

Economic Development



2020 Capstone – UA 805 Boston University



Environmental Planning



M
A
Y

5

2

0

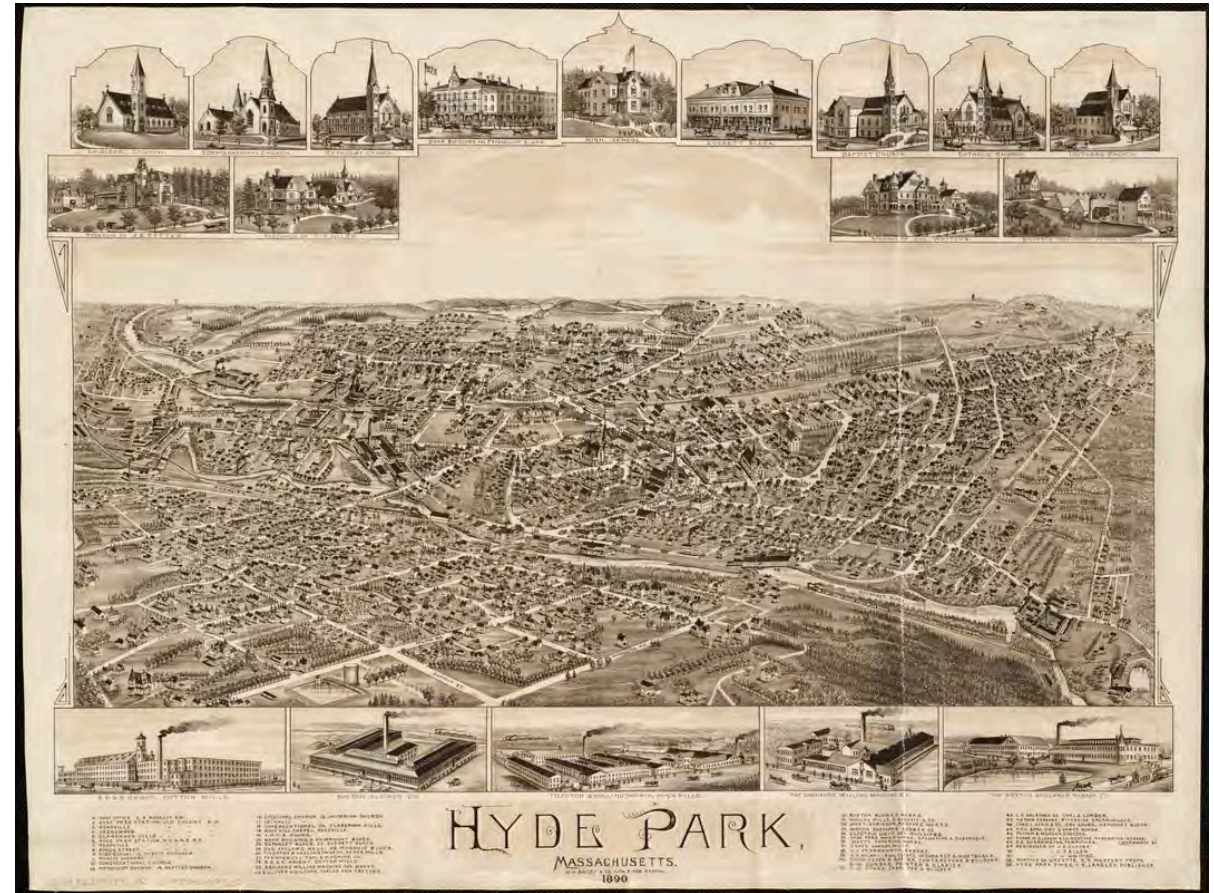
2

0

Hyde Park, MA (1868)



1879



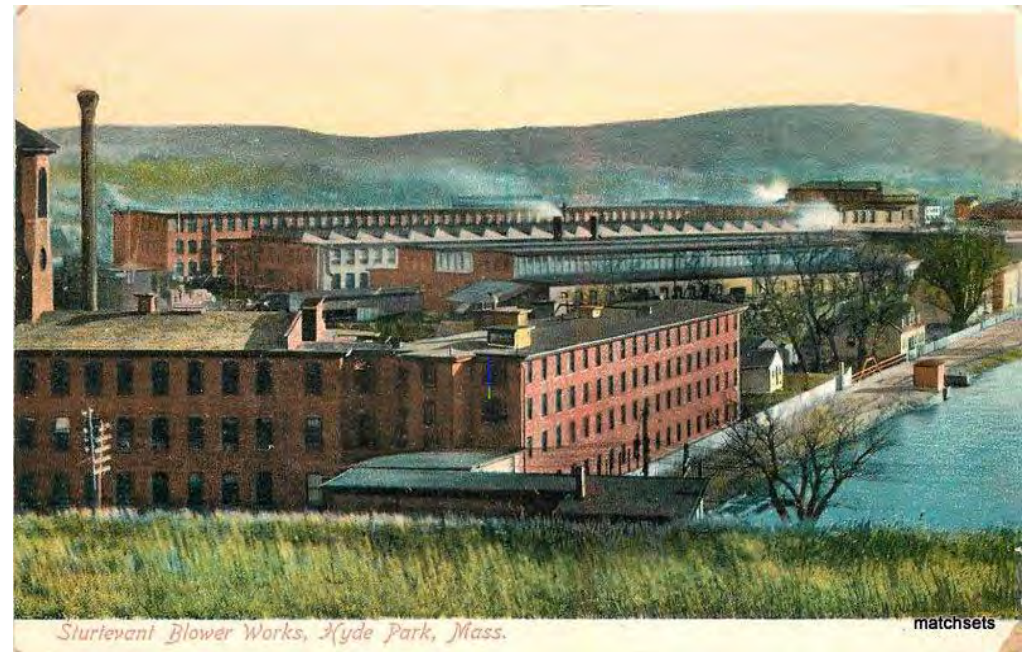
1890



Late



19th
Century



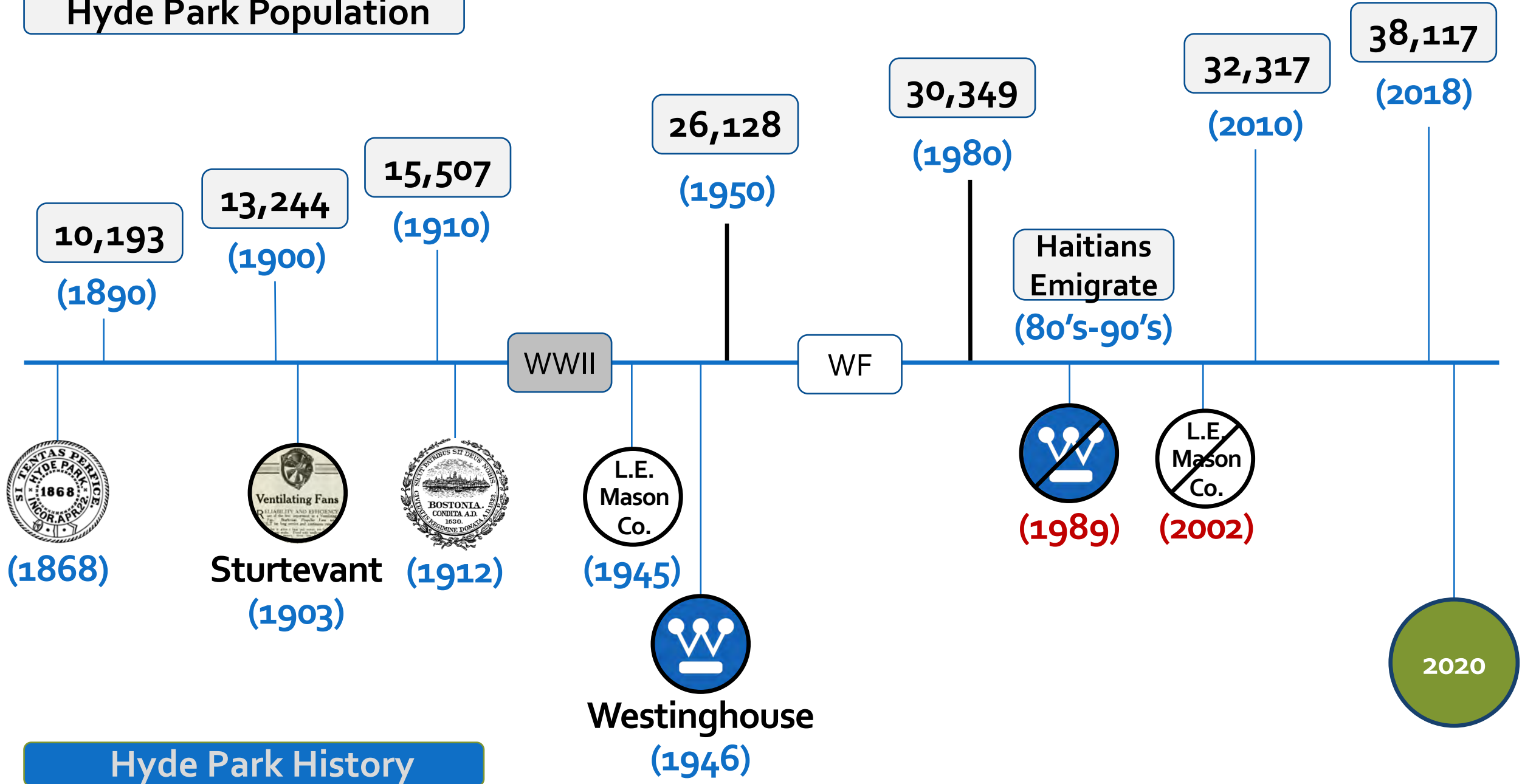


Early



20th
Century

Hyde Park Population



Hyde Park History

Hyde Park

2020

Annexed – 1912
City of Boston

Demographic Information



38,117 people



28.9%



- African-American 45.3%
- Hispanic or Latino 25.8%
- Non-Hispanic White 24.5%
- Other Races 4.3%



\$31,622



13.9%

Hyde Park

2020

Annexed – 1912
City of Boston



7.9 Miles South of
Downtown Boston



Economic Development

COMPLETE STREETS HYDE PARK

Did you know?

MAKING IT EASIER TO BIKE OR WALK CAN STIMULATE THE LOCAL ECONOMY.




MORE FOOT TRAFFIC MEANS MORE BUSINESS.

Redesigning our busiest streets to make them more inviting for bicyclists and pedestrians can increase safety and draw people into local businesses.


Group 1

HYDE PARK

Education: The Road to Wealth



- Vocational Education
- Workforce Development
- Coworking Opportunities
- Community Education



JASON ASIRIFI
ERIC FREEMAN
JINGYI GU
WINSTON PIERRE

Group 2

A Future That Works: Promoting Inclusive Job Growth in Hyde Park



Attracting:

- Future Forward Industries
- Advanced Manufacturing
- Mixed-Income Housing
- Increasing Employment Options
- Upskilling Local Workers



YOU CAN HELP US BY PROVIDING FEEDBACK AND QUESTIONS. WE NEED YOUR PARTICIPATION!

 (617) 555-WORK     **CONNECT WITH US**




Group 3

Environmental Planning


INCREASING RIVERFRONT ACCESS IN HYDE PARK


PROJECT LOCATIONS ENVIRONMENTAL JUSTICE MAP

WEST STREET PARK



STONY BROOK








ENGAGE

ENHANCE

ACTIVATE

Group 4

Hyde Park Neighborway

Connecting You to a Greener Hyde Park





Hyde Park Plaza





Ross Playground





Neighborway







West Street Park





Iacono Playground







Scan for more info about parks & events along your Neighborway

Group 5


Slow the Flow

CREATING A SAFER RIVER STREET CORRIDOR
HYDE PARK, BOSTON, MA





PLANTING STREET TREES



ADDING CROSSWALKS & CURB EXTENSIONS



INSTALLING RAIN GARDENS

UA805 - Spring 2020
Helen Lee, Riley McCorstin, Rebecca Singh, Lening Wang

Group 6



Hyde Park, Boston

Enjoy the Presentations!



WALKABLE HYDE PARK

**MORE FOOT TRAFFIC
MEANS MORE BUSINESS.**

Anthony Alamia, Liz Bagley,
Angela Servello, and Liu Yan



Overview

- I. Our Vision
- II. Challenges to Address
- III. Project Goals and Strategies
- IV. Case Studies
- V. Estimated Budget
- VI. Community Impact



Our Vision

Strengthen Hyde Park's Central Business District by promoting it as a vibrant center of activity.

Pedestrian-friendly design, inviting public space, a strong business community, and engaging programming will draw residents and visitors alike to the district.



Economic



Transportation



Public Health

Complete Streets

Community Impact

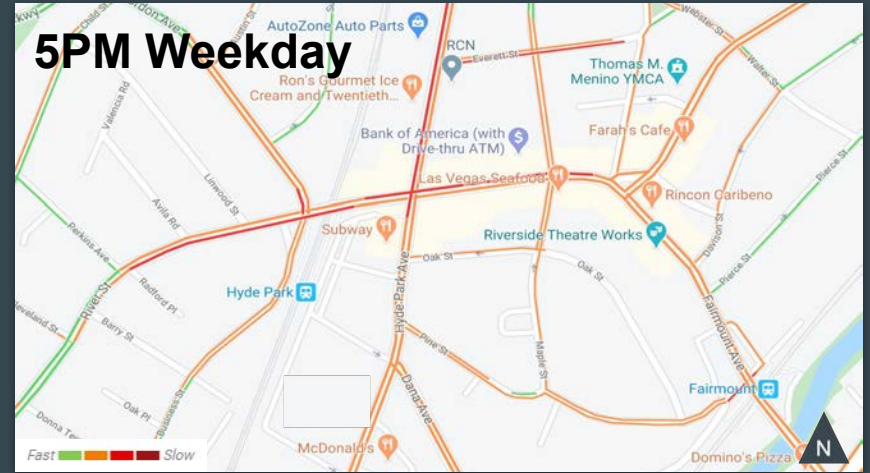
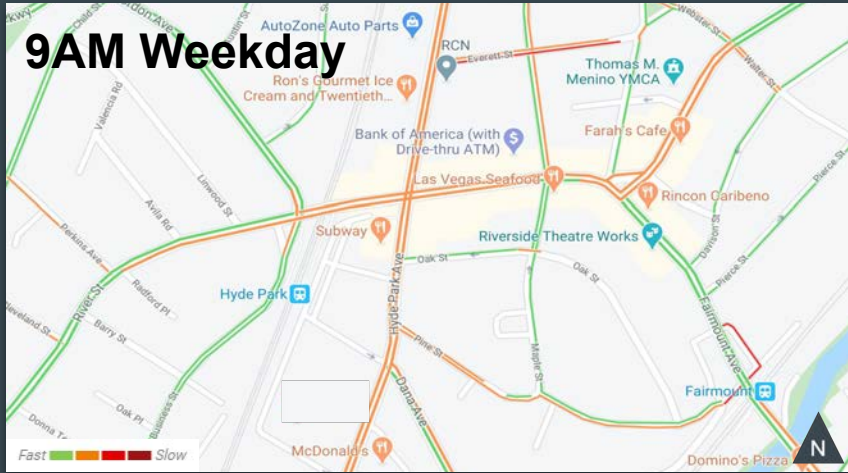


Safety

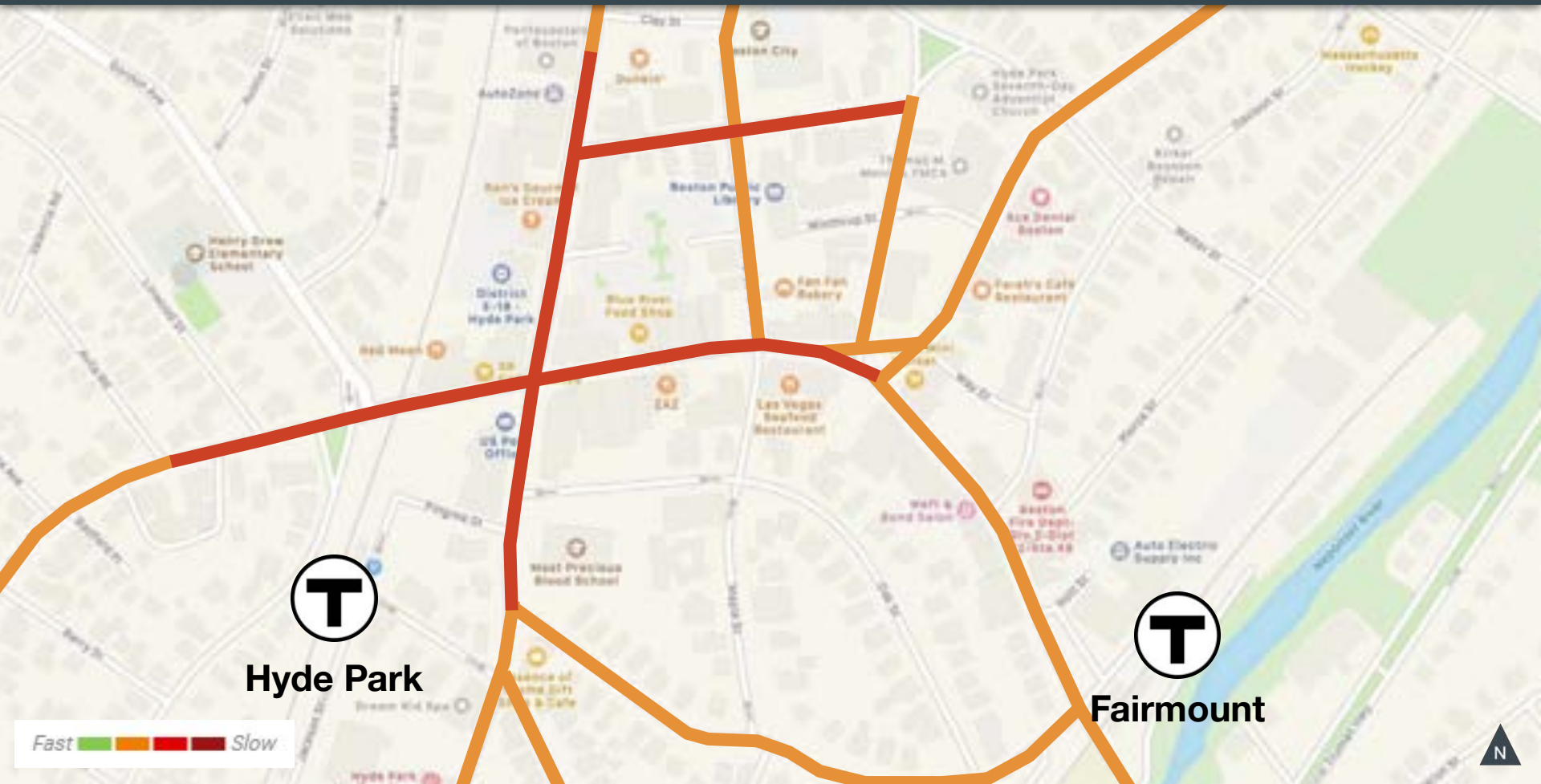


Design

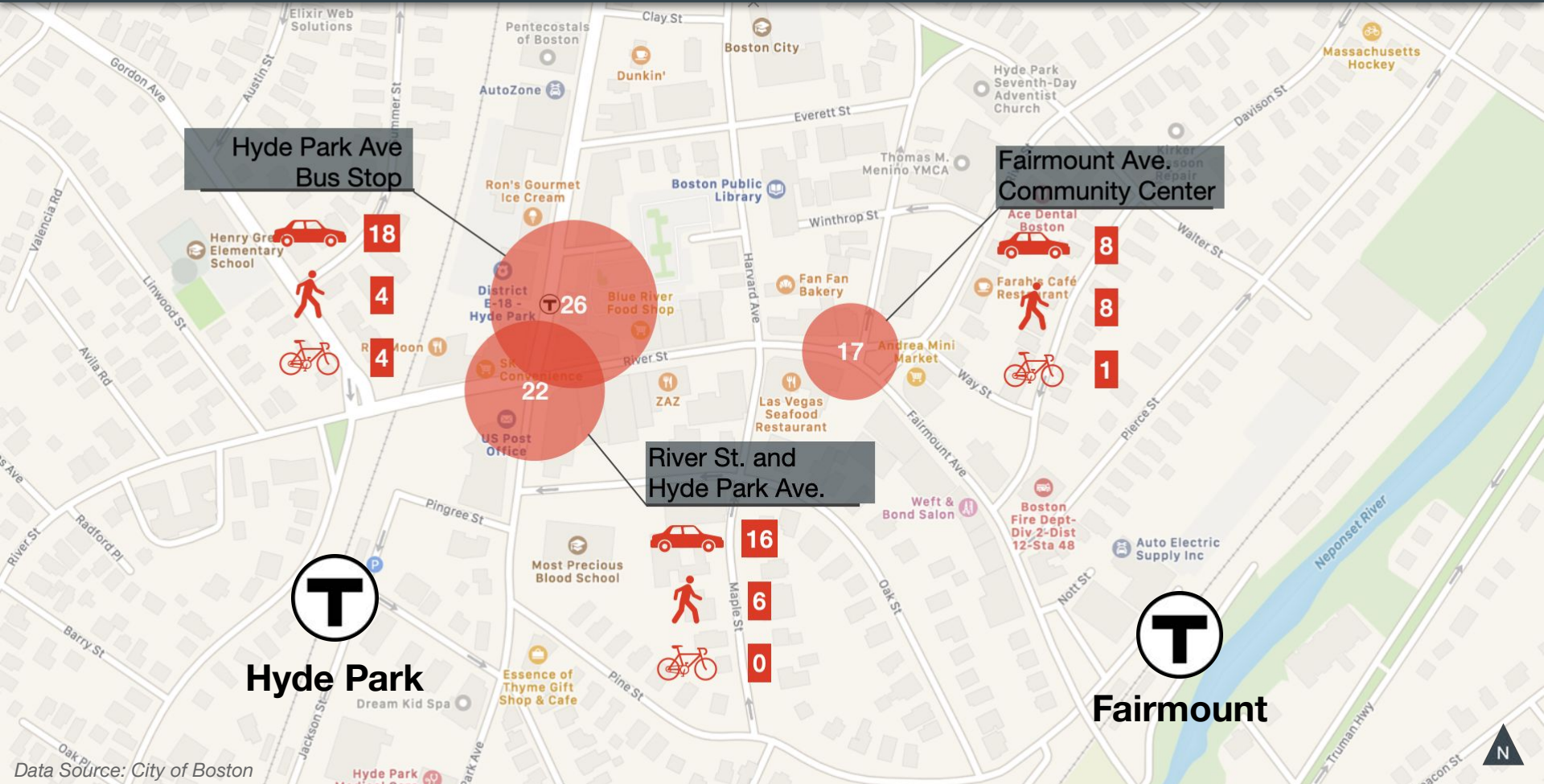
Typical Traffic Conditions



High-Traffic Corridors



Crashes in the Hyde Park CBD Since 2010



Data Source: City of Boston

Underutilized Connectivity



Challenges to Address



**Unsafe conditions
for pedestrians**

Limited social options



**Underutilized space
and on-street parking**

**Missed opportunities
for community revenue**



**Little connectivity
across the CBD
despite nearby transit
options**

Project Goals



Improve pedestrian infrastructure in the CBD

Cultivate a unified “feel” of the CBD through wayfinding and community programming

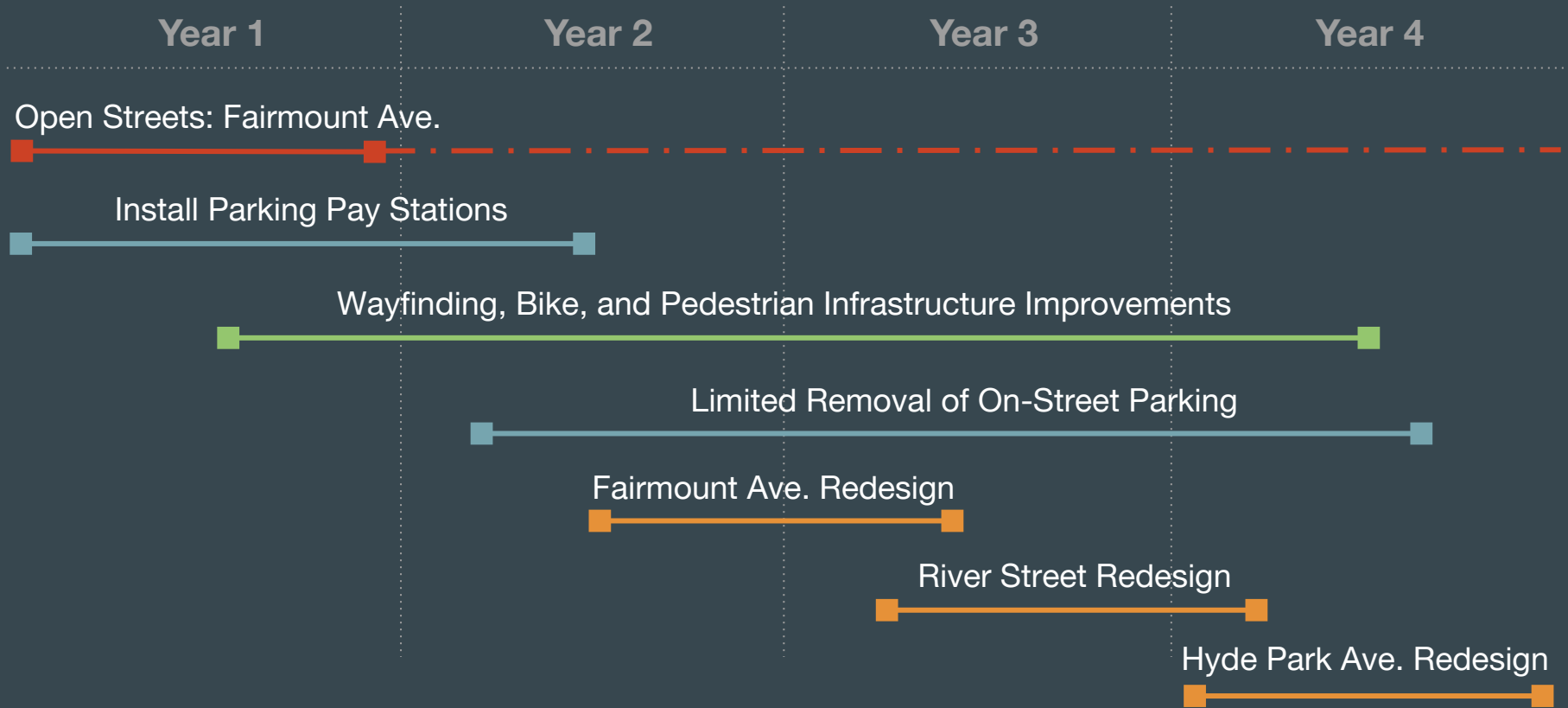


Shift parking demand away from on-street spaces by encouraging use of surface lots

Complement nearby TOD by increasing connectivity between the CBD’s commuter rail stops



Project Schedule



Parking Plan

River Street & Fairmount Ave.



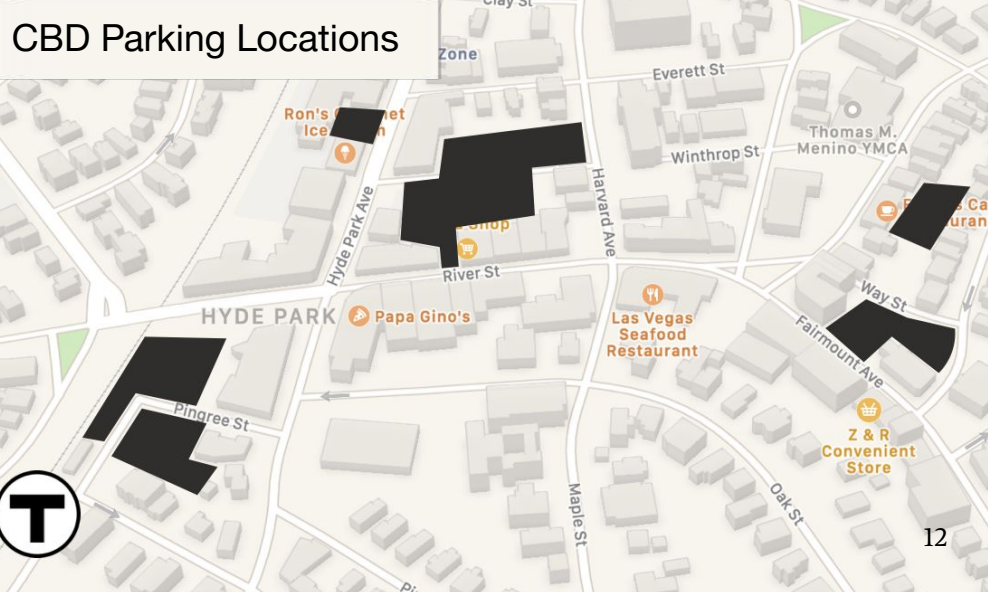
Phase 1: Open Street Days

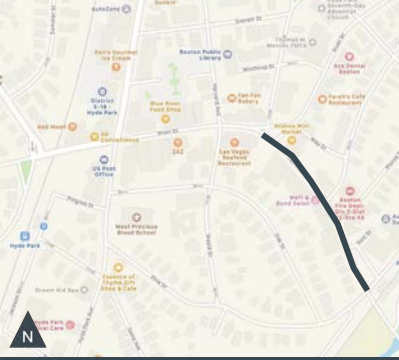


Phase 2: Introduction of On-Street Parking Pay Stations for Revenue



Phase 3: Bike Shares and New Pedestrian Amenities



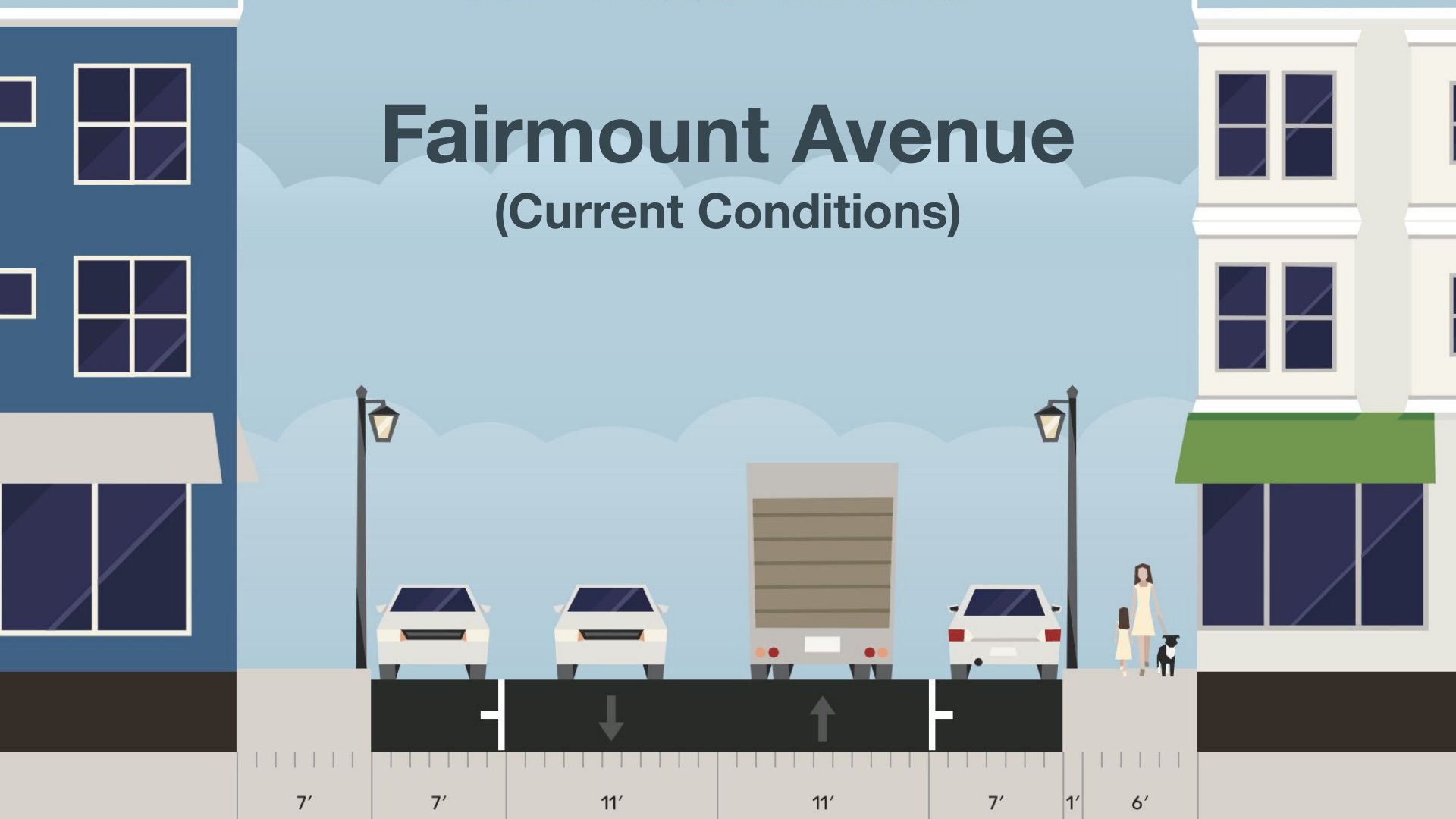


Fairmount Avenue



Fairmount Avenue

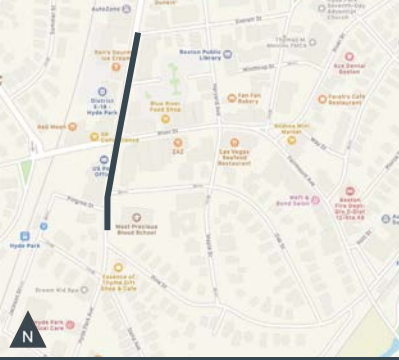
(Current Conditions)



Fairmount Avenue

(Open Streets)

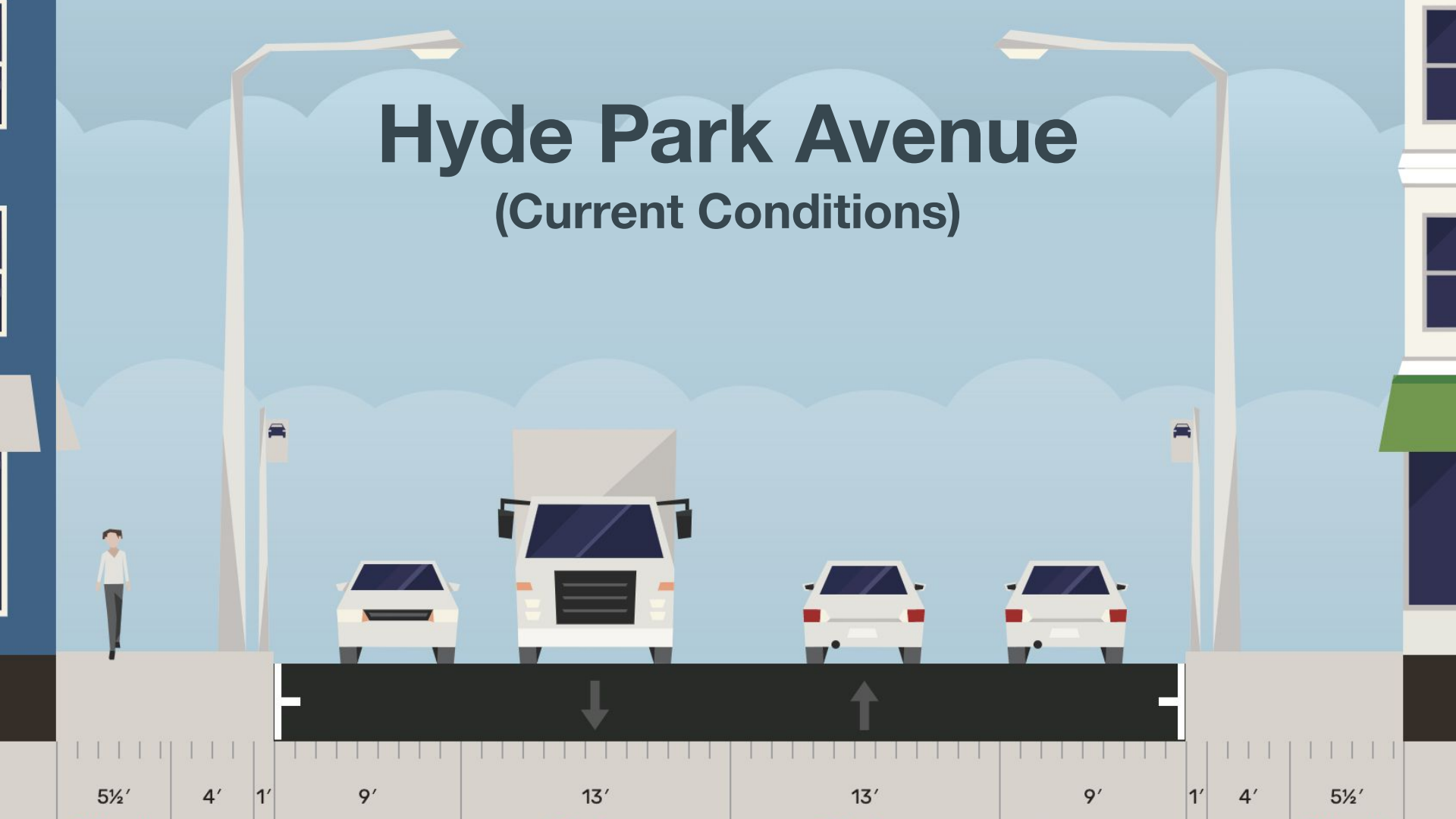




Hyde Park Avenue

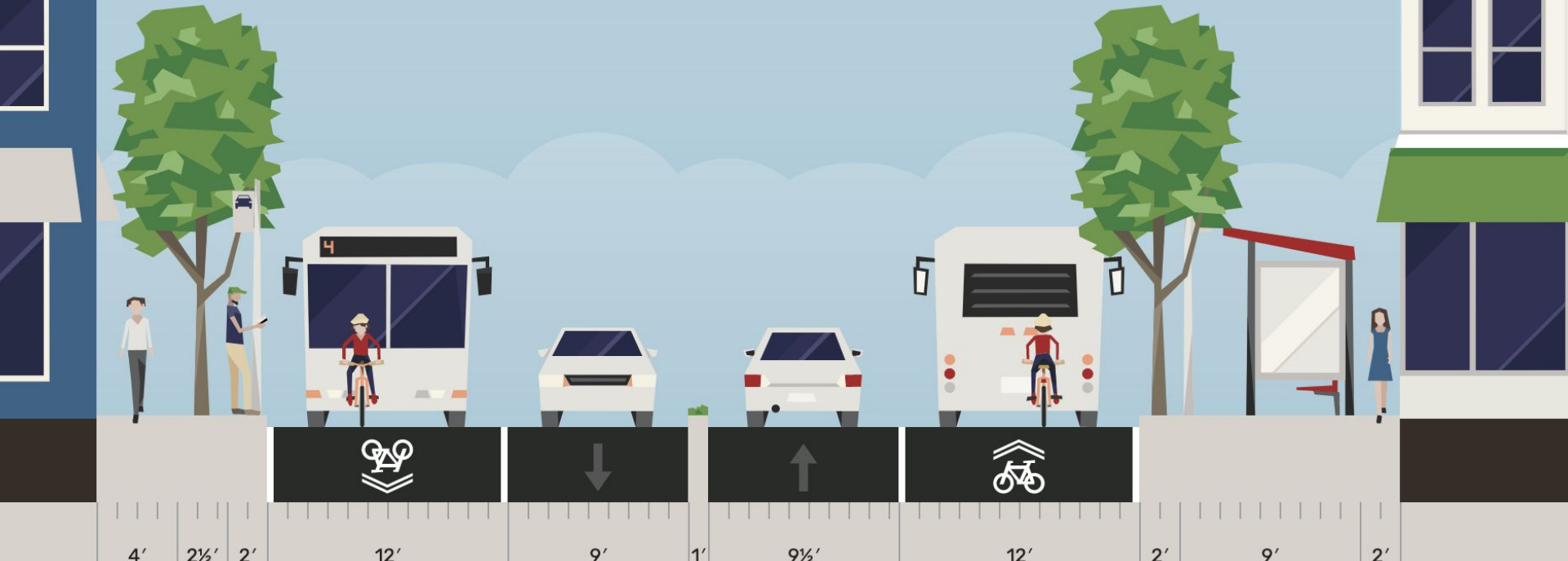
Hyde Park Avenue

(Current Conditions)



Hyde Park Avenue

(Multimodal Corridor)



Case Studies

Huntington Village, NY

- Installation of parking meters
- Reduce idling
- Funds for reinvestment
- Town acquired private lots



Middleborough, MA

- Has seen a pop increase
- Parking mins decreased
- Changes in zoning
- Increased use of downtown



Case Study Findings

- **Add Parking Terminal**
- **Overlay District for Hyde Park**
- **Decrease 1-1.5 Parking**
- **Temporary & Short-term Opening of Road to Pedestrians**
- **Long-term Reduction of On-street Parking**
- **Activate Streets**



Benefits to the Community



| | | | |
|---------------------------------------|---|---|---|
| Open Streets: Fairmount Avenue | + | + | + |
| Parking Pay Stations | | + | |
| Redesign: Fairmount, River, Hyde Park | + | + | + |
| Bike and Pedestrian Infrastructure | + | + | + |
| Wayfinding Improvements | | + | + |

Estimated Budget and Revenue

| | Cost |
|--|------------------|
| Parking Pay Station (70 spaces) | \$5,950 |
| Fairmount Avenue Redesign (~1,400 ft) | \$14 mil. |
| Hyde Park Avenue Redesign (~2,000 ft) | \$16 mil. |
| Bike and Pedestrian Infrastructure (~3,400 ft) | \$5 mil. |
| Wayfinding Improvements (~3,400 ft) | \$25,000 |
| Total | \$35 mil. |

Annual Revenue Generation

Revenue generated for local businesses at \$2.50/hr (+\$.15 fee) per year =

~\$260,000



Impact & Benefits



People

Foster greater social options for an already tight-knit community.



