



**HEALTH, WEALTH, ENVIRONMENT**  
**PROMOTING SUSTAINABLE DEVELOPMENT IN CODMAN SQUARE**  
MIT • DEPARTMENT OF URBAN STUDIES AND PLANNING • GREENHOUSE STUDIO 2011

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# TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY.....</b>	<b>4</b>
-------------------------------	----------

<b>INTRODUCTION.....</b>	<b>5</b>
--------------------------	----------

## **DESIGN GUIDELINES**

• Introduction.....	13
• Current Context.....	15
• KeyPrinciples.....	24
• Strategies.....	25
• Challenges.....	52
• Implementation.....	53
• Summary.....	57

## **GREEN + HEALTHY HOMES**

• Introduction.....	59
• Current Context.....	60
• Challenges.....	69
• Key Principles.....	72
• Strategies.....	73
• Summary.....	85

## **WEALTH GENERATION**

• Introduction.....	87
• Current Context.....	89
• KeyPrinciples.....	92
• Program.....	93
• Challenges.....	102
• Implementation.....	104
• Summary.....	108

## **ANTI-DISPLACEMENT**

• Introduction.....	109
• Current Context.....	110
• Strategies.....	113
• CaseStudies.....	115
• Summary.....	118

<b>CONCLUSION.....</b>	<b>119</b>
------------------------	------------

<b>REFERENCES.....</b>	<b>120</b>
------------------------	------------

## EXECUTIVE SUMMARY

In collaboration with the Codman Square Neighborhood Development Corporation (CSNDC), a local CDC in Dorchester, and the Metropolitan Area Planning Council (MAPC), a regional planning agency for the Greater Boston area, students in the GreenHouse Neighborhood Planning Studio focused on developing a sustainability plan for the Codman Square neighborhood.

This report outlines recommendations that CSNDC can implement in order to cultivate the health and wealth of the community while enhancing the local and global environment. Additionally, the report provides examples of ways that MAPC can facilitate sustainability planning within other “Inner Core” communities in their region.

The report is organized into four sections that are representative of distinct, yet interconnected, aspects of sustainability:

1. **Design Guidelines** to make improvements to the streetscape and built environment that will encourage walkability, bikeability and increased usage of the Talbot Avenue Station by Codman Square residents.
2. **Healthy and Energy Efficient Homes** recommendations to retrofit homes in the neighborhood to improve health and energy efficiency through innovative outreach and comprehensive upgrade strategies.

3. **Wealth Generation** to connect residents to sustainable economic opportunities.

4. **Anti-Displacement Strategies** to ensure neighborhood revitalization efforts benefit the residents currently living in the neighborhood and allow them to be apart of the future development of Codman Square .

Each section outlines recommendations that CSNDC and the MAPC can undertake, with a summary after each chapter. We acknowledge that many of these efforts will require sustained and coordinated effort from the City of Boston, the State of Massachusetts, the Federal government, and other organizations and agencies.

Additionally, many of the recommendations will require further input from members of the Codman Square community, which can be achieved through community visioning and engagement processes, such as the Millennium Ten Planning Process.

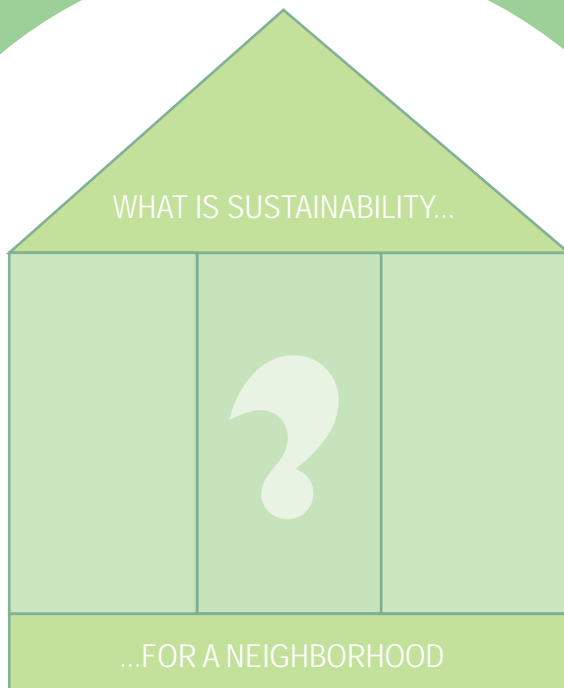


## INTRODUCTION

“Sustainability” has increasingly garnered attention in urban planning and community development circles as a strategy to create more livable communities, reduce carbon emissions, and foster healthier lifestyles. In 2010, the U.S. federal government created the Partnership for Sustainable Communities as an inter-agency partnership between the Environmental Protection Agency (EPA), the Department of Transportation (DOT), and Housing and Urban Development (HUD). The Partnership for Sustainable Communities has funded a number of innovative initiatives around the country that are striving to expand housing and transportation choices, protect air and water quality, attract economic

growth, and provide the type of development that local residents want. Communities around the country have been trying to define what “sustainability” means for them, how it relates to their particular context, and how it can improve the lives of residents. The Codman Square neighborhood in the South Dorchester area of Boston is one of these communities.

The authors of this report are urban planning graduate students at MIT who are interested in how sustainability can benefit Codman Square. As participants in the “GreenHouse Neighborhood Planning Studio,” the students partnered with the Codman Square Neighborhood Development Corporation (CSNDC), and with Greater Boston’s regional planning organization, the Metropolitan Area Planning Council (MAPC), to envision what a multipronged approach to neighborhood sustainability might look like in Codman Square. One of the challenges that the students faced in this effort was to take the lofty rhetoric of sustainability and translate it into concrete neighborhood development strategies.



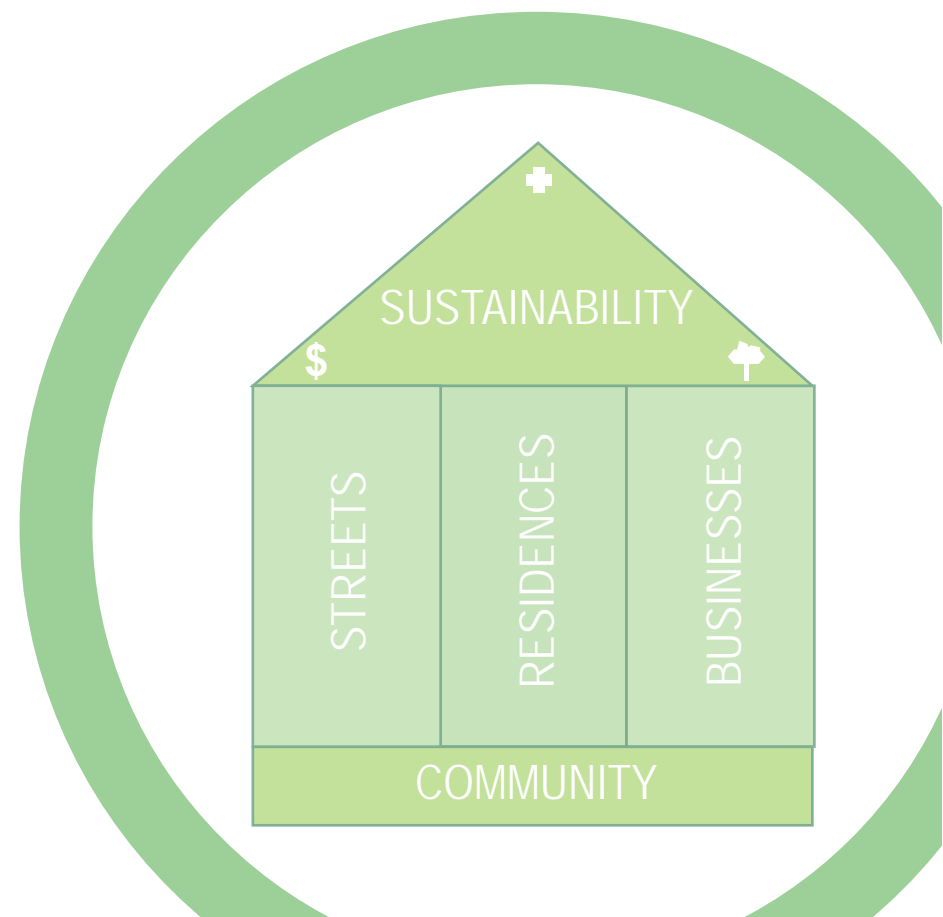
In confronting this challenge, the GreenHouse students wanted to focus on the needs of local residents and place the Codman Square community at the center of their efforts. This focus on the local community inspired the students to generate recommendations to improve health, wealth, and the environment—all areas of concern for the Codman Square community—as well as to investigate community engagement and anti-displacement strategies that will ensure that current residents remain at the heart of the neighborhood’s sustainability efforts and ongoing revitalization.

The GreenHouse graphic on the right illustrates this vision. The roof provides a framework for neighborhood level sustainability in Codman Square highlighting the three themes of health, wealth, and the environment. The community forms the foundation of the house and anchors the diverse elements of the GreenHouse. Finally, the sustainability proposals are categorized around the three themes of streets, residences, and businesses.

- The ‘streets’ theme encompasses the creation of design guidelines for enlivening the one-third-mile stretch of Talbot Avenue that connects the new Talbot Avenue transit station to Codman Square, the commercial heart of the community.
- ‘Residences’ speaks to recommendations for community-wide programs to retrofit the neighborhood’s existing housing stock in order to make it more healthy and energy-efficient.

- The ‘businesses’ sphere comprises proposals to generate economic opportunity for the residents of Codman Square and to create wealth for the neighborhood as a whole.

The proposals under all of these themes are grounded in addressing the needs of the local community by improving health, generating wealth, and enhancing the local and global environment. The following chapters detail these proposals for developing a sustainable Codman Square.





- |   |  |  |   |
|---|--|--|---|
| <span style="color: red;">—</span> Red Line         | <span style="color: yellow;">—</span> MBTA Bus Route   | <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">T</span> Active Station   | <span style="border: 2px solid orange; display: inline-block; width: 15px; height: 10px;"></span> CSND C Service Area |
| <span style="color: purple;">—</span> Commuter Rail | <span style="background-color: #cccccc; display: inline-block; width: 15px; height: 10px;"></span> Buildings | <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">T</span> Proposed Station | <span style="background-color: #cccccc; display: inline-block; width: 15px; height: 10px;"></span> School             |

Source: U.S. Census, MassGIS



## CODMAN SQUARE & TRANSIT NEEDS

Codman Square is a vibrant inner-city residential and commercial neighborhood with a strong sense of community.

Located in the heart of South Dorchester, the neighborhood is home to about 50,000 residents, the vast majority of whom are low- to moderate-income people of color with household incomes at or below 80 percent of Boston's area median income.

Different populations and immigrant groups have lived in the neighborhood over the past century, although some of the families residing in the Codman Square area have been living in the neighborhood for decades.

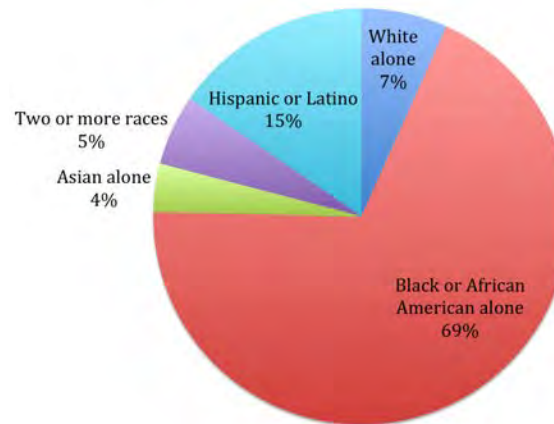
**Fig. 1-1: Codman Square and the Greater Boston Metro Region**



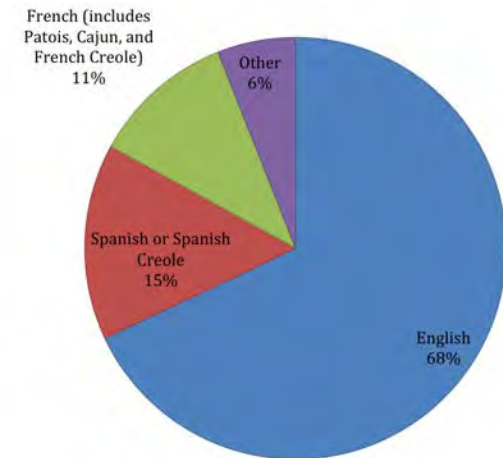
The majority of the neighborhood's residents are African-American or immigrants from the Caribbean, comprising 69 percent of the population, with a rapidly-growing Latino population (currently representing about 15 percent of the local population) and a Caucasian population representing about seven percent of the neighborhood (please see Figure 1-2 for additional detail).

In addition, while the majority of households speak English at home, 15 percent speak Spanish (or Spanish Creole), and 11 percent speak French (please see Figure 1-3 for additional detail). Similar to other low-income Boston neighborhoods, Codman Square faces many challenges, including some of the highest unemployment, crime, and foreclosure rates in the city, combined with some of the lowest income and education levels. Significantly, Codman Square is also underserved by rapid transit, as none of the MBTA's metro lines pass through the neighborhood. The #23 bus route that passes through parts of Codman Square is the third most-utilized bus route in the MBTA system.

**Fig. 1-2: Race**



**Fig. 1-3: Languages Spoken at Home**



Source: American Communities Survey

In 2005, after years of community advocacy, the MBTA agreed to upgrade the Fairmount commuter rail line, which runs from South Station, through the Codman Square neighborhood, down to the Boston-Quincy boundary. Up to this point, the Fairmount line, also known as the Indigo line, had passed through Codman Square and other low-income neighborhoods without stopping on its way to more suburban destinations further south.

The MBTA agreed to add four new stations to the line, significantly increasing transit access and facilitating a quick trip downtown for people living in these neighborhoods. Residents of the Codman Square neighborhood will now be able to catch the train at the new Talbot Avenue station, scheduled to open in January 2013. Furthermore, the new Talbot Avenue station also presents an opportunity to catalyze a broader program of sustainability for the Codman Square neighborhood.

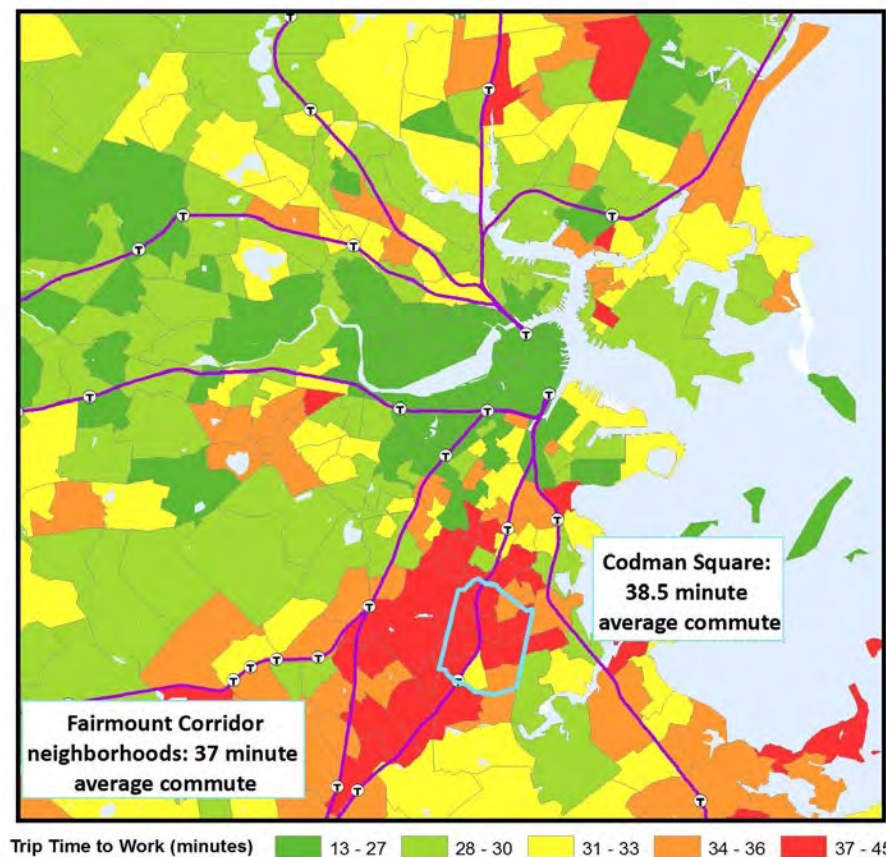
## The Need for Improved Transit in Codman Square

The lack of convenient access to rapid transit has been a significant problem for Codman Square. While the Red Line's Shawmut and Ashmont stations are nearby, the majority of the Codman Square community is well over a mile from these stations. As a result, residents rely on buses, translating to long commute times, or own a car. This current situation is not environmentally sustainable, because the dependency on private vehicles increases greenhouse gas emissions and local air pollutants. It is an inequitable situation as well, given the long commutes and poor access to job centers.

A look at the average one-way commute time illustrates the disproportionately burdensome commute that residents of Codman Square face (see Figure 1-4). In fact, the entire Fairmount Corridor has some of the longest commutes in the region, averaging around 40 minutes each way. This restricts residents' access to jobs and reduces the time they have for non-work activities.

The construction of the Talbot Avenue station, combined with increased commuter rail service on the Fairmount line, is a crucial step towards sustainable and equitable transportation for the community. Residents will have a direct link to jobs downtown and along the corridor. Not only is this a more sustainable means of transportation, but it is also a faster trip than the multiple bus trips currently needed to get downtown (no bus services run directly between Codman and downtown Boston).

**Fig. 1-4: Average One-Way Commute Times in Greater Boston**



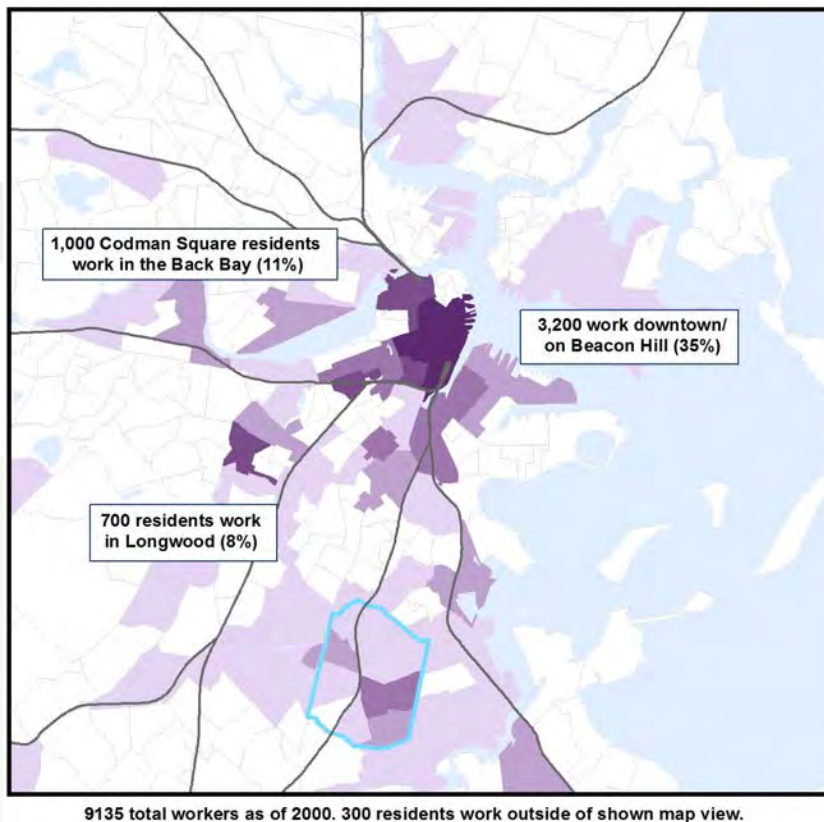
Source: American Community Survey 2005-2009;  
CSNDC service area indicated in blue.

Indeed, Census data shows that a large percentage of the Codman Square community works downtown and would benefit from this new connectivity. In 2000 (the most recent year for this data), 35% of Codman Square residents – 3,200 people – worked downtown or on Beacon Hill (see Figure 1-2).



Census data show that a large percentage of the Codman Square community works downtown and would benefit from this new connectivity. In 2000 (the most recent year for this data), 35% of Codman Square residents – 3,200 people – worked downtown or on Beacon Hill (see Figure 1-5). Another 11% worked in the Back Bay. Thus, improved transit service along the corridor would directly benefit a significant part of the community.

**Fig. 1-5: Work Destinations for Residents of Codman Square**



Source: U.S. Census 2000 Transportation Planning Package; CSNDC service area indicated in blue.

The neighborhood can benefit even more from these improvements by fostering a connection between Codman Square and the new station. An improved streetscape on Talbot Avenue can make for a more pleasant, safer, and more comfortable connection, on foot or bike, from the heart of the community to the T stop. This would enable more residents to take advantage of the new station, and thus encourage a shift to commuting by transit. For local businesses, an improved Talbot Avenue streetscape would enable both employees and new clientele alike to reach Codman Square's central business area, helping the local business community thrive.

The neighborhood can also encourage the development of new businesses and residences along Talbot Avenue in order to further enhance this connection to the station.

Improving connectivity between Codman Square and the Talbot Avenue station will add vibrancy to the neighborhood and increase public transit use. Encouraging the use of biking and walking along this Talbot Avenue connection can improve neighborhood health. In the long run, a growing, transit-oriented Codman Square can also justify a push for better service on the Fairmount Corridor.

There are many questions about how to improve mobility for the residents of Codman Square while promoting neighborhood sustainability and equity. These questions merit detailed investigation. How many Codman Square residents would use the commuter rail if service were significantly improved? How many of these riders would be switching from car commutes? What would this mean for commute times? How many residents would be able to bike or walk to work? Would more people in Codman Square work downtown with improved commuter rail access to South Station?

Such analysis should be conducted through local and regional collaboration. Local-level efforts, conducted by CSNDC or partner organization, could consist of surveying residents on how they make their decisions about commuting to work. Regional-level analysis would be needed to better examine how other neighborhoods have been affected by improved commuter rail access, and by studying how the Fairmount Line could change job markets and economic opportunities along its length.



## DESIGN GUIDELINES - INTRODUCTION

The construction of the new Talbot Avenue station presents an opportunity to provide more affordable transportation options to the Codman Square community. The increased access to jobs, retail, and other services provided by the new rail service can have a positive impact on the natural environment by decreasing use of private vehicles, reducing carbon emissions, and contributing to creating a safer, cleaner, and more pedestrian-friendly neighborhood.

However, the completion of Talbot Station alone will not necessarily change residents' travel patterns, in part because the station is removed from the commercial center of the



The Talbot Avenue Link connects Talbot Avenue Station and Codman Square

area. Codman Square is the heart of the neighborhood while the new commuter rail station on the Fairmount Line is a one third of a mile, or seven-to-eight minute walk to the west along Talbot Avenue. If residents see Talbot Avenue as a pleasant and safe urban route to walk, they are more likely to perceive the station as a part of their neighborhood and to use it frequently. For this reason, the Design Guidelines section of the report focuses on strategies to improve the link between Codman Square and the Talbot Avenue station, which we will refer to as the Talbot Avenue Link, or simply the Link.

We have divided our recommendations for improvements along the Link into two broad categories: streetscape improvements and developers' guidelines.



*Streetscape improvements* will help orient the Talbot Avenue Link more towards pedestrians by directly targeting the public right-of-way, and could be achieved with the help of public agencies.

*Developer Guidelines* will allow developers to understand and foster the kind of environment that the community desires along the street.

These improvements can contribute to the larger goals outlined in this report in the following ways:

### **Energy Efficiency**

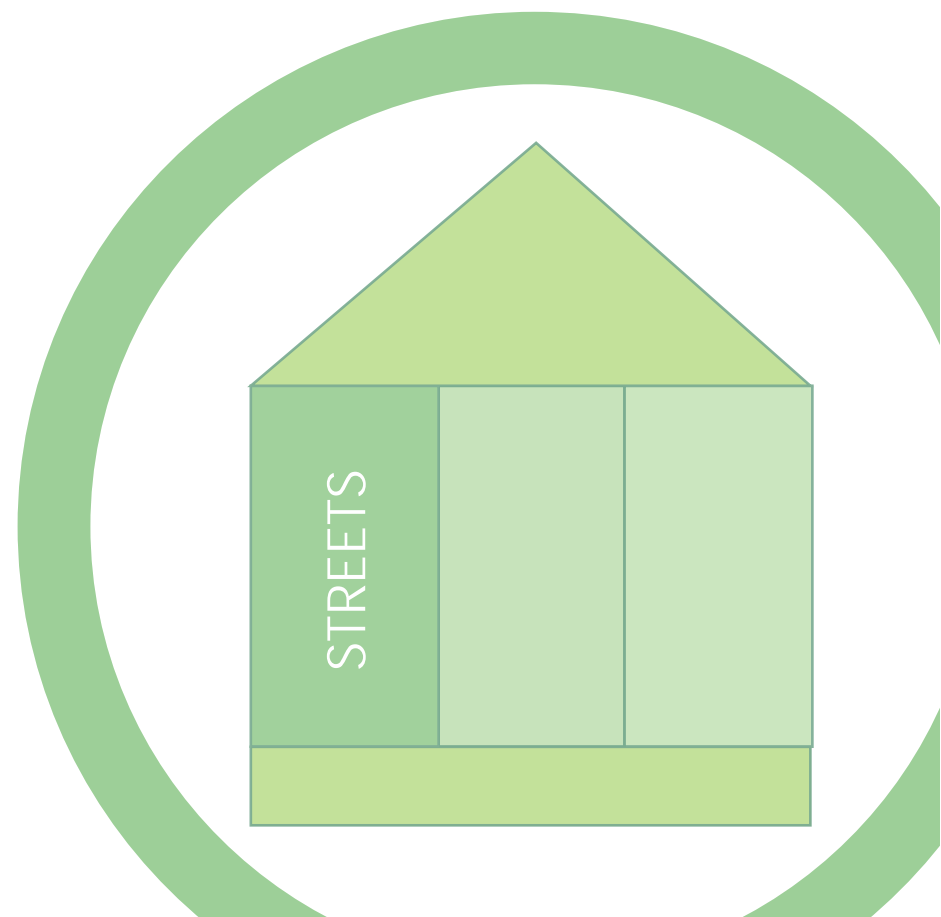
Encouraging public transit ridership, walking and biking reduces automotive energy use. The reduced use of automobiles can improve air quality and health.

### **Wealth Generation**

Increased use of Talbot Avenue by pedestrians creates an environment in which local businesses can flourish. Increased transit use can also provide greater access to jobs for residents.

### **Community Engagement**

These guidelines are intended to build on the work already done by CSNDC and community participants in envisioning the future character of their neighborhood. Through CSNDC's ongoing community engagement process, local residents would have input on these guidelines, which would be adapted in accordance with their preferences and desires.



