

Better Buses Benefit Pennsylvania's Cities

October 18, 2016



Bus Transit in Pennsylvania

- 26 Fixed-Route Bus Systems
- 3,000 revenue vehicles
- 7.3 million revenue hours of operation in FY2014
- 272 million individual rides in FY2014

Bus transit comprises most of the transit in Pennsylvania

- In FY2014, fixed-route bus service accounted for 75% of the revenue hours and 61% of the transit riders in Pennsylvania with other fixed route service provided by rail transit systems.

Disadvantages of Conventional On-Street Bus Service

- Lack of visibility, particularly for occasional transit users
- Limited or no amenities for transit riders
- Prone to delay in traffic which increases travel times
- Traffic delays lead to unreliable and uneven service
- Short spacing of bus stops reduces bus speeds
- High operating costs
- Poor image
- Difficult to capture the value of transit where development occurs in a corridor

Examples of Actions to Improve Effectiveness and Appeal of Bus Service

- Real-time schedule information (Nationwide)
- Transit Signal Priority (Chicago)
- Stations and bus shelters with amenities (Kansas City and Minneapolis)
- Off-board fare collection (Cleveland)
- Branding of vehicles, stations & signage (Eugene, OR)
- Dedicated transitways (Los Angeles)
- Stylized vehicles (Seattle and Las Vegas)
- Coordinating Transit-Oriented Development with bus rapid transit (Oakland, CA)

Wide Range of Applications

- **Small and Large Cities (Fort Collins, Colorado and Chicago)**
- **Minimal investments and major projects (New York City Select Bus and Los Angeles Orange Line busway)**

Three Pennsylvania Cities' Approaches

- Philadelphia
 - Roosevelt Boulevard Route for Change – Dan Nemiroff, AICP, Southeastern Pennsylvania Transportation Authority
- Allentown
 - Enhanced Bus/Bus Rapid Transit Study – Owen O'Neill, Lehigh and Northampton Transportation Authority
- Pittsburgh
 - Downtown - Uptown - Oakland - East End Bus Rapid Transit – Justin Miller, AICP, City of Pittsburgh



IMPLEMENTING "BRT LITE" SERVICE ON ROOSEVELT BOULEVARD



Dan Nemiroff, AICP
SEPTA Service Planning

APA-PA
October 18th, 2016

ABOUT SEPTA



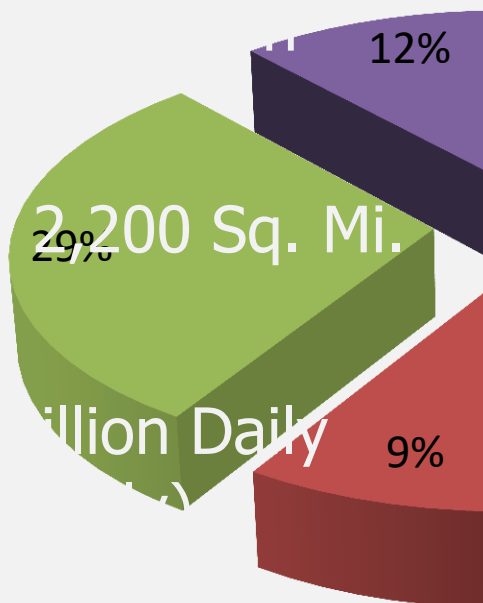
6th Largest

Area Popul

Coverage A

Ridership:
(330 Million

SEPTA Ride



Bus Light Rail H



ROOSEVELT BOULEVARD BASICS



- Proposed in 1903 as part of the City Beautiful movement to take the Boulevard into Northeast Philadelphia and Bucks County and led to road widening and other improvements of the city to the central portion
- Roosevelt Expressway constructed in 1951 to link Roosevelt Boulevard to the Schuylkill Expressway
- Original sections completed between 1903 and 1914 at a cost of \$3.5 million
- One of the most congested roads in the United States
- Became part of the Federal Highway System in 1926 when the US 1 designation was added (US 1 is now I-76)
- One of the worst intersections in the city (Center City and Center City)



RECENTLY COMPLETED STUDIES

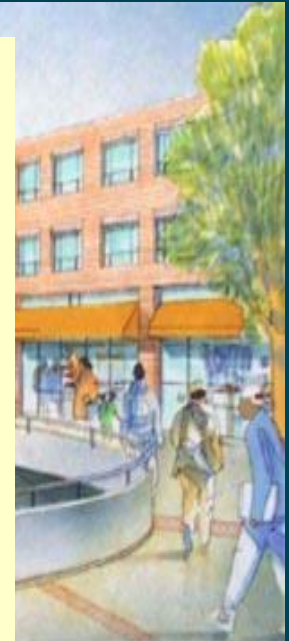
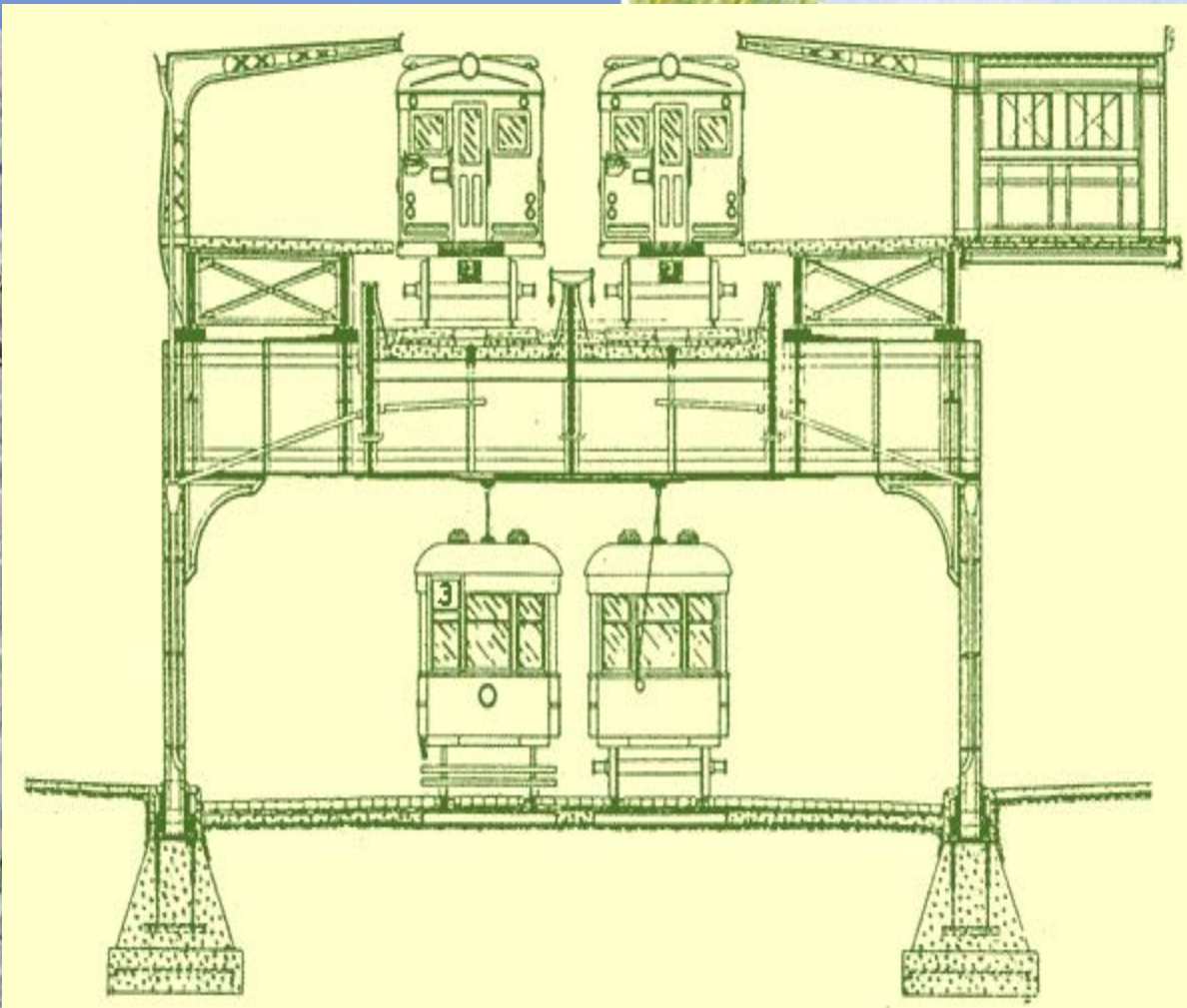
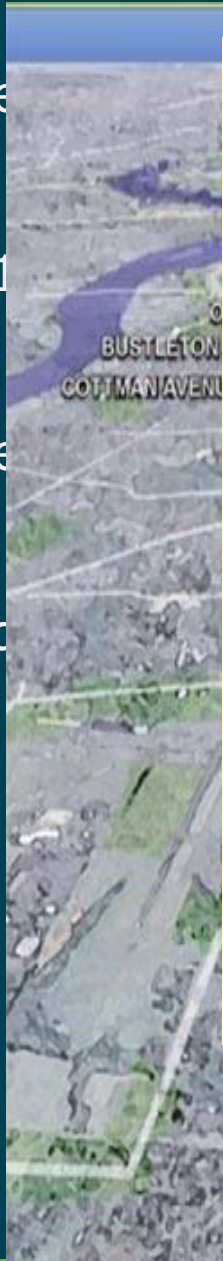


Roose

U.S. 1

Roose

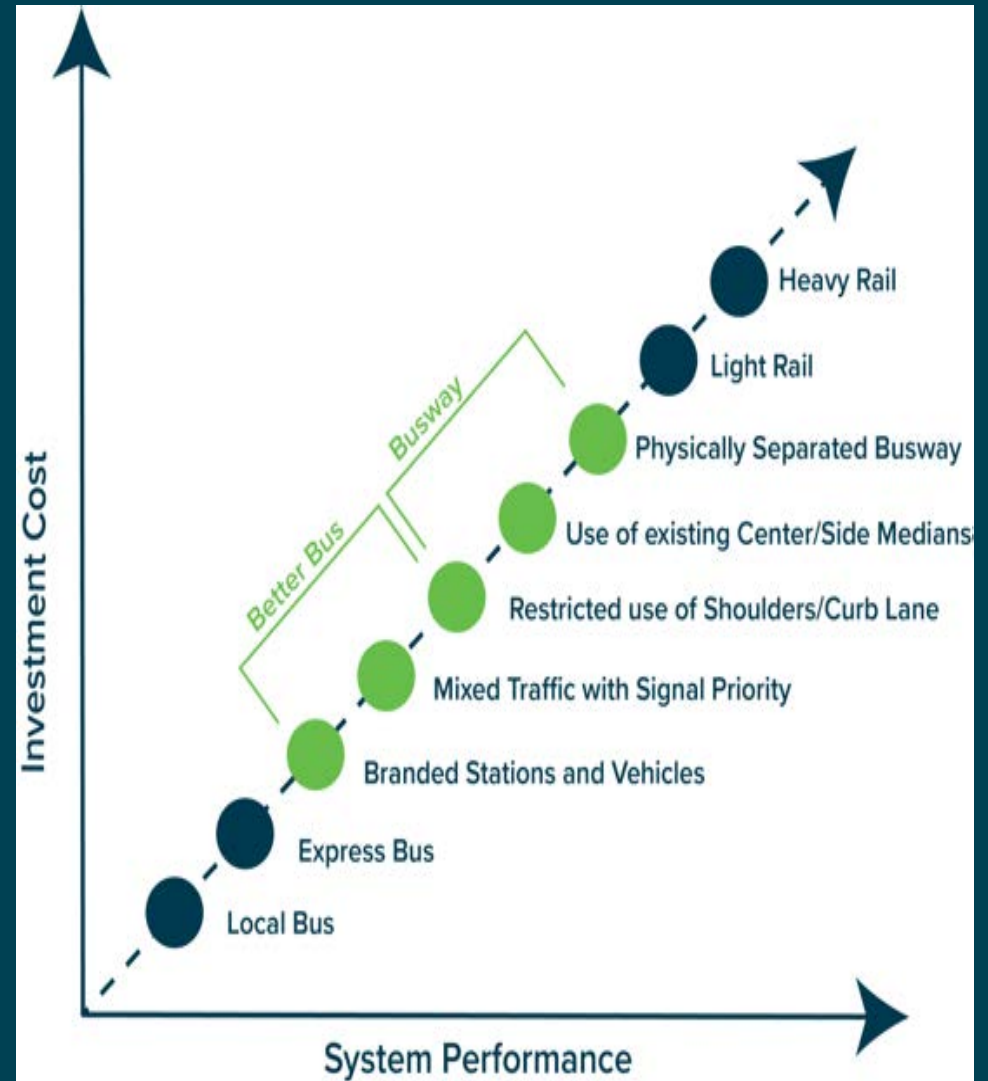
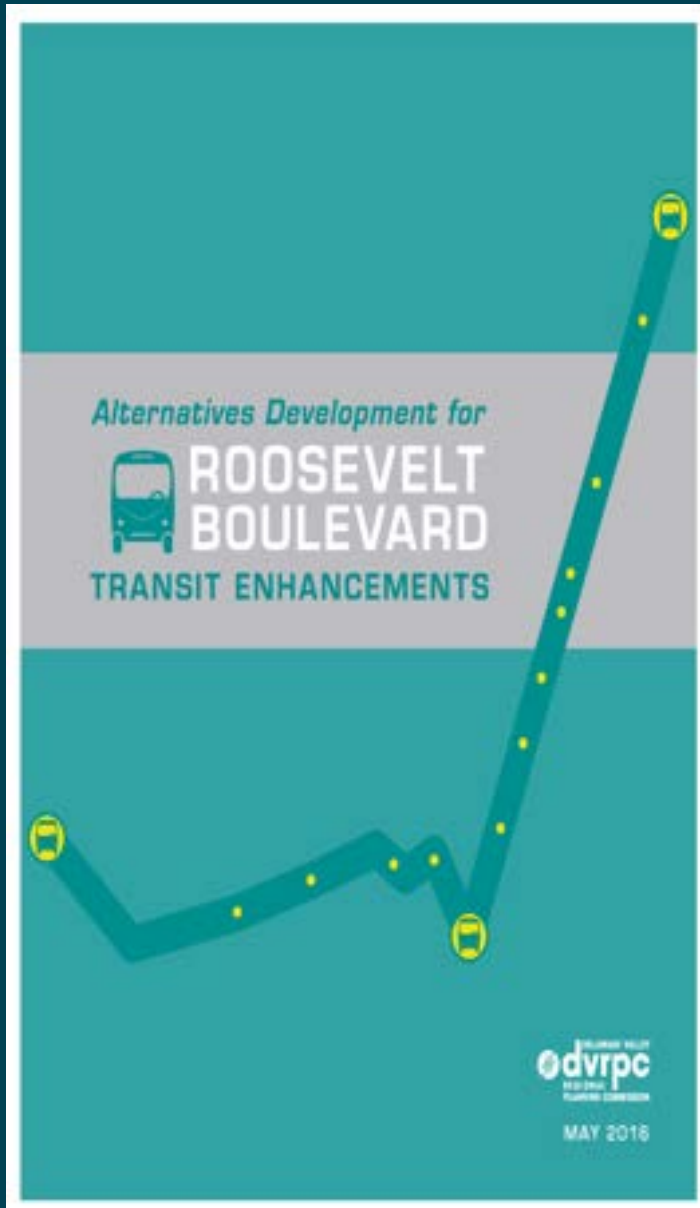
Philad



