

Pelli Clarke Pelli Architects

ARROWSTREET



THE OFFICE OF JAMES BURNET

















ARUP











AGENDA

- Review Of Article 80 Process And Project Status (5 Min.)
- Project Design & Refinements Since PNF/ENF (15 Min.)
- Public Realm Improvements (15 Min.)
- Wind And Shadow (15 Min.)
- Transportation And Parking (15 Min.)
- Public Comment (20 Min.)
- Next Steps (5 Min.)

PROJECT PROCESS

- Article 80 Review
 - PNF
 - DPIR (Draft Project Impact Report)
 - FPIR (Final Project Impact Report) Or Supplemental Information As Requested
- MEPA Review (Concurrent)
 - ENF
 - DEIR (Draft Environmental Impact Report)
 - FEIR (Final Environmental Impact Report)
- PDA #2 (Planned Development Area)
 - Existing PDA Encompasses Garage Sites + Existing Building
 - Will Be Amended To Include Station Sites + Related Elements

PROJECT STATUS

- Key Dates
 - PNF Filing
 March 29, 2016
 - ENF Filing April 15, 2016
 - CAC #1 April 28, 2016
 - CAC #2 May 12, 2016 (Site Visit)
 - CAC #3 May 26, 2016
 - CAC #4 June 15, 2016
 - CAC #5 June 29, 2016
 - CAC #6 July 13, 2016
 - CAC #7 October 6, 2016
 - DPIR/DEIR Filing
 January
 31, 2017
 - CAC #8 February 23, 2017
 - Public Meeting
 March 01, 2017

COMMUNITY/AGENCY FEEDBACK

- 85 Comment Letters Received
- Over 1,100 Individual Comments
- Desire For Public Open Space
- Desire To Preserve Architectural Integrity Of Back Bay Station
- Desire To See More Detail On Public Realm Design

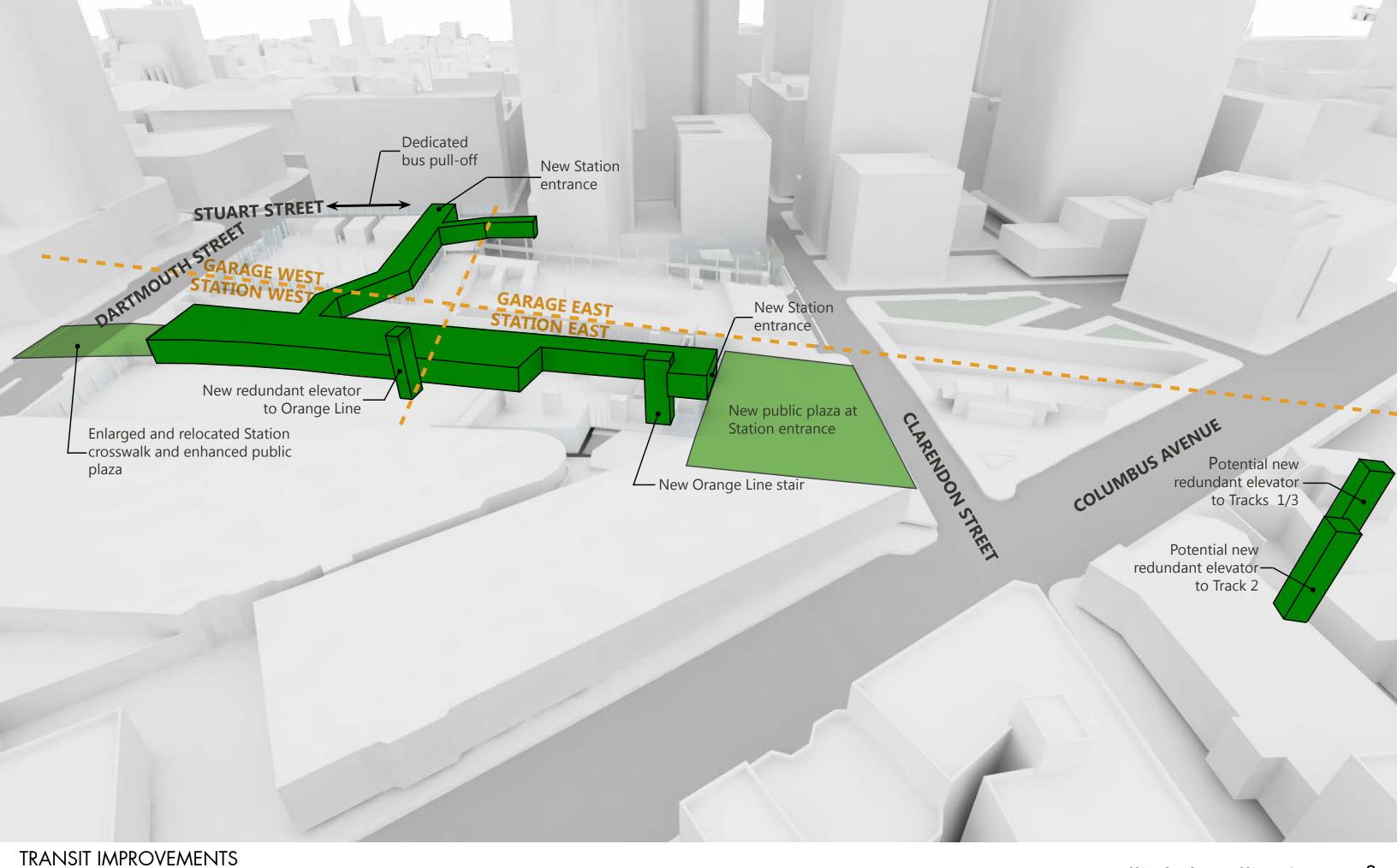
PROJECT DESCRIPTION



PUBLIC BENEFITS

- 2 New Civic-Scale Station Entrances And Accessible Public Through-Block Connectors from Stuart and Clarendon Streets, Increasing Neighborhood Connectivity And Public Safety
- Significant Public Realm Improvements Within The Project Site Including The Creation Of An 11,000sf Public Plaza On Clarendon Street
- A Redundant Elevator To The Orange Line and Redundant Elevators to Commuter Rail,
 Where Feasible
- Approximately \$15.3 Million In New Annual Real Estate Tax Revenues For The City Of Boston
- Approximately \$5,500,000 In Housing Linkage And \$1,100,000 In Job Linkage Payments
- Approximately 2,500 Construction Jobs And Approximately 3,200 Permanent Jobs Across All Four Air Rights Parcel
- A Variety Of New High Quality Housing Opportunities, Including The Creation Of Affordable Housing
- New And Diverse Retail Opportunities For Neighborhood Residents, Transit Customers And The Public At Large
- Innovative New Workplace Opportunities For A Variety Of Business Types





FEEDBACK BASED ON PROJECT EVOLUTION

- 85 Comment Letters Received
- Over 1,100 Individual Comments
- Desire For Public Open Space
- Desire To Preserve Architectural Integrity Of Back Bay Station
- Desire To See More Detail On Public Realm Design
- Station East
 - Addition Of 11,000sf Public Plaza
- Station West
 - Abandoned Two-Story Addition
- Site Wide
 - Detailed Development & Phasing Of Public Realm Improvements



