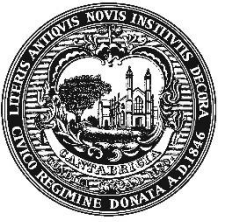


River Street Reconstruction



Public Meeting #2

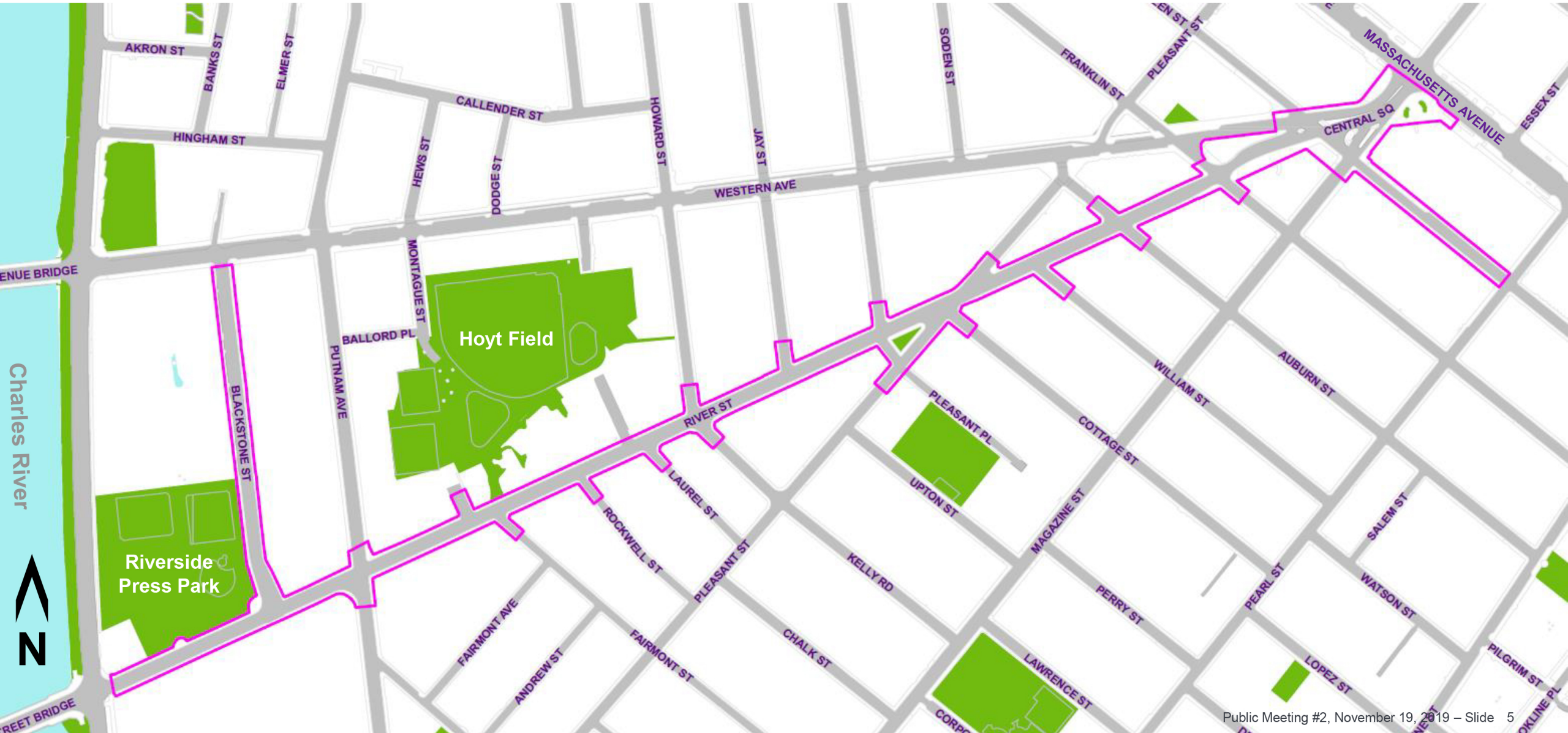
Tuesday, November 19, 2019

Today's Agenda

- Welcome and Overview 5 minutes
- Review of Public Input 10 minutes
- Conceptual Design Development 15 minutes
- Concept Walkthrough 30 minutes
- Clarifying Questions 10 minutes
- Detailed Comments on Draft Concept 45 minutes
- Conclusion 5 minutes

Welcome and Overview

River St Reconstruction Project Area



Project Team

City Team

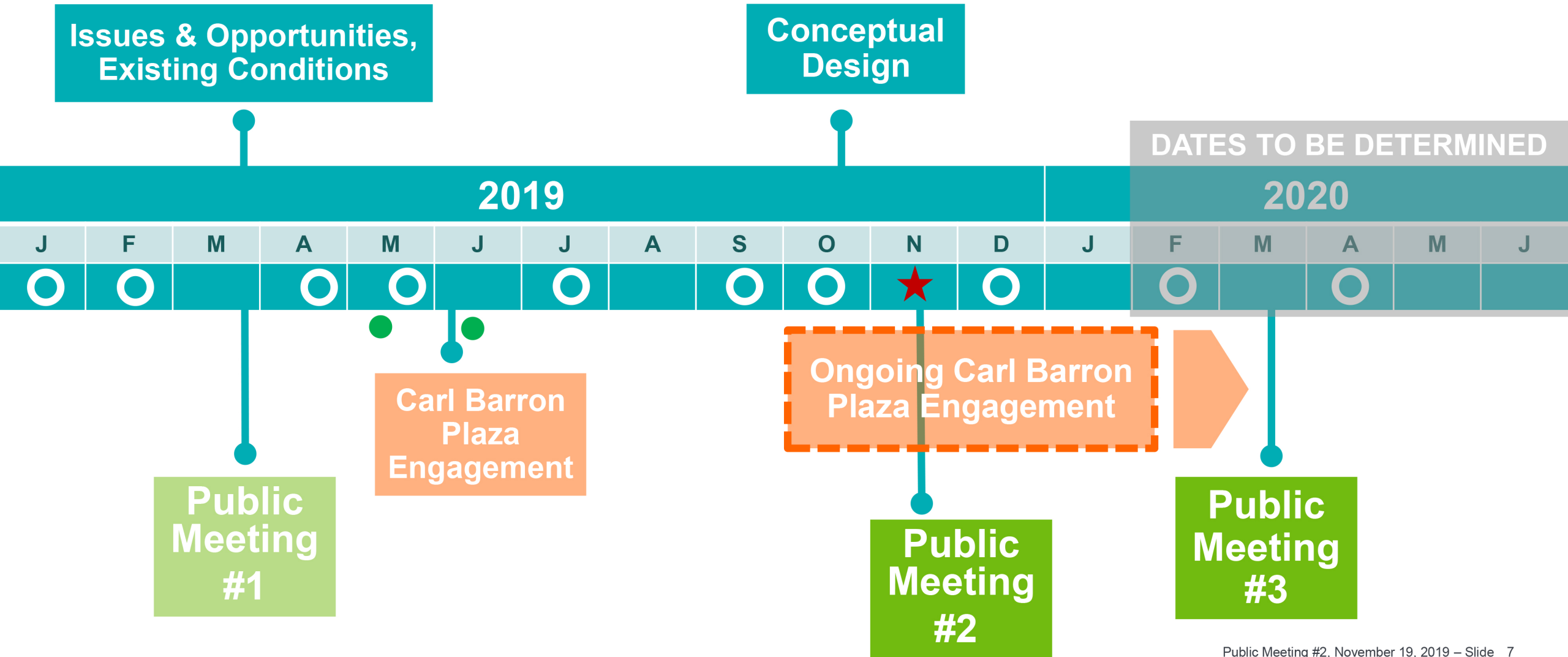
- **Jerry Friedman**
Public Works
- **Bill Deignan**
Community Development
- **Patrick Baxter**
Traffic, Parking & Transportation

Consultant Team

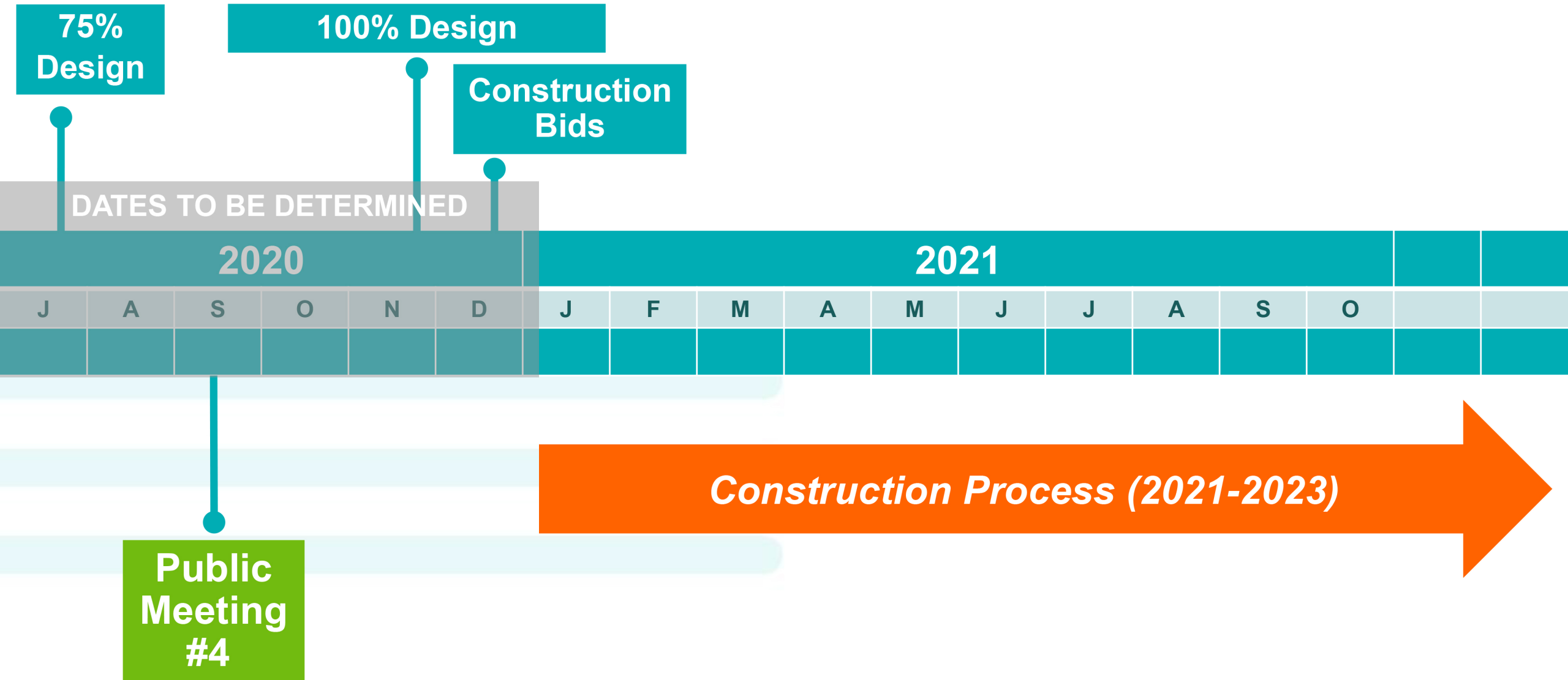
- HDR Engineering
- Halvorson Design Partnership
- McMahon Associates
- Project for Public Spaces
- GEI Consultants
- BSI Engineering
- Feldman Land Surveyors

Expected Timeline

-  Working Group
-  Public Walks
-  Today



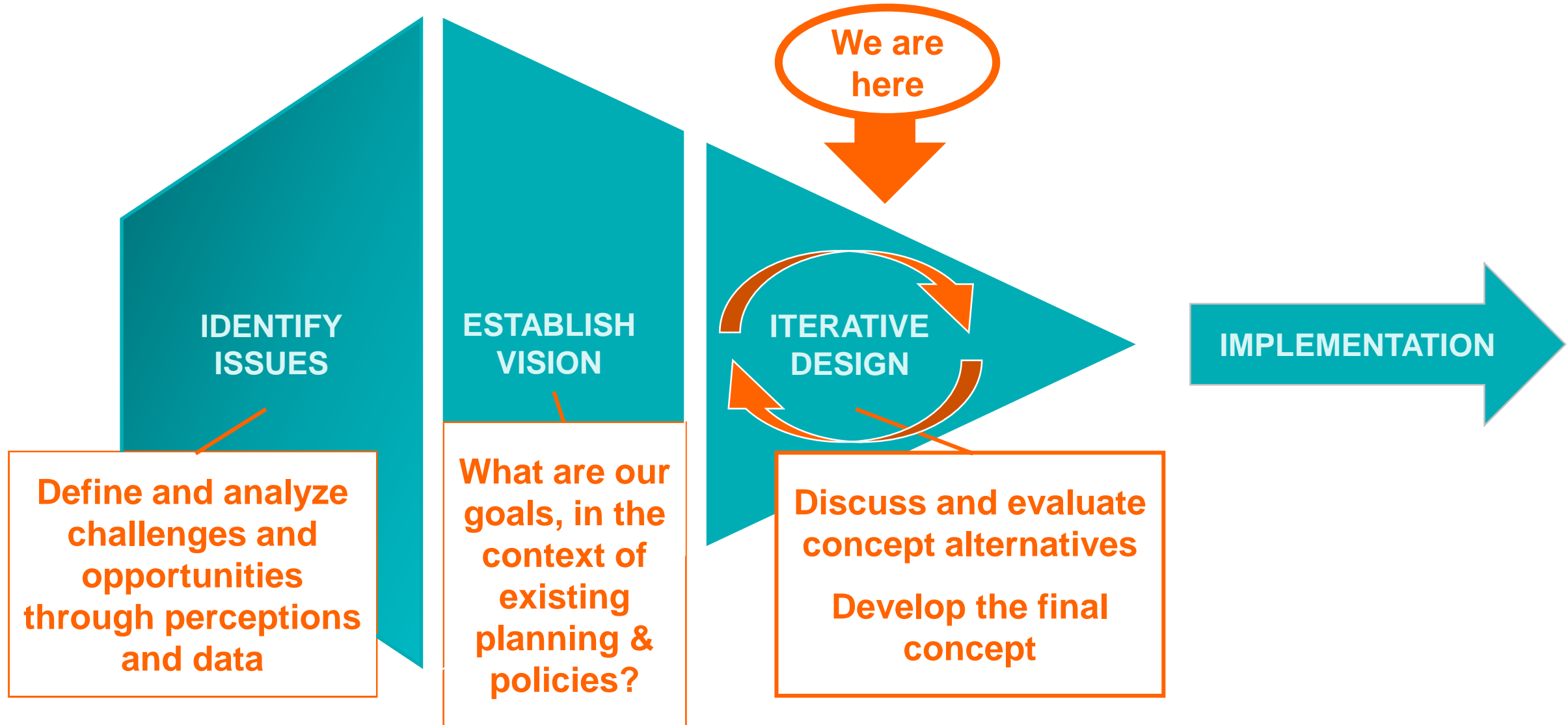
Expected Timeline



Upcoming Meetings

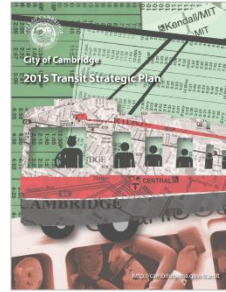
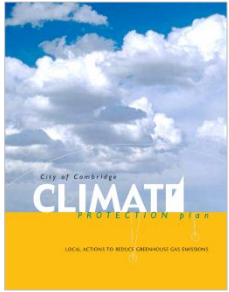
- **Working Group #8 Meeting:** Tuesday, December 17, 6-8pm at Manning Apartments
 - Review feedback from tonight's Public Meeting #2
 - Review refined concept which incorporates public comments
 - Refine conceptual framework for Carl Barron Plaza and Massachusetts Avenue intersection
- **Working Group #9 Meeting:** Date to be determined
 - Carl Barron Plaza concepts and River Street from Auburn Street to Massachusetts Avenue
- **Public Meeting #3:** Date to be determined
 - Carl Barron Plaza concepts and River Street from Auburn Street to Massachusetts Avenue

