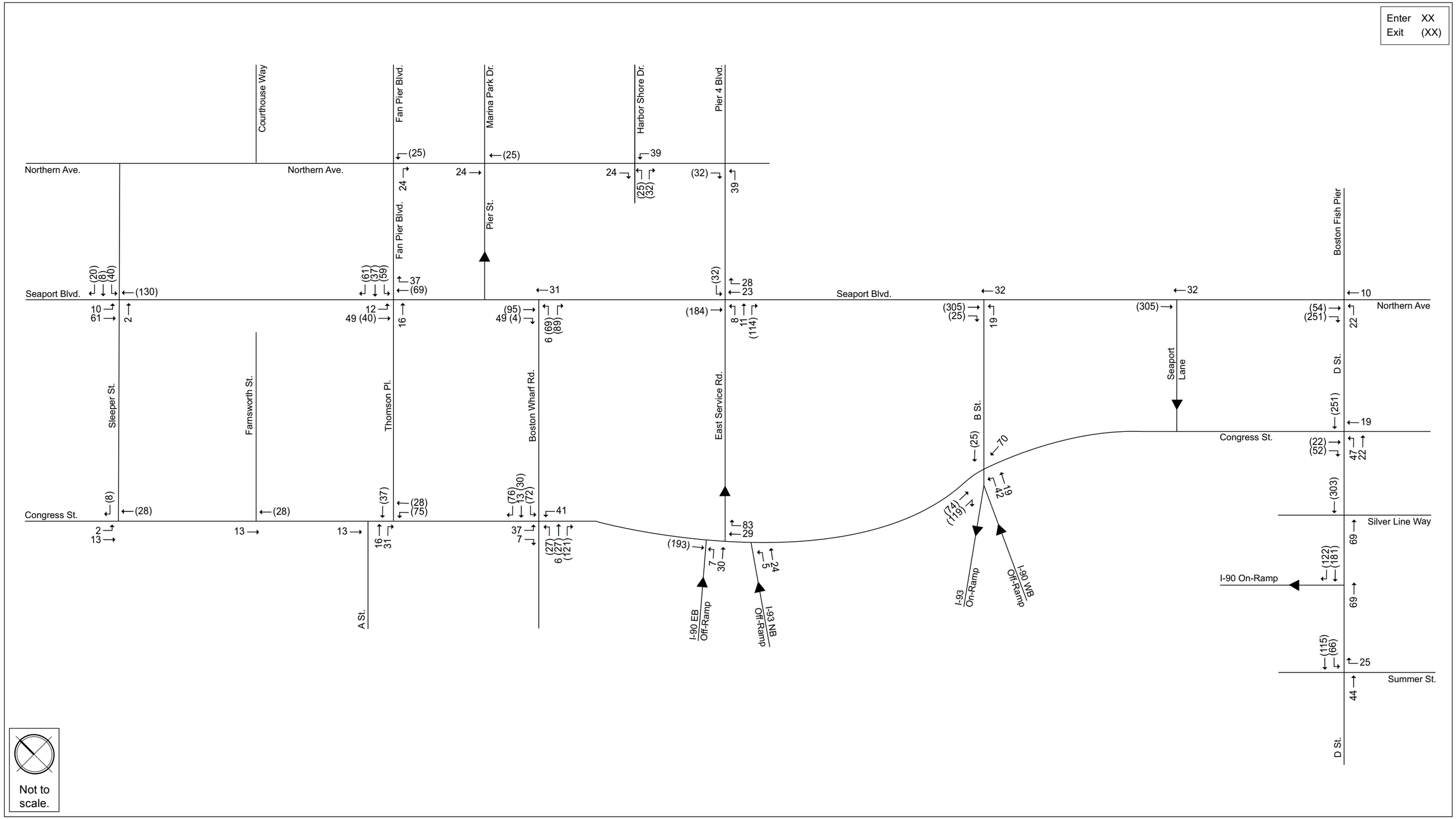

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Figure 5
Project-generated Trips, p.m. Peak Hour

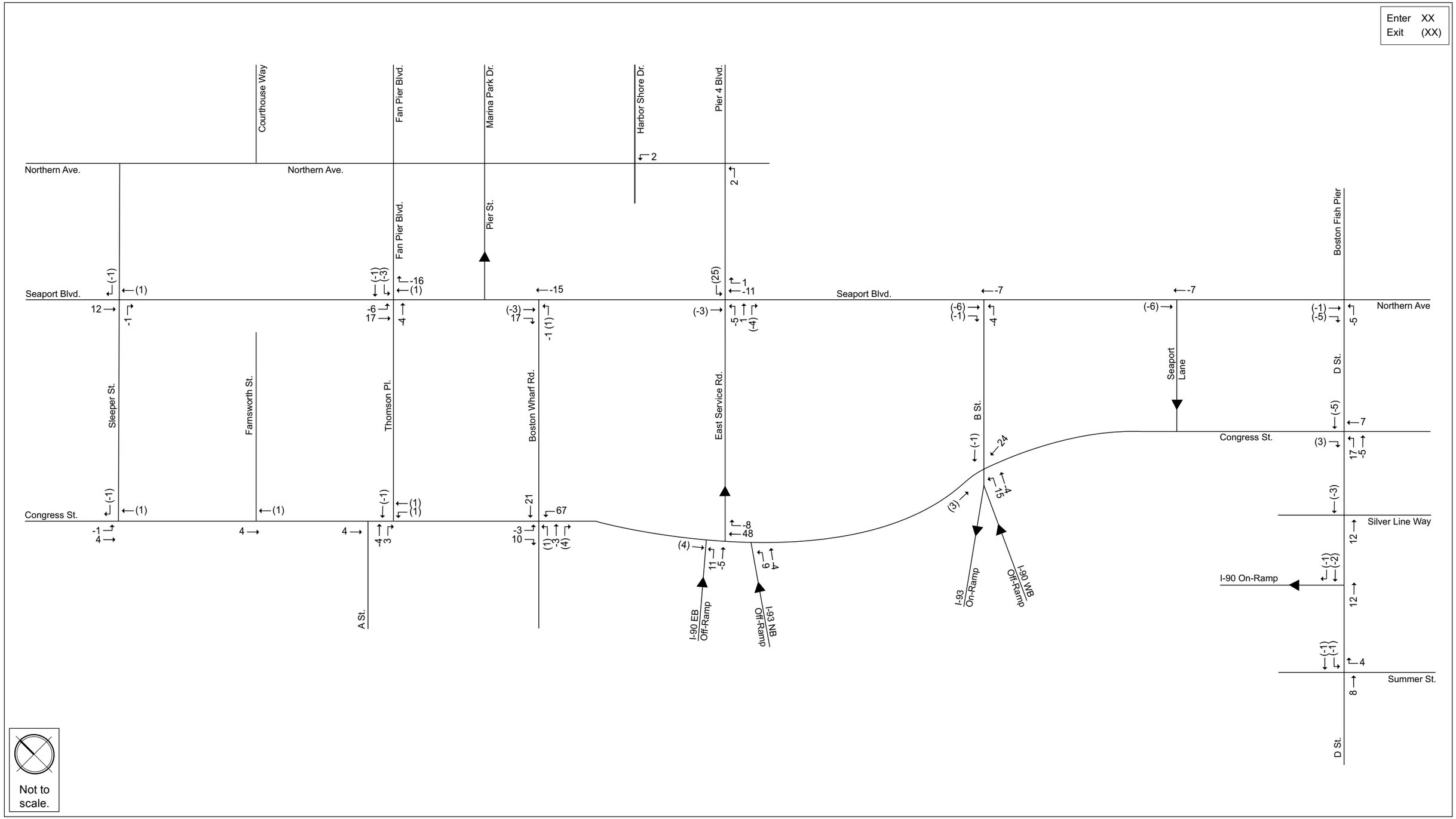

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Figure 6
Net Project-generated Trips, a.m. Peak Hour