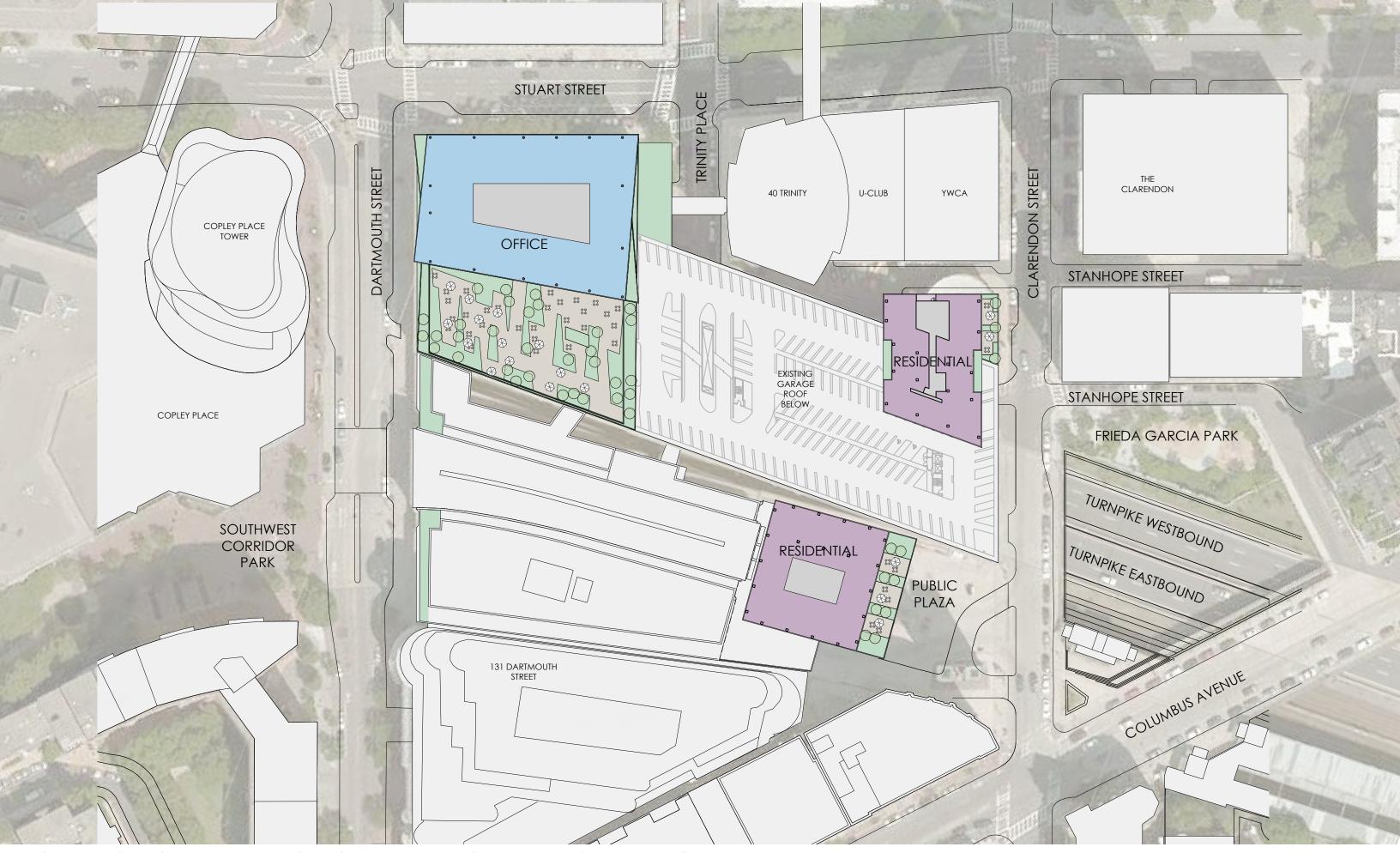
VIEW 7 - AERIAL LOOKING TO THE NORTHEAST - FUTURE EXISTING CONDITION



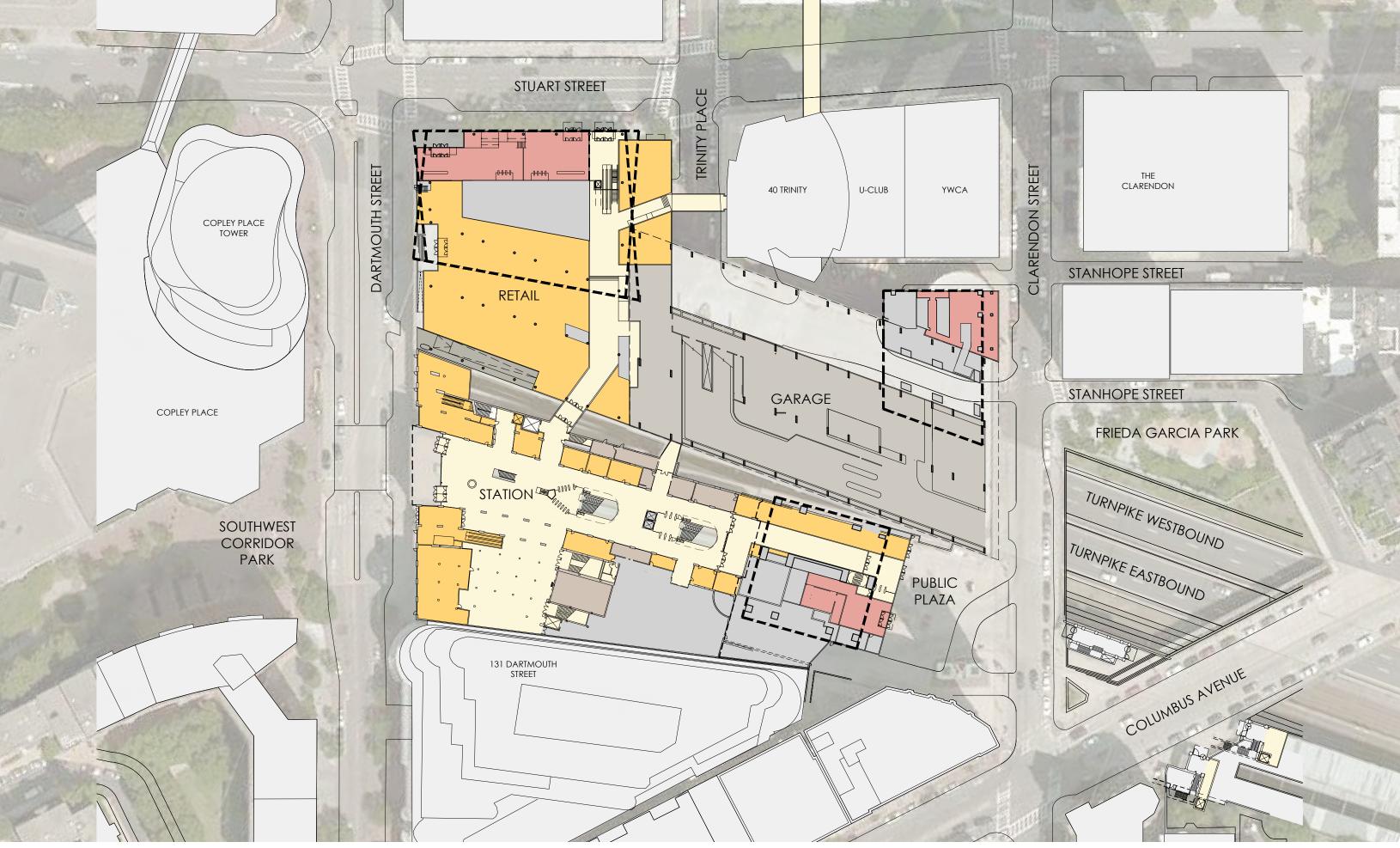
VIEW 7 - AERIAL LOOKING TO THE NORTHEAST - FUTURE PROPOSED BASE SCHEME



VIEW 7 - AERIAL LOOKING TO THE NORTHEAST - FUTURE PROPOSED ALTERNATE SCHEME Boston
Properties 01 MARCH 2017



GW: TYPICAL PLAN • GE: TYPICAL PLAN • SE: TYPICAL LEVEL • SW: ROOF PLAN Boston
Properties 01 MARCH 2017

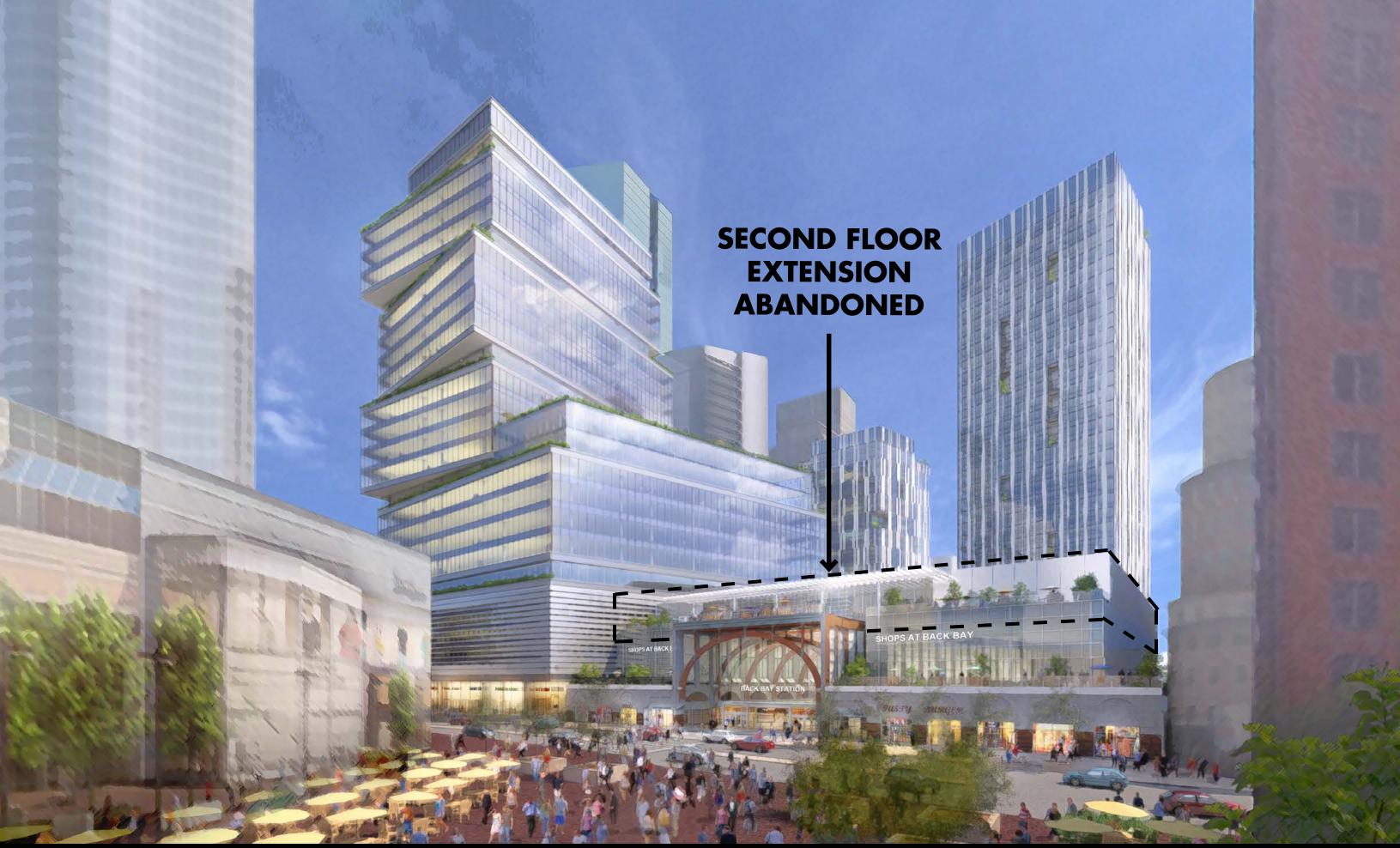


GW: BASE SCHEME DECK LEVEL • GE: LEVEL 2 • SE: CONCOURSE LEVEL • SW: CONCOURSE LEVEL



VIEW FROM SOUTHWEST CORRIDOR - EXISTING CONDITIONS

Boston
Properties 01 MARCH 2017





VIEW FROM SOUTHWEST CORRIDOR - BASE SCHEME

Boston
Properties 01 MARCH 2017



