



# Christian Science Plaza Revitalization Project

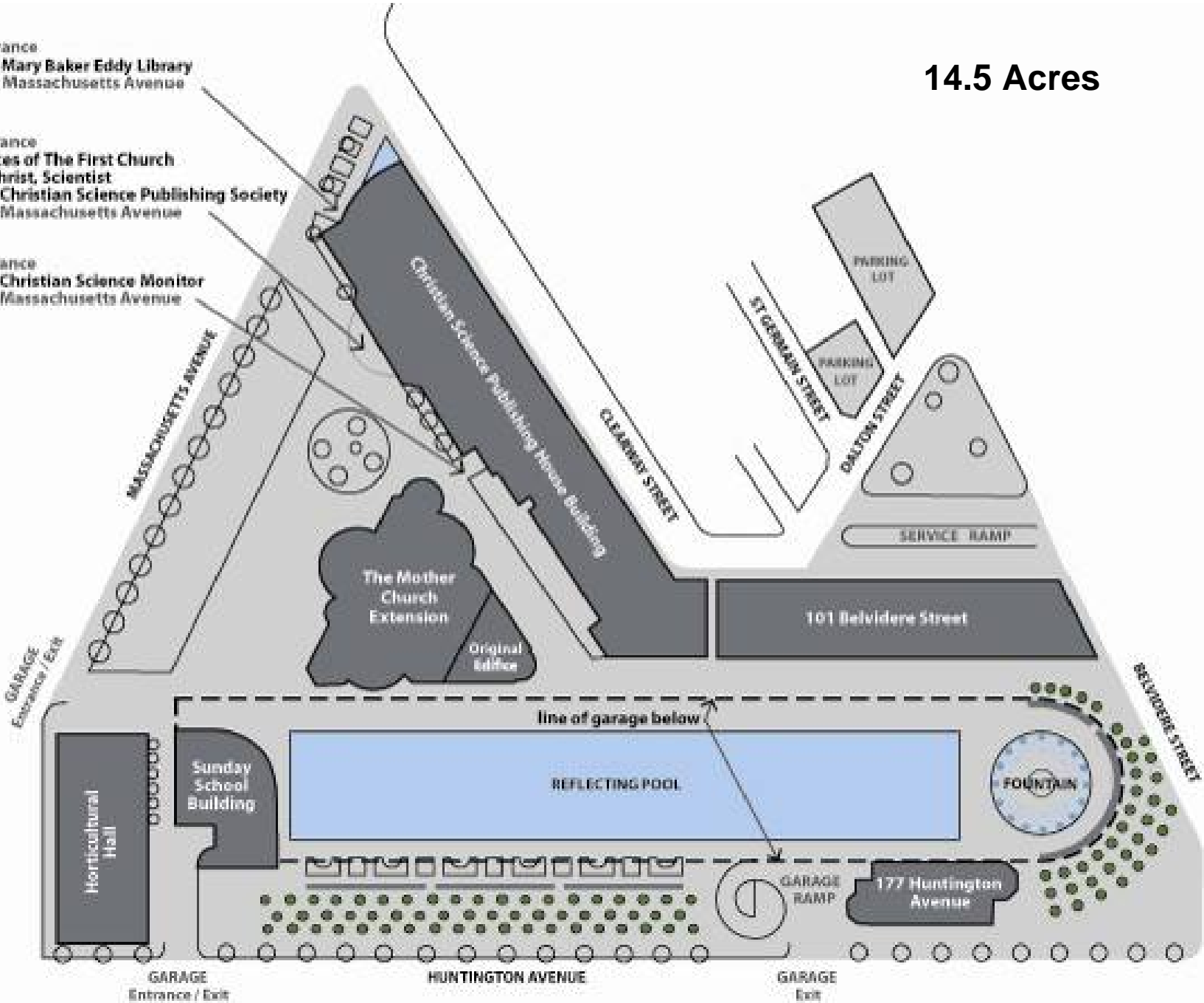
12.09.2009

14.5 Acres

Entrance  
The Mary Baker Eddy Library  
200 Massachusetts Avenue

Entrance  
Offices of The First Church  
of Christ, Scientist  
The Christian Science Publishing Society  
210 Massachusetts Avenue

Entrance  
The Christian Science Monitor  
210 Massachusetts Avenue



# The First Church of Christ, Scientist Perimeter Properties Ownership



© Skyshots; modified by The First Church of Christ, Scientist

- Christian Science Plaza Revitalization Project Site
- Church Owns Land – Long Term Ground Lease to Others
- Church Owns Land/Building – Leased to Others

# Urban Context





© The First Church of Christ, Scientist

Surveying Waterproofing Membrane in Reflecting Pool



© The First Church of Christ, Scientist

Surveying Pile Condition

# Planning Objectives

1. Enhance Open Space
2. Improve Environmental Sustainability
3. Identify Opportunities for Underutilized Real Estate

# Existing FAR & Heights

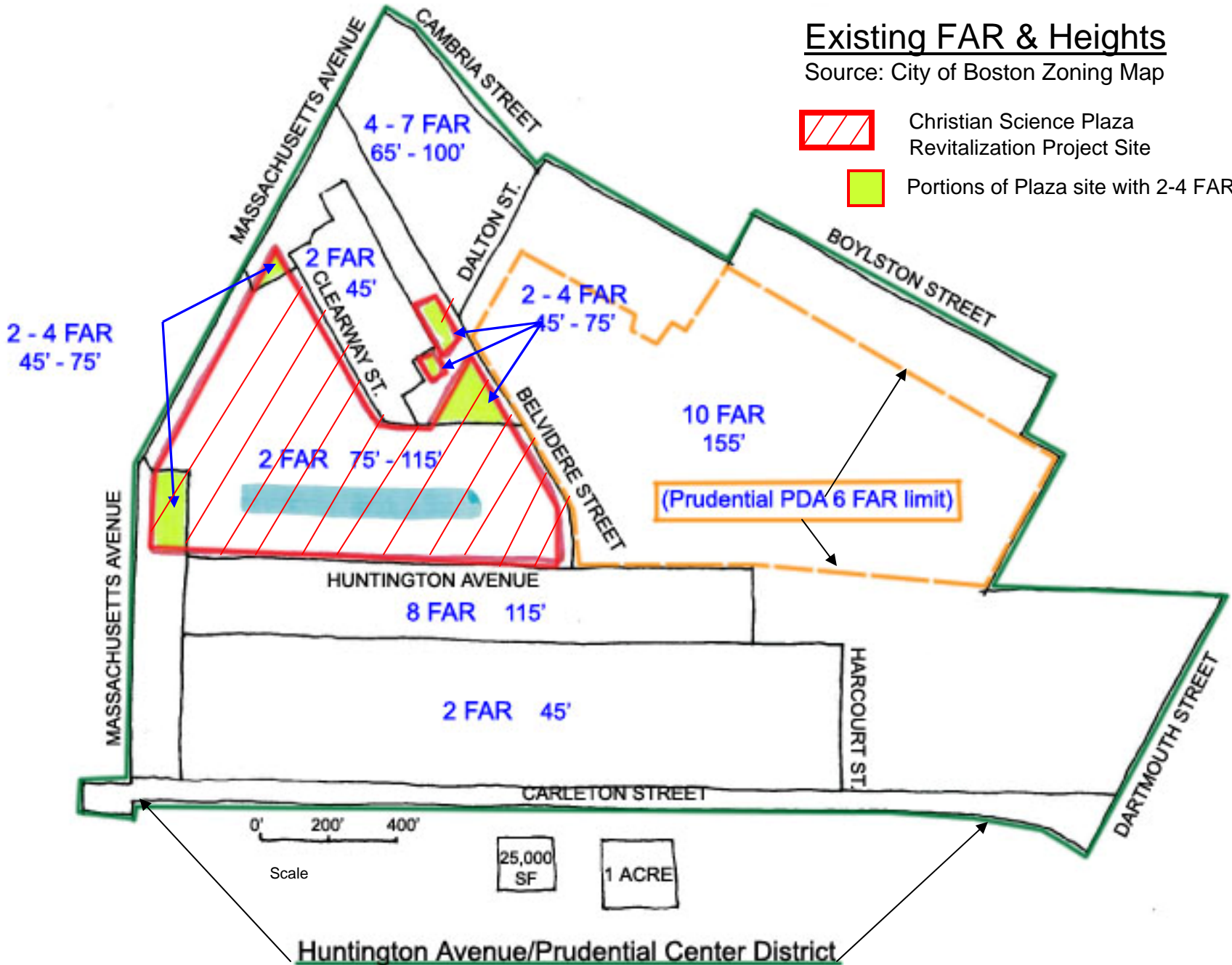
Source: City of Boston Zoning Map



Christian Science Plaza  
Revitalization Project Site



Portions of Plaza site with 2-4 FAR





# “As of Right” zoning development [average FAR 2.2; heights from 75’ – 115’]



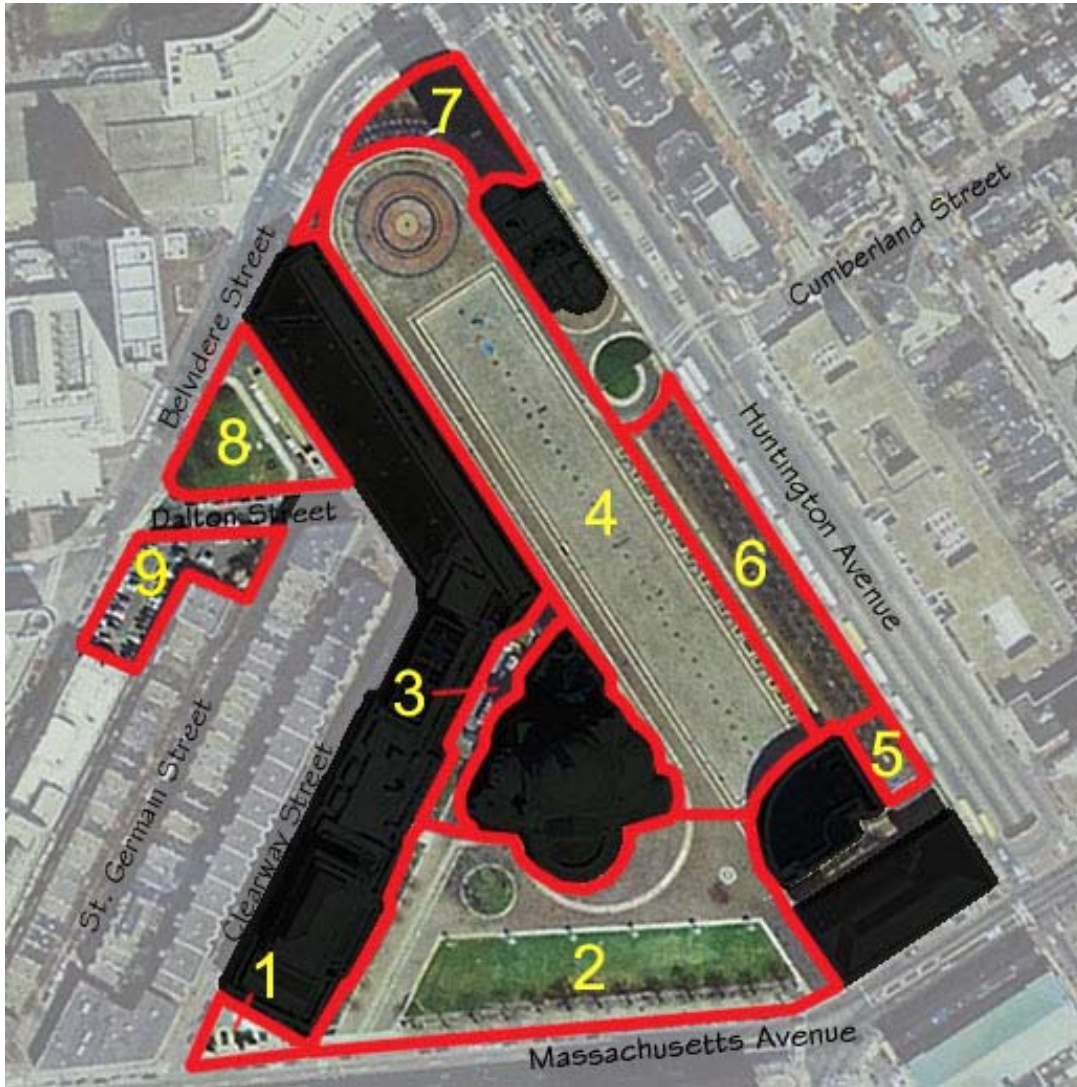
*Courtesy of The First Church of Christ, Scientist*

