

# Union Street Corridor Study

Waterfront Commission Meeting #2  
August 23, 2012

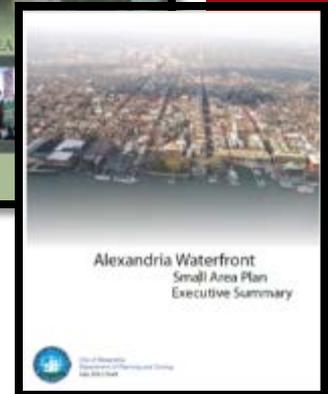
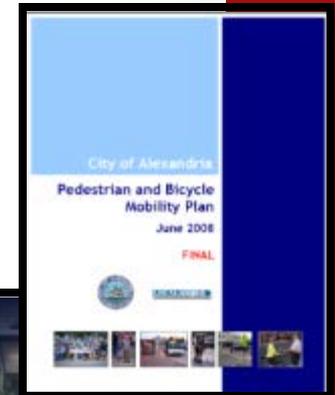


# Agenda

- Open House
- Project Overview
- Site-specific Improvements & Discussion
- Corridor Alternatives & Discussion
- Concept Idea Questionnaire
- Public Meeting & Next Steps

# Project Goals and Challenges

- Build upon previous studies
- Facilitate a vibrant waterfront
- Address parking and circulation issues
- Enhance safety for all modes
- Implement Complete Streets
- Balance needs:
  - Of all users
  - On different days and times of the week



# Ongoing work

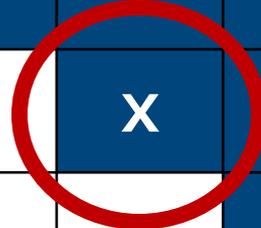
- Existing Transportation Conditions
  - Field Assessments
  - Traffic Counts (all modes!)
  - Parking
  - Overnight Parking
  - Delivery Truck Activity
  - Motorcoach Activity
  - Crash Data
- Public Engagement
  - Stakeholder Interviews
  - Waterfront Commission
  - Trail Intercept Surveys
- Alternatives and Recommendations





# Project Schedule

TASK	MAY	JUNE	JULY	AUG	SEPT	OCT
Fieldwork/Data Collection	█	█				
Analysis and Documentation		█	█	█		
Develop & Refine Recommendations			█	█	█	█
Waterfront Commission Meetings		X		X	X	
Public Meeting					█	
Final Report					█	█
Planning Commission Meeting						█
Transportation Commission Meeting						█
City Council Meeting						█



# What we've heard from you

- Eliminate on street parking right at King and Union in order to build curb extensions/bulb outs.
- Do bulb outs and curbs extensions by Windmill Park to slow down traffic.
- Utilize pilots to test different and possibly "outside of the box" solutions.
- Provide in person traffic management at King and Union.
- Recognize that the issue of bikes not stopping at stop signs is not the same at all intersections.



# Framework for Concept Development

- Need to define Union Street as a pedestrian and bicycle priority street
- Limited roadway width
- Serve all users
- Unique solutions for different areas
- Respect historic character of Union Street



# Site-specific Improvement

## Unit Block of King Street - Background

Waterfront Plan recommended:

- making the unit block of Unit Street a “pedestrian hub”.
- limiting motor access to only emergency vehicles, delivery vehicles, motor coaches and the King Street Trolley.
- creating more space for pedestrians to congregate.

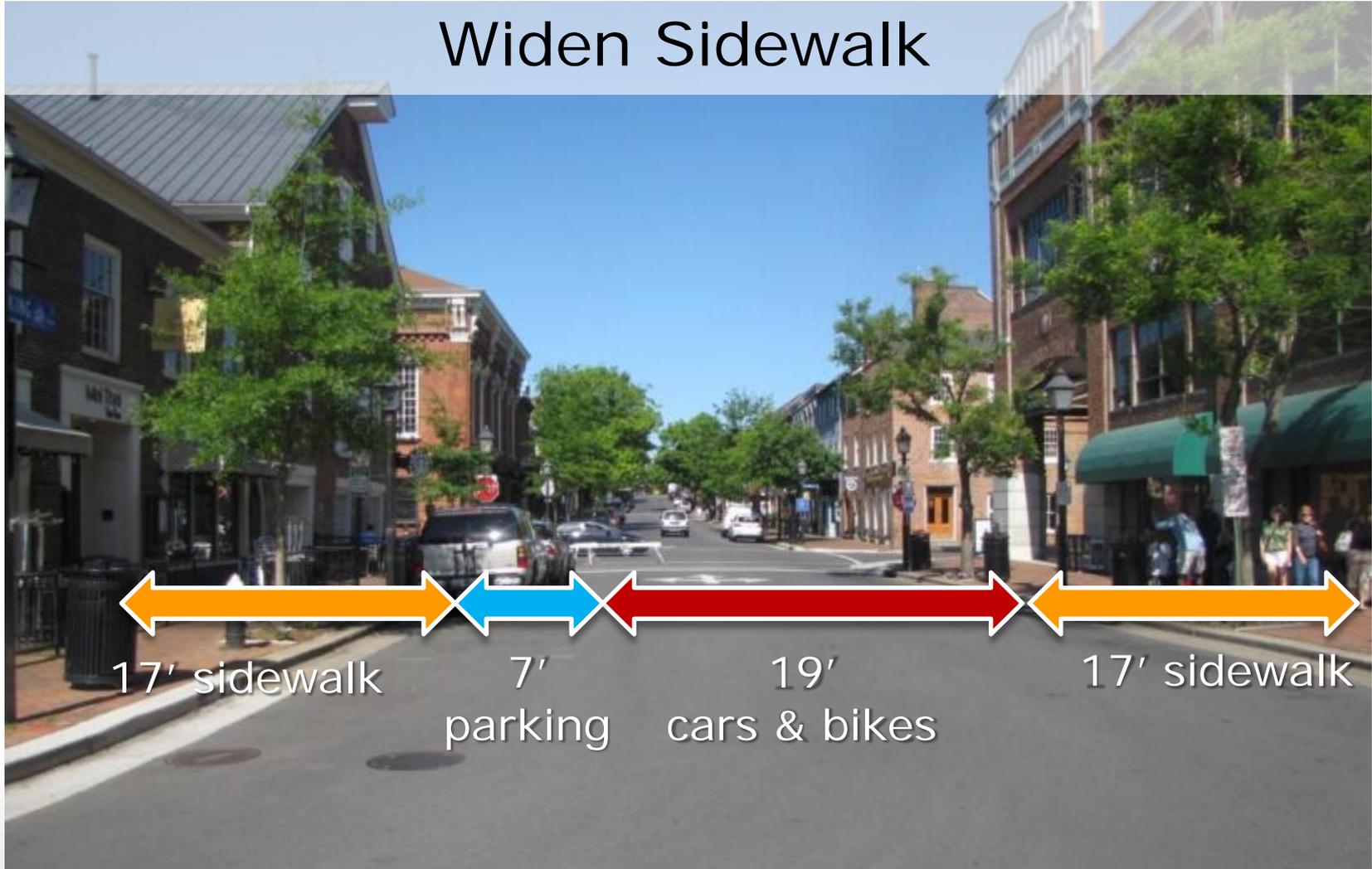
# Site-specific Improvement Unit Block of King Street