Businesses

Increased foot traffic and revenue from parking meters for reinvestment.



Transportation

Connection of the rail station and multi-modal options allowing for easier access.

Short-term

- Increased foot traffic and longer time spent in CBD.
- Have people walk in from surrounding neighbors.

Mid-term

- Greater multi-modal travel through the use of bike sharing and way-finding.

Long-Term

- Push more reliance on parking lots and less on street parking.



**Greater
Walkability**



**Reduced
Accidents**

Thank You

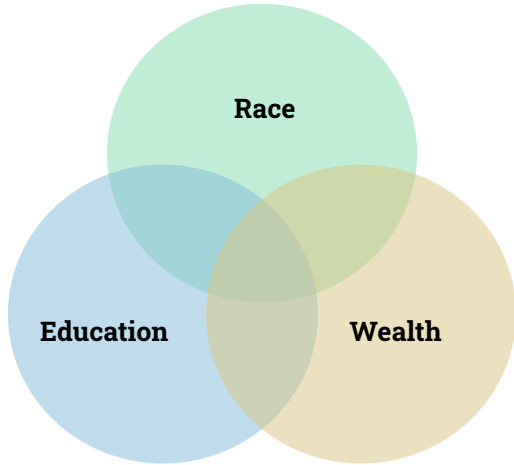


**Business
Focused**



**Better
Connectivity**

Education: The Road To Wealth

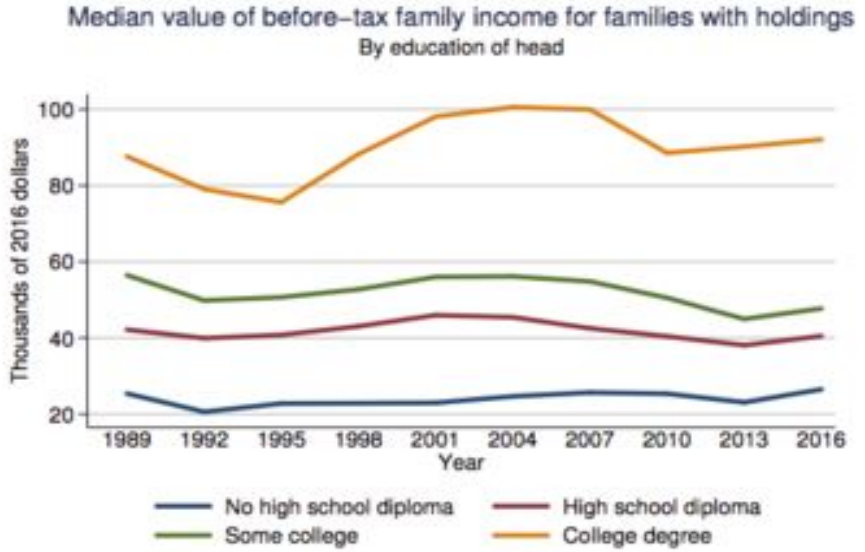
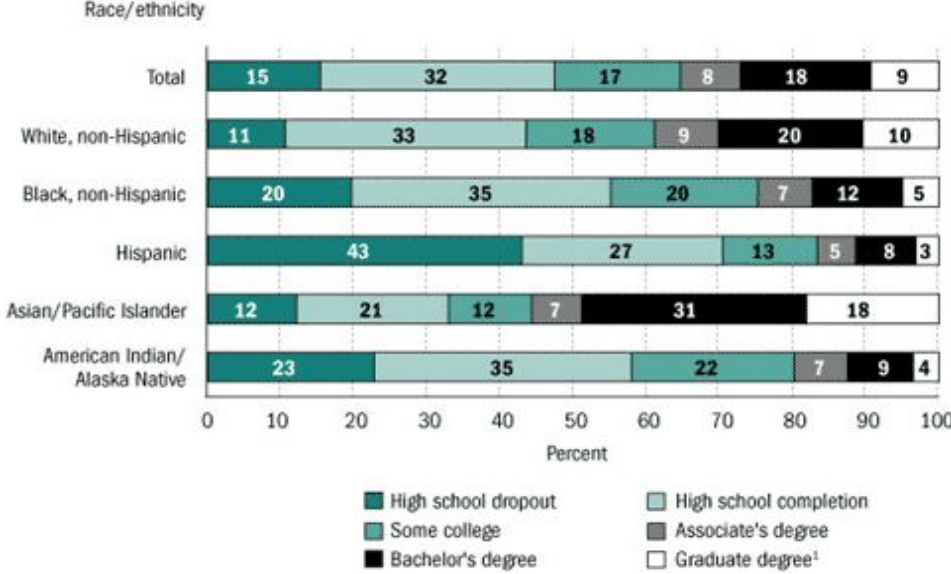
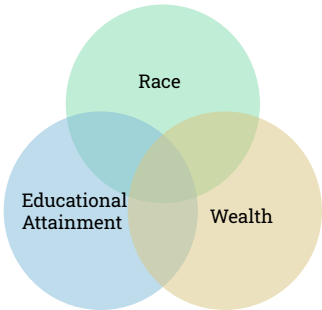


Jason Asirifi
Eric Freeman
Jingyi Gu
Winston Pierre



Historical Lens (National)

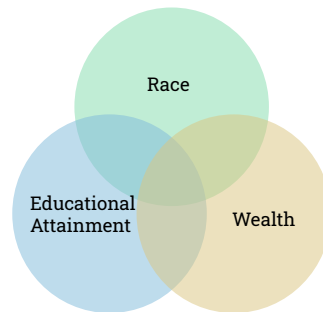
Education and Workforce



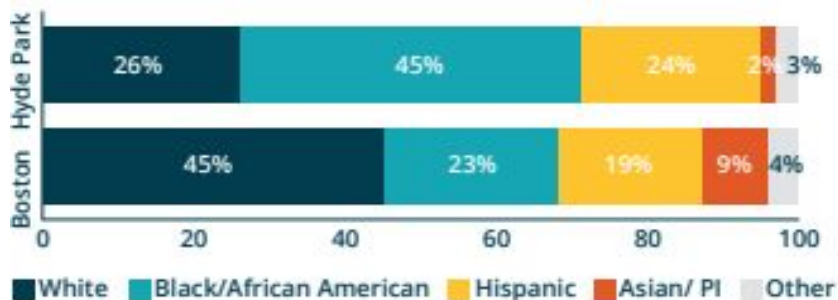
Source: National center for Education Statistic

Historical Lens (Boston)

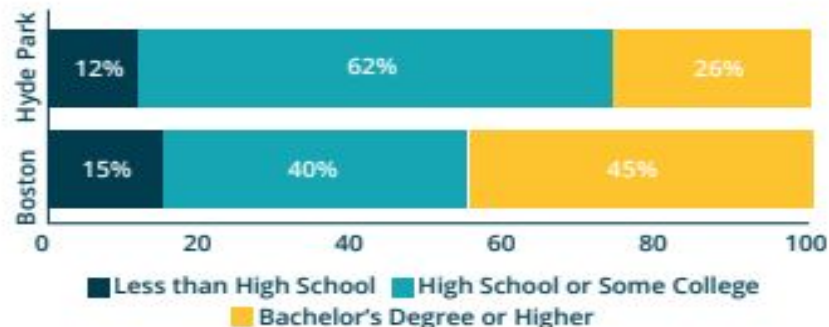
Education and Workforce



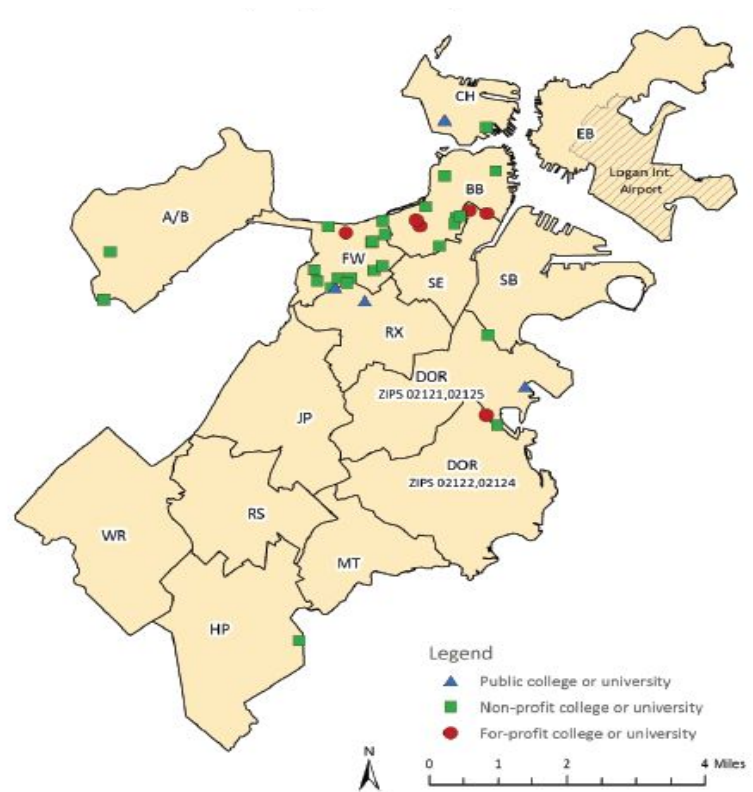
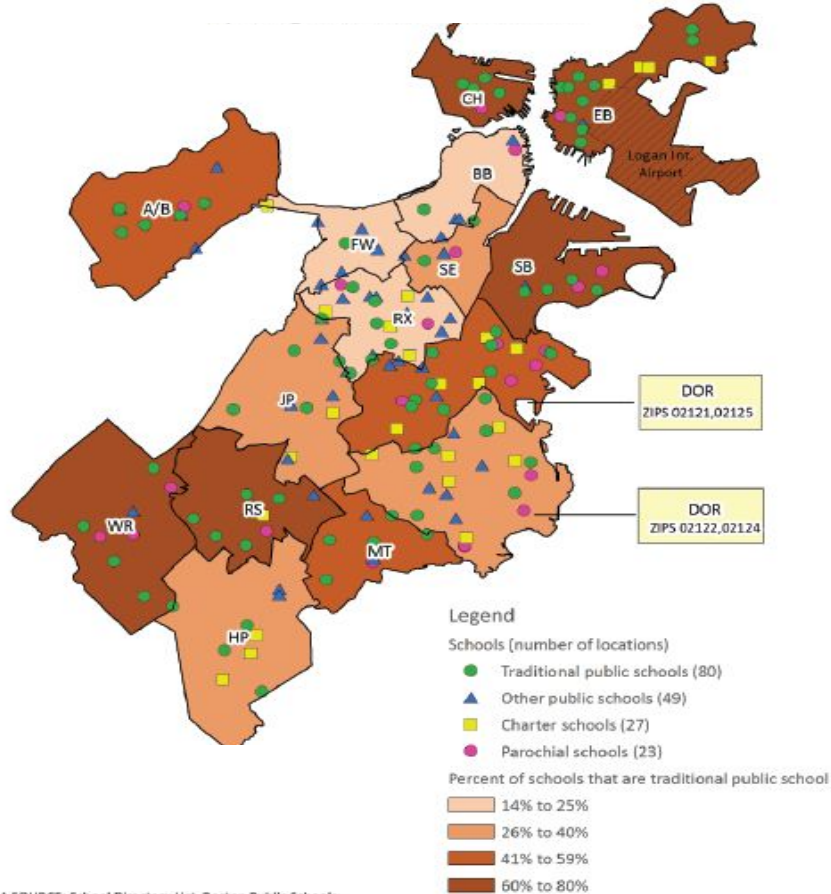
Hyde Park & Boston Residents by Race
2015



Educational Attainment (Age 25+)
2015

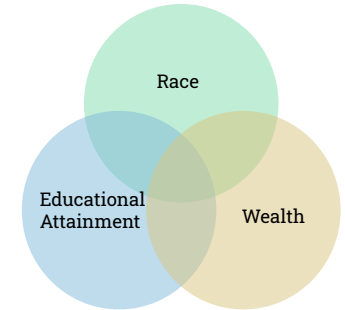
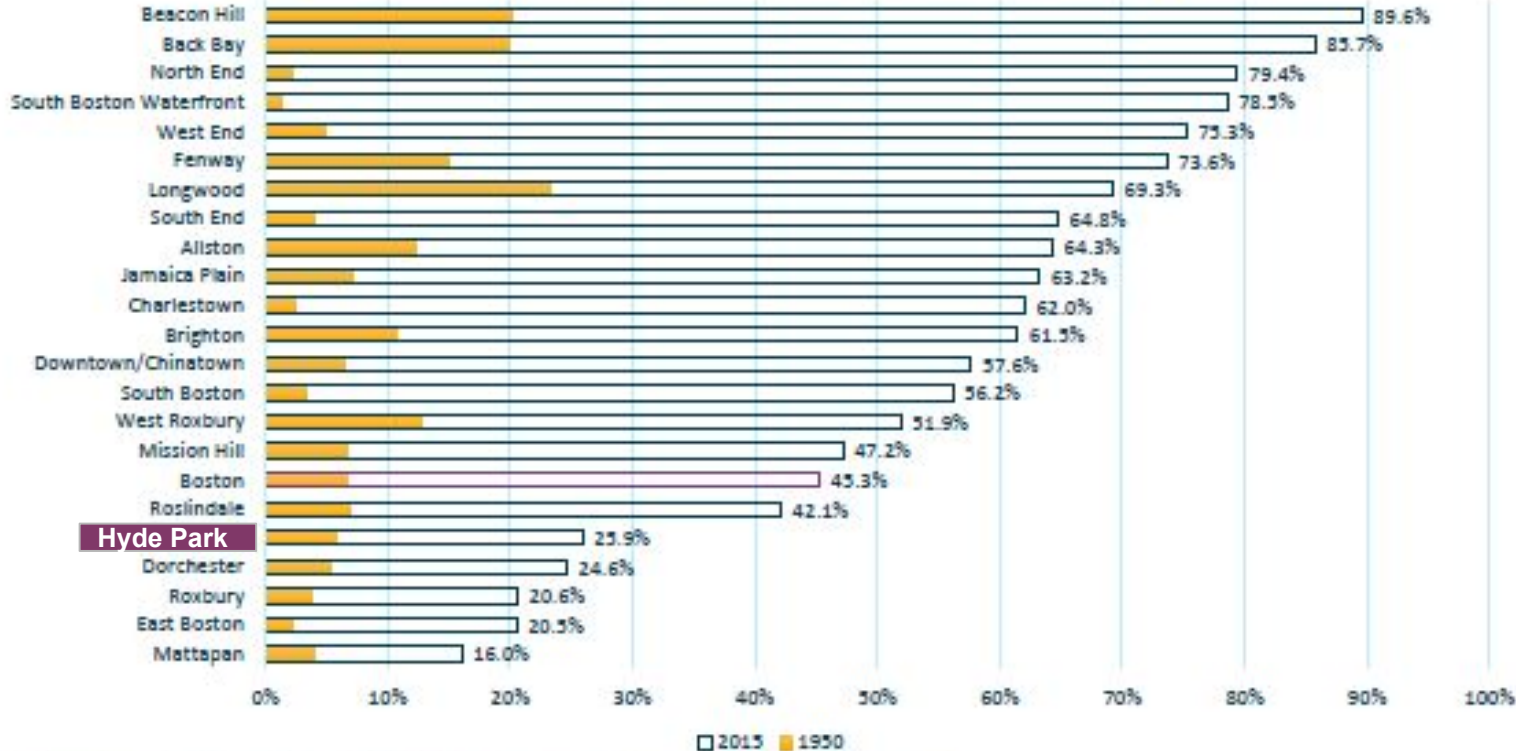


Boston's Schools, Colleges and Universities



Educational Attainment

Share of Population age 25+ with Bachelor's Degree or Higher



Source: U.S. Census Bureau, 1990 Decennial Census & 2011-2015 American Community Survey, BPDA Research Division Analysis

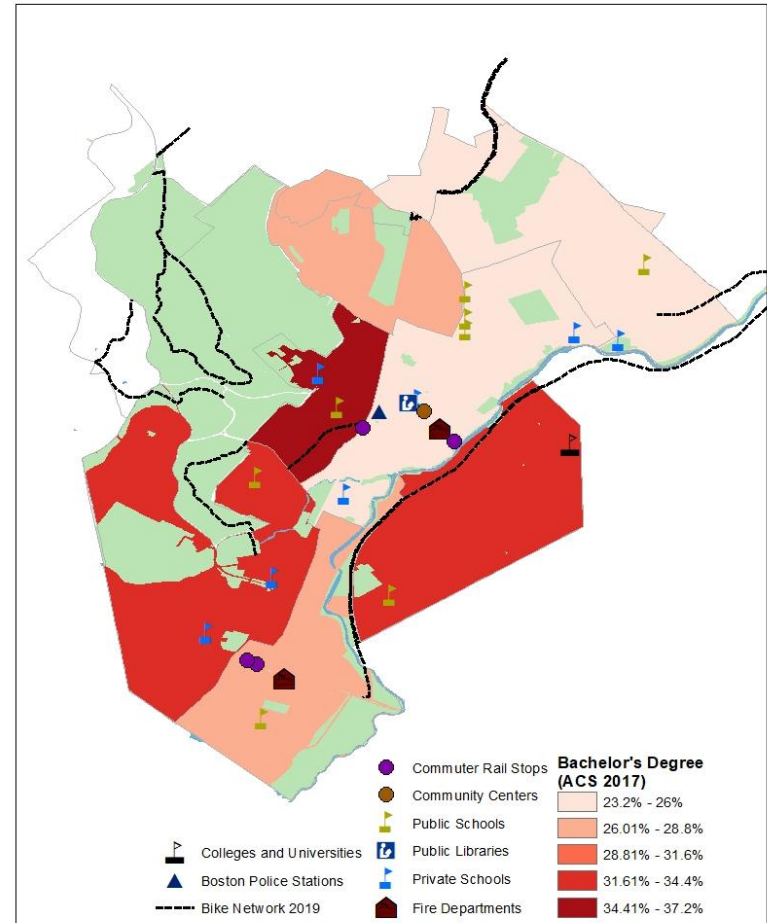
The Problem

Educational Attainment



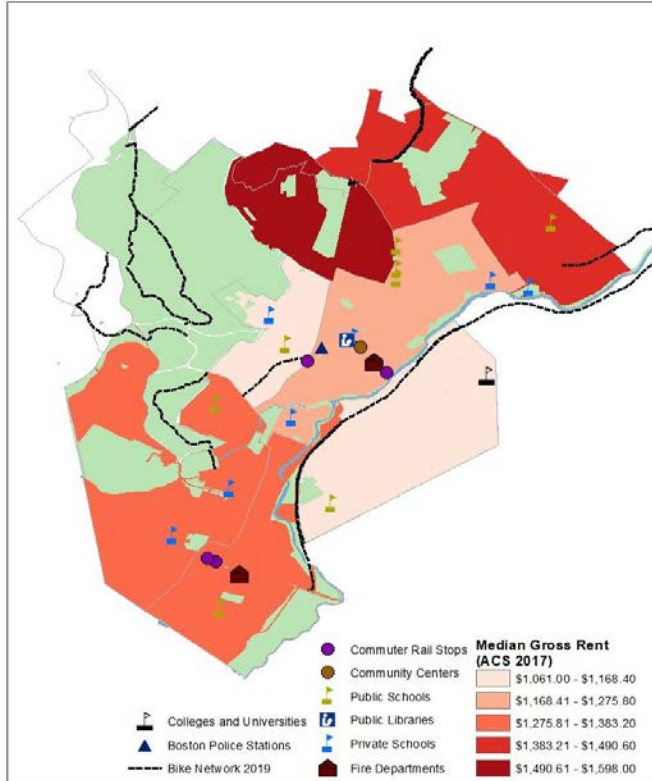
- **9%** of Hyde Park residents were enrolled in college or university, a lower share than the city as a whole **17%**
- **58%** of Hyde Park residents age 25 and older have a Bachelor's degree, compared with **45%** of Boston residents.
- Hyde Park is ranked **33 out of 37** among the neighborhood with lowest level of education

Bachelor's Degree Hyde Park (ACS 2017)



Median Household Income

Median Gross Rent Hyde Park (ACS 2017)



HYDE PARK

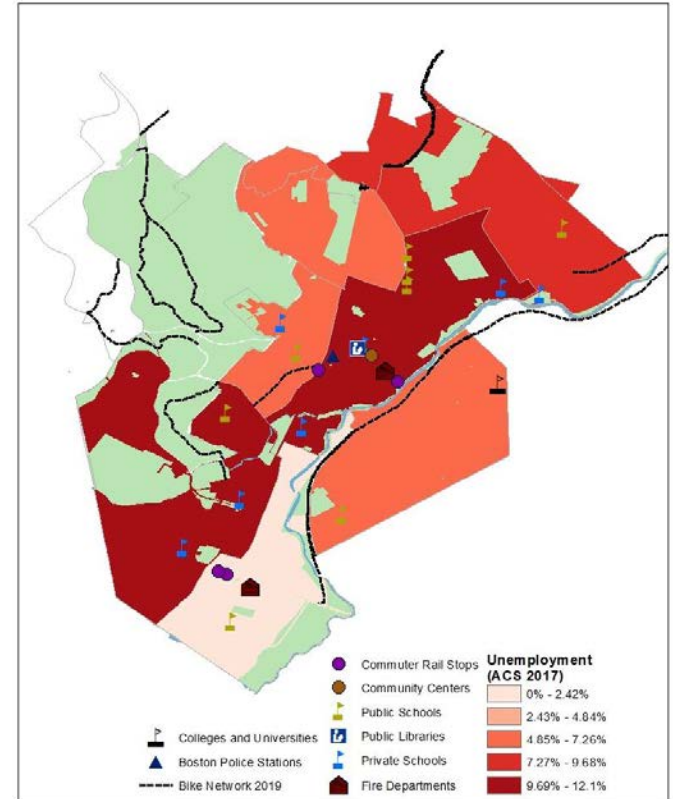
\$65,260 (2015)

BOSTON

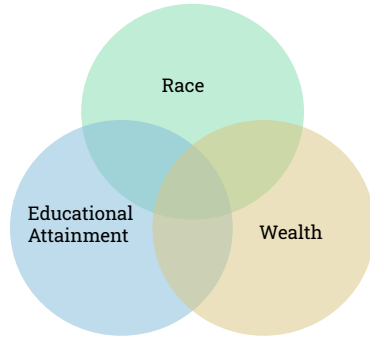
\$55,777 (2015)

(BPDA)

Unemployment Hyde Park (ACS 2017)



The Neighborhood of Paradox



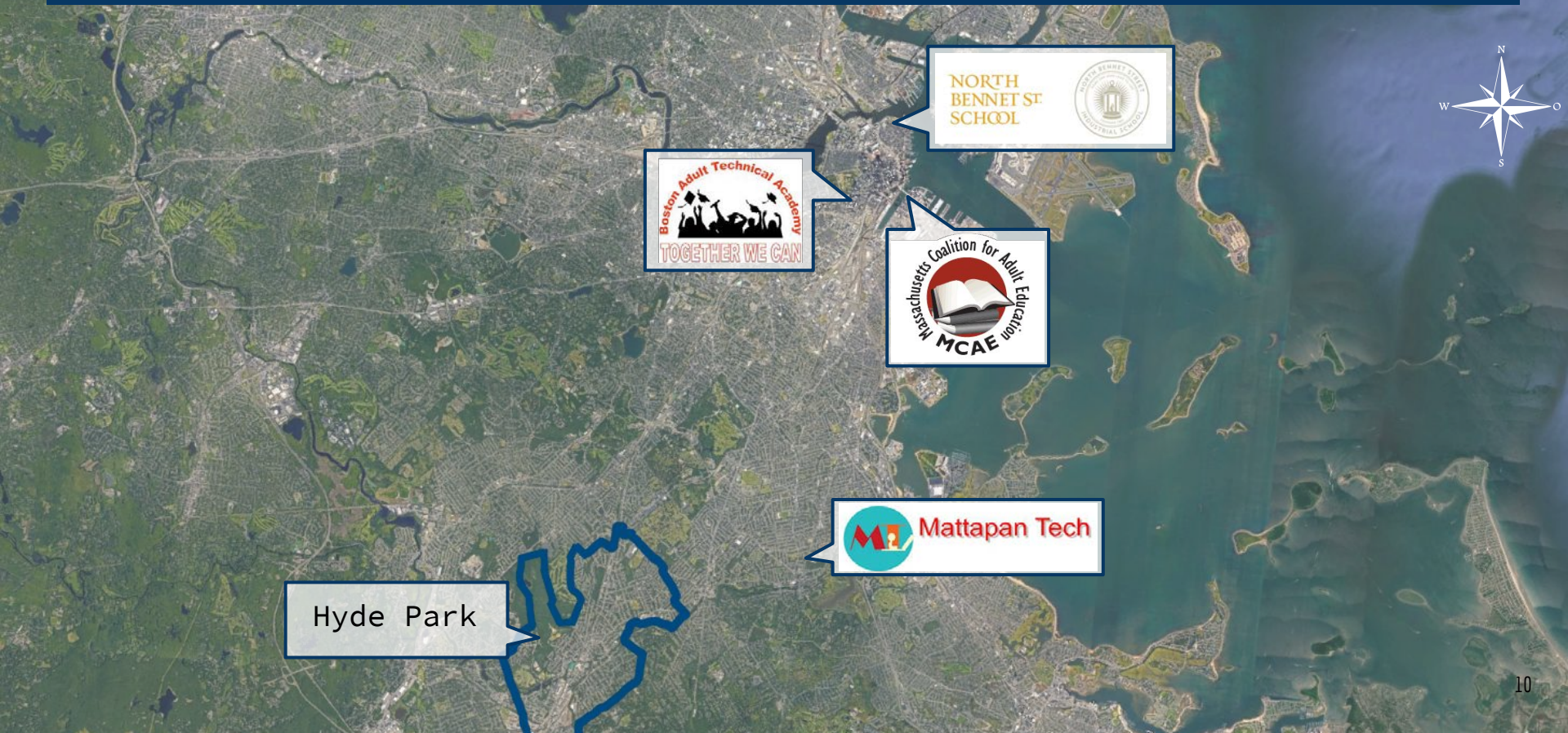
- Most diverse neighborhood in Boston
- Pockets of High Poverty
- Low Educational Attainment
- Higher median income than Boston



Underlying Problems



Existing Educational Centers and Partners in Boston



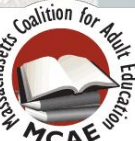
NORTH BENNET ST. SCHOOL

The logo for North Bennet St. School, featuring a circular seal with a central figure and the text "NORTH BENNET STREET INDUSTRIAL SCHOOL" around the perimeter.

Boston Adult Technical Academy

The logo for Boston Adult Technical Academy, showing silhouettes of people with raised arms and the text "TOGETHER WE CAN" below.

Massachusetts Coalition for Adult Education

The logo for the Massachusetts Coalition for Adult Education (MCAE), featuring a red circle with a white book icon and the text "MCAE" at the bottom.

Mattapan Tech

The logo for Mattapan Tech, consisting of a teal circle with a white 'M' and a person icon.

Hyde Park

Available Real Estate for Lease & Sale in Hyde Park



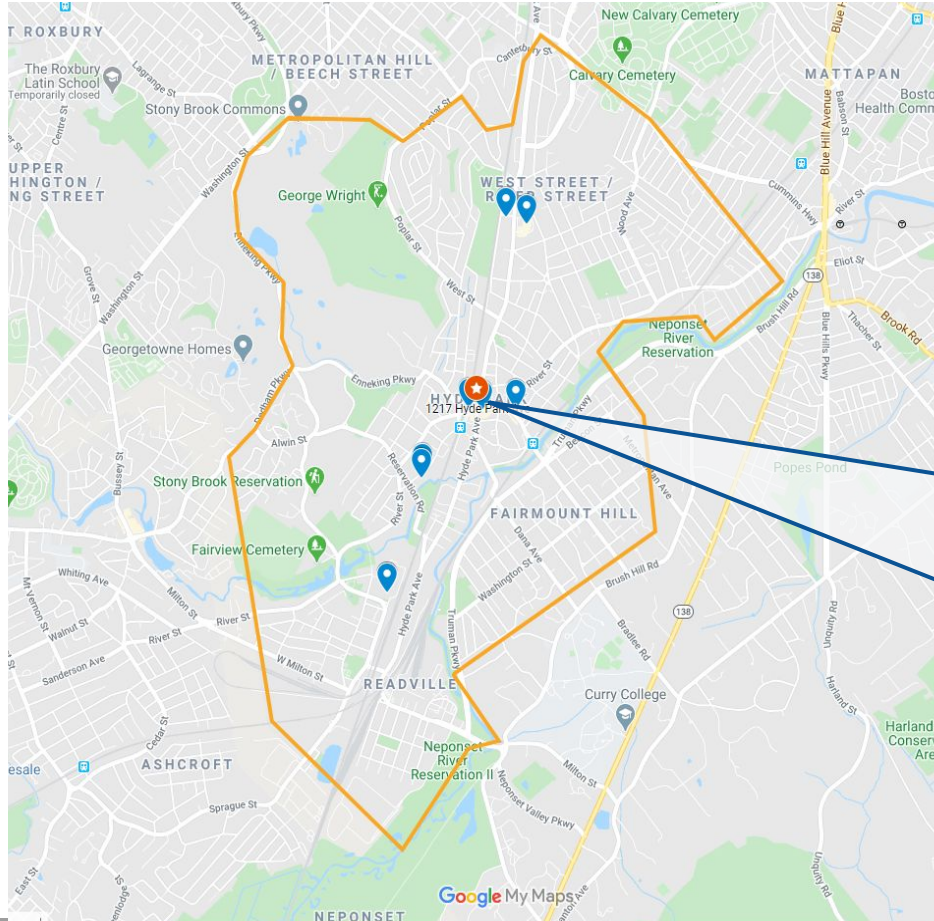
1260-1268 River St



1174-1178 River St



1295 River St



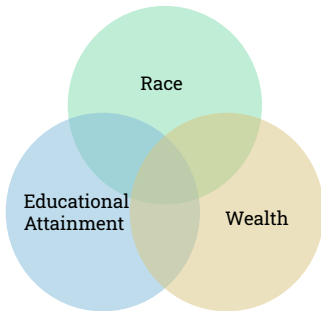
98 Business St

The only property available for sale or acquisition by the city - **1217 Hyde Park Ave.**



Development Parcels

1. 931 Hyde Park Ave
2. 1217 Hyde Park Ave



931 Hyde Park Ave.

- Built 2006
- 25,000 sq. Ft Building
- 0.74 Acres
- Flexible Manufacturing / Office Space
- Direct access to MBTA bus
- Zoning: LI-1 & Multifamily



931 Hyde Park Ave

Zoning and Code Details

- Property occupies 3 parcels
- Zoning: Industrial (LI-1) & 2-Family
- Hyde Park Neighborhood District zoning overlay
- Proposal Would Require Zoning Amendment



1217 Hyde Park Ave

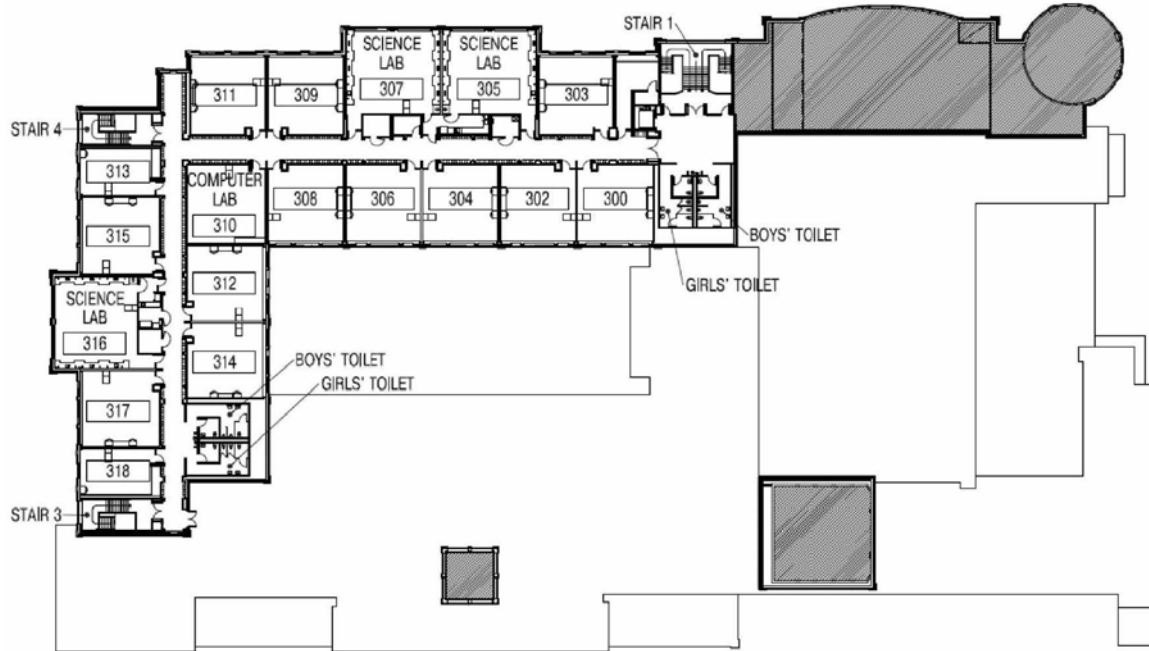
Property Overview

- Built 1920
- 22,000 sq. Ft parcel
- 0.57 Acres
- Warehousing / Light Industrial
- Direct access to MBTA bus and Commuter Rail
- Zoning: LI-1 & Multifamily



Design Details

Proposed Interior Layout



Spatial Programming

- **10,000 Sq. Ft**
Classroom / Workshop Space
- **6,000 Sq. Ft**
Flex / Event Space
- **2,000 Sq. Ft**
Administrative Space
- **3,000 sq. Ft**
Utility & Common Space

Design Concepts - 1217 Hyde Park Ave

Before



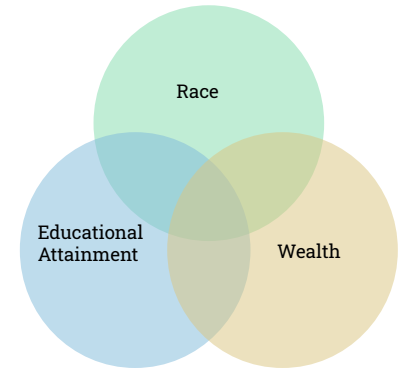
After



Estimated Construction Cost

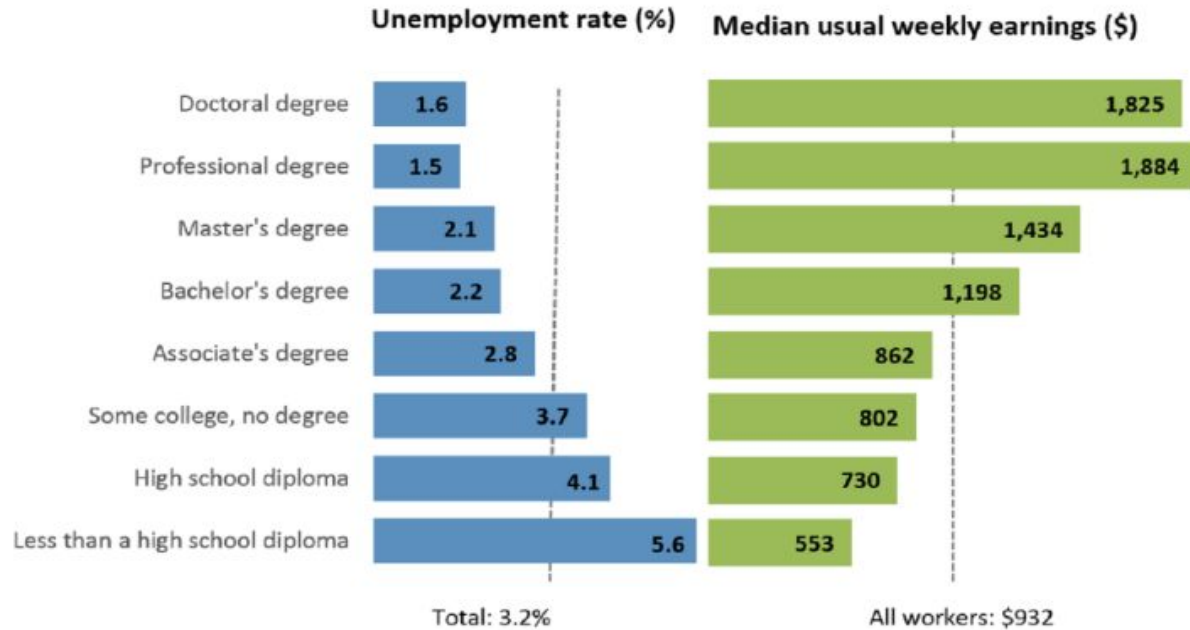


Proposal: 931 Hyde Park Ave Workforce Education Center



Workforce Education Center **Impact**

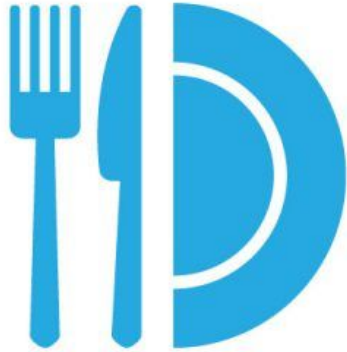
Unemployment rates and earnings by educational attainment, 2018



Note: Data are for persons age 25 and over. Earnings are for full-time wage and salary workers.