**“As of Right”:** ~1.4 Million SF (FAR 2.2)

**Existing Buildings:** ~750,000 SF (FAR 1.2)

**Additional “As of Right”:** ~650,000 SF

**Proposed:** 650,000 + 300,000 = ~950,000 SF (FAR around 3)



Courtesy of The First Church of Christ, Scientist

## Existing Open Space Areas

- 1) Mary Baker Eddy Library Courtyard
- 2) Mass. Ave Lawn
- 3) Passage Way
- 4) Reflecting Pool/Children's Fountain
- 5) Huntington side of Sunday School Building
- 6) Huntington Bosque
- 7) Belvidere Bosque/Corner
- 8) "Triangle"/Service Area
- 9) Belvidere/Dalton Parking Lots



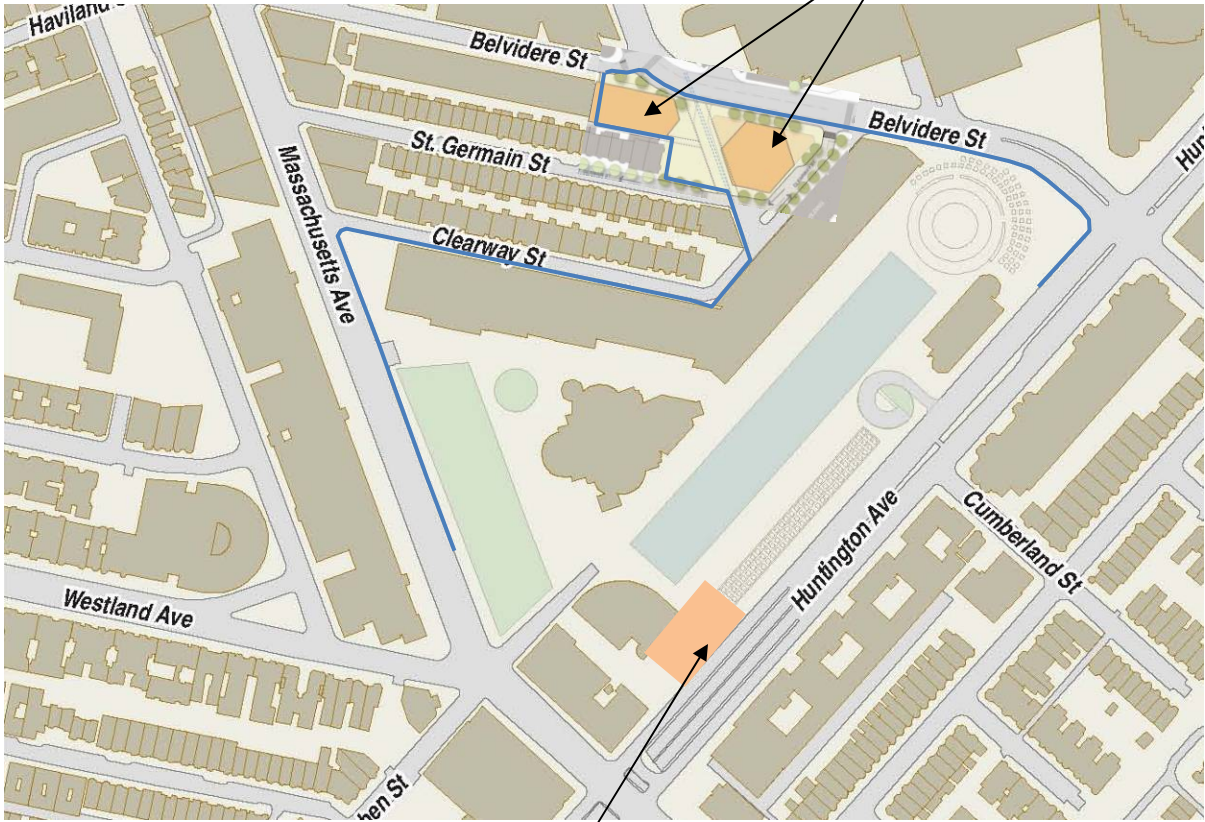
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## Primary Development Sites

# 5 Huntington Side of Sunday School Building

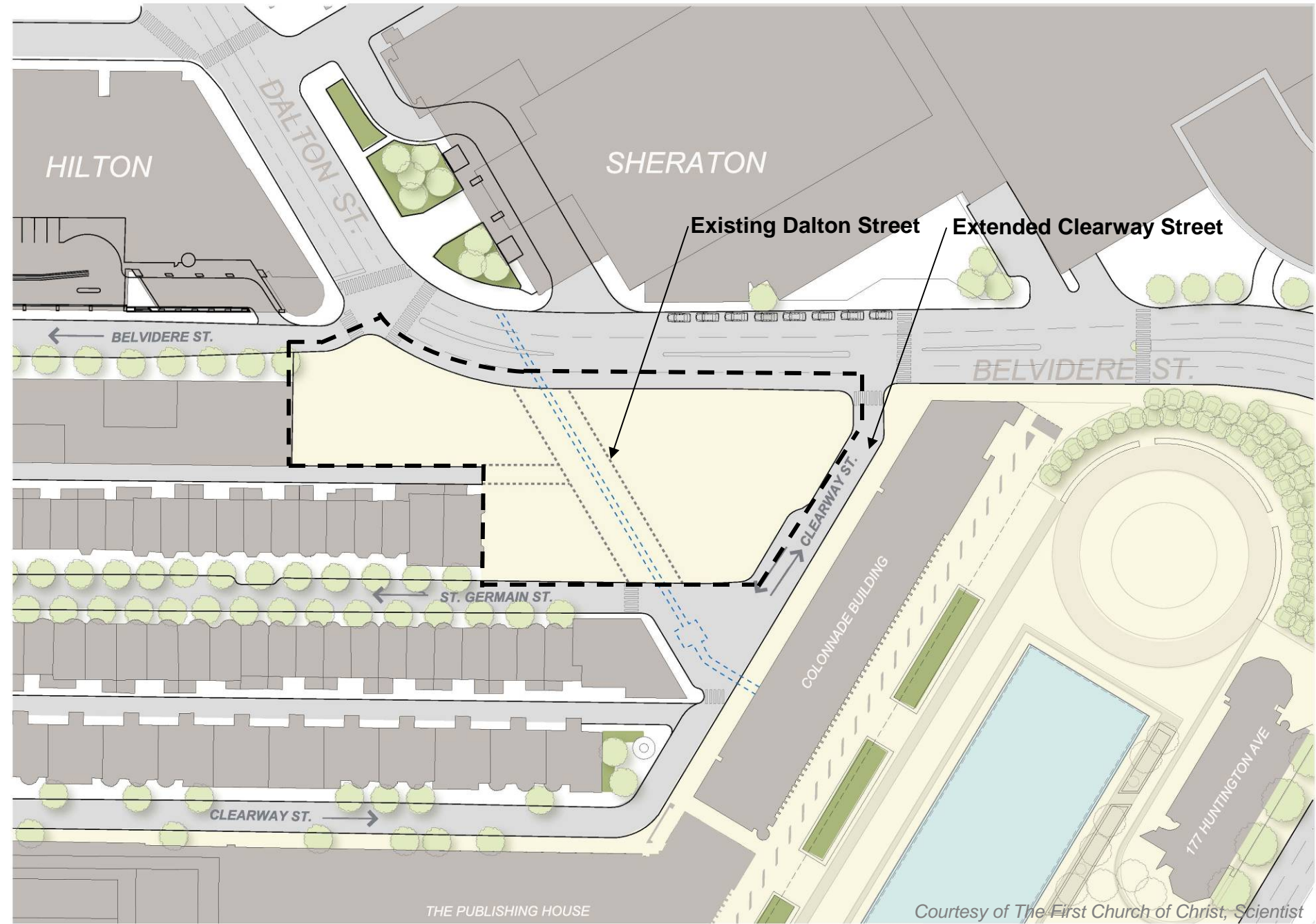
# 8/9 reconfigured  
Triangle/Service Area/Belvidere/Dalton Parking Lots

Residential/Hotel Use



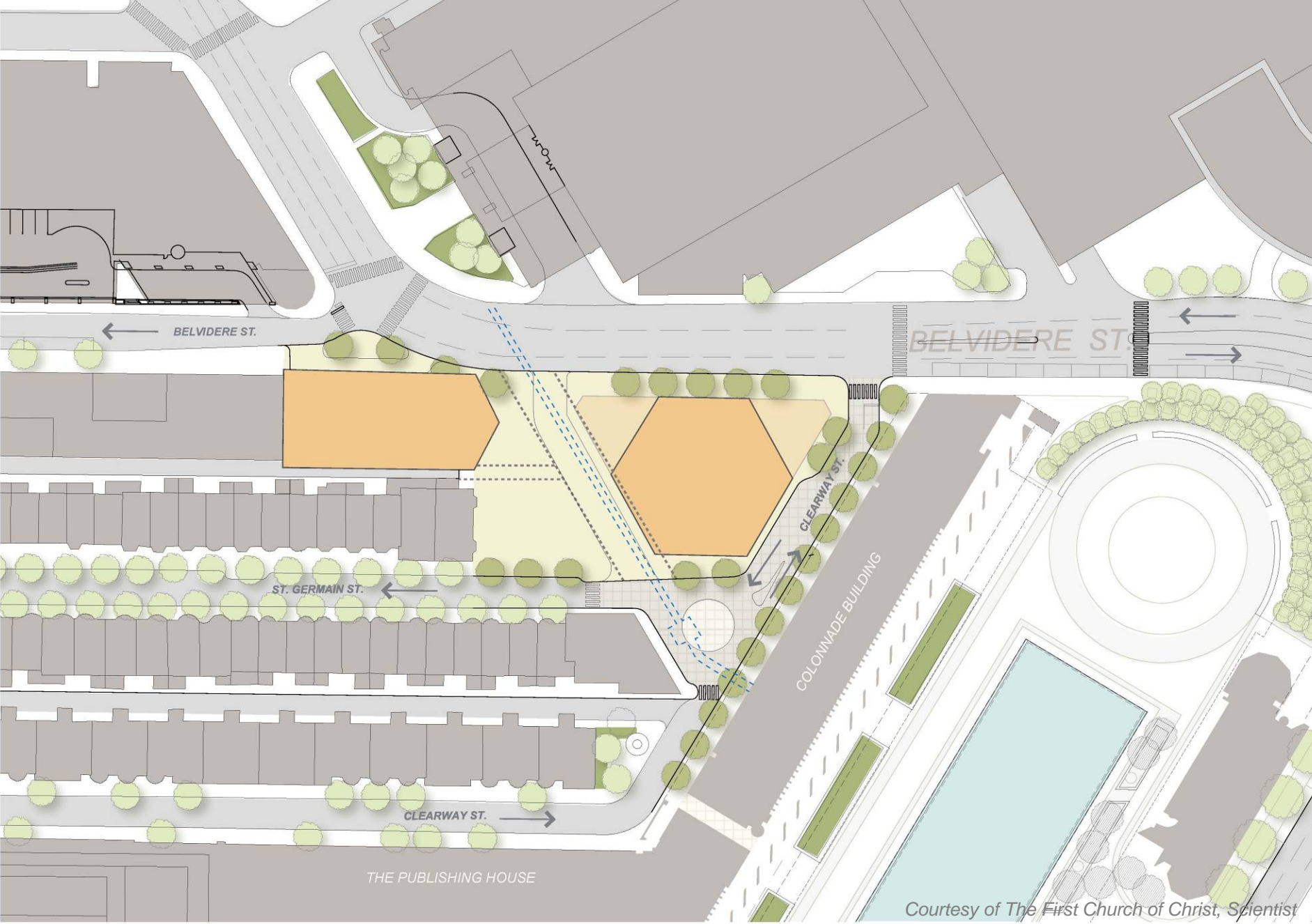
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Office/Residential Use



