

# Webpage Update



TEXAS DEPARTMENT OF TRANSPORTATION

[A - Z Site Index](#) | [Contact Us](#) | [Español](#)

Search TxDOT



[Driver](#) | [Government](#) | [Business](#) | [Inside TxDOT](#) | [Jobs](#)



## Safety

Information and educational resources for safe cycling.



## Places to Ride

Bike routes and trails in communities across Texas.



## Commuting

Information and links for commuting and recreational cycling in Texas.



## DriveTexas™

Get highway road condition information.



## Get Involved

Share your opinions at the next meeting.



Contact Us



Laws and Regulations



Sign Up for Updates



Maps & Routes

## FAQ

- › Traffic laws for cyclists?
- › Riding a bike on sidewalks
- › Pedestrians on roadway/bike lane
- › Parking a car in a bike lane
- › Placing containers or objects in bike lane
- › Who maintains bike lane, path, or sidewalk?
- › Riding on interstate highways in Texas
- › Using bike path adjacent to the roadway
- › Cyclists "taking the lane"
- › Bike lane or general travel lane

Edit

## Events

- › Conquer the Coast  
Sep. 19, 2015, Corpus Christi, TX
- › Mamma Jamma Ride Against Breast Cancer  
Sep. 26, 2015, Martindale, TX
- Bike MS: Valero Ride to the River  
Oct. 3 & 4, 2015, San Ant./New Braunfels

More

# Webpage Update

This screenshot shows the old website design. The header includes the Texas Department of Transportation logo and navigation links. The main content area features a large image of two cyclists on a trail. Below the image is a 'Connect with Us' section with social media icons and a 'Sign Up for Updates' button. The text content is organized into several sections: 'Bicycle Safety Tips', 'Equipment Check', 'Helmet Tips', 'Bicycling with Children', and 'Bicycle Safety Websites'. A sidebar on the left contains a search bar and a 'Page Options' dropdown menu.

This screenshot shows the new website design. The layout is more modern and user-friendly. The header is clean with the Texas Department of Transportation logo and navigation links. The main content area features a large image of two cyclists on a trail. Below the image is a 'Connect with Us' section with social media icons and a 'Sign Up for Updates' button. The text content is organized into several sections: 'Bicycle Safety Tips', 'Equipment Check', 'Helmet Tips', 'Bicycling with Children', and 'Bicycle Safety Websites'. A sidebar on the left contains a search bar and a 'Page Options' dropdown menu.



# IMPLEMENTING THE STRATEGIC DIRECTION REPORT

---

TxDOT Bicycle Advisory Committee

January 29, 2016

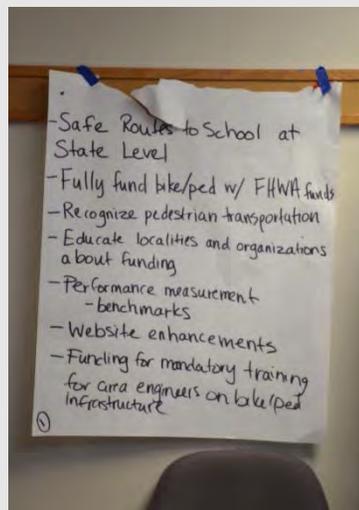
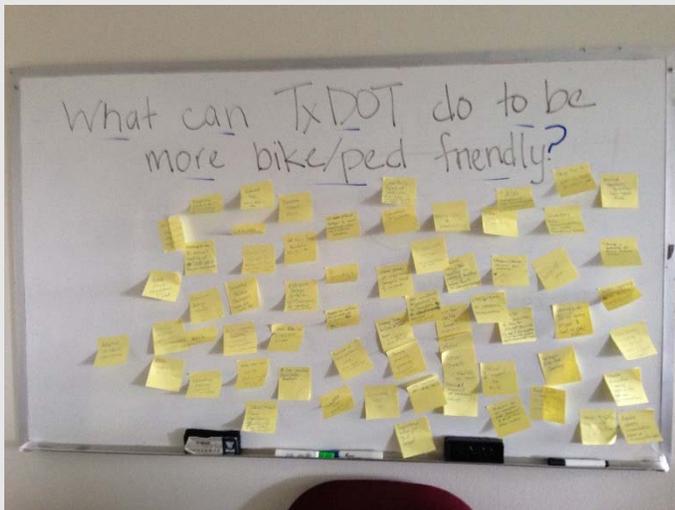
# Implementing the Strategic Direction Report

- On February 26, 2016, BAC Chairman Hibbs will give a presentation to the Texas Transportation Commission on the Strategic Direction Report



# Strategic Direction Report Development - 2015

2015									
January	February	March	April	May	June	July	August	September	October
Consultant hired		TxDOT staff workshop		BAC workshop		BAC follow-up			BAC endorses report
Consultant research and report content drafting									
						Priority area refinement w/ TxDOT		Draft Report to TxDOT	Draft Report to BAC



# Strategic Direction Report Focus Areas



**Expand the bikeway network**



**Build safer and better bicycle and pedestrian accommodations**



**Provide training for engineers, planners and construction staff**



**Educate the public on safe driving, bicycling and walking**



**Encourage people to walk and bicycle**



**Develop statewide management systems for bicycle and pedestrian information**



**Fund more bicycle and pedestrian projects**

# 2016 Workplan – Potential Action Items

- Work with MPOs, counties and cities to adopt consistent bikeway terminology and attributes
- Establish a statewide bikeway network
- Leverage connectivity to local and regional bikeway networks
- Identify needs and gaps in bikeway connectivity
- Prioritize future bikeway investment
- Identify safety concerns and safety hot spots
- Adopt design guidelines that support safe facilities
- Review how staff considers bicycle accommodations during all phases of project development
- Develop training materials for staff
- Publish Bicycle safety guide
- Publish Handlebar hanger
- Update information and materials on TxDOT website
- Develop Quarterly email newsletter and District Bicycle Coordinator contact list
- Support for educational programs (ex: Please Be Kind to Cyclists)
- Funding safety and education programs (ex: safe passing distance, cell phone ban)
- Develop materials for law enforcement education
- Support statewide Bike to Work Day
- Develop statewide interactive bicycle map
- Support for efforts that quantify health and economic impacts of walking and bicycling
- Fund Safe Routes to School projects: sidewalks and bikeway infrastructure
- TxDOT Employer-based Transportation Demand Management Program
- Develop annual safety briefing materials
- Develop guidelines for gathering pedestrian and bicycle data (counts, identification of bikeways, etc.)
- Purchase count equipment
- Develop statewide bikeway database
- Continued bike/pedestrian funding through the Transportation Alternatives Program (TAP)/Surface Transportation Program (STP) Set-aside
- Seek additional funding for bicycle accommodations (ex: Highway Safety Improvement Program)
- Support bicycle program pilot programs

# 2016 Committee Work Efforts

- Work with MPOs, counties and cities to adopt consistent bikeway terminology and attributes
- Establish a statewide bikeway network
- Leverage connectivity to local and regional bikeway networks
- Identify needs and gaps in bikeway connectivity
- Prioritize future bikeway investment
- Identify safety concerns and safety hot spots 
- Adopt design guidelines that support safe facilities 
- Review best practices for TxDOT Complete Streets policy 
- Review how staff considers bicycle accommodations during all phases of project development
- Develop training materials for staff
- Publish Bicycle safety guide
- Publish Handlebar hanger
- Update information and materials on TxDOT website
- Develop Quarterly email newsletter and District Bicycle Coordinator contact list
- Support for educational programs
- Fund safety and education programs (ex: safe passing distance, cell phone ban)
- Develop materials for law enforcement education
- Support statewide Bike to Work Day
- Develop statewide interactive bicycle map 
- Support for efforts that quantify health and economic impacts of walking and bicycling
- Fund Safe Routes to School projects: sidewalks and bikeway infrastructure
- TxDOT Employer-based Transportation Demand Management Program
- Develop annual safety briefing materials
- Develop guidelines for gathering pedestrian and bicycle data (counts, identification of bikeways, etc.)
- Purchase count equipment
- Develop statewide bikeway database
- Continued bike/pedestrian funding through the Transportation Alternatives Program (TAP)/ Surface Transportation Program (STP) Set-aside
- Seek additional funding for bicycle accommodations (ex: Highway Safety Improvement Program)
- Support bicycle program pilot programs 

## Process for Implementing BikeStripe

- Refine & reach consensus on BikeStripe pilot program purpose
- Identify selection criteria

# Process for Implementing BikeStripe

- What are the target locations?
- How do we solicit interest in the program?
- How do we choose locations and local entities for pilot projects

**Population of X - X**

**Bicycle Advisory Committee  
Advocacy Organizations  
TxDOT District Bicycle  
Coordinators**

**Criteria for selection:  
Need  
Mode share  
Connectivity  
Maintenance responsibility  
Technical resources**



# PLANNING FOR PEDESTRIANS + CYCLISTS ALONG THE TEXAS GULF COAST



Jeff Taebel, FAICP

Director of Community + Environmental Planning

- Existing/Potential Active Transportation Network
- National/State Bikeways (Existing/Proposed)
- Regional Bikeways (Conceptual)
- Basin Greenways
- Major Federal/State Parkland

**TxDOT Bicycle Advisory Committee**

January 29, 2015

# Houston—Galveston Area Council



13 Counties  
134 Cities  
6+ Million Residents



## Making Connections

Facility type will vary according to:

- Local preferences
- Site conditions
- Budgetary constraints

Bike Lane



Shared-Use Path



Signed Shoulder Route



Signed Shared Roadway



# Special Districts



# Special Districts



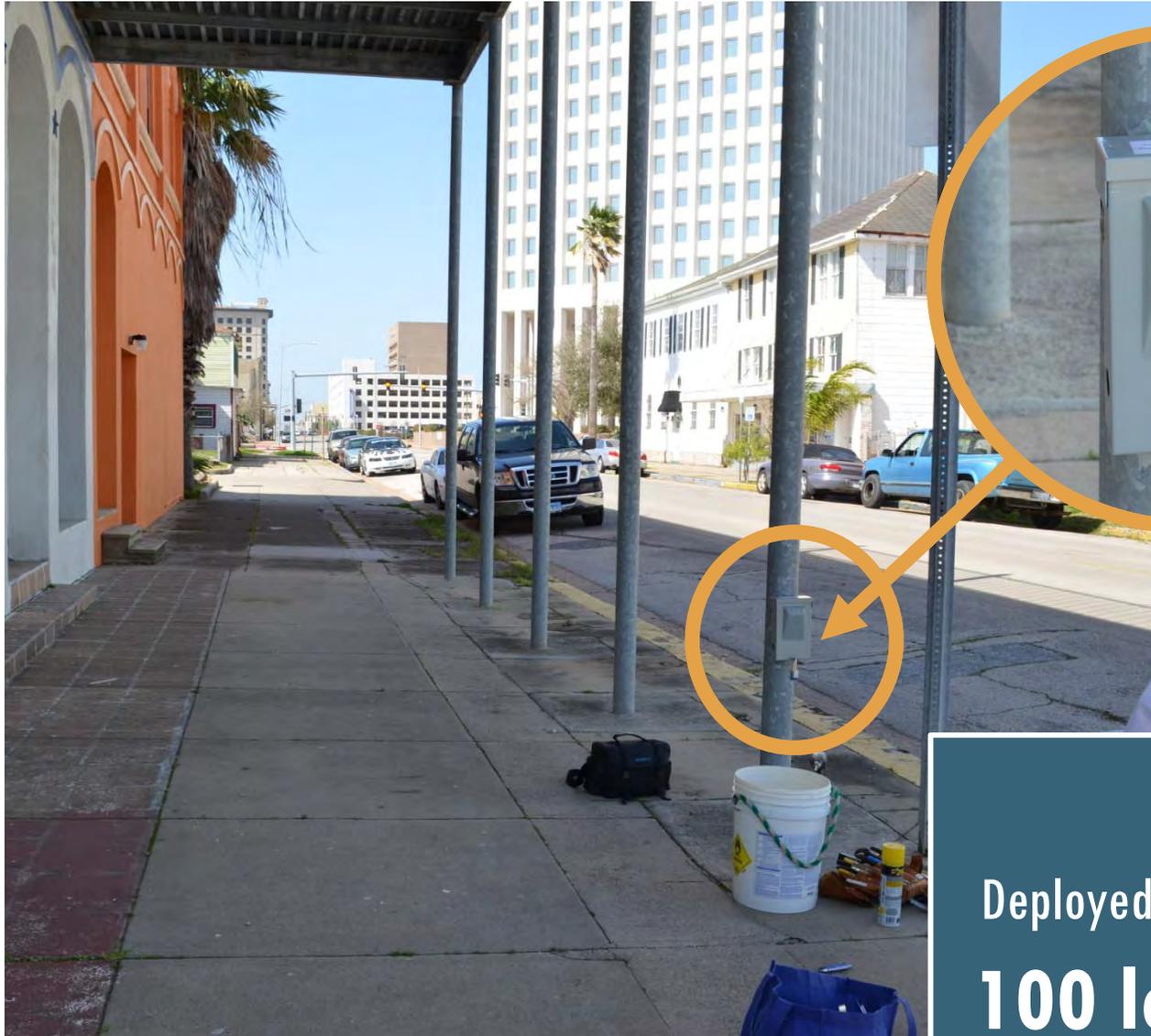
## Sidewalks on Airline Drive

Airline Improvement District:  
Harris County

High  
Pedestrian Activity,  
No Pedestrian  
Accommodations



# Collecting Data



Temporary Counters

Deployed at more than  
**100 locations**  
in partnership with TTI

# Collecting Data

## MKT Trail @ 7<sup>th</sup> Street/Moy St. (White Oak Bayou Crossing)

City of Houston  
September 2015

396 users/day



## FM 518 Shared-Use Path @ SH 146

City of Kemah  
November 2015

80 users/day



## Westheimer Road Eastbound (Urban Road 1093) West of McCue Road

City of Houston  
December 2015

1,091 users/day

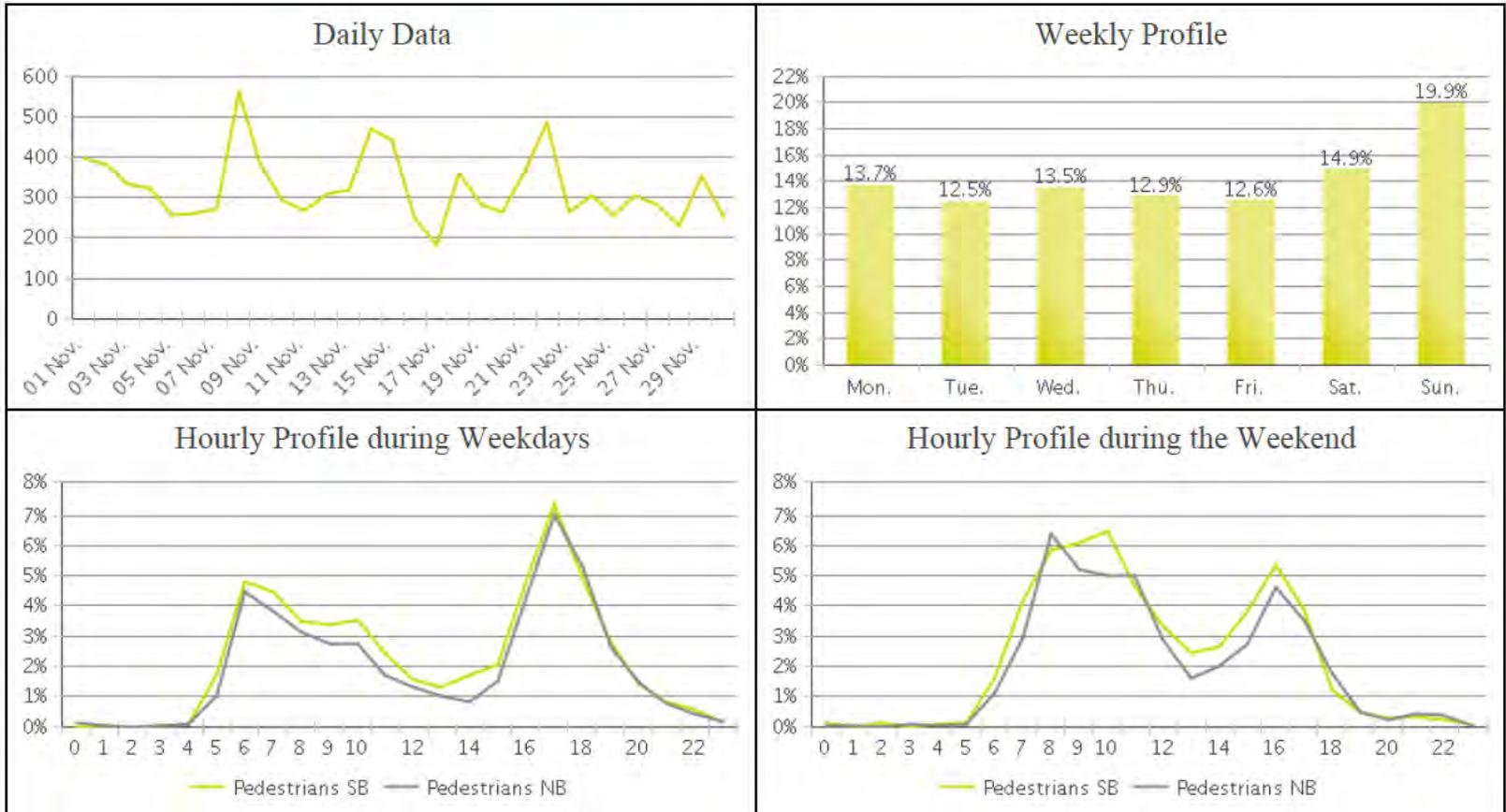


# Collecting Data



## White Oak Trail at 5th St (Pedestrians)

Period Analyzed: Sunday November 01, 2015 to Monday November 30, 2015

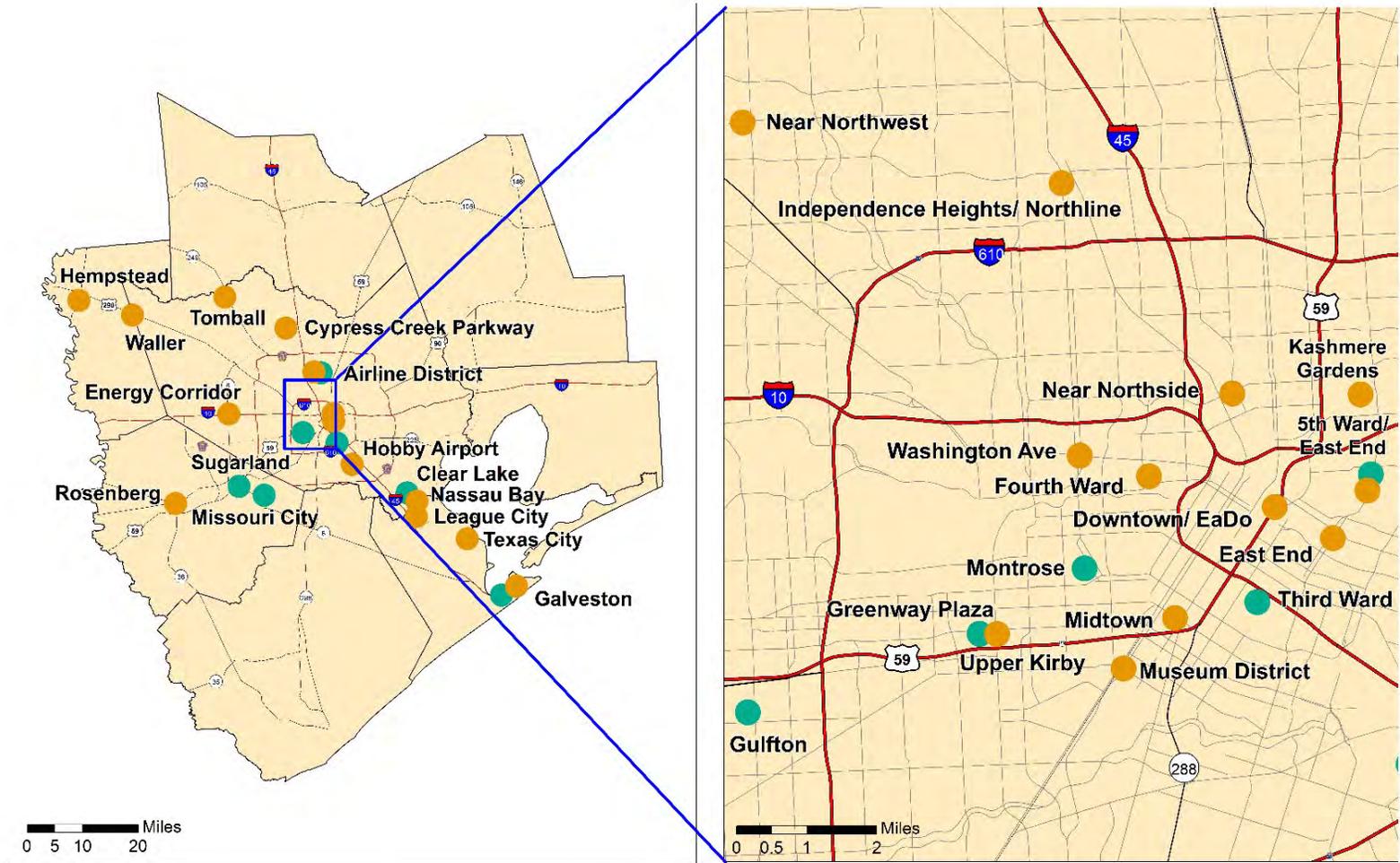


**Monthly Usage**  
November 2015

**9,698 Pedestrians**  
(323 Per Day)

**12,880 Bicyclists**  
(429 Per Day)

# Livable Centers + Ped/Bike Districts



- Livable Centers Studies
- Special Districts Studies