Source: U.S. Bureau of Labor Statistics, Current Population Survey.

What are we offering?



Culinary & Food Services

Food Service Managers,
Operation Managers,
Entrepreneurship



Construction & Engineering Tech

Journeyman Status, Shop
Managers



Human & Health Service

Clinic Managers, Case
Workers, Patient Care
Workers

Broad Overview of Program Offering

Biweekly Workshop

- Citizenship Application
- Tax Preparing (Seasonal)
- Housing loan application
- HomeBuyer/Landlord Training
- OSHA 10 (Bi-Weekly)
- OSHA 30 (Quarterly)

3 Month Programs

- Auto Tech
- Carpentry
- Culinary Arts (Basic)
- Early Education and child care

6 Month Programs

- Cosmetology
- Welding
- Culinary Arts (Advanced)
- Certified Nurse Assistant (CNA)

12 Month Programs

- Plumbing & Pipe Fitting
- HVAC/R
- Licensed Nurse Practitioner (LPN)



Increased Income for all Residents



Current Hyde Park Resident

\$29,523/yr/Capita
\$78,589/yr/Household



Shop Manager
\$51,019/year
Automotive Tech
\$73,381/year



Restaurant Manager
\$57,185
Kitchen Manager
\$50,425



Clinic Coordinator
\$57,760
Licensed Nurse (LPN)
\$54,817



Carpenter
\$61,588+
Pipefitter
\$70,527

Funding and Grants \$13,800,000



Paul Grogan
\$500,000



Harvard, Northeastern, Boston College and Boston University
\$ 9.8 millions



Linkage Fees
\$2 millions



Thring Ngugen **\$1,500,000**

Project Timeline - 931 Hyde Park Ave



▲ LOREM

Evaluating Impact



Community Events





Thank You





A Future That Works

Promoting Inclusive Growth in Hyde Park

How Will Hyde Park Diversify & Expand Local Job Market to Benefit Current & Future Residents?



Defining Hyde Park

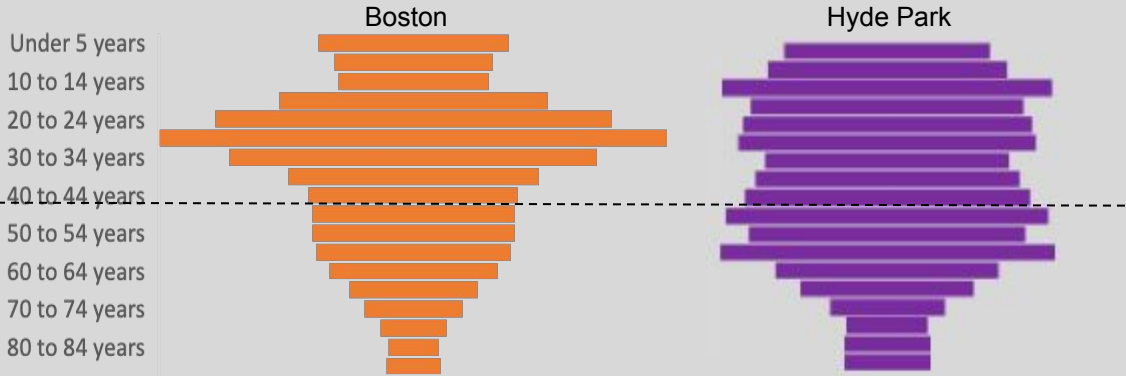
Demographics

Trends

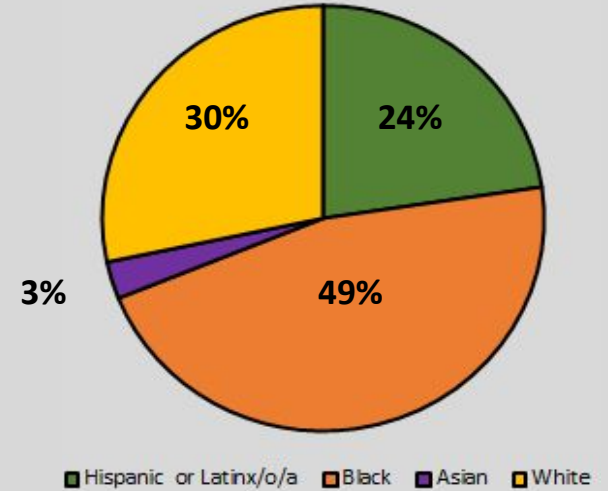
Local Voices

Hyde Park: A Comprehensive Background

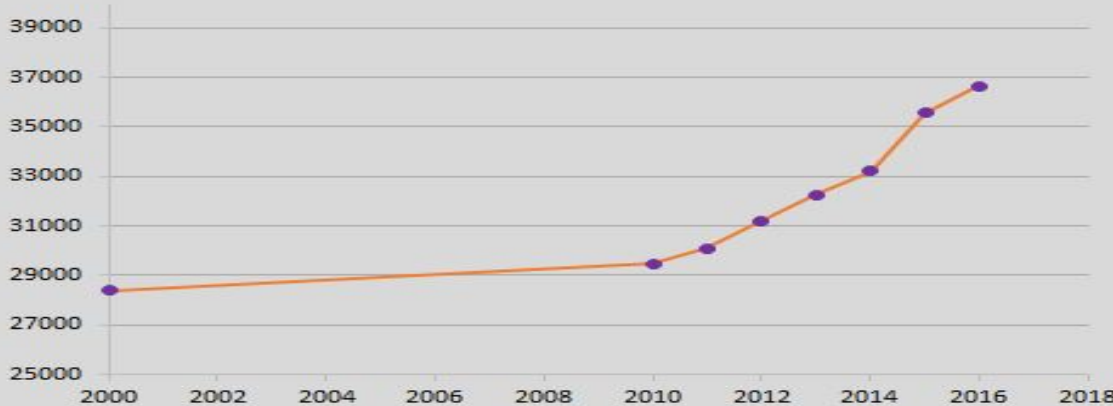
Age Distribution



Race Distribution



Population Growth

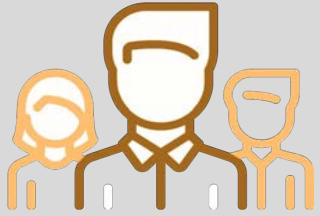


13.9%
of Hyde Park residents
live in Poverty

Hyde Park: Current Trends



Predominantly commuters. The share of Hyde Park households with a vehicle grew from 81% to 85% from 2000 to 2015.



Higher percentage of Hyde Park residents are participating in the labor force, either holding jobs or actively seeking jobs



Steady growth in population, especially young people

Why Hyde Park?

A community wanting and needing more local economic growth

Unutilized industrial spaces with potential for development

Voices From The Community

“I want to make sure families stay vested in our communities”

- Maria Esdale Farrell, Bay State Banner

“Somehow Hyde Park has the reputation of being against development. But that’s not the case. We want to see responsible development.”

Joe Smith, The Hyde Park Bulletin

“Hyde Park is a neighborhood that developers are interested in”

Marty Walsh, The Hyde Park Bulletin

“In our neighborhood, I think we’ve been trapped in our cars. I feel really embarrassed that I work two-and-a-half miles from here and I drive.”

Lisa Beatman, The Hyde Park Bulletin

An aerial photograph of a city neighborhood, likely Hyde Park, showing a mix of residential houses, larger commercial buildings, and extensive greenery. A road winds through the center of the area.

Identifying the Gaps in Hyde Park

**Income &
Education**

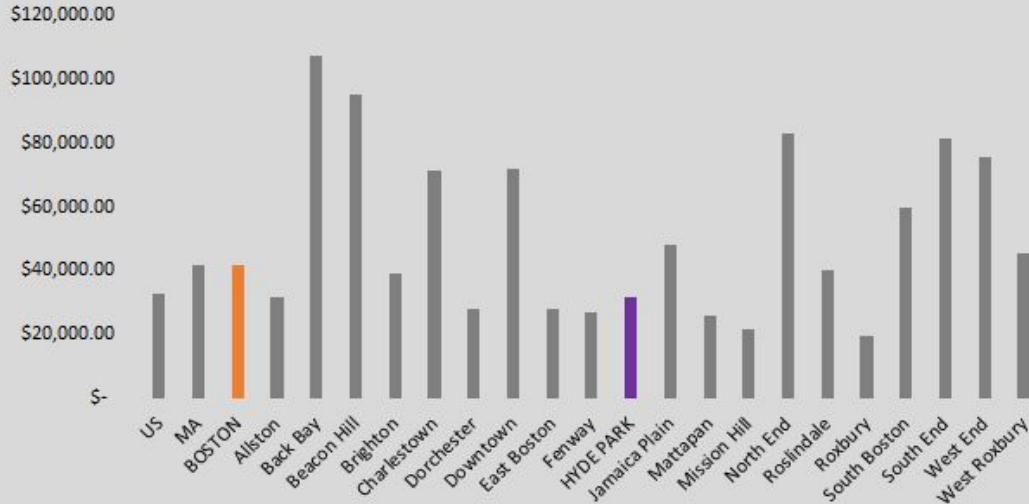
Labor Industries

**Investment &
Development**

Local Job Market

Income & Education

Per Capita Income

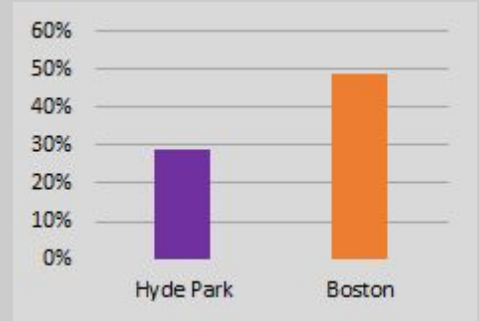


US Census Bureau ACS 5 year Survey

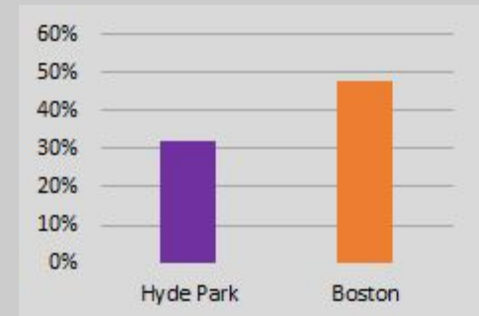
Hyde Park Per Capita Income: **\$31,622**

Boston Per Capita Income: **\$42,010**

Bachelor Degree Attainment

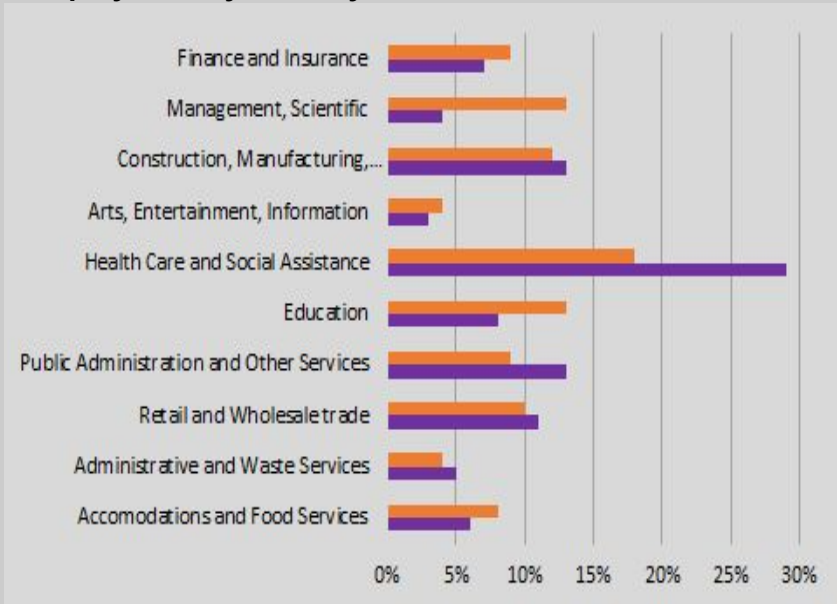


Active Labor Force Under Age 35



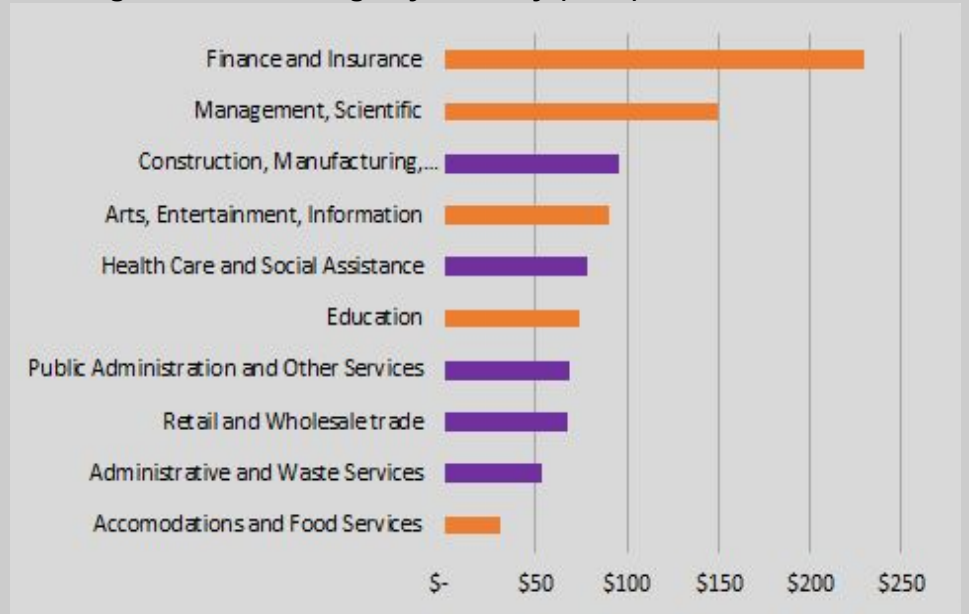
Labor Industries

Employment by Industry



U.S. Census Bureau, 2014-2018 ACS, BPDA Research Division Analysis

Average Annual Earnings by Industry (2017)



MA EOWLD, BPDA Research Division analysis

Investment and Development

\$12.7

Billion Invested

\$36

Million Invested

111

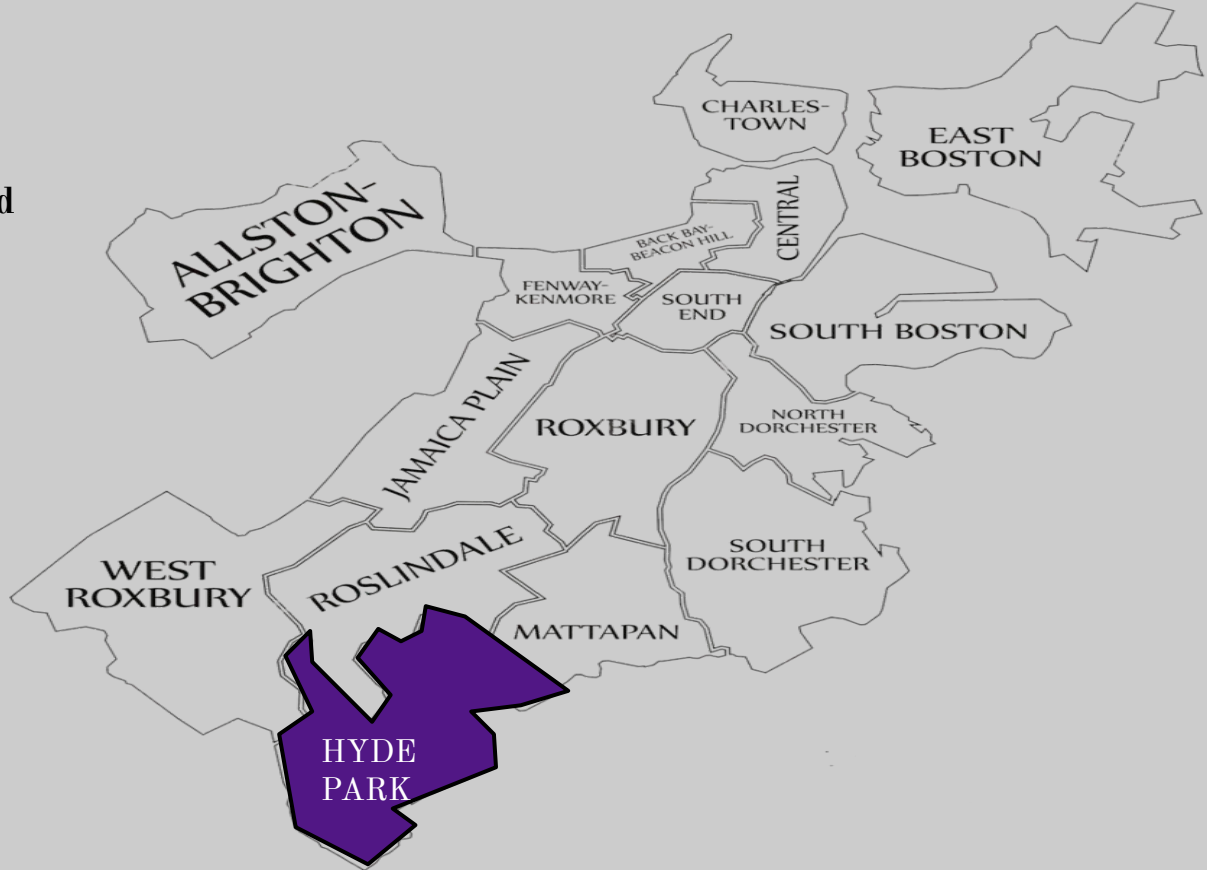
Developments

2

Developments

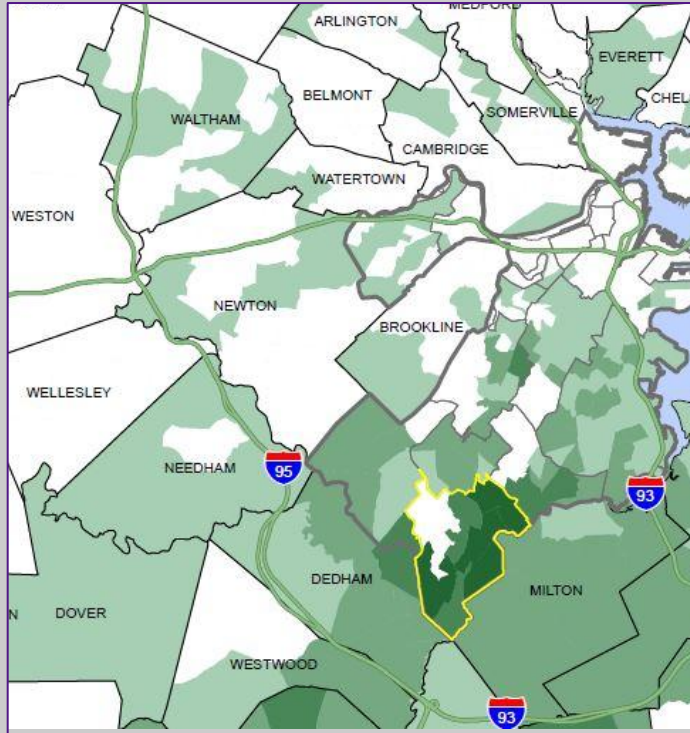
Less than 1% of Boston's
Development Investment

Less than 1% of Boston's
Under Construction
Developments



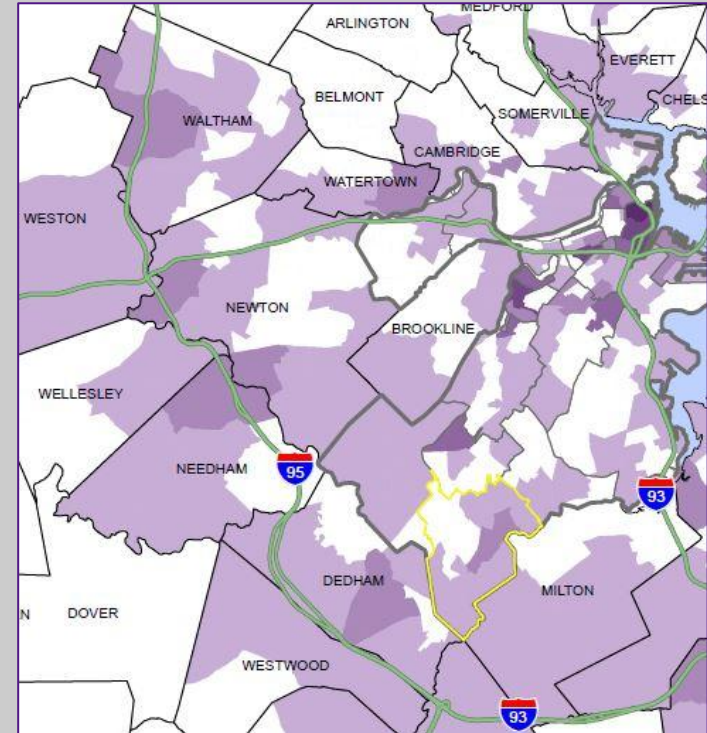
The Job Location Spatial Mismatch Problem

Within Hyde Park



0.13 payroll jobs for every resident worker
< 1% of Boston jobs provided

Outside of Hyde Park



19.6% Commutes > 1 hour

An aerial photograph of a city, likely Hyde Park, showing a dense mix of green trees and urban buildings. A road winds through the lower portion of the image. The overall scene is a mix of nature and urban development.

Our Plan for Hyde Park

Inclusive Growth

Green Energy

Adaptive Reuse

Increasing Inclusive and Equal Opportunity in Hyde Park

Inclusive Growth is a concept that advances equitable opportunities for *ALL* economic participants



Attracting Future Forward Industries



Mixed-Skilled Employment



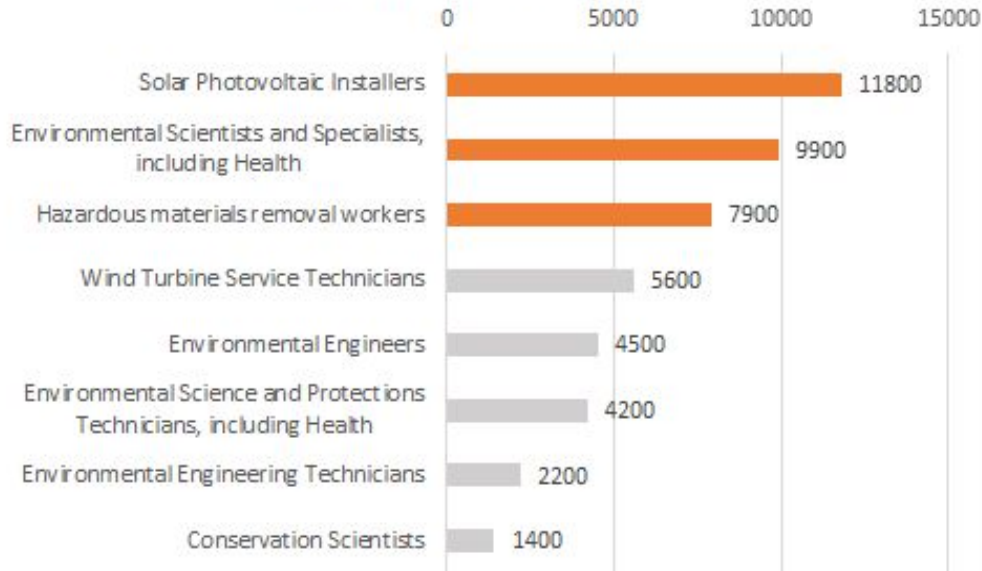
Mixed-Income Housing



Upskilling Workers

So what about the future?

Selected New Green Occupations, Projected 2016-2026 (numeric change)



Source: U.S. Bureau of Labor Statistics

What factors will affect the future of work?

- The fourth industrial revolution
- Automation
- Climate Change

What does this mean for Hyde Park?

- Attract future forward agencies (e.g. clean energy, IT, and consulting firms)
- Develop and employ local talent
- Activate existing infrastructure

Where Do Industrial Spaces and New Manufacturing Meet?

21 commercial listings, **11 Industrial**



- 1217 Hyde Park Ave
- 98 & 100 Business St
- 1 Westinghouse Plz
- 931 Hyde Park Ave
- 63 Sprague St
- 56 Industrial Way
- 8 Industrial Way
- 65 Sprague St
- 4-8 Wolcott St
- 54 Industrial Dr
- 1476 River St



Zoning: LI2
(Light Industrial 2)



Landowner
Sefer Ozdemir (DevYap Realty Group)



Condition
Rental Rate: \$3 – \$17 /SF/YR
Rentable building area: 12,525 SF & 1000 SF
Year Built: 1890

98 & 100 Business St.

98 & 100 Business Street



OUR PLAN

Offices
Research Labs



STRENGTHS

Green energy
Start-ups
Mid-sized
Cost of Space
Zoning



WEAKNESSES

Attracting Talent



OPPORTUNITIES

Agglomeration Effect
Growth Hub
Manufacturing
Spaces



Zoning: NS-2

Neighborhood Shopping Subdistrict-2, mixed use development

FAR: 2, Height Limit: 40 Ft

Industrial use status



Landowner

1217 HP REALTY TRUST



Condition

Rental Rate: \$18 /SF/YR

Rentable building area: 11,000 SF

Year Built: 1920

Current status: Industrial building, office, commercial compound

1217 Hyde Park Ave.

1217 Hyde Park Avenue



OUR PLAN

Mixed-income
Housing
Career Center
Retail



STRENGTHS

Transportation
Location
Zoning Flexibility
Uniqueness



WEAKNESSES

Limited Space



OPPORTUNITIES

Benefit Local Businesses
Redevelopment of Housing
to offset Gentrification



Zoning: LI2
(Light Industrial 2)



Landowner
MOTHER BROOK CONDO



Condition
Rental Rate: \$3 - \$4 /SF/YR
Rentable building area: 125,000 SF
Year Built: 1945
6-industrial-building complex

1 Westinghouse Plaza

1 Westinghouse Plaza



OUR PLAN

Manufacturing Plant
Large Scale Labs



STRENGTHS

Manufacturing Space
Cost of Space
Zoning
Transportation



WEAKNESSES

Manufacturing in MA

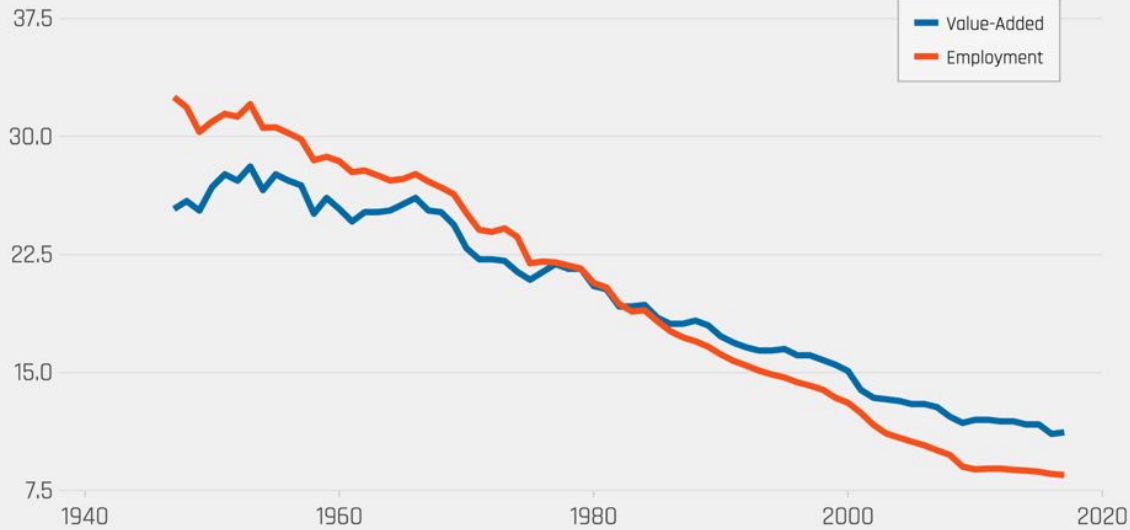


OPPORTUNITIES


Near Destination
Manufacturing
Growth Space for Startups

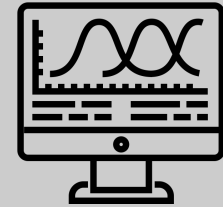
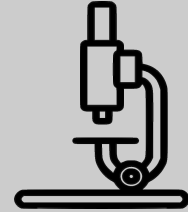
The shrinking footprint of the U.S. manufacturing industry

Manufacturing value-added as a percentage of GDP and manufacturing employment as a percentage of total nonfarm employment



Source: U.S. Bureau of Economic Analysis, Value Added by Industry, retrieved from BEA, February 15, 2019; U.S. Bureau of Labor Statistics, All Employees: Manufacturing [MANEMP], retrieved from FRED, Federal Reserve Bank of St. Louis, February 15, 2019.

 Equitable Growth



Tapping into Hyde Park's infrastructure is an opportunity to get ahead of industry changes.



Getting the Job Done in Hyde Park

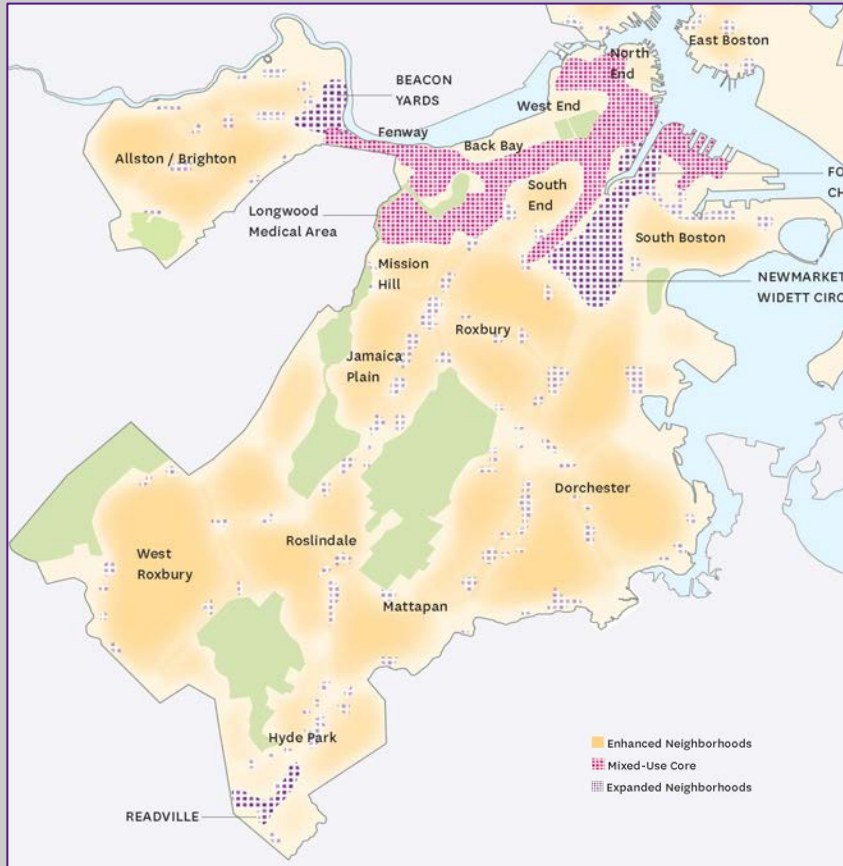
**Workforce
Development**

Community Partners

**Targeted
Stakeholders**

Funding

Strengthening Connectivity, Leveraging Resources



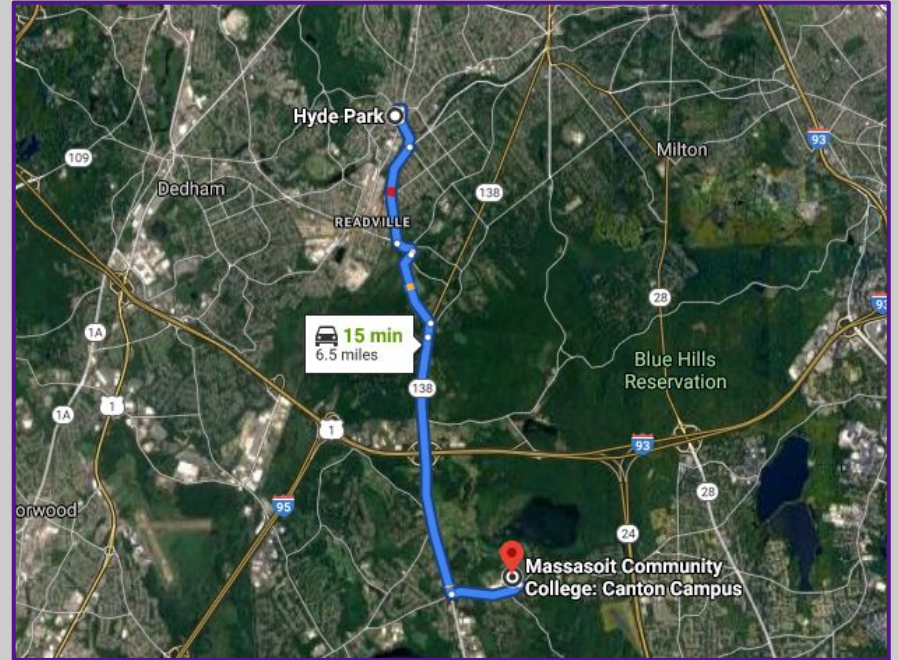
Source: Imagine Boston 2020



Resources to Strengthen Labor Force:

- Jobs hub (Workforce Development)
- Encourage Women/POC Small Business Owners
- ESOL classes
- Community College Satellite Campuses

How Do We Make It Work?



Industry Partners

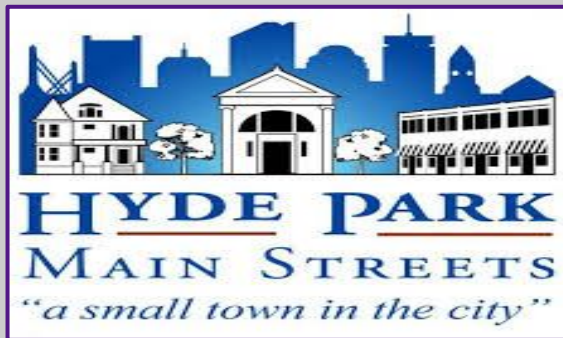
Targeted Stakeholders:

- Sunrun
- Vivint
- General Electric
- Jobs Hubs
- TJX Companies
- Coworking Space Leasing



1217 Hyde Park Avenue, 2020

Community Stakeholders



Local and national nonprofits composed of residents, activists, business owners supporting a thriving Hyde Park.



Public development agencies creating economically diverse communities in Boston through a focus on affordable housing options, access to good jobs and transit, preservation of green spaces.