## CURRENT CONTEXT

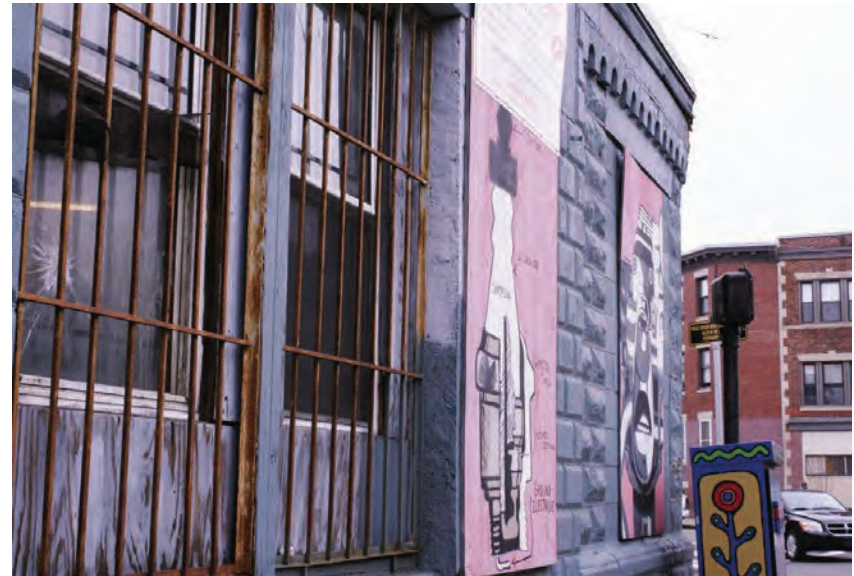
The Link between Codman Square and the new Talbot Avenue station passes through a mostly residential area, with some commercial activity closer to the square. At present, the Talbot Avenue Link has not yet achieved its potential to be a vibrant community street, usable by all. This stretch is uninviting to pedestrians, as there are few crosswalks, traffic signals, or stop signs. Off-street parking in front of buildings, large curb cuts, chain link fences and a general neglect of the public realm also detract from the pedestrian experience. While there is a bicycle lane on Talbot Avenue on either side of the Link, the Link itself has no bicycle lane.

Due to the angled layout of the surrounding streets, bicyclists do not have alternate routes to avoid this stretch, and are forced to share the road with other traffic. This can be dangerous, especially for younger riders, as well as unpleasant, discouraging cycling. Also, while there are bus shelters on other parts of Talbot Avenue, there are none along the Link. Especially since the use of these bus stops is likely to increase when the new station is completed, it is important to address this issue. Lastly, there is a need for a greater diversity in the types of retail and services available along the Link.

However, the current context also presents some opportunities. For example, the numerous balconies on the triple-decker buildings along Talbot Avenue contribute to giving the Link a lively, safe and distinctive character. Also, CSNDC has already been buying and renovating properties on and near Talbot Avenue, which has had a positive effect on the character of the street.



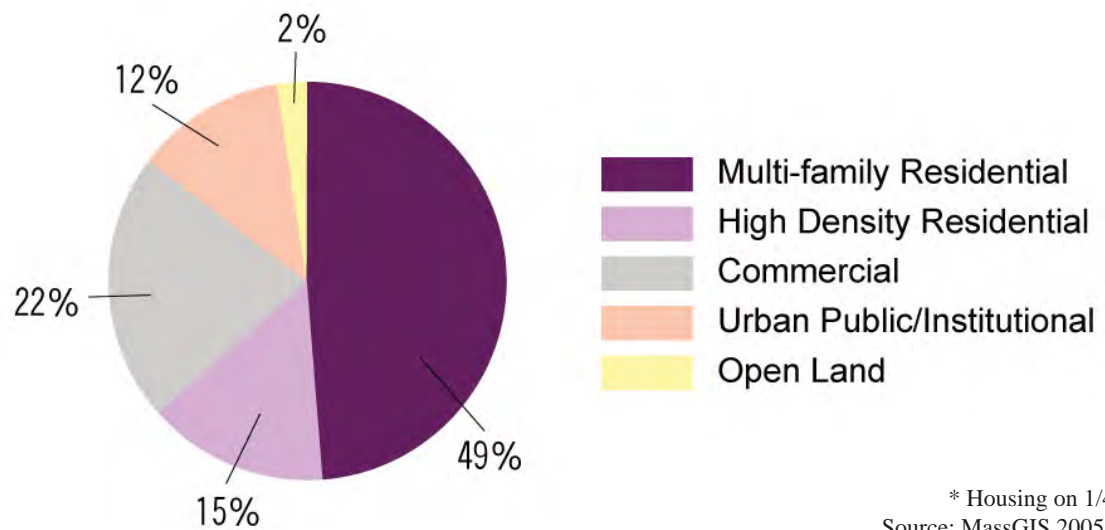




*Top Left:* an auto repair shop along Talbot Avenue has peeling paint and a blank facade. *Top Right:* another auto repair shop along Talbot Avenue has broken windows that are gated with metal bars. *Bottom Left and Bottom Right:* litter accumulates along chain link fences surrounding empty lots.



## CURRENT LAND USE



\* Housing on 1/4-acre lots  
Source: MassGIS 2005 Land Use



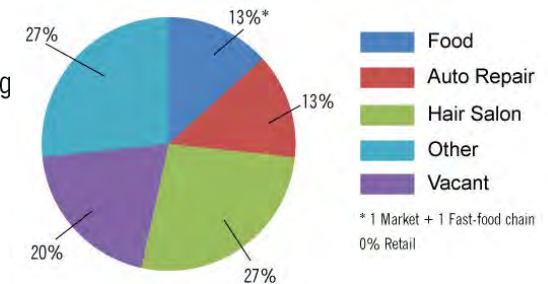
## ISSUE: Limited Commercial Types



### LEGEND

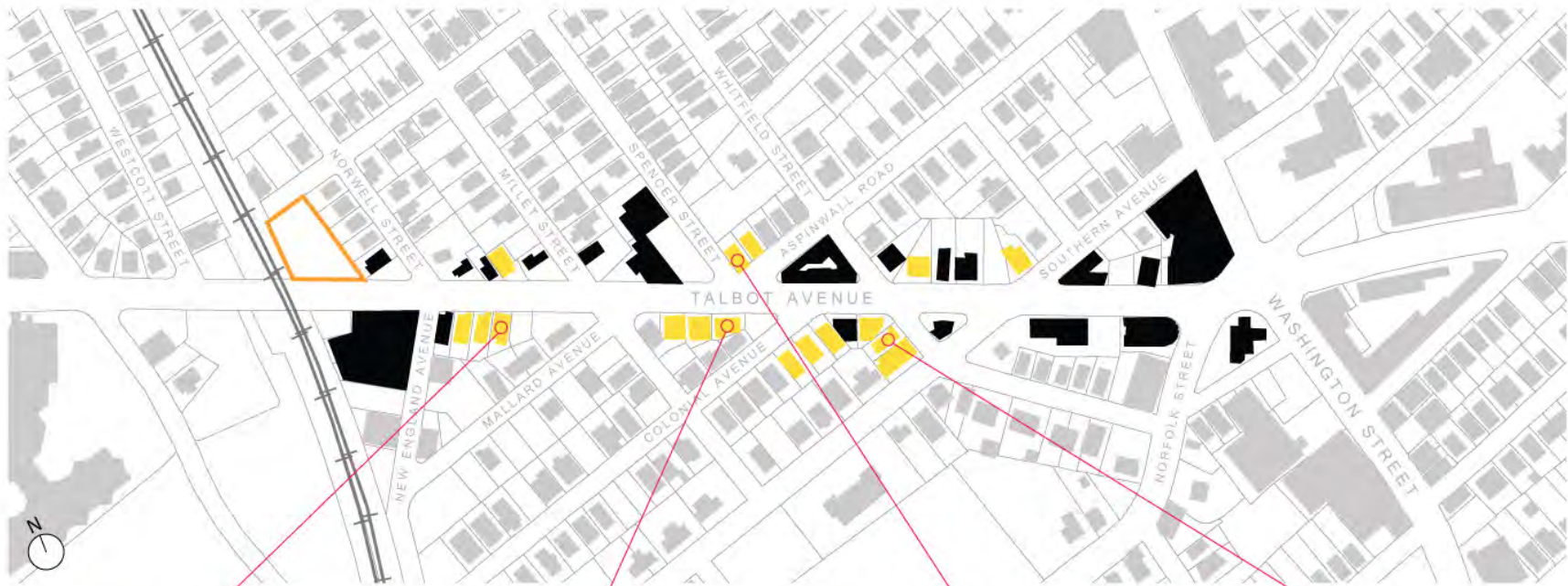
- Commercial Building
- Building Footprint
- Corridor Building Footprint
- Site for Talbot Station

1. Vacant Building
2. Roper's Auto Repair
3. Refuge Relief Ministry, Inc.  
Pedomo Barber Shop  
Salon Divine  
Hair Trends
4. African Hair Braiding & More  
Alex Market
5. McDonald's  
Feel Well Rehab  
Codman Square Professional Building  
Vacant Upper Floor (2)
6. Talbot Collision Center
7. Mt. Washington Bank





## ISSUE: Eyes on the Street



### LEGEND

- Open Balcony Building
- Building Footprint
- Corridor Building Footprint
- Site for Talbot Station

- Triple decker multi-family housing units line the street built with porches and open balconies that have potential to serve as active building fronts for the community, encouraging clear views of the street and enhanced safety.
- Higher density, an improved streetscape, and greater walkability would attract more frequent use of the Link, promoting safety through “eyes on street.”



# ISSUE: Vacant Lots



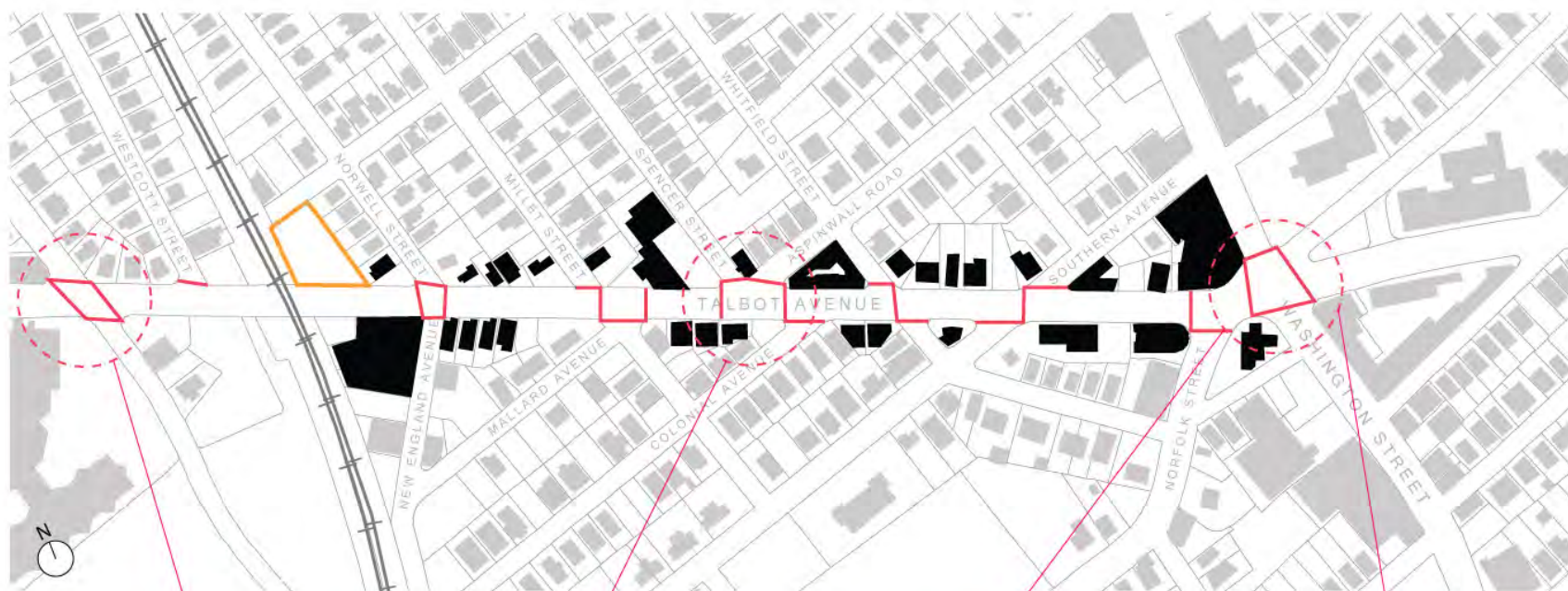
## LEGEND

- Vacant Lot
- Building Footprint
- Corridor Building Footprint
- Site for Talbot Station

- Vacant lots on Talbot Avenue are filled with trash, fenced off, and unkempt.
- The transformation of these lots into public spaces can encourage community interaction, attract residents to use these spaces for leisure and recreation, and promote the aesthetics and upkeep of the space.
- All of these lots sit on different land uses: residential, open land, and cemetery.



## ISSUE: Crosswalks



### LEGEND

- Crosswalk
- - - Intersection with Traffic Light
- Site for Talbot Station

- Pedestrian crosswalk signals are only present at traffic light intersections (only 3 along the Link) and are not available on all sides of the intersection. These signals also lack audible signals, push buttons, and pedestrian countdowns.
- An increase in traffic signals, stop signs, and other traffic calming measures could reduce the speed of cars along Talbot Avenue, creating a safer and more pedestrian-friendly environment.

## ISSUE: Bus Stops and Shelters



### LEGEND

-  West Bound Bus Stop
-  East Bound Bus Stop
-  Bus Shelter
-  Site for Talbot Station

- Providing good bus connections (MBTA 22 bus route) from Codman Square to the Talbot Avenue Station are key to encouraging commuter rail use.
- To increase safety and comfort, bus shelters could also be provided along the Link at appropriate bus stops.
- Currently, no bus stops along the Link have bus shelters.



## ISSUE: Bikeways



### LEGEND

- Class 2 Bikeway (Lane)
- Class 3 Bikeway (Sharrows)
- One-way Street
- Direction of One-way Street
- Site for Talbot Station

- Bike lanes exist on Talbot Ave. from Peabody Sq. to Washington St. and Bernard St. to Blue Hill Ave., as do painted “sharrows” from Washington St. to Bernard St.
- To accommodate bike lanes from Washington Street to Bernard Street, street parking would have to be removed from one side of the street, as this section of the street is 10 feet narrower.
- The surrounding smaller streets intersect Talbot at sharp angles and are mostly one-way streets. Maneuvering through these smaller streets is inefficient. Providing a thru bike lane on Talbot Avenue would provide greater safety and ease of travel.

## KEY PRINCIPLES

### Connectivity between Codman Square and the new station

Making this connection would encourage use of the station by residents of the neighborhood, and encourage patronage of Codman Square's businesses by commuters using the new station.

### Accessibility to all modes of transportation

In order to reduce the neighborhood's dependence on automobiles, which are expensive, detrimental to the environment, and a safety concern for pedestrians, our recommendations aim to increase the attractiveness of taking buses and trains, bicycling, and walking.

### Safety for pedestrians and bicyclists

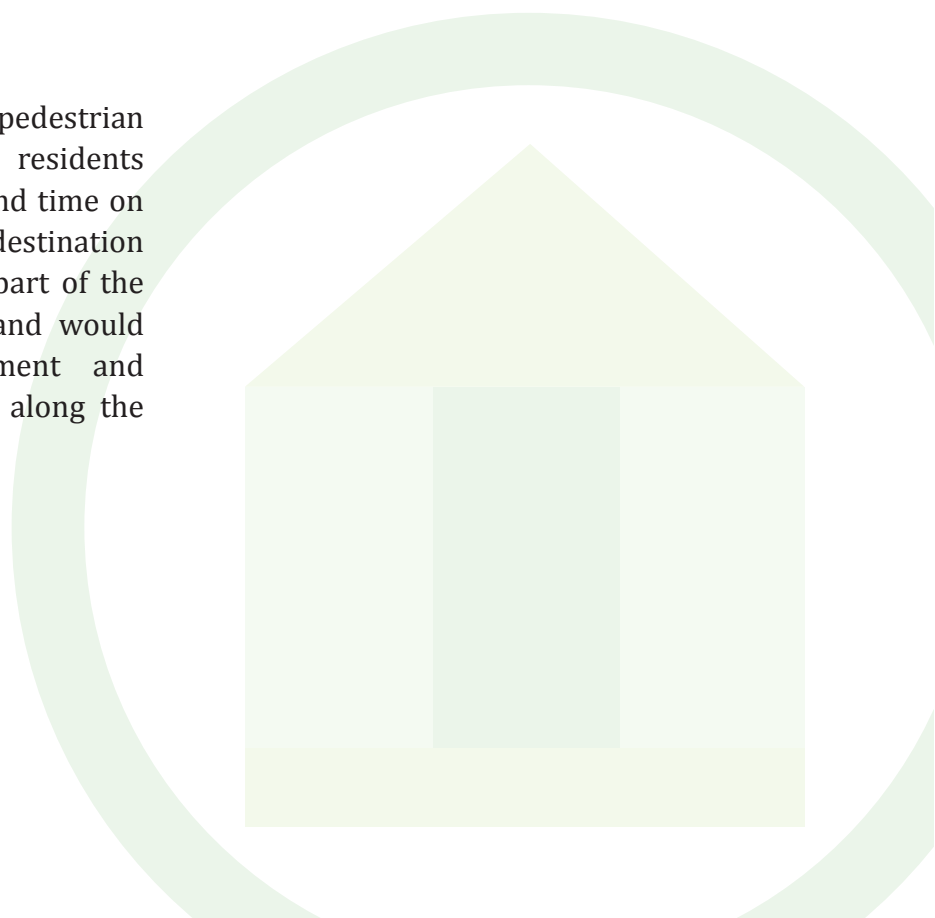
Due to the long distances between crosswalks, stop signs and traffic lights, cars tend to reach speeds on Talbot Avenue that are unsuitably high for a residential neighborhood. Introducing traffic calming measures and having a designated bicycle lane could make the Link safer for everyone, particularly children and the elderly.

### Liveliness along the Link

A lively, well-used pedestrian environment would give residents and visitors a reason to spend time on Talbot Avenue, making it a destination in itself. It would give this part of the neighborhood an identity, and would also foster the development and viability of new businesses along the Link.

### Visual interest

Visual interest would help create a stimulating and aesthetically pleasing environment, which would help give the Link a sense of place. Our streetscape improvement recommendations and developer guidelines for new buildings try to increase the visual interest of the public realm.





## STRATEGY 1: STREETSCAPE IMPROVEMENTS

The streetscape guidelines pertain specifically to the Talbot Avenue Link. However, these recommendations draw upon many different documents, resources, and design theories and can be adapted for other locations looking to revitalize their streetscapes through strategies focused around transit-oriented development. Ultimately, the streetscape guidelines are meant to serve as a resource for CSNDC that can be used to help inform their decisions about increasing sustainability and equity in the area by making the Talbot Avenue Link safer, cleaner, livelier, and more pedestrian- and bicycle-friendly.

Talbot Avenue is approximately 40 feet wide with 10 foot sidewalks on either side. According to Boston Complete Streets, Talbot Avenue is a “Neighborhood Main Street” because of its proximity to a commercial square, high residential land use, and transit lines. We hope that Talbot Avenue can be developed into a “Neighborhood Connector” that “provides continuous walking and bicycle routes and accommodates major bus routes,” and through multimodal and pedestrian-friendly amenities, creates a “unifying identity for the entire street.”



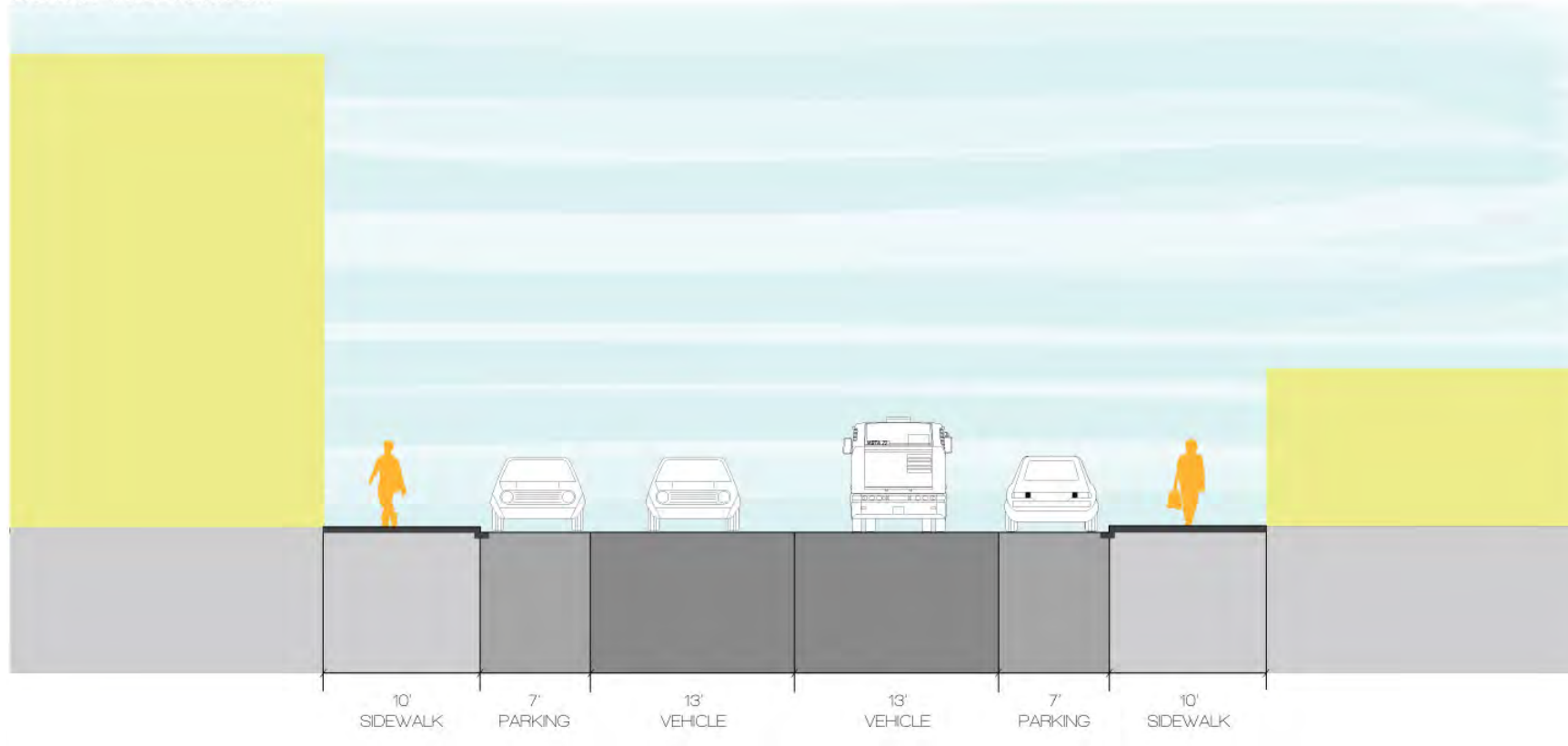
Peabody Square before improvements.



Changes being made in Peabody Square by Boston Complete Streets.



EXISTING TALBOT AVENUE



The existing street section between Talbot Station and Codman Square is 40 feet wide in total with two traffic lanes in opposing directions (13 feet each), two parking lanes (7 feet each), and sidewalks on both sides of the street (10 feet each).

Boston Complete Streets recommends minimum lane widths for the City of Boston for different lane types, which are depicted in the different scenarios (see Figures 1-1 to 1-4): (1) bike lanes to be 4 feet wide if adjacent to a curb and 5 feet wide if adjacent to parking, (2) vehicle lanes to be 10 feet wide, (3) transit lanes to be 11 feet wide, and (4) parking lanes to be 7 feet wide. The scenarios show different lane reconfigurations that the existing street can accommodate.

### Road Diet

*Avoid creating more on-street parking.*

At the Talbot-Norfolk Triangle Transit Oriented Development Meeting in November 2010 (see Resources) residents voiced their concerns regarding transit-oriented development and increased density in their neighborhood. Residents wanted to expand parking on and near the main street and retail establishments and also establish parking restrictions, such as resident stickers and short term parking. The scenario visualizations in Figures 1-1 to 1-4 demonstrate the opportunities that arise when one or even both parking lanes are removed: there is more space for bike lanes and wider sidewalks, to encourage people to walk, bicycle, and spend time along the street, making it healthier,

reducing car emissions, and deterring crime by increasing social interaction and presence on the street.

*Establish and clearly designate bikeways.*

The presence of bike *lanes* - typically designated by markings - or bike *paths* - typically separated from motorized vehicle traffic by an open space or barrier - can encourage more people to travel by bicycle, which has environmental and health benefits. Additionally, bike lanes and bike paths can help calm traffic.

*Provide wide sidewalks for foot traffic, avoid sidewalk narrowings, and increase connectivity by avoiding large curb cuts.*

Increasing sidewalk width can invite more people to walk along the Link, for both recreation and as a part of their commute to and from Talbot Station. It is also important to ensure that the route is connected and as uninterrupted as possible so that pedestrians are not deterred by having to take an indirect or circuitous route that is difficult to navigate.

ONE LANE OF PARKING REMOVED



Scenario 1: One lane of parking is removed and travel lanes are narrowed, creating space for wider sidewalks, tree pits, and two bike lanes. Narrower lanes also slow traffic and make a more pleasant environment for pedestrians.



## TWO LANES OF PARKING REMOVED



Scenario 2: Both lanes of parking are removed and travel lanes are narrowed, allowing for wider sidewalks, a bike lane in one direction, and a dedicated bike/bus lane in the other direction. This allows for a rapid connection by bus between the Talbot Avenue Station and Codman Square.

NO PARKING REMOVED



Scenario 3: No parking is removed, but travel lanes are narrowed, allowing for a bike lane in one direction, but no widening of sidewalks.



ONE LANE OF PARKING REMOVED W/CYCLE TRACK



Scenario 4: One lane of parking is removed and travel lanes are narrowed, allowing for wider sidewalks, a traditional bike lane in one direction, and a dedicated cycle track in the other direction.



## Traffic Calming

According to the “Regionwide Needs Assessment” section of *Paths to a Sustainable Region* by the Boston Region Metropolitan Planning Organization, traffic speeds in many low income and minority neighborhoods are too fast. To increase safety on streets for pedestrians and bicyclists, traffic calming and Complete Streets design principles can help create a safer environment and encourage non-vehicle use of the street.

*Make intersections safer and easier to navigate.*

*Post signage showing the speed limit and have stop signs at intersections.*

*Increase and clearly designate crosswalks.*

*Consider usage of chicanes (an artificial narrowing or turn in the road) or create staggered curb extensions or a serpentine roadway alignment by alternating on-street parking from one side to another to slow down traffic.*

*Insert speed humps or speed tables to slow down drivers.*

CSNDC should also determine whether bus routes, emergency vehicle routes, and snow emergency routes would be disrupted by these measures.



## Pedestrian Wayfinding

In addition to making the street easier to navigate physically, other methods can make the streetscape easier to read and travel.

### *Signage*

Signage should be easily visible and provide information relating to the location of the Talbot Avenue Station, Codman Square, and other landmarks.

Directional signs that point to the Talbot Avenue Station and Codman Square would make it easy for pedestrians to be aware of their proximity to transit and retail. Signs should also take into consideration any potential language barriers and could perhaps include visuals. Pedestrians should be able to find their way with ease and confidence, and know where it is safe to cross the street.

*Increase traffic signals at busy intersections.*

*Provide cues for hearing and visually impaired people.*

## Street Furniture

Street furniture is another important component of making a streetscape more inviting to the community. Materials that are readily maintained and durable over an extended period of time should be used, and since streets are renovated very infrequently, considering future conditions and needs should be emphasized.

### *Put in more bus shelters.*

The Talbot Avenue Link is along the MBTA's Route 22; according to the MBTA's 2009 *Blue Book*, Route 22 ranks 10th out of 196 bus lines in terms of weekday ridership, with greater inbound than outbound ridership figures. Since increased use of the Link can increase use of this bus line, it is important to have a bus shelter for people waiting to make their commute more comfortable and to encourage usage of public transportation.