## LIVABLE CENTERS AND SPECIAL DISTRICTS STUDIES



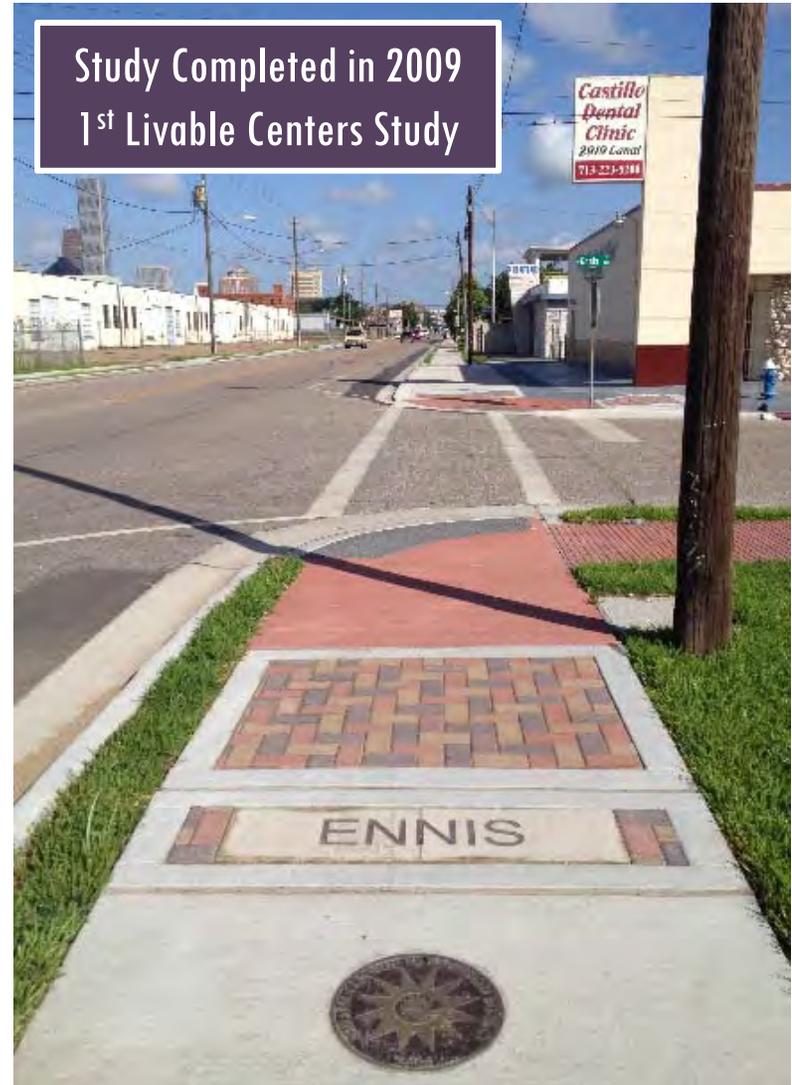
## Houston's East End



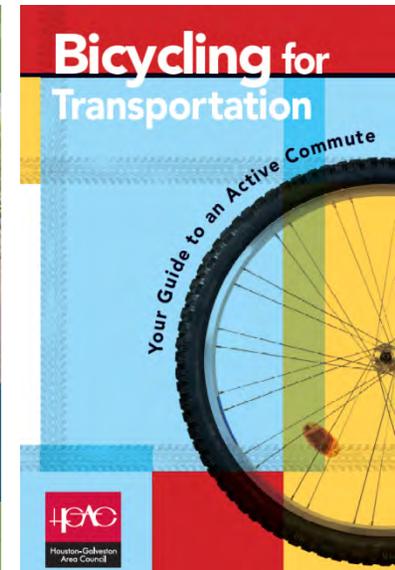
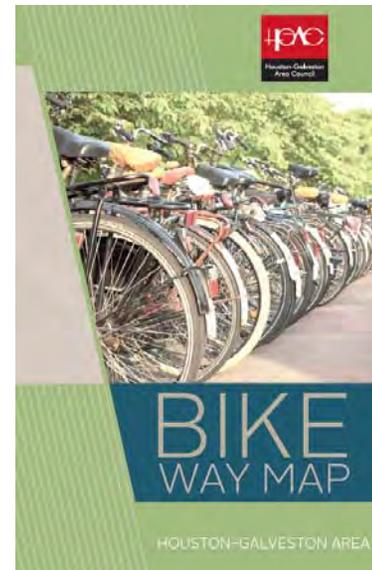
### Value of Public Projects Built or Underway

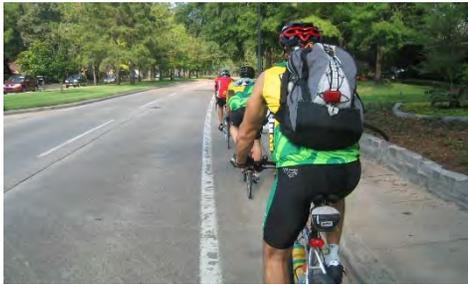
Completed Projects	\$27,019,993
Planned/Programmed	\$2,225,535

Study Completed in 2009  
1<sup>st</sup> Livable Centers Study



# Technical Assistance





# **JEFF TAEBEL, FAICP**

**Director of Community & Environmental Planning**



**Houston-Galveston Area Council**

**[jtaebel@h-gac.com](mailto:jtaebel@h-gac.com)**

**[www.h-gac.com/go/pedbike](http://www.h-gac.com/go/pedbike)**

**[www.h-gac.com/livablecenters](http://www.h-gac.com/livablecenters)**

# Houston's Bikeway Program

- Historical Overview
- Houston Bike Plan
- Current Projects & Implementation

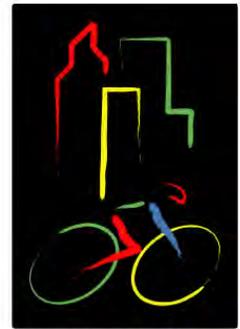
Anita Hollmann  
Ped-Bike Coordinator,  
City of Houston

**HOUSTON**  
**BIKEPLAN**



# Historical Overview

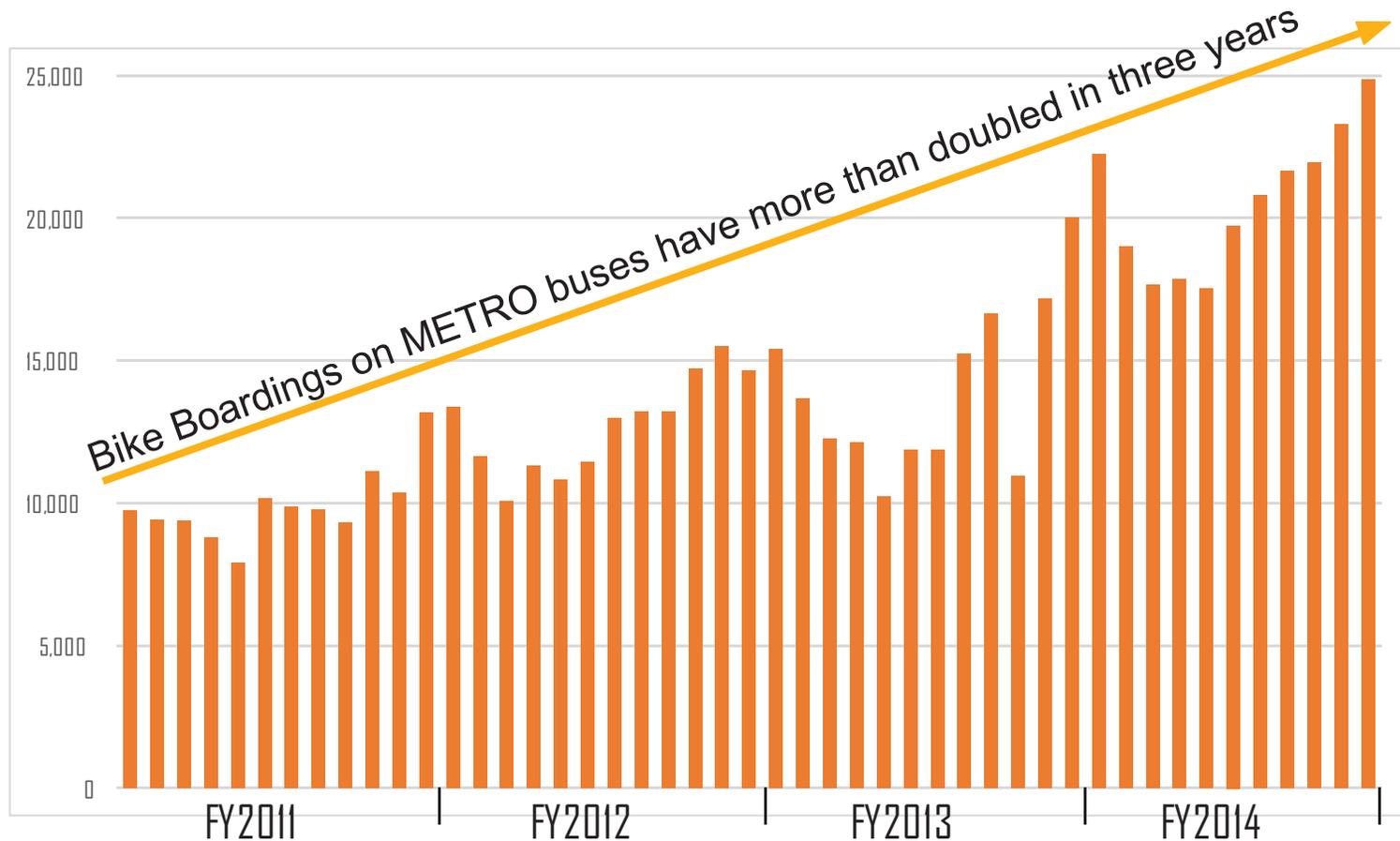
- Established in September of 1992
  - 1993 Houston Bike Plan
  - Roadway Congestion/Air Quality
  
- Bikeway Coordination Established
  - On-street Bicycle Facilities = PWE
  - Off-street Bicycle Facilities = HPARD
  