Existing Conditions



# Site-specific Improvement Unit Block of King Street

Widen Sidewalk



# Site-specific Improvement Unit Block of King Street

Additional design details:

- Enhance trolley stop
- Limit motor vehicle traffic
- Create plaza-like atmosphere

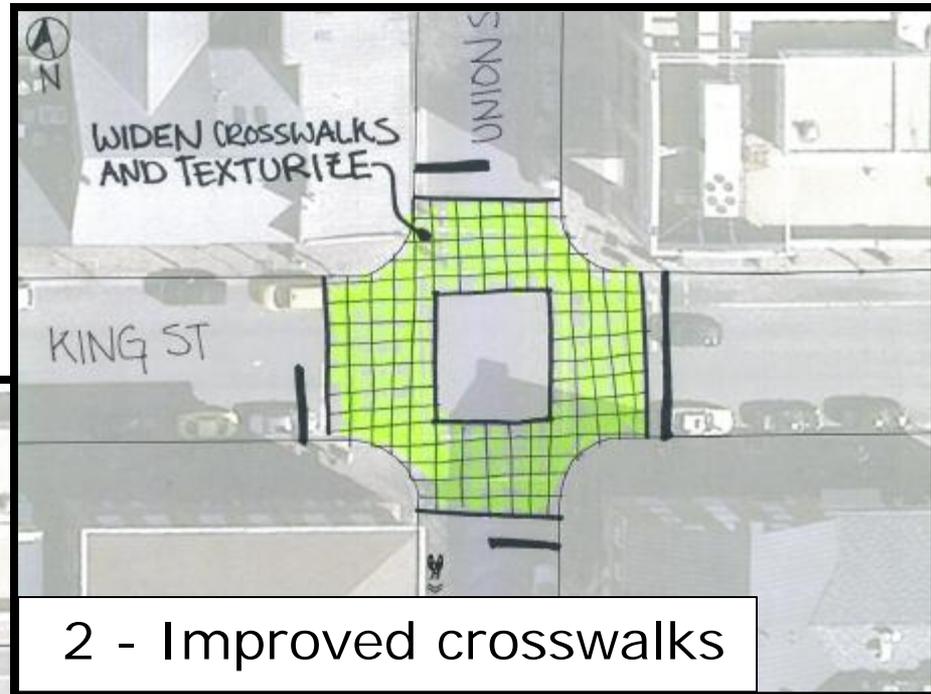
# Site-specific Improvement Union & King Street - Issues

- Pedestrian crowding on corners and sidewalk
- Pedestrians concerned with being hit by a motorist or bicycle
- Bicyclists compliance with stop sign
- Motorists wait time and frustration



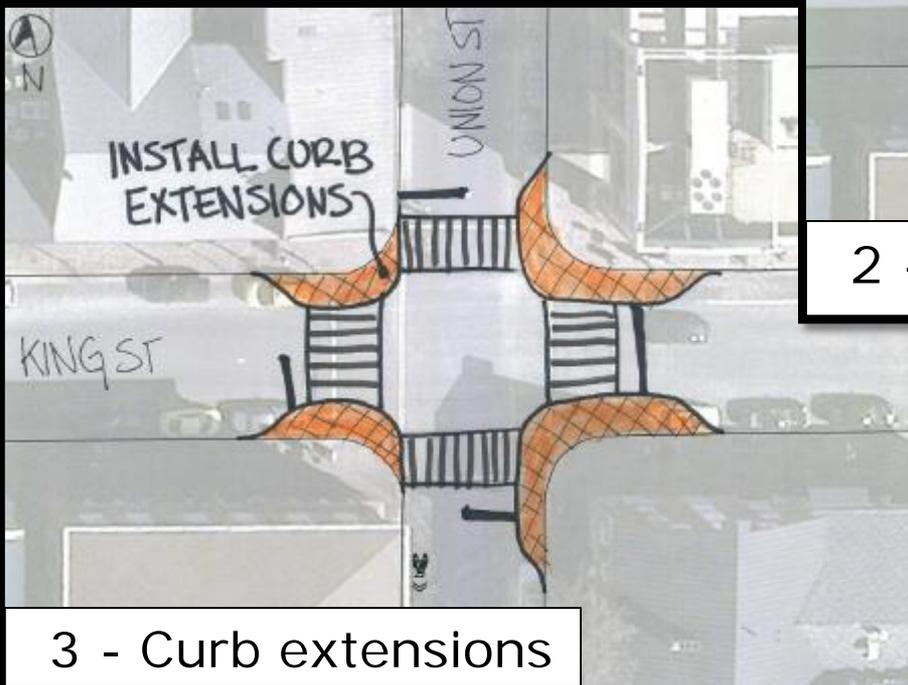
# Site-specific Improvement Union & King Street - Options

1 - Install Traffic Signal



2 - Improved crosswalks

(see boards and handouts for additional details)



3 - Curb extensions

# Site-specific Improvement Windmill Hill Park

- Higher speeds between Wolfe Street and Gibbon Street
- Bicycles entering and exiting via Wilkes Street trail
- Desire to connect both sides of Windmill Hill Park
- Build on work done in Windmill Hill Park Concept Plan (2003)