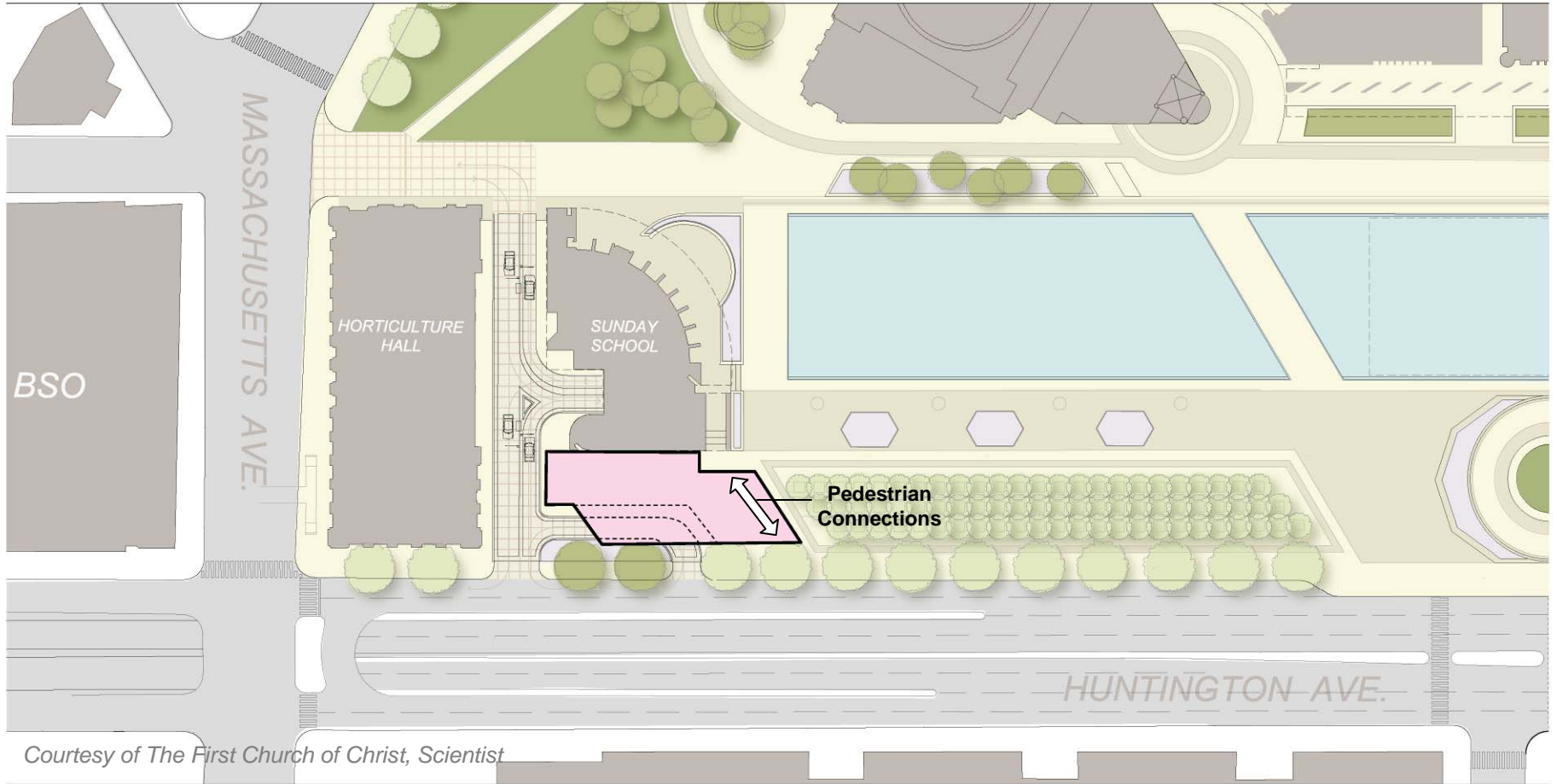
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**PROPOSED RECONFIGURATION OF DALTON SITE**    - - - -

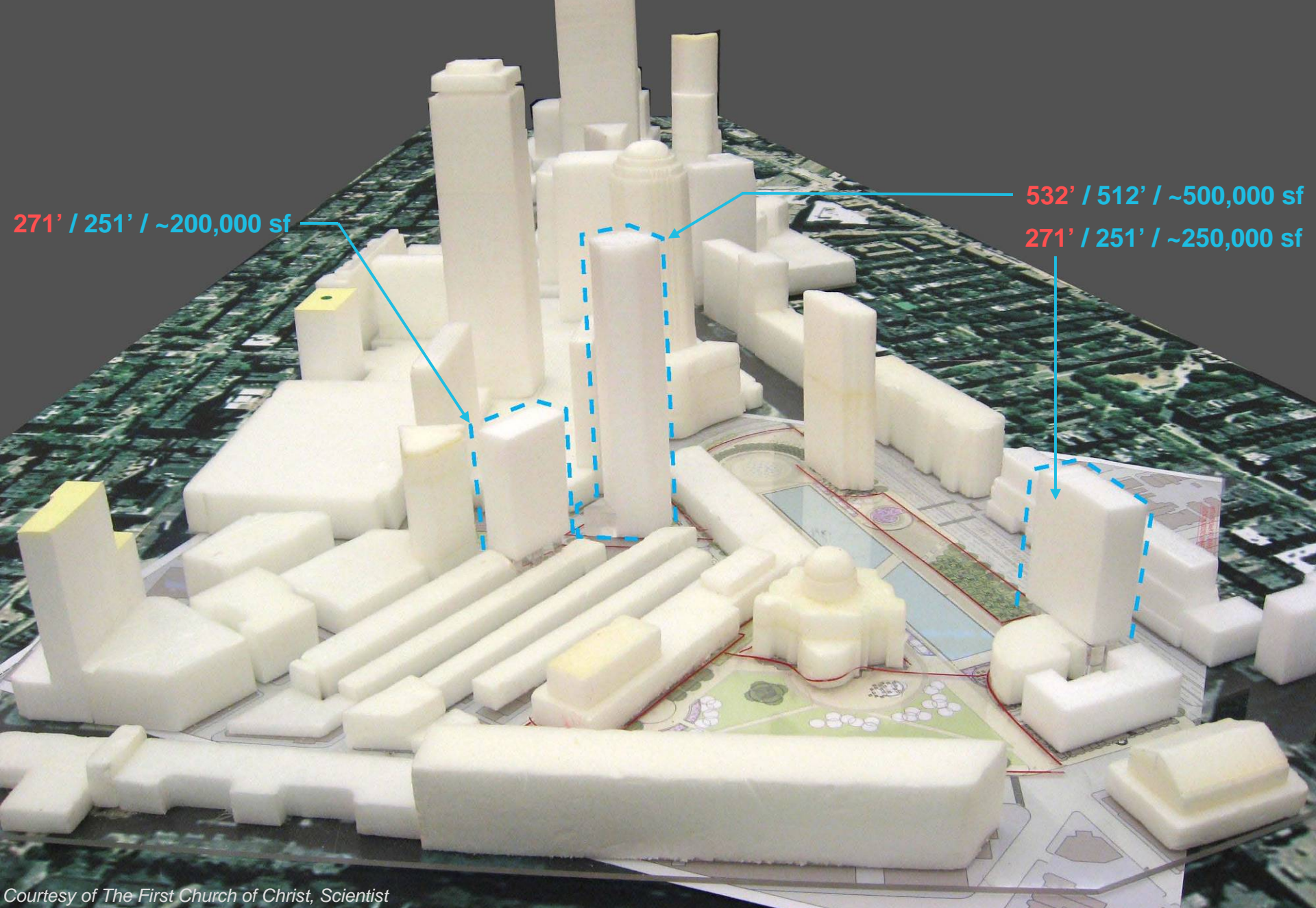


Courtesy of The First Church of Christ, Scientist

**DALTON SITE : Current Proposal Building Footprints**



**PROPOSED HUNTINGTON SITE DEVELOPMENT:  
BUILDING FOOTPRINT**



Courtesy of The First Church of Christ, Scientist

**MASSING HEIGHT**

**ZONING HEIGHT & SQUARE FOOTAGE - - - - -**

**CURRENT PROPOSAL : Context Model View**



# Christian Science Plaza Revitalization Project

Citizens Advisory Committee

Transportation Study Presentation  
December 9, 2009

# Presentation Outline

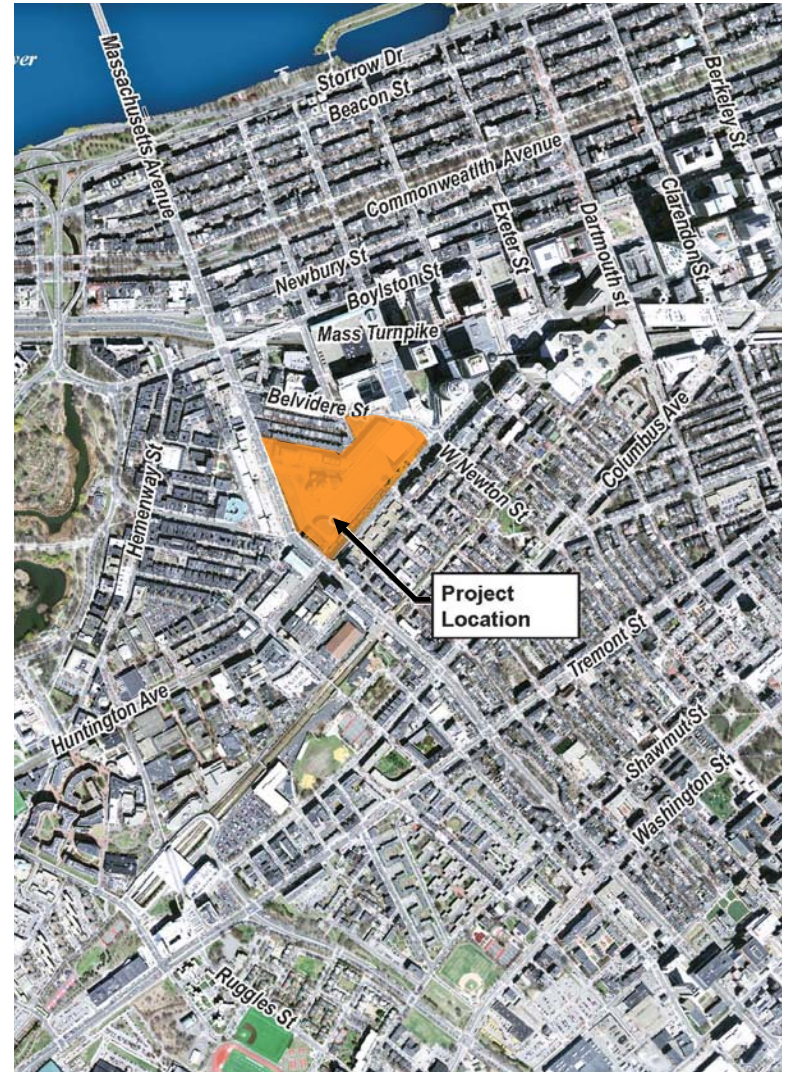
- Key Findings
- Transportation Study Overview
- Existing Conditions
  - Regional Access and Egress
  - Site Access and Egress
  - Study Area Intersections
  - Loading & Curb Use
- Build Conditions (Proposed Project)
  - Planned Improvements
  - Preliminary Parking
  - Analysis Assumptions
- Initial Assessment

# Key Findings

- The proposed project has minimal transportation impacts on nearby intersections due to predominance of residential and hotel land uses
- The proposed project has minimal net increase in parking needs due to existing parking supply and residential/hotel focus
- The project area already has a high use of transit and walking versus drive-alone commuting