- Implementation: 300 centerline miles



Houston **Bikeway** Program

# Better Serve Growing Ridership

Significant increase in cycling activity and interest



Source: Houston METRO Bicycle Boarding Data

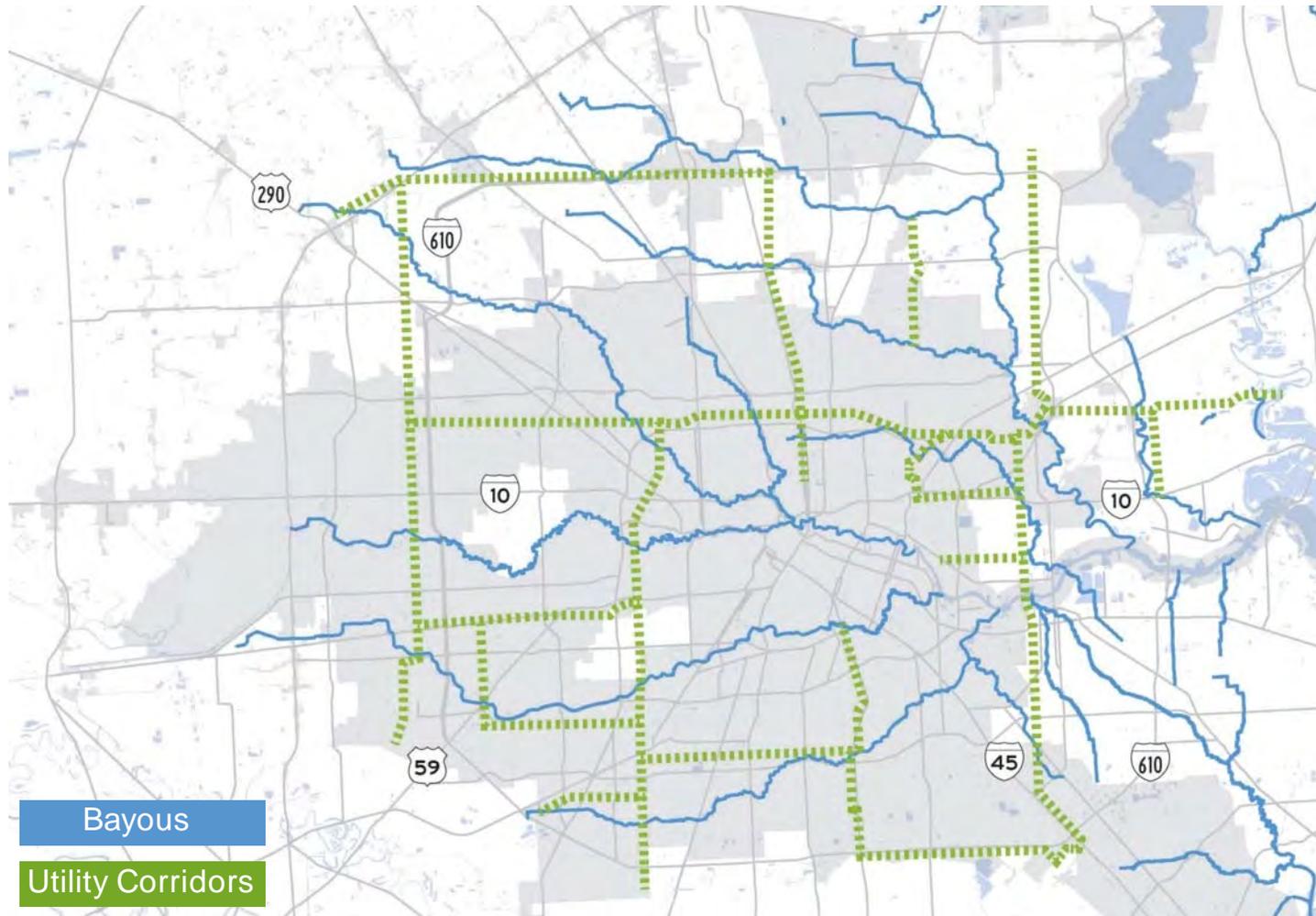
# Better Serve Growing Popularity



Houston B-Cycle Facebook

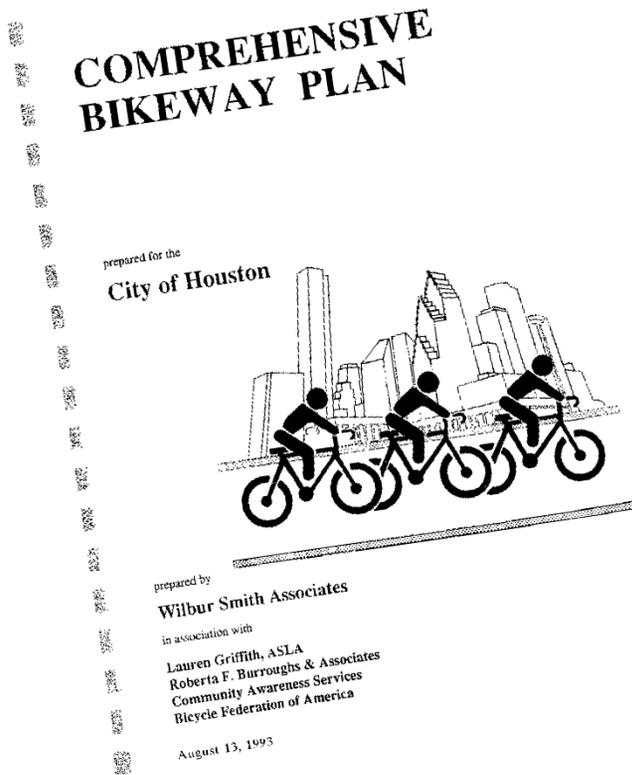
# Houston is building the foundation to become a great bicycling city...

Major investment in off-road trails form a great backbone



# Why do we need a new bike plan?

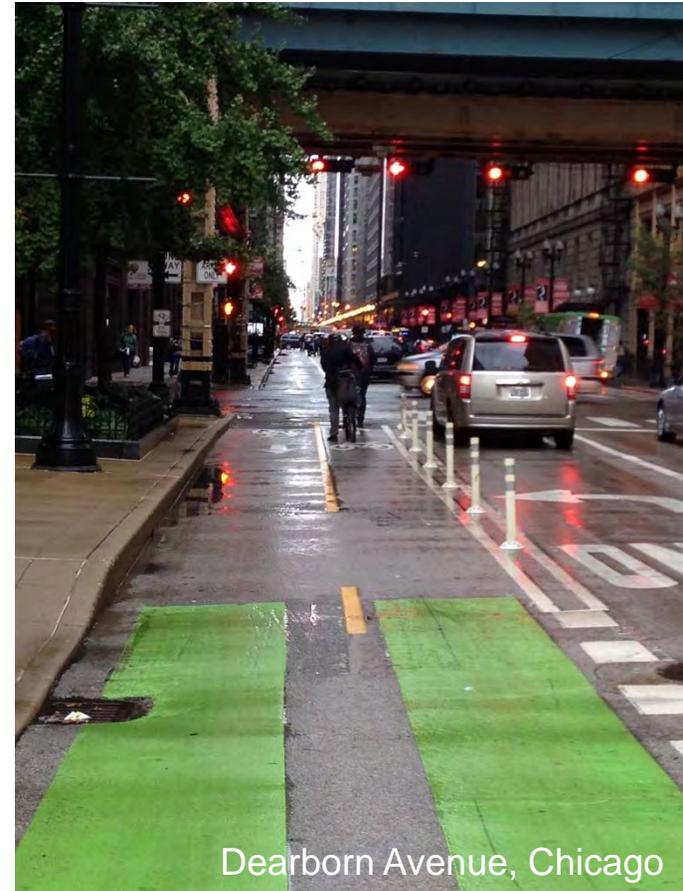
- 20 years since plan update
- Limited Resources
- Economic Benefits
- Health Benefits



# A Case for Action

The Houston Bike Plan is a **transformative opportunity** to...

1. Provide a safer, more comfortable environment for the growing number of people riding bicycles in Houston
2. Provide affordable access to opportunities
3. Improve community health and wellness
4. Compete with peer cities who are setting the bar
5. Benefit everyone, not just people who bike



# Houston Bike Plan: Developed Through Partnership...

## Lead Agency



## Multiple Departments

- Planning & Development
- Public Works & Engineering
- Parks & Recreation

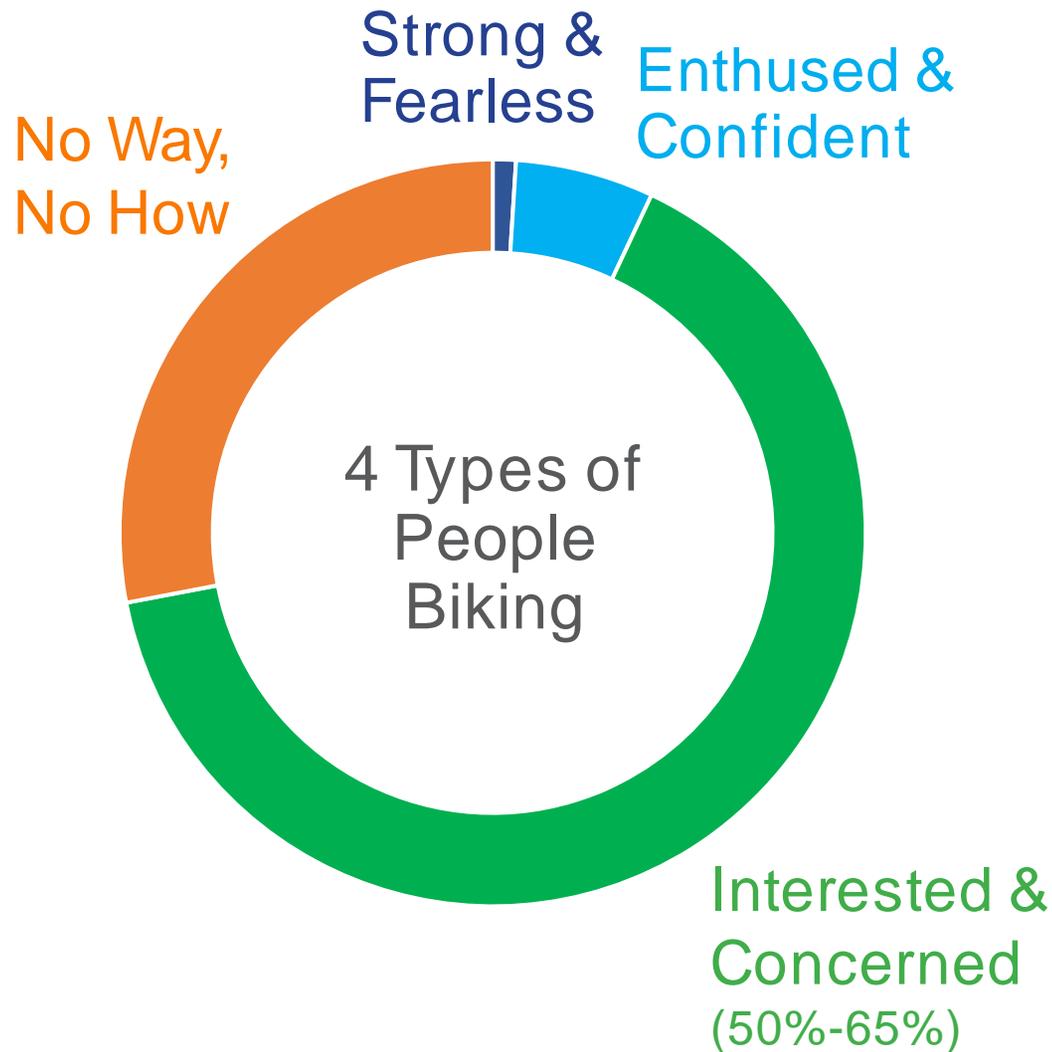
## Funding Partners



**BIKEHOUSTON**



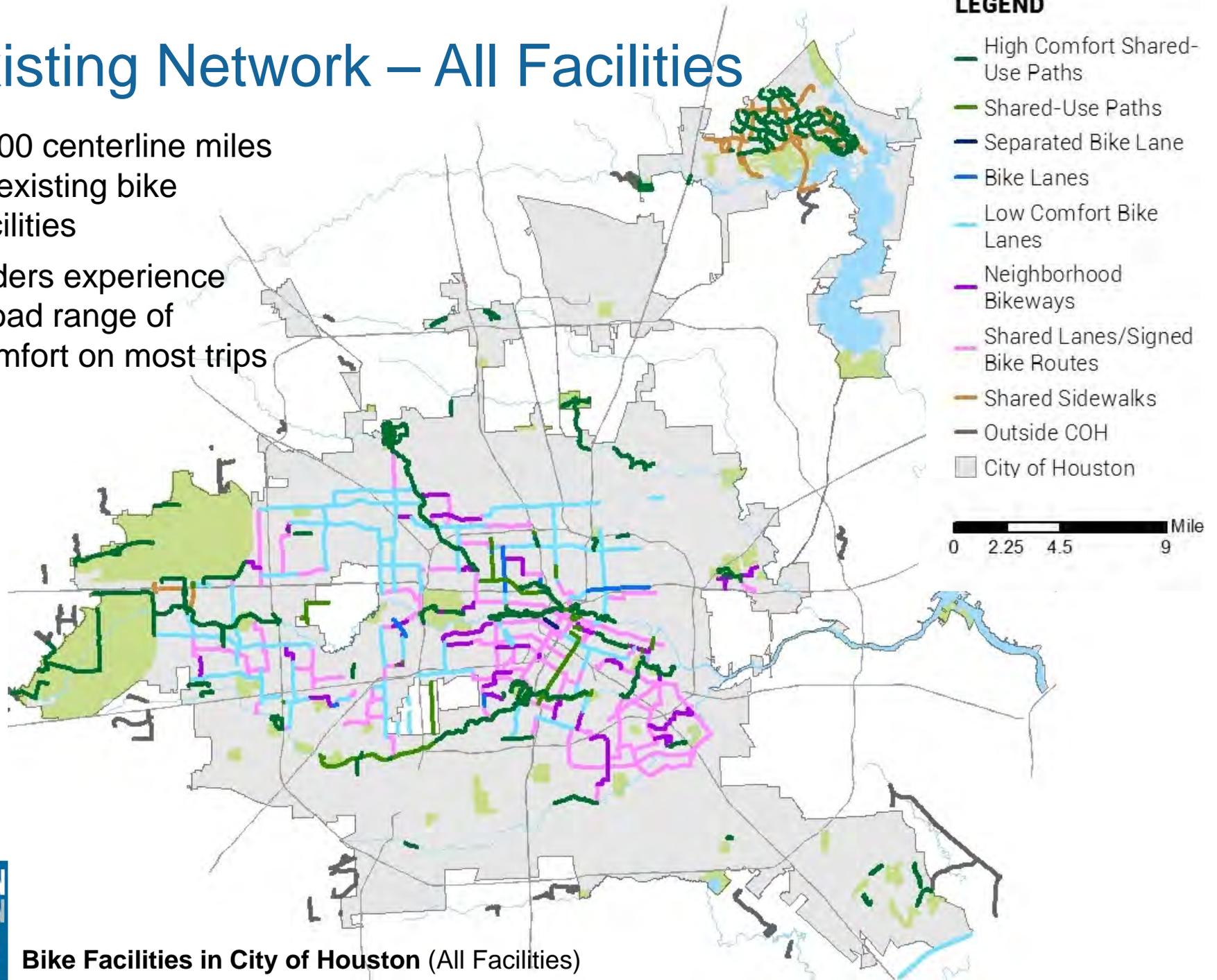
# Who is Our Design Rider?