Funding Tools and Possibilities

Leveraging Partnerships and Existing Resources



Community Reinvestment Act (CRA)

- Support Job Hubs
- Support Local Job Growth
- Increase Workforce Development Resources in the Community

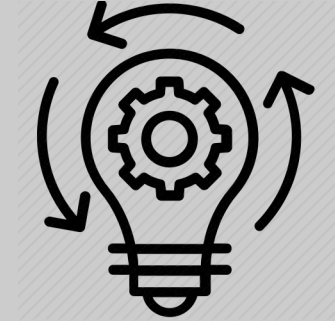
Community and Economic Development Grants



Community Development Block Grant (CDBG)

- Fund Local Redevelopment
- Encourage Local Investment
- Fund New Housing

Policies that Encourage Private Sector Contributions



Private Sector Engagement

- Attract Capital to Hyde Park
- Encourage Local Innovation
- Increase Financing Sources
- Roundtable Discussions

NEXT STEPS



Operational

Reach Out to Leaseholders to Obtain Property Information



Community Engagement

Collaborate with Community-Based Organizations on Marketing and Plans



Industry Alignment

Connect with Green Industry Startups to Identify Their Needs



Workforce Engagement

Align with the City of Boston and others to Create Community Partnerships

Increasing Riverfront Access in Hyde Park

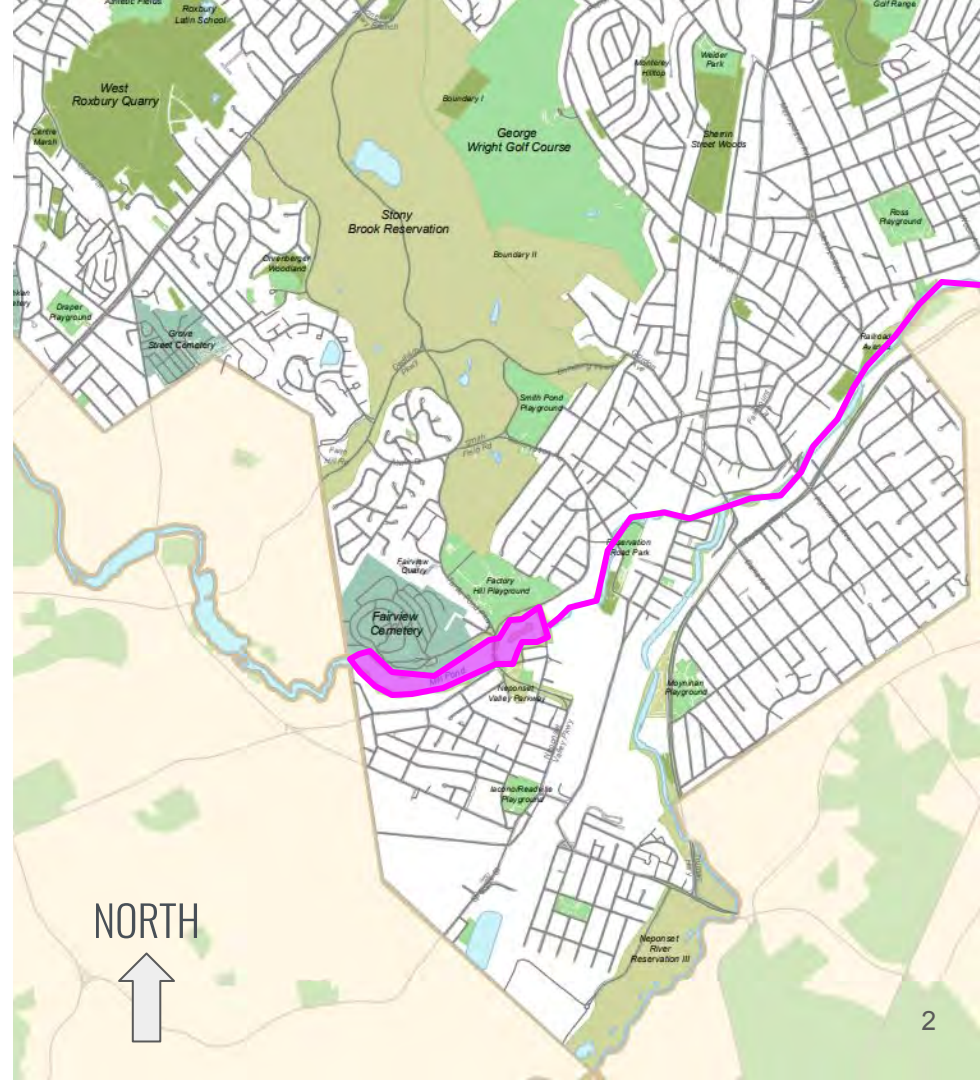
Group 4

Ben Cares
Zheng Qu
Marco Rebaza
Steve Schlauch

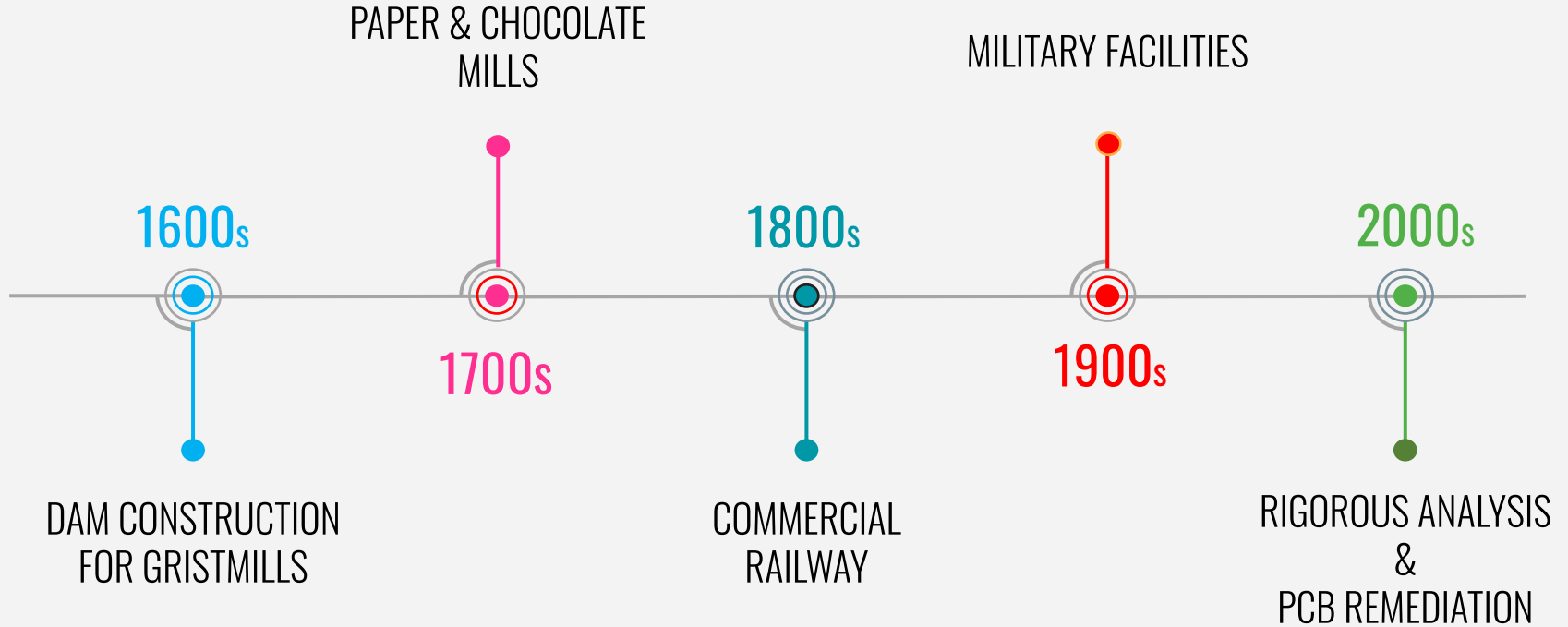


MISSION STATEMENT & STRATEGIES

INCREASE NEPONSET RIVERFRONT ACCESS WITHIN ENVIRONMENTAL JUSTICE POPULATIONS OF HYDE PARK



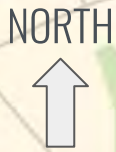
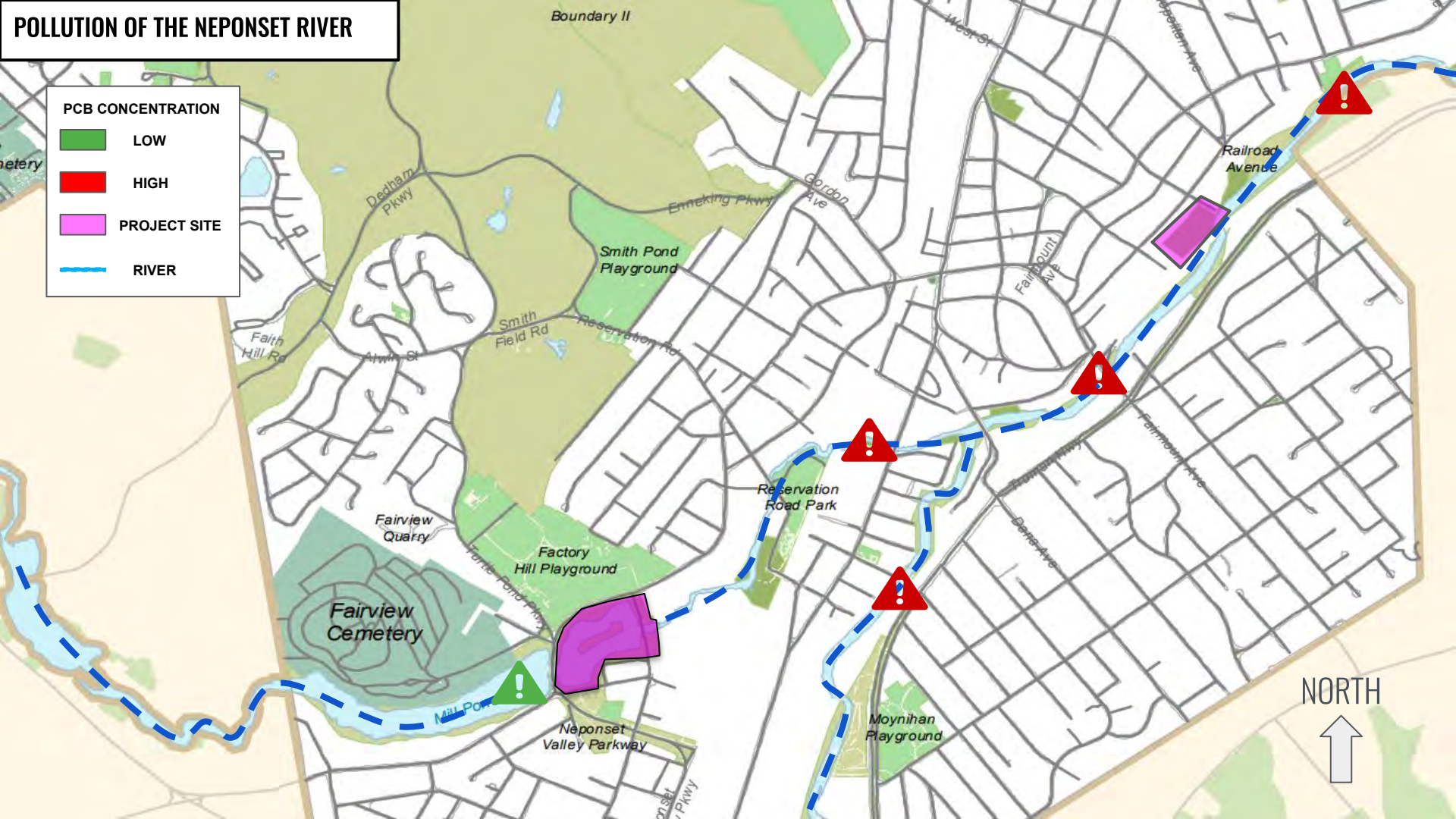
**HISTORY OF NEPONSET
RIVER USAGE**



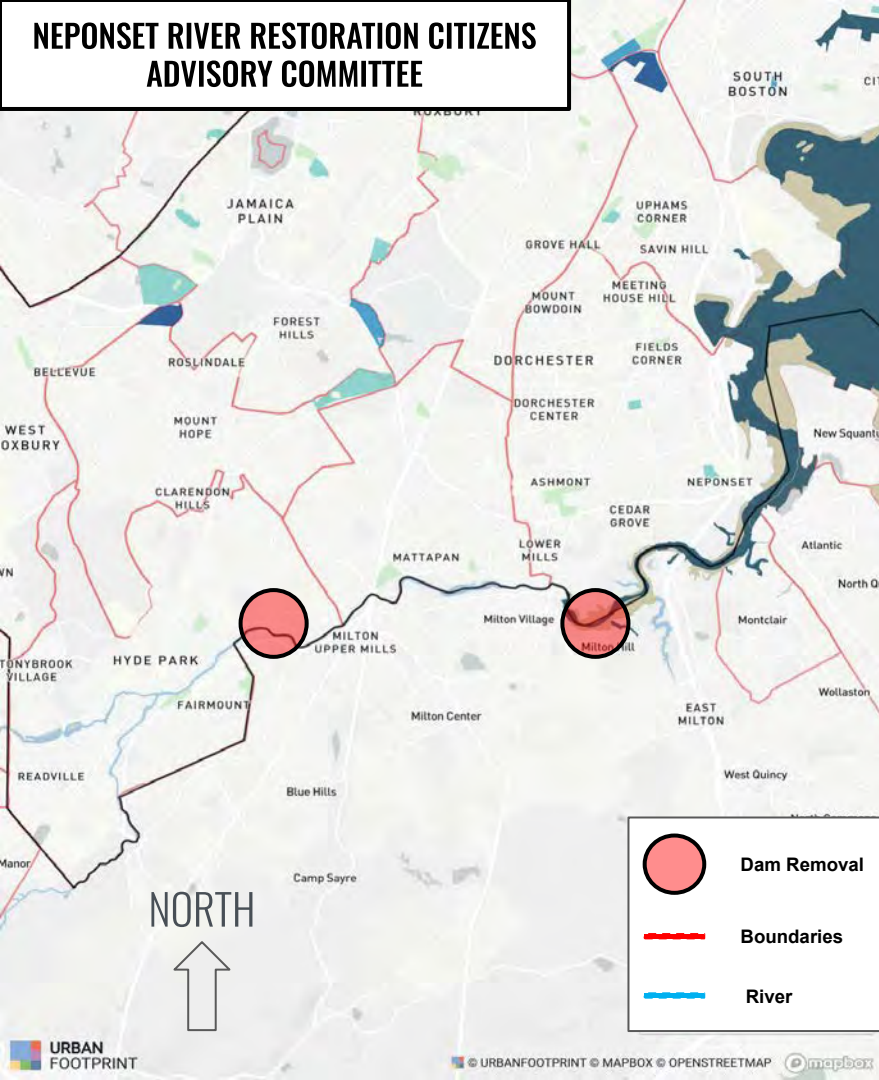
POLLUTION OF THE NEPONSET RIVER

PCB CONCENTRATION

- LOW
- HIGH
- PROJECT SITE
- RIVER



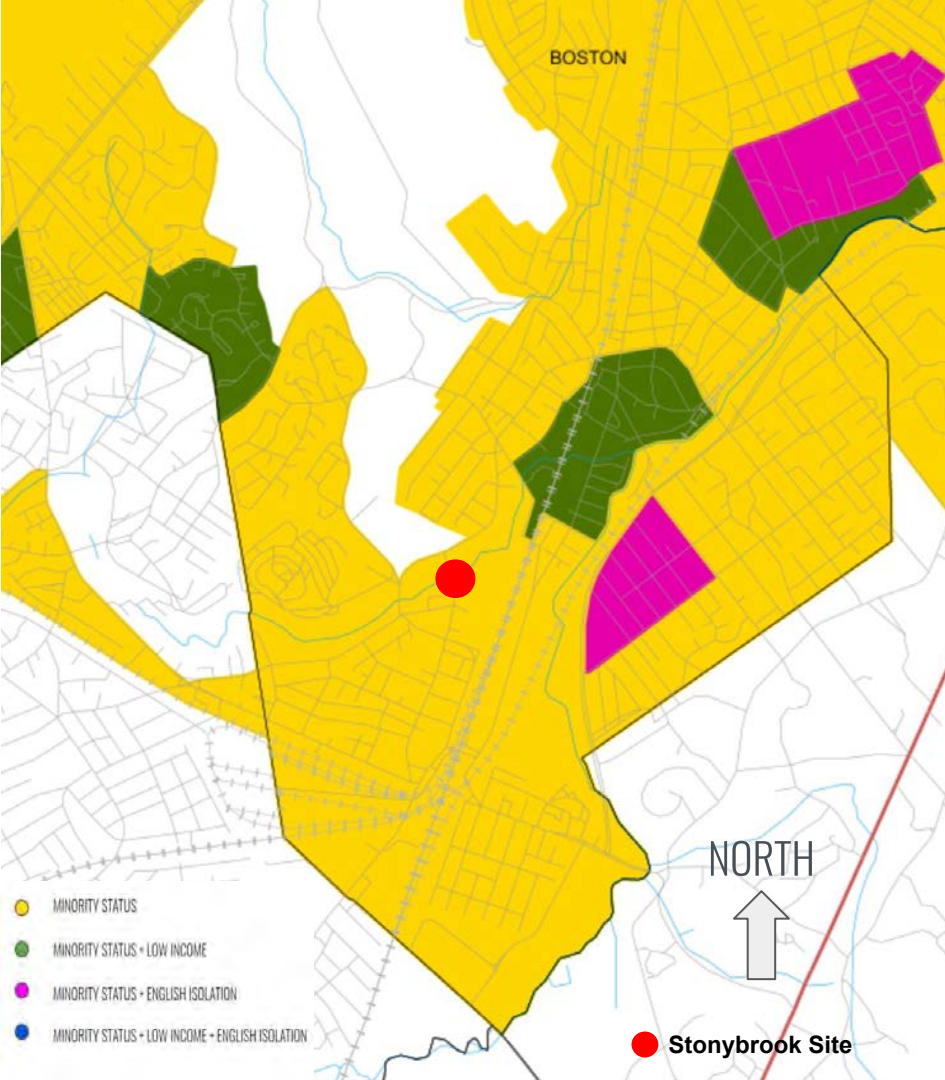
NEPONSET RIVER RESTORATION CITIZENS ADVISORY COMMITTEE



TILESTON & HOLLINGSWORTH DAM

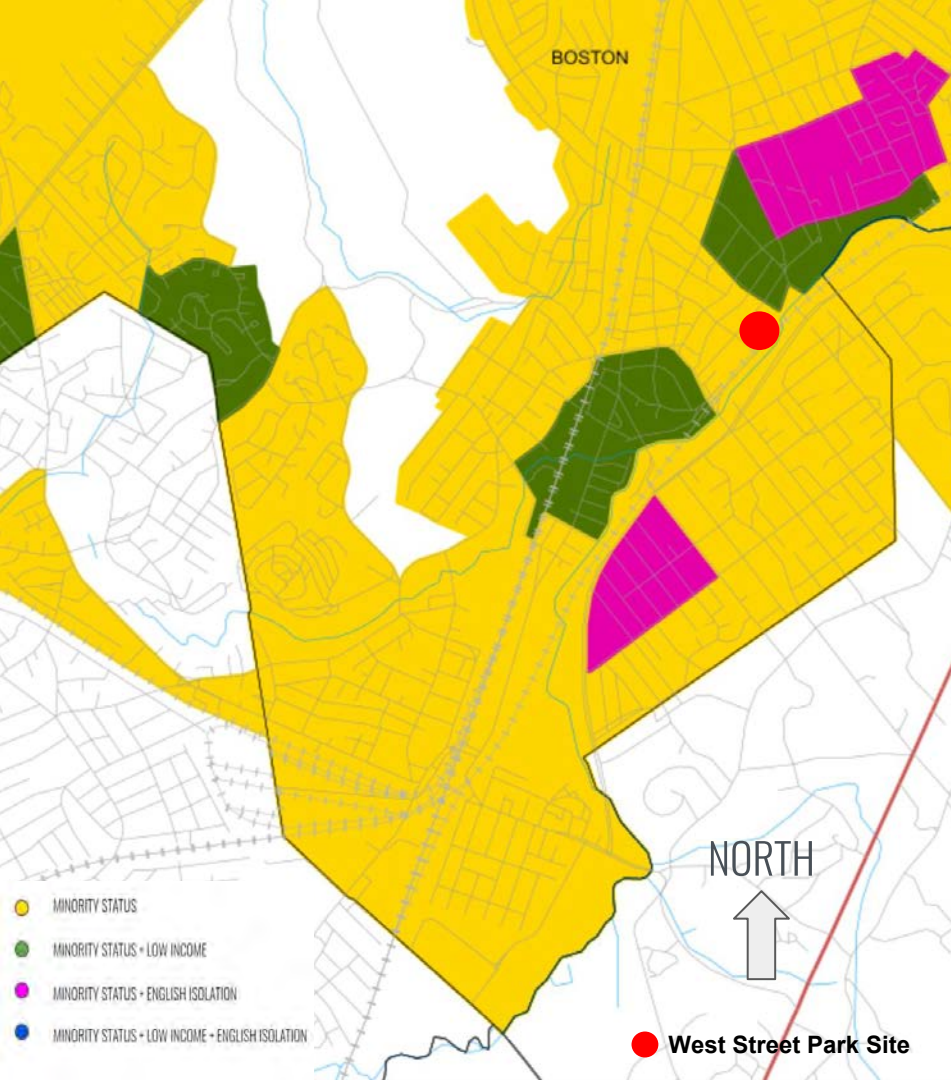


BAKER DAM



STONYBROOK RESERVATION





WEST STREET PARK



URBAN HEAT ISLAND



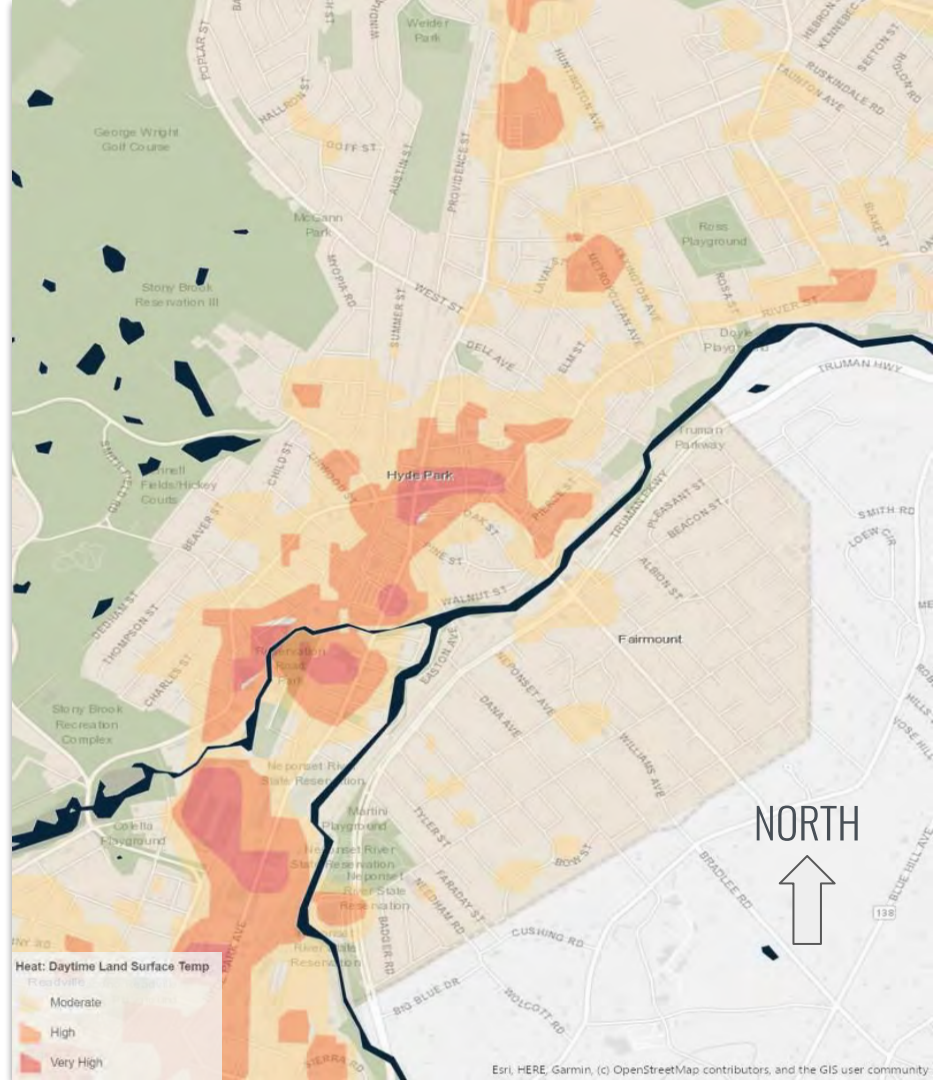
People



Place



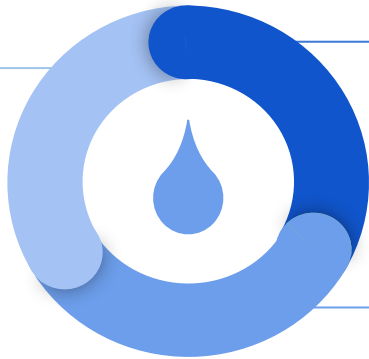
Economy



MISSION STATEMENT & STRATEGIES

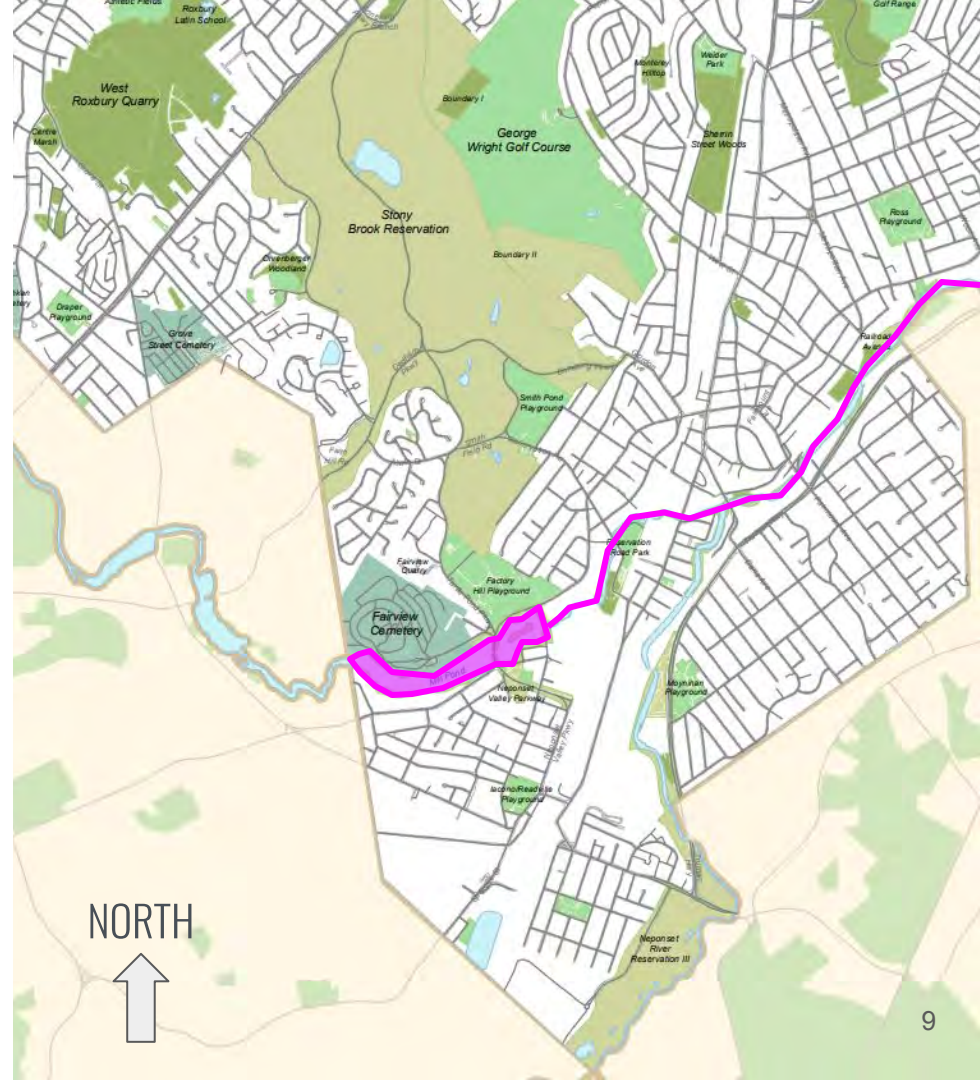
INCREASE NEPONSET RIVERFRONT ACCESS WITHIN ENVIRONMENTAL JUSTICE POPULATIONS OF HYDE PARK

ENGAGE



ENHANCE

ACTIVATE





NEPONSET RIVER WATERSHED ASSOCIATION & BOSTON PUBLIC HEALTH COMMISSION

INTERVIEW: IAN COOKE & ATYIA MARTIN
ENVIRONMENTAL JUSTICE & EFFORTS TO DATE



ANDRES RIPLEY



RACIAL JUSTICE AND
PUBLIC HEALTH INTERSECTIONS



GREEN SPACE AND PHYSICAL HEALTH



ATYIA MARTIN



RECREATIONAL ACTIVATION OF
RIVERFRONT SPACES



ENVIRONMENTAL EDUCATION

RIVERSIDE RESIDENT INFORMATION

33,442
HYDE PARK TOTAL
RESIDENTS

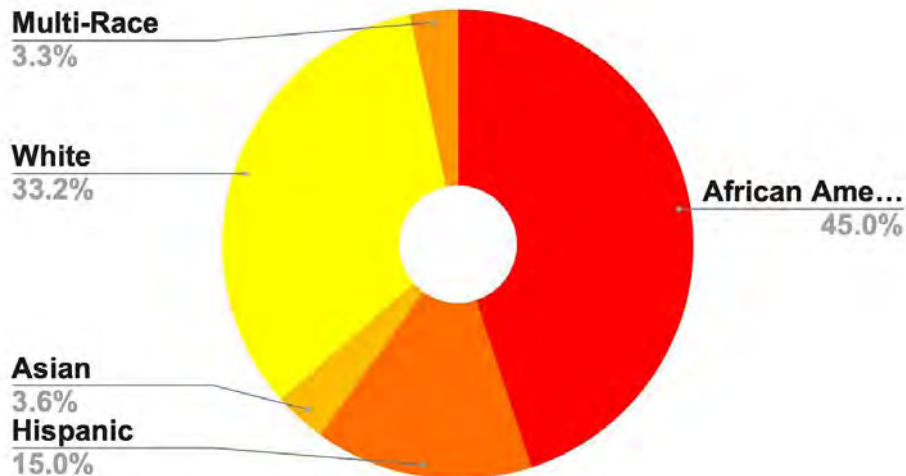
8,228
RESIDENTS ADJACENT TO
NEPONSET RIVER

3,947
RESIDENTS AFFECTED BY
PROJECT

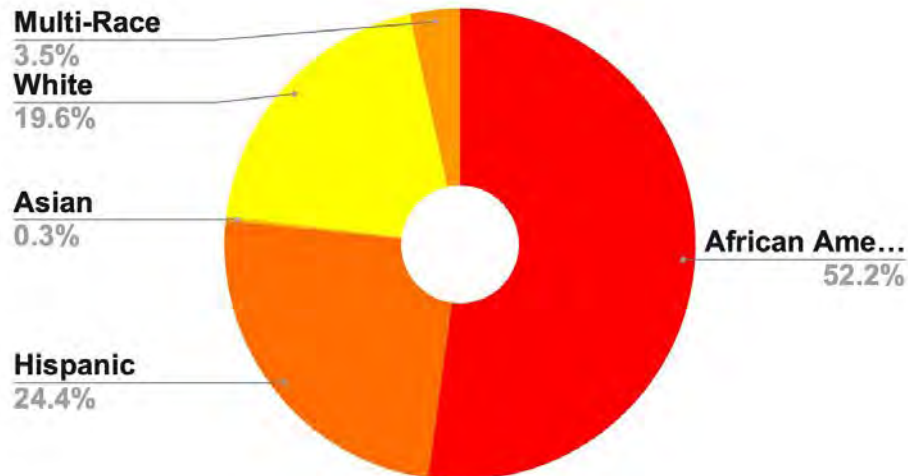


DEMOGRAPHICS OF AFFECTED RESIDENTS
(0.5 MILES FROM LOCATIONS)

**STONYBROOK RESERVATION:
1,612 RESIDENTS**

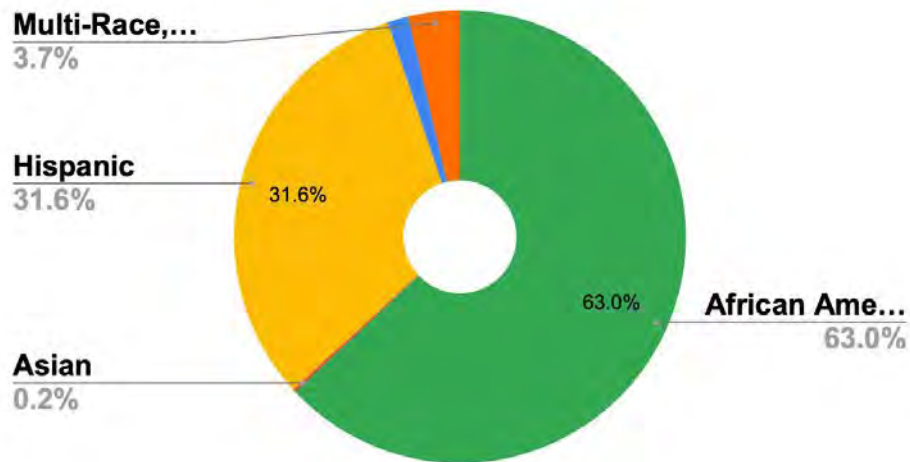


**WEST STREET PARK:
2,335 RESIDENTS**



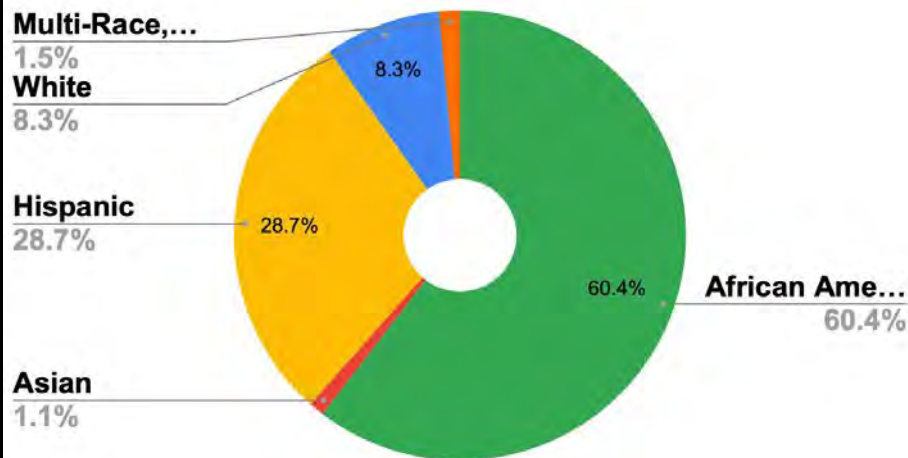
TOTAL RESIDENTS AFFECTED: 3,947

***ACADEMY OF THE PACIFIC RIM CHARTER
PUBLIC SCHOOL (GRADES 5-12)***



STUDENTS POPULATION: 527

***BOSTON RENAISSANCE CHARTER PUBLIC
SCHOOL (GRADES PK-6)***



STUDENT POPULATION: 930



ACADEMY OF THE PACIFIC RIM CHARTER PUBLIC SCHOOL & BOSTON RENAISSANCE CHARTER PUBLIC SCHOOL



CHARETTE: STUDENTS OF CHARTER SCHOOLS ASSESSING YOUTH PERCEPTION OF RIVERFRONT

IS THIS SPACE SAFE & FUN?