Iterative Design Stage

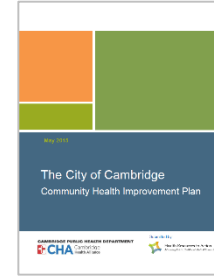


Review of Public Input

City Policies and Planning



Better
Bus
Project
Making transit better together



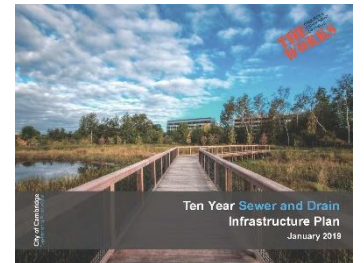
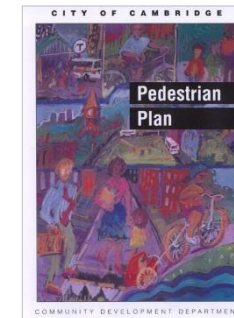
New Mobility Blueprint



Toward A Sustainable Future
Cambridge Growth Policy
UPDATE 2007



VISION ZERO
CAMBRIDGE



Public Meeting #1 3/26/19 – 81 Attendees



Online Public Input – 93 Commenters

River Street Reconstruction Public Input Map

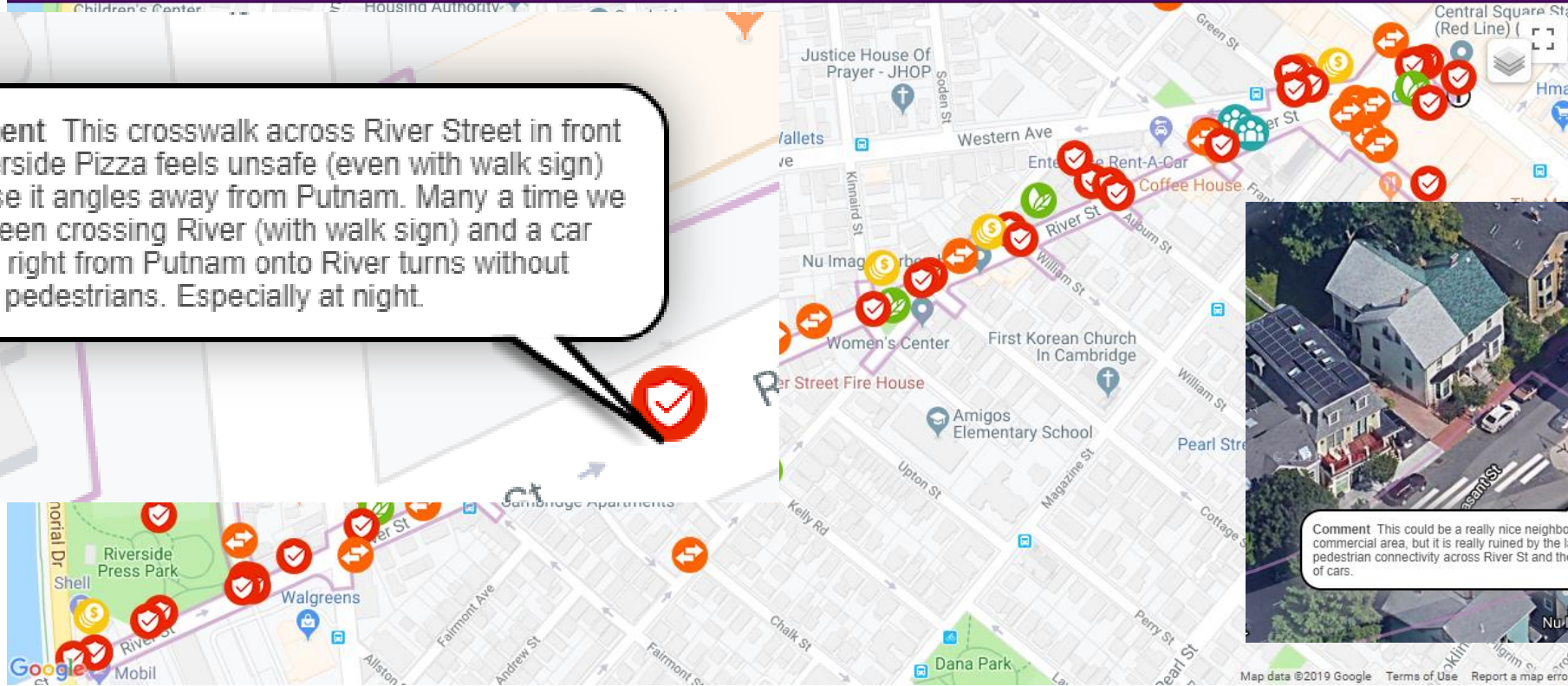
Where do you see issues and opportunities for change on River Street?
Click "Add Points" to add to the map.

ADD AS MANY POINTS AS YOU WOULD LIKE

- Activity/ Public Realm
- Commerce/ Business
- Greenery/ Landscape
- Mobility/ Access
- Safety/ Comfort
- Other
- Project Limits

Instructions & Help Add Points Project Website

Comment This crosswalk across River Street in front of Riverside Pizza feels unsafe (even with walk sign) because it angles away from Putnam. Many a time we have been crossing River (with walk sign) and a car turning right from Putnam onto River turns without seeing pedestrians. Especially at night.



7 Working Group Meetings So Far...



The Working Group

- Patrick Barrett
- Dan Beaulieu
- Seanna Berry
- Sai Boddupali
- Valerie Bonds
- Matthew Ciborowski
- Gabriel Cira
- Abby Duker
- Samuel Gebru
- Melissa Greene
- Kai Long
- Neil Rodriguez
- Randy Stern
- Andrew Tarsy
- Christopher Tassone
- Annie Tuan
- Olivia Turner
- Saul Tannenbaum

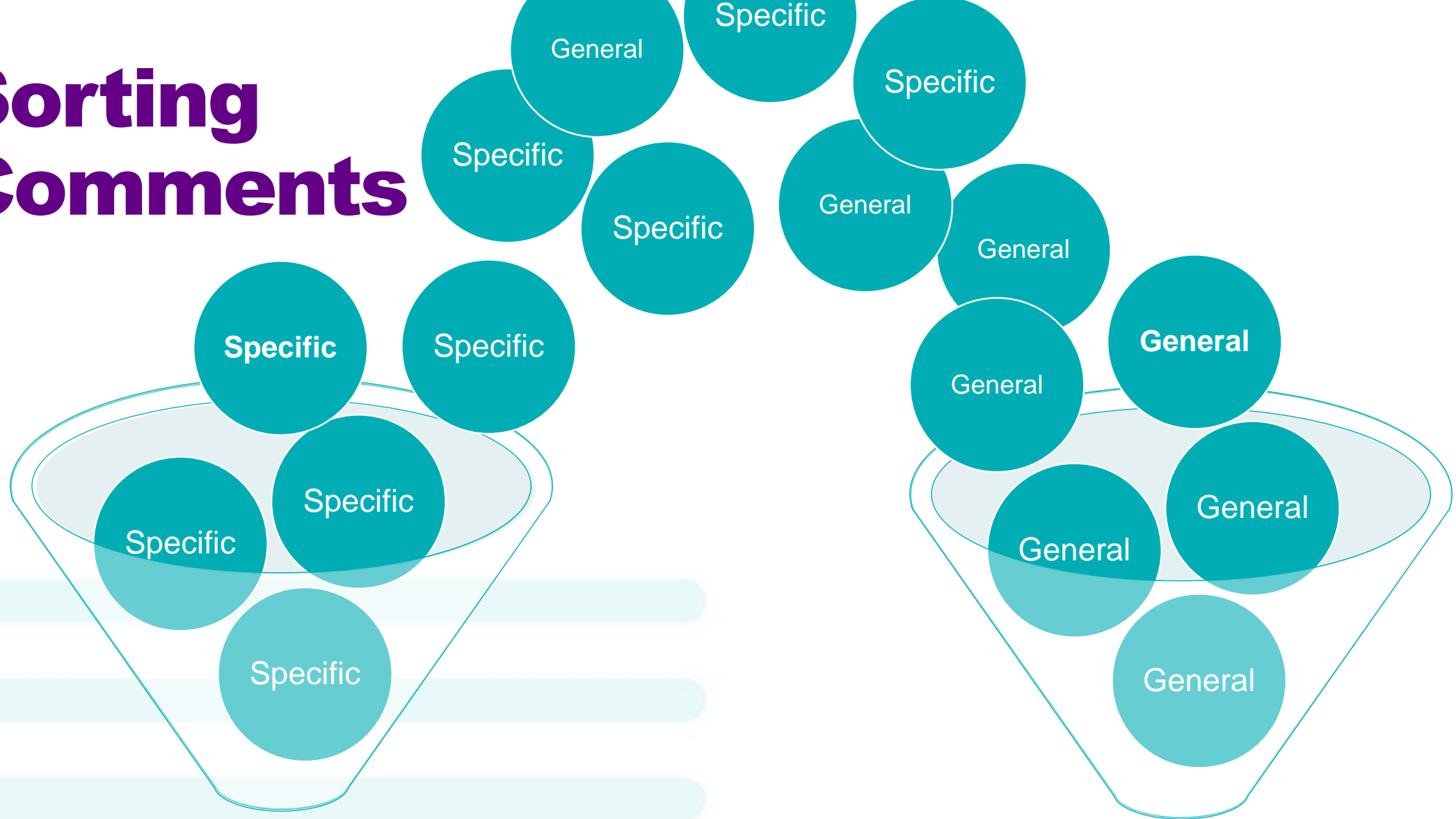
Other outreach...

- River Street pre-construction survey (83 respondents so far)
- Cambridge Winter Farmers Market (3/23/19)
- Mobility Walk (5/14/19)
- River Festival (6/1/19)
- Urban Design Walk (6/11/19)
- Parking Day (9/20/19)
- Business focus groups (8/27/19 and 10/16/19)
- Ongoing coordination with Department of Human Service Programs and Cambridge Police Department
- Carl Barron outreach (full exploration of Carl Barron outreach scheduled for next Public Meeting)

What we heard (highlights):

- Improve safety / lower speeds
- Reduce noise by slowing traffic
- Improve accessibility
- Enhance public space
- Add more greenery
- Expand and activate open space
- Support businesses
- Regulate parking, meet business needs
- Create spaces that encourage people to stay and support retail businesses
- Widen sidewalk near Star Variety store
- Make transportation / movement of people more efficient
- Add separated bikeways
- Reduce bus delay
- Improve bus stops, add amenities, and alleviate crowding
- Create shorter, safer, and more visible crossings
- Improve visibility on turns
- Create long lasting, smooth surfaces
- Provide amenities for the unhoused community (water fountain, public restrooms, etc.)

Sorting Comments



Location-Specific Comment Map

Shared Design Goals

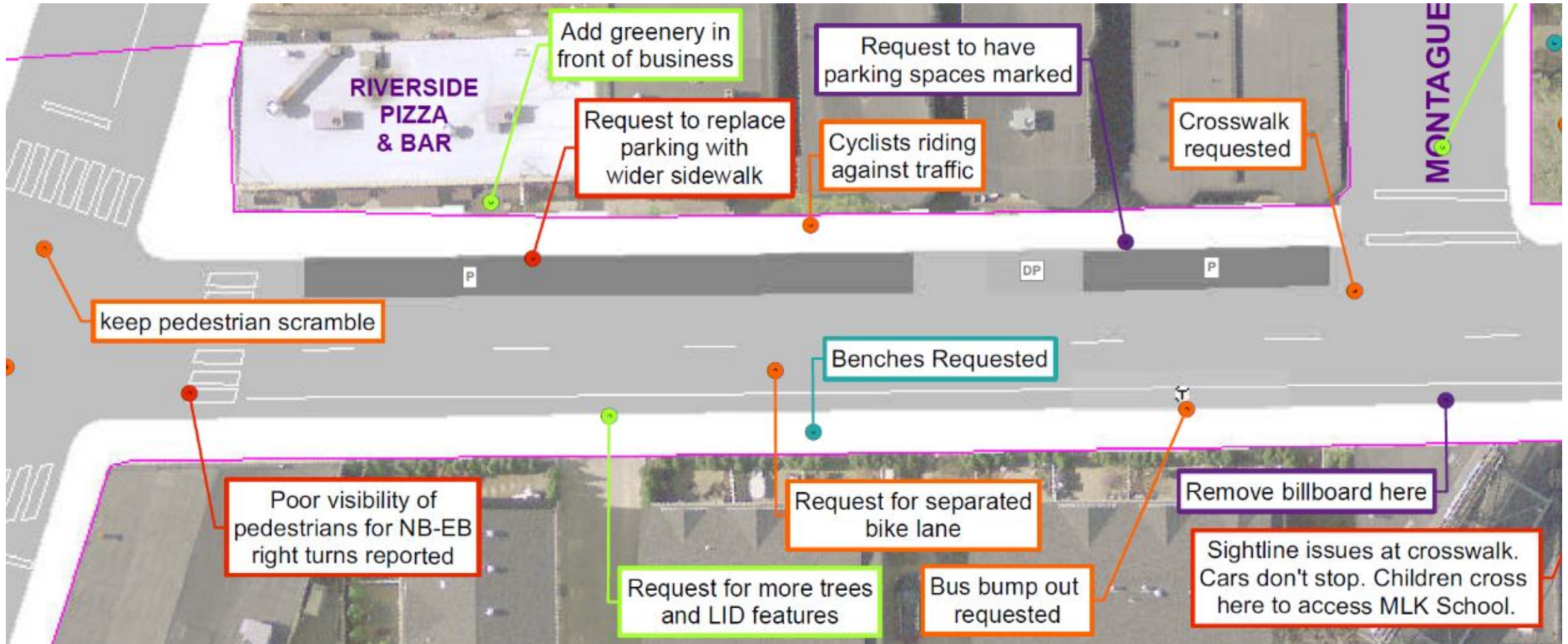
Guidance for Our Designers: Shared Design Goals

- Safe
- Inclusive
- Human Scale
- Ecological
- Multimodal
- Activated
- Resilient



Western Avenue

Guidance for Our Designers: Location-Specific Comment Map



Complete and Share the Pre-Construction Survey!!