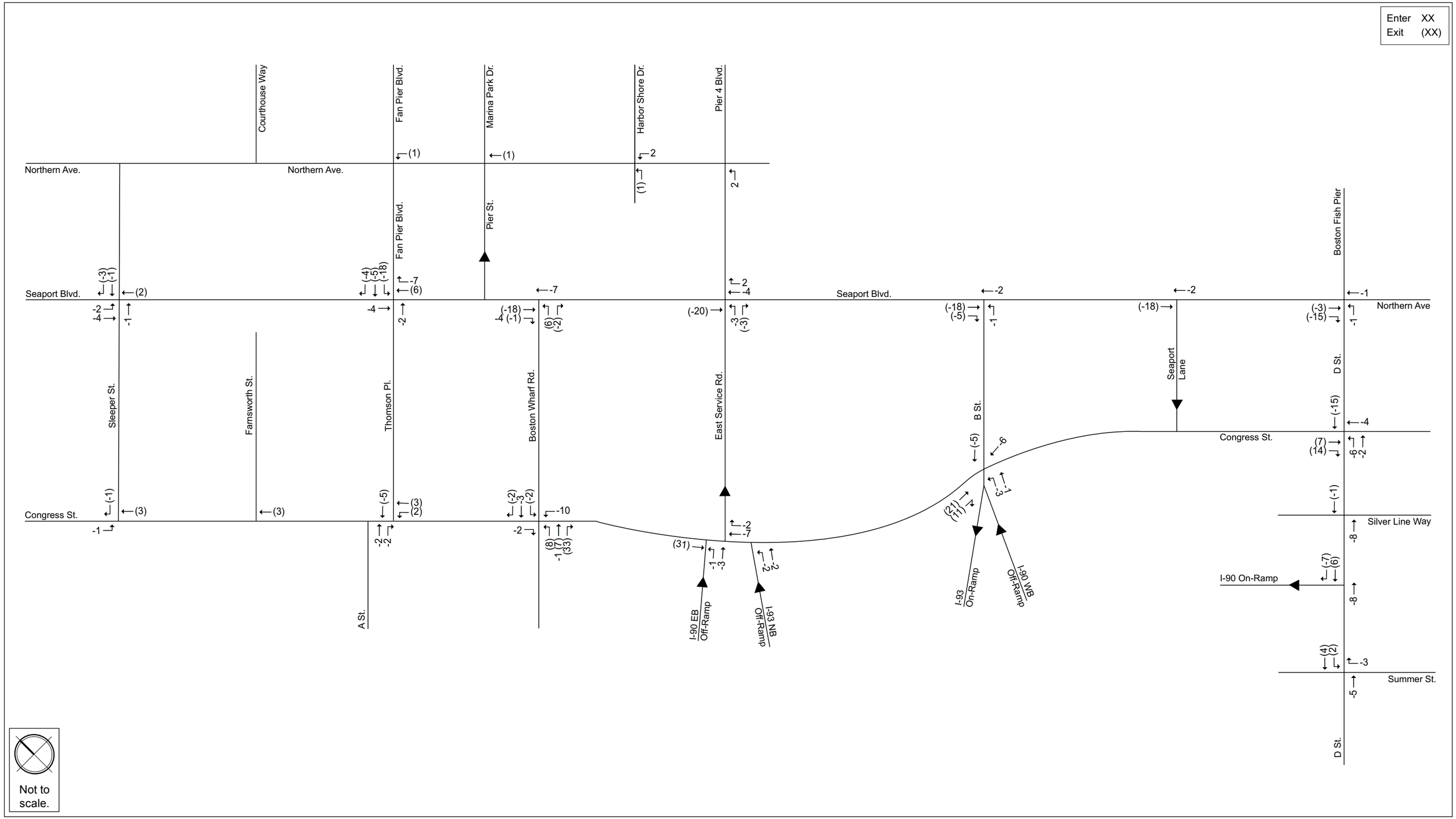

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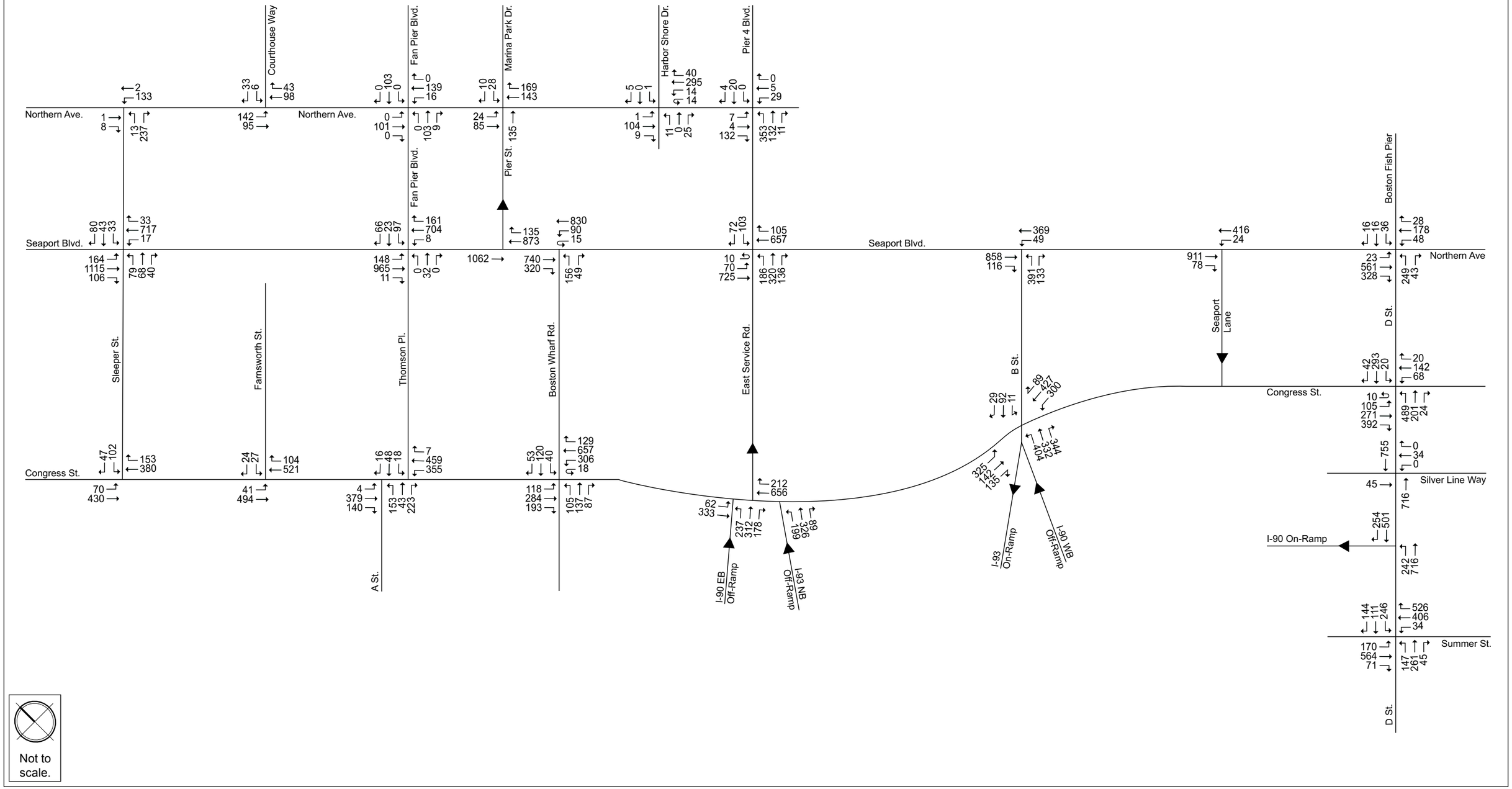
Figure 7
Net Project-generated Trips, p.m. Peak Hour



