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Pelli Clarke Pelli Architects

ARROWSTREET

OJB THE OFFICE OF JAMES BURNETT
LANDSCAPE ARCHITECTURE

MAGNUSSON KLEMENCIC ASSOCIATES

WSP | PARSONS BRINCKERHOFF

McNAMARA · SALVIA

BRIA

AHA CONSULTING ENGINEERS

vhb

ARUP

HALEY ALDRICH

RWDI
CONSULTING ENGINEERS & SCIENTISTS

JENSEN HUGHES

Nutter

THE BACK BAY SOUTH END GATEWAY PROJECT

BOSTON, MASSACHUSETTS

MARCH 29, 2017

CAC #10



AGENDA

- Review Of Stuart Street Zoning By BPDA (10 Min.)
- Responses to CAC Questions (20 Min.)
- Streetscape And Pedestrian Analysis (40 Min.)
- CAC Comments (20 Min.)
- Public Comments (20 Min.)
- Next Steps (5 Min.)

PROJECT STATUS - KEY DATES

- PNF Filing • March 29, 2016
- ENF Filing • April 15, 2016
- CAC #1 • April 28, 2016
- BPDA Scoping Session • May 11, 2016
- Back Bay Public Meeting • May 11, 2016
- CAC #2 • May 12, 2016 (Site Visit)
- MEPA Scoping Session • May 18, 2016
- South End Public Meeting • May 18, 2016
- CAC #3 • May 26, 2016
- BCDC Public Meeting • June 07, 2016
- CAC #4 • June 15, 2016
- CAC #5 • June 29, 2016
- CAC #6 • July 13, 2016
- BPDA Scoping Determination • August 30, 2016
- CAC #7 • October 6, 2016
- DPIR/DEIR Filing • January 31, 2017
- CAC #8 • February 23, 2017
- Public Meeting • March 01, 2017
- CAC #9 • March 13, 2017
- **CAC #10 • March 29, 2017**
- Public Meeting • April 04, 2017
- CAC #11 • April 06, 2017
- BCDC Subcommittee Meeting • April 11, 2017 *(Tentative)*
- MEPA DEIR Comment Period Closes • ~~March 10~~ April 18, 2017
- BPDA DPIR Comment Period Closes • April 18, 2017



REVIEW OF STUART STREET ZONING



Stuart Street Planning Study

Overview for Back Bay/South End Gateway Project CAC

CAC Meeting #10: March 29, 2017

Context and Study Area

c. 2008



Community Process

- **Stuart Street Planning Study 2008-2011**

- 15+ **Advisory Group Meetings** (open to public)
 - Dana Masterpolo, BVNA
 - Jo Campbell, BVNA
 - Ann Gleason, NABB
 - Sandra Silver, Ellis
 - Nathaniel Margolis, John Hancock
 - **Meg Mainzer-Cohen, BBA**
 - **Ted Pietras, SEBA**

- **Development Guidelines**

- September 2015: Public Meeting

- **Zoning Article 48 + Map 1S**

- January 2016: Public Meeting
- February 2016: BRA Board Holds Public Hearing and Recommends Adoption of Zoning
- March 2016: Zoning Commission Holds Public Hearing and Adopts Zoning

- **Project Website:** all relevant documents were posted, including the PowerPoint presentations, the Draft and Final Development Guidelines, and the Draft Zoning Text and Map
- Meetings were advertised in *Boston Courant* and on the BRA website Calendar
- Meetings were very well attended, with residents and business representation from the **Back Bay, Bay Village and South End**

Study Components

Environmental Impacts

- Wind
- Shadows
- Utility Infrastructure
- Groundwater

Economics and Real Estate

- Financial Viability: Total GSF
- Financial Viability: Floorplates
- Retail Capacity

Transportation

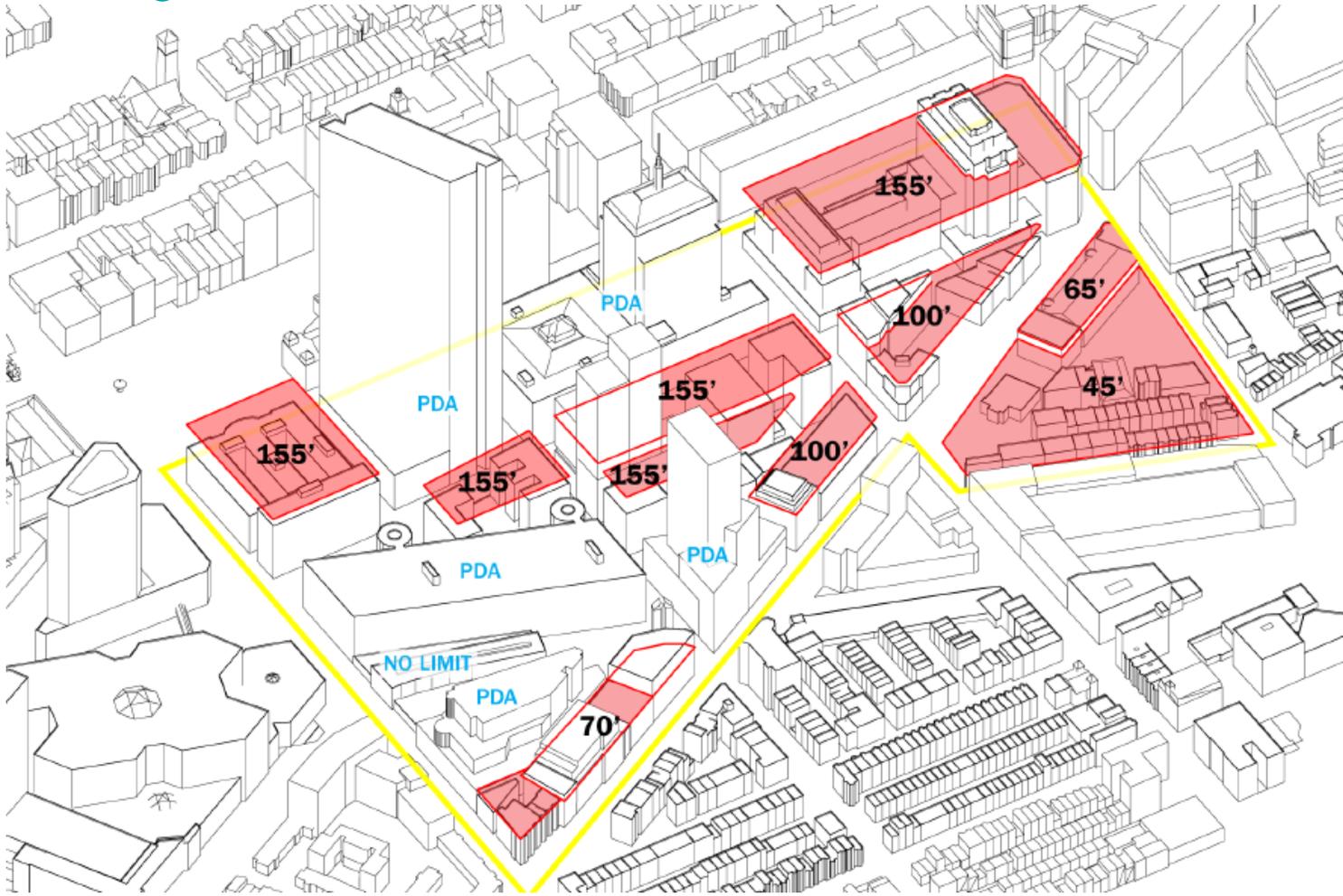
- Public Transit Access
- Automobile Traffic
- Loading and Servicing
- Parking

Urban Design

- Public Realm Contribution
- Pedestrian Connectivity
- Ground-Level Active Uses
- Streetscape Definition
- View Corridors
- Skyline Design and Composition
- Program and Use Mix