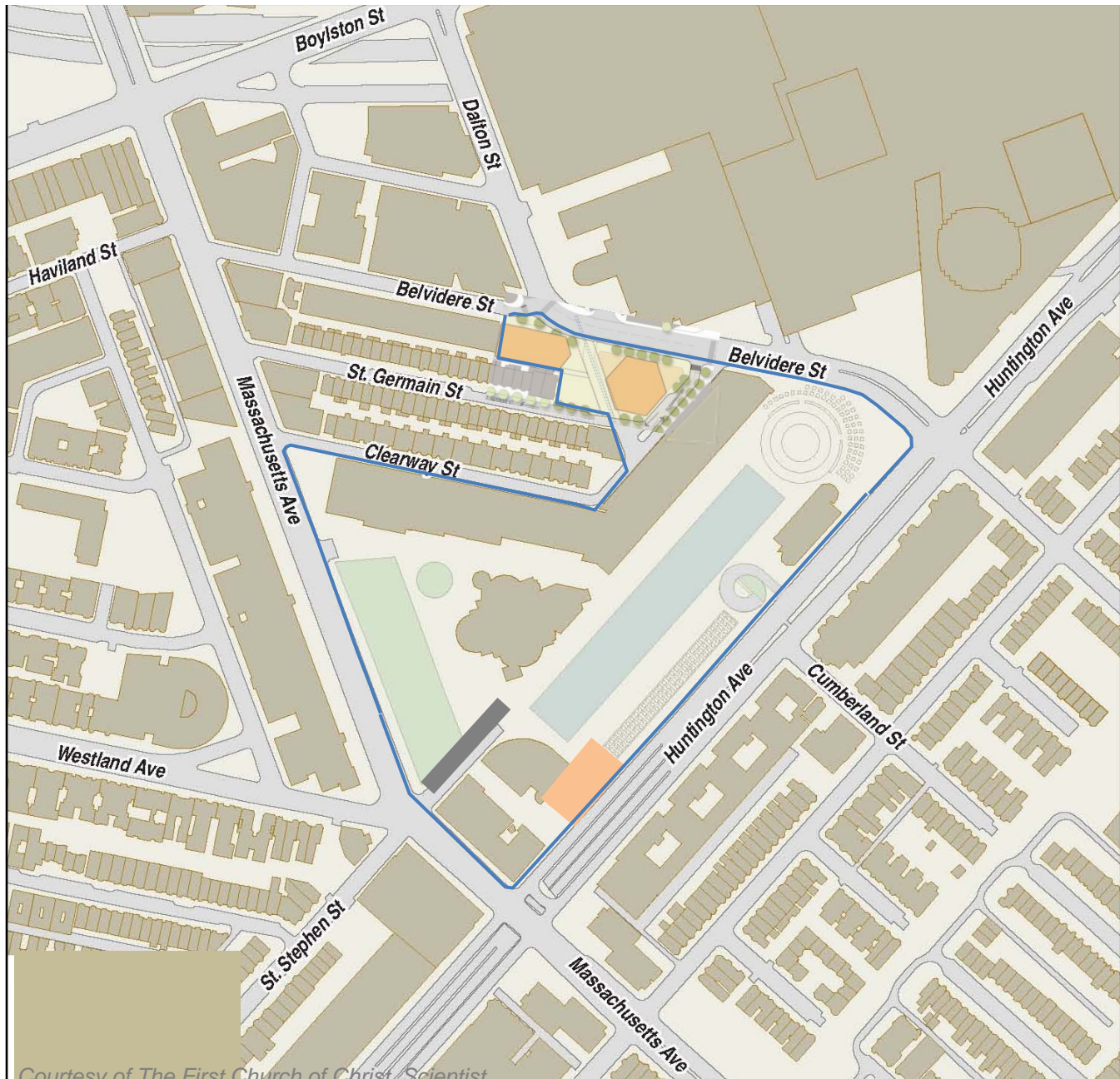
# Transportation Study Overview


- Scope Developed in coordination with BTD and BRA
- Existing Conditions (May, 2009)
- No Build (10 years growth and planned and approved projects)
- Build Conditions (Proposed Project)
- BTD Back Bay Traffic Model
- BTD Mode Share and Trip Distribution
- Institute of Transportation Engineers - Trip Generation
- Identify transportation impacts



*Courtesy of The First Church of Christ, Scientist*

# Plaza Revitalization Site Plan

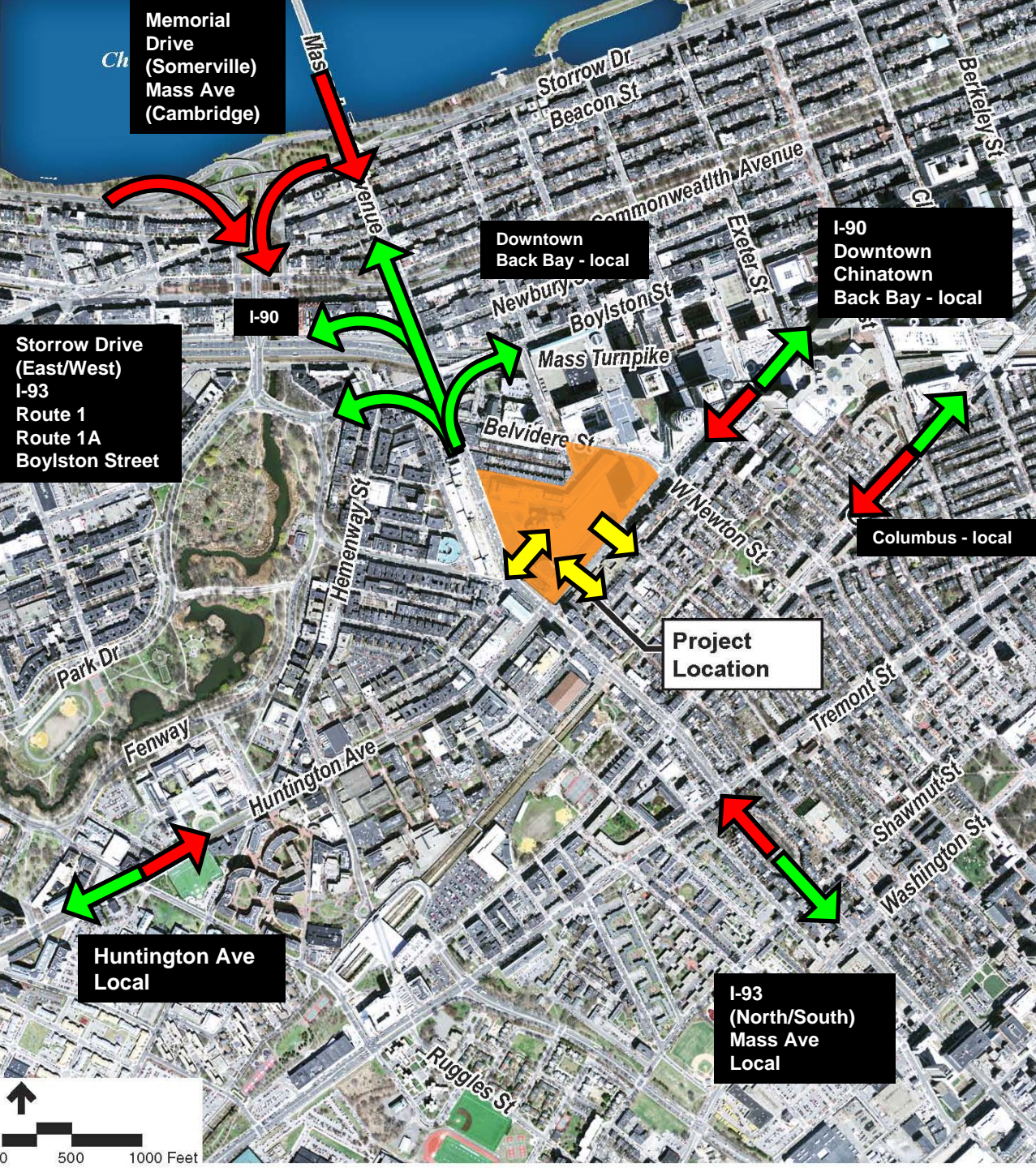


 Proposed New Development



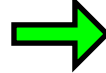
Courtesy of The First Church of Christ, Scientist