Seaport Square **Boston, Massachusetts**

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Figure 8

New Build (2023) Condition Traffic Volumes, Weekday a.m. Peak Hour

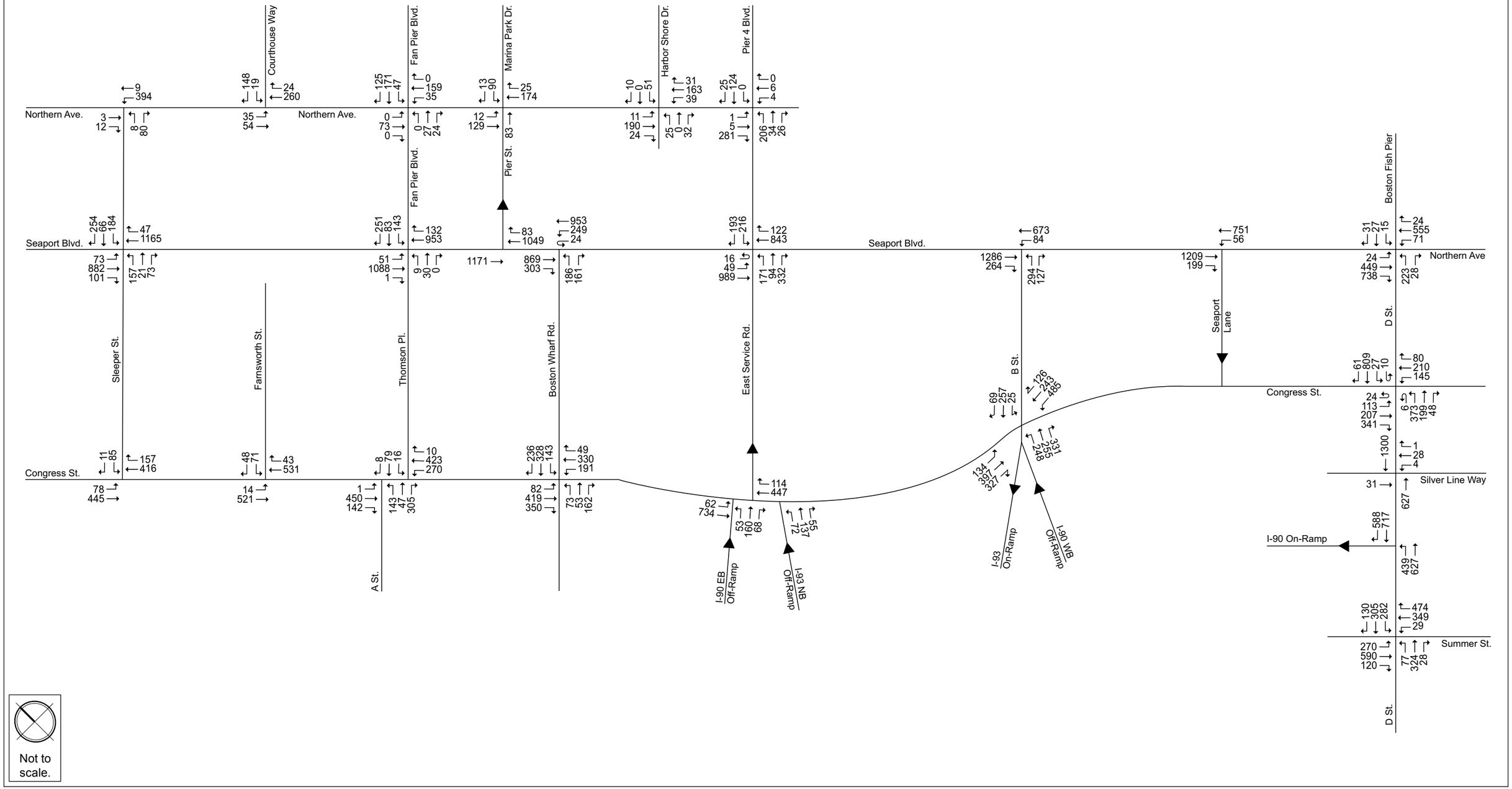

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Figure 9

New Build (2023) Condition Traffic Volumes, Weekday p.m. Peak Hour

Traffic Capacity Analysis

This section introduces the traffic mitigation commitments that the Proponent has committed to from previous filings and provides an updated Build Condition analysis of the proposed Project and compares it to the previously approved 2017 NPC.

Traffic Mitigation

As part of the 2010 Project, the Proponent has completed improvements along the Seaport Boulevard corridor between Sleeper Street and B Street to improve both vehicular and pedestrian operations. These improvements include turning lane modifications, pavement marking improvements, signal installation (including two signalized mid-block pedestrian crossings), and signal timing improvements. The 2017 NPC Project involved a similar scope of pavement marking and signal retiming along the Congress Street corridor from the A Street/Thomson Place intersection to the B Street/On and Off Ramp intersection. The intent of the signal timing modifications to each corridor is to provide more efficient vehicle travel east-west through the corridors, while also providing pedestrian improvements via concurrent pedestrian phasing that will allow for longer walk times. The Proponent maintains their commitment to the traffic mitigation as it continues to be appropriate under the proposed building program as the analysis outline within this section shows.

Traffic Operations Analysis

Trafficware's Synchro (version 9) 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).

Level of Service (LOS) designations are based on average delay per vehicle for all vehicles entering an intersection. Table 6 displays the intersection LOS criteria. LOS A indicates the most favorable condition, with minimum traffic delay, while LOS F represents the worst condition, with significant traffic delay. LOS D or better is typically considered desirable during the peak hours of traffic in urban and suburban settings. However, LOS E or F is often typical for a stop controlled minor street that intersects an urban roadway.

Table 6. Vehicle 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 ratio (v/c ratio) is a measure of congestion at an intersection approach. A v/c ratio below one indicates that the intersection approach has adequate 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.

The 95th percentile queue, measured in feet, denotes the farthest extent of the vehicle queue (to the last stopped vehicle) upstream from the stop line. This maximum queue occurs five percent, or less, of the time during the peak hour, and typically does not develop during off-peak hours. Since volumes fluctuate throughout the hour, the 95th percentile queue represents what can be considered a "worst case" condition. Queues at an intersection are generally below the 95th percentile length throughout most of the peak hour. It is also unlikely that 95th percentile queues for each approach to an intersection occur simultaneously.

Table 7 and Table 8 present the New Build (2023) Condition capacity analysis for the a.m. and p.m. peak hours, respectively. The detailed analysis sheets are provided in the Appendix.

Table 7. New Build (2023) Condition, Capacity Analysis Summary, a.m. Peak Hour

Intersection/Approach	*LOS*	*Delay (s)*	*V/C Ratio*	*50th Percentile Queue (ft)*	*95th Percentile Queue (ft)*
Signalized Intersections					
Northern Avenue/Pier 4 Boulevard	**B**	**17.1**	-	-	-
Northern Ave EB left/thru	D	51.5	0.11	8	28
Northern Ave EB right	A	0.5	0.12	0	7
Driveway WB left/thru/right	E	56.9	0.35	25	59
Pier 4 Blvd NB left	B	18	0.29	200	m293
Pier 4 Blvd NB thru/right	A	4.0	0.09	32	m45
Pier 4 Blvd SB left/thru/right	D	50.1	0.41	39	30
Seaport Boulevard/Sleeper Street	**B**	**16.8**	-	-	-
Seaport Blvd EB left	C	20.5	0.49	31	m23
Seaport Blvd EB thru | thru/right	A	6.3	0.69	71	m57
Seaport Blvd WB left/thru | thru/right	C	22.5	0.73	90	157
Sleeper St NB left/thru/right	D	47.7	0.71	112	166
Sleeper St SB left/thru	D	46.8	0.29	51	98
Sleeper St SB right	B	13.4	0.22	10	41
Seaport Boulevard/Boston Wharf Road	**C**	**30.2**	-	-	-
Seaport Blvd EB thru | thru/right	D	38.3	0.89	328	#225
Seaport Blvd WB left	B	18.9	0.49	53	90
Seaport Blvd WB thru | thru	C	20.1	0.47	282	281
Boston Wharf Rd NB left	D	42.0	0.43	87	m146
Boston Wharf Rd NB right	B	10.7	0.08	3	m21
Seaport Boulevard/East Service Road/Pier 4 Boulevard	**C**	**34.2**	-	-	-
Seaport Blvd EB left	D	38.1	0.46	64	121
Seaport Blvd EB thru | thru	C	33.4	0.57	310	378
Seaport Blvd WB thru | thru/right	C	28.3	0.58	215	282
East Service Rd NB left/thru | thru	D	49.1	0.84	163	m238
East Service Rd NB right	A	8.4	0.35	9	m24
Pier 4 Blvd SB left | left/right	E	63.4	0.50	41	71
Seaport Boulevard/B Street	**B**	**18.3**	-	-	-
Seaport Blvd EB thru | thru/right	A	5.4	0.57	66	98
Seaport Blvd WB left/thru | thru	B	11.1	0.39	72	125
B St NB left | left	D	48.5	0.77	109	m139
B St NB right	D	45.7	0.56	73	m102