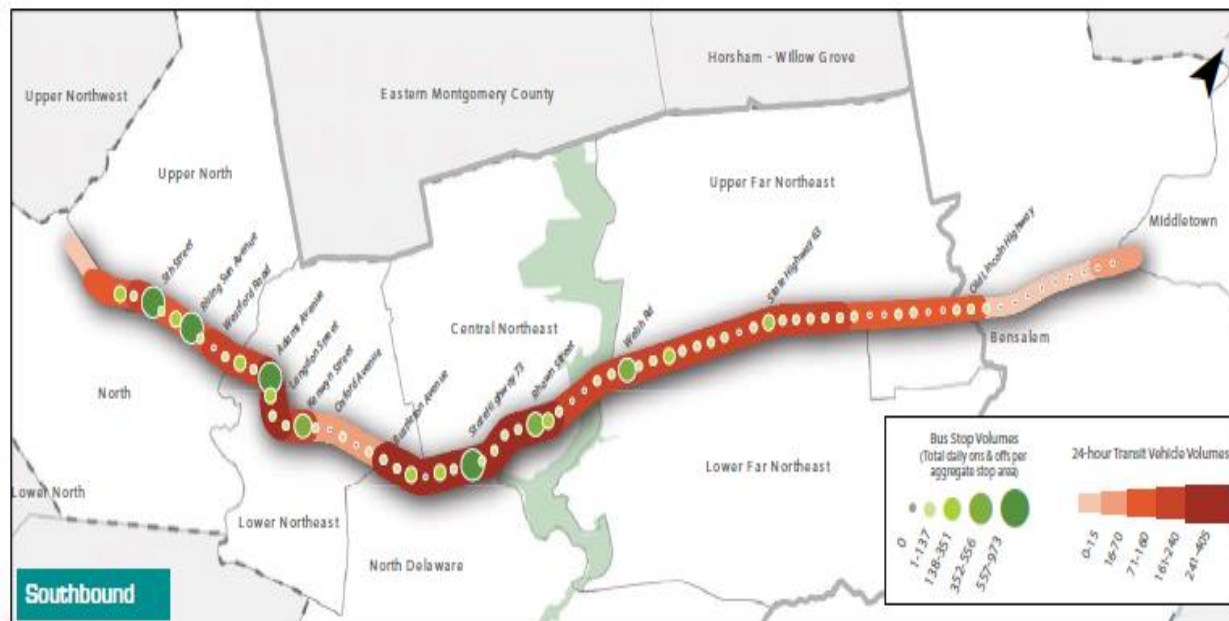
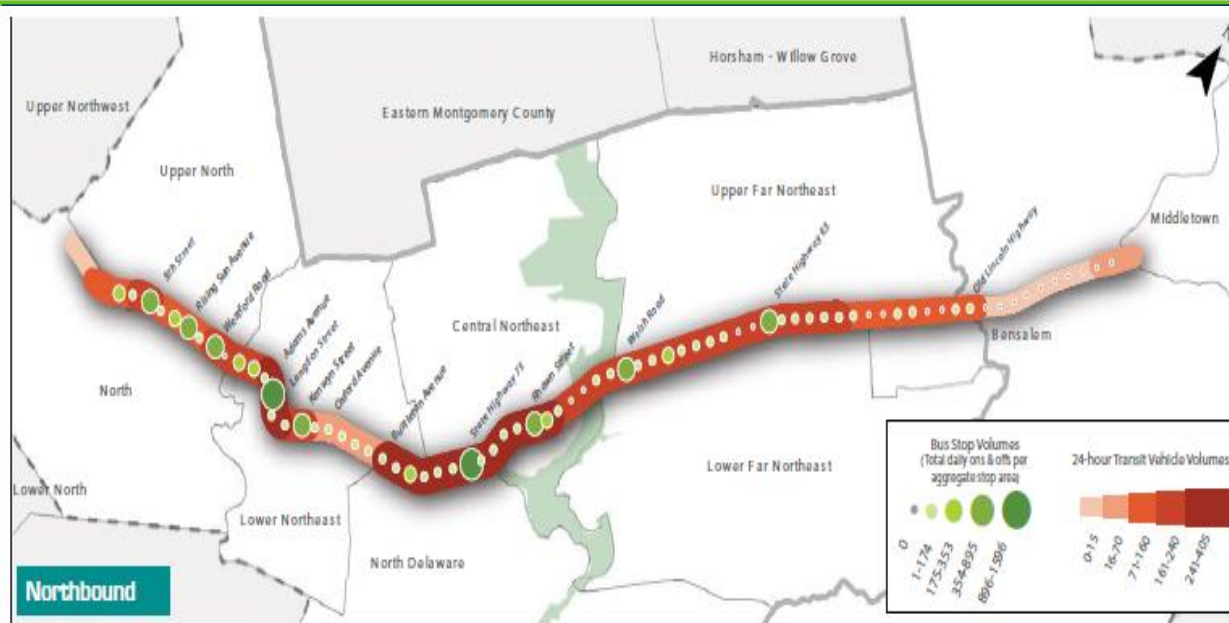
CURRENT CONFIGURATION



DIFFERENT APPROACH



CURRENT TRANSIT CLIMATE



RECOMMENDATION – “ENHANCED BUS SERVICE”



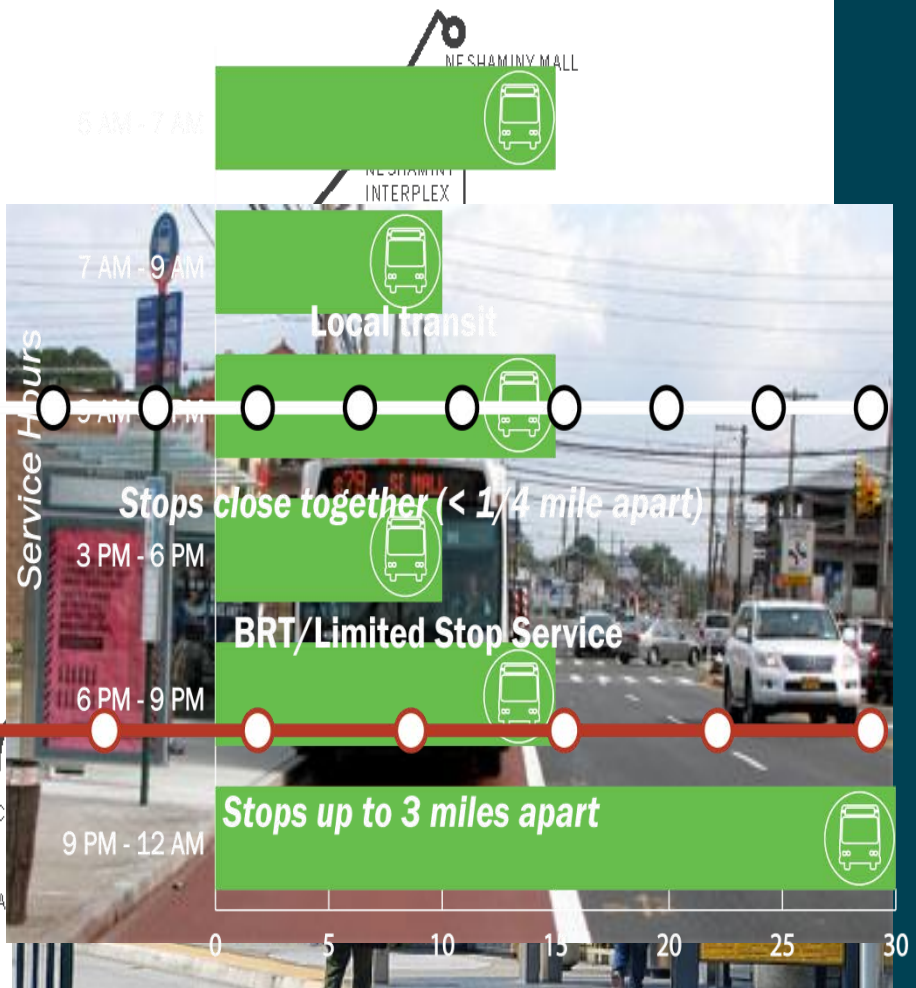
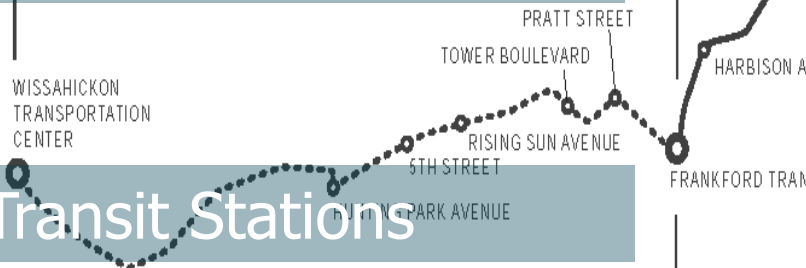
EBS Station Diagram

Wider Stop Spacing

Frequent Service

Business-and-Transit Lane

Transit Stations



EBS-A

Source: DVRPC, 2015

OTHER RECOMMENDED ENHANCEMENTS



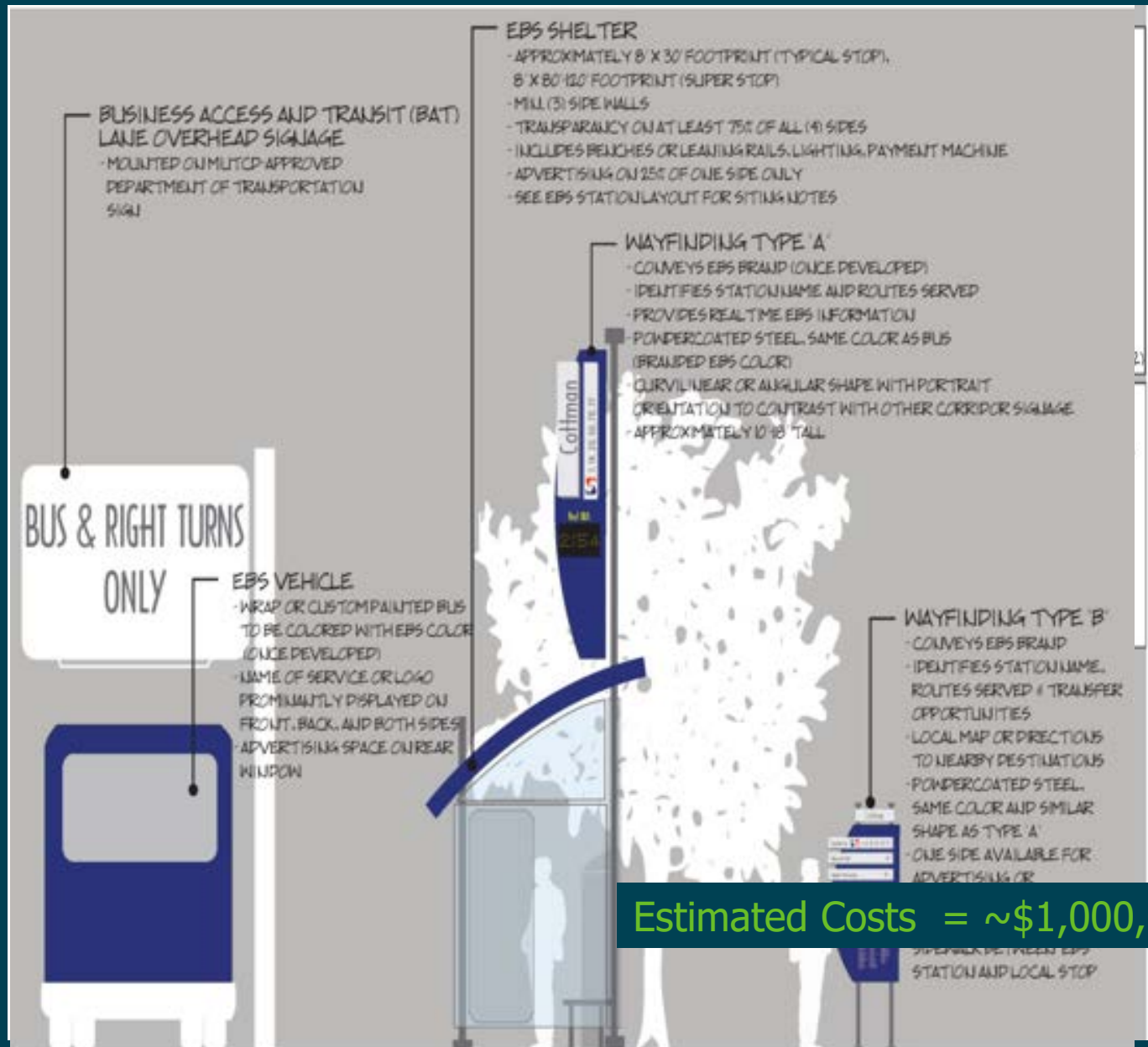
Transit Signal
Priority

All-Door Boarding

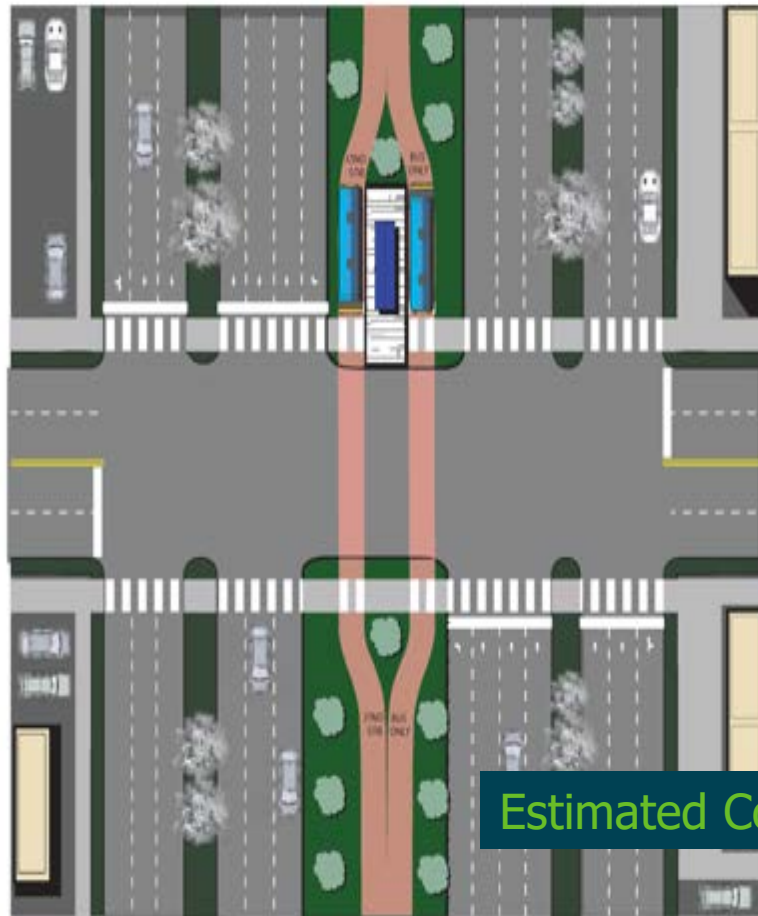
Real-Time
Information



STATION DESIGN – ENHANCED BUS



LONG-TERM RECOMMENDATION – FULL BRT



NOT TO SCALE

Source: DVRPC, 2014



Estimated Costs = ~\$50,000,000

Source: DVRPC, 2014



How to make infrastructure changes to property SEPTA does not own?