Transportation

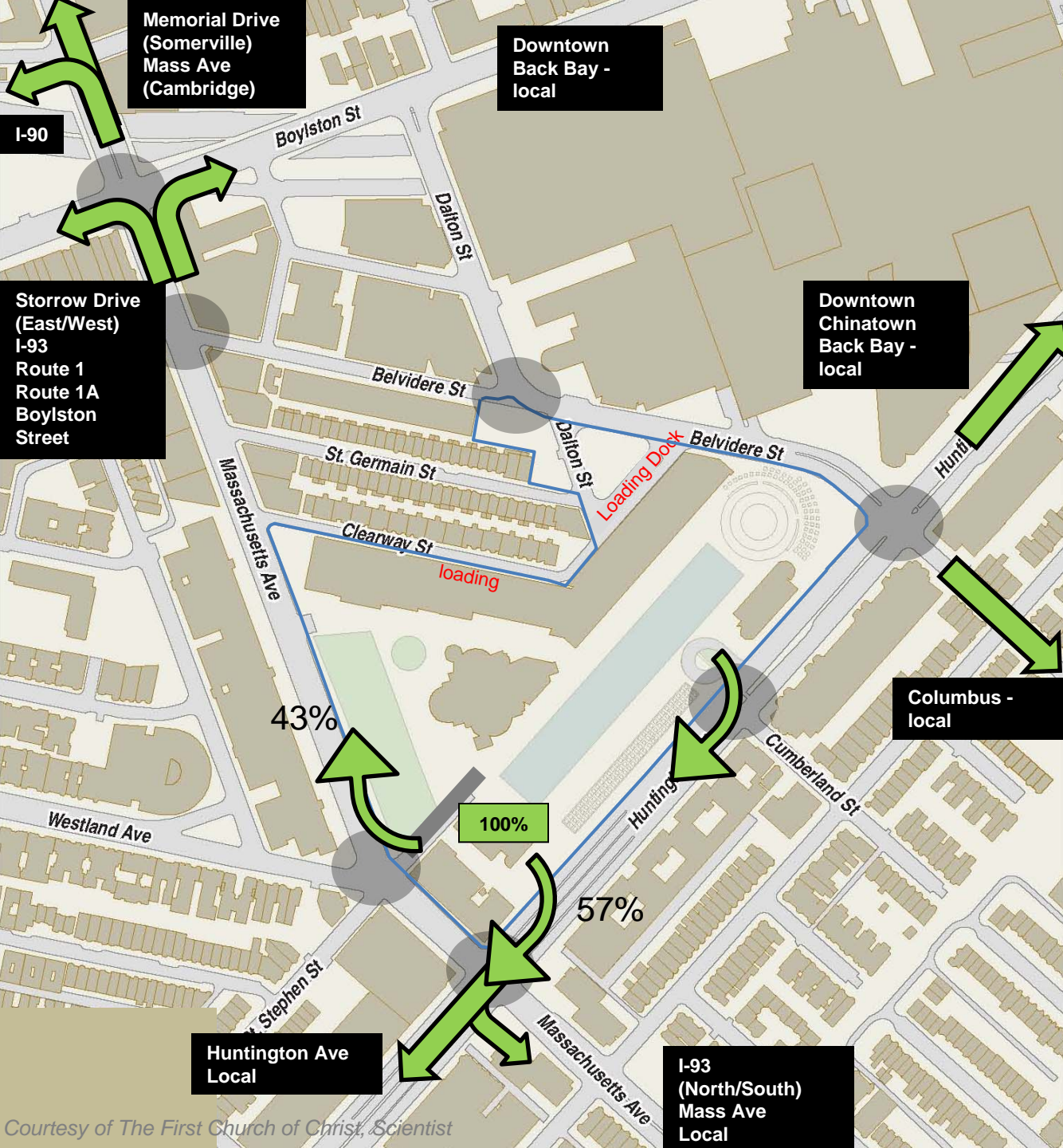
# **EXISTING CONDITIONS**



# EXISTING Regional Access & Egress

-  Site Driveway
-  Access
-  Egress

Courtesy of The First Church of Christ, Scientist



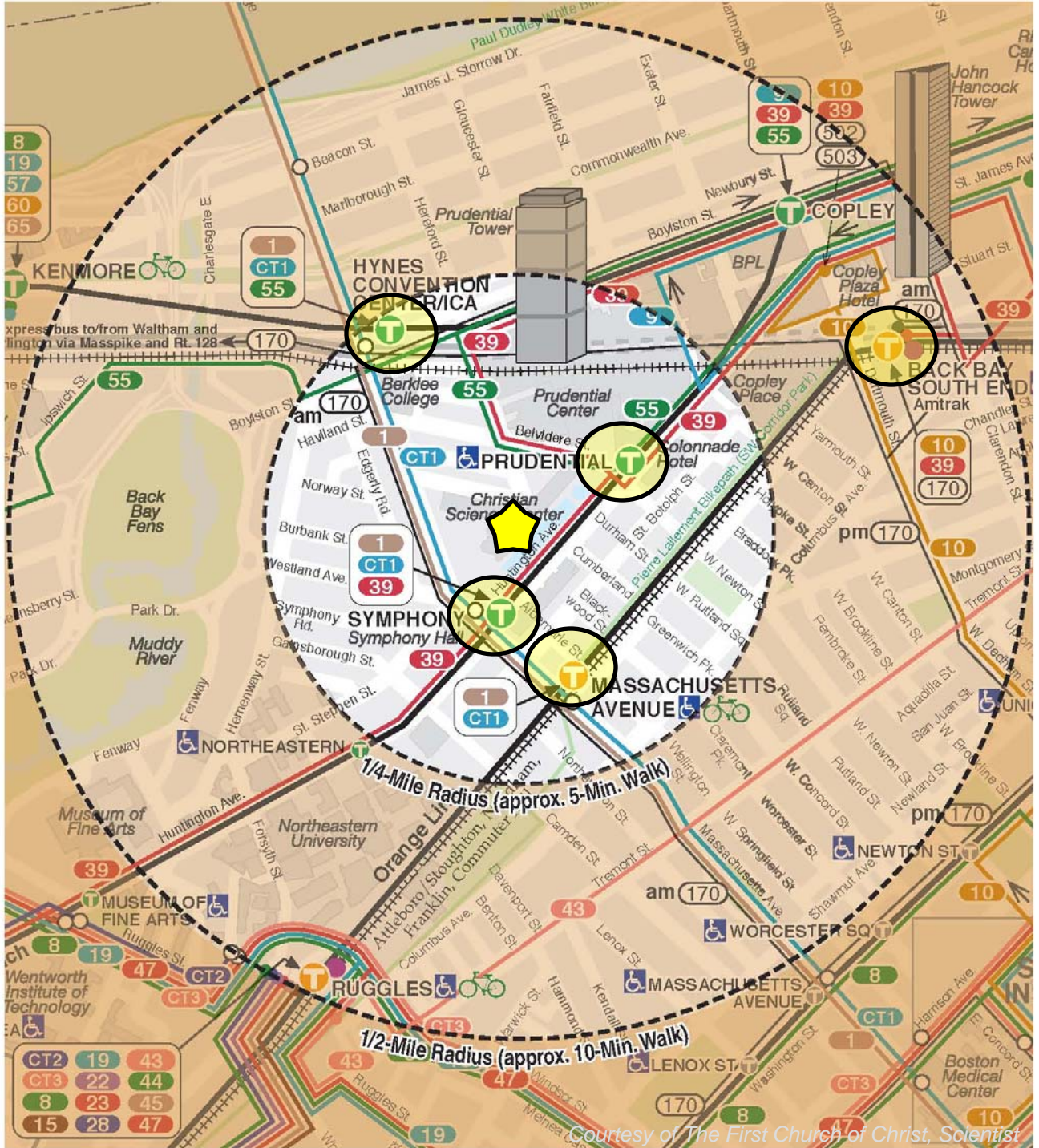
# EXISTING Site Egress Vehicles

● Key Study Intersection



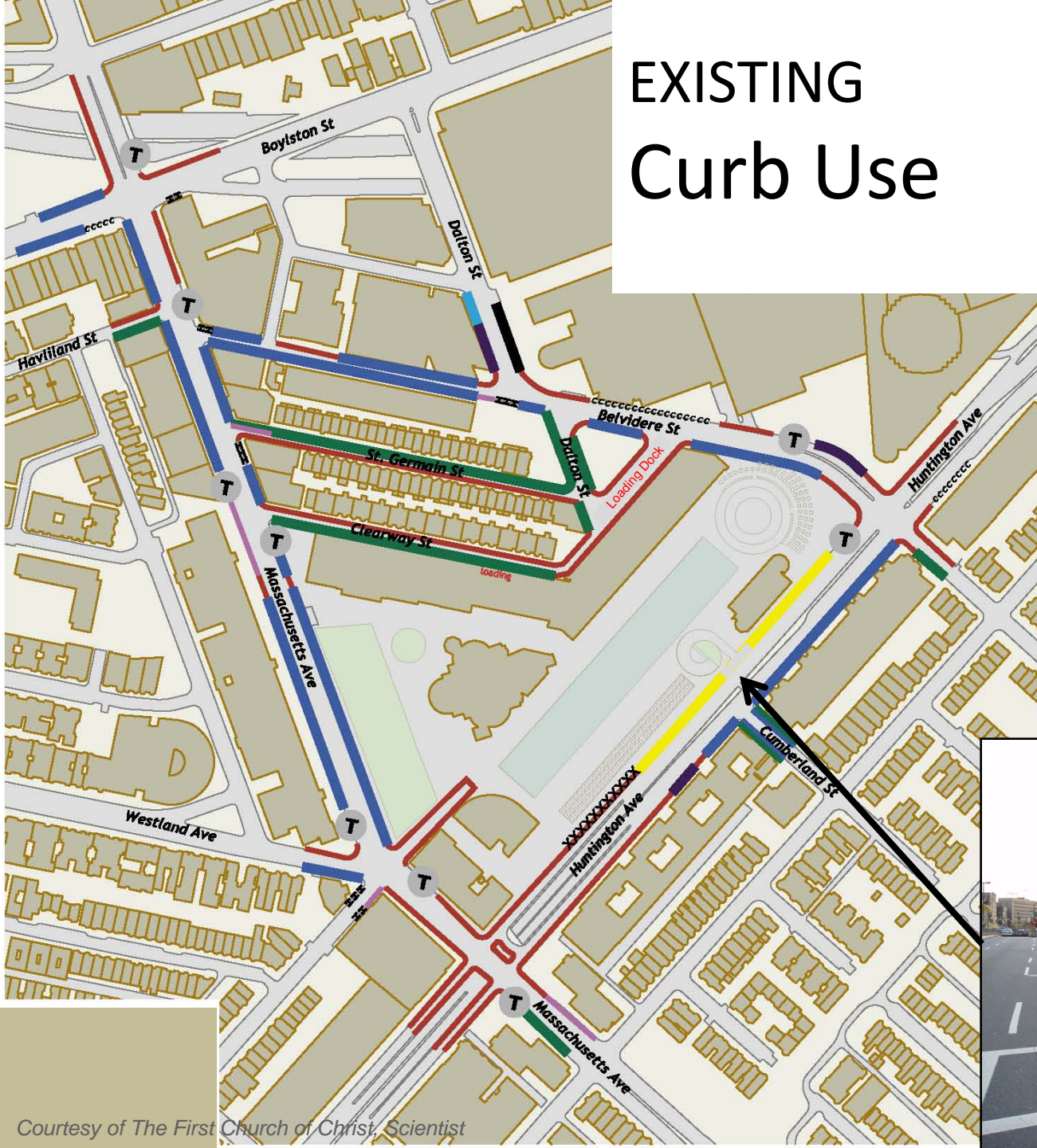
# EXISTING Transit Access

- Orange Line  
(Mass Ave)
- Green Line  
(B,C,D + E Line)
- Commuter Rail  
South and West: Back Bay,  
North and West: North  
Station connect to  
Orange Line or Green  
Line
- Buses



# EXISTING Curb Use

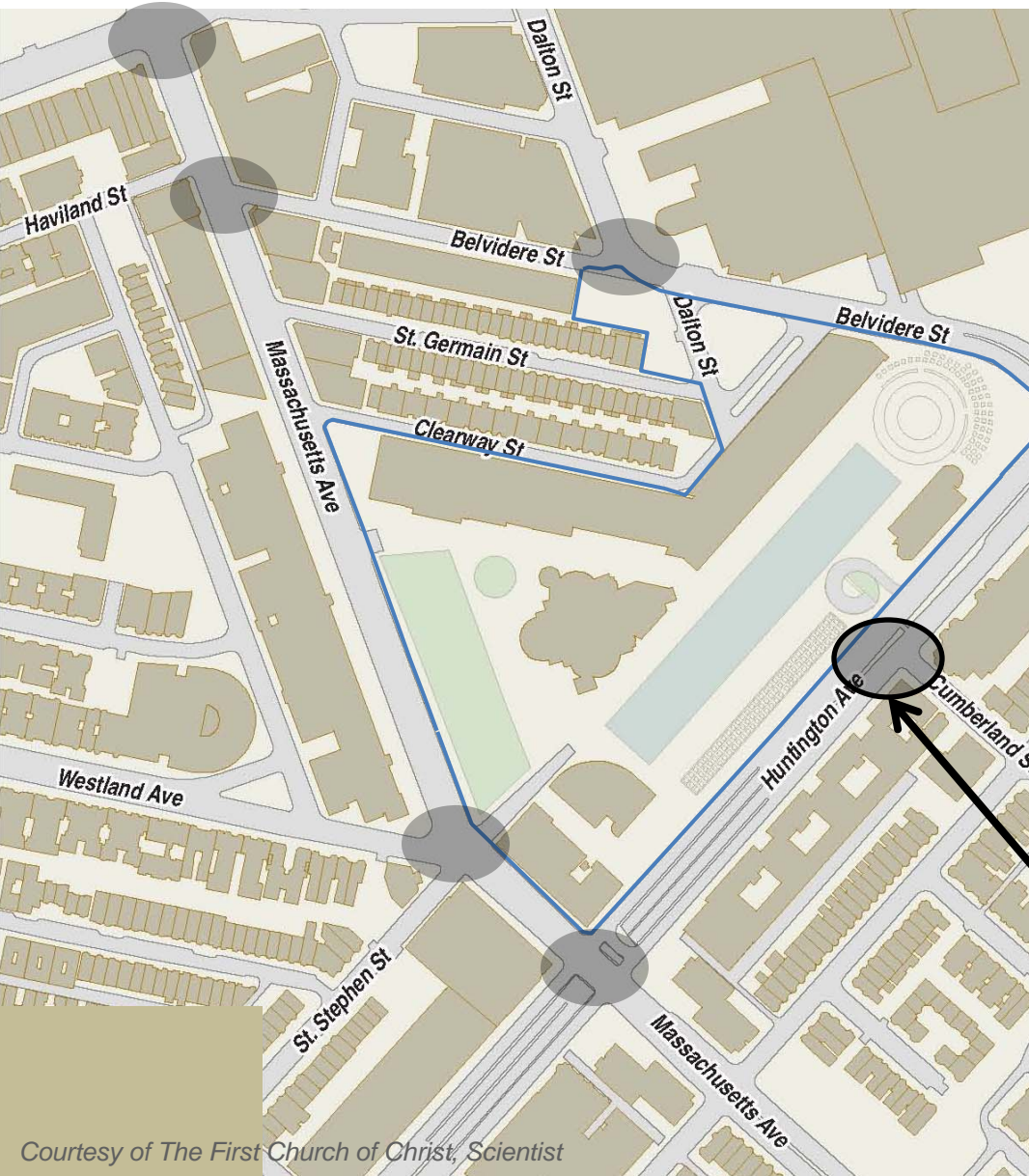
- No Parking
- Residential
- Metered
- Valet Parking - 10min Limit
- Commercial (7am-7pm) 30min Limit
- Bus Layover - 3hr Limit
- Tour Bus Stop - 15min Limit
- Sightseeing Bus Stop- 10min Limit
- T MBTA Bus Stop
- H HP-V Parking
- ccc Taxi Cab Stand
- xxxxx Illegal Bus Layover



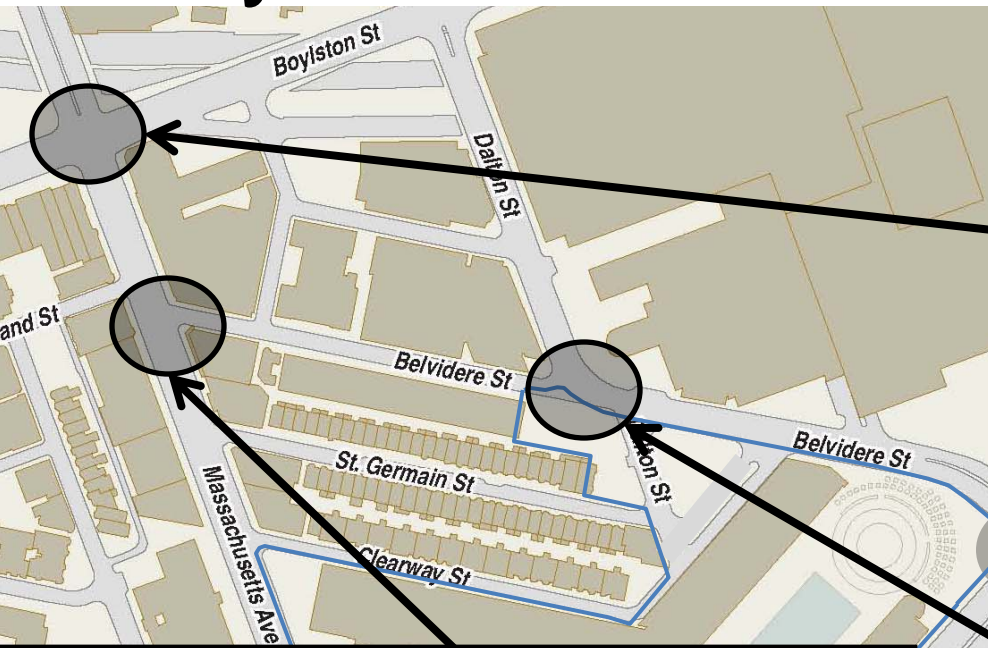
- Curb Use defined and regulated for variety of users
- Users are Residents, Visitors,