VIEW FROM SOUTHWEST CORRIDOR - ALTERNATE SCHEME

Boston
Properties 01 MARCH 2017



VIEW FROM DARTMOUTH STREET AND STUART STREET - EXISTING CONDITION

Boston
Properties 01 MARCH 2017



VIEW FROM STUART AND DARTMOUTH STREET - PROPOSED CONDITION

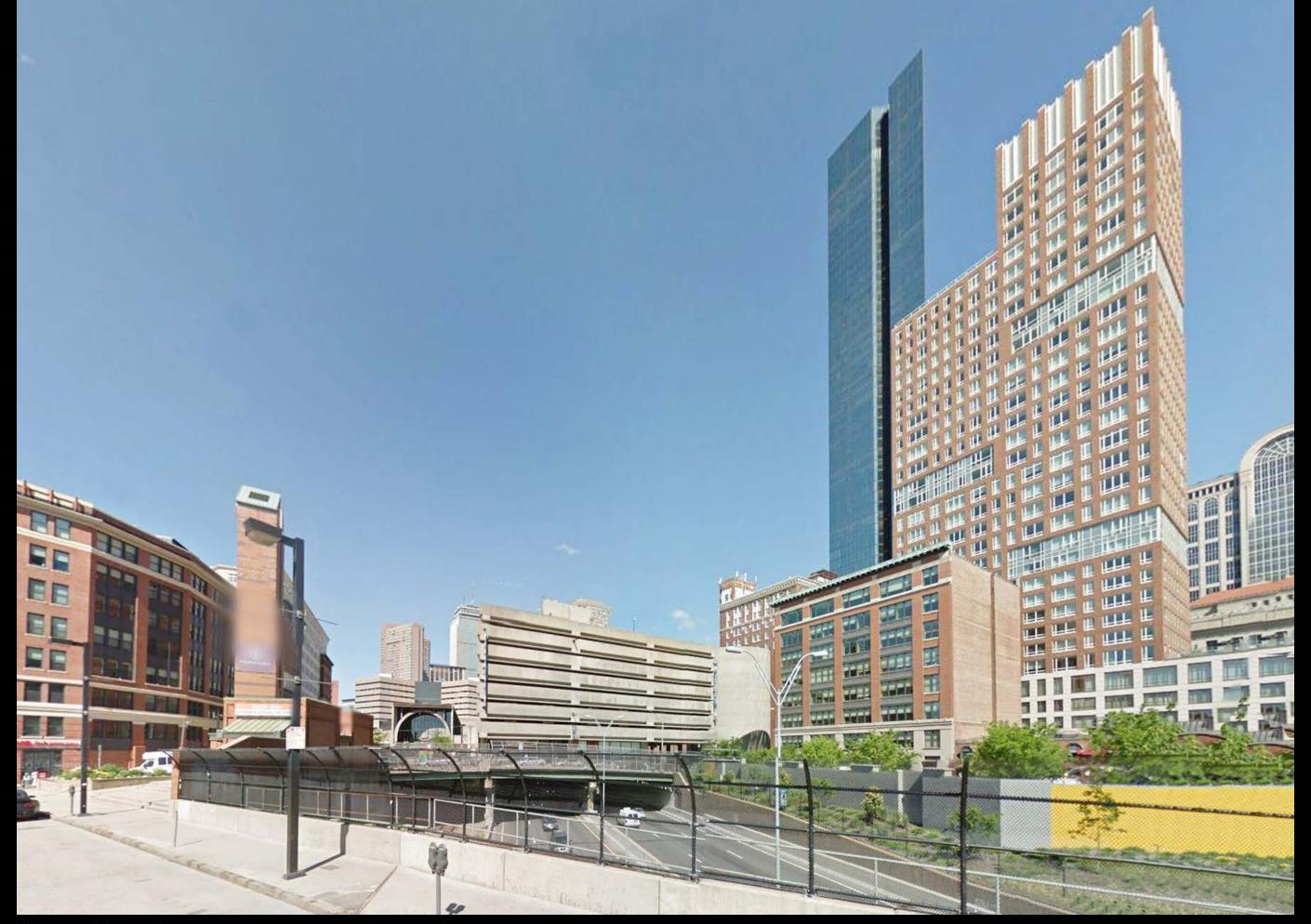
Boston
Properties 01 MARCH 2017



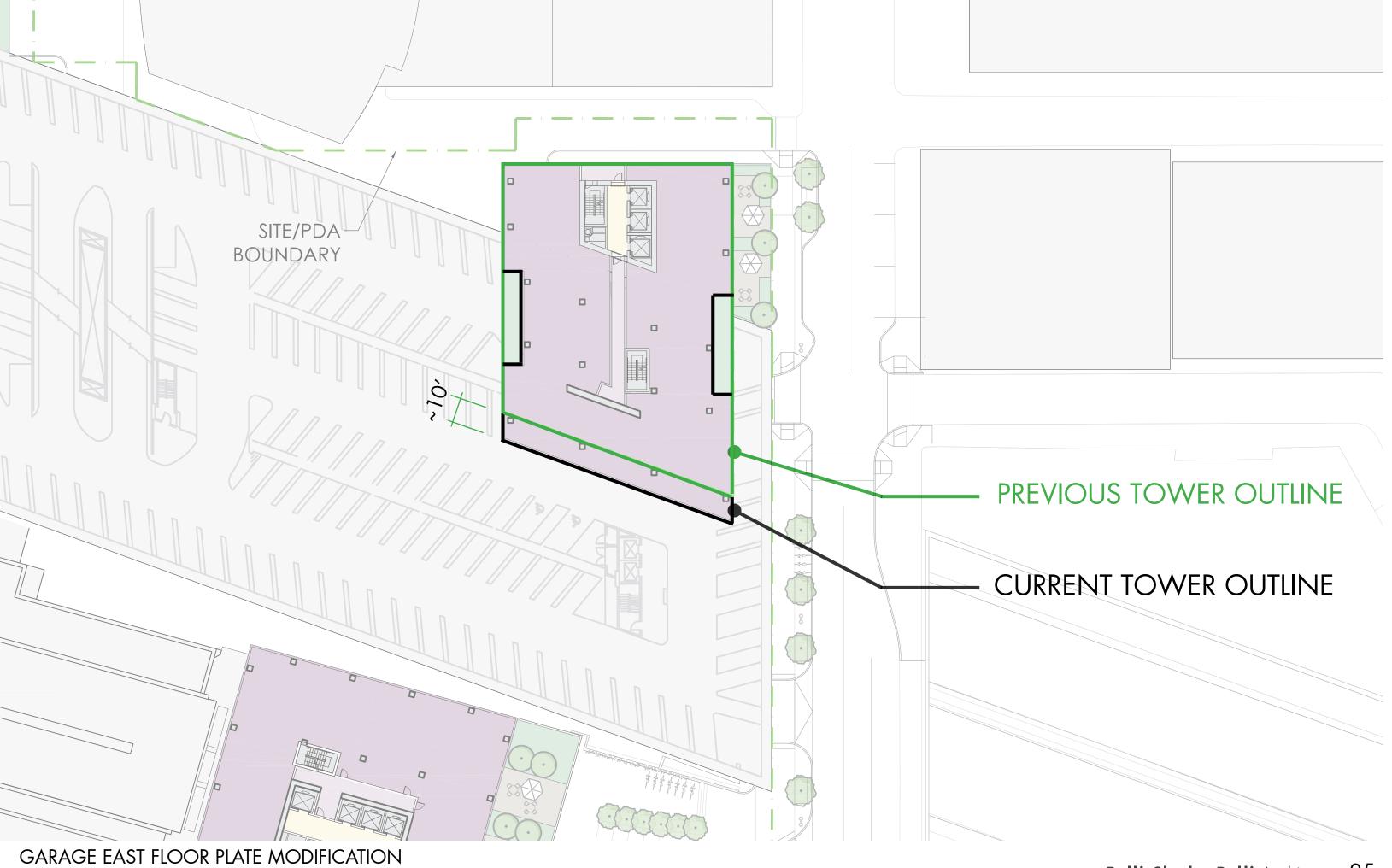


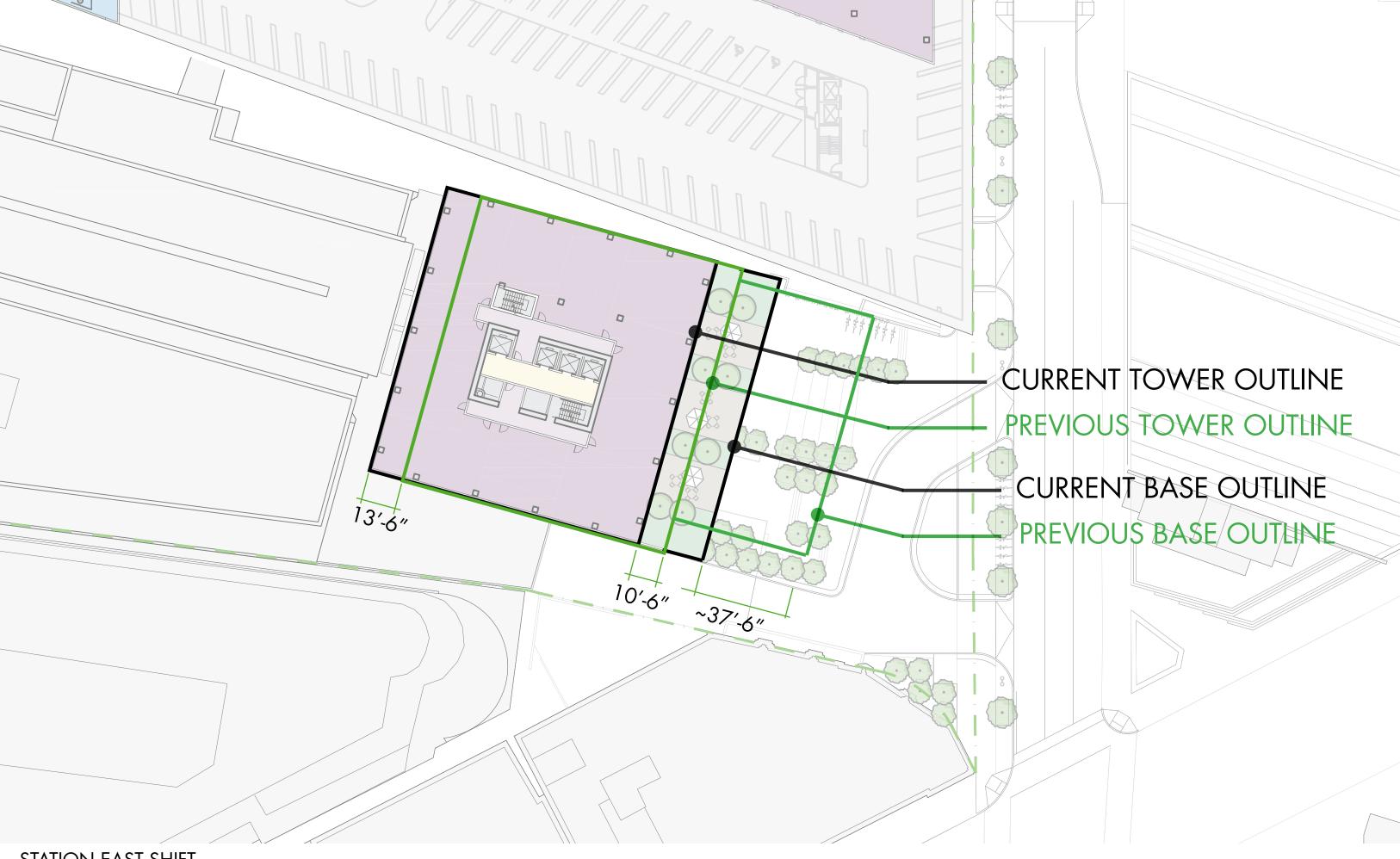
VIEW FROM STUART STREET AND TRINITY PLACE - PROJECT RENDERING

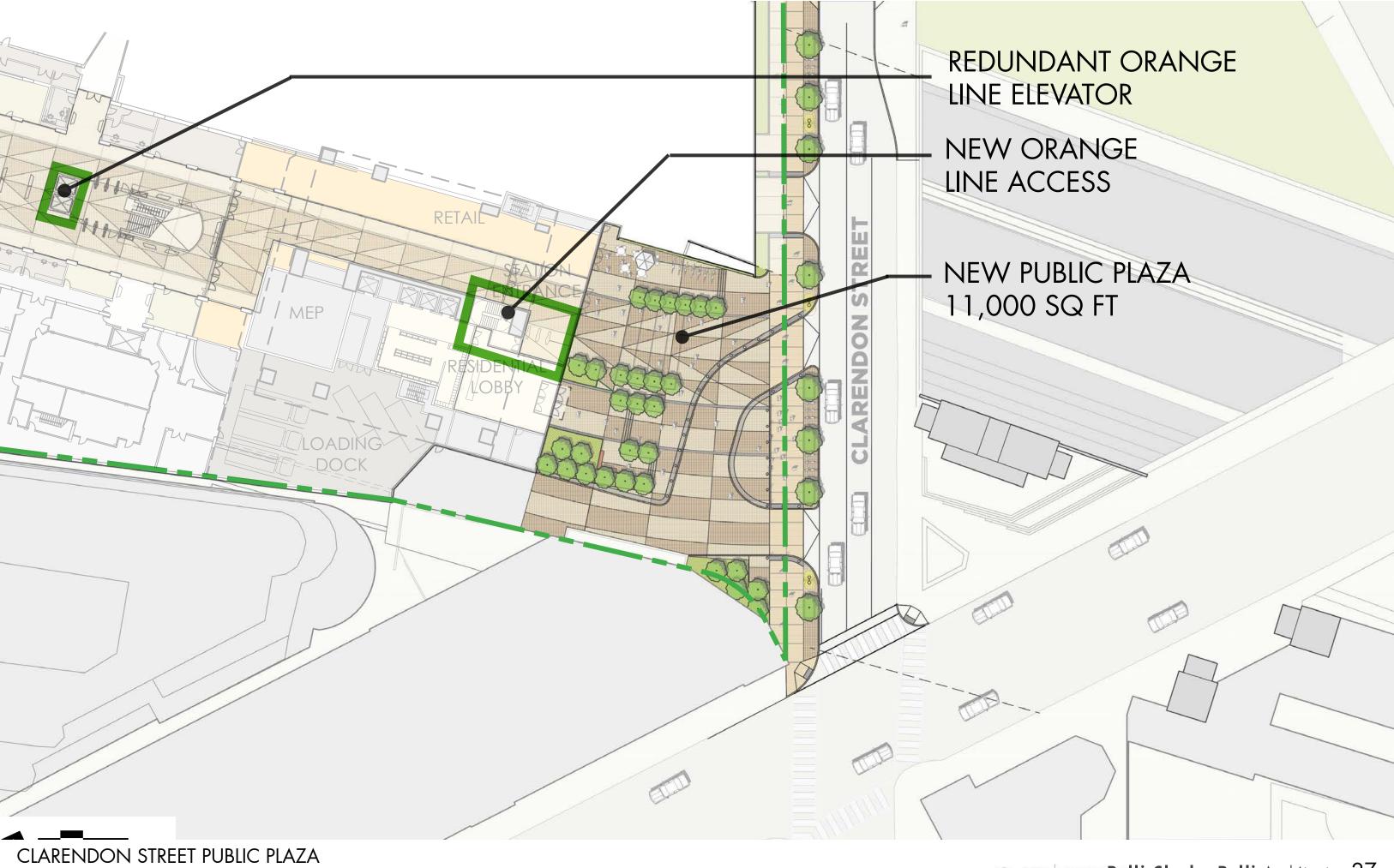
Boston
Properties 01 MARCH 2017

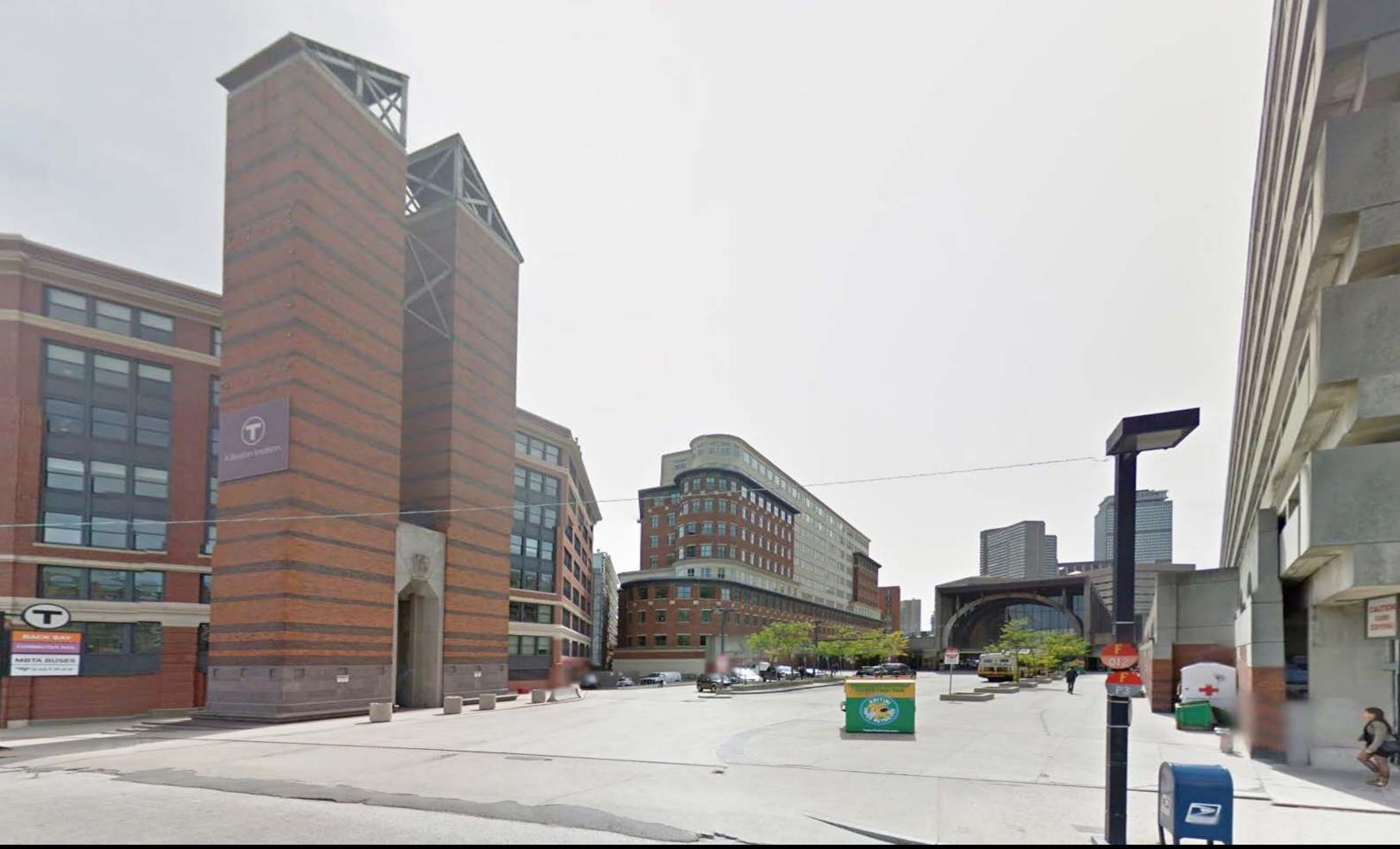




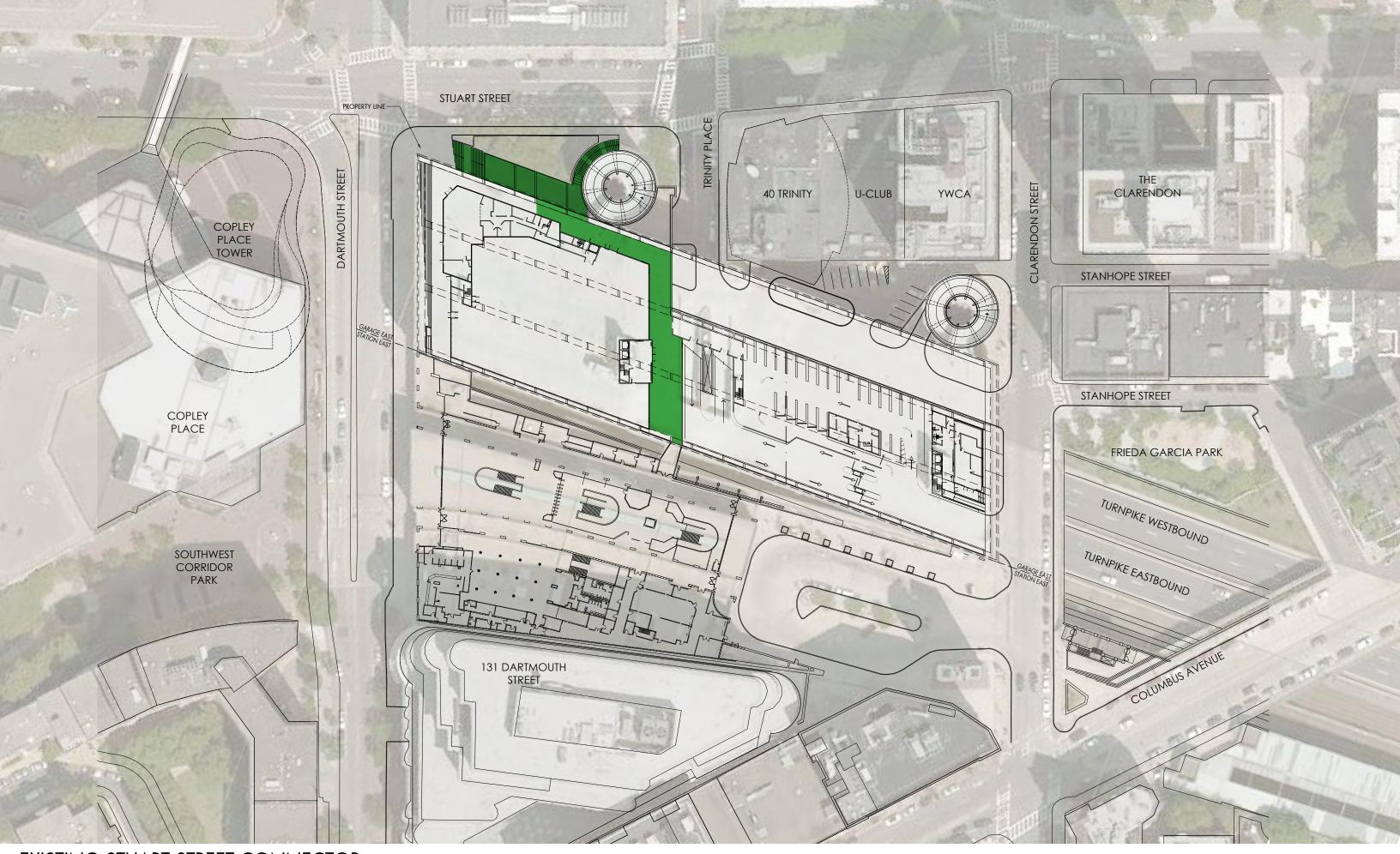


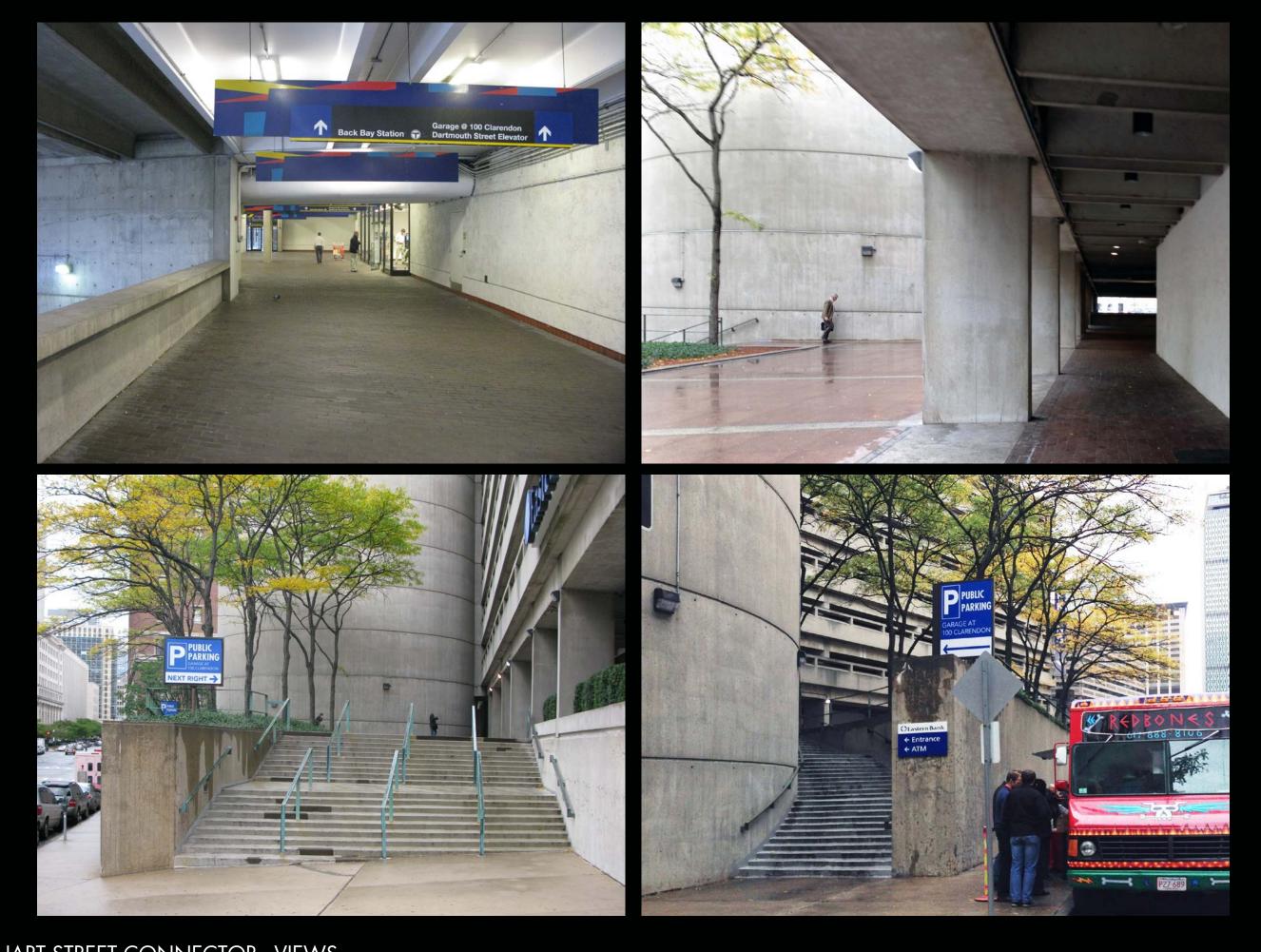


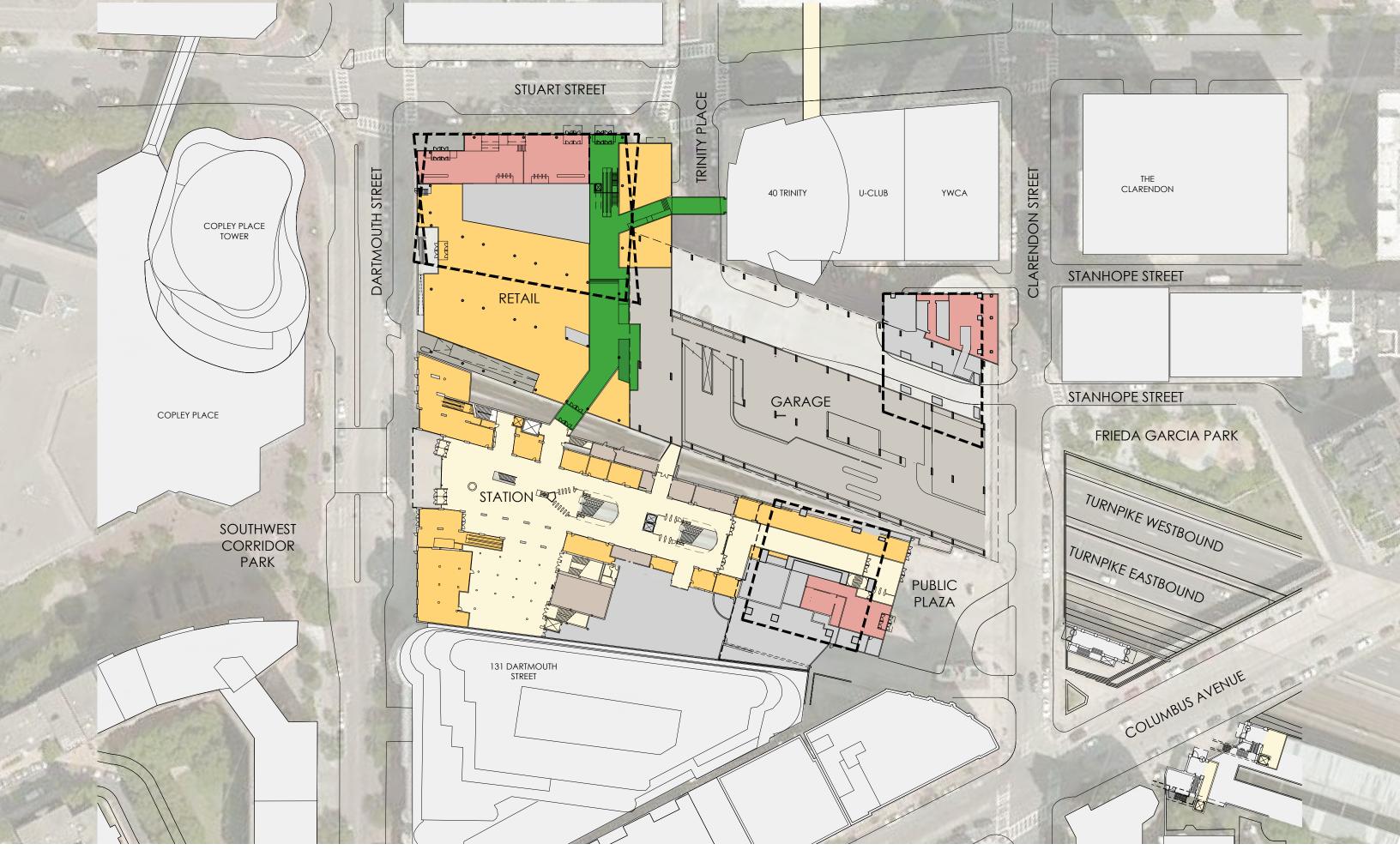