How to brand a new transit mode?

How to coordinate with other stakeholders, property owners, and the general public?

How to pay for the costs of design, construction, and operation?



Multi-modal in approach (car, ped, bike, transit)

Focus on transportation and economic development throughout the corridor and in the neighborhoods

All major parties on the same page and at the table

Big picture but with shorter-term actions

Philadelphia's Study for a Better
Roosevelt Boulevard

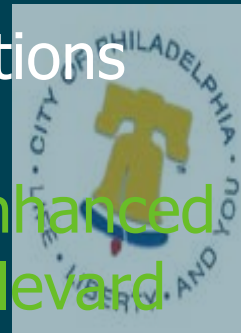
Interim Action – Establishing Enhanced Bus Service on
Roosevelt Boulevard

3 Years

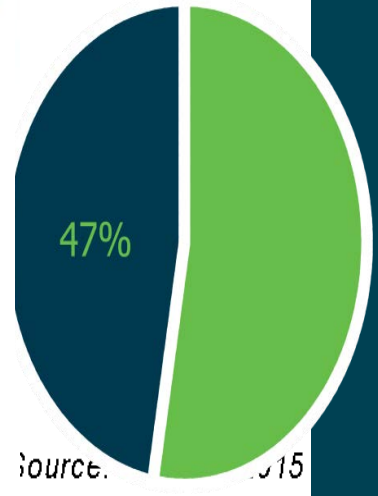
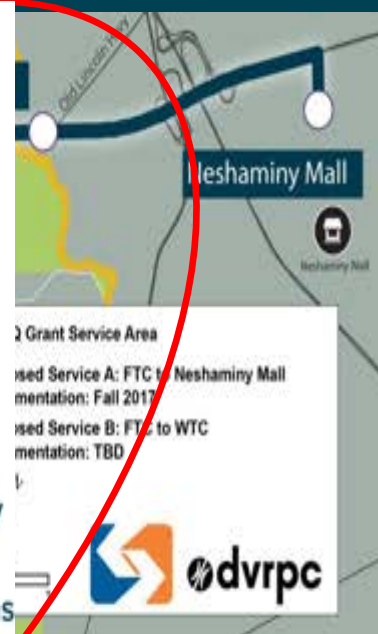
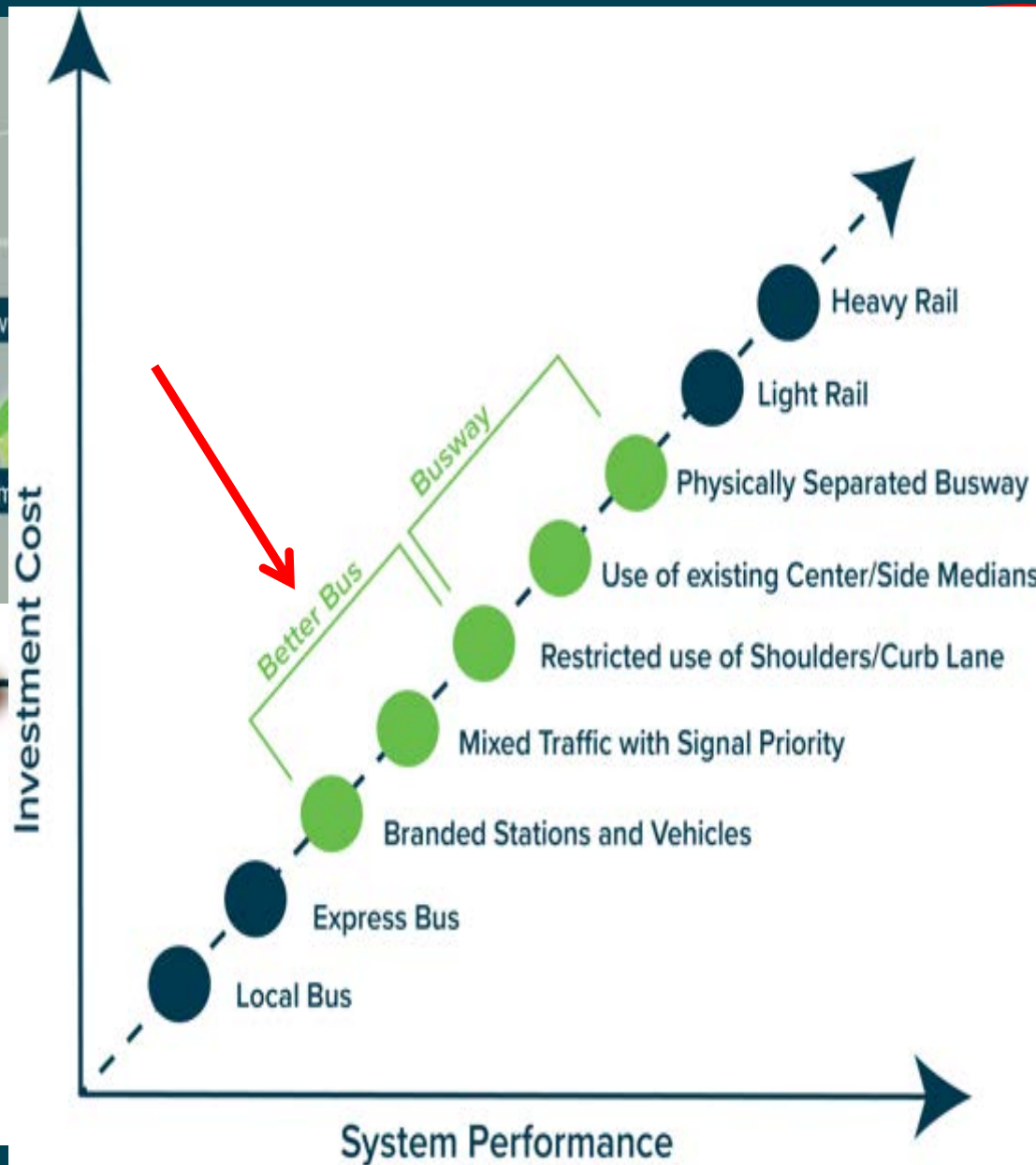
\$3,000,000

Route for
Change

Transforming The Boulevard



IMPLEMENTATION – BRT LITE (X BUS)



OTHER ENHANCEMENTS



All-Door-Boarding
Custom branding for mode & route
(work done through TIGER grant,
Spring 2017 announcement)

STATION DESIGN/CONSTRUCTION - CMAQ AWARD



Covers
stations
Bouleva

Station
coopera
City/SE



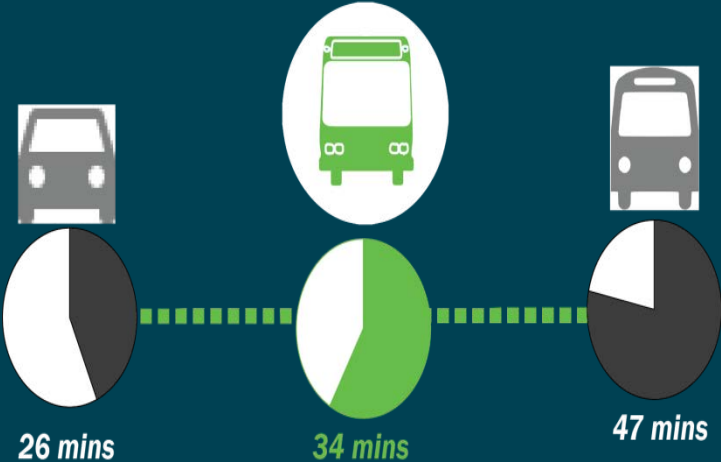
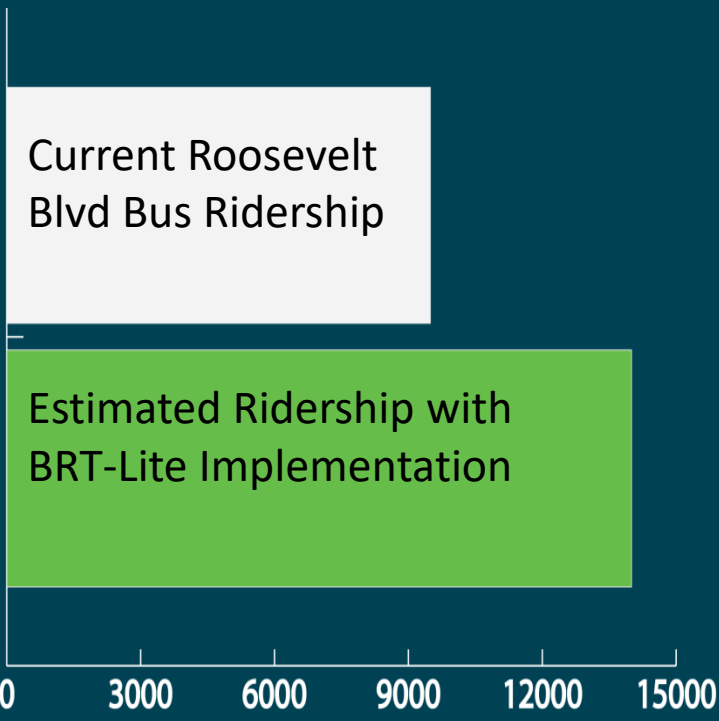
for

ESTIMATED BENEFITS



Trip reduction time of 13 minutes (28%)
off of current end-to-end runtime

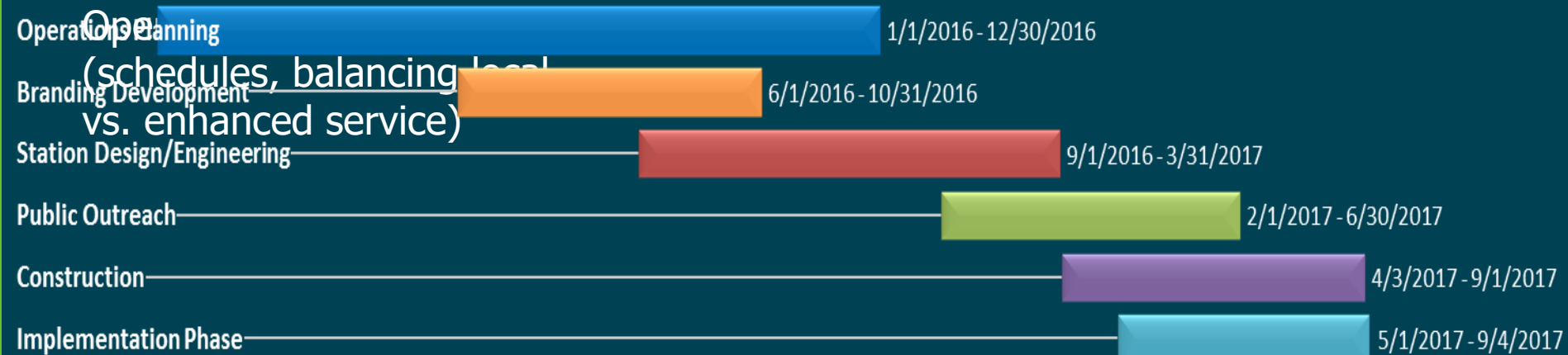
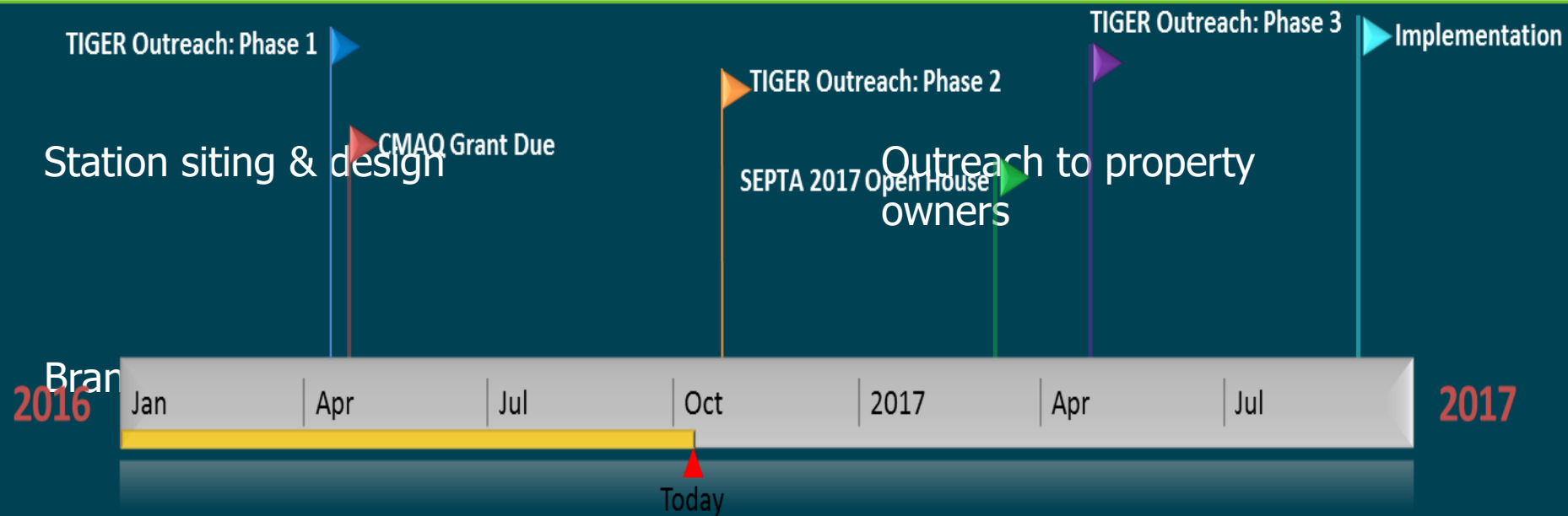
Approx. 4,500 new riders a day,



Balancing Local/Enhanced Service will
allow us to run 30% more service for
same cost



ONGOING ACTIVITIES





Finish implementation of FTC to Neshaminy Service
(estimated for Fall 2017)

Improvements to FTC and Neshaminy Mall to support
service

Planning work for lower portion of Roosevelt Boulevard*
(EBS-B)

Future investigation into other appropriate corridors
(BRT LRP)



THANK YOU



Dan Nemiroff, AICP
SEPTA Service Planning



Lehigh Valley
Enhanced Bus/ Bus
Rapid Transit Plan



Services

- Fixed Routes 
 - 24 fixed routes, 65 peak buses
 - Approximately 18,000 trips per day
 - 9,000 work commutes
 - 9,000 trips for shopping, medical, other quality of life needs
 - 2,000 seniors daily
- Paratransit 
 - Operated by Easton Coach Company
- Carbon County Community Transit (CCCT)

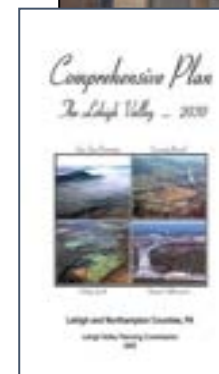


Moving LANTA Forward Study

- 12 Year Strategic Vision
- Adopted 2010
- Three Elements
 - Service Plan
 - Marketing Plan
 - Land Use Outreach Tools

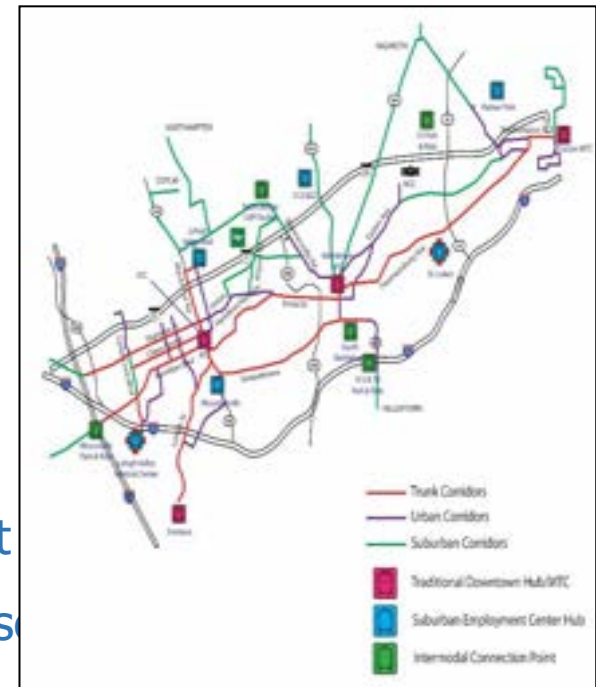
Why Moving LANTA Forward?