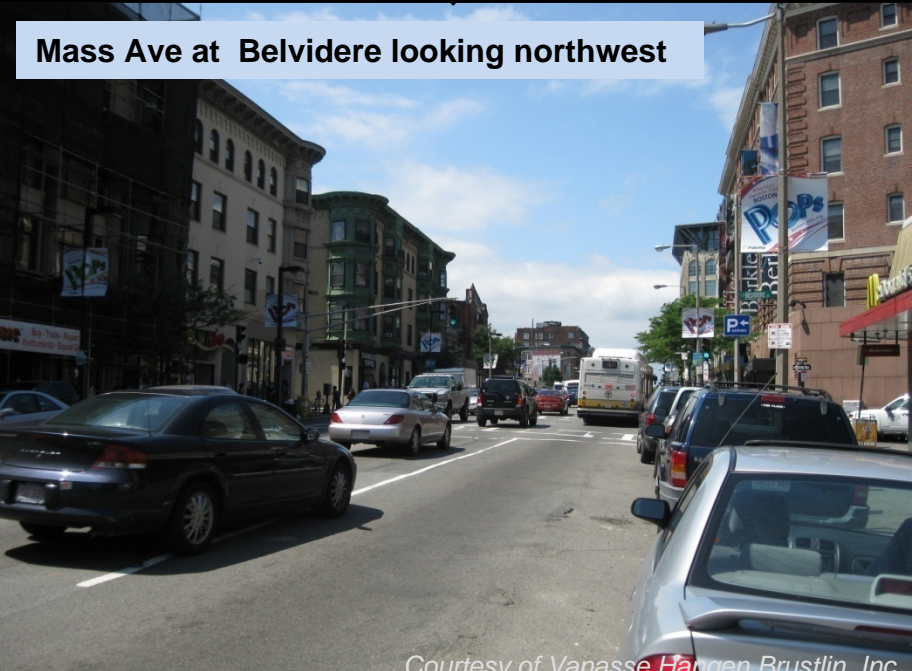
# Study Intersections



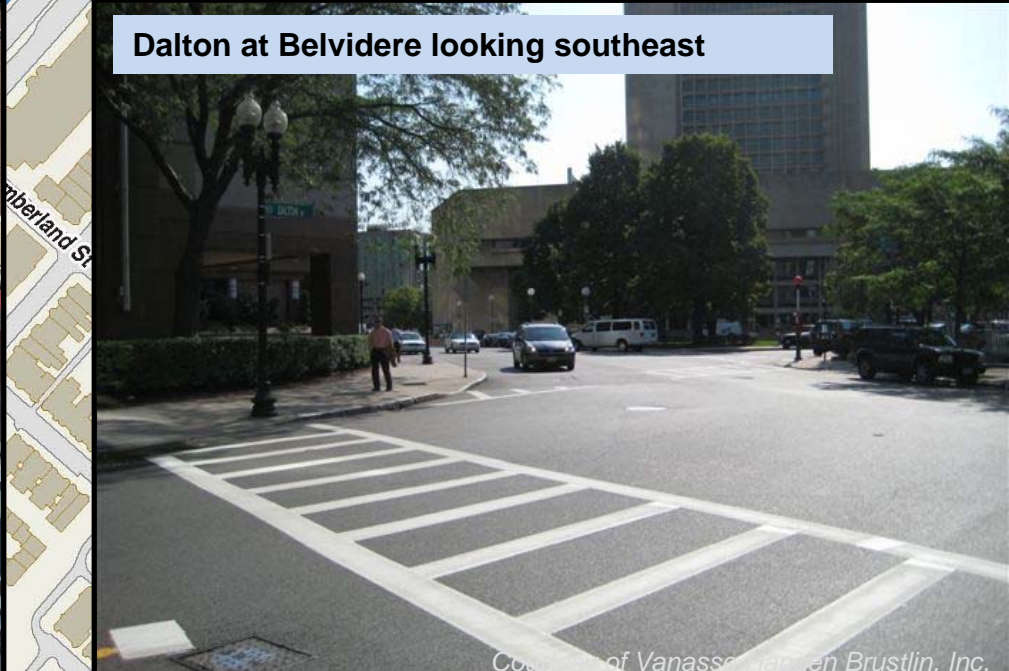
# Study Intersections



Courtesy of Vanasse Hangen Brustlin, Inc.

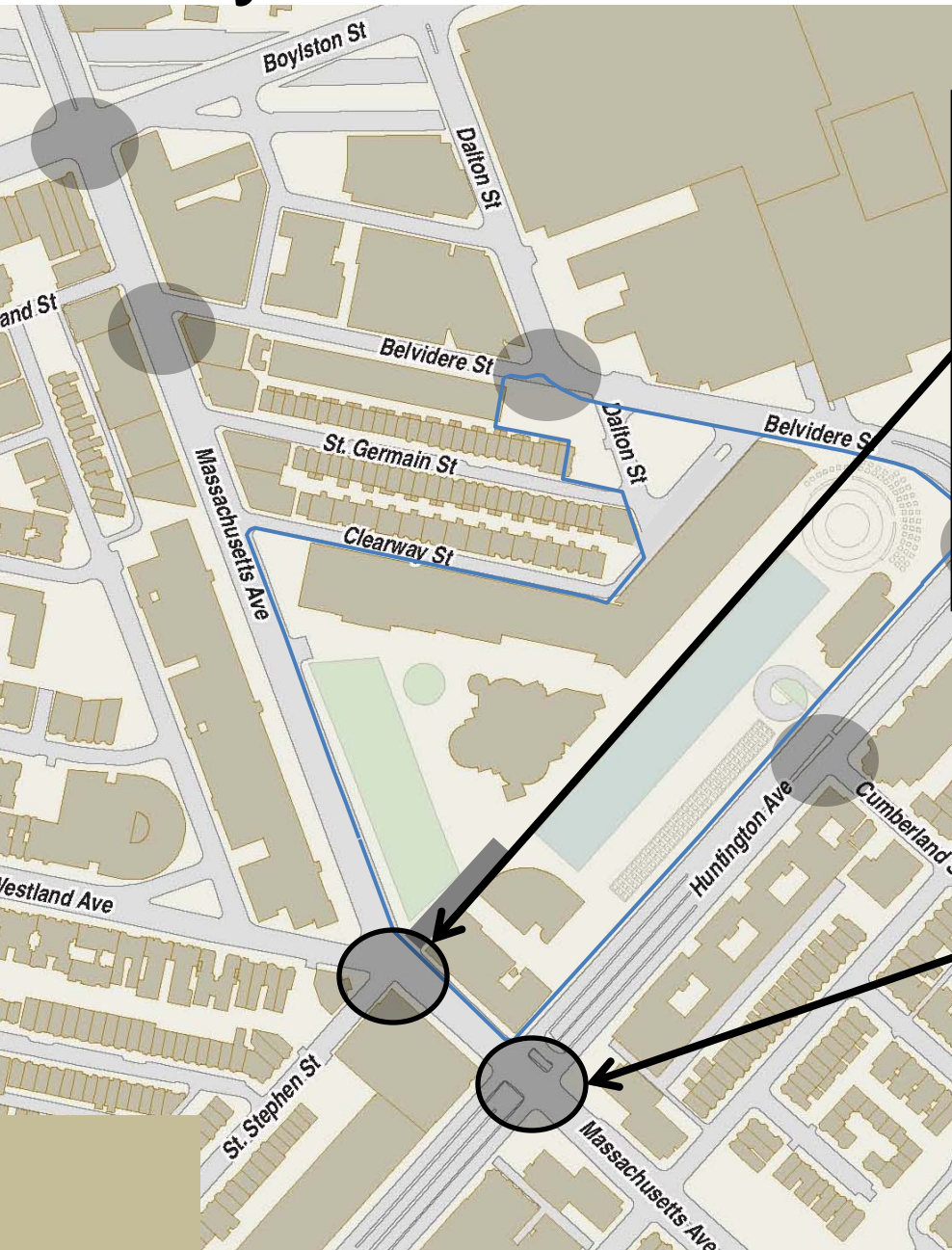


Mass Ave at Belvidere looking northwest



Dalton at Belvidere looking southeast

# Study Intersections



Mass Ave at Westland looking south

Courtesy of Vanasse Hangen Brustlin, Inc.



Huntington at Mass Ave looking southwest

Courtesy of Vanasse Hangen Brustlin, Inc.

Courtesy of The First Church of Christ, Scientist

Transportation

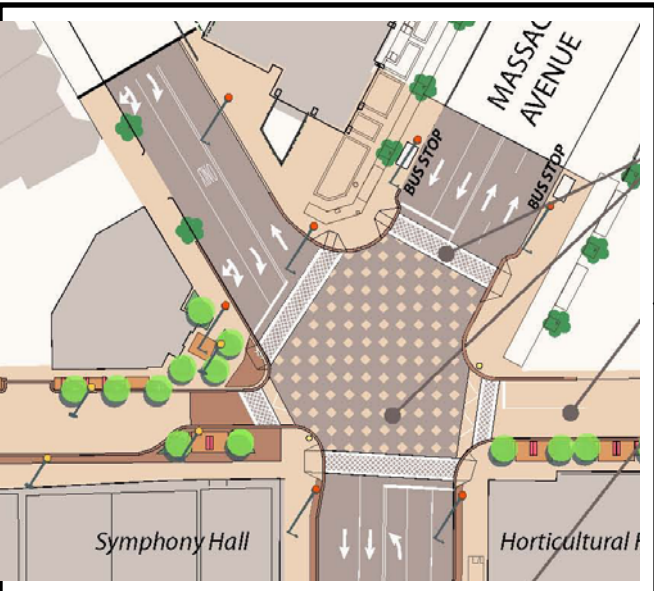
**NO-BUILD CONDITIONS**

# No-Build Conditions

Existing Conditions plus:

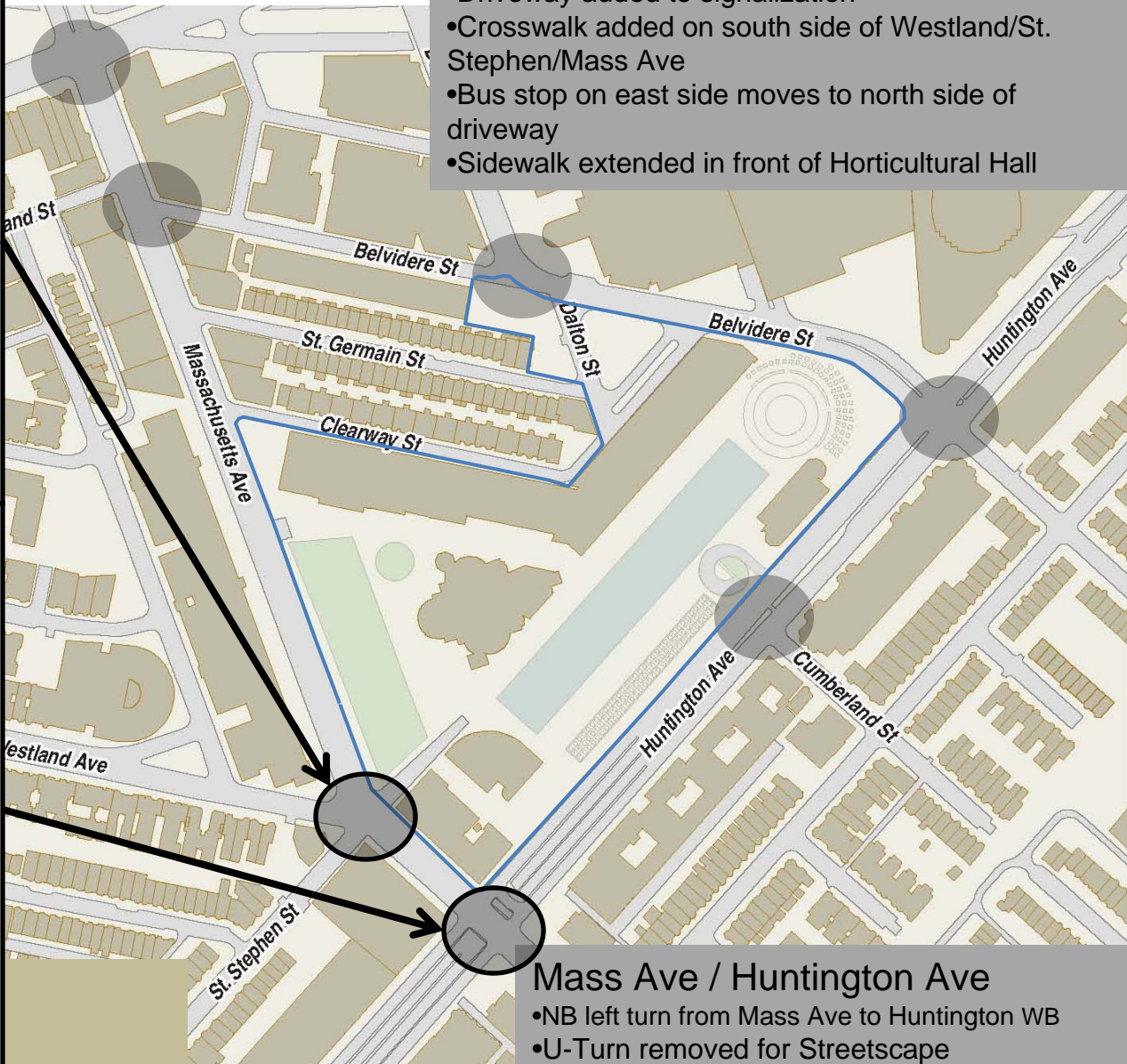
- 10 years of growth at 0.5 percent per year
- Planned and approved projects:
  - BTD Symphony Streetscape Project
  - 888 Boylston Street
  - Exeter Residential
  - The Clarendon
  - Berklee School of Music