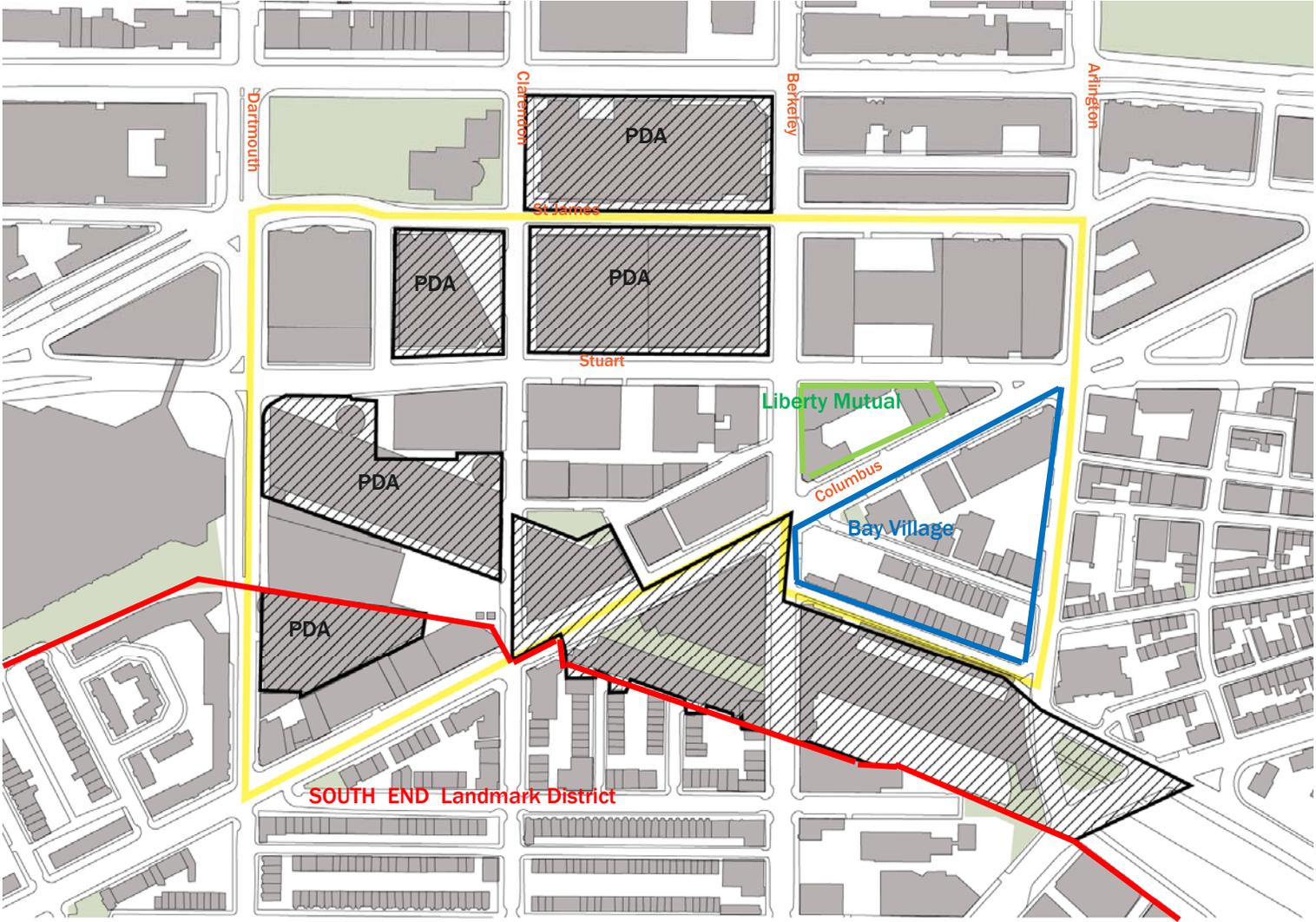
Initial Zoning Analysis

c. 2008



PDA

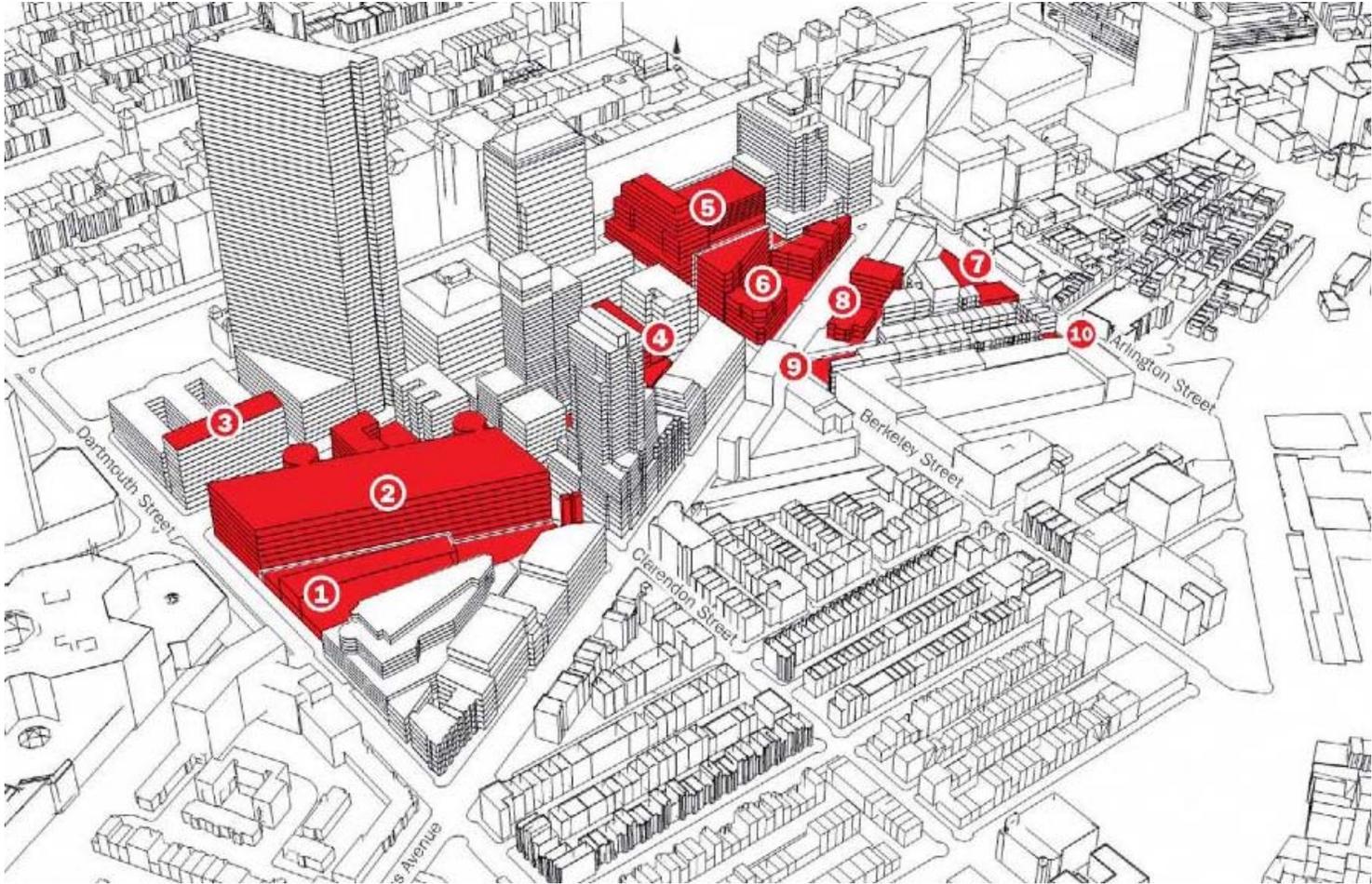
c. 2008



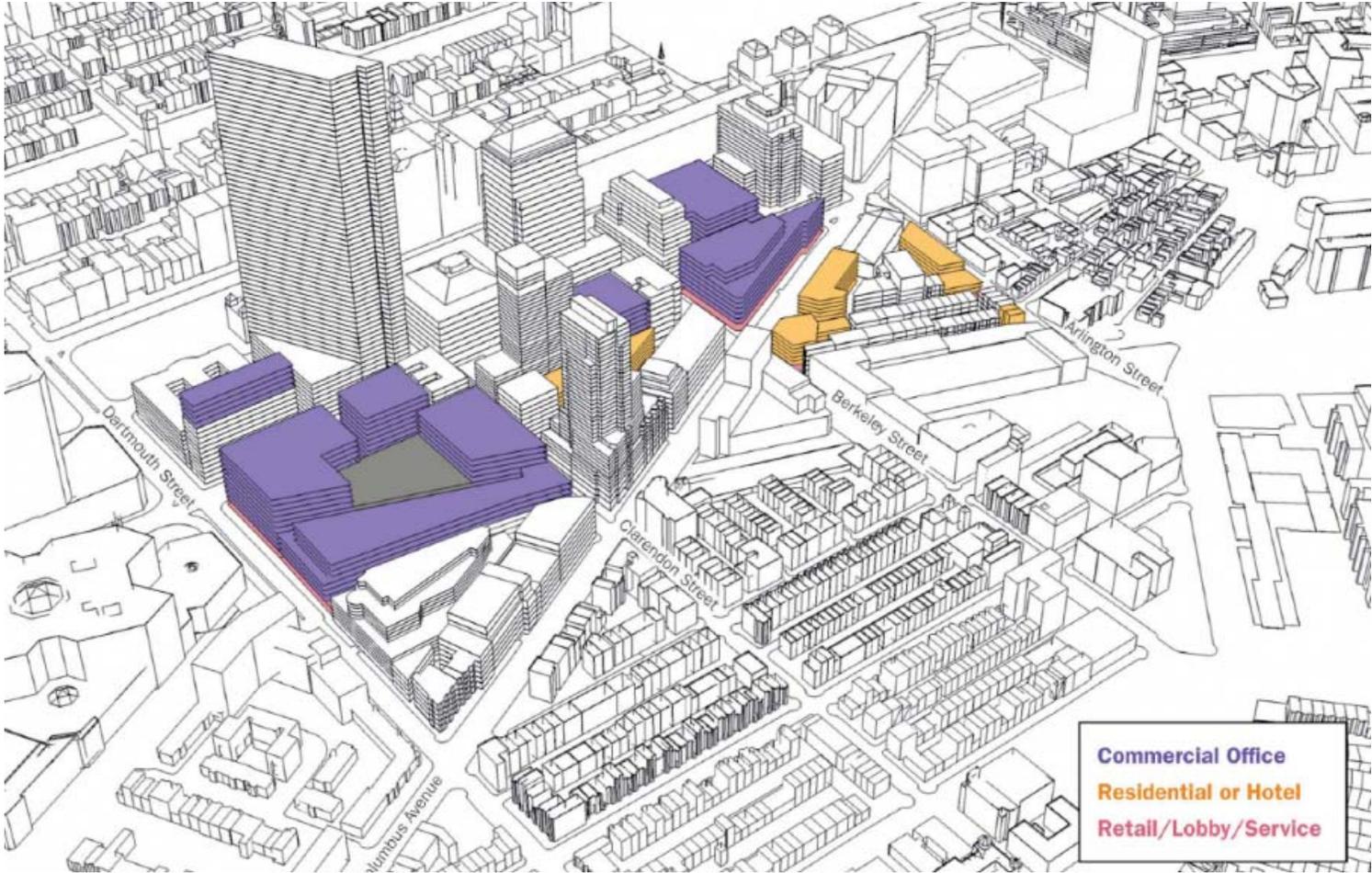
Source: Boston Zoning Code



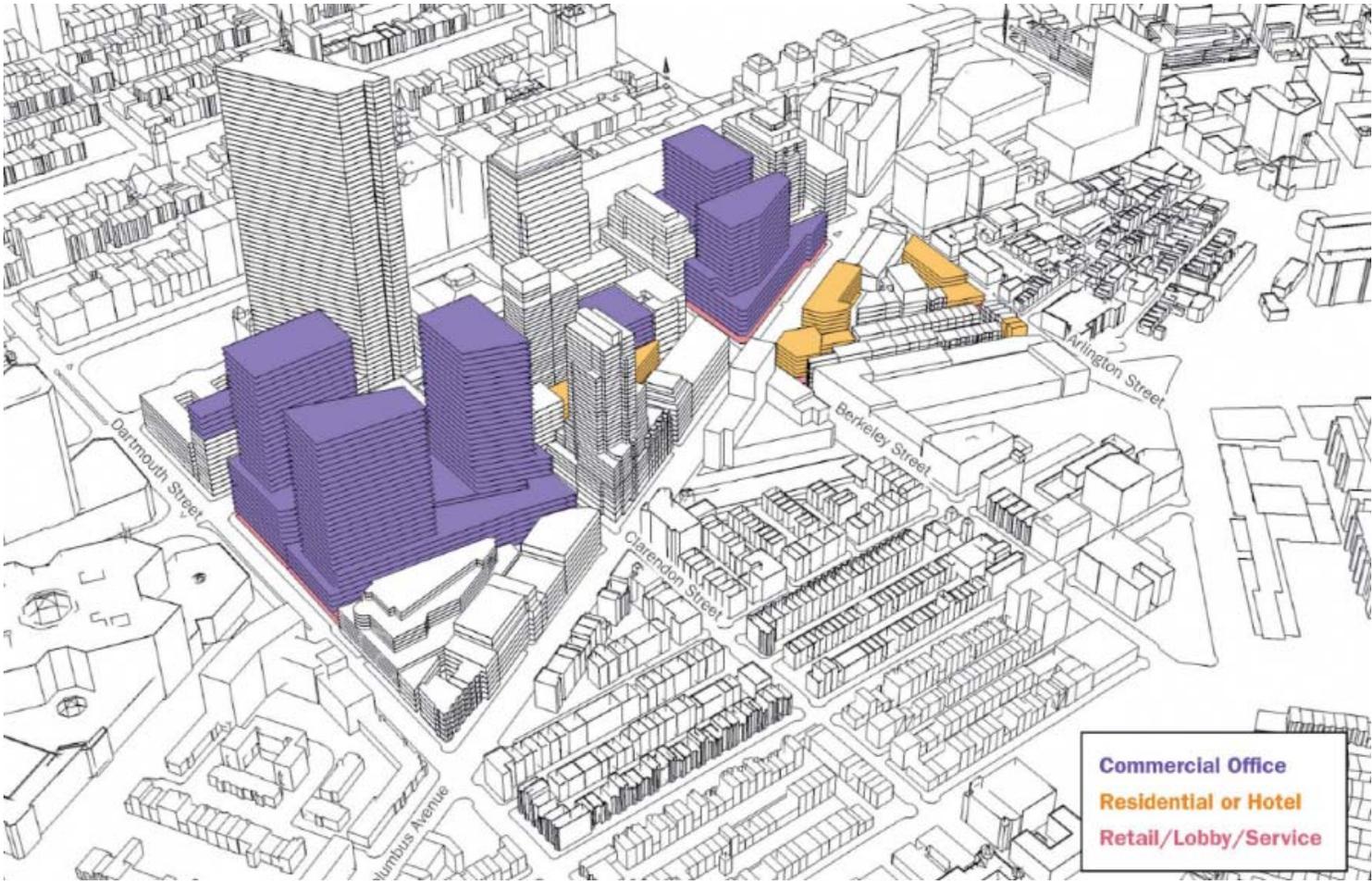
Sites Studied



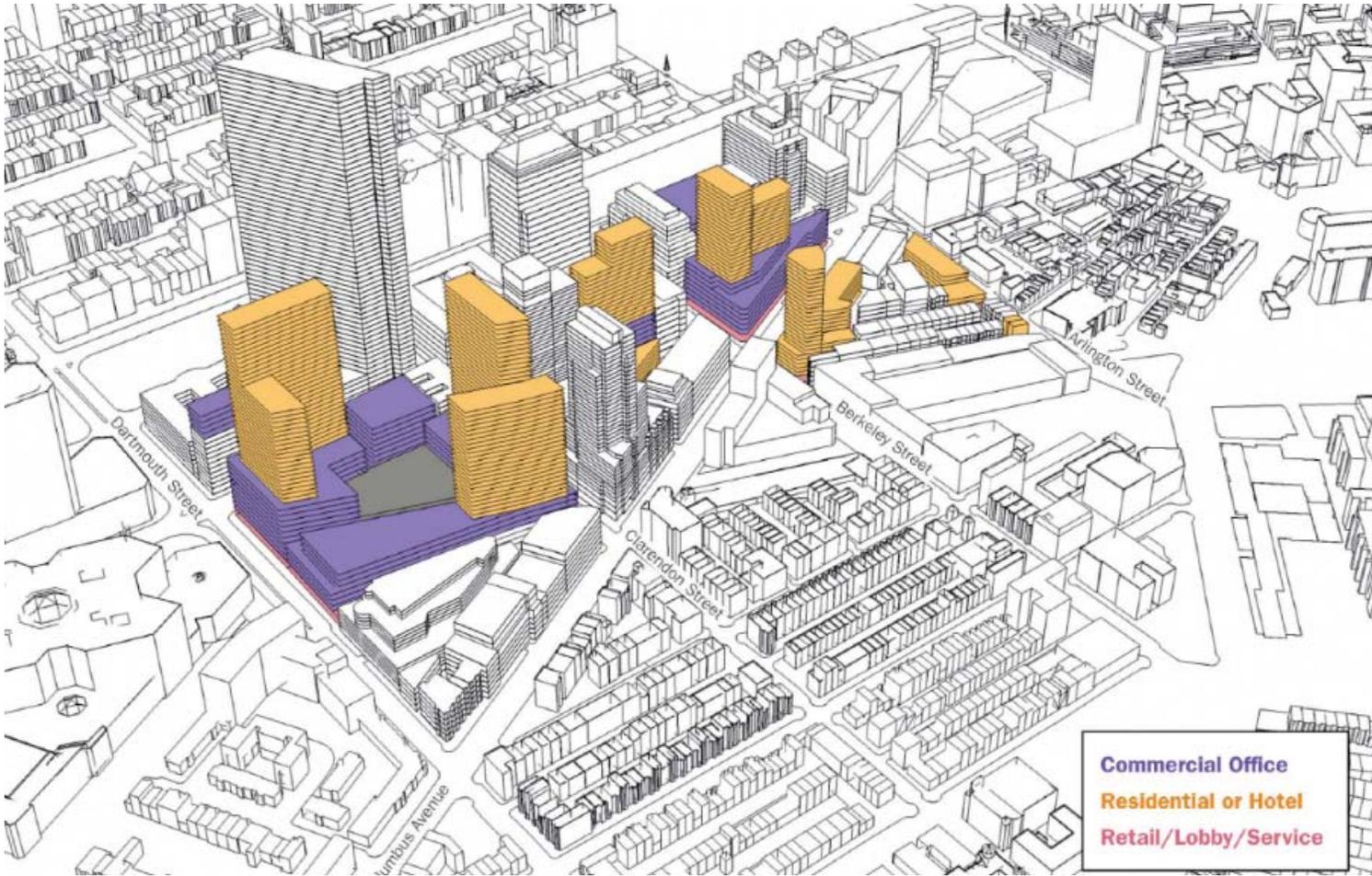
Massing Alternatives



Massing Alternatives



Massing Alternatives



Massing Alternatives



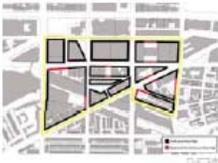
Urban Design Considerations



Urban Design:
Reinforce unique districts; create transitions between districts



Urban Design:
Reinforce view corridors



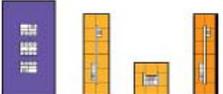
Urban Design:
Fill the gaps



Preliminary
Environmental
Analysis



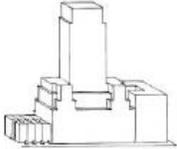
Urban Design:
Activate ground
floors uses



Typical Building
Sizes



Urban Design:
Skyline design



Building Typologies



Urban Design:
Increase Pedestrian
Connectivity

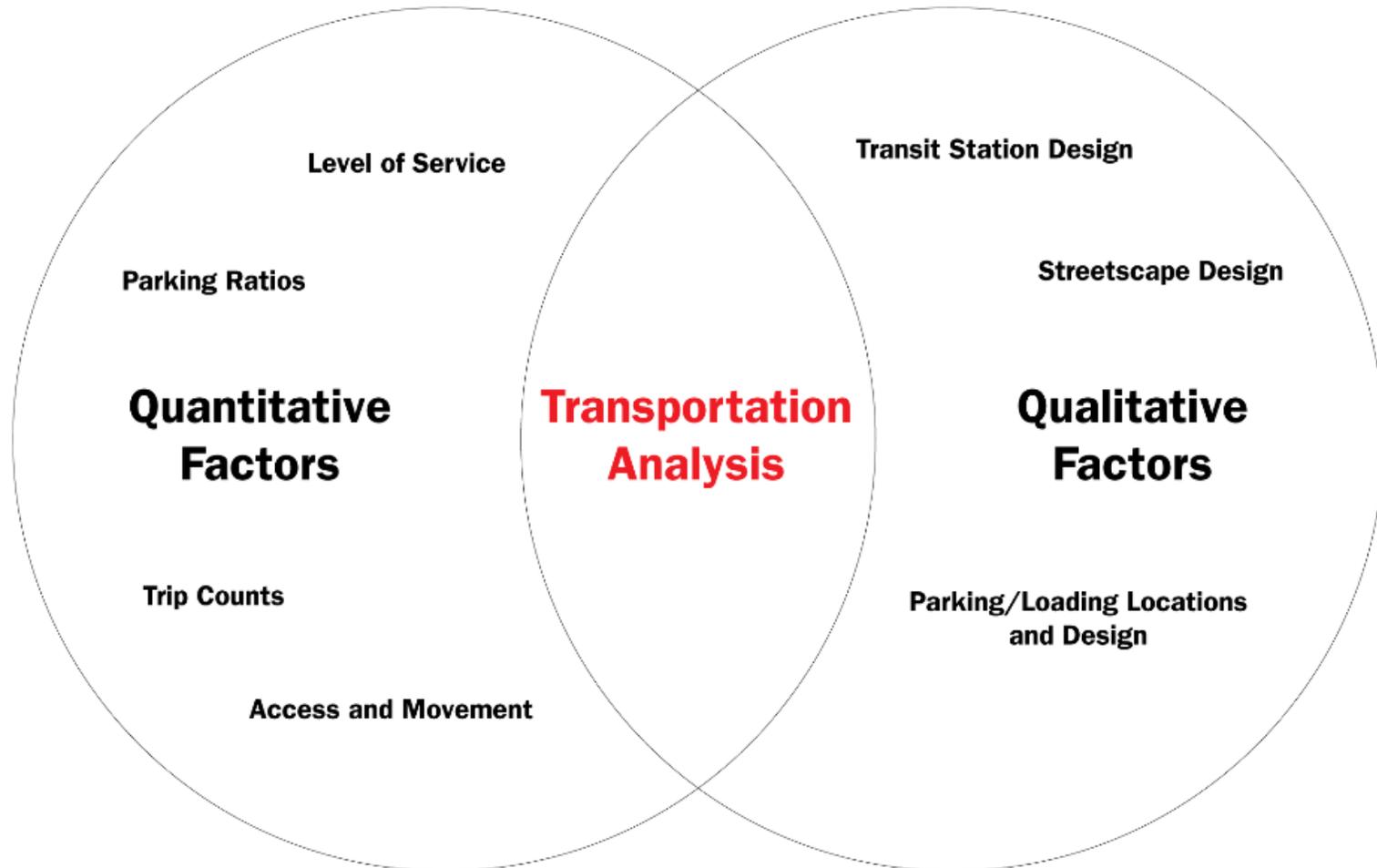


Historic Buildings

Historic Resources



Transportation



March 21st Shadow Study

8:00am

2 hours allowed on Copley Square from 8am – 2:30pm March - October



March 21st Shadow Study

9:00am

2 hours allowed on Copley Square from 8am – 2:30pm March - October



March 21st Shadow Study

10:00am

2 hours allowed on Copley Square from 8am – 2:30pm March - October



March 21st Shadow Study

11:00am

2 hours allowed on Copley Square from 8am – 2:30pm March - October



March 21st Shadow Study

12:00pm

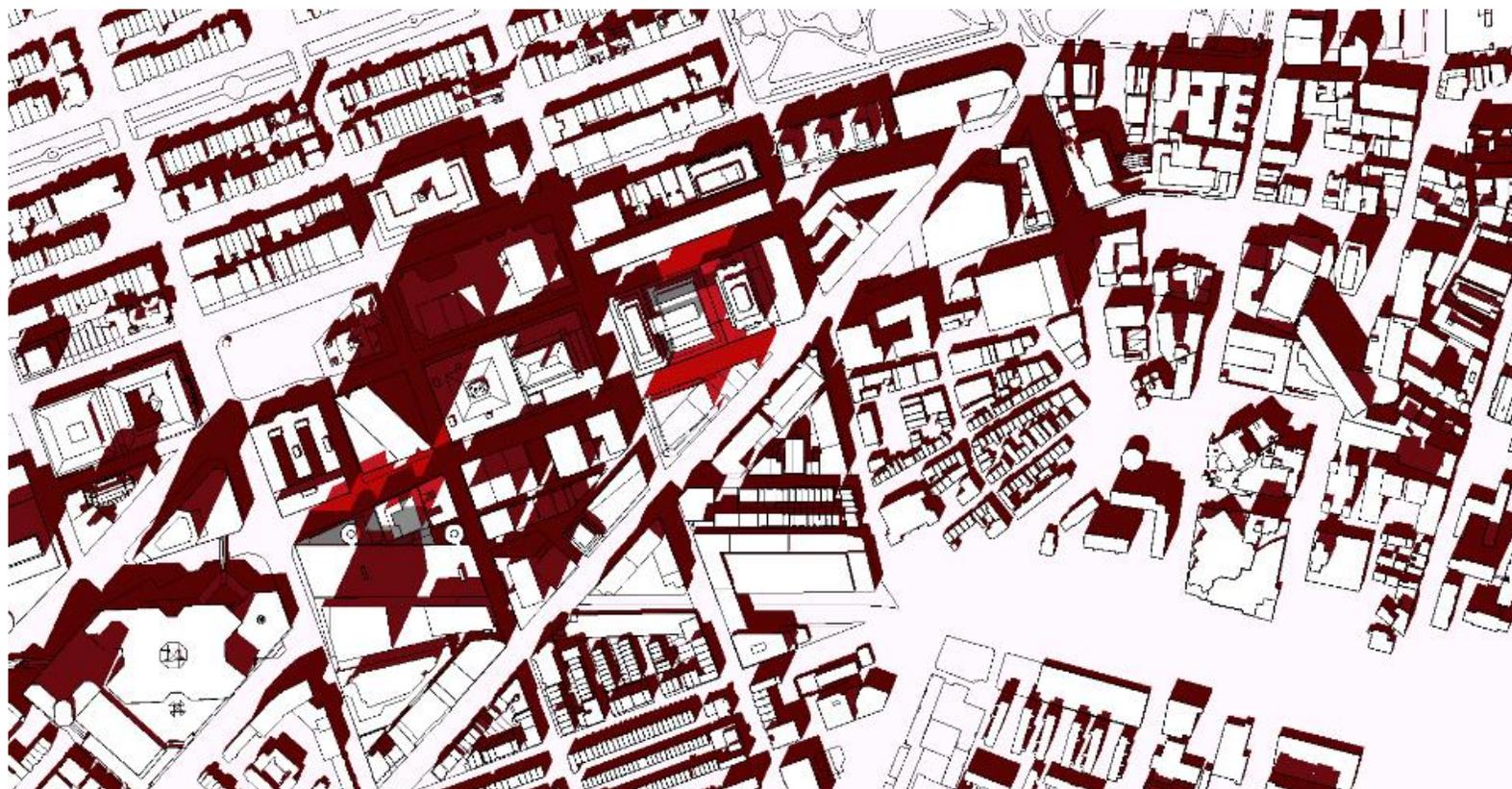
2 hours allowed on Copley Square from 8am – 2:30pm March - October



March 21st Shadow Study

1:00pm

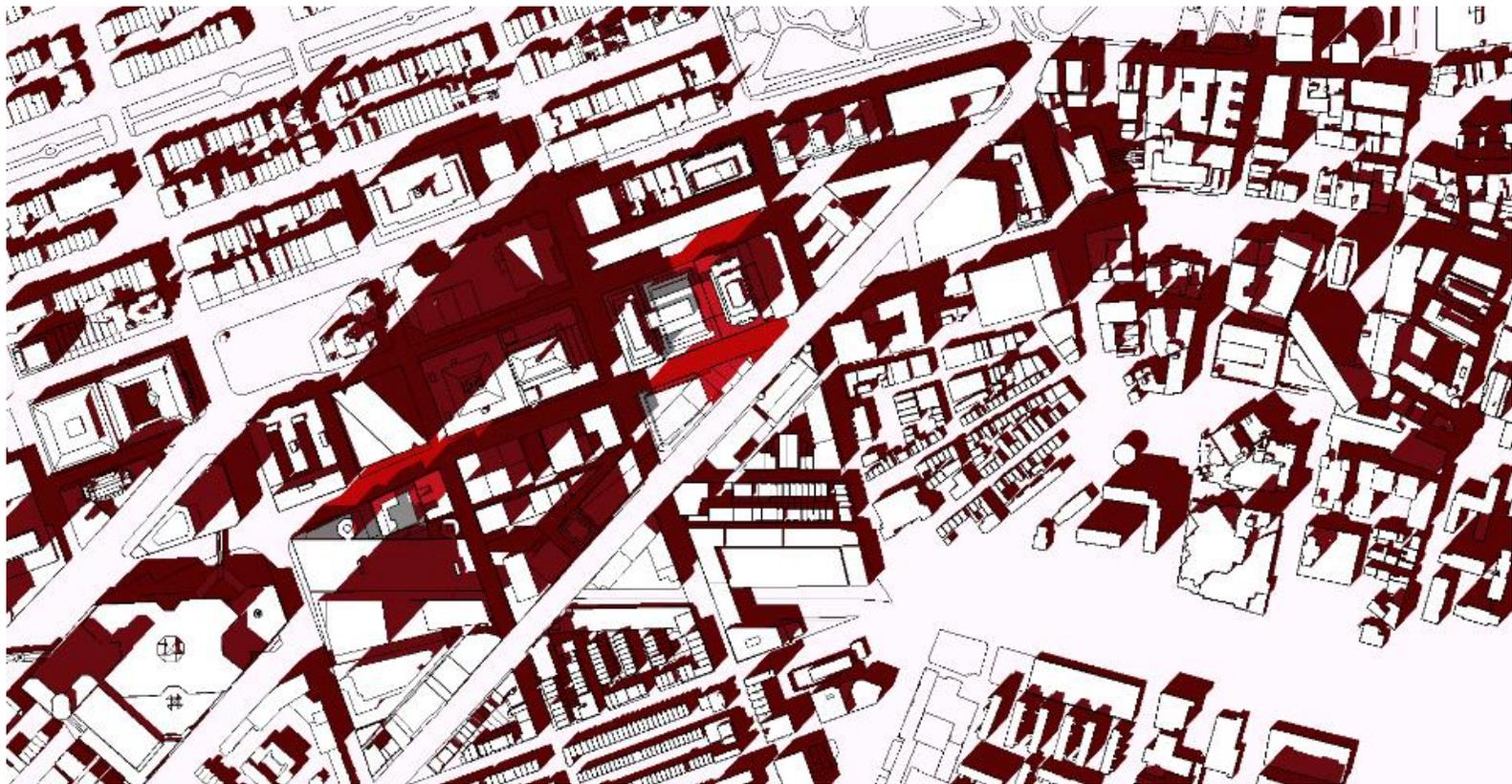
2 hours allowed on Copley Square from 8am – 2:30pm March - October



March 21st Shadow Study

2:00pm

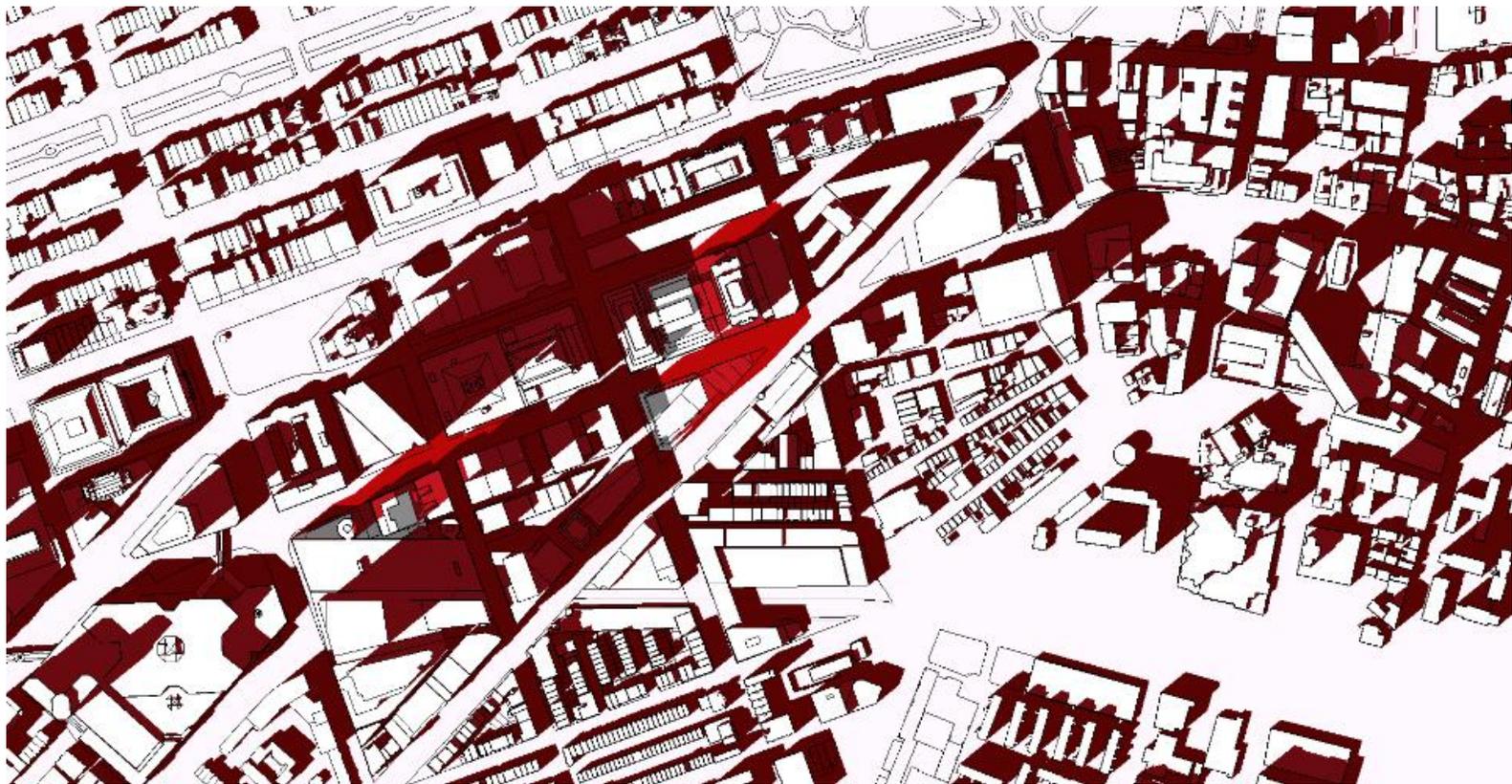
2 hours allowed on Copley Square from 8am – 2:30pm March - October



March 21st Shadow Study

2:30pm

2 hours allowed on Copley Square from 8am – 2:30pm March - October



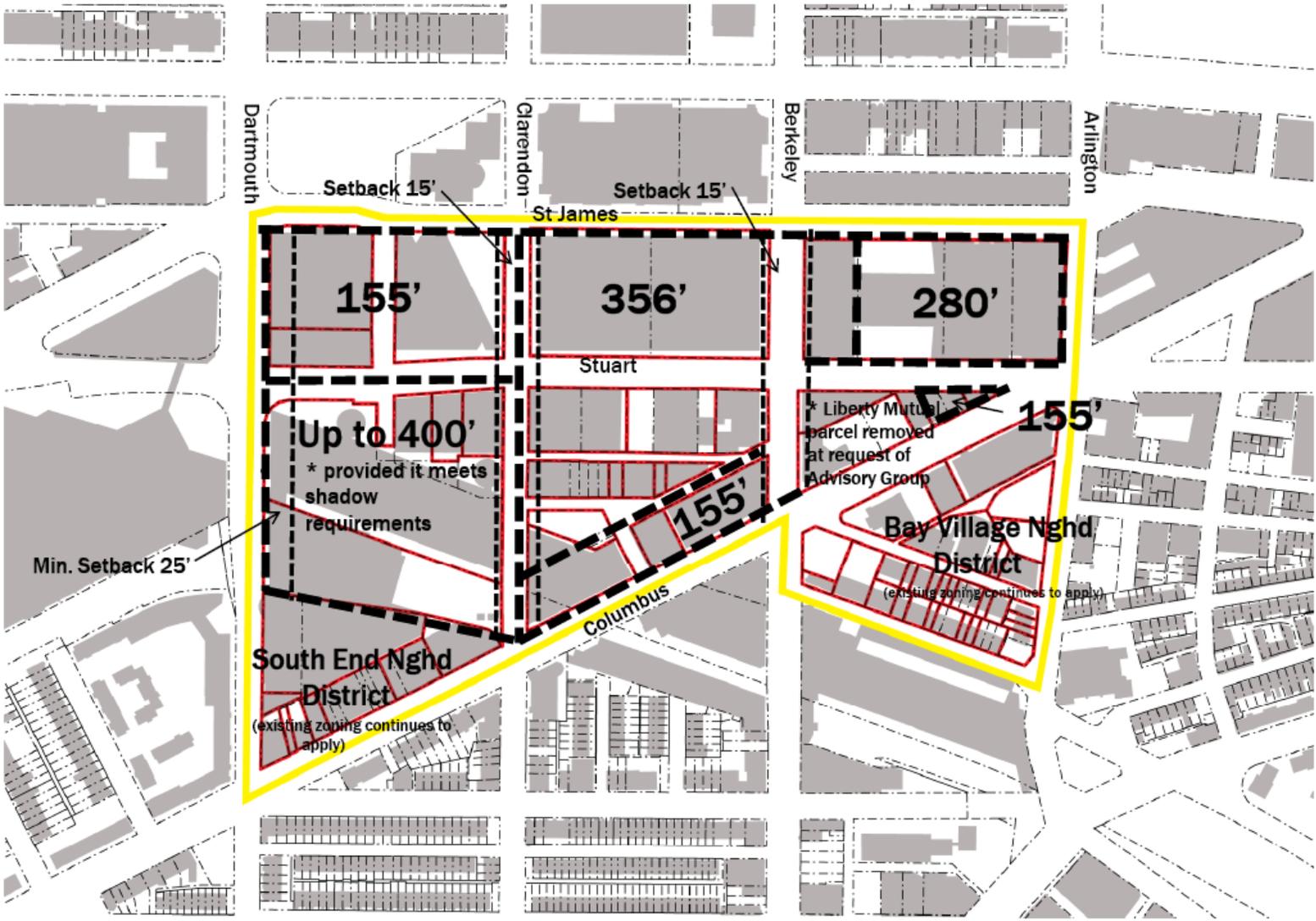
Development Review Guidelines

Base: 10 FAR & 155' height limit

- **Building Preservation**
- **Increasing the City's Affordable Housing Supply**
- **Review process**
 - Article 80B
- **Public Realm/ Pedestrian Experience**
 - Street Wall Frontage Achievement
 - Transparency Achievement
 - Publicly Accessible Space
 - Ground Floor Pedestrian Entrances
 - Ground Floor Use
- **Environment**
 - Sustainability
 - Wind
- Shadow
- Ground Water
- **Multi-modal Access**
 - Traffic Studies project Area
 - Off-Street Parking Ratios
 - Parking/Service Access
 - Off-Street Parking/Service Location
 - Bicycle Accommodations
 - Alternative Transportation Off-Street Parking
 - Traffic Management
 - Loading
 - Transportation Demand Management
 - Transit