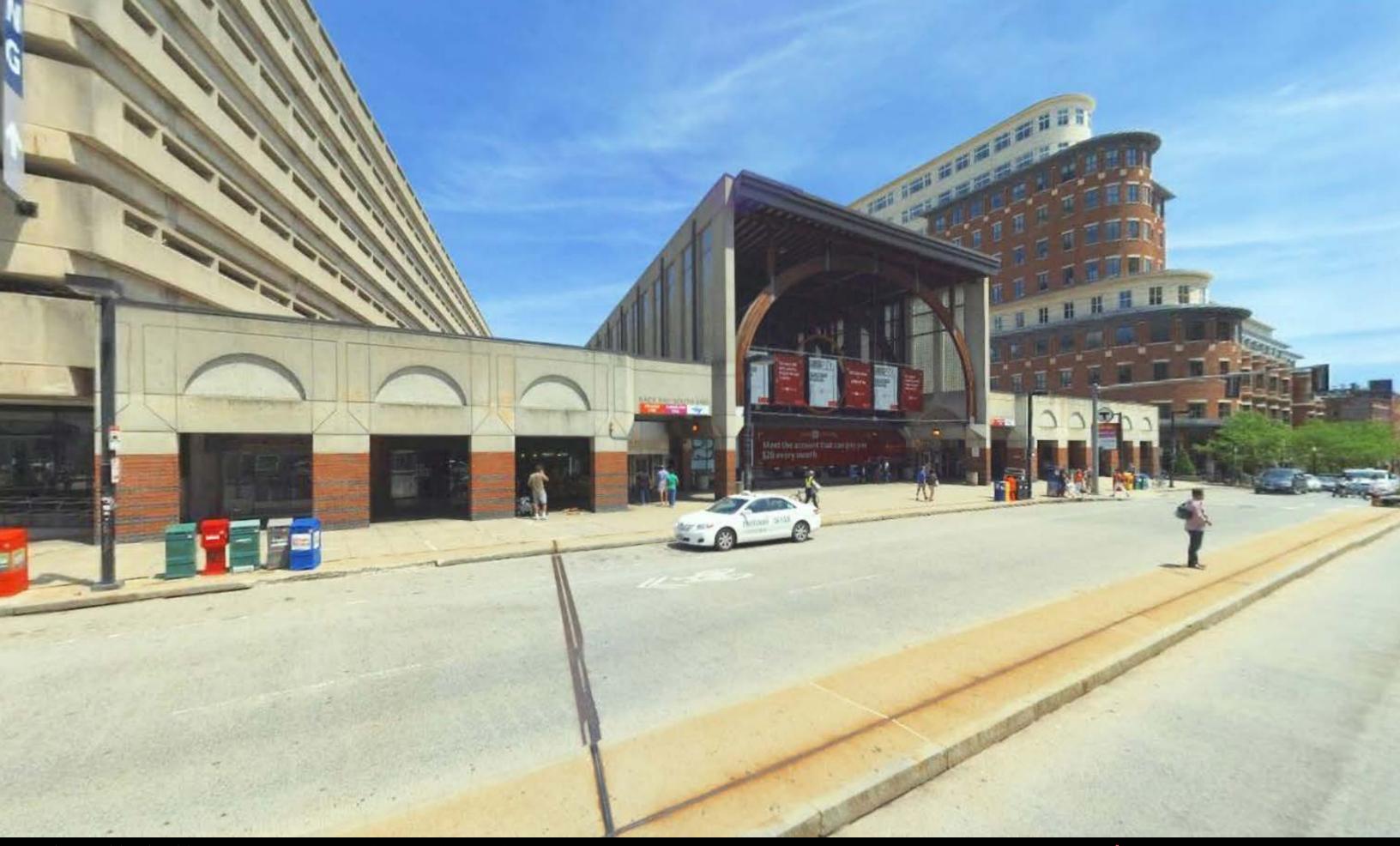


GW: BASE SCHEME DECK LEVEL • GE: LEVEL 2 • SE: CONCOURSE LEVEL • SW: CONCOURSE LEVEL



VIEW OF STUART STREET CONNECTOR - PROJECT RENDERING

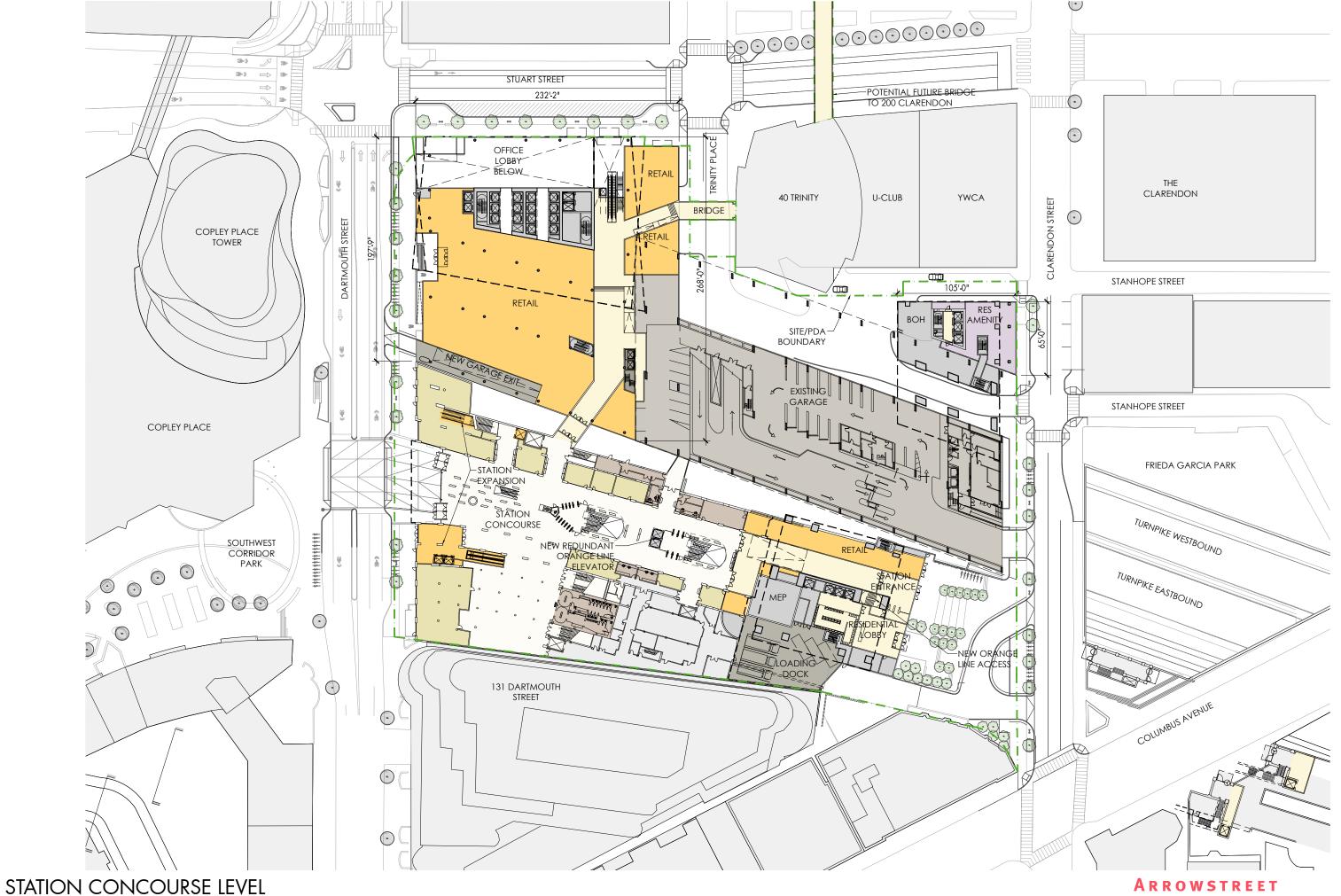
Boston
Properties 01 MARCH 2017

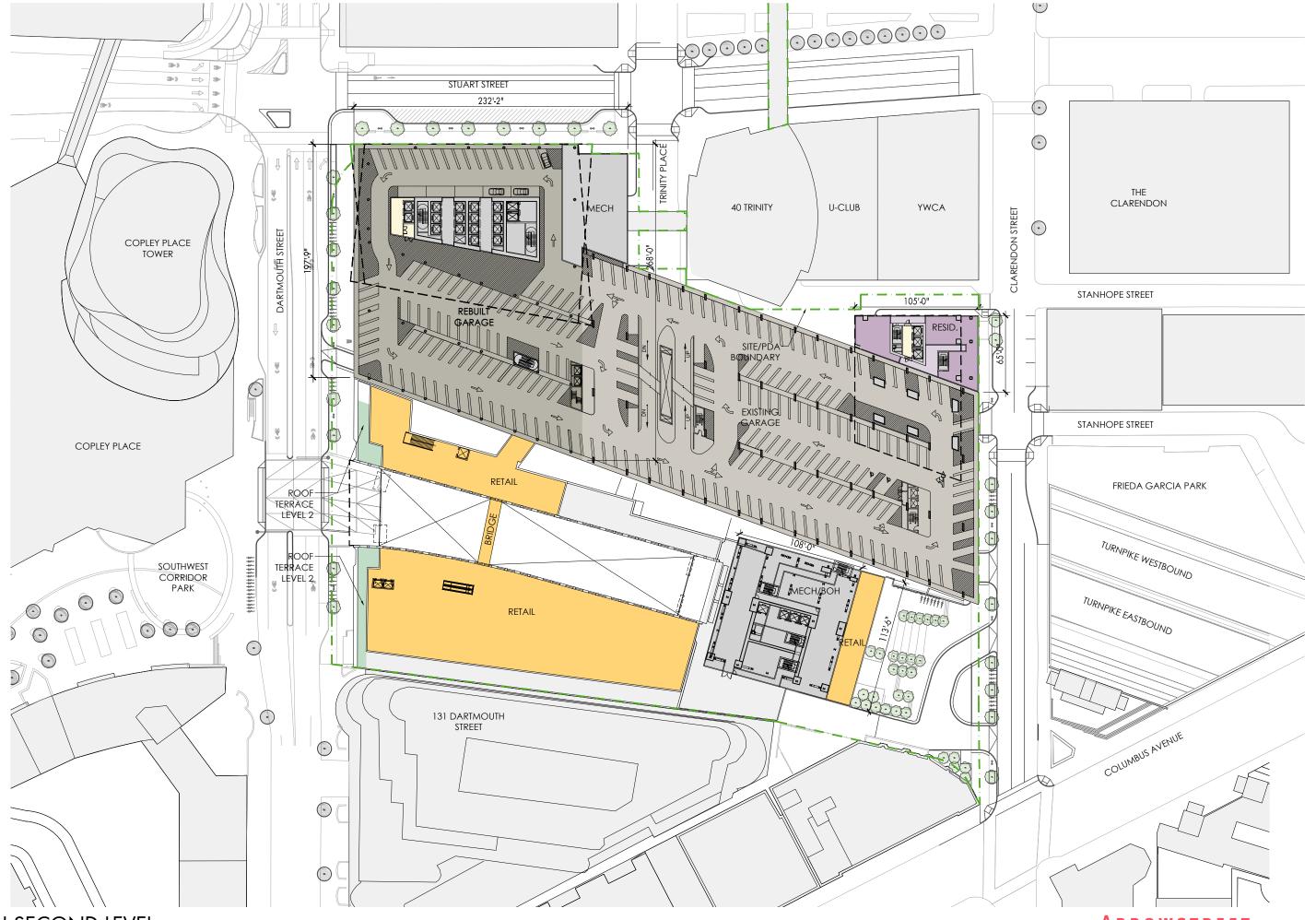


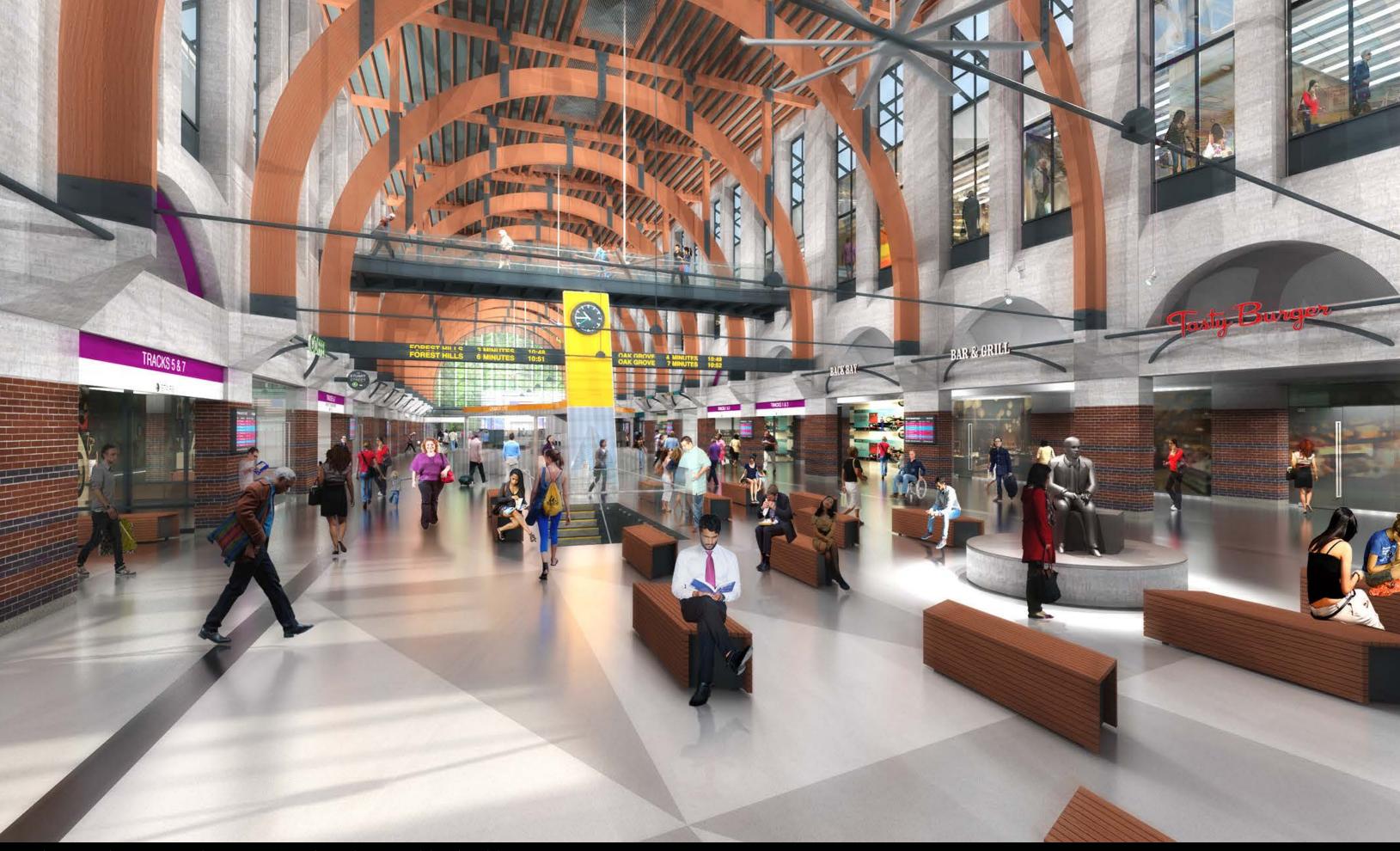


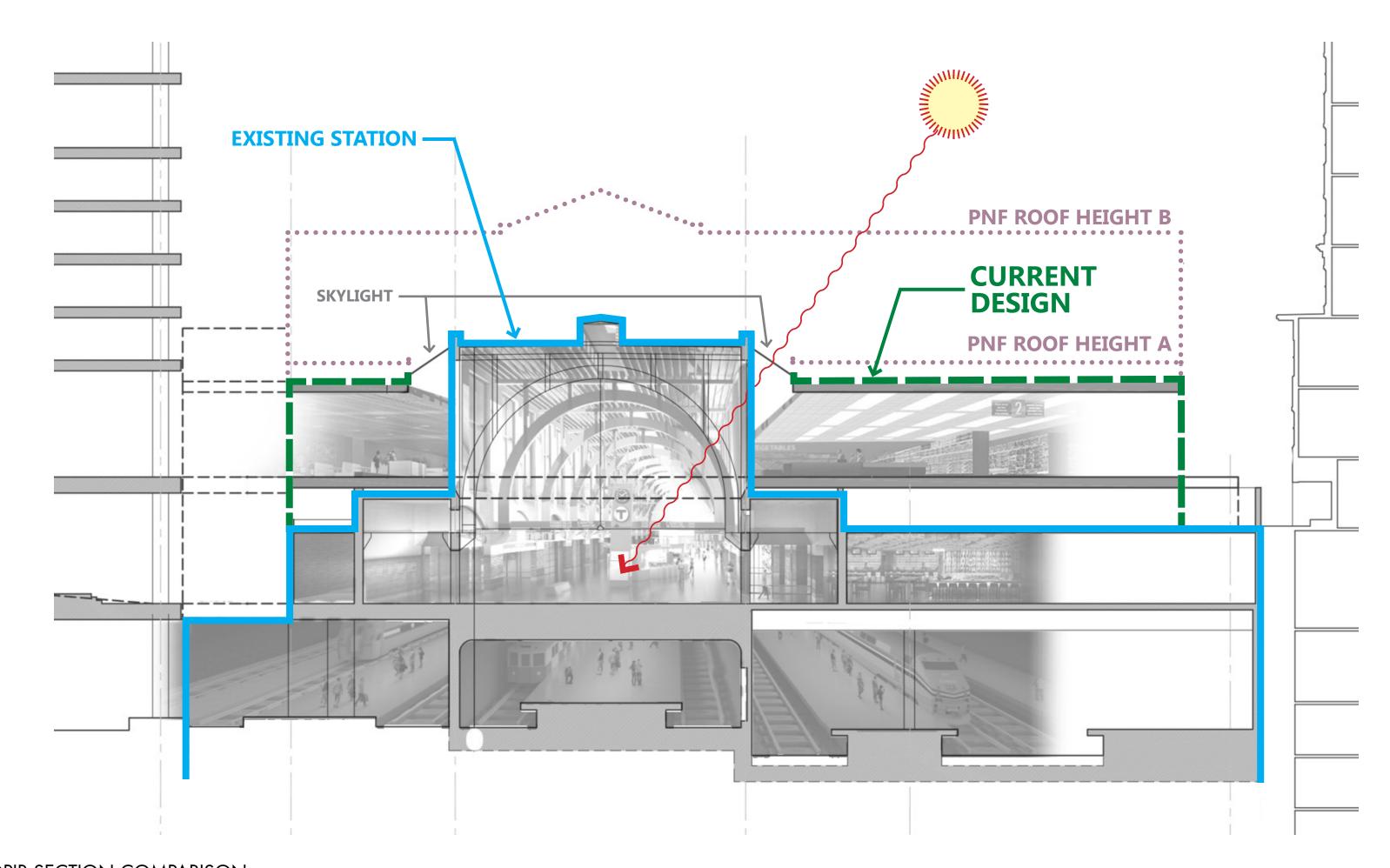
VIEW FROM DARTMOUTH STREET - PROJECT RENDERING

Boston
Properties 01 MARCH 2017









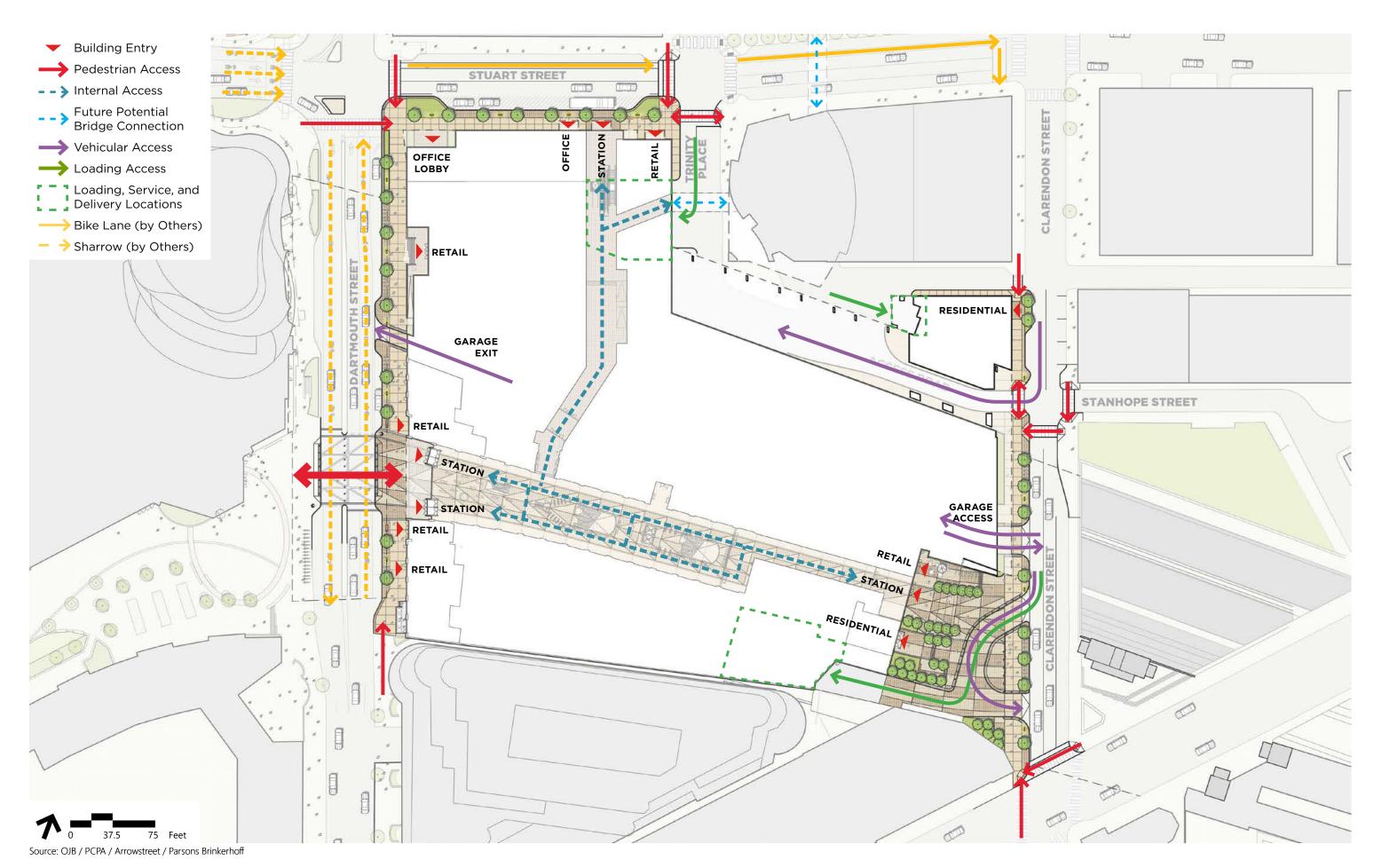


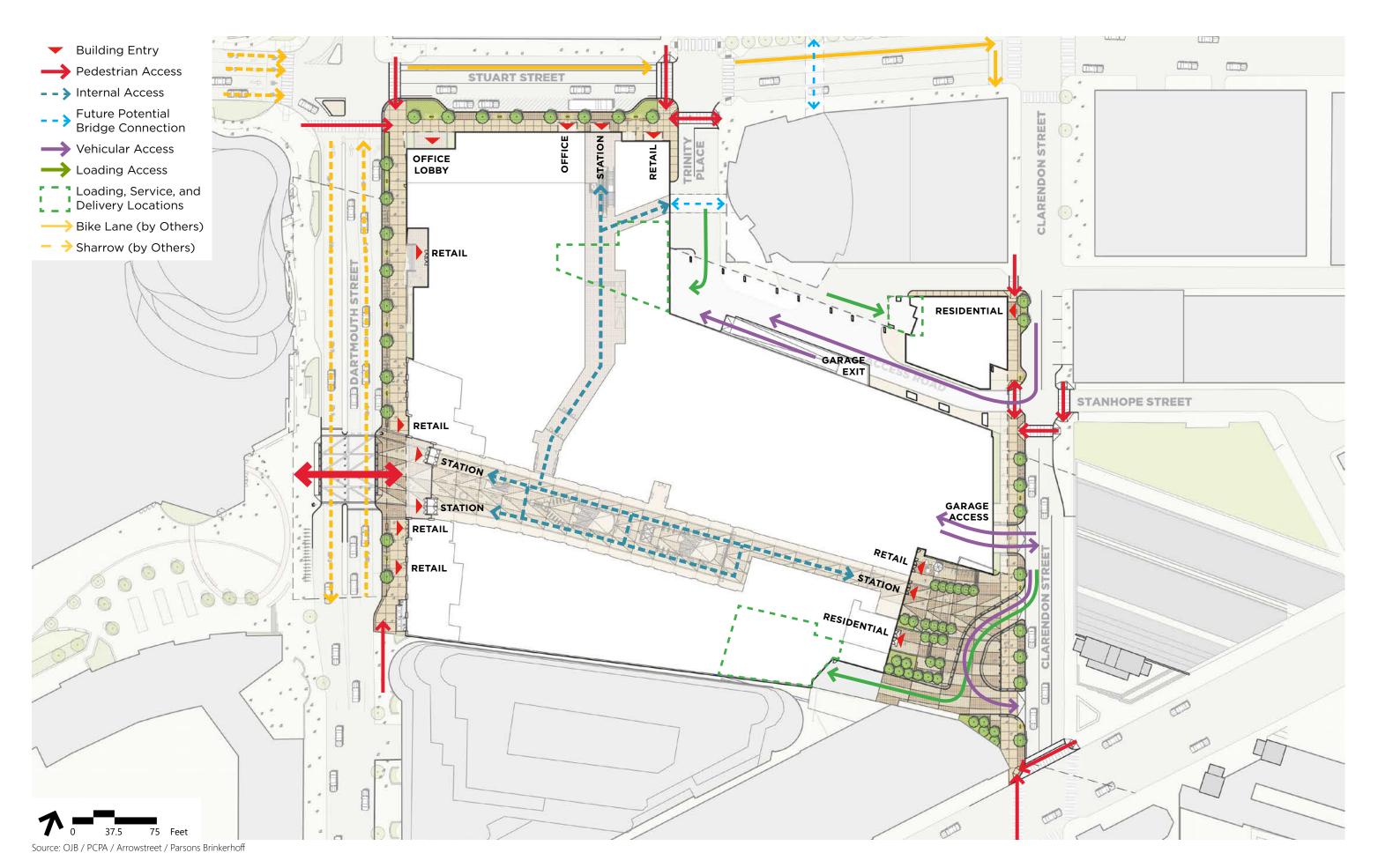
STATION WEST - VIEW OF POTENTIAL PEDESTRIAN BRIDGE

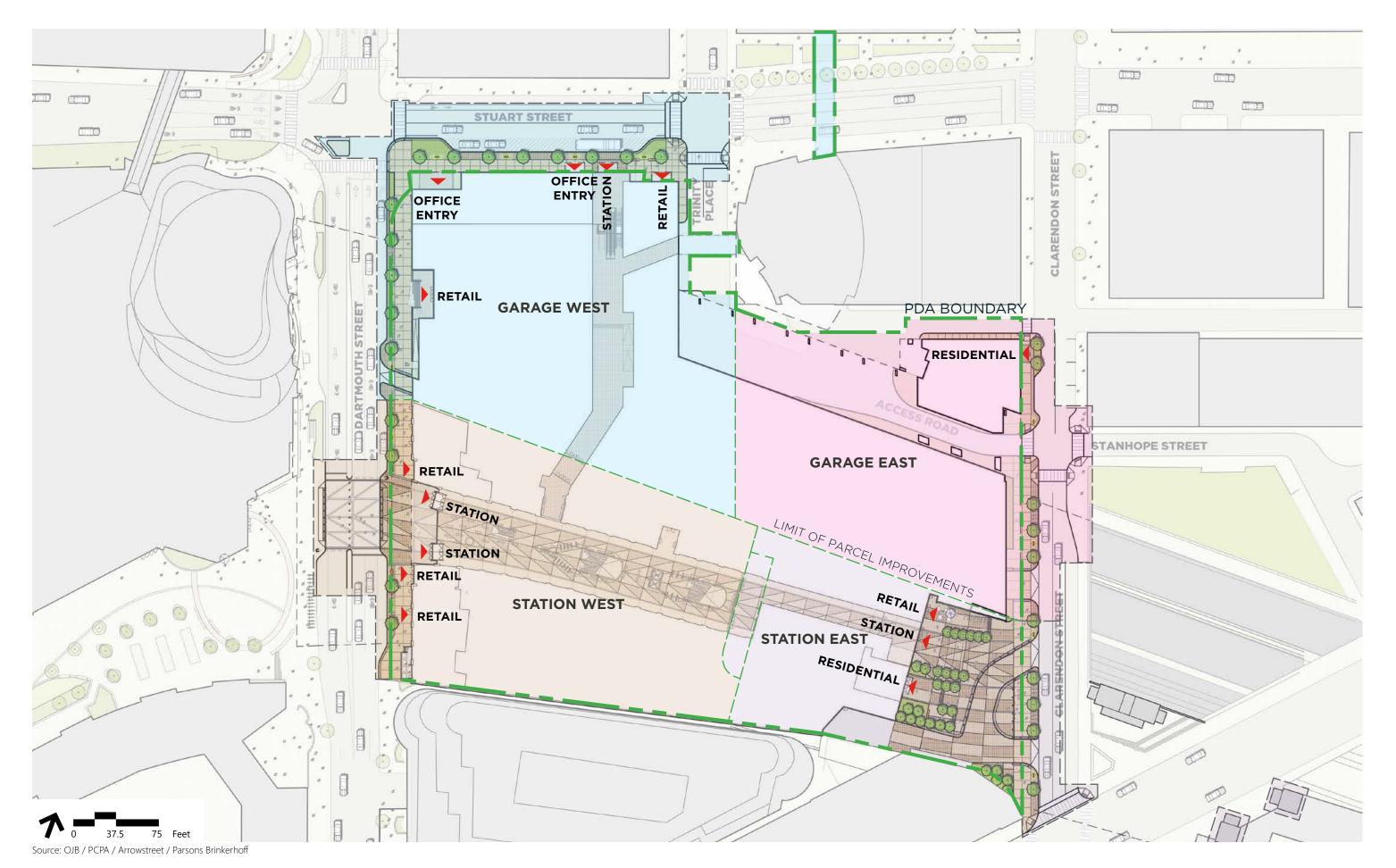
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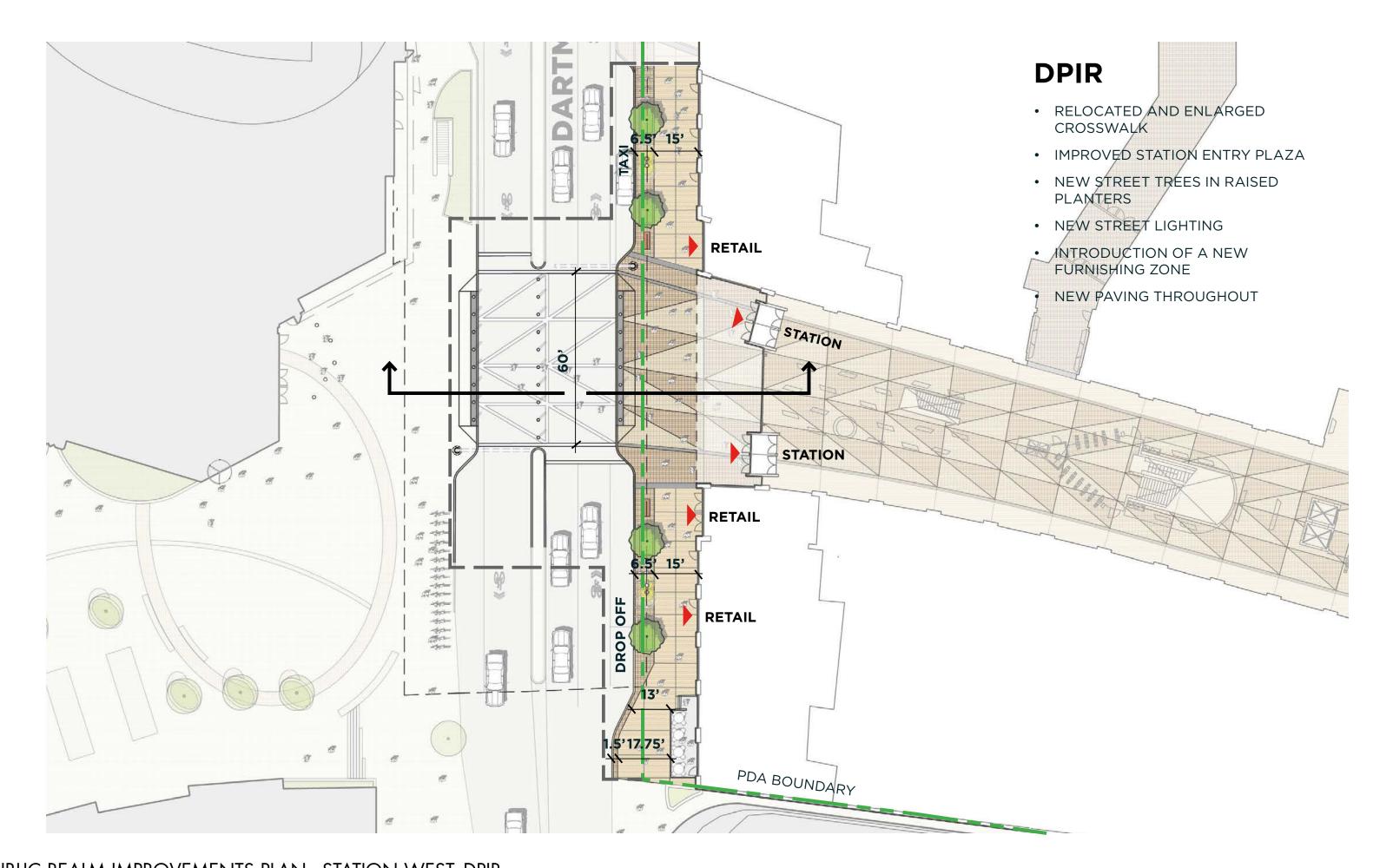