### *Place more benches along the Link.*

Benches are another amenity that encourage people to use the Link and not simply pass through. They allow for increased social interaction among community members, and are relatively



The Boston Street Furniture Program includes signage that helps orient people. Signage can be an effective way to draw people along the stretch of Talbot Ave between Codman Square and the new station.

inexpensive to install.

### *Place more trash cans along the Link.*

The community has expressed its desire to have more trash receptacles. Currently, the Talbot Avenue Link is marked by neglect and litter on the streets. One idea for CSNDC to pursue could be to have trash cans that are



An electrical box is transformed to a neighborhood amenity.

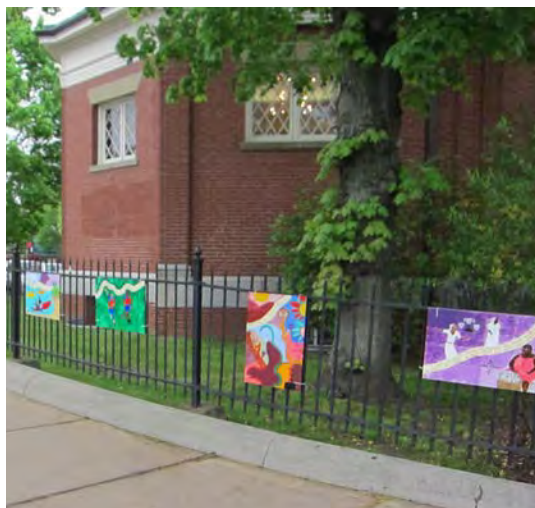
sponsored by local businesses and are aesthetically pleasing, to help turn something with a negative connotation into something pleasant.

### Public Art

There are opportunities to explore public art as a way to enliven the streetscape and make it more visually interesting and appealing.

*Encourage art hanging on fences and in other public spaces.*

The Codman Square Neighborhood Health Center displays artwork on the fences that surround the building.



Artwork is displayed outside the Codman Square Neighborhood Health Center.

Other businesses and residents could be encouraged to do the same in order to increase public participation in improving the streetscape and in order to make the streetscape more visually appealing.

### Trees

Street trees confer multiple benefits to homes, businesses, and pedestrians. They generate community wealth and improve public health and the environment. They also significantly enhance the safety, character, and landscape of streets, all of which support transit-oriented development

### Health

- Tree-lined streets encourage people to walk rather than drive.
- Trees bind gaseous vehicular pollutants to their leaves and bark, improving air quality.
- Trees have proven to help people concentrate and relieve mental stress.
- Trees produce thermal comfort for pedestrians by blocking solar and ambient radiation.

### Character & Landscape

- Trees engage residents in the revitalization and maintenance of shared spaces.
- Trees enhance the aesthetic quality of streets.
- Trees help produce a unique sense of place and foster community pride.

### Environment

- Trees reduce demand for in-home air conditioning, which forms ozone.
- Trees remove carbon dioxide and other green house gases from the atmosphere.
- Trees absorb and clean rain water, which can recharge groundwater instead of allowing it to flow polluted into water bodies.



### *Safety*

- Tree-lined streets interrupt drivers' visual field, which makes them drive slower, increasing pedestrian safety.
- Trees help create safe neighborhoods by fostering pedestrian vitality and encouraging people to spend time outside.

### *Wealth*

- Trees encourage pedestrians to linger longer in front of businesses, resulting in longer shopping trips.
- Trees improve real estate values for both residences and businesses.
- Trees reduce energy spending from naturally cooling buildings in the summer and insulating them from cold weather in the winter.
- Trees save municipalities significant costs from storm water management by absorbing water and water-borne pollutants during intense rainfall.

### *Context of Trees on Talbot Avenue*

Three features of the trees on Talbot Avenue are noteworthy. First, from Codman Square to Colonial Avenue/Aspinwall Road, Talbot Avenue is more or less consistently planted with trees. From that intersection to the new station however, Talbot Avenue is

completely devoid of street trees (e.g. trees planted in the sidewalk); all trees in this area are in untended side-yards or vacant lots.

Therefore, the trees closest to Codman Square are almost wholly managed by the City of Boston while the station-side trees are not. The trees planted by the City are all of one variety and are all very young, whereas the trees on private or vacant property are older, mature trees.

### *Opportunities and Barriers*

The existing tree cover on Talbot Avenue presents both opportunities and barriers. Mature trees provide exponentially greater benefits compared to young trees. For example, one Littleleaf Linden tree on Talbot Avenue provides only 17% of the overall benefits of a mature Norway Maple, the largest mature tree on the block.

Additionally, 97% of the benefits provided by Littleleaf Lindens come from their aesthetic value; in other words, the enhancement in property values attributable to the simple presence of the tree. Therefore Littleleaf Lindens, while the most prevalent tree on Talbot Avenue, are currently

providing very few benefits in terms of energy, air quality, or the environment.

Underscoring trees' aesthetic value is critical, however, because it is these benefits that community members, pedestrians, and business owners experience most tangibly. Highlighting the dollar value of trees, even young ones, is an important step to fostering respect for trees among community members.

The prevalence of young trees planted in the public right-of-way is worrisome. The average lifespan of street trees in Boston is estimated to be eight to ten years, meaning these trees may not live long enough to provide the maximum potential of a mature tree. Given these mortality rates, municipalities often try to balance their urban forests among trees of different age groups.

Between the prevalence of young trees on half of Talbot Avenue and the wholesale lack of trees on the other half, there is a great need and opportunity to strategically plant and manage trees on the Link.



The Clapp pear sculpture in Edward Everett Square reflects the pear's importance of its indigenous roots in Dorchester history



President of the Dorchester Historical Society Earl Taylor stands behind a young Clap Pear tree on the former estate of William Clapp, who hybridized this and other pear and apple trees in the 19th century.

### *Collaborate to Create a Tree Planting Team for Talbot Avenue*

Planting and maintaining street trees is an expensive and difficult task. While the City of Boston's Parks Department has pledged to plant 100,000 trees by 2020, it lacks capacity to reach every street. That is why many organizations have joined the Grow Boston Greener coalition, which helps communities participate in tree planting in their communities.

CSNDC and other CDCs along the Fairmount Line should join this coalition to advocate within the city for getting more trees planted along main connector streets leading to the new stations as well as to take advantage of resources and technical assistance for community tree planting and maintenance.

In order to maximize the long-term health of trees, however, more expensive tree-planting methods can be employed that help trees thrive (see Water section). CSNDC should partner with other local organizations committed to tree planting

in Dorchester, such as the Dorchester Environmental Health Coalition and the Boston Natural Areas Network to launch a capital campaign for tree planting along main connector streets and the Fairmount Greenway.

A portion of this campaign should include fundraising for a fund to train and hire local youth to maintain trees along the greenway and in community orchards. Additional partnerships with organizations like the Boston Tree Party and the Dorchester Historical Society may be leveraged if CSNDC and the other Fairmount CDCs focus on planting fruit trees.

### *Plant Pear and Apple Trees*

CSNDC and other CDCs along the Fairmount Line have envisioned linking the proposed Greenway with a signature green element: fruit trees. Fruit trees have a long history in Dorchester, where there were several orchards during the 18th and 19th centuries. Today, several streets in North Dorchester are named after pear varieties grown on the Clap Estate such as Mt. Vernon, Dorset and Bellflower Streets. The Clap estate was granted to Roger Clap in 1630, however





it wasn't until six generations later that William Clapp began experimenting hybridizing apples and pears. A popular hybrid, aptly named the Clapp Pear, still grows around the Clapp House and is memorialized in a large bronze sculpture in Edward Everett Square.

Planting pear trees along the Fairmount Greenway and connector streets would produce a signature element linking the different neighborhoods and attracting visitors during the spring flowering and fall harvesting months. Additionally, fruit trees provide greater aesthetic

value than the existing trees being planted on Talbot Avenue, the Littleleaf Linden.

While it may not be feasible to plant fruit trees exclusively along streets, CSNDC and the other Fairmount Corridor CDCs should at a minimum review their vacant land survey for plots abutting the Greenway that they can reserve for community orchards. Finally, CSNDC should partner closely with the Boston Natural Areas Network, The Dorchester Historical Society, the Boston Tree Party, and the Dorchester

Environmental Health coalition, all of whom have varying degrees of expertise in the planting and maintenance of fruit trees, experience developing and training youth maintenance teams, and relationships with local fruit tree suppliers. More details on regulations governing street trees can be found at <http://www.cityofboston.gov/Parks/StreetTrees/seasonal.asp>.

## VISUALIZING STREETSCAPE IMPROVEMENTS



The current streetscape is uninviting and geared towards cars, with little space and other amenities present to encourage pedestrians and bicyclists to feel safer and enjoy walking down the street.





Improvements to the streetscape, such as the addition of a bench, trees, swale, and permanent bike lane, make Talbot Avenue a friendlier, safer, and livelier environment.





Oriented towards cars, the block directly east of the proposed Talbot Station is confusing and dangerous for pedestrians and bicyclists to navigate.





Adding features such as trees and pedestrian crosswalks that are clearly designed and visible can help to make this part of Talbot Avenue more appealing and inviting.





Complex intersections make it difficult for pedestrians and bicyclists to safely and confidently navigate the street.





Clearly designated pedestrian crosswalks and bike lanes make it easier and safer for pedestrians and bicyclists to travel through the intersection, and other amenities such as trees add elements of visual interest and liveliness to people's commute.





The stretch of Talbot Avenue between the new station and Codman Square does not have any bus shelters or other amenities to make waiting for the bus and walking down the street a pleasant experience.





Adding bus shelters along Talbot Avenue and other elements, such as trees, can improve the pedestrian experience and encourage more people to take advantage of different transit options.



## STRATEGY 2: DEVELOPER GUIDELINES

In order to improve the streetscape along Talbot Avenue and encourage people to walk the short distance between Codman Square and Talbot Station, developers of private property should design buildings that conform to the community's desires for the neighborhood's look and feel. The guidelines below are drawn from local, successful case studies, where the pedestrian environment has been improved through the addition of new, well-designed buildings, such as Dudley Village near the Upham's Corner station on the Fairmount Line, and The Carruth near the Ashmont transit station on the Red Line. The guidelines also incorporate ideas from a range of other transit-oriented design guidelines and are intended as a starting point, adapted by the community surrounding Talbot Avenue, that will eventually inform developers of private property and assist them in proposing developments that reflect the community's needs and wishes.

These guidelines can be used in order to eventually provide a better pedestrian experience, and have been adapted to suit the unique characteristics of Talbot Avenue.



Housing in Dudley Village, Roxbury

### Appearance of street wall

*All buildings should visually indicate the line between the ground and upper levels with a cornice, canopy, balcony, arcade, or other visual device. A well-defined lower level helps keep the feel of larger buildings on a human scale.*

*Balconies should be built on upper floors, facing the street.*

This is in keeping with the existing character of Talbot Avenue. Balconies would also add visible activity to the street wall, and enhance safety



Housing in Dudley Village, Roxbury

through ‘eyes on the street’, or people being able to see activity taking place on the street from their homes.

*Maximize the number of entrances.*

Frequent entrances create a lively environment, and prevent large blank walls which have a deadening effect on the pedestrian experience.

*Doorways should be recessed where feasible.*

Recessed doorways provide many benefits to the storefront or apartment such as providing shelter for customers or residents in bad weather, helping to clarify the entrance to the business and giving space to outward swinging doors.



An entrance to the Dudley Village development

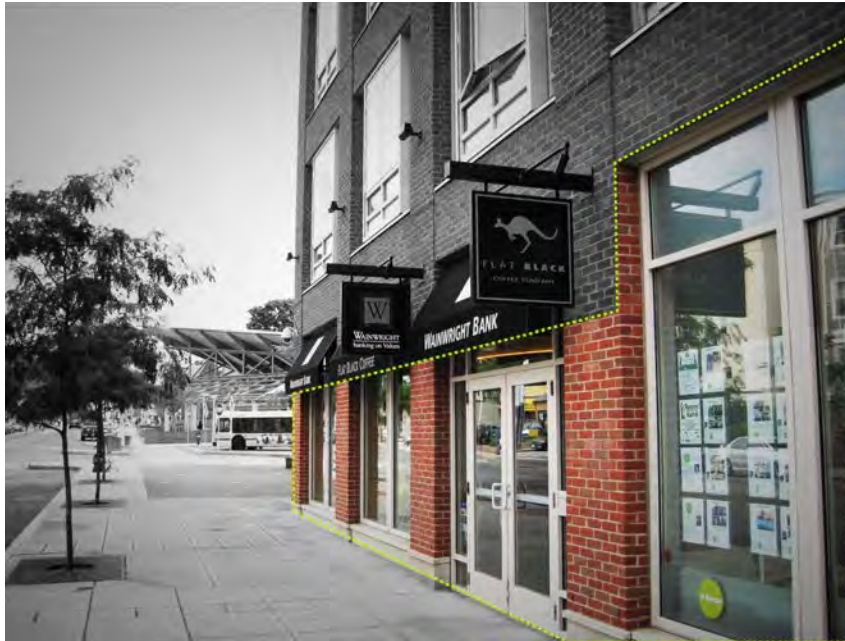
*Residential doors that are located on the front of the building should be visually separate from the storefront.*

This prevents confusion, and allows residents to feel more comfortable with ground-level retail.

*Maximize use of glass on facade walls and doors, as far as possible. Glass on walls should come down to 2-4 feet above ground level.*

Being able to see indoor activity helps create a lively environment for pedestrians. Being able to see outdoors from inside contributes to greater “eyes





Storefronts at the Carruth near the Ashmont station

on the street” and increases safety. The use of glass should be maximized on the northern side of the street (on south-facing facades), while there should be only enough glass on the southern side of the street (north-facing) to provide lighting and views.

South-facing windows are exposed to natural sunlight, whereas heat is lost through north-facing windows. Placing windows strategically can help conserve energy and reduce heating bills.

*Pedestrian scale lighting fixtures should be provided along all sidewalks and walkways.*

This would provide ample lighting at night, for safety and aesthetic purposes.



*Special attention should be paid to corners.*

Corners of buildings help define structures. Intersections of routes also see more activity.

*Signage for retail should be consistent and at a defined height above ground level.*

This would help create a unified image for the retail along the Talbot Avenue link.

*Awnings are encouraged.*

Awnings provide protection to pedestrians from the elements, and can be aesthetically pleasing.



*Window graphics should be used to provide information for the business such as hours of operation or services offered.*

This helps to create a welcoming retail environment for pedestrians.

*Facades over fifty feet in length should be divided into shorter segments by means of façade modulation, repeating window patterns, changes in materials, canopies or awnings, varying roof lines and/or other architectural treatments.*

This helps prevent a monotonous pedestrian experience.

*There should be no use of grates/chain-link fences. Safety measures should attempt to be discreet.*

Grates and chain-link fences are associated with high-crime areas, and create a harsh and unwelcoming environment.

*Single-story buildings should be discouraged.*

Single-story buildings are out of place in the lively, highly-used environment envisioned along Talbot Avenue.

## Use of ground floor space

*Retail when possible.*

Retail along Talbot Avenue would help meet the needs of the local community and encourage use of the Link towards the new station.

*Retail that remains open late is encouraged. Leaving lights on after closing hours is also encouraged.*

This would increase safety at night.

*Temporary use of un-leased retail space by community groups and others should be considered.*

Long-term vacant storefronts present a poor image to potential renters of space and to the community. Use of new retail space by community groups and others helps encourage foot traffic, which can benefit surrounding stores.

## Interaction with street

*A building should have a maximum setback of 5 feet from the front property line. A setback may be increased to 25 feet from the front property line if a courtyard, plaza or seating area is incorporated into the development adjacent to the public street.*

Buildings that are far recessed from the street create a dead zone along the sidewalk.

*Curb-cuts should be placed on side streets where possible.*

Curb-cuts, which are ramps leading smoothly down from a sidewalk to a street, can be inconvenient to pedestrians, and can detract from opportunities for retail.

*Street trees should be planted by the developer along sections of the sidewalk fronting the development. Street trees shall be planted at intervals of no more than 40 feet. Tree species shall be selected that require minimal maintenance and are of native origin.*

Street trees provide shade, are aesthetically pleasing, and are beneficial to the environment. (See previous section on trees.)

*Pedestrian amenities such as benches, public art, planters, and trash receptacles are encouraged and should be installed by developers immediately outside their property.*

These amenities enhance the experience of pedestrians, shoppers, and users of public transit along the link.

*Developers can help upgrade the fences of neighboring properties.*

Several buildings on Talbot Avenue currently feature poorly maintained, unattractive and unwelcoming chain fences. Removing these and replacing them where necessary with picket fences would enhance the pedestrian experience.

*Sidewalks should be renovated up to curb by all new developments.*

New developments present an opportunity to renovate elements of the public realm.



Parking behind the Dudley Village.

## Parking

*No off-street parking at front, shielded from view from Talbot Avenue where possible.*

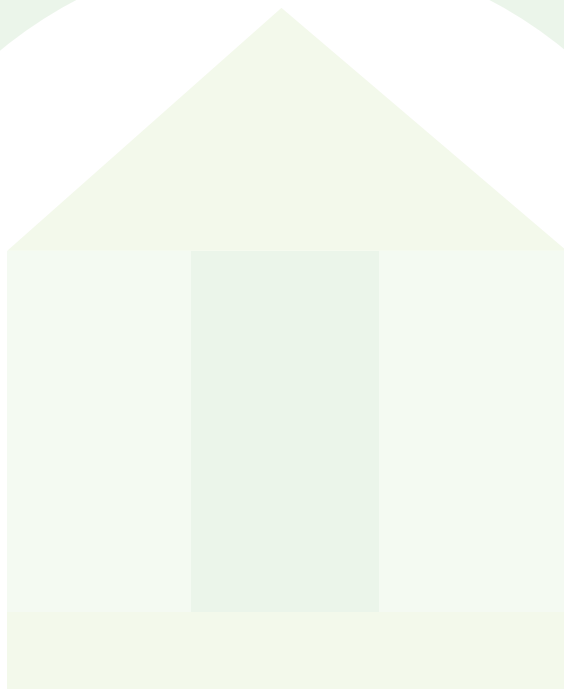
Parking lots detract from the liveliness of the pedestrian experience. Developers should be restricted to a maximum of 1 parking space per multi-family unit, plus 1 guest space per 15 units. Parking for non-residential uses should be provided at not more than 3 per 1,000 square feet (gross) and not less than 1 per 500 square feet (gross) for uses covering less than 1,000 square feet. Shared parking should be encouraged. On lots serving more than one use, the total number of spaces required may be reduced.



Reducing excess parking requirements encourages new development by increasing leasable space, and creates a more pedestrian and transit-friendly environment.

*Bicycle racks should be provided on site at a ratio of 1 space for every 15 automobile parking spaces or portion thereof.*

The provision of bicycle parking would encourage bicycling, a low-cost, healthy, and energy-efficient mode of transport, and would reduce car traffic.



## CHALLENGES AND OPPORTUNITIES

These design guidelines will benefit a number of groups, such as:

- Commuters using the new station
- Pedestrians, particularly children and the elderly
- Retail establishments along the Link that will benefit from increased foot traffic
- Residents along the Link who will benefit from improved access to transit and retail activity

However, many communities are cautious and wary of change, and may not immediately accept modifications to the built environment. In neighborhoods like Codman Square, residents may be concerned about the traffic effects of increased density. Although helping to mitigate residents' concerns is a challenge, it is also an opportunity to demonstrate that increased proximity to retail and services coupled with better walkability and bikeability means that people do not need to make as many car trips, which actually decreases traffic.

Other residents may not be open to close proximity to retail. However, their

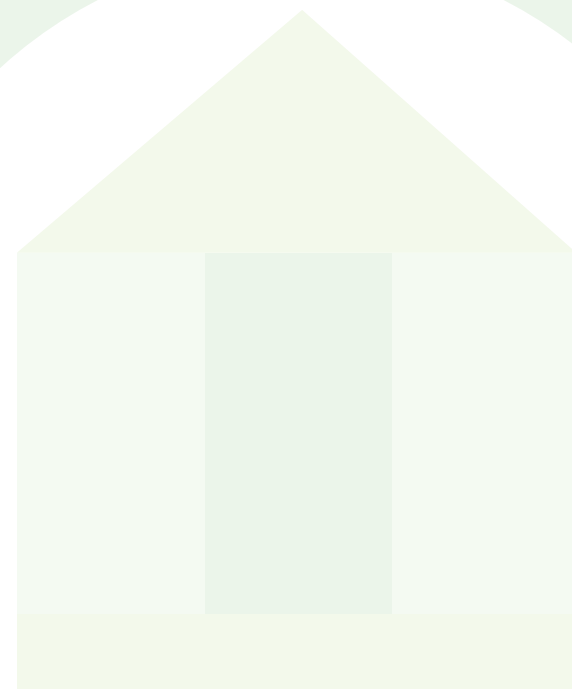
concerns can be addressed through sensitive design practices. Drivers may not welcome the pedestrian-and bicycle-oriented redesign of the street, which would slow down cars. By using resources from other organizations, design manuals from other cities, and even this report, drivers can be shown that new efforts can increase their transportation options and decrease their dependence on cars.

Community engagement strategies can be used to help various members of the community discuss their concerns and find ways to incorporate their ideas into the possible redesign of the Talbot Avenue Link and other parts of the area.

No matter how sensitive the design of streets and buildings is to the context and wishes of community members, any modification in the physical environment will undoubtedly result in a change in neighborhood character, which some people may perceive as being a detriment. Also, both the Streetscape and the Developer Guidelines present a picture of redevelopment that is not necessarily the lowest cost path.

Although some recommendations may, over time, lead to cost savings, the upfront costs remain high.

While these concerns will need to be negotiated carefully, they are some of the tradeoffs that any redevelopment along this Link will have to contend with. Communication and coordination with local agencies and organizations and the City of Boston will also be critical to bringing about the changes that this report recommends.





## IMPLEMENTATION

The guidelines presented here are intended as a starting point for discussions in the Codman Square community about the kind of physical environment that residents desire. In order to address some of the concerns outlined above, CSNDC can draw on the work being done around the country on “complete streets” (see references below). Organizations such as the National Complete Streets Coalition, Boston Complete Streets, Boston Bikes, DotBike, Walk Boston, and Livable Streets can provide useful resources.

### **Working with the community on developer’s guidelines**

CSNDC can build on the community meetings and visioning workshops that it held between 2007 and 2009 to determine a comprehensive, unified vision of future development in Codman Square. By ensuring an iterative process, soliciting feedback, and remaining flexible, CSNDC and other players like the city government and developers can be responsive to the community’s needs.

To ensure that the visioning process is representative of the community as a whole, meeting attendance could be monitored and assessed in comparison to the overall demographic composition of Codman Square. To do this, it would be necessary to determine the ages, demographic characteristics, and residences of people attending the workshops, most likely in a survey format or sign-in sheet at each workshop. It may be necessary to set desired thresholds of participation for Codman Square’s various racial and age groups. If thresholds are not feasible, CSNDC could more informally determine which groups are underrepresented in the workshops. This participation assessment should be ongoing.

Targeted outreach should then be done for the specific groups or areas of the neighborhood that are underrepresented. One strategy would be to go door-to-door to engage people in conversations around the issues. If they cannot commit to attending a later workshop, their feedback could be solicited at home.

Another strategy to ensure attendance could be to set meeting or workshop times and locations in advance, and schedule them at a time that is consistent. Keeping meeting minutes or some other written or visual record of the topics that are discussed at the meetings could also be useful, particularly if these documents are sent out to community members or available so that they may read them if they were unable to attend the meeting. Having a record of the community’s visions and concerns can also increase accountability and help maintain the history of community engagement processes and the outcomes of these processes.

### **Working with the community on streetscape improvements**

While CSNDC has already engaged its residents around potential development in the neighborhood, visioning workshops specific to the streetscape should also be held. Community mobilization can start with targeting community leaders, neighbors, and community members who are likely to

support Complete Streets in Codman Square. Initial conversations should emphasize key concerns such as the safety of children, high speed and cut-through traffic, and safe places to walk along and cross streets. Out of these initial conversations, Codman Square could encourage formation of a Complete Streets Coalition to educate others and advocate for changes along Talbot Avenue. In addition to raising awareness among more residents, this group can begin to advocate for new infrastructure and streetscape designs to the City of Boston.

To further increase community awareness of and interest in Complete Streets infrastructure, CSNDC should hold visioning workshops similar to those around design and developer guidelines. The street diagrams seen throughout this report can be used in these presentations to help residents visualize and make decisions about how space should be allocated between park, trees, bicyclists, et cetera.

Presentations could begin with an introduction to “problem” streets in the Codman Square service area, what a Complete Street looks like, and how

Complete Streets can improve the neighborhood. Sample presentations are available on the National Complete Streets Coalition website, [www.completestreets.org](http://www.completestreets.org). An effective strategy in other areas has been to include specific facts about the city based on transportation data from the U.S. Census. For example, data from other areas in the city could be presented, talking about how much likelier households living and working within a half-mile of a transit station are to walk to work, to drive less, or to not need to own a car.

Complete Streets are an increasingly popular topic, so CSNDC should get in touch with the inter-agency Boston Complete Streets group to see how their engagement processes went. Additionally, the National Complete Streets Coalition (NCSC) offers interactive, full-day workshops led by national experts on policy development and policy implementation. Policy is already in place in Boston, but the NCSC may also have recommendations for increasing awareness and support at the neighborhood level.

## Engaging youth around urban design

One perspective often left out of the planning process is the youth voice. To develop a comprehensive vision for Codman Square that truly accounts for and includes residents’ voices, workshops should be held that specifically target youth.

In June 2008, a Youth Community Design Summit was held by Boston’s Community Design Resource Center. This all-day event was attended by 30 youth across the Greater Boston region and focused on design solutions to build safer neighborhoods. Youth worked with volunteers and community supporters to analyze sites in Dorchester and Roxbury, then to design and model interventions such as street furniture, lighting, and expansion of community facilities.

Similar events can empower youth and educate them about their neighborhoods, spatial thinking, and the architecture and design professions. CSNDC could recruit design volunteers from the Community Design Resource Center and/or local



college and university students. CSNDC's workshop should have a narrower focus than the 2008 CDRC event. Targeted outreach with local middle and high school students will be required to raise awareness of the event and its issues. To incentivize participation, CSNDC could reach out to teachers with classes related to civics, art, or even government. These teachers could advertise to their classes on behalf of CSNDC, or even offer extra credit opportunities for participation.

Another potential partner for collaboration located right in Codman Square is B.O.L.D. Teens. This organization and the teenagers involved with it have, over the past few years, concentrated primarily on putting in bike lanes in the area and on efforts related to the Fairmount Line. In the past, teenagers have performed site evaluations in other areas of the neighborhood, noting where trees and crosswalks are missing. B.O.L.D. Teens also works with the police department and have fought for bike lanes and a bike rack at station, which is unusual for a commuter line. CSNDC could reach out to B.O.L.D. Teens to focus specifically on the Talbot Avenue Link, and organize visioning sessions, on-foot evaluations of the Link, and other strategies that would integrate the youth voice into a comprehensive vision for Codman Square.

### **Lessons from the literature on design and development issues**

Lessons learned by researchers at UC Berkeley's Center for Community Innovation at the Institute for Urban and Regional Development can be applied by CSNDC

to their engagement around neighborhood design issues. Focus groups were held around developments in the Bay Area that were based around new transit stations and threatened to change neighborhood character with increased density.