Tower: 17.5 FAR & 400' height limit

- **Building Achievement**
 - Sustainability
 - Streetscape/Pedestrian & Bicycle Fund
 - Public Art
 - Mitigating Development Impacts
- **Performance Criteria**
 - Building Form
 - Tower GSF
 - Tower Length
 - Massing Setback
- **Environment**
 - Shadow Performance
 - Wind Performance
 - Ground Water
- **Multi-modal Access**

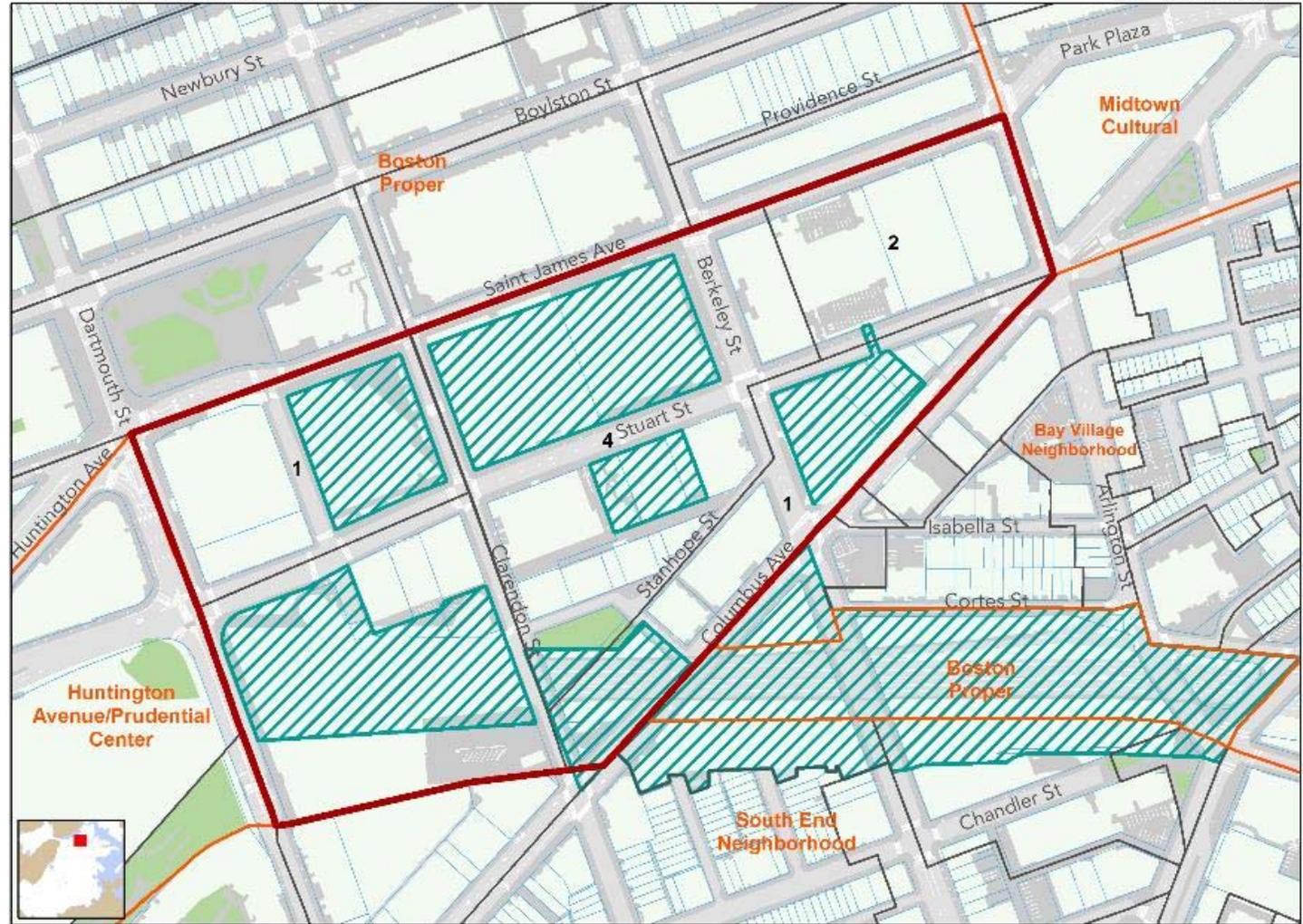
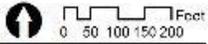


Max. Heights and Setbacks



Zoning Map

1S Stuart Street District





RESPONSES TO CAC QUESTIONS

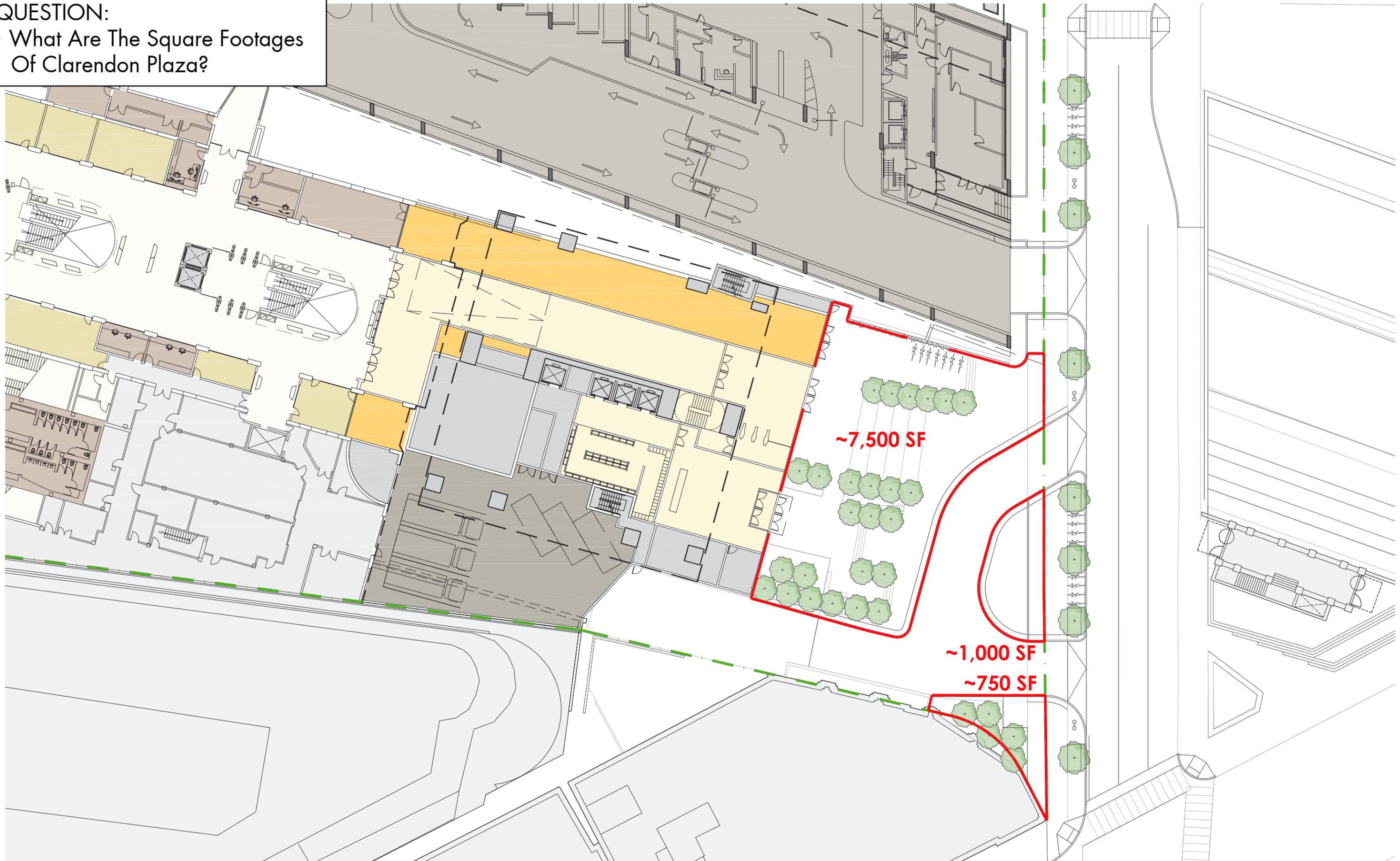
QUESTION:

- What are the Shadow Impacts To Stained Glass Windows in the New Old South Church And Trinity Church?

SHADOW IMPACTS TO HISTORIC RESOURCES

- New Old South Church - West and South Facade Restored Windows
 - Shading During Approximately 12 Weeks Of The Year (Nov 09 to Feb 01)
 - Duration Ranges From Approximately 10 to 100 Minutes
- Trinity Church - Christ Preaching Windows
 - Shading During Approximately 11 Weeks Of The Year (Nov 16 to Feb 01)
 - Duration Ranges From Approximately 10 to 60 Minutes

QUESTION:
• What Are The Square Footages Of Clarendon Plaza?



QUESTION:

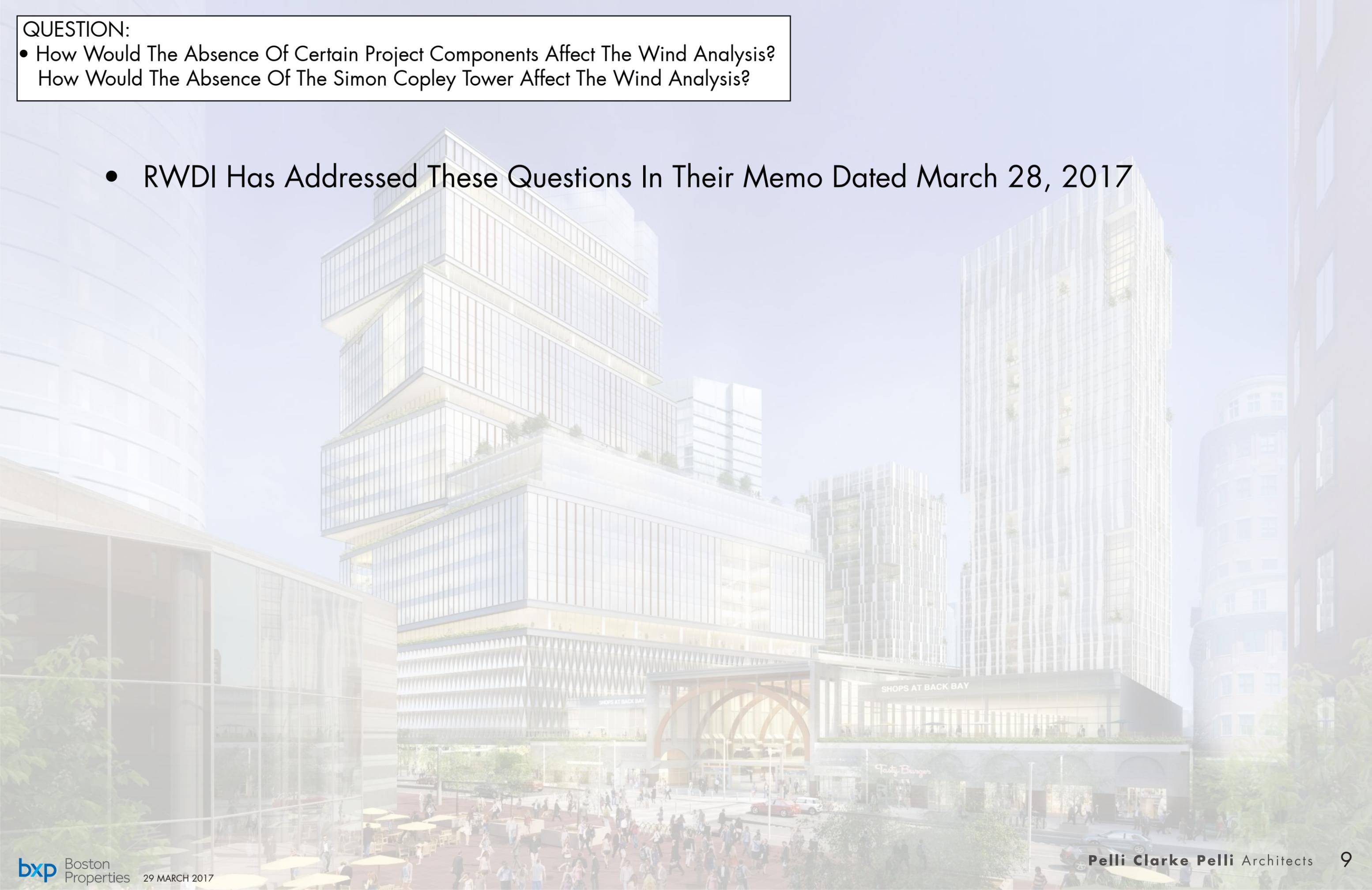
- How Is The Project Providing Good Indoor Air Quality?
What Types Of Filters Are Being Used?

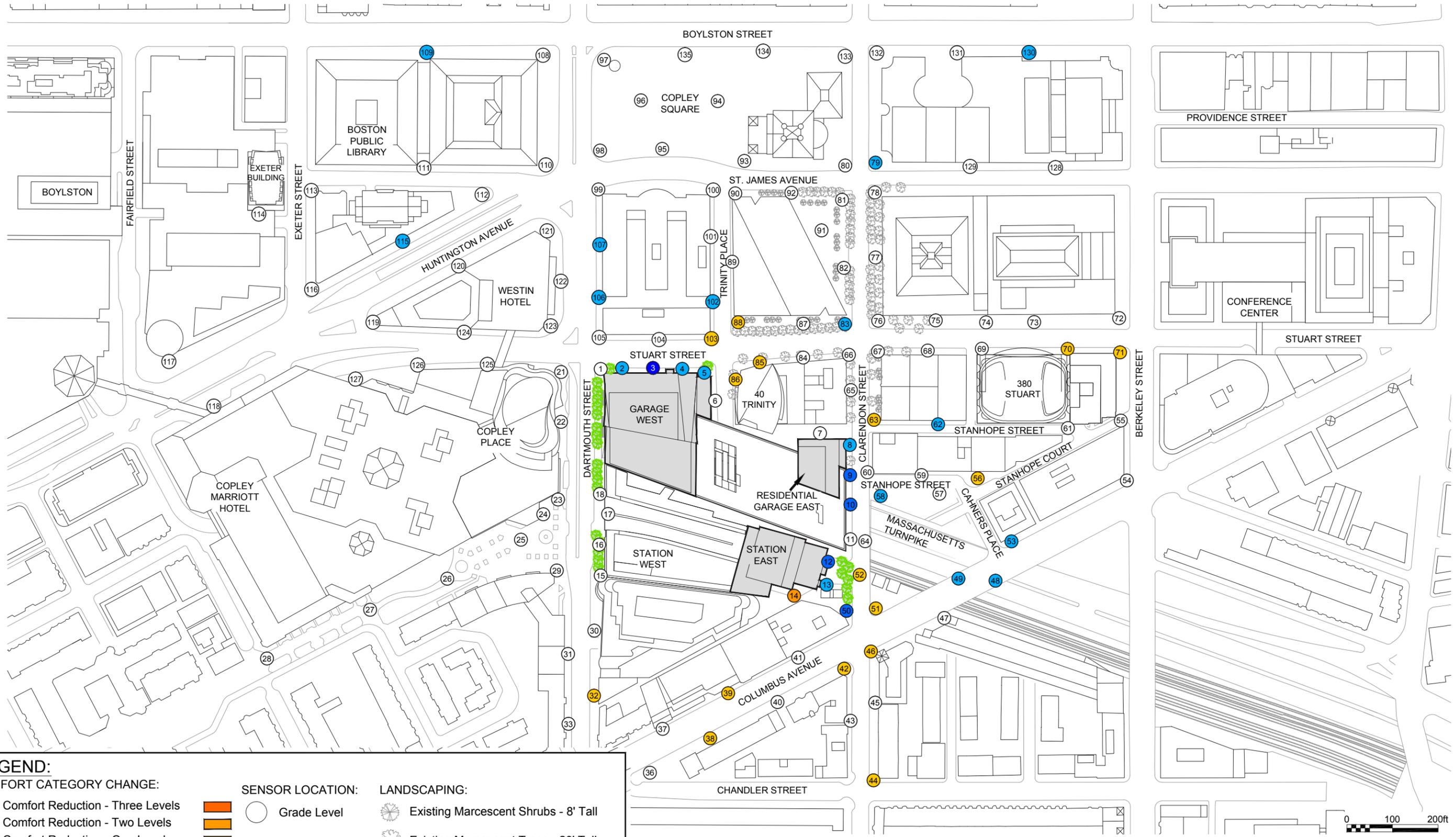
- From An Air Quality And Health Perspective, We Are Concerned With Particulate Matter 2.5 ($Pm_{2.5}$), Which Refers To Tiny Particles In The Air That Are Two And One Half Microns Or Less In Width. These Particulates Primarily Come From Car, Truck, Bus And Off-Road Vehicle Exhausts, And Other Operations That Involve The Burning Of Fuels.
- Our Project Will Provide Good Indoor Air Quality Through The Use Of MERV13 Filters For Outdoor/Supply Air. MERV Stands For Minimum Efficiency Reporting Value Per ASHRAE Standard 52.2 And MERV 13 Filters Are Able To Filter Fine Particulate Matter Like $Pm_{2.5}$. Materials Will Also Be Specified That Have Low VOCs (Volatile Organic Compounds).
- The Project Will Also Improve Indoor Air Quality Through Its Construction Practices By Requiring A Construction Indoor Air Quality Management Plan Which Addresses Storage Of Materials On-Site, Protection Of Duct Work During Construction And Scheduling Or Sequencing Of Activities To Minimize Air Quality Impacts. At The End Of Construction, A Flush Out Period Or Air Quality Testing Will Be Conducted To Verify Air Quality Standards.

QUESTION:

- How Would The Absence Of Certain Project Components Affect The Wind Analysis?
How Would The Absence Of The Simon Copley Tower Affect The Wind Analysis?

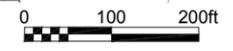
- RWDI Has Addressed These Questions In Their Memo Dated March 28, 2017





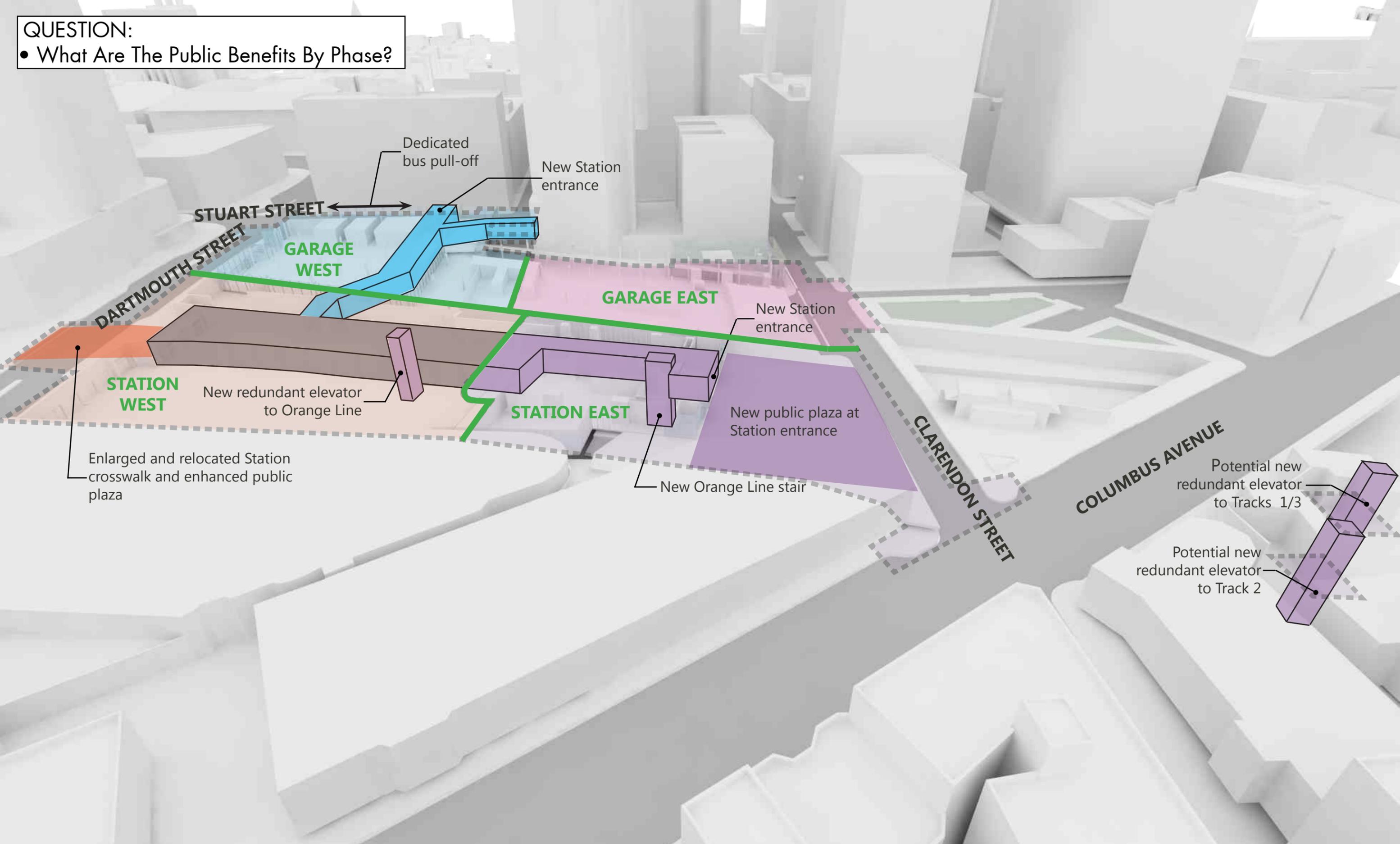
LEGEND:

COMFORT CATEGORY CHANGE:		SENSOR LOCATION:		LANDSCAPING:	
Wind Comfort Reduction - Three Levels			Grade Level		Existing Marcescent Shrubs - 8' Tall
Wind Comfort Reduction - Two Levels					Existing Marcescent Trees - 20' Tall
Wind Comfort Reduction - One Level					Proposed Marcescent Trees - 20' Tall
No Comfort Category Change					
Wind Comfort Improvement - One Level					
Wind Comfort Improvement - Two Levels					
Wind Comfort Improvement - Three Levels					



PEDESTRIAN WIND CONDITIONS - CATEGORY CHANGE - NO-BUILD TO BASE SCHEME

QUESTION:
• What Are The Public Benefits By Phase?