Intersection/Approach	*LOS*	*Delay (s)*	*V/C Ratio*	*50th Percentile Queue (ft)*	*95th Percentile Queue (ft)*
D Street/Northern Avenue/ Fish Pier	**C**	**24.0**	-	-	-
Seaport Blvd EB left/thru | thru/right	C	20.7	0.71	210	328
Northern Ave WB left/thru | thru/right	B	16.1	0.31	48	88
D St NB left	D	41.9	0.65	151	233
D St NB right	A	0.3	0.08	0	0
Boston Fish Pier SB left/thru/right	D	46.9	0.50	37	79
Congress Street/A Street/Thomson Place	**C**	**23.2**	-	-	-
Congress St EB left/thru | thru	B	17.5	0.30	57	109
Congress St EB right	B	18.5	0.24	39	91
Congress St WB left	C	25.6	0.73	109	#282
Congress St WB thru/right	B	17.7	0.52	149	307
A St NB left	E	55.8	0.70	136	201
A St NB right	A	5.6	0.40	0	52
Thomson Pl SB left/thru/right	D	47.8	0.49	56	m102
Congress Street/Boston Wharf Road	**C**	**28.3**	-	-	-
Congress St EB left/thru	D	41.1	0.90	224	#573
Congress St EB right	A	1.3	0.29	0	3
Congress St WB left	D	54.8	0.98	121	m#445
Congress St WB thru | thru/right	B	12.4	0.56	126	183
Boston Wharf Rd NB left	D	51.0	0.59	72	121
Boston Wharf Rd NB thru/right	D	52.6	0.78	142	210
Boston Wharf Rd SB left/thru	B	12.9	0.37	48	m31
Boston Wharf Rd SB right	A	2.2	0.14	0	m2
Congress Street/East Service Road/Highway Ramps	**C**	**34.4**	-	-	-
Congress St EB left	E	59.4	0.73	35	m#68
Congress St EB thru | thru	C	22.5	0.30	72	m99
Congress St WB thru | thru/right	C	21.6	0.80	195	m#427
I-93 NB Off-Ramp NB left/thru | thru	D	49.4	0.80	198	260
I-93 NB Off-Ramp NB right	A	8.4	0.25	0	42
I-90 EB Off-Ramp NEB left/thru |	D	45.5	0.85	264	333

Intersection/Approach	*LOS*	*Delay (s)*	*V/C Ratio*	*50th Percentile Queue (ft)*	*95th Percentile Queue (ft)*
Congress Street/B Street/ Ramps	**C**	**32.7**	-	-	-
Congress St EB left/thru | thru	D	41.2	0.89dl	193	m240
Congress St EB right	C	21.9	0.20	80	m126
Congress St WB left	C	26.9	0.38	103	m130
Congress St WB left/thru | thru/right	D	39.5	0.87	249	m#354
I-90 WB Off-Ramp NB left	D	37.6	0.74	235	341
I-90 WB Off-Ramp NB thru	C	30.1	0.52	184	272
I-90 WB Off-Ramp NB right	A	5.0	0.49	0	60
B St SB thru | thru	E	59.3	0.40	39	63
B St SB right	A	4.8	0.07	0	m12
Congress Street/D Street	**D**	**51.4**	-	-	-
Congress St EB left/thru | thru/right	D	44.9	0.69	197	267
Congress St EB right	D	47.5	0.64	181	287
Congress St WB left/thru | thru/right	E	60.8	0.75	88	#144
D St NB left | left	D	49.4	0.88	194	#280
D St NB thru/right	D	46.2	0.76	170	#278
D St SB left/thru | thru/right	E	63.4	0.85	136	#218
D Street/Silver Line Way	**A**	**8.9**	-	-	-
SL Way EB left/thru/right	E	61.0	0.47	32	69
SL Way WB left/thru/right	E	55.2	0.37	25	57
D St NB thru | thru | thru/right	A	7.7	0.23	61	181
D St SB thru | thru	A	4.7	0.30	91	m166
D Street/ Massport Haul Road (I-90 On-Ramps)	**B**	**14.5**	-	-	-
D St NB left	D	42.4	0.57	144	m232
D St NB thru | thru	A	1.7	0.27	0	104
D St SB thru | thru/right	B	17.8	0.48	104	150
D Street/Summer Street	**C**	**28.3**	-	-	-
Summer St EB left	D	43.1	0.73	75	#151
Summer St EB thru | thru/right	C	23.2	0.50	164	222
Summer St WB left	E	63.3	0.58	13	m#50
Summer St WB thru	D	43.7	0.84	205	#434
Summer St WB right	B	14.4	0.71	101	182
D St NB left	D	46.5	0.51	99	167
D St NB thru | thru/right	D	43.8	0.59	104	153
D St SB left	C	25.7	0.66	56	141
D St SB left/thru | thru/right	A	8.4	0.55	8	14

Intersection/Approach	*LOS*	*Delay (s)*	*V/C Ratio*	*50th Percentile Queue (ft)*	*95th Percentile Queue (ft)*
Seaport Boulevard/Fan Pier Boulevard	**C**	**28.6**	-	-	-
Seaport Blvd EB left	C	30.9	0.44	79	m149
Seaport Blvd EB thru | thru/right	A	7.4	0.49	110	194
Seaport Blvd WB left/thru | thru/right	D	51.4	0.82	371	440
Thomson Pl NB left/thru/right	D	43.3	0.25	26	m57
Fan Pier Blvd SB left/thru/right	C	28.2	0.45	91	148
Unsignalized Intersections					
Sleeper Street/Northern Avenue	-	-	-	-	-
Northern Ave EB thru/right	A	0.0	0.01	-	0
Northern Ave WB left/thru	A	8.1	0.11	-	10
Sleeper St NB left/right	C	15.7	0.45	-	58
Northern Avenue/Courthouse Way	-	-	-	-	-
Northern Ave EB left/thru	A	8.2	0.23	-	22
Northern Ave WB thru/right	A	0.0	0.09	-	0
Courthouse Way SB left/right	C	19.7	0.15	-	13
Northern Avenue/Fan Pier Boulevard	-	-	-	-	-
Northern Ave EB left/thru/right	A	0.0	0.00	-	0
Northern Ave WB left/thru/right	A	0.8	0.01	-	1
Fan Pier Blvd NB left/thru/right	C	21.6	0.36	-	40
Fan Pier Blvd SB left/thru/right	C	22.3	0.35	-	38
Northern Avenue/Marina Park Drive	-	-	-	-	-
Northern Ave EB left/thru	A	2.2	0.03	-	2
Northern Ave WB thru/right	A	0.0	0.19	-	0
Pier St NB left/thru/right	D	25.9	0.47	-	59
Marina Park SB left/right	D	28.5	0.21	-	19
Northern Avenue/Harbor Shore Drive	-	-	-	-	-
Northern Ave EB left/thru/right	A	0.1	0.00	-	0
Northern Ave WB left/thru/right	A	0.4	0.01	-	1
Harbor Shore Dr NB left/thru/right	B	11.2	0.06	-	5
Harbor Shore Dr SB left/thru/right	B	13.8	0.03	-	2
Seaport Boulevard/Seaport Lane	-	-	-	-	-
Seaport Blvd EB thru | thru/right	A	0.0	0.38	-	0
Seaport Blvd WB left/thru | thru	A	0.7	0.18	-	3