Key takeaways include fostering trust and credibility, humanizing the message, and respecting the reality of the community. Researchers recommend the following specific strategies when engaging residents around similar projects:

- The legitimacy of the process matters more for community acceptance than the specific outcome
- Humanize the residents of affordable housing. Make the projects about actual people, not statistics. Use pictures of



At the 2008 Youth Urban Design Summit hosted by the Boston's Community Resource Design Center, community members worked together to see how urban design could improve safety.

children and families, or the elderly. Provide stories about young families just starting out and struggling, or people retiring. Community-members are going to connect more to pictures of people, not buildings, so prioritize and plan presentations accordingly.

- Images of attractive buildings that happen to be affordable and/or high-density developments help people visualize something inoffensive, or even desirable, in their neighborhoods. People prefer buildings that fit within the local context. Show details that are community-oriented, like balconies, playgrounds, and green space. Show that affordable housing is not run-down or unattractive. Use local images if possible. Images should include people, so the buildings don't seem lonely. Make sure images are realistic, or residents might doubt that such nice developments could occur in their area.
- Concrete, local/relatable examples are best. Emphasize the benefits of density, such as reduced driving, which will reduce air pollution for

everyone and allow people to spend more time with their families and communities. Include testimonials from people in the area who take transit for its convenience. People will be skeptical of abstract, unsubstantiated claims—so always use specific examples. Provide a section of online references to build credibility and allow people to investigate on their own.

- People will notice if data isn't provided or claims aren't property substantiated. Don't limit information—provide more and let them make up their own minds. Citations and numbers are important when claims are made. Be alert that not everyone will fully understand concepts like affordable housing and density—either provide it in a handout or explain up front how many units would be affordable.
- The context matters. People won't like things that aren't designed for the density, built environment, urban/suburban nature, or particularities of their community. They will be unsympathetic to what

is being presented if it seems like it has “outsider” status. It is important to create an emotional connection. People may be more likely to dismiss national statistics; having locally relevant facts is the only way to penetrate the strongest resistance. People believe their neighborhoods are unique and special. Be sure to focus on specific concerns that residents face, rather than simply design issues.

- Supplying pictures of good and bad affordable housing designs can be a good way to instigate discussion based on residents' own knowledge. Allow people to talk about what they do and do not like about the images.
- If possible, use examples of (or bring people in from) respected organizations/developers.
- Conversation is an important way to add information to the group's shared understanding.



## SUMMARY

Summary: Design Guidelines		
Principles: <ul style="list-style-type: none"> <li>• Connectivity</li> <li>• Accessibility</li> <li>• Safety</li> <li>• Liveliness</li> <li>• Visual Interest</li> </ul>		
Recommendation	CSNDC Role	MAPC role
Streetscape Improvements <ul style="list-style-type: none"> <li>• a road diet</li> <li>• traffic calming measures</li> <li>• wayfinding signage</li> <li>• street furniture</li> <li>• public art</li> </ul>	Take advantage of the growing “complete streets” movement in Boston, which can act as a resource as the Link develops once the station is built.	Facilitate such improvements on other “connecting streets” between stations and key neighborhood centers.  Streets include: <ul style="list-style-type: none"> <li>• Quincy Street and Ceylon Streets near Columbia Road Station</li> <li>• Washington Street near Four Corners Station</li> <li>• Fairmount Avenue, which connects Fairmount Station to Logan Square</li> <li>• Hyde Park Avenue, which connects Readville Station to Walcott Square</li> </ul>
Developer Guidelines <ul style="list-style-type: none"> <li>• the appearance of the street wall</li> <li>• use of ground floor space</li> <li>• interaction of buildings with the street</li> <li>• parking</li> </ul>	Use recommendations as a starting point for discussion points among members of the community, whose input will be an important part of shaping them.	
Work with the community <ul style="list-style-type: none"> <li>• visioning workshops</li> <li>• targeted outreach for community meetings</li> <li>• multi-lingual translations</li> <li>• incorporating youth voice</li> </ul>	Build on current work and use best practices in community engagement around neighborhood design.	Work with community organizations to develop and implement design guidelines that suit each neighborhood’s context and preferences.





## GREEN AND HEALTHY HOMES - INTRODUCTION

The Codman Square neighborhood possesses a great asset in its beautiful homes and buildings, many of which date from the early twentieth century. Sixty-seven percent of Codman Square's housing is rented, and while affordable rental housing is important to the functioning of the community, it makes landlords reluctant to invest in improvements to an aging housing stock. Tenants do not have an incentive to make improvements either. The result is that housing structures use too much energy and exacerbate a variety of health ailments, such as asthma and lead exposure. These health impacts affect children especially.

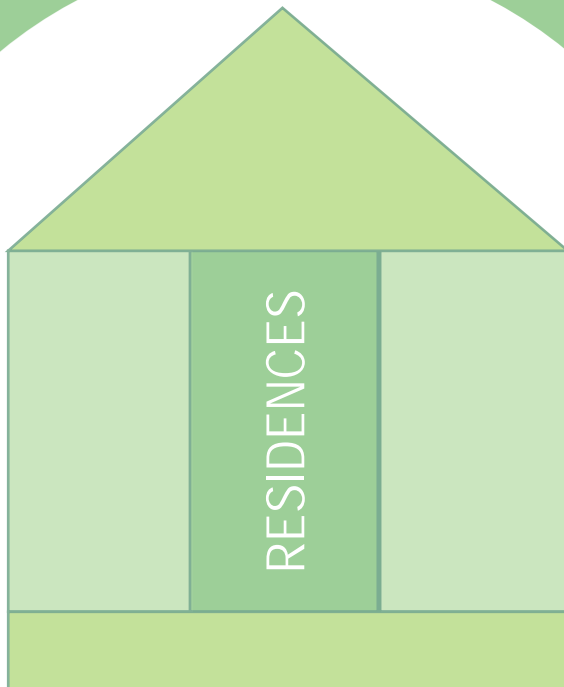
Home upgrades help reduce utility bills, improve health, and create employment opportunities. The City of Boston, the State and Federal governments, utilities and various non-governmental organizations, have already established a variety of home upgrade programs in Boston to reduce energy use, lead poisoning, asthma, and other health impacts. Nevertheless, a variety of improvements must be made to these programs. First, the level of participation in these programs must increase, particularly in neighborhoods like Codman Square. Second, program benefits will increase if both energy and health improvements are integrated into one process. Lastly, neighborhoods like Codman Square will benefit if a greater proportion of jobs created through these programs are filled by low-income people of color.

This section suggests three strategies to address these challenges:

- Integrate health and energy efficiency upgrades into a single comprehensive program
- Advise CSNDC to use their housing portfolio as a best practice pilot for comprehensive building upgrades
- Conduct innovative outreach to increase participation in existing upgrade programs

CSNDC and MAPC will not pursue all these strategies alone. Many of the aforementioned agencies and organizations must sustain a coordinated effort.

Consequently, these strategies include recommendations for a range of organizations. They note actions CSNDC and MAPC can take, and recommend they advocate for richer upgrade programs, with Codman Square as a pilot site for new initiatives.

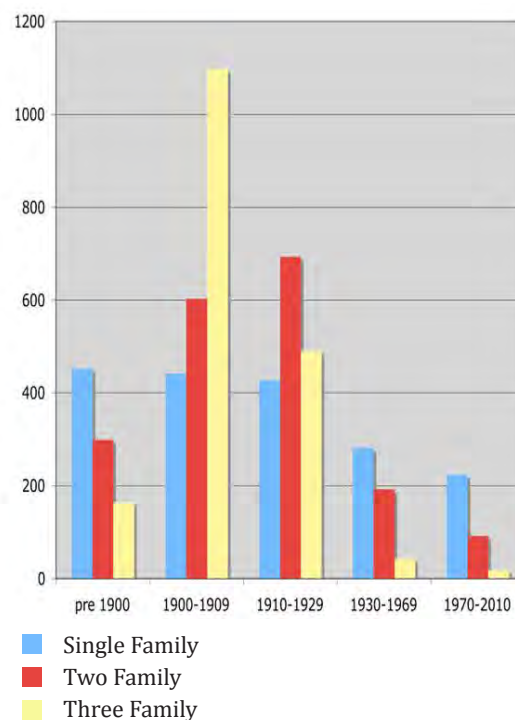


## CURRENT CONTEXT

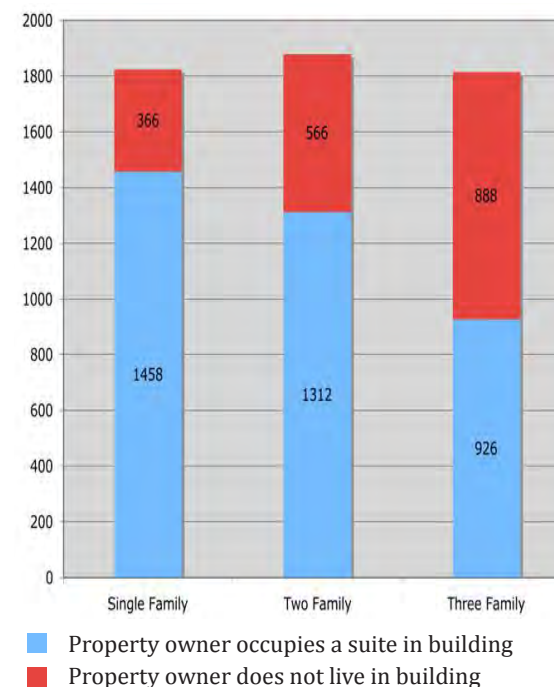
The vast majority of Codman Square's housing stock is one-to-three family homes built prior to 1930 (Fig. 3-1). The high concentration of rental units inhabited by low-to-moderate-income families presents challenges to addressing these issues through home upgrades. First, energy efficiency upgrades are difficult to achieve in rental properties because the incentive to upgrade a home is split between landlords and tenants. Landlords may be reluctant to invest in improvements to their properties when it is tenants who will see the savings on their energy bill. The tenant, on the other hand, has little interest in spending on a home that they do not own and may only rent for a limited time.

Second, the income levels in Codman Square indicate that neither tenants nor landlords occupying their properties may be able to take on the debt necessary for larger capital investments. Therefore, upgrades that improve the efficiency and health of the building stock are left unmade. Because of these factors, negative health impacts and high residential energy use predominate in Codman Square.

**Fig. 3-1: Age of Building Stock: 1 -3 Family Homes**



**Fig. 3-2: Percent of Buildings with Owner Occupancy**



Source: Boston Assessing Department, 2010



## Health Issues and Impacts

The age and condition of Codman Square's older buildings can lead to lead paint and asbestos exposure, leaks and mold, pest infestation, insufficient heating, and drafts, all of which contribute significantly to health impacts such as asthma and lead poisoning. These impacts are particularly acute in South Dorchester, the larger neighborhood around Codman Square.

### Lead

Lead is a common additive in paint used in older homes. Exposed lead

paint can flake into the air or become embedded in the soil surrounding a home. Exposure at low levels can result in attention and behavioral problems and reduced motor skills. High lead exposure can result in seizures or coma. Children are particularly susceptible, resulting in the passage of lead laws nationwide.

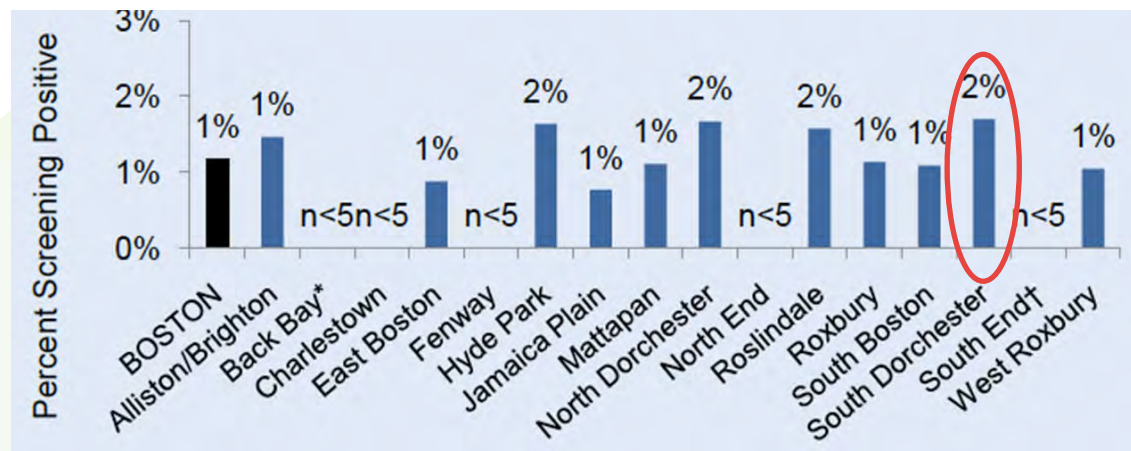
Because of these risks, Massachusetts Lead Law requires lead abatement in homes built before 1978 in which children live. South Dorchester has long experienced high rates of childhood lead exposure and rates in Codman Square are higher still (Fig. 3-3).

Substantial reductions in lead exposure have been achieved, however. Boston's Lead Action Collaborative reports that in the past twenty years, the number of children showing elevated lead levels in their blood has gone from 6000 to under 200. This is due to the efforts of multiple government, nonprofit, and community-based organizations.

Nevertheless, "lead safe" homes that are compliant under existing laws are not lead free; lead paint remains in the home. Unfortunately, energy efficiency upgrades, specifically weatherization measures like blowing insulation, can exacerbate lead dangers in homes that were previously abated.

The EPA's 2008 Renovation, Repair, and Painting rule (RRP) requires that contractors be trained and certified in lead safe practices when working on renovations of any home, school, or child-care center built before 1978. However, some healthy homes advocates worry that contractors are not properly certified nor adhering to RRP practices since energy efficiency programs have sprung up in the past few years and contractors doing the work may be new to the field.

**Fig. 3-3: Children with Elevated Blood Lead Levels by Neighborhood, 2009**



\*Includes Beacon Hill, Downtown, and the West End

† Includes Chinatown

Source: Health of Boston, 2010

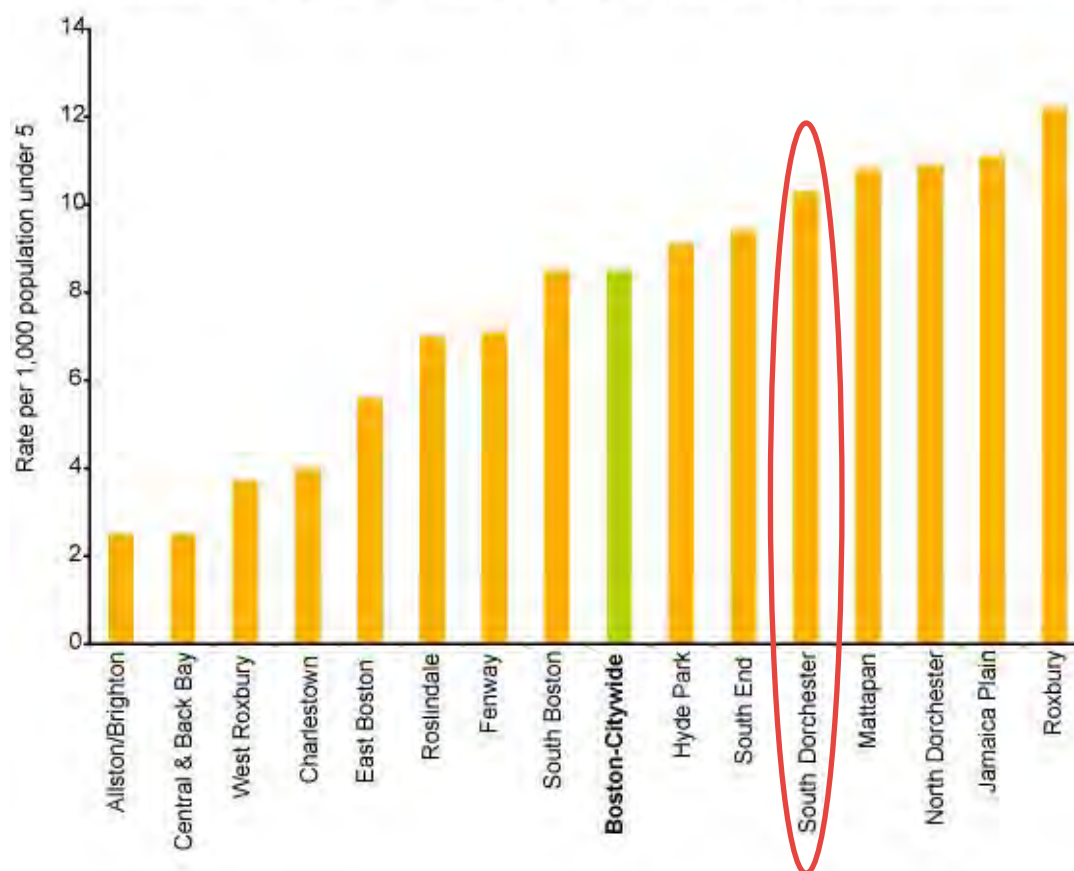
### Asthma

Codman Square and other inner-city communities of color suffer from disproportionately high rates of childhood asthma. Asthma can be triggered by multiple issues such as moisture, mold, leaks, vermin, poor insulation and ventilation, carpeting and lack of heat, the condition of which are all regulated by the state sanitary code.

Any violation of the sanitary code filed with the health commission will require a landlord to bring the property into compliance. However while some of these issues, such as leaks, mold, and pest infestation are chronic, they are dealt with in a piecemeal, symptomatic fashion. Health Resources in Action, a non-profit focused on improving public health, notes that multiple studies have shown the efficacy of addressing asthma triggers through home upgrades.

Weatherization can exacerbate asthma problems if care is not taken. Because energy efficiency contractors are often

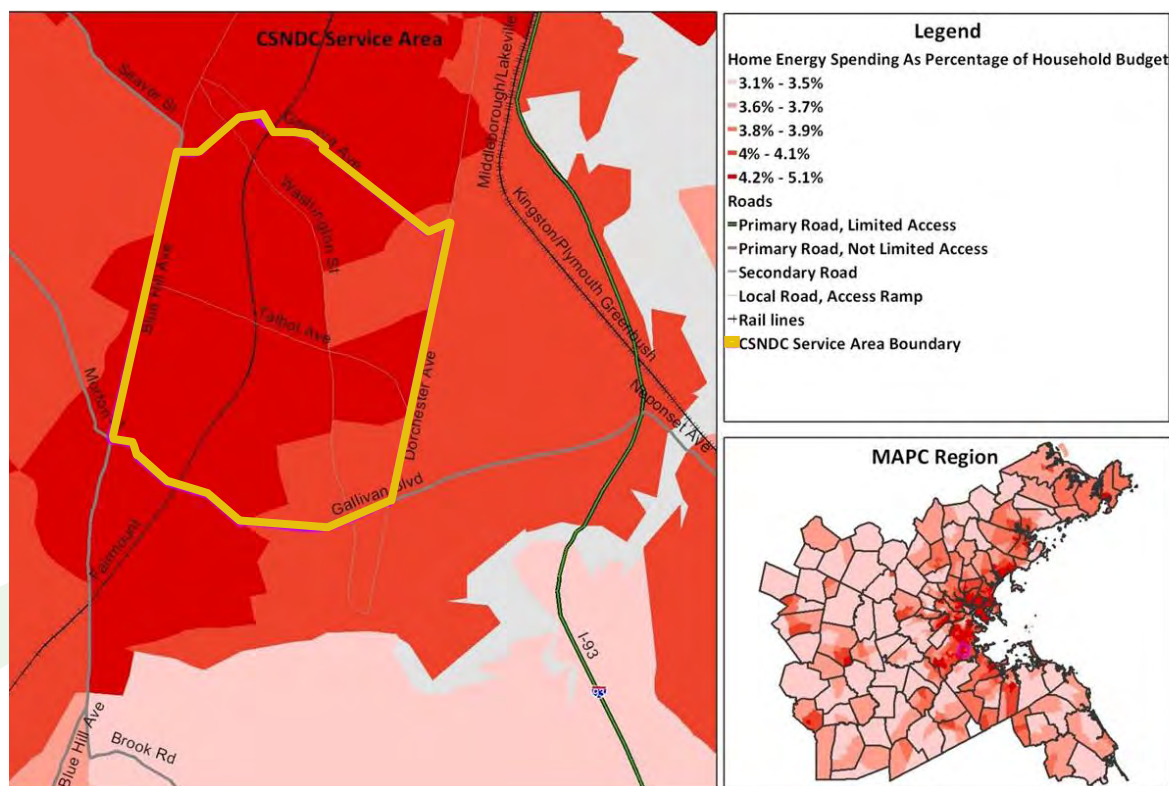
**Fig. 3-4: Asthma Hospitalization Rate, Children Under Age 5, by Boston Neighborhood, 2003-2005**



Source: Boston Indicators Project (Public Health Commission, data)

unaware of these triggers, weatherization is sometimes performed without proper precautions to protect air quality.

**Fig. 3-5: Home Energy Spending as a Percentage of Household Income**



Source: Geolytics, 2010. Based on Bureau of Labor Statistics data, 2004

### High Energy Spending

The condition of Codman Square's housing not only creates health concerns but imposes an economic burden as well. The energy consumed to heat, cool, and power homes can be a significant financial burden on low-income households.

Indeed, residents in Codman Square spend 30 - 50 % more on energy as a portion of their household budget than other neighborhoods in the greater Boston metro region. While this proportionally higher energy spending in Codman Square is in large part a product of lower average incomes, it also reflects an energy inefficient building stock.

Money spent on energy leaves the community, bound predominantly for utilities and multinational energy companies. The trends are even more pronounced when only low-income households are considered – nationally, low-income households spend 14% of their income on utilities.

Reducing energy use can make an important contribution to community wealth in Codman Square, increasing the dollars that are re-circulated locally. Conducting energy efficiency retrofits for homes can save residents significant money. These investments typically have a net-positive financial impact, paying for themselves in a few years through utility bill savings. Action for Boston Community Development (ABCD) report that their efficiency assistance programs typically result in a 30% energy bill savings for the resident.



Several challenges have prevented widespread adoption of energy efficiency retrofits in Boston and Codman Square. First, as mentioned, the incentive to foot the bill for an upgrade is split between landlords and tenants. Residents may also lack awareness about the energy efficiency programs they have access to, which is addressed in our third recommendation. Additional expenditure is needed to fix buildings and bring them up to code before energy efficiency retrofits are implemented.

The critical issue in Codman Square however is that existing retrofit programs cannot perform upgrades to many homes because of the prevalence of indoor home health hazards (lead paint, asbestos, or mold), older knob-and-tube electrical wiring, structural issues (leaky roofs), poor ventilation, and fire hazards. These “pre-weatherization barriers” require additional expenditure to fix and bring up to code before energy efficiency retrofits are implemented.

Approximately 50% of all of Massachusetts’ inner-city housing faces pre-weatherization barriers. This percentage is likely to be higher for the rental housing stock, which has had less

frequent upgrades to wiring, lead-paint abatement, or similar improvements. A national review of Weatherization Assistance Programs (WAPs) by the Green and Healthy Homes Initiative found that pre-weatherization barriers prevented 13% of WAP projects nationally, and much higher rates in some locales. On average, WAPs nationwide found the average costs of treating pre-weatherization barriers were \$2,200.

For programs in Boston, typical costs are reported to be \$200-\$500, but even these relatively small costs hinder implementation. Program Administrators are prohibited from spending on non-energy related costs, WAPs are restricted by the Department of Energy to spending no more than 15% of project costs on pre-weatherization, and contractors implementing energy upgrades operate on small margins and cannot cover costs.

Utility funded efficiency upgrade programs, as currently designed, cannot cover many pre-weatherization barriers. Residents or landlords may thus have to pay for the improvements out-of-pocket, which typically prevents

households from going forward with an intended retrofit. Merely the process of having an electrician or building inspector verify pre-weatherization barriers can be an impediment to moving forward. Programs often lack official procedures for referring health and safety hazards to the appropriate agency if they identify them during weatherization work and correct referrals can take up to two years.



## INSTITUTIONAL CONTEXT: INTEGRATING HEALTH AND ENERGY IN THE HOME

### Benefits of Integrated Programs

Currently, there is little coordination between health and energy programs. Working towards more integrated program delivery would engender a number of benefits:

#### *Overcome Pre-Weatherization Barriers to Energy Efficiency*

Home health and safety issues create “pre-weatherization barriers” which stall or derail upgrade projects. A program to link energy efficiency upgrade work with home health upgrades, thus, would allow for pre-weatherization barriers to be systematically eliminated, allowing more homes to proceed with energy upgrades.

#### *Protect Health During Energy Upgrades*

Energy upgrades can worsen health impacts by sealing homes without addressing asthma-causing irritants or exposing residents to lead paint. Integrating home health and energy upgrade programs provides a platform to ensure that contractors are properly trained and use best practices.

#### *Improve Outreach and Recruitment into Upgrade Programs*

Currently, outreach for energy efficiency and home health quality programs operate independently of each other. Engaging households in upgrades has proven difficult, with low participation rates despite substantial expenditures on outreach. Once participants are enrolled in a program, it makes sense to maximize this interaction by providing both health and energy related services.

#### *Create Higher Wage Employment*

Training contractor crews to address both health and energy issues provides them with a range of valuable skills. Contractors with this range of skills have experience higher wages in some Green and Healthy homes pilots.

#### *Improve Households’ Experience*

*and the Cost-efficacy of Program Delivery*  
There are logistical benefits for residents in combining upgrades: the work can be performed quickly at one time, rather than over two separate home improvement projects.

This is cost efficient, less disruptive and, in turn, makes both energy and health upgrades more attractive to residents. By realizing all of these benefits, integrated delivery of health and energy upgrades could increase the participation rates in upgrade programs, the positive impacts of upgrades for households, and the cost-efficacy of program delivery.

### Current Efforts to Integrate Health and Energy

Despite all of the benefits of integrating the two types of work, efforts to integrate health and energy home upgrades have been limited. This may be changing. The national Green and Healthy Homes Initiative (GHHI) - a coalition of the HUD, Center for Disease Control, and the non-profit LeadSafe - has developed recommendations for WAPs to follow. These include helping residents identify health hazards and potential costs, comprehensively cataloging home health and safety issues, and leveraging different funding streams for co-investment. These efforts could extend to other energy efficiency programs.

A federal working group consisting of HUD, EPA, DOE and several other agencies is supporting the GHHI. The Group has suggested developing a tiered health, energy, and safety performance standard for homes; establishing flexible federal funding schemes that can address both health and energy in homes; and training standards for contractors and assessment professionals. Additionally, the EPA is in the process of drafting healthy homes and safety guidelines and best practices for energy upgrade contractors.

While institutional change and inter-agency coordination is developing at the federal level, home health and energy efficiency programs in the Boston region still remain largely disconnected. Nevertheless, the strength and abundance of these programs provides opportunities for collaboration and comprehensive action.

### **Existing Program Capacity in Boston and Massachusetts**

Codman Square residents have access to a variety of well-developed building upgrade programs that support home health and energy efficiency. Funded by federal grants or through utilities, these programs can be accessed by residents, homeowners, and public housing authorities. Currently, there is little connection between health and energy programs.

#### **Energy Programs**

Massachusetts offers numerous, nationally exemplary programs to help homeowners and tenants fund energy efficiency. As a result, Codman Square residents have access to several useful energy efficiency programs, each targeting income levels and tenureship:

#### *Action for Boston Community Development (ABCD)*

ABCD is the primary state WAP in Dorchester. ABCD provides low-income heating assistance and energy efficiency services to residents with incomes under 60% of state median income. An application to ABCD's low-

income heating assistance program (LIHEAP) automatically puts residents in touch with ABCD's energy efficiency services at zero cost to the resident, beginning with a free home energy audit. Landlords and tenants with landlord permission are eligible.

