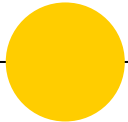


The **Built Environment** and Health



Presented by Shoshana Akins, MPH
E: sakins@dvrpc.org

What is the built environment?

All the physical components and spaces that make up where we live and work

“



History of Built Environment and Health

When infectious disease was the leading cause of death over a century ago, **planners and public health practitioners worked together** to improve zoning, hygiene, and infrastructure.

The **disciplines diverged** with public health following a clinical model and planning focusing on policy and environment.

As chronic disease becomes increasingly associated with **built environment and health disparity issues**, the two fields began to converge again.



Passive Strategies for Improved Health

One of the best ways to create sustainable, scalable, and affordable health interventions is to create passive strategy solutions, which are **interventions that protect an individual without requiring them to act** (i.e. airbags).

The built environment embodies a multitude of opportunities for passive interventions, affecting public health in drastic ways through **improvement of one's surroundings**.



How Public Health and Urban Planning **Fit Together**

Public Health:

Evaluation
Research
Understanding of
health disparities
Interdisciplinary

**Better Health
Outcomes**

Urban Planning:

Policy-oriented
Politically connected
and directed
Linked to physical
development



Thanks!

Green Jobs and Safer Neighborhoods

Philadelphia LandCare Program

Managed by the Pennsylvania Horticultural Society
Under contract with the City of Philadelphia



Development of Philadelphia Green/1974



educational programs and resources

Development of Philadelphia Green/1990s



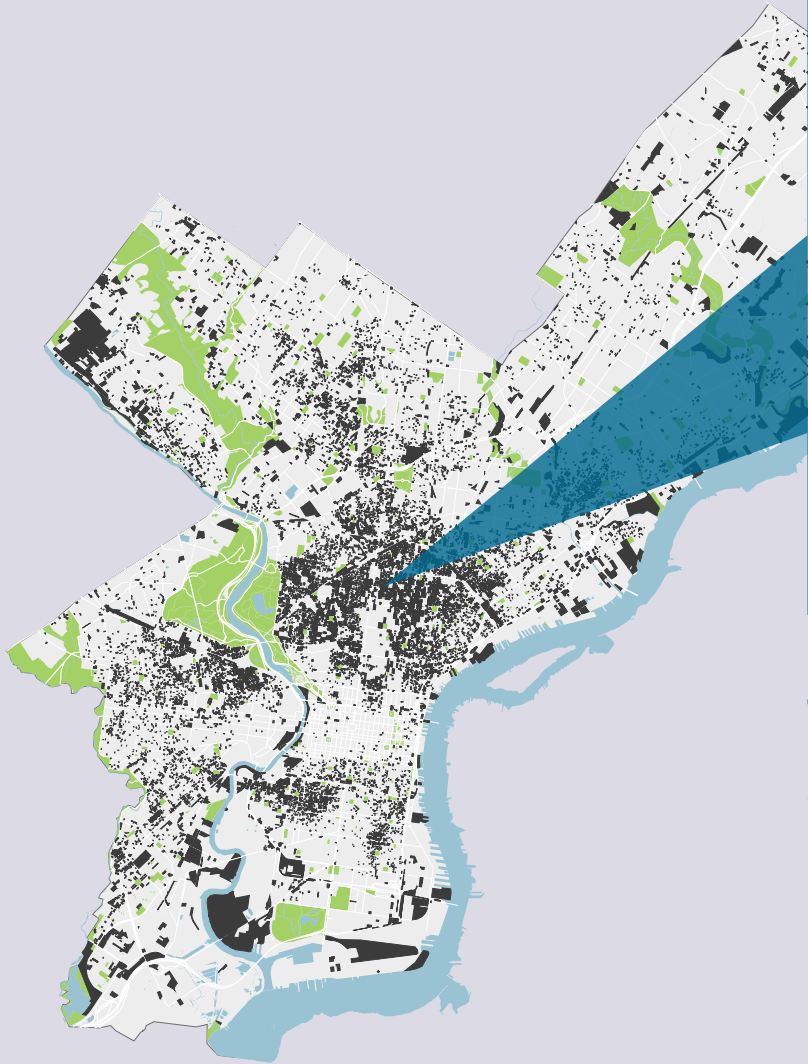
developed focus areas for gardens

Development of Philadelphia Green/1990s

- A lack of knowledgeable gardeners, interest in community gardening, and funding for community gardens led to the decline of many gardens
- Issues with drug activity in the neighborhoods where the community gardens had been started, as well as in the gardens themselves, further aggravated the situation

decline of community gardens

Widespread Vacant Land/1990s



These issues surrounding the community gardens sparked conversations about vacant land, and the city began to look at vacant land as an issue all on its own

time of transition

Vacancy / 40,000 VACANT PARCELS



The city does not own all of the vacant land, but it does own the problems created by vacancy.

current condition

Philadelphia LandCare / THE TREATMENT



The LandCare program became a positive alternative, which could be applied at the city-wide scale, taking a lot like this...

previous condition

Philadelphia LandCare / THE TREATMENT



...and making it a safe and more pleasant space.

resulting condition

Philadelphia LandCare / A PARTNERSHIP



a city-wide treatment

Philadelphia LandCare/ A PARTNERSHIP



PHS

Using funding from the City of Philadelphia, PHS targets **key neighborhoods** and **strategically selects sites** for an interim **land treatment**.

This treatment is a **city-wide pre-development tool** that is an **economical, yet pleasing landscape design** that includes a regular **maintenance program**.

an interim land treatment

Philadelphia LandCare / THE TREATMENT



Major trash, debris,
and weed removal

stabilization process

Philadelphia LandCare / THE TREATMENT



Major trash, debris,
and weed removal



Site grading and
seeding

stabilization process

Philadelphia LandCare / THE TREATMENT



Major trash, debris,
and weed removal



Site grading and
seeding



Fence installation

stabilization process

Philadelphia LandCare / THE TREATMENT



Major trash, debris,
and weed removal



Site grading and
seeding



Fence installation



Tree planting

stabilization process

Philadelphia LandCare / THE TREATMENT



before

Philadelphia LandCare / THE TREATMENT



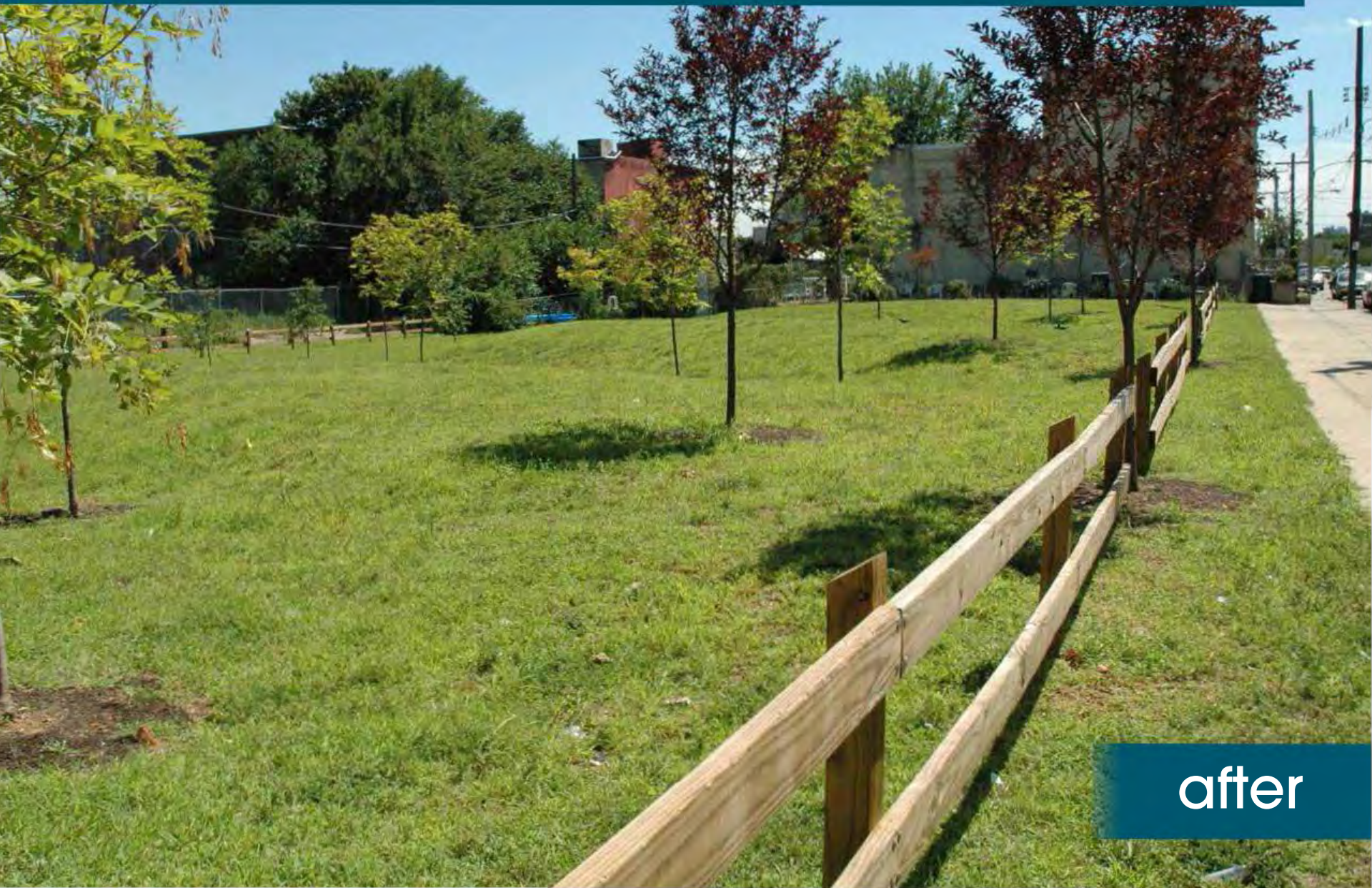
after

Philadelphia LandCare / THE TREATMENT



before

Philadelphia LandCare / THE TREATMENT



after

Philadelphia LandCare / THE TREATMENT



before

Philadelphia LandCare / THE TREATMENT



after

Philadelphia LandCare/TARGET AREAS

- located near schools and recreational centers
- key transitional communities in need of stabilization
- contribute to establishing economies of scale
- complement the City Comprehensive Plan and the Land Bank Strategic Plan
- located in key Council Districts
- include public safety issues that provide opportunities to collaborate with the Philadelphia Police Department and Philly Rising
- lack open space amenities, such as parks and gardens

Target Area
Selection

selection criteria

Philadelphia LandCare/COMPARISON



Rittenhouse Square

Philadelphia LandCare/COMPARISON

Clear Site Lines

- Site lines are unobstructed, enabling visitors to see across the park and to nearby sidewalks, making the park safer and keeping “eyes on the street”.

Low Permeable Fence

- Delineates the park as a separate space that is maintained, without making people feel unwelcome.



Canopy of trees

- Trees provide shade and create ambiance for the space. They change with the season, providing interest year round.