# Site-specific Improvement Windmill Hill Park – Option 1, 1A



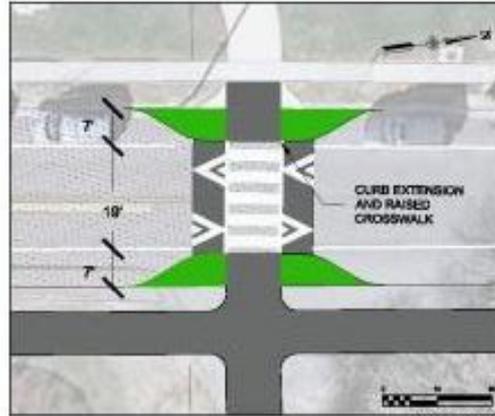
EXAMPLE RAISED CROSSWALK



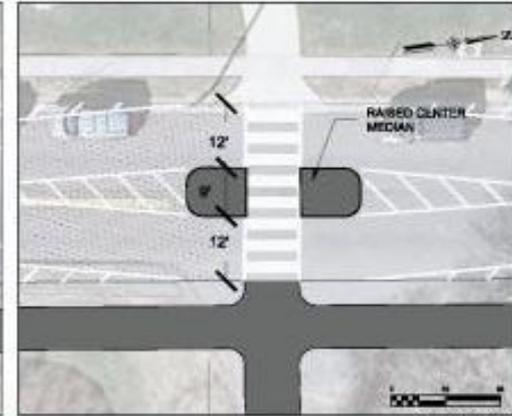
EXAMPLE RAISED CENTER MEDIAN



EXAMPLE RAISED INTERSECTION



OPTION #1



OPTION #1A



OPTION #1



444 GEORGE AVENUE, SUITE 200, SUENY SPRING, MD 20851  
PHONE: (301) 462-1000 FAX: (301) 462-0800  
www.tooledesign.com

**UNION STREET**  
CITY OF ALEXANDRIA



FILE NO. 15-001  
REV. 0  
REV. 0  
DESIGNED BY TS  
DRAWN BY RP  
CHECKED BY TS  
DATE: JULY 14, 2015

PROJECT NAME: GARDEN PLAN  
DRAWING NUMBER: C0.1  
SHEET NUMBER: 01 OF 03

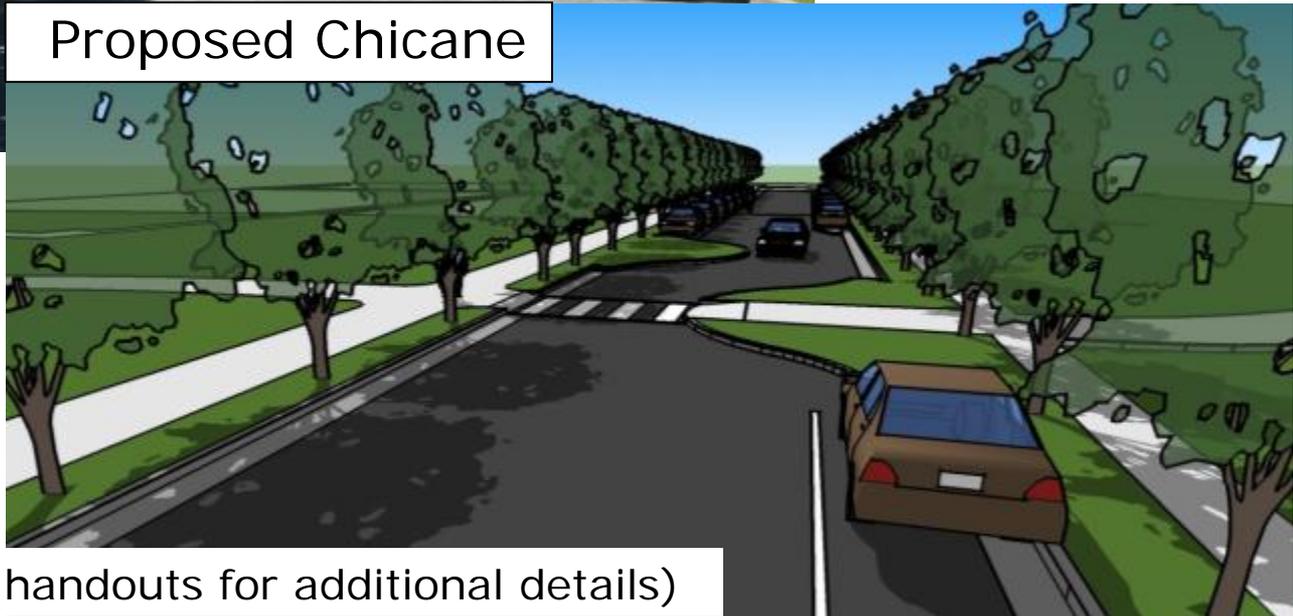
(see boards and handouts for additional details)

# Site-specific Improvement Windmill Hill Park– Option 2

Existing



Proposed Chicane



(see boards and handouts for additional details)

# Site-specific Improvement

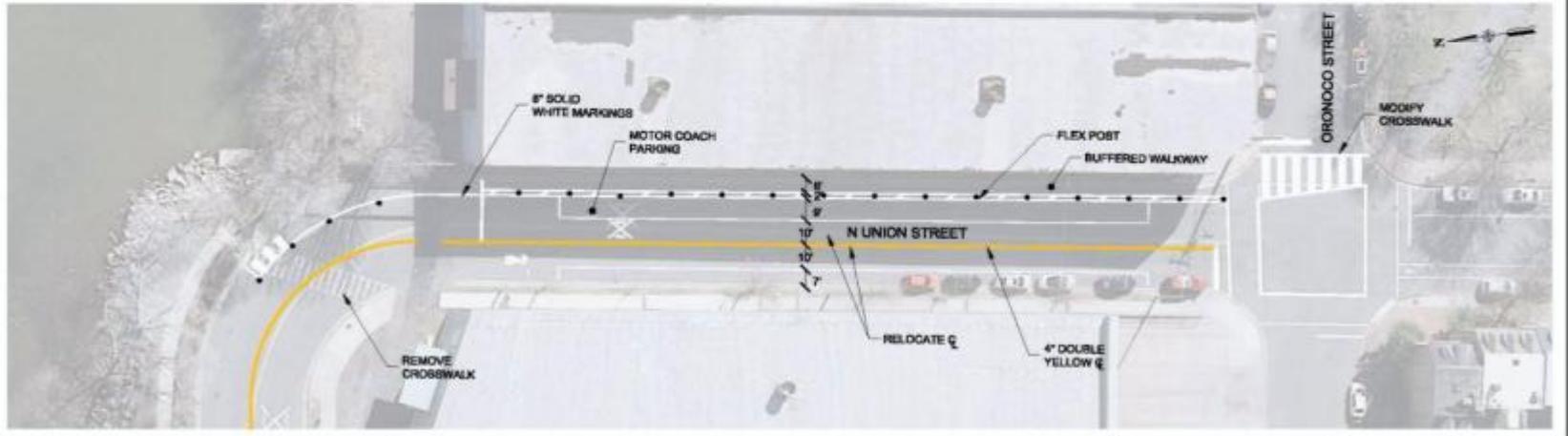
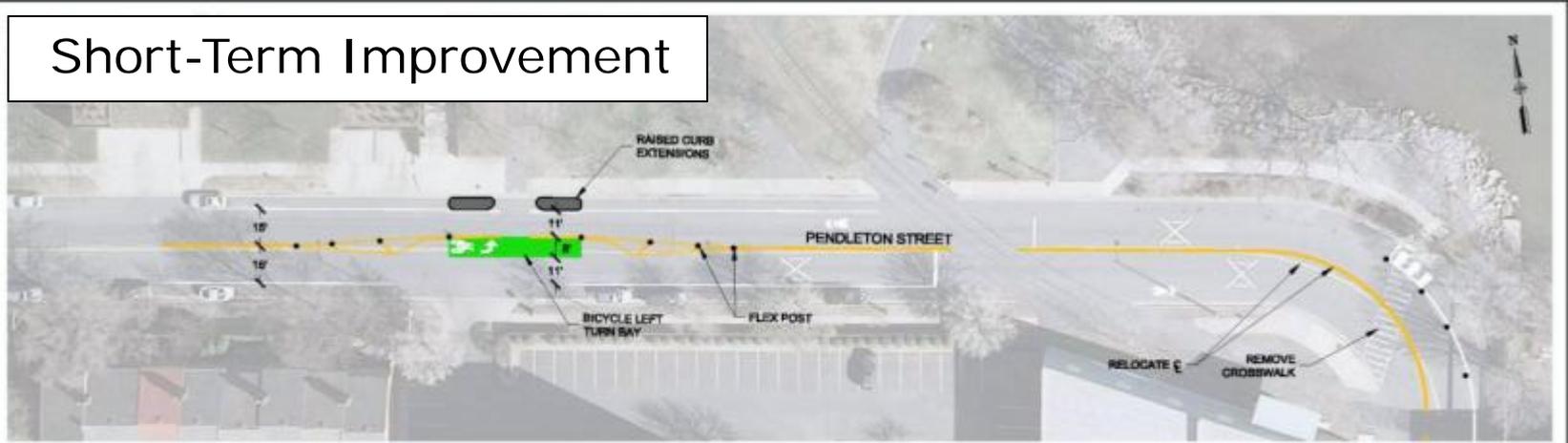
## Mt. Vernon Trail Connection - Issues