- Still live at cambridgema.gov/riverstreet!
- Will become the “before” survey for the River Street Reconstruction
- When the post-construction survey is complete, the two surveys will help the City evaluate the project
- **Please help us distribute to your neighbors!**

1. What brings you to River Street? (Check all that apply)

I live nearby

I work nearby

I go to school nearby

I shop or do errands nearby

Other (please specify)

OK



Conceptual Design Development: 5 Design Toolbox Highlights

Pedestrian Crossings



Pedestrian Hybrid Beacon/HAWK



Signalized

Curb Ramps and Detectable Warning Strips

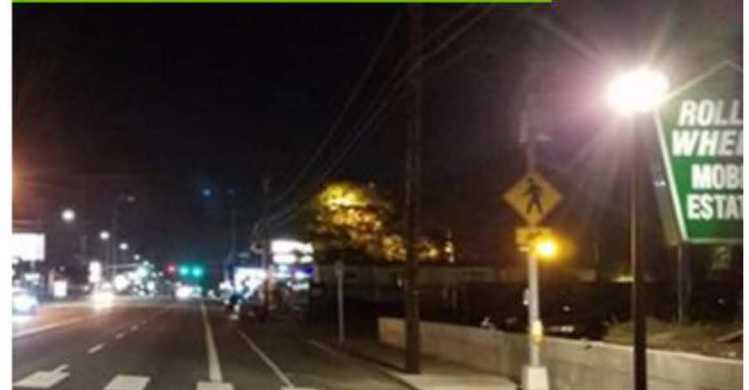


Crosswalk



Rapid Flashing Beacon

Crosswalk Illumination



Separated Bike Lanes



Raised—No Parking



Raised—Buffered w/ Parking



Raised Mountable Curb



Protected Intersections



Signal Control

Bus Priority



Bus Lane



Transit Signals/Bus Queue Jump



Flexible Curbside Space



Function	Definition	Examples of Uses
Access for commerce	Goods and services reach their customers	Commercial vehicle loading, truck loading
Access for People	Arrivals, transfers between modes	Bus stops, bike parking, curb extensions, pick up/drop off, short-term parking, taxi zones
Activation	Offers vibrant social spaces	Food truck parking, seating, parklets, public art, street festivals
Greening	Enhances aesthetics and environmental health	Plantings, rain gardens, bio-swales
Mobility	Moves People & Goods	Sidewalks, bus lanes, bike lanes, travel lanes, turning lanes
Parking/storage	Provides storage for vehicles and equipment	Bus layover, vehicle parking, reserved spaces (police/fire), construction needs.

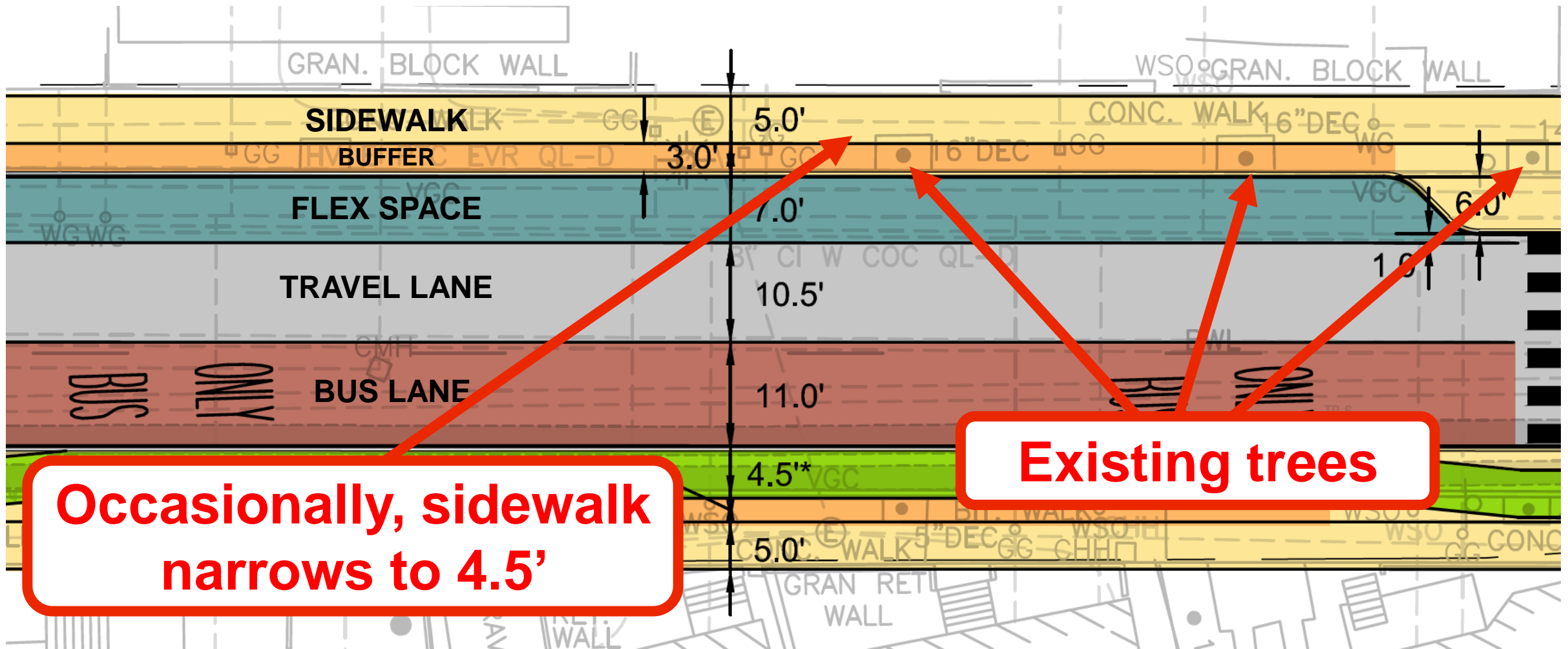


Conceptual Design Development: Givens and Constraints

Givens

- Address flooding & drainage capacity
- Upgrade and/or protect public and private utilities
- Preserve healthy trees
- Maximize additional trees & improve growing conditions
- Access for emergency vehicles (18-20 feet)
- Accommodate routine maintenance and operations (snow, trash, etc.)
- Include separated bicycle facility
- Regulate parking to allow us to use curbside space more efficiently
- Maintain regional truck route
- Raise crossings on side streets
- Improve intersections

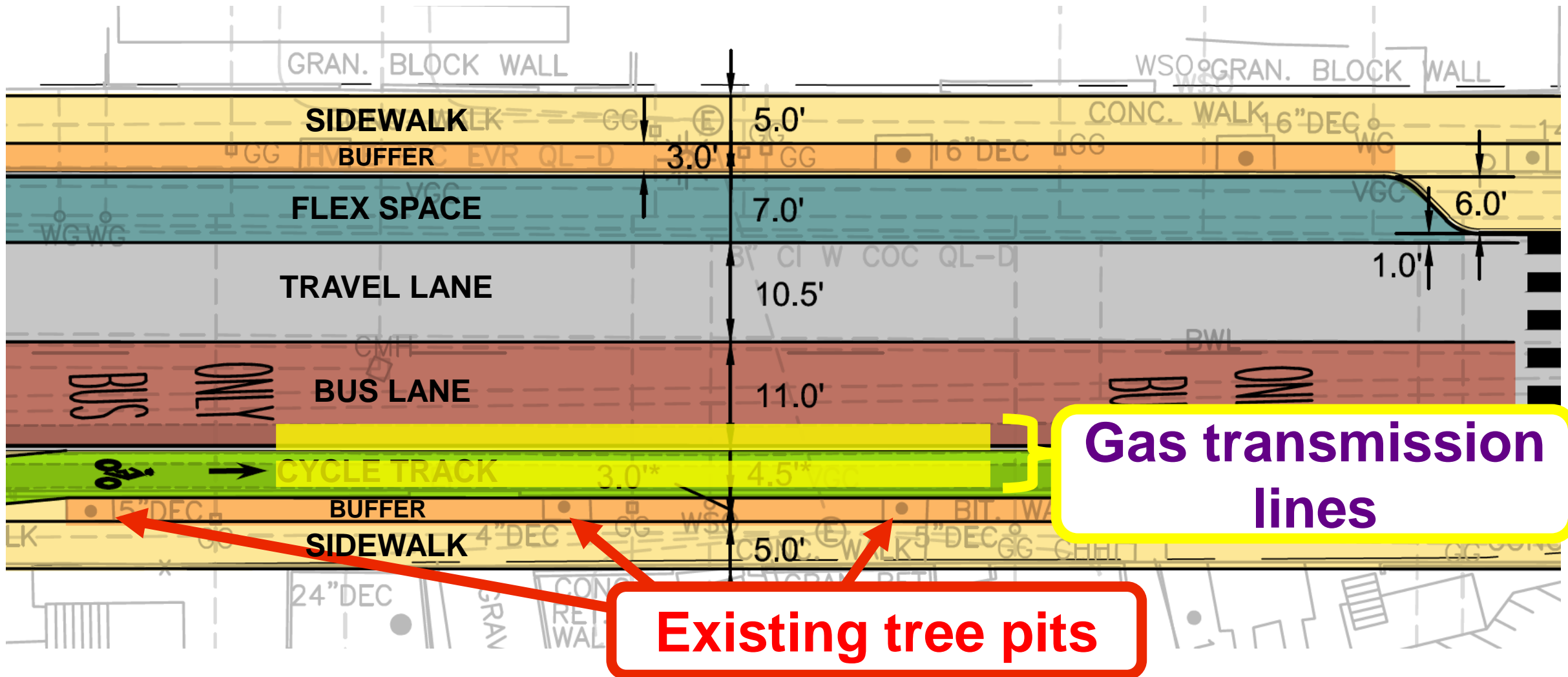
Example of Sidewalk Constraint



Occasionally, sidewalk narrows to 4.5'

Existing trees

Example of Utility Constraint



Consider planning for greater electricity, natural gas, and telecom needs?

Preserve gas transmission lines

Update and separate portions of sewer & drainage and mitigate flooding risks with improved stormwater management

Replace gas distribution lines (to start in 2020)

Upgrade soil conditions for trees and plantings

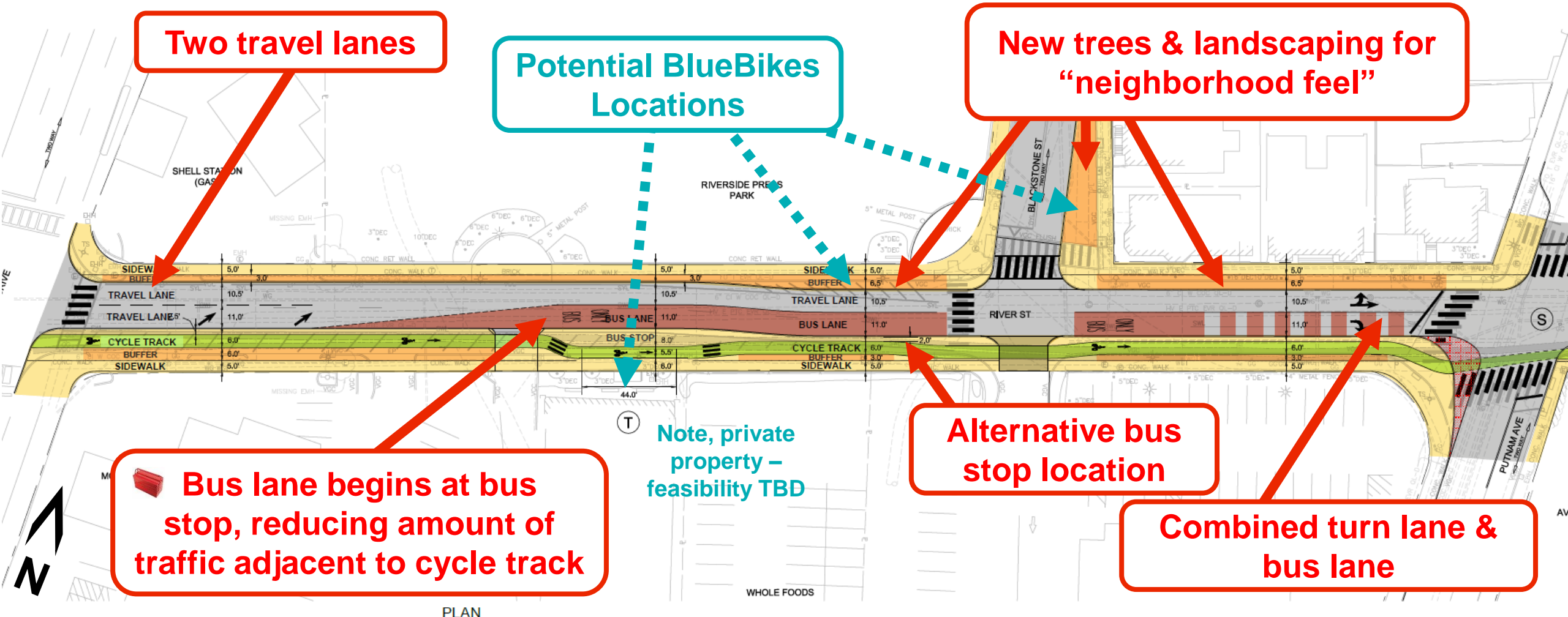
Replace and upsize water main

Subsurface Work



Concept Walkthrough

Memorial Drive to Putnam Ave



Two travel lanes

Potential BlueBikes Locations

New trees & landscaping for “neighborhood feel”