QUESTION:

- What Are The Public Benefits By Phase?

PUBLIC BENEFITS - GARAGE WEST

- **New Station Entrance** From Stuart Street.
- New 19' to 26' Wide, Accessible, Weather-Protected **Through-Block Connector** From Stuart Street.
- New Dedicated **Bus Pull-Off Area** Adjacent To The New Station Entrance On Stuart Street.
- New **Accessible Drop-Off Lane** On Stuart Street, In Proximity To New Station Entrance.
- **Widened Pedestrian Zone** Along Stuart Street.
 - Overall Increase of 9.5', Including the Furnishing Zone.
- **New Sidewalks**, Street Trees, And Street Furniture Along Dartmouth And Stuart Streets.
- Site Accessibility Upgrades:
 - a) **Reconfigured Crosswalks** At Stuart Street.
 - b) **Improved Grade** At Corner Of Dartmouth And Stuart Streets.
 - c) **Improved Accessible Ramp** At Dartmouth Retail Entrance.

QUESTION:

- What Are The Public Benefits By Phase?

PUBLIC BENEFITS - GARAGE WEST (CONT.)

- New **30 Short-Term** and **162 Long-Term Bicycle Parking** Spaces.
- New Workplace Opportunities For A Variety Of Business Types.
- New And Diverse Retail Opportunities.
- Approximately **\$5.5M and \$1.1M In Housing And Jobs Linkage** Payments.
- Approximately **\$10.1M In New Annual Real Estate Tax Revenue.**
- Approximately **3,100 Permanent Jobs.**

QUESTION:

- What Are The Public Benefits By Phase?

PUBLIC BENEFITS - GARAGE EAST

- **New Sidewalks**, Street Trees, And Street Furniture Along Clarendon Street.
- **Reconfigured Curb Alignment And Crosswalks** At Clarendon And Stanhope Streets.
- Reduced And **Realigned Garage Drive** Width.
- Site Accessibility Upgrades:
 - a) **Improved Grade** Along Garage Façade.
 - b) **Improved Grade** At Clarendon And Stanhope Intersection.
- New **10 Short-Term** and **120 Long-Term Bicycle Parking** Spaces.
- New Quality Housing Opportunities, In Compliance With Boston's Applicable Inclusionary Development Policy.
- Approximately **\$1.7M In New Annual Real Estate Tax Revenue.**

QUESTION:

- What Are The Public Benefits By Phase?

PUBLIC BENEFITS - STATION EAST

- **New Station Entrance** From Clarendon Street.
- New 20' Wide Accessible Weather Protected **Through-Block Connector** From Clarendon Street.
- New 11,000SF Landscaped **Public Plaza**.
- **New Sidewalks**, Street Trees, And Sidewalk Furniture Along Clarendon Street.
- **Reconfigured Crosswalks** At Clarendon Street And Columbus Avenue Intersection.
- New **Accessible Drop-Off Lane** In Proximity To New Station Entrance.
- New **Redundant Elevator To MBTA Orange Line**.
- Potential New Redundant Elevators To Commuter Rail Tracks 1/3 And Track 2, If Feasible.

QUESTION:

- What Are The Public Benefits By Phase?

PUBLIC BENEFITS - STATION EAST (CONT.)

- **New Hubway Station** On Clarendon Street Plaza Near New Station Entrance.
- New **10 Short-Term** and **180 Long-Term Bicycle Parking** Spots.
- New Quality Housing Opportunities, In Compliance With Boston's Applicable Inclusionary Development Policy.
- New And Diverse Retail Opportunities.
- Approximately **\$3.1M In New Annual Real Estate Tax Revenue.**

QUESTION:

- What Are The Public Benefits By Phase?

PUBLIC BENEFITS - STATION WEST

- **Improved And Enhanced Station Entry Plaza** Welcoming Transit Customers And Reinforcing The Civic Nature Of The Station Entrance.
- **Relocated and Enlarged Dartmouth Street Crosswalk** - To Align With The Future Station Entrance, Significantly Improving Pedestrian Safety And Enhancing The Link Between The Station And The Southwest Corridor Park.
- **New Sidewalks**, Street Trees, And Street Furniture Along Dartmouth Street.
- New **20 Short-Term** and **18 Long-Term Bicycle Parking** Spaces.
- New And Diverse Retail Opportunities.
- Approximately **\$500,000 In New Annual Real Estate Tax Revenue.**
- Approximately **75 Permanent Jobs.**

QUESTION:

- What Are The Public Benefits By Phase?

SUMMARY ECONOMIC & PUBLIC BENEFITS PROJECT AS A WHOLE

- **Job Creation** - Approximately 2,500 Construction Jobs And Approximately 3,200 Permanent Jobs Across All Four Air Rights Development Parcels.
- **Linkage Payments** - Contribute Approximately \$5,500,000 In Housing Linkage And \$1,100,000 in Jobs Linkage Payments.
- **Enhanced Tax Revenues** – Generate Approximately \$15.3 Million Annually In New Real Estate Tax Revenues For The City of Boston Across All Four Air Rights Development Parcels Upon Stabilization.
- **MBTA Revenue** - The Project-Generated Transit Trips Are Estimated To Contribute An Additional Approximately \$4.6 to 5.8 Million In Annual Revenue For The MBTA Based On Current Fare Levels.

QUESTION:
• What Would Different Phasing Scenarios Look Like?

GARAGE WEST / GARAGE EAST / STATION EAST / STATION WEST



QUESTION:
• What Would Different Phasing Scenarios Look Like?

~~GARAGE WEST~~ / GARAGE EAST / STATION EAST / STATION WEST



QUESTION:
• What Would Different Phasing Scenarios Look Like?

GARAGE WEST / ~~GARAGE EAST~~ / STATION EAST / STATION WEST



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GARAGE WEST / GARAGE EAST / ~~STATION EAST~~ / STATION WEST



QUESTION:
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GARAGE WEST / GARAGE EAST / STATION EAST / STATION WEST



QUESTION:
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~~GARAGE WEST~~ / GARAGE EAST / STATION EAST / STATION WEST



QUESTION:
• What Would Different Phasing Scenarios Look Like?

GARAGE WEST / ~~GARAGE EAST~~ / STATION EAST / STATION WEST



QUESTION:
• What Would Different Phasing Scenarios Look Like?

GARAGE WEST / GARAGE EAST / ~~STATION EAST~~ / STATION WEST



QUESTION:
• What Will The Garage
East Lobby Look Like?



VIEW FROM DARTMOUTH STREET AND STUART STREET - EXISTING CONDITION

QUESTION:
• What Will The Garage
East Lobby Look Like?

NEW
STATION
ENTRANCE



VIEW FROM STUART AND DARTMOUTH STREET - PROPOSED CONDITION

QUESTION:
• What Will The Garage
East Lobby Look Like?



VIEW FROM CLARENDON STREET - EXISTING CONDITION

QUESTION:
• What Will The Garage
East Lobby Look Like?



NEW STATION
ENTRANCE

NEW 11,000sf PUBLIC PLAZA

VIEW FROM CLARENDON STREET - PROJECT RENDERING

QUESTION:
• What Will The Garage
East Lobby Look Like?



VIEW OF GARAGE EAST STREET LEVEL - EXISTING CONDITION

QUESTION:
• What Will The Garage
East Lobby Look Like?

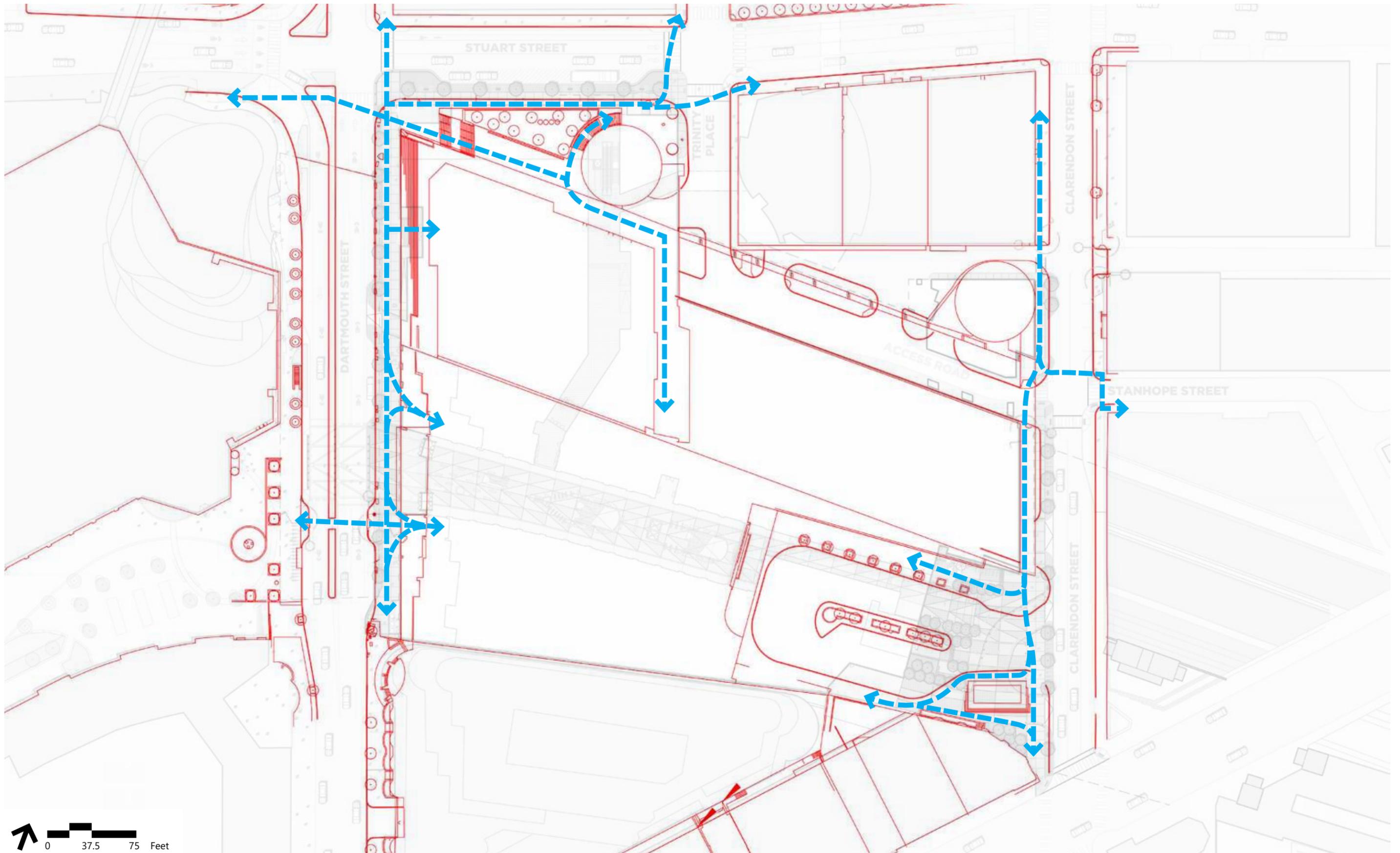


VIEW OF GARAGE EAST STREET LEVEL - PROJECT RENDERING



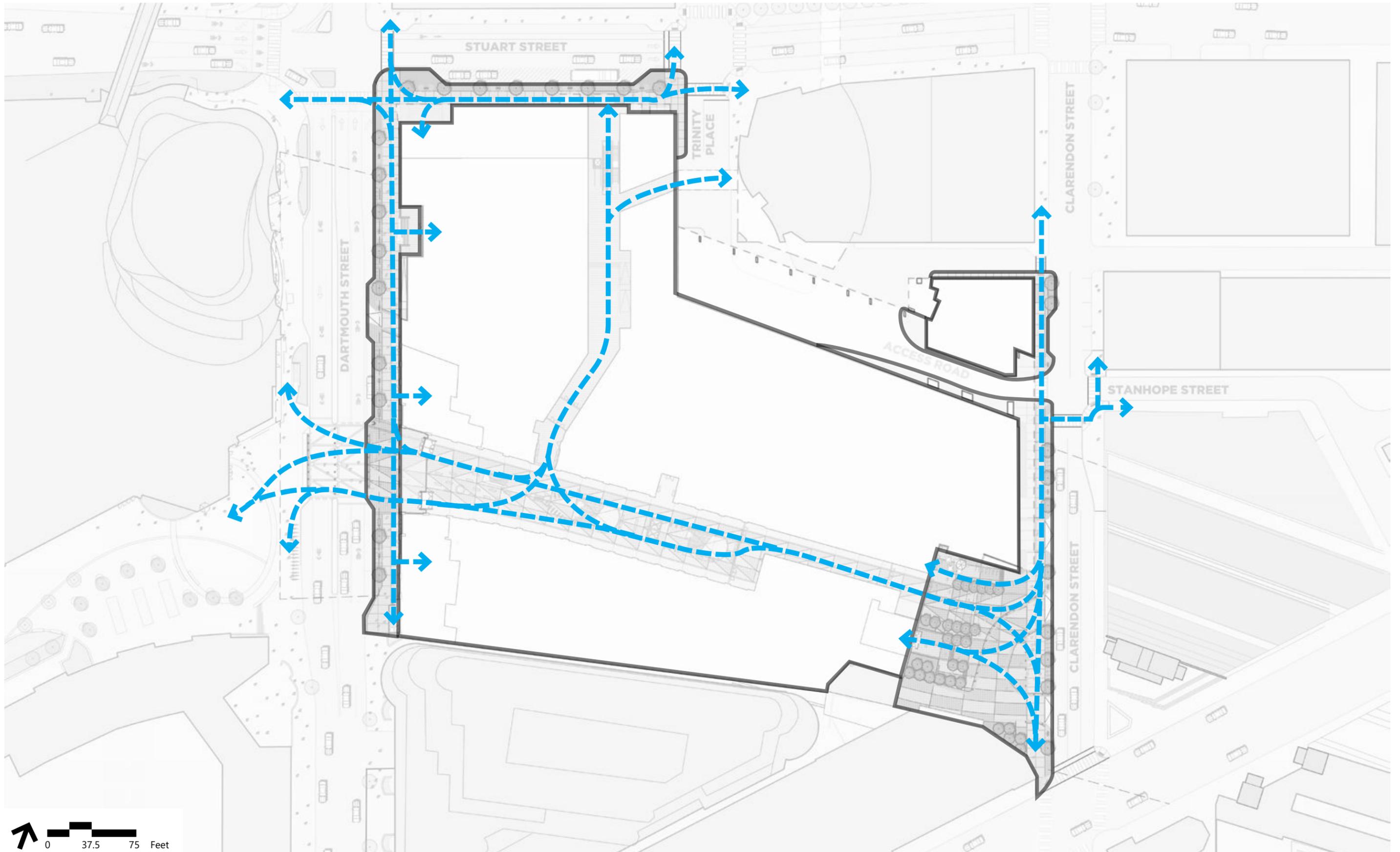
Source: OJB / PCPA / Arrowstreet / Parsons Brinkerhoff

SITE PLAN - PROPOSED CONDITIONS



Source: OJB / PCPA / Arrowstreet / Parsons Brinkerhoff

SITE PLAN | EXISTING CONDITIONS OVERLAY ANALYSIS



Source: OJB / PCPA / Arrowstreet / Parsons Brinkerhoff

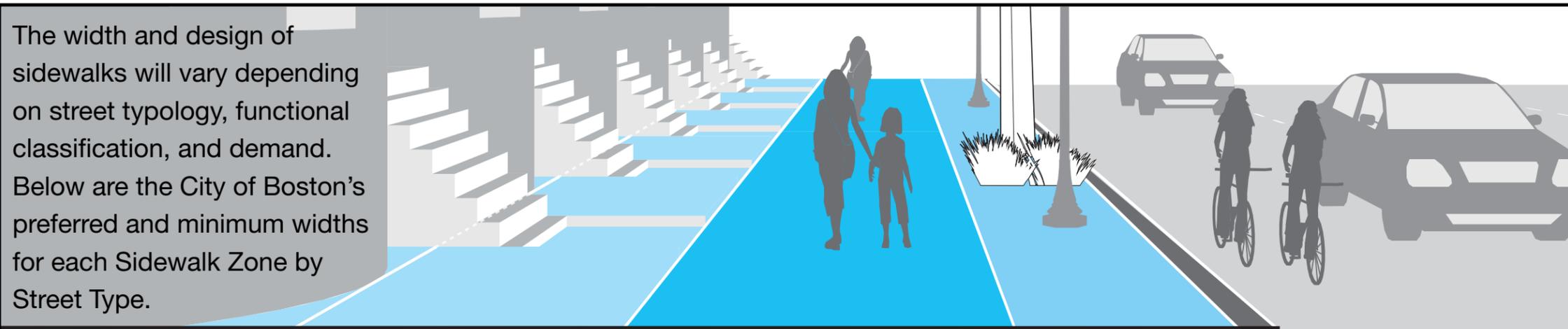
SITE PLAN - PROPOSED CONDITIONS

Sidewalk Zones



Curb Greenscape/Furnishing Zone Pedestrian Zone Frontage Zone

Preferred and Minimum Widths for Sidewalk Zones

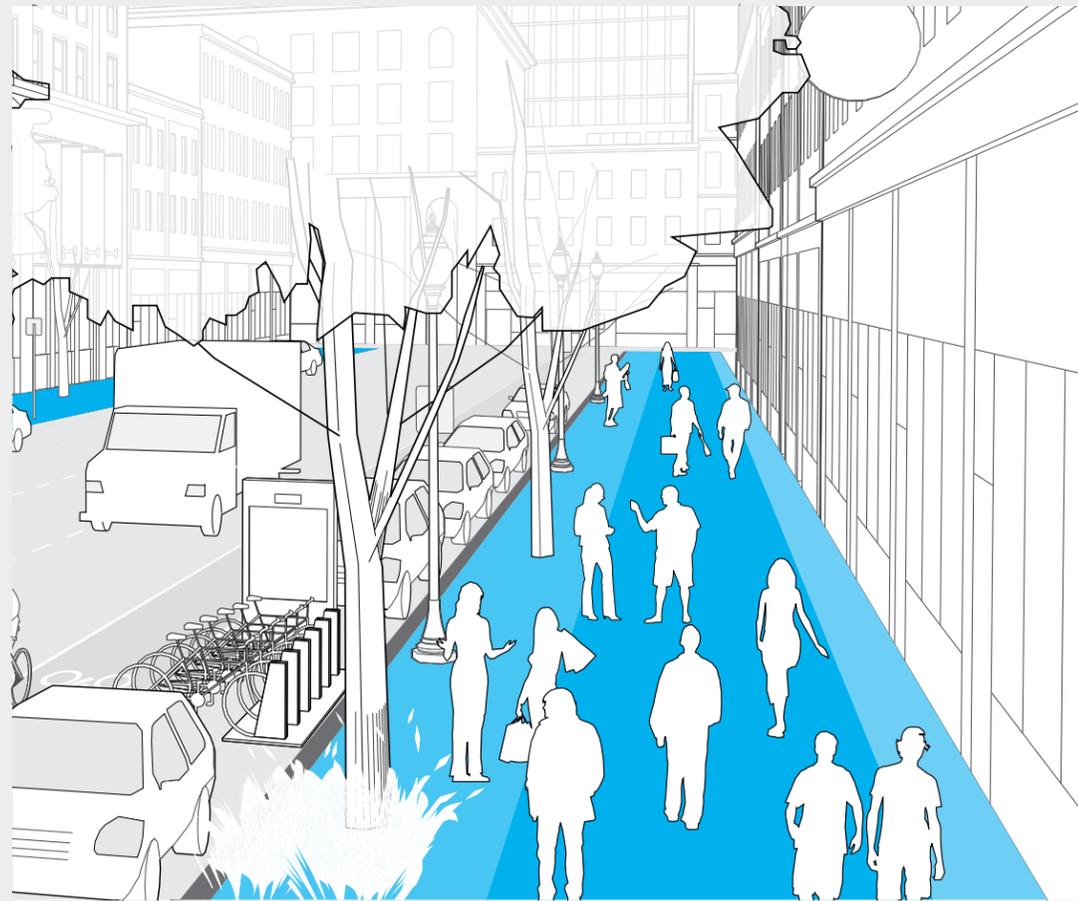


Street Type	Frontage Zone		Pedestrian Zone*		Greenscape/ Furnishing Zone		Curb Zone	Total Width	
	Preferred	Minimum	Preferred	Minimum	Preferred	Minimum		Preferred	Minimum
Downtown Commercial	2'	0'	12'	8'	6'	1'-6"	6"	20'-6"	10'
Downtown Mixed-Use	2'	0'	10'	8'	6'	1'-6"	6"	18'-6"	10'
Neighborhood Main	2'	0'	8'	5'	6'	1'-6"	6"	16'-6"	7'
Neighborhood Connector	2'	0'	8'	5' (4')*	5'	1'-6"	6"	15'-6"	7'
Neighborhood Residential	2'	0'	5'	5' (4')*	4'	1'-6"	6"	11'-6"	7'
Industrial Street	2'	0'	5'	5' (4')*	4'	1'-6"	6"	11'-6"	7'
Shared Street	2'	0'	Varies	5' (4')*	N/A	N/A	N/A	Varies	Varies
Parkway	N/A	N/A	6'	5'	10'	5'	6"	16'-6"	10'-6"
Boulevard	2'	0'	6'	5'	10'	5'	6"	18'-6"	11'-6"