# BID Symphony Streetscape Project



## Mass Ave / Westland St/St. Stephen

- Driveway added to signalization
- Crosswalk added on south side of Westland/St. Stephen/Mass Ave
- Bus stop on east side moves to north side of driveway
- Sidewalk extended in front of Horticultural Hall



## Mass Ave / Huntington Ave

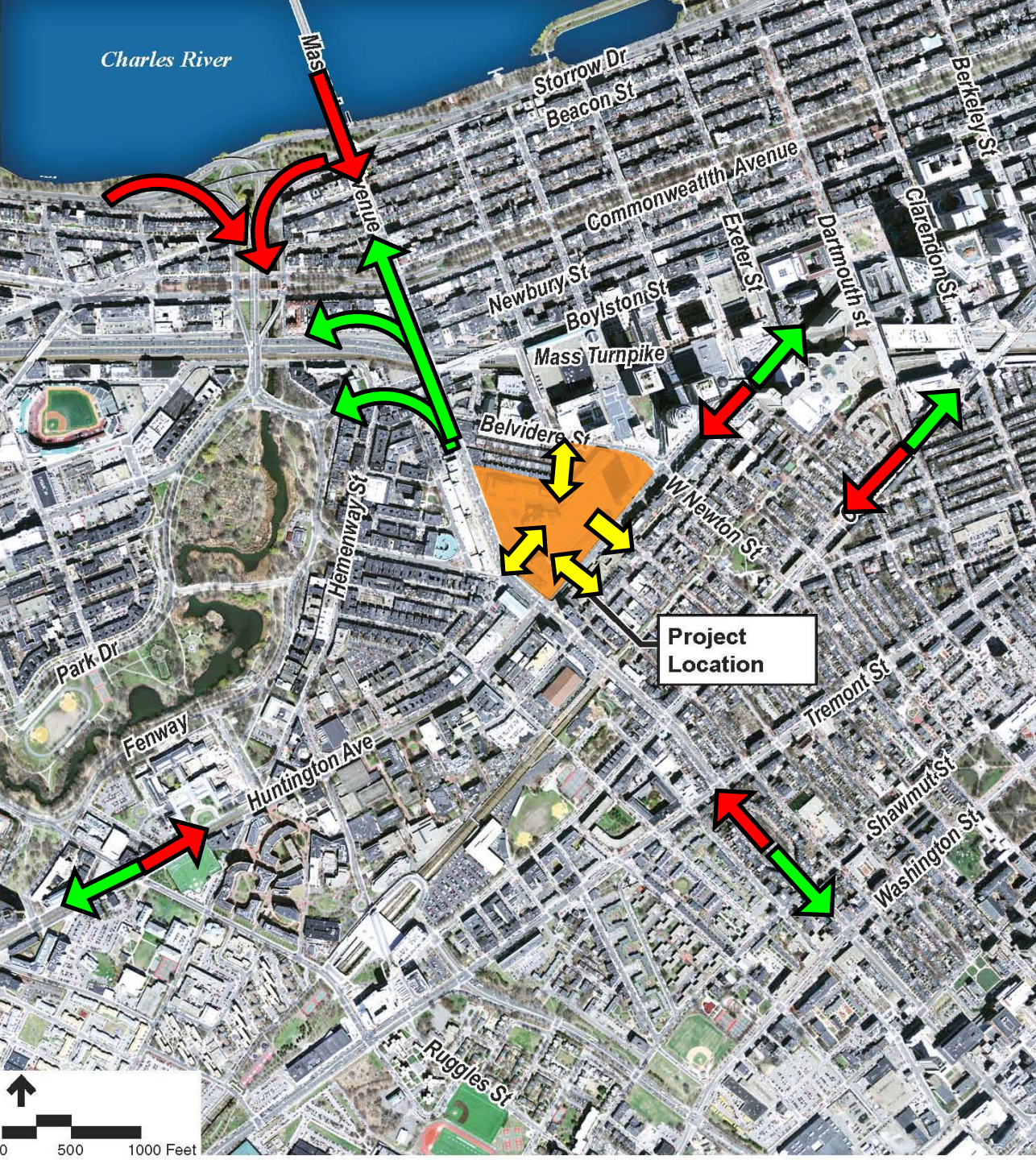
- NB left turn from Mass Ave to Huntington WB
- U-Turn removed for Streetscape

Courtesy of The First Church of Christ, Scientist



Transportation


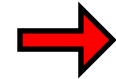
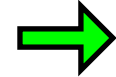
# **BUILD CONDITIONS (PROPOSED PROJECT)**



# BUILD CONDITIONS

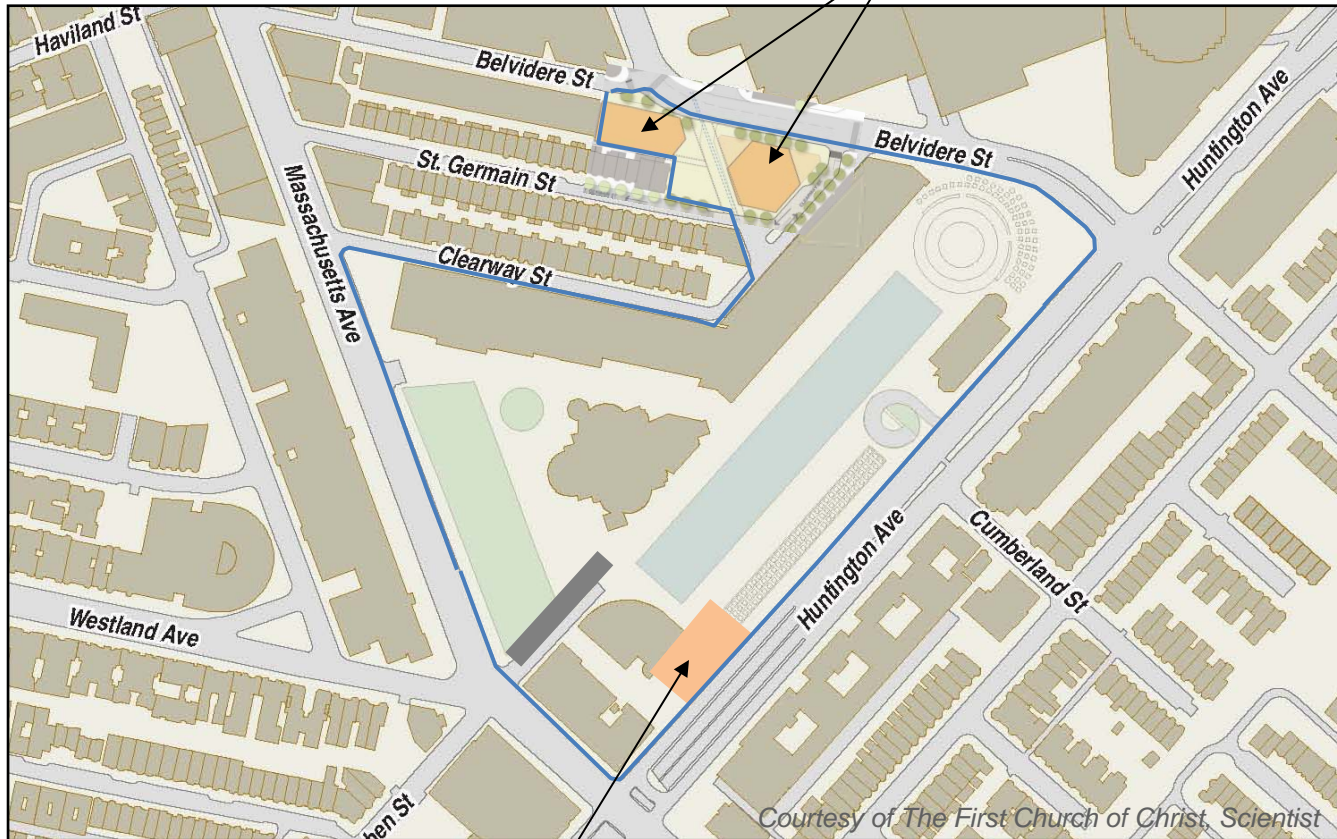
Regional Access & Egress

No Change

-  Site Driveway
-  Access
-  Egress

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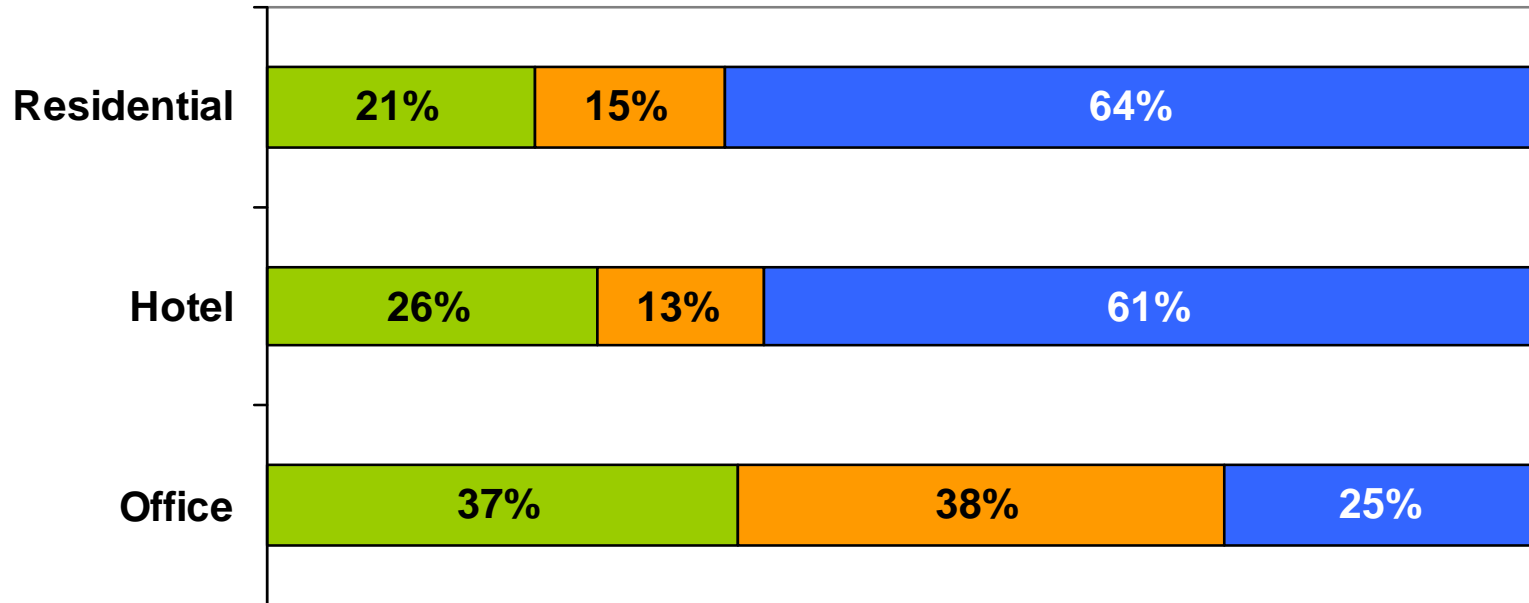
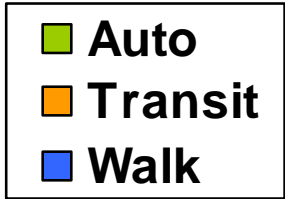
Residential/Hotel Use