#### *MassSave*

MassSave is a statewide utility rate-payer funded program, offering energy efficiency upgrades for residential buildings. For residents of all income levels, MassSave provides free home energy assessments and rebates on energy efficient products and appliances. Its numerous programs target different levels of income eligibility and housing:

- The Multifamily program provides upgrades in buildings over four units where at least half of the residents make less than 60% of AMI.
- The Major Renovations program is designed for homes that are being renovated or upgraded. Technical assistance is provided through onsite inspections. Up to \$2000 in incentives per home are available.



- HEAT loans for heating and water heating upgrades. Up to \$25,000 loans, with zero interest, are awarded to homeowners that own 1- to 4-unit buildings to install a portfolio of upgrades. Loan terms are seven years.

#### *Renew Boston*

Renew Boston is the City of Boston's signature energy efficiency program. Residents of 1-4 family homes with annual income between 60%-120% AMI are eligible. Owners or tenants with the owner's permission can apply. There is zero cost to residents.

Funded by ARRA, Renew Boston's services begin with a free home energy assessment. Up to \$3500 is available for each household; most households use the total amount.

### **Health Programs**

The City of Boston, Massachusetts state government, research institutions, and local organizations provide a strong framework to address lead, asthma, and other healthy home issues. The following summarize the main agencies administering programs in the Boston area:

#### *Breathe Easy*

Run by the Boston Public Health Commission (BPHC), Breathe Easy allows doctors of asthma patients to refer an inspector to their home. Free inspections are conducted by the Department of Inspectional Services, which works with landlords to ensure buildings comply with Boston's sanitary buildings code. BPHC also offers outreach, education, and training programs for landlords and tenants on asthma prevention in the home.

#### *Healthy Pest Free Housing*

Also run by the BPHC, this program focuses on identifying pest issues and enhancing integrated pest management practices in affordable housing. Key community partners active in research, outreach and advocacy in Dorchester

include the Boston Urban Asthma Coalition, the Bowdoin St Neighborhood Health Center and the Asthma Regional Council of New England.

#### *Lead Safe Boston*

The Department of Neighborhood Development (DND) administers this program to provide forgivable loans of up to \$8,500/unit for lead abatement. Property owners of 1-4 family homes with household income under 80% area median income (AMI) are eligible. DND works in conjunction with the Boston Home Center, which processes the loan, locates a contractor, provides monitoring and administers a post-renovation inspection.

#### *Get the Lead Out*

A state project of MassHousing, Get the Lead Out is administered locally by the Dorchester Bay Economic Development Corporation (DBEDC) and DND. It provides 0-5% interest loans over 5-15 years to owner-occupiers of 1-4 family homes. Interest rates are tied to income eligibility and funding is only for lead abatement. Loans range from \$30,000 for single-family home to \$45,000 for four family homes.

*HomeWorks*

The DND's HomeWorks program provides interest-free loans up to \$15,000/home to owner-occupiers of 1-4 family homes for repair and renovation projects. Single households with annual income under \$75,750 are eligible as are multi-resident households with combined annual income under \$95,000. Households with annual income over 80% AMI are required to match funding dollar for dollar.

HomeWorks funding is often pooled with Lead Safe Boston funding in order to upgrade homes in a more comprehensive way during lead abatement. HomeWorks funding is generally used for significant capital investments, such as the replacement of a building's heating system, and it may be used for costly pre-weatherization barriers.



## CHALLENGES AND OPPORTUNITIES

### Comprehensive Upgrade Programs

The Lead Action Collaborative (LAC) reported that, due to the *“distressed housing market and the economic recession, property owners are having much more difficulty in accessing deleading funds because they are behind on their mortgages, do not have good credit, are unemployed and/or are late on tax/utility payments to the City of Boston. These factors can result in owners being disqualified for city programs, or not meeting the underwriting guidelines of the banks that issue Get the Lead Out loans.”*

There is increasing recognition amongst Boston’s healthy home advocates that greater integration of programs and education among contractors will improve the cost-efficacy of programs and provide better services to residents. LAC and the Boston Urban Asthma Coalition recently merged into the Health Homes and Schools (HHS) program under Health Resources in Action, a research and consulting organization located in South Dorchester.

HHS is working with city partners to consider how healthy homes programs and funding might be streamlined. They are also in communication with Renew Boston to inform them about the lead risks associated with weatherization.

Meanwhile, both ABCD’s WAP program and Renew Boston are heavily reliant on grants from the 2009 American Recovery and Reinvestment Act. These funds will be exhausted around 2013. To continue, the programs will rely more heavily on utility funding, as well as financing systems that allow occupants to pay for upgrades. Maintaining strong participation in these programs through a transition to financing systems will be difficult, but is crucial to achieve Boston’s Climate Action goals.

### Parallels in Program Delivery

Home health and energy efficiency upgrade programs in Boston share common steps to engage households:

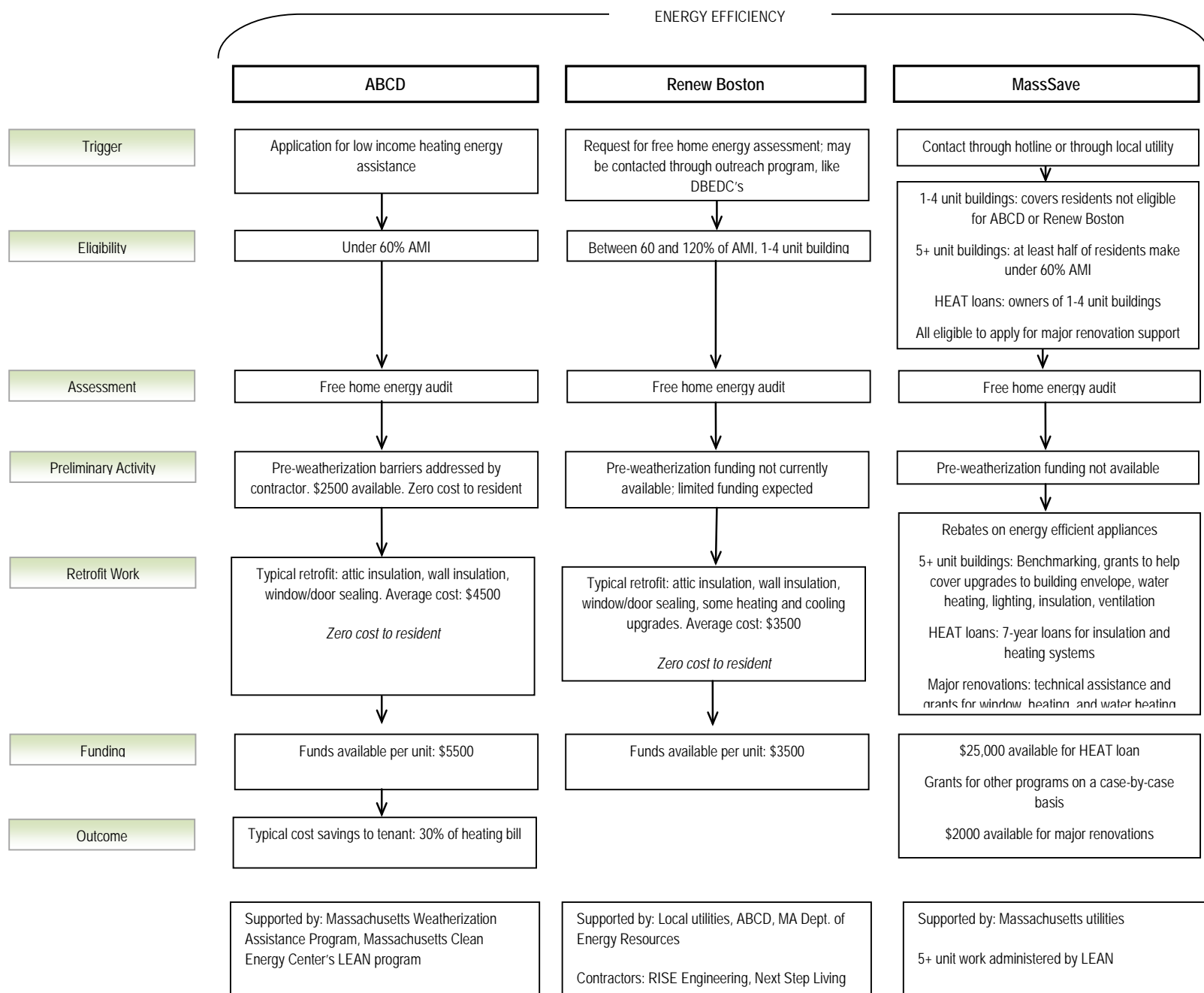
- An event triggers a home assessment, such as a doctor of an asthmatic child alerting the Boston Public Health Commission

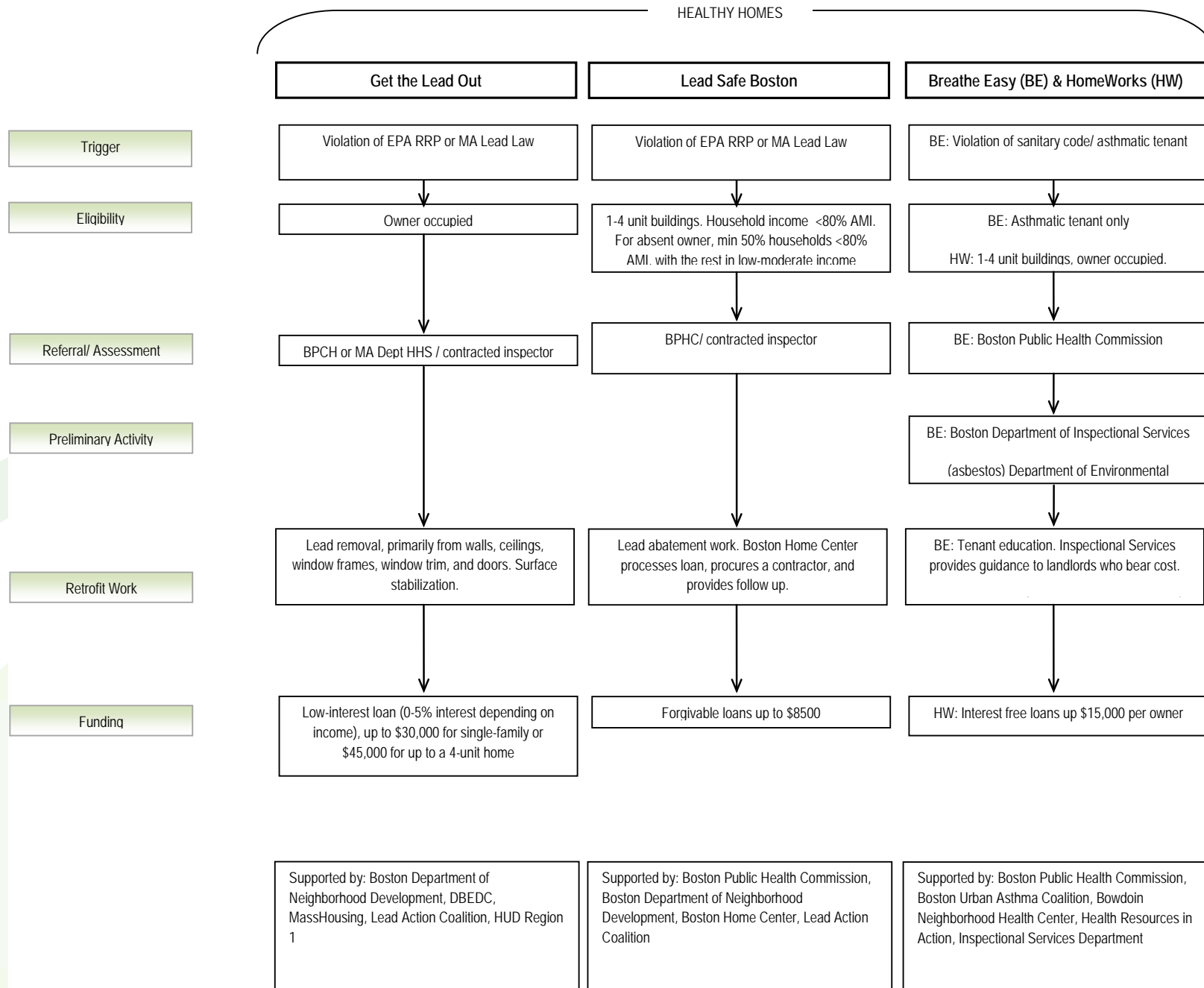
to a violation of the state Sanitary Housing Code, or a property owner requesting a free home energy audit.

- The appropriate agency refers the tenant or landlord to a contracted agency that performs a home health or energy assessment. This assessment prioritizes optional and/or mandatory upgrades to the home.
- Head agencies provide funding. Agencies provide funding up to a certain amount to help property owners manage the financial burden of the home upgrade. Each program carries eligibility requirements for participating tenants.
- Upgrades are performed. Contractors typically require certain certifications to undertake upgrades. Programs often feature a quality assurance regime to assure acceptable work.

Currently, health and energy programs are not integrated. The following diagrams illustrate the current complexity for each phase of a healthy and energy home upgrade process in Boston.







## KEY PRINCIPLES

### **Increase participation in existing programs**

As the previous sections of this chapter have illustrated, many programs currently exist in the Boston area to address home health and energy efficiency upgrades. However, participation rates in energy efficiency programs have been low, particularly in neighborhoods like Codman Square. Families in Codman Square would disproportionately benefit from energy efficiency upgrades, therefore it is critical to increase their participation in these programs.

### **Improve the quality of upgrade programs**

For home health and energy efficiency upgrade programs to truly improve the quality of service they provide to residents, they must take a streamlined approach. Currently, energy efficiency upgrades may exacerbate health issues in the home, while health-related upgrades may not fulfill all the work needed to make a home energy efficient. A comprehensive home health and

energy efficiency upgrade process in Boston would go a long way toward addressing these issues.

### **Realize economic and health benefits for local communities**

Residents of Codman Square experience health impacts and high energy spending disproportionate to the rest of the Boston metro area, in large part due to the aging building stock. Home upgrades will help reduce utility bills, improve health, and create employment opportunities.

### **Connect organizations at all levels to leverage resources, expertise and partnerships**

The process of engaging residents and landlords to undertake home upgrades requires building upon strong community-level organization. Local non-profits are the most trusted messenger of policy and program dissemination. Therefore, connecting local groups like CSNDC to other organizations responsible for home upgrade program outreach, funding,

and management will help scale up the completion of home health and energy upgrades at the neighborhood level.

These principles address each of the facets of neighborhood sustainability identified in this report: Public Health, Energy and Environment, Wealth Generation, and Supporting Existing Communities.





## STRATEGY 1: COMPREHENSIVE GREEN & HEALTHY HOME UPGRADE PILOT

We recommend that a wide array of stakeholders initiate a collaborative process to integrate health and energy upgrade services in Boston. This effort should begin with a pilot program offering integrated services, similar to the Green and Healthy Homes Initiative pilot in Baltimore. Codman Square can serve as the locus for the pilot and CSNDC's portfolio could serve as sites.

A comprehensive home upgrade program will require collaboration at each phase of the upgrade process. Below, we suggest strategies for a potential program, applicable to each stage and provide both interim and longer-term strategies to deliver more integrated upgrade services.

### **Trigger, Referral and Home Assessment**

#### *Interim Implementation Strategy*

At minimum, the customer service, assessor and contractor staff of existing upgrade programs should be provided information about healthy homes and/or energy efficiency programs and directed to encourage tenants and landlords to contact the appropriate agency. Households would then have information and support to pursue energy efficiency, and vice versa. Specifically:

The Boston Public Health Commission (BPHC) should provide information and training to the doctors participating in the Breathe Easy Program as well as the Departments of Inspectional Services and Environmental Hazards. This information and training should introduce professionals to energy efficiency programs and inform them about the potential to leverage these programs as additional funding sources for upgrading the home.

BPHC should encourage these professionals to directly refer landlords and tenants to energy efficiency programs. The Healthy Homes and Schools (HHS) program of Health Resources in Action should partner with the BPHC to provide similar information and training to their staff and member partners.

Energy efficiency programs should also require that assessors and contractors track cases in which health and safety issues are cited as barriers to participation. The energy efficiency program should then share these cases with the relevant healthy homes agency to ensure that property-owners seeking to participate can address pre-weatherization barriers expediently.

*Comprehensive Implementation Strategy*  
Ideally, the main health and energy programs should collaborate with relevant institutions, contractors and community organizations to establish a comprehensive health, safety, and energy home assessment procedure.

The core task will be crafting a comprehensive home assessment that will allow assessors to fill out a form that provides homeowners a detailed scope of work for a comprehensive upgrade. This would become the standard assessment form for each health, safety, and energy efficiency program. GHHI has in fact developed such a form, which can be used as a model.

Using this form does not preclude programs from operating in parallel. Individual programs may still fund only certain aspects of the home upgrade. Property owners would retain the ability to choose which upgrades to pursue. However, a comprehensive assessment form would ensure that a full appraisal of the health and energy issues in a home is taken account of and that all relevant agencies are informed, in particular about potential violations of existing regulations.

## Contractor Certification & Training

### *Interim Implementation Strategy*

In the short-term, agencies should ensure that their contractors are aware of potential home problems that could be exacerbated. In particular, energy efficiency programs and their home contractor firms should ensure assessors are trained and certified under EPA's Renovation, Repair, and Painting rule. Furthermore, they should ensure contractors are trained in the EPA Healthy Homes and Safety Guidelines when these are made available.

### *Comprehensive Implementation Strategy*

In the longer term, contractors and home assessors should pursue training and certifications requirements that provide grounding in both health and energy efficiency issues. The federal Healthy Homes working group, in conjunction with GHHI, is considering a national certification for health and energy contractors. Boston upgrade programs should seek to have their contractors trained in the first iterations of these standards.

## Integrated Financing Mechanism

### *Interim Implementation Strategy*

At minimum, the agencies administering funding for home health and energy programs should work together to streamline eligibility requirements for grants and loans. Where eligibility differences exist, programs should develop memoranda of understanding that allow property-owners participating in one program to leverage additional funding from other programs as a reward for agreeing to complete a comprehensive home assessment and upgrade.

Agencies should develop specific coordinated strategies around common pre-weatherization barriers to ensure that property-owners are not declined financing for these issues. Renew Boston and the Boston Department of Neighborhood Development are already pursuing this strategy to address the prevalence of properties that are declined funding to replace knob-and-tube wiring.

Previously the HomeWorks program would decline applicants because the cost of replacement was not large enough to warrant financing, whereas Renew Boston turned down applicants because the work fell outside the scope of what their funding could cover.

*Comprehensive Implementation Strategy*  
Ultimately, programs should seek to finance both health and energy upgrades through one specialized financing mechanism. This will reduce the hassle households face to secure upgrades, and facilitate a streamlined integrated energy upgrade process. This will be especially important as more energy efficiency programs move towards self-financing models.

An integrated financing mechanism would feature one agency, perhaps the Boston Department of Neighborhood Development, to coordinate financing for comprehensive upgrades. This agency could:

- Accept comprehensive home upgrade forms (see above) from contractors, on behalf of homeowners, detailing upgrade recommendations.

- Determine what elements of the upgrade recommendations qualified for either incentives or financing from various health and energy upgrade agencies.
- Pool funding for the project from various escrow funds established by upgrade agencies, to serve as either cash incentives or loaned capital. Capital could also be provided by lending institutions, likely making use of credit enhancements.
- Disperse funds to contractors to undertake the work.
- Establish a repayment mechanism with households. Repayments may be made only by homeowners, potentially through a personal loan or a property assessed financing scheme. Alternatively, some payments that benefit tenants (such as upgrades saving tenants utility bills) could be paid for through an on-utility bill financing mechanism.

The design and implementation of such integrated lending schemes would require extensive negotiations between upgrade agencies and various stakeholders, including: Consumers rights advocates, funders, lenders, utilities, the Massachusetts Department of Public Utilities, the City of Boston, and others.

Such a program would likely take a number of years to be fully established. These stakeholders could agree to begin the process with a limited pilot in the Codman Square neighborhood, potentially using new additions to the CSNDC's portfolio as test sites. A small pilot could better determine the potential efficiencies inherent in coordinated delivery, the feasibility of a joint financing system, and other issues.



**CASE STUDY: GREEN AND HEALTHY HOMES INITIATIVE, BALTIMORE**

The Green and Healthy Homes Initiative (GHHI) has developed a “Comprehensive Environmental Health and Housing Assessment” and tested the tool in 12 pilots across the country.

One case involved a single mother with two severely asthmatic daughters living Northwest Baltimore. GHHI combined funding from HUD Office of Healthy Homes and Lead Hazard Control, the Baltimore City Community Development Block Grant and Community Services Block Grant Programs (ARRA), the Maryland Energy Administration, the Annie E. Casey Foundation, Osprey Foundation, and the Blaustein Foundation to commission the National Coalition to End Childhood Lead Poisoning to assess the property using the comprehensive tool. The property had several problems with plumbing, water leaks and moisture, exposed lead paint, air leaks, excessive energy use due to lack of insulation, and pest infestation.

The Coalition coordinated a single crew to address issues such as: installing energy efficient windows, stabilizing exposed lead paint, conducting integrated pest management, installing air conditioners and an air filtering system in the child’s bedroom, repairing plumbing, insulating pipes and sealing air leaks. The Coalition additionally provided in home counseling to address behavioral changes necessary to mitigate asthma symptoms and energy consumption.

This case resulted in an estimated 25% savings in materials and labor costs from completing the home upgrade using a comprehensive, coordinated approach. A 27% reduction in natural gas usage for heat and hot water was achieved within 12 months of the comprehensive upgrade and hospital visits triggered by the childrens’ asthma ceased entirely. Asthma-related health costs prior to the comprehensive upgrade were over \$53,000.

These results have been mirrored in eighty project pilot homes in Baltimore, all of which have shown major reductions (up to 35%) in electricity and gas use, as well as significant avoided health-related expenses. Avoided asthma-related hospital visits in particular have allowed effected children to remain in school and their parents to remain at work, improving their earning potential.

Source: Green and Healthy Homes Initiative

## STRATEGY 2: USE CSNDC'S PORTFOLIO AS PILOT FOR COMPREHENSIVE UPGRADES

CSNDC owns several older properties, including five triple-deckers bought out of foreclosure. These properties should be upgraded in order to provide healthy and energy efficient rental homes. CSNDC can leverage existing programs for much of this work, then pursue additional efforts to realize greater gains. CSNDC should use a comprehensive strategy to conduct home health and energy retrofits, becoming an exemplary property owner.

Retrofitting CSNDC's portfolio of buildings offers numerous benefits. Energy expenditures will be reduced, and the properties will be more environmentally sensitive. Better insulated and more-efficiently heated homes will be more comfortable for tenants. Buildings treated for mold and moisture problems will have an increased lifespan as well. Finally, tenants' health will be improved through elimination of home health hazards and improved indoor air quality.

CSNDC should comprehensively retrofit its existing properties using the following approach:

### Evaluation and Benchmarking

CSNDC should conduct an evaluation of its current properties. Free home energy audits should be utilized, but, in addition, building energy consumption should be benchmarked using existing energy bill data. Furthermore, health hazards should be thoroughly assessed and catalogued.

### Comprehensive Retrofits

The next step is to leverage existing resources to comprehensively address home health hazards and implement energy efficiency retrofits. In this process, CSNDC would tackle any issues of mold, asbestos, lead paint, or ventilation while also putting in insulation, air sealing, CFLs, and efficient hot water heating and space heating.

The following resources should be primary sources of funding:

- Leverage MassSave's multifamily and income-eligible programs. This may require having tenants in place or having tenants signed up, as residents need to be income-eligible.
- Connect with ABCD on potential assistance through the Weatherization Assistance Program. This would require building to have residents with incomes under 60% of AMI. It would also offer funding for addressing pre-weatherization barriers.
- MassSave offers technical assistance that should be utilized during the process.
- Connect with Renew Boston and utilities on launching this as a model program for comprehensive retrofits. Renew Boston and its partner utilities may be interested in providing a special grant for an NDC developing a replicable model of holistic home retrofits.
- Apply for Boston's newly won pre-weatherization grant money.

- Invite the consultation of an energy services company (ESCO), if additional financing solutions are needed.
- The Department of Inspectional Services should be contacted to provide a free healthy homes inspection. Lead Safe Boston and HomeWorks funding should be utilized, especially if lead issues are found in the properties.

### **Going Beyond Standard Energy Efficient Retrofits**

CSNDC can go above and beyond the standard retrofit procedure by implementing additional cost-effective energy efficiency measures. First, it should put in highly insulated windows that prevent significant amounts of heat loss. Improved HVAC systems, including new ducts, can not only cut energy costs but also improve indoor air quality.

Water heating systems should be made as efficient as possible and solar water heating should be investigated as a possibility, especially given the attractive incentives offered by the Commonwealth Solar program.

Finally, CSNDC should identify and install ENERGY STAR large appliances – ovens, refrigerators, washers, and dryers – as these investments can cut electricity use drastically.

### **Ensure Green and Healthy Maintenance and Operations**

It is important to operate retrofitted buildings in a way that maximizes their health and energy benefits. First, maintenance staff should be trained in best practices. Second, water heating and space heating settings should be adjusted periodically to maximize system efficiency. Third, HVAC systems should be checked regularly to maintain efficiency and indoor air quality.

### **Tenant Education**

A crucial component of a holistic retrofit is tenant education. While this list will be expanded as tenant needs are identified, the following issues should be part of a tenant education program:

- How to maximize home energy efficiency
- How to save water at home
- What to recycle

- How to keep your home healthy, especially for young families
- Benefits of commuting by public transportation, biking, or walking
- Facilitation of carpools for interested residents

### **Tracking and Monitoring Impacts**

The results of a comprehensive retrofit must be measured and catalogued. Not only will this enable CSNDC to revisit buildings to make additional improvements, but it will also provide other NDCs with data on how successful comprehensive retrofits can be.

Energy bills should be tracked with tenant permission, and compared to the pre-retrofit benchmarks. A net cost analysis can be conducted to examine the overall payback period of energy efficiency retrofits.

Resident satisfaction should be measured, of course. Finally, resident health indicators should be measured.