Grass Turf

- Well maintained grass demonstrates that the park is cared for, while also allowing for informal recreational activities

simple design elements

Philadelphia LandCare/COMPARISON

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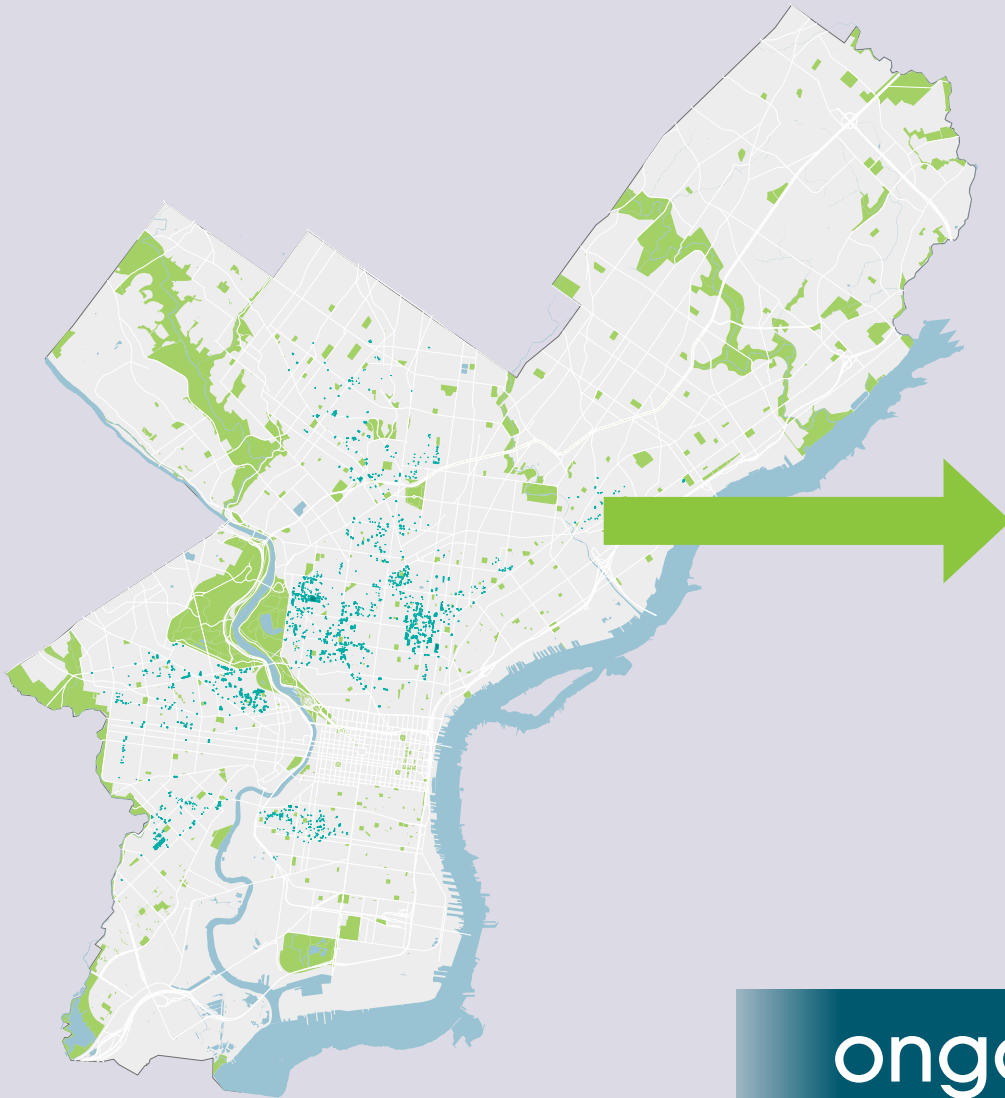
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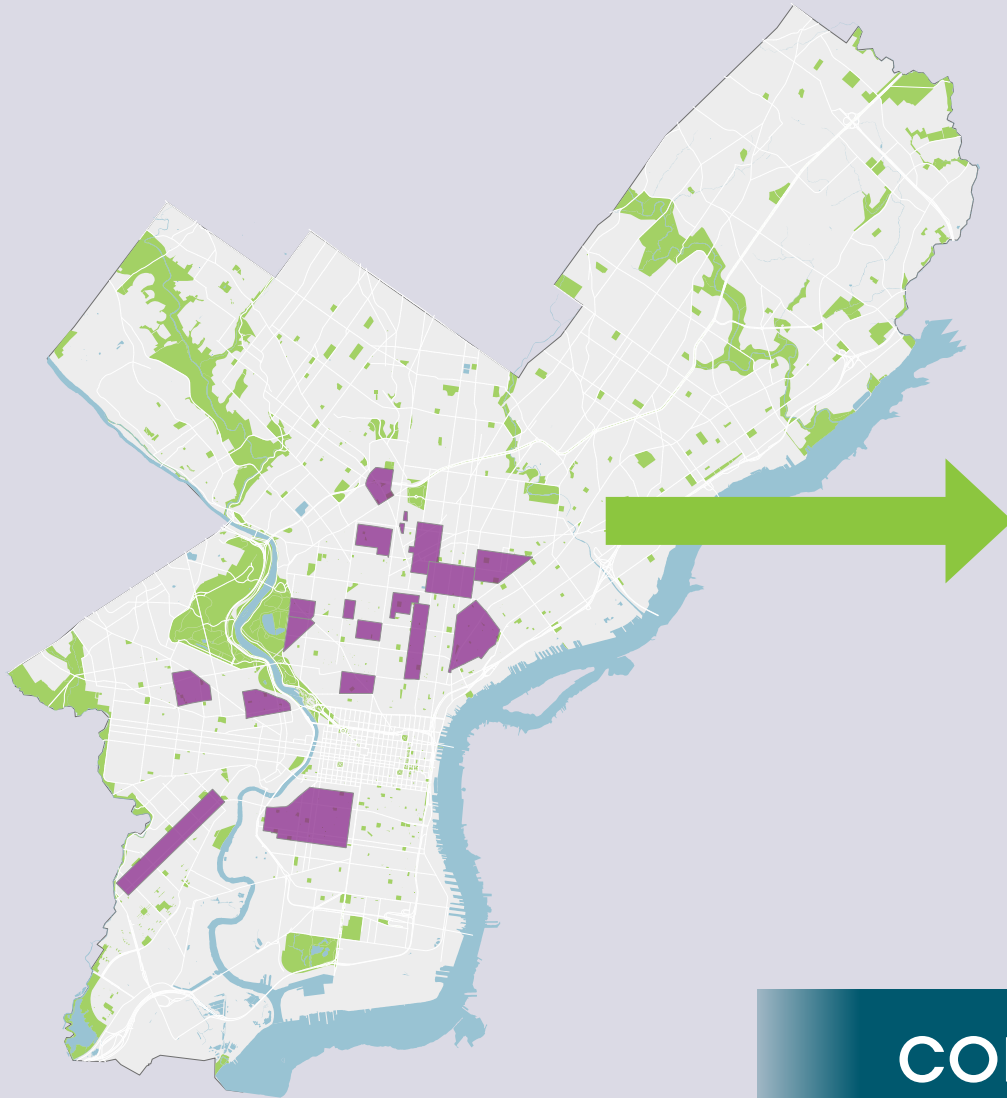
Philadelphia LandCare / WHY IT WORKS



17 hired contractors stabilize and maintain over 11 million square feet of land through Philadelphia LandCare

ongoing maintenance

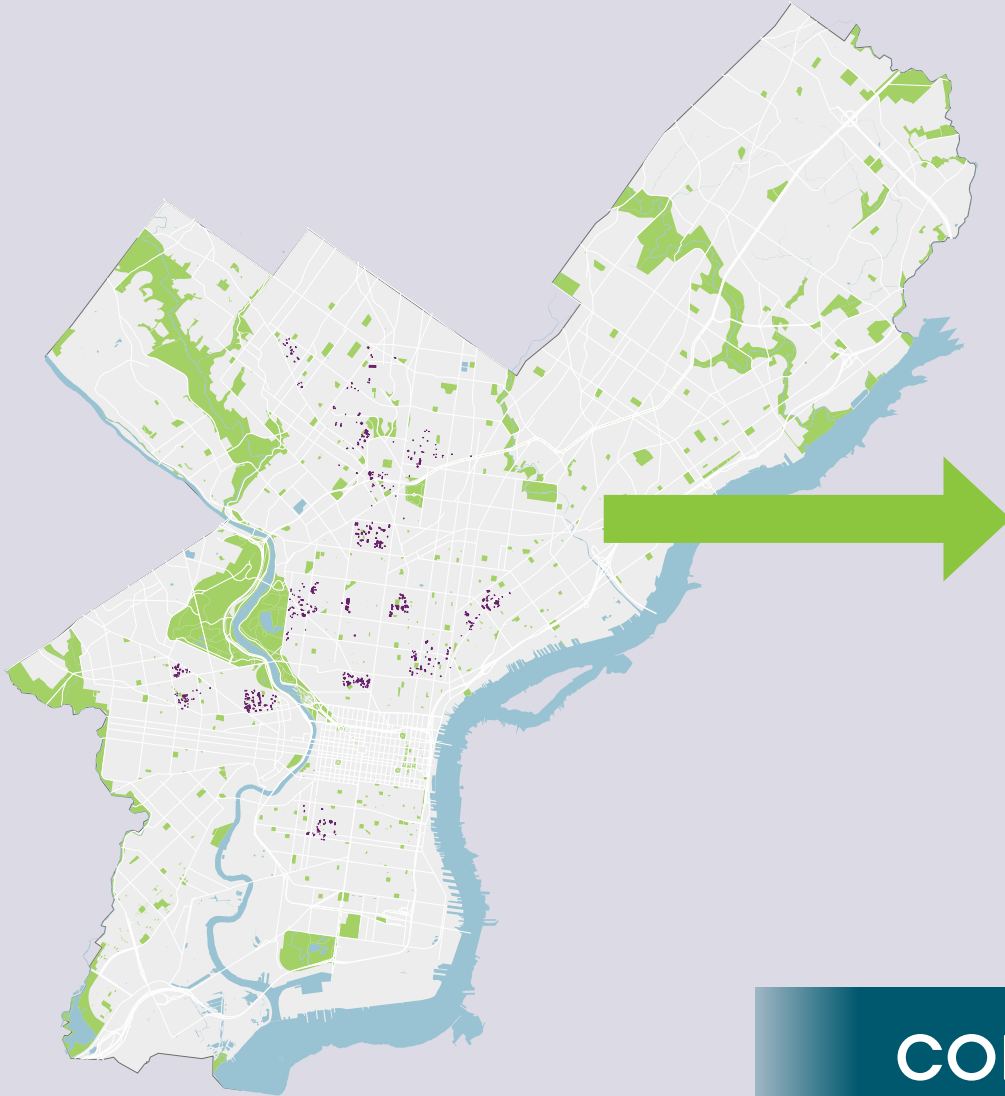
Philadelphia LandCare / WHY IT WORKS



Additionally, PHS works with 18 community organizations in the Community LandCare program, which hires local residents to perform maintenance work