- People in the **Interested & Concerned** category typically most attracted to bicycle facilities with higher comfort levels
- Current network introduces enough gaps and high stress locations to limit frequent bicycle use to **Strong & Fearless** riders

# Existing Network – All Facilities

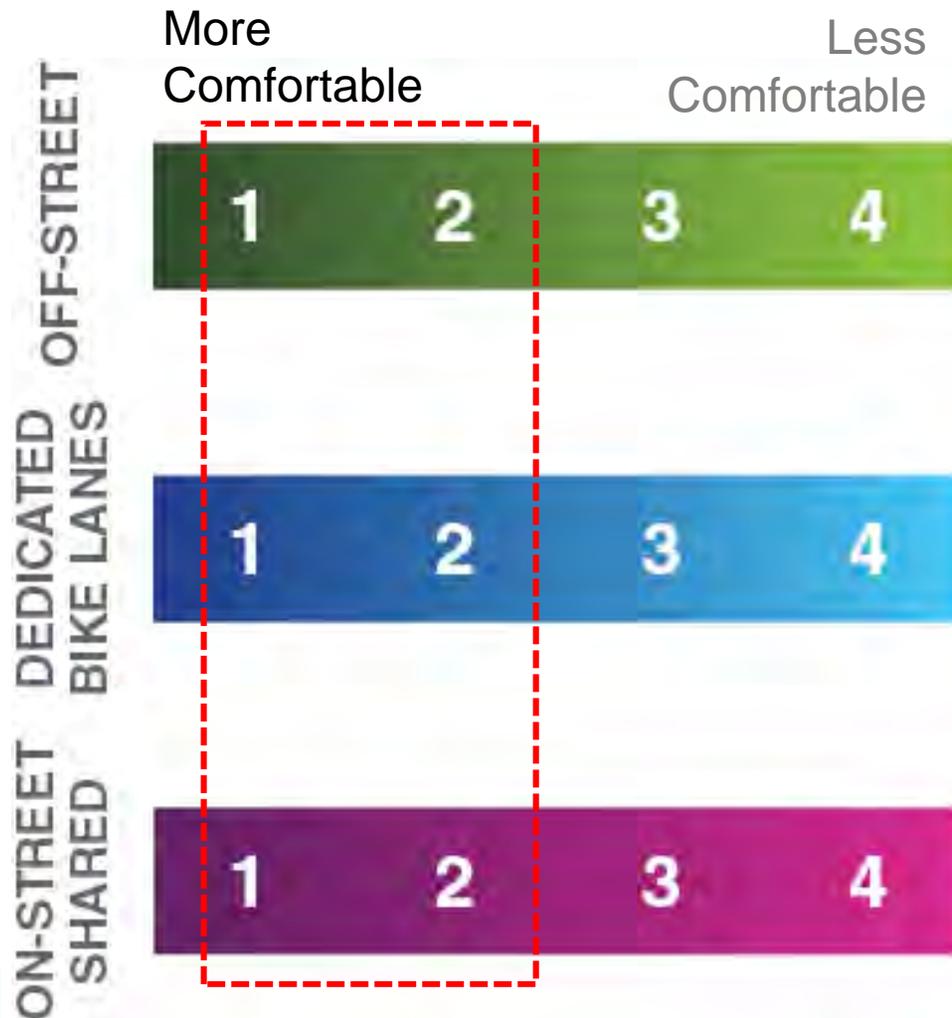
- ~500 centerline miles of existing bike facilities
- Riders experience broad range of comfort on most trips



**Bike Facilities in City of Houston (All Facilities)**

# Defining Bicycle Level of Comfort

Existing Bicycle Facilities Assessed on Four Levels of Comfort

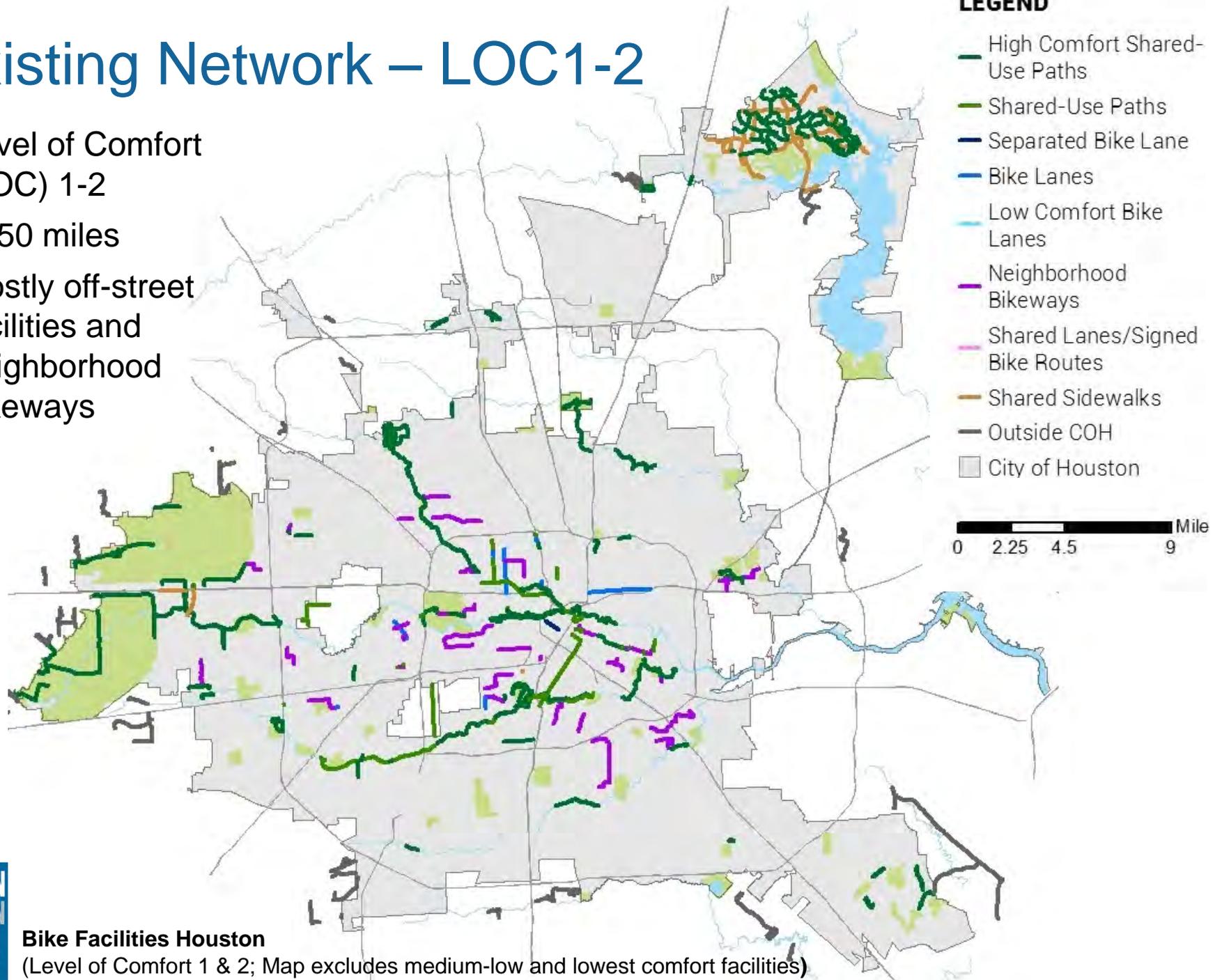


Level of Comfort assessment based on:

- Bicycle facility width
- Adjacent traffic volumes & speeds
- Separation from vehicle traffic
- Intersections & crossings

# Existing Network – LOC1-2

- Level of Comfort (LOC) 1-2
- ~250 miles
- Mostly off-street facilities and neighborhood bikeways



# HOUSTON BIKEPLAN



JOIN US AT THESE UPCOMING MEETINGS TO SHARE YOUR IDEAS ON HOW THE HOUSTON BIKE PLAN CAN HELP MAKE HOUSTON A SAFER, HEALTHIER, MORE BIKE-FRIENDLY CITY.

**BIKE RIDE & OPEN HOUSE** at ENSEMBLE THEATER  
**SATURDAY MAY 30TH, 9:00AM-1:00PM**  
**3535 MAIN STREET HOUSTON, TX 77002**

Parking is available at the HCC lots located on Berry Street at Sam Jaminio (next to Adams Architectural Antiques) and on Perry Street at Fossilin. Participants may enter to win one of several raffle prizes.

Join us at one of the four public meetings for a presentation on the Houston Bike Plan, and an opportunity to give input on talking in Houston:

- 1 KASHMERE MULTI-SERVICE CENTER**  
**THURSDAY, JUNE 4, 2015, 6:00-8:00 PM**  
 4902 Lockwood Drive, Houston, TX 77025 / Auditorium #172
- 2 PALM CENTER BUSINESS TECHNOLOGY CENTER**  
**TUESDAY, JUNE 9, 2015, 6:00-8:00 PM**  
 5380 Grogg Road, Houston, TX 77051 / Conf. Room C101
- 3 HCC MEMORIAL CITY PERFORMING ARTS CENTER**  
**TUESDAY, JUNE 16, 2015, 6:00-8:00 PM**  
 1060 W Sam Houston Pkwy N, Houston, TX 77043 / Theat. II Room 411
- 4 BAKER-RIPLEY NEIGHBORHOOD CENTER**  
**TUESDAY, JUNE 23, 2015, 6:00-8:00 PM**  
 6500 Roskin, Houston, TX 77074



HOUSTONBIKEPLAN.ORG  
 HOUSTONBIKEWAYS  
 @HOUSTONBIKEPLAN

\*This project is funded by the City of Houston, BikeHouston, Houston Parks Board, H&A, FTA, FHWA, and TxDOT.