Intersection/Approach	*LOS*	*Delay (s)*	*V/C Ratio*	*50th Percentile Queue (ft)*	*95th Percentile Queue (ft)*
Congress Street/Sleeper Street	-	-	-	-	-
Congress St EB left/thru/right	C	23.7	0.41	-	45
Congress St WB left/thru/right	A	0.3	0.01	-	1
Driveway NB left/thru/right	F	50.6	0.05	-	4
Sleeper St SB left/thru/right	F	>50.0	>1.00	-	-
Congress Street/Farnsworth Street	-	-	-	-	-
Congress St EB left/thru	A	5.2	0.14	-	12
Congress St WB thru/right	A	0.0	0.40	-	0
Farnsworth St SB left/right	F	>50.0	0.65	-	77

Grey Shading indicates LOS E or F.
~ 50th percentile volume exceeds capacity. Queue shown is the maximum after two cycles.
 # 95th percentile volume exceeds capacity. Queue shown is the maximum after two cycles.
dl Operates as a defacto left-turn lane
m Volumes for 95th percentile queue is metered by upstream signal.

Table 8. New Build (2023) Condition, Capacity Analysis Summary, p.m. Peak Hour

Intersection/Approach	*LOS*	*Delay (s)*	*V/C Ratio*	*50th Percentile Queue (ft)*	*95th Percentile Queue (ft)*
Signalized Intersections					
Northern Avenue/Pier 4 Boulevard	**B**	**17.4**	-	-	-
Northern Ave EB left/thru	D	51.5	0.05	4	18
Northern Ave EB right	A	0.8	0.22	0	17
Driveway WB left/thru/right	D	49.6	0.09	7	26
Pier 4 Blvd NB left	B	11.2	0.17	66	157
Pier 4 Blvd NB thru/right	A	1.4	0.04	0	m14
Pier 4 Blvd SB left/thru/right	E	58.8	0.69	106	168
Seaport Boulevard/Sleeper Street	**C**	**26.3**	-	-	-
Seaport Blvd EB left	D	52.8	0.78	23	m27
Seaport Blvd EB thru | thru/right	B	14.4	0.68	155	m160
Seaport Blvd WB left/thru | thru/right	B	19.8	0.87	174	240
Sleeper St NB left/thru/right	E	75.3	0.97	177	#350
Sleeper St SB left/thru	D	46.7	0.75	142	#281
Sleeper St SB right	C	25.8	0.54	95	197
Seaport Boulevard/Boston Wharf Road	**D**	**42.8**	-	-	-
Seaport Blvd EB thru | thru/right	E	76.0	1.11	~523	#228
Seaport Blvd WB left	D	51.9	0.79	172	#370
Seaport Blvd WB thru | thru	A	3.2	0.47	51	181
Boston Wharf Rd NB left	D	49.5	0.72	136	m192
Boston Wharf Rd NB right	C	21.2	0.36	85	m133
Seaport Boulevard/East Service Road/Pier 4 Boulevard	**C**	**26.8**	-	-	-
Seaport Blvd EB left	C	22.0	0.43	21	m37
Seaport Blvd EB thru | thru	B	19.0	0.75	171	195
Seaport Blvd WB thru | thru/right	C	25.5	0.68	161	203
East Service Rd NB left/thru | thru	C	31.5	0.43	76	109
East Service Rd NB right	D	40.8	0.87	114	#205
Pier 4 Blvd SB left | left/right	E	62.7	0.77	85	#138
Seaport Boulevard/B Street	**B**	**16.3**	-	-	-
Seaport Blvd EB thru | thru/right	A	8.3	0.79	193	226
Seaport Blvd WB left/thru | thru	B	13.7	0.66	146	254
B St NB left | left	D	49.4	0.71	113	m149
B St NB right	D	53.7	0.65	95	m138

Intersection/Approach	*LOS*	*Delay (s)*	*V/C Ratio*	*50th Percentile Queue (ft)*	*95th Percentile Queue (ft)*
D Street/Northern Avenue/Fish Pier	**B**	**16.9**	-	-	-
Seaport Blvd EB left/thru | thru/right	B	11.3	0.69	170	302
Northern Ave WB left/thru | thru/right	B	14.8	0.50	126	210
D St NB left	D	47.7	0.68	140	212
D St NB right	A	0.4	0.07	0	0
Boston Fish Pier SB left/thru/right	D	39.5	0.48	31	75
Congress Street/A Street/Thomson Place	**C**	**23.7**	-	-	-
Congress St EB left/thru | thru	C	25.1	0.47	124	127
Congress St EB right	C	31.1	0.52	79	119
Congress St WB left	C	34.8	0.82	72	#162
Congress St WB thru/right	B	15.0	0.58	136	188
A St NB left/thru	D	43.6	0.50	123	195
A St NB right	A	4.7	0.49	0	39
Thomson Pl SB left/thru/right	C	34.7	0.32	38	m70
Congress Street/Boston Wharf Road	**C**	**34.1**	-	-	-
Congress St EB left/thru	C	21.4	0.76	305	461
Congress St EB right	A	5.5	0.57	25	35
Congress St WB left	E	72.2	0.91	166	#284
Congress St WB thru | thru/right	B	19.0	0.29	118	171
Boston Wharf Rd NB left	D	53.8	0.51	48	99
Boston Wharf Rd NB thru/right	C	27.3	0.63	63	149
Boston Wharf Rd SB left/thru	E	65.7	1.00	306	m#436
Boston Wharf Rd SB right	C	29.4	0.62	113	m146
Congress Street/East Service Road/Highway Ramps	**C**	**22.0**	-	-	-
Congress St EB left	B	11.9	0.16	15	m30
Congress St EB thru | thru	B	10.9	0.37	104	m175
Congress St WB thru | thru/right	B	14.5	0.31	112	m157
I-93 NB Off-Ramp NB left/thru | thru	D	49.6	0.55	80	116
I-93 NB Off-Ramp NB right	B	10.5	0.24	0	32
I-90 EB Off-Ramp NEB left/thru |	D	49.1	0.63	102	140