- Mt. Vernon Trail connection to Pendleton Street
- Pedestrian crossing where Union Street and Pendleton intersect
- Connection of Alexandria Waterfront Walk & park to park



# Site-specific Improvement Mt. Vernon Trail Connection - Options

## Short-Term Improvement



(see boards and handouts for additional details)

# Site-specific Improvement Mt. Vernon Trail Connection - Options



(see boards and handouts for additional details)

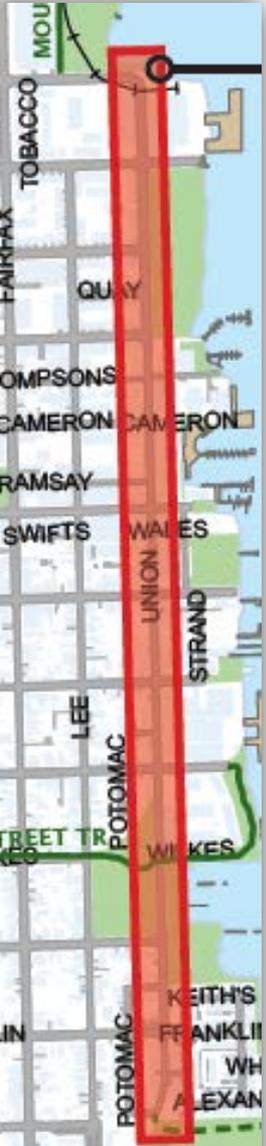
# Site-specific Improvement Mt. Vernon Trail Connection - Options

Long-Term Improvement



(see boards and handouts for additional details)