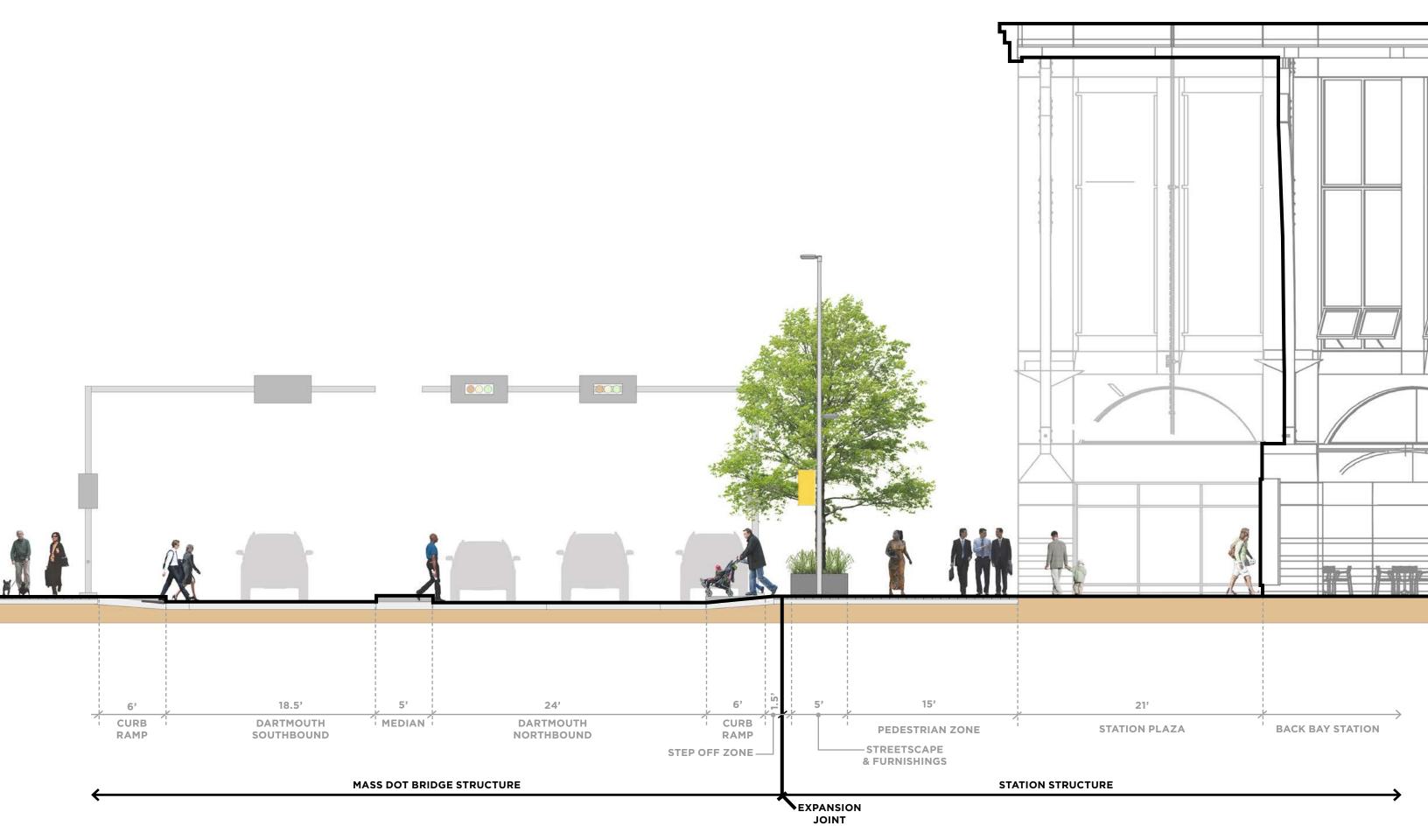


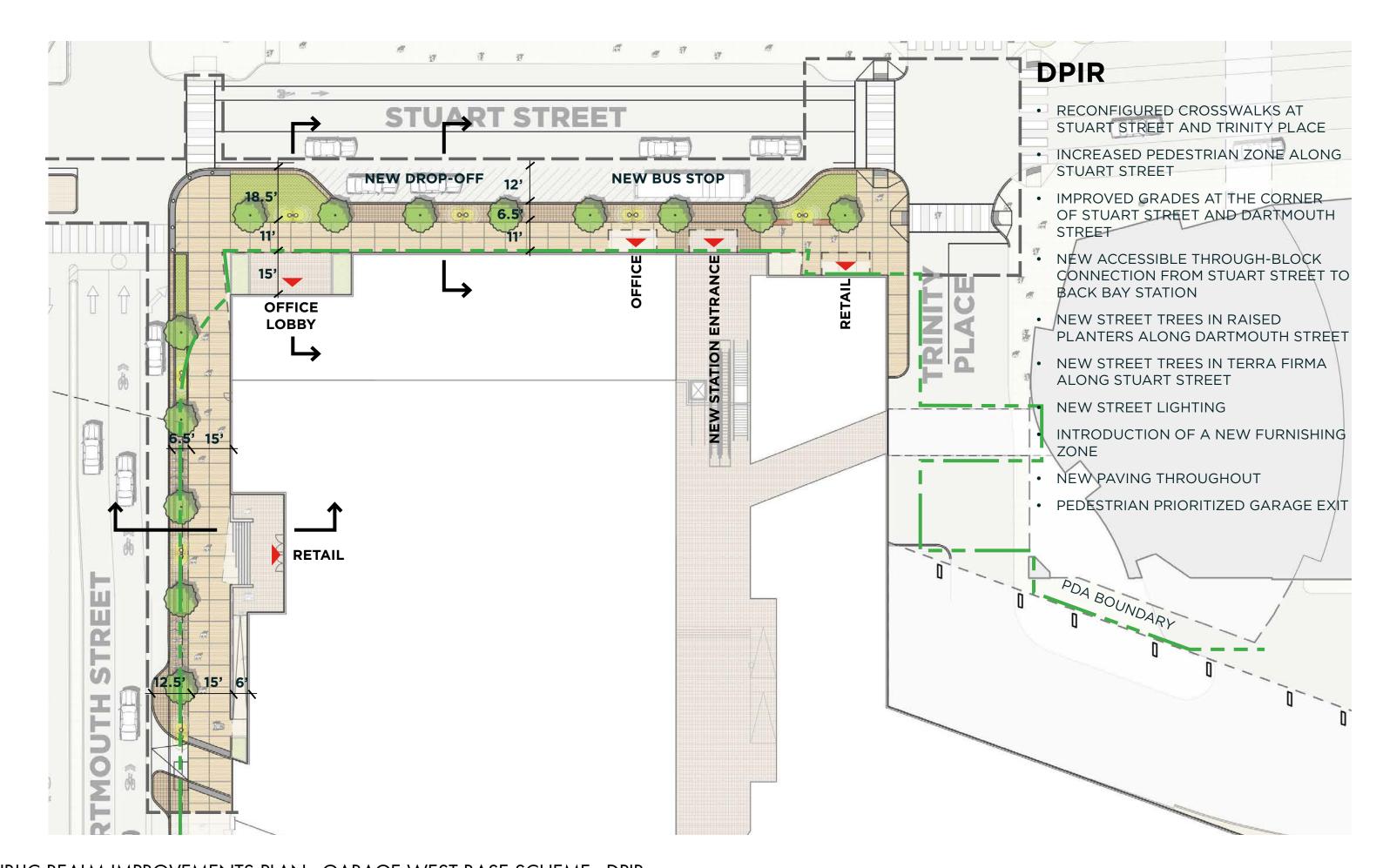


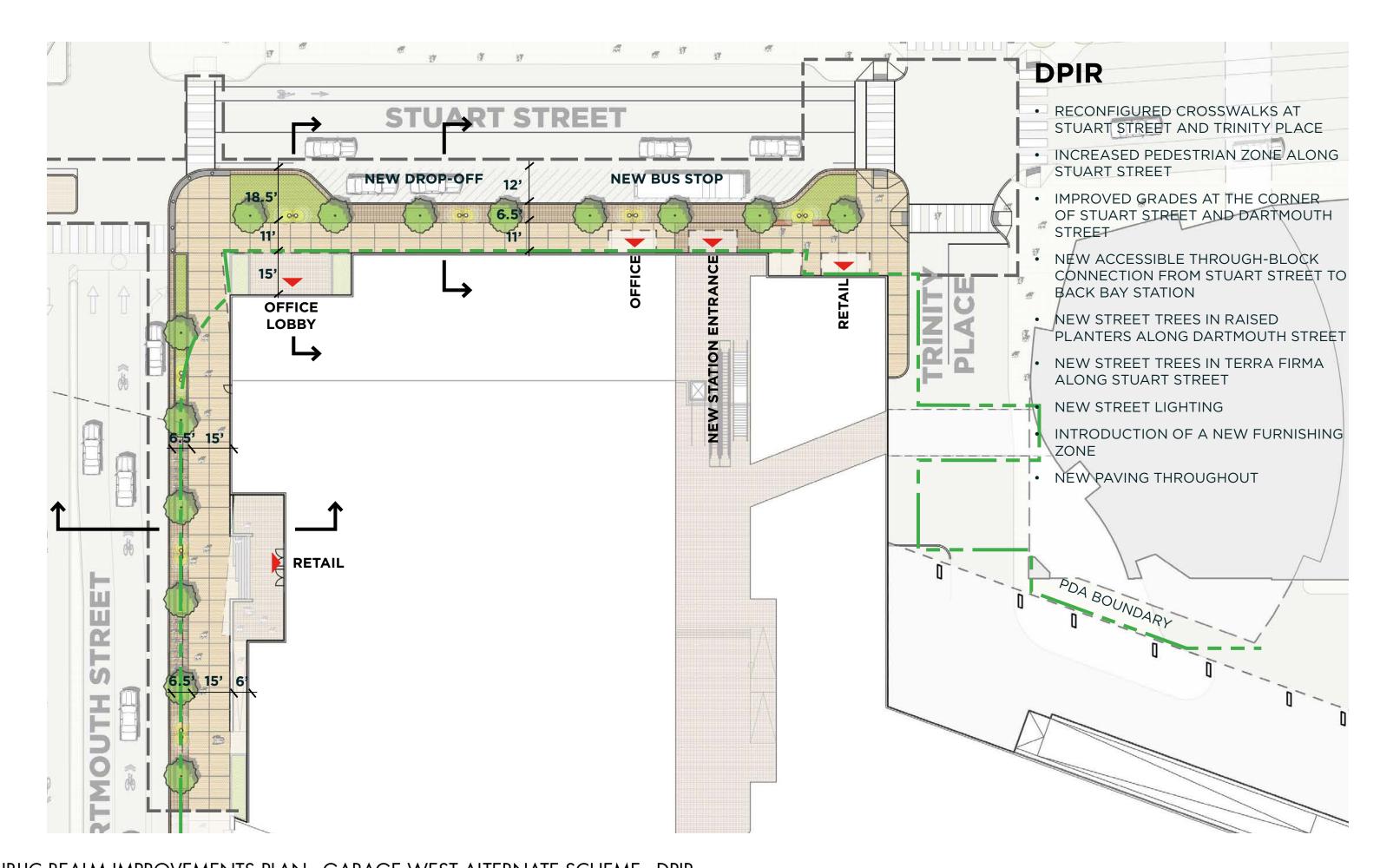


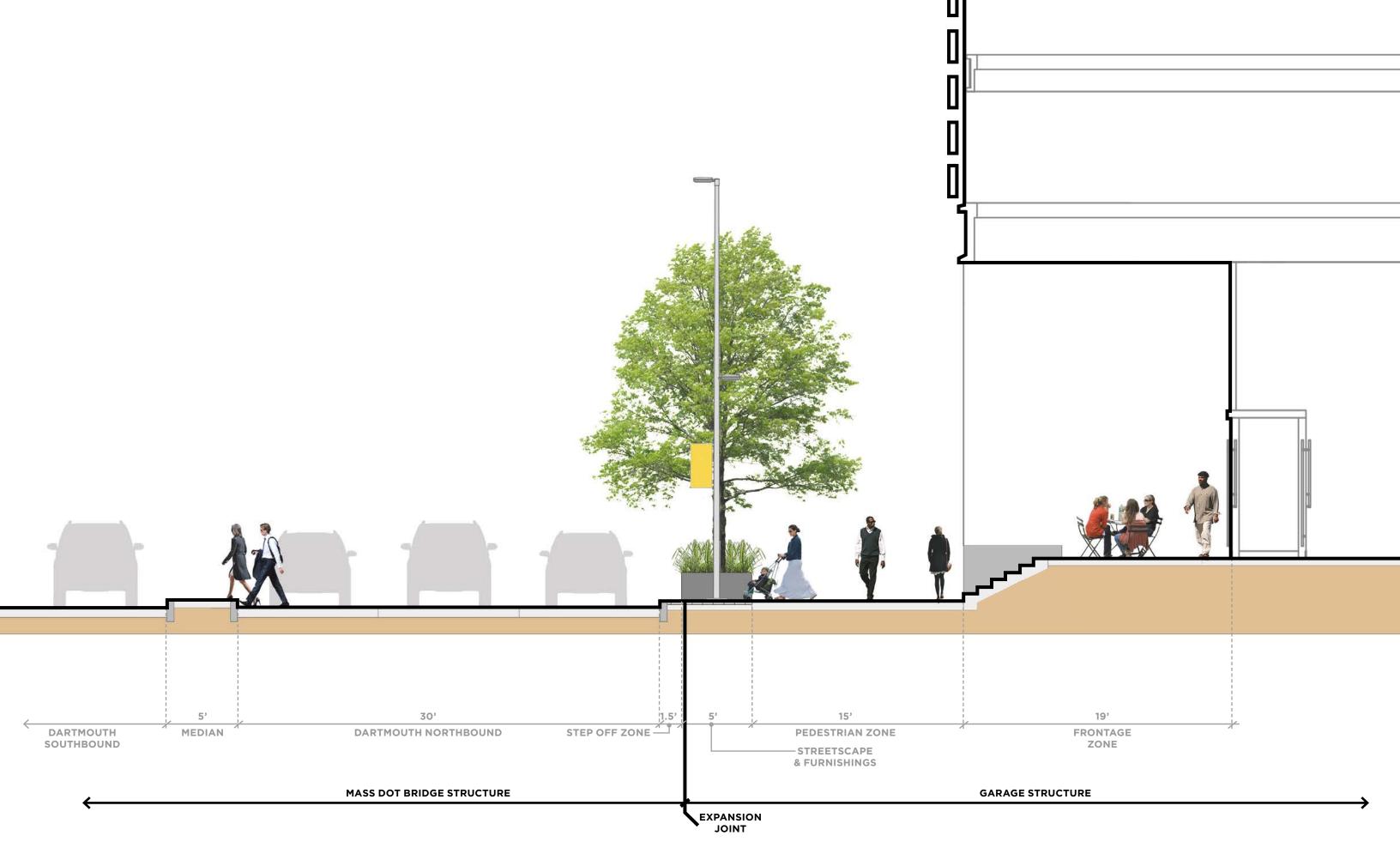












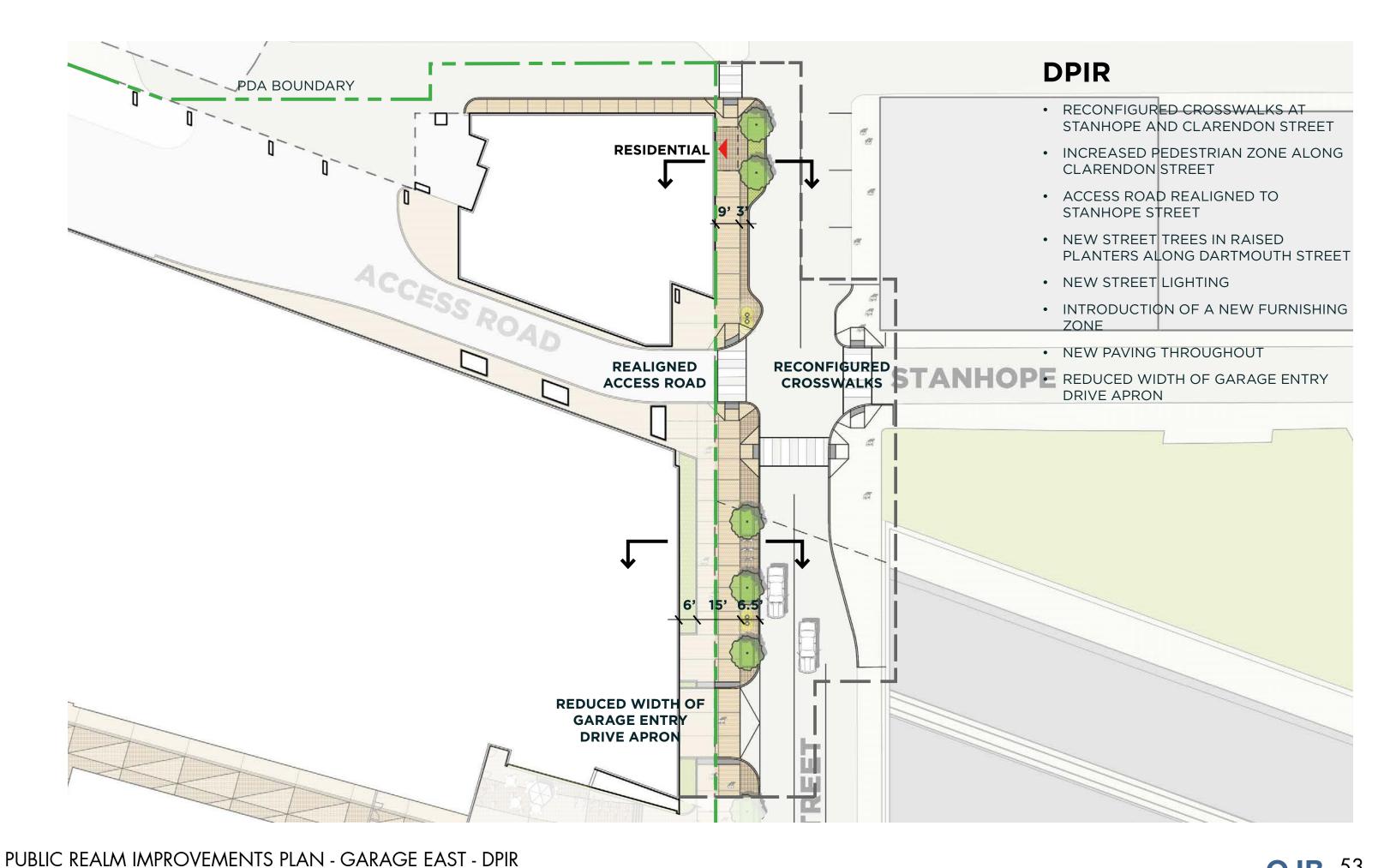
DARTMOUTH STREET RETAIL SECTION

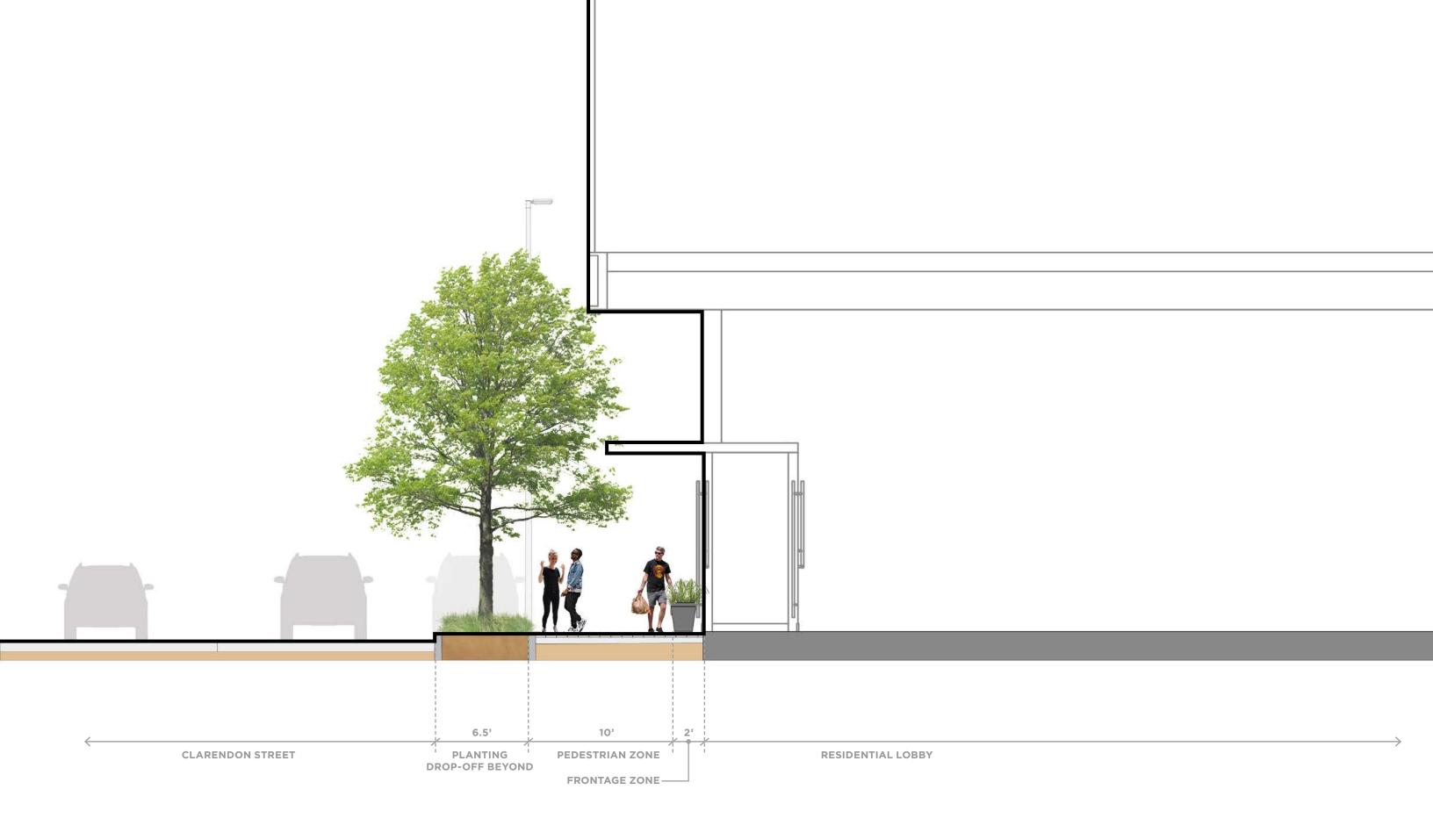




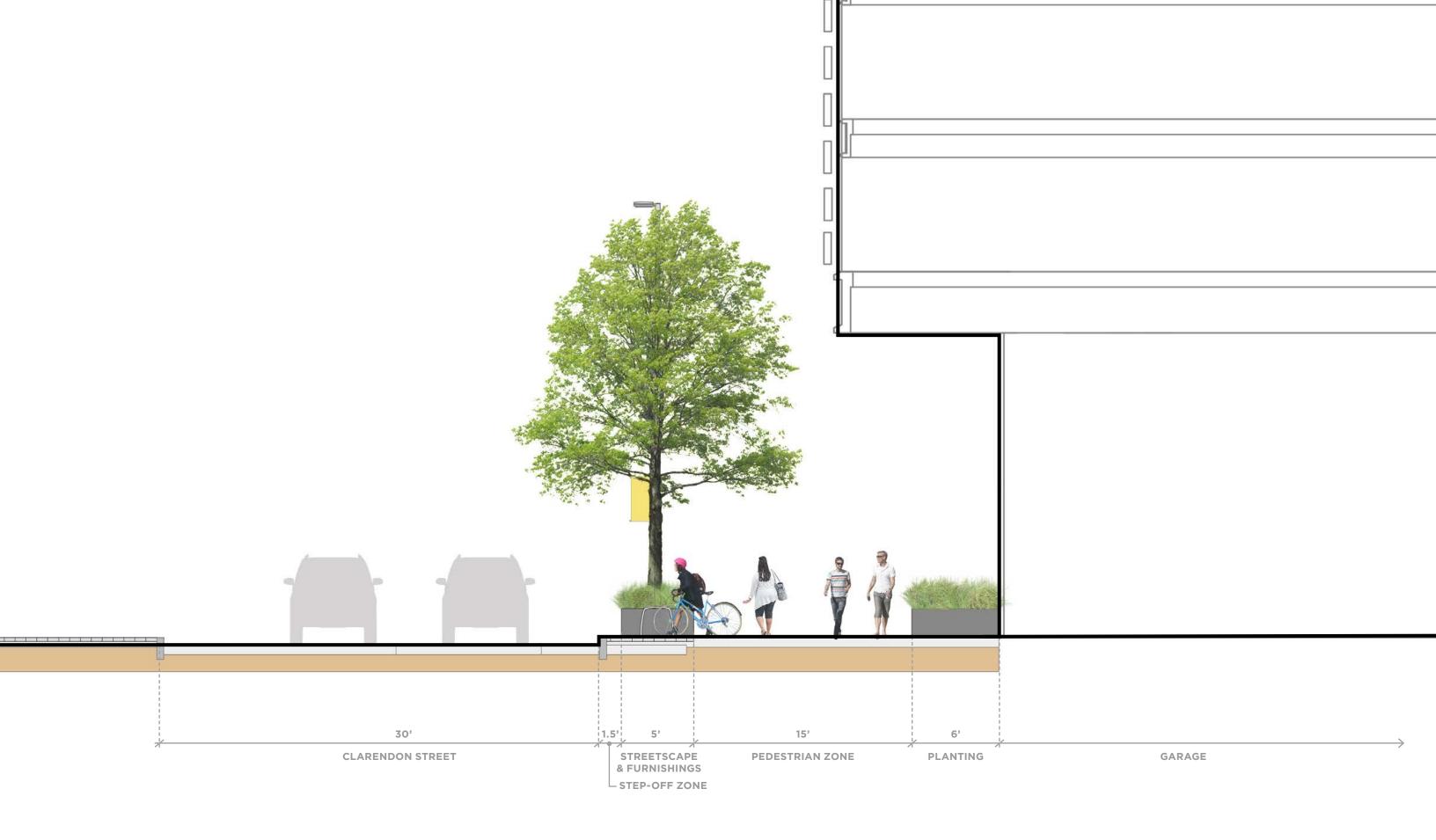




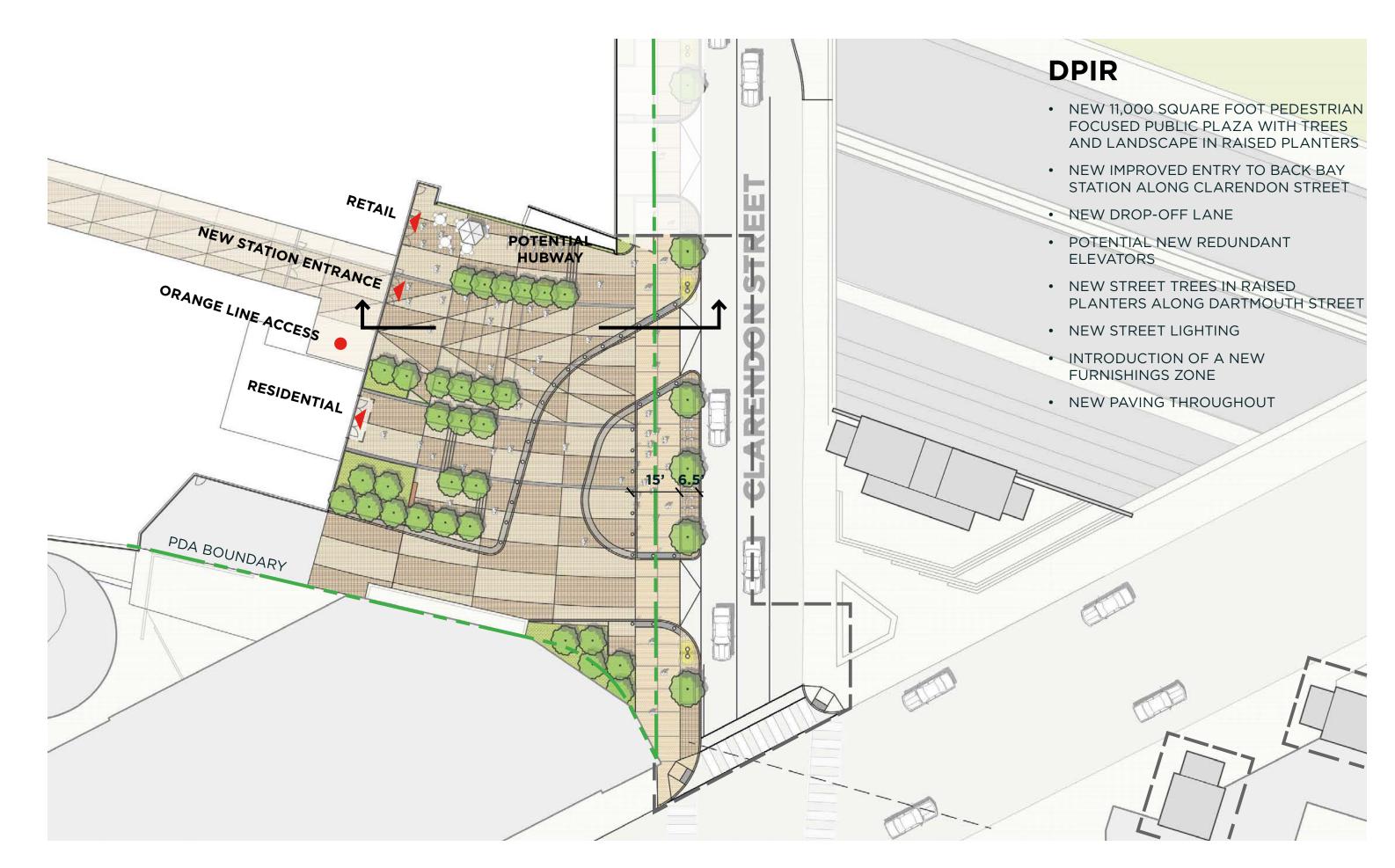




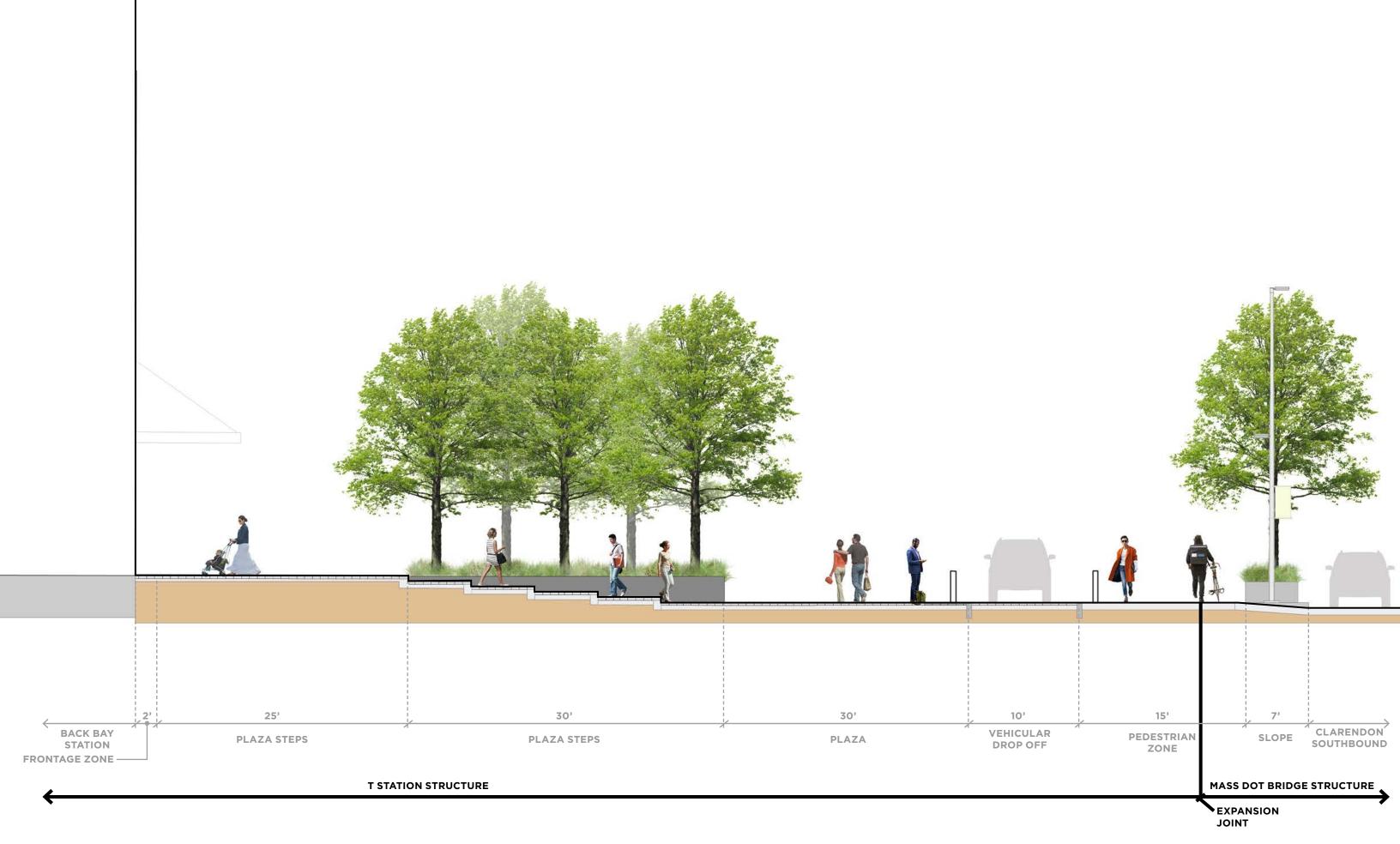














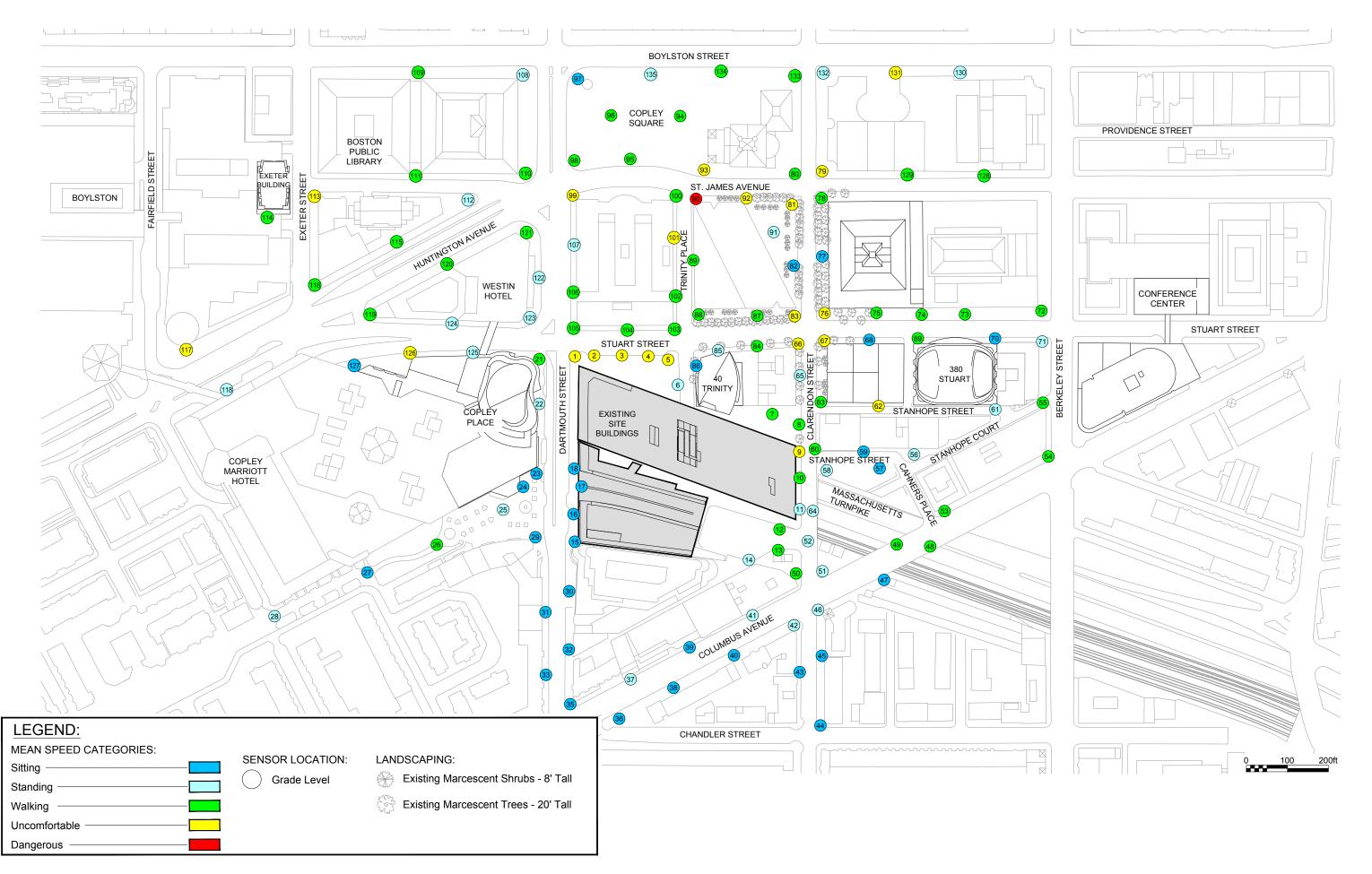


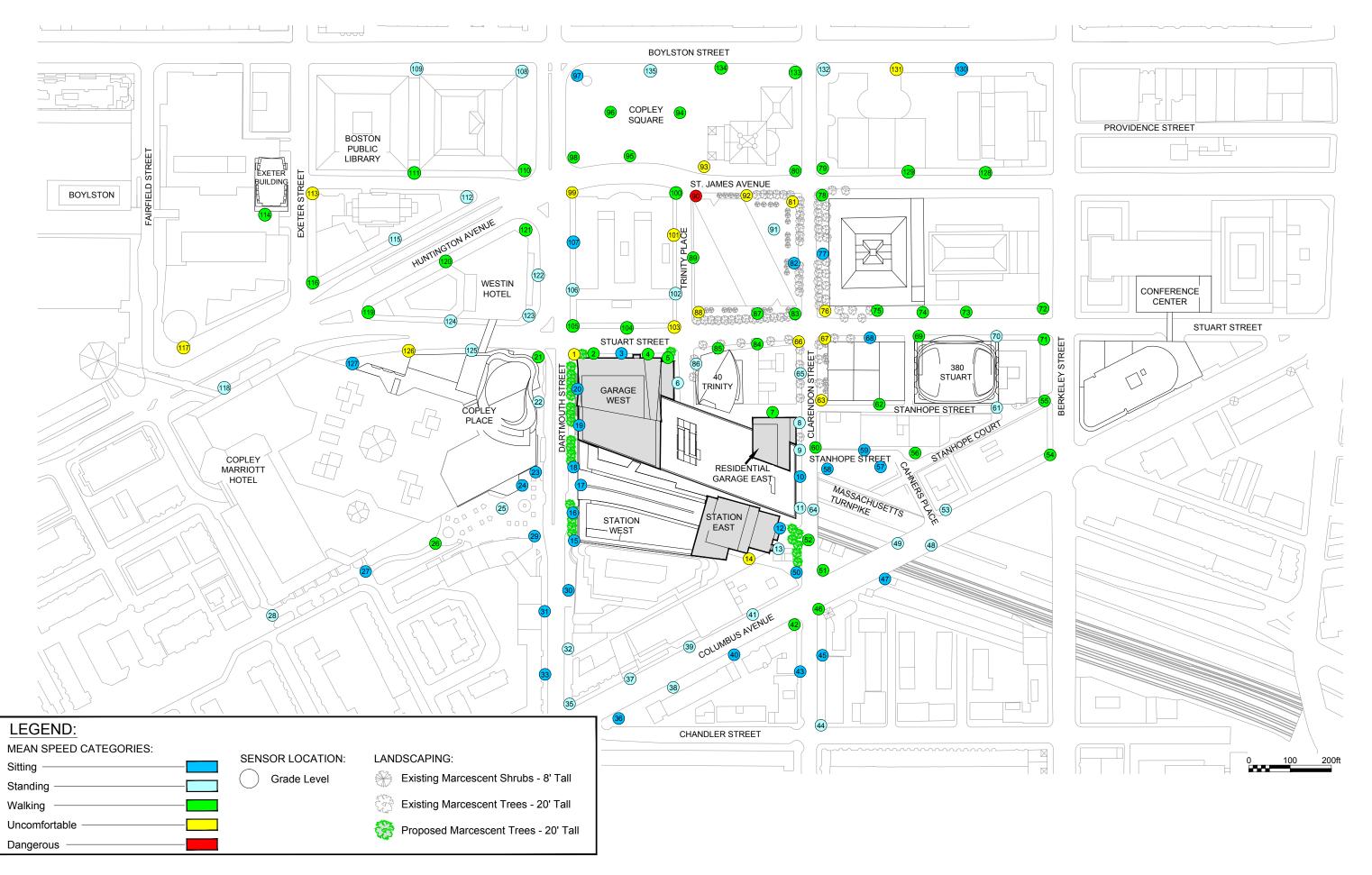


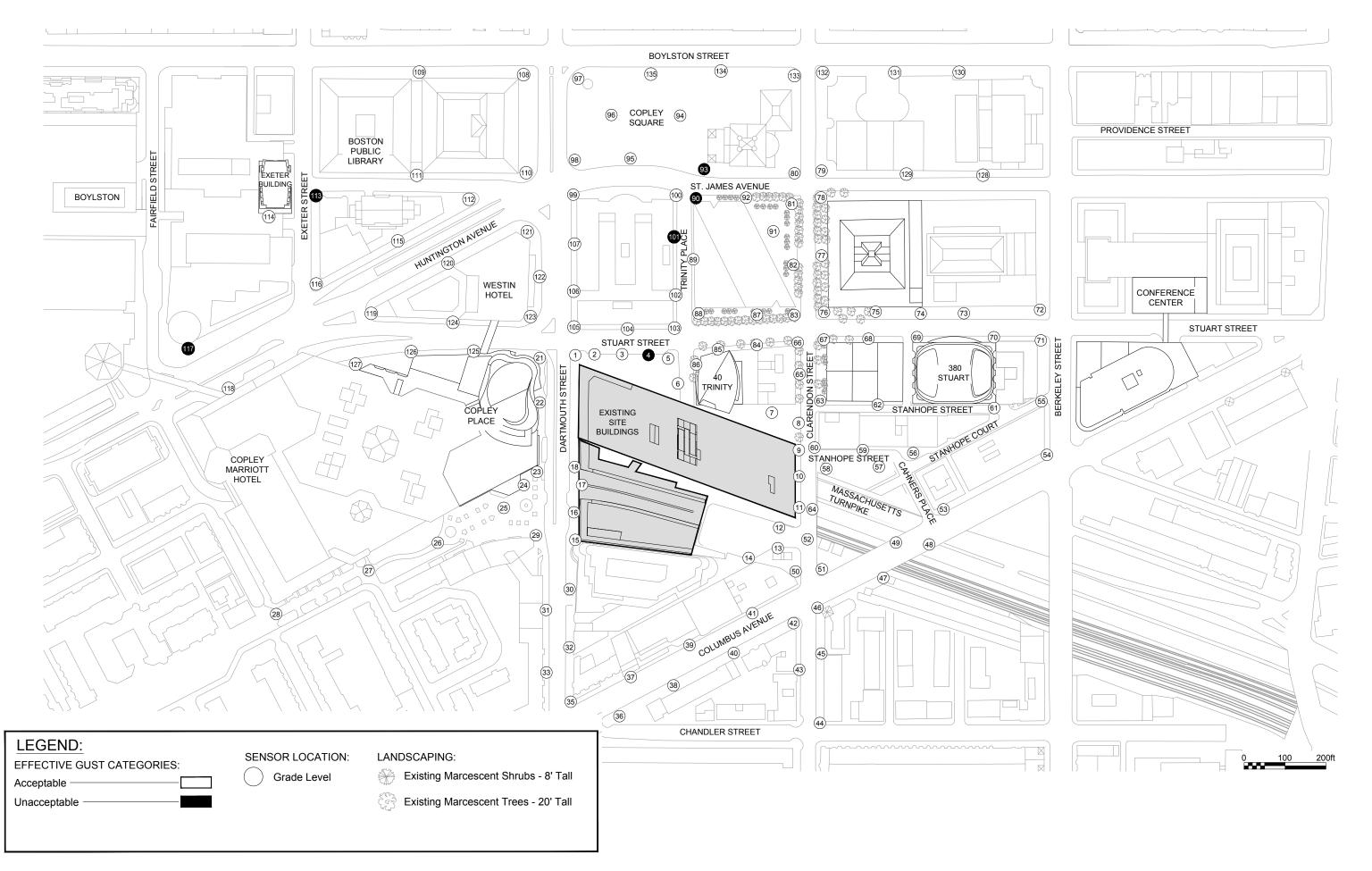
PEDESTRIAN WIND COMFORT SUMMARY

- Base Scheme and Alternate Scheme nearly identical results
- On-Site Wind Comfort Conditions:
 - o Similar or better than No-Build conditions at most locations
 - o Wind comfort conditions improve at 10 on-site locations
 - o Existing uncomfortable conditions improve at 5 on-site locations
- Off-Site Wind Comfort Conditions:
 - o Similar or better than No-build conditions at most locations
 - o No new uncomfortable or dangerous off-site wind conditions are anticipated