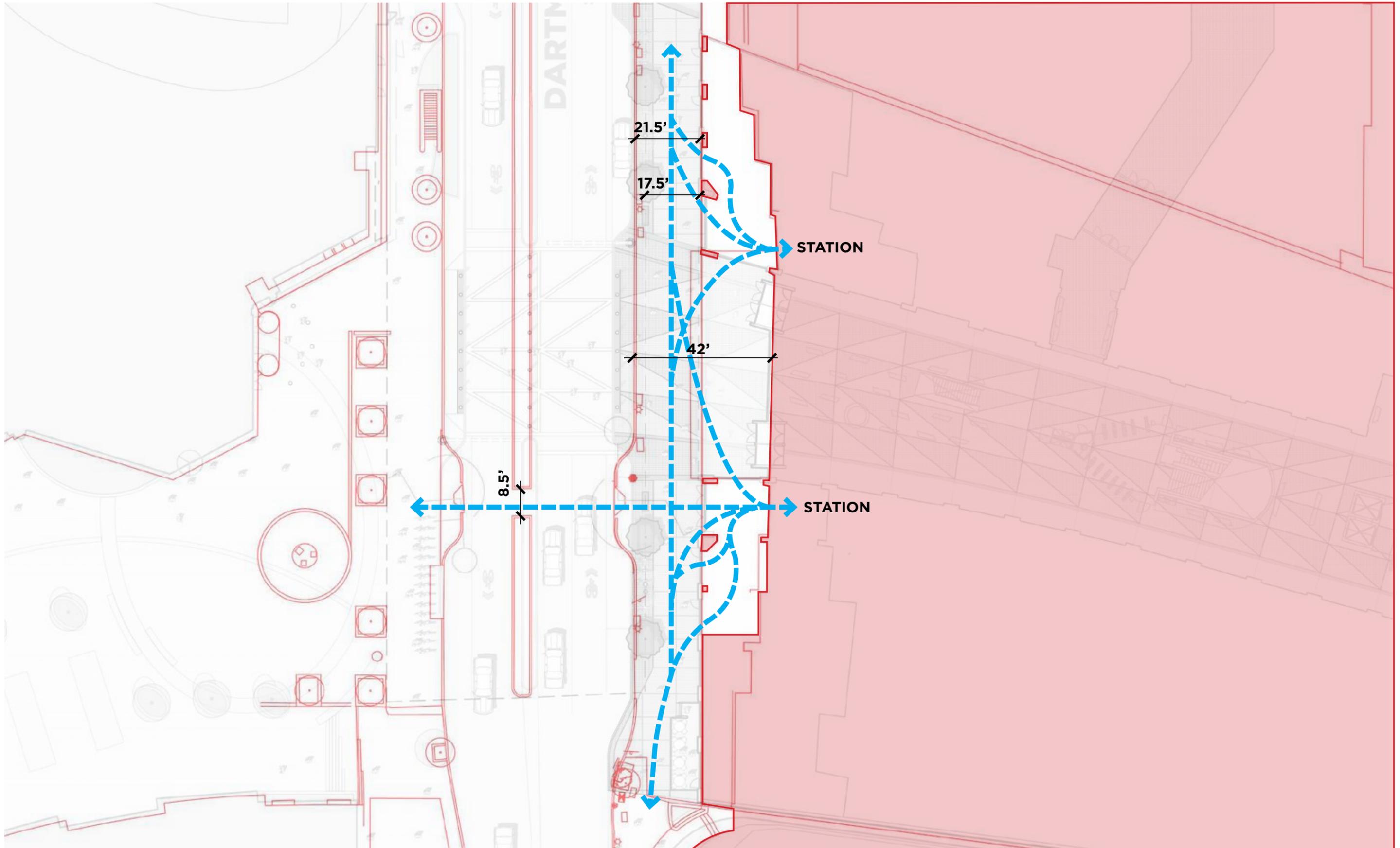
Source: Boston Complete Streets Design Guidelines 2013

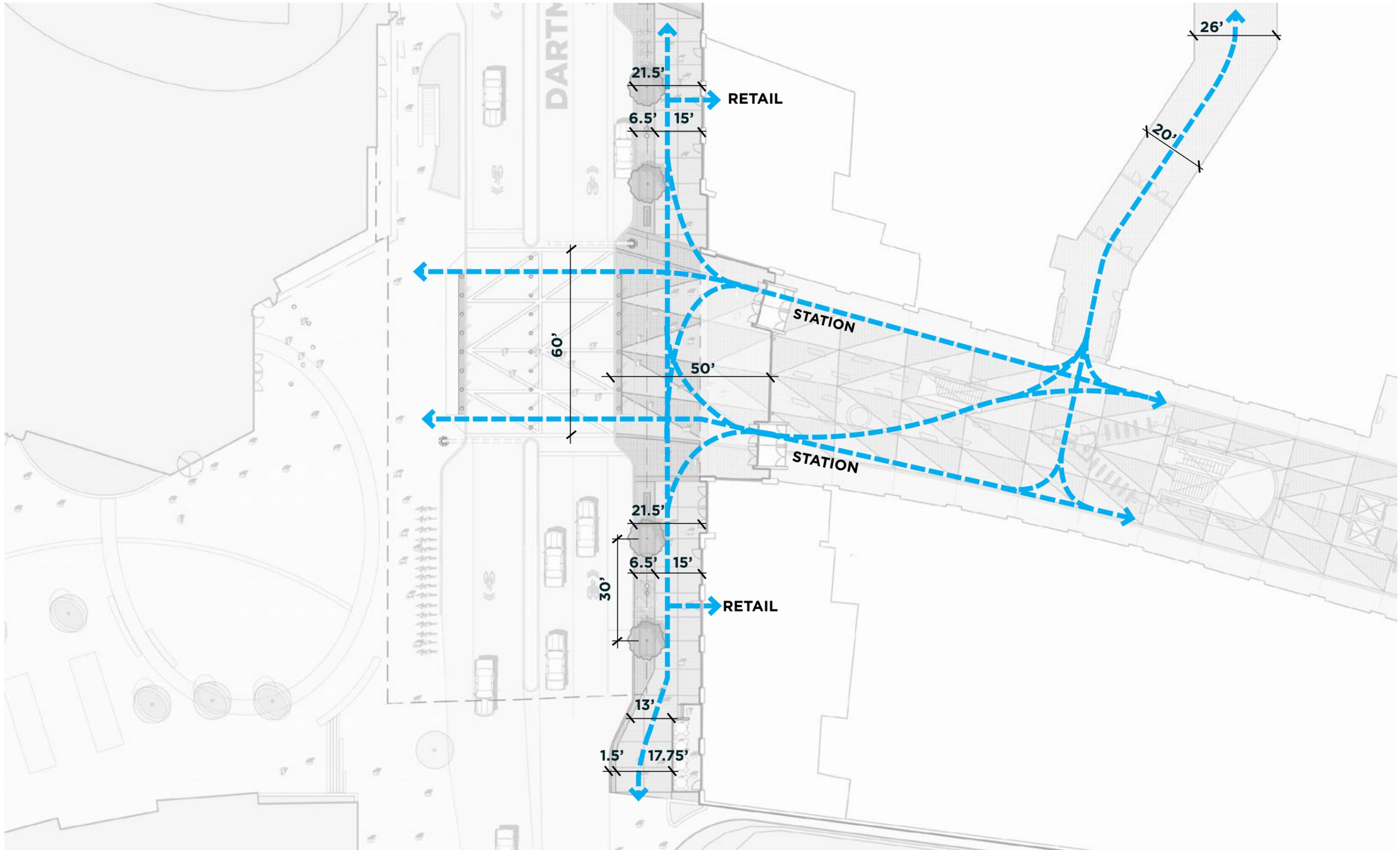
Downtown Commercial

Wide Pedestrian Zones dominate Downtown Commercial streets and accommodate high volumes of pedestrian traffic. Continuous building facades provide visual interest at ground-level, with the Frontage Zone announcing building entrances and the occasional café. The Greenscape/Furnishing Zone is characterized by planters and high-quality finishes as are prominent along Federal and Boylston Streets. Street furniture, public art, and wayfinding are featured in the Greenscape/Furnishing Zone.



DARTMOUTH STREET









BACK BAY
COMMUTER RAIL
MBTA BUSES
AMTRAK

P
P
A
R
K
I
N
G

BACK BAY SOUTH
COMMUTER RAIL
AMTRAK

MINI IN BOSTON
JAMAICA #1 Pt. 100 Under

FREE
Improper
MBTA BOSTON'S OFFICIAL GUIDE
TO ENTERTAINMENT & CULTURE



BACK BAY
COMMUTER RAIL
MBTA BUSES
AMTRAK®

P
P
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↑

BACK BAY SOUTH
COMMUTER RAIL
AMTRAK

21.5'
CURB TO BLDG

FACE OF BUILDING

17.5'
PEDESTRIAN ZONE



COMMUTER RAIL
MBTA BUSES

PARKING

BACK BAY SOUTH
COMMUTER RAIL
CHANGE LINE - ALL TRAINS







FACE OF BUILDING

21.5'

CURB TO BUILDING

17'.5

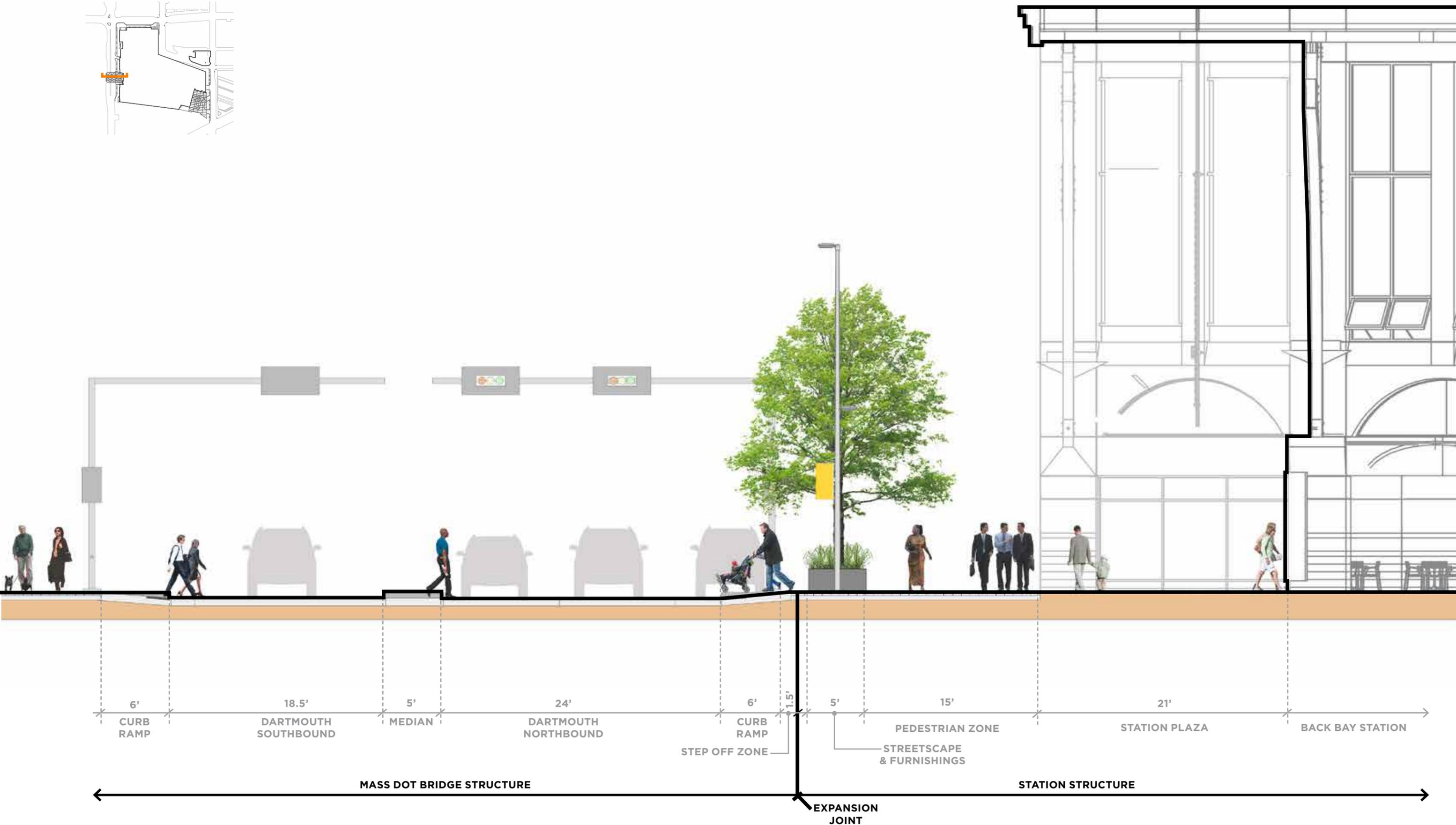
PEDESTRIAN ZONE



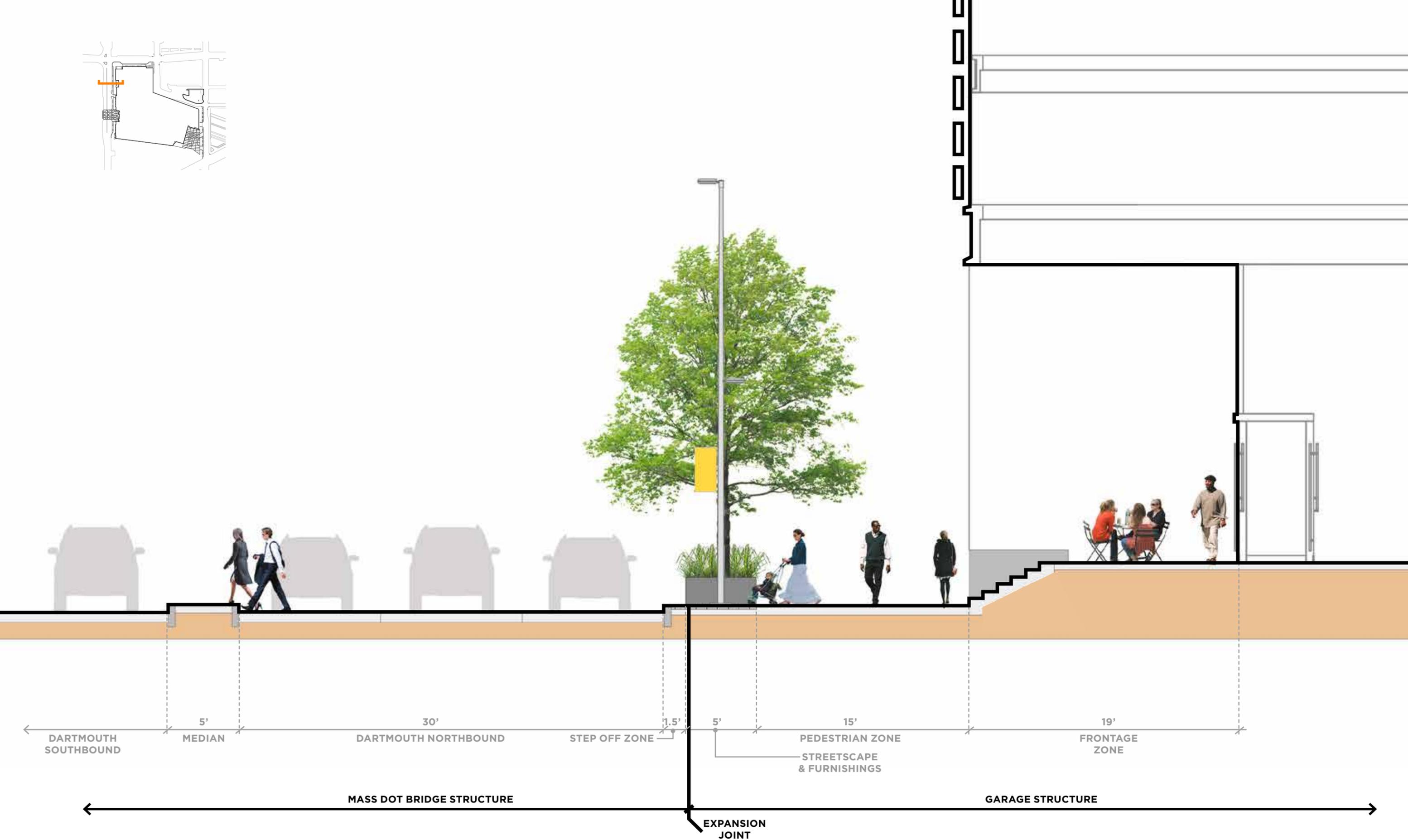
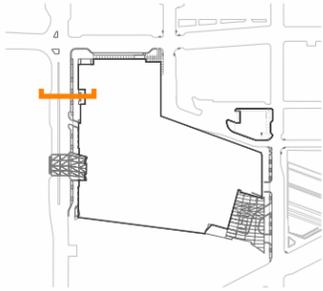
28'
PLAZA