## STRATEGY 3: INCREASE PARTICIPATION IN EXISTING UPGRADE PROGRAMS

### Introduction to Community-Based Outreach

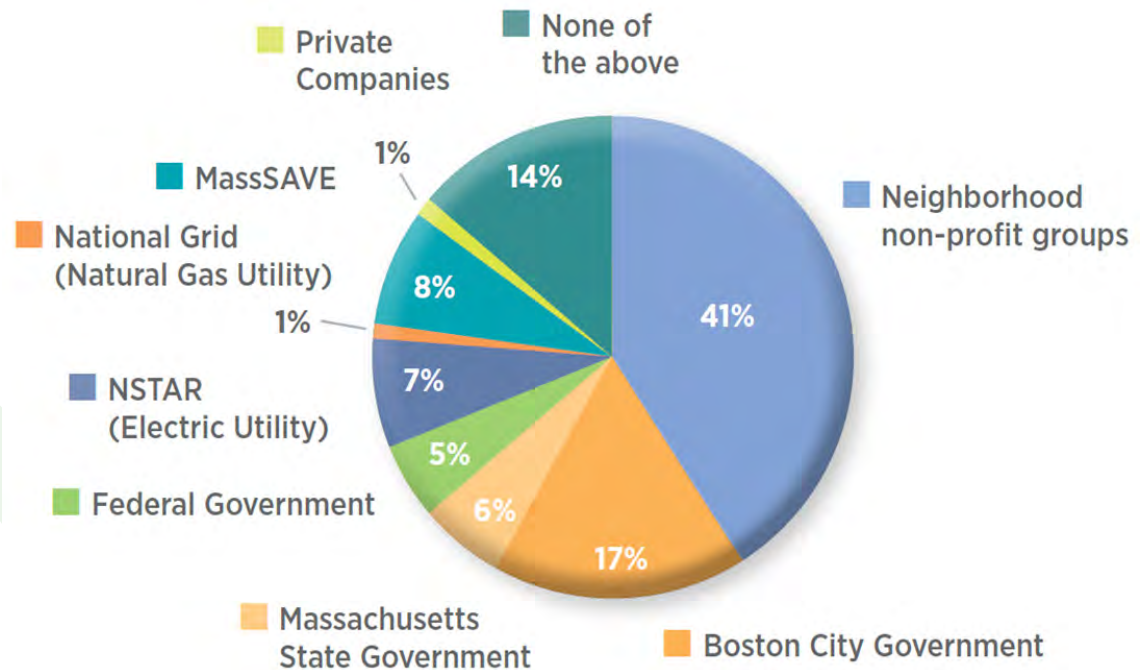
The City of Boston has found that residents trust neighborhood organizations to provide good advice on issues related to health and the environment. Community organizations are well suited to recruiting participants in outreach programs at community meetings, churches, schools, and going door to door.

In Spring 2011, Renew Boston contracted three neighborhood development corporations to conduct outreach for energy upgrade programs: Dorchester Bay Economic Development Corporation (DBEDC), East Boston's NOAA, and Nuestra Comunidad. These organizations can partner with other neighborhood groups, such as the CSNDC, to engage in outreach.

Renew Boston has also been active in the crucial area of engaging landlords, including having hosted a meeting of 150 landlords in the Codman Square area.

Fig. 3-6: City of Boston Energy Poll

Whom do you trust most about getting information on energy efficiency program?



Source: City of Boston

## Community-Based Outreach in Codman Square

DBEDC and Renew Boston will be responsible for much of the engagement around energy efficiency in the near future in Dorchester. However, this activity should not preclude CSNDC nor MAPC from undertaking outreach to foster health and sustainable energy in the community.

At minimum, the CSNDC and MAPC should:

1. Incorporate upgrade program outreach by the DBEDC into existing community engagement forums.

Stakeholders should also develop a common community-based outreach framework to engage residences in energy and health upgrades over the coming years.

This should:

2. Use behavior change theories to convince community members to participate in programs.
3. Identify engagement strategies that are most effective at drawing participants into programs.
4. Initiate a Green Landlord pilot in Codman Square to target upgrade outreach to landlords
5. Share a Customer Relationship Management System
6. Ultimately expand from outreach promoting building upgrade programs to other community organizing and sustainability efforts, leveraging the networks and goodwill created by upgrade programs

## 1. Incorporate Upgrade Program Outreach in CSNDC's Community Engagement

Codman Square NDC has a unique opportunity to take advantage of their trusted community networks to generate excitement for and commitment to adopting energy efficiency programs. CSNDC can use their existing programs to incorporate outreach for energy upgrade programs:

- The Millennium Ten planning process is well positioned to be a mechanism through which to engage a wide range of community stakeholders. As part of the ten-year comprehensive community plan, goals around energy efficiency and healthy living environments should be incorporated to ensure the sustainability of the neighborhood in the future. The Millennium Ten process should emphasize opportunities for ecologically-friendly changes to the neighborhood. We recommend setting goals for home energy audits, home upgrades, and overall utility savings.

- The Resilient Families, Resilient Communities Initiative will provide a platform from which to launch a broader community outreach strategy. An exercise could be conducted with the one hundred Resilient Families as a way of educating the families about energy consumption.
- CSNDC's Financial Fitness Services could be extended to include the economic benefits of home and energy efficiency upgrades on utility and healthcare savings. These community engagement initiatives provide a variety of opportunities to encourage residents to undertake upgrades:

Invite DBEDC staff to present the Renew Boston program and recruit participants at meetings for the above initiatives.

## 2. Use Behavior Change Strategies

Community engagement processes can apply behavior change strategies to encourage participation in home energy upgrade programs.

Pertinently, behavior researchers have found that people are more likely to undertake an environmental action when they:

- Perceive themselves as environmentally friendly people
- Commit to engage in efficient behaviors, and are reminded of these behaviors
- Feel that these behaviors are normal, that others are taking them, and that their peers approve of such actions
- Get the difficult parts of the process out of the way early in one fell swoop

In the context of recruitment, behaviors that should be encouraged amongst homeowners include: signing up for upgrade programs, having their homes assessed, and ultimately undertaking upgrades.

Program outreach coordinators should consider the following principles:

- Ask potential program participants for small commitments, and then designate them as environmental leaders when they make these commitments. Small commitments have been shown to make people more likely to undertake larger steps in the future. For instance, DBEDC's current strategy for Renew Boston begins with people signing up to be contacted about the program. The form could include a stronger pledge, with people asked to begin registration for the program.
- Use social settings to have participants sign up for programs. Committing to undertake a home assessment in a group setting is more conducive than doing so over the phone.
- Use City of Boston assessment records to target outreach to single family homeowners and rental properties separately. Single-family homeowners can be recruited directly, while landlords must be engaged on rental properties.



### 3. Identify Effective Strategies

Ongoing research should involve methodological assessment of what strategies work best in fostering participation in programs. For example, the DBEDC is currently surveying customers at various stages of the Renew Boston process to assess their experience with the program.

Other research strategies can be formalized to better assess experience with the program:

- *Qualitative:* Question prospective and current participants about their experiences and perceptions. Schedule regular sharing of insights amongst outreach personnel, within and between different programs.
- *Quantitative:* Some recent energy efficiency programs have emphasized testing new messages and initiatives with small groups, using control groups to quantitatively gauge the impact of their response. Such methods have their downsides, as some group must serve as a control. In a community organizing setting,

quantitative experimentation can be extremely difficult to realize in practice. However, Renew Boston or MassSAVE are positioned to conduct quantitative market research on different outreach messages, which could then inform local outreach efforts.

### 4. Green Landlords Program

With its high proportion of rental housing, Codman Square will require substantial landlord buy-in to realize the benefits of building upgrades. Codman Square should serve as the pilot site for a new city-wide Green Landlord program, a component of Renew Boston's Green Triple Decker Strategy.

- Recruit landlords through mail-outs, organization at community events, and other forums. Use small meetings and focus groups of landlords to determine what media sources and best to recruit landlords.
- Ask landlord's commitment to allow a free direct installation of simple upgrade measures (compact fluorescent light-bulbs, low-flow showerheads, simple pest management strategies, etc.) Label them a "Green Landlord" at this juncture.
- Invite landlords during this direct installation to a group meeting for the Green Landlords program, reminding them of their status and commitment to action. Enticements to attend the meeting should be substantial – for example, the Mayor or other well-known public officials could attend the first Green Landlord event.
- Register landlords in a communal setting at meetings. Gain commitment from some eager participants beforehand to initiate public signage. Also, include tenant speeches to emphasize the value of home upgrades.
- Celebrate participating landlords in media, signs in the CSNDC's window, and other forums. Use this media to promulgate subsequent iterations of the program.

## 5. Integrating Customer Relationship Management Systems

Renew Boston should liaise with consultants, other upgrade agencies, and neighborhood outreach partners to implement a Customer Relationship Management System (CRMS). CRMSs are software, hardware, and customer service protocols that allow for efficient collection and sharing of data about customers between different organizations. Properly implemented, they can reduce the costs and increase efficacy of upgrade programs by allowing for:

- Systematic information sharing among personnel who interact with customers, including outreach coordinators, home assessors, contractors, and quality assurance professionals. Many CRMSs now allow these professionals to enter information about customers and their households into data repositories using mobile devices, such as an iPhone
- A simple means of keeping track of the customers outreach personnel are responsible for

- Ongoing data analysis on customers' engagement throughout different stages of the program. Such analysis can identify stages at which customers are likely to drop out.

While Renew Boston has a CRMS of sorts, it does not provide the degree of functionality of some other programs, such as the Connecticut Neighbor to Neighbor Energy Challenge. When integrating outreach between multiple programs, having an integrated CRMS could substantially improve the efficiency and efficacy of outreach.

## 6. Expand on the Networks Created by Energy Upgrade Programs

The City of Boston intends for the majority of homes to receive an energy upgrade over the next decade. The level of commitment from participants, and investment of resources in recruitment, for this goal to be realized will be very substantial. Households that undertake upgrades may rightly consider themselves to be taking strong environmental action.

The opportunity to reinforce an environmental identity for residents, and link it to broader community improvement considerations, should not be ignored. Boston and its neighborhood partners have the opportunity to encourage further environmentally friendly behaviors, and conduct community organizing initiatives through these networks.

For instance, residents could be recruited into neighborhood volunteer opportunities, community sustainability planning, carpool programs, and/or a host of other programs and events.

Both the City of Boston and community organizations could provide periodic opportunities, reminding residents of their previous leadership in environmental initiatives. Establishing a CRMS with regular communications emails (see above) is one way of maintaining engagement with such networks.

## NEW BEDFORD

### CASE STUDY: NEW BEDFORD

The New Bedford Community Mobilization Initiative was a partnership between NStar Electric & Gas Corporation, the city of New Bedford, and two local nonprofit organizations, the Marion Institute and PACE YouthBuild. The community-based pilot program aimed to increase energy efficiency efforts and the development of green jobs in New Bedford, Massachusetts. The goal of the initiative was to weatherize 25 small businesses, 50 housing units and four apartment buildings over a two-month period as a first step toward helping the city of New Bedford reach its long-term goal of weatherizing 5,000 New Bedford housing units and small businesses over the next five years.

To encourage engagement from the community, the Marion Institute hired a team of New Bedford residents to become Community Mobilization Leaders. These leaders were responsible for conducting in-person outreach efforts to encourage New Bedford residents, particularly those who had not been reached through traditional marketing efforts, to participate in NSTAR's energy efficiency programs.

Similarly, P.A.C.E. YouthBuild, an affiliate of AmeriCorps, was responsible for the development of the pilot program's green jobs workforce program, especially targeted to inner-city youth. They worked to provide local contractors, construction workers, and residents with training and certification needed to work in the energy efficiency sector.

While the program was successful in issuing 28 weatherization contracts, they faced many pre-weatherization hurdles. In the future, community outreach coordinators should be prepared for potential pre-weatherization barriers by having access to the necessary resources, both financing for pre-weatherization issues and availability of adequate auditing staff, to ensure the program runs smoothly.

Source: Erin Brandt



## SUMMARY

Summary: Green and Healthy Homes		
Principles: <ul style="list-style-type: none"> <li></li> </ul>		
Recommendation	CSNDC Role	MAPC Role
Comprehensive Upgrade Program Pilot	CSNDC should help organize a local pilot for this program, potentially using its own portfolio of older buildings.	MAPC can utilize its position to facilitate regional conversation among agencies listed in this report on how to best integrate home health and energy upgrades.
Portfolio - Green Property Management	Act as an exemplary landlord and implement comprehensive home upgrade process in CSNDC's portfolio of existing buildings.	MAPC should disseminate the comprehensive upgrade and management process outlined in this report to other CDC partners interested in home health and energy issues.
Local Outreach & Recruitment: <ul style="list-style-type: none"> <li>Behavior Change and Identify Effective Strategies</li> <li>Green Landlord Pilot</li> <li>Customer Relationship Management System (CRMS)</li> <li>Promoting building upgrade programs</li> </ul>	<p>CSNDC should first and foremost integrate outreach on home health and energy efficiency into its existing community engagement programs. CSNDC can also take advantage of the best practice outreach methods, such as behavior change strategies, outlined in the report.</p> <p>CSNDC should launch a pilot program for Green Landlords using its own portfolio and then host subsequent events. CSNDC can request a connection to Renew Boston's CRMS once it establishes a robust program, in order to target landlords and families in the neighborhood that have successfully completed upgrades.</p>	<p>MAPC can utilize the outreach methods outlined above to enable and facilitate engagement among local partners around energy efficiency and home health upgrades.</p> <p>In particular, MAPC should consider funding the implementation of CRMS and should coordinate with Renew Boston and other upgrade programs to build upon their customer networks to target local partners.</p>

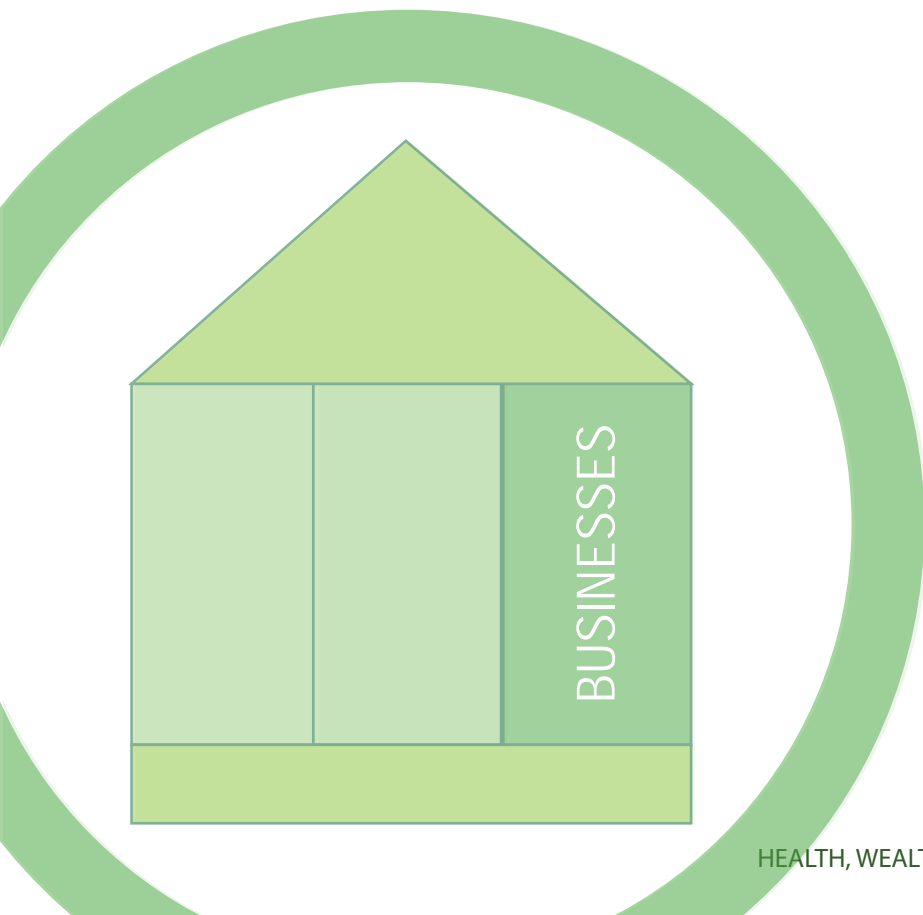


## WEALTH GENERATION - INTRODUCTION

The backbone of any thriving community is the wellbeing of its residents. Inner-city neighborhoods like Dorchester have struggled with economic insecurity because of historic disinvestment, racial segregation and redlining, poverty, and barriers to living wage employment. The new stops on the Fairmount Line address one of those barriers by helping transport residents to job centers. Other strategies to enhance the economic opportunities available to Codman Square residents will provide multiple sustainability benefits. By focusing on economic development that is also environmentally friendly, neighborhoods such as Codman Square can make progress towards improving the local and global environment.

Generating wealth in urban neighborhoods will also help the Boston metropolitan region become more equitable. Wealth is a “social determinant of health,” which means that economic stability helps individuals and communities stay healthy and access healthcare when needed. Our strategies aim to build wealth generation capacity in Codman Square to support a vibrant, healthy, environmentally-friendly neighborhood.

We use the term “wealth generation” to encompass individual and community sources of wealth, which may include individual income and assets, neighborhood resources, and community economic security. Our goals and recommendations are targeted toward creating or expanding access to these sources of wealth through neighborhood-level interventions.

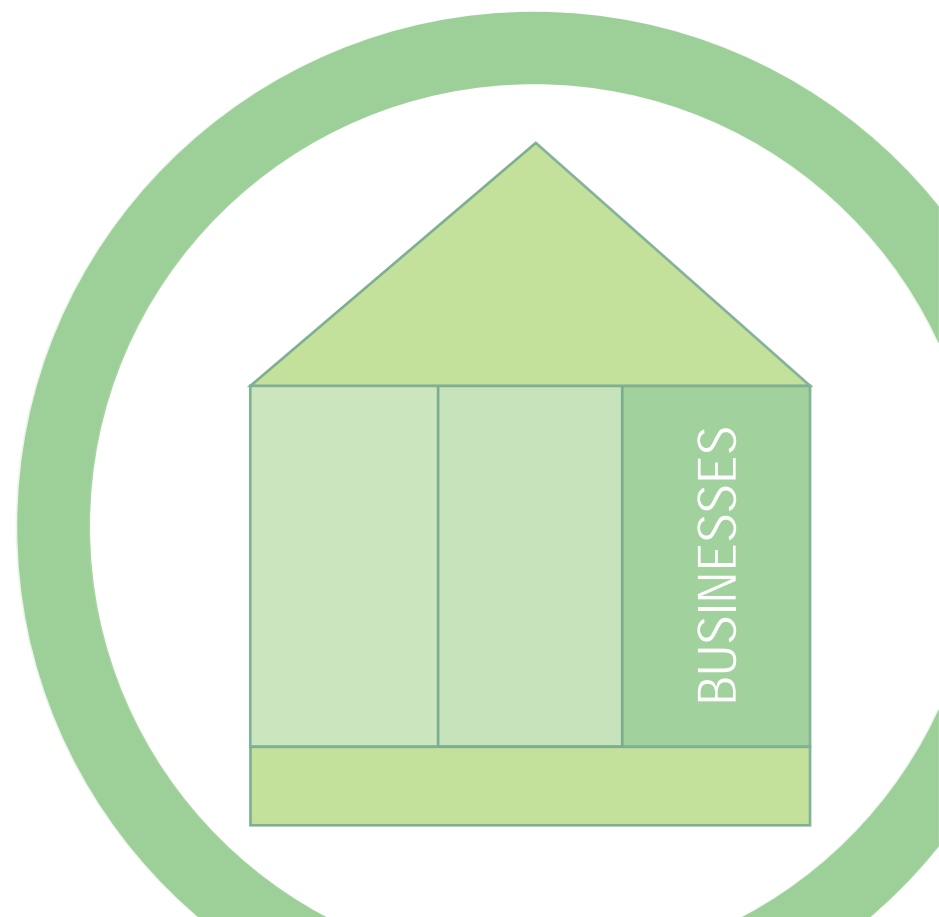




We propose three recommendations to improve the economic wellbeing of Codman Square's residents and businesses:

- *Green Wealth Generation* focuses on creating pathways for residents to business opportunities and jobs, with a particular emphasis on development of green industries and sectors expected to grow.
- *Green Neighborhood District* suggests a branding and business support effort that highlights neighborhood identity and incentivizes sustainable practices for both local business-owners and their patrons.
- *Development for Wealth Generation* provides strategies for CSNDC to devote its own physical space towards enhancing the goals promoted throughout this chapter: economic development, sustainability, and community benefits.

Strategies for implementation, challenges and tradeoffs, and community engagement ideas are detailed after the three recommendations. While these strategies are crafted for the context of Codman Square and with the capacities of CSNDC in mind, they are also relevant to other community-based organizations in low- and middle- income urban communities.

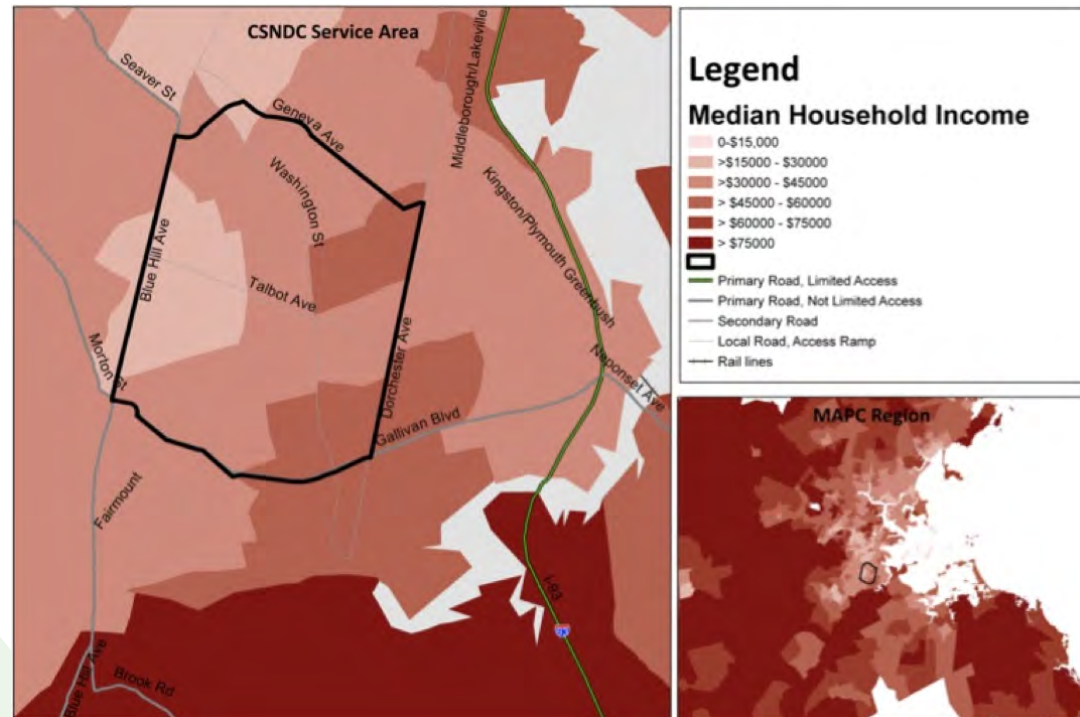


## CURRENT CONTEXT

Codman Square faces a number of economic challenges. 2010 estimates of median income vary across the neighborhood from some tracts between \$15,000 and \$30,000, and other tracts between \$45,000 and \$60,000 (Figure 4-1). Several tracts have a median income that falls between these estimates. Despite this variation, the regional perspective demonstrates that the neighborhood is located in a concentrated area of lower median income.

Employment challenges explain part of this disparity. Codman Square's labor force participation rate is lower than that of the region, which means that the neighborhood has a greater proportion of people who are unemployed, on public assistance, who have given up looking for work, or are retired or elderly. Additionally, the percentage of residents with less than a high school degree is twice as high in Codman Square as it is in the region, while the percentage of residents with a post-secondary diploma is half that of the region, according to 2010 Geolytics estimates (Figure 4-2).

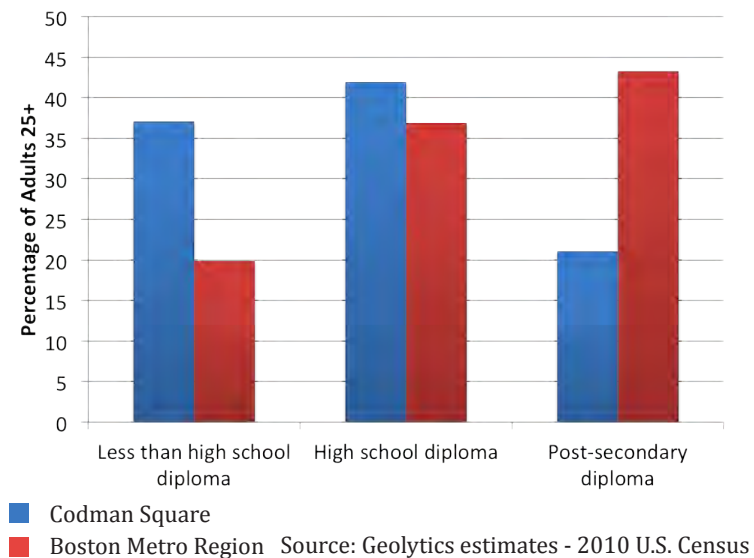
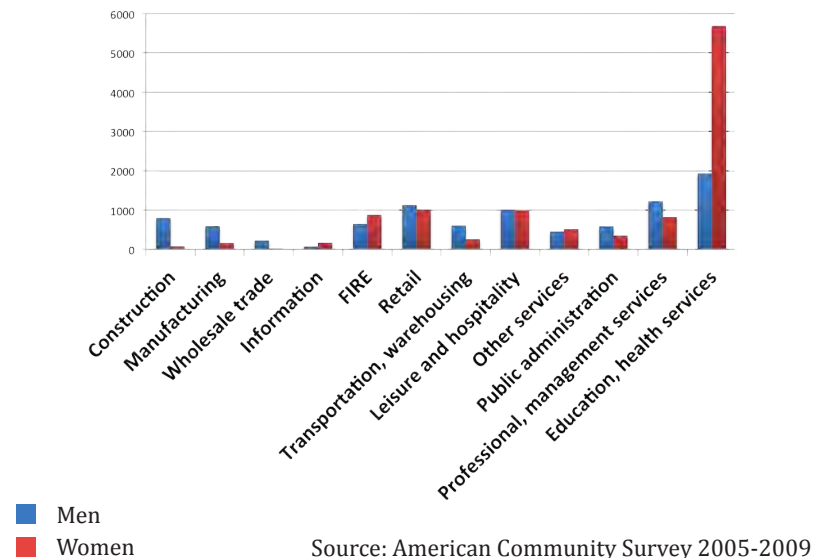
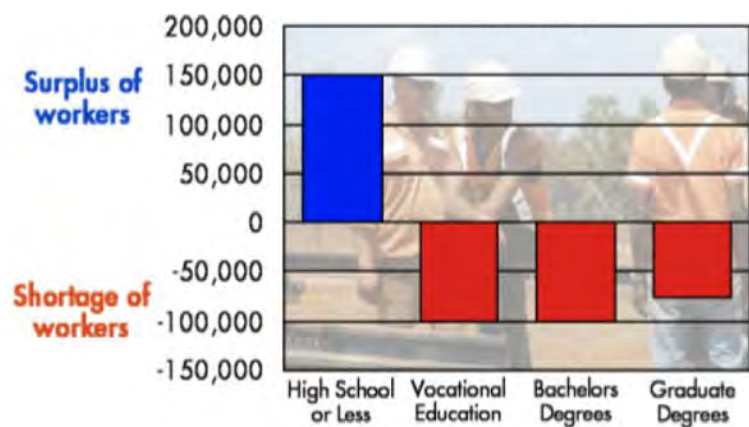
Fig. 4-1: Median Household Income



Source: Geolytics, 2010 estimates based on Census data

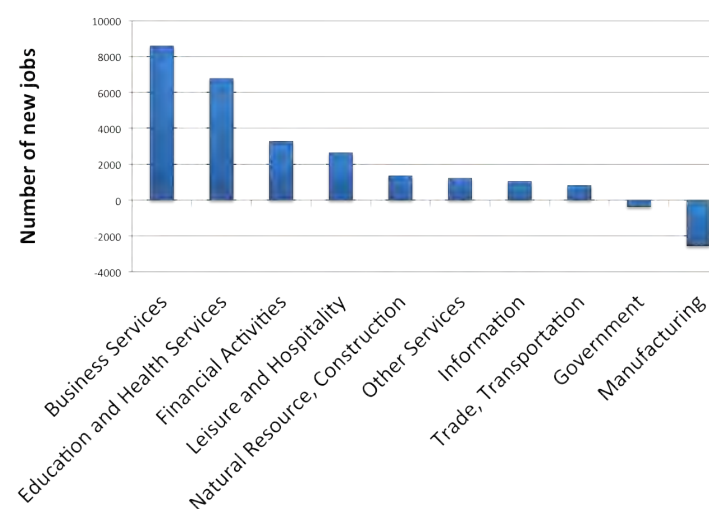
This is particularly troublesome because MAPC projects that the region will have a deficit of workers for jobs requiring vocational, bachelor's, or graduate degrees over the next twenty years, and a surplus of workers for jobs that do not require advanced education (Figure 4-4).