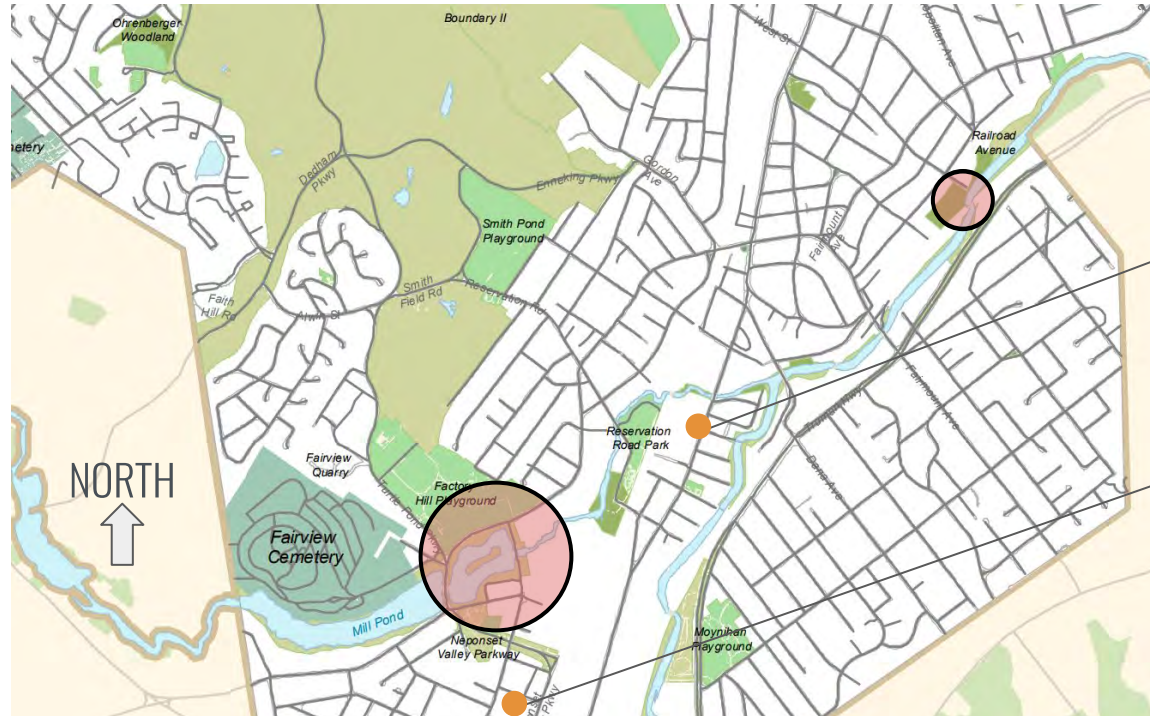
YES



SORT OF



NO



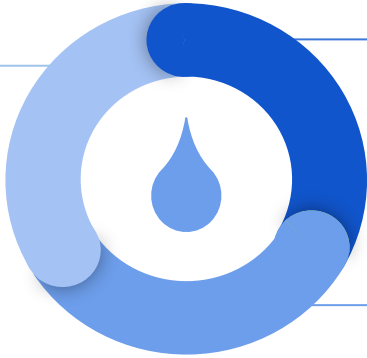
BOSTON RENAISSANCE CHARTER PUBLIC SCHOOL

PACIFIC RIM CHARTER PUBLIC SCHOOL

MISSION STATEMENT & STRATEGIES

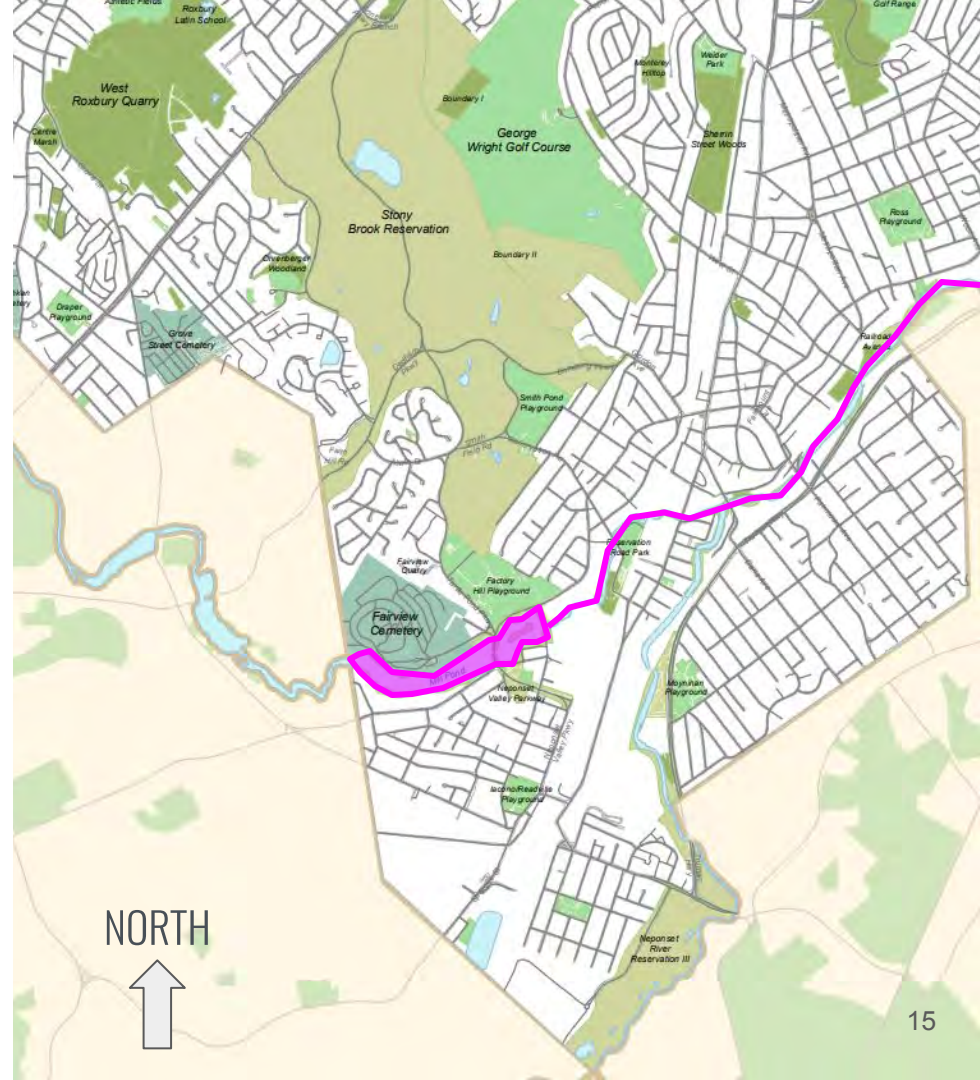
INCREASE NEPONSET RIVERFRONT ACCESS WITHIN ENVIRONMENTAL JUSTICE POPULATIONS OF HYDE PARK

ENGAGE



ENHANCE

ACTIVATE



CHARTER SCHOOL PROGRAMS



UNIVERSITY INTERVENTIONS



ENVIRONMENTAL EDUCATION



MYSTIC RIVER ENVIRONMENTAL EDUCATION



WALK & TALK ABOUT NEPONSET RIVER

NEPONSET ROWING CLUB



NEPONSET RIVERFEST



RECREATION



RECREATION ADVISORY COMMITTEE MEETING



KAYAKING & BOATING

PROVIDENCE FIRE FESTIVAL



LOWELL FOLK FESTIVAL



ENTERTAINMENT

NEPONSET RIVERFEST

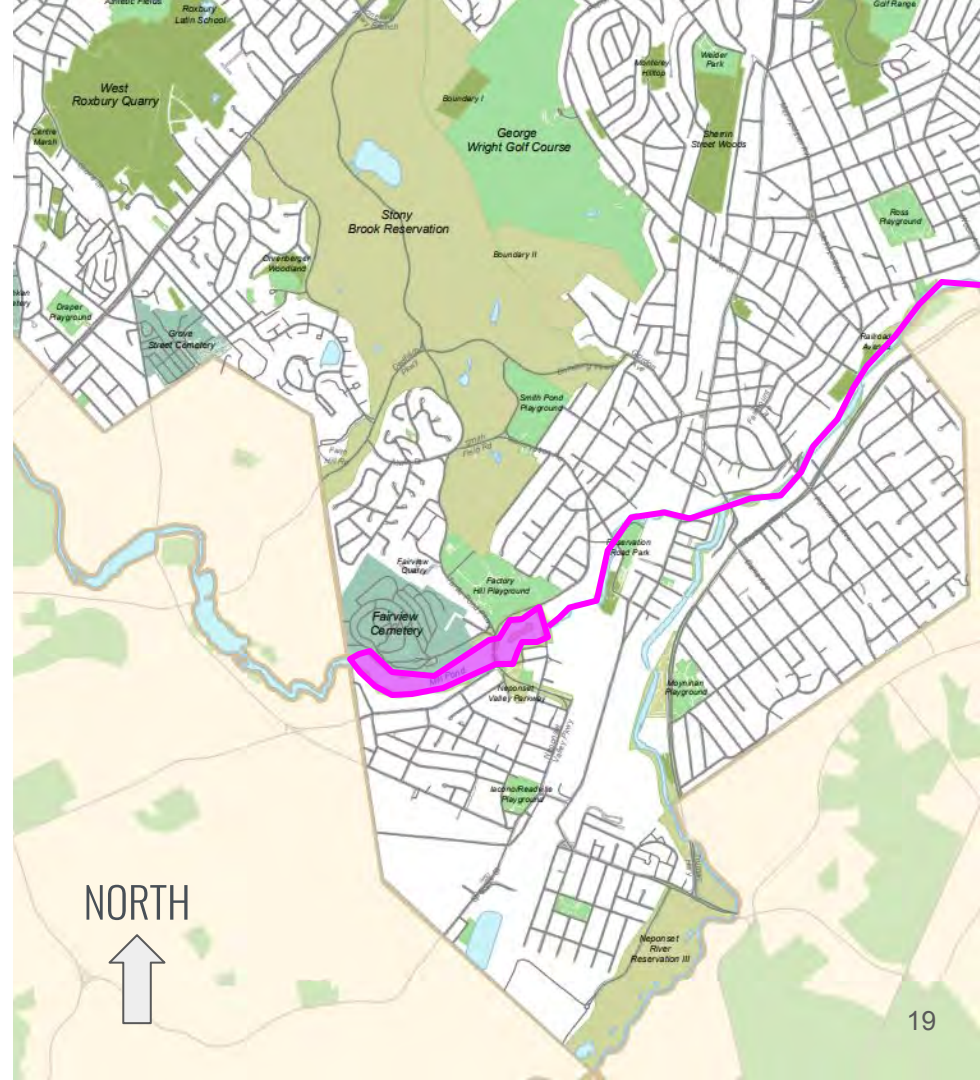


HAITIAN MUSIC FESTIVAL - HYDE PARK

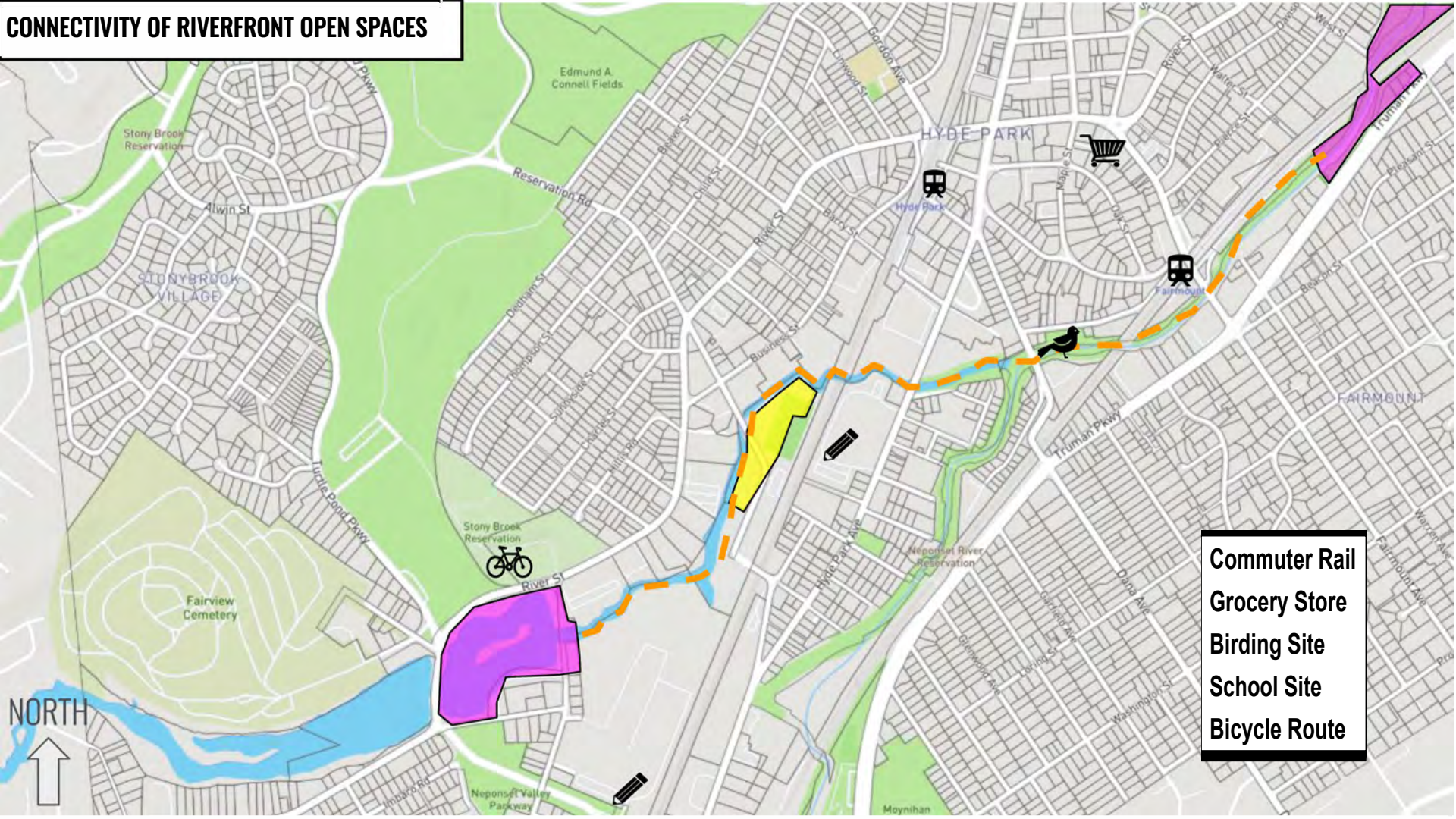


MISSION STATEMENT & STRATEGIES

INCREASE NEPONSET RIVERFRONT ACCESS WITHIN ENVIRONMENTAL JUSTICE POPULATIONS OF HYDE PARK



CONNECTIVITY OF RIVERFRONT OPEN SPACES



- Commuter Rail
- Grocery Store
- Birding Site
- School Site
- Bicycle Route



NEPONSET RIVER GREENWAY



LOWER NEPONSET RIVER TRAIL



QUINCY RIVERWALK



MOTHER BROOK VIEWING PLATFORM & PATHWAY

**CONCEPT FOR STONYBROOK RESERVATION
A WALKABLE RIVERFRONT**



**CONNECTION: PEDESTRIANS AND
NATURE**

**GREATER OPPORTUNITIES FOR
PHYSICAL ACTIVITY**

**INNOVATE PUBLIC ACCESS FOR
OPEN SPACES**

**CONCEPT FOR WEST STREET PARK
RIVERFRONT & NATURAL SETTINGS**

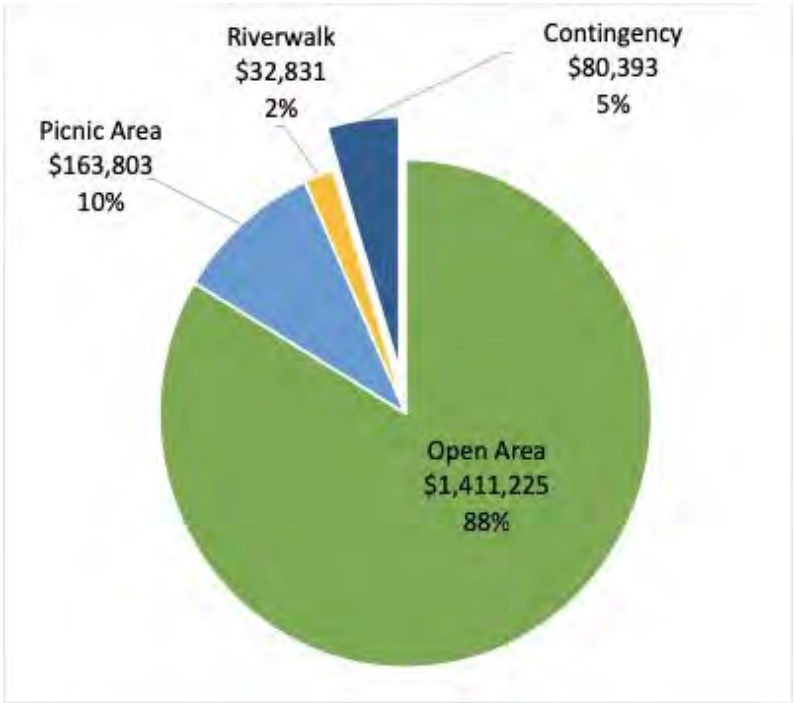
CONNECTION: PLACE & HEALTH

GREATER OPPORTUNITIES FOR
SOCIAL ACTIVITY

SOCIAL & ENVIRONMENTAL
INITIATIVES



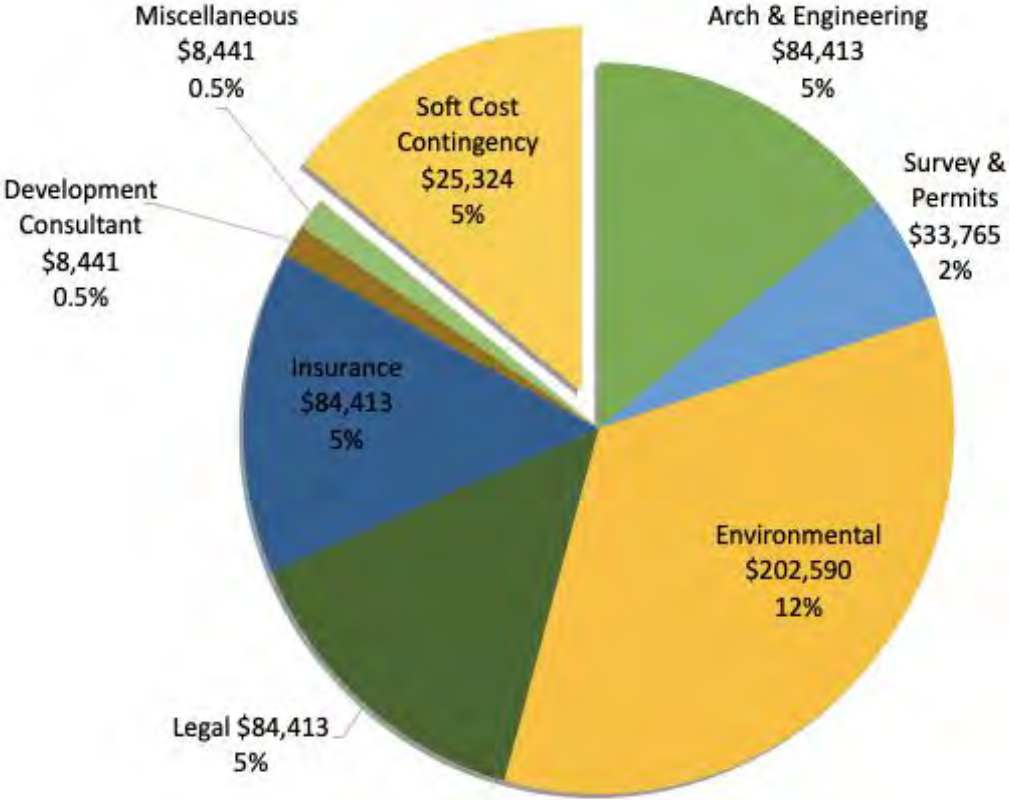
CONSTRUCTION COSTS



| Description | Unit | Value | Stony Brook | West Park | Total Value |
|---------------------------------|------|---------|-------------|-----------|--------------------|
| Land Acquisition | | | | | 0 |
| Construction Costs | | | | | |
| Open Area | s.f. | \$2.80 | 424,205 | 79,804 | \$1,411,225 |
| Picnic Area (10 %) | s.f. | \$3.25 | 42,421 | 7,980 | \$163,803 |
| Riverwalk | s.f. | \$18.75 | 1,206 | \$545 | \$32,831 |
| Direct Construction Cost | | | | | \$1,607,859 |
| Contingency | | 5% | | | \$80,393 |
| Total Construction | | | | | \$1,688,252 |

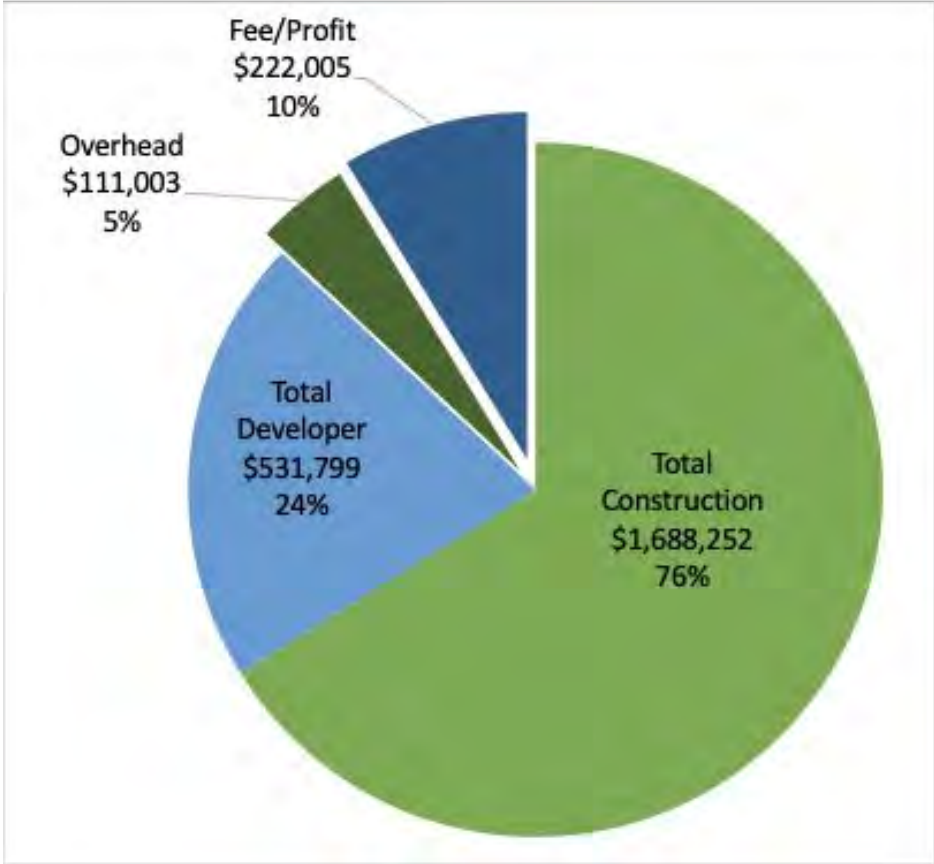
DEVELOPER COSTS

| Developer Costs | Value |
|-------------------------------------|------------------|
| Arch & Engineering | \$84,413 |
| Survey & Permits | \$33,765 |
| Environmental | \$202,590 |
| Legal | \$84,413 |
| Insurance | \$84,413 |
| Development Consultant | \$8,441 |
| Miscellaneous | \$8,441 |
| Total Developer or Soft Cost | \$506,476 |
| Soft Cost Contingency | \$25,324 |
| Total Developer | \$531,799 |



TOTAL DEVELOPMENT BUDGET

| Overall Breakdown | Total Value |
|---------------------------------|--------------------|
| Land Acquisition | 0 |
| Total Construction | \$1,688,252 |
| Total Developer | \$531,799 |
| Land, Construction, Developer | \$2,220,052 |
| Overhead | \$111,003 |
| Fee/Profit | \$222,005 |
| Total Development Budget | \$2,553,060 |



MISSION STATEMENT & STRATEGIES

INCREASE NEPONSET RIVERFRONT ACCESS WITHIN ENVIRONMENTAL JUSTICE POPULATIONS OF HYDE PARK

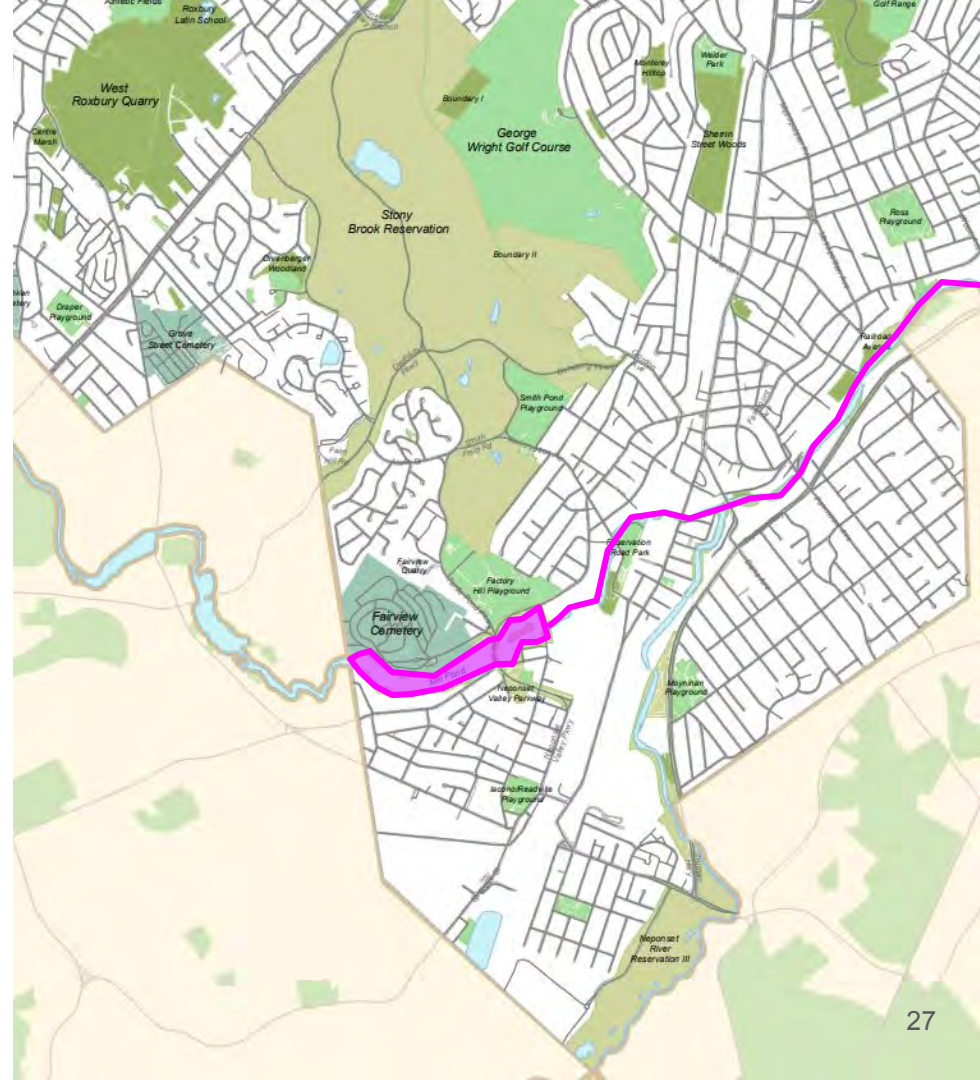
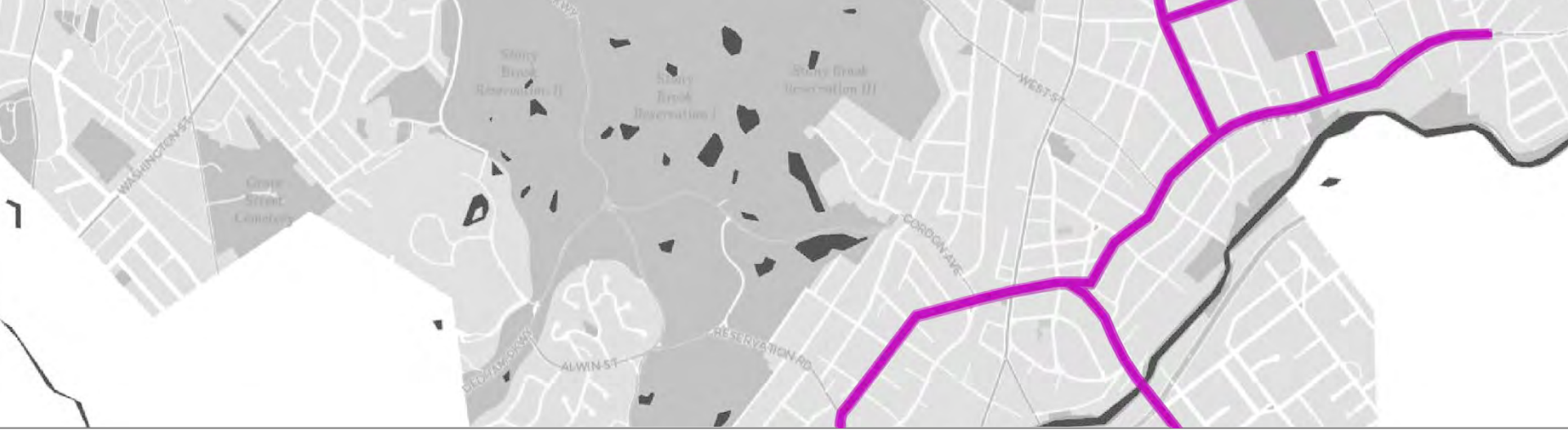


EXHIBIT A: BUDGET ANALYSIS

| Description | Unit | value | Stony Brook | West Park | Total Value |
|---------------------------|------|---------|-------------|-----------|--------------------|
| Land Acquisition | | | | | 0 |
| Construction Costs | | | | | |
| Open Area | s.f. | \$2.80 | 424,205 | 79,804 | \$1,411,225 |
| Picnic Area (10 %) | s.f. | \$3.25 | 42,421 | 7,980 | \$163,803 |
| Riverwalk | s.f. | \$18.75 | 1,206 | \$545 | \$32,831 |
| Direct Construction Cost | | | | | \$1,607,859 |
| Contingency | | 5% | | | \$80,393 |
| Total Construction | | | | | \$1,688,252 |

| Developer Costs | Value |
|-------------------------------------|------------------|
| Arch & Engineering | \$84,413 |
| Survey & Permits | \$33,765 |
| Environmental | \$202,590 |
| Legal | \$84,413 |
| Insurance | \$84,413 |
| Development Consultant | \$8,441 |
| Miscellaneous | \$8,441 |
| Total Developer or Soft Cost | \$506,476 |
| Soft Cost Contingency | \$25,324 |
| Total Developer | \$531,799 |

| | |
|--|--------------------|
| Summary: Land, Construction & Developer | \$2,220,052 |
| Developer Overhead | \$111,003 |
| Developer Fee/Profit | \$222,005 |
| Total Development Budget | \$2,553,060 |



HYDE PARK NEIGHBORWAY



Steven Lassman

Shengxiang Jin

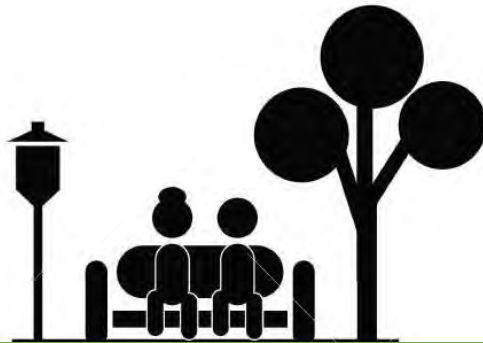
Kelly Schroeder

Willie Simon

How do we increase quality and community value of Hyde Park's existing green spaces?



ACCESS



AMENITIES



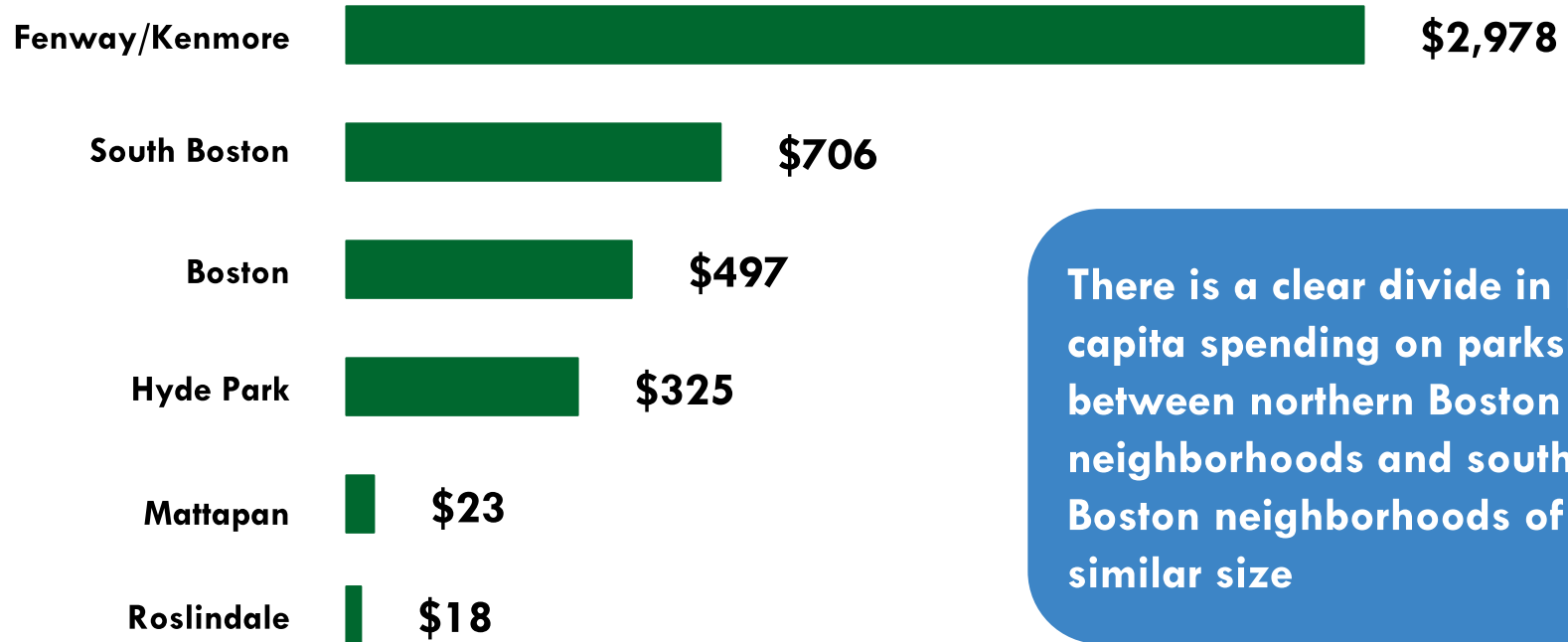
ACTIVITIES



**Boston ranks #13 for
park access in the US¹.**

**But what does that
mean in terms of
equity and quality?**

Parks & Recreation Spending Per Person

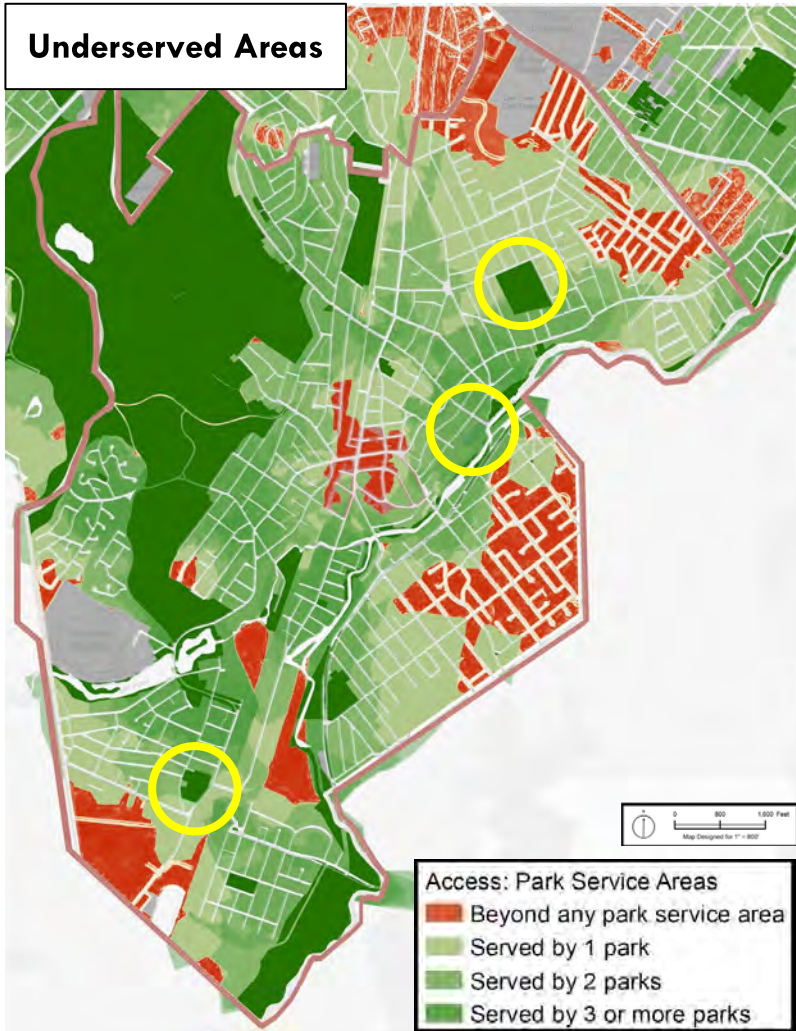


There is a clear divide in per capita spending on parks between northern Boston neighborhoods and southern Boston neighborhoods of similar size