Bus lane begins at bus stop, reducing amount of traffic adjacent to cycle track

Note, private property – feasibility TBD

Alternative bus stop location

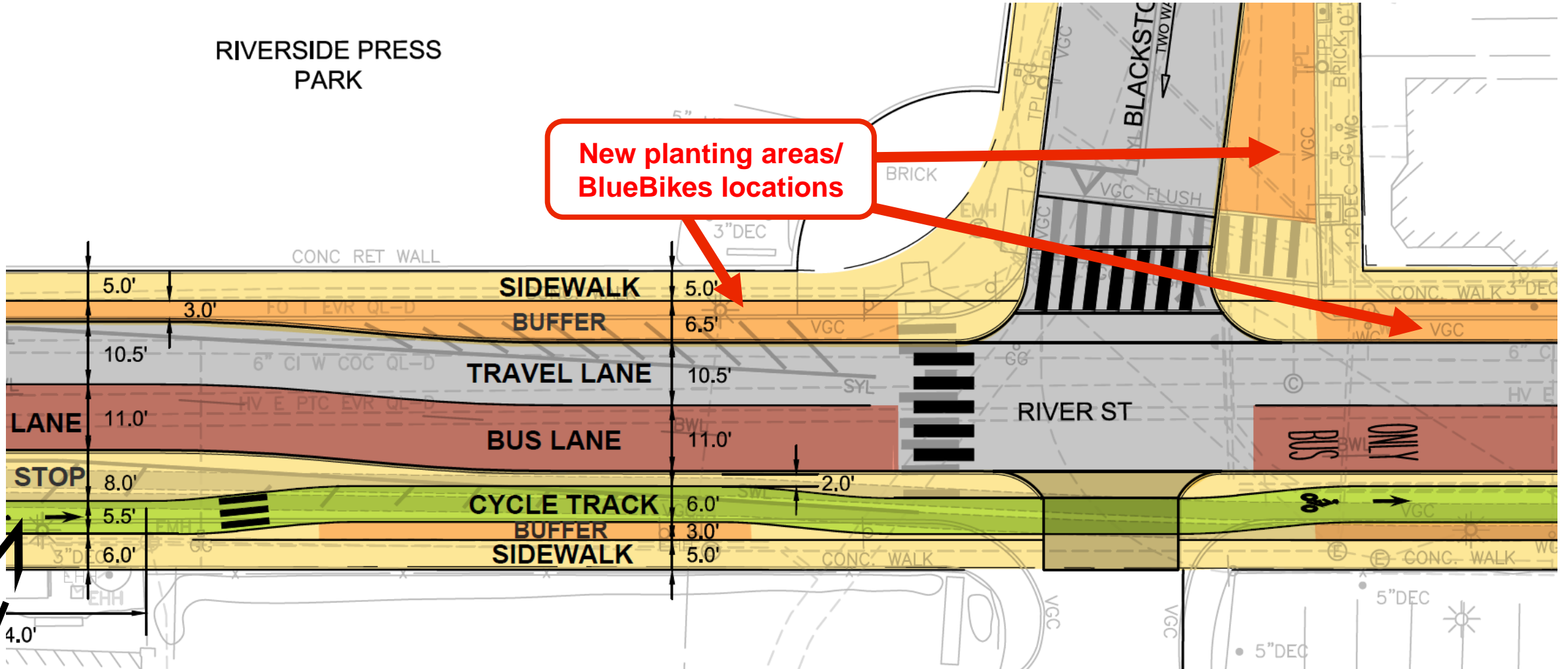
Combined turn lane & bus lane

PLAN

Extending the Neighborhood Feel

RIVERSIDE PRESS
PARK

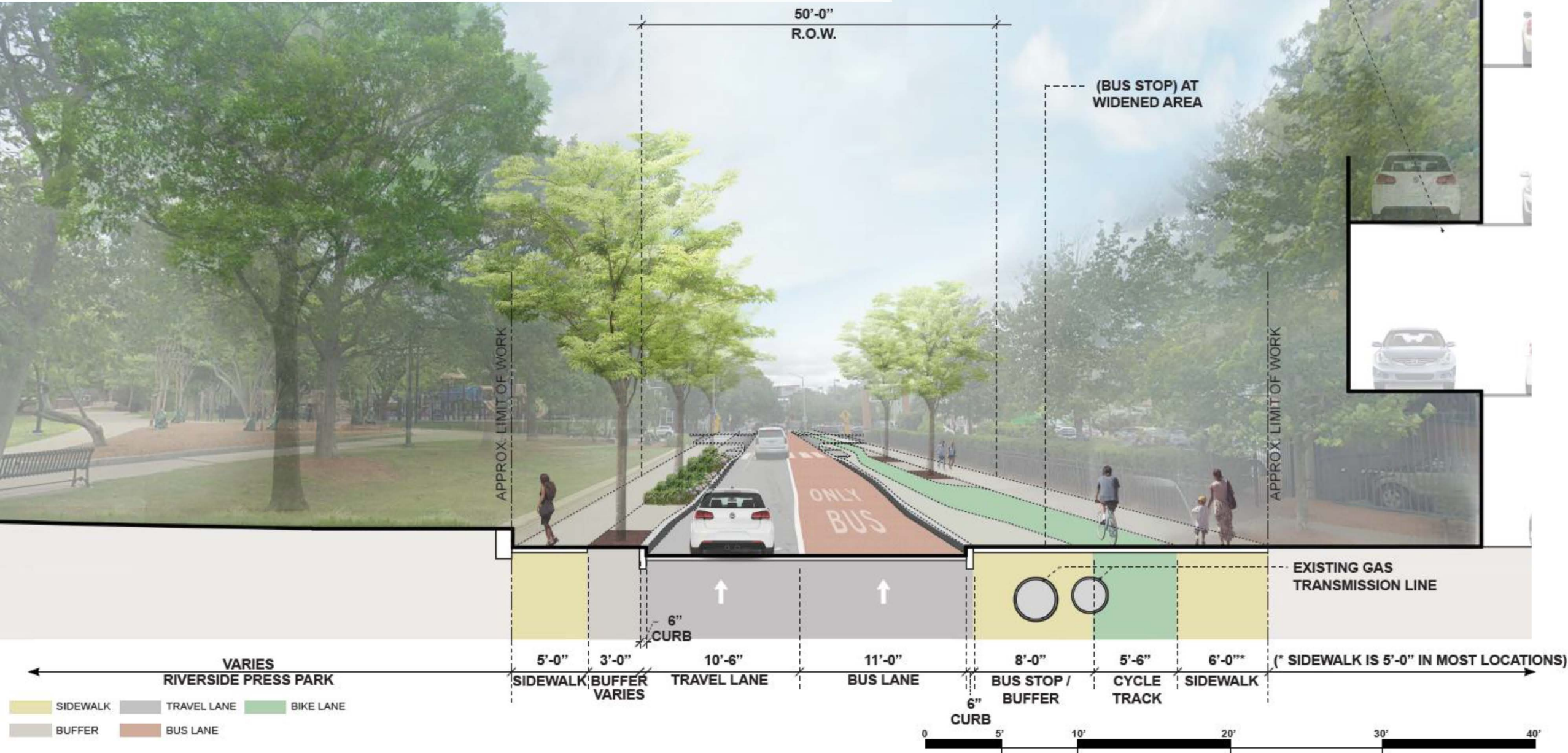
New planting areas/
BlueBikes locations



River Street Today



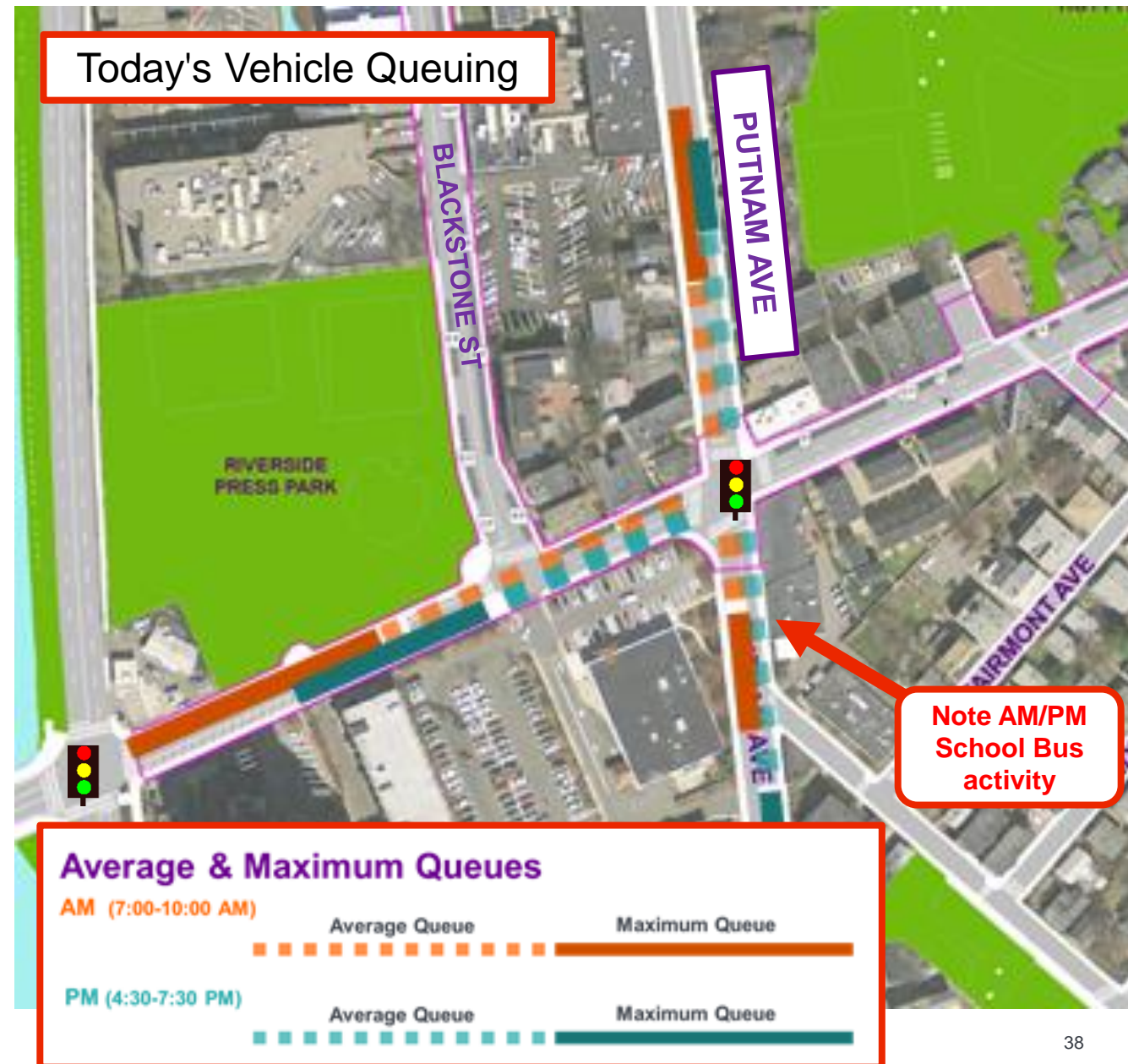
River Street Concept



River at Putnam: The impact of signal timing

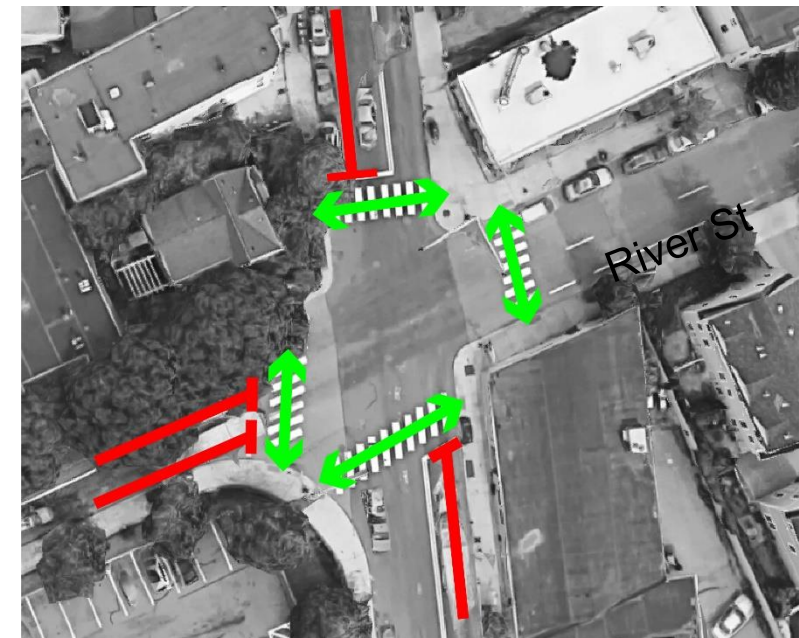
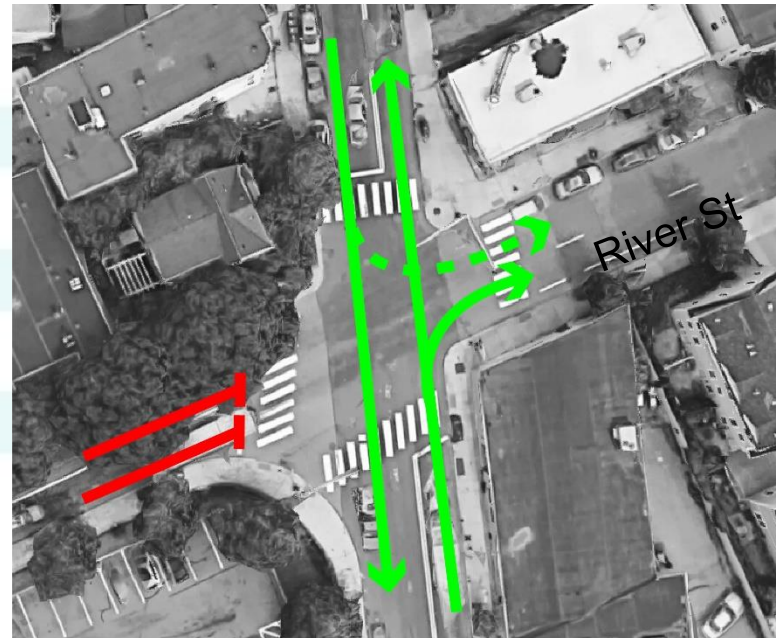
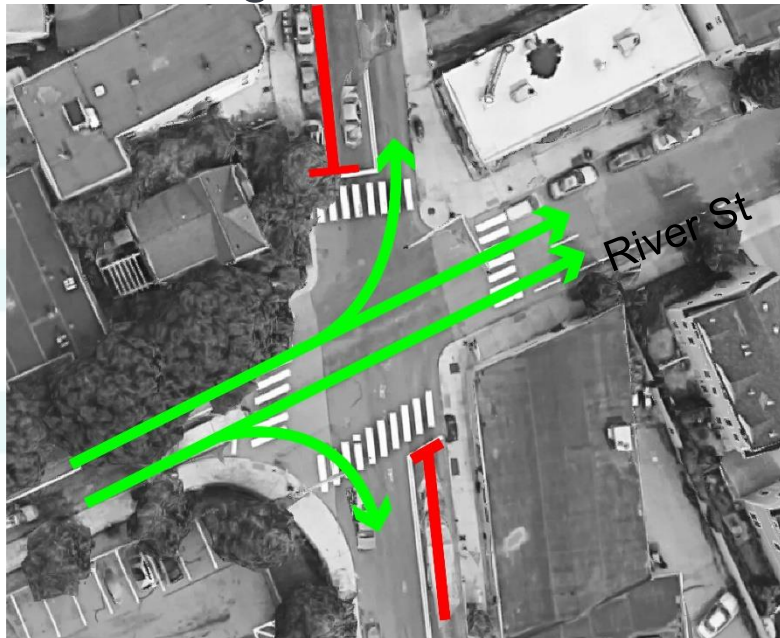
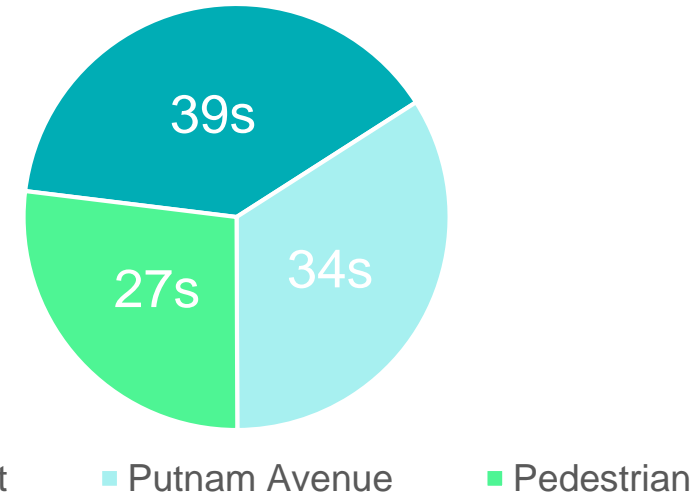
- Signals influence how many people get through an intersection
- Today's "exclusive" pedestrian phasing increases delays for all users
- In the future, "concurrent" pedestrian phasing could help move everyone through with less delay (people walking, biking, taking the bus, and driving)

Based on field measurements of vehicle queues



Today's signal timing at Putnam limits all users of River St.