For decades, many Codman Square residents have lacked an efficient means of transportation to job centers, and many take multiple busses to get to jobs outside the neighborhood. However, the arrival of the Fairmount Line will provide commuter rail service to downtown Boston and other commercial centers.

**Fig. 4-2: Educational Achievement****Fig. 4-3: Industries Employing Codman Square Residents****Fig. 4-4: Mismatch by Education Level**

Job growth versus labor availability by educational achievement. MAPC predicts a shortage of workers for jobs requiring advanced degrees.

Source: MAPC

**Fig. 4-5: Job Growth Prediction for Boston, 2010-2030**

Source: MAPC



Codman Square also has many assets to build upon. The commercial corridor on Washington Street has dozens of local businesses. Large employers in the neighborhood include the Kit Clark Senior Center and the Codman Square Health Center.

Nearby, the Four Corners Main Street and St. Mark's Area Main Street Association works with small business owners to support improvements. The Dorchester Bay Economic Development Corporation provides multiple economic development programs for residents nearby, and Boston has dozens of workforce development and economic development programs, run by non-profits and by the City.

With regard to green employment, the City of Boston has launched several initiatives that have the potential to generate green jobs, such as attracting green firms to the city and requiring large private developments to be LEED certifiable. However, connecting current residents to these opportunities will require making strong links between workforce training programs, hiring managers, and growing businesses.

Building relationships between CSNDC and workforce and economic development programs will help CSNDC expand its wealth generation role in the neighborhood, without having to generate its own capacity for these programs. Many of the recommendations in this chapter follow this model.



The Codman Square Health Center is one of the neighborhood's major employers.

## KEY PRINCIPLES

### Better Access to Jobs

While Boston has a healthy regional economy, Codman Square does not benefit from this asset as much as other communities in the region. Neighborhood-level interventions have little ability to change the regional job market, but they can help link residents to opportunities by providing workforce training, advocating for better transportation access, and improving educational attainment for young people. Community-based organizations have an important role in advocating for policies and programs that will help local residents access economic assets in the region.

### Neighborhood-Level, Sustainable Economic Development

Neighborhood commercial activity contributes greatly to quality of life for local communities. Neighborhood business development programs can help provide revenue for entrepreneurs and income for employees. A healthy commercial corridor adds vibrancy for residents and attracts visitors.

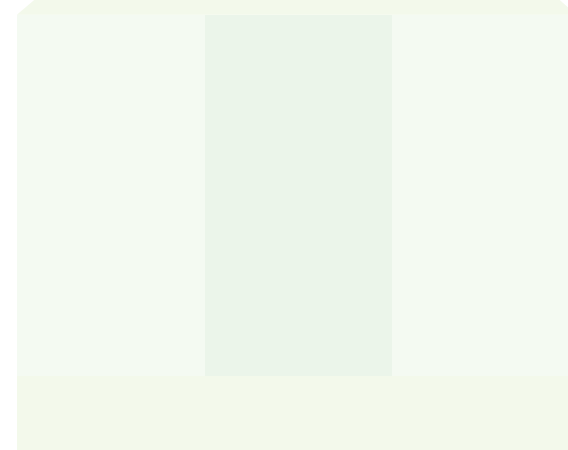
Neighborhood economic development can provide public health benefits by ensuring that residents can purchase healthy foods and other staples in the neighborhood, and by providing retail outlets within walking distance of residences. Further, neighborhood businesses that adopt green practices and hire locally contribute to environmental and economic sustainability.

### Partnerships

CSNDC can partner with other non-profits and institutions to expand wealth generation opportunities without having to develop major new capacities. In addition to CSNDC's individual financial fitness programs, there are many non-profits in Dorchester and Boston, as well as citywide initiatives, that CSNDC can work with to expand its wealth generation activities. Many of these institutions need community-based partners to make their work effective. CSNDC can help organize residents to get involved in existing programs, and help tailor existing opportunities to

Codman Square residents, for example, by advocating for programming in other languages. As a developer, CSNDC can provide space for economic activities, such as ground floor retail or economic development programs like a small business incubator.

MAPC can help foster such local-level partnerships by disseminating knowledge and connecting various organizations. It will also be beneficial for all parties involved to develop partnerships across geographic scales. MAPC and CSNDC can work together to achieve many of the recommendations outlined in this report. Combining different skillsets and knowledge bases can serve to expand the capacity of both organizations.



## STRATEGY 1: DEVELOP PATHWAYS TO LINK RESIDENTS TO GREEN WEALTH GENERATION

Industries and sectors based on clean energy or contributing to environmental sustainability can provide a broad range of employment opportunities across education background and training levels. Regional and local organizations seeking to capitalize on this opportunity have several strategies that may help residents and communities generate wealth.

### Entrepreneurial Support for Small Green Businesses

While many local organizations provide general business support, few provide support specific to particular industries or opportunities. CSNDC, or partner organizations, could build capacity to work with individuals to start local businesses that serve green niches, such as bicycle delivery, biodiesel production, auto body shop for cars running on alternative fuels, composting, and green landscaping. These businesses help improve local environments, and many expect market demand for green services to grow.

This program would support individuals with identifying opportunities, assessing the market need, developing a business plan, finding startup capital, and managing the business in early stages. In addition to expertise in business development and opportunities in the green economy, with some additional capital a program could offer shared equipment and space (See “Small business incubator” under Wealth Generation Strategy 3).

A green entrepreneurship program could have the capacity to work with all residents, or it could target specific sub-groups, such as unemployed individuals or people with particular barriers to employment. Beyond a means of providing an income, a small business can provide a path to growth of assets and employment of other residents.

### Urban Agriculture

Boston has a growing interest in urban agriculture. The City of Boston is revising its zoning code to allow for urban farming, and the number of farmers markets in the city has

### CASE STUDY:

#### BOSTON WORKER’S ALLIANCE

The Boston Worker’s Alliance (BWA) is a young non-profit located in Grove Hall, Dorchester. BWA runs a program to start co-operatively owned green businesses with residents who have challenges to employment. They have successfully started Roxbury Green Power, a worker-owned co-op that picks up used vegetable oil from restaurants and businesses and sells it to biodiesel producers and owners of cars with engines converted to veggie oil. The co-op provides an income to three workers.



**Fig. 4-6: Proposed Urban Agriculture Zoning Overlay District**



Source: Boston Redevelopment Authority

increased 30 percent in the past three years. The pilot of Boston's urban farm rezoning initiative is an overlay district for four city-owned parcels in Dorchester. Cutting through the middle of the parcels is the portion of Talbot Avenue west of the new Fairmount station and Codman Square. In summer 2011, Boston will initiate a "citywide conversation" about how to modify the Boston Zoning Code to support different types of urban agriculture, such as rooftop agriculture, aquaculture, vertical farming, and other forms of agriculture throughout the city.

Urban agriculture can contribute to wealth generation and sustainability in several ways. If production is aimed for market, sales of produce can provide income to a small number of workers. City Growers, a Boston non-profit, pays livable wages to workers on urban farms. For others, urban agriculture can bring fresh produce to the neighborhood and make a healthier diet easier and more accessible. Depending on the operation objectives of the farm plots, the produce grown in these plots may help reduce monthly grocery budgets.

The benefits of urban agriculture extend beyond monetary gains—many programs use urban agriculture as a vehicle for workforce development or cultural programming. CSNDC can explore these objectives as part of the Millennium Ten planning process, and look for partner organizations to help achieve them in Codman Square.

## Youth Workforce Development

Youth workforce development can help young people develop job skills, learn about sectors expected to grow in the region, and contribute to their neighborhood and city. Providing employment opportunities to youth also decreases their risk of involvement in violence. Jobs programs can take the form of internships, like the Codman Square Health Center's Health Ambassadors program, which links students to health industry employment, an expected area of growth in the region. Other programs seek to place youth in jobs across the city. One such example is the Boston Youth Fund, a partnership between the city, the Boston Private Industry Council, and Action for Boston Community Development (ABCD), which connects youth to summer jobs in Boston. Many of these programs aim not just to provide an income, but also to prepare young people for a future in the workforce.

Several recommendations in this report could provide a base for youth employment opportunities. For example, youth could be employed

in landscaping the trees along Talbot Avenue as recommended in the Design Guidelines chapter of this report, and in the development of the Fairmont Greenway. Or, youth workforce development programs might key into the energy efficiency sector to prepare individuals for access to such jobs.



Youth gardeners in Somerville



**CASE STUDY: GROUNDWORK SOMERVILLE**

The non-profit organization Groundwork Somerville (GWS) provides green jobs to youth through a number of programs. GWS runs a green jobs corps, the Green Team, for high school students who work on community-based advocacy, education, and stewardship projects. Most recently the Green Corps focused on lack of local green space and access to healthy food. The National Park Preservers trains teams of young adults to work at the Minute Man National Historic Park in Concord, Mass. They also participate once a week in green community service projects in Somerville. GWS also runs SoilCycle, a professional compost pick-up service staffed by bicycle-riding youth. Through this program, youth gain leadership and entrepreneurial skills while learning the basics of small business management. The program's youth employees are currently managing the business, after completing a 7-week entrepreneurship training and writing a business plan.

Groundwork Somerville's work is supported by diverse public and private sources. Major supporters include the National Park Service, the Environmental Protection Agency, the City of Somerville and the Somerville Public Schools, the Llewellyn Foundation, and the Tremaine Foundation. CSNDC could partner with city and neighborhood initiatives to develop a youth jobs program using one of these models.





## STRATEGY 2: LINK GREEN BUSINESS SUPPORT AND NEIGHBORHOOD BRANDING EFFORT

### Neighborhood Branding

Codman Square can become a leader in a neighborhood-based sustainability movement in Boston by establishing a local green certification program. Similar programs exist across the country, but most are at the city- or county-level. Codman Square could develop its own localized certification program, or supplement an existing program in Boston with a “brand” specific to Codman Square. This strategy should expand beyond environmentally friendly practices to recognize contributions to economic sustainability and equity, such as hiring locally, paying living wages, and providing business or services in multiple languages. The “brand” can celebrate the unique heritage of Codman Square and Dorchester.

The certification or brand can be the basis of advertising a “buy local” campaign. A set of criteria can be used to determine qualifying businesses, which will then receive decals, posters, and other physical announcements of their membership within this green business consortium. Consumers will become more aware of sustainable business practices, and the relevance of sustainability to everyday life.

Several cities have programs tailored to environmentally responsible businesses. The Sustainable Business Network of Greater Boston is a large-scale example of a sustainability certification program. Through their Sustainable Business Leader Program (SBLP), small, independent, locally-owned businesses can receive certification through a six-step process

which is detailed on their website. The certification process, which includes customized recommendations, action plans, and support, is geared toward larger businesses. There is an opportunity to tap the niche of neighborhood sustainability branding.

Initiatives in other cities follow different models. For example, the Green Business Program in Santa Barbara County, California does not charge for its services. Interested businesses fill out an online application, receive a regulatory compliance check, and follow steps outlined in a guidebook depending on business type. After a final evaluation, businesses become green certified. Periodic site visits occur to ensure that businesses are still in compliance. Guidebooks are available online at <http://www.greenbizsb.org/guidebooks.html> for a variety of businesses, include office and retail, restaurants, lodging, and automotive.



Sustainable  
Business  
Leader  
Program

*A Program of the Sustainable Business Network  
of Greater Boston*

Examples of logos for other green certification and branding programs.

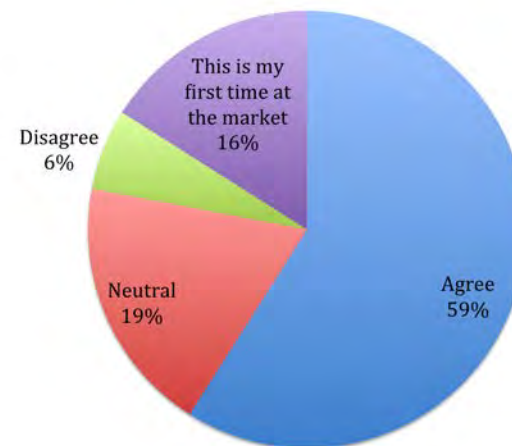
## Green Business Support and Procurement

CSNDC and MAPC can play a role in developing a program to encourage green business practices and green procurement. CSNDC can take a lead in outreach to business owners about the financial and environmental benefits of sustainable practices. Both CSNDC and MAPC can help connect existing local businesses with various professionals and organizations. For example, businesses in Santa Barbara, California have worked with volunteer graduate students in environmental science programs. With assistance, they began to participate in recycling and hazardous waste programs, compost, install fixtures to reduce energy costs and water consumption and donate excess food to charity. Similar assistance can be targeted towards new and existing businesses that want to be certified in the Neighborhood Branding program.

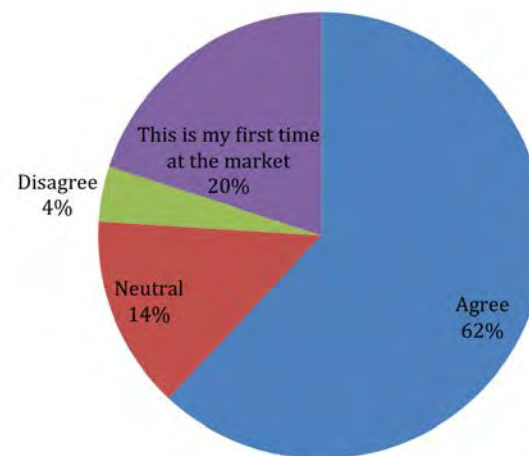
Additionally, a purchasing program for businesses to procure eco-friendly products will benefit the environment, local community, impact business images, and potentially save businesses' money. Through economies of scale, alternative procurement practices will make it more feasible for small businesses to make environmentally friendly choices.

The program can also link businesses to opportunities for alternative waste management (e.g. composting or oil disposal for biodiesel production), which are more feasible at a larger scale than at the individual business scale. By pooling resources, businesses could save money through the green procurement program. Other benefits include differentiation from competitors, free promotion through the branding program, and creation of a healthier workplace.

**Fig. 4-7: Do you eat more fruits and vegetables as a result of the Codman Square Farmers Market?**



**The Codman Square Farmers Market has helped me to improve my overall health**



2009 survey results from shoppers at the new Codman Square Farmers Markets indicate that residents are aware of and interested in eating healthy.

Source: Codman Square Neighborhood Council

CSNDC might focus on “greening” the numerous auto repair shops near the new Talbot Avenue commuter rail station. Auto body shops cause significant air and soil pollution, although they are a source of employment in the neighborhood. Fortunately, there are a variety of specific, targeted strategies to reduce environmental impact of auto shops. Mike’s Automotive Services of Somerville provides an example of an auto shop outfitted for environmentally responsible repair.

The Database of State Incentives for Renewables and Efficiency (DSIRE) lists over thirty financing and rebate options that Massachusetts businesses can use to adopt environmentally beneficial practices. CSNDC and MAPC can help businesses access these resources.

### **CASE STUDY: NEW JERSEY GREEN AUTOMOTIVE REPAIR (NJGARP)**

NJGARP is a certification program for automotive repair shops, overseen by the New Jersey Green Automotive Business Council, an alliance of automotive business leaders. The Council sets quantifiable standards for sustainable practices and provides resources for business owners and consumers with information on the benefits of going green. Funding is derived from application fees and grants obtained by the Council.

Specific benefits of NJGARP include improved air and soil quality, reduced materials in waste stream, and reduced costs of operating facilities. CSNDC could encourage local auto repair shops to follow similar guidelines to NJGARP’s checklist. Compliance could earn recognition and marketing services from the general neighborhood branding program. Please refer to the NJGARP Application packet (available at [www.njgreenautorepair.org](http://www.njgreenautorepair.org)) for the detailed checklist.



## STRATEGY 3: SUSTAINABLE AND EQUITABLE WEALTH GENERATION OPPORTUNITIES

### Attract Healthy Retail

Because CSNDC has financed their mixed-use developments through the residential units, the organization has the opportunity to be selective about tenants for other uses of its space, such as retail, commercial, or community space. One priority that CSNDC might seek to address is making fresh food more available in the neighborhood.

Projects linking economic development to healthy food are most effective when located along major intersections and transit hubs. With the opening of the Fairmount Line, the stretch of Talbot Square connecting to the neighborhood's main business district fits this description perfectly. As Figure 4-7 shows, a survey of Codman Square Farmers Market shoppers shows that many residents find the local availability of fresh produce to have health benefits. CSNDC can seek to attract an entrepreneur or a local business owner who wants to start a small retail outlet with fresh food availability. Because there are already several businesses that sell hot food, a business may be

interested in expanding its healthy food menu or availability of fresh food, particularly staples of neighborhood's Caribbean immigrant community.

Codman Square has a number of small grocers and corner stores, and CSNDC might use a reduced rent structure to incentivize a relocation of one of these stores with an expanded healthy food selection. Alternatively, CSNDC could look to house an industrial kitchen (start-up or existing) that provides healthy prepared food options to neighborhood institutions such as schools, health centers, and senior centers.

PolicyLink has a useful "Healthy Food Retailing" toolkit available on their website that includes eight case studies of low-income communities that have successfully attracted supermarkets, grocery stores, and farmers markets. One example can be seen in West Fresno, a minority community that used the media and public city council meetings to gain political support for a supermarket. For more detail, please refer to PolicyLink's online "Healthy

Food Retailing" toolkit - Tool in Action section.

Working with corner stores to provide healthy options can be a strategic economic and public health investment. However, many corner stores do not have adequate refrigeration capacity for perishable items, and many corner store owners are not familiar with selling perishable items. Linking corner store owners with community groups can lead to strategic investments in skills training and equipment upgrades to enhance profitability and sustainability.

One example of an urban corner store that is a successful retailer of fresh food is West Philly Produce. The owner partnered with a community group and two other organizations, The Food Trust and The Reinvestment Fund, to receive grant funding from the state to complete development of the store, which was built on a formerly abandoned lot. Opened in 2009, West Philly Produce has been performing so successfully that the owner has hired seven youth from the community.

There are also plans to provide fresh products to other corner stores in the area.

### **Small Business Incubator**

Development along the Talbot Avenue corridor could provide an opportunity for CSNDC and MAPC to encourage new business development through a small business incubator. A business incubator assists start-up companies by providing resources and services such as mentorship, advice on financing, market assessment, and business plan development, opportunities for networking and education, and shared equipment office or manufacturing equipment.

According to the National Business Incubation Association, incubator-assisted enterprises have an overall 87% better chance of success than unsupported startups. The physical space ensures that new business owners are located in close proximity to each other, which can result in further partnerships and networking.

A green business incubator can take a variety of forms. Examples of

incubators focused on sustainable firms and products include Bethesda Green Business Incubator, based in the second floor of a bank building, and New York's Green Spaces, which occupies 5,300 square feet. New Jersey's Fairleigh Dickinson University's Silberman College of Business even has a virtual Sustainable Business Incubator, which doesn't occupy any space at all. Examples of incubators that aim to serve disadvantaged populations include the Navajo Green Business Incubator (still in development), or the business incubators run by Minneapolis/St. Paul's Neighborhood Development Corporation, which "provide tenants with stable, affordable places to do business, while serving as catalysts for the revitalization of the surrounding communities." Some incubators take an equity share in the companies they support, and most have a variable rent or fee structure depending on services used. Many have several sources of public funding for development.

### **CASE STUDY: NEIGHBORHOOD DEVELOPMENT CENTER**

The Neighborhood Development Center, an economic development non-profit based in Minneapolis/St. Paul, Minnesota, has developed five incubators that target people who have trouble accessing traditional sources of entrepreneurial support. Their developments are funded through a mixture of city and state loans, private loans, and philanthropic and public grants. One of their projects was developed using New Market Tax Credits, and another used Tax Increment Financing. Their rental income covers the operating costs. NDC charges a variable rent depending on its spaces, which cater to a host of different kinds of businesses, including retail, office, and restaurants.

## CHALLENGES AND OPPORTUNITIES

### Green Wealth Generation

In general, the strength and rate of growth in green sectors will shape the widespread potential of these recommendations to lead to sustainable wealth sources. State and federal policy will make a significant impact in this area, as will consumer interest and demand. However, even if green sectors explode in growth, without targeted programs and policies that link workforce development and real employers, residents with challenges to employment will have difficulty accessing these jobs.

Additionally, CSNDC is not currently engaged in workforce or business development, and if the organization wants to use these recommendations, it will have to build relationships with partners, some of whom are suggested below. Finally, many of these strategies, particularly in youth workforce development, require public funding, which has inherent instability, particularly in current recession-era budget cuts.

### Green Neighborhood District

There are considerable challenges to developing a neighborhood branding program, whether CSNDC partners with an existing program or develops their own. It would be more efficient for Codman Square businesses to go through Boston's Sustainable Business Leaders Program (SBLP) because there is more legitimacy with an already-existing program, and CSNDC would not need to develop a separate, duplicative program.

However, the main tradeoff is that SBLP's requirements and process may be too stringent for the neighborhood at this point in time. The cost to participate in SBLP would likely be a significant challenge to many small businesses in Codman Square. However, CSNDC could seek grants or other forms of financial assistance to supplement application costs for businesses.

Local businesses may be initially resistant toward joint purchasing of products or following sustainable practices due to lack of knowledge or

the apparent difficulties of changing current practices. Business owners may be faced with a situation where they seemingly must choose between trading cost effectiveness for eco-friendliness. It will be important to engage business owners and educate them about the importance of eco-friendliness, and how it can save them money too.

### Sustainable development

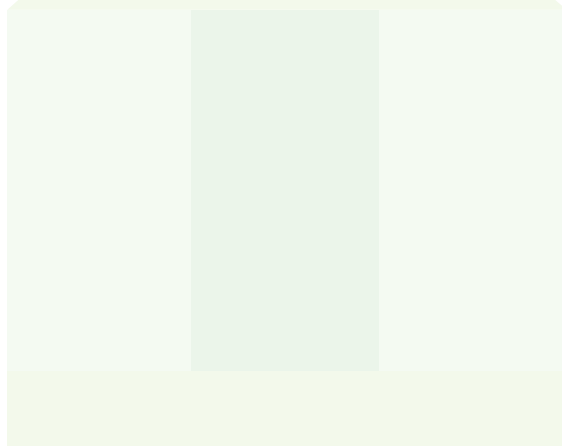
In making decisions about use of commercial space in developments, CSNDC faces decisions about desirable tenants and rent income. New retail businesses can create market competition with existing businesses, but they can also attract an increased customer base that can benefit nearby businesses.

CSNDC may want a cash stream from rent in its ground floor retail space, but may have to reduce the rent if it wants to be selective in the type of business it supports. An incubator requires significant capacity to start and run, and CSNDC would need to find partners



with expertise in developing one and identifying the needs it would serve. Because DBEDC is currently developing a shared space for green businesses, an incubator in the neighborhood may want to work with DBEDC to complement its services, or focus on a particular niche that it can serve with targeted resources. Finally, business incubators often require applications, and may not serve well those with challenges to employment, although CSNDC might link an incubator to the Green Business Entrepreneurship Opportunities strategy, which can target such populations.

Lastly, CSNDC has small parcels of land, and along with the housing units above its retail/commercial space, this limitation may restrict the options available for its use.



## IMPLEMENTATION

### Green Wealth Generation

There are numerous partners with whom CSNDC could work to link Codman Square to existing programs and to develop new programs. DBEDC is a logical partner for economic development strategies, and particularly for green entrepreneurship programming which might take advantage of the green office/manufacturing space that DBEDC is developing. Codman Square might landscape its streets by working with Youth Build Boston, which provides skills to youth in construction and sustainable landscape management. The City of Boston, Boston Private Industry Council, and ABCD are other institutions with significant youth jobs programming. Finally, CSNDC can initiate conversations with the other CDCs in the Fairmont Collaborative to develop corridor-wide programming that can build on an expanded population base and the new transit route to create and expand green wealth generation opportunities.

For urban agriculture, CSNDC might partner with the Food Project or with City Growers, a cooperative that helps Dorchester residents remediate vacant land, and grow, sell, and transport produce, and earn a living wage. There are a variety of other non-profits focusing on urban agriculture that CSNDC could also turn to for advice.

Though Growing Power is based in Milwaukee and Chicago, they offer workshops, training centers, as well as general ideas and best practices around soil health, composting, urban agriculture, food distribution, marketing, youth education, community engagement, and participatory leadership development, among others.

An important implementation and engagement strategy to get residents invested in healthy food and urban agriculture is teaching them how to use it. An organization in New York City, Just Food, trains Community Chefs to provide public cooking demonstrations. Their model includes training around basic nutrition, culinary skills and recipe writing. CSNDC could find

residents to teach their neighbors how to select, store, preserve, and cook with fresh produce.

Community engagement for many of these strategies can start with the Millennium Ten Planning process. Through the resident engagement strategies, CSNDC can gain greater understanding of interest in and challenges to these recommendations. For example, CSNDC might invite a representative from an urban agriculture organization to facilitate a conversation with local cultural groups and community institutions such as the Codman Square Health Center about objectives for urban agriculture in the neighborhood.

CSNDC can take this information to city forums on the overlay district and potential zoning code amendment. To address youth workforce development, an initial step could be for CSNDC to include youth in Millennium Ten to gain knowledge about youth employment successes in the city and current challenges faced by neighborhood youth. CSNDC can use this information

to lead the development of partnerships that could build on successful initiatives and address gaps.

### **Green Neighborhood District**

Implementation strategies for the branding program will vary depending on whether CSNDC develops an in-house program or supplements the Sustainable Business Leaders Program (SBLP). If businesses receive certification through the SBLP, CSNDC's role would be limited to verifying certification and providing specialized Codman Square marketing materials.

If CSNDC develops its own assistance and application procedures for the branding program, the first step will be to determine the criteria for participation. The Santa Barbara County Green Business Program's website has multiple guidebooks with such recommendations. An application process will also need to be developed. After the program has been established for a certain length of time, its criteria may be re-evaluated and tiers created to recognize outstanding practices. Additionally, a mechanism should be

developed to periodically ensure that sustainability standards are being met and maintained. Staffing assistance could come in the form of an Americorps volunteer and/or graduate students in environmental programs at Boston's numerous colleges.

An important initial engagement strategy will be to develop a map of Codman Square's business landscape. How many independent enterprises are there? Are any already following sustainable practices? What have been challenges to adopting these practices for businesses in the neighborhood? To raise awareness of and interest in business-level sustainability, further outreach and education is likely to be necessary. Examples of cost savings that green practices can provide may help bring business owners on board. Boston's Sustainable Business Leader Program website provides some examples of cost savings.