- Transit service levels have not kept pace with demand
- Residential and commercial development
- Goals of Regional Vision – LVPC's *Comp Plan -The Lehigh Valley 2030*
 - Mitigate congestion and sprawl
 - Link land use and transportation decisions
 - Preserve open space and revitalize urban centers
- Organizational Vision – *LANTA Strategic Plan 2004-2015*
 - LANTA services should address changing mobility needs, support regional economic development and environmental goals



Summary of Recommendations - Service Plan

- Core Service Improvement Plan
 - Improved frequency and span
 - Metro system re-design
 - Establishes hierarchy of corridors
- Expanded Service Coverage Plan
 - Network of satellite hubs
 - Flexible services connect to fixed route at
 - Improved connections to commuter bus s
- Enhanced Bus Modes Plan
- Land Use Outreach



Enhanced Bus/Bus Rapid Transit Study

- Funded through congressional designation
- Study conducted by team led by AECOM Technical Services
 - HDR – Land Use Policy Research
 - Taggart Associates – Public Outreach
- Study commenced in summer 2012
- Numerous Advisory Committee meetings throughout process
- Two series of public meetings
- Revised Draft Final Report and Executive Summary submitted

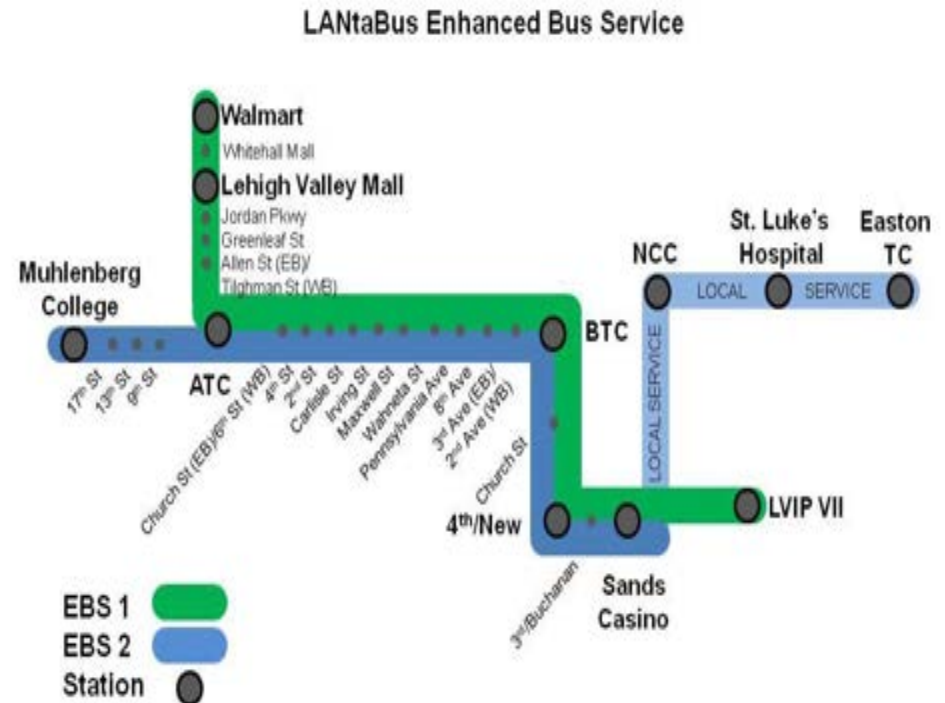


Study Process

- Identified “Priority Transit Corridors” – 100’s routes
- Established overall goals of program
- Developed Evaluation Criteria based on:
 - Program goals
 - LANta Board of Directors and Study Advisory Committee input
 - Federal Transit Administration (FTA) required criteria for a BRT project

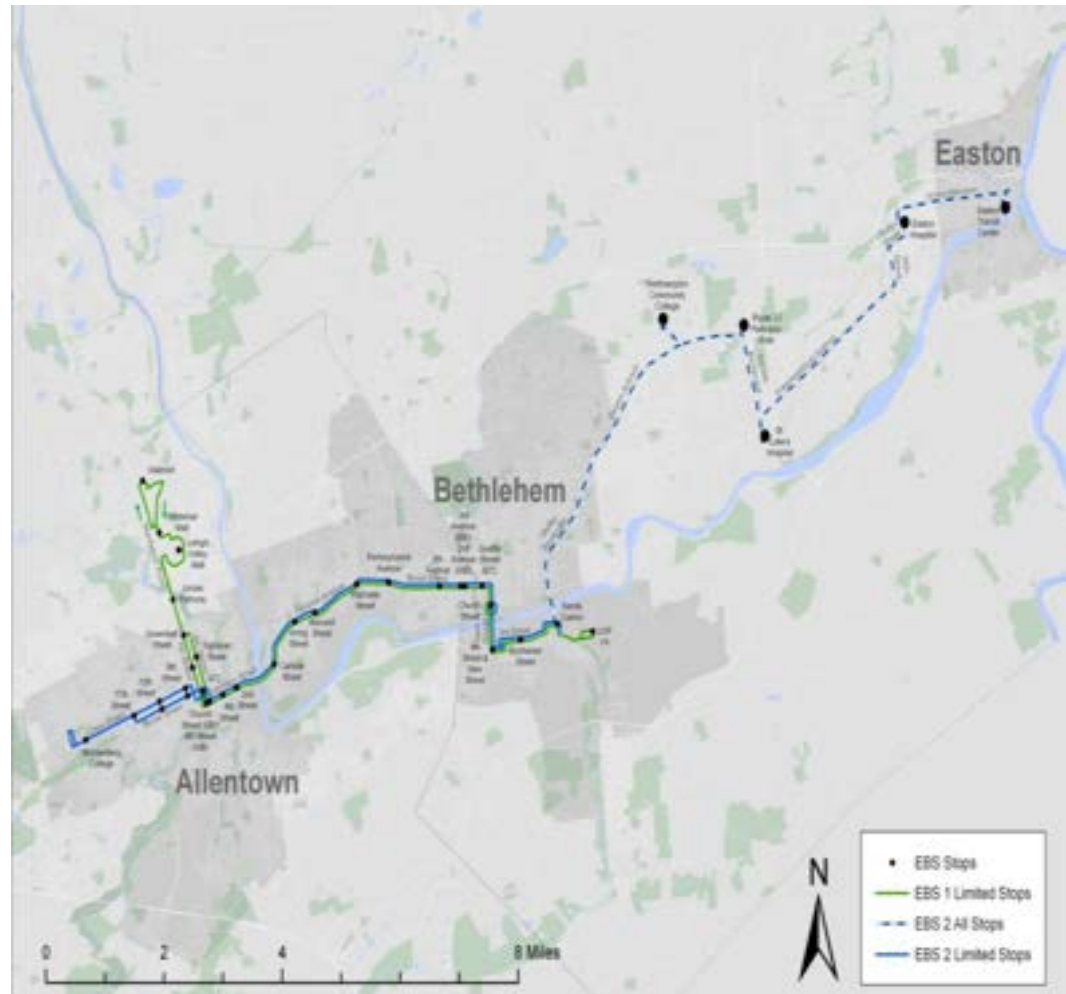
Study Process

- Identified Recommended
 - Service Plan
 - Roadway Treatments/Capital
 - Implementation Plan



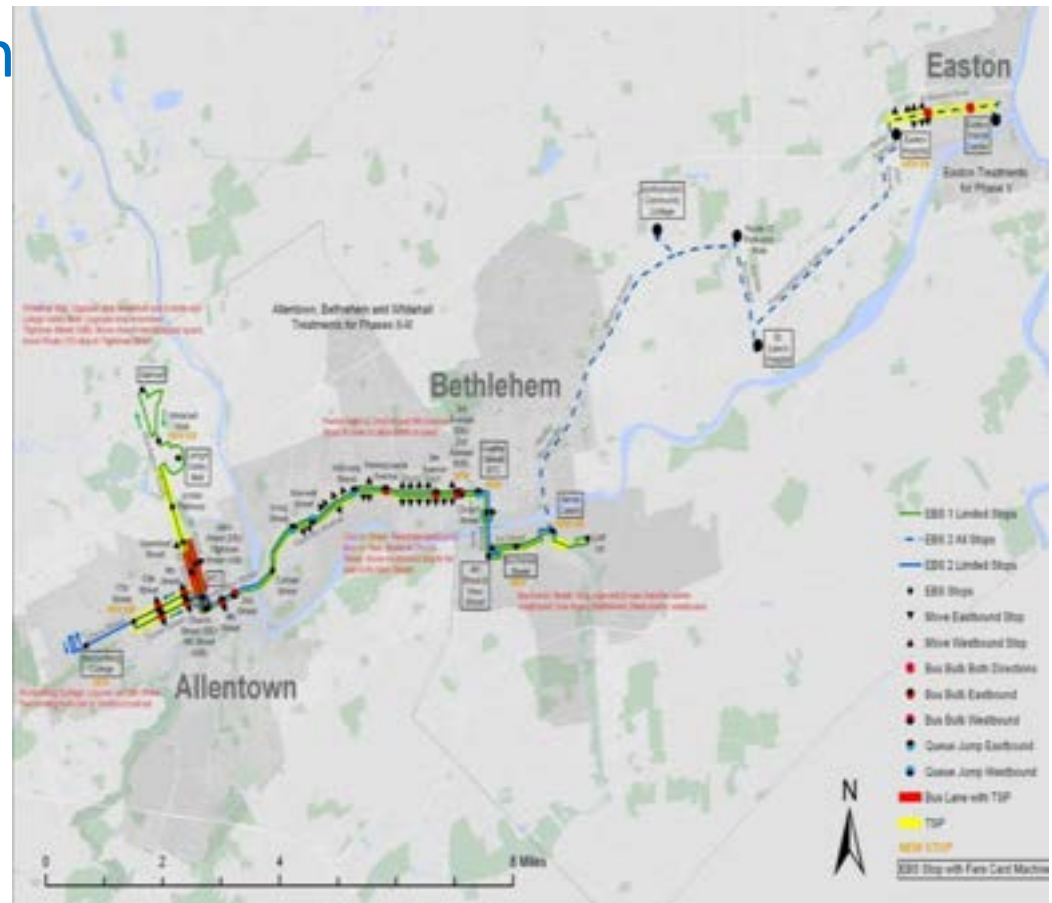
Summary of Recommendations

- Two route system



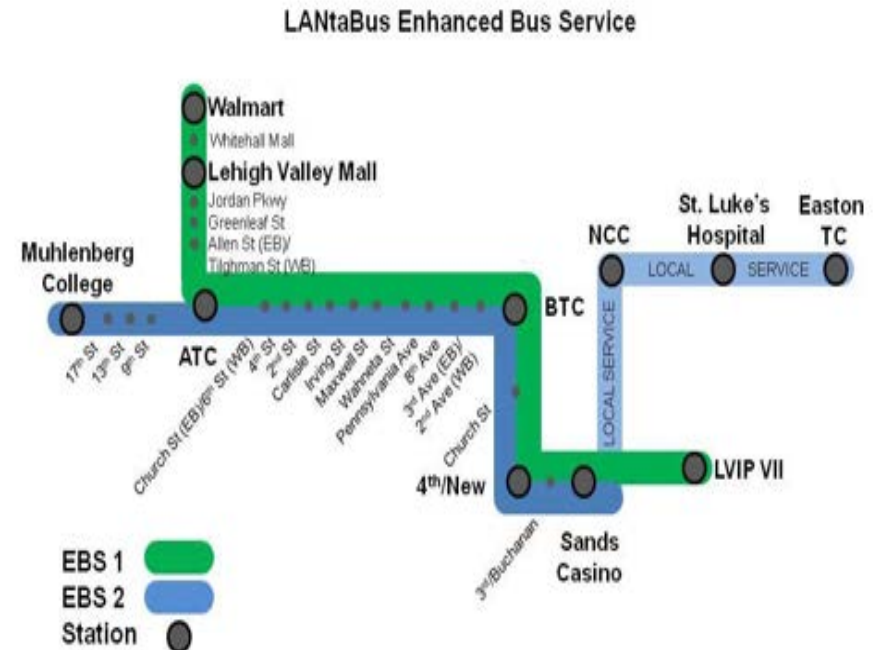
Recommended Program of Treatments

- Improved Stop Amenities
- Bus Bulbs
- Queue Jumps
- Bus Lanes
- TSP



Phased Implementation Approach

- Phase I – Implement EBS 1 as local
- Phase II – Add limited stop service EBS 1
- Phase III – Implement EBS 2 between West Allentown and S Bethlehem
- Phase IV – Increase frequency
- Phase V – Add limited stop in Easton
- Phase VI – Add limited stop along EBS 2



Land Use Guidelines

- Plan recognizes that feasibility depends on land use
- Set of guidelines developed by HDR covering:
 - Density of employment/residential
 - Design elements
 - Pedestrian environment
- Guidelines for three development environments
 - Urban
 - Transitional
 - Suburban