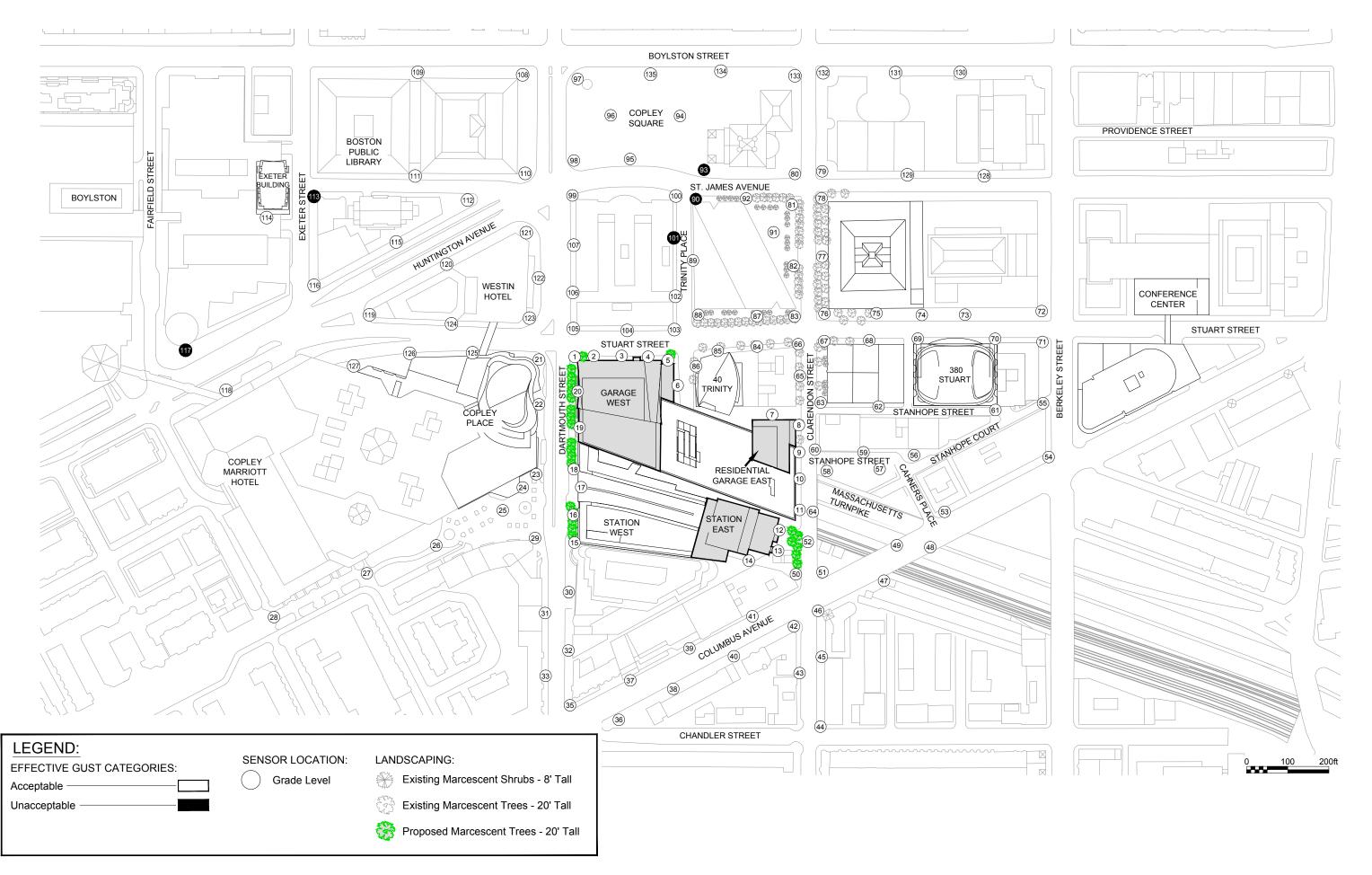




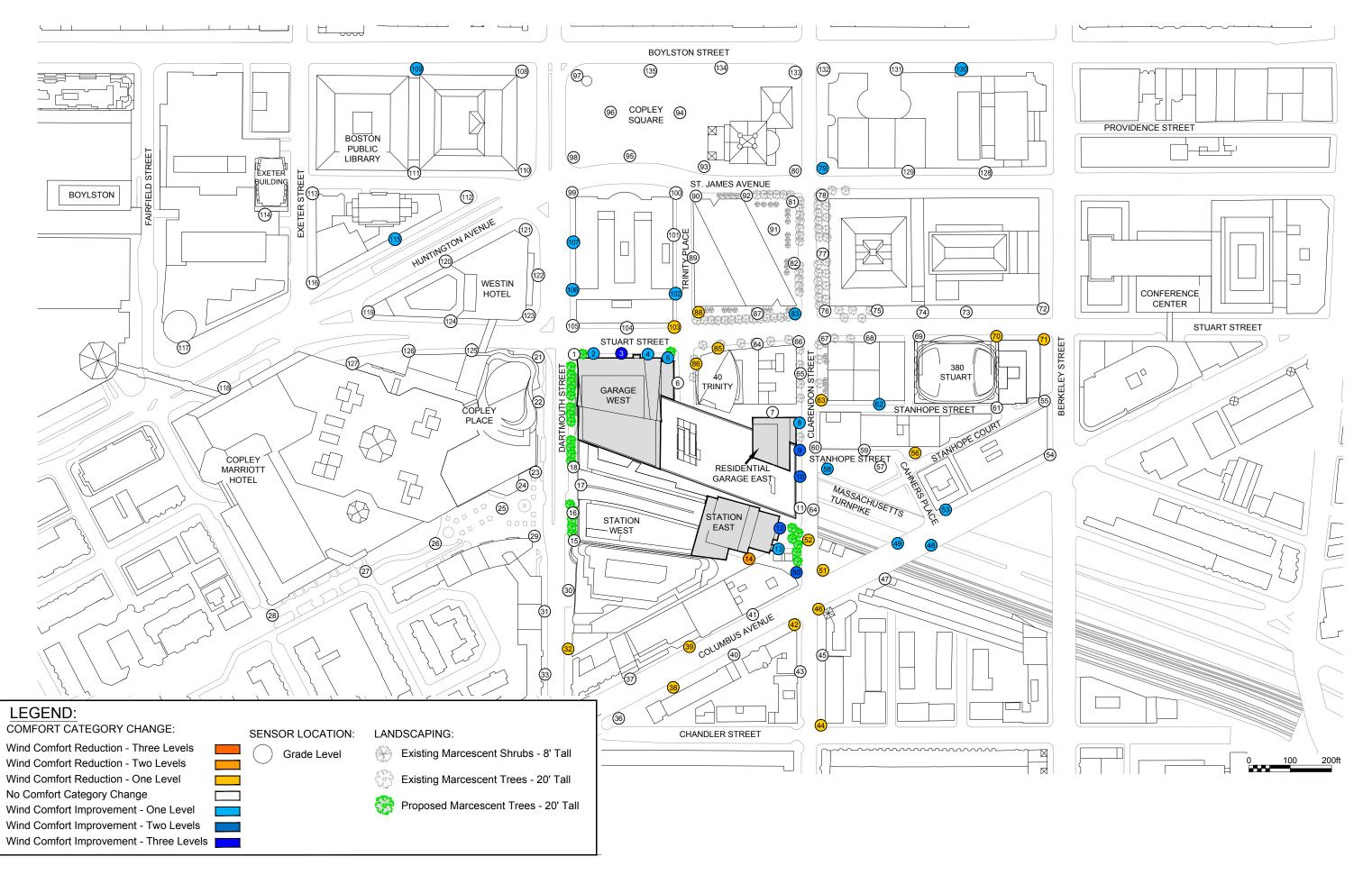




















CONE SOUNCE

CONE SOUNCE

STANKE ME

CONE SOUNCE

STAN

12:00PM EDT



3:00PM EDT







9:00AM EDT



12:00PM EDT



3:00PM EDT

6:00PM EDT



9:00AM EST



3:00PM EST



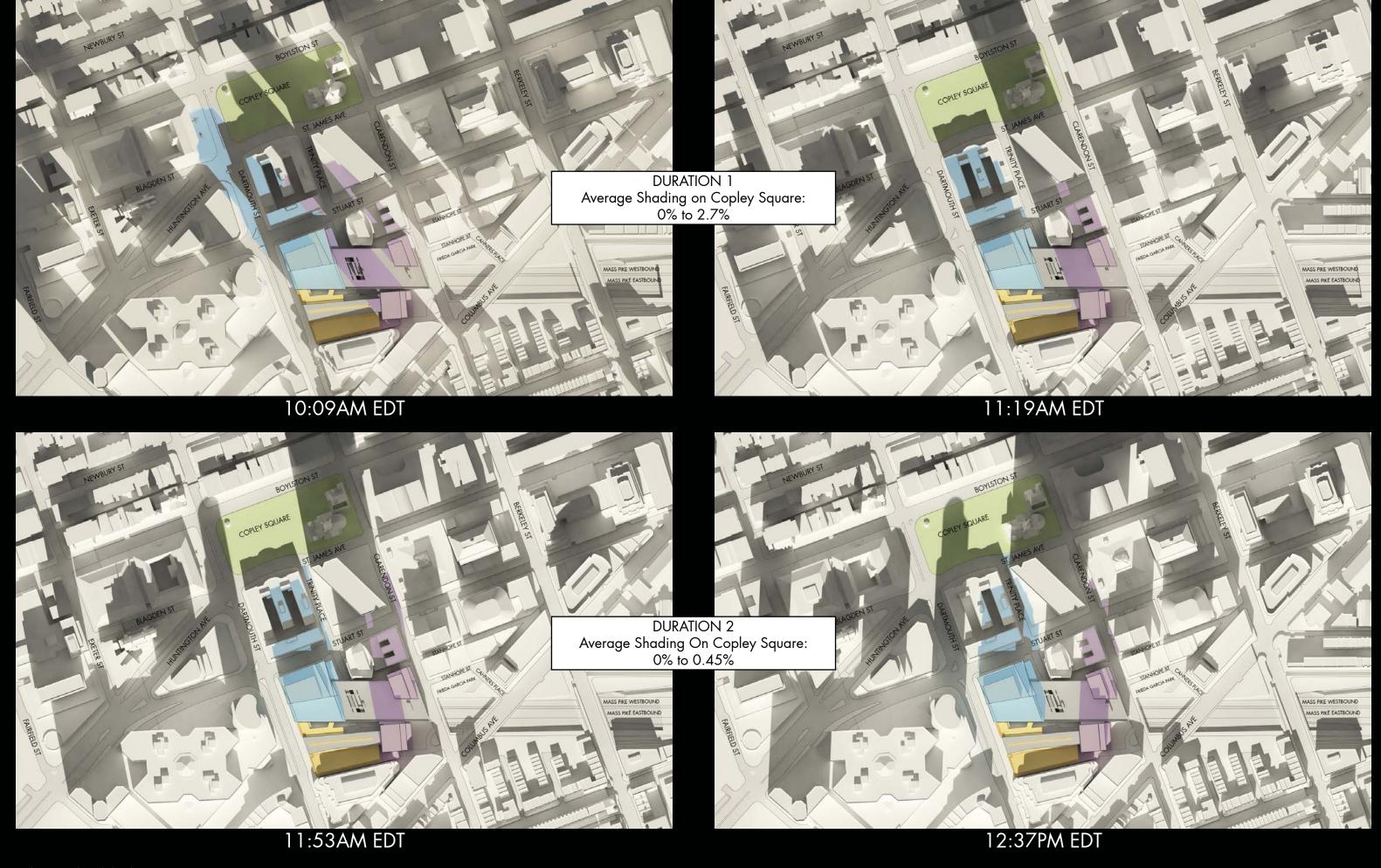
12:00PM EST



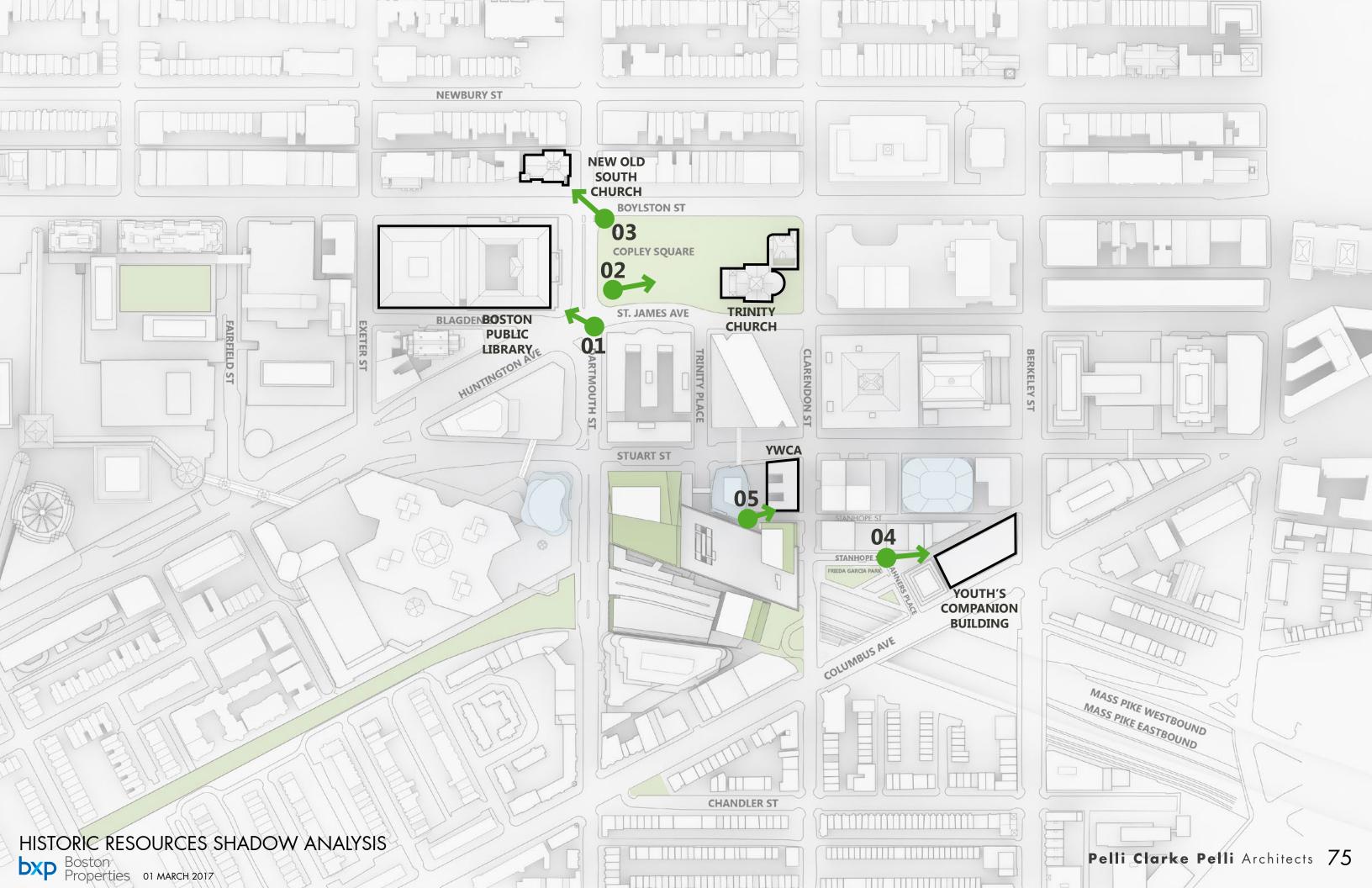


SHADOW LIMIT - OCTOBER 21 - ANIMATION

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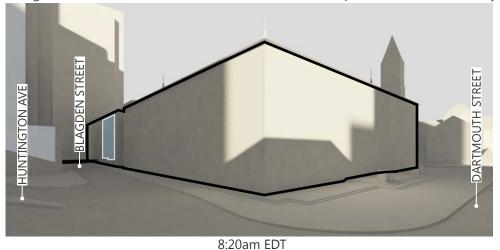


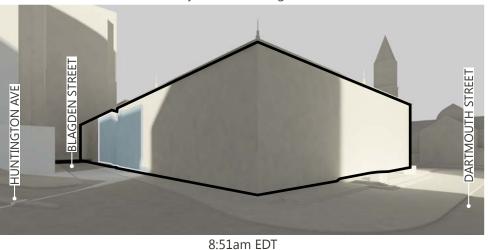


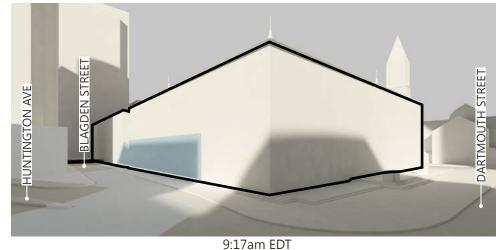
01 - BOSTON PUBLIC LIBRARY

MARCH 21 AND SEPTEMBER 21 (Equinox)

Garage West casts a small amount of net new shadow on portions of the Secondary Facade of the Boston Public Library in the morning from 8:05am to 9:32am for a total of 87 Minutes.







JUNE 21 (Solstice)

No net new shadow impact.

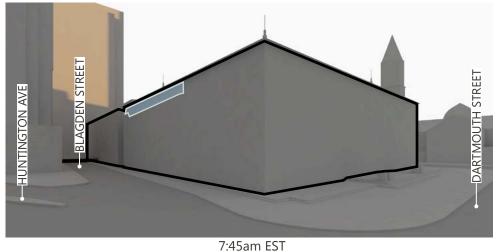






DECEMBER 21 (Solstice)

Garage West casts net new shadow on portions of the South and East Facades of the Boston Public Library in the early morning from 7:30am to 9:30am for a total of 120 Minutes.







Area Of Existing Shadow

Area Of Net New Shadow From Proposed Office Building

MARCH 21 AND SEPTEMBER 21 (Equinox)



No Net New Shadow Impact

9:00am EDT



12:00pm EDT



JUNE 21 (Solstice)

No Net New Shadow Impact.

DECEMBER 21 (Solstice)

No Net New Shadow Impact



12:00pm EDT



9:00am EDT

Garage West casts net new shadow on portions of the West Facade of Trinty Curch from 11:15am to 12:45pm for a total of 90 Minutes.







Area Of Existing Shadow

Area Of Net New Shadow From Proposed Office Building

MARCH 21 AND SEPTEMBER 21 (Equinox)

03 - NEW OLD SOUTH CHURCH



9:00am EDT





JUNE 21 (Solstice)

No net new shadow impact.

DECEMBER 21 (Solstice)

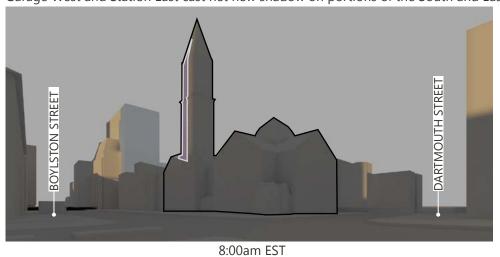


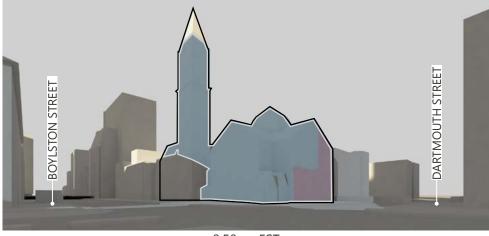




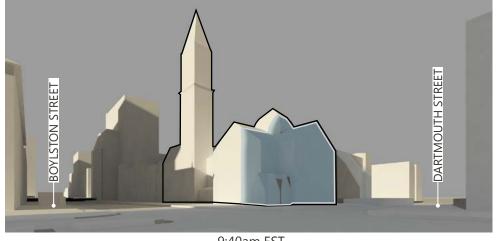
9:00am EDT

Garage West and Station East cast net new shadow on portions of the South and East Facades of the New Old South Church in the early morning from 7:45am to 9:55am for a total of 130 Minutes.





12:00pm EDT



8:50am EST

9:40am EST

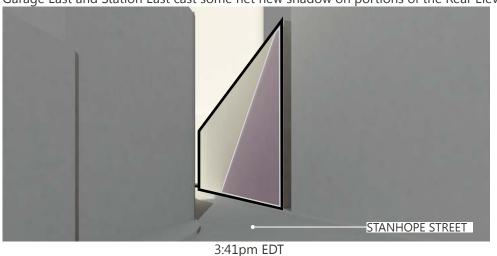
Area Of Existing Shadow

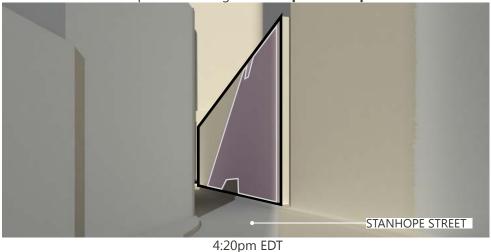
Area Of Net New Shadow From Proposed Office Building

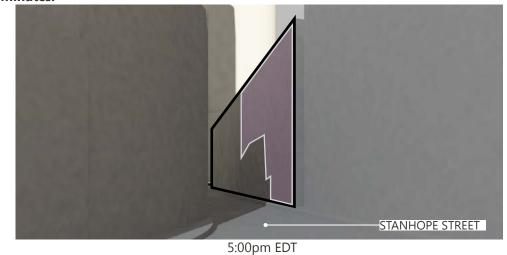
04 - YOUTH'S COMPANION BUILDING (SECONDARY FACADE)

MARCH 21 AND SEPTEMBER 21 (Equinox)

Garage East and Station East cast some net new shadow on portions of the Rear Elevation of the Youth's Companion Building from 3:26pm to 5:15pm for a total of 109 Minutes.



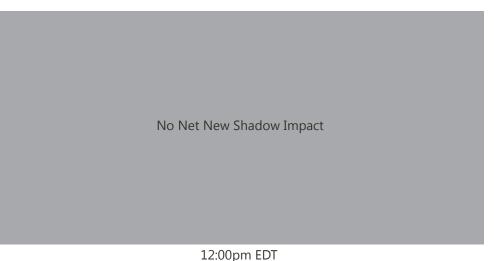


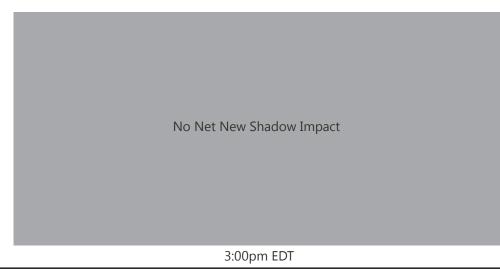


JUNE 21 (Solstice)

No net new shadow impact.

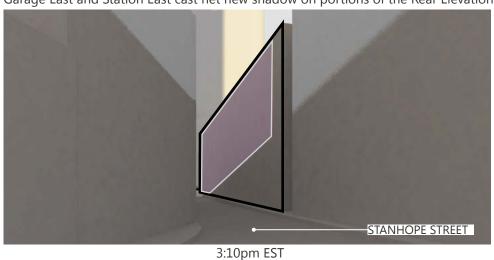


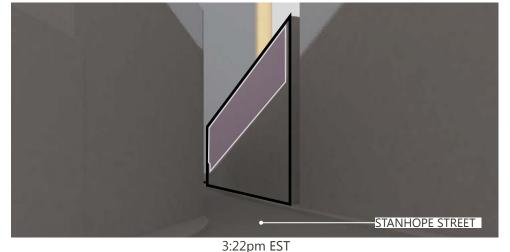


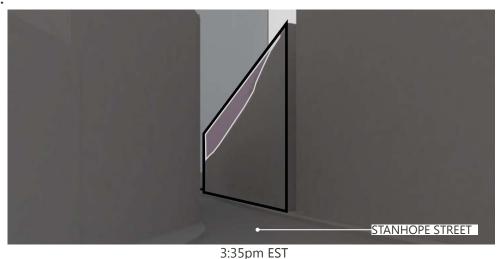


DECEMBER 21 (Solstice)

Garage East and Station East cast net new shadow on portions of the Rear Elevation of the Youth's Companion Building from 3:00pm to 3:45pm for a total of 45 Minutes.







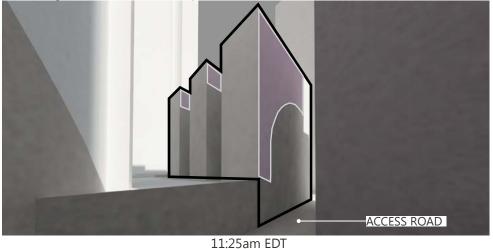
Area Of Existing Shadow

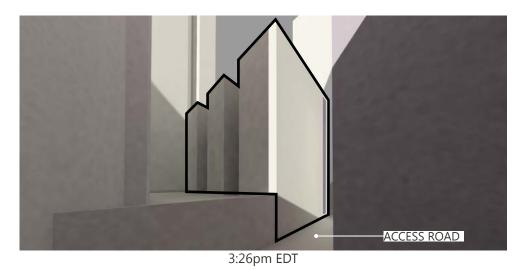
Area Of Net New Shadow From Proposed Office Building

MARCH 21 AND SEPTEMBER 21 (Equinox)

Garage East casts net new shadow on portions of the Secondary Elevation of the YWCA Building from 7:10am to 3:41pm for a total of 7 Hours and 31 Minutes.

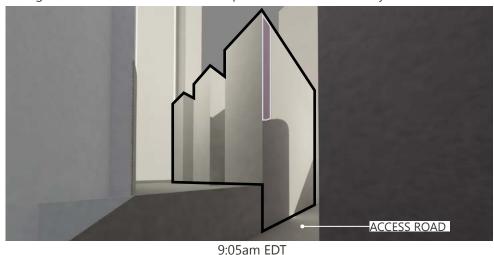




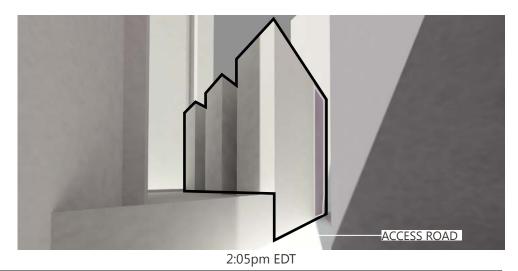


JUNE 21 (Solstice)

Garage East casts net new shadow on portions of the Secondary Elevations of the YWCA Building from 8:50am to 2:20pm for a total of 5 Hours and 30 Minutes.