How can the Houston Bike Plan encourage more women to bike?

please join us for a  
**WOMEN & BIKING FOCUS GROUP**

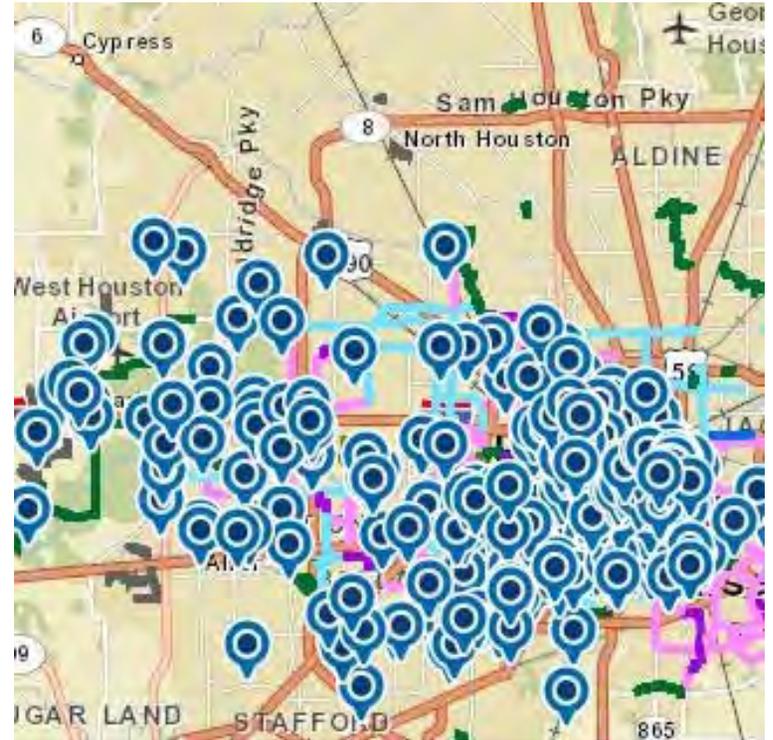


During the month of September, we are convening women (who bike a little, a lot, or not at all) to better understand how to encourage more women to bike. Please sign up to participate in a 1.5-hour long focus group. If you are selected, we will contact you to schedule the date based on respondents' availability. Kids are welcome to attend with you; just indicate their age(s) when you sign up so that we can plan accordingly. Participants will be entered into a drawing for a \$100 Office Depot gift card.

Sign up to participate! | Online: [WWW.SURVEYMONKEY.COM/R/HBPWOMENBIKE](http://WWW.SURVEYMONKEY.COM/R/HBPWOMENBIKE)  
 Phone: 832-395-2700

This project is funded by the City of Houston, BikeHouston, Houston Parks Board, H&A, FTA, FHWA, and TxDOT.  
 Houston's City Council (City of Houston) is the lead agency for this project.  
 Project website: [www.houstonbikeplan.org](http://www.houstonbikeplan.org)

HOUSTONBIKEPLAN.ORG  
 HOUSTONBIKEWAYS  
 @HOUSTONBIKEPLAN



# Goals

## VISION

By 2026, the City of Houston will be a Safer, More Accessible, Gold Level Bike-Friendly City

## GOALS



### Improve Safety

To provide a safer bicycle network for people of all ages and abilities through improved facilities, education, and enforcement



### Increase Access

To create a highly accessible, citywide network of comfortable bike facilities that connects neighborhoods to transit, jobs, and activity centers, including schools, universities, parks, and libraries



### Increase Ridership

To exceed average ridership levels in peer cities by implementing policies and programs that enable more people to ride bicycles and encourage healthy, active transportation choices



### Develop and Maintain Facilities

To develop and sustain a high-quality bicycle network, including both bikeways and end-of-trip facilities



# Next Steps: Reaching Gold



## From Plan to Action

1. Finalize Recommendations:
  - Policies
  - Programs
  - Projects
2. Prioritization of projects (short term/long term)
3. Implementation and funding strategies
4. Pilot projects which may include:
  - New on-street facilities
  - Neighborhood bikeways
  - Intersection treatments

# Toolbox – Facility Types

## OFF-STREET

Off-Street Bike Path .....22

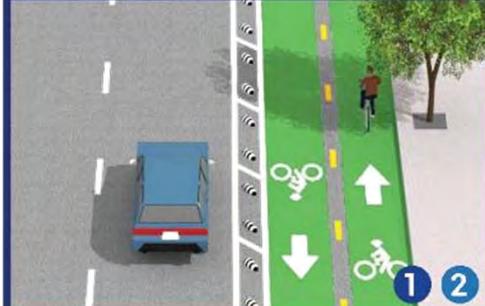


Side Path .....24



## DEDICATED ON-STREET

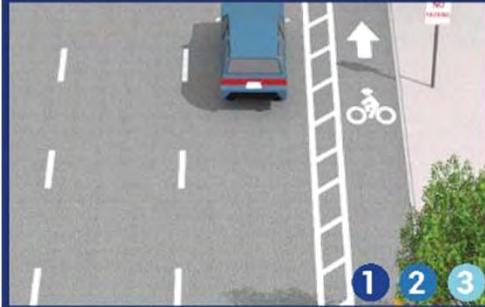
Separated Bike Lane .....8



Side Path .....24



Bike Lane .....12

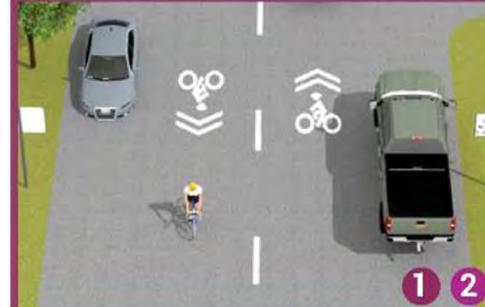


## SHARED ON-STREET

Neighborhood Bikeway .....16



Neighborhood Shared Street .....18



Shared Lane .....20



# Toolbox - Intersections

INTERSECTION TREATMENT	INTERSECTION TREATMENT	SIGNALING	CONNECTIONS
Intersection Crossing Markings .....38	Protected Intersections .....50	Bike Signal Treatment .....58	Bridges / Tunnels .....64
Turn Lane Treatments .....40	Beacons .....52	SPECIAL CONDITIONS	Shortcuts .....66
Bike Box .....46	Median Refuge Islands .....54	Floating Bus Stop .....60	
Two-Stage Turn Queue Box .....48	Bike Crossings of Minor Streets .....56	Back In Angled Parking .....62	SIGNAGE + WAYFINDING
			Comprehensive Wayfinding System .....88



Toolbox examples shown not exhaustive of full list

MUTCD Signage

# Toolbox – End of Trip Facilities

## PARKING

Bike Racks .....70



Bike Lockers .....72



Bike Cage .....74



## PARKING

Bike Corral .....76



Bike Station .....78



## CONNECTIONS

Bike-and-Ride .....80



Trailhead .....81



## SUPPORT

Lockers / Showers .....82



Bike Repair Stations .....83



## NETWORKS

Bikeshare (Houston B-Cycle) .....84

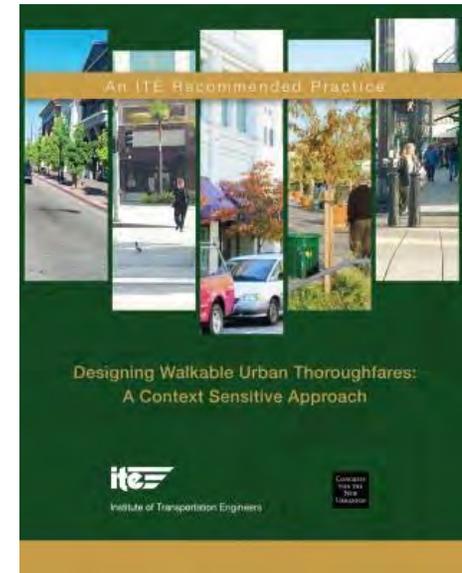
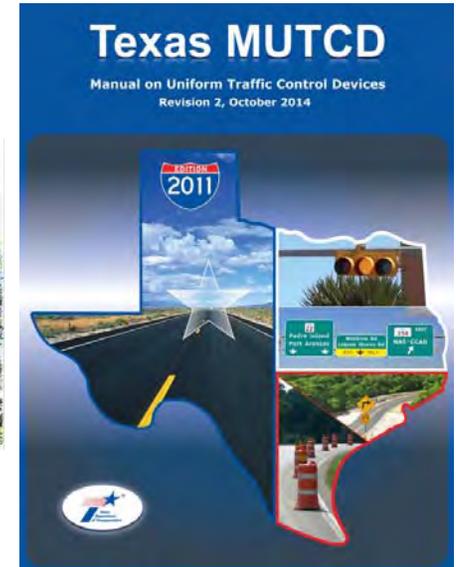
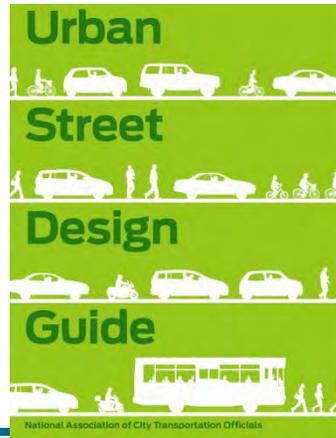
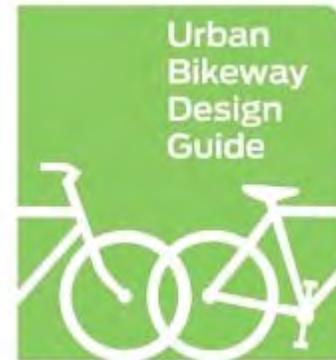
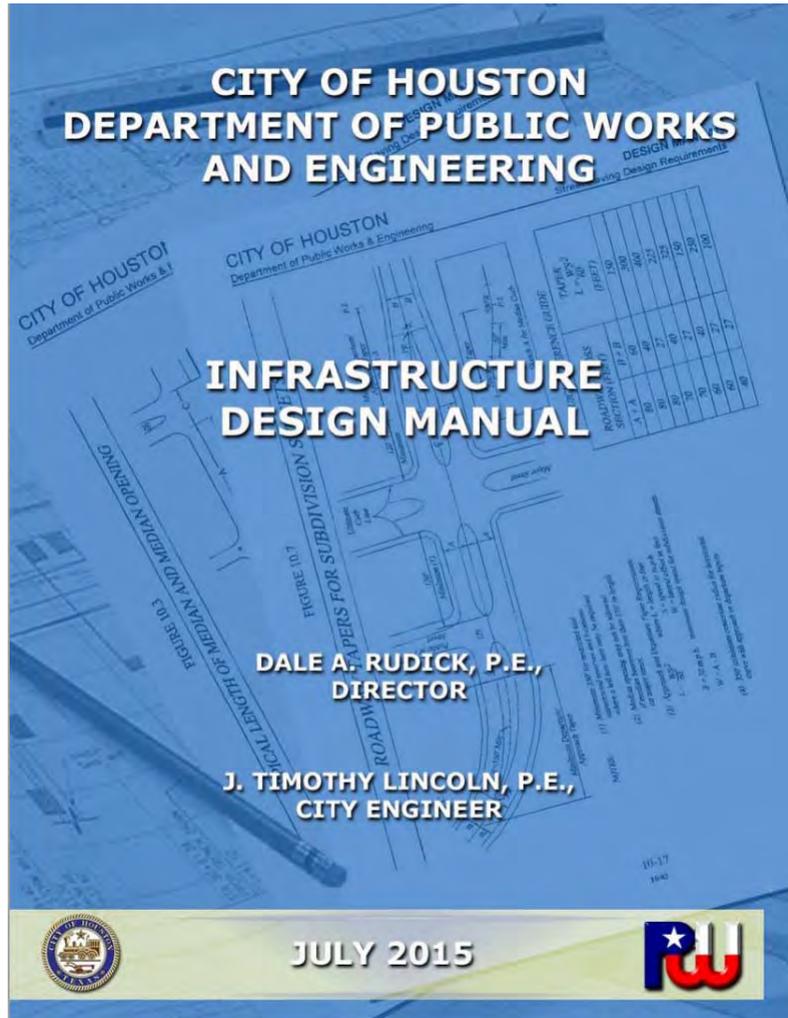


Bikes on Transit .....85



# Getting Ready

# Infrastructure Design Manual



# INFRASTRUCTURE DESIGN MANUAL

## MINIMUM STANDARDS

- The minimum standards set in this chapter are **not intended to be the only values** used for design.
- The design values should be based on the **context of the roadway** and engineers may choose to use values that vary from the minimums set in this chapter based on engineering judgment.

