TASK 3.1

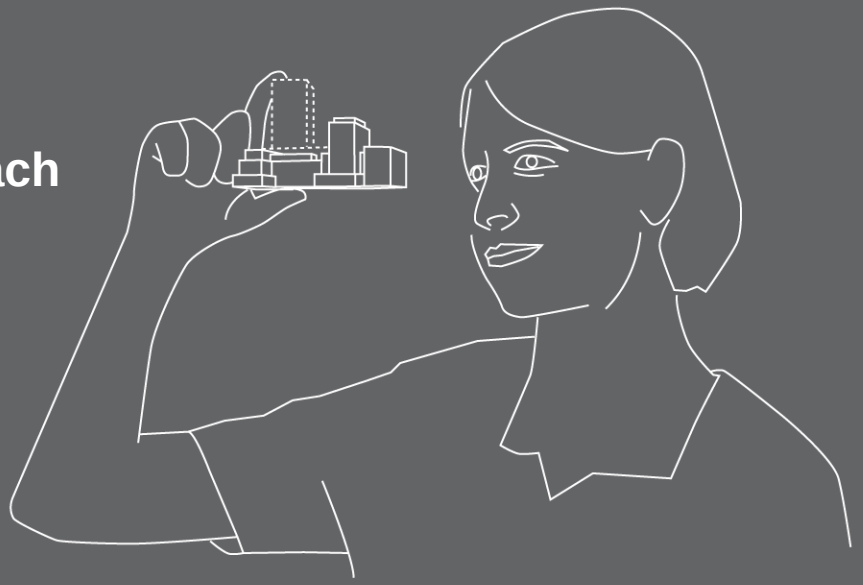
Public transit, automobile traffic and loading

1: Timeline Update and Project Approach

2: Transportation Conditions and Challenges

3: Zoning Strategies

4: Next Steps



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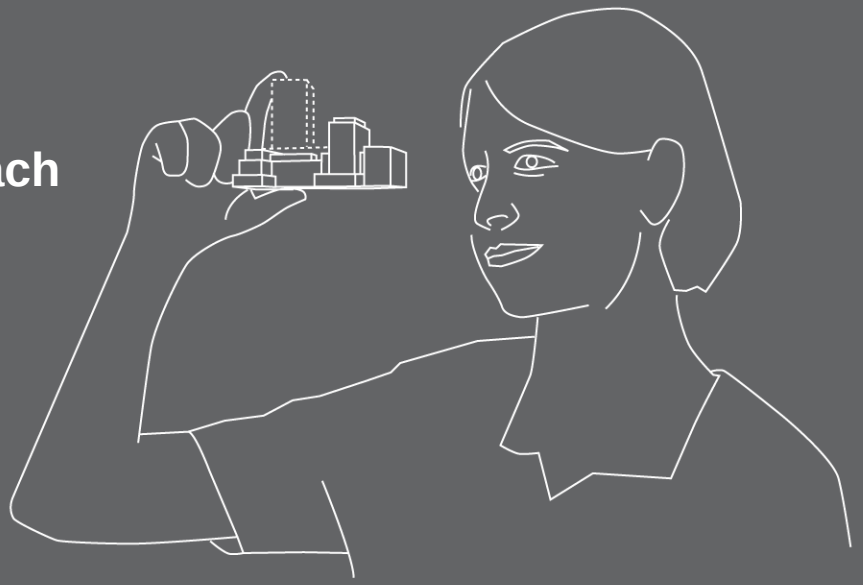
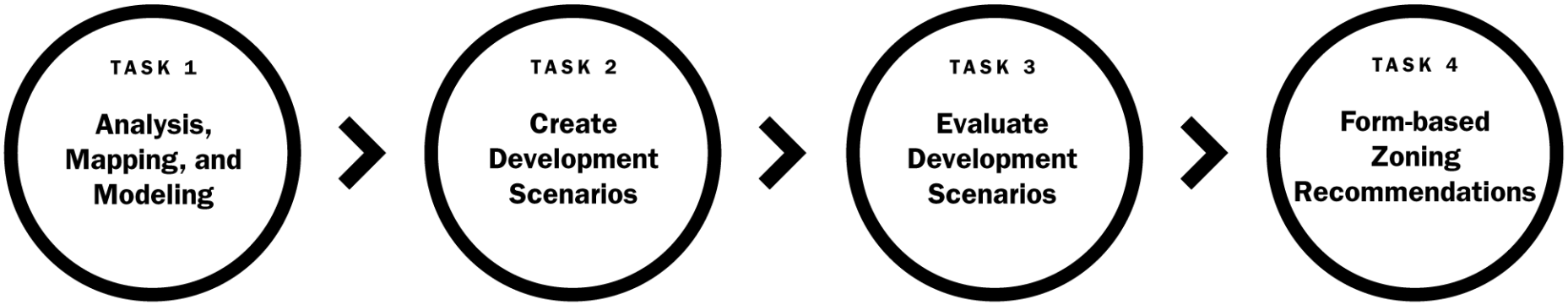
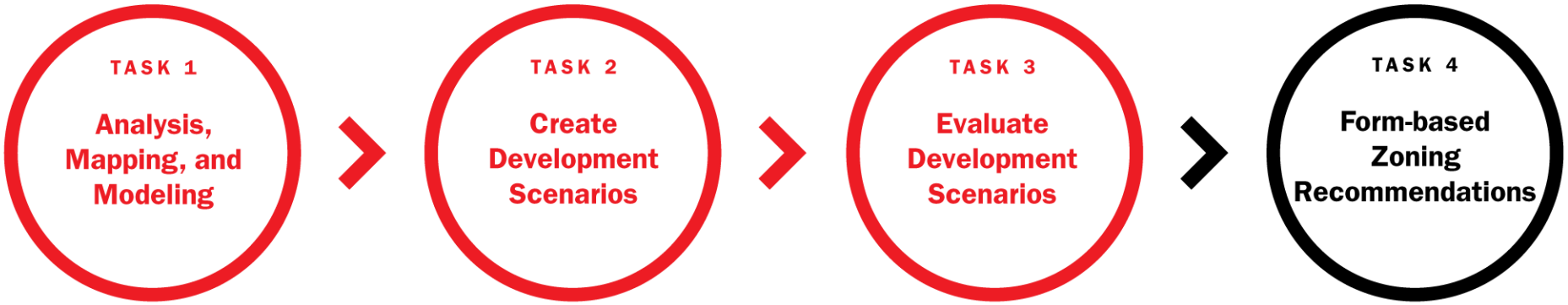
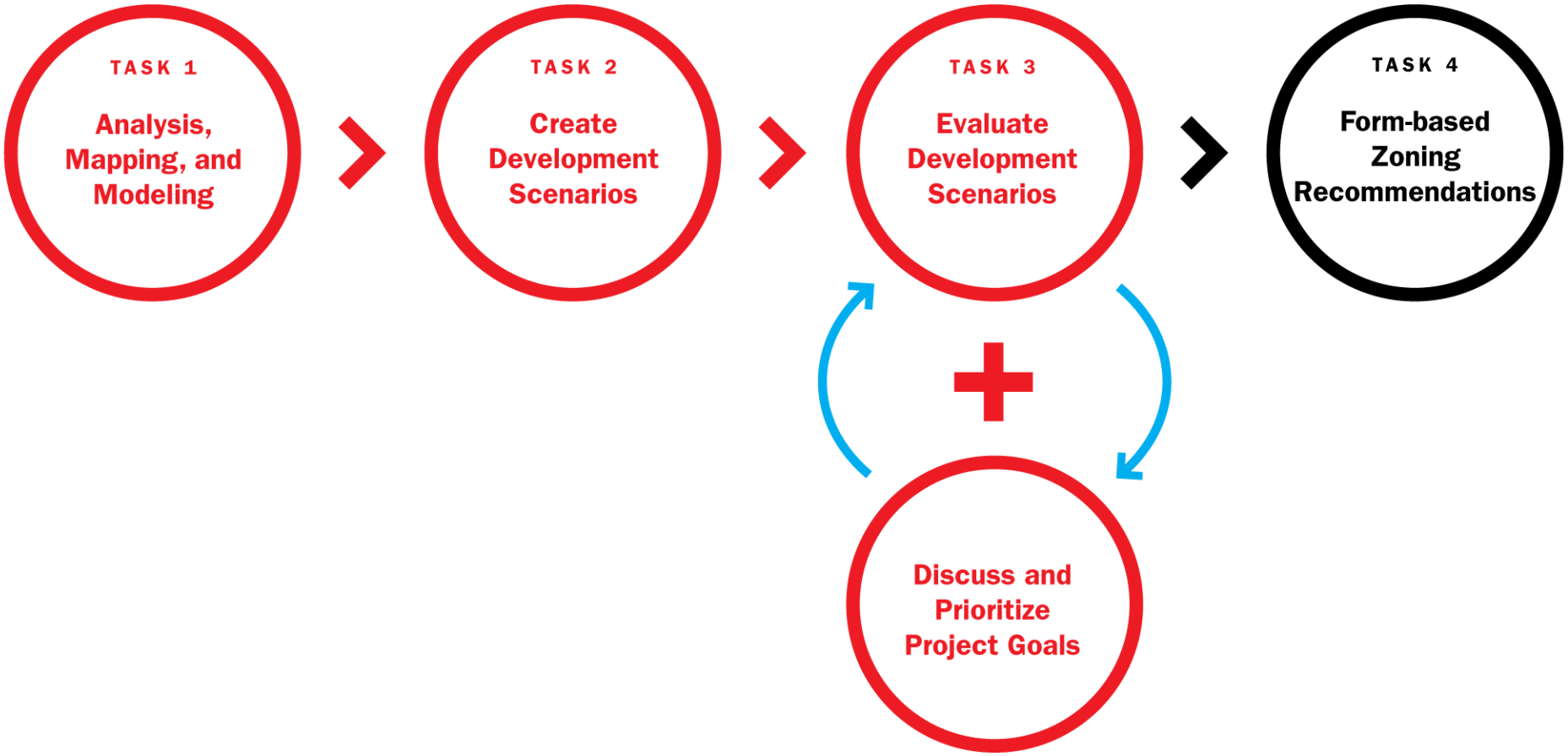




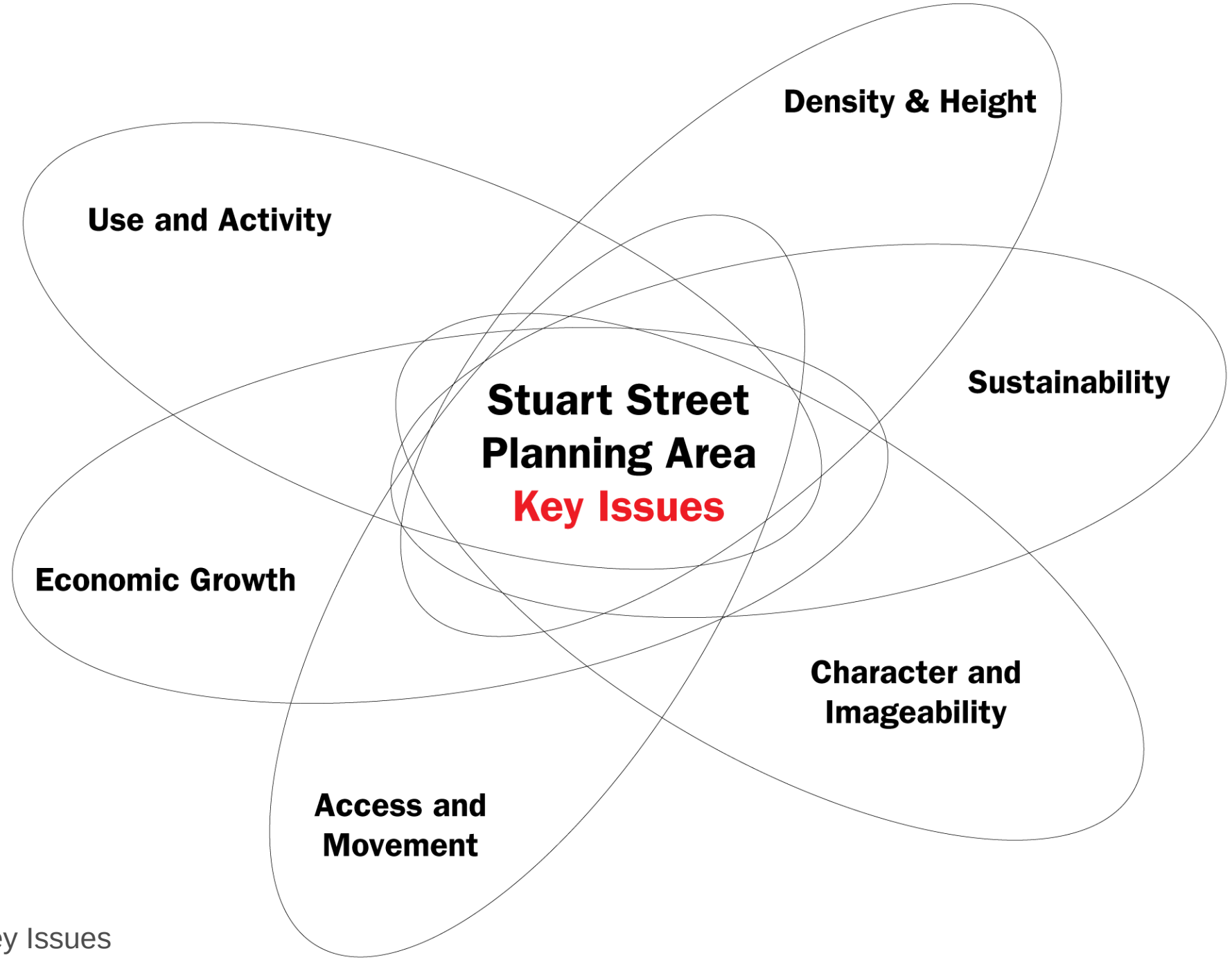
Project Timeline



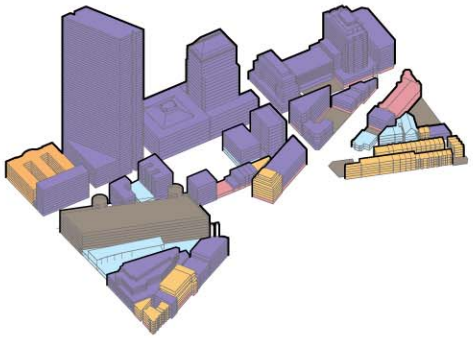
Project Timeline

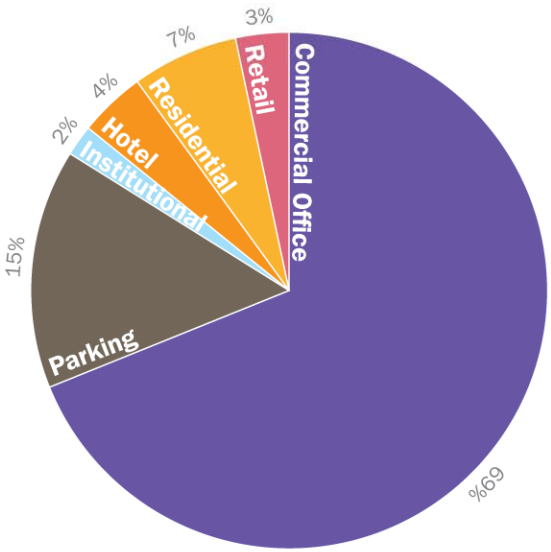


Project Timeline


Density & Height
Use and Activity
Stuart Street
Planning Area
Key Issues
Sustainability
Economic Growth
Character and
Imageability
Access and
Movement