community landcare

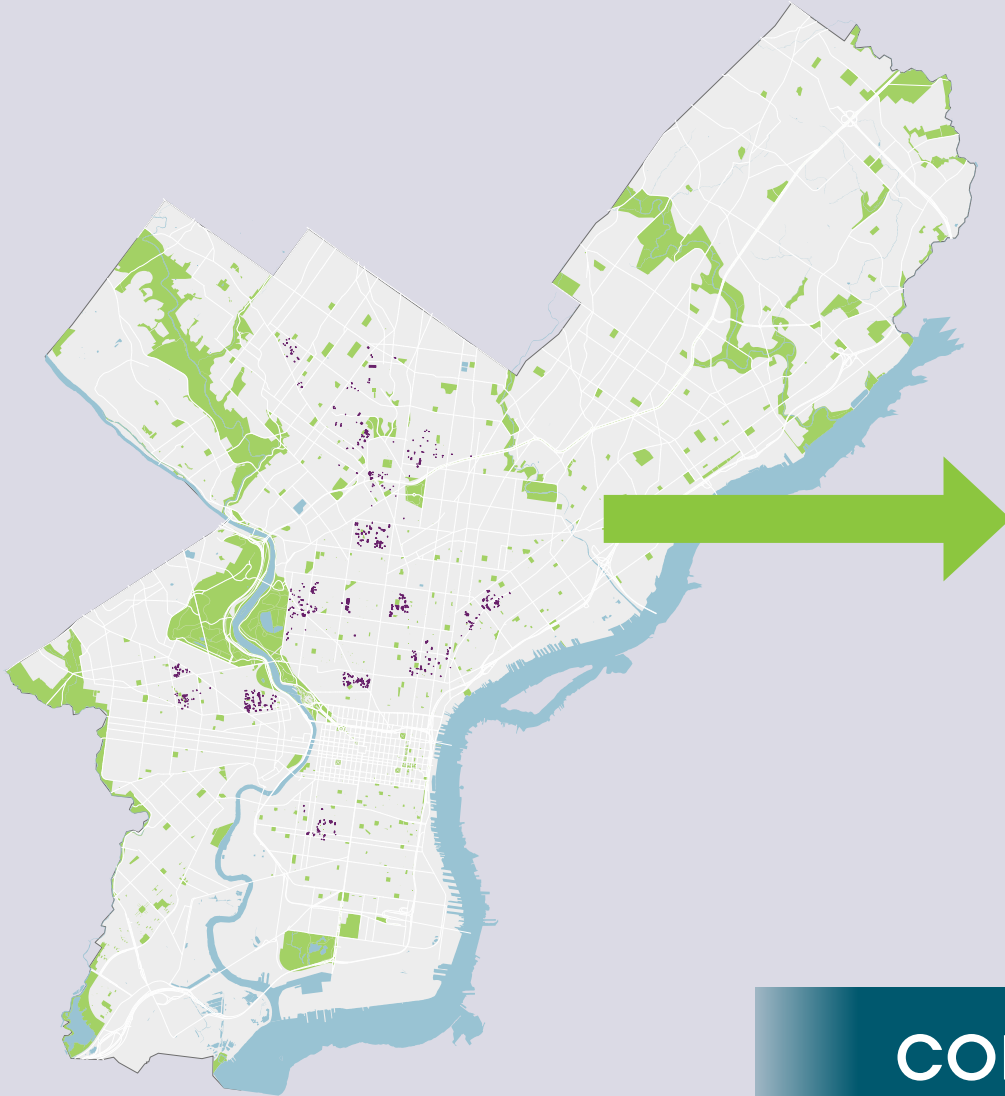
Philadelphia LandCare / WHY IT WORKS



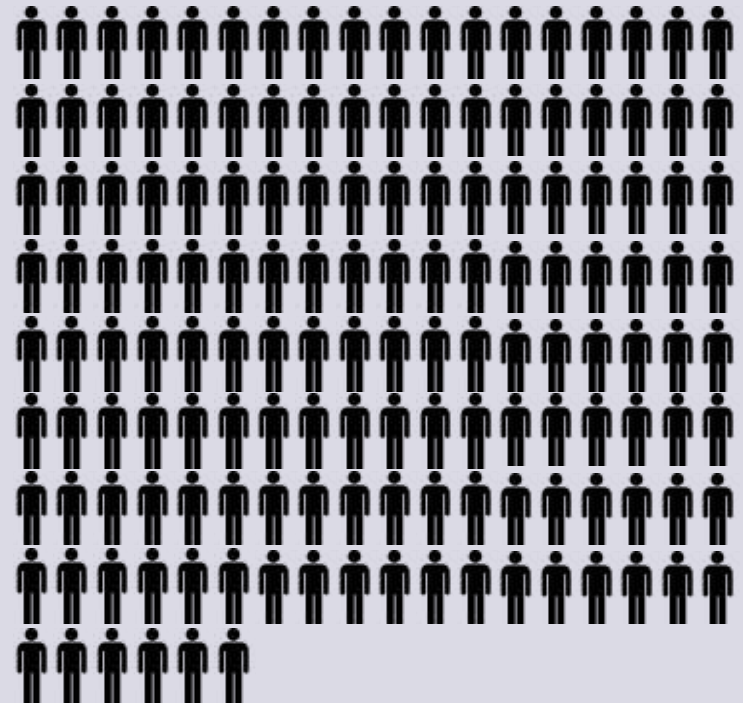
Community LandCare maintains close to 3,000 vacant parcels throughout Philadelphia, totaling 4,500,000 square feet

community landcare

Philadelphia LandCare/ONGOING MAINTENANCE



Which provides over 100 jobs for local residents each season!



community landcare

Philadelphia LandCare

- The LandCare Reentry Initiative incentivizes current Philadelphia LandCare landscape contractors and community organizations to hire and train returning citizens by enabling contractors to take on larger maintenance contracts.
- 30 returning citizens have been hired through this program.
- Over 3,000 additional vacant parcels will be cleaned and maintained through this new program.
- The candidates for the initiative were vetted by R.I.S.E., a reintegration



reentry initiative

Philadelphia LandCare



reentry initiative

Philadelphia LandCare / 2,000 PARCELS



reentry initiative

Philadelphia LandCare / THE COST

Clean and Green Treatment (Stabilization)

Cost per parcel	\$ 1,391
Cost per square foot	\$ 1.07

Maintenance of Clean and Green lots (14 visits)

Cost per parcel	\$ 12.65 visit / \$ 177.10 annual
Cost per square foot	\$ 0.01 visit / \$ 0.14 annual

Community LandCare Treatment (7 visits)

Cost per parcel	\$ 25.00 visit / \$ 175.00 annual
Cost per square foot	\$ 0.015 visit / \$ 0.10 annual

implementation costs

Philadelphia LandCare/BEYOND STABILIZATION



Previous Site Condition



stimulating new uses

Philadelphia LandCare / BEYOND STABILIZATION



Previous Site Condition



Stabilized Site



stimulating new uses

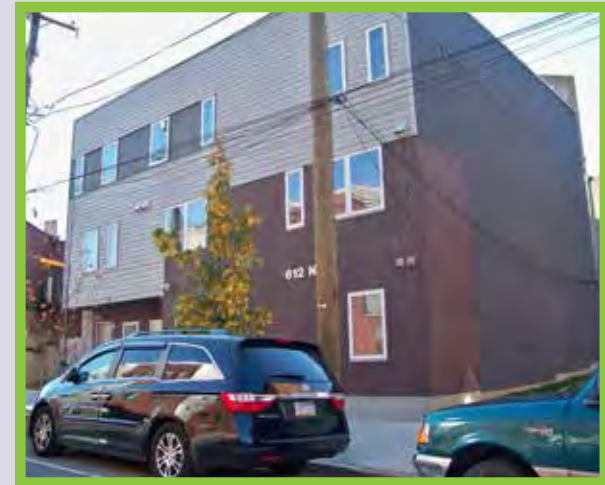
Philadelphia LandCare / BEYOND STABILIZATION



Previous Site Condition



Stabilized Site



Developed Site

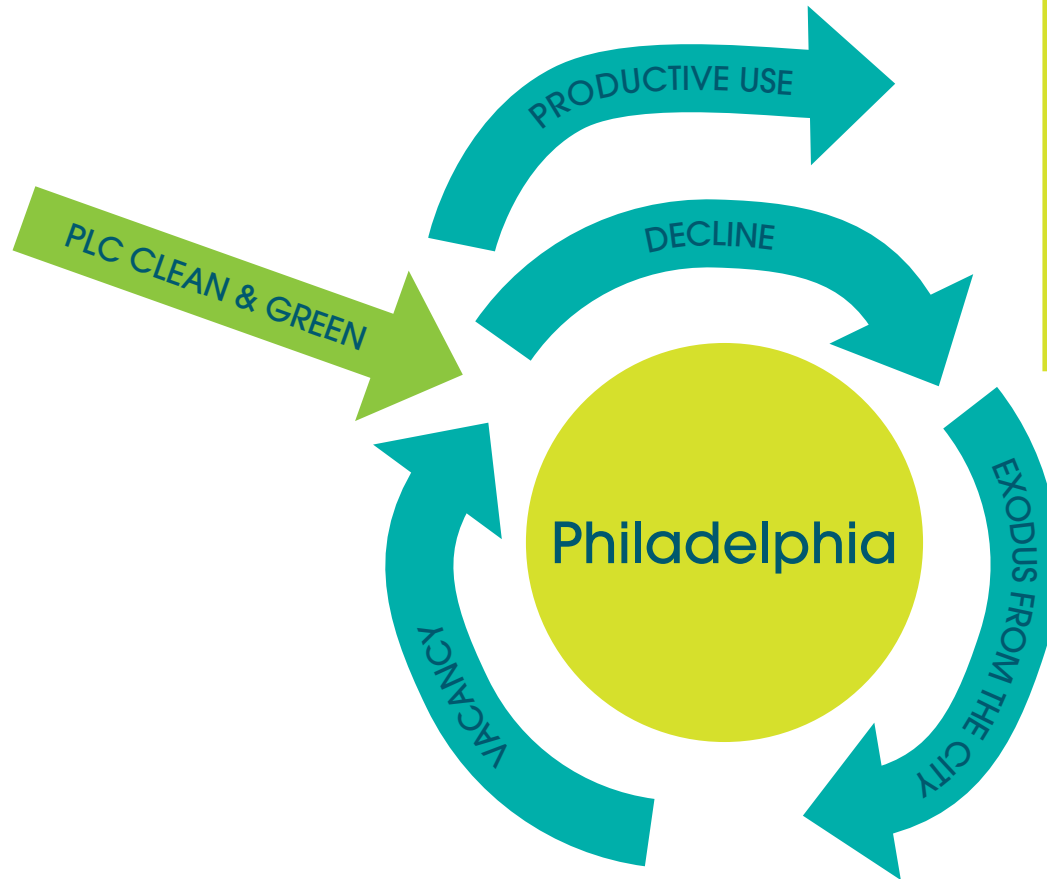
stimulating new uses

Philadelphia LandCare/BEYOND STABILIZATION



current cycle

Philadelphia LandCare/BEYOND STABILIZATION



clean + green intervention

greening / landcare program

Evidence Of Success

Share

+

Ad



With more than a decade of experience cleaning and greening vacant lots around the city, the PHS Philadelphia LandCare program has been in place long enough and widely enough for academic researchers to document its exponential benefits on the health, safety and value of Philadelphia neighborhoods.

In numerous thorough studies published in peer-reviewed academic journals, researchers have found that PHS Philadelphia LandCare's benefits are quantifiable, measureable and replicable. Numerous independent studies have found the following:

- In 2012, one study found that the \$15.3 million spent by the City on the program yielded a total housing gain of \$3.6 billion. This means that for every dollar spent to clean and green vacant land, housing wealth increased by a whopping \$224.
- Transformed lots are associated with a marked reduction in gun crime.
- PHS Philadelphia LandCare parcels are associated with improved health behaviors for neighborhood residents, including increased exercise and decreased stress levels.
- After a vacant lot is cleaned and greened, the values of nearby homes jump by nearly 20 percent. Whereas before they were worth 16 percent less than comparable homes, they now command a premium of 2-5 percent.
- The benefits increase over time. While the initial jump is immediate, when those cleaned and greened lots are maintained, nearby homes continue to appreciate at an additional 0.5 percent every year.
- The benefits increase with more greened lots. After the initial benefits of a cleaned-up lot, each additional cleaned and greened lot adds another 1 percent of value to homes within a quarter mile.