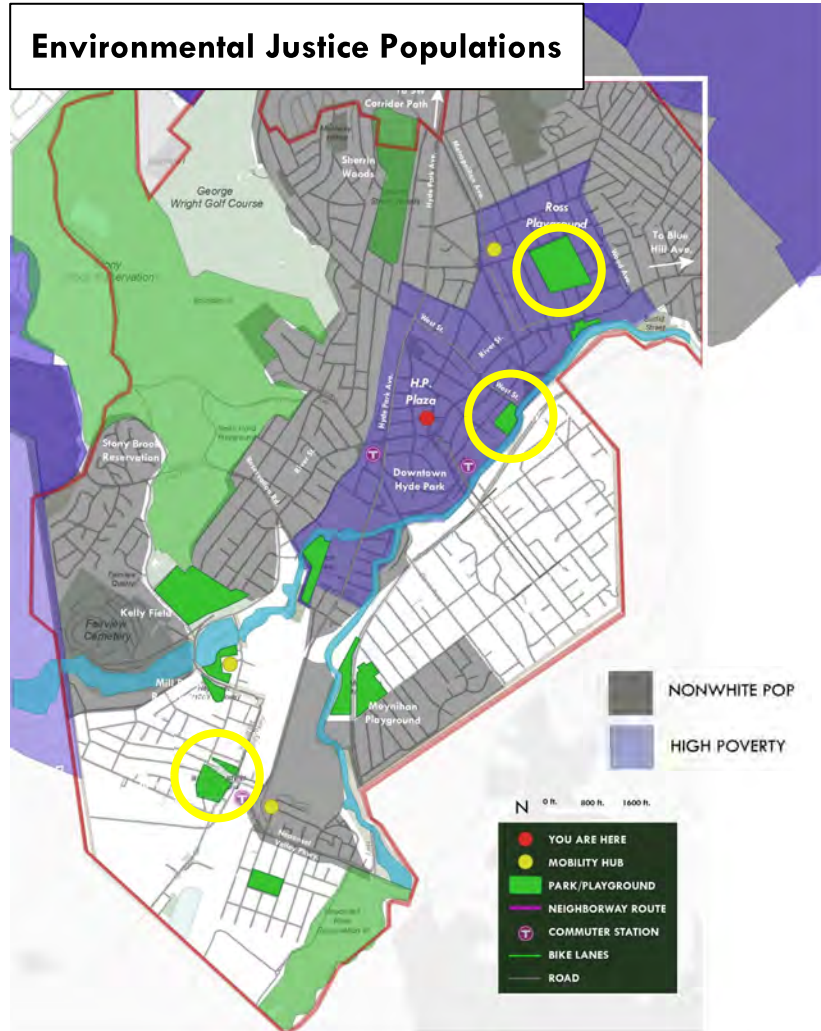
¹Imagine Boston Capital Plan FY 21-25

²ACS 2013-2017 Boston Neighborhood Demographics- Population

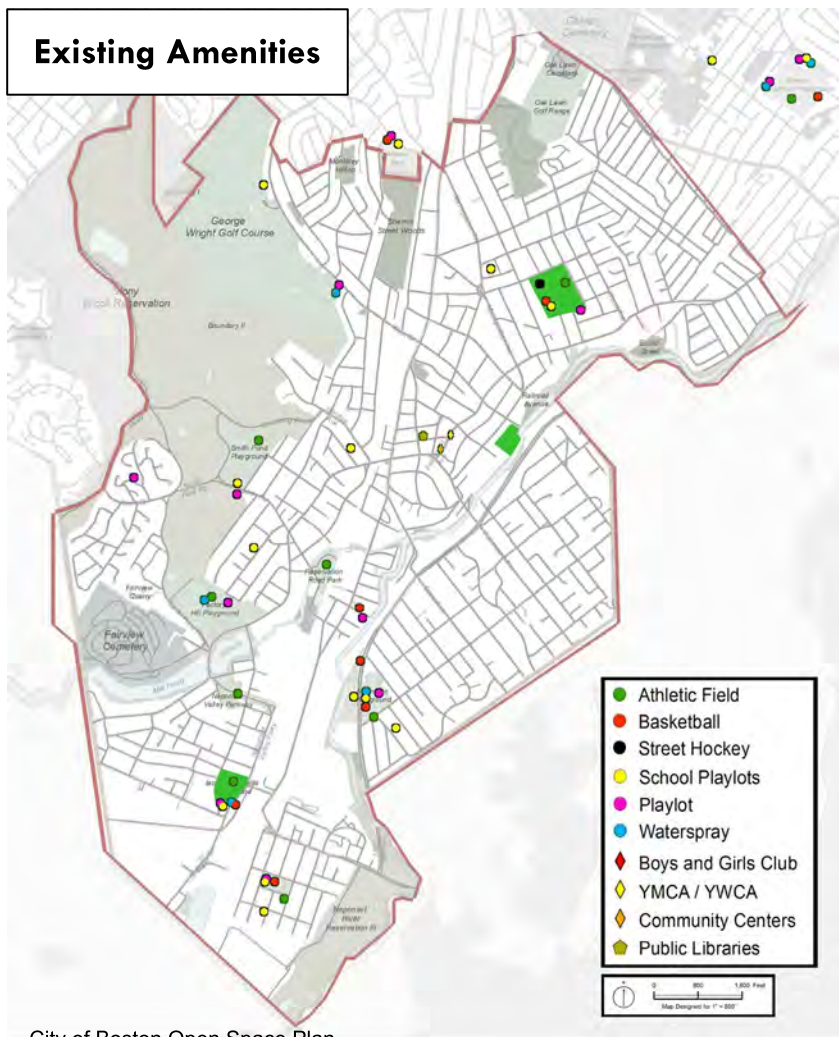
Underserved Areas



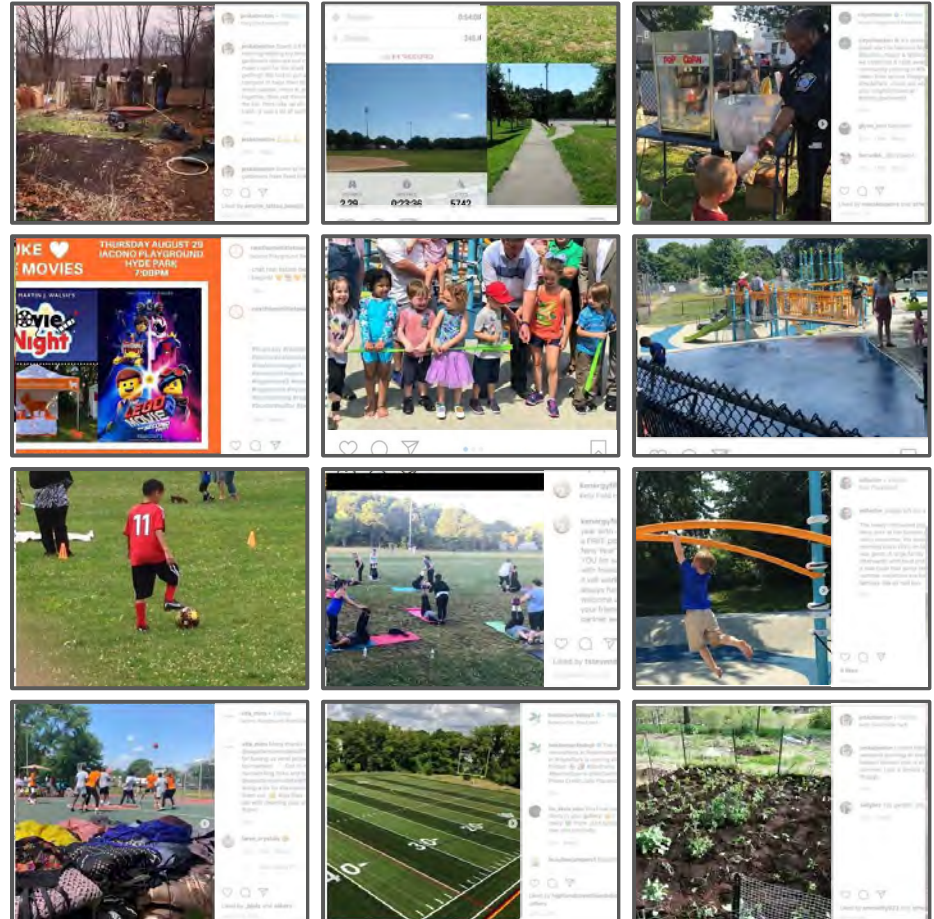
Environmental Justice Populations



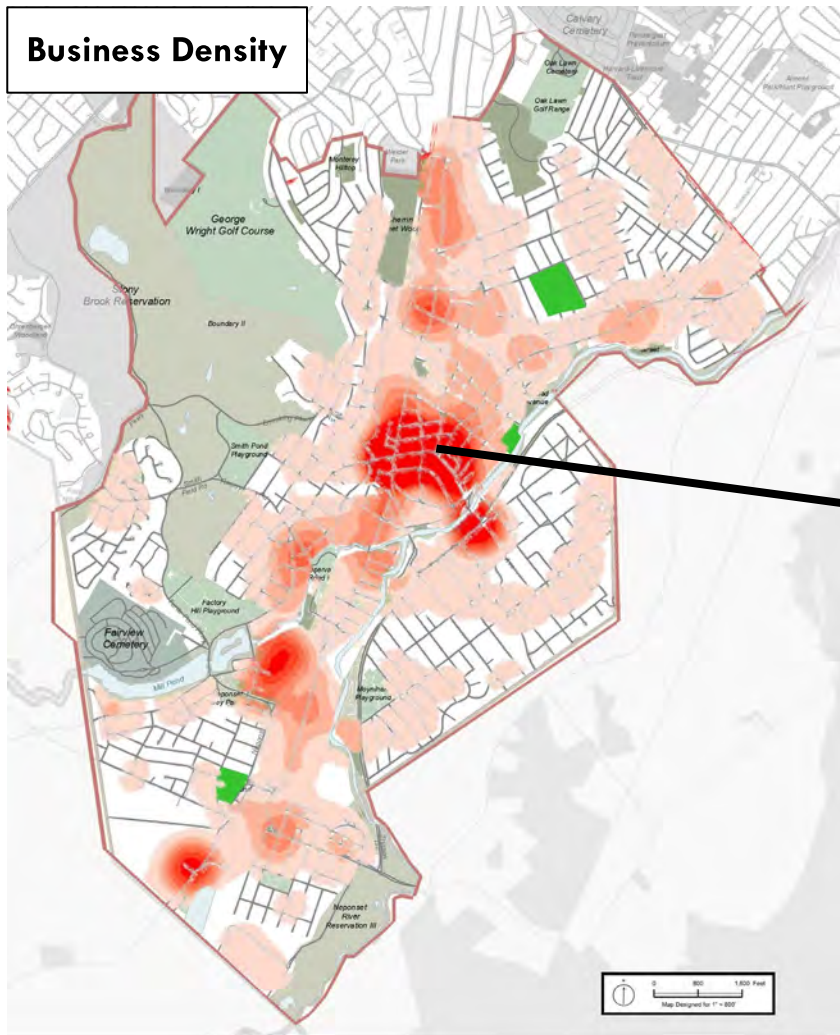
Existing Amenities



Social Media Impressions



Business Density

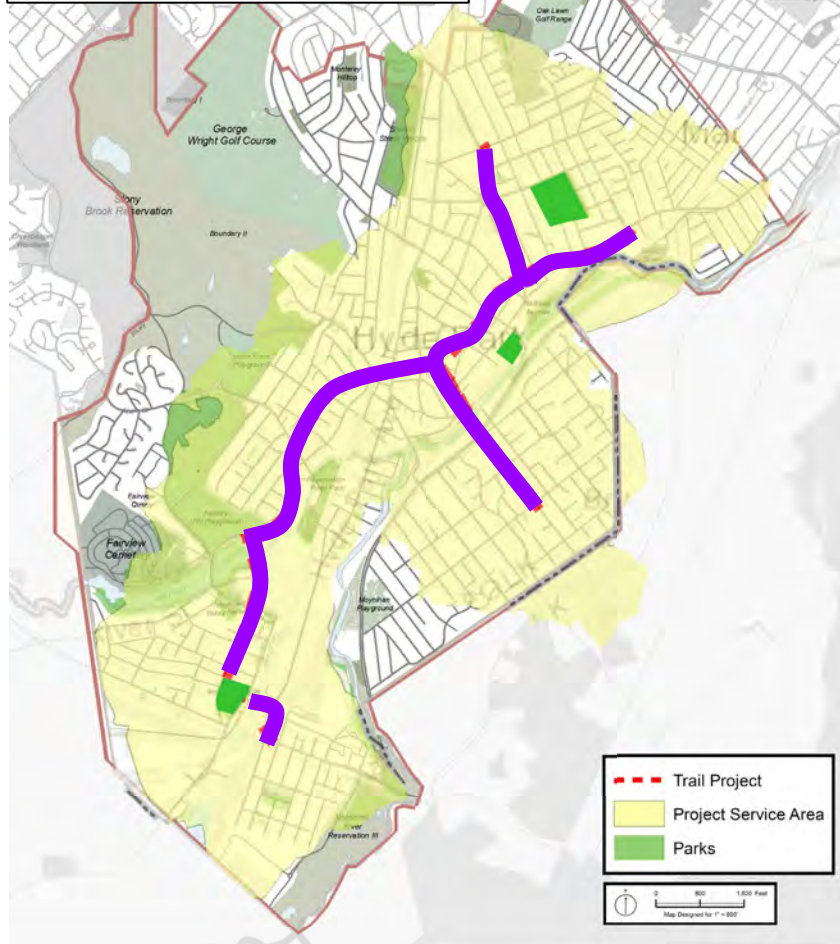


Neighborway Impact Area



Cleary Square in Hyde Park's Central Business District

Neighborway Impact Area



Population Affected

Age

| | |
|---------------------------|--------|
| Children (under age 20) | 5,917 |
| Adults (age 20 to age 64) | 15,466 |
| Seniors (age 65 and up) | 4,133 |

Household Income

| | |
|---------------|-------|
| Low income | 3,051 |
| Middle income | 1,496 |
| High income | 4,588 |

Race/Ethnicity

| | |
|------------------|--------|
| White | 8,022 |
| Black | 12,946 |
| Asian | 403 |
| Native American | 124 |
| Pacific Islander | 21 |
| Other Race | 2,835 |
| Mixed Race | 1,163 |
| Hispanic* | 6,140 |

Total Population Impacted 25,518



ACCESS



Family Safety



Cycling Improvements



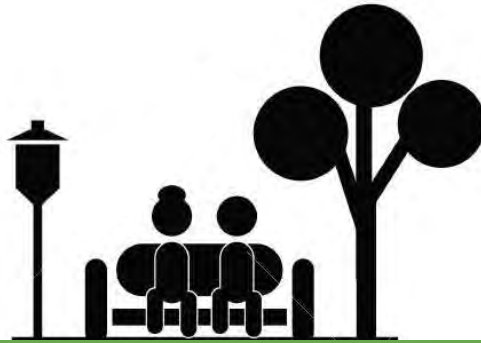
Ped. Improvements



Senior Friendly Paths



Rest Areas



AMENITIES



Dog Park



Food Vendors



Tables and Seating



Sports Facilities



Community Garden



ACTIVITIES



Music & Dancing



Senior Recreation



Arts & Crafts



Yoga Classes



Little League

Neighborway



Wayfinding

Neighborway



Hyde Park Plaza





3 Minute Walk

West Street Park





1 Minute Walk

Ross Playground





5 Minute Walk

Iacono Playground

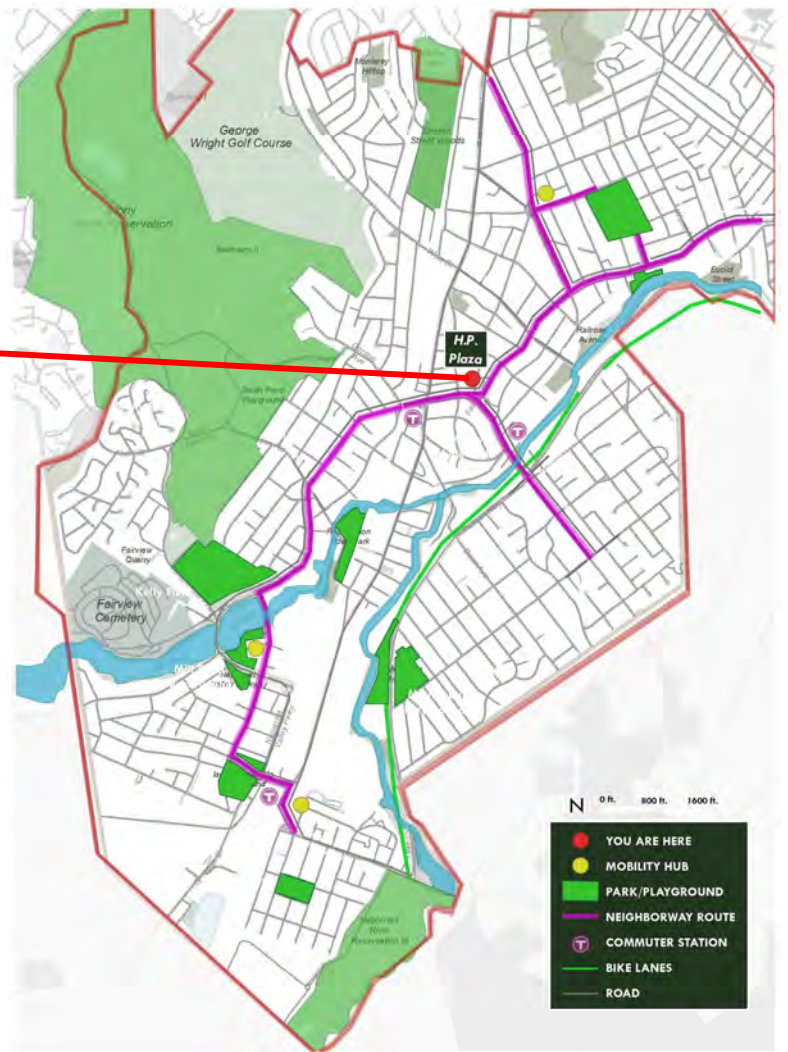
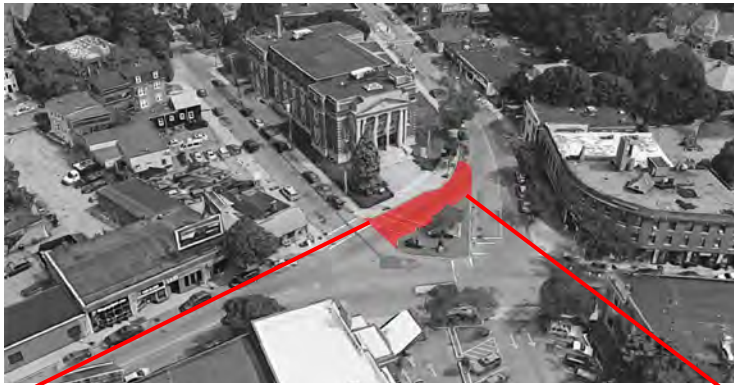




3 Minute Walk

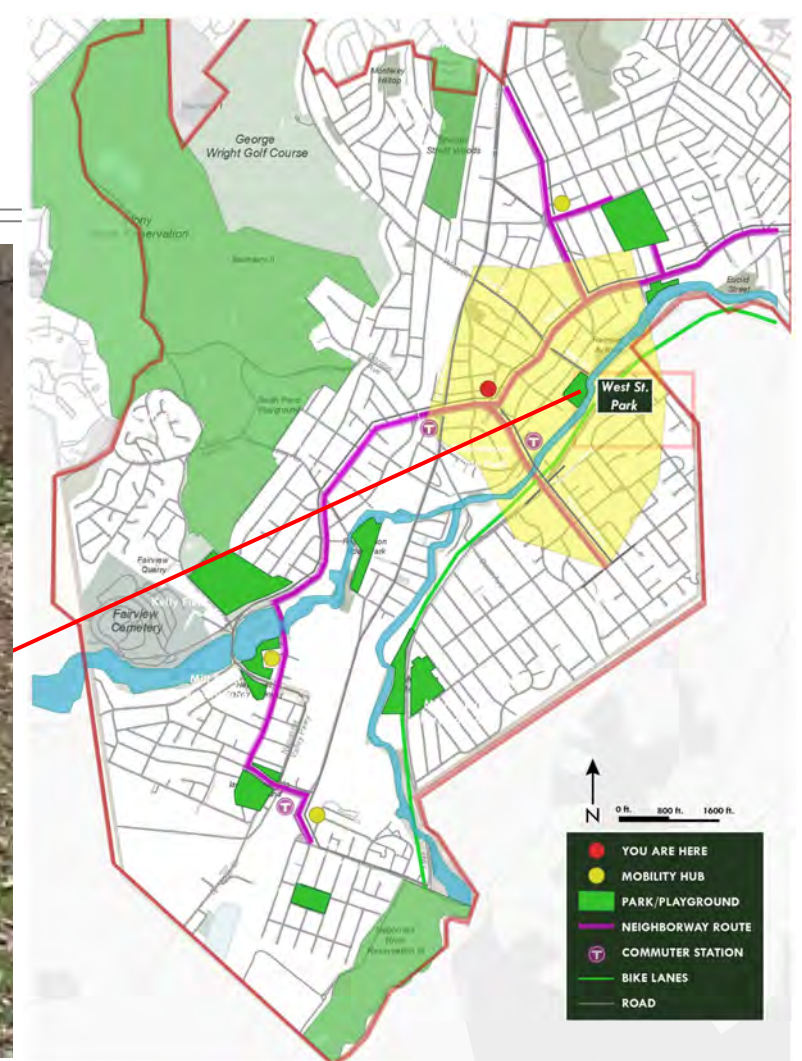
 

Hyde Park Plaza



Neighborway Parks

West Street Park



Park Facts

West Street Park

Population Served **3,928**

Demographic Concerns

Minority Population **77%**

Low income population **17%**

| Populations | HP | WSP |
|-------------|----|-----|
|-------------|----|-----|

| | | |
|----------|-----|------------|
| Children | 24% | 25% |
|----------|-----|------------|

| | | |
|---------|-----|------------|
| Elderly | 16% | 14% |
|---------|-----|------------|

Amenities

| | |
|--------------|---------------|
| VS Hyde Park | - 0.47 |
|--------------|---------------|

| | |
|-----------|---------------|
| VS Boston | - 2.35 |
|-----------|---------------|

*Data collected from ACS Community Survey

Partners & Resources



Susan Cascino

Zero Waste Boston



Nora Vandenberghe

Dog-on-it Dog Parks



Yoga in the Park

Boston Summer Fitness



Streetscape Innovation Fund

Boston Complete Streets

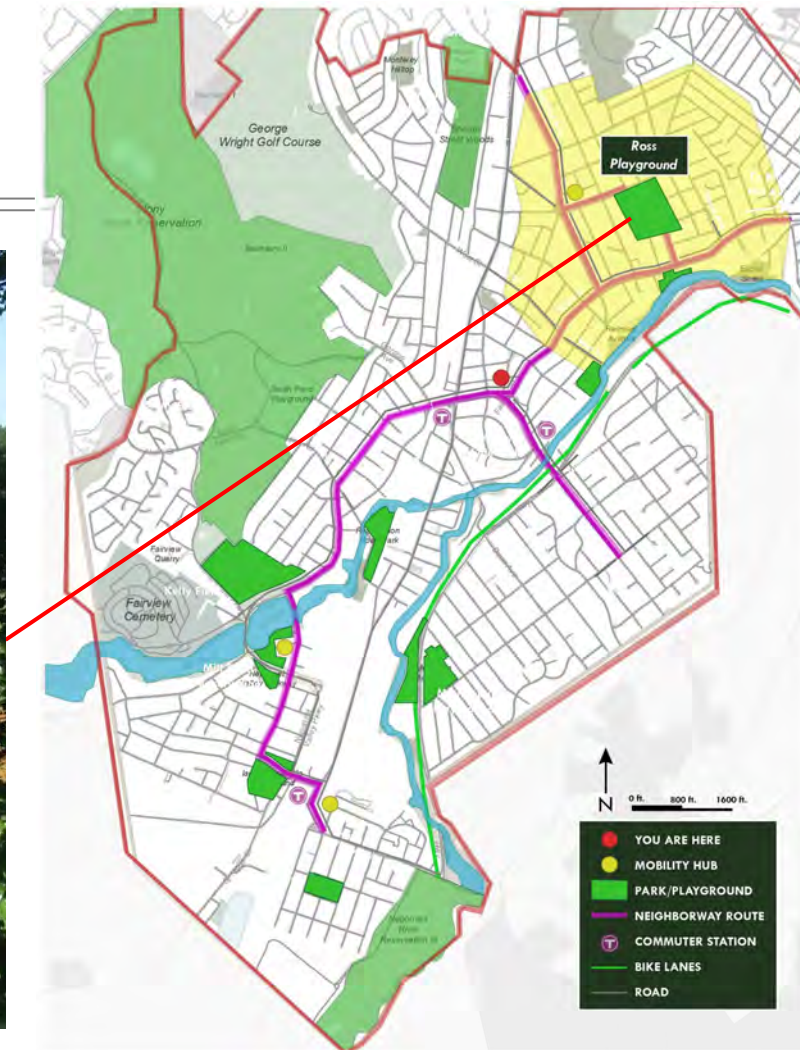
Interventions

West Street Park



Neighborway Parks

Ross Playground



Park Facts

Ross Playground

Population Served **7,103**

Demographic Concerns

Minority Population **84%**

Low income population **15%**

| Populations | HP | RP |
|-------------|-----|------------|
| Children | 24% | 25% |
| Elderly | 16% | 15% |

Amenities

VS Hyde Park **- 0.09**

VS Boston **- 0.45**

*Data collected from ACS Community Survey

Partners & Resources



Little League Youth Sports
Hyde Park YMCA



BlueBikes Bikeshare
City of Boston



Arts & Crafts Sessions
Boston Center for Youth & Families



Cathy Horn
Keep Hyde Park Beautiful

Interventions

Ross Playground



ACCESS



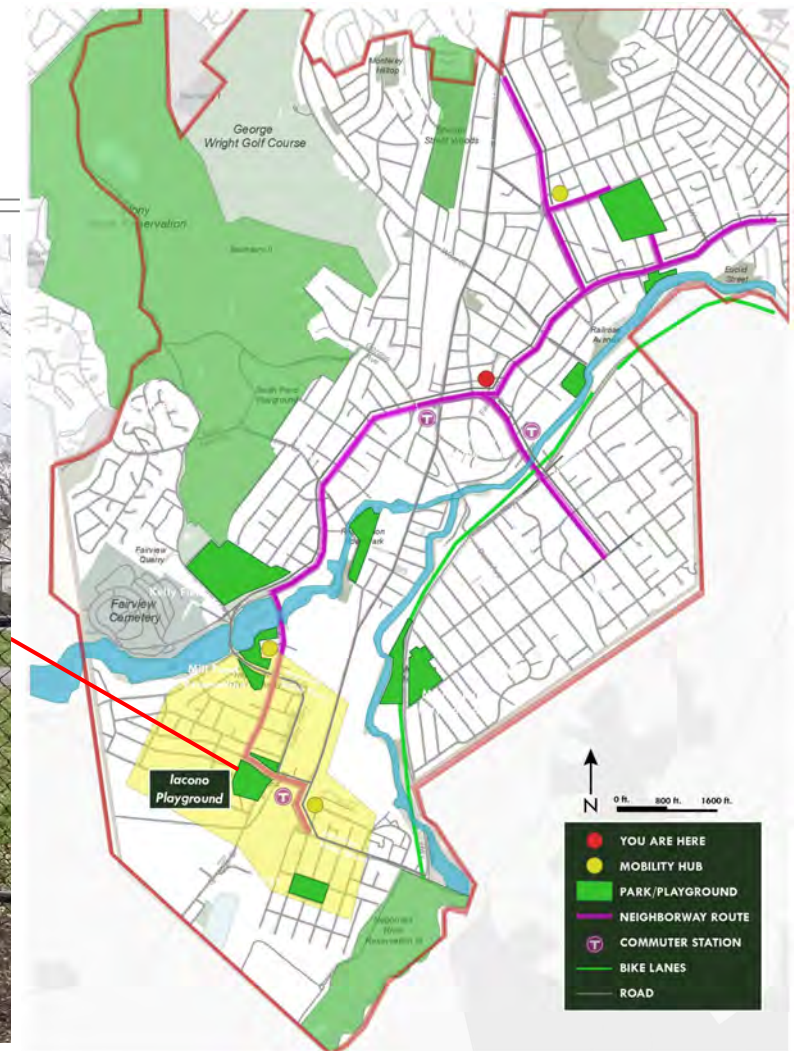
AMENITIES



ACTIVITIES



Neighborway Parks Iacono Playground



Park Facts

Iacono Playground

Population Served **2,453**

Demographic Concerns

Minority Population **47%**

Low income population **13%**

| Populations | HP | IP |
|-------------|----|----|
|-------------|----|----|

| | | |
|----------|-----|------------|
| Children | 24% | 23% |
|----------|-----|------------|

| | | |
|---------|-----|------------|
| Elderly | 16% | 17% |
|---------|-----|------------|

Amenities

| | |
|--------------|---------------|
| VS Hyde Park | + 2.45 |
|--------------|---------------|

| | |
|-----------|---------------|
| VS Boston | + 0.80 |
|-----------|---------------|

*Data collected from ACS Community Survey

Partners & Resources



Mary Hogan and Jen Gaman
Humans of Hyde Park



Streetscape Innovation Fund
City of Boston



Boston Green Team
SW Corridor CDC



Little League Youth Sports
Hyde Park YMCA

Interventions

Iacono Playground



ACCESS



AMENITIES



ACTIVITIES



Budget

Neighborway Costs

3.8 miles = 20,064 ft

Average streetscape improvement cost

= \$270 per foot

= \$270 x 20,064 ft

Total Est. Cost = **\$5,417,280**

Park Improvement Costs

Average New Park Cost = \$1,843,000

Est. Improvement Costs x 0.33

= \$608,000

x 3

Est. Cost For 3 Parks = **\$1,824,000**

Possible Funding & Grants

- Parkland Acquisitions for Communities (PARC).....\$400,000
- Gateway City Parks Program Grant.....\$500,000
- Landscape Partnership Grant Program.....\$1,250,000
- Masstrails Grants.....\$300,000
- Streetscape Innovation Fund (Boston).....\$250,000
- Recreational Trails Program.....\$300,000

Total Available Funding\$3,000,000



Phasing

| | | Phase I | Phase II | Phase III |
|------------|-----------|--|---|--|
| | | ~\$840,000 | ~\$2,200,000 | ~\$4,300,000 |
| | | 1 year | 2-4 years | 4+ years |
| ACTIVITIES | ACCESS | <ul style="list-style-type: none"> ● Wayfinding Improvements ● Temp. Bike Infrastructure ● NeighborWayfinding Site | <ul style="list-style-type: none"> ● Mobility Hubs ● Lane Painting ● Bikeshare Stations | <ul style="list-style-type: none"> ● Neighborway Paving ● Separated Bike Lanes |
| | AMENITIES | <ul style="list-style-type: none"> ● Gardening Beds ● Trash Cans ● Tables and Seating | <ul style="list-style-type: none"> ● Improved Park Fixtures ● More Planting ● Path and Park Lighting | <ul style="list-style-type: none"> ● Dog Park Construction ● Food Vendors |
| | | <ul style="list-style-type: none"> ● Youth Sports Programming ● Yoga Sessions ● Gardening Classes ● Senior Fitness | <ul style="list-style-type: none"> ● Arts and Crafts Sessions ● Cultural Programming | <ul style="list-style-type: none"> ● Concert Series |

**HYDE PARK NEIGHBORWAY
WEEKLY EVENT SCHEDULE
June 1st - September 27th**

| | | |
|------------|-------------------------|---|
| MON | 10:00AM | Yoga for Seniors - Ross Playground |
| | 3:00PM | Arts in the Park - Iacono Playground |
| TUE | 6:00PM | Cardio Pump - Iacono Playground |
| | 6:00PM | Little League Practice- Ross Playground |
| WED | 2:00PM | Neighborway Book Club - Hyde Park Plaza |
| | 6:00PM | Zumba - Ross Playground |
| THU | 7:00AM | Morning Mindfulness - Iacono Playground |
| | 6:00PM | Little League Practice - Ross Playground |
| FRI | 10:00AM | Community Gardening - West Street Park |
| | 8:00PM | Movie in the Park - Iacono Playground |
| SAT | 10:00AM | Keep Hyde Park Beautiful Volunteer Meet-Up - West Street Park |
| SUN | 11:00AM - 7:00PM | Neighborway HyClovía |



HYCLOVIA

CELEBRATE THE HYDE PARK NEIGHBORWAY
SUNDAY, JUNE 7TH
11:00 AM - 7:00 PM





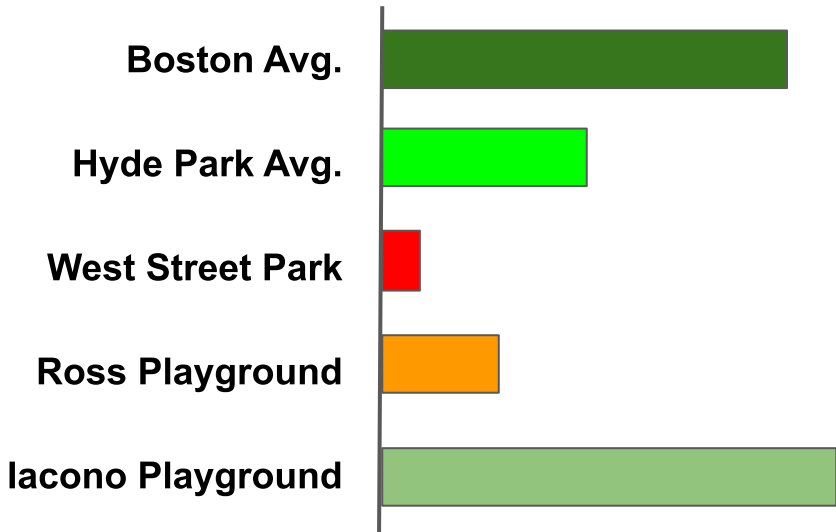
Scan me

<https://hydeparkneighbourway.github.io/neighborwayfinder/>

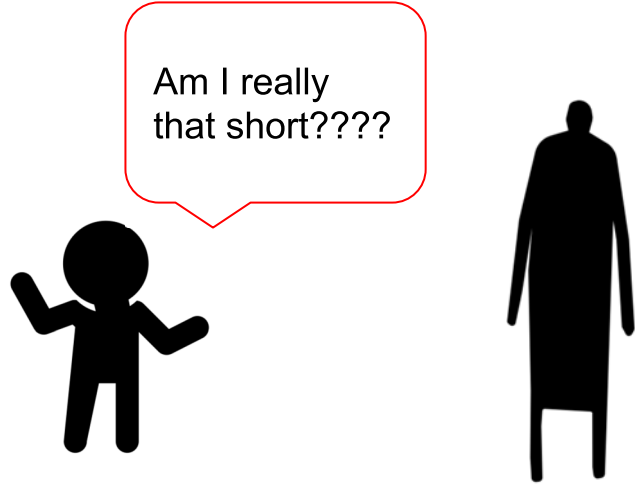
Appendix

Methodology

Amenities Score



Measurement of Total Amenities vs Total Park Service Area Population



Parkscore

| | PEOPLE BASED | | | | PLACE BASED | | |
|-------------------|-----------------------|---------------------------|-----------------------|------------------------|-----------------|--------------------|----------------|
| | Low Income Population | High Racial Dissimilarity | High Youth Population | High Senior Population | Fewer Amenities | Heat Island Effect | Flood Concerns |
| West Street Park | X | X | X | | X | | X |
| Ross Playground | X | X | X | | X | X | |
| Iacono Playground | | X | | X | | X | |

Additional Stakeholders



Mary Hogan and Jen Gaman
Humans of Hyde Park



Steve Nilson
Switch Co-Op



Cathy Horn
Keep Hyde Park Beautiful



Amanda Coen and Diana Ferrara
Give & Get - Hyde Park



Boston Green Team
Southwest Corridor CDC



Susan Cascino
Zero Waste Boston

Park Budget Precedents

| PARK | NEIGHBORHOOD | COST |
|----------------------------|----------------------|--------------------|
| RESERVATION ROAD PARK | HYDE PARK | \$3,220,000 |
| PARKMAN PLAYGROUND | JAMAICA PLAIN | \$1,405,000 |
| HANNON PLAYGROUND | ROXBURY | \$730,000 |
| MEDAL OF HONOR PARK | SOUTH BOSTON | \$1,335,500 |
| NOYES PLAYGROUND | EAST BOSTON | \$2,525,000 |



Neighborway Budget

3.8 miles = 20,064 ft

Average streetscape improvement cost

= \$270 per foot

= \$270 x 20,064 ft

Total Cost = \$5,417,280



Possible Funding & Grants

- Parkland Acquisitions for Communities (PARC).....\$400,000
- Gateway City Parks Program Grant.....\$500,000
- Landscape Partnership Grant Program.....\$1,250,000
- Mastrails Grants.....\$300,000
- Streetscape Innovation Fund (Boston)\$250,000
- Recreational Trails Program.....\$300,000
- Total Available Funding\$3,000,000**

Hyde Park Cyclovia



GRANTS

Parkland Acquisitions and Renovations for Communities (PARC) Grant Program - Maximum grant award amount: \$400,000