# Union Street Today Multi-Modal Volumes

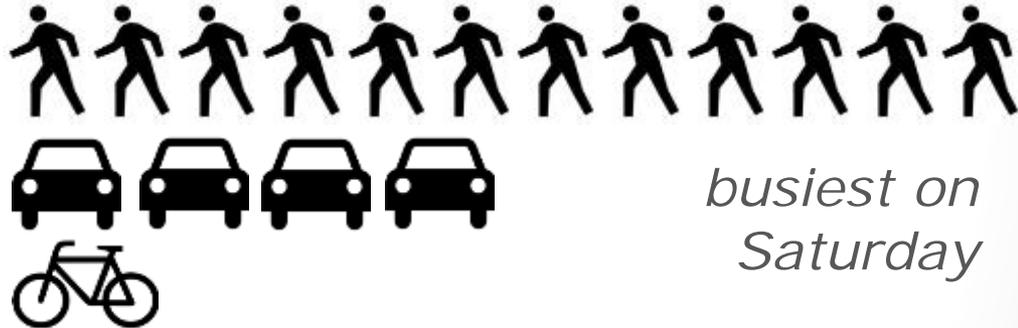


**PENDLETON**  
**to**  
**CAMERON**



*consistent  
throughout  
week*

**CAMERON**  
**to**  
**DUKE**



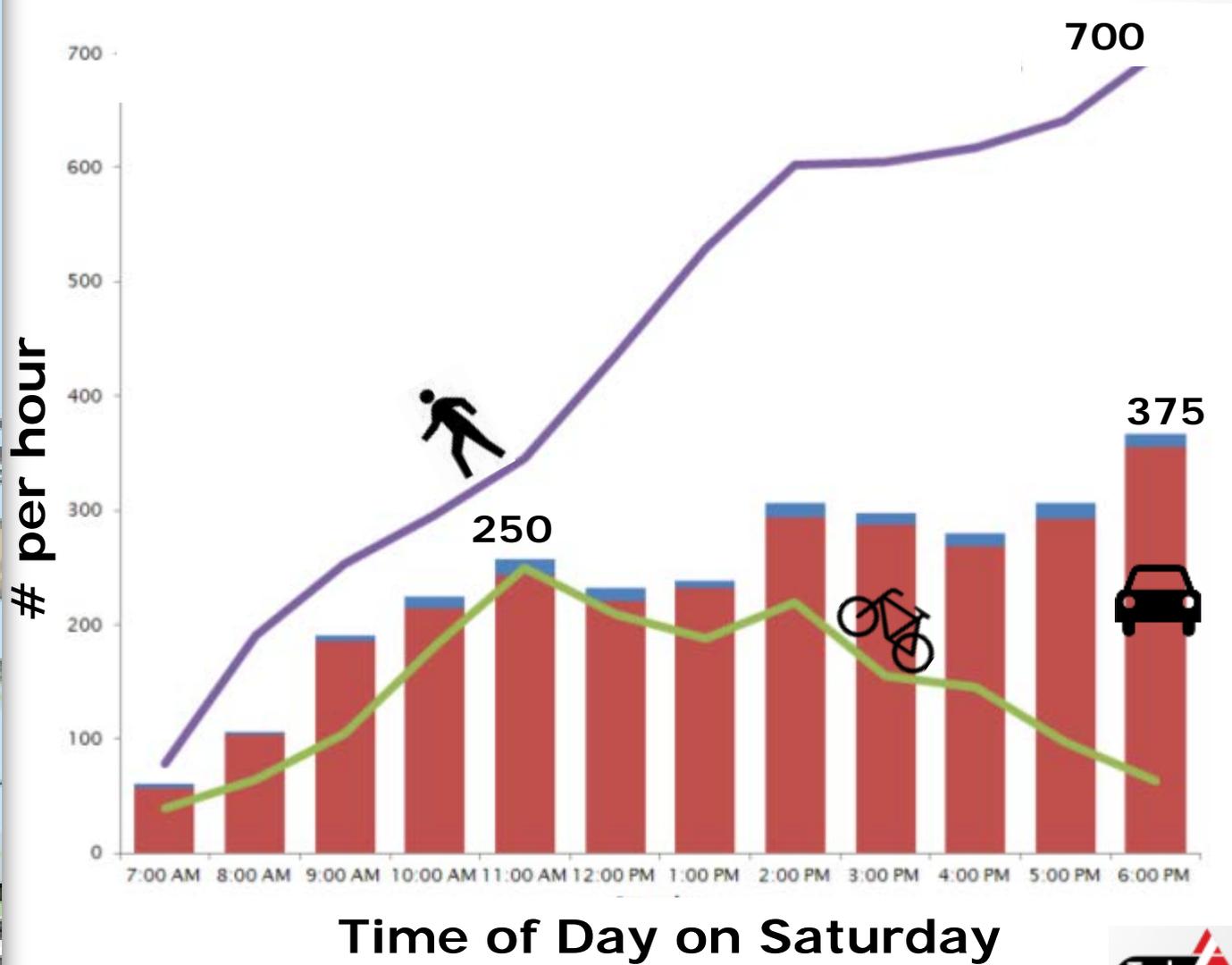
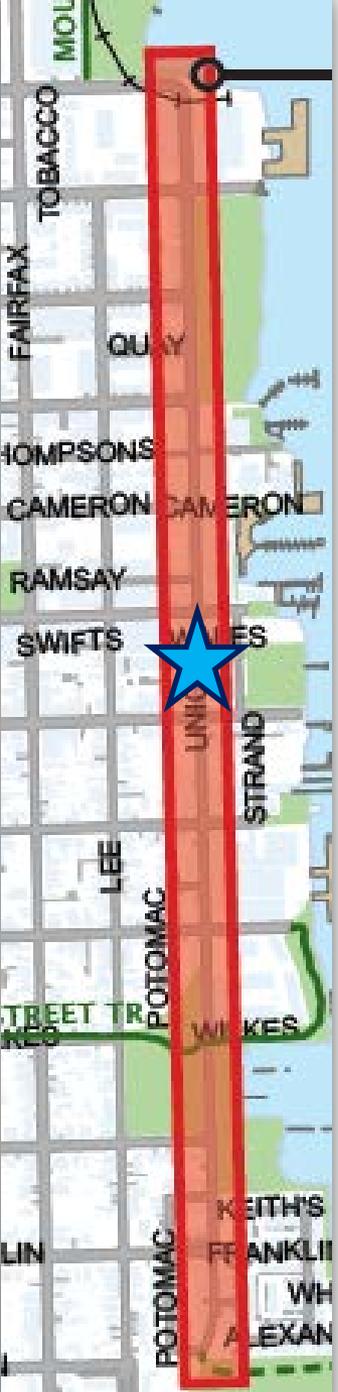
*busiest on  
Saturday*