Interested in learning more? Published studies are listed below:

Charles C. Branas, David Rubin, and Wentzheg Guo. "Vacant lot remediation and neighborhood safety: A randomized controlled trial." *Social Science Research*, September 2013.

Charles C. Branas, PhD and John M. Macdonald, PhD. "A Street-Level View of the Impact of LandCare on Neighborhood Safety." *Public Access*, April 2014.

Eugenia C. Garvin, Carolyn C. Cammisolo, Charles C. Branas. "Greening vacant lots to reduce violent crime: a randomized controlled trial." *PLoS One*, August 2013.

gardening

learning

PHS PROGRAMS

6ABC Action News Garden
City Harvest
City In Bloom
Civic Landscapes
Garden Tenders
Gardening and Greening Contest
Gold Medal Plants
Green City Teachers
Growers Alliance
Philadelphia City Garden
[See all](#)

SUPPORT

Sponsorship
Volunteer
Membership
Donate

JOIN OUR MAILING LIST

ASK PHS

Where can I buy succulents in the Philadelphia area?
What are the Flower Show themes of past years?
[Read more](#)

THE PHS BLOG

In the Garden with Sally McCabe
Aug 30, 2015

PLANT PARTY at MEF on 9/12!
Aug 28, 2015

In the Garden with Sally McCabe
Aug 23, 2015

[Read all](#)

academic research

Mantua Urban Peace Garden Garden
Workday & Workshop
Join Mantua community residents for a

Philadelphia LandCare/RESEARCH

- More than 45,000 people and 16,000 households have access to some form of green space within 1/2 mile of their homes who otherwise would have no access to green space.



access to green space

Philadelphia LandCare/RESEARCH

- Trees planted on Philadelphia Landcare parcels city-wide intercept over 2,000,000 gallons of stormwater



stormwater management

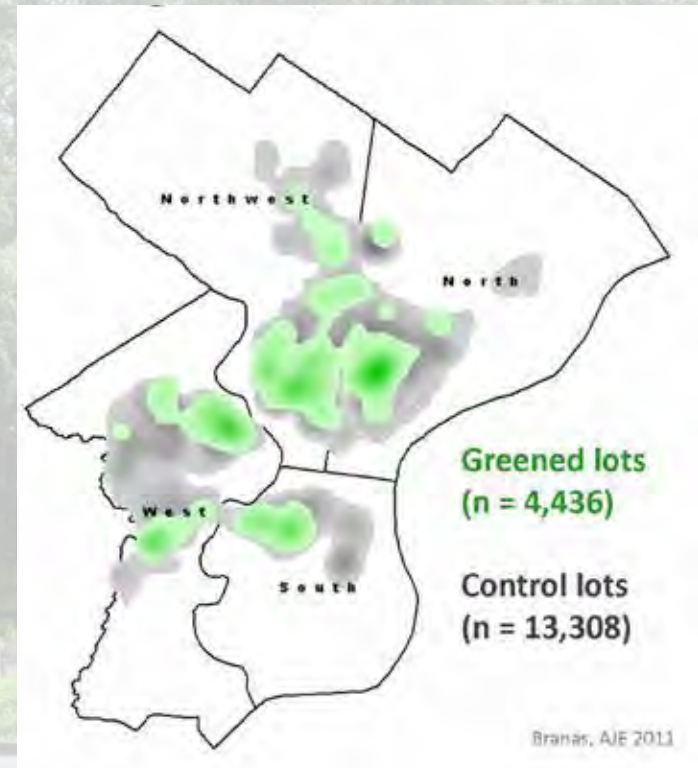
Philadelphia LandCare/RESEARCH

- Studies demonstrated that homes values near a greened vacant lot, on average, increased by \$41,000.
- Every dollar invested to clean and green a vacant lot increases housing wealth by \$224, a 22,000% return on investment.

economic benefits

Philadelphia LandCare/RESEARCH

- Researchers conducted a decade-long difference-in-differences analysis on the impact of a vacant lot greening in Philadelphia on health and safety outcomes.
- ‘Before’ and ‘after’ outcome differences among treated vacant lots were compared with matched groups of control vacant lots that were eligible but did not receive treatment.
- Random-effects regression models were fitted, along with alternative models and robustness checks.



effects on health + safety

Gun assaults are significantly reduced in all city sections

- May be explained with broken windows theory or fewer opportunities to hide illegal guns

High stress is significantly reduced in North Philadelphia

- May be explained by recovery from stress at a basic physiologic level

Exercise has significantly increased in West Philadelphia

- May be explained by greater and enhanced outdoor opportunities

effects on health + safety

Philadelphia LandCare/RESEARCH

- Researchers used a heart rate monitor with GPS to measure the stress response in study participants as they went on a prescribed walk past vacant lots before and then again three months after the treatment.
- Residents who walked near newly greened vacant lots had significantly lower heart rates compared to when they walked near a blighted vacant lot.
- Remediating neighborhood blight may reduce stress and improve overall health.



effects on health + safety

Philadelphia LandCare



activities on lots

Philadelphia LandCare



activities on lots

Philadelphia LandCare



activities on lots

Philadelphia LandCare



activities on lots

Philadelphia LandCare



activities on lots

Philadelphia LandCare



activities on lots

Philadelphia LandCare



reinvesting in Philadelphia neighborhoods



Walk Montco

Montgomery County Walkability Study

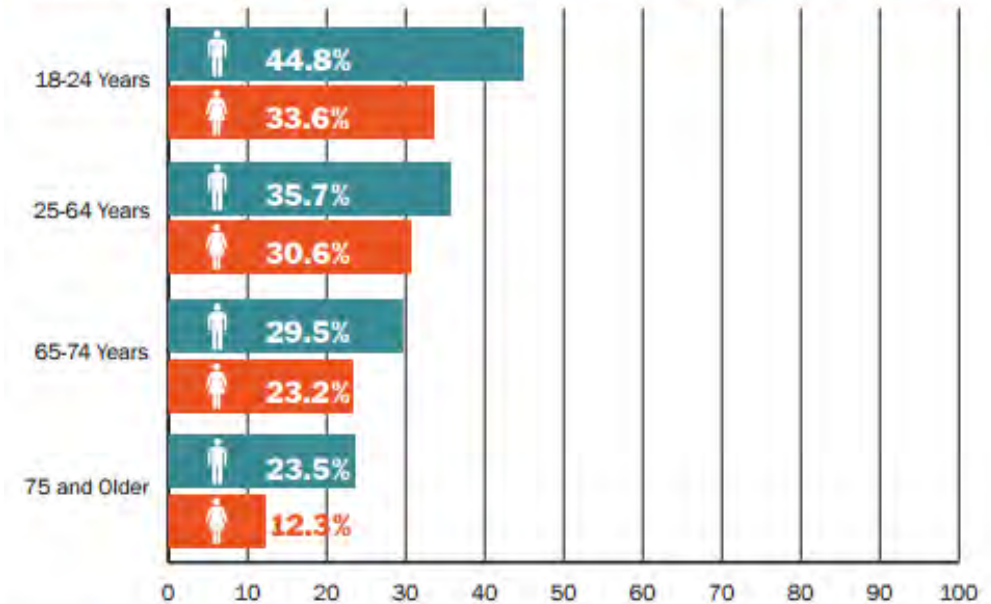
DVRPC Public Participation
Task Force
June 15, 2016



WHY CARE ABOUT WALKING?

- Walking is a crucial part of almost everybody's lives; everyone needs a way to get around safely and securely.
- Walking is a great way to stay healthy and promotes social interaction.
 - Ranked 2nd in the state in Robert Wood Johnson rankings for health behaviors, up from 4th last year
 - Even 20 minutes of activity per day has amazing benefits
- Getting around on foot is affordable!
- Walking is good for the environment.

Percent of adults getting recommended physical activity (30 minutes, 5 times per week):



Source: Centers for Disease Control via WalkBoston



WHY CARE ABOUT WALKING?

- Communities that are walkable attract shoppers, and businesses, and become vibrant, livable places.
 - Walkable urban places command rent premiums over their suburban counterparts. They are denser, contain a large share of jobs per acre, and have transit access.
- Walking is a great way to foster independence in our children...
- And to give seniors the opportunity to age in place.

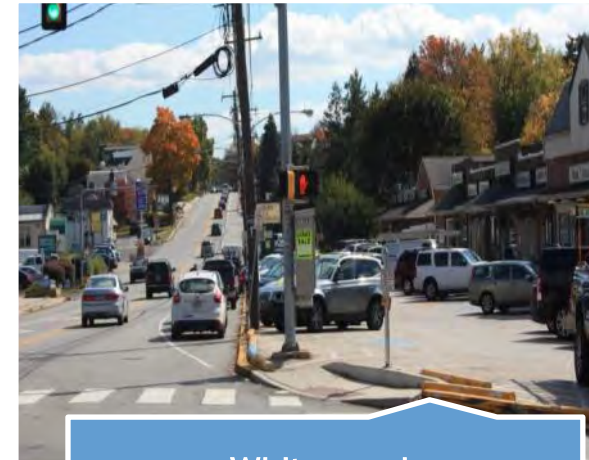


OUR METHODOLOGY

- Open call for applications
- Scope of focus areas
 - A public event with a presentation on what makes walkability important
 - an audit of a small area
 - brainstorming sessions
 - a final report
- Preliminary meeting with each municipality and a local task force
- Second meeting was audit
- Participation and feedback from both SEPTA and PennDOT



Cheltenham
A Safe Route to School



Whitemarsh
Suburban Commercial Corridor



Abington
Transit Oriented Development



Hatfield Borough
A Traditional Downtown
Development

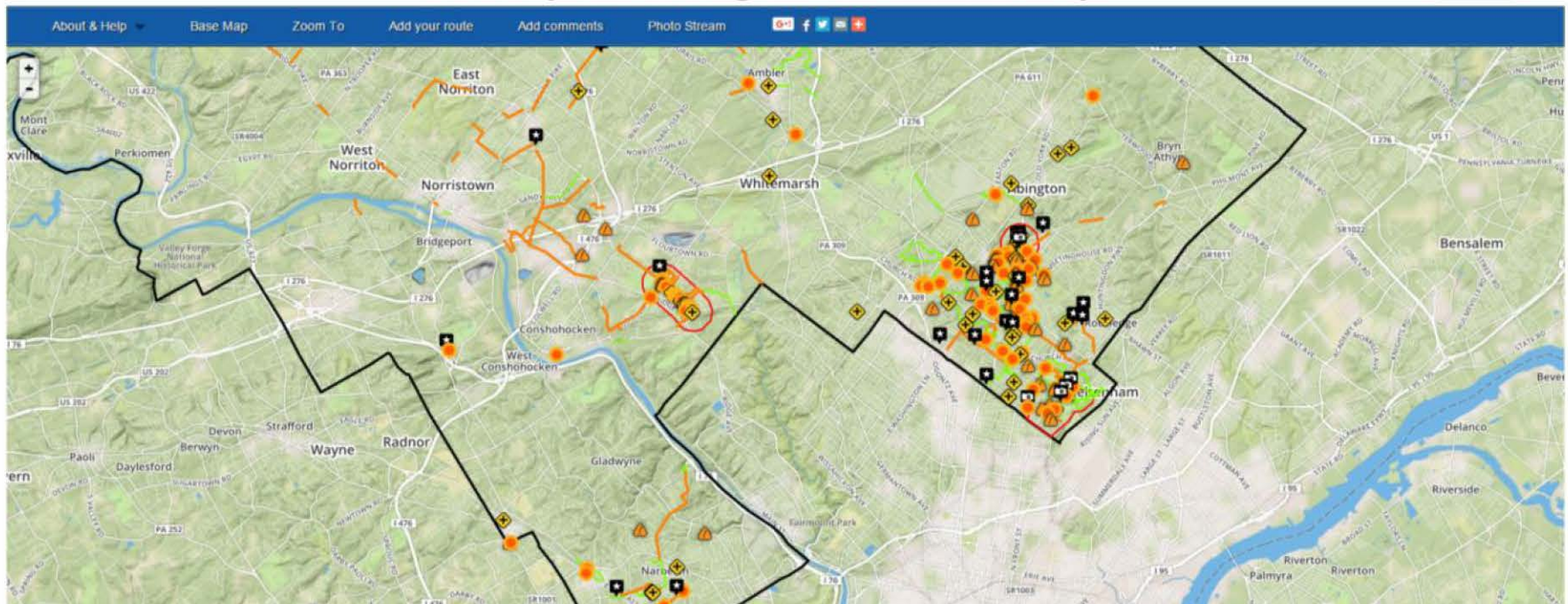
OUR ONLINE METHODOLOGY



- 1 Draw your route or desired route. Briefly describe problem.
- 2 Add points to show problem spots.
- 3 Illustrate with a photo (if you want to).
- 4 Share this with friends, and come back to add more info.