Urban



Transitional



Transitional



Status

- Currently developing detailed service plan for Phase 1 for implementation late 2017/early 2018
- Developing branding scheme
- Developing coordinated implementation strategy for roadway improvement elements





Pittsburgh BRT Project Coordination



Project Context



Project Context



Project Context

Downtown
(west of Ross St)

Uptown
(Ross St to Craft Ave)

Oakland
(Craft Ave to CMU)



BRT: Travel Time Impacts

Wood St to Morewood (CMU)

About the Travel Time Estimates:

- BRT times based on current service configuration, but adding exclusive lanes
- Assumes off-board fare collection & all-door boarding
- Valid for either build alternative
 - * Could be slightly improved with Forbes Ave connection thru West Oakland

With BRT

5' 00"

14' 07"

15' 07"

Average Time Savings:

6' 20"

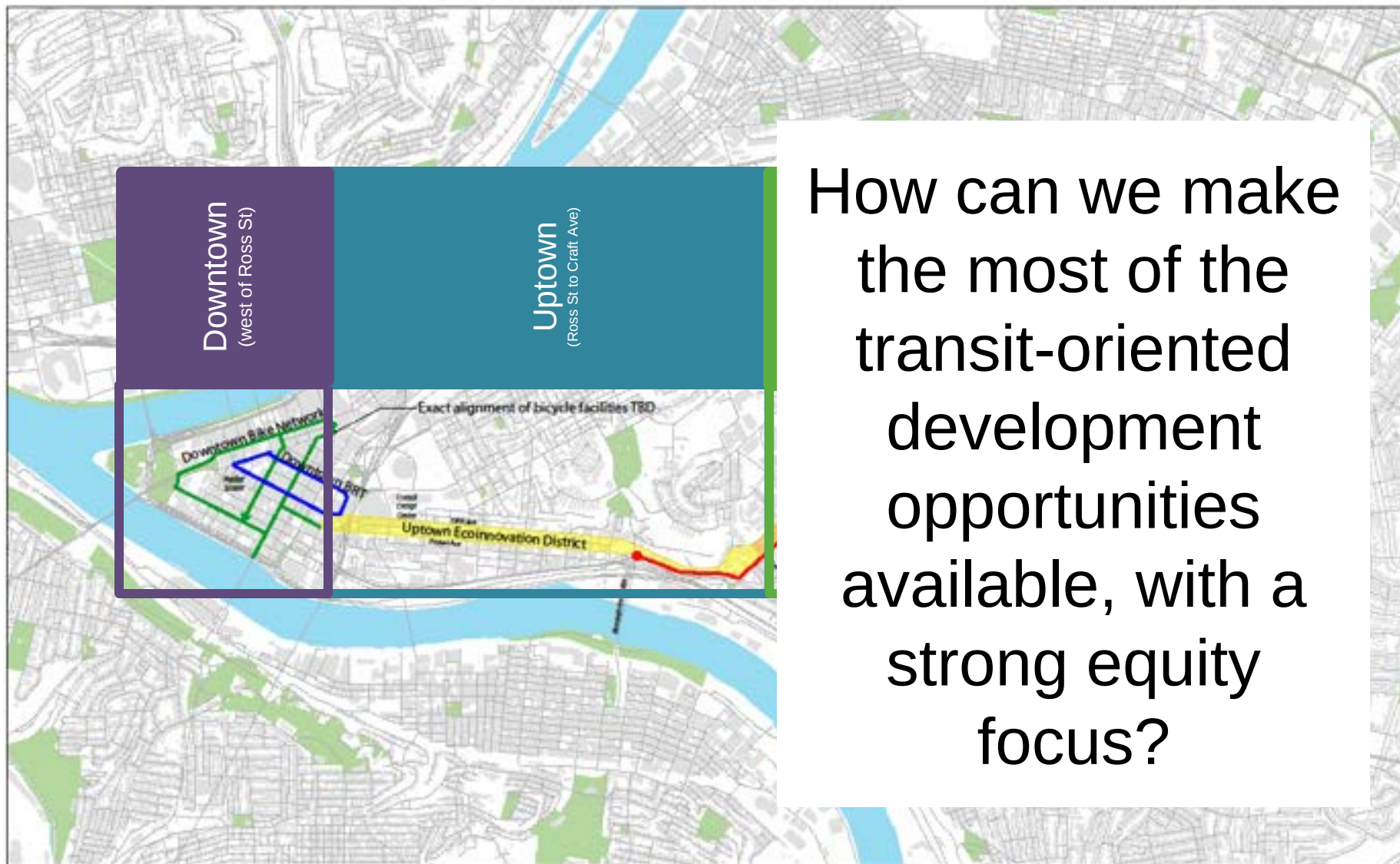
Potential Time Savings During Peak Congestion:

26' 44"

Wood St

Morewood (CMU)

Is it just about speed, speed, speed?



How can we make the most of the transit-oriented development opportunities available, with a strong equity focus?

FIRST THINGS FIRST...

WHAT IS AN ECOINNOVATION DISTRICT plan?

A community plan focused on equitable growth, economic development, and sustainability.

Centered around Uptown/West Oakland, this EcoInnovation District plan will be created WITH and FOR THE COMMUNITY. This includes ensuring that improvements in Uptown/West Oakland reinforce the work already underway in neighboring communities.

Creating
an
equitable
and
sustainable
community.

NEXT QUESTION:

HOW DOES THIS RELATE TO THE BUS RAPID TRANSIT (brt) PLANNING THAT began A WHILE AGO?

There was some planning for BRT but that process has been put on hold so that this community plan can shape potential transit improvements and not the other way around.

Planning for transit improvements will be folded into your vision for the community.

The UPTOWN / WEST OAKLAND area
today is:

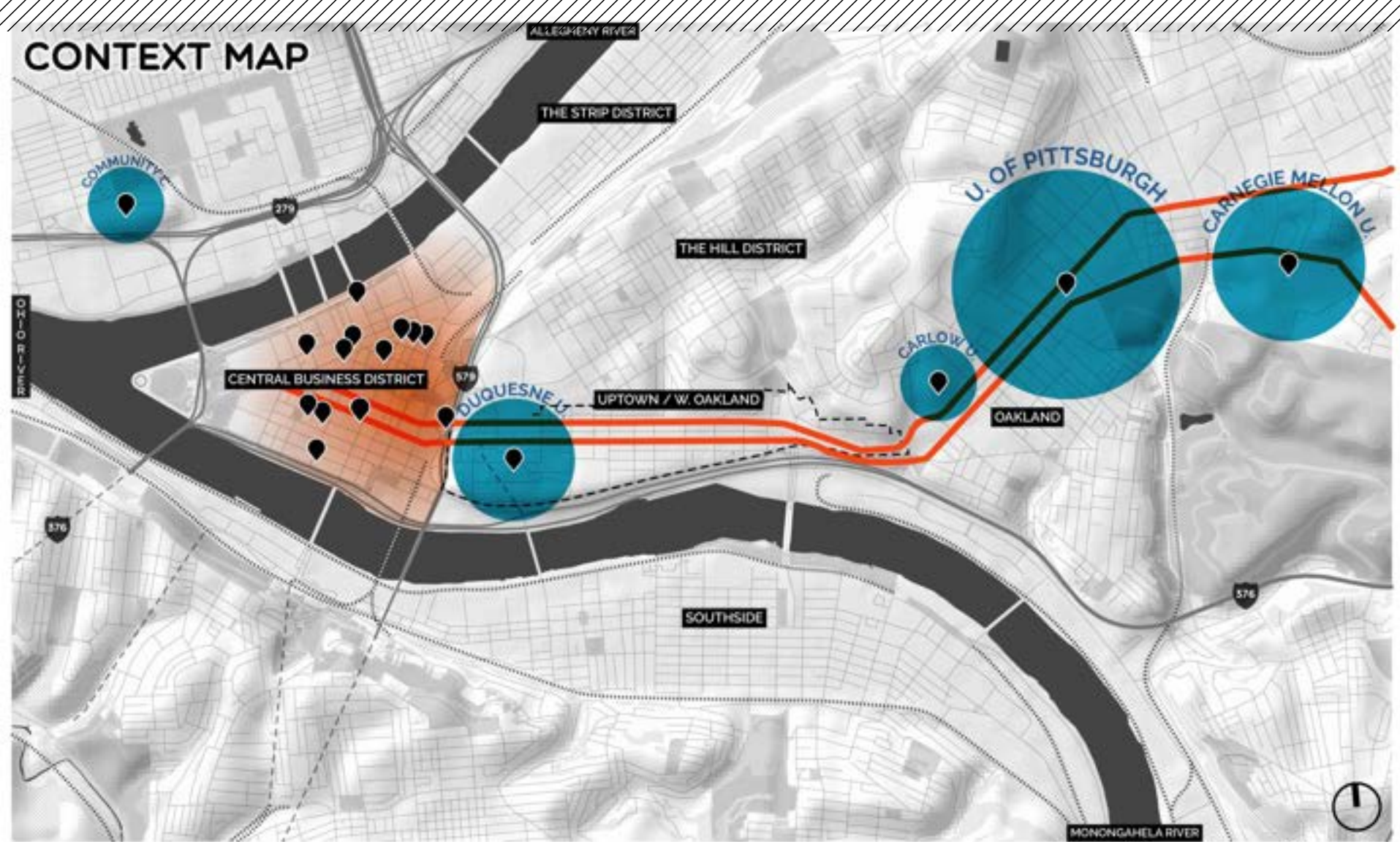
> 204 acres

> about 1,000 residents

(not including students)

> 81 businesses

CONTEXT MAP



- STUDY AREA
- COLLEGE/UNIVERSITY
- 5TH - FORBES CORRIDOR
- COLLEGE/UNIVERSITY CAMPUS
- CENTRAL BUSINESS DISTRICT

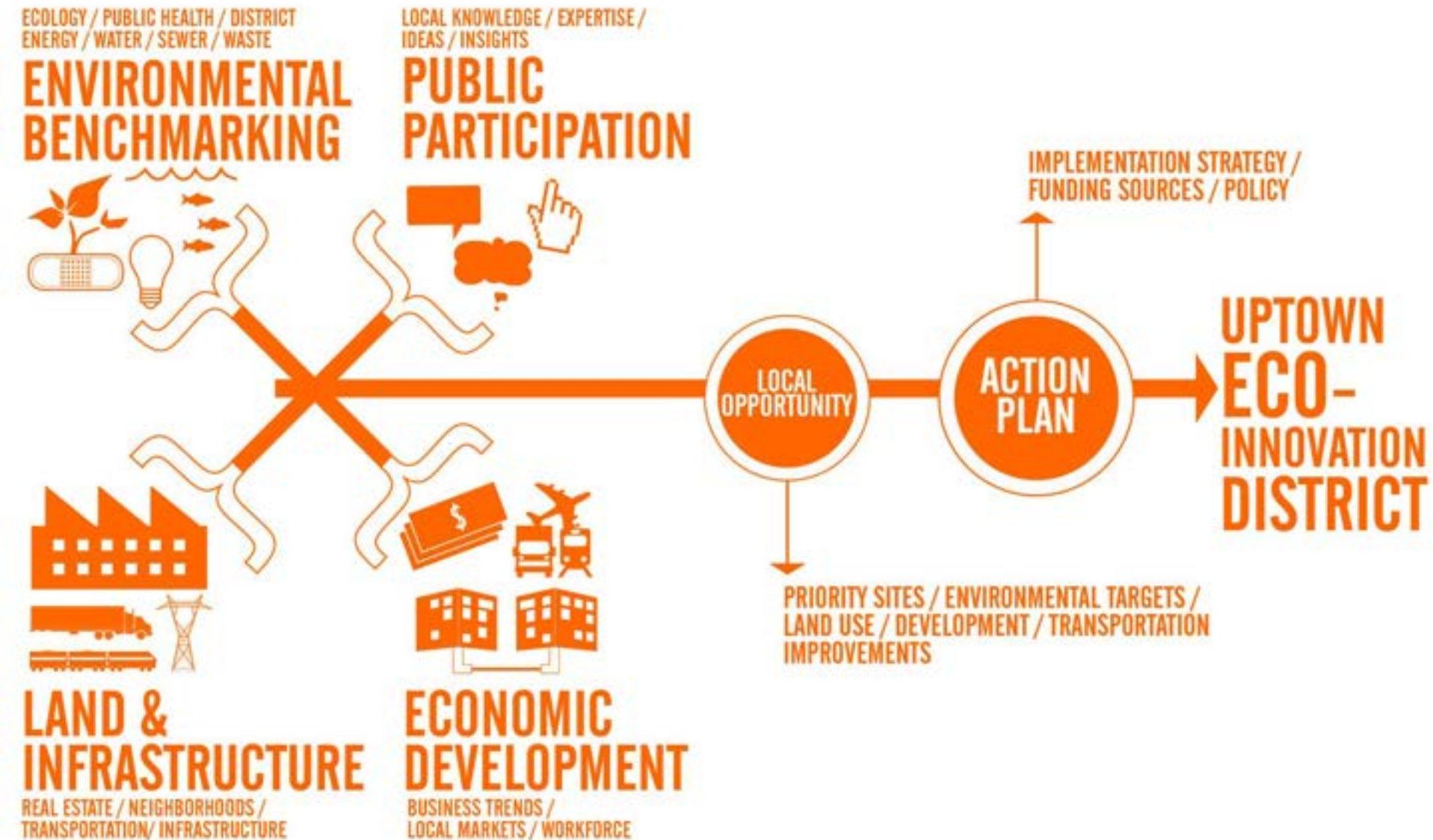


PREVIOUS PLANNING STUDIES



- This map summarizes proposals from other plans that address uptown.
- while uptown is included in these plans, it is not the focus.
- this is an opportunity to specifically address the challenges facing uptown and its residents and businesses.