Intersection/Approach	*LOS*	*Delay (s)*	*V/C Ratio*	*50th Percentile Queue (ft)*	*95th Percentile Queue (ft)*
Congress Street/B Street/Ramps	**C**	**28.1**	-	-	-
Congress St EB left/thru | thru	D	42.3	0.71	198	261
Congress St EB right	B	14.9	0.45	153	247
Congress St WB left	C	29.1	0.67	105	m132
Congress St WB left/thru | thru/right	C	31.9	0.86	124	m#165
I-90 WB Off-Ramp NB left	C	24.6	0.46	118	181
I-90 WB Off-Ramp NB thru	C	23.1	0.35	122	186
I-90 WB Off-Ramp NB right	A	3.9	0.43	0	53
B St SB thru | thru	D	48.9	0.73	117	m152
B St SB right	A	4.3	0.12	6	m14
Congress Street/D Street	**F**	**80.8**	-	-	-
Congress St EB left/thru | thru/right	D	42.4	0.86	190	#268
Congress St EB right	E	68.6	0.94	201	m#354
Congress St WB left/thru | thru/right	F	108.0	1.07	~189	#297
D St NB left | left	D	52.8	0.75	153	144
D St NB thru/right	E	78.0	0.91	186	#309
D St SB left/thru | thru/right	F	102.7	1.08	~383	#514
D Street/Silver Line Way	**A**	**6.6**	-	-	-
SL Way EB left/thru/right	E	58.4	0.38	23	54
SL Way WB left/thru/right	E	56.6	0.38	23	55
D St NB thru | thru | thru/right	A	5.3	0.19	63	44
D St SB thru | thru	A	4.7	0.47	57	m84
D Street/ Massport Haul Road (I-90 On-Ramps)	**C**	**29.2**	-	-	-
D St NB left	F	90.9	0.94	323	m#464
D St NB thru | thru	A	1.8	0.22	0	m92
D St SB thru | thru/right	C	21.5	0.77	108	#332
D Street/Summer Street	**D**	**40.1**	-	-	-
Summer St EB left	F	88.5	1.04	~111	m#252
Summer St EB thru | thru/right	A	2.8	0.57	0	0
Summer St WB left	E	76.4	0.58	15	m#66
Summer St WB thru	D	54.8	0.85	183	#398
Summer St WB right	C	28.3	0.71	146	246
D St NB left	D	40.9	0.28	51	98
D St NB thru | thru/right	D	44.7	0.59	128	179
D St SB left	D	51.8	0.79	168	m#251
D St SB left/thru | thru/right	E	56.3	0.92	192	#315

Intersection/Approach	*LOS*	*Delay (s)*	*V/C Ratio*	*50th Percentile Queue (ft)*	*95th Percentile Queue (ft)*
Seaport Boulevard/Fan Pier Boulevard	**C**	**26.3**	-	-	-
Seaport Blvd EB left	C	32.9	0.51	19	m30
Seaport Blvd EB thru | thru/right	C	21.6	0.74	219	237
Seaport Blvd WB thru | thru/right	C	27.3	0.75	261	353
Thomson Pl NB left/thru/right	C	24.1	0.28	31	m62
Fan Pier Blvd SB left/thru/right	C	34.4	0.79	277	365
Unsignalized Intersections					
Sleeper Street/Northern Avenue	-	-	-	-	-
Northern Ave EB thru/right	A	0.0	0.01	-	0
Northern Ave WB left/thru	A	8.5	0.30	-	32
Sleeper St NB left/right	B	12.5	0.16	-	14
Northern Avenue/Courthouse Way	-	-	-	-	-
Northern Ave EB left/thru	A	4.9	0.06	-	5
Northern Ave WB thru/right	A	0.0	0.18	-	0
Courthouse Way SB left/right	D	34.0	0.59	-	89
Northern Avenue/Fan Pier Boulevard	-	-	-	-	-
Northern Ave EB left/thru/right	A	0.0	0.00	-	0
Northern Ave WB left/thru/right	A	1.5	0.02	-	2
Fan Pier Blvd NB left/thru/right	C	15.8	0.14	-	12
Fan Pier Blvd SB left/thru/right	F	>50.0	>1.00	-	522
Northern Avenue/Marina Park Drive	-	-	-	-	-
Northern Ave EB left/thru	A	1.0	0.02	-	1
Northern Ave WB thru/right	A	0.0	0.13	-	0
Pier St NB left/thru/right	C	23.2	0.31	-	33
Marina Park SB left/right	F	55.0	0.63	-	90
Northern Avenue/Harbor Shore Drive	-	-	-	-	-
Northern Ave EB left/thru/right	A	0.5	0.01	-	1
Northern Ave WB left/thru/right	A	1.5	0.03	-	2
Harbor Shore Dr NB left/thru/right	B	13.2	0.12	-	11
Harbor Shore Dr SB left/thru/right	C	22.5	0.24	-	23
Seaport Boulevard/Seaport Lane	-	-	-	-	-
Seaport Blvd EB thru | thru/right	A	0.0	0.50	-	0
Seaport Blvd WB left/thru | thru	A	2.1	0.30	-	11

Intersection/Approach	*LOS*	*Delay (s)*	*V/C Ratio*	*50th Percentile Queue (ft)*	*95th Percentile Queue (ft)*
Congress Street/Sleeper Street	-	-	-	-	-
Congress St EB left/thru/right	B	10.5	0.28	-	28
Congress St WB left/thru/right	A	0.2	0.01	-	0
Driveway NB left/thru/right	C	18.3	0.03	-	2
Sleeper St SB left/thru/right	F	>50.0	>1.00	-	283
Congress Street/Farnsworth Street	-	-	-	-	-
Congress St EB left/thru	A	1.0	0.03	-	3
Congress St WB thru/right	A	0.0	0.35	-	0
Farnsworth St SB left/right	F	>50.0	0.92	-	155

As shown in Table 7 and Table 8, the traffic operations are similar to the previously approved 2017 NPC filing with most intersections operating at LOS B or LOS C with some approaches at LOS E or LOS F. The only intersection operating at LOS E or F is the intersection of Congress Street/D Street, which was also shown to be operating at LOS F in the 2017 NPC.

Traffic Operations Analysis Comparison

The New Build (2023) Condition traffic operations were compared to the Build (2023) Condition traffic operations contained in the 2017 NPC. Overall, the traffic operations are very similar to previous projections. Table 9 shows the comparison of signalized intersection overall level of service of the 2017 NPC Project to the currently proposed 2019 NPC Project.

Table 9. Level of Service Comparison, 2017 NPC to 2019 NPC Project

Intersection	*a.m. Peak Hour*		*p.m. Peak Hour*	
	2017 NPC	*2019 NPC*	*2017 NPC*	*2019 NPC*
Signalized Intersections				
Northern Avenue/Pier 4 Boulevard	B	B	B	B
Seaport Boulevard/Sleeper Street	B	B	C	C
Seaport Boulevard/Boston Wharf Road	A	C	C	D
Seaport Boulevard/East Service Road	C	C	C	C
Seaport Boulevard/B Street	C	B	B	B
D Street/Northern Avenue/Boston Fish Pier	C	C	B	B
Congress Street/A Street/Thomson Place	C	C	C	C
Congress Street/Boston Wharf Road	C	C	C	C
Congress Street/East Service Road	C	C	C	C
Congress Street/B Street/Highway Ramps	C	C	C	C
Congress Street/D Street	D	D	F	F
D Street/Silver Line Way	A	A	A	A
D Street/Summer Street	C	B	D	C
Seaport Boulevard/Fan Pier Boulevard	B	C	C	D

Grey Shading indicates a degradation in LOS in the NPC; black shading indicates an improvement in LOS.

As shown in Table 9, the traffic operational differences between the previously approved 2017 NPC and the current 2019 NPC Project are minimal. This comparison shows that the mitigation commitments determined for the 2017 NPC are still valid based on the similar vehicle trip numbers and traffic operations resulting from the proposed 2019 NPC Project.

Transit Capacity Operations

This section introduces the existing transit options for trips in and out of the Seaport neighborhood, the mitigation commitments and recommendations for transit, and the updated transit capacity analysis comparing the 2017 NPC to the proposed 2019 NPC Project.

Public Transportation Mitigation

The Seaport Square project is envisioned as a transit-oriented development that will provide significant improvements to the public realm. The Project includes a new Silver Line entrance to the existing Courthouse Station. This new headhouse will be located along Seaport Boulevard in front of District Hall on Block F. In addition, the Proponent committed to provide $2.88 million in funding for Silver Line capacity improvements. These improvements will be determined by the MBTA but could include measures such as extending peak hour service time, operating the spare Silver Line buses for more service, utilizing the I-90 ramp for the SL1/3, and procuring more Silver Line buses. Further strategies the MBTA has devised to improve Silver Line operations are outlined in their Focus40 transit planning document and include new zero-emission vehicles, transit priority infrastructure (D Street/Silver Line Way), and further expanding the Silver Line fleet.