Share your thoughts on walkability.

Done



NOBLE STATION – TRANSIT ORIENTED DEVELOPMENT

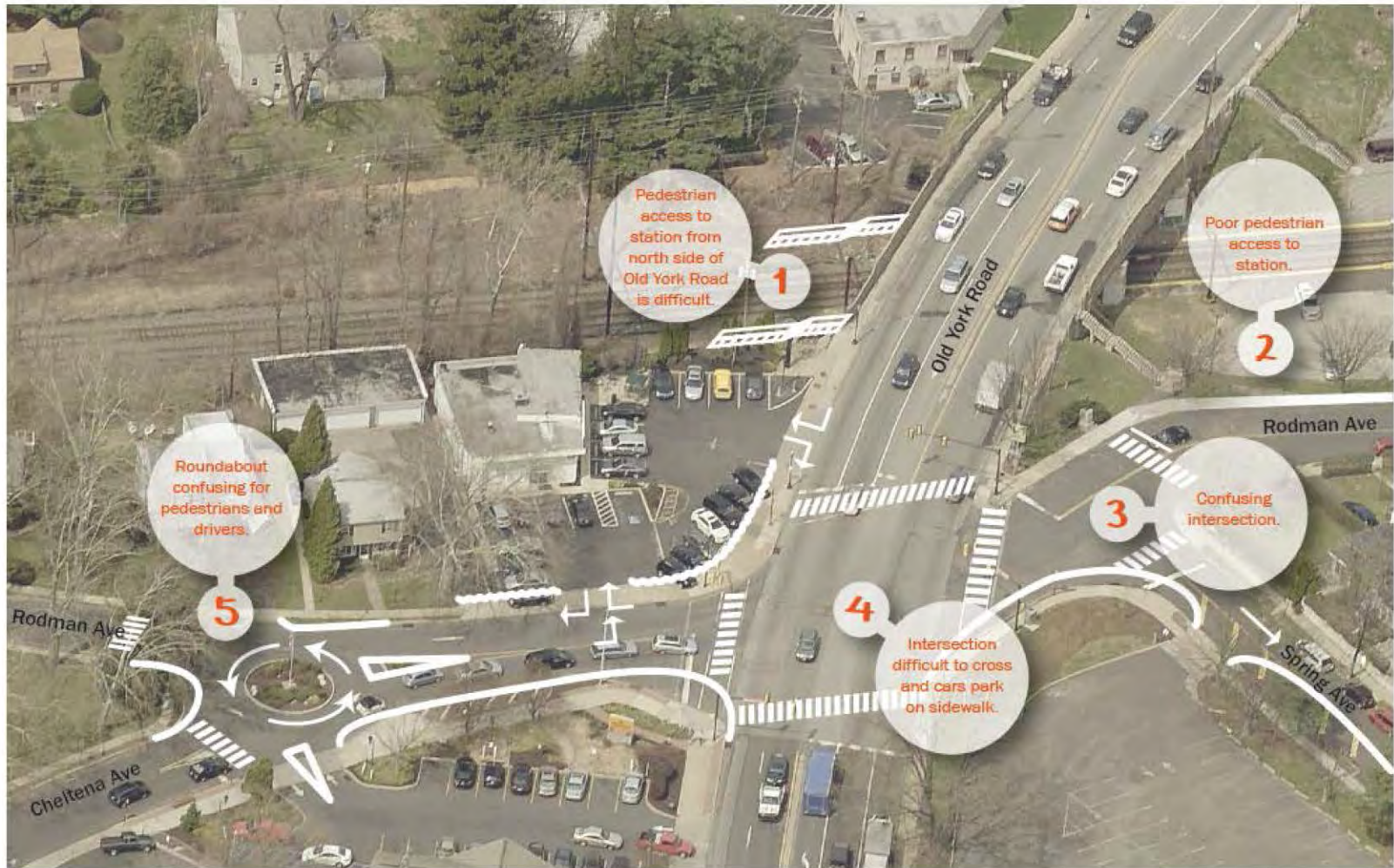
- Active shopping uses along the 611 corridor. A new dorm for Penn State Abington students is being built just outside of the study area.
- Several planning studies have been done in this area.
- A new garage is proposed for the train station.
- TOD zoning has been adopted for the surrounding area.



STUDY AREA



SOME OF OUR RECOMMENDATIONS...

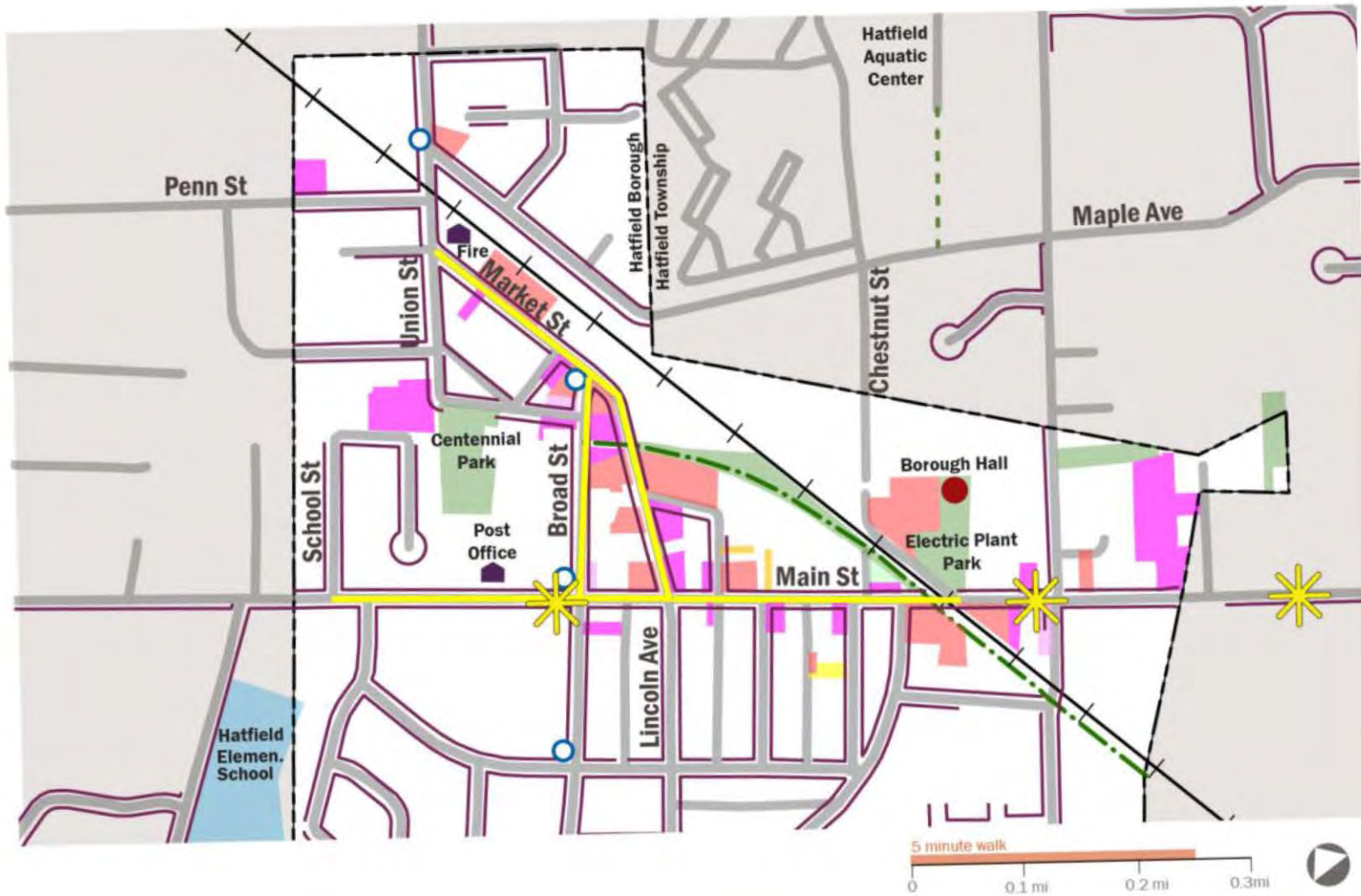


HATFIELD BOROUGH – ACCESS TO DOWNTOWNS

- Hatfield Borough is already very walkable.
- Sidewalks line the borough’s streets and a streetscaping initiative added crosswalks, street trees, and pedestrian scaled lighting to the borough’s streets
- However, many large trucks cut through the borough. State roads leading to the Pennsylvania Turnpike get much traffic too.



STUDY AREA



SOME OF OUR RECOMMENDATIONS...