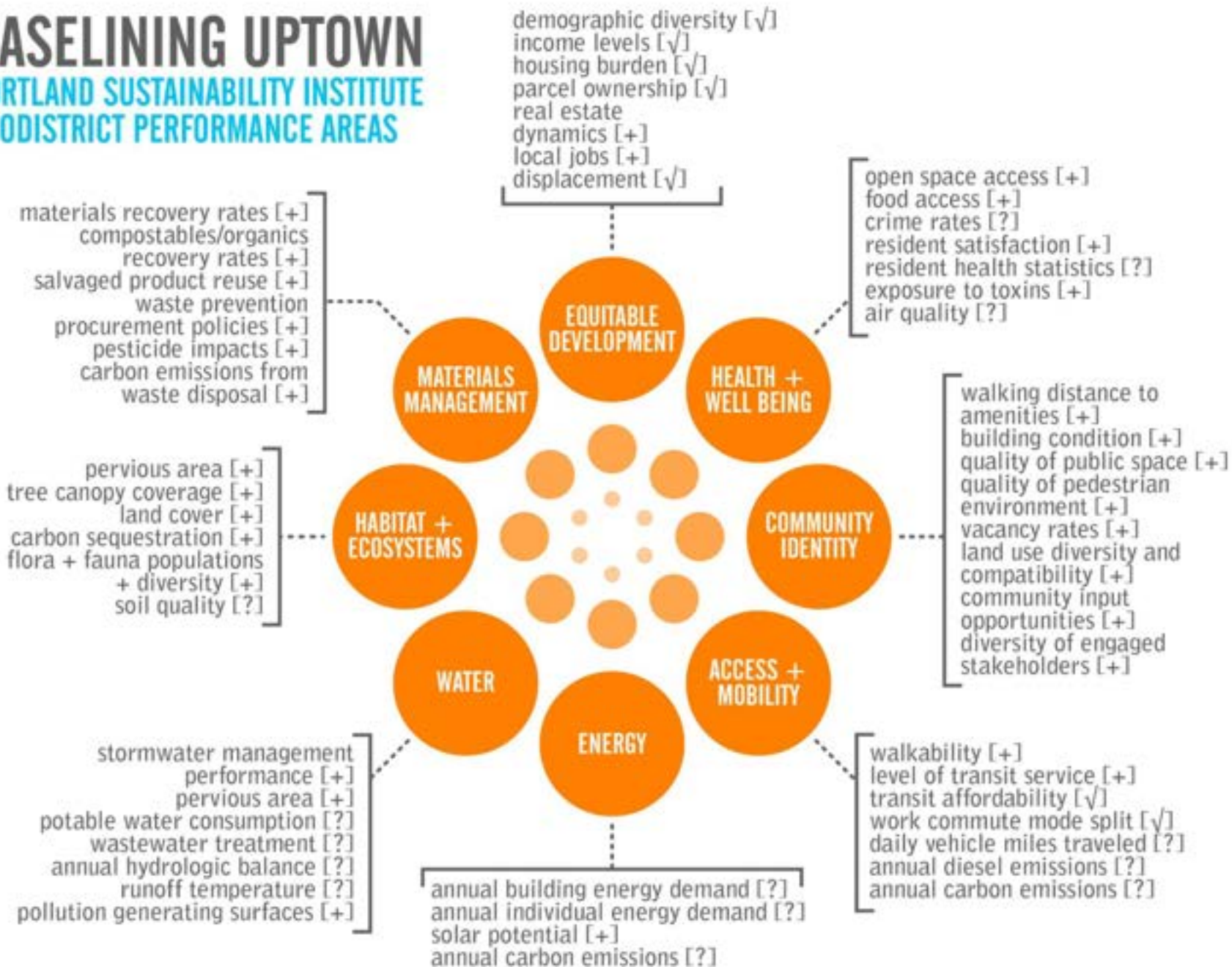
OUR PROCESS:



BASELINING UPTOWN

PORTLAND SUSTAINABILITY INSTITUTE

ECODISTRICT PERFORMANCE AREAS





This is how much of the area is
currently vacant.

VACANCY:
(Buildings + Land)

23%
of Study Area

For years, property was acquired,
buildings were demolished and lots used
for this.

**“all of this demolition is destroying the
community”**

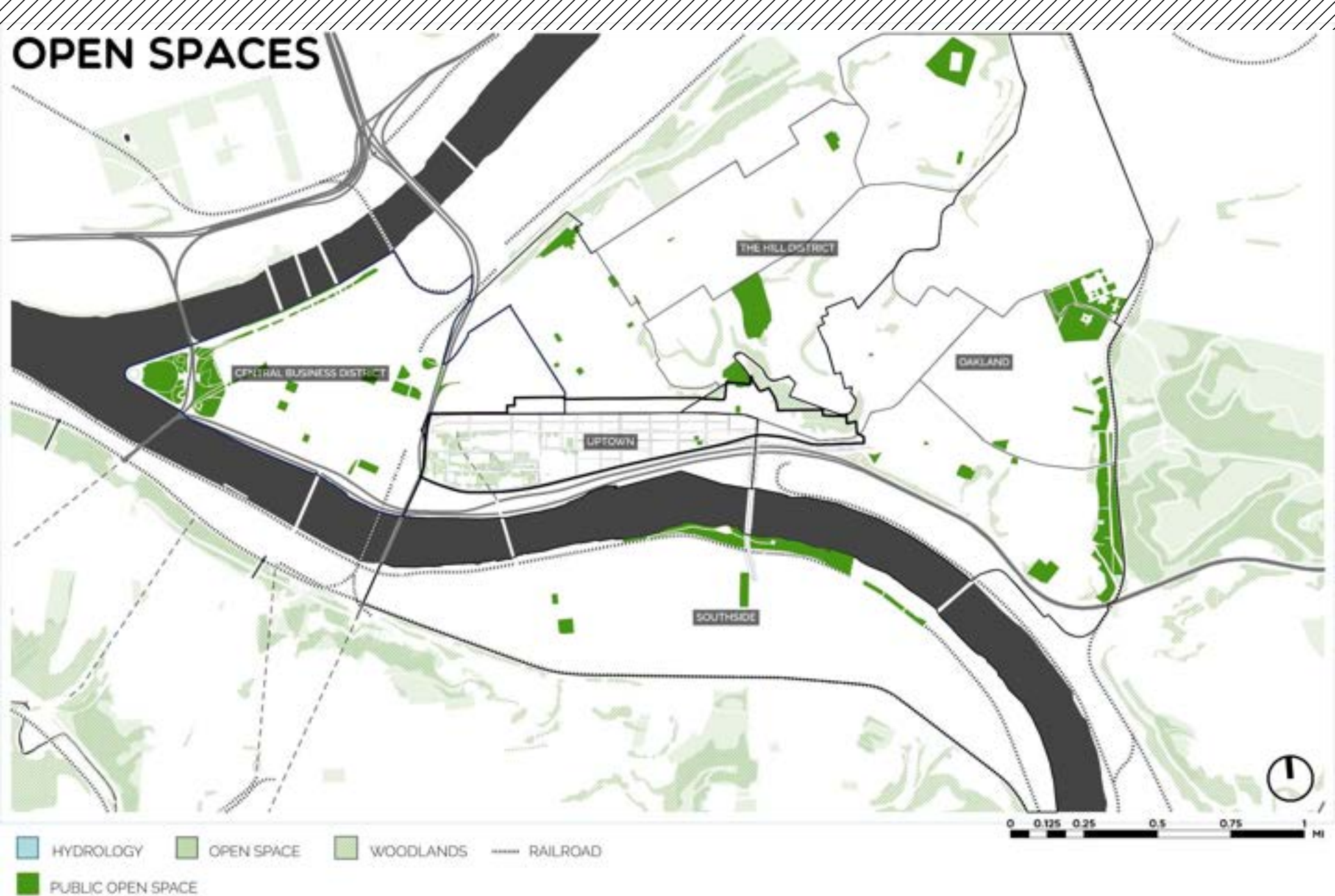


In response, the city created the interim planning overlay district (IPOD) which prohibits the demolition of buildings AND CONSTRUCTION OF NEW SURFACE PARKING LOTS in the community.



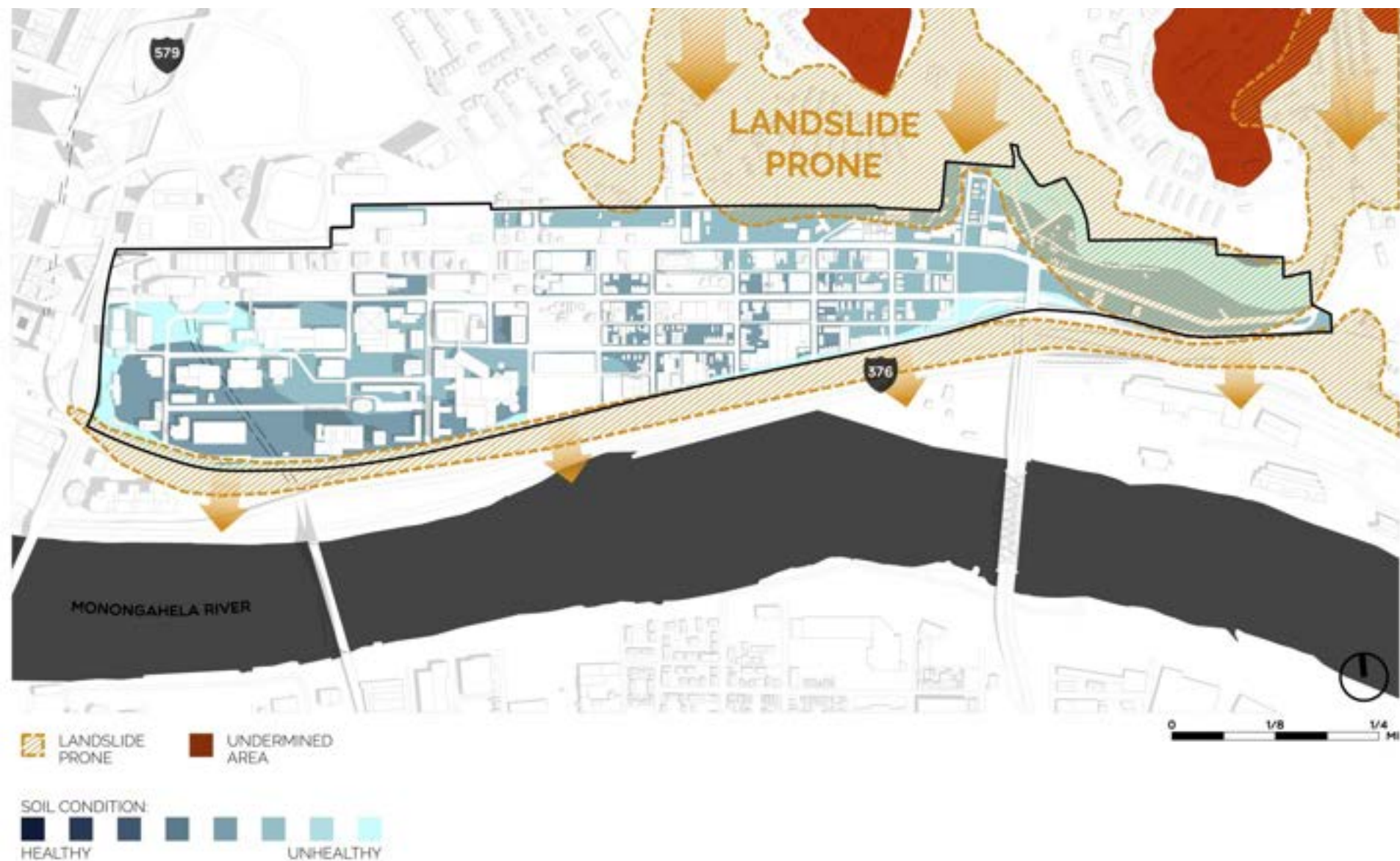
So what about open space? Is there enough to meet the needs of all residents?





Simply put, no. There are larger parks nearby but very few in the community.

not just open space but landscapes that help to solve regular issues like flooding. Since there are steep hillsides, we should design to better manage stormwater.





HERE ARE the impacts. This is from a storm just TWO months ago.

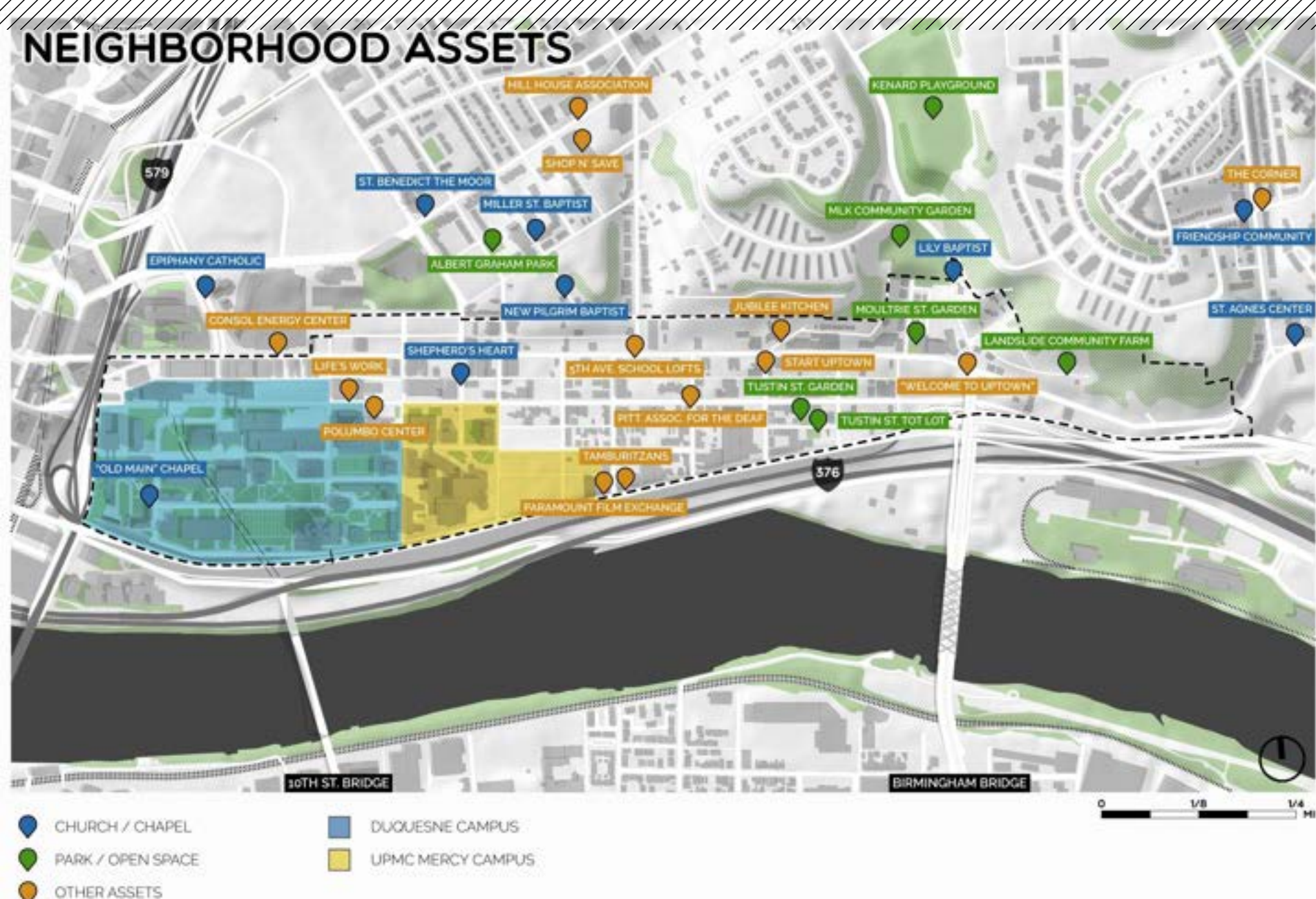
But despite these challenges, the area has so much going for it, including historic buildings...



...A committed group of
active residents
organizing for positive
and inclusive change...



NEIGHBORHOOD ASSETS



...AND significant NEIGHBORHOOD assets.
Here are just a few.