Key Issues





Existing

without

Clarendon + Columbus towers

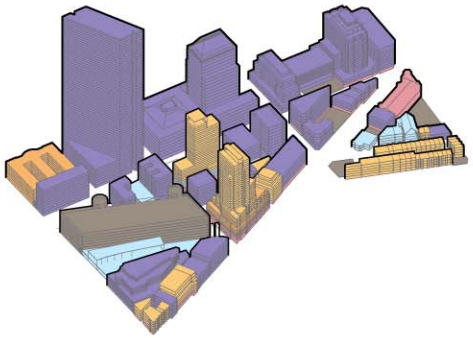
8,456,673 gsf

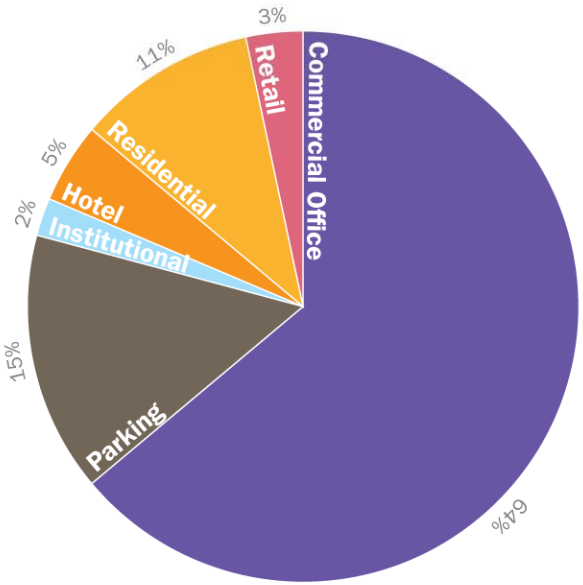
MXI 7*

Existing uses

Source: Utile revit model

*MXI = Mixed Use Index. Percentage of total GSF devoted to residential. An MXI of 20-60 is typical in mixed-use central city districts. Developed by Joost W. van den Hoek, Delft University.



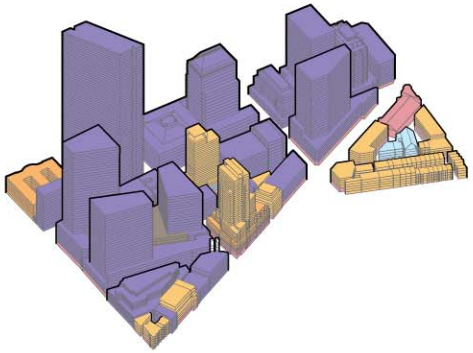


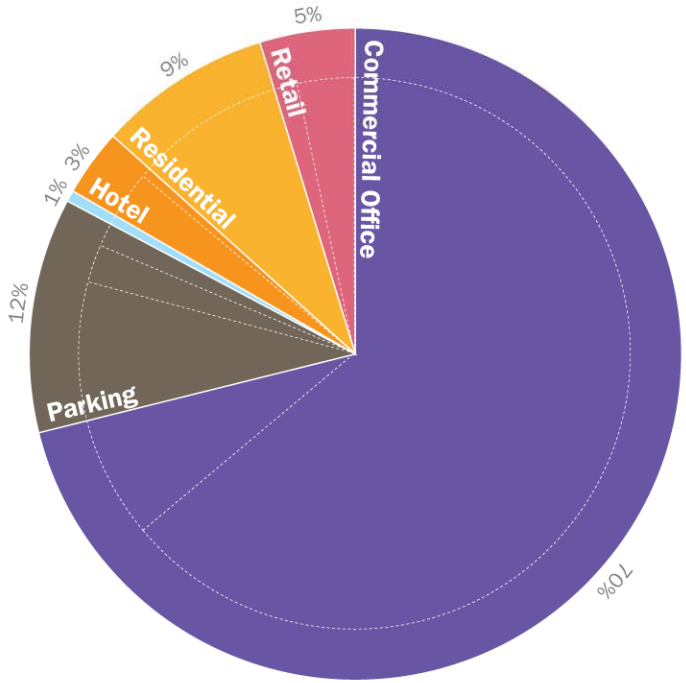
Existing
with
Clarendon + Columbus towers

9,620,323 gsf
MXI 11*

Existing uses

Source: Utile revit model
*MXI = Mixed Use Index. Percentage of total GSF devoted to residential. An MXI of 20-60 is typical in mixed-use central city districts. Developed by Joost W. van den Hoek, Delft University.





Scenario A

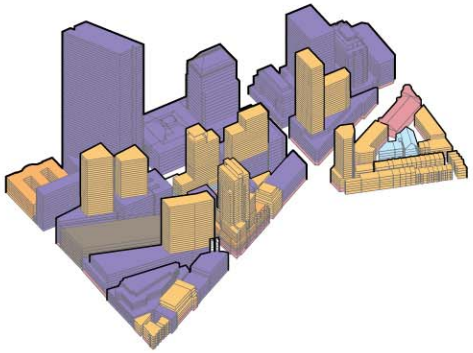
Commercial-oriented

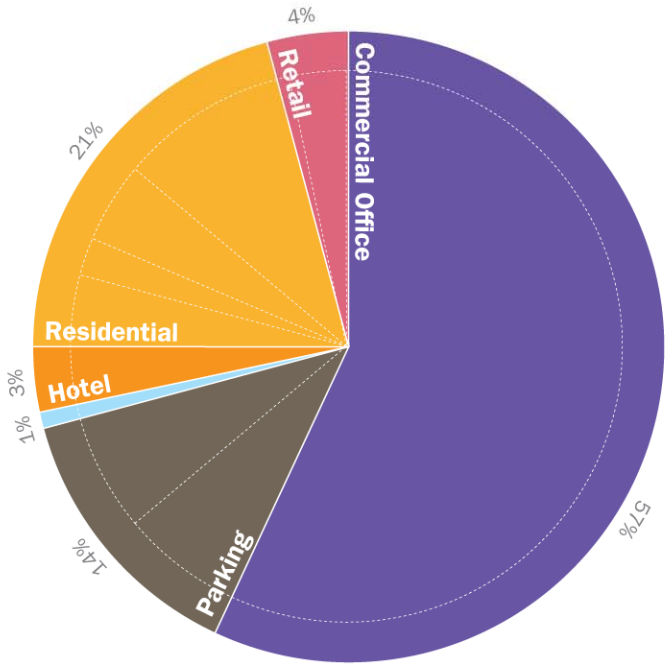
13,469,662 gsf
MXI 9*

Development scenario uses

Source: Utile revit model

*MXI = Mixed Use Index. Percentage of total GSF devoted to residential. An MXI of 20-60 is typical in mixed-use central city districts. Developed by Joost W. van den Hoek, Delft University.





Scenario B

Residential-oriented

12,646,225 gsf
MXI 21*

Development scenario uses

Source: Utile revit model
*MXI = Mixed Use Index. Percentage of total GSF devoted to residential. An MXI of 20-60 is typical in mixed-use central city districts. Developed by Joost W. van den Hoek, Delft University.

Task 3.1 (today)

Transportation

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

Environmental Impacts

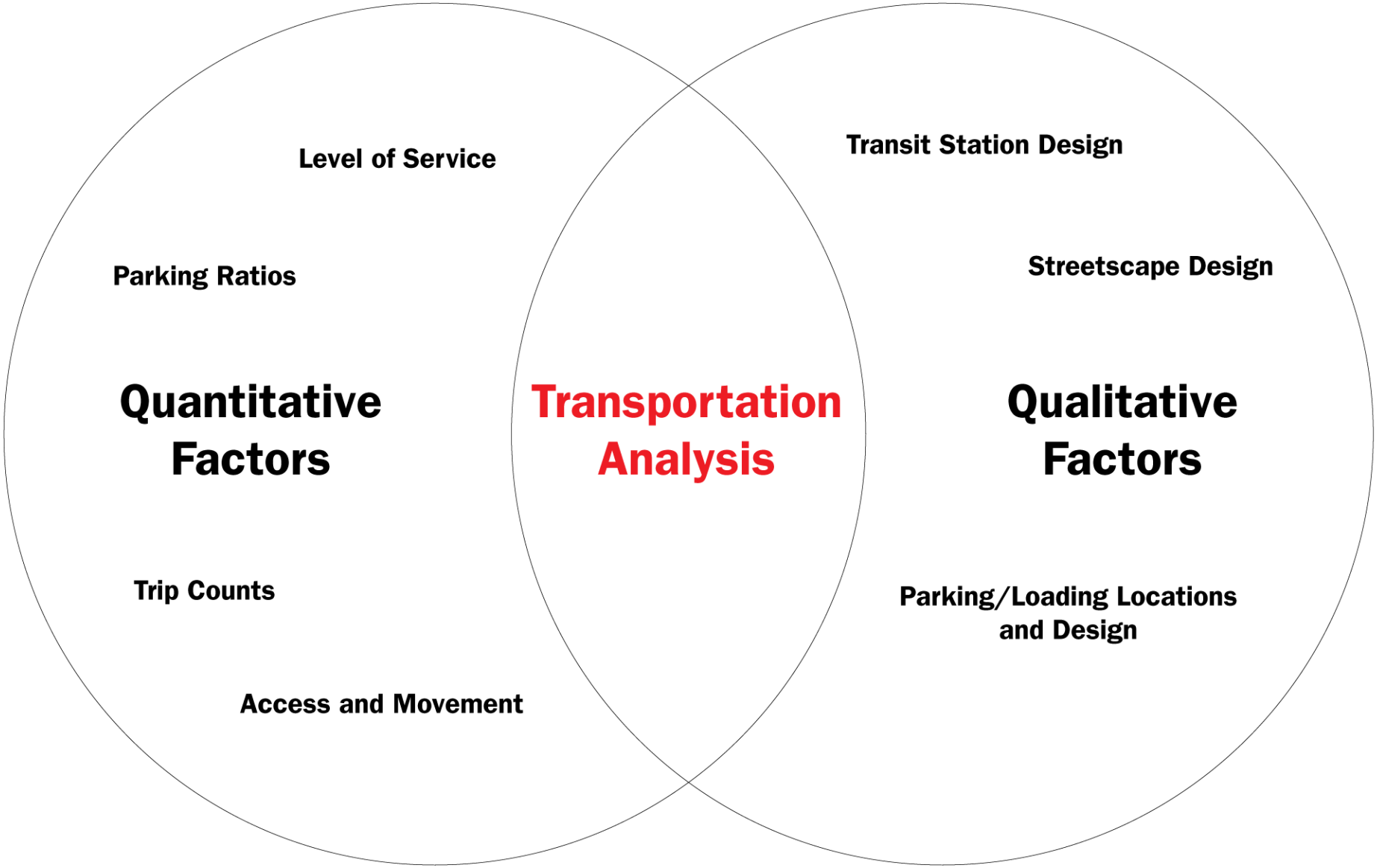
- ☐ Wind
- ☐ Shadows
- ☐ Utility Infrastructure
- ☐ Groundwater

Economics and Real Estate

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

Urban Design

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


Level of Service
Parking Ratios
Quantitative Factors
Trip Counts
Access and Movement
Transportation Analysis
Transit Station Design
Streetscape Design
Qualitative Factors
Parking/Loading Locations and Design