15'
PEDESTRIAN ZONE

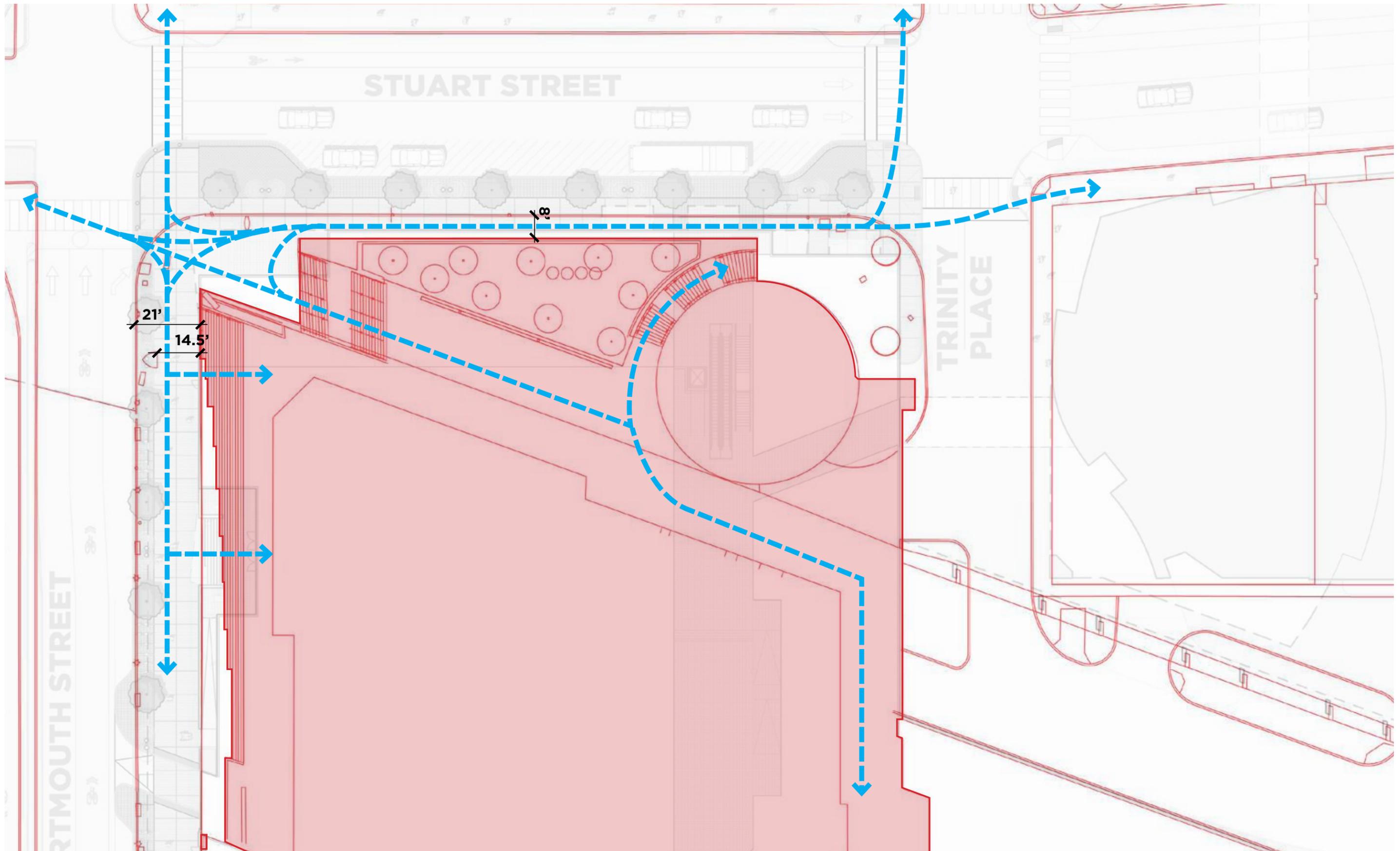
6.5'
FURNISHING ZONE



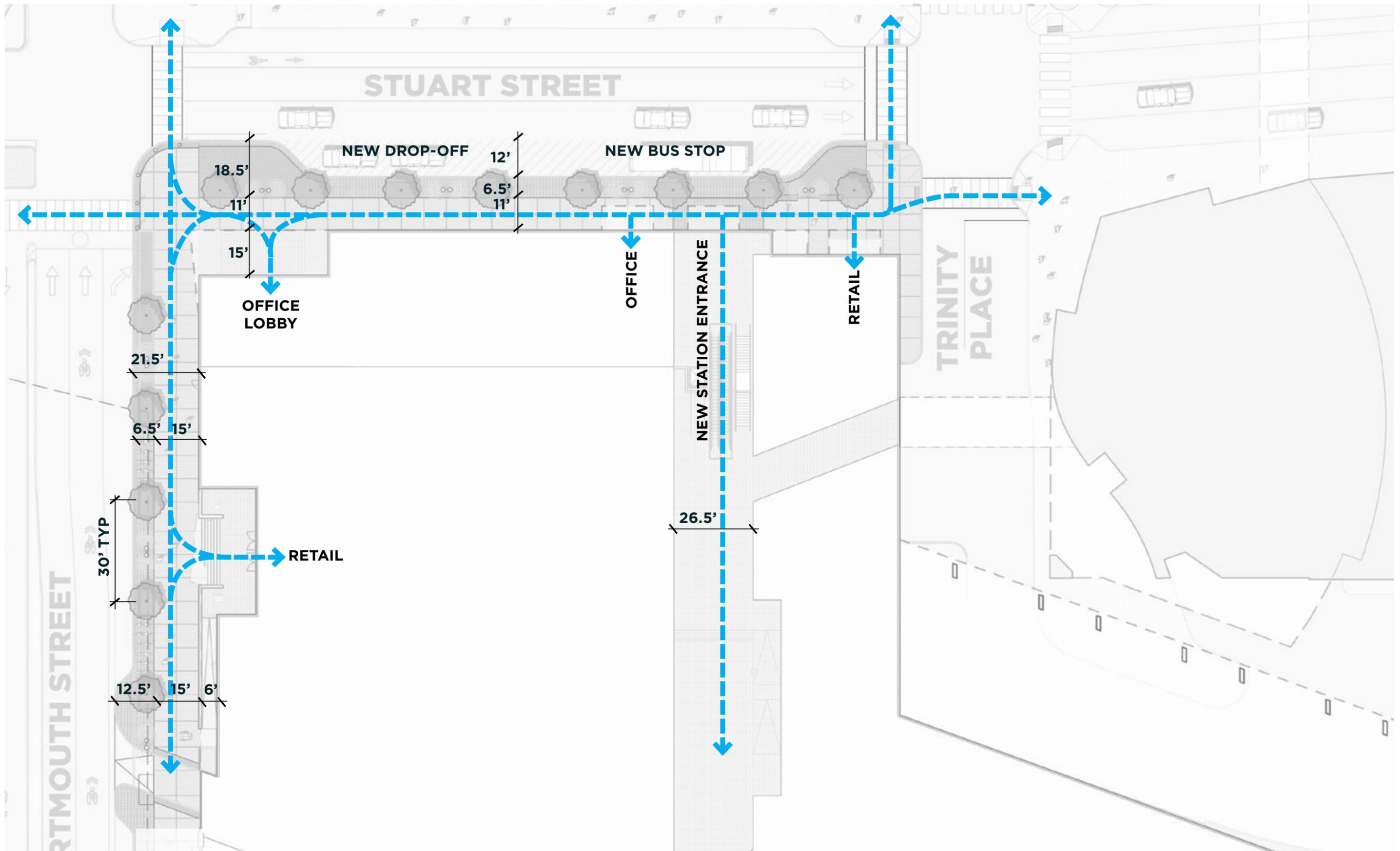
DARTMOUTH STATION PLAZA SECTION

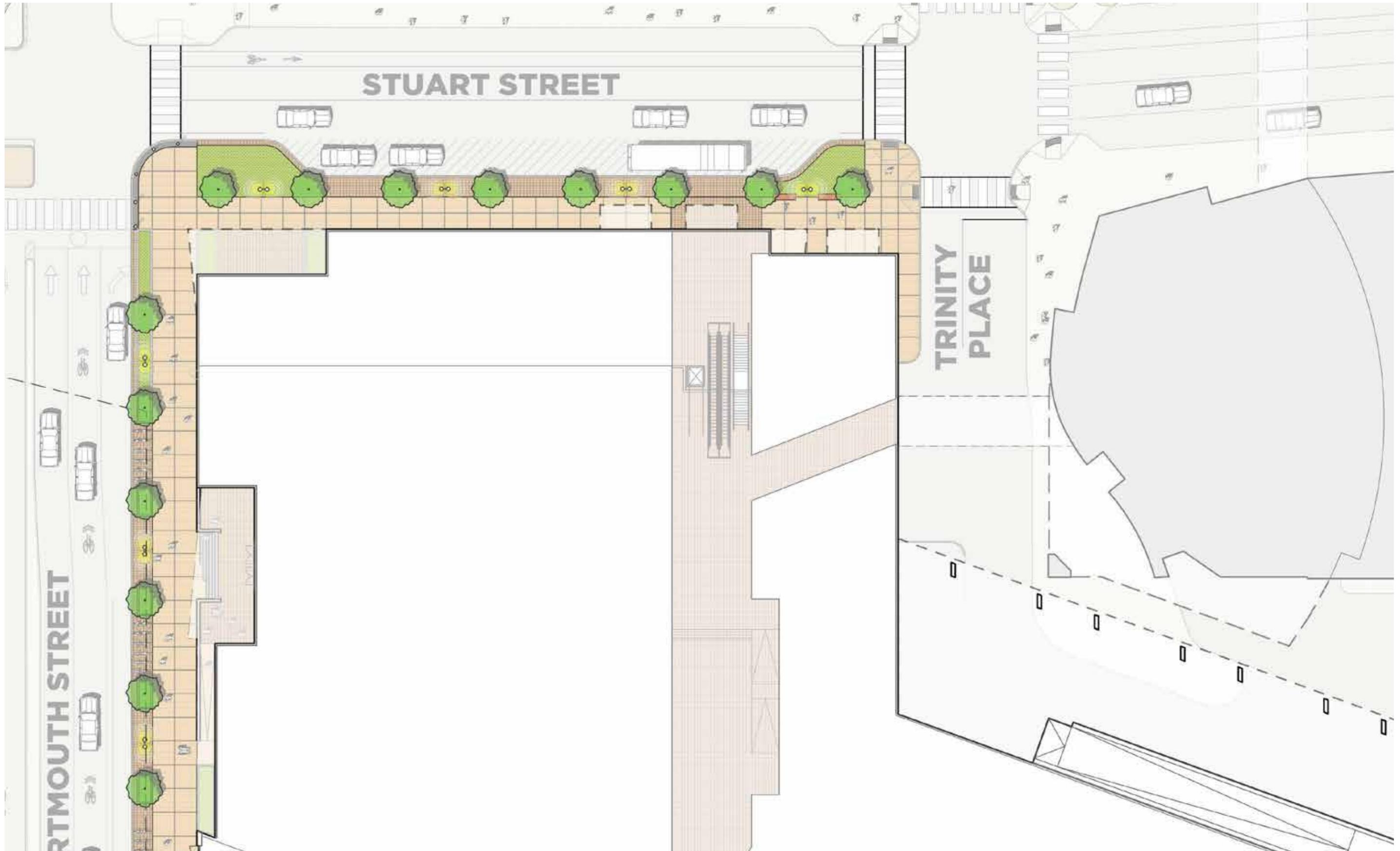


DARTMOUTH STREET RETAIL SECTION



STUART STREET | EXISTING CONDITIONS OVERLAY ANALYSIS





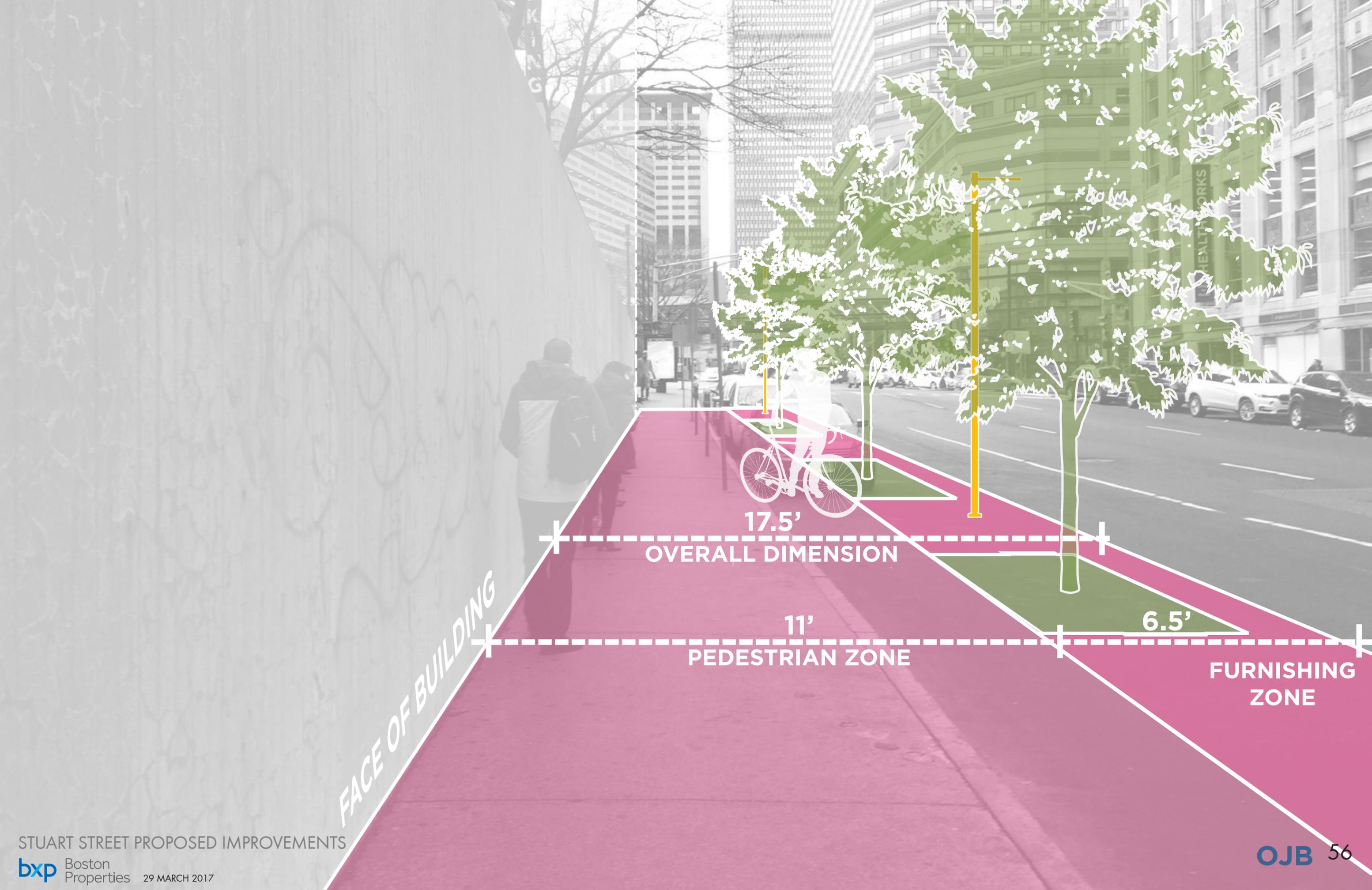
STUART STREET | PROPOSED CONDITIONS



HEALTHWORKS



8'
SIDEWALK



FACE OF BUILDING

17.5'

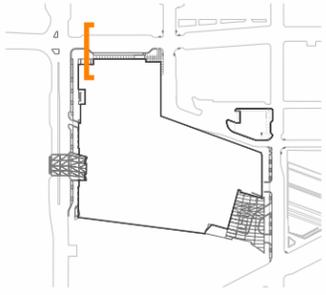
OVERALL DIMENSION

11'

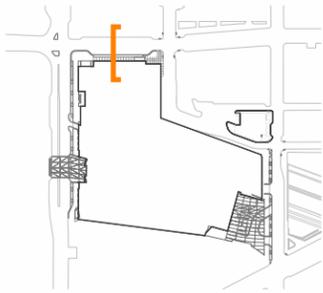
PEDESTRIAN ZONE

6.5'

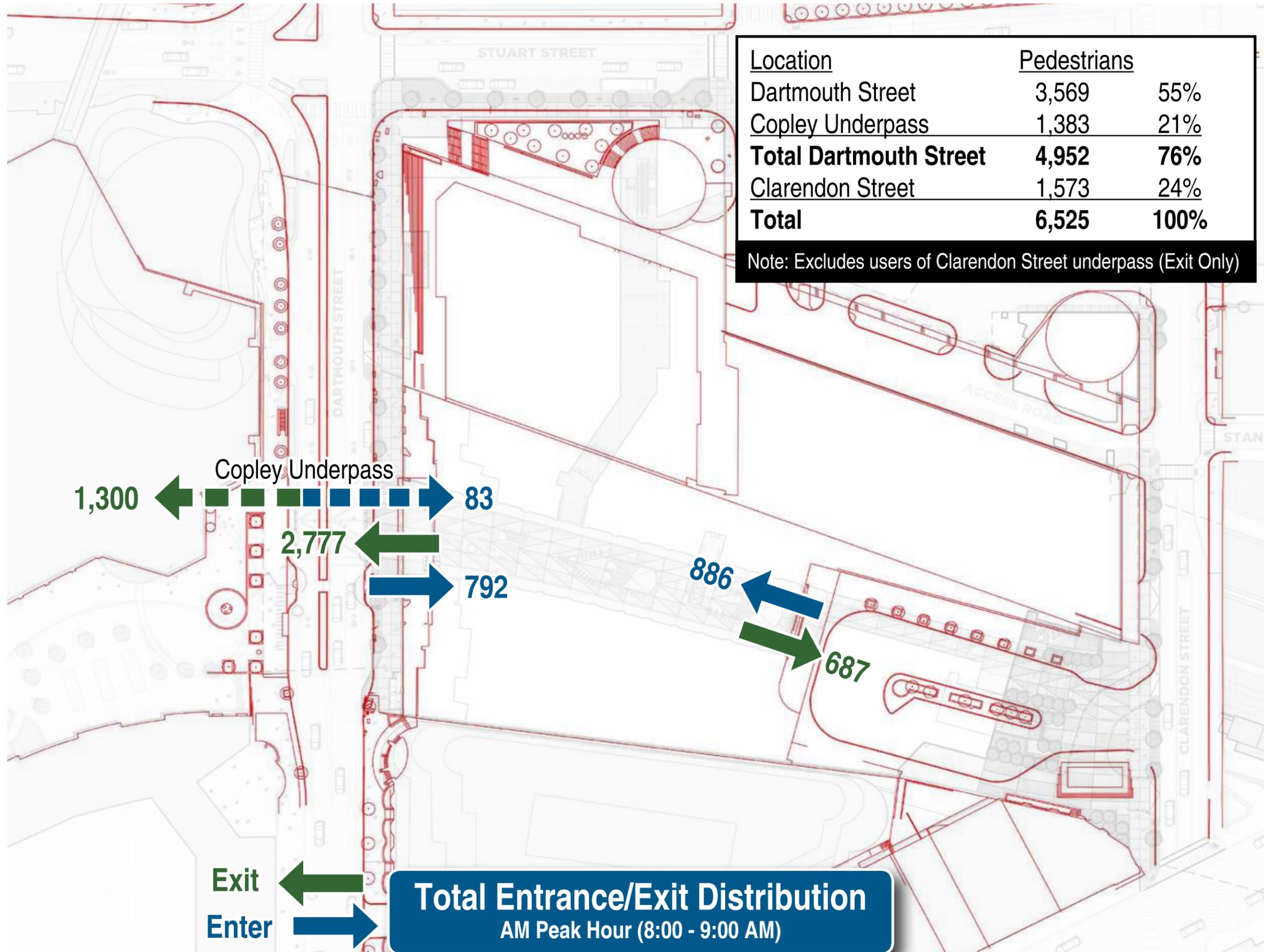
FURNISHING ZONE

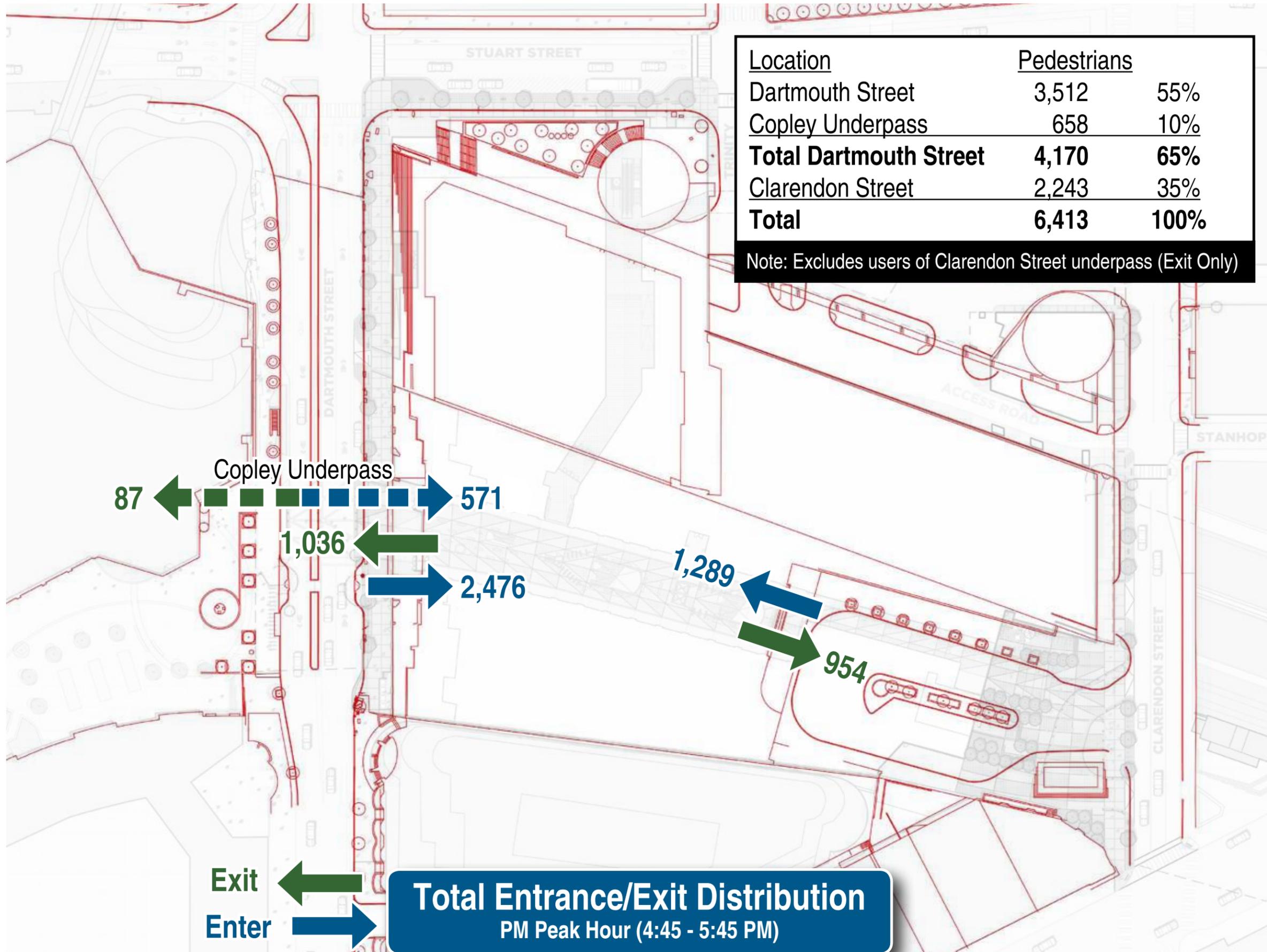


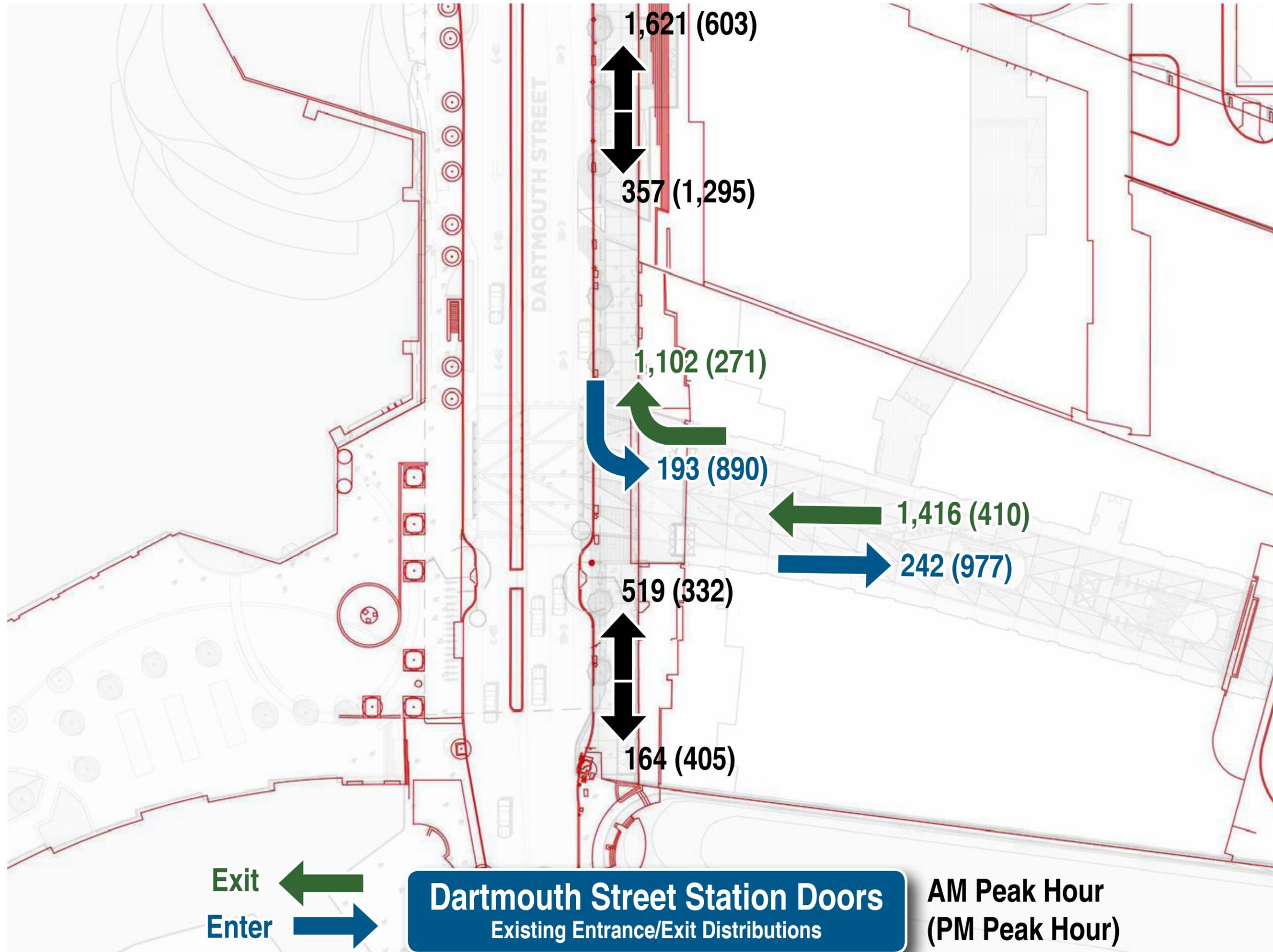
STUART STREET SECTION AT OFFICE LOBBY ENTRY



STUART STREET SECTION TYPICAL





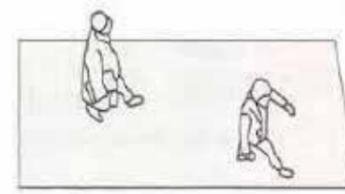


Pedestrian Level of Service

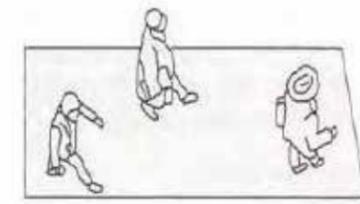
HCM 2010 Walkway LOS	Average Pedestrian Space (ft ² /ped)
A	> 60
B	40 – 60
C	24 – 40
D	15 – 24
E	8 – 15
F	≤ 8