- 3-phase signal, total 100-second cycle time
- The “all-stop” or exclusive pedestrian phase forces pedestrians to wait longer to cross (up to 73 seconds), and limits how many vehicles can get through during the green time

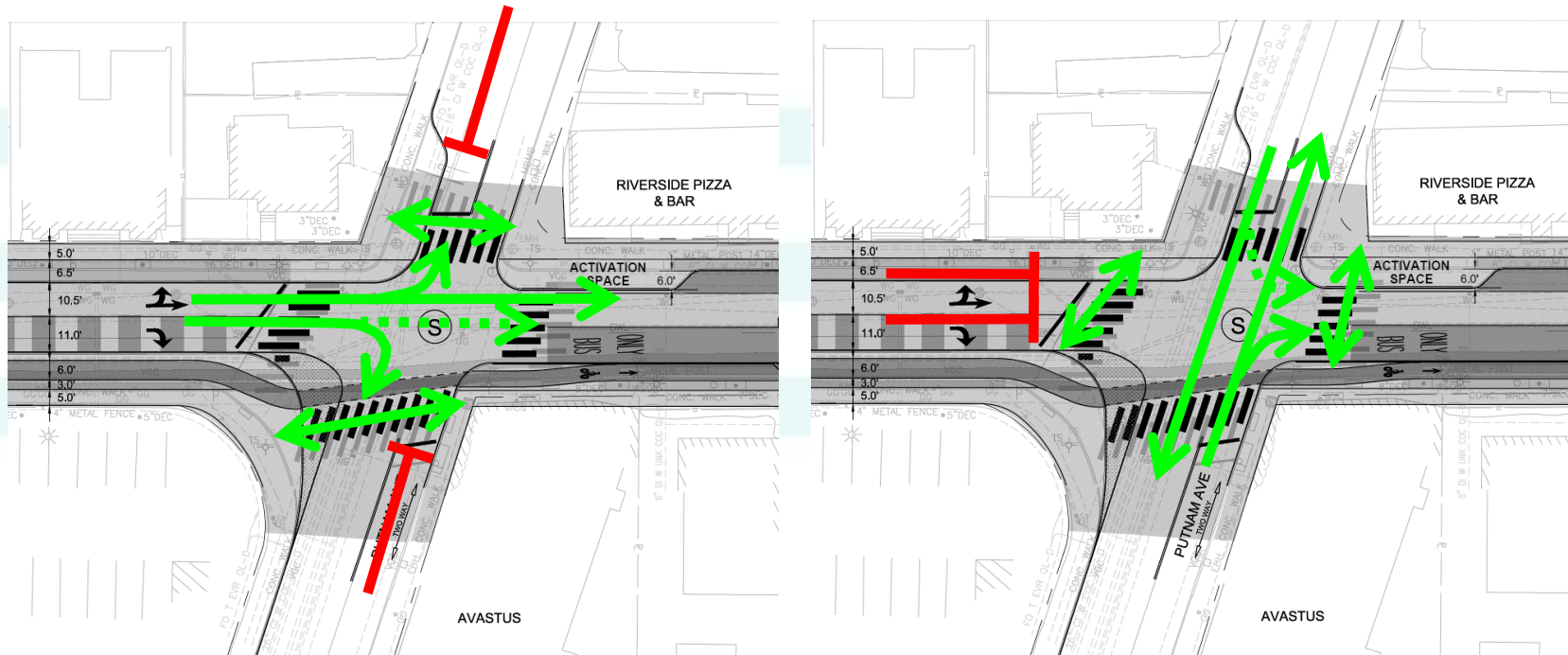


Concurrent phasing at Putnam Avenue could “open the valve”

- 2-phase signals are more efficient for everyone
- What about safety?
 - Concurrent (pedestrians cross with parallel traffic) with 4-7 second pedestrian head start (Leading Pedestrian Interval)
 - Safety is improved with shorter crossing distances and better sightlines

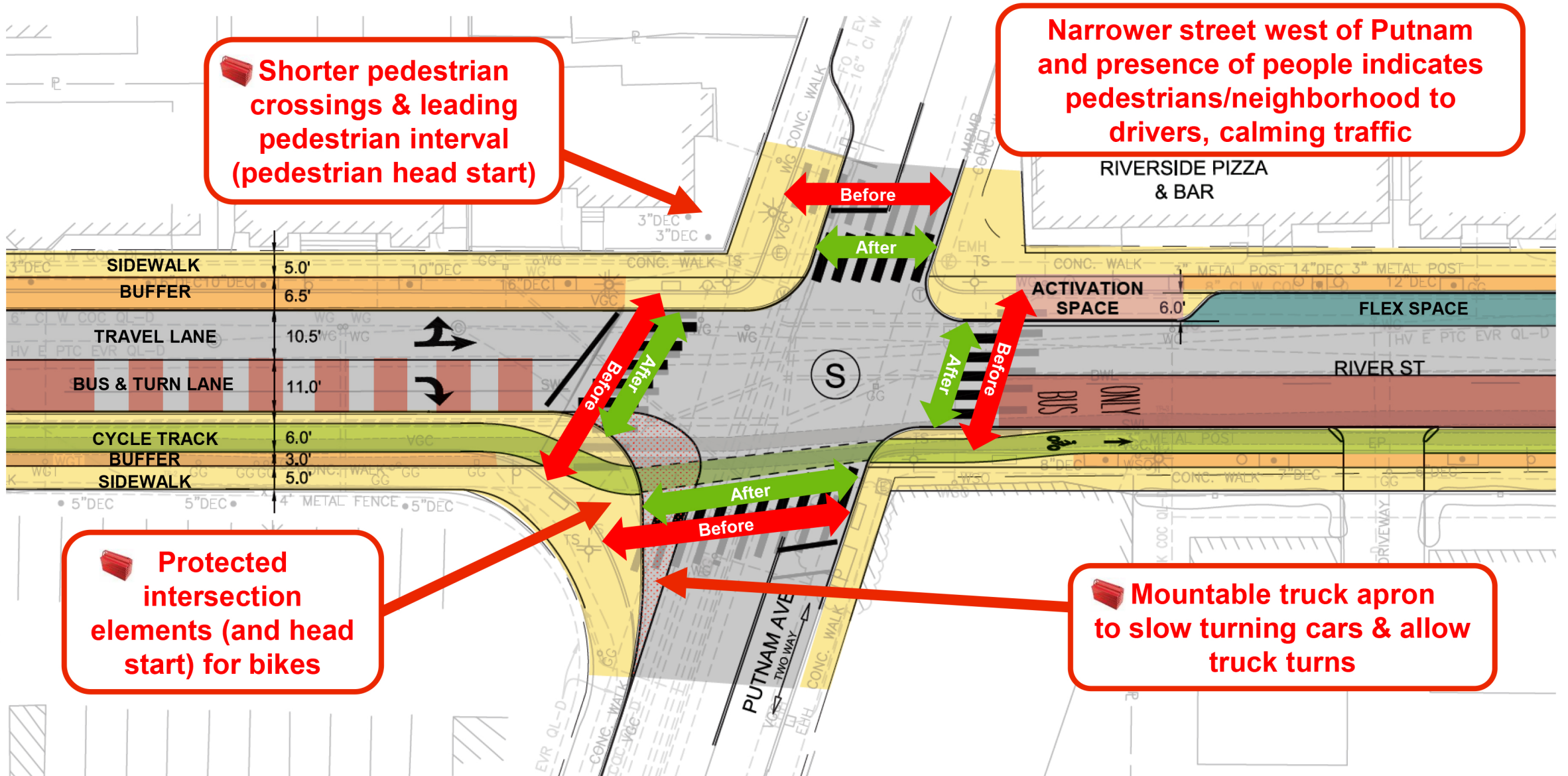


■ River Street ■ Putnam Avenue

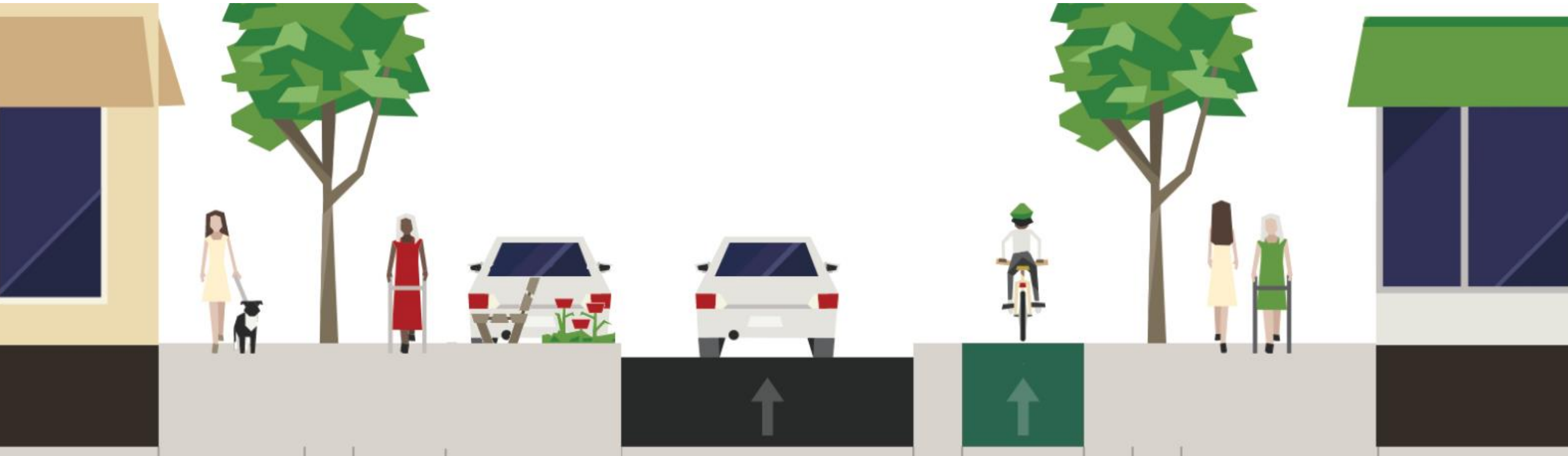


Pedestrians cross concurrently with traffic in an intersection with a safer geometry

Putnam Avenue Intersection



One-lane east of Putnam Avenue?



One-lane east of Putnam Avenue?

Pros

- 4' to 6' additional for activation/buffer on north side
- Shorter pedestrian crossings
- Wider bicycle facility/wider buffer
- Easier bicycle facility maintenance

Cons

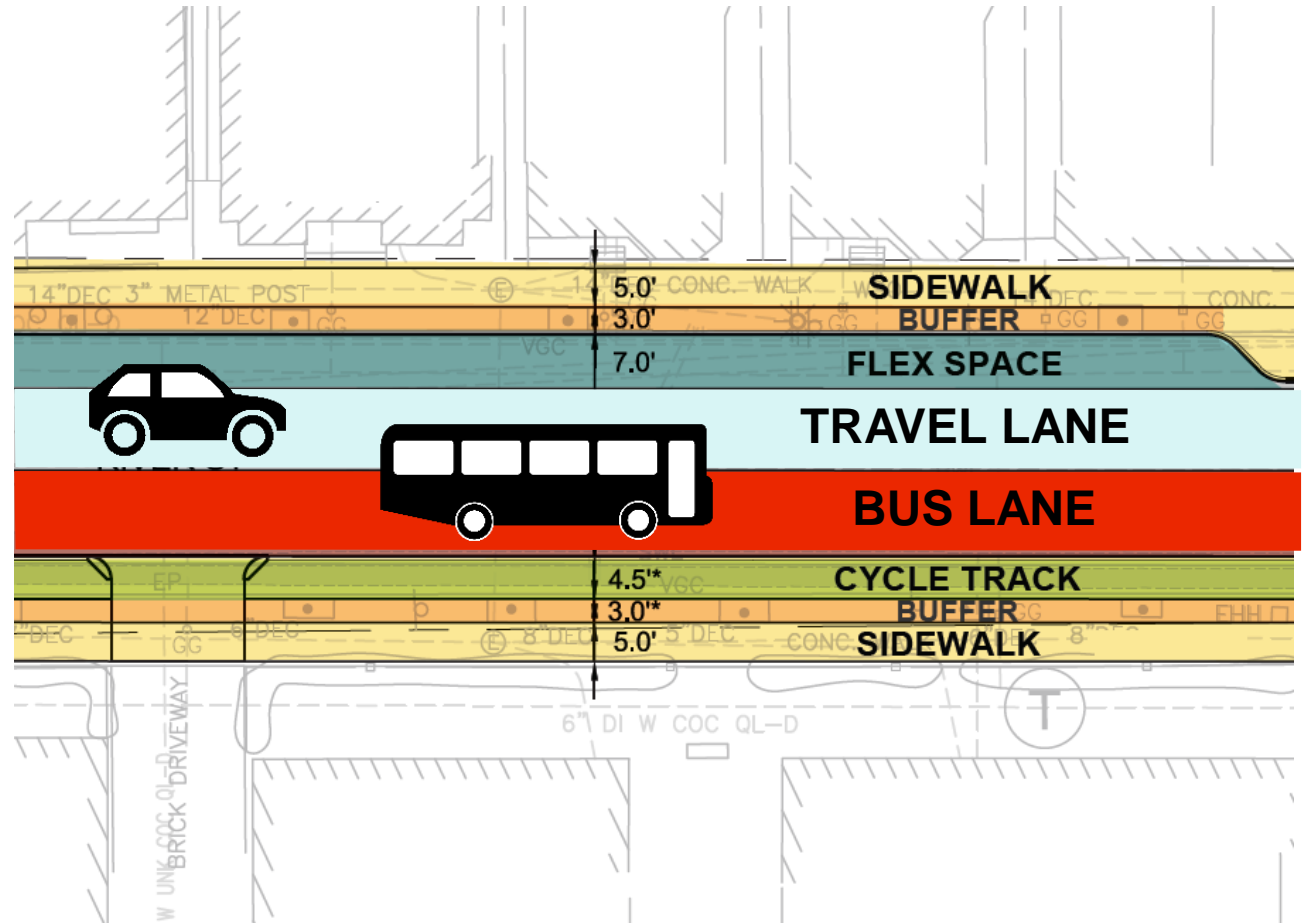
- Requires raised bikeway to be mountable (for emergency vehicle access) making illegal parking/stopping/loading likely
- Buses would experience same congestion as general vehicles
- Street/utility repairs would block entire street
- Routine operations including trash collection and street sweeping would block street
- Maintaining clear width and mountable feature would be challenging during and after snow events