TASK 3.1

Public transit, automobile traffic and loading

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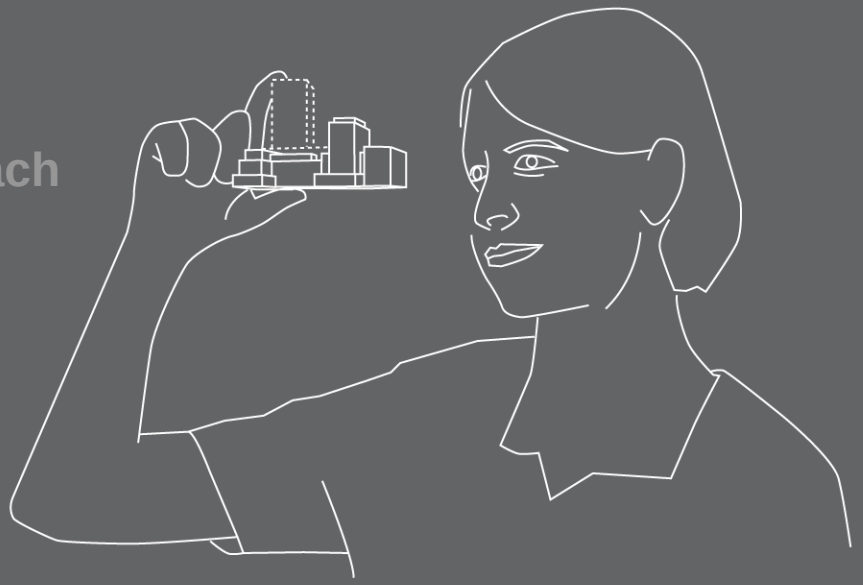
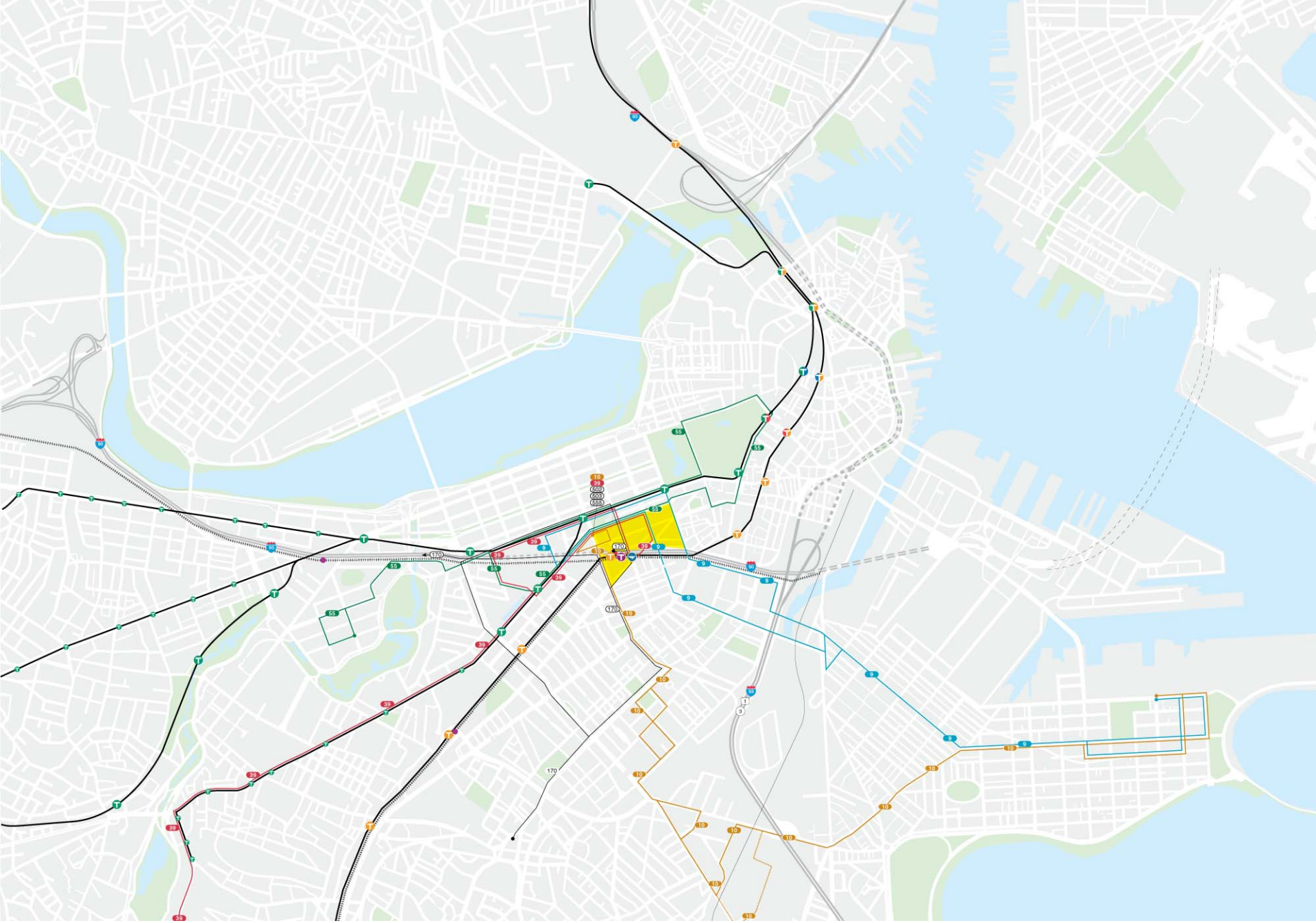


Transit

At the city-scale, the study area serves as a major transit hub.



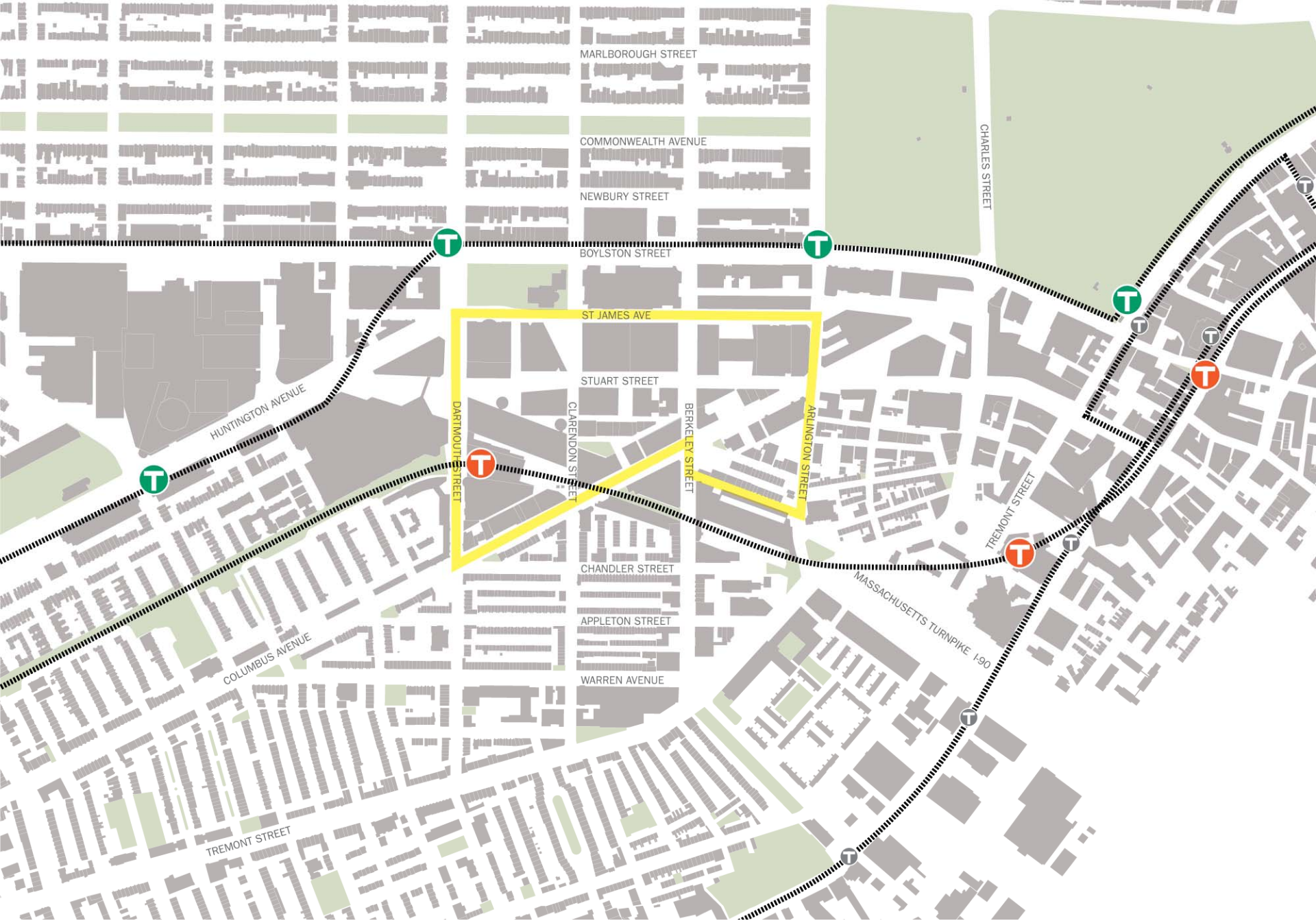
A major transit hub for the city

Source: MBTA

Transit

The study area is sufficiently served by bus, subway and rail.

Future development might require additional frequency, but additional transit lines are unlikely.