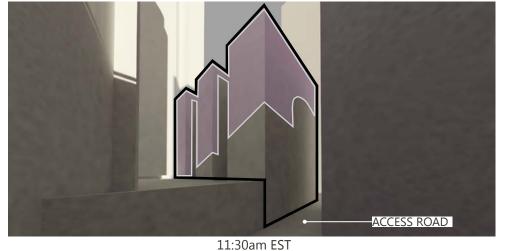


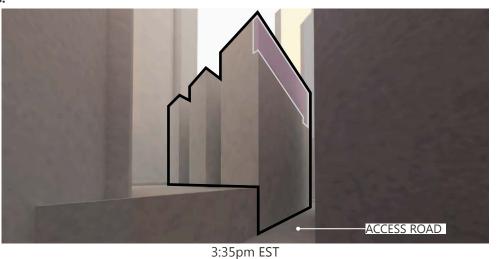


DECEMBER 21 (Solstice)

Garage East casts net new shadow on portions of the Secondary Elevations of the YWCA Building from Sunrise (7:11am) to 3:50pm for a total of 8 Hours and 39 Minutes.







Legend Area Of Existing Shadow

Area Of Net New Shadow From Proposed Office Building



Transportation Analysis Methodology

- Existing 2016 conditions (existing traffic volumes)
- Future 2023 No-Build conditions (with background traffic growth & approved projects)
 - Base scheme: I-90 on-ramp open
 - Alternate scheme: 1-90 on-ramp closed
- Project trips calculated by each mode
- Vehicular Project trips distributed through roadway network
- Potential Impacts and appropriate mitigation are identified
- Analysis for Transit network is similar



Daily (24 Hour) Project Trips

Base Scheme

	Vehicle (SOV + HOV)	Transit (Train + Bus)	Other (Walk, Bike, Etc.)
Office	1,999	2,998	704
Residential	822	1,246	1,849
Retail	806	1,853	436
Total	3,627 (29%)	6,097 (48%)	2,989 (23%)

Alternate Scheme

	Vehicle (SOV + HOV)	Transit (Train + Bus)	Other (Walk, Bike, Etc.)
Office	2,036	3,054	716
Residential	81 <i>7</i>	1,241	1,841
Retail	842	1,937	455
Total	3,695 (29%)	6,232 (48%)	3,012 (23%)



Peak Hour Project Vehicle Trips

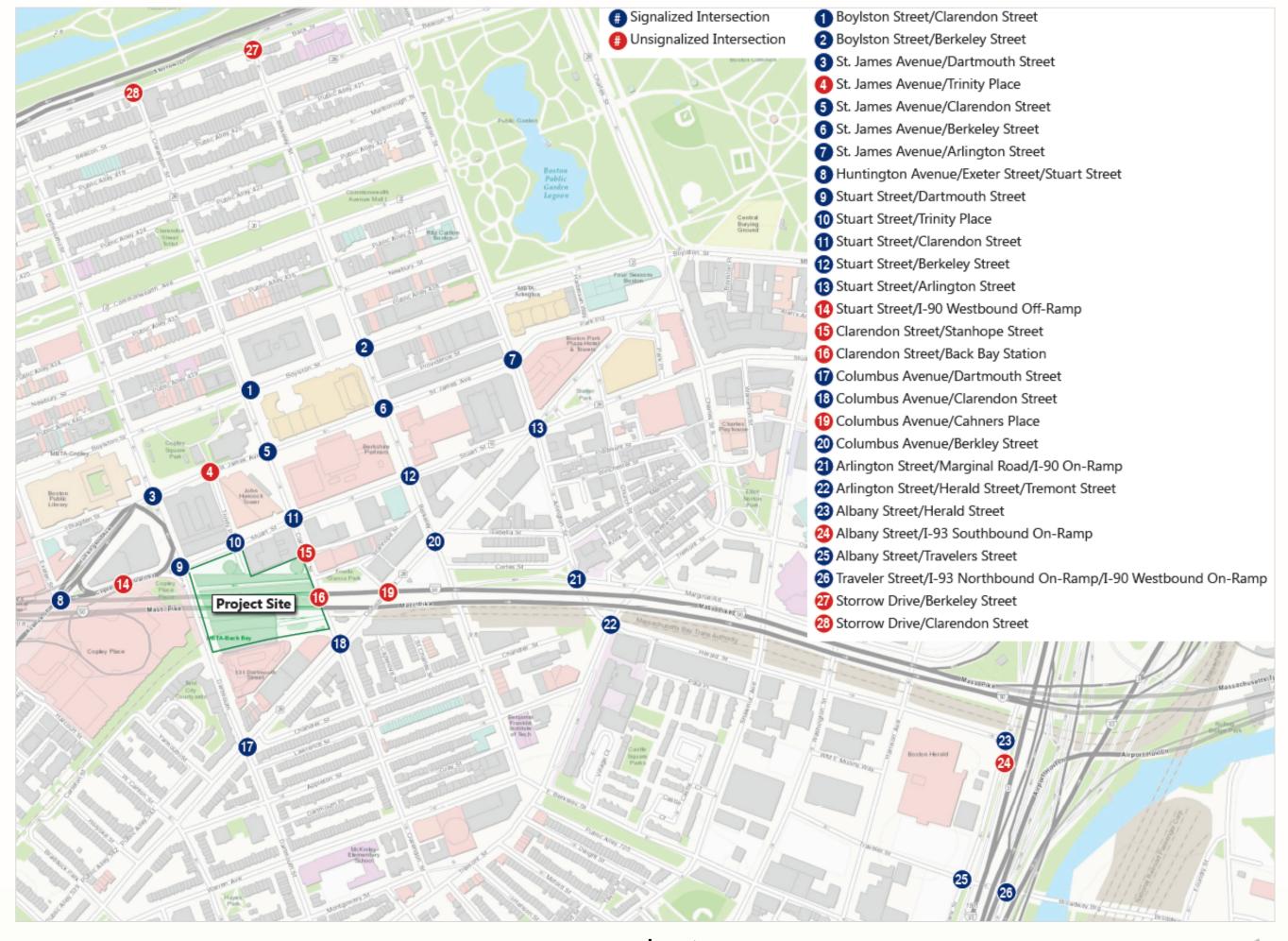
Base Scheme

	Morning Peak Hour (8:00 – 9:00 AM)	Evening Peak Hour (5:00 – 6:00 PM)
Office	304	265
Residential	69	68
Retail	14	60
Total	387	373

Alternate Scheme

	Morning Peak Hour (8:00 – 9:00 AM)	Evening Peak Hour (5:00 – 6:00 PM)
Office	310	270
Residential	69	68
Retail	14	44
Total	393	382

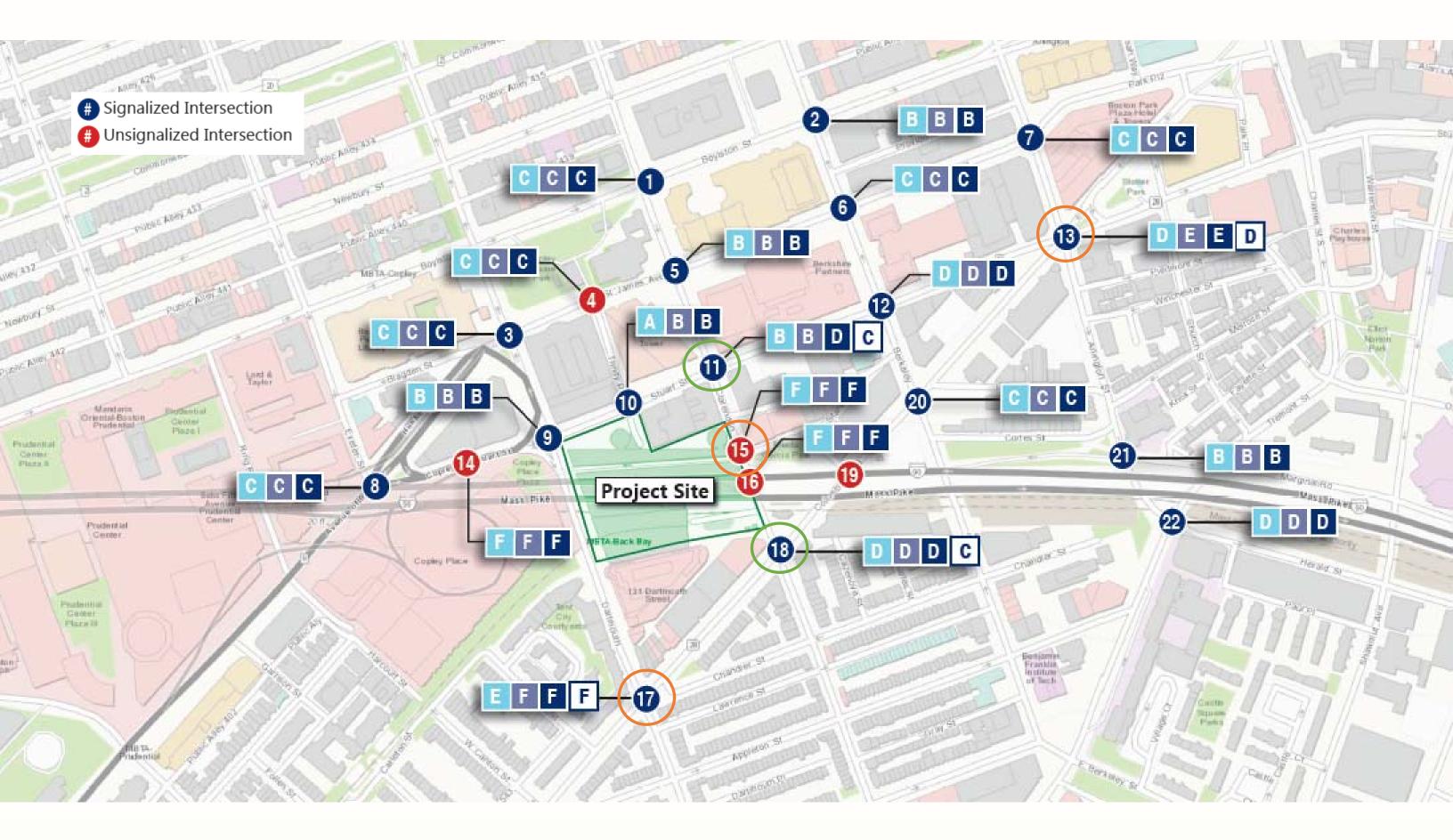


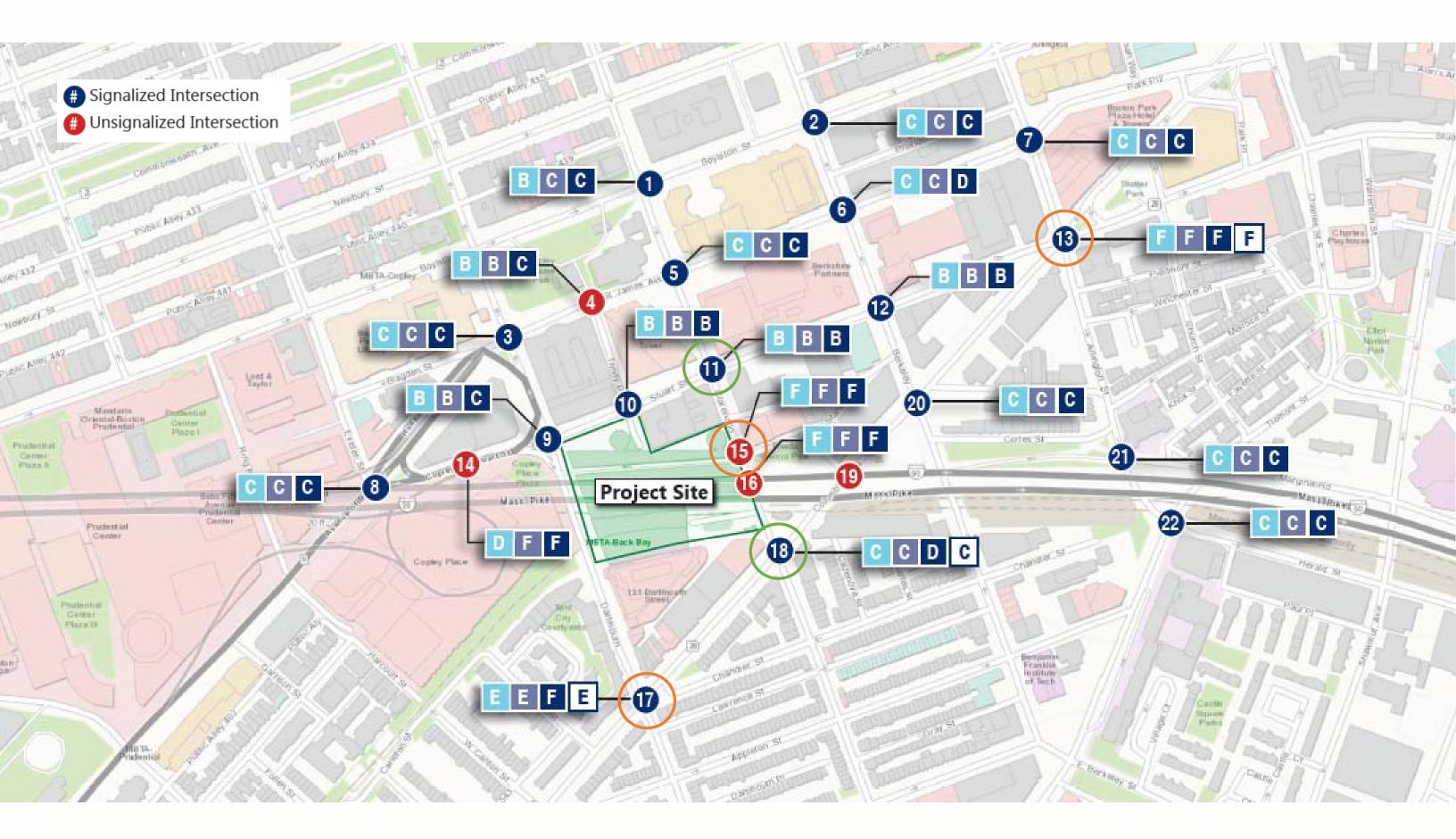


Intersection Level of Service (LOS) Analysis

- Level of Service is graded on a scale from LOS A to LOS F
- Level LOS A represents best operations, LOS F represents worst operations
- In an urban area, LOS D or better is considered acceptable
- LOS is reduced below LOS D or remains at LOS E or F at limited locations
 - Base Scheme:
 - This occurs at 3 locations in the AM peak and 2 locations in the PM peak
 - Mitigation/improvements are identified at 5 locations
 - Alternate Scheme:
 - This occurs at 3 locations in the AM peak and 2 locations in the PM peak
 - Mitigation/improvements are identified at 6 locations
- Improvements include roadway layout as well as signal/timing/phasing changes

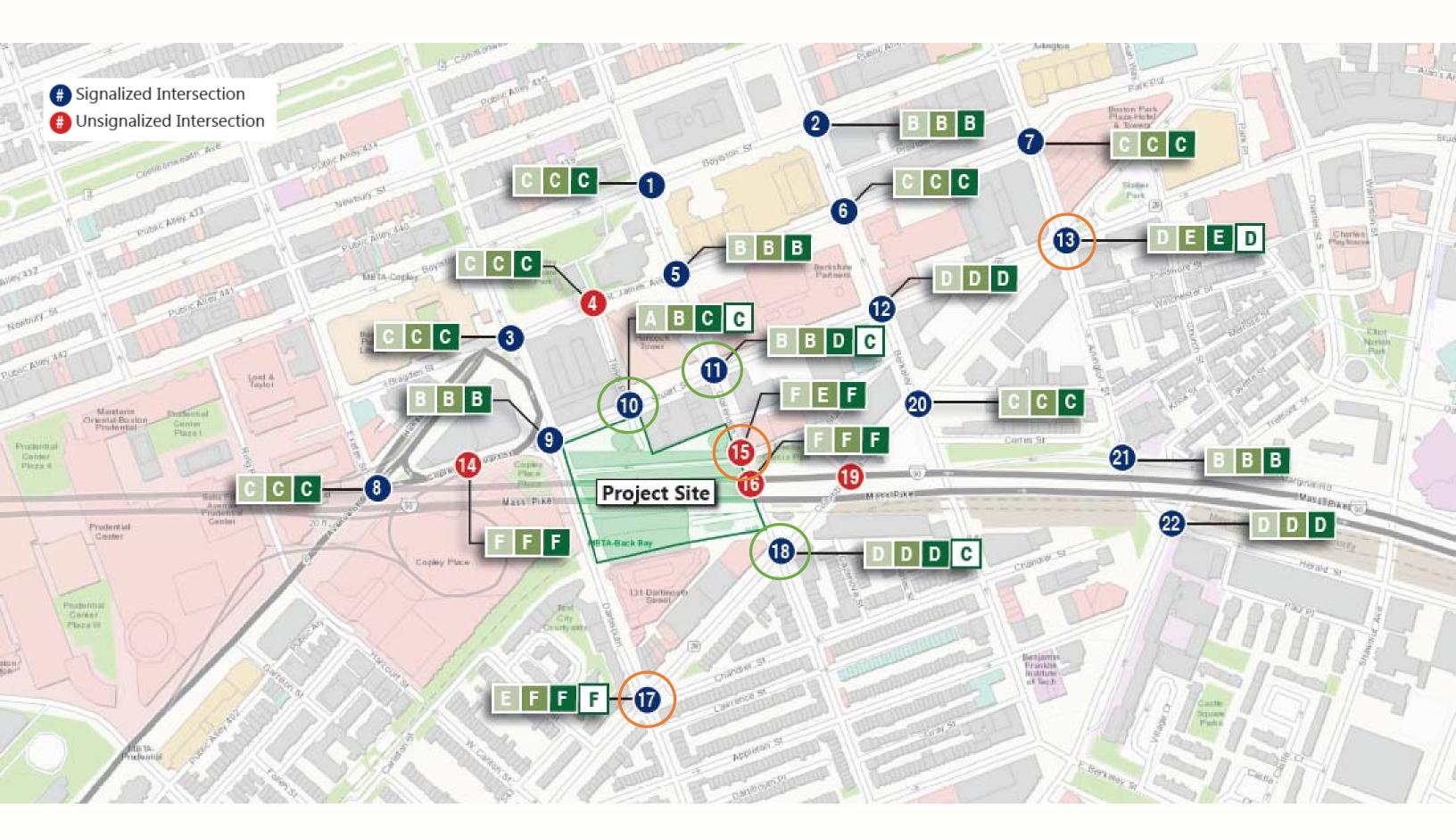






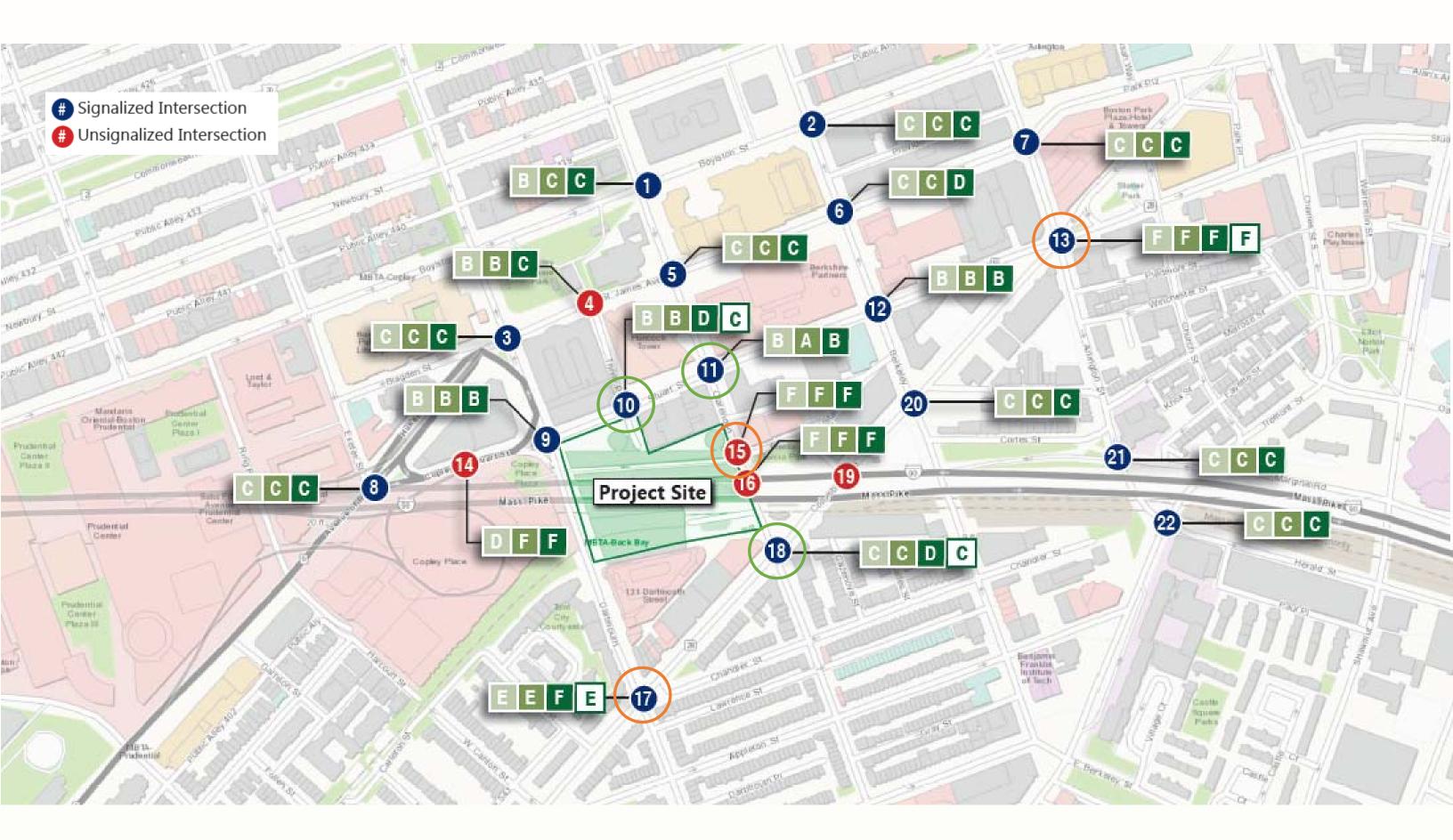












Proposed Mitigation

Signal Phasing/Timing

- Stuart St/Arlington St (#13)
- Columbus Ave/Dartmouth St (#17)
- Columbus Ave/Clarendon St (#18)
- Stuart St/Clarendon St (#11)
- Stuart St/Trinity PI (#10) Alternate Scheme Only

Roadway Modifications

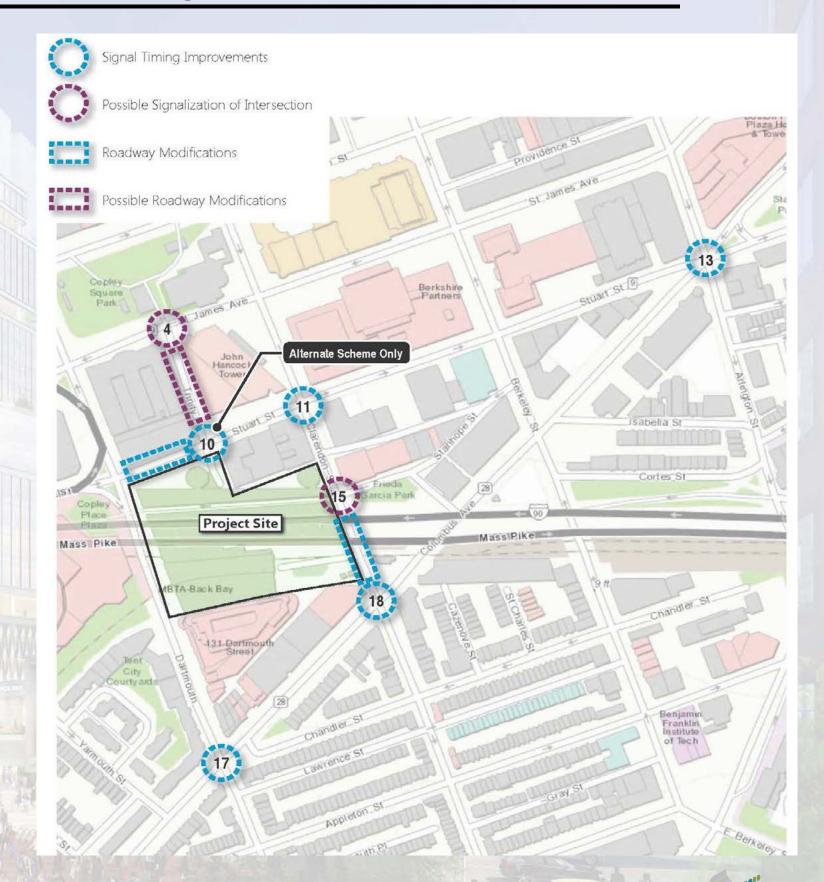
- Stuart Street
- Clarendon Street

Possible Signalization of Intersection

- St. James Street at Trinity Place (#4)
- Clarendon Street at Stanhope Street (#15)