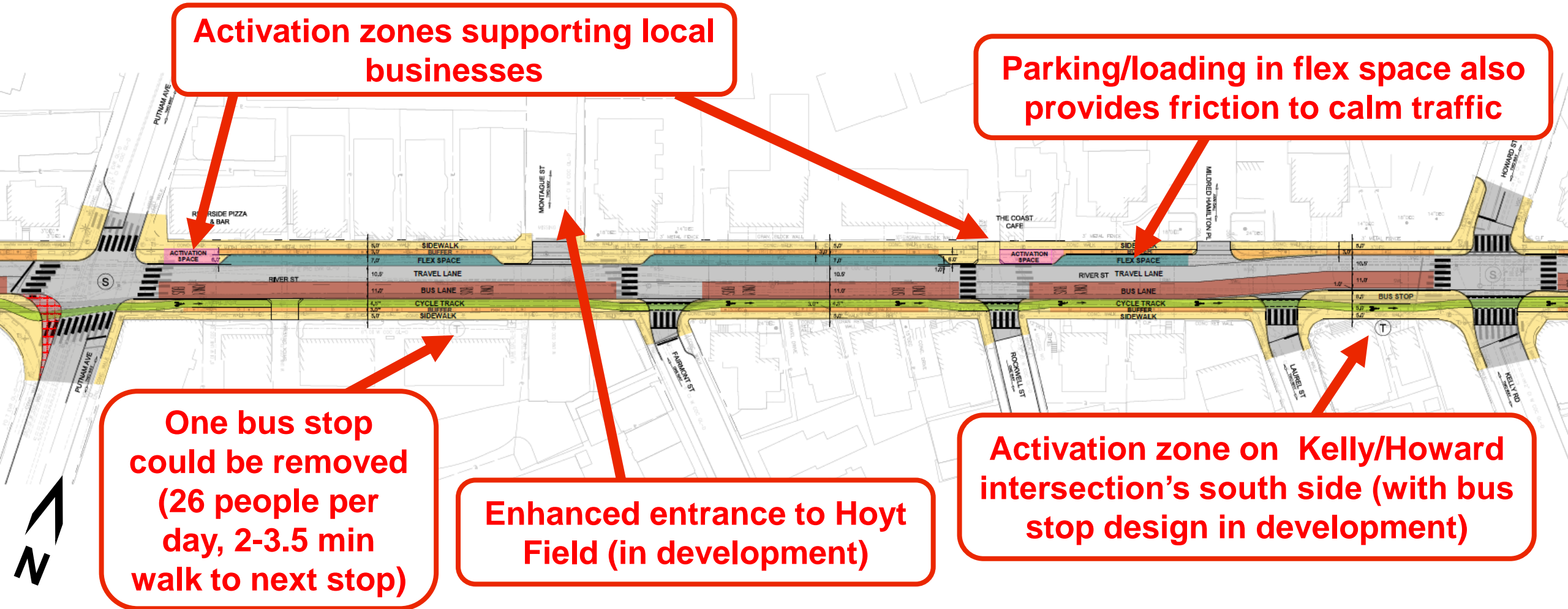
Rendering of Beacon Street cycle track (Somerville)

East of Putnam Avenue to Franklin Street

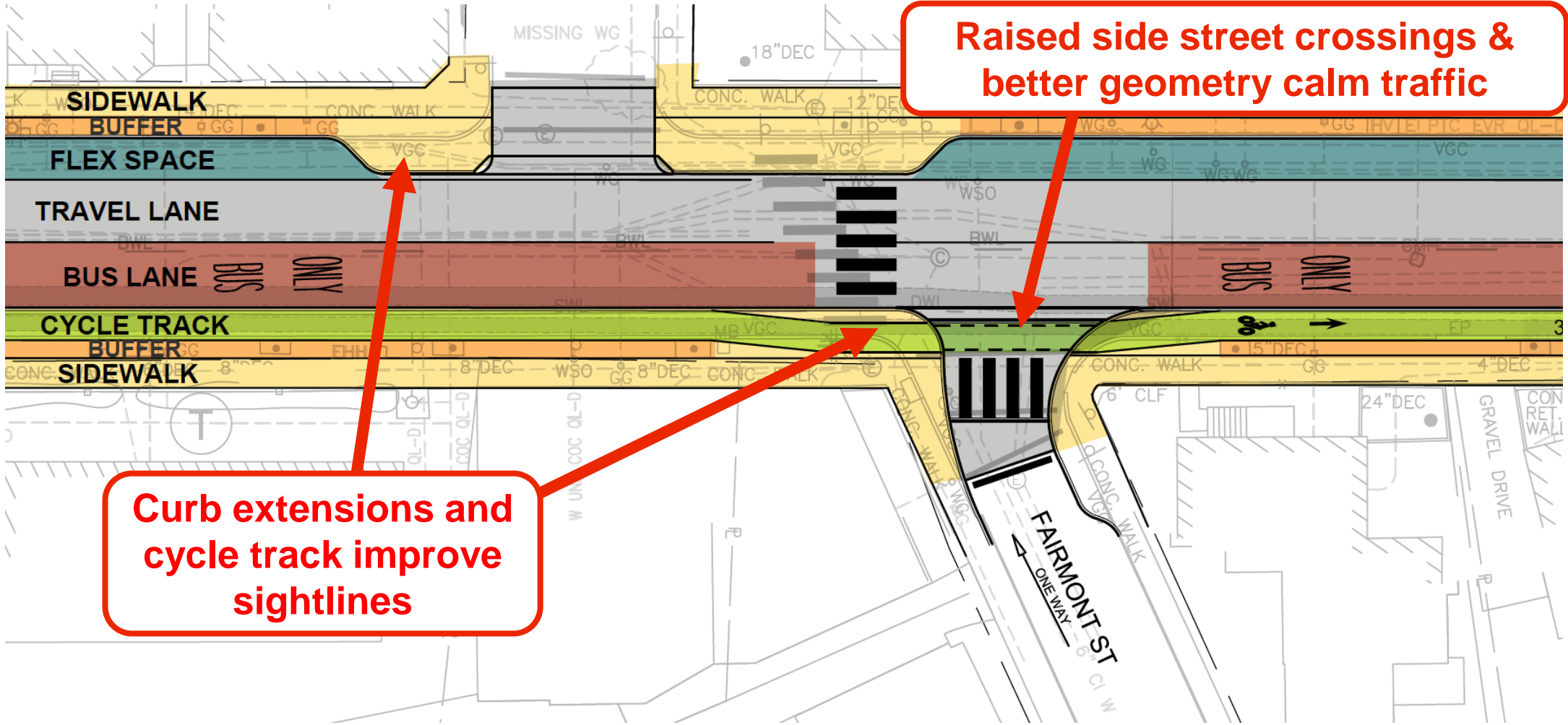
- One general use lane accommodates existing traffic (encouraging slower speeds)
- Minimal queuing at Kelly/Howard Street signal
- Bus lane – improves bus reliability and reduces delay
- The bus lane provides flexibility for maintenance, trash operations, etc.



Putnam Avenue to Kelly Road/Howard Street



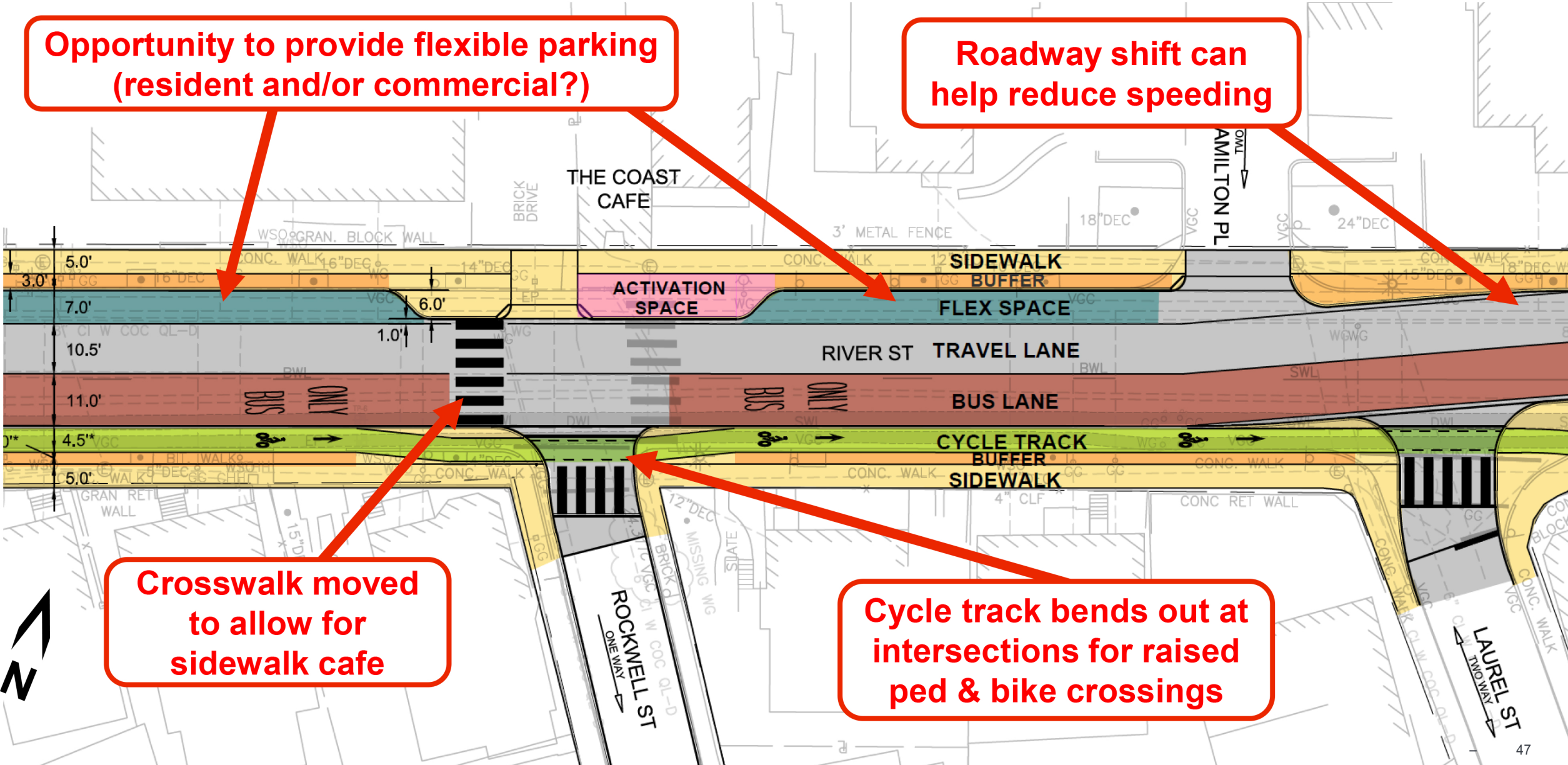
Intersection Improvements Example



Coast Café Area

Opportunity to provide flexible parking (resident and/or commercial?)

Roadway shift can help reduce speeding



Crosswalk moved to allow for sidewalk cafe

Cycle track bends out at intersections for raised ped & bike crossings

Coast Café Area Today



Coast Café Area Concept



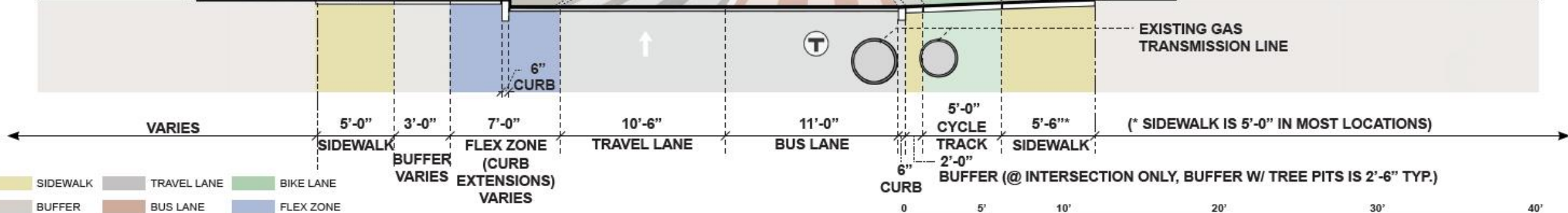
BUMP OUT AT
CROSSWALK
& COAST CAFE
(BEYOND)
ACTIVATION AREA

50'-0"
R.O.W.

APPROX. LIMIT OF WORK

APPROX. LIMIT OF WORK

EXISTING GAS
TRANSMISSION LINE



At Howard Street/Kelly Road

Existing signal not warranted based on traffic volumes, but signal serves other important needs:

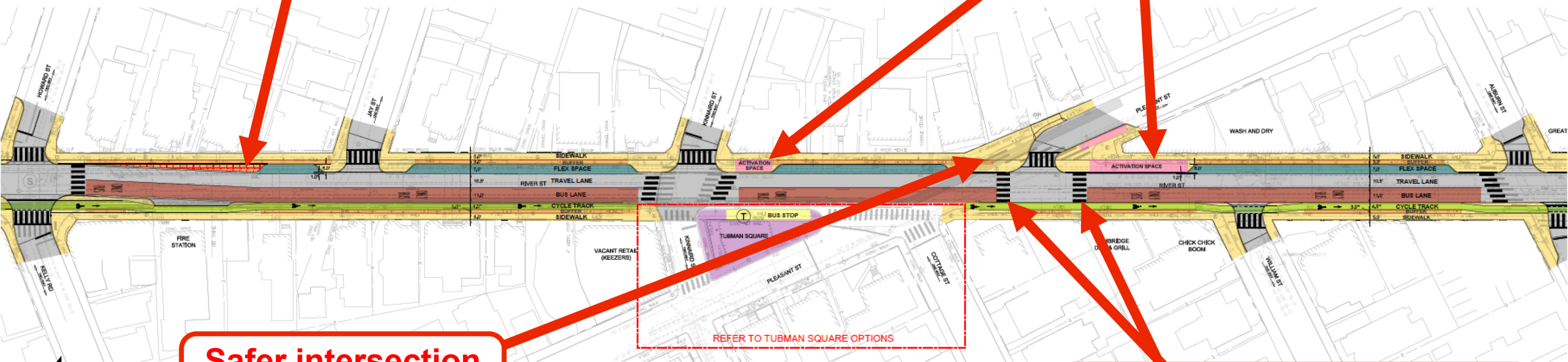
- Provides signalized pedestrian crossing on the Amigos School's designated Safe Route to School
- Critical for safe Fire Department operations
- Could help mitigate traffic changes with one of two Tubman Sq. options