Subway Routes and Stations

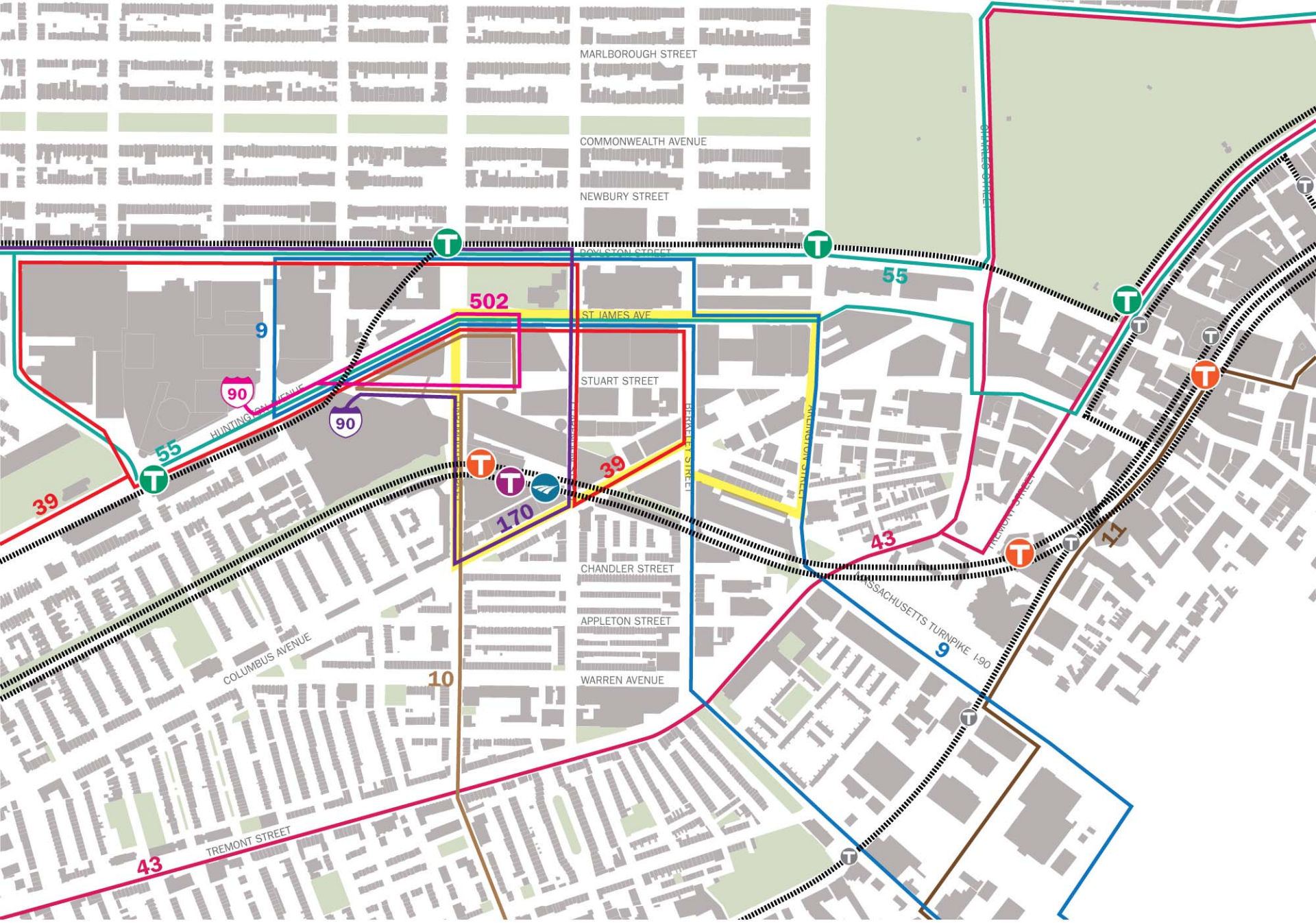
Source: MBTA

0 175 350 700

Bus Routes

Source: MBTA

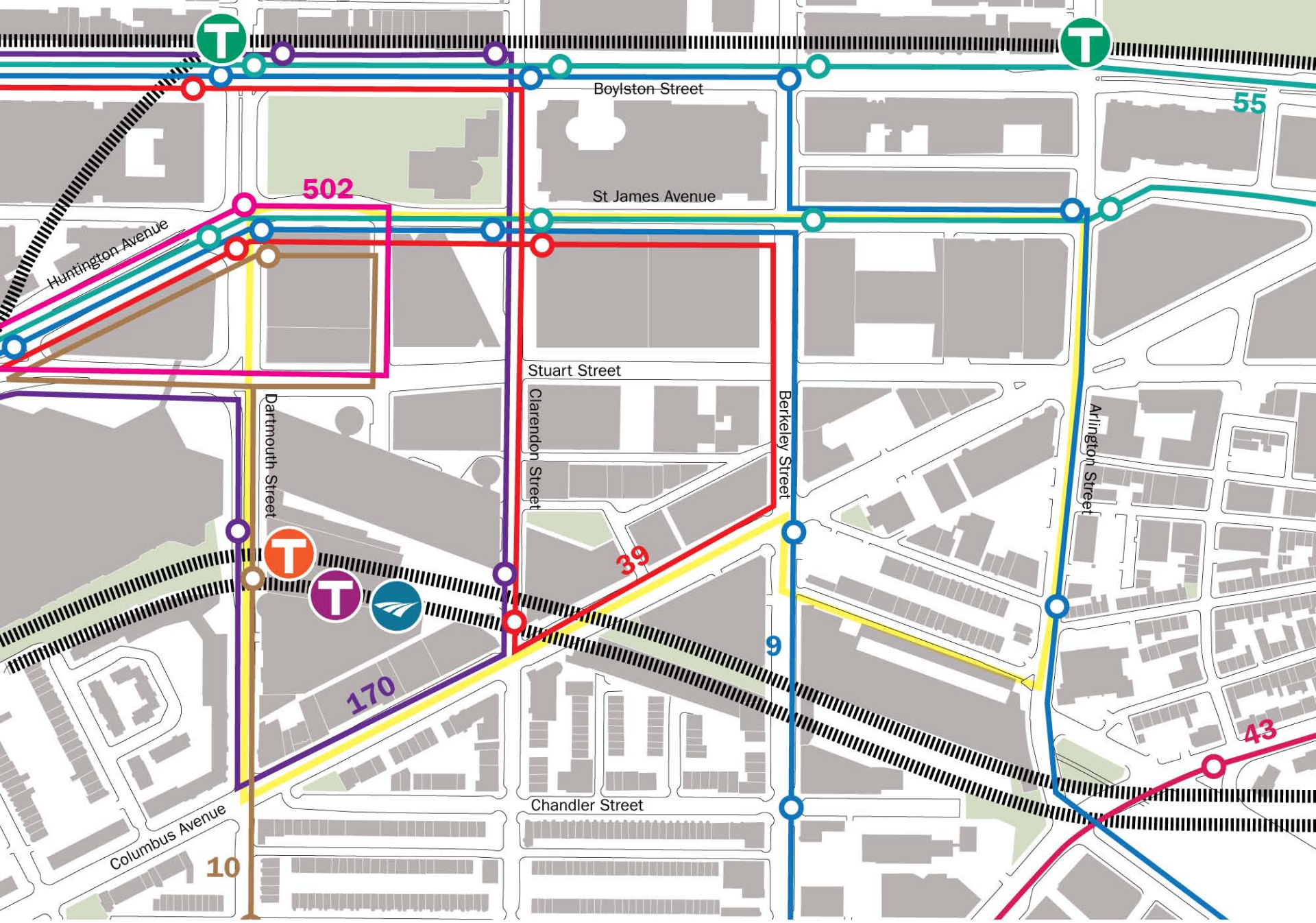
0 175 350 700



Subway Routes and Stations

Source: MBTA

0 175 350 700



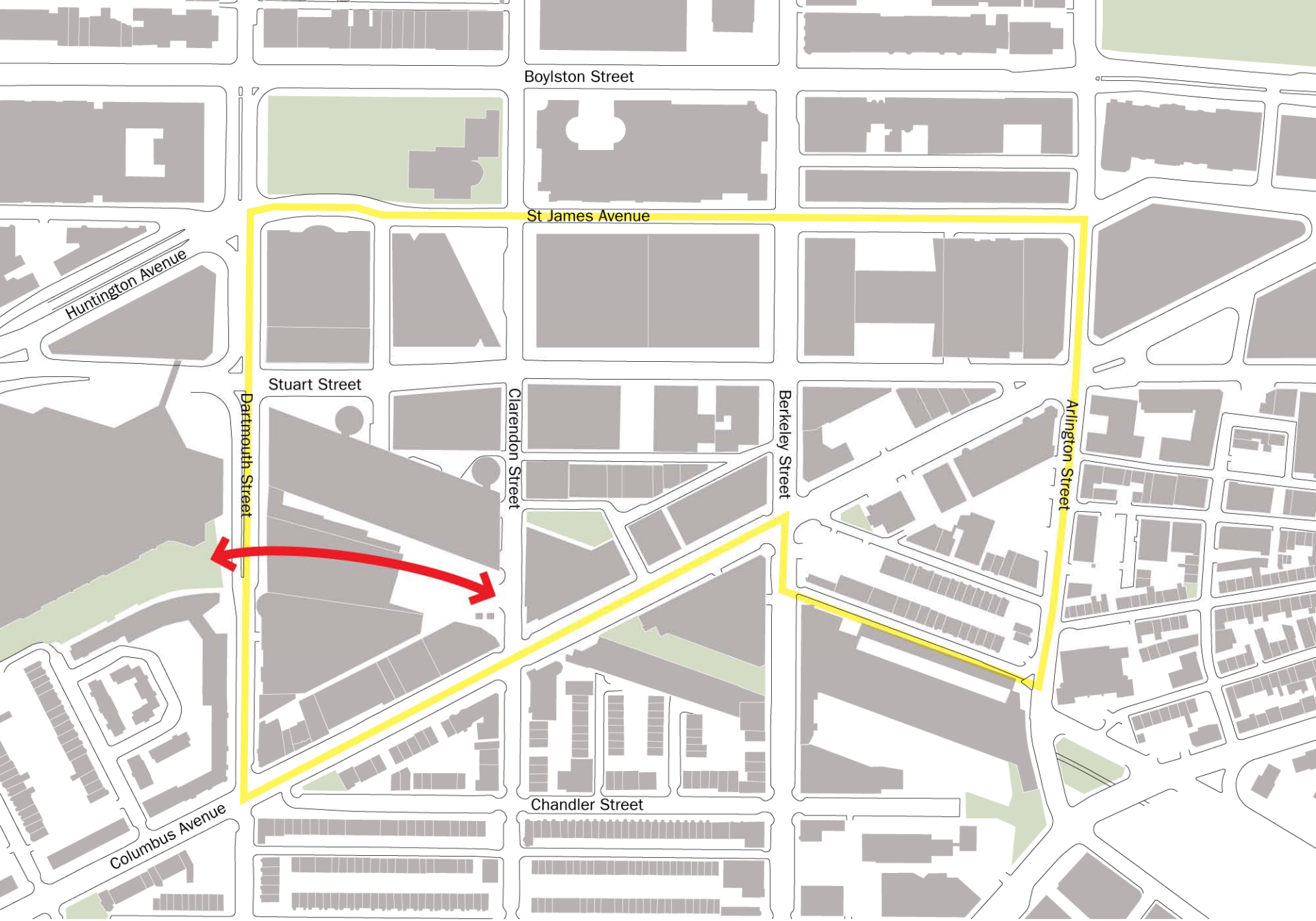
Subway Routes and Stations, Bus Routes and Stops

Source: MBTA

0 75 150 300

Transit

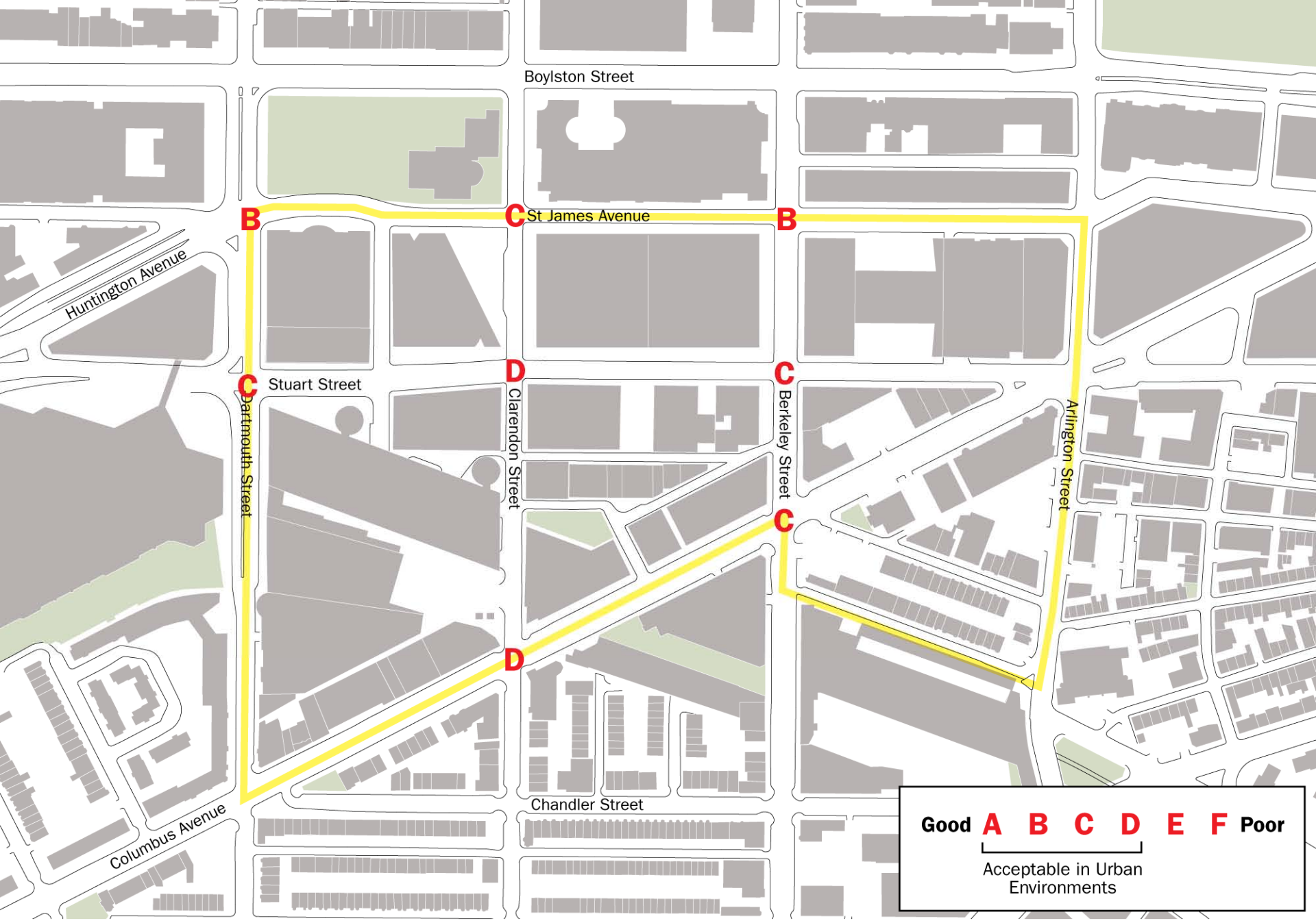
The Back Bay station contributes to the neighborhood by creating a pedestrian connection through a large block.


Boylston Street
St James Avenue
Huntington Avenue
Stuart Street
Dartmouth Street
Clarendon Street
Berkeley Street
Arlington Street
Chandler Street
Columbus Avenue
0
75
150
300

Traffic & Parking

Traffic movement is acceptable.

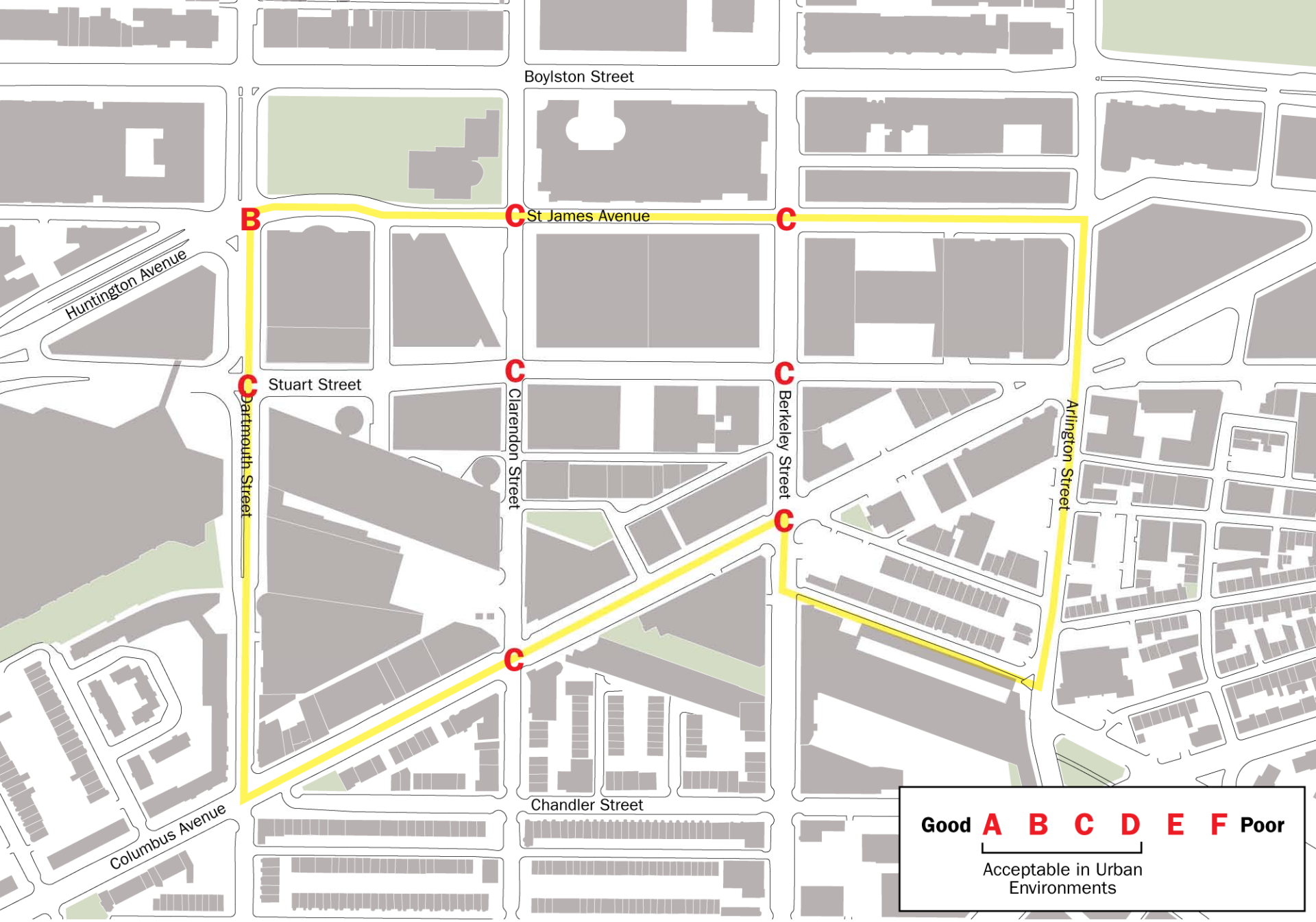
Existing levels of service are either average or above average.



2003 Level of Service: Morning Peak Hour

Source: Clarendon ENF

0 75 150 300



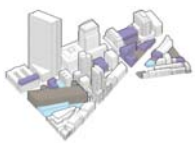
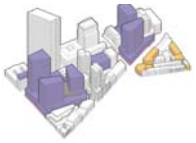
2003 Level of Service: Evening Peak Hour

Source: Clarendon ENF

0 75 150 300

Stuart Street Planning Study
Planning - Level Trip Generation Comparison

DRAFT


Program Summary	Existing	Scenario A	Scenario B
U Club (sf)	28,185	0	0
Day Care (sf)	30,746	0	0
Fire station (sf)	13,294	0	0
Commercial Office (sf)	755,226	4,780,631	2,227,449
Retail (sf)	30,991	336,762	278,588
Residential (units)	0	202	1,753

Person Trip Generation	Existing	Scenario A	Scenario B
Daily	15,886	82,143	57,919
AM Peak Hour	1,956	9,432	5,560
PM Peak Hour	2,113	10,213	6,540

Auto Trip Generation	Existing	Scenario A	Scenario B
Daily	5,283	28,257	17,565
AM Peak Hour	585	2,878	1,560
PM Peak Hour	626	3,079	1,801

Trip Generation for Development Scenarios

Source: VHB

Traffic & Parking

Commercial parking and residential parking ratios

Off Street Parking within a 5-Minute Walk

Source: Boston Air Pollution Control Commission

Off Street Parking

Source: Boston Air Pollution Control Commission

Commercial

.37 spaces per 1,000 gsf

Based on parking freeze data for total number of designated parking spaces for non-residential uses and total gsf for commercial office.

Residential

.28 spaces per unit

Based on parking freeze data for total number of designated parking spaces for residential uses and total gsf for residential.

Public

.16 spaces per 1,000 gsf

Based on parking freeze data for total number of public parking spaces and total gsf.