WE'VE LEARNED A LOT FROM A YEAR'S WORTH OF CONVERSATIONS

OUTREACH SUMMARY (TO DATE)

	PUBLIC EVENT ATTENDEES	400
	FOCUS GROUP MEETINGS	17
	INTERVIEWS	50 +
	SURVEYS	700
	WEB USERS	2,488
	WEB PAGE VIEWS	7,536
	COLLAB MAPS COMMENTS	164

WHAT WE'VE HEARD: (a snapshot)

POSITIVE

GROWING MOMENTUM

LOCATION, LOCATION, LOCATION

THERE IS GOOD ACCESS TO PUBLIC TRANSIT

COMMITTED BASE OF RESIDENTS

EXISTING ARTS ENCLAVE
COLLABORATION ACROSS CITY / INSTITUTIONS / PARTNERS

HISTORIC STRUCTURES

HOME TO START-UPS / ENTREPRENEURS

THERE ARE OPPORTUNITIES TO REDEVELOP!

5TH / FORBES ARE IMPORTANT CONNECTOR STREETS

NEGATIVE

CHANGE IS HAPPENING TOO QUICKLY
CONCERNS ABOUT EQUITY AND GROWTH OF THE AREA

THERE IS TOO MUCH PASS-THROUGH TRAFFIC / BOTTLENECKS
TRAFFIC SPEED AND SAFETY ARE MAJOR ISSUES
SIDEWALKS AND STREETS ARE IN POOR CONDITION
NOT PEDESTRIAN OR BICYCLE FRIENDLY

QUESTIONS ABOUT BRT ALTERNATIVES
LACK OF BIKE INFRASTRUCTURE

SOME RESIDENTS ARE NOT ENGAGED
NEED TO BUILD TRUST WITH RESIDENTS

MANY ARE / HAVE BEEN LOST DUE TO DEMOLITION

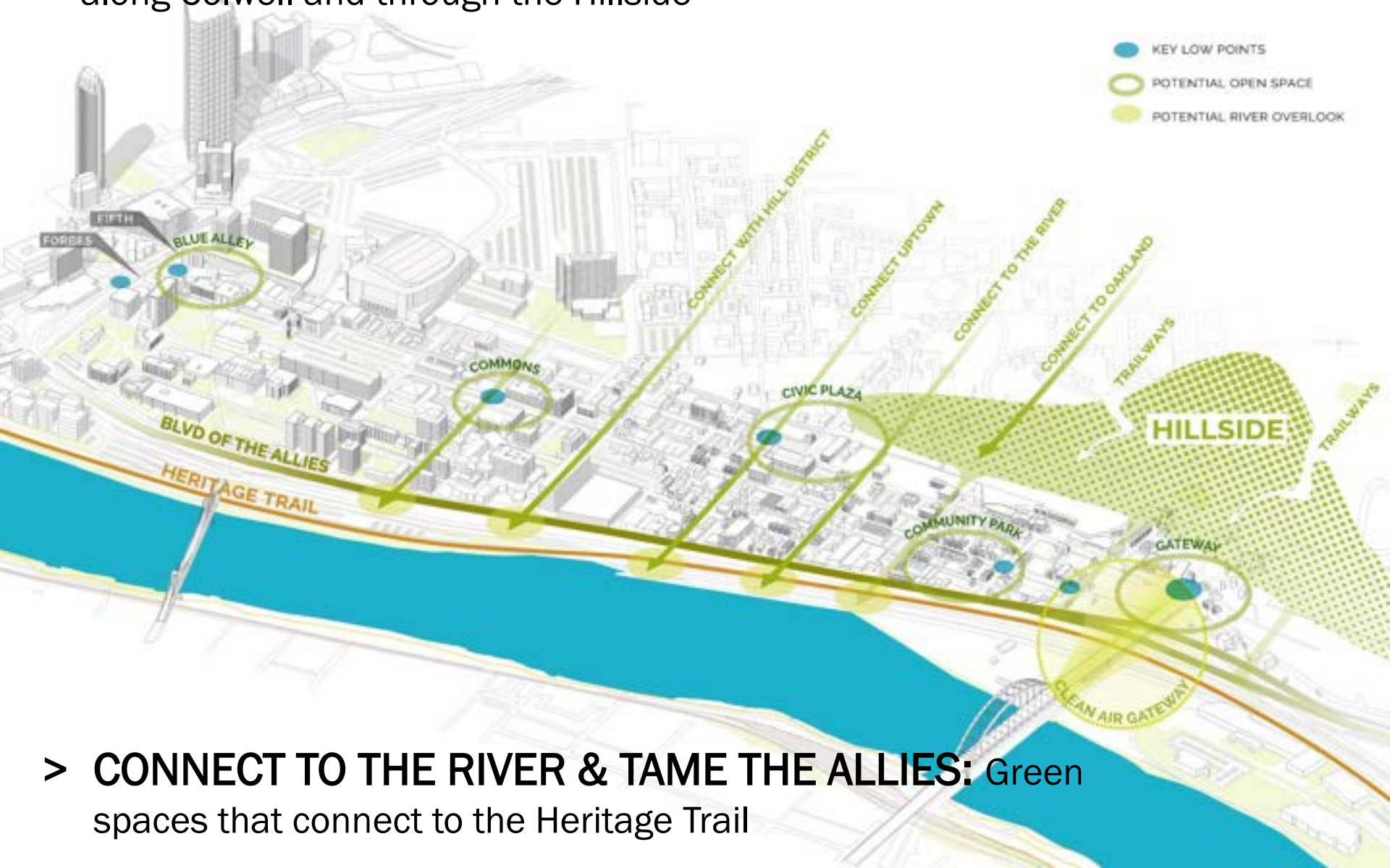
LACK OF AVAILABLE SPACE FOR NEW START-UPS
LIMITED AMENITIES / COMMERCIAL SERVICES

MUCH OF THE LAND IS CONTROLLED BY A FEW OWNERS
SITE CONTROL!
THERE ARE LIMITED HOMES AND SITES FOR SALE
UPTOWN DOES NOT YET HAVE A STRONG IDENTITY
PARKING DOMINATES THE COMMUNITY

THESE STREETS EXPERIENCE FLOODING / MAJOR TRAFFIC

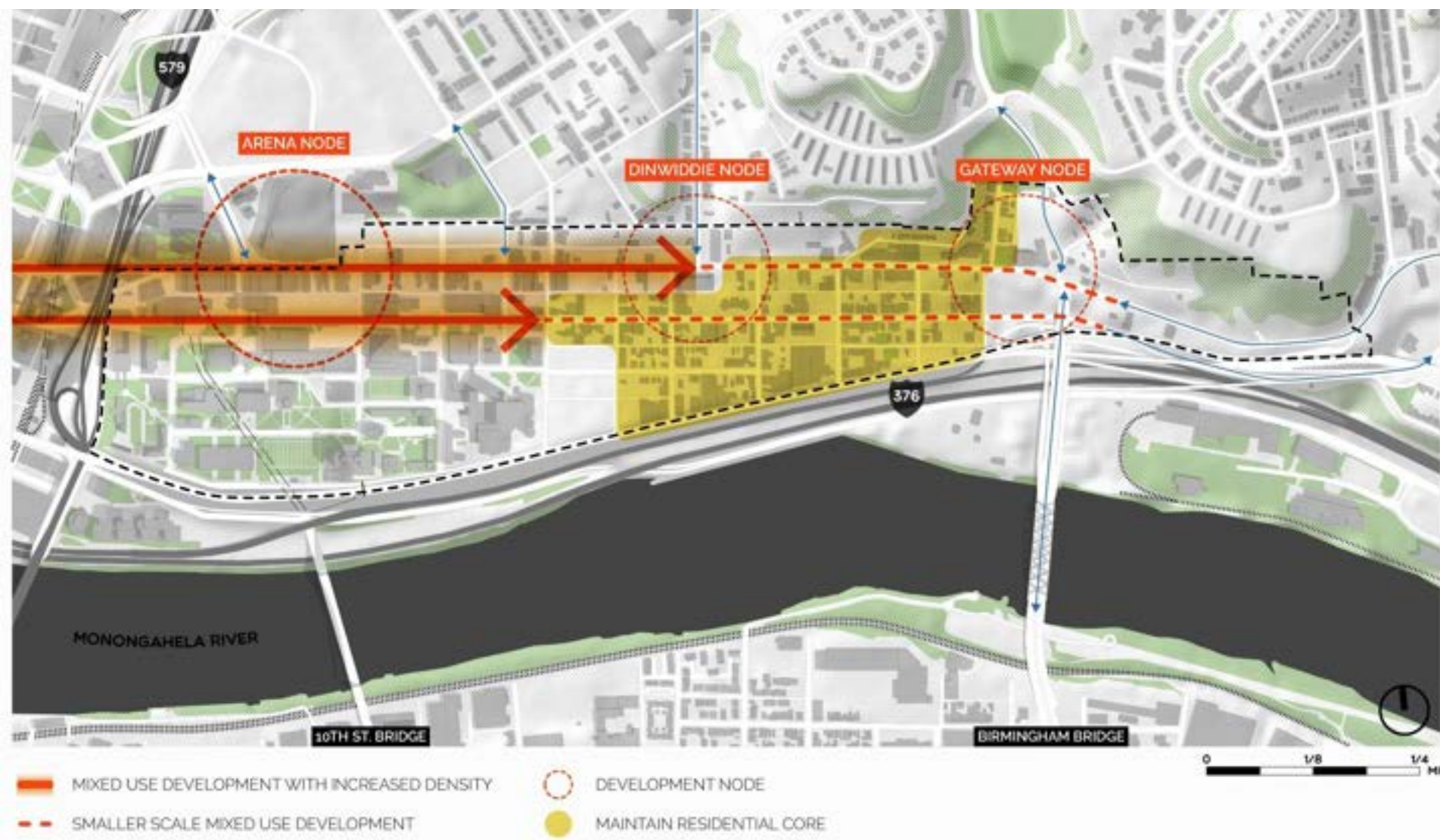
Big picture ideas that keep surfacing:

- > **NEW / IMPROVED PARKS:** @ 5th / Dinwiddie, around the Tustin Garden / along Colwell and through the Hillside



- > **CONNECT TO THE RIVER & TAME THE ALLIES:** Green spaces that connect to the Heritage Trail

- **MORE DENSITY AND MORE PRESERVATION:** More density along 5th toward Downtown / protections for the existing community



- **PROTECT AFFORDABILITY:** Tax exemptions, Land trust? Coordinated rehabilitation programs, inclusionary zoning

THE IDEAS ARE SPLIT INTO 4 THEMES

1. PRESERVE & STRENGTHEN THE EXISTING COMMUNITY

- Affordable housing, jobs for residents, invest in what makes the community unique

2. ENCOURAGE BALANCED, EQUITABLE, & GREEN DEVELOPMENT

- Sustainable & equitable development, density, innovative zoning code

3. PROVIDE CHOICE IN MOBILITY

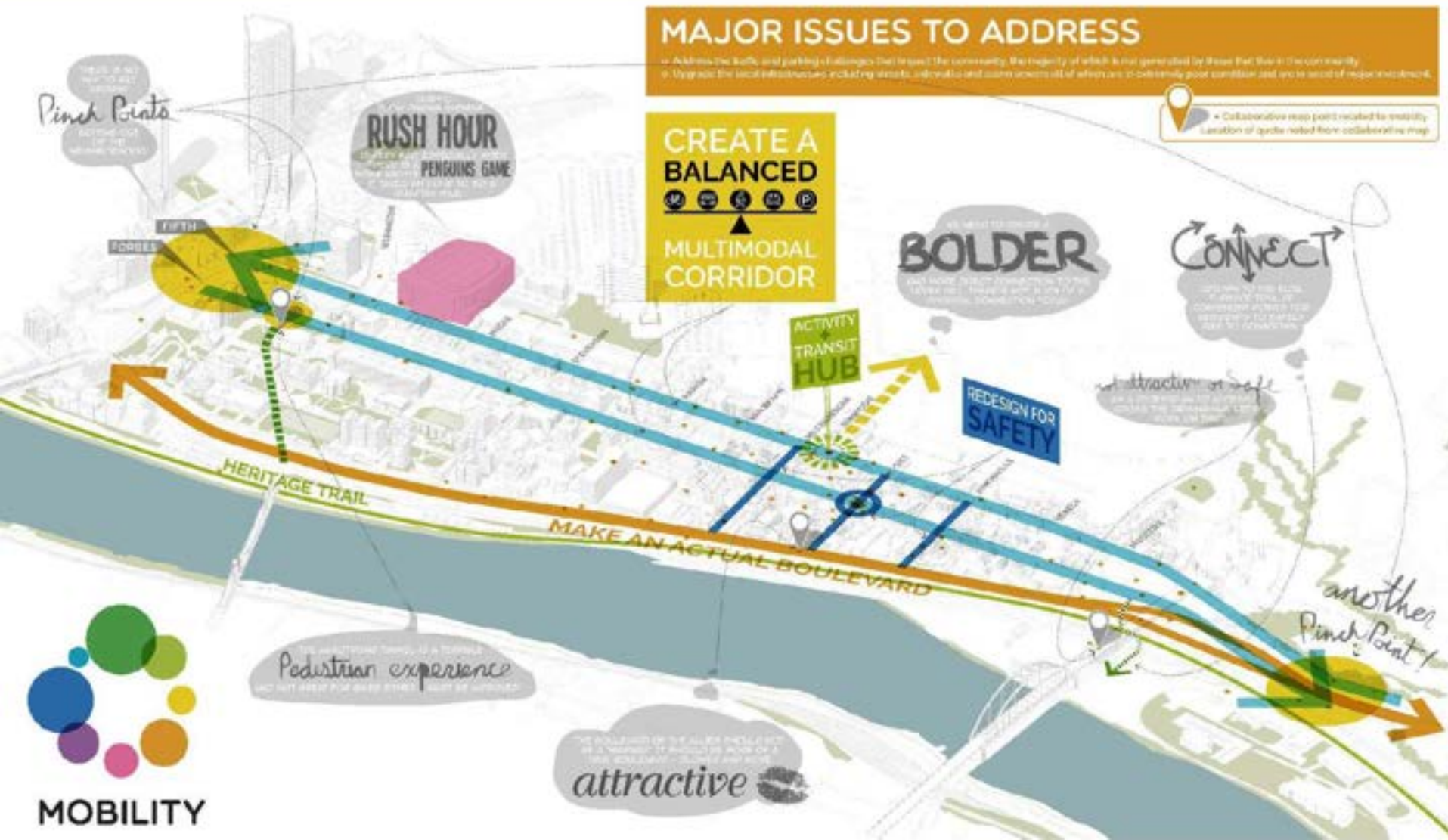
- Increase choice (complete streets), safer active mobility, transit improvements

4. INVEST IN SUSTAINABLE INFRASTRUCTURE

- More greenery, updated water infrastructure, district energy, waste management

Ecolnnovation Mobility Component

PROVIDE CHOICE IN MOBILITY & ACCESSIBILITY



Uptown BRT Alignment Focus Groups



Uptown BRT Alignment Focus Groups



Uptown BRT Alignment Focus Groups



Uptown BRT Alignment Focus Groups

FORBES AVENUE SECTION (60 FT)