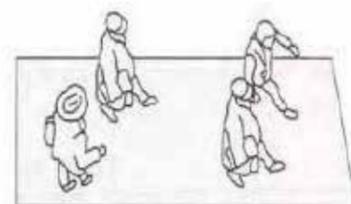
LOS A



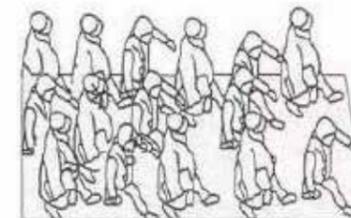
LOS B



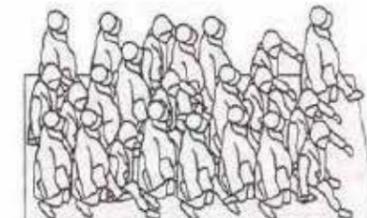
LOS C



LOS D



LOS E



LOS F

Source: FHWA, <https://www.fhwa.dot.gov/publications/research/safety/pedbike/98107/section3.cfm>

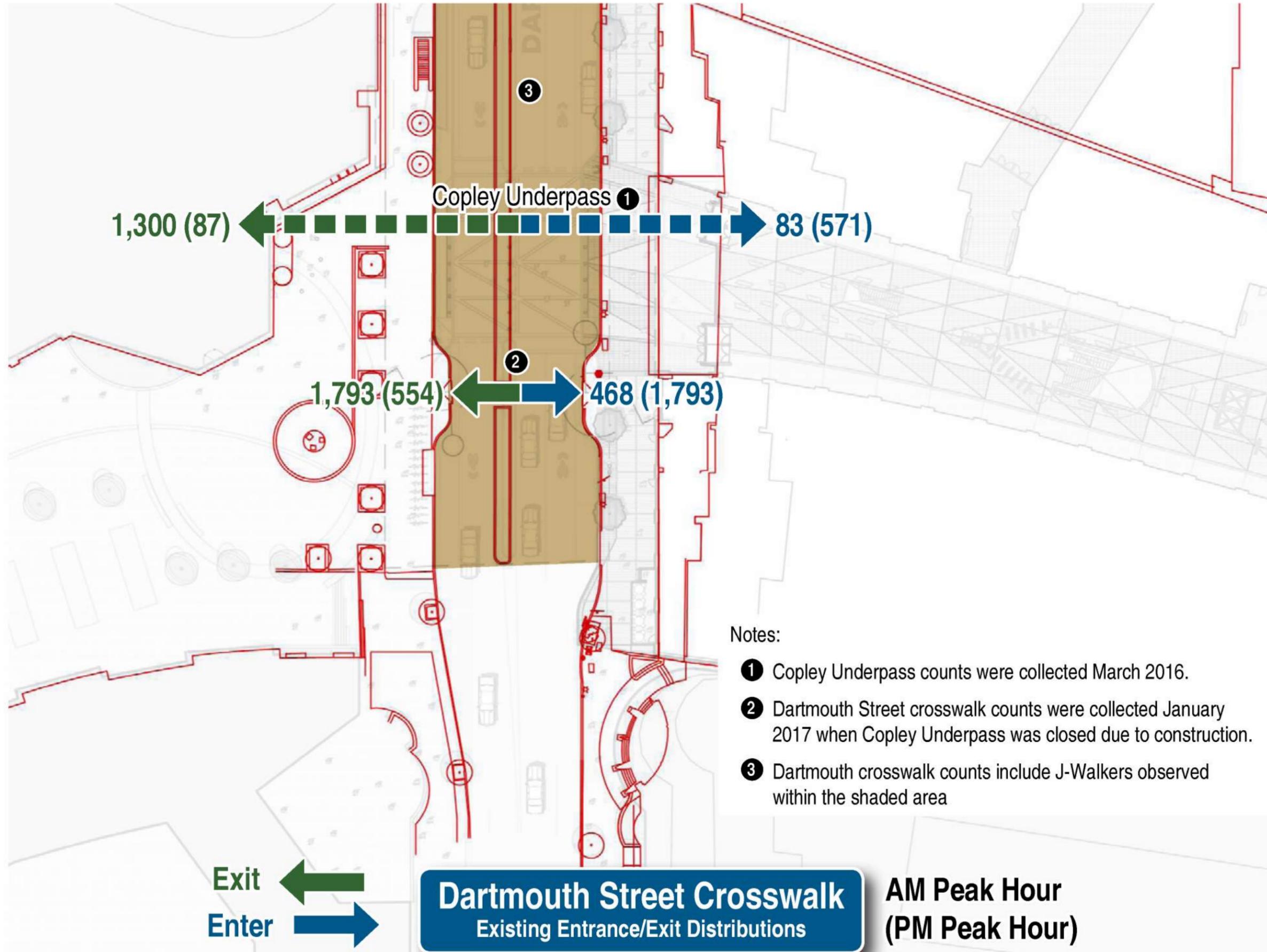
Dartmouth Street East Sidewalk (between Stuart Street and Station)

HCM 2010 Pedestrian Spacing Analysis

Interval	Existing Pedestrian Flow Rate (ped/hr)	Existing Pedestrian Spacing (ft ² /ped)	Future ¹ Pedestrian Spacing (ft ² /ped)
Peak Hour	1,978	127 (LOS A)	106 (LOS A)
Peak 15-Minute	2,280	110 (LOS A)	92 (LOS A)
Peak 5-Minute	4,520	55 (LOS B)	45 (LOS B)

¹ Future condition assumes 20% pedestrian growth

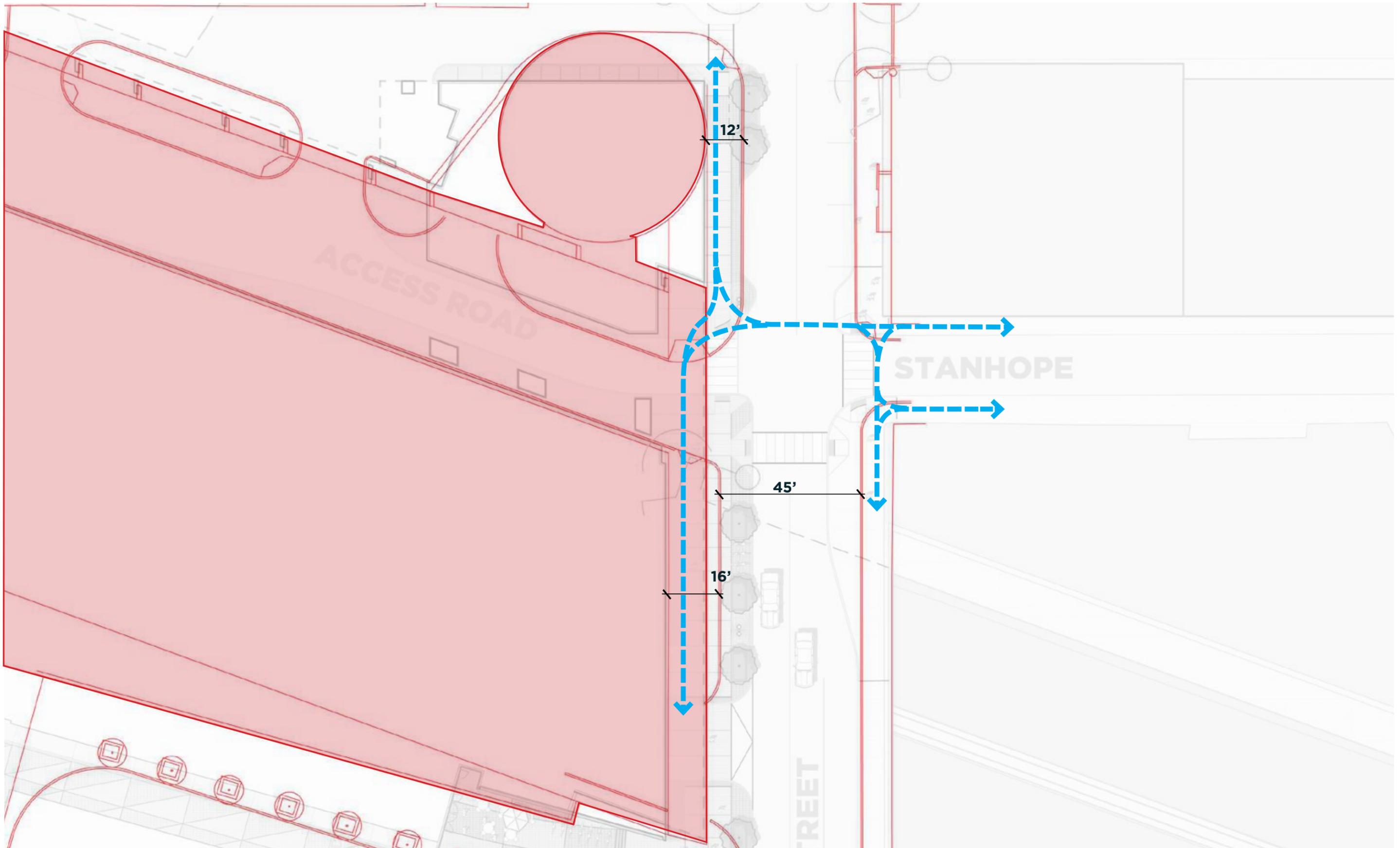
Note: AM volumes used due to higher pedestrian volumes

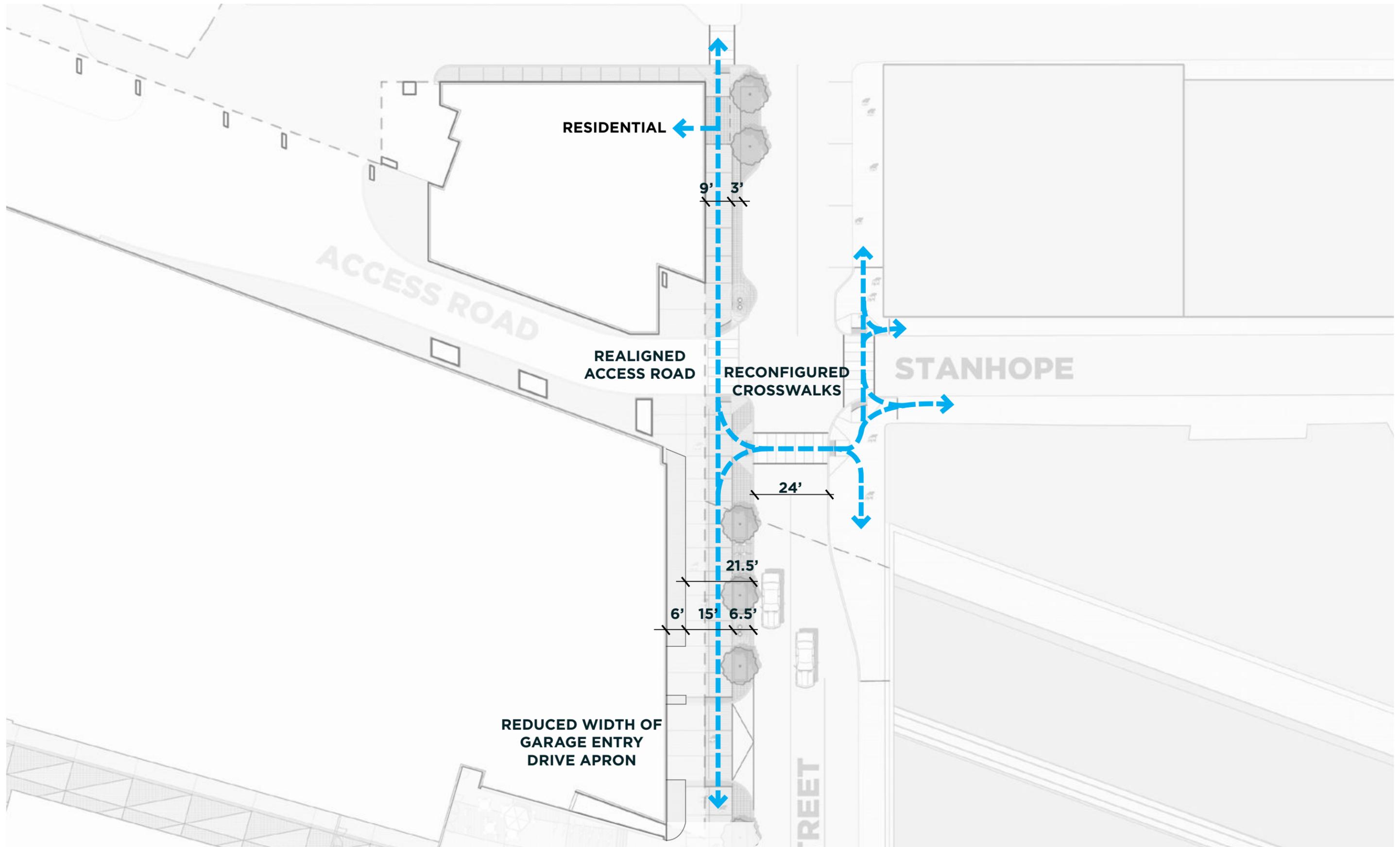


Notes:

- 1** Copley Underpass counts were collected March 2016.
- 2** Dartmouth Street crosswalk counts were collected January 2017 when Copley Underpass was closed due to construction.
- 3** Dartmouth crosswalk counts include J-Walkers observed within the shaded area

CLARENDON STREET









Wes
SUPPLY

8-4334

S • TABLE LINENS • MATS
Established since 1929

TOLL
90 WEST
MASS PIKE
→

PARKING

MASS PIKE
WEST →

AVIS





12'
PEDESTRIAN ZONE



PLANTING ZONE

6'

FURNISHING ZONE

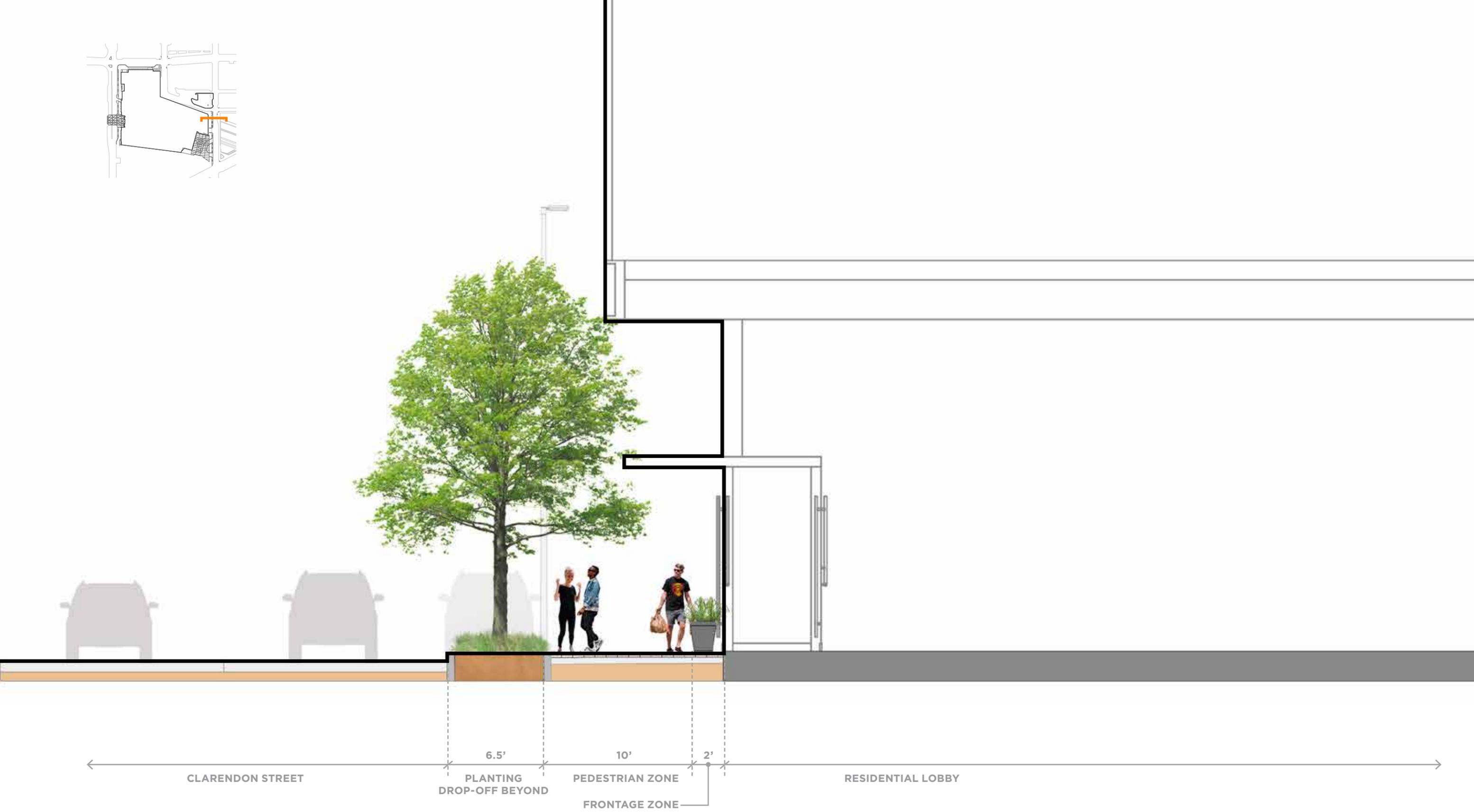
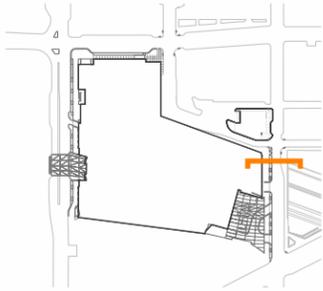
3'

PEDESTRIAN ZONE

9'

12' OVERALL

FACE OF BUILDING



CLARENDON STREET

6.5'
PLANTING
DROP-OFF BEYOND

10'
PEDESTRIAN ZONE
FRONTAGE ZONE

2'

RESIDENTIAL LOBBY

CLARENDON STREET SECTION AT RESIDENTIAL TOWER



ENTR
→
Clarendon
GARAGE

AVIS

AVIS

Clarendon Street
GARAGE

CAUTION
GARA
EXITING



ENTR
→
Clarendon
GARAGE

AVIS

AVIS
Clarendon Street
GARAGE

CAUTION
CARS
EXITING

T

16'
PEDESTRIAN ZONE



6.5'
FURNISHING
ZONE

21.5' OVERALL
15'
PEDESTRIAN ZONE

6'
PLANTING



CAUTION
CARS
EXITING

AVIS

P
ENTRANCE
←
Clarendon Street
GARAGE

Do Not Enter

DO NOT
ENTER

UNITED STATES
POSTAL SERVICE

CAUTION
CARS
EXITING

P
ENTRANCE
←
Clarendon Street
GARAGE

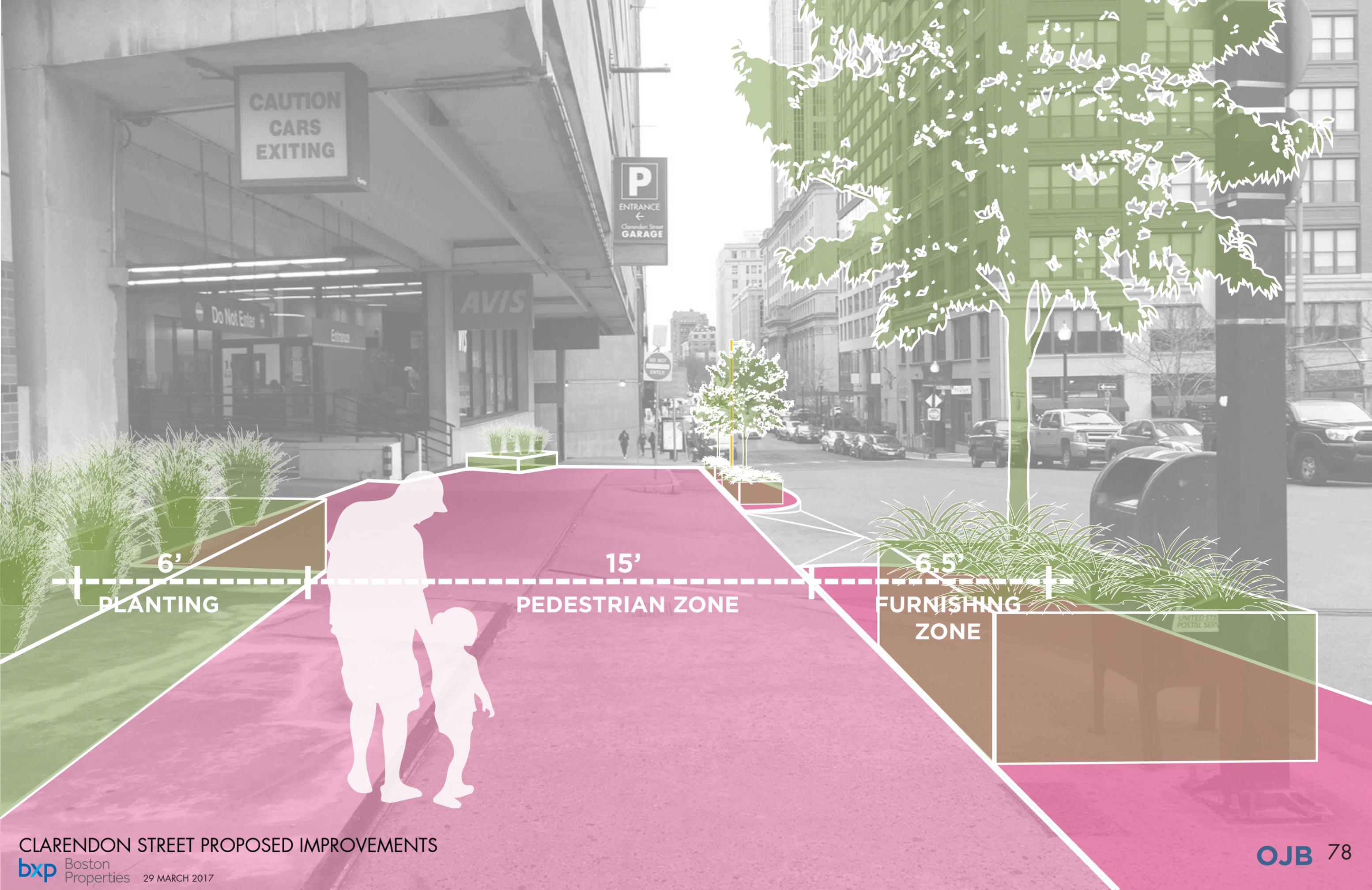
AVIS

Do Not Enter

Entrance

DO NOT
ENTER

12'
PEDESTRIAN ZONE



CAUTION
CARS
EXITING

P
ENTRANCE
←
Clarendon Street
GARAGE

AVIS

Do Not Enter

Entrance

6'