Existing Parking Ratios in Study Area

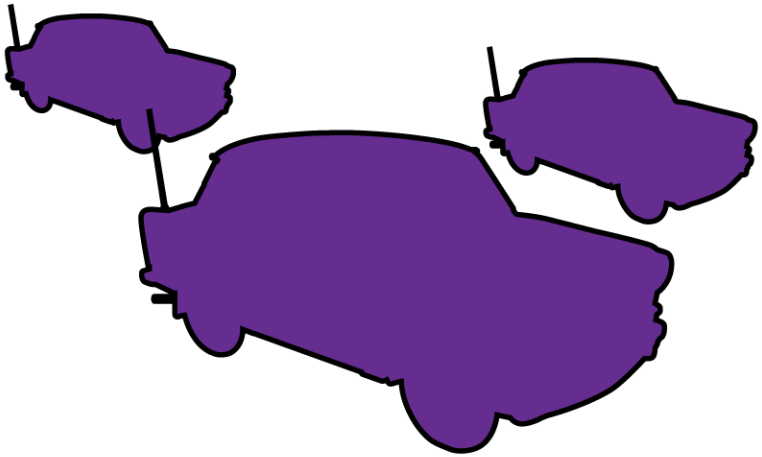
Source: Utile

Clarendon Tower
.75 spaces per unit

Columbus Tower
1.0 - 1.25 spaces per unit

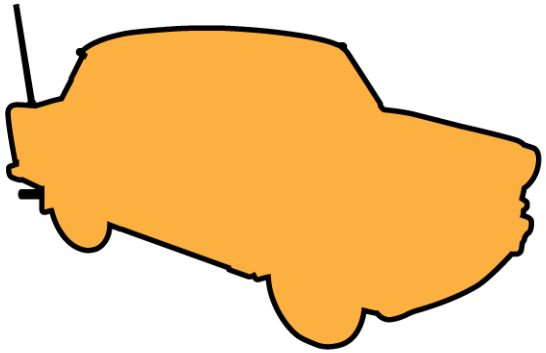
Existing Parking Ratios

Source: Utile



More Trips and Traffic

Commercial and Retail Parking

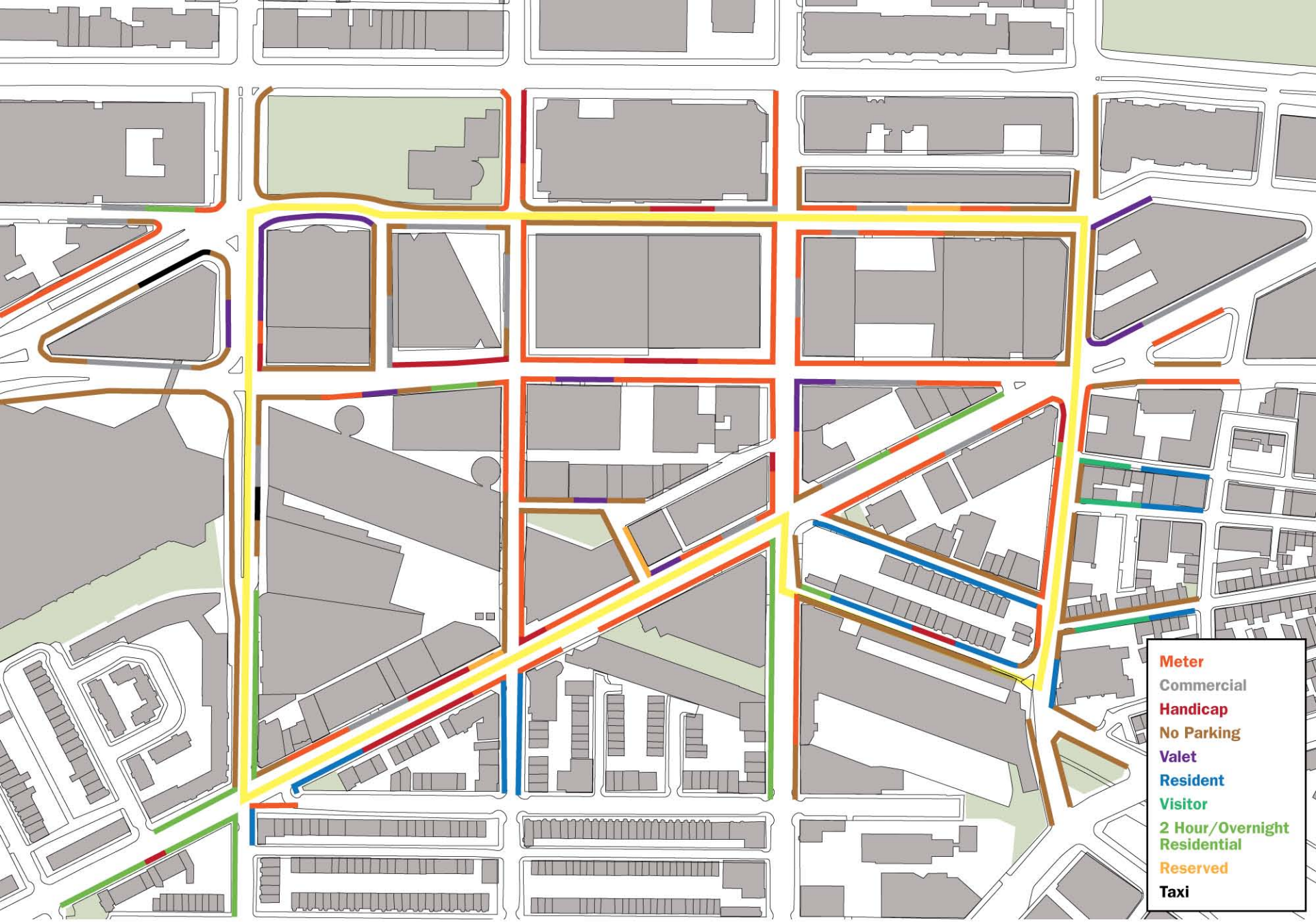


Fewer Trips and Traffic

Residential Parking

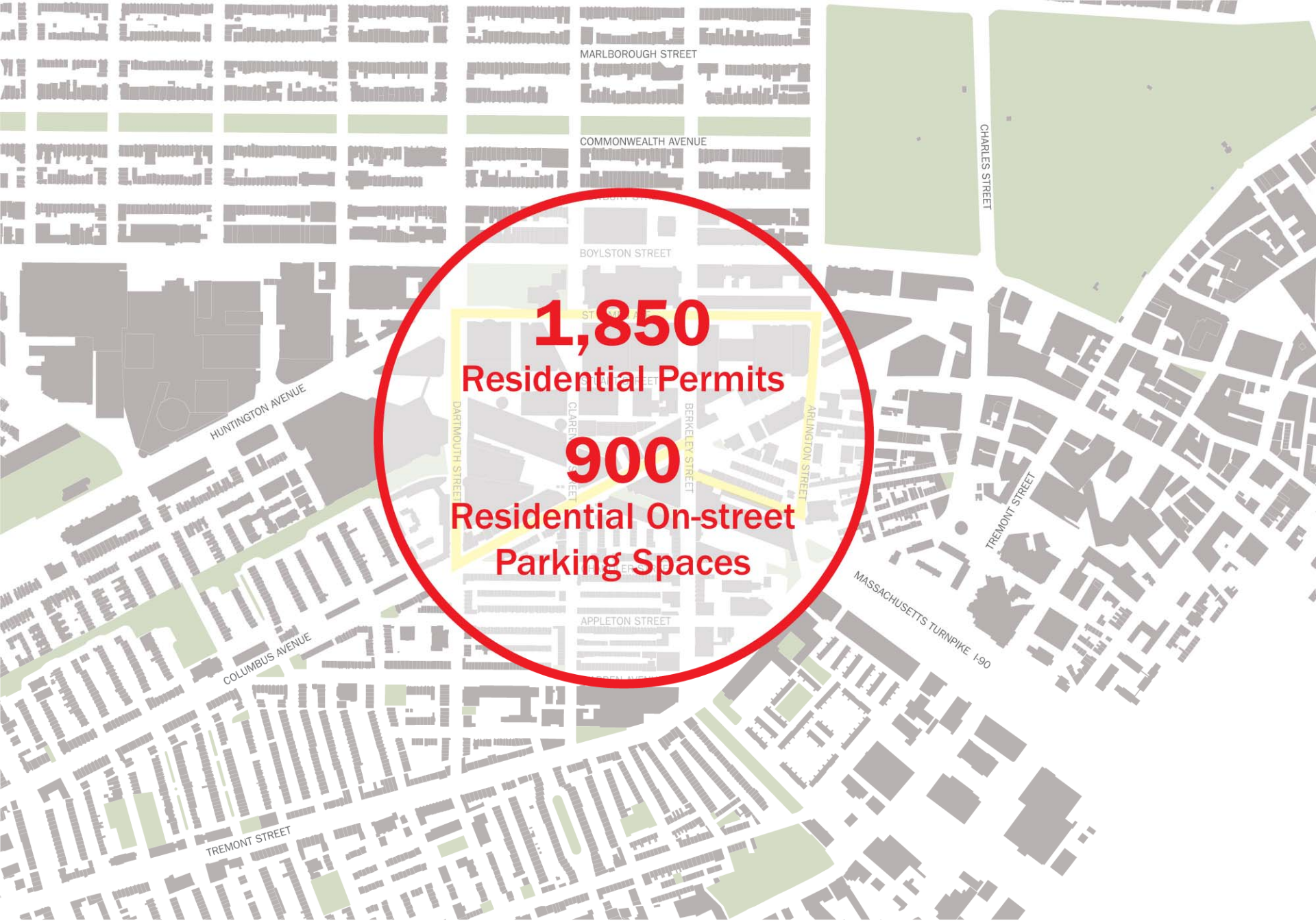
Residential vs. Commercial and Trip Generation