Office/Residential Use

Use

## Modes of Transportation

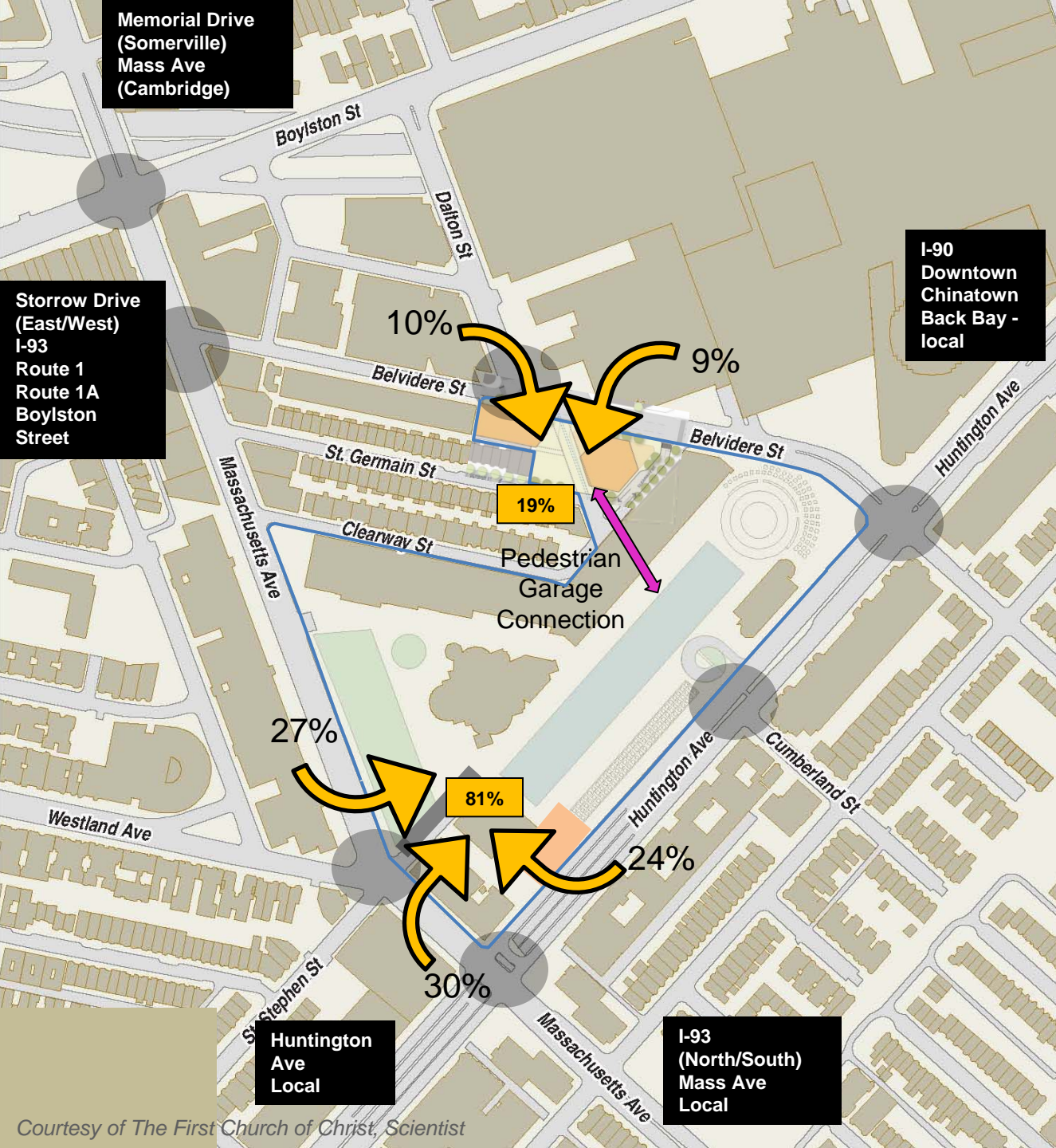


*Courtesy of The First Church of Christ, Scientist*

# Proposed Project Trip Generation

<b>Peak Hour Project Trips</b>			
	<b>Auto</b>	<b>Transit</b>	<b>Walk/Other</b>
<b>Morning Peak Hour</b>	<b>207</b>	<b>205</b>	<b>393</b>
<b>Evening Peak Hour</b>	<b>214</b>	<b>209</b>	<b>430</b>

Source: ITE Trip Generation



# BUILD CONDITIONS

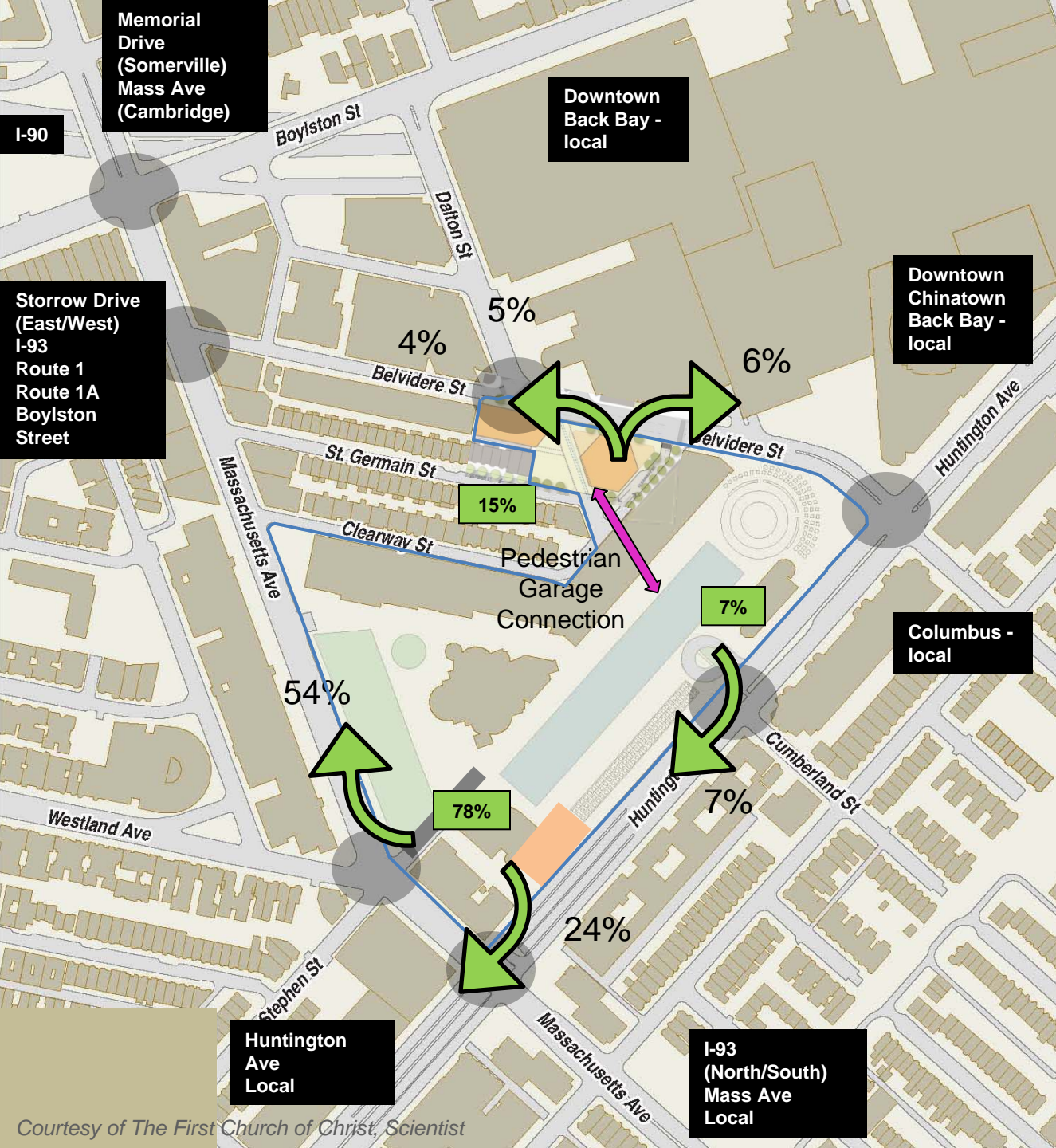
## Project Trip Distribution

### Inbound AM

## Vehicles

- Pedestrian Garage Connection

● Key Study Intersection



# BUILD CONDITIONS

## Project Trip Distribution

### Outbound PM

## Vehicles

- Pedestrian Garage Connection
- Spiral ramp for egress
  - Direct Huntington Ave westbound access
  - Symphony Parking

● Key Study Intersection

Courtesy of The First Church of Christ, Scientist

# Level of Service (LOS) Criteria

Level of Service (LOS)	Unsignalized Intersection Control Delay (sec/veh)	Signalized Intersection Control Delay (sec/veh)
A	$\leq 10$	$\leq 10$
B	$> 10 - \leq 15$	$> 10 - \leq 20$
C	$> 15 - \leq 25$	$> 20 - \leq 35$
D	$> 25 - \leq 35$	$> 35 - \leq 55$
E	$> 35 - \leq 50$	$> 55 - \leq 80$
F	$> 50$	$> 80$

2000 Highway Capacity Manual

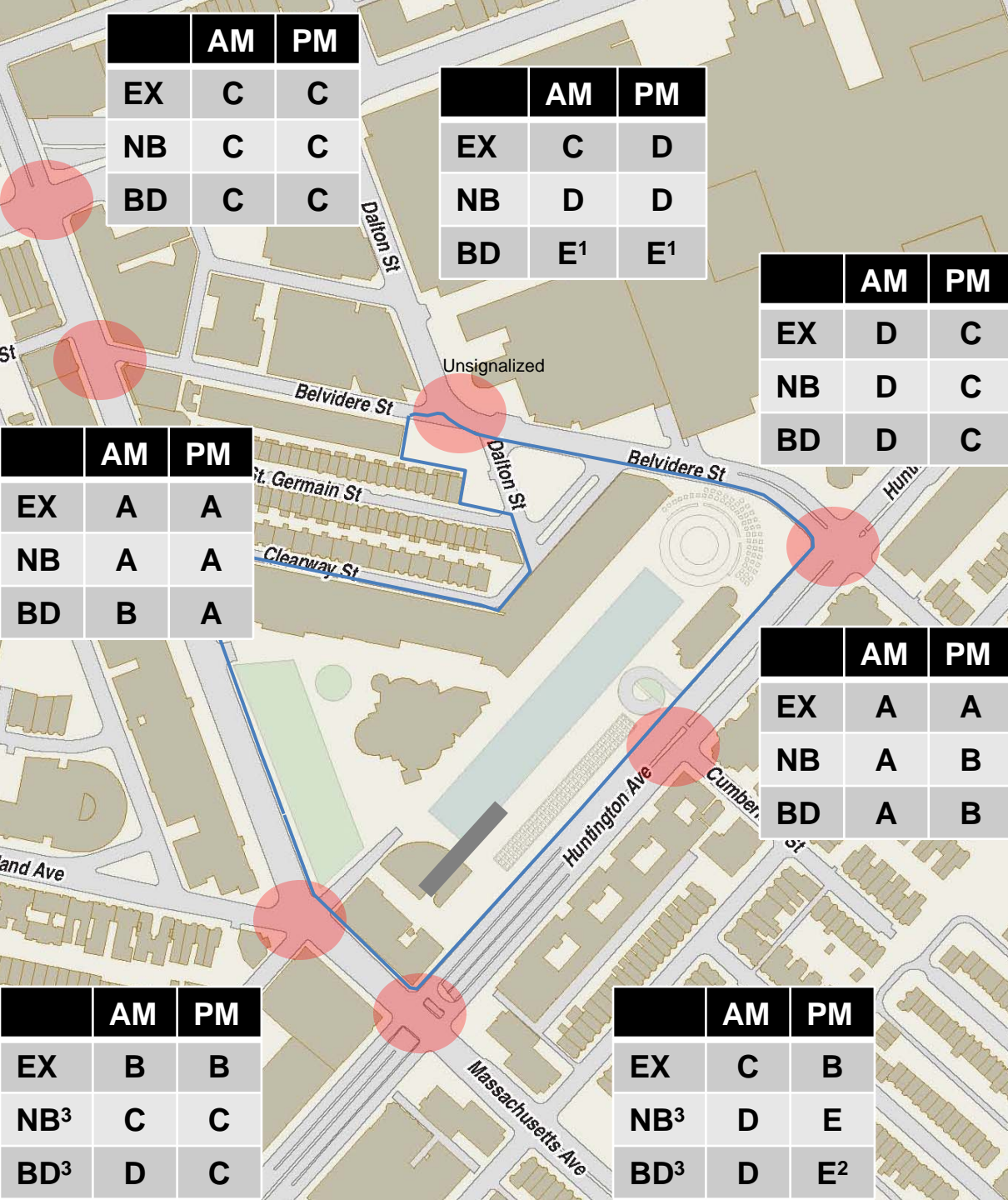


# Initial Assessment

## Conclusion:

- Existing conditions analyzed are at acceptable LOS
- Build conditions analyzed at signalized intersections are at acceptable LOS

EX – Existing Conditions  
 NB – No-Build Conditions  
 BD – Build Conditions



<sup>1</sup> to be redesigned as part of project

<sup>2</sup> signal timings adjusted

<sup>3</sup> preliminary results will need to be coordinated with Symphony Streetscape Project Plans

# Preliminary Parking Supply Estimate

## Existing

Existing Underground Garage	550
<u>Existing Commercial Surface Lots</u>	<u>80</u>
<b>Total Existing Parking Supply</b>	<b>630</b>

## Proposed

Proposed Belvidere High Rise	~200
Proposed Belvidere Mid Rise	~50
<u>Relocation of Commercial spaces</u>	<u>-80</u>
<b>Total Net New Proposed Parking</b>	<b>~170</b>
<b>Total Proposed Parking Supply Estimate</b>	<b>~800</b>



# Summary of Key Findings

- The proposed project has minimal transportation impacts on nearby intersections due to predominance of residential and hotel land uses
- The proposed project has minimal net increase in parking needs due to existing parking supply and residential/hotel focus
- The project area already has a high use of transit and walking versus drive-alone commuting