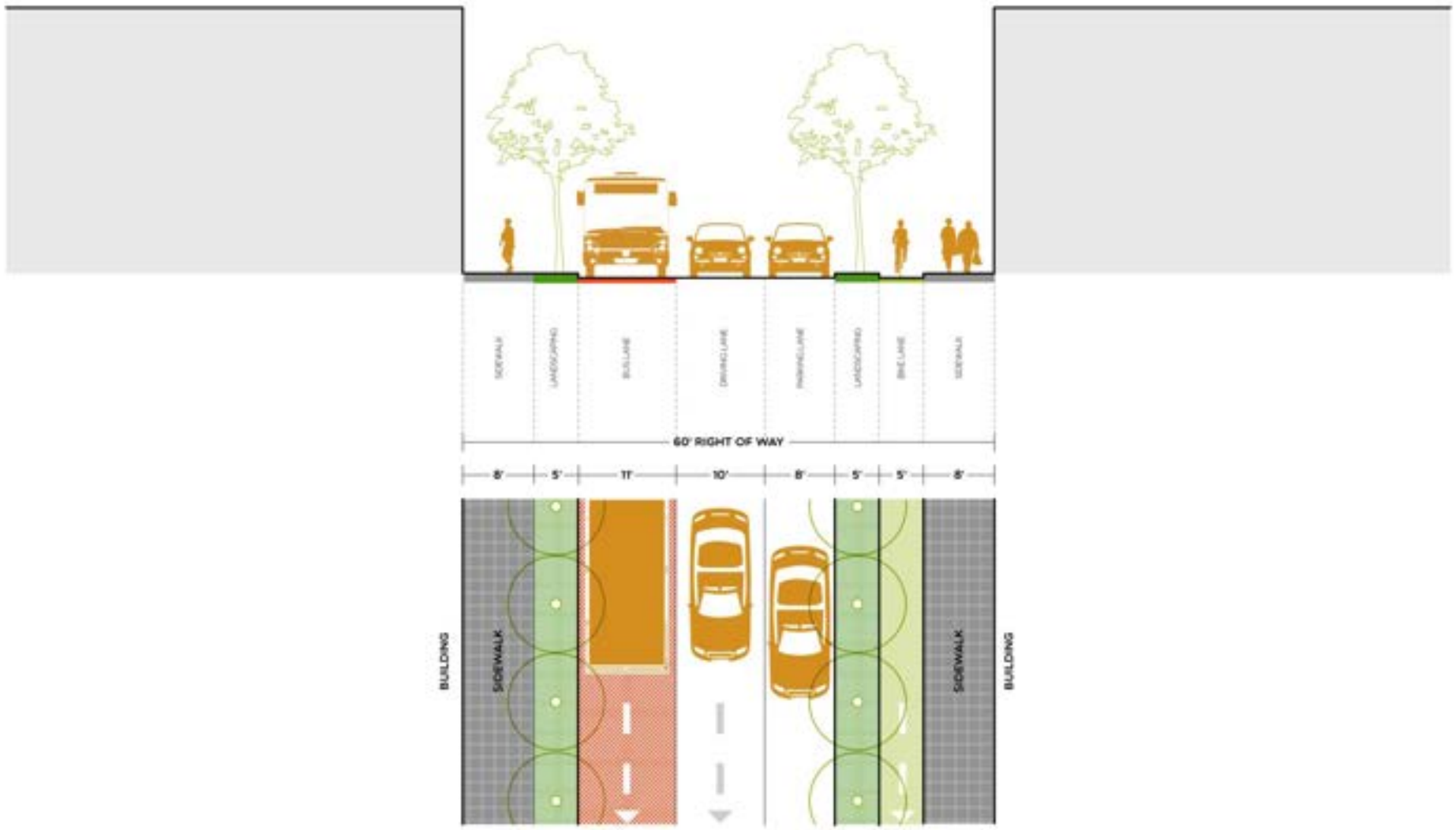
AVENUE SECTION (60 FT)



5TH AVENUE PROPOSED CROSS-SECTION

TYPICAL SECTION

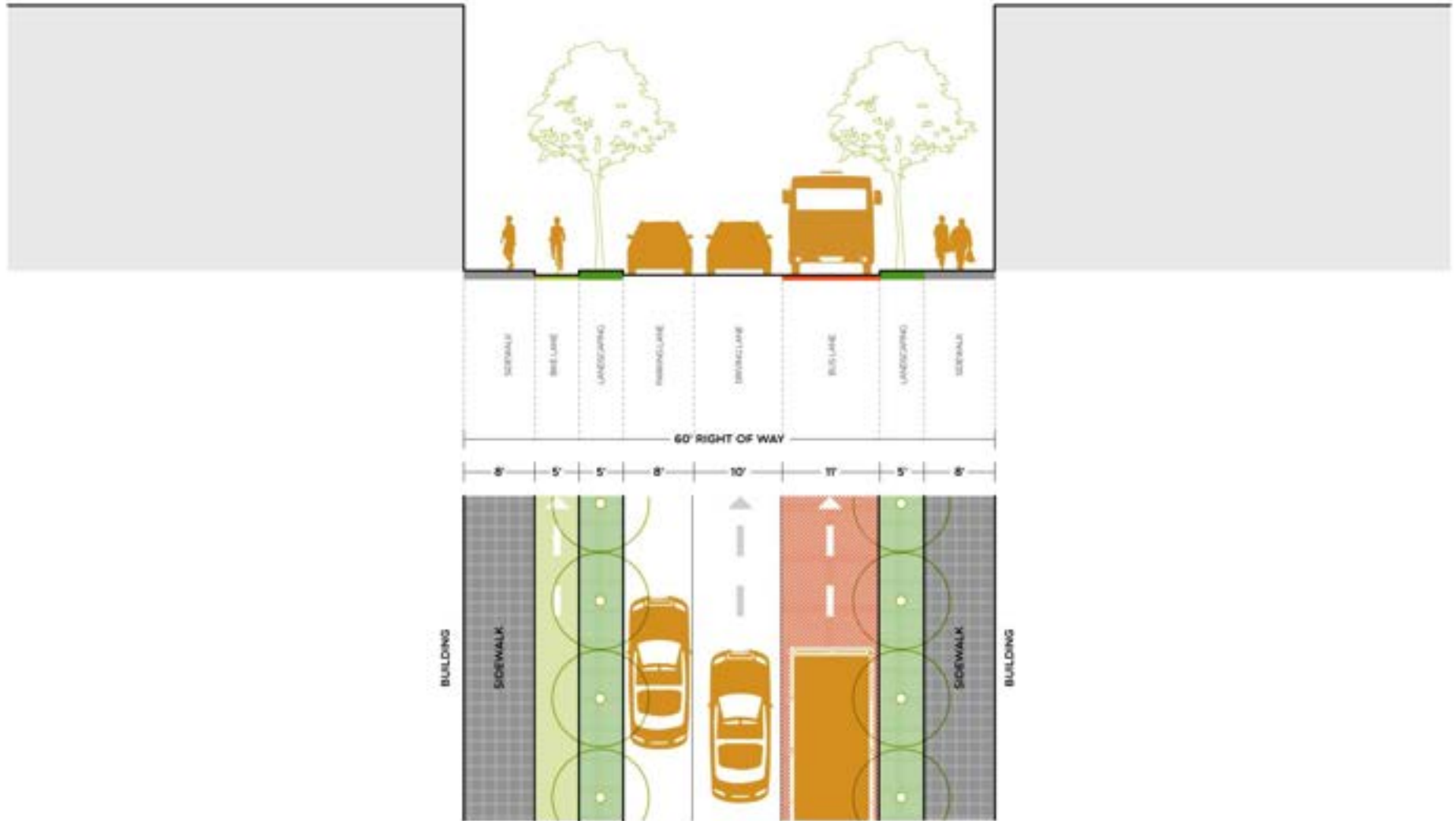
1 BUS LANE - 1 DRIVING LANE - 1 PARKING LANE - ONE WAY CYCLE TRACK



FORBES AVENUE PROPOSED CROSS-SECTION

TYPICAL SECTION

1 BUS LANE - 1 DRIVING LANE - 1 PARKING LANE - ONE WAY CYCLE TRACK

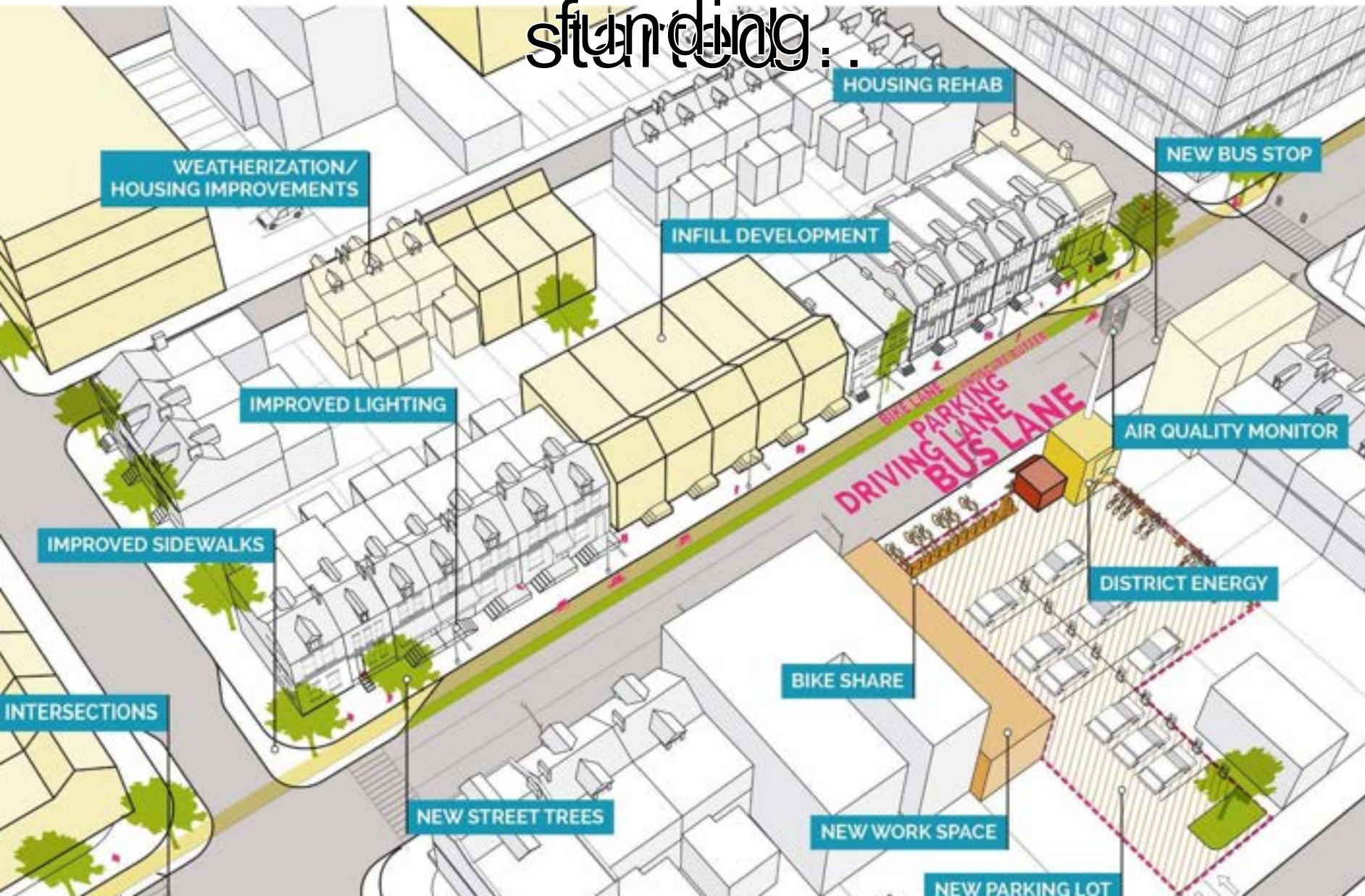


0 5 10 25 50 FT

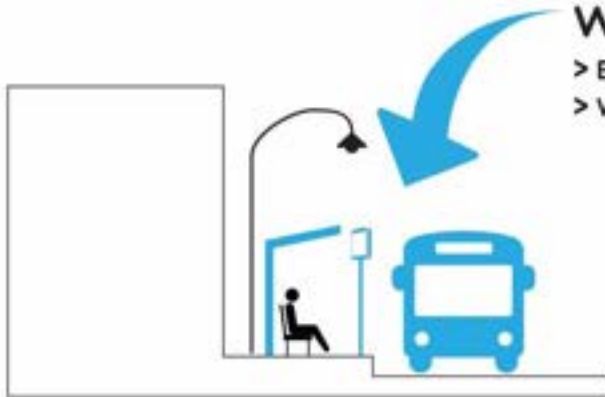
We need more than just BRT...



...and leverage even more
standing:

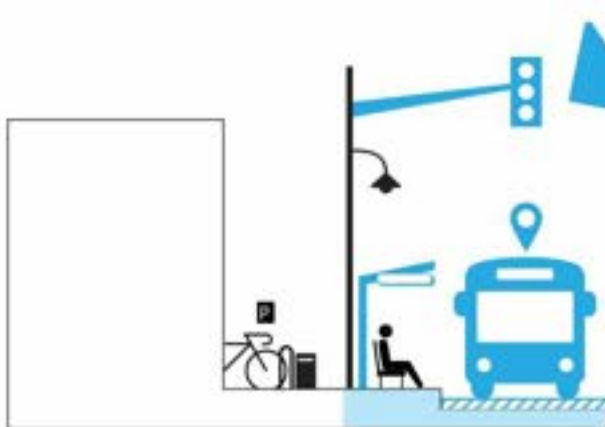


A DEDICATED BUS LANE OPENS UP FUNDING WE WOULD NOT HAVE ACCESS TO OTHERWISE TO FIX THESE ISSUES WITH OUR STREETS AND INFRASTRUCTURE



WHAT IS TYPICALLY FUNDED:

- > BUS STOP IMPROVEMENTS INCLUDING SIGNAGE, A BENCH & MAYBE A SHELTER
- > WITH LIMITED \$\$ AVAILABLE, UPGRADES CAN TAKE YEARS
- AND THESE UPGRADES DON'T INCLUDE STREET or INFRASTRUCTURE IMPROVEMENTS



A DEDICATED BUS LANE ENABLES US TO:

- > REBUILD THE STREETS & SIDEWALKS
- > CREATE SAFE AND VISIBLE CROSSWALKS
- > REPLACE / UPGRADE TRAFFIC SIGNALS
- > IMPROVE / UPGRADE LIGHTING
- > UPGRADE WATER / SEWER INFRASTRUCTURE
- > CREATE FULL BUS SHELTERS
- > CREATE SPACE FOR BICYCLES
- > CREATE A SAFE, WALKABLE COMMUNITY



THANK YOU!

> ?