Gateway City Parks Program - Average Grant Size: \$500,000

Landscape Partnership Grant Program - Maximum Award: \$1,250,000

MassTrails Grants - Maximum grant award amount: \$300,000

Recreational Trails Program

Slow the Flow

CREATING A SAFER RIVER STREET CORRIDOR
HYDE PARK, BOSTON, MA

UA 805

Spring 2020

Helen Lee, Riley Mccorstin, Rebecca Singh, Lening Wang




Franklin Park

Stony Brook Reservation

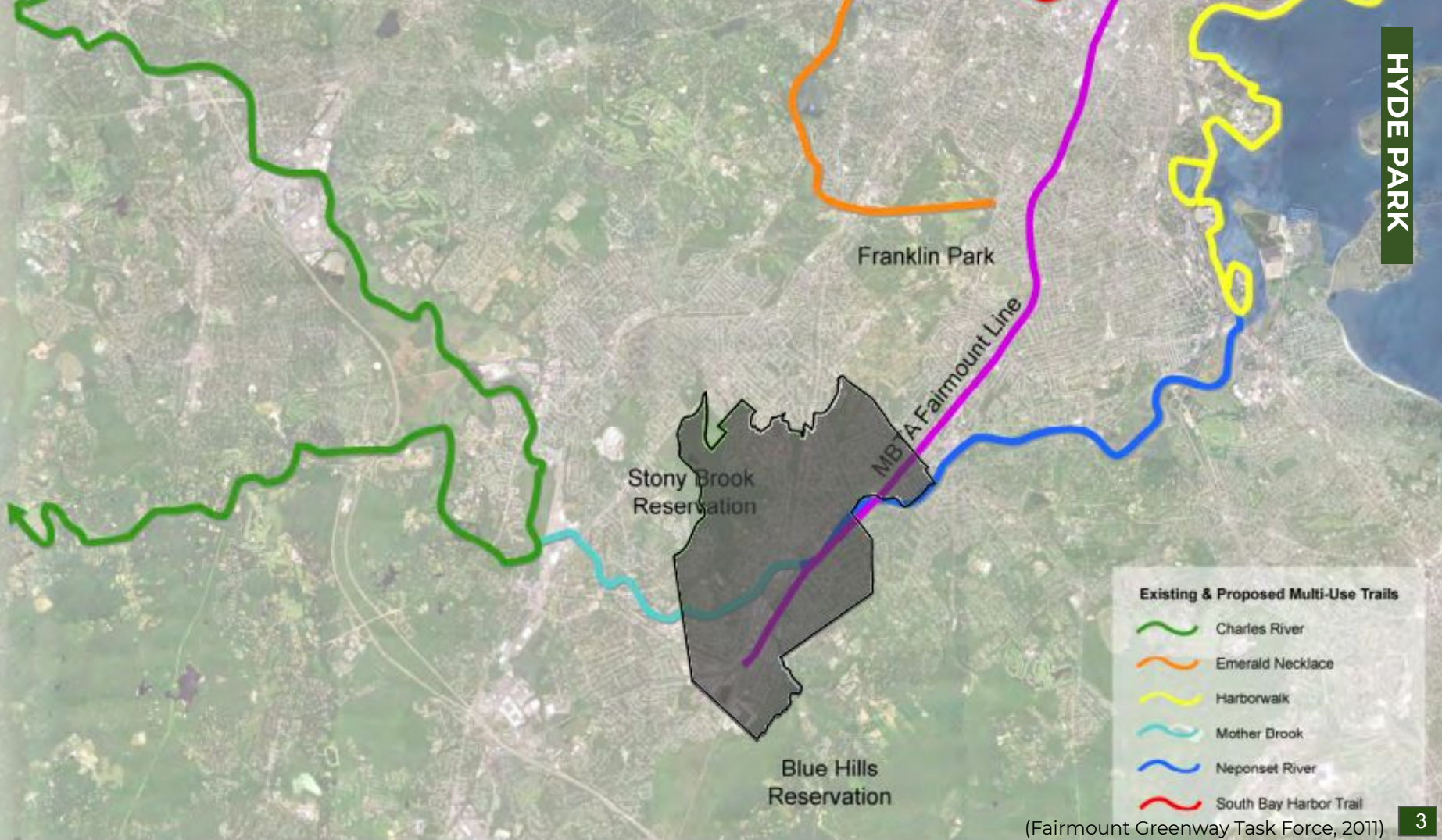
Blue Hills Reservation

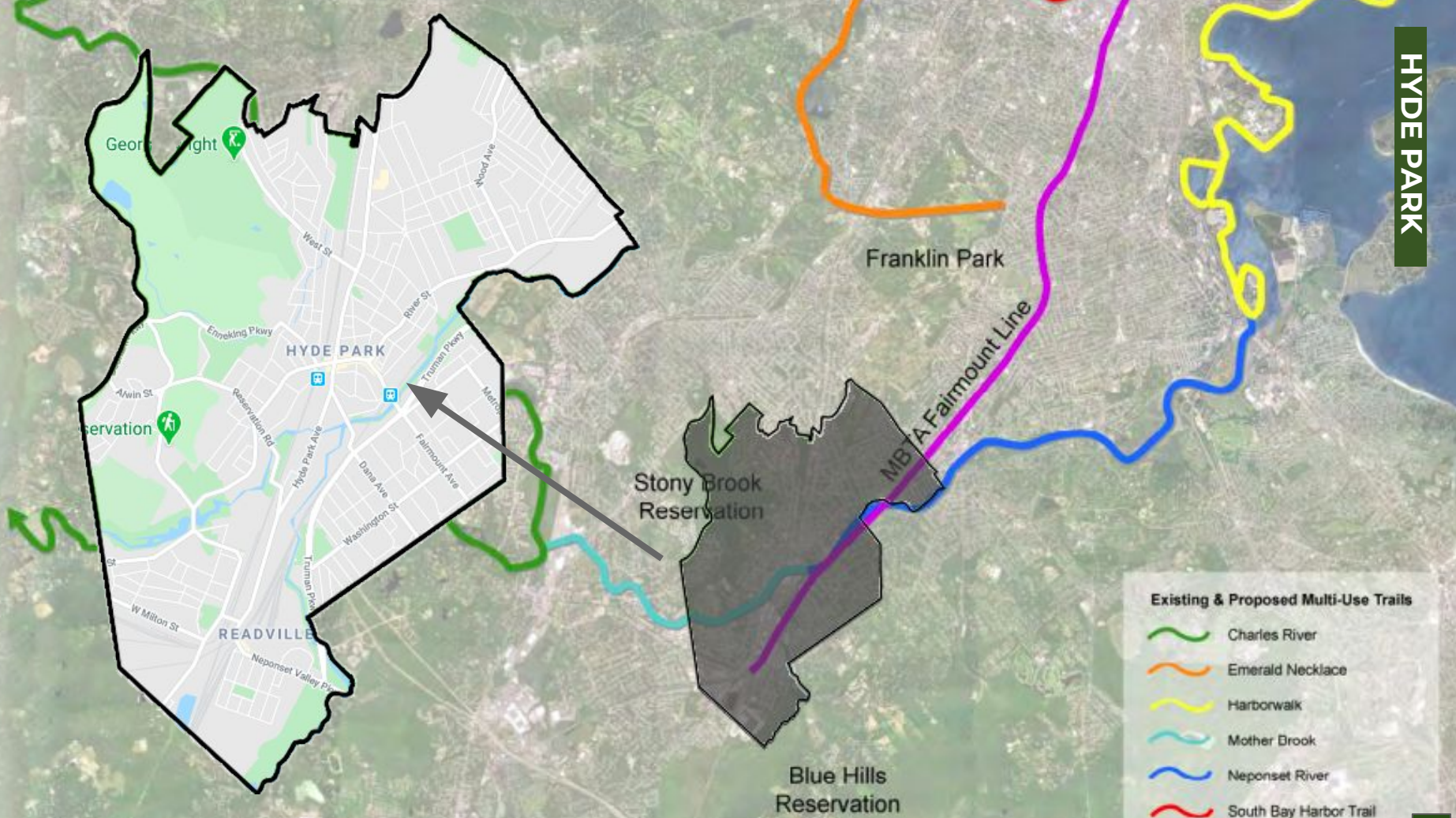
MBTA Fairmount Line

Existing & Proposed Multi-Use Trails

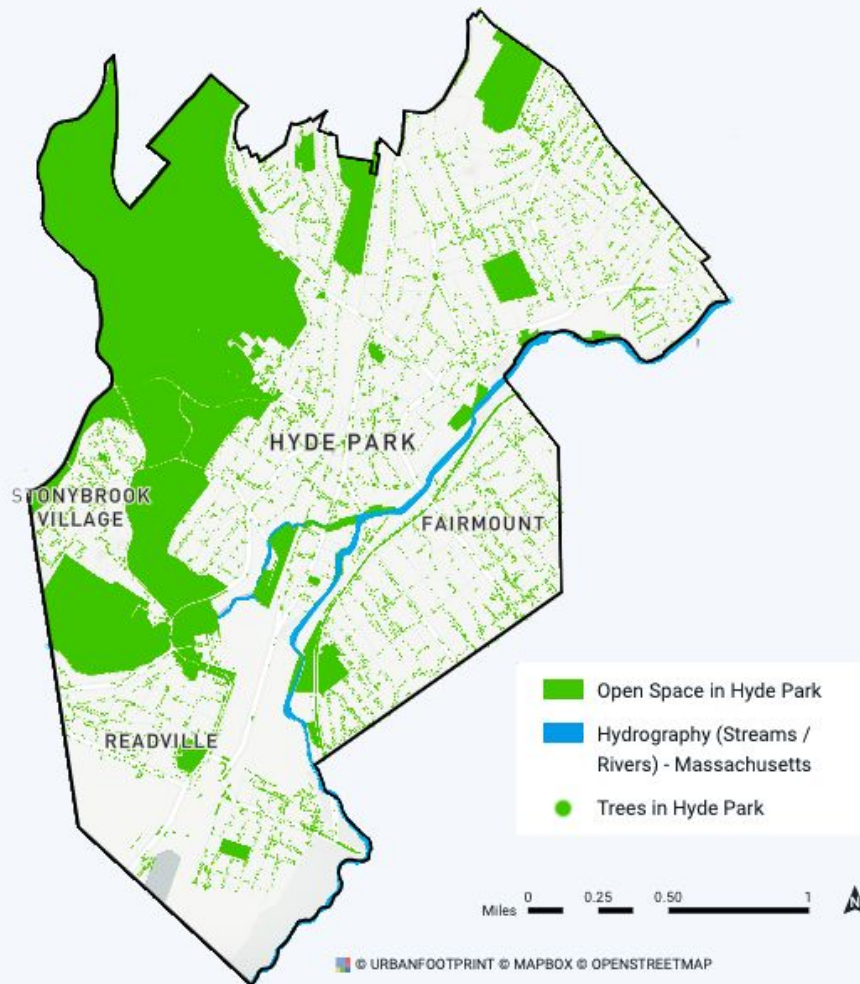
-  Charles River
-  Emerald Necklace
-  Harborwalk
-  Mother Brook
-  Neponset River

(Fairmount Greenway Task Force, 2011)





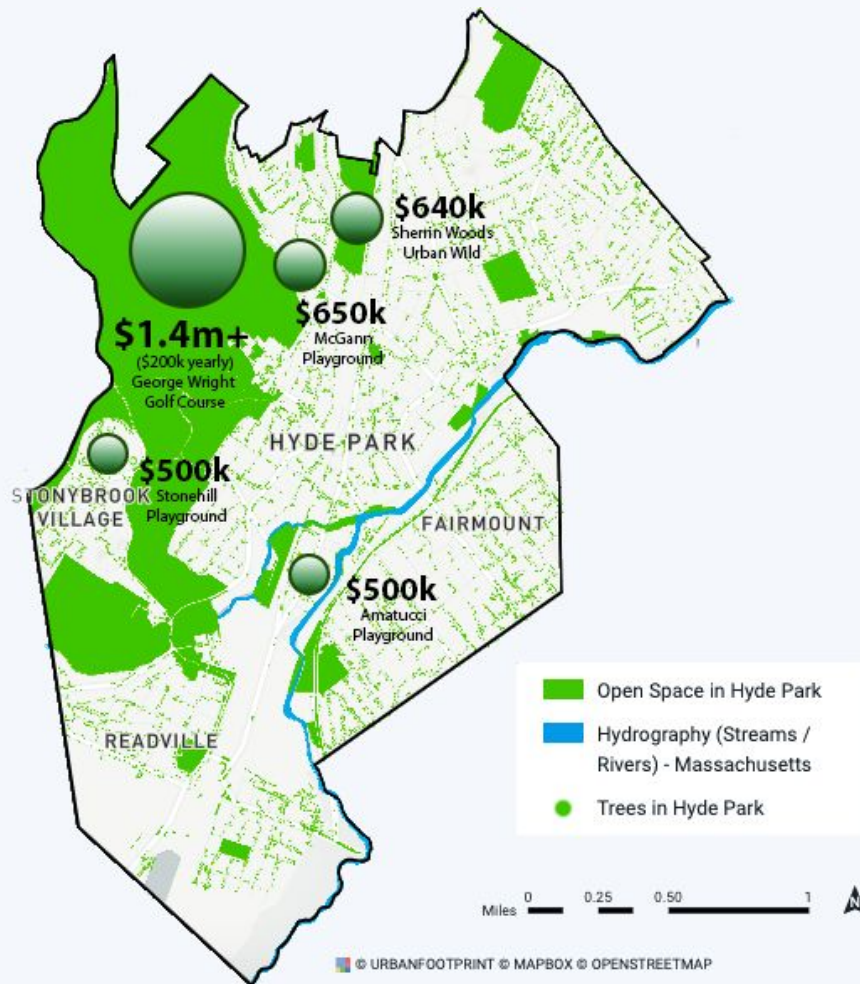
- Existing & Proposed Multi-Use Trails**
- Charles River
 - Emerald Necklace
 - Harborwalk
 - Mother Brook
 - Neponset River
 - South Bay Harbor Trail



A \$7M INVESTMENT

in equitable and accessible open spaces and parks, including:

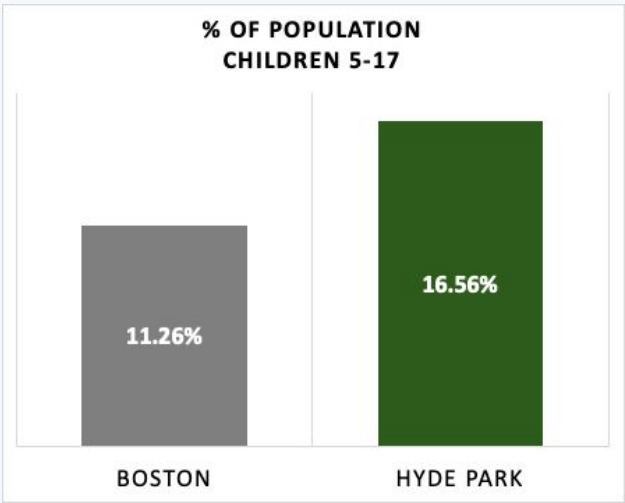
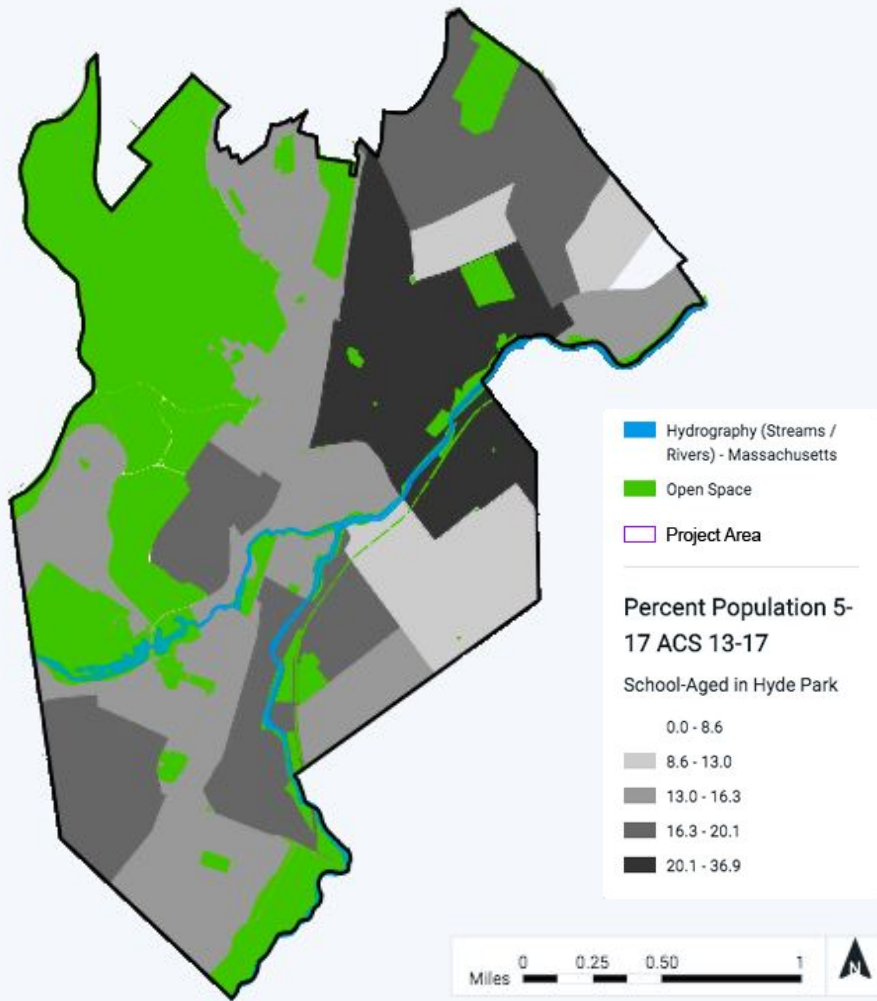
- **\$1.4M** to ongoing improvements to the George Wright Golf Course, including upgraded building systems and the construction of an accessible bathroom.
- **\$1M** for play lot upgrades to the Stonehill and Amatucci Playgrounds,
- **\$650K** to upgrade the McGann Playground, and
- **\$640K** to complete trail improvements and wetland restoration work at the Sherrin Woods Urban Wild.
- **\$200K** yearly investment for ongoing improvements to the George Wright Golf Course, including drainage, paving, and other miscellaneous items.



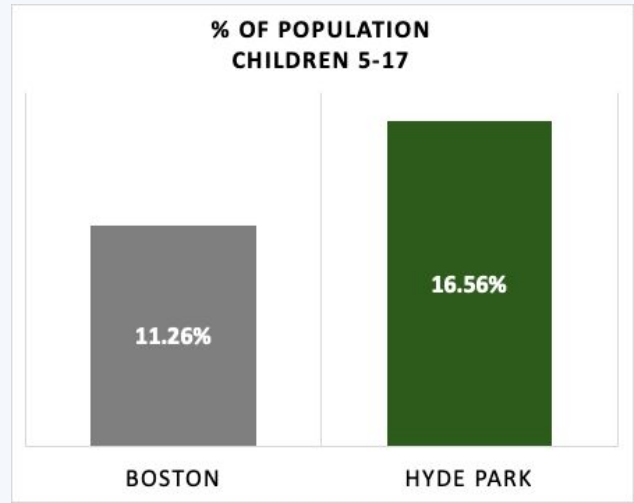
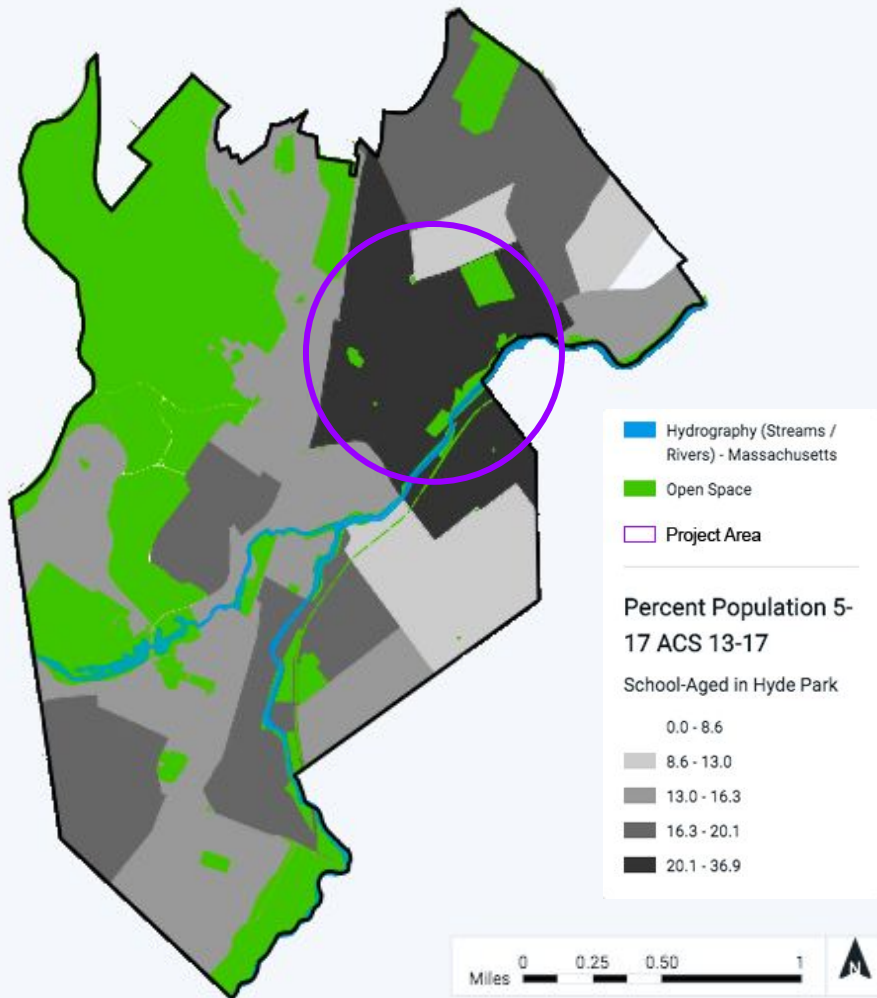
A \$7M INVESTMENT

in equitable and accessible open spaces and parks, including:

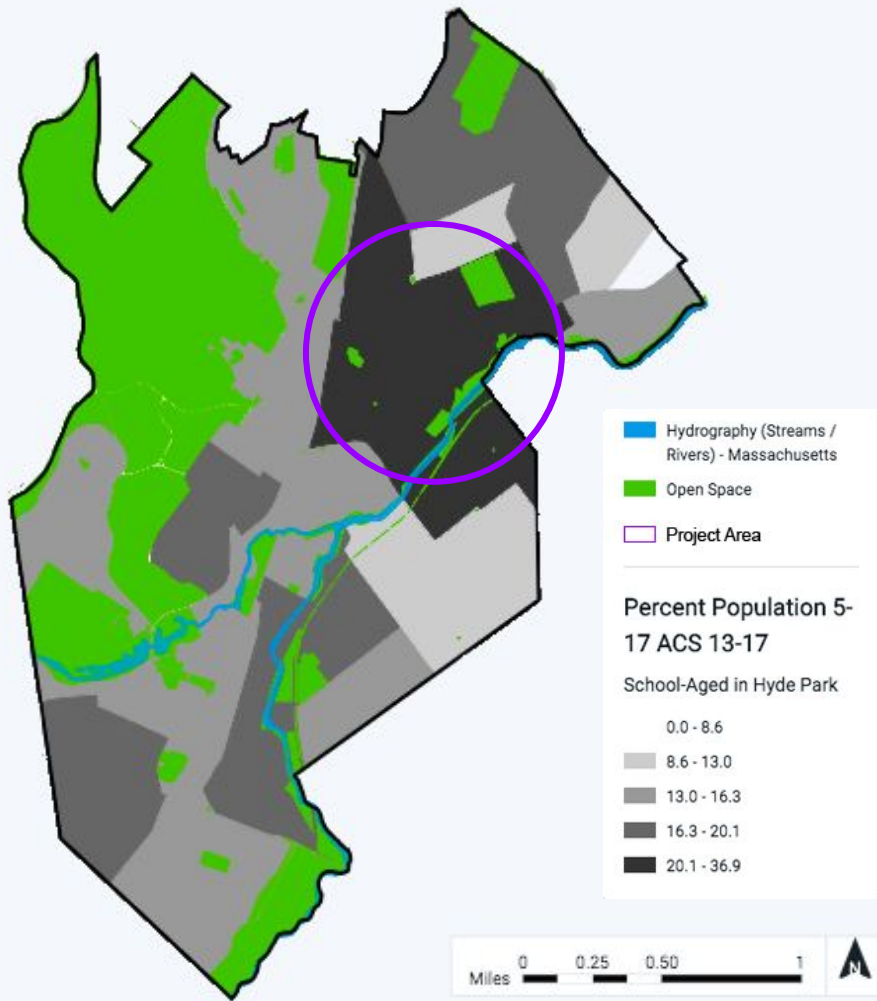
- **\$1.4M** to ongoing improvements to the George Wright Golf Course, including upgraded building systems and the construction of an accessible bathroom.
- **\$1M** for play lot upgrades to the Stonehill and Amatucci Playgrounds,
- **\$650K** to upgrade the McGann Playground, and
- **\$640K** to complete trail improvements and wetland restoration work at the Sherrin Woods Urban Wild.
- **\$200K** yearly investment for ongoing improvements to the George Wright Golf Course, including drainage, paving, and other miscellaneous items.



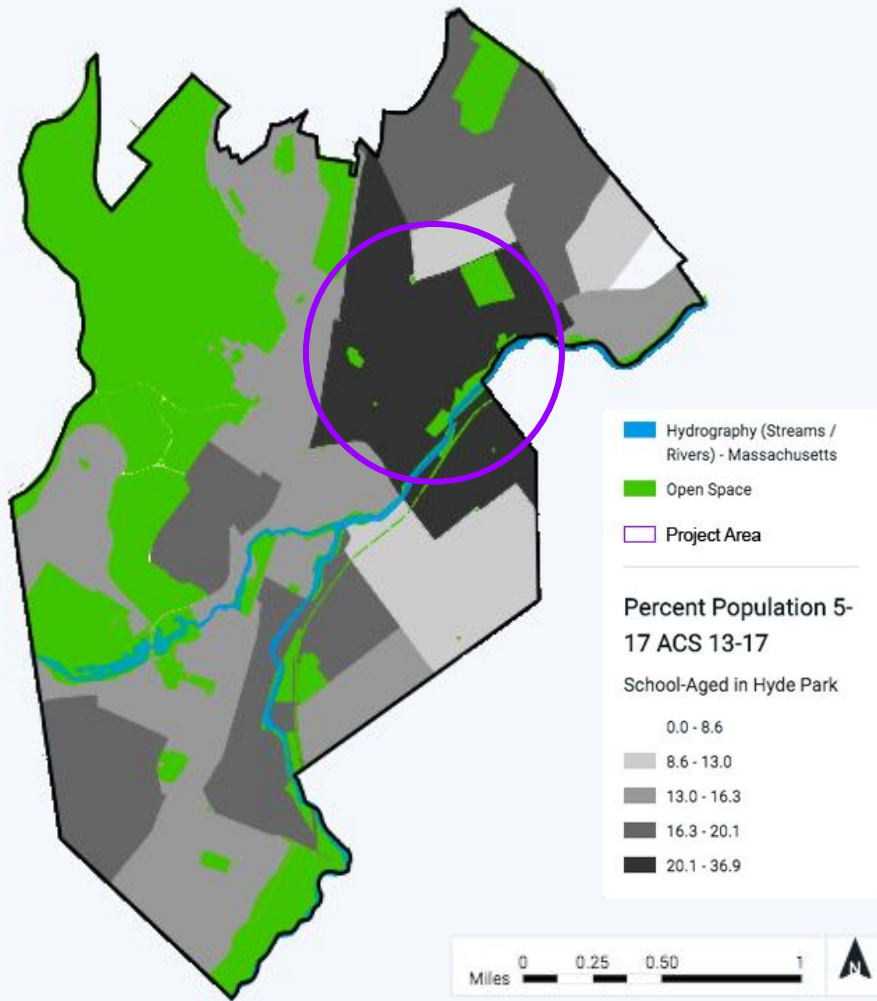
(Urban Footprint, 2020; Google Earth, 2020)



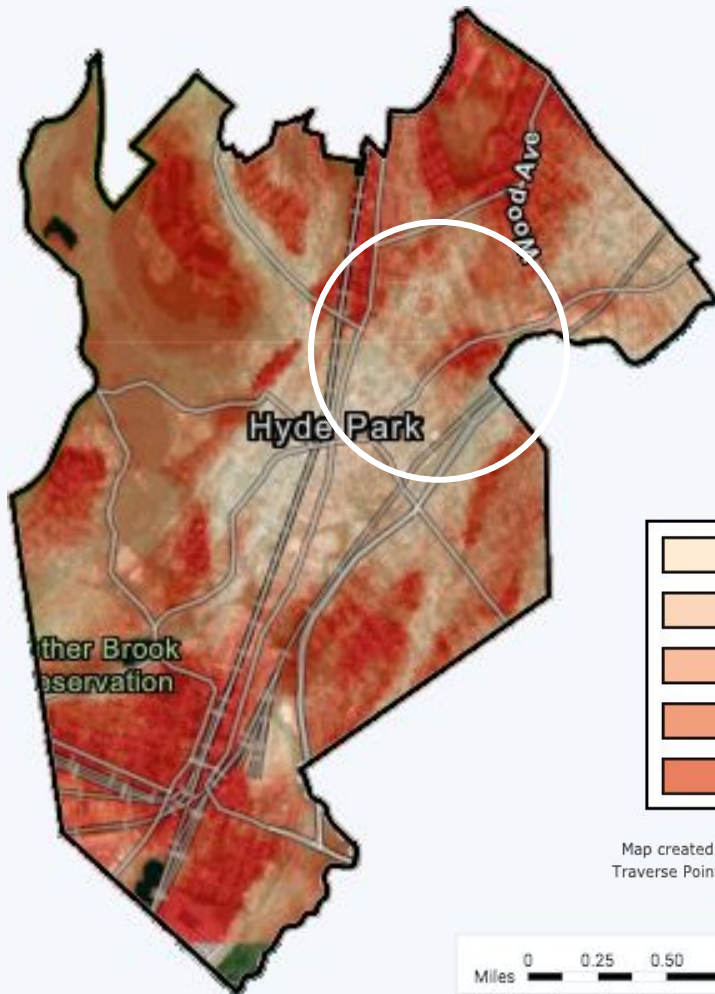
(Urban Footprint, 2020; Google Earth, 2020)



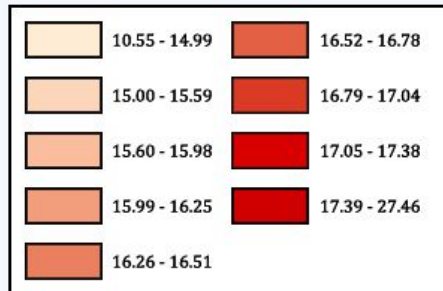
(Urban Footprint, 2020; Google Earth, 2020)



(Urban Footprint, 2020; Google Earth, 2020)



Study Area
3PM minus 6AM ($\Delta^{\circ}\text{F}$)



Map created by Museum of Science and Northeastern University.
Traverse Points and Landsat Model Raster Data by CAPA Strategies.

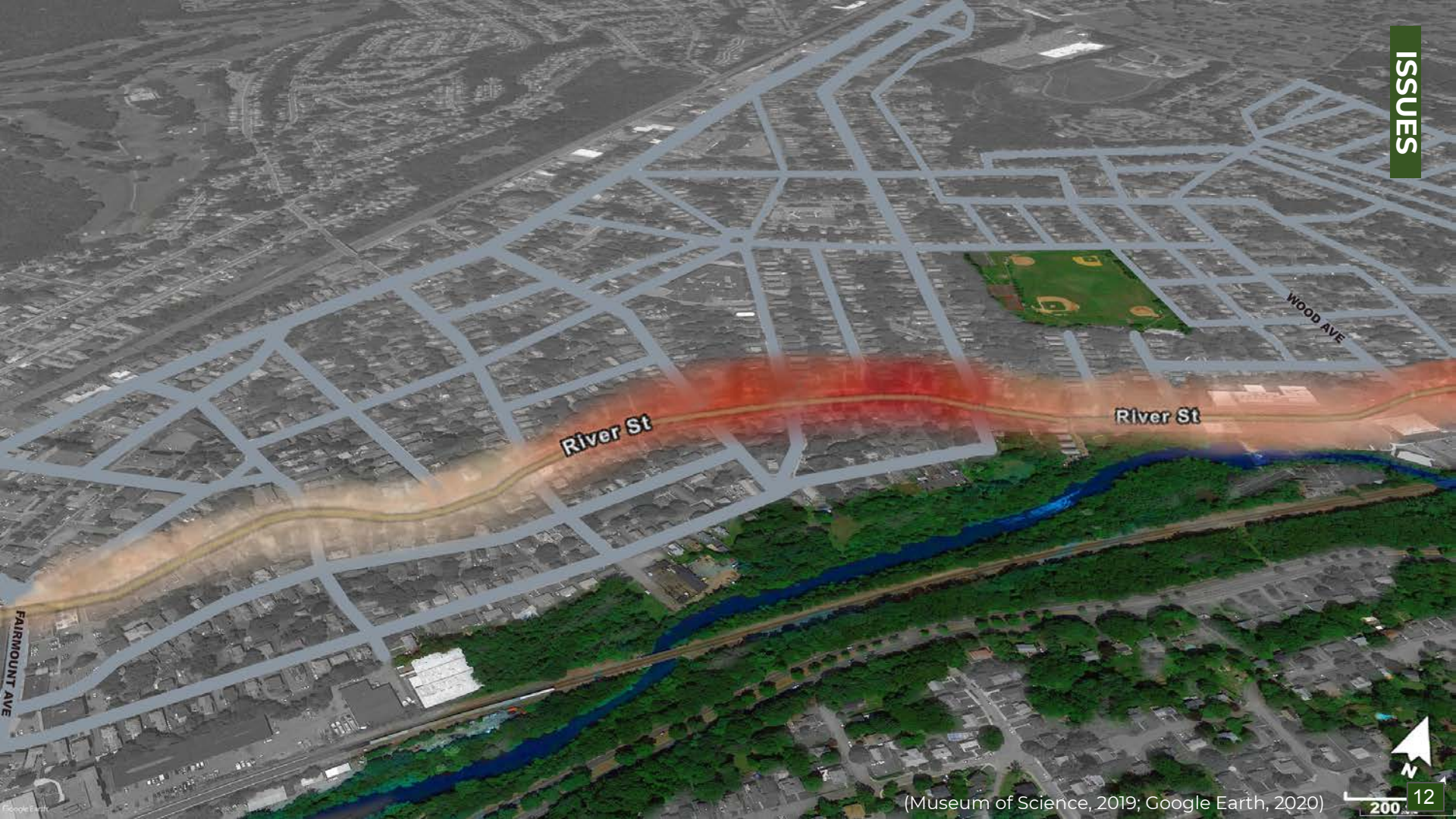


EXTREME HEAT

+17°F to +27.0°F
between 6a and 3p

90.3°F
evening heat index

(Museum of Science, 2019; CAPA Strategies, 2019)



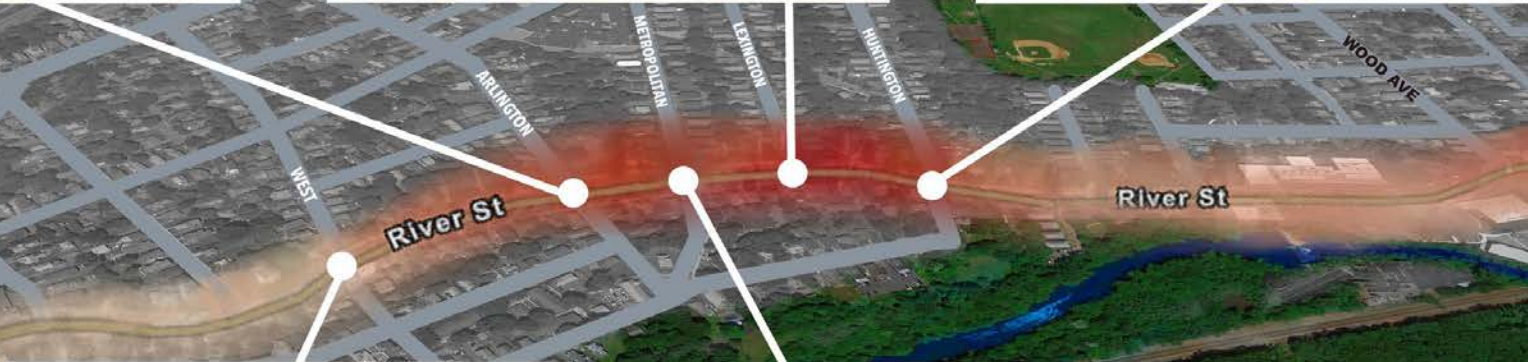
River St

River St

WOOD AVE

FAIRMOUNT AVE





TRAFFIC ACCIDENTS



● CRASHES

TRAFFIC ACCIDENTS



DEVELOPING STORY
VAN CARRYING YOUNG KIDS FLIPS OVER AFTER CRASH IN HYDE PARK

6:18 49°
SOUTH SHORE



● CRASHES



FILTER BY

Hyde Park



Letter of Intent

Under Review

Board Approved

Under Construction

Construction Complete

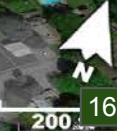
INCREASED DENSITY

ISSUES



*tentative

(Boston Planning & Development Agency, 2020)



INCREASED DENSITY

FILTER BY

Hyde Park



Letter of Intent



Under Review



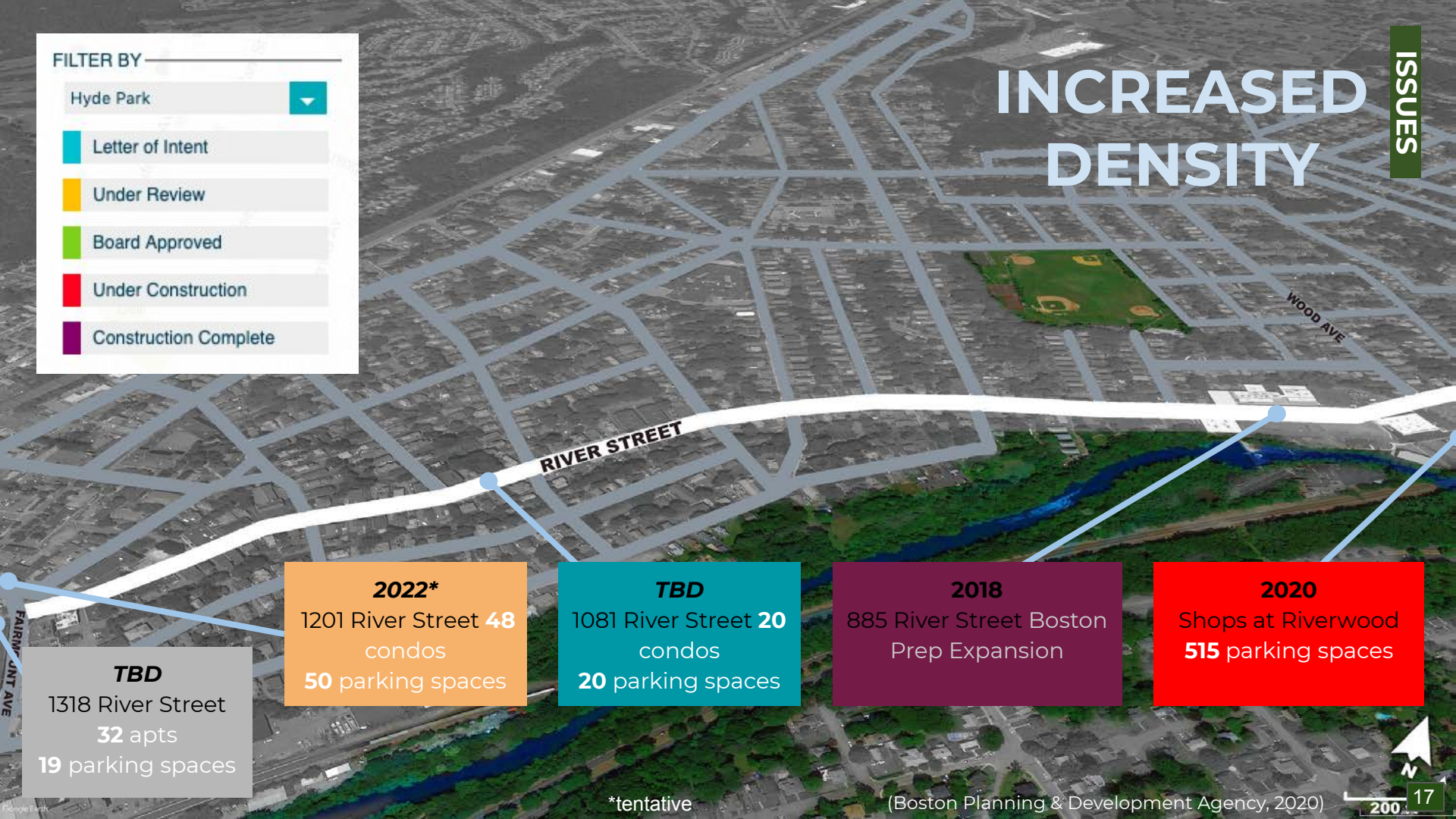
Board Approved



Under Construction



Construction Complete



RIVER STREET

WOOD AVE

FAIRMOUNT AVE

TBD
1318 River Street
32 apts
19 parking spaces

2022*
1201 River Street 48
condos
50 parking spaces

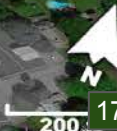
TBD
1081 River Street 20
condos
20 parking spaces