# Appendix A: Multimodal Street Class

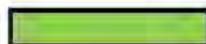
- |               |                |                   |
|---------------|----------------|-------------------|
| ■ Commercial  | ■ Boulevard    | ■ P. Thoroughfare |
| ■ Mixed Use   | ■ Avenue       | ■ Thoroughfare    |
| ■ Residential | ■ Couplet      | ■ Major Collector |
| ■ Transit     | ■ Street       | ■ Minor Collector |
| ■ Industrial  | ■ Local Street | ■ Local Street    |

Land  
Use

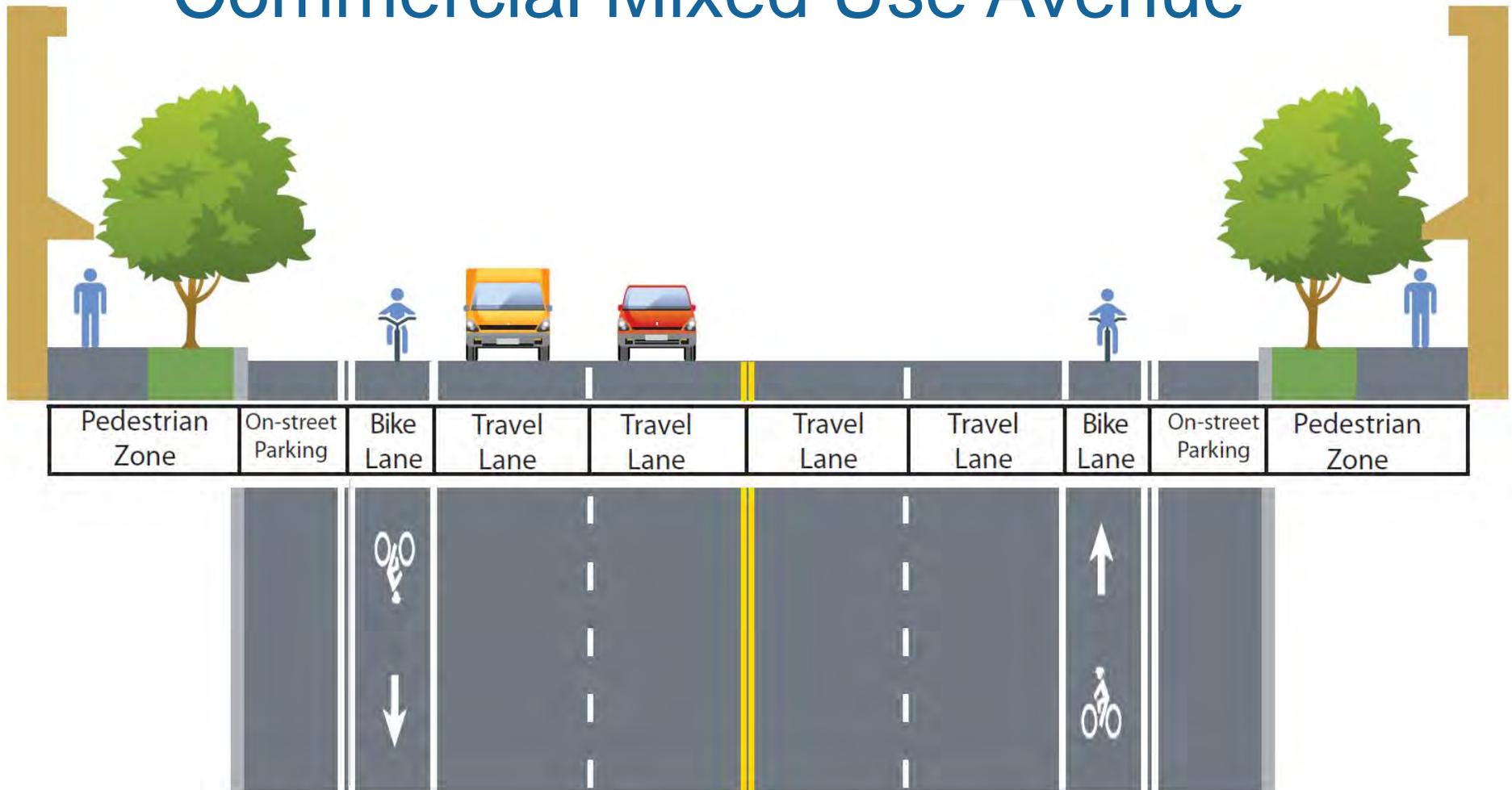
Type

MTFP Class

CITY MOBILITY PLAN (CMP)				MAJOR THOROUGHFARE AND FREEWAY PLAN (MTP)				
MULTIMODAL STREET CLASSIFICATION				EXISTING CLASSIFICATION				
	Proposed Right-of-Way	Number of Lanes	Typical Design Avg Daily Traffic Vol (vpd)	Principal Thoroughfare	Thoroughfare	Major Collector	Minor Collector	Local Street
<b>BOULEVARD</b>								
Commercial	80' - 140'	4 - 8	15,000 - 80,000					
Mixed Use	80' - 140'	4 - 6	15,000 - 50,000					
Residential	80' - 120'	2 - 6	15,000 - 30,000					
Transit	120'	4 - 6	15,000 - 30,000					
Industrial	80' - 140'	4 - 6	15,000 - 50,000					
<b>AVENUE</b>								
Commercial	80' - 100'	2 - 4	1,500 - 30,000					
Mixed Use	80' - 100'	2 - 4	1,500 - 30,000					
Residential	80' - 100'	2 - 4	1,000 - 20,000					
Transit	100'	2	1,500 - 15,000					
Industrial	80' - 100'	3 - 5	5,000 - 35,000					
<b>COUPLET</b>								
Commercial	60' - 100'	2 - 5	1,000 - 45,000					
Mixed Use	60' - 100'	2 - 5	1,000 - 45,000					
Residential	60' - 100'	2 - 3	1,000 - 25,000					
Transit	60' - 100'	2 - 4	1,000 - 35,000					
Industrial	60' - 100'	2 - 5	1,000 - 45,000					
<b>STREET</b>								
Commercial	60'	2	1,000 - 15,000					
Mixed Use	60'	2	1,000 - 15,000					
Residential	60'	2	500 - 5,000					
<b>LOCAL STREET</b>								
Residential Main	60' - 70'	2	≥ 1,500					
Residential High Density	55' - 65'	2	350 - 5,000					
Residential Std. Density	50' - 65'	2	250 - 5,000					

 Indicates Shared Classification

# Commercial Mixed Use Avenue



# INFRASTRUCTURE DESIGN MANUAL

## DESIGN SPEED

- For purposes of design; **design and target** speed shall be synonymous.
- The design speed shall be set by City Ordinances regulating speed limits.
- The minimum design speed for a roadway shall be **30-mph**.

## 11' Lane Widths

# Bicycle Facilities Defined – 10.08

- Bike Routes
- Shared Lanes
- Dedicated Bike Lane
- Buffered Bike Lane
- Cycle Track
- Off-Street facilities
- Bicycle Parking or “Corrals”



D11-1

Bike Lane:

- Minimum = 5'
- Preferred = 6'

Buffered Bike Lane:

- Minimum Buffer = 3'