Source: Utile



On Street Parking

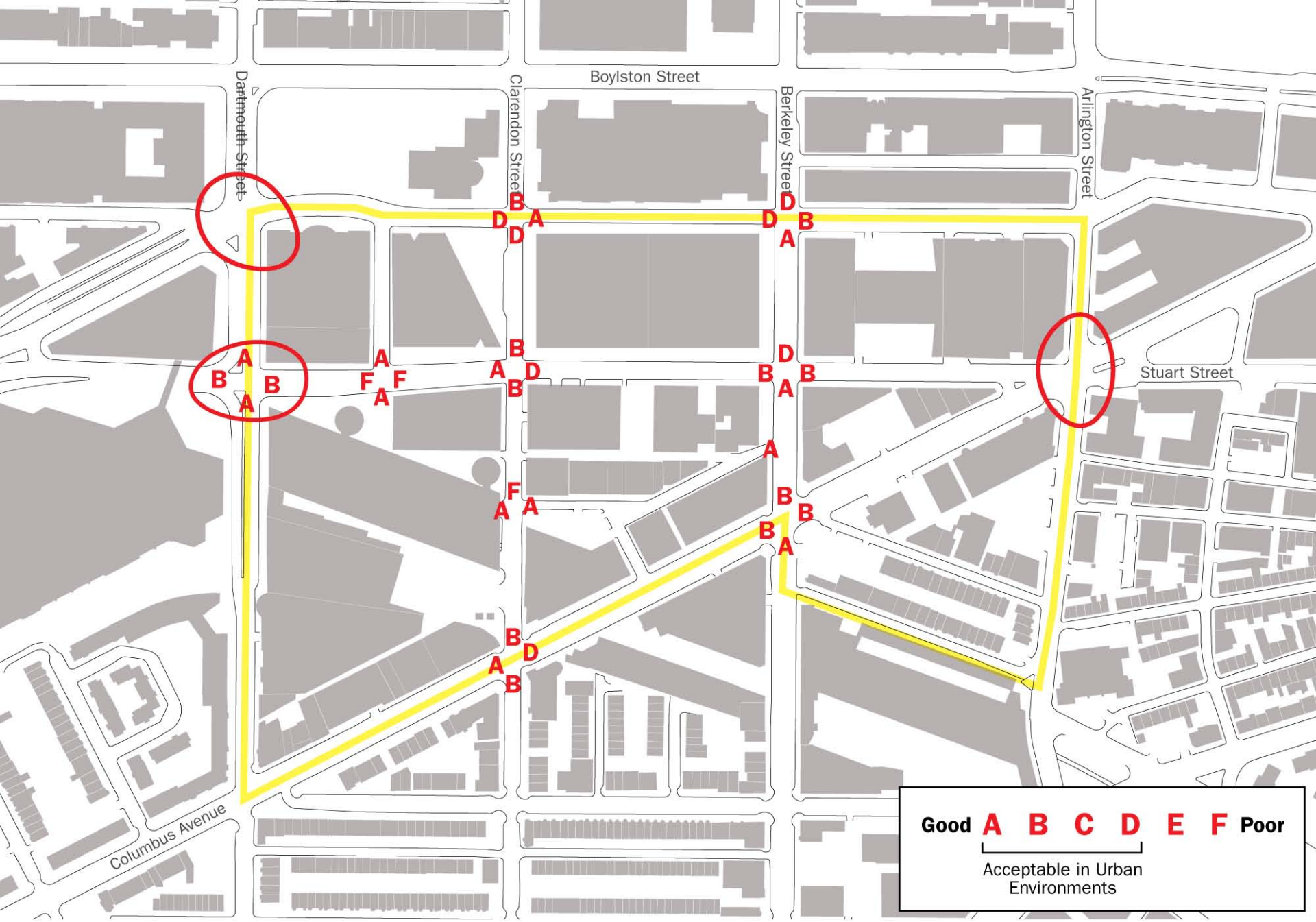
Source: Columbus Center Article 80



2001 Residential Permits vs. Available Spaces

Source: Columbus Center Article 80

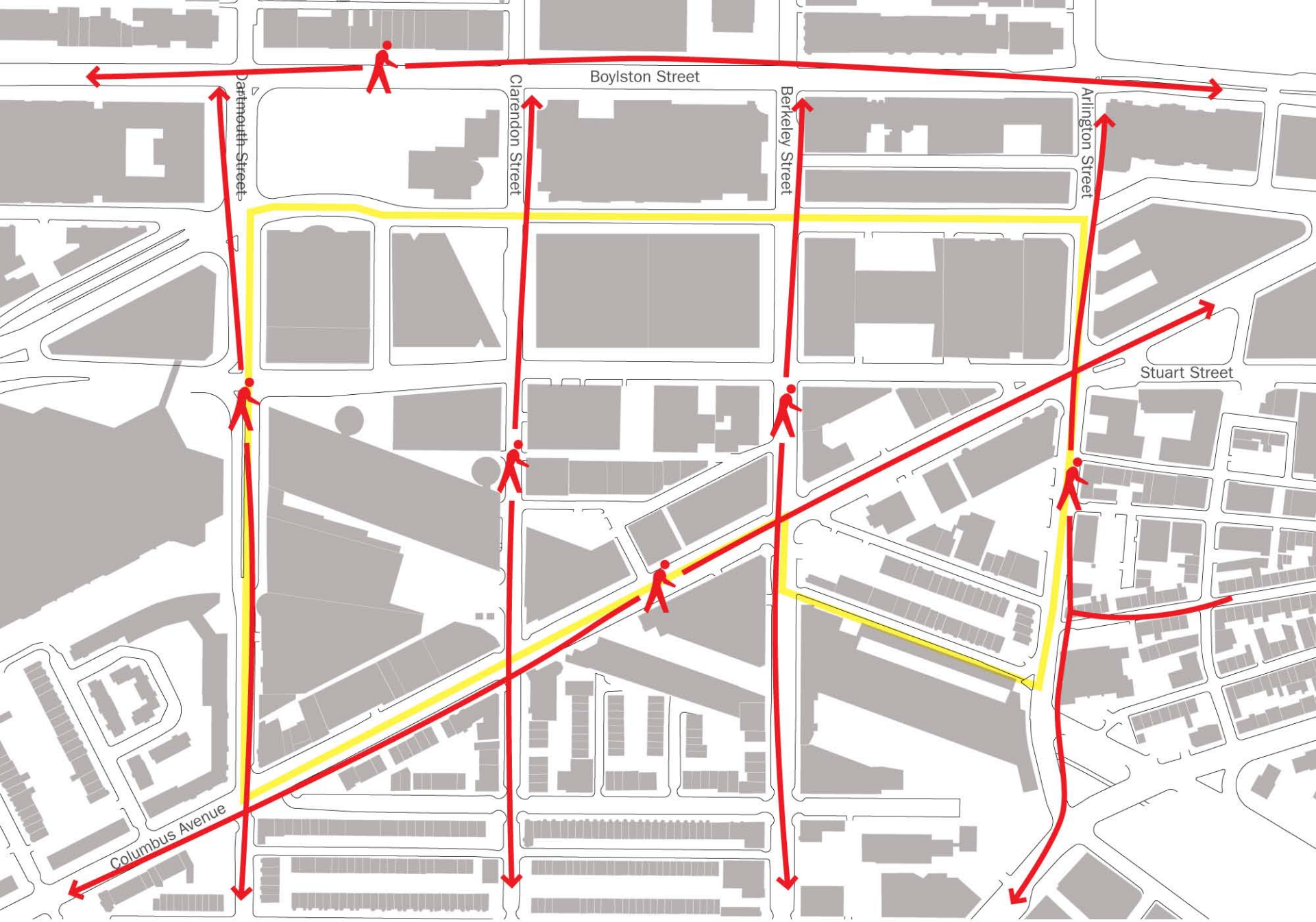
0 175 350 700



2004 Pedestrian Level of Service (Delay): Morning Peak Hour

Source: Clarendon ENF

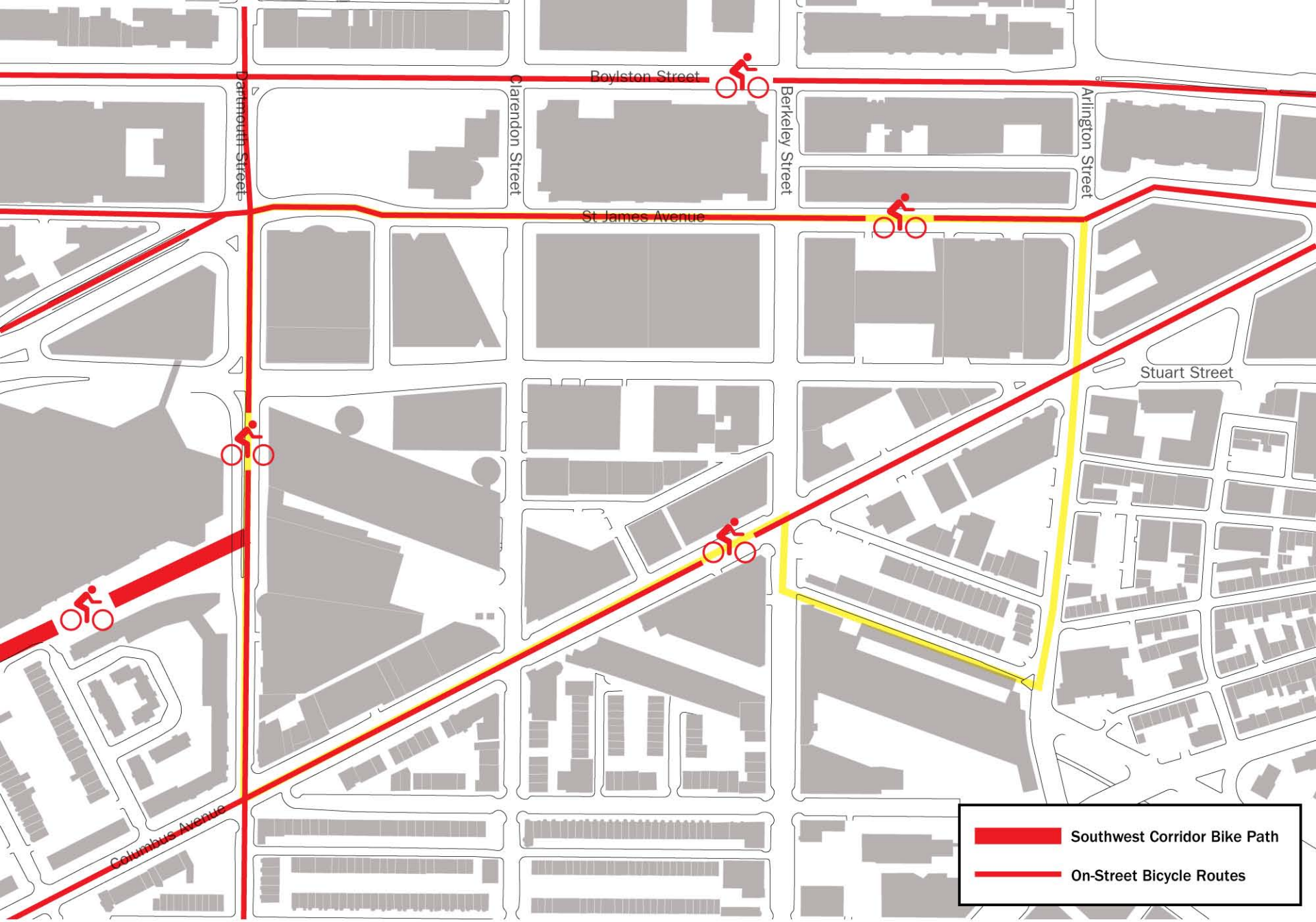
0 75 150 300



Pedestrian Desire Lines

Source: Utile

0 75 150 300



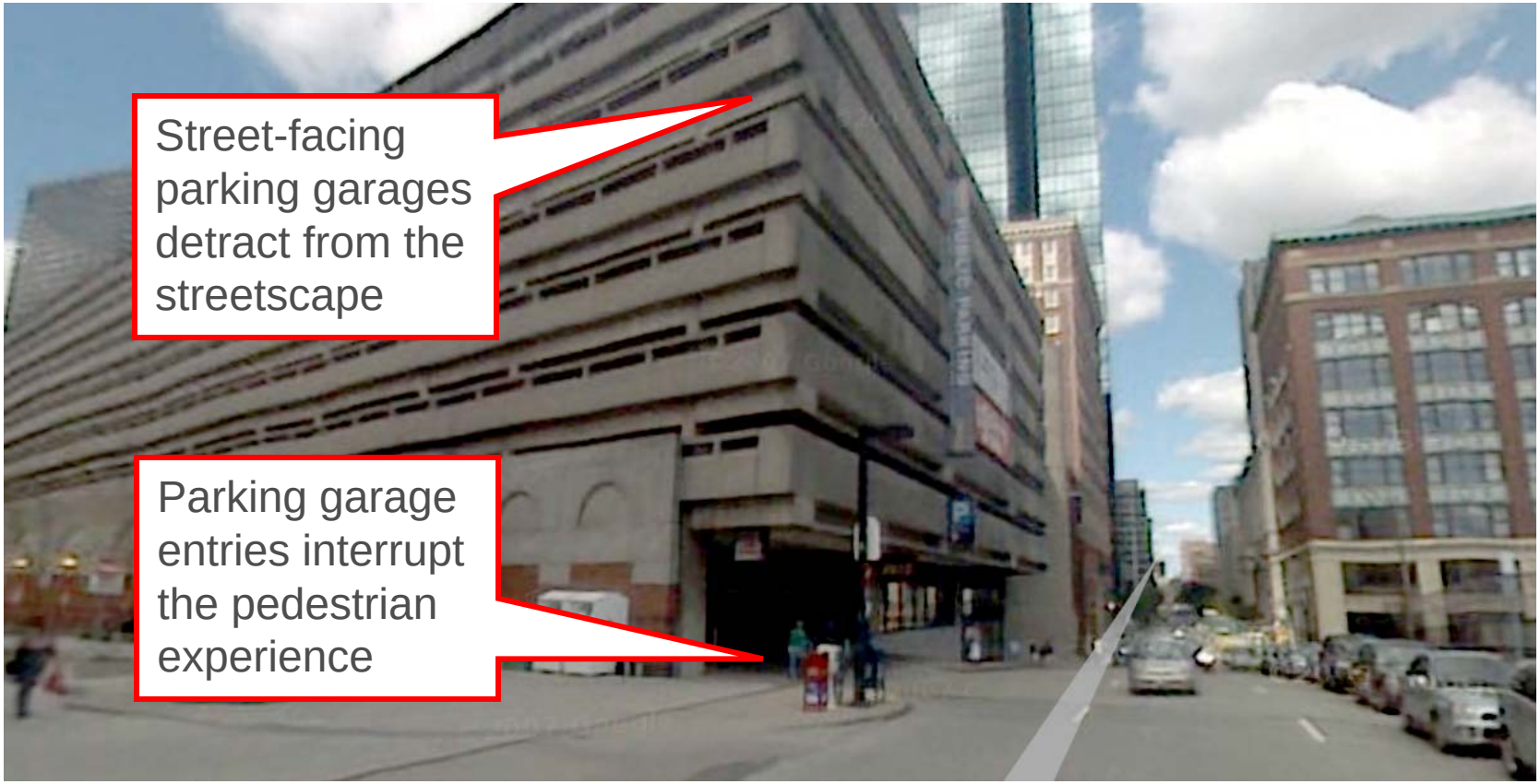
Existing Bicycle Network

Source: On-street bicycle routes defined by *Boston's Bike Map*

0 75 150 300

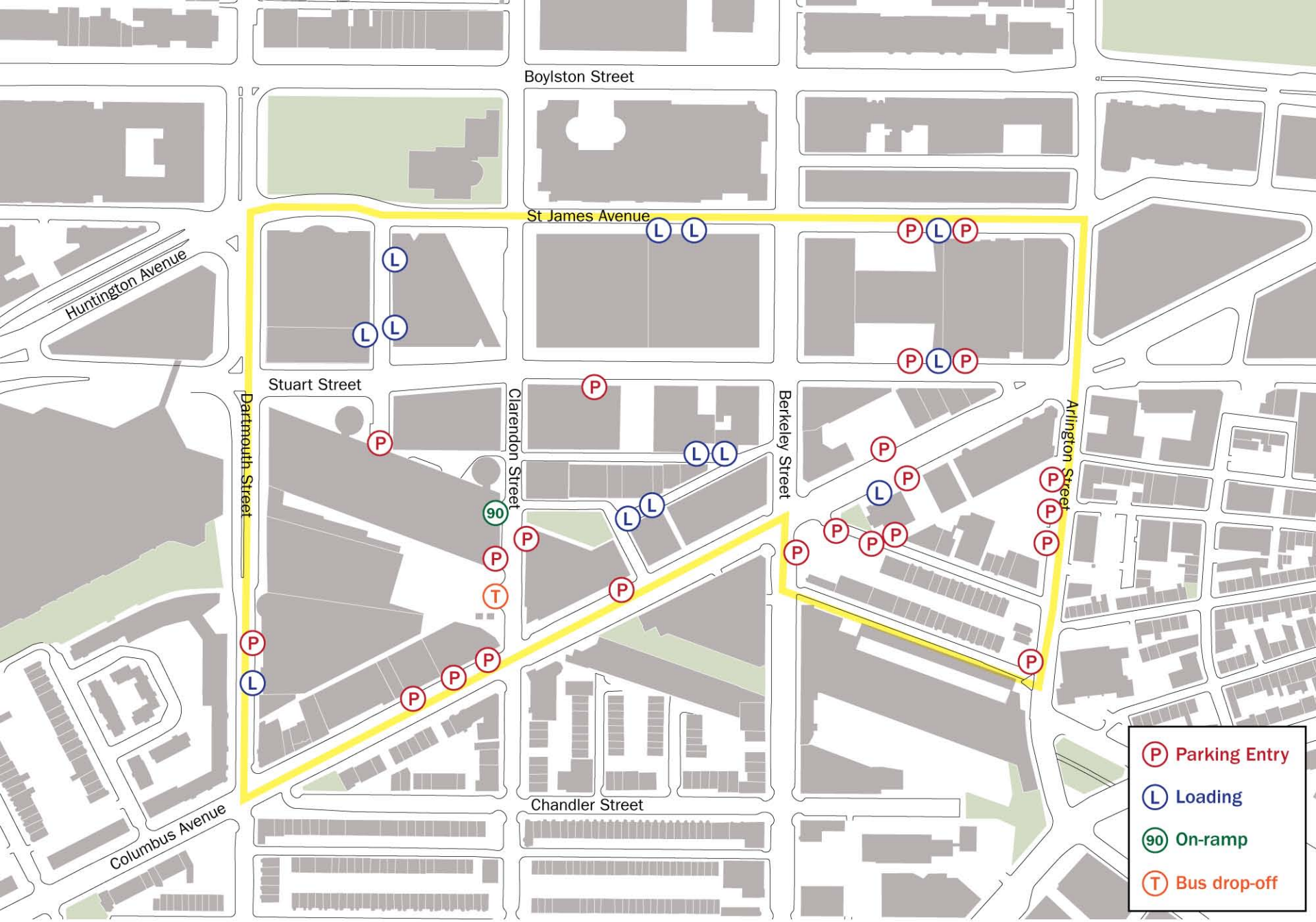
Traffic & Parking

The design of parking facilities impacts the streetscape and pedestrian experience.