CHELTENHAM ELEMENTARY – SAFE ROUTES TO SCHOOL

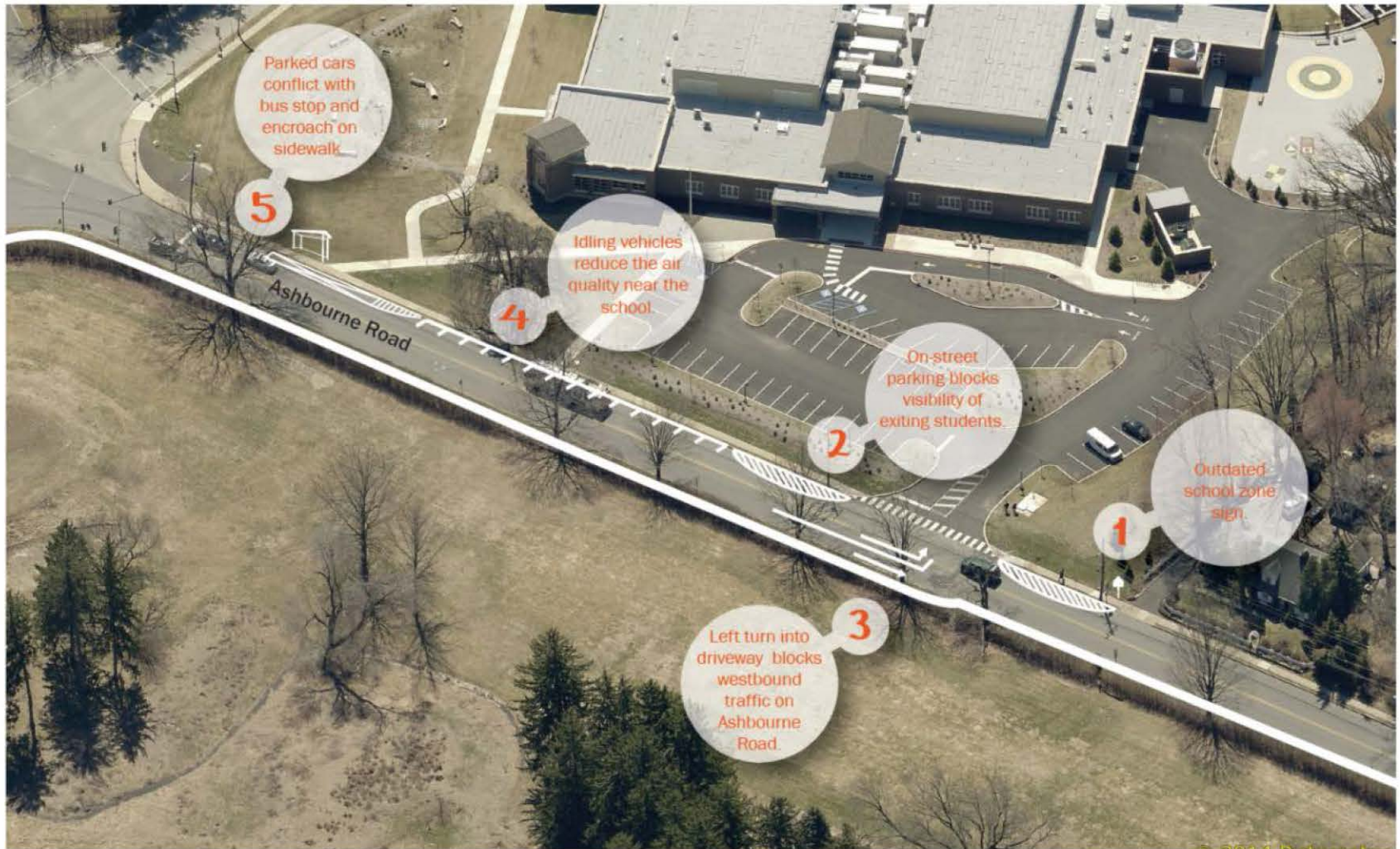
- School is recently reconstructed but sits at a complex five-way intersection.
- Circulation issues have forced the school to re-evaluate the way students are dropped off and picked up.
- New construction across the street could dramatically increase student enrollment.
- Of the 400 students at the school, only a handful of students walk regularly.



STUDY AREA



SOME OF OUR RECOMMENDATIONS...



PEDESTRIAN POLICY RECOMMENDATIONS



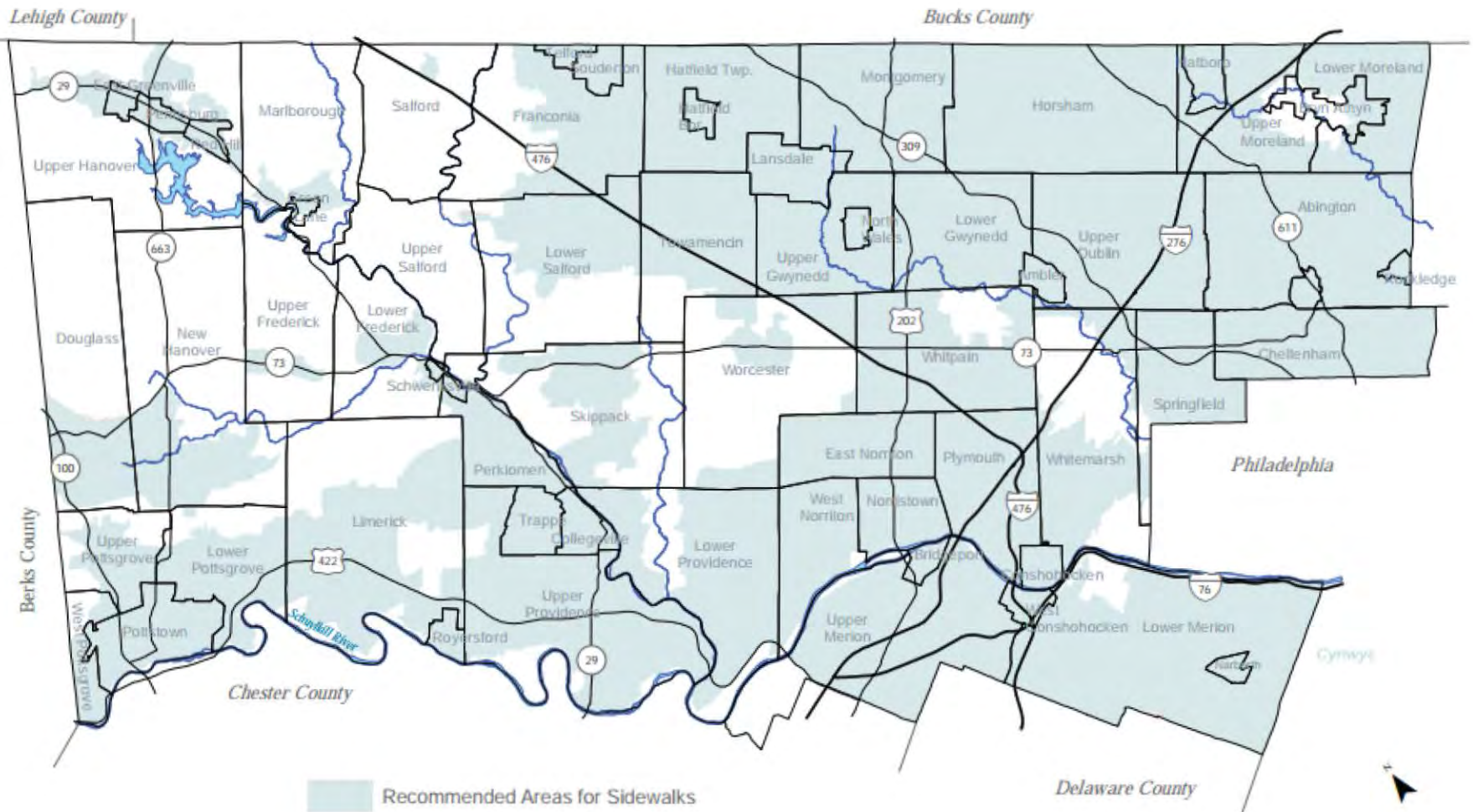
Pedestrian safety is not a new idea...this ad dates back to the early 1940s

POLICY RECOMMENDATIONS - SIDEWALKS

- All new development and redevelopment within the Designated Growth Areas shown in the county’s Growth and Preservation Plan should have sidewalks installed.
- These areas include the majority of the county’s downtown and Main Street areas, shopping centers, office parks, industrial complexes, apartments, townhouses, and twins—as well as single-family detached homes on lots less than an acre in size.



POLICY RECOMMENDATIONS - SIDEWALKS



POLICY RECOMMENDATIONS - SIDEWALKS

Sidewalk Location Guidelines by Type of Development

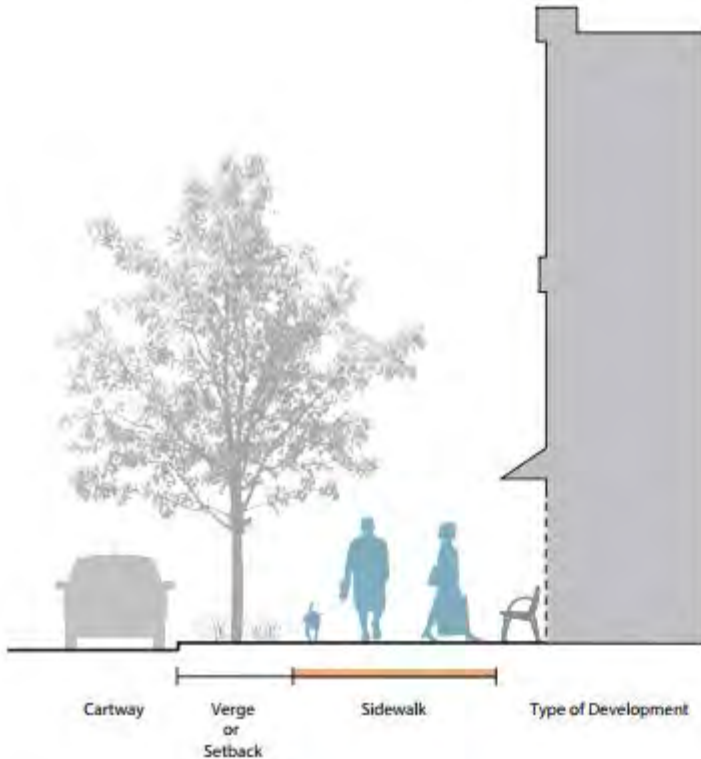
TYPE OF DEVELOPMENT	SIDEWALK LOCATIONS FOR NEW DEVELOPMENT*	SIDEWALK LOCATION FOR EXISTING DEVELOPMENT*
<ul style="list-style-type: none"> Commercial, Office, and Industrial Residential (along arterial roads) 	Both sides of streets.	Both sides of streets. Every effort should be made to add sidewalks where they do not exist and complete missing links.
<ul style="list-style-type: none"> Residential (along collector roads) 	Both sides of streets.	Apartments, townhouses, or twins—both sides of street. Single family detached homes—prefer both sides of streets; require at least one side.
<ul style="list-style-type: none"> Residential (along local streets) <ul style="list-style-type: none"> - More than 4 units/acre 	Both sides of streets.	Prefer both sides of streets; require on at least one side.
<ul style="list-style-type: none"> - 1-4 units/acre 	Prefer both sides of streets; require at least one side.	Prefer both sides of streets* [*] ; require on at least one side or 6 foot shoulders* [*] on both sides.
<ul style="list-style-type: none"> - Less than 1 unit/acre 	One side of street preferred, shoulder on both sides required.	One side of street preferred, at least 6 foot shoulders on both sides.

Adapted from guidelines published in the Institute of Transportation Engineers' Design and Safety of Pedestrian Facilities

* Changes made from the guidelines to reflect Montgomery County conditions are noted with an asterisk.

- In most cases, we're recommending that sidewalks go on both sides of the street.
- In more rural residential areas, a sidewalk along one side of the street is sufficient.

POLICY RECOMMENDATIONS - SIDEWALKS

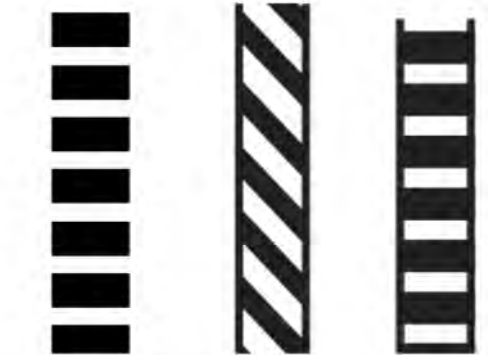


TYPE OF DEVELOPMENT	VERGE WIDTH	SIDEWALK WIDTH
CENTRAL BUSINESS DISTRICT SIDEWALKS	5'	8'
COMMERCIAL, OFFICE, AND INDUSTRIAL SIDEWALKS OUTSIDE OF CENTRAL BUSINESS DISTRICT	5' - 8'	5'
RESIDENTIAL SIDEWALKS ALONG MAJOR STREETS	5' - 8'	5'
RESIDENTIAL SIDEWALKS ON LOCAL STREETS WITH MORE THAN 4 HOMES PER ACRE	2'	5'
RESIDENTIAL SIDEWALKS ON LOCAL STREETS WITH 4 HOMES PER ACRE OR LESS	2'	4' - 5'

- In central business districts, sidewalks should be 8 feet wide with a landscaped strip, free of street furniture and opening doors.
- In most other areas, sidewalks should be 5 feet wide with a landscaped strip.