Transit Capacity Analysis

To determine the impacts of the Project on transit capacity, several steps were followed. The peak load point for each line and direction was identified and ridership established for each from the most recent available MBTA Automated Passenger Count (APC) data (2018). The future transit growth was accounted for according to a 1% per year growth rate as outlined by the Central Transportation Planning Staff (CTPS).

Since the filing of the 2017 NPC, mode share data has been collected as part of the Seaport Transportation Management Association (TMA) that outlines how workers within the existing Seaport Square blocks get to work. This survey data shows that the transit mode share utilized in 2017 is still accurate at approximately 55 percent of office trips. However, the individual transit service that is being used differs from the 2017 projections. Table 10 shows a comparison of the transit service that was projected to be used and the actual usage.

Table 10. Transit Service Usage

Service	***2017 Breakdown***	***2019 Breakdown***
South Station[1] Commuter Rail	4%	22%
South Station[1] Subway	4%	24%
Silver Line	88%	46%
Bus (To Seaport)	4%	3%
Ferry	N/A	5%

1. The South Station percentage accounts for transit trips walking to Seaport Square and not impacting the Silver Line or local buses.

As shown in Table 10 the large dependence on the Silver Line has not materialized. Many Seaport Square area trips choose to walk from South Station when connecting to the subway or commuter rail service available there instead of using the Silver line. The 13,199 daily roundtrip net new transit riders generated by the NPC Project were assigned to the various transit lines based on the distribution presented in Table 11.

Table 11. Transit Trip Distribution

Service	*Percent Distribution*	*Transit Trips (Daily Roundtrip)*
Silver Line	46%	6,072
South Station[1] Subway	24%	3,168
South Station[1] Commuter Rail	22%	2,904
Ferry	5%	660
Bus	3%	395

1. The South Station percentage accounts for transit trips walking to Seaport Square and not impacting the buses.

As shown above, approximately 49% of transit users currently utilize the buses and Silver Line to get to the Seaport today. The remaining proportion of transit users currently walk from South Station into the Seaport District or take the Ferry in. It should be noted that these transit trips will not match the previous 2017 NPC due to the change to the 10th edition ITE trip rates.

MBTA bus capacity was established according to the Planning Capacity, defined as 140% of the seated capacity when considering seated and standing passengers on each bus. The Planning Capacity of each bus route analyzed is summarized in Table 12.

Table 12. MBTA Transit Operations – Existing Peak Hour Capacities

Transit Line	*Seats*	*Planning Capacity (per Bus)*	*Peak Hour Buses*	*Peak Hour Planning Capacity[1]*
Silver Line (1, 2, 3, & W)	47	65	32	2,080
MBTA #7	39	54	16	864

Determined based on MBTA schedules and Planning Capacity per bus.

The expected transit trips were added to the existing peak load point data to establish future peak ridership. The resulting Build Mitigated Condition peak load point ridership and Planning Capacity during the weekday are shown in Table 13 and Table 14 for the Silver Line and #7 Bus respectively.

Table 13. New Build (2024) Condition Ridership and Capacity Summary, Silver Line 1, 2, 3 & Shuttle, Weekday

Time	Buses IB	Buses OB	IB Planning Capacity	OB Planning Capacity	Ridership between South Station and Courthouse			
					IB	v/c	OB	v/c
5-6 a.m.	17	12	1105	780	342	0.31	291	0.37
6-7 a.m.	20	17	1300	1105	470	0.36	838	0.76
7-8 a.m.	35	34	2275	2210	881	0.39	1999	0.90
8-9 a.m.	32	32	2080	2080	955	0.46	2975	1.43
9-10 a.m.	22	23	1430	1495	730	0.51	1260	0.84
10-11 a.m.	17	17	1105	1105	633	0.57	719	0.65
11 a.m. – 12 p.m.	18	19	1170	1235	684	0.58	781	0.63
12-1 p.m.	19	18	1235	1170	814	0.66	818	0.70
1-2 p.m.	19	19	1235	1235	903	0.73	905	0.73
2-3 p.m.	20	19	1300	1235	947	0.73	824	0.67
3-4 p.m.	22	22	1430	1430	1193	0.83	896	0.63
4-5 p.m.	31	29	2015	1885	1906	0.95	989	0.52
5-6 p.m.	29	29	1885	1885	2728	1.45	1095	0.58
6-7 p.m.	28	27	1820	1755	1430	0.79	746	0.43
7-8 p.m.	20	23	1300	1495	731	0.56	538	0.36
8-9 p.m.	16	18	1040	1170	633	0.61	382	0.33
9-10 p.m.	17	17	1105	1105	614	0.56	330	0.30
10-11 p.m.	14	16	910	1040	423	0.46	296	0.28
11 p.m. – 12 a.m.	14	14	910	910	251	0.28	222	0.24
12-1 a.m.	12	12	780	780	120	0.15	105	0.13
Daily Total	**422**	**417**	**27430**	**27105**	**17388**	**0.63**	**17009**	**0.63**

As shown in the table above, based on the current mode share data utilization of the Silver Line, the 2019 NPC Project will only place the Silver Line over capacity during the a.m. and p.m. peak hours in the peak directions (outbound in the a.m. and inbound in the p.m.). These capacity constraints were accounted for in the approved 2017 NPC and lead to the commitment for $2.88 million to improve the future capacity to provide. With the mitigation improvements stemming from this funding as well as the MBTA's plans outlined in their Focus40 transit planning document, the peak hour constraints are anticipated to be fixed. Figure 10 graphs the ridership and outlines the effect of the mitigation improvements.