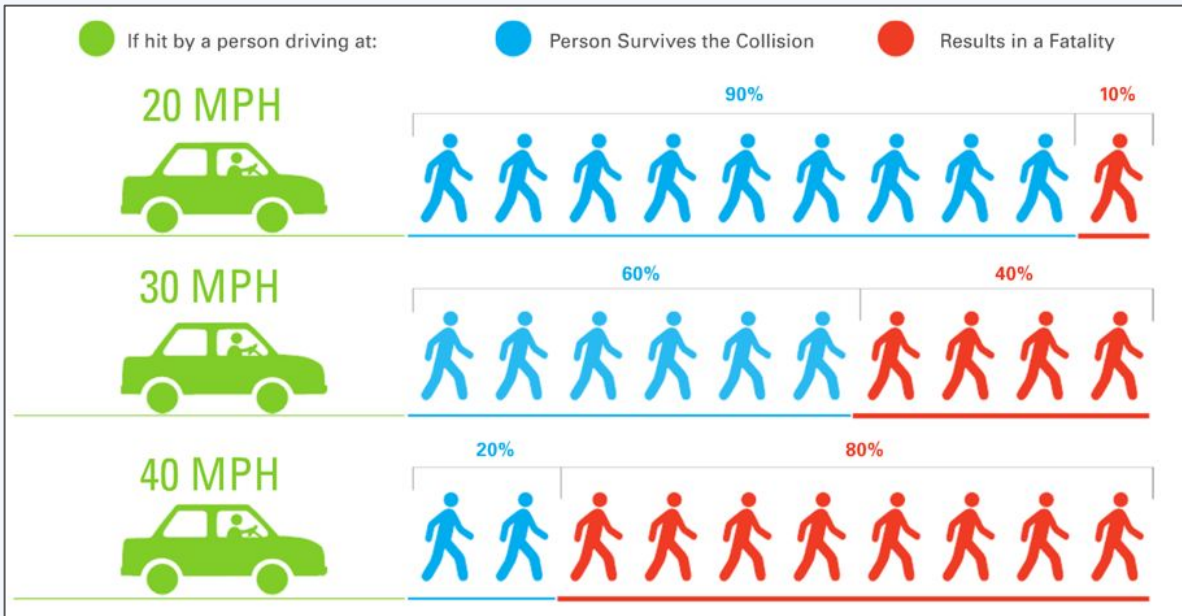
2018
885 River Street Boston
Prep Expansion

2020
Shops at Riverwood
515 parking spaces

*tentative

(Boston Planning & Development Agency, 2020)





Research shows that planting trees can reduce car speeds by up to 8 miles per hour





HYDE PARK



(Urban Footprint, 2020; Ziter et al., 2019)

25 street trees
50 yard trees

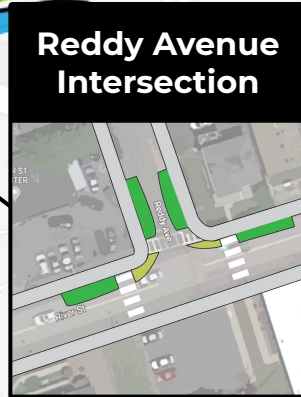
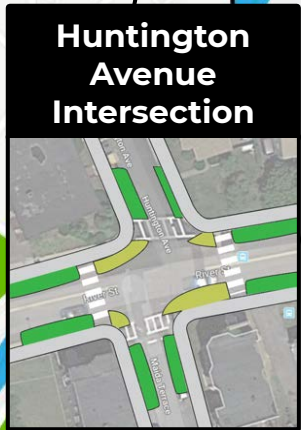
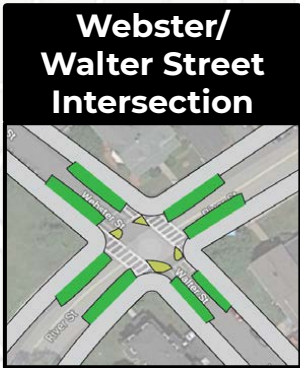
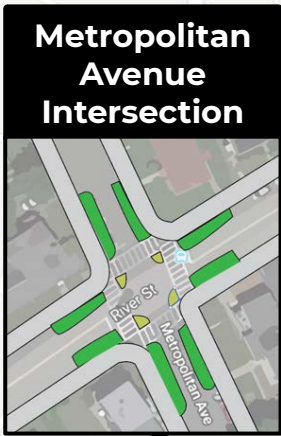
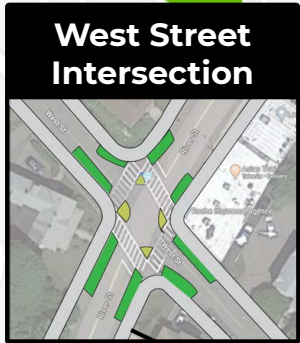


HYDE PARK

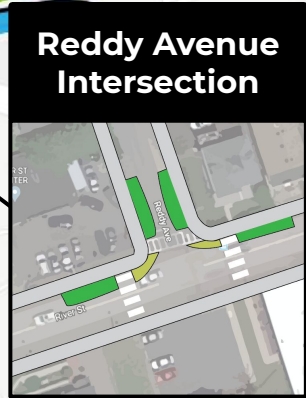
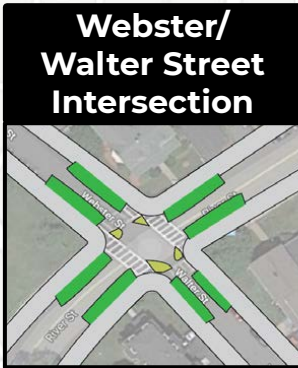
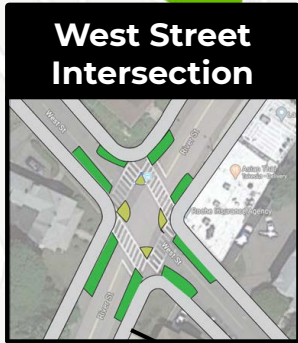
● NEW TREES



(Urban Footprint, 2020; Ziter et al., 2019)

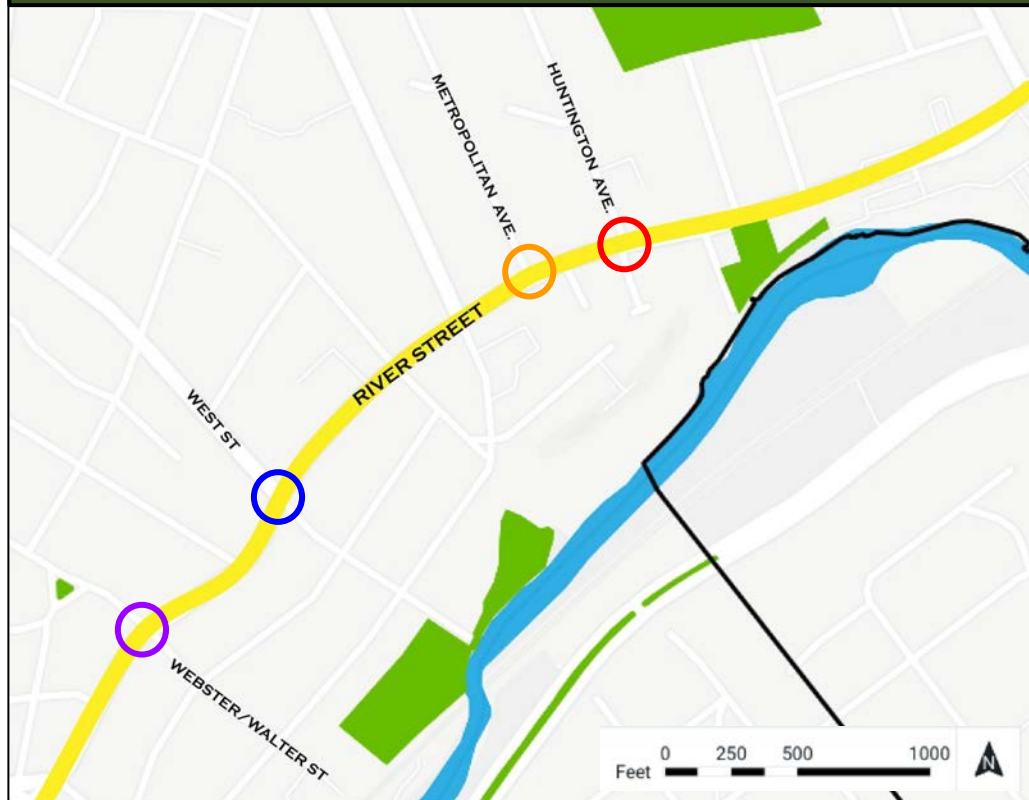


(Urban Footprint, 2020; Google Earth, 2020)



(Urban Footprint, 2020; Google Earth, 2020)

4-WAY INTERSECTIONS



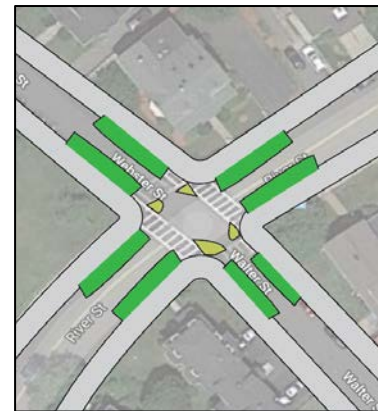
HUNTINGTON AVE



METROPOLITAN AVE

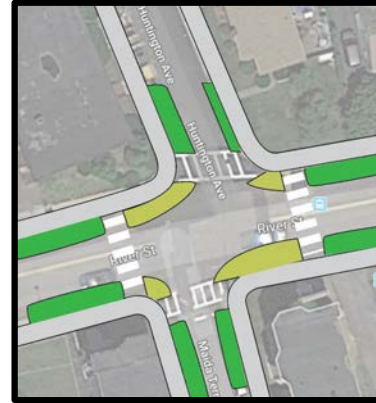


WEST ST



WEBSTER/WALTER ST

4-WAY INTERSECTIONS



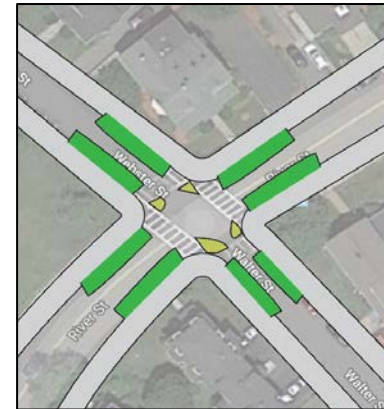
HUNTINGTON AVE



METROPOLITAN AVE



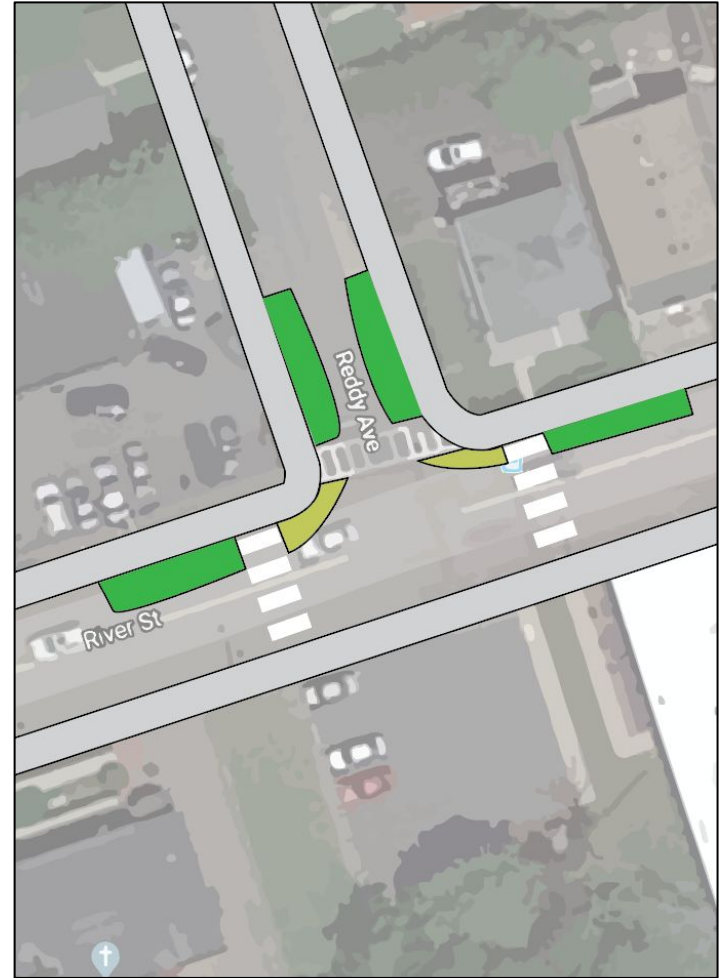
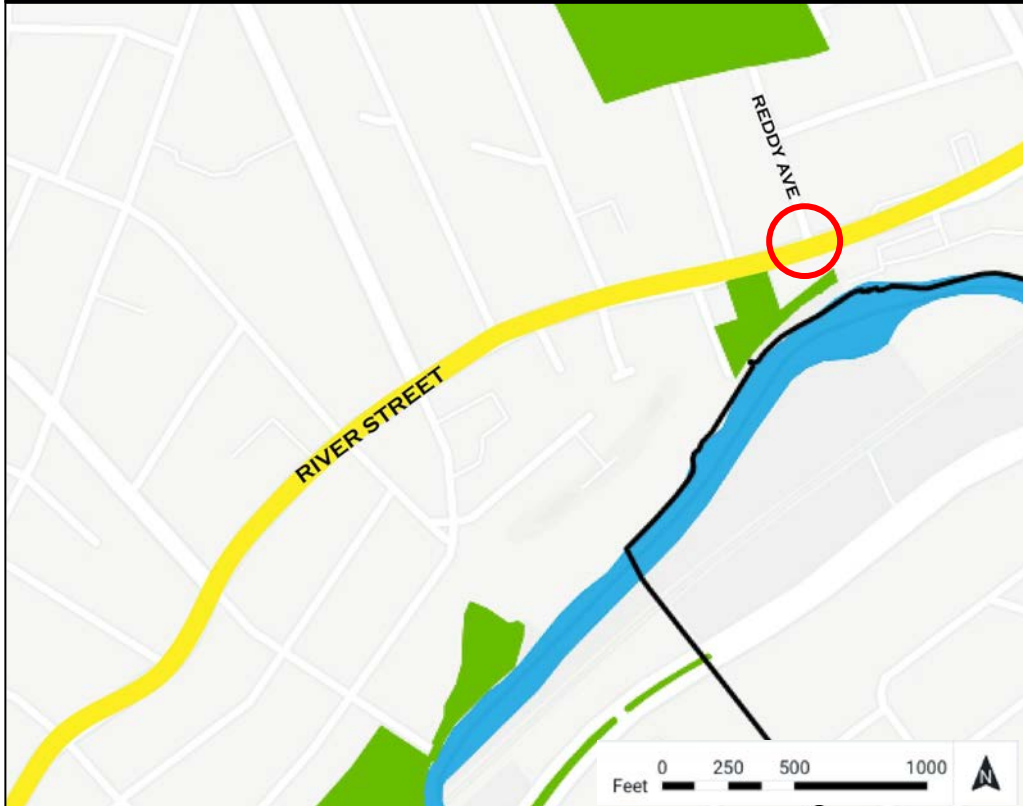
WEST ST

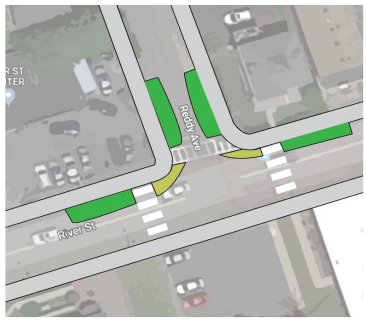


WEBSTER/WALTER ST



3-Way Intersection







- 5 intersections (safety curb + garden)
- 2 intersections (only garden)

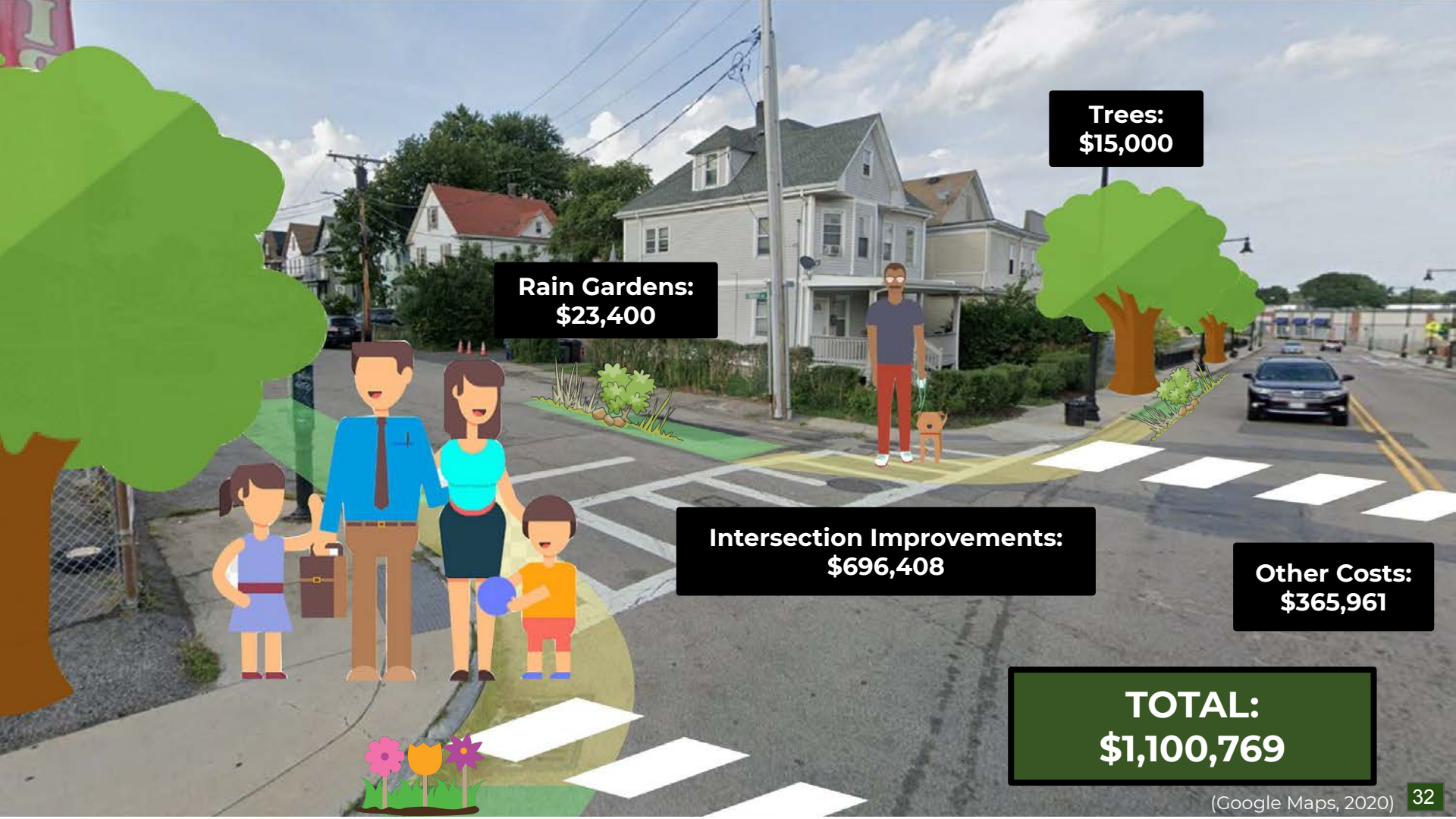


HYDE PARK



Source: (Urban Footprint, 2020)





**Rain Gardens:
\$23,400**

**Trees:
\$15,000**

**Intersection Improvements:
\$696,408**

**Other Costs:
\$365,961**

**TOTAL:
\$1,100,769**



SPEAK FOR THE TREES Boston

We aim to improve the size and health of the urban forest in the greater Boston area, with a focus on under-served and under-canopied neighborhoods.



54.7 %
Residents
(19,703)

44.5 %
School-Aged
Children
(2,779)

40
Businesses
(1.00%)

10
Schools
(71.4%)



(U.S. Census Bureau, 2019; Infogroup, Inc. n. d.; Boston Public Schools, 2019)

A street scene with a sidewalk and road. On the left, a man in a yellow shirt sits on a bench with a laptop, and a boy in a blue shirt and cap is on a skateboard. In the center, a man in a black shirt and shorts is running, followed by a child in an orange shirt. On the right, a utility pole has a 'DEAD END STREET' sign. The background shows houses and a blue sky with clouds. Three large, stylized green trees with brown trunks are overlaid on the scene. The word 'QUESTIONS?' is written in white on the central tree.

QUESTIONS?

Special thanks to our advisors:
Pat Alvarez, Herbert Nolan, and Margaret Kent

REFERENCES

- Boston Planning & Development Agency. (2020). *Development projects*. <http://www.bostonplans.org/projects/development-projects?neighborhoodid=10&sortBy=name&sortdirection=ASC>
- Boston Public Schools. (2020). *School listings*. <https://www.bostonpublicschools.org/domain/175>
- Burden, D. (2006). *Urban street trees: 22 benefits specific applications*. State of Michigan. https://www.michigan.gov/documents/dnr/22_benefits_208084_7.pdf
- CAPA Strategies. (2019). *Heat watch report: Boston, MA*. http://www.northeastern.edu/helmuthlab/MOS/Final%20Report_Heat%20Watch%20Boston.pdf
- City of Boston. (n. d.). *Urban wilds: Hyde Park*. <https://www.boston.gov/departments/parks-and-recreation/urban-wilds-hyde-park>
- City of Boston. (2020). *Hyde Park, we are investing in you: Capital plans for the fiscal years FY20-FY24*. City of Boston. https://www.boston.gov/sites/default/files/embed/h/hyde_park_2.pdf
- Fairmount Collaborative. (2015, July). *Fairmount Greenway: Connecting communities*. https://fairmountcollaborative.org/2016/wp-content/uploads/2016/08/FG_Brochure_vert_July-2015.pdf
- Fairmount Greenway Task Force. (2011). *The Fairmount Greenway: Concept plan*. https://fairmountcollaborative.org/2016/wp-content/uploads/2016/08/Fairmount-Greenway-Concept-Plan-2012_-reduced.pdf
- Infogroup, Inc. (n.d.). *Hyde Park businesses* [Map]. Retrieved March 14, 2020, from ReferenceUSA database.
- Mazza, J. [@julianamazatv]. (2019, October 7). *UPDATE: Boston Police said the bus driver, and two people in the car are expected to survive the crash in* [Three Images] [Tweet]. Twitter. <https://twitter.com/julianamazatv/status/1181199893303631872>
- Museum of Boston. (2019). *Wicked hot Boston*. <https://www.mos.org/pes-forum-archive/wickedhotboston>
- Niezgoda, A. (2018, February 15). *Children hospitalized after van crash in Hyde Park*. *NBC Boston*. <https://www.nbcboston.com/news/local/children-hospitalized-after-van-crash-in-hyde-park-boston/128256/>
- O'Neil-Dunne, J. (2017). *An assessment of Boston's tree canopy*. <https://d279m997dpfwl.cloudfront.net/wp/2020/01/Boston-2016-Tree-Canopy-Assessment.pdf>
- Raciti, S. M., Hutyra, L. R., & Newell, J. D. (2014). Mapping carbon storage in urban trees with multi-source remote sensing data: Relationships between biomass, land use, and demographics in Boston neighborhoods. *Science of the Total Environment*, 500-501, 72-83. <http://doi.org/10.1016/j.scitotenv.2014.08.070>
- San Francisco Municipal Transportation Agency. (n. d.). *Automated speed enforcement*. <https://www.sfmta.com/projects/automated-speed-enforcement>
- Shen, R., Tao, S., & Yang, C. (2011). Study on the effect of corridor structures on urban heat island in Nanjing by remote sensing. <http://doi.org/10.1109/ICIST.2011.5765323>
- Speak for the Trees. (n.d.). *Tree plantings*. <https://www.sfttbos.org/tree-plantings>
- Southwest Boston CDC. (2017). *Massachusetts DHCD CITC Community Investment Plan (CIP)*. Commonwealth of Massachusetts. https://www.mass.gov/files/documents/2017/08/zt/SouthwestBostonCDCCIP.pdf?_ga=2.36178472.906817805.1584918419-917265254.1582679157
- U.S. Census Bureau. (2019). *ACS demographic and housing estimates*. https://data.census.gov/cedsci/table?q=population&q=1600000US2507000&hidePreview=false&tid=ACSDP1Y2018.DP05&vintage=2018&layer=place&cid=DP05_0001E
- Ziter, C. D., Pedersen, E. J., Kucharik, C. J., & Turner, M. G. (2019). Scale-dependent interactions between tree canopy cover and impervious surfaces reduce daytime urban heat during summer. *Proceedings of the National Academy of Sciences*, 116(15), 7575-7580. <https://doi.org/10.1073/pnas.1817561116>

APPENDIX

RIVER STREET PEDESTRIAN CORRIDOR PLAN

| 3-way Intersections | 4-way Intersections | Tree canopy coverage | Rain gardens |
|--|--|--|--|
| <p>Reddy Ave. intersection.</p> <p>Add 195 square foot rain gardens to each side of the intersection (195x6).</p> <p>Add two crosswalks to get across River Street.</p> <p>Add curb extensions/neck outs to reduce traffic speeds.</p> | <p>Huntington Ave. Metropolitan Ave. West St. Walter St.</p> <p>Add Add 195 square foot rain gardens to each side of the intersection (195x8x4)</p> <p>Add crosswalks to connect all sides of the street.</p> <p>Add curb extensions/neck outs to reduce traffic speeds.</p> | <p>Plant 75 trees along River Street to reduce heat island effect and slow traffic speeds.</p> <p>25 public street trees. 50 private yards trees.</p> <p>Areas of focus for public street trees are areas where there is high heat island effect or clusters of traffic incidents</p> <p>Work with our partners and residents to plant the 50 private yard trees</p> | <p>Two rain gardens along River Street not at intersections</p> <p>One near Ross and Doyle playgrounds. One in between Huntington and Metropolitan Avenue.</p> <p>Each rain garden would be about 390 square feet (slightly smaller than 3 parking spaces)</p> <p>Serve to collect stormwater runoff from spilling into the street or Neponset River, Serve as bump outs to reduce traffic speeds.</p> |

River Street Pedestrian Corridor
Hyde Park Neighborhood, City of Boston, MA

Cost Estimate
Prepared by: Group 6 - UA 805 - Spring 2020

4/20/2020

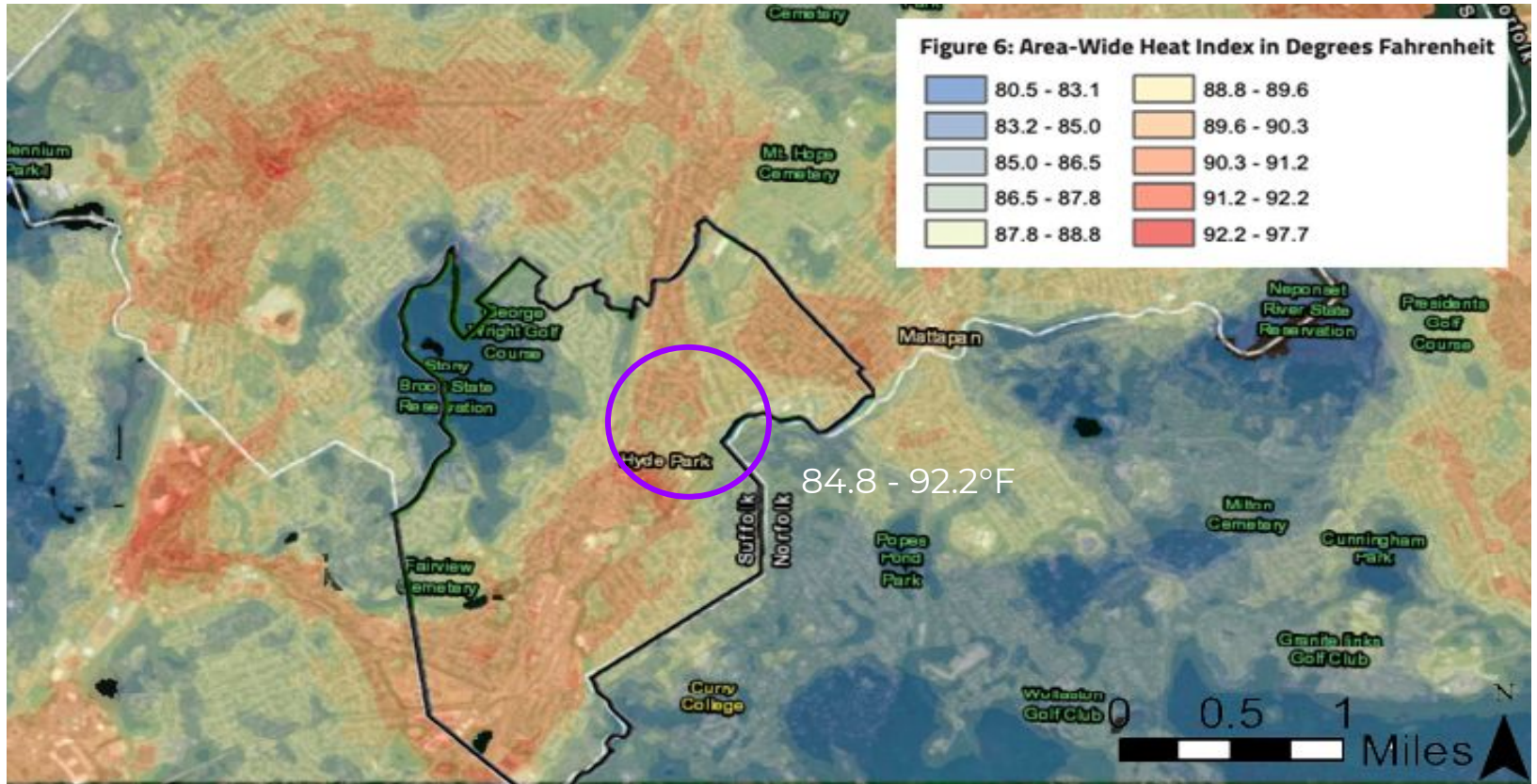
| ITEM | DESCRIPTION | UNIT | TOTAL QTY | UNIT PRICE | TOTAL COST |
|---|---|------|-----------|-----------------|-----------------------------------|
| Section 1 - Curb Extensions and Raised Crosswalks | | | | | |
| 1 | CLASS B ROCK EXCAVATION | CY | 450 | \$150.00 | \$67,500.00 |
| 2 | PAVEMENT STANDARD MILLING | SY | 2000 | \$14.00 | \$28,000.00 |
| 3 | CEMENT CONCRETE SIDEWALK | SY | 2000 | \$65.00 | \$130,000.00 |
| 4 | CEMENT CONCRETE WHEELCHAIR RAMP | SY | 500 | \$105.00 | \$52,500.00 |
| 5 | SUPERPAVE SURFACE COURE - 12.5 POLYMER | TON | 250 | \$120.00 | \$30,000.00 |
| 6 | ASPHALT EMULSION FOR TACK COAT | GAL | 2000 | \$8.05 | \$16,100.00 |
| 7 | GRANITE CURB CORNER, TYPE A | FT | 100 | \$320.00 | \$32,000.00 |
| 8 | GRANITE TRANSITION CURB FOR WHEELCHAIR RAMPS | FT | 100 | \$55.00 | \$5,500.00 |
| 9 | DETECTABLE WARNING PANELS (HUNTINGTON, REDDY) | EA | 4 | \$500.00 | \$2,000.00 |
| | | | | SUBTOTAL | \$363,600.00 |
| Section 2 - Pavement Markings | | | | | |
| 10 | 6 INCH REFLECTORIZED WHITE/YELLOW LINE (THERMOPLASTIC) | FT | 140 | \$1.15 | \$161.00 |
| 11 | 12 INCH REFLECTORIZED WHITE LINE (THERMOPLASTIC) | FT | 140 | \$3.95 | \$553.00 |
| 12 | PAVEMENT ARROWS AND LEGENDS REFLECTORIZED WHITE (THERMOPLASTIC) | FT | 50 | \$10.00 | \$500.00 |
| 13 | POST MOUNTED SIGNS, TYPE B | SF | 75 | \$105.00 | \$7,875.00 |
| | | | | SUBTOTAL | \$9,089.00 |
| Section 3 - Utilities | | | | | |
| 14 | STANDARD INLET BOX, HEIGHT < /= 10' | EA | 13 | \$2,776.88 | \$36,099.44 |
| 15 | GRADE ADJUSTMENT OF EXISTING MANHOLES | SET | 2 | \$820.58 | \$1,641.16 |
| 16 | MISC UTILITY RELOCATION | LS | 1 | \$25,000.00 | \$25,000.00 |
| | | | | SUBTOTAL | \$62,740.60 |
| Section 4 - GSI and Landscaping | | | | | |
| 17 | STORMWATER BUMPOUT-HUNTINGTON | SF | 380 | \$92.00 | \$34,960.00 |
| 18 | STORMWATER BUMPOUT-WALTER/WEBSTER | SF | 380 | \$92.00 | \$34,960.00 |
| 19 | STORMWATER BUMPOUT-REDDY | SF | 380 | \$92.00 | \$34,960.00 |
| 20 | STORMWATER BUMPOUT-WEST | SF | 380 | \$92.00 | \$34,960.00 |
| 21 | STORMWATER BUMPOUT-METROPOLITAN | SF | 380 | \$92.00 | \$34,960.00 |
| 22 | STORMWATER BUMPOUT- B/W HUNTINGTON & MET | SF | 260 | \$92.00 | \$23,920.00 |
| 23 | STORMWATER BUMPOUT- B/W ROSS AND DOYLE | SF | 260 | \$92.00 | \$23,920.00 |
| 24 | TREES FOR PLANTING | EA | 75 | \$200.00 | \$15,000.00 |
| 25 | STORMWATER PLANTERS | SF | 760 | \$92.00 | \$69,920.00 |
| | | | | SUBTOTAL | \$307,560.00 |
| SUBTOTAL SECTIONS 1-4 | | | | | \$742,989.60 |
| MAINTENANCE OF TRAFFIC - SUBTOTAL SECTIONS 1-4 | | | | | LS 5.00% \$37,149.48 \$37,149.48 |
| MOBILIZATION, CONSTRUCTION, ENGINEERING, INSPECTION - SUBTOTAL SECTIONS 1-4 | | | | | LS 10.00% \$74,298.96 \$74,298.96 |
| OPINION OF CONSTRUCTION COST | | | | | \$854,438.04 |
| 30% Contingency | | | | | \$256,331.41 |
| TOTAL OPINION OF ESTIMATED COST | | | | | \$1,110,769.45 |

Created with assistance from:

- sample Engineer's Estimates provided by Kittelson & Associates
- City of Boston's Public Works Department: Special Provisions Documentation (https://www.boston.gov/sites/default/files/imce-uploads/2019-05/special_provisions_2019-05-07.pdf)
- City of Boston's Public Works Department: Roadway Design Standards (https://www.boston.gov/sites/default/files/imce-uploads/2019-01/roadway_design_standards.pdf)
- Massachusetts Department of Transportation: Weighted Bid Prices (<https://hwy.massdot.state.ma.us/CPE/WeightedAverageBook.aspx>)
- Beverly, MA ADA Transition Plan (<http://www.beverlyma.gov/wp-content/uploads/2014/03/Beverly-ADA-Ramps-Report-9-26-2012.pdf>)

<https://drive.google.com/open?id=1xZGAFx5rvX1BGGnhPLgKOKS2H8YmjtE0>

Evening Area-Wide Heat Index, July 2019



Surface Temperatures and Existing Tree Canopy Coverage in Project Area, August 2010

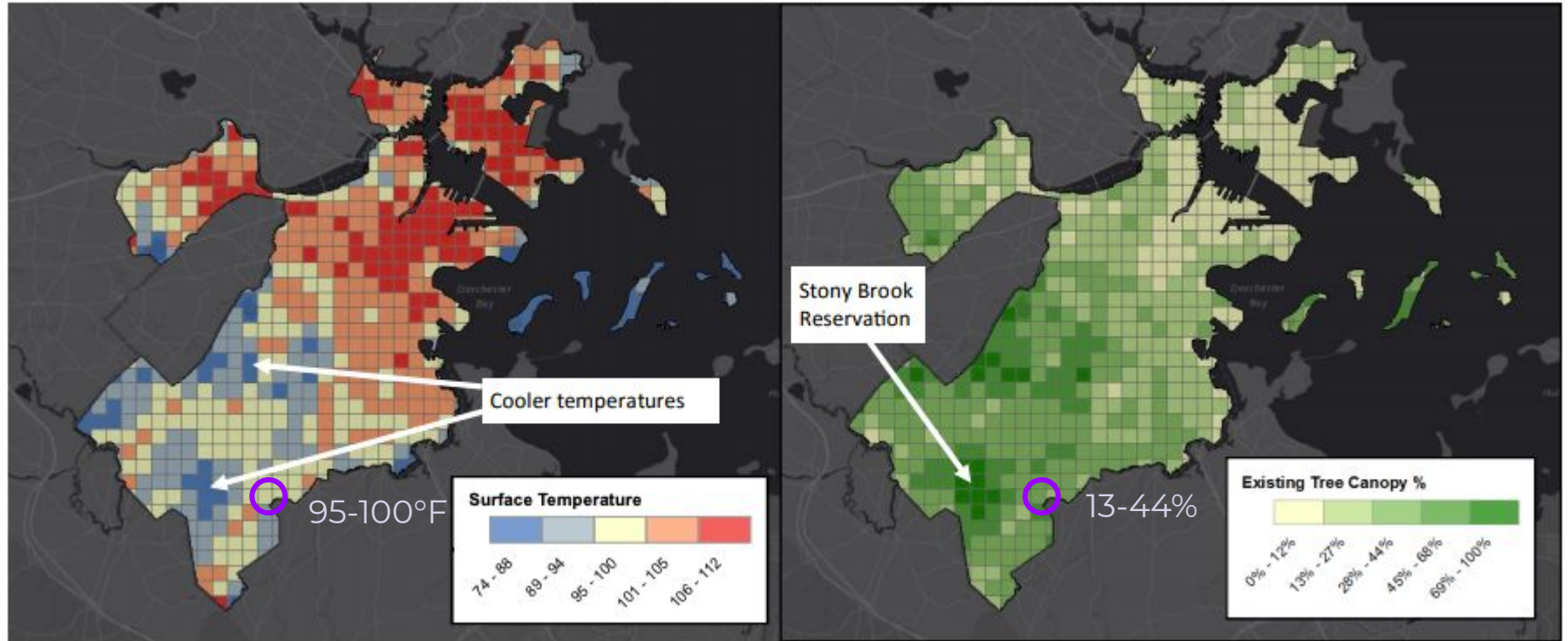


Figure 7: Surface temperature, degrees Fahrenheit on August 30, 2010 (left) in comparison with Existing Tree Canopy (right).