POLICY RECOMMENDATIONS – STREETS AND CROSSINGS

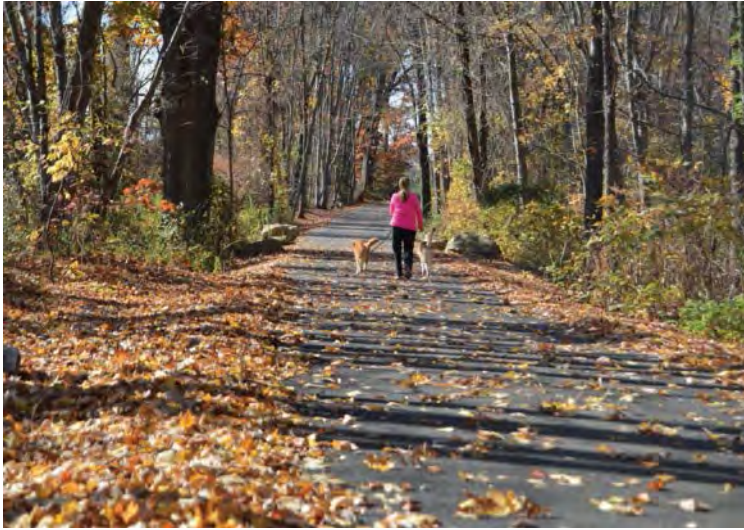
Continental Zebra Ladder



- Interconnected streets, short blocks, speeds of 25 mph on local streets
- Easy to see crosswalks (color/texture/style), well lit intersections
- Signs/lights to warn motorists of crosswalks



POLICY RECOMMENDATIONS - TRAILS

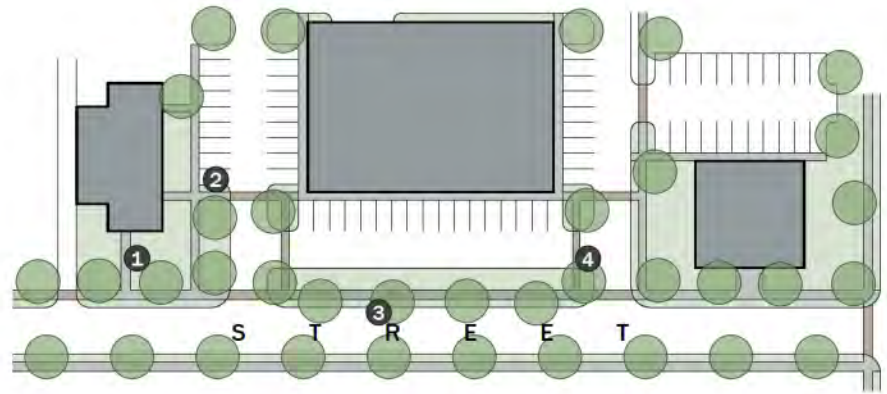


- Widths of 10 - 12 feet with 2 foot buffer, where possible
- Keeping people safe and traffic flowing – dividing trails with a center line (or a broken line where passing is permitted)
- Where trails get heavy use, consider separating pedestrians and bike traffic entirely



POLICY RECOMMENDATIONS – LAND USE AND BUILDING DESIGN (COMMERCIAL)

- Building design should be attractive to pedestrians
 - Accentuated entrances
 - Varied setbacks
 - Breaks in the building façade
 - Sufficient (12 foot) setbacks
- Heights should be tall enough to allow for a mix of uses and sufficient density
- Sidewalks should connect to entrances
- Driveways should have clearly marked crosswalks

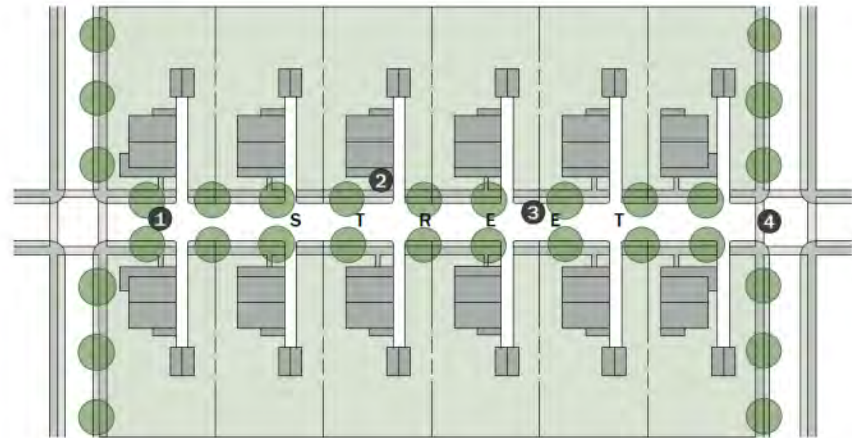


- 1 Sidewalk Connection
- 2 Sidewalk Connection Between Buildings
- 3 Landscape Verge
- 4 Pedestrian Crosswalk



POLICY RECOMMENDATIONS – LAND USE AND BUILDING DESIGN (RESIDENTIAL)

- Street width of 26-30 feet (enough for two way traffic and on-street parking)
- Homes relatively close to the street
- Street trees
- Centrally located open space
- Elements like porches and garages that don't dominate the street



- 1 Street Trees
- 2 Front Porch
- 3 Landscape Verge
- 4 Pedestrian Crosswalk



WHERE WE'RE HEADED NEXT

- Continued walk audits with schools and communities.
- Ongoing partnership and outreach with the county's health department.
- New county grant program - Montco 2040 Implementation fund - to jump start pedestrian improvements.
- Working closely with other county initiatives to ensure that walkability is a focus.



PRESENT



PROPOSED



DECEMBER 2015

CULTIVATING CAMDEN

THE CITY'S FOOD ECONOMY STRATEGY



Cultivating Camden: An Introduction





Stakeholders



Delivering Nourishment.
Improving Health.



**New Jersey Partnership
for Healthy Kids**
Communities Making a Difference
to Prevent Childhood Obesity



**FOR
COMMUNITY**
YMCA of Burlington
and Camden Counties



THE REINVESTMENT FUND
Capital at the point of impact.



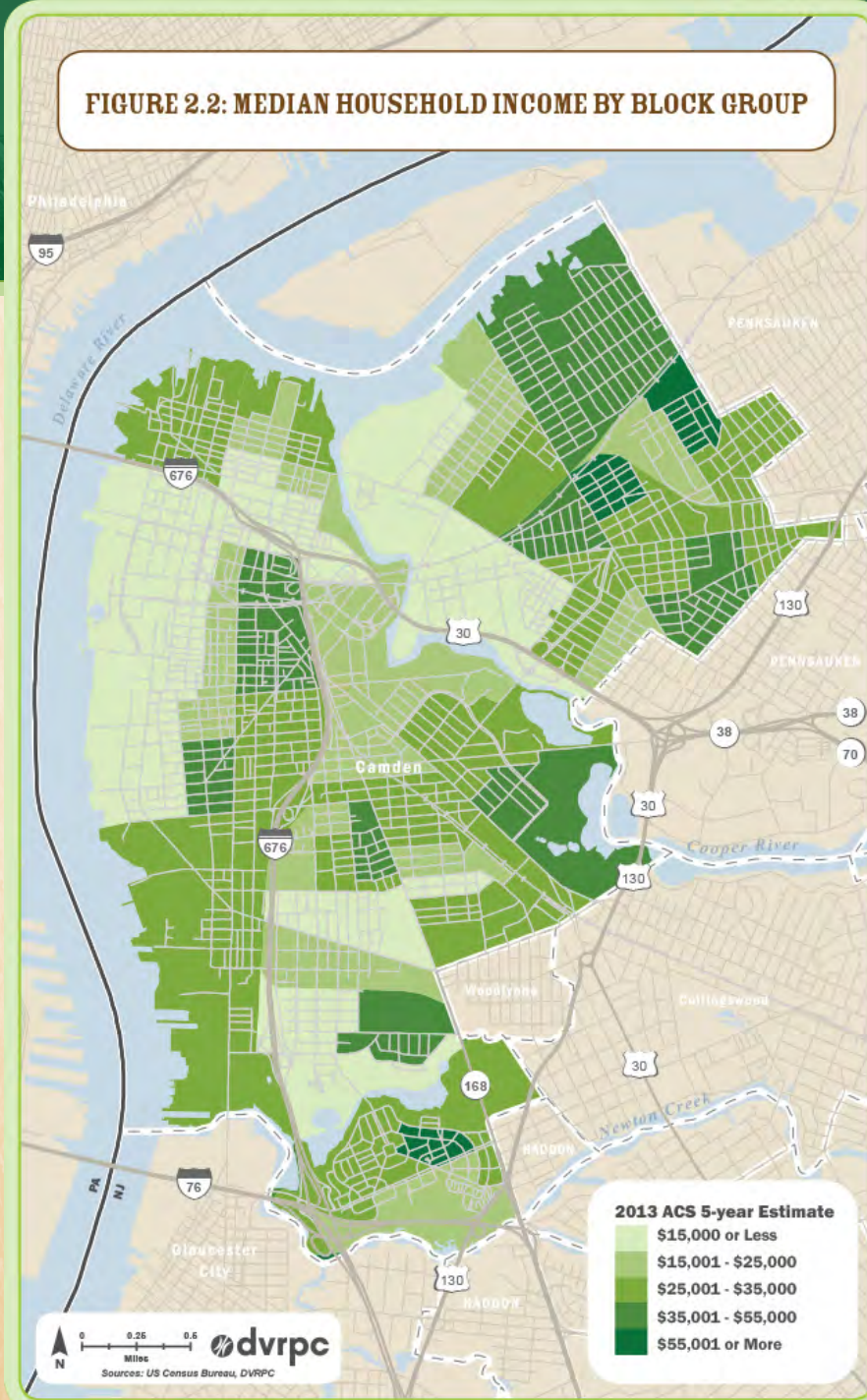


Data: *What does it tell us?*

Median Household Income

- \$26,202: City of Camden
 - \$61,683: Camden County
 - \$71,629: New Jersey
-
- 39.8% of Camden residents live below the poverty line