Kelly Road/Howard Street to Auburn Street

Mountable area for fire truck movements

Activation zones supporting local businesses



Safer intersection geometry

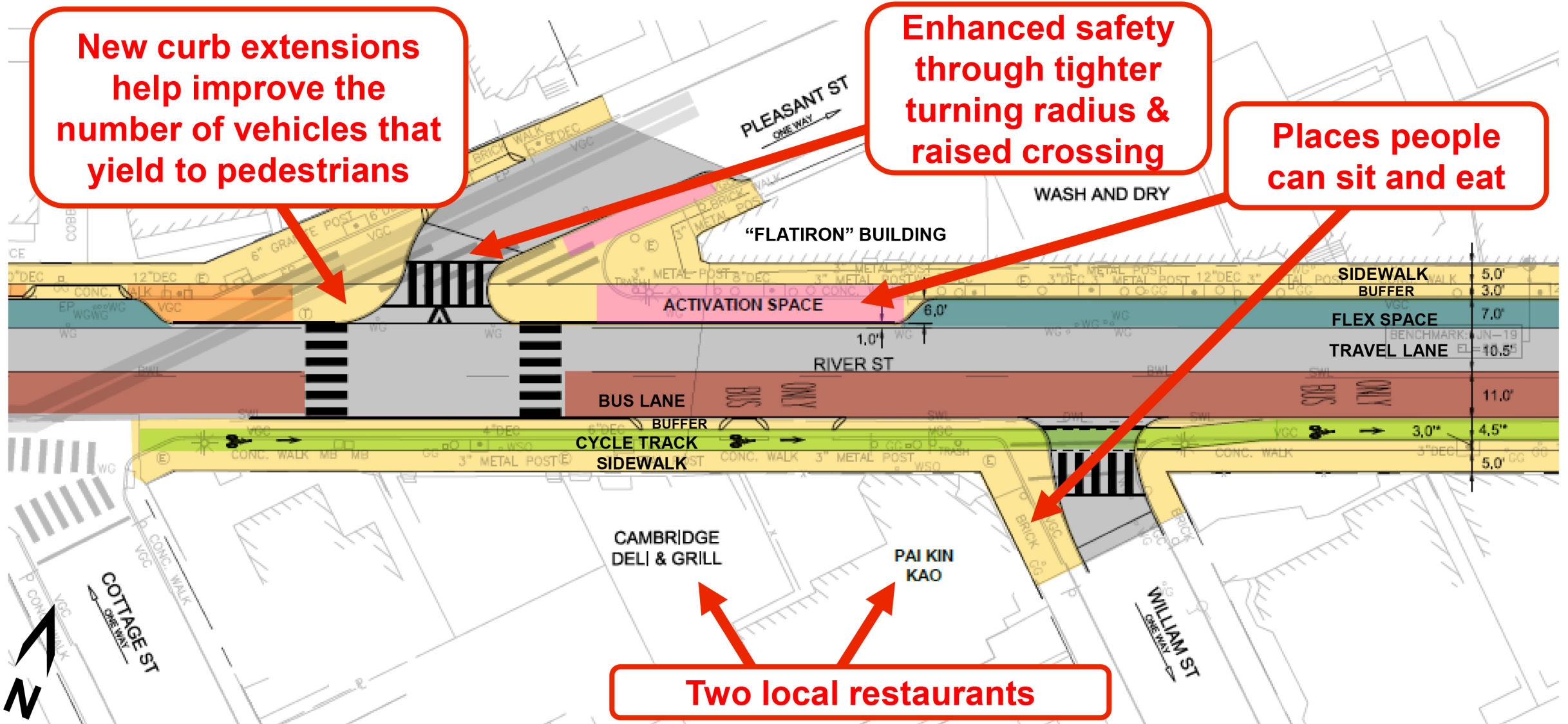
New pedestrian crossings

“Flatiron” building area

New curb extensions help improve the number of vehicles that yield to pedestrians

Enhanced safety through tighter turning radius & raised crossing

Places people can sit and eat

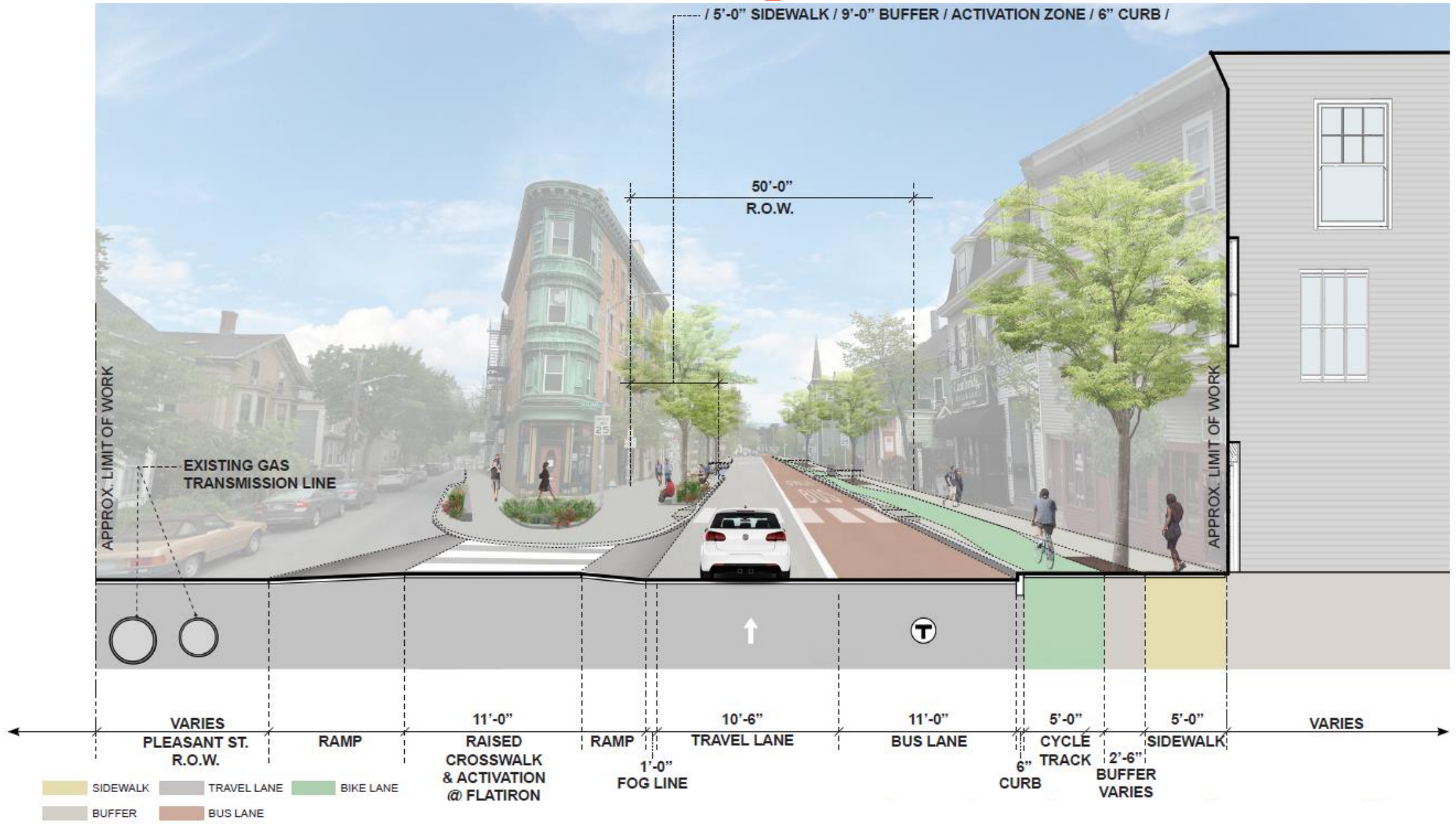


Two local restaurants

“Flatiron” Building Area Today



Flatiron Area Concept



Tubman Square Ideas



Concept 1: Pleasant Street Plaza

- Pleasant Street as shared street/local driveway access only
- Minimal traffic diversions
- Parking impacts
 - 7 unregulated
 - 1 accessible



Street closure



Raised side street crossing



Concept 2: Kinnaird Street Closure

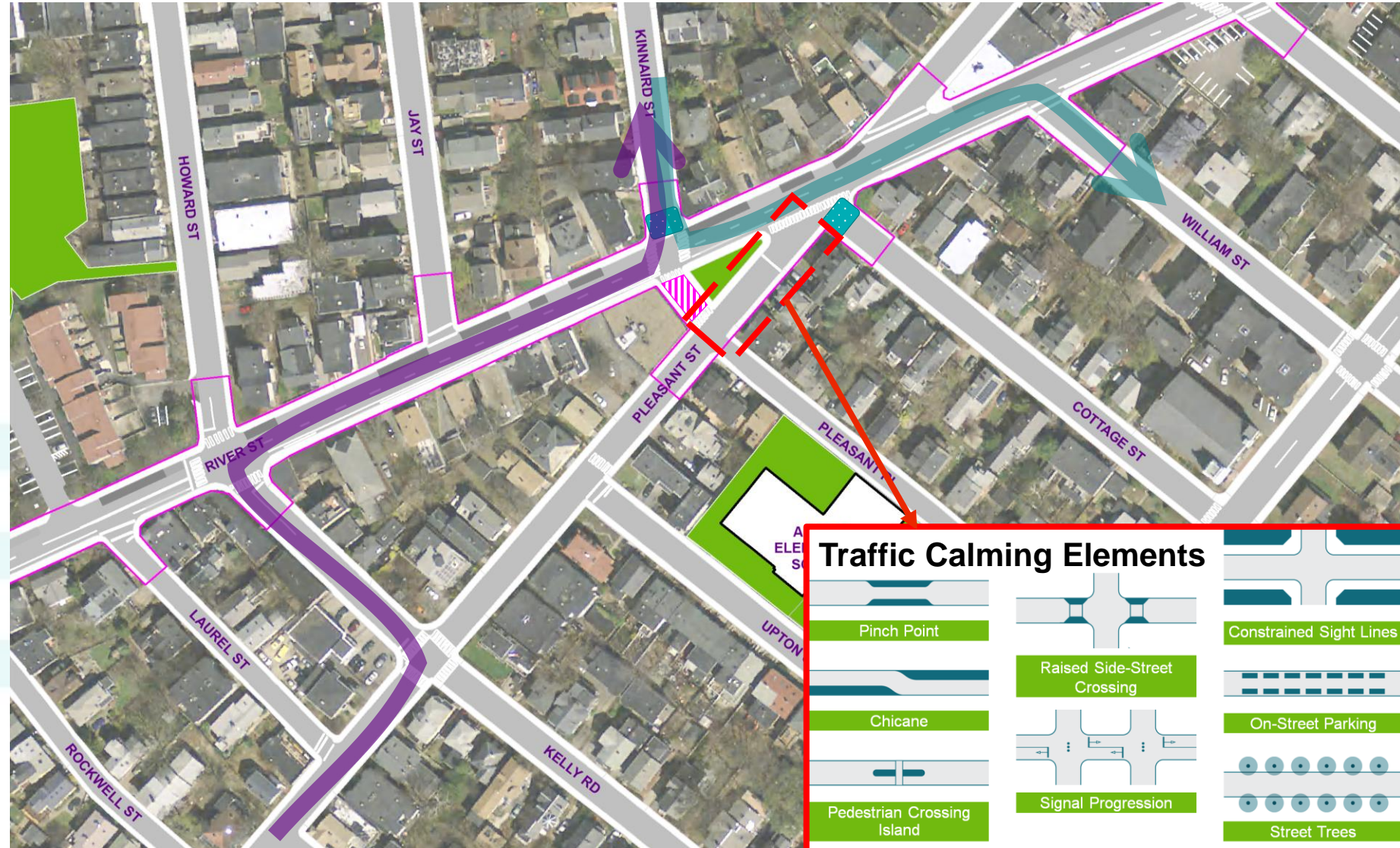
- Close Kinnaird Street
- Traffic calming on Pleasant Street
- Traffic diverted through Howard Street/Kelly Road intersection
- Parking impacts
 - 2 unregulated



Street closure



Raised side street crossing



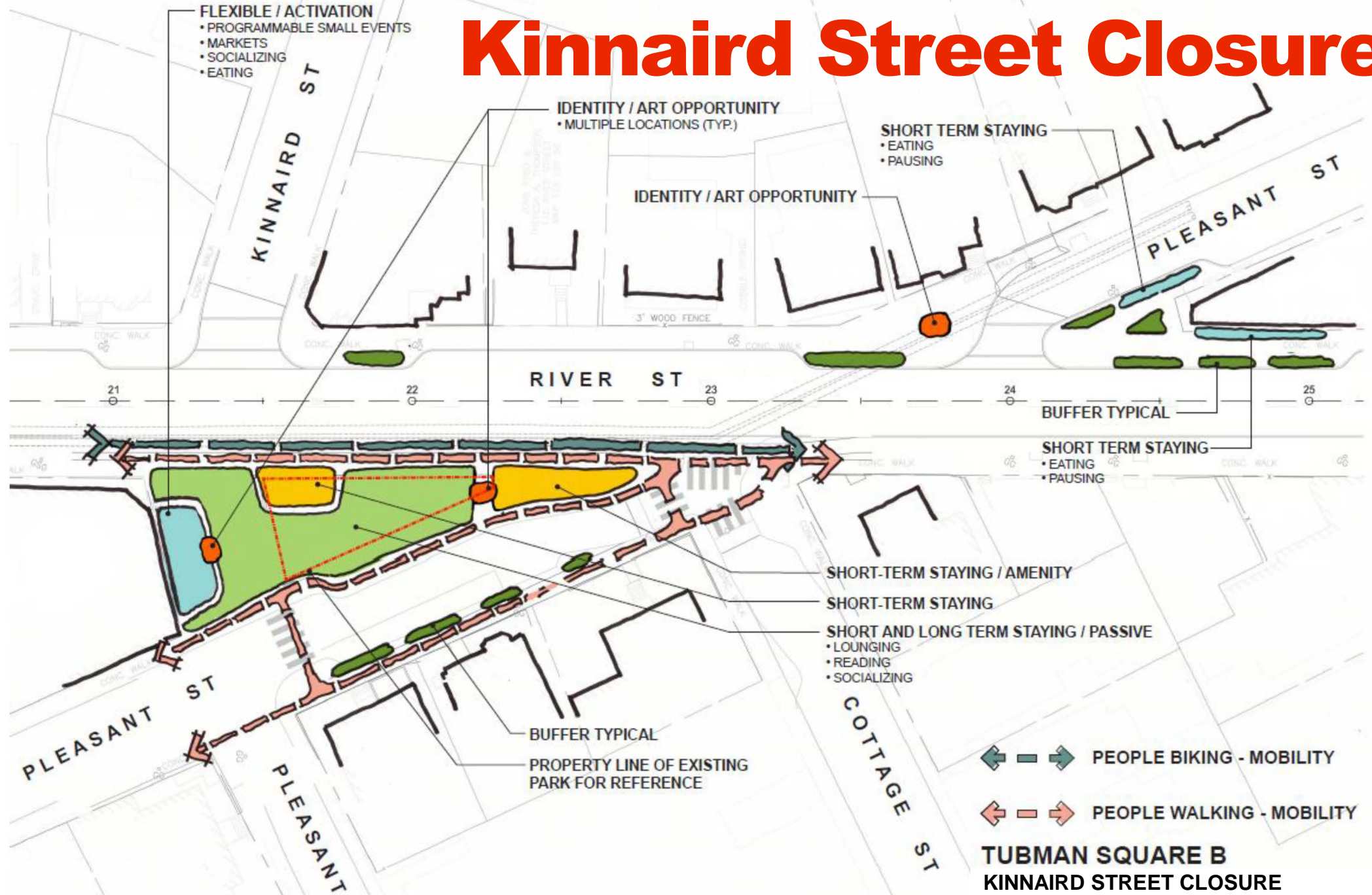
Traffic Calming Elements

Pinch Point	Raised Side-Street Crossing	Constrained Sight Lines
Chicane	Signal Progression	On-Street Parking
Pedestrian Crossing Island	Street Trees	Street Trees