Possible Roadway Modifications

• Trinity Place







Peak Hour Project Transit Trips

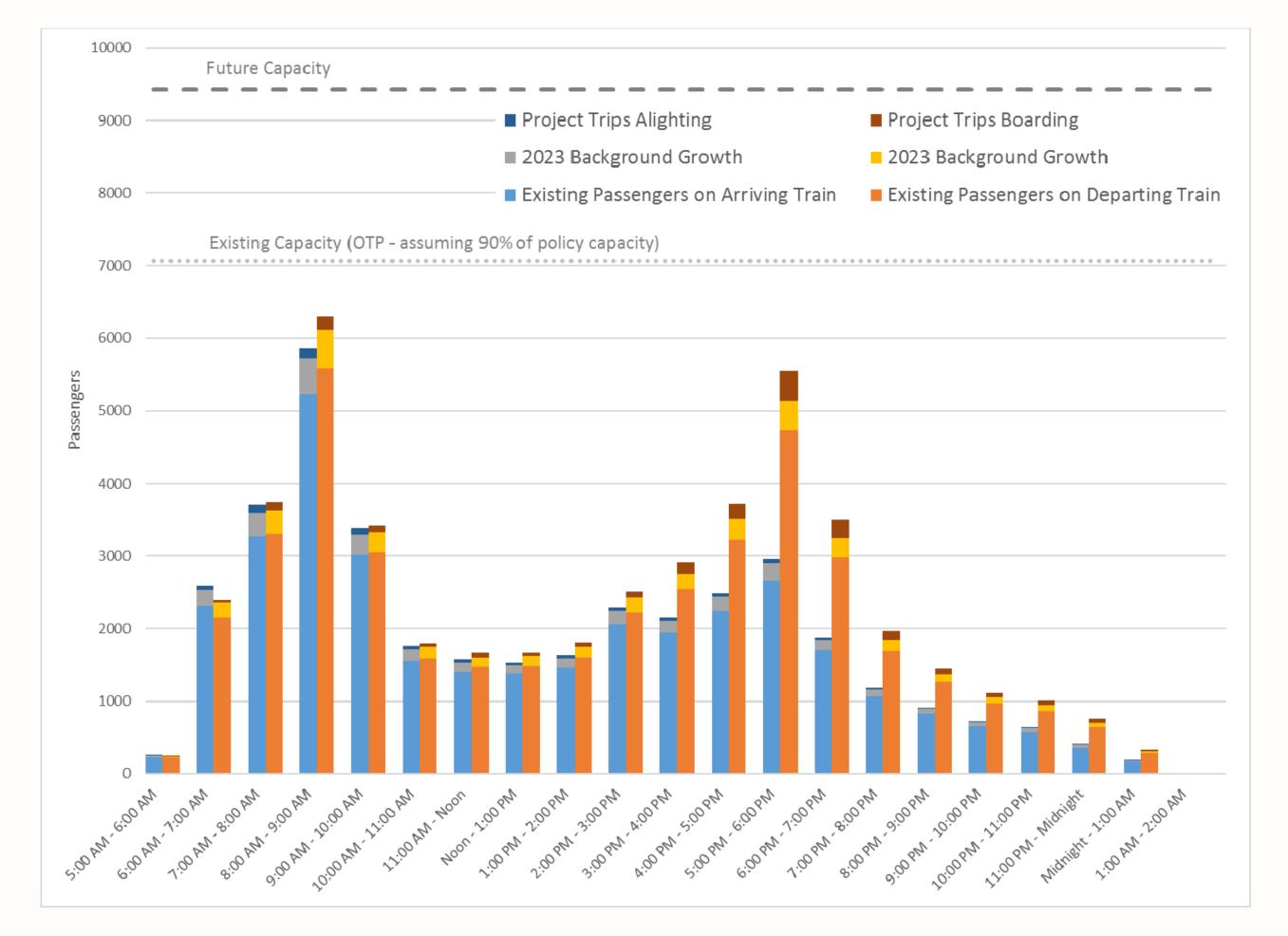
	Morning Peak (8:00 – 9:00 AM)	Evening Peak (5:00 – 6:00 PM)
Office	467	389
Residential	105	103
Retail	31	140
Total	603	632

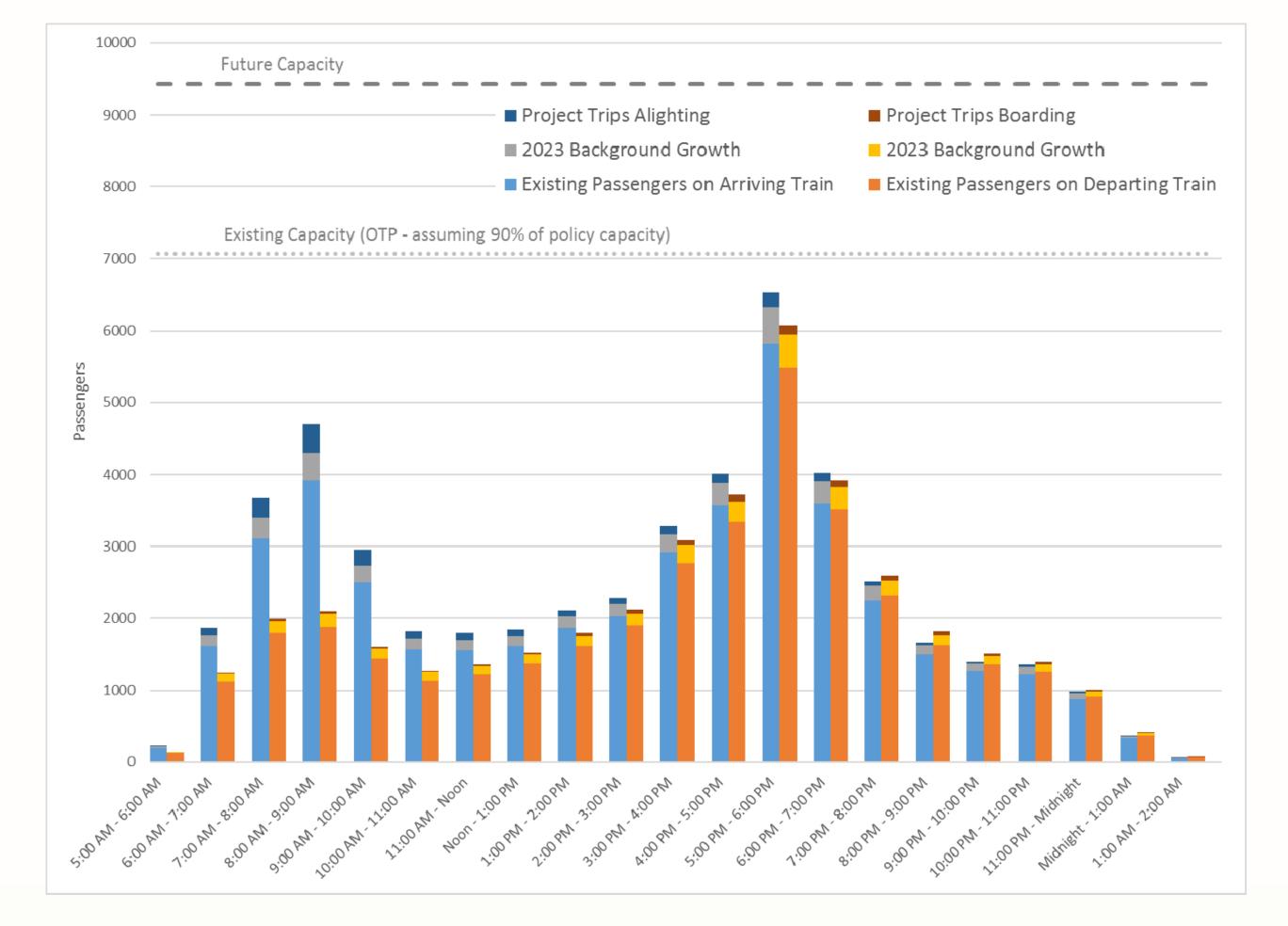
Transit Service	Share	Morning Peak (8:00 – 9:00 AM)	Evening Peak (5:00 – 6:00 PM)
Commuter Rail	24%	142	148
Orange Line	50%	304	320
Green Line	6%	36	36
Bus	20%	121	128

Transit Analysis

- MBTA "Policy Capacity" is based on providing a "safe and comfortable ride"
- "Crush Capacity" includes additional passengers standing in vehicle
- Almost 50% of Project trips will be by transit of which 50% use Orange Line
- Existing capacity analysis conservatively based on "On-Time-Performance" (90% Policy Capacity)
- New Orange Line cars in 2019 will reduce headways from 6 to 4 minutes
- Orange Line capacity will increase substantially before the Project is built
- Orange Line operates well within Policy Capacity for Future No-Build and Build conditions
- No increase in capacity assumed for Commuter Rail and Bus analysis
- Commuter Rail largely operates within capacity for Future No-Build and Build conditions
- Bus services largely operate within capacity for Future No-Build and Build conditions











AM Peak Hour Commuter Rail V/C Ratio Analysis

	2016 Existing		2023 N	No-Build	2023	Build
	Entering V/C Ratio	Exiting V/C Ratio	Entering V/C Ratio	Exiting V/C Ratio	Entering V/C Ratio	Exiting V/C Ratio
Franklin Line Inbound (to South Station)	0.72	0.44	0.79	0.49	0.80	0.49
Franklin Line Outbound (to Franklin)	0.01	0.03	0.01	0.03	0.01	0.03
Needham Line Inbound (to South Station)	0.56	0.39	0.61	0.43	0.62	0.43
Needham Line Outbound (to Needham)	0.09	0.04	0.10	0.04	0.10	0.04
Providence/Stoughton Line Inbound (to South Station)	0.94	0.52	1.04	0.57	1.05	0.57
Providence/Stoughton Line Outbound (to Providence/Stoughton)	0.17	0.16	0.19	0.18	0.19	0.18
Framingham/Worcester Line Inbound (to South Station)	0.68	0.40	0.75	0.44	0.75	0.44
Framingham/Worcester Line Outbound (to Framingham/Worcester)	0.10	0.18	0.11	0.22	0.11	0.21

PM Peak Hour Commuter Rail V/C Ratio Analysis

	2016 E	xisting	2023 No-Build		2023 Build	
	Entering V/C Ratio	Exiting V/C Ratio	Entering V/C Ratio	Exiting V/C Ratio	Entering V/C Ratio	Exiting V/C Ratio
Franklin Line Inbound (to South Station)	0.04	0.03	0.05	0.03	0.05	0.03
Franklin Line Outbound (to Franklin)	0.40	0.62	0.44	0.67	0.44	0.68
Needham Line Inbound (to South Station)	0.04	0.04	0.04	0.04	0.04	0.04
Needham Line Outbound (to Needham)	0.77	1.14	0.83	1.24	0.84	1.24
Providence/Stoughton Line Inbound (to South Station)	0.06	0.04	0.06	0.04	0.07	0.04
Providence/Stoughton Line Outbound (to Providence/Stoughton)	0.58	0.91	0.63	0.99	0.63	1.00
Framingham/Worcester Line Inbound (to South Station)	0.15	0.11	0.16	0.12	0.17	0.12
Framingham/Worcester Line Outbound (to Framingham/Worcester)	0.33	0.50	0.36	0.54	0.36	0.55



AM Peak Hour Bus V/C Ratio Analysis

	2016 Existing		2023 N	2023 No-Build		Build
	Entering V/C Ratio	Exiting V/C Ratio	Entering V/C Ratio	Exiting V/C Ratio	Entering V/C Ratio	Exiting V/C Ratio
Bus 9 Inbound	0.51	0.35	0.67	0.46	0.72	0.46
Bus 9 Outbound	0.25	0.30	0.32	0.40	0.32	0.42
Bus 10 Inbound	0.33	0.20	0.33	0.20	0.35	0.20
Bus 10 Outbound	0.25	0.50	0.26	0.51	0.26	0.51
Bus 39 Inbound	0.06	-	0.07	-	0.08	-
Bus 39 Outbound	-	0.16	-	0.17	-	0.17
Bus 55 Inbound	-	-	-	-	-	-
Bus 55 Outbound	0.29	0.31	0.29	0.31	0.30	0.31
Express Bus 170 Inbound	-	-	-	-	-	-
Express Bus 170 Outbound	0.11	0.20	0.12	0.22	0.19	0.24
Express Bus 502 Inbound	0.38	0.02	0.43	0.02	0.46	0.02
Express Bus 502 Outbound	0.19	0.16	0.22	0.18	0.22	0.19
Express Bus 503 Inbound	0.56	0.13	0.74	0.18	0.88	0.18
Express Bus 503 Outbound	0.06	0.13	0.07	0.17	0.77	0.23

PM Peak Hour Bus V/C Ratio Analysis

	2016 Existing		2023 N	2023 No-Build		Build
	Entering V/C Ratio	Exiting V/C Ratio	Entering V/C Ratio	Exiting V/C Ratio	Entering V/C Ratio	Exiting V/C Ratio
Bus 9 Inbound	0.15	0.08	0.18	0.10	0.20	0.10
Bus 9 Outbound	0.18	0.54	0.22	0.66	0.22	0.69
Bus 10 Inbound	0.46	0.24	0.53	0.27	0.56	0.27
Bus 10 Outbound	0.29	0.40	0.33	0.46	0.33	0.52
Bus 39 Inbound	0.07	-	0.08	-	0.08	-
Bus 39 Outbound	-	0.05	-	0.06	-	0.07
Bus 55 Inbound	-	-	-	-	-	-
Bus 55 Outbound	0.31	0.42	0.39	0.52	0.44	0.66
Express Bus 170 Inbound	0.23	0.05	0.27	0.06	0.31	0.15
Express Bus 170 Outbound	-	-	-	-	-	-
Express Bus 502 Inbound	0.21	0.04	0.26	0.05	0.28	0.05
Express Bus 502 Outbound	0.04	0.59	0.05	0.73	0.05	0.78
Express Bus 503 Inbound	0.04	-	0.05	-	0.12	-
Express Bus 503 Outbound	0.07	0.70	0.10	0.93	0.10	1.11

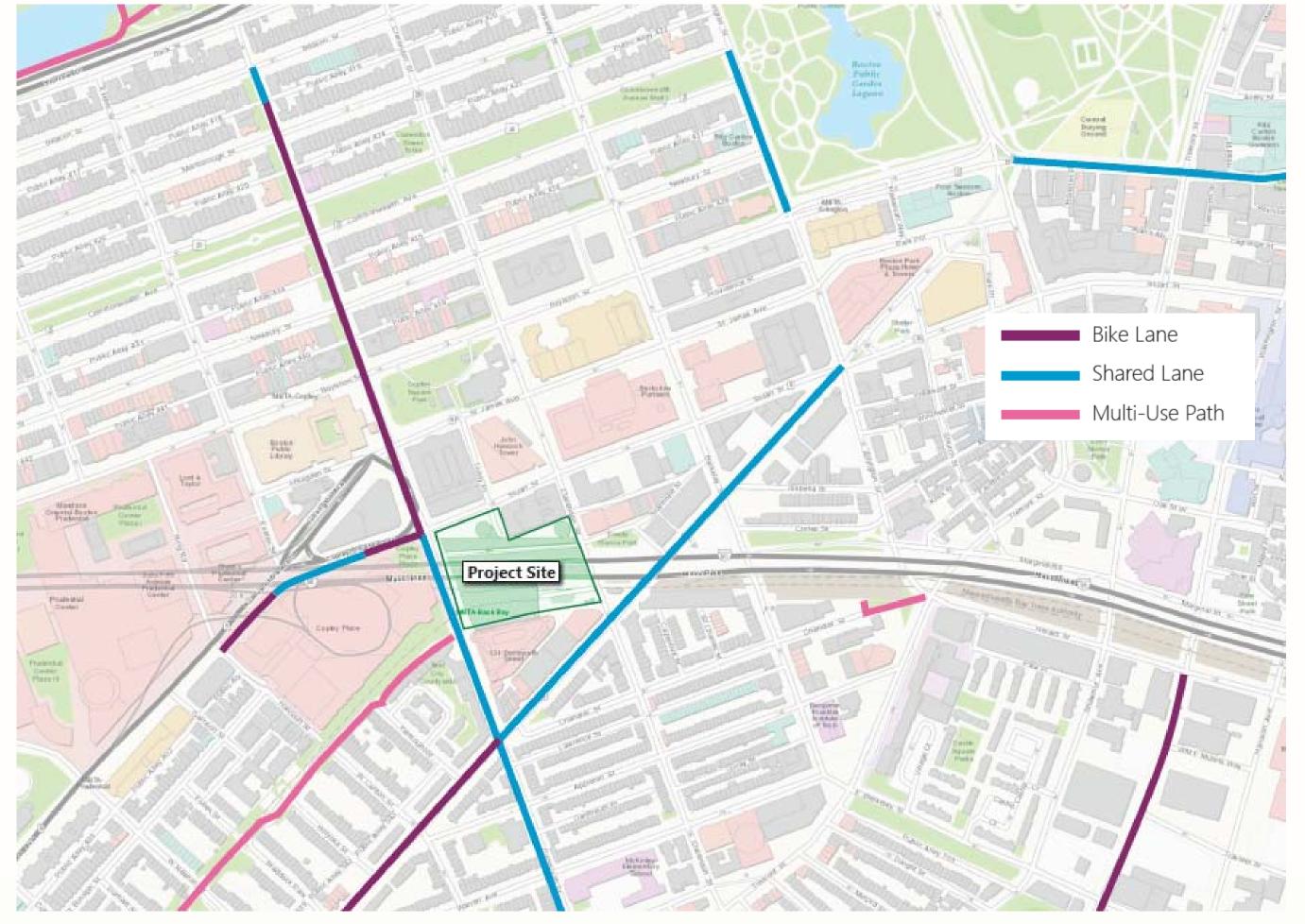
Project Parking Ratios

Existing garage average daily occupancy is 78%

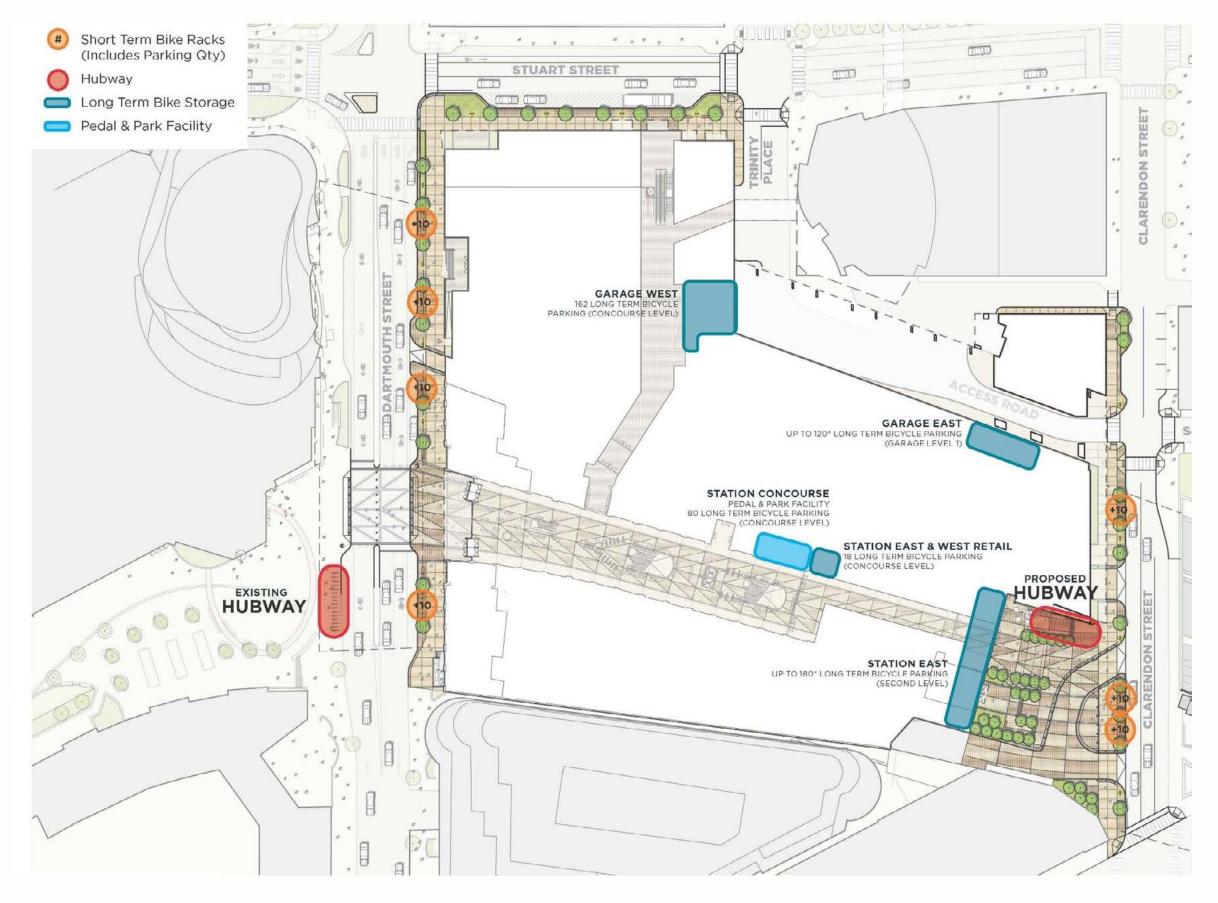
Parking ratios are based on other Downtown Boston mixed-use and TOD projects

* Shared parking between residential and office users

Lane Use	Size	Parking Ratio	Parking Spaces
Lulle Use	JIZE	Tarking Kano	Turking opuces
Office	582,600 SF	0.4	233
Residential 600 units		0.4	180 *
Retail	Retail 58,900 SF		24
Project Sub-total		437	
Existing commitm	992		
Permitted public	Up to 576		
Total			Up to 2,013



101



- Garage West
 - 162 Long Term Spaces
 - 30 Short Term Spaces
- Garage East
 - 120 Long Term Spaces
 - 10 Short Term Spaces
- Station East
 - 180 Long Term Spaces
 - 10 Short Term Spaces
- Station West
 - 18 Long Term Spaces
 - 20 Short Term Spaces

Transportation Demand Management (TDM)

- Preferential parking for carpools/vanpools
- Short term bicycle parking near lobbies
- Hubway station delivered with Station East Parcel
- Covered and secure bicycle parking for residents and employees with each Parcel
- Join A Better City (ABC) TMA to access its alternate transportation programs
- On-site Transportation Coordinator for City, local TMA and tenants/residents
- Provide transit maps, schedules, commuting options, etc.
- On-site transportation events
- Monitoring program
- Construction Management Plan (CMP)
- Transportation Access Plan Agreement (TAPA)



NEXT STEPS + CONTACT INFORMATION

- CAC Meeting #9
 March 13, 2017
- CAC Meeting #10 March 29, 2017
- MEPA DEIR Comment Period Closes March 10 April 18, 2017
- BPDA DPIR Comment Period Closes April 18, 2017

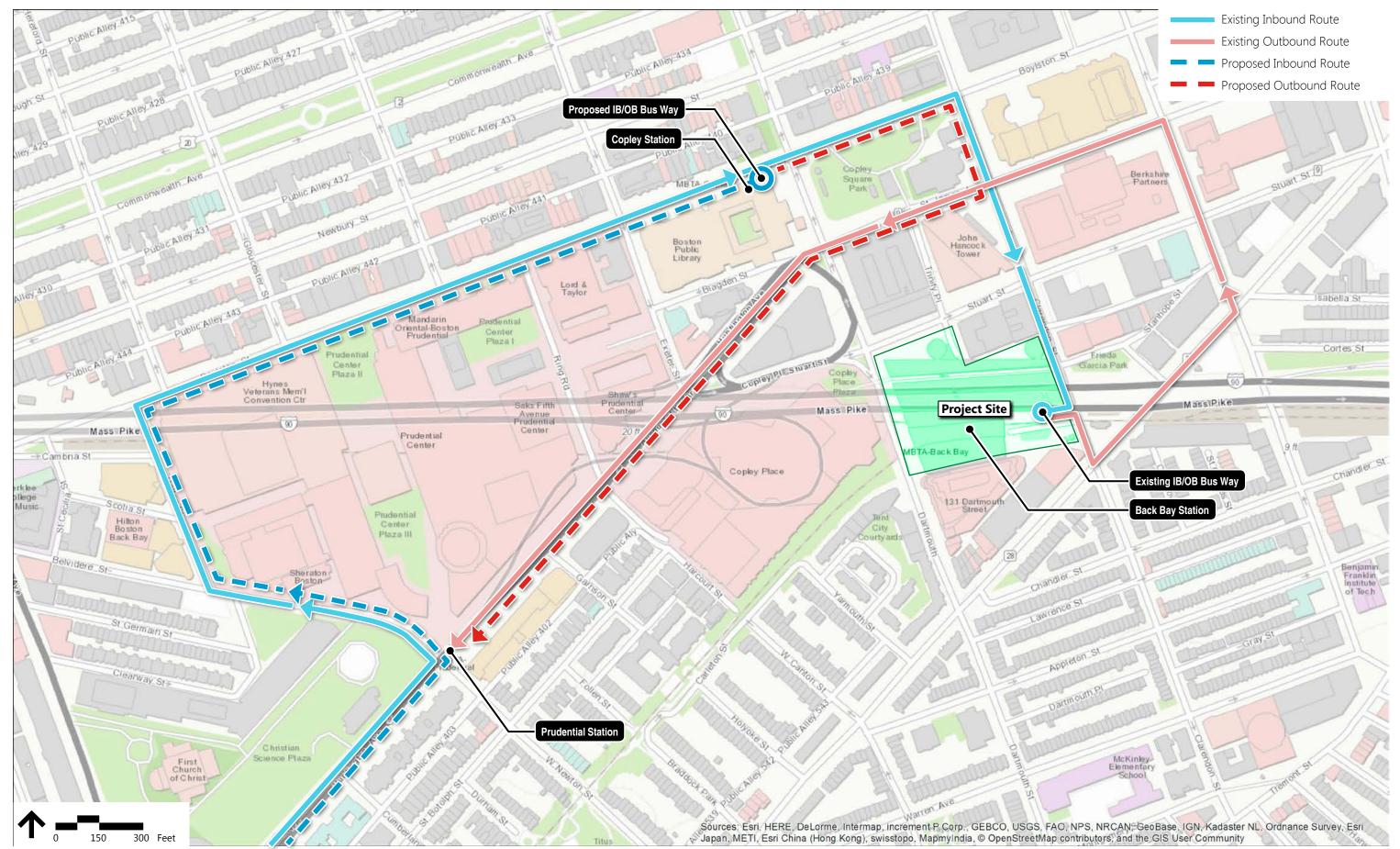
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Source: Preferred Option provided by Peter Paravalos of the MBTA via email to Melissa Schrock on September 30, 2016

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