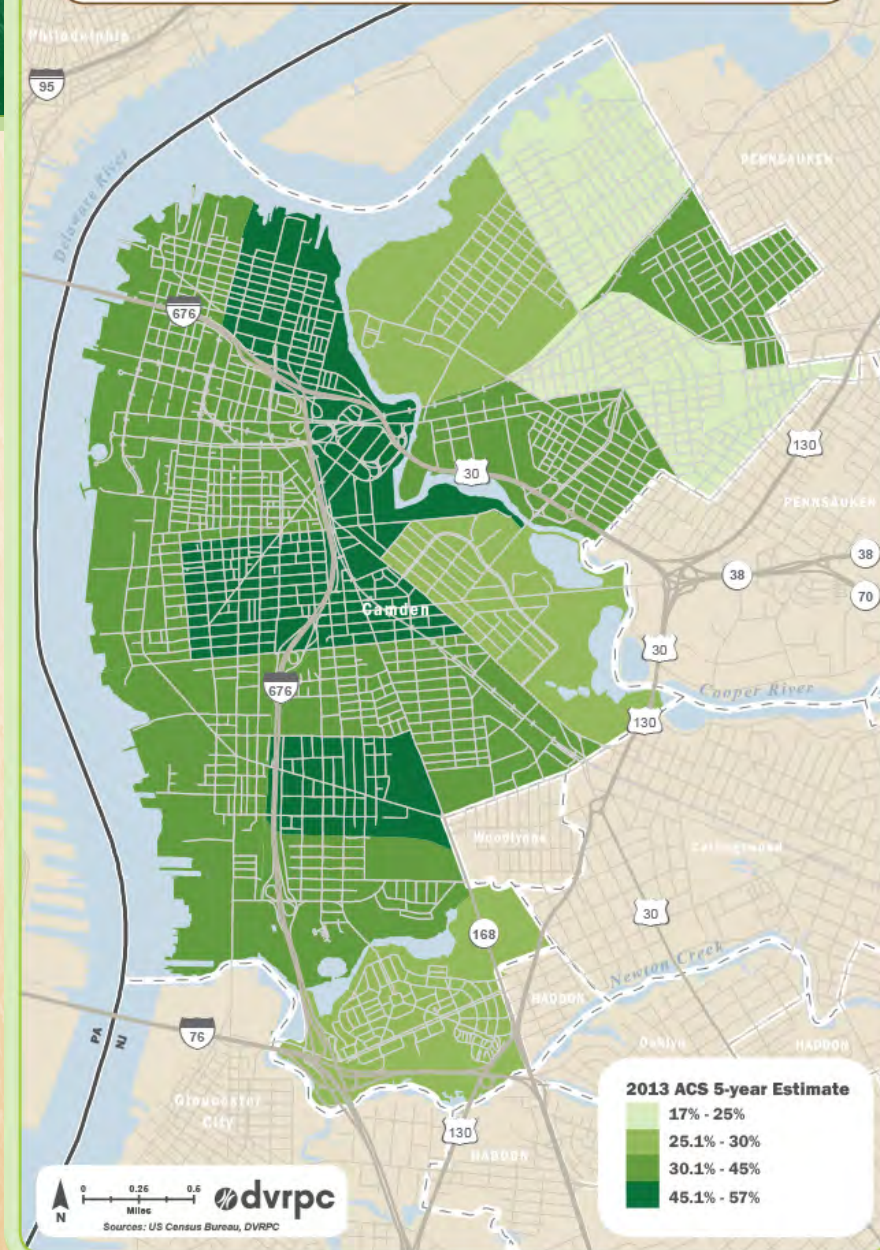
FIGURE 2.2: MEDIAN HOUSEHOLD INCOME BY BLOCK GROUP



Household Vehicle Ownership

- 10 out of 19 census tracts within Camden have low vehicle ownership (over 35% of households are carless)
- Between 45.1% and 57% of households in Centerville, Bergan Square, Gateway, and Pyne Point do not have cars

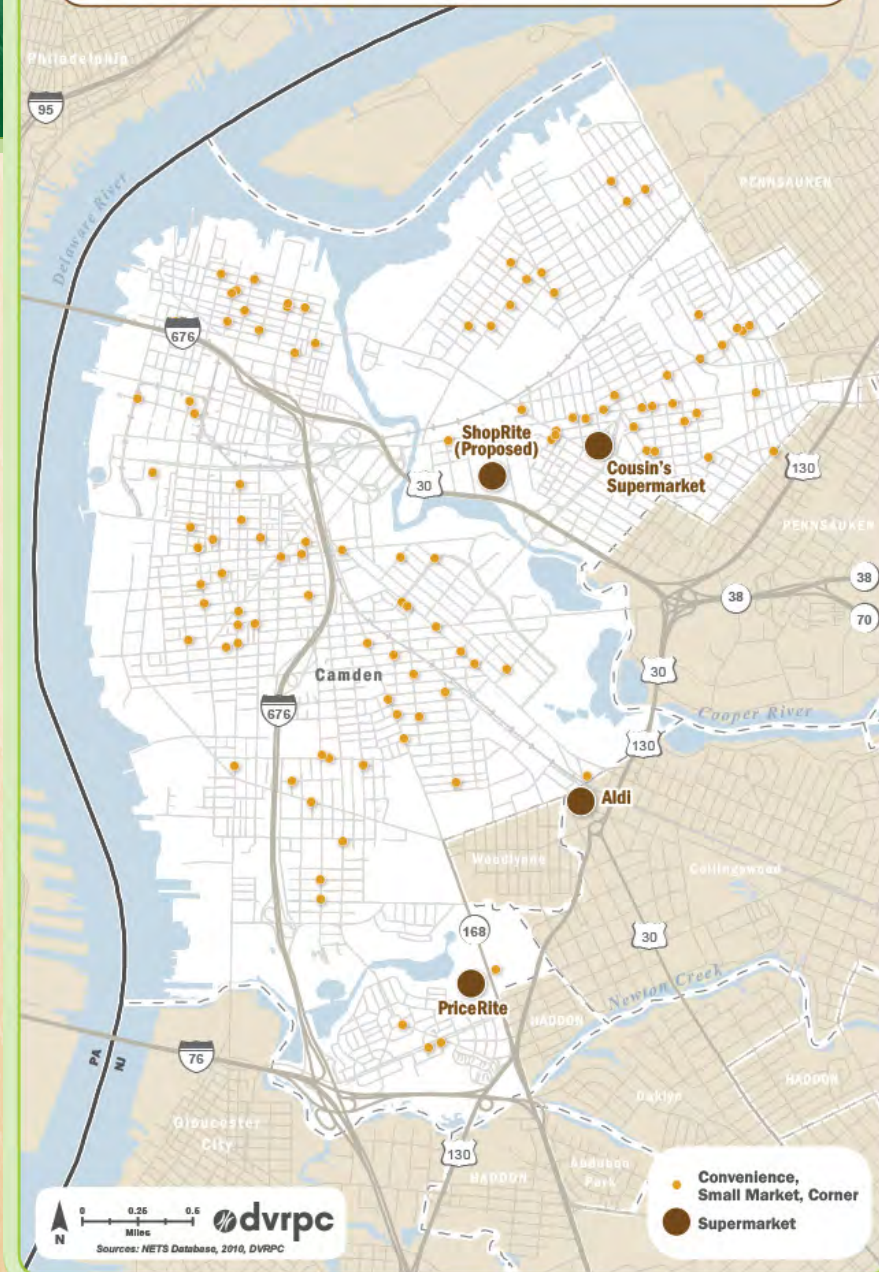
FIGURE 2.4: PERCENTAGE OF CARLESS HOUSEHOLDS BY CENSUS TRACT



Food Retail

- Within Camden City, there are:
 - Over **100** convenience stores
 - **5** grocery stores
 - **2** supermarkets

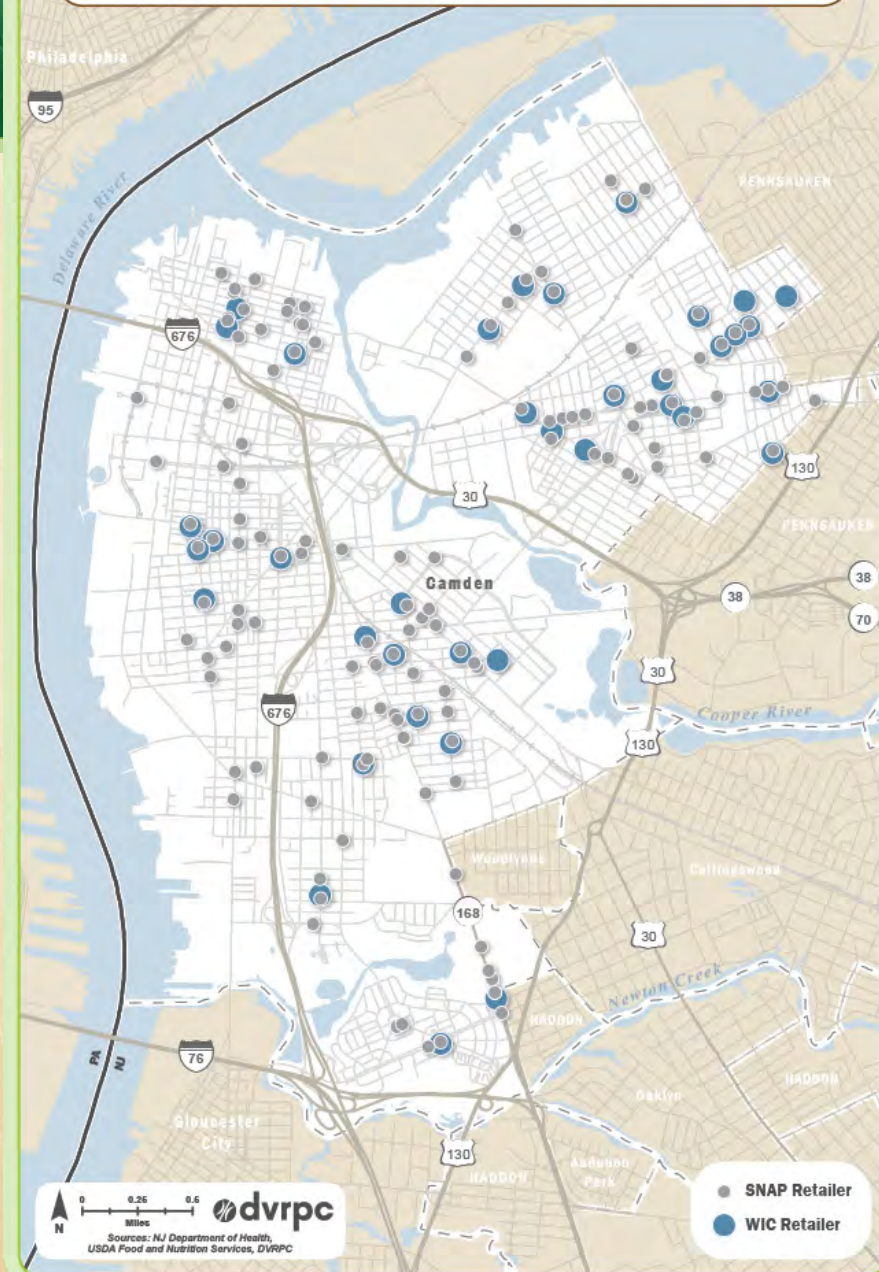
FIGURE 2.10: TRADITIONAL FOOD RETAIL



Food Assistance Retail

- Stores that accept SNAP and/or WIC are found throughout Camden and are much more accessible to residents

FIGURE 2.9: FOOD ASSISTANCE RETAIL LOCATIONS





Recommendations: *How are we making changes?*



Government





Ensure Transit Access to Grocery Stores

FIGURE 3.2: BUS ROUTES TO PRICE RITE AND ALDI





Ensure Transit Access to the Grocery Stores





Adopt agricultural zoning

- Could allow urban ag by-right, conditionally in certain districts, or by overlay zone.
- Zoning would allow the activity to occur but does not permanently protect gardens or urban farms.



Source: NJ Tree Foundation



Community Organizations





Identify & preserve long-standing & iconic community gardens

- Strong culture of community gardens in Camden
- Some, like Camden Men's Garden, have existed for 30+ years
- Work with an exiting land trust to permanently preserve a select number of gardens





Economic Development Organizations





Expand the Heart Bucks Program for healthy purchases in Camden's corner stores

- Offer financial incentive for healthy food purchases and/or attendance at nutrition education
- Tie to current initiatives, such as healthy corner store network
- Dual incentive for storeowners and customers



Source: *The Food Trust*



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