Pleasant Street Plaza



Kinnaird Street Closure



**TUBMAN SQUARE B
KINNAIRD STREET CLOSURE**



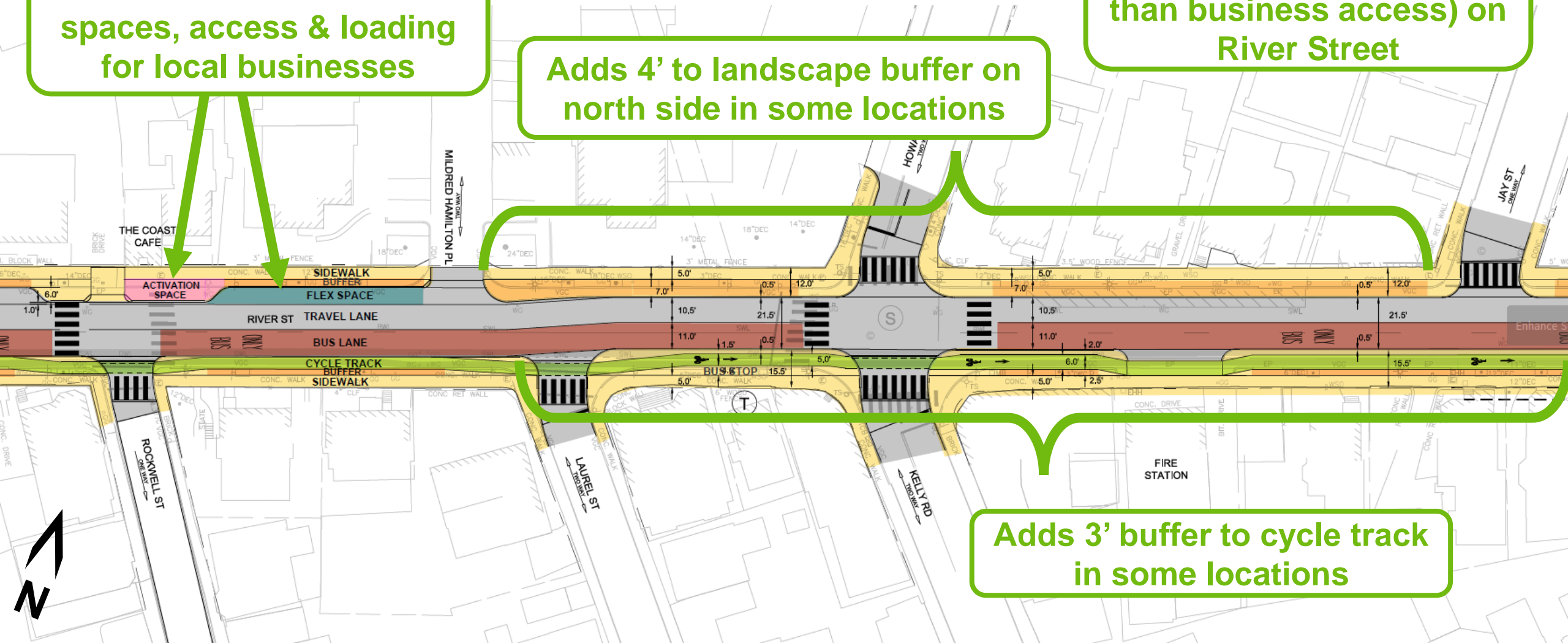
Option B – Better Buffers?

Maintains activation spaces, access & loading for local businesses

Adds 4' to landscape buffer on north side in some locations

Significantly reduces vehicle parking (other than business access) on River Street

Adds 3' buffer to cycle track in some locations

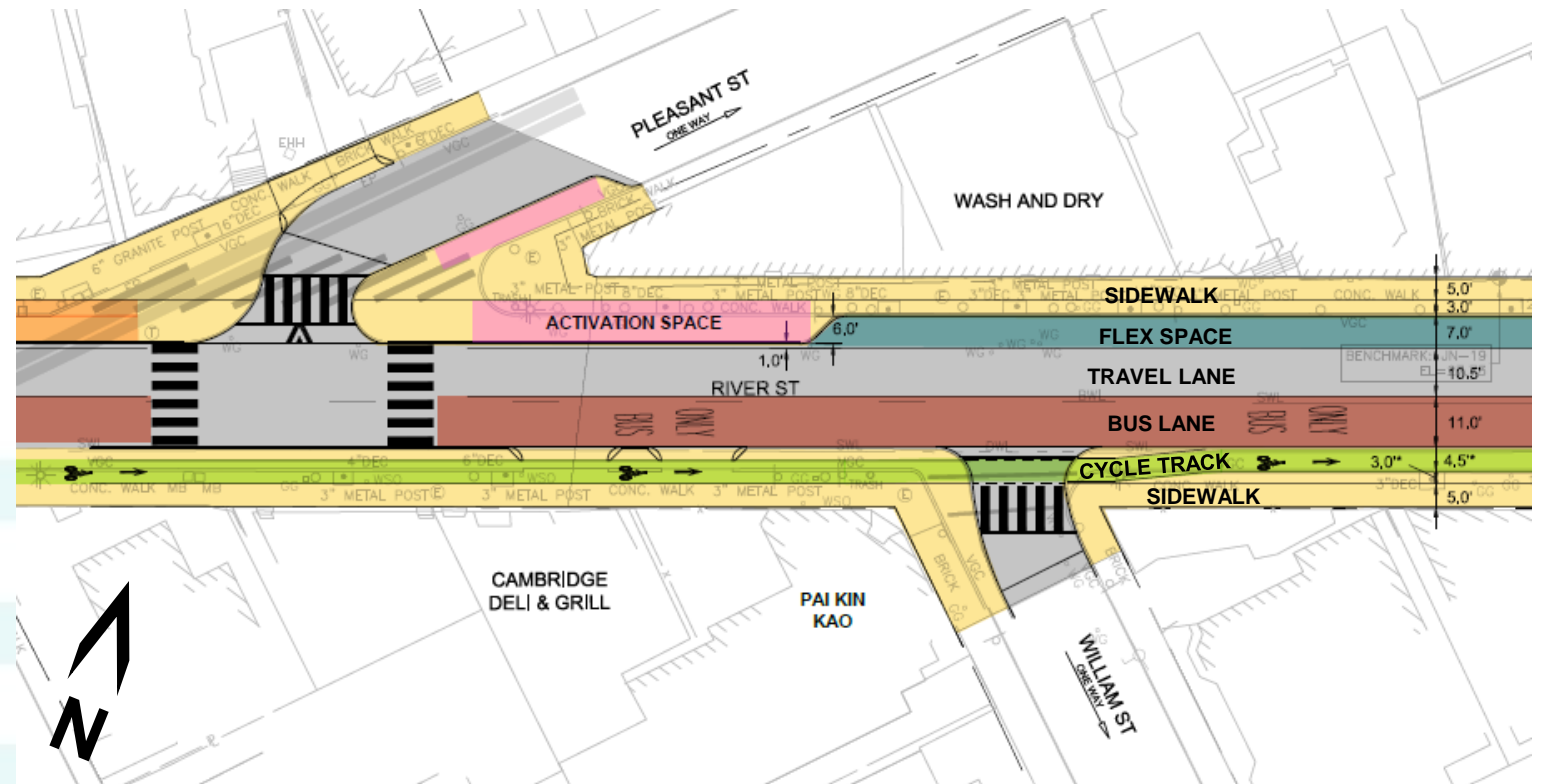


Summary of Pedestrian Safety and Comfort Features

- Raises un-signalized side-street crossings
- Narrows turning radii on most intersections to slow down turns
- Improves visibility at intersections
- Adds to the tree canopy and increases vertical elements
- Moves general traffic in a single lane
- Adds two new crosswalks
- Reduces potential travel speeds with single general purpose lane
- Provides an increased buffer between traffic and people walking and biking (except buses and right-hand turns)
- Simplifies ADA compliant crossings
- Provides more space for people to sit, providing a more neighborhood feeling

Design Goals – How are we doing?

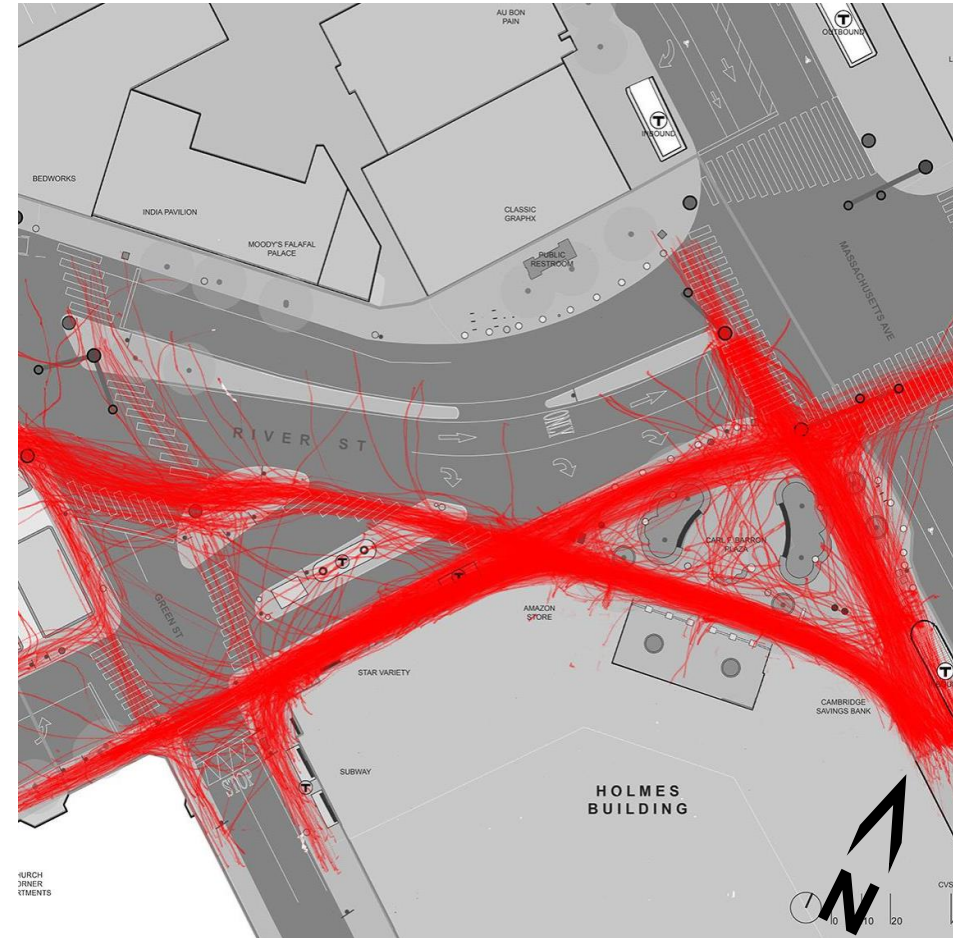
- Safe
- Inclusive
- Human Scale
- Ecological
- Multimodal
- Activated
- Resilient



Detailed Comments on Draft Concept

Visit the Carl Barron Update Table!

- Activity Mapping
- Movement Tracking
- Existing and Proposed Uses of the Plaza



Flexible Curbside Space



Function	Definition	Examples of Uses
Access for commerce	Goods and services reach their customers	Commercial vehicle loading, truck loading
Access for People	Arrivals, transfers between modes	Bus stops, bike parking, curb bumpouts, pick up/drop off, short-term parking, taxi zones
Activation	Offers vibrant social spaces	Food truck parking, seating, parklets and streateries, public art, street festivals
Greening	Enhances aesthetics and environmental health	Plantings, rain gardens, bio-swales, green infrastructure
Mobility	Moves People & Goods	Sidewalks, bus lanes, bike lanes, travel lanes, turning lanes
Storage (less than 24-hour)	Provides storage for vehicles and equipment	Bus layover, private vehicle parking, reserved spaces (police, govt., etc), construction needs.

Ask questions and use sticky notes to tell us what you **like/don't like** about the draft concepts



Share additional ideas that you think are still missing

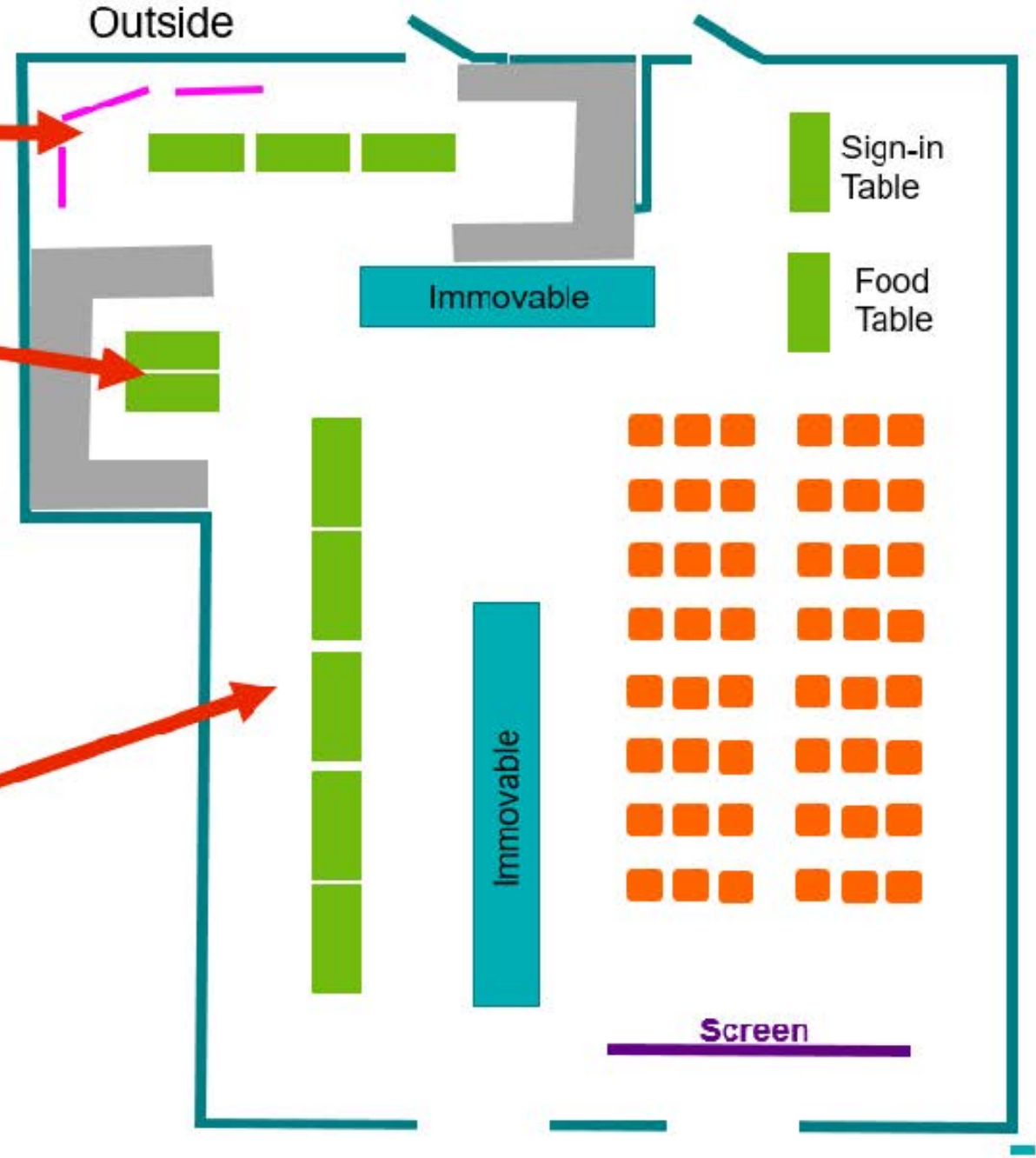
Outside

Carl Barron Area

Tubman Square Zone

Public Meeting #2 Layout

Corridor Concepts



THANK YOU!

riverstreet@cambridgema.gov