Street-facing parking garages detract from the streetscape
Parking garage entries interrupt the pedestrian experience

Loading Zones

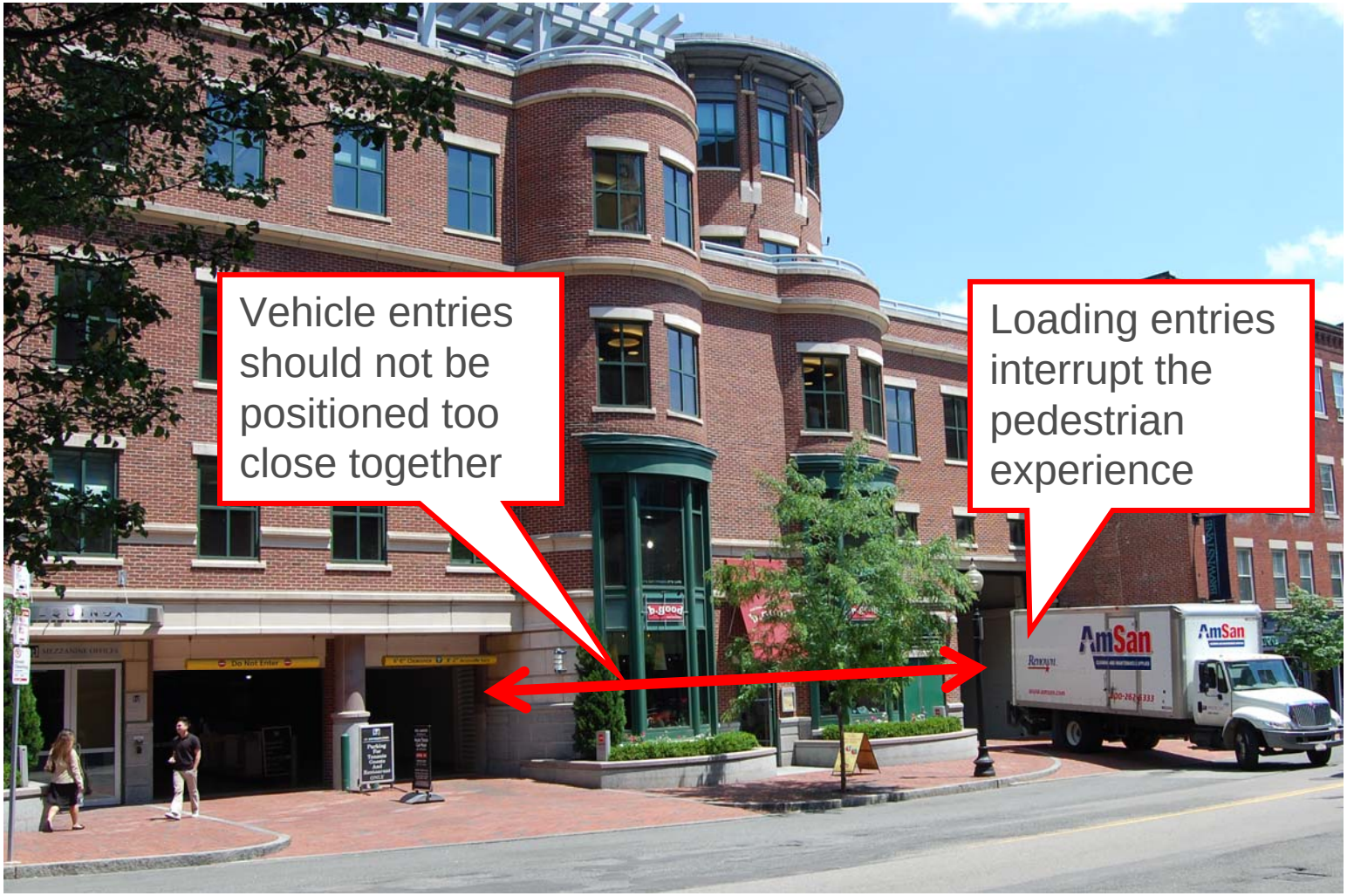
The study area’s large blocks and few alleys encourage many loading areas to interrupt streets and detract from the pedestrian experience.



Loading and Parking Entries

Source: Site observations

0 75 150 300


Vehicle entries should not be positioned too close together
Loading entries interrupt the pedestrian experience
AmSan
AmSan

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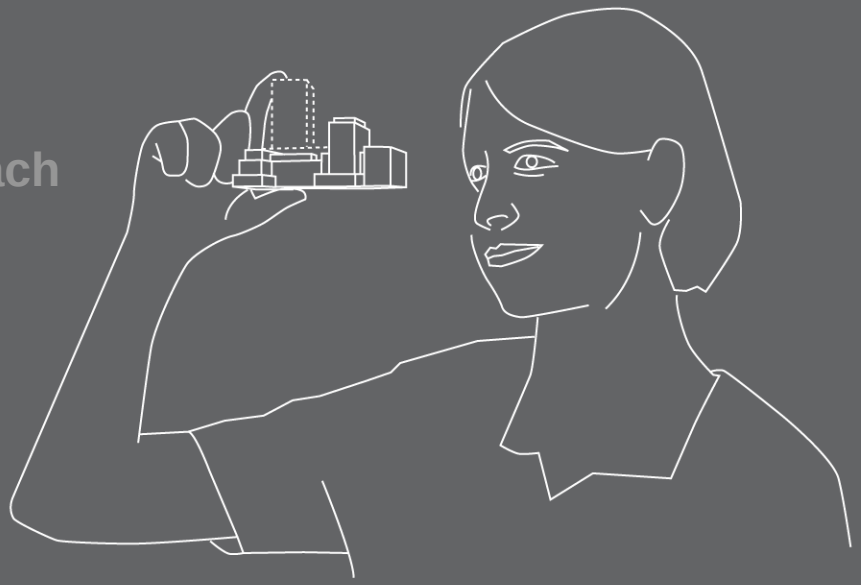
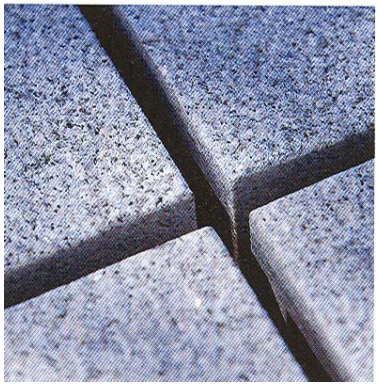


Transit

Require or reward specific public space, connectivity and way-finding contributions.

Quality paving and way-finding systems



Public space and improved pedestrian connectivity

Transit station = Art

Traffic and Parking

Two parking strategies:

- Minimum allowances
- Maximum allowances and transfer of rights

Traffic and Parking

Minimum allowances

- Assure minimum number of parking spaces
- Traditional method for regulating parking
- Can help to mitigate the impact of parking on on-street parking inventory

Traffic and Parking

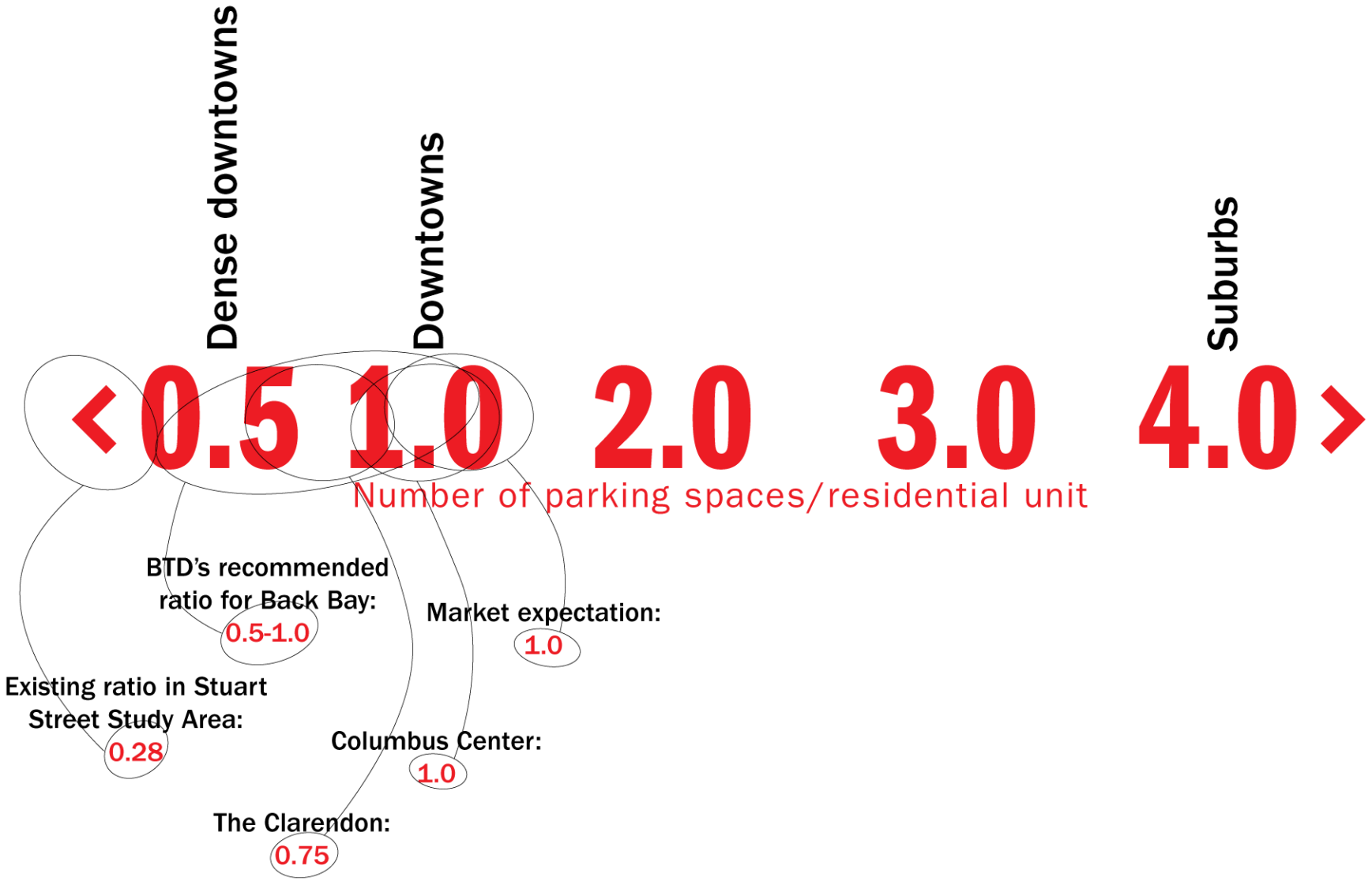
Maximum allowances

-Restrict parking

- Work best when a robust public transit system is present
- Most successful when used with **transfer of rights** in order to provide flexibility for projects and uses that *require* additional parking
- Can be linked to transit strategies by increasing parking ratio further from transit stations

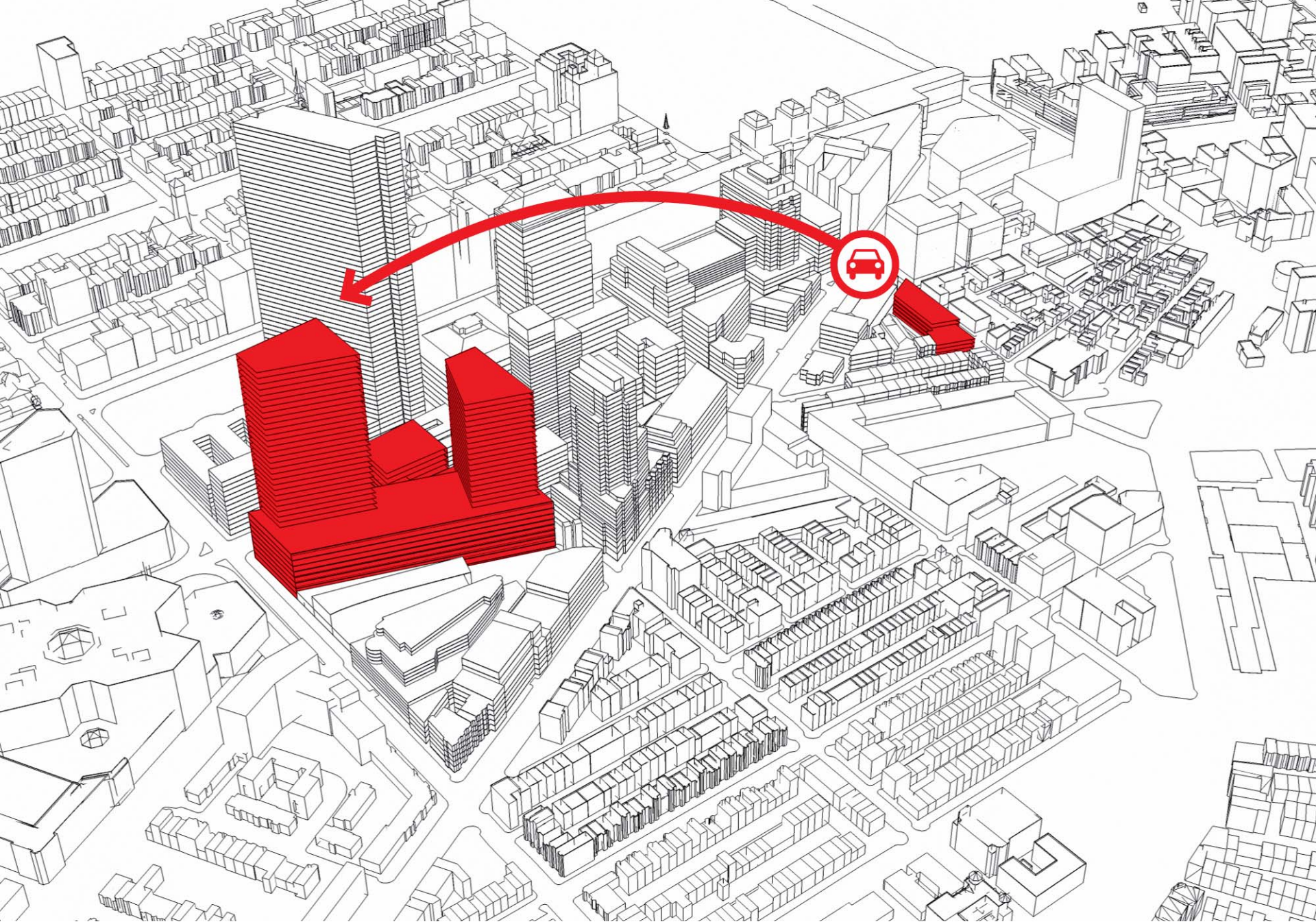
Maximum parking allowances: Commercial

Source: Utile, Meredith & Grew, Boston Transportation Department



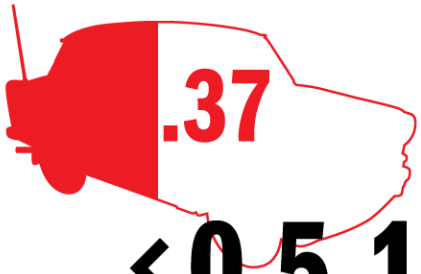
Maximum parking allowances: Residential

Source: Utile, Meredith & Grew, Boston Transportation Department



Parking transfer of rights

Source: Utile



<0.5 1.0 2.0 3.0 4.0>

Number of parking spaces/1,000 gsf commercial office and retail

<0.5 1.0 2.0 3.0 4.0>

Number of parking spaces/residential unit

Keep existing ratio, lower it or raise it?