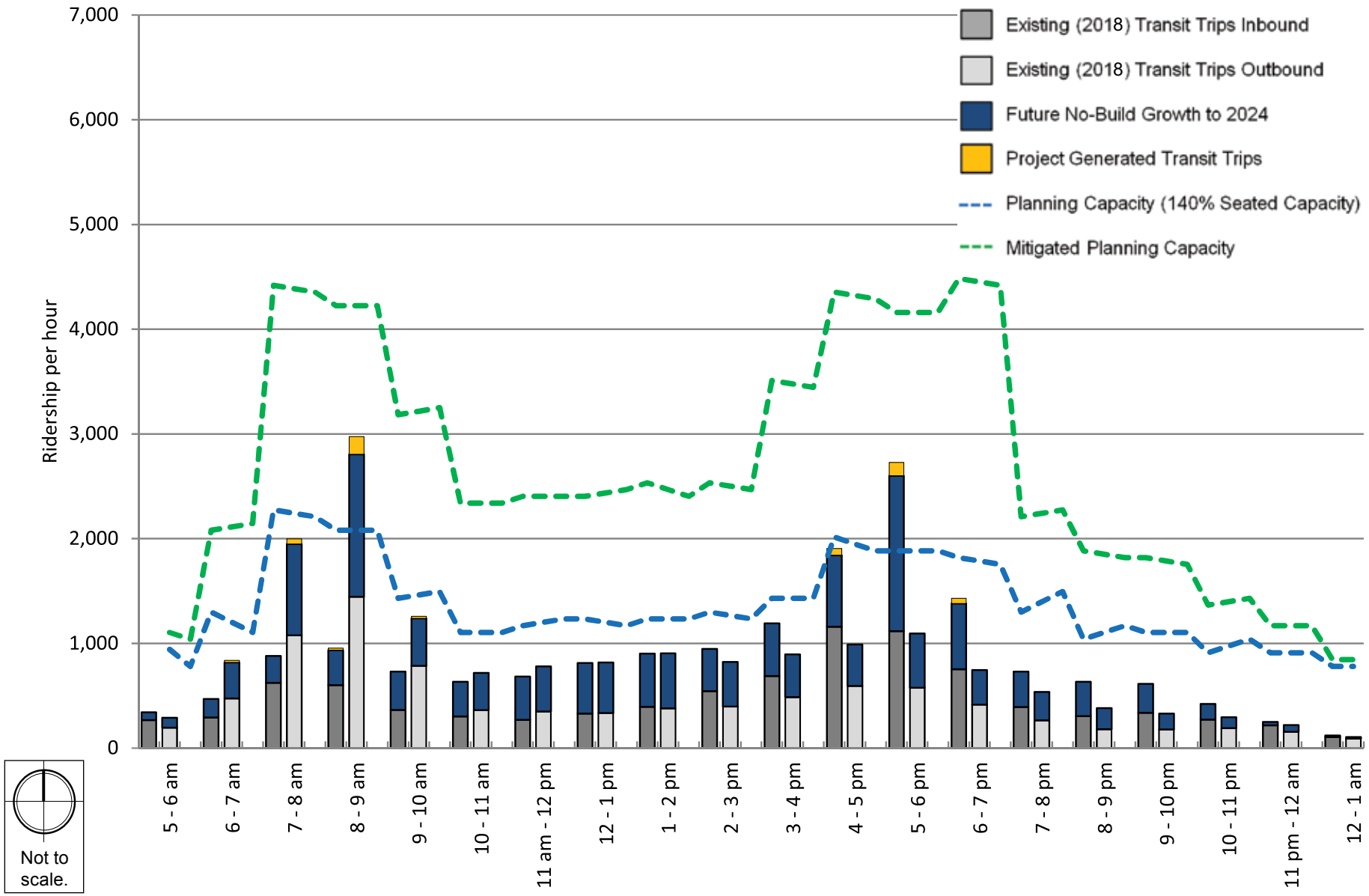

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Figure 10

MBTA Silver Line - New Build Mitigated (2024) Condition Hourly Ridership, Weekday

Table 14. Build (2024) Condition Ridership and Capacity Summary, MBTA #7, Weekday

Time	Buses IB	Buses OB	IB Planning Capacity	OB Planning Capacity	Ridership between South Station and Courthouse			
					IB	v/c	OB	v/c
5-6 a.m.	2	1	108	54	32	0.30	15	0.28
6-7 a.m.	8	7	432	378	165	0.38	121	0.32
7-8 a.m.	16	9	864	486	678	0.78	166	0.34
8-9 a.m.	16	13	864	702	596	0.69	288	0.41
9-10 a.m.	4	5	216	270	84	0.39	64	0.24
10-11 a.m.	3	3	162	162	48	0.30	39	0.24
11 a.m. – 12 p.m.	3	3	162	162	55	0.34	51	0.32
12-1 p.m.	3	3	162	162	58	0.36	60	0.37
1-2 p.m.	3	3	162	162	62	0.38	60	0.37
2-3 p.m.	3	3	162	162	62	0.38	67	0.42
3-4 p.m.	5	5	270	270	94	0.35	90	0.33
4-5 p.m.	8	7	432	378	154	0.36	201	0.53
5-6 p.m.	9	10	486	540	176	0.36	406	0.75
6-7 p.m.	6	8	324	432	77	0.24	266	0.62
7-8 p.m.	3	4	162	216	33	0.20	146	0.68
8-9 p.m.	2	1	108	54	28	0.26	26	0.48
9-10 p.m.	1	2	54	108	18	0.33	26	0.24
10-11 p.m.	1	1	54	54	12	0.22	10	0.19
11 p.m. – 12 a.m.	0	0	0	0	0	0.00	0	0.00
12-1 a.m.	0	0	0	0	0	0.00	0	0.00
Daily Total	**96**	**88**	**5184**	**4752**	**2434**	**0.47**	**2103**	**0.44**

As shown, the #7 bus operates along Summer Street and will primarily serve trips to Block N and P. The current peak direction for the #7 bus is IB in the a.m. peak hour and OB in the p.m. peak hour. Since the peak additional trips to and from Seaport Square will be added to the reverse peak direction, the bus route will not be placed over capacity. The operations of the Route 7 bus are graphed in Figure 11.

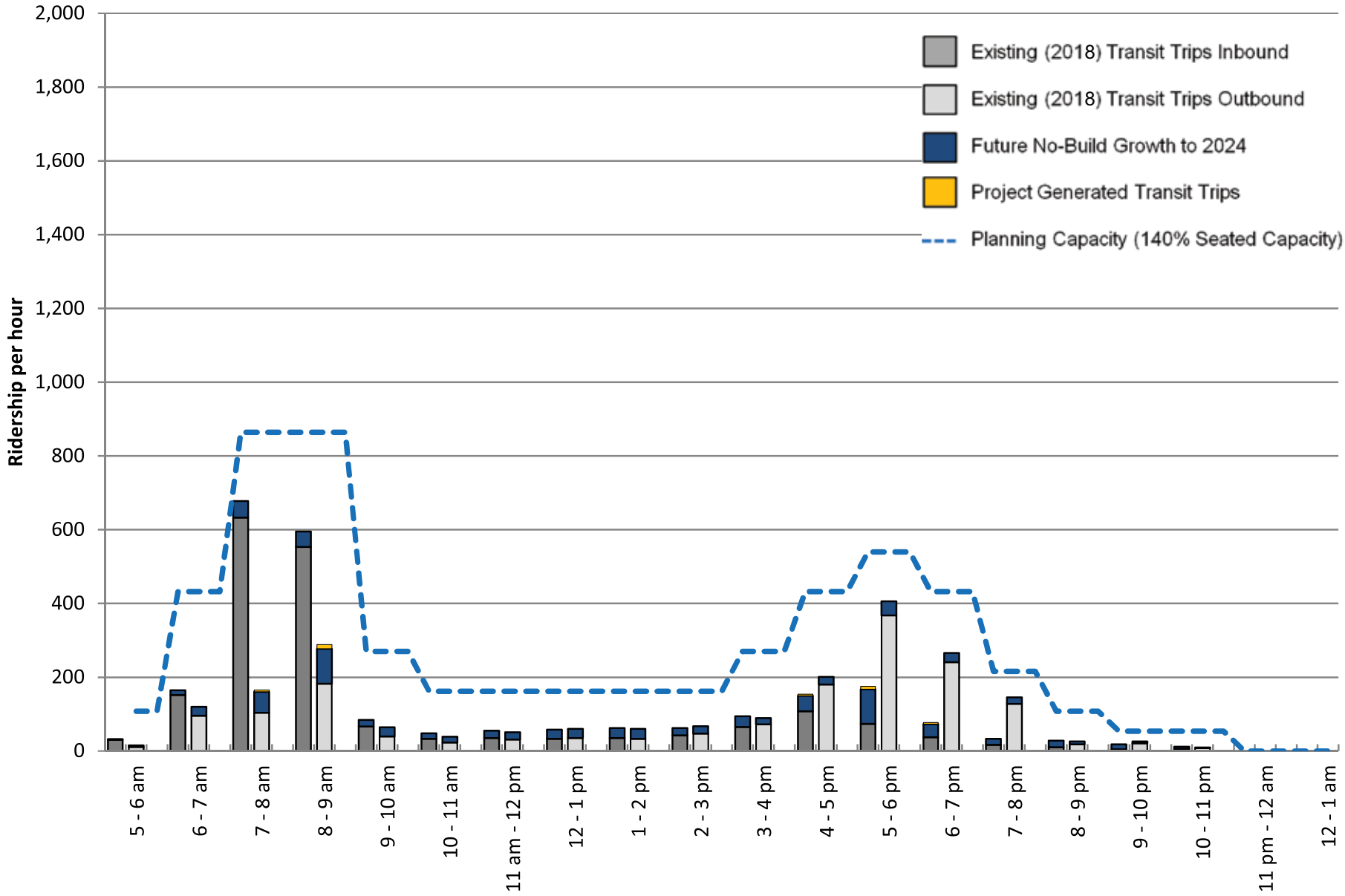

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Figure 11

MBTA #7 Bus - New Build (2024) Condition Hourly Ridership, Weekday

Load Point: Between South Station and Summer St/Melcher St