**DUKE**  
**to**  
**FRANKLIN**



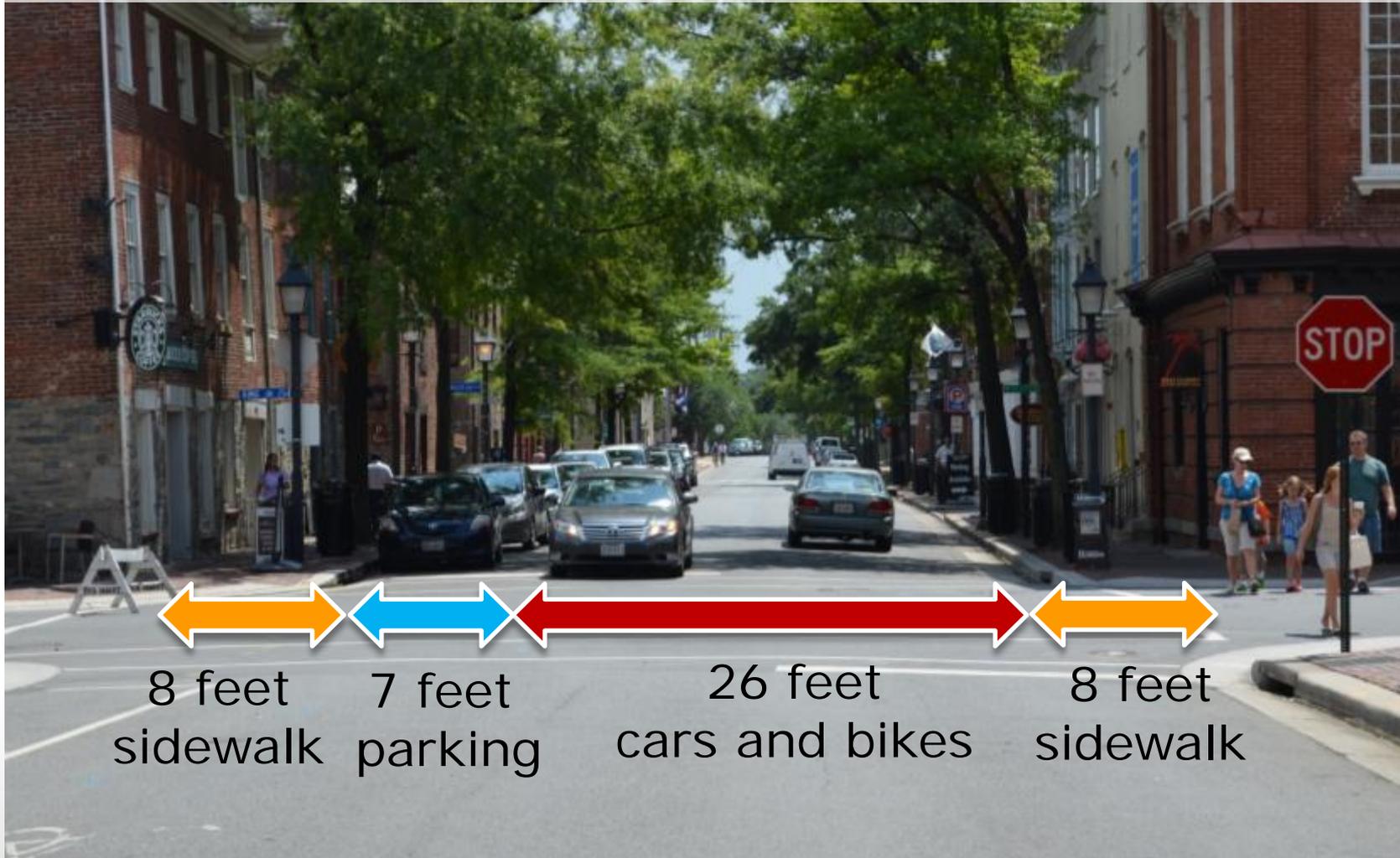
*consistent  
throughout  
week*

# Union Street Today Multi-Modal Volumes



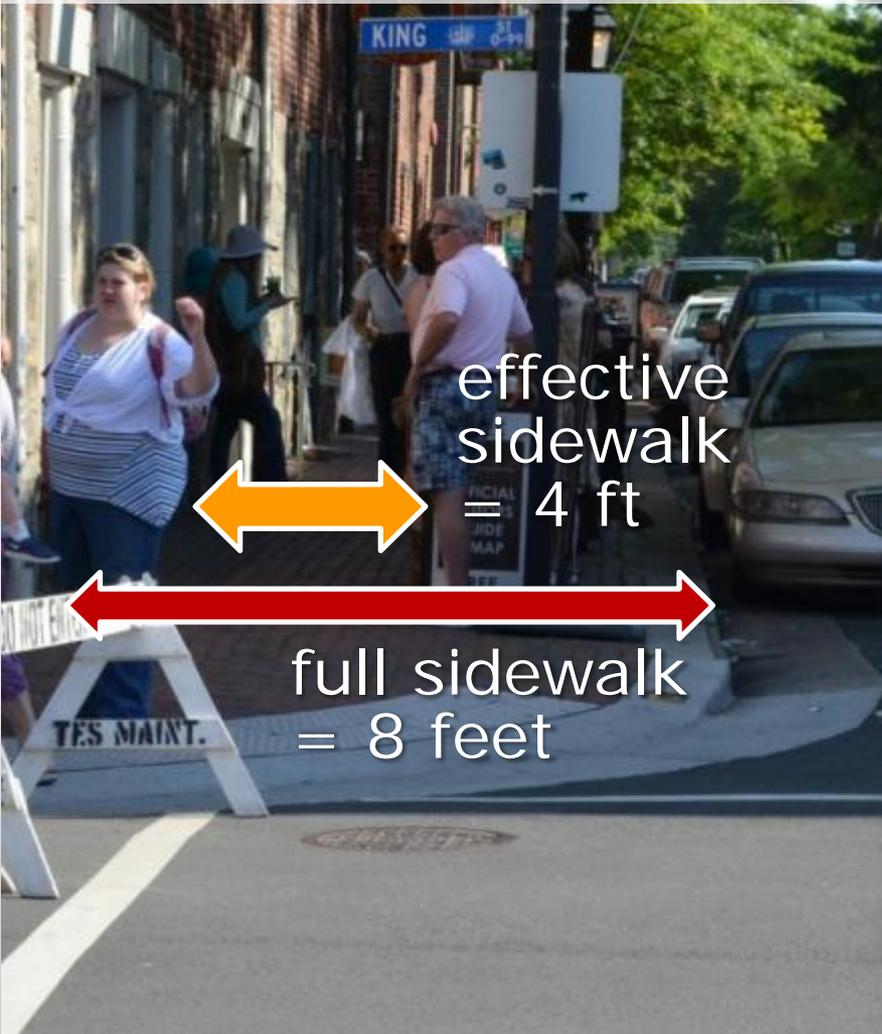
# Union Street Today

From building face to building face....

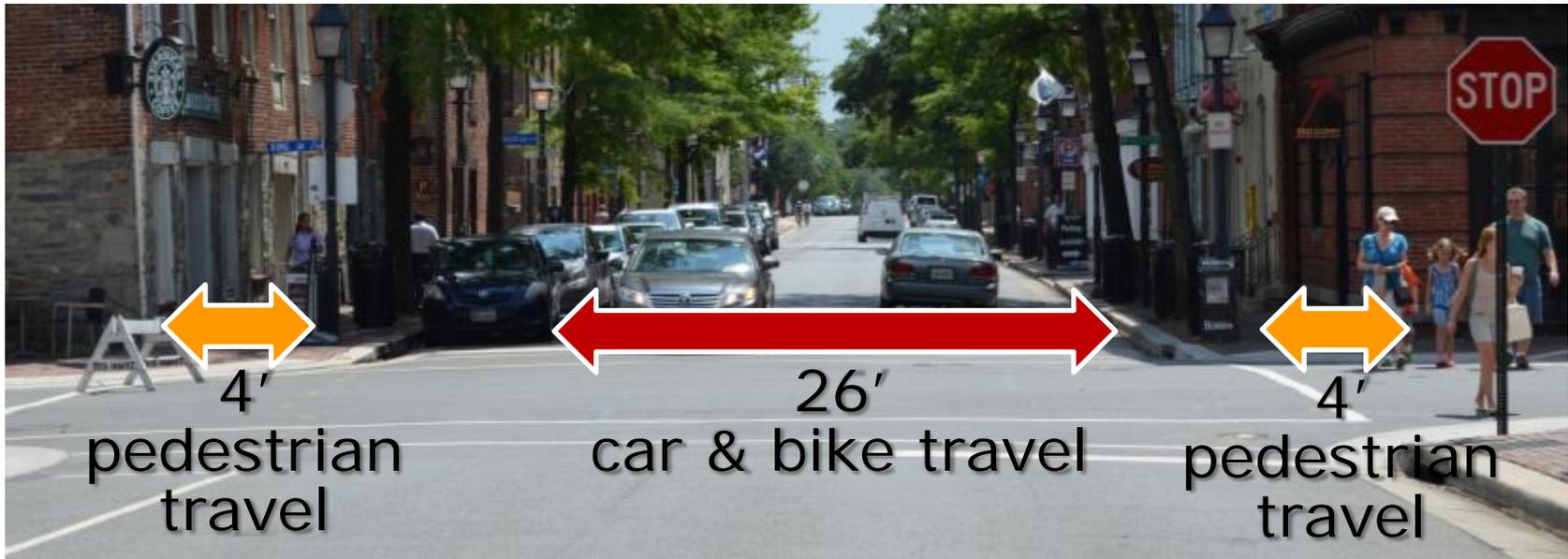


# Union Street Today

How much space do pedestrians have?