Source: Xx

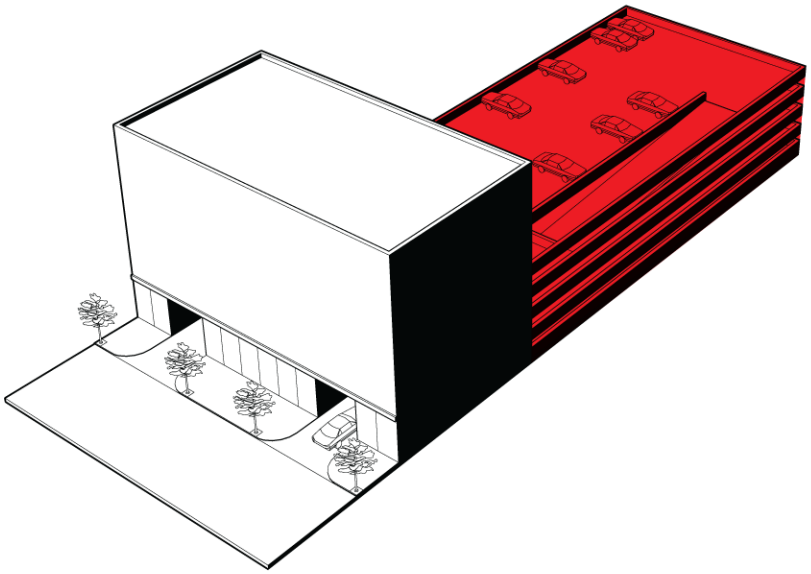
Traffic and Parking

Other Strategies

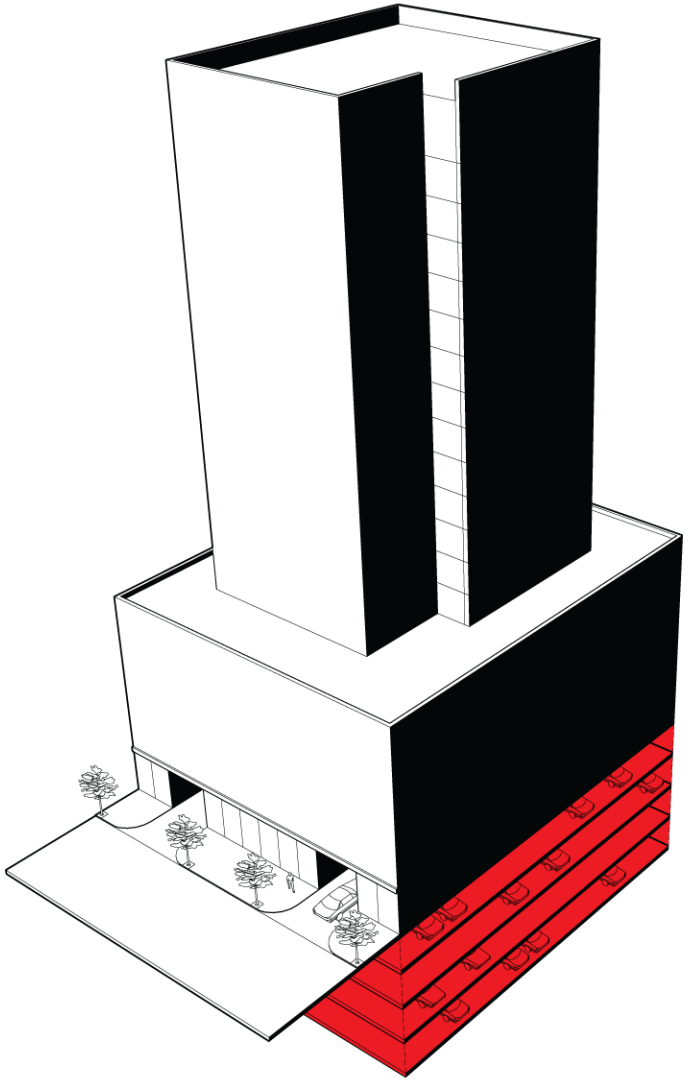
- Shared parking
- Allow more parking, but limit vehicle trips (and penalize violations)
- Performance standards
- Centralized parking
- Include below grade parking in FAR calculations

Traffic & Parking

Hide parking facilities by mandating setbacks, liner buildings and underground parking.



“Liner” Building
parking is behind building



Plinth + Tower
parking is below building

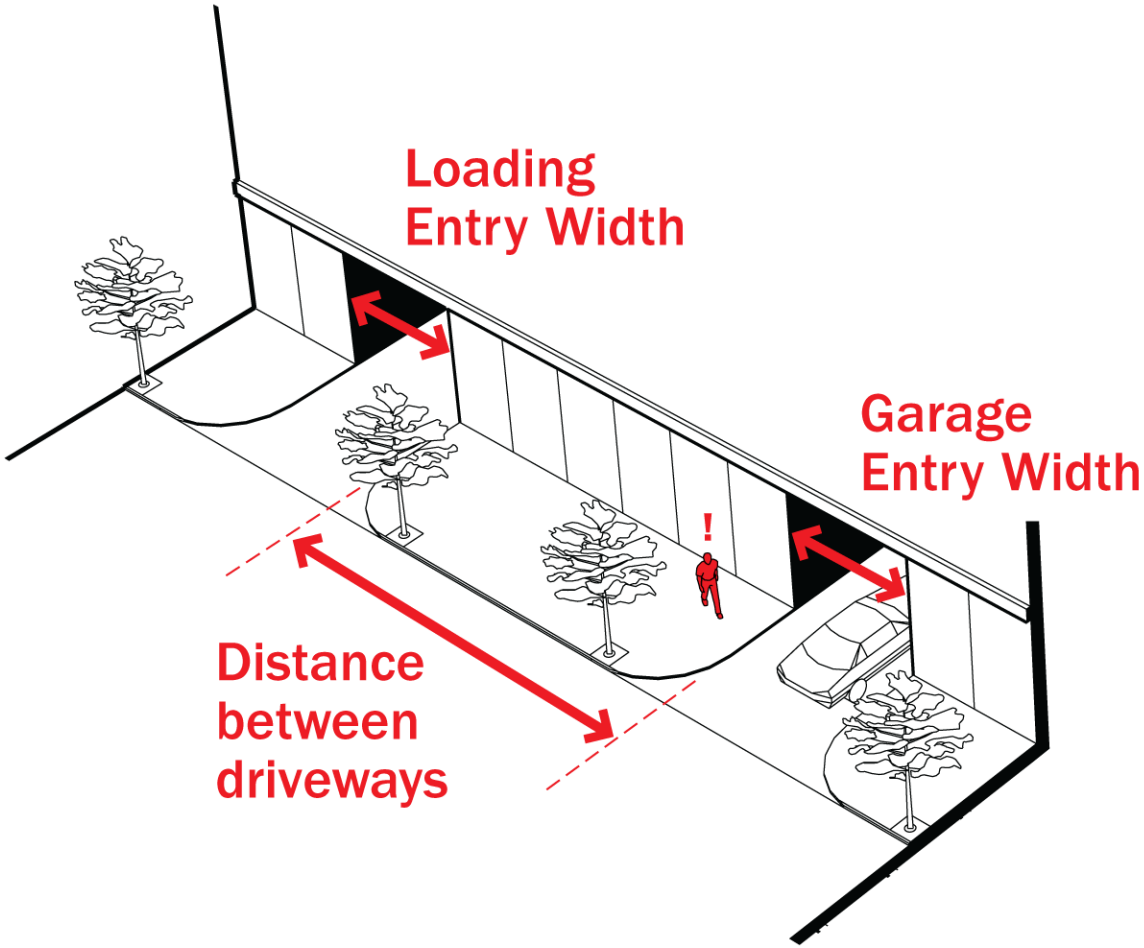
Parking strategies

Source: Utile best practices

Loading Zones

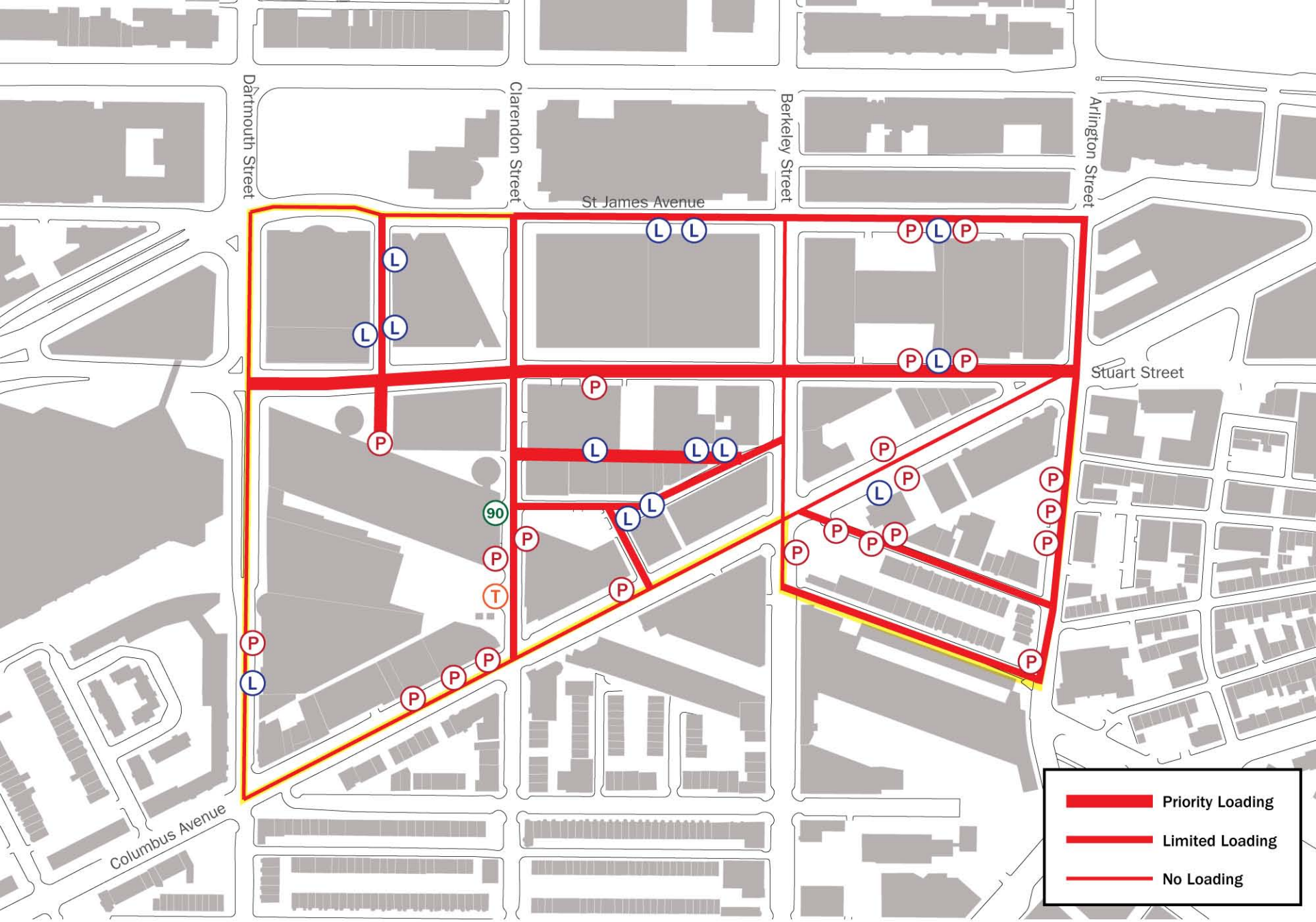
Regulate locations of loading and parking access.

Set a standard for the minimum distance between loading and parking access.



Loading zone strategies

Source: Utile best practices



Prioritize streets for loading and parking access

Source: Utile

0 75 150 300

TASK 3.1

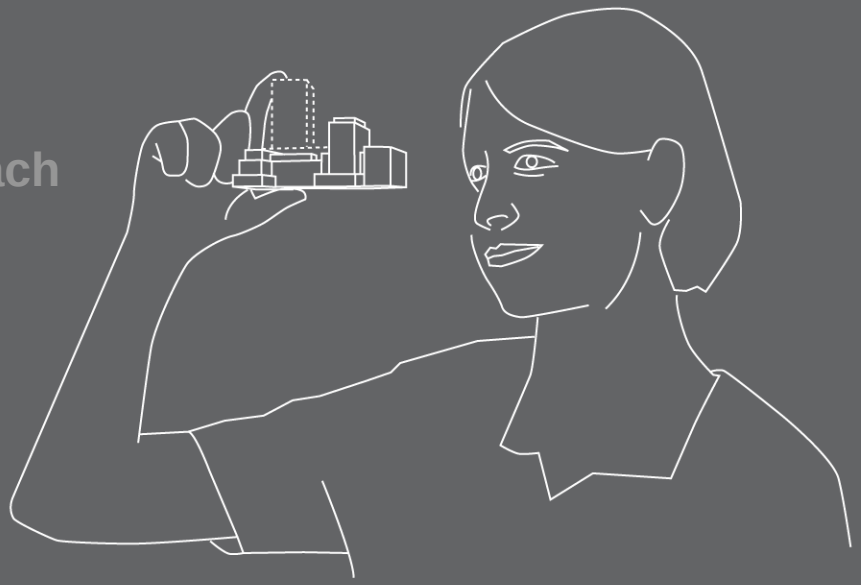
Public transit, automobile traffic and loading

1: Timeline Update and Project Approach

2: Transportation Conditions and Challenges

3: Zoning Strategies

4: Next Steps



Task 3.2

Environmental Impacts

- ☐ Wind
- ☐ Shadows
- ☐ Utility Infrastructure
- ☐ Groundwater

Task 3.1 (today)

Transportation

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

Task 2.3 (on-going)

Economics and Real Estate

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

Task 3.3

Urban Design

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

Evaluation Checklist for Development Scenarios