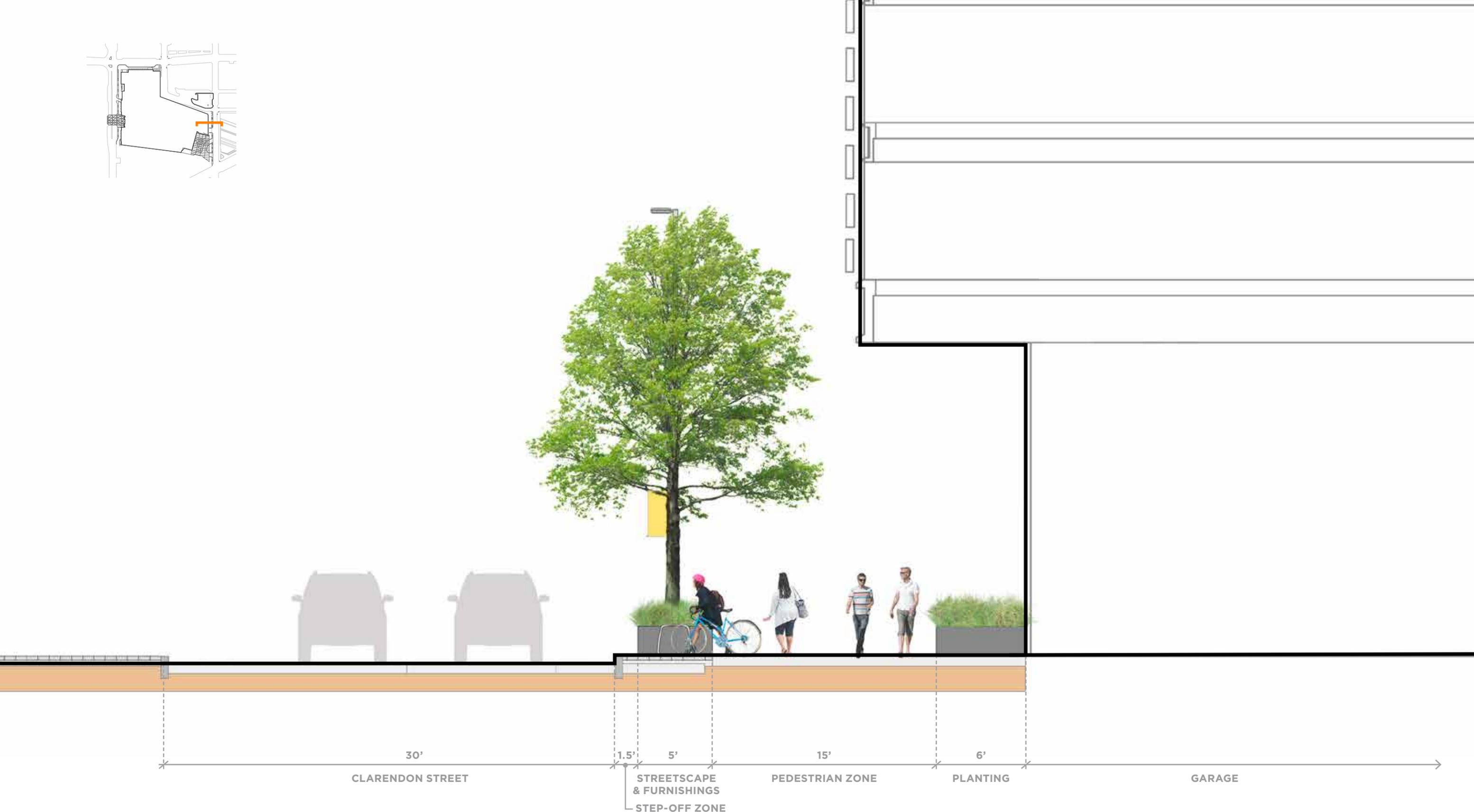
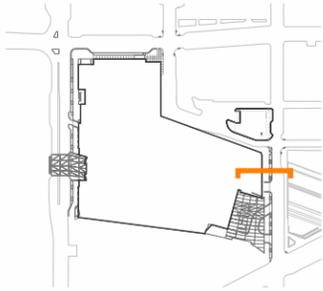
PLANTING

15'

PEDESTRIAN ZONE

6.5'

FURNISHING
ZONE



30'
CLARENDON STREET

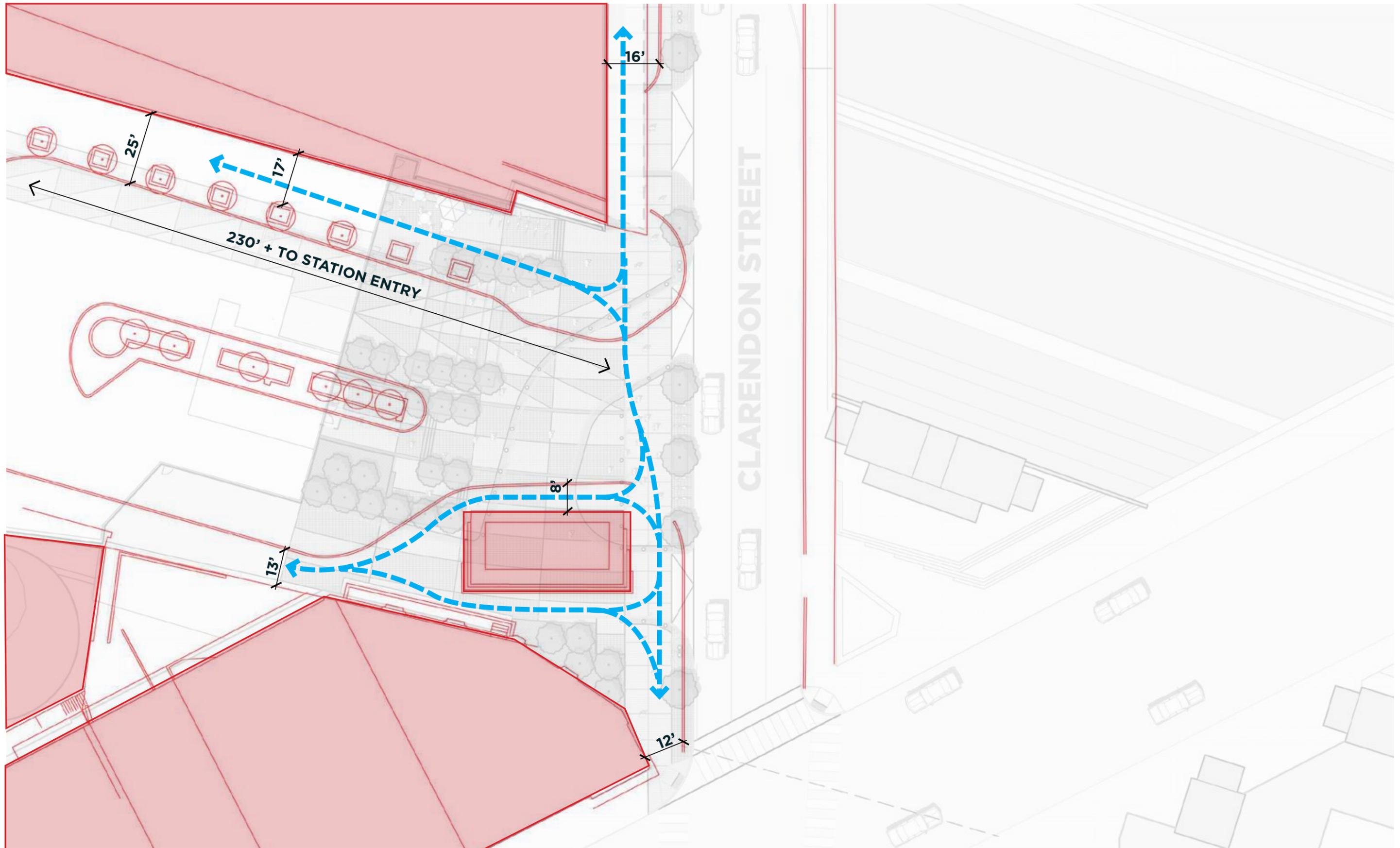
1.5'
5'
STREETSCAPE
& FURNISHINGS
STEP-OFF ZONE

15'
PEDESTRIAN ZONE

6'
PLANTING

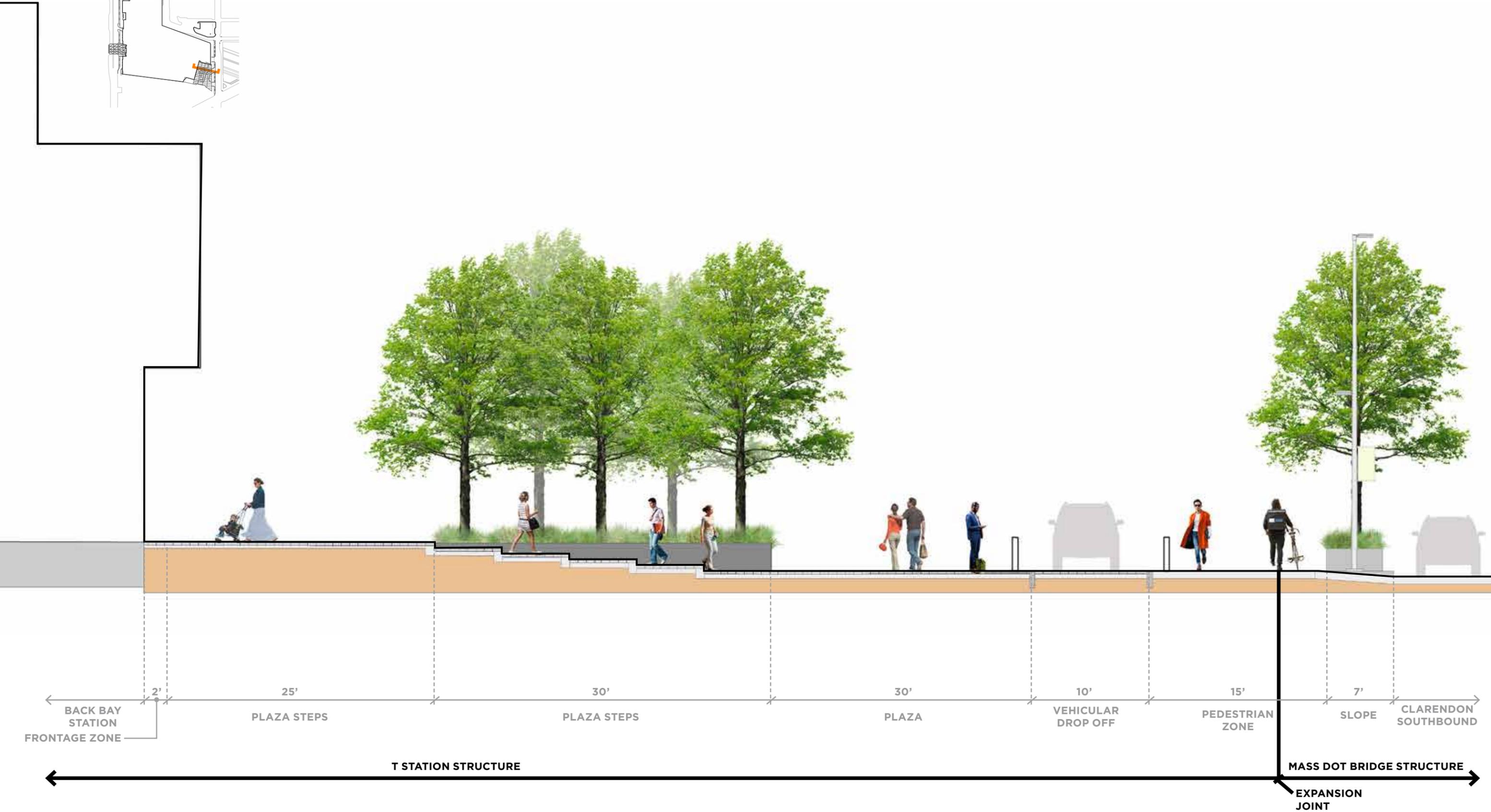
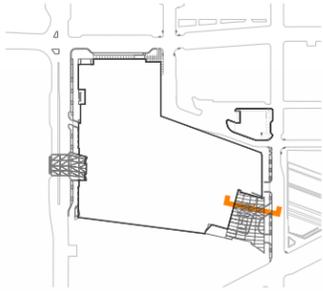
GARAGE

CLARENDON STREET SECTION AT GARAGE





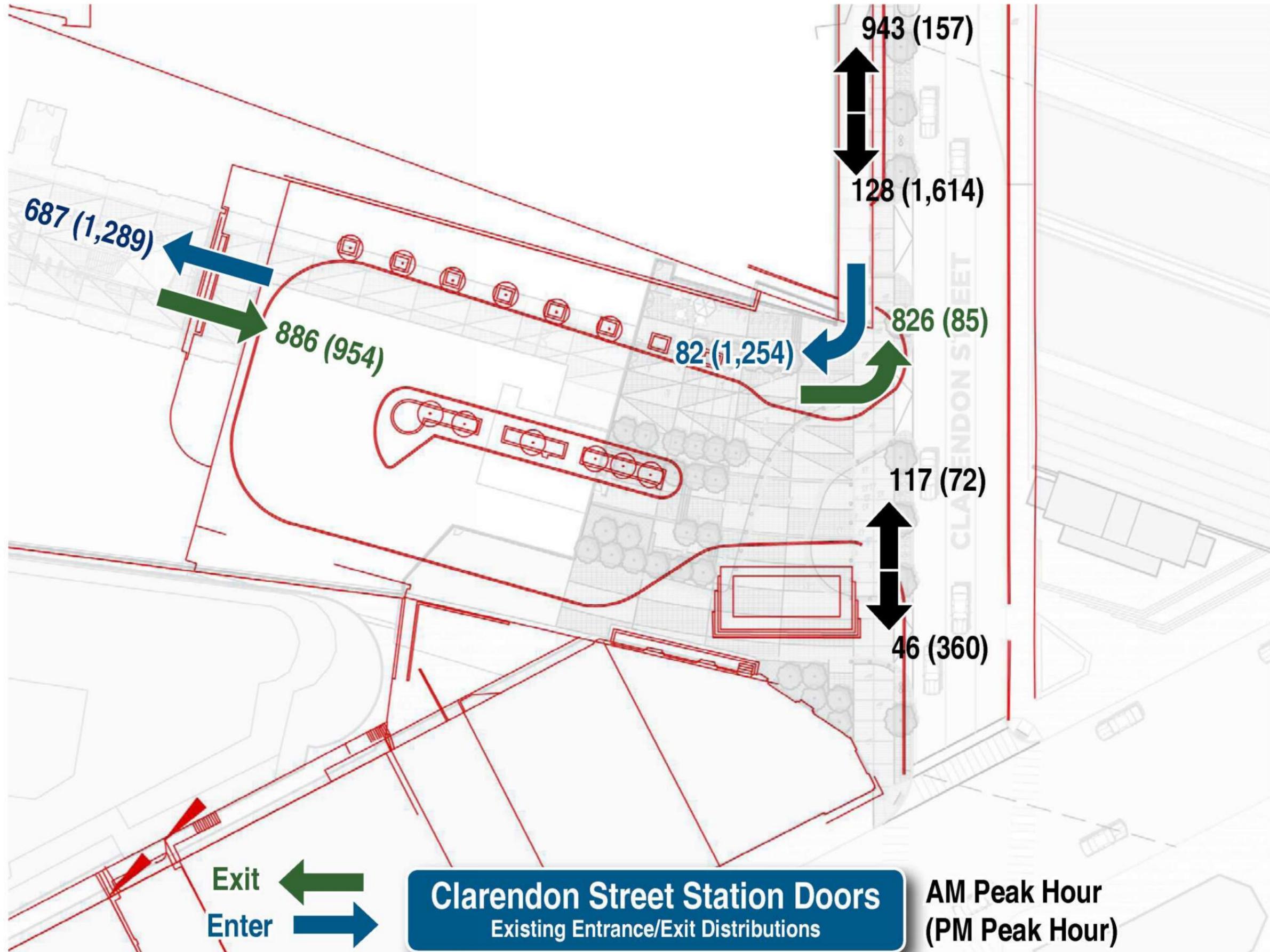




CLARENDON COURT SECTION

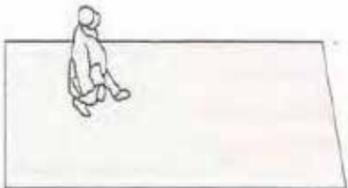






Pedestrian Level of Service

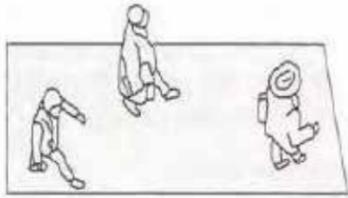
HCM 2010 Walkway LOS	Average Pedestrian Space (ft ² /ped)
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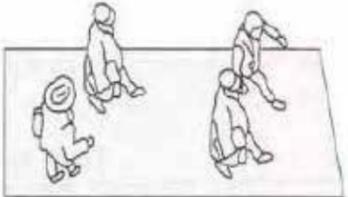
LOS A



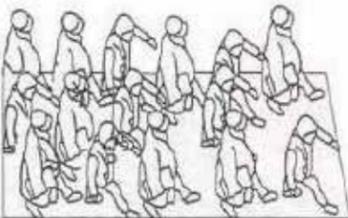
LOS B



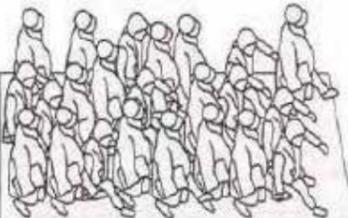
LOS C



LOS D



LOS E



LOS F

Source: FHWA, <https://www.fhwa.dot.gov/publications/research/safety/pedbike/98107/section3.cfm>

Clarendon Street West Sidewalk (between Station and Stanhope)

HCM 2010 Pedestrian Spacing Analysis

Interval	Existing Pedestrian Flow Rate (ped/hr)	Existing Pedestrian Spacing (ft ² /ped)	Future ¹ Pedestrian Spacing (ft ² /ped)
Peak Hour	1,771	85 (LOS A)	74 (LOS A)
Peak 15-Minute	2,192	68 (LOS A)	60 (LOS A)
Peak 5-Minute	4,384	33 (LOS C)	29 (LOS C)

¹ Future condition assumes 20% pedestrian growth

Note: PM volumes used due to higher pedestrian volumes

NEXT STEPS + CONTACT INFORMATION

- Public Meeting • April 04, 2017
- CAC #11 • April 06, 2017
- BCDC Subcommittee Meeting • April 11, 2017 *(Tentative)*
- MEPA DEIR Comment Period Closes • ~~March 10~~ April 18, 2017
- BPDA DPIR Comment Period Closes • April 18, 2017

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Michael.Rooney@boston.gov • 617.918.4237



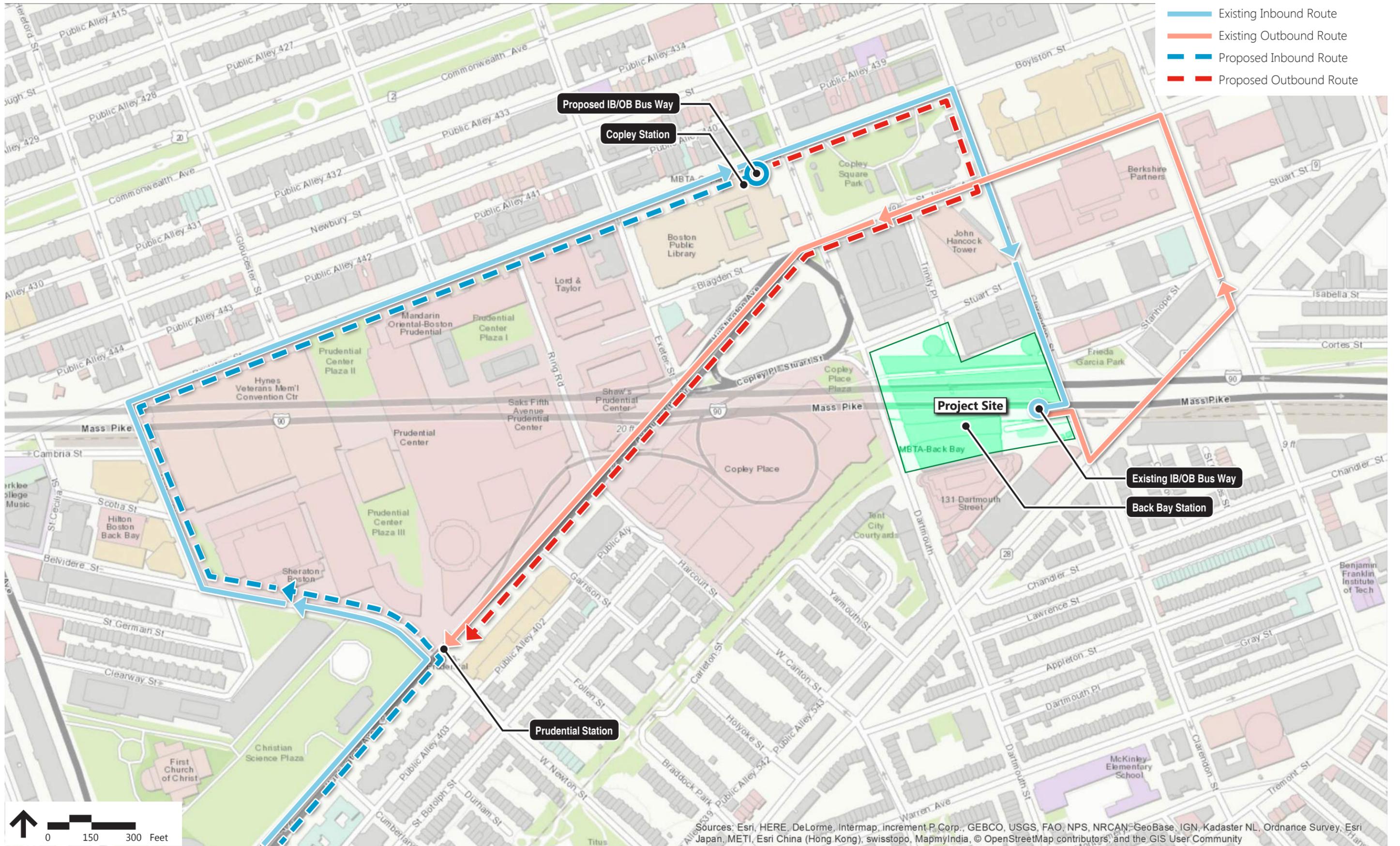
Q&A



THANK YOU!

APPENDIX





Source: Preferred Option provided by Peter Paravalos of the MBTA via email to Melissa Schrock on September 30, 2016

BUS 39 RE-ROUTING

- Preferred Re-Routing Offers The Largest Travel Time Savings
- Will Improve Headways, Reduce Passenger Wait Time, And Increase Ridership
- Considered Holistically With Other Transit Improvements Delivered With Station East Parcel
 - New Station Entrance and Plaza on Clarendon Street
 - New Stair And Elevator To Orange Line
 - Potential New Elevators To Commuter Rail
 - Bus Shelter Improvements