A promising strategy to implement green business practices for auto repair shops in the neighborhood is to work with the Safe Shops Project, part of the City of Boston's Public Health Commission. Services are offered at no

cost, and include environmental and workplace safety trainings (an average of three per month), health screenings, and financial and technical assistance. Safe Shops specifically seeks out community partners, such as CSNDC, to outreach to workers to conduct surveys and training, to build awareness among the community, and to provide referrals to local resources such as health centers and financial assistance.

### **Sustainable development**

To explore incubator options, CSNDC might contact the Bethesda Green Business Incubator or the Neighborhood Development Center's business incubators, to explore the feasibility of such a center in Codman Square. Further research on the needs assessment would be required. GreenTech Boston, the Boston Redevelopment Authority's green economic development arm, may be able to provide assistance. CSNDC can also start exploring partnerships with local organizations and other incubators, such as Green2Gold, an incubator program based out of California, that establishes community-based, mixed-tech and mixed-use



sustainable incubators throughout the US and internationally.

Outreach during the Millennium 10 planning process can provide the first steps to determining a direction for sustainable development. CSNDC can ask residents and business owners about fresh food access, or other ideas for businesses that contribute to a healthy and livable neighborhood. To target a healthy food retail strategy, a Community Food Assessment can provide information about food availability in the surrounding communities. If the needs assessment indicates there is not enough of a need and a market to sustain a new store, CSNDC can target existing stores to increase healthy food options and fresh produce.

There are many national organizations advocating for healthy food access that CSNDC could contact for support in early implementation steps. The Food Trust offers consulting services and almost 100 reports and resources on their website. They also have many specific projects that may be of interest to CSNDC, such as the Healthy Corner Store Initiative, Green Grocery, and

Supermarket Campaign.

The Healthy Corner Store Network also offers a variety of tips around selecting stores, building relationships with store owners, and connecting with distributors. They provide webinars, a list of consultants and profiles of participants that CSNDC could contact, and a variety of other tools and resources.

Locally, the Boston Strategic Alliance for Health (SAH) is working to promote community nutrition in Mattapan. Though they have already chosen participants for their current Corner Store Initiative, CSNDC could model the steps taken and strategies pursued by SAH.

If CSNDC is to assist existing restaurants and corner stores sell healthier food, it is recommended that they partner with motivated owners. Additionally, emphasize to the community that the upgrades and changes are about something more than food: they can improve community safety, revitalization, and sustainability as well. Healthy corner store work can be integrated into CSNDC's larger

community planning and engagement framework.

There are a variety of financing mechanisms for funding healthy food retail, including the U.S. Department of Agriculture (USDA) Community Food Projects Grant Program and the U.S. Department of Housing and Urban Development Brownfields Economic Development Initiative. More details can be found at Public Health Law and Policy's Funding Sources for Healthy Food Retail document, a link to which is available in the Resources section of this report.

Despite general budgetary uncertainty, the current groundswell of support for healthy food access may support a variety of new funding sources for CSNDC or local retailers to tap into. The federal government is currently requesting proposals for Healthy Food Financing Initiative (HFFI) grants and loan, totaling \$10 million, to help open new fresh food outlets, supermarkets, and expanded convenience stores in low-income and underserved communities. The Treasury Department and USDA are expected to come out with similar financing mechanisms, and Congress is

debating additional HFFI funding for 2012. The application can be found in the Resources section; the deadline is July 11, 2011.

An important implementation and engagement strategy to get residents invested in healthy food and urban agriculture is teaching them how to use fresh food. An organization in New York City, Just Food, trains Community Chefs to provide public cooking demonstrations. Their model includes training around basic nutrition, culinary skills and recipe writing. CSNDC could find interested residents to teach their neighbors how to select, store preserve, and cook with fresh produce.

### Summary: Wealth Generation

#### Principles:

- Better access to jobs
- Neighborhood-level, sustainable economic development
- Creating partnerships

Recommendation	CSNDC Role	MAPC role
Entrepreneurial Support for Small Green Businesses	Build capacity and seek funding in partnership with other organizations to provide entrepreneurial support for green businesses	Identify strategies to develop capacity to run this program; advocate for policies that favor the employment of low-income workers
Urban Agriculture	Assess resident interest; develop partnerships with local organizations working on urban farming	Take a leadership role in linking local communities to Boston's rezoning effort
Youth Workforce Development	Incorporate youth perspective on employment into Millennium 10; build partnerships with youth workforce programs	Help build partnerships between local youth development programs and large regional employers and in sectors expected to grow
Neighborhood Branding	Develop vision for sustainable Codman Square brand or certification; develop criteria alone or in partnership; outreach to businesses about sustainable practices	Provide research and operation guidance to the initiative; work with regional educational institutions to facilitate volunteer involvement
Green business support and procurement	In partnership, develop a scheme for reaching businesses about sustainable practices and cost-savings	
Healthy food retail	Healthy food: Outreach to business owners or entrepreneurs, link them to financing options	Healthy food: generate a resource to help local organizations identify strategies and financing options
Incubator	Incubator: Develop the space and partner operation of incubator	Incubator: Identify operating partners

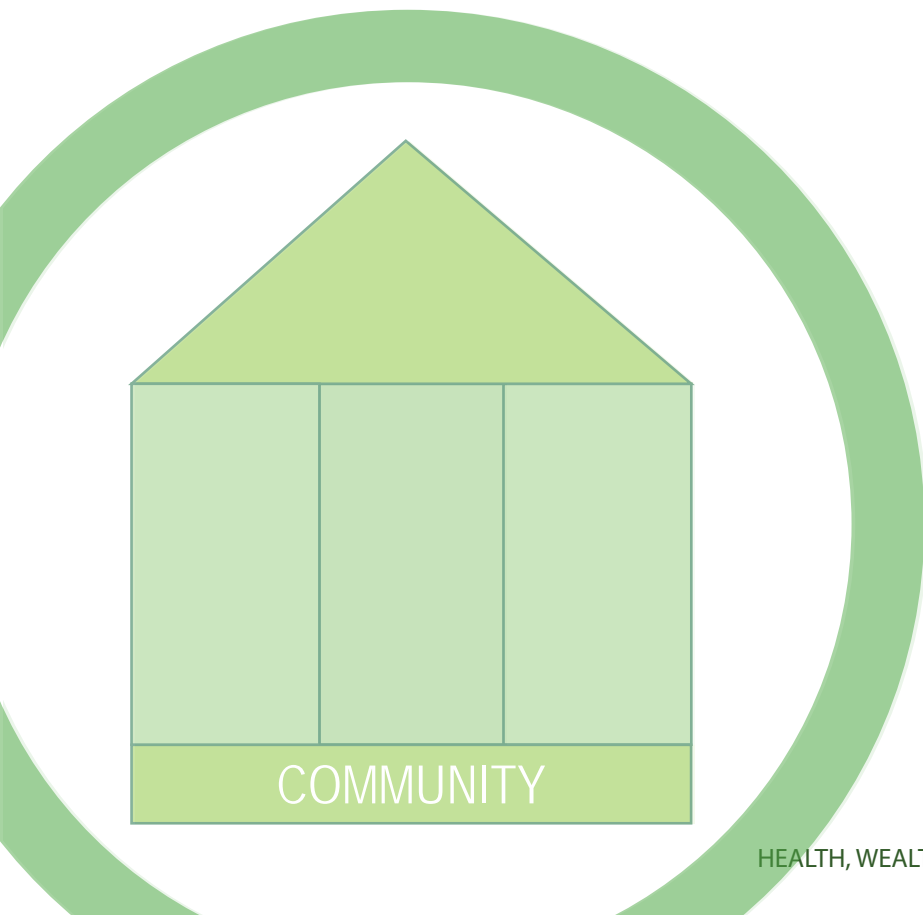


## ANTI-DISPLACEMENT - INTRODUCTION

The recommendations outlined in the Design Guidelines, Health and Energy, and Wealth Generation pieces were designed to improve the Codman Square neighborhood. However, improvement to inner city areas can lead to gentrification and displacement. Though these terms are often conflated, they actually have distinct definitions.

Gentrification is a pattern of change in which a previously low-income neighborhood experiences a reinvestment and revitalization accompanied by increasing home values and rents.

Displacement, on the other hand, is a pattern of change in which current residents are involuntarily forced to move out because they cannot afford to stay in the gentrified neighborhood. We want to ensure that new development, home energy upgrades, and an enhanced business landscape benefit, rather than displace, residents of Codman Square.



## CURRENT CONTEXT

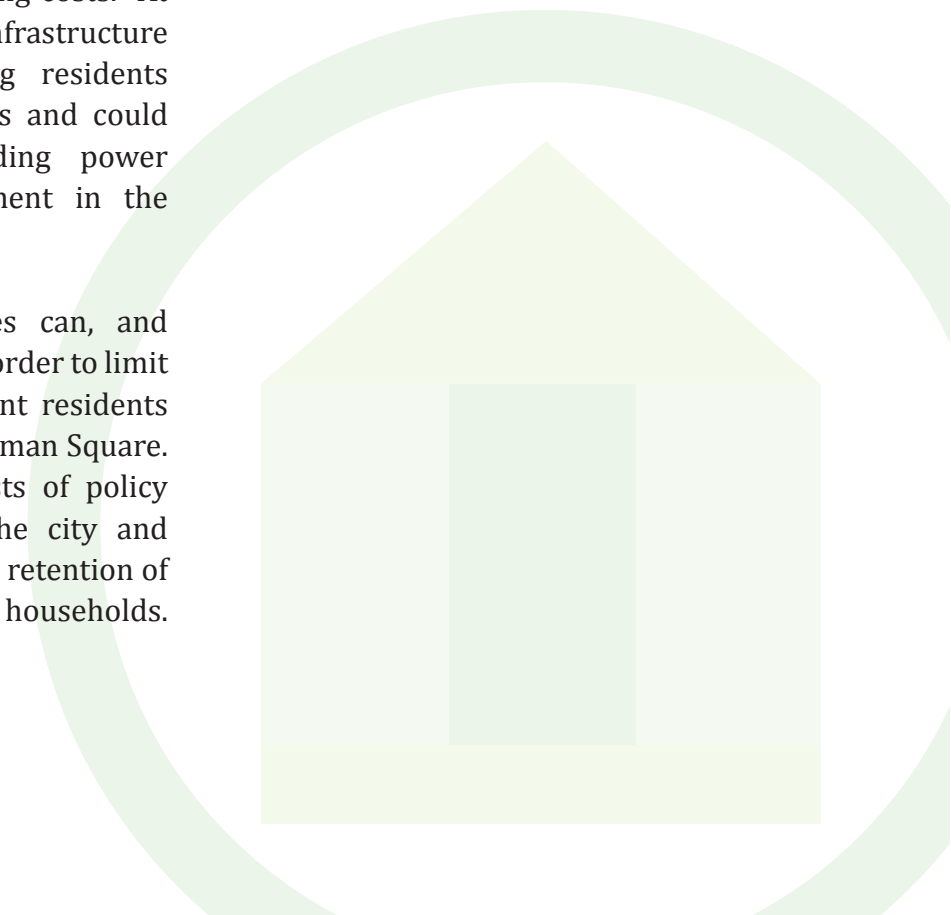
Like many parts of Dorchester, the Codman Square neighborhood currently offers a substantial amount of housing affordable to lower-income households. Programs that involve any significant private or public investment, like many of the items included in this report, have the potential to increase land values and housing costs in the local market.

Such changes in the real estate market can have both positive and negative effects on the people who currently live in the neighborhood. Long-time property owners can benefit from higher property values by refinancing their mortgages to fund property improvements or cover major expenses like college tuition, but could also suffer from higher property tax bills if assessments increase faster than their incomes. While higher rents might encourage landlords to make improvements, tenants can quickly find themselves priced out of a neighborhood undergoing rapid rent inflation, or find long-term landlords turning over properties to less community-minded owners.

Neighborhoods along the Fairmount Corridor face particularly interesting questions of potential gentrification and displacement due to the introduction of the new Indigo Line transit infrastructure. Even without additional community development investment, easy transit access to job centers in central Boston and Cambridge could attract wealthier homebuyers and renters to move into the area and put upward pressure on housing costs. At the same time, the transit infrastructure potentially offers existing residents better access to good jobs and could build more local spending power for commercial development in the neighborhood.

Two types of approaches can, and should, work in concert in order to limit the displacement of current residents in a neighborhood like Codman Square. The first approach consists of policy options, particularly at the city and state levels, to facilitate the retention of low- and moderate-income households.

The second approach consists of grassroots strategies, implemented at the local level, to strengthen local households and the local community. These two approaches are complementary and each works best alongside the other.



## Codman Square Context and Suggested Strategies

Of the various policy and grassroots strategies suggested above, a few are of particular relevance considering the local context in Codman Square. For example, the presence of a significant number of vacant residential lots suggests the application of two types of strategies, one policy strategy and one grassroots strategy.

At the policy level, changes to conveyance and receivership policies, as well as reform of the tax foreclosure process, would facilitate the reclamation of vacant lots for productive use. In addition, zoning changes and the provision of incentives for private redevelopment would facilitate the reuse of vacant lots. At the grassroots level, local organizations can reclaim vacant lots through foreclosure acquisition and land banking.

The following sections provide an overview of the current conditions in the Codman Square neighborhood and the strategies, both at the policy and grassroots levels, that are recommended in these conditions



## Overview of Anti-Displacement Strategies

As seen in the table to the right (Figure 5-1) there are a variety of public policy measures that can be pursued at the local and state levels to limit displacement. These strategies range from land acquisition, to the preservation and production of affordable housing and can be financed through a variety of mechanisms including tax-increment financing (TIF) and Low Income Housing Tax Credits (LIHTC).

“Grassroots Strategies” (Figure 5-2) highlights the community-level strategies that local organizations, such as a community development corporation, can use to limit displacement. These grassroots strategies are of two main types: preservation and creation of affordable housing, and community development strategies to strengthen resident capacities and the community.

**Fig. 5-1: City and State Policy Strategies**

<i>Land Acquisition</i>	<i>Preservation</i>	<i>Production</i>
<ul style="list-style-type: none"> <li>• Public land for public good</li> <li>• Vacant property ownership transfer</li> <li>• Eminent domain for NGOs</li> </ul>	<ul style="list-style-type: none"> <li>• Vacant property receivership</li> <li>• Vacant property redevelopment</li> <li>• Tax adjustment</li> <li>• Real estate transfer tax</li> <li>• Preserve expiring use units</li> <li>• Replacement Ordinance</li> <li>• Condo conversion ordinance</li> <li>• “Development without displacement” policy</li> </ul>	<ul style="list-style-type: none"> <li>• Joint development</li> <li>• Vacant lot redevelopment</li> <li>• Linked housing trust fund</li> <li>• Zoning changes (e.g., smart growth districts)</li> </ul>
Tax Increment Financing (TIF)		
Tax abatement		
Low Income Housing Tax Credits (LIHTC)		

**Fig. 5-2: Grassroots Strategies**

<i>Housing</i>		
<i>Land Acquisition</i>	<i>Preservation</i>	<i>Production</i>
<ul style="list-style-type: none"> <li>• Land banking</li> <li>• Land trusts</li> <li>• Eminent domain for NGOs</li> </ul>	<ul style="list-style-type: none"> <li>• Coop conversion</li> <li>• Foreclosure acquisition</li> <li>• Expiring use properties</li> </ul>	<ul style="list-style-type: none"> <li>• Affordable housing development</li> </ul>
<i>Community Development</i>		
<i>Asset Building</i>	<i>Outreach + Education</i>	<i>Other Strategies</i>
<ul style="list-style-type: none"> <li>• Homebuying Programs</li> <li>• Individual Development Accounts</li> </ul>	<ul style="list-style-type: none"> <li>• Market existing programs</li> <li>• Provide resident education</li> </ul>	<ul style="list-style-type: none"> <li>• Support policy work</li> <li>• Negotiate Community Benefits Agreements</li> </ul>

## RECOMMENDED STRATEGIES

Recommended Policy Strategies to Limit Displacement		
Current Condition in Codman Sq.	Recommended Policy Strategies	Detailed Strategies
Availability of vacant residential lots and vacant properties	Promote reclamation of vacant lots and properties through property ownership transfer and receivership and changes to state tax foreclosure process	<ul style="list-style-type: none"> <li>Reform the tax foreclosure process to increase the speed of completing a tax foreclosure while also ensuring that all properties can be transferred with a clear title</li> <li>Enact conveyance policies to allow owners to transfer unwanted properties to the city without facing a tax foreclosure</li> <li>Enact receivership policies to facilitate redevelopment by allowing repairs to begin before the transfer of title</li> </ul>
	Promote reuse of vacant lots and properties through zoning changes and incentives for private redevelopment	<p>Provide infill incentives to promote the development of vacant land or the rehabilitation of existing properties. These incentives might include:</p> <ul style="list-style-type: none"> <li>Financial incentives for private developers</li> <li>Streamlined permitting</li> <li>Property tax abatement for multi-family housing or for housing priced under a certain threshold</li> <li>Changes to existing zoning (e.g., reduce lot sizes, setbacks, parking requirements)</li> </ul> <p>Enact “rehab codes” to make it easier to renovate older homes (which can also help improve energy efficiency)</p>
Relatively high rate of owner occupancy of buildings compared to rest of Boston; aging building stock	Promote reinvestment to improve quality and ensure long-term affordability	<ul style="list-style-type: none"> <li>Promote long-term ownership by limiting property tax increases for low-income homeowners</li> <li>Create financial incentives to promote rehabilitation of existing, aging affordable housing</li> </ul>

Recommended Grassroots Strategies to Limit Displacement		
Current Condition in Codman Sq.	Recommended Policy Strategies	Detailed Strategies
Availability of vacant lots and residential properties. High local foreclosure rate	Acquire and redevelop vacant lots and vacant housing units to increase the supply of high quality, affordable housing in Codman Square	Reclaim + reuse vacant lots <ul style="list-style-type: none"> <li>Reclaim through foreclosure acquisition and land banking</li> <li>Reuse through rehabilitation and co-op conversion</li> </ul> Monitor status of investor-purchased foreclosures
Abundant supply of two- and three-family rental properties	Convert tenant-occupied affordable rental housing into limited-equity housing cooperatives to promote housing stability and long-term affordability	Expand limited equity cooperative program <ul style="list-style-type: none"> <li>Include conversion of tenant-occupied rental housing</li> <li>Consider targeting multi-family housing at risk of foreclosure as well as federally- or state-subsidized expiring use properties</li> </ul>
Many residents face challenges accessing programs and services at the local, city, and state levels	Increase resident awareness of and access to existing programs and services that promote affordability and equitable development	Outreach to and educate local community members <ul style="list-style-type: none"> <li>Market existing programs (e.g., property deferment policies, energy efficiency grants) and services (e.g., tenant advocacy)</li> <li>Provide resident education (e.g., foreclosure prevention, tenant rights, co-op conversion training, etc.)</li> </ul>
	Build political will for progressive policy change	Collaborate with other community-based organizations to build political will in support of policy change



## CASE STUDIES: GRASSROOTS STRATEGIES

### Creating and Maintaining Affordable Housing

#### *Creating Affordable Housing*

In the Mission Hill neighborhood of Boston, the investment in the Roxbury Crossing transit station combined with development pressure from the neighboring Longwood Medical Complex and expansion of Northeastern University led to an increase in demand for housing in the area and a subsequent rise in property values. In order to ensure that affordable housing remained available to existing neighborhood residents, the Back of the Hill Community Housing Initiative worked with the Jamaica Plain Neighborhood Development Corporation to develop 80 units of affordable housing. These units preserved affordability for low and moderate income families to rent or buy in Mission Hill.

#### *Financing to Rehab Housing*

NEWSED CDC of Denver, Colorado partnered with a local foundation to acquire an occupied rental property. NEWSED then assembled financing to rehab the property, allowing residents who are at 40 percent of area median income (AMI) to keep their homes.

### Community Engagement and Advocacy

#### *Technology for Community Engagement*

The Somerville Community Corporation worked with several neighborhood groups to create an interactive website to encourage engagement around the planned Green Line extension. The goal is to gain community input on the designs of stations and the use of land within a half mile of the stations. Through one-on-one visits, large and small community meetings, as well as photo and mapping workshops, the Somerville Community Corporation connected with 700 Somerville residents. These efforts culminated with the creation of inTeractive Somerville, a web-based community-engagement and planning tool. Organizations are increasingly using technologies such as social networking sites, interactive maps, and 3D virtual worlds to facilitate information sharing and community participation as supplements to traditional community-engagement strategies.

#### *Community Engagement to Guide Development*

The Community Alliance of Mission Hill began in 1995 with a self-described mission to give a voice to the residents of Mission Hill. The group holds monthly meetings to gain community input and represents the neighborhood on zoning, licensing, and development issues. By doing so, they are able to monitor proposed changes in the neighborhood and take a stance that represents the existing residents in an effort to minimize displacement.

#### *Community Organizing*

City Life/Vida Urbana has successfully organized tenant associations and tenant unions to protect hundreds of households in Boston from being displaced. Through collective bargaining agreements, City Life has negotiated with large landlords to prevent no-fault evictions, protect Section 8 tenants and limit significant rent increases.

## CASE STUDIES: POLICY STRATEGIES

### Reclaiming Abandoned Properties

#### *Tax Foreclosure*

In 1999, Michigan replaced tax lien sales with judicial foreclosures, reduced the timeline from 6 to 3 years, and worked in combination with land banking to facilitate the reuse of abandoned properties.

#### *Receivership Policy*

Baltimore's Building Code allows the use of receivership if the owner of a vacant property has not complied with rehabilitation orders. The court can appoint a receiver to either rehabilitate the property or sell it to an entity that has the demonstrated ability to complete the necessary repairs in a timely manner.

#### *Database*

Philadelphia's Building Uniformity in Land Development (BUILD) database provides one-stop access to parcel data from multiple city departments on tax delinquency, code violations, vacancy, and sales info. Users can search by address for specific parcels, or they can search by area (such as a ZIP code). Funding for BUILD came from tax-exempt bonds.

### Reusing Abandoned Properties

#### *Financial incentives*

In Sacramento, the Housing Redevelopment Authority's Boarded and Vacant Homes Program (BVHP) provides financial incentives to private developers to acquire, rehab, and sell homes to low-income people, and develop vacant lots.

#### *Streamlined permitting*

Austin, Texas provides expedited permit reviews for affordable housing in TOC areas. This process cuts the average completion time in half.

#### *"Rehab codes"*

New Jersey's rehab code uses the scope of the project and any proposed changes in building use to determine the degree of code compliance required. Projects in each category must fulfill a different set of requirements. Early estimates suggest the new code has reduced redevelopment costs by as much as 40%.

## Promoting Reinvestment

### *Limit rate of increase*

Washington, DC offers two programs that provide real estate tax relief to local property owners faced with rising real estate tax bills:

1. Homestead deduction: Reduces a property's assessed value by \$60K for owner-occupants in properties with under six units
2. Assessment cap credit: Limits increases in a property's assessed value to 10% per year. (For owner-occupants eligible for Homestead Deduction only).

### *Promote reinvestment*

Portland, Oregon's Rental Rehabilitation Tax Abatement program exempts property owners for 10 years on increases in assessed property value resulting from an improvement to existing rental housing or conversion of existing structures to rental housing (a certain number of units must be affordable).

### *Inclusive Zoning*

The Chinatown Zoning District, in Boston, established a public benefit criterion for new development in "planned development areas," which include reclaimed area and an adjoining part of the neighborhood. The public benefit criteria include:

1. A 50 percent affordable housing requirement for new residential development,
2. Various opportunities for local residents and businesses with respect to economic development projects on public land,
3. The construction of community facilities,
4. The construction of cultural facilities, and
5. The rehabilitation of existing historical and cultural buildings.



## SUMMARY

Anti-Displacement		
<p>Principles:</p> <ul style="list-style-type: none"> <li>• Equitable distribution among current Codman Square residents of the benefits generated by new transit investment and accompanying neighborhood revitalization, and</li> <li>• Developing and preserving land and housing in a way that provides a high-quality neighborhood for all residents.</li> </ul>		
Recommendation	CSNDC Role	MAPC Role
Reclaim vacant lots and properties	Foreclosure acquisition Monitor investor-purchased foreclosures Land banking	Advocate for: <ul style="list-style-type: none"> <li>• Reform of tax foreclosure process</li> <li>• Conveyance policies that eliminate tax foreclosure</li> <li>• Receivership policies that fast-track repairs</li> <li>• Create and manage a database that tracks property abandonment by combining city and state data</li> </ul>
Reuse vacant lots and properties	Rehabilitation Co-op conversion	Advocate for: <ul style="list-style-type: none"> <li>• Provision of infill incentives</li> <li>• Enactment of “rehab codes”</li> </ul>
Convert rental housing into limited-equity housing cooperatives	Expand existing limited-equity cooperative program	Advocate for policies that support limited-equity cooperatives, such as property-tax deductions
Promote reinvestment to improve quality and ensure long-term affordability	Market existing programs and services for reinvestment	Advocate for: <ul style="list-style-type: none"> <li>• Limiting tax increases for low-income homeowners</li> <li>• Creation of financial incentives for rehabilitation</li> </ul>
Increase resident awareness of and access to existing programs and services that promote affordability and equitable development	Outreach and education <ul style="list-style-type: none"> <li>• Market existing programs and services</li> <li>• Provide resident education</li> </ul>	Disseminate best practices to local organizations throughout region
Build political will for progressive policy change	Organize constituents and collaborate with other community-based organizations	Partner with local organizations and facilitate information exchange between advocates and organizations around region

## CONCLUSION

The Codman Square neighborhood is poised for significant transformation over the next few years with the introduction of the Talbot Avenue station on the Indigo Line. By providing quick, easy access to many areas of the Boston region that were previously only accessible by bus or private automobiles, the new transit line has the opportunity to transform how local residents access work, recreation, and other opportunities beyond Codman Square.

This report has illustrated that the new transit station can serve as a catalyst for a broader program of neighborhood sustainability. By focusing on key elements of sustainability—generating wealth, improving health and safety, protecting the environment, and keeping the long-term interests of the local community at the center of the effort—this report has sought to illustrate what sustainability can look like at the neighborhood scale, tailored to the specific needs and opportunities present in Codman Square.

For example:

- In order to address the third-of-a-mile distance between the new station and the commercial heart of the community in Codman Square, design guidelines are proposed to enliven Talbot Avenue in order to encourage use of the train, facilitate walking and bicycling, and improve health through reduced pollution and increased physical activity.

- The Codman Square neighborhood features a large stock of well-built older housing, although many of these homes have dangerous levels of lead and asbestos and are poorly insulated. By addressing these issues comprehensively while working with local residents and landlords to build enthusiasm for these upgrades, sustainability initiatives can improve residents' health while lowering utility bills.
- Codman Square has one of the highest unemployment and lowest income and education levels in the city. Strategies to create environmentally-friendly jobs and foster sustainable entrepreneurship can help Codman Square become a vibrant, healthy, environmentally-friendly neighborhood that serves as a model for sustainable wealth generation.
- With the coming of the new Talbot Avenue station, Codman Square is likely to be under increased development pressure that could displace lower-income residents. A variety of policy-level and grassroots strategies can be employed in Codman Square, and throughout the city and state, to help local residents remain in, and strengthen, their community.

By implementing these sustainability initiatives and pioneering others that are applicable to the conditions of the neighborhood, Codman Square has an opportunity to serve as an exemplar for other communities along the Fairmount Corridor that are receiving new transit stations and for other low-income communities that are seeking to implement neighborhood-level sustainability measures.

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22 Johnson Station

**T**

NO STOPPING  
TOW ZONE →

TOW ZONE  
EMERGENCY  
PARKING

**P**

During  
SNOW  
EMERGENCY