# How is Union Street distributed today?

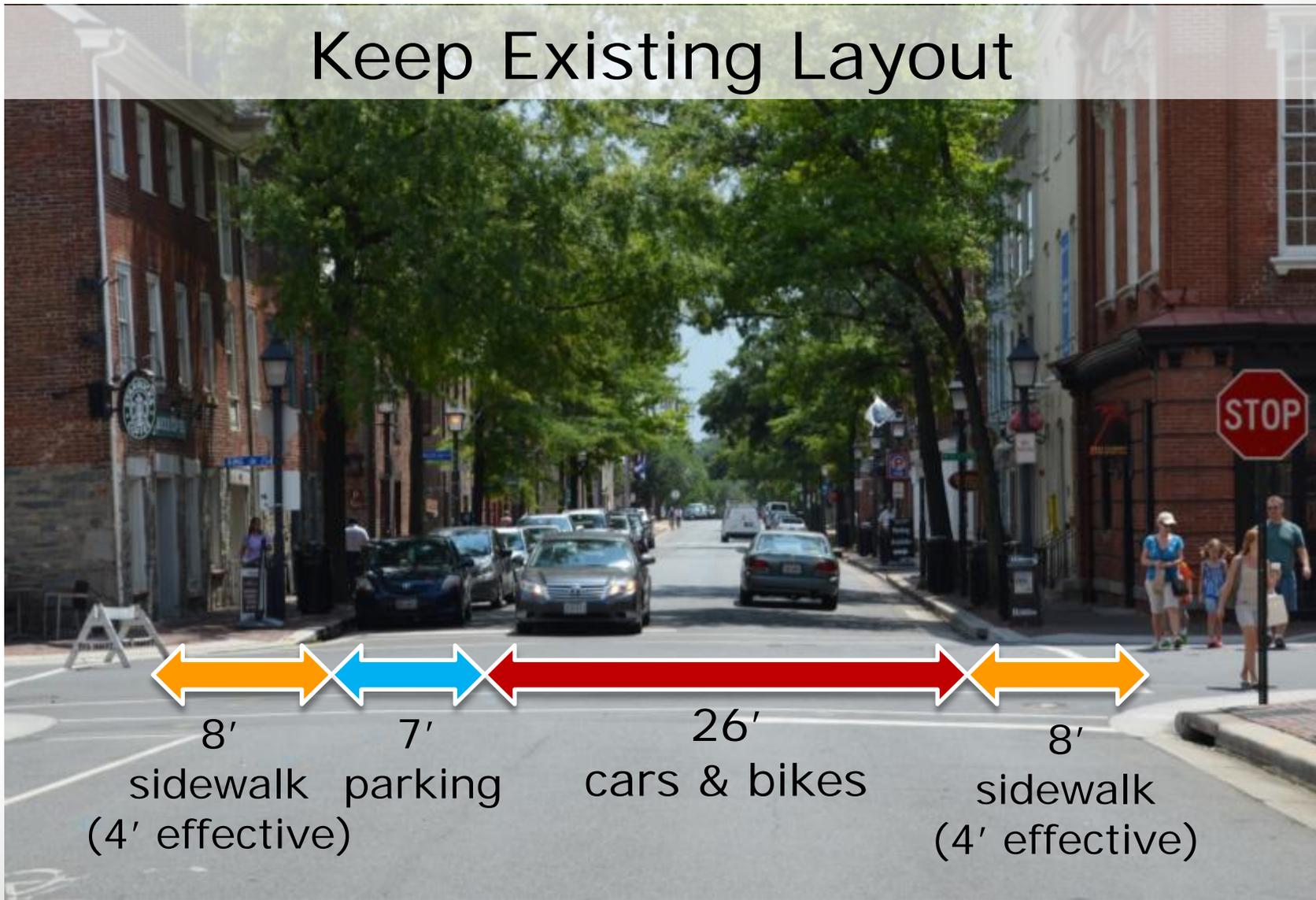


By volume...  
55% pedestrians  
45% cars and bikes

By space...  
25% for pedestrians  
75% for cars and bikes

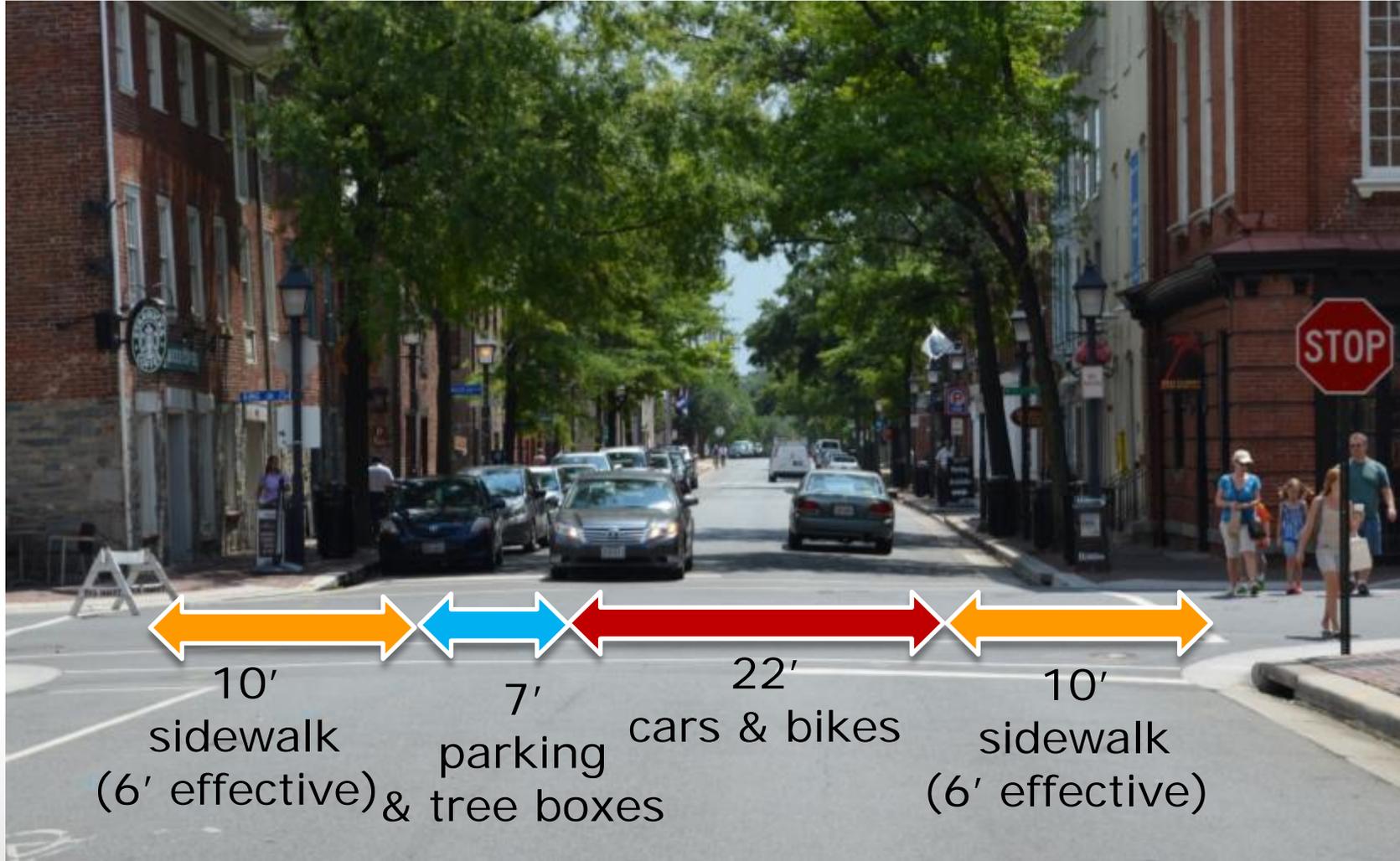
# Corridor Alternative #1

## Keep Existing Layout



# Corridor Alternative #2

## Narrow Lanes & Move Tree Boxes



# Corridor Alternative #2

## Narrow Lanes & Move Tree Boxes\*



\*Trees to be removed and replaced with new trees

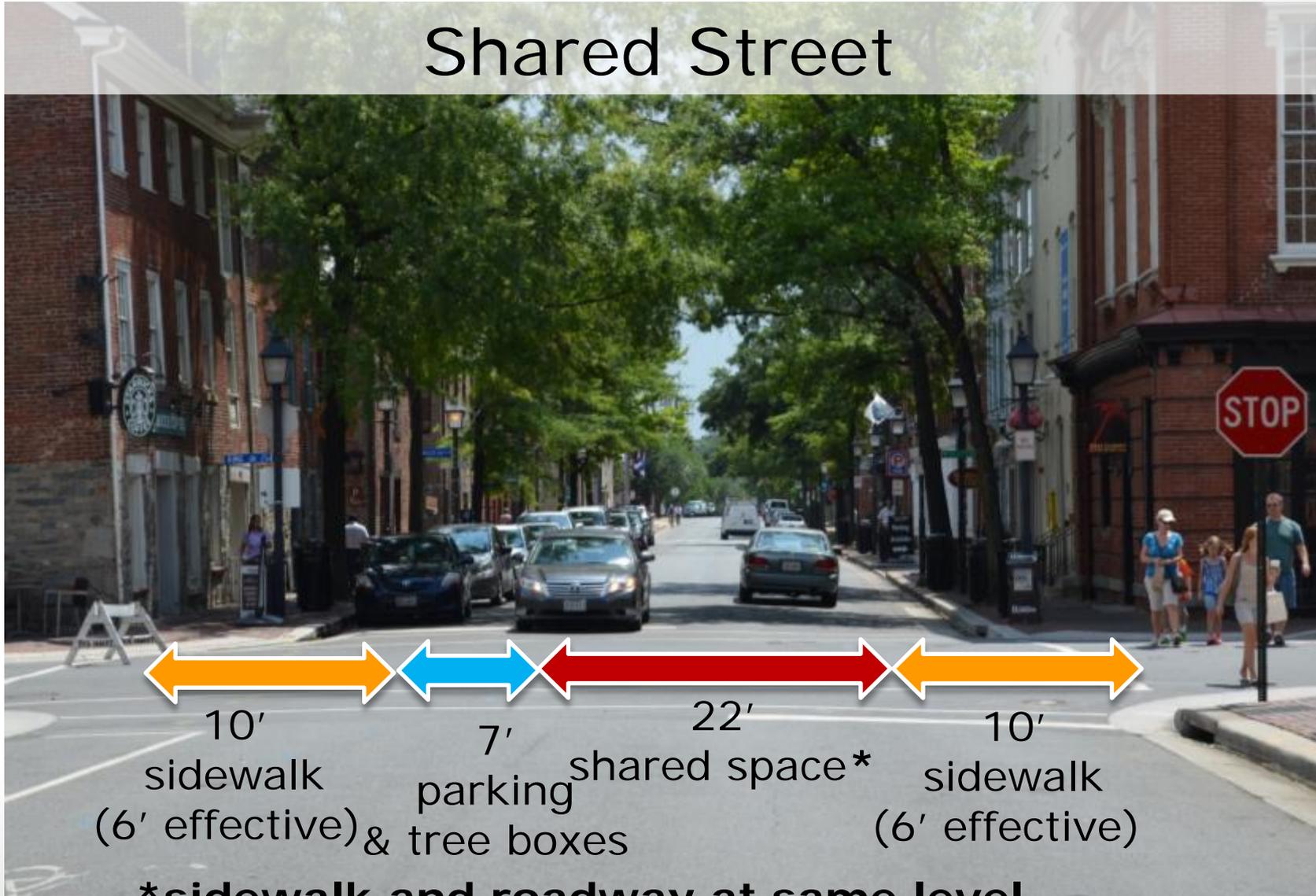
# Corridor Alternative #2



Narrow Lanes & Move Tree Boxes

# Corridor Alternative #3

## Shared Street



10' sidewalk (6' effective) & tree boxes

7' parking

22' shared space\*

10' sidewalk (6' effective)

**\*sidewalk and roadway at same level**

# Corridor Alternative #3

## Shared Street

### Example:

Ellsworth Street in  
Silver Spring, MD



# Corridor Alternative #3

## Shared Street Example

- Harvard Square in Cambridge, MA



- Historic area, narrow sidewalks & streets, high pedestrian volume

# Creating a balanced cross-section

## Shared Street Example:

- Vordingburg, Denmark 1990-92
- 4,000 veh/day

Union Street, ~4,100 veh/day



Before.



The project.



After.



# Corridor Alternative #3

## Benefits of a Shared Street

- Reduces travel speeds for cars & bicycles
- More efficient/balanced: functions differently with different user volumes
- More social activities & civic interaction
- Chaos improves safety

# Corridor Alternative #4

## Remove Parking



11.5' sidewalk  
(7.5' effective)

26'  
cars & bikes

11.5' sidewalk  
(7.5' effective)

# Corridor Alternative #4



OR



# Corridor Alternative #5

## Make Union Street One Way



13' sidewalk  
(9' effective)

7' parking

16' cars  
& bikes

13' sidewalk  
(9' effective)