# Pending Considerations:



R4-11

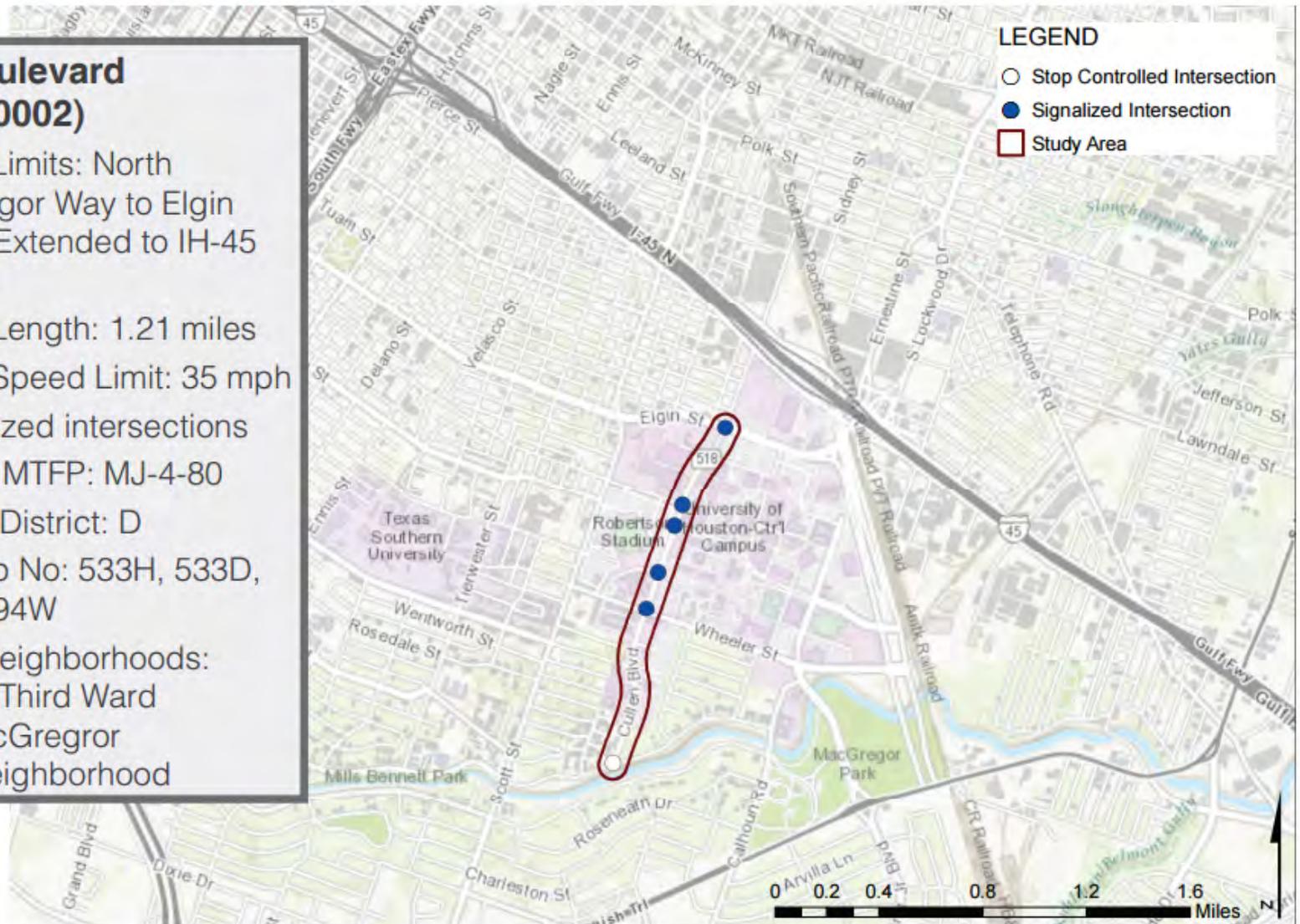
14' Lane Widths  $\neq$  Sharrows, MTF

# Future Projects

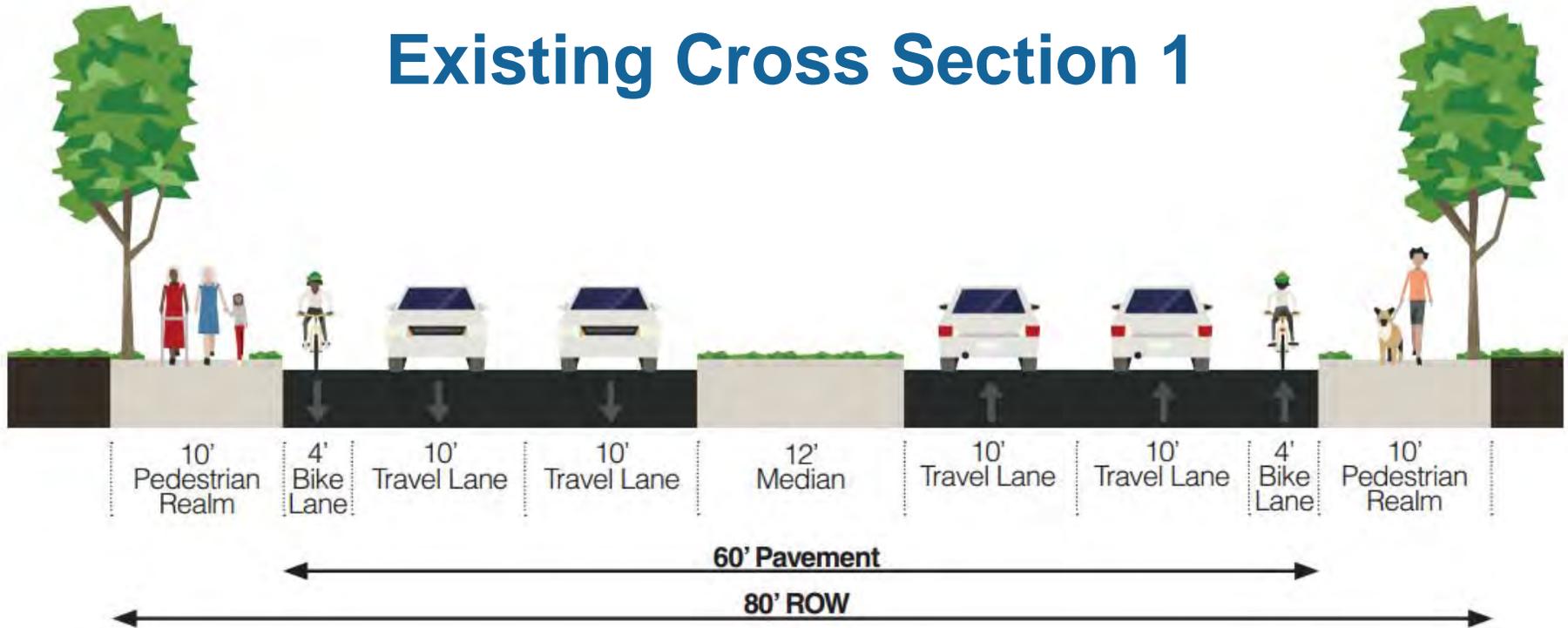
# PROJECT LOCATION

## Cullen Boulevard (N-2015T-0002)

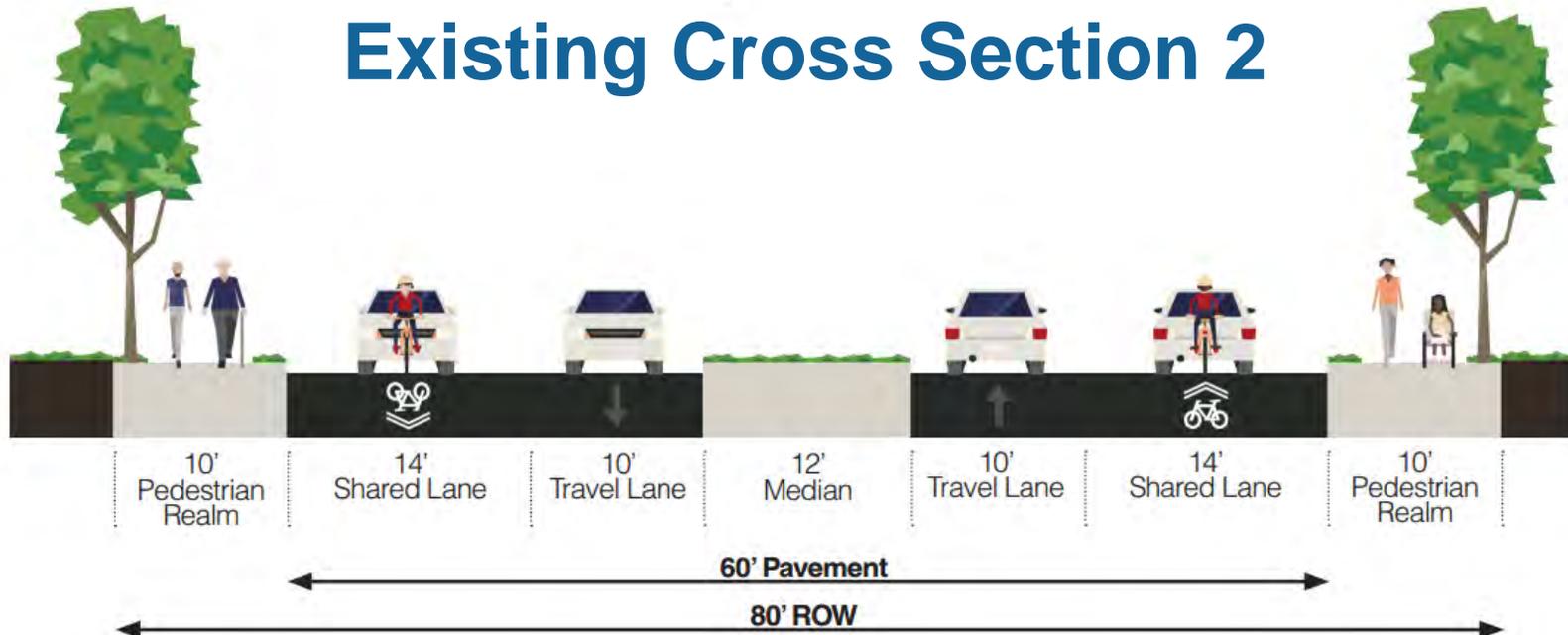
- Project Limits: North MacGregor Way to Elgin Street - Extended to IH-45 after P1
- Project Length: 1.21 miles
- Posted Speed Limit: 35 mph
- 5 signalized intersections
- Existing MTFP: MJ-4-80
- Council District: D
- Key Map No: 533H, 533D, 534A, 494W
- Super Neighborhoods: Greater Third Ward and MacGregor Superneighborhood



# Existing Cross Section 1

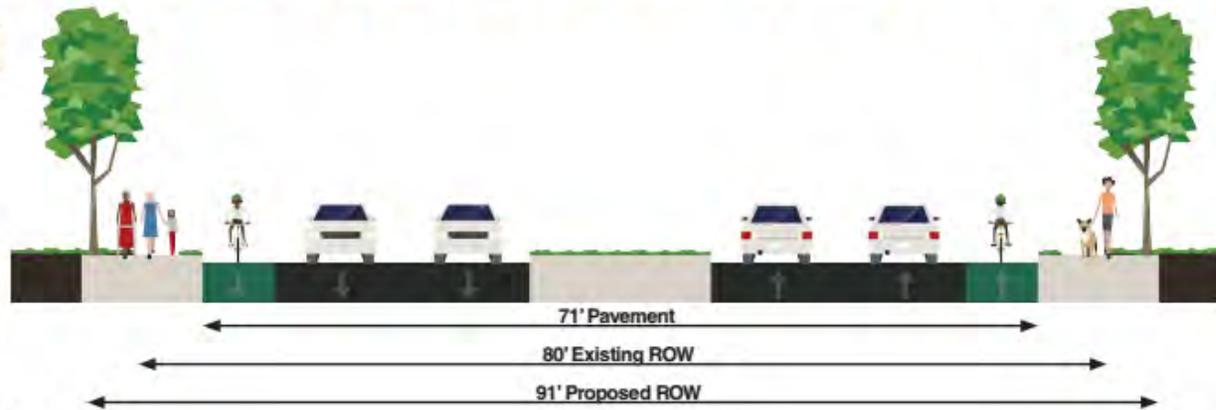


# Existing Cross Section 2

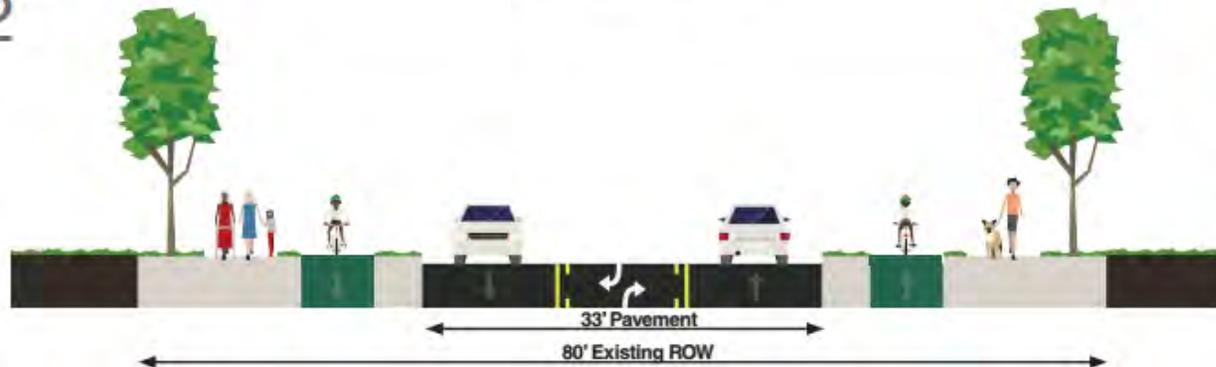


# PLANNING 1 CONCEPTUAL ALTERNATIVES

Alternative 1



Alternative 2



Alternative 3



# Existing Projects

# LAMAR CYCLE TRACK



# SPRING STREET



# HERITAGE CORRIDOR BAYOU TRAIL



# WHITE OAK BRIDGE – MKT Trail



# Trail detour on White Oak Bayou Greenway through fall 2017



Sidewalk along Houston Ave.  
connects to asphalt trail

Trail Closed

Trail Detour on Heights Hike &  
Bike Trail next to Spring St.

Houston Ave.

Spring St.

UH-Downtown



## **Houston Bike Map:**

<http://www.gims.houstontx.gov/bikeway/default.aspx>

## **Program Website:**

<http://www.houstonbikeways.org/>

## **Anita Hollmann:**

832-395-3010

[anita.hollmann@houstontx.gov](mailto:anita.hollmann@houstontx.gov)

**MORE COMFORTABLE**

**LESS COMFORTABLE**

**SHARED**

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
--	----------	----------	----------	----------

<b>SPEED LIMIT</b> <small>residential</small>	25 MPH or less	30 MPH	30 MPH	35+ MPH
<b>SPEED LIMIT</b> <small>non-residential</small>		25 MPH or less	30 MPH	35+ MPH
<b>NUMBER OF LANES</b>	2 LANES	2-3 LANES	2-3 LANES	4+ LANES
<b>INTERSECTING STREETS</b>	NARROW, CALM	CALM	BUSY	WIDE, BUSY

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
--	----------	----------	----------	----------

**DEDICATED BIKE LANES**

<b>SPEED LIMIT</b>	30 MPH or less	30 MPH	35 MPH	40+ MPH
<b>LANES EACH DIRECTION</b> <small>without median</small>	1 LANE	1 LANE	2+ LANES	2+ LANES
<b>LANES EACH DIRECTION</b> <small>with median</small>	1-2 LANES	2 LANES	3+ LANES	3+ LANES
<b>BIKE LANE WIDTH</b>	6 FEET	5 FEET	4 FEET	3 FEET
<b>INTERSECTION TREATMENTS</b>	CONTINUOUS	SHARED	SHARED	NONCONTINUOUS
<b>SEPARATION</b>	SEPARATION MOVES A FACILITY ONE COMFORT LEVEL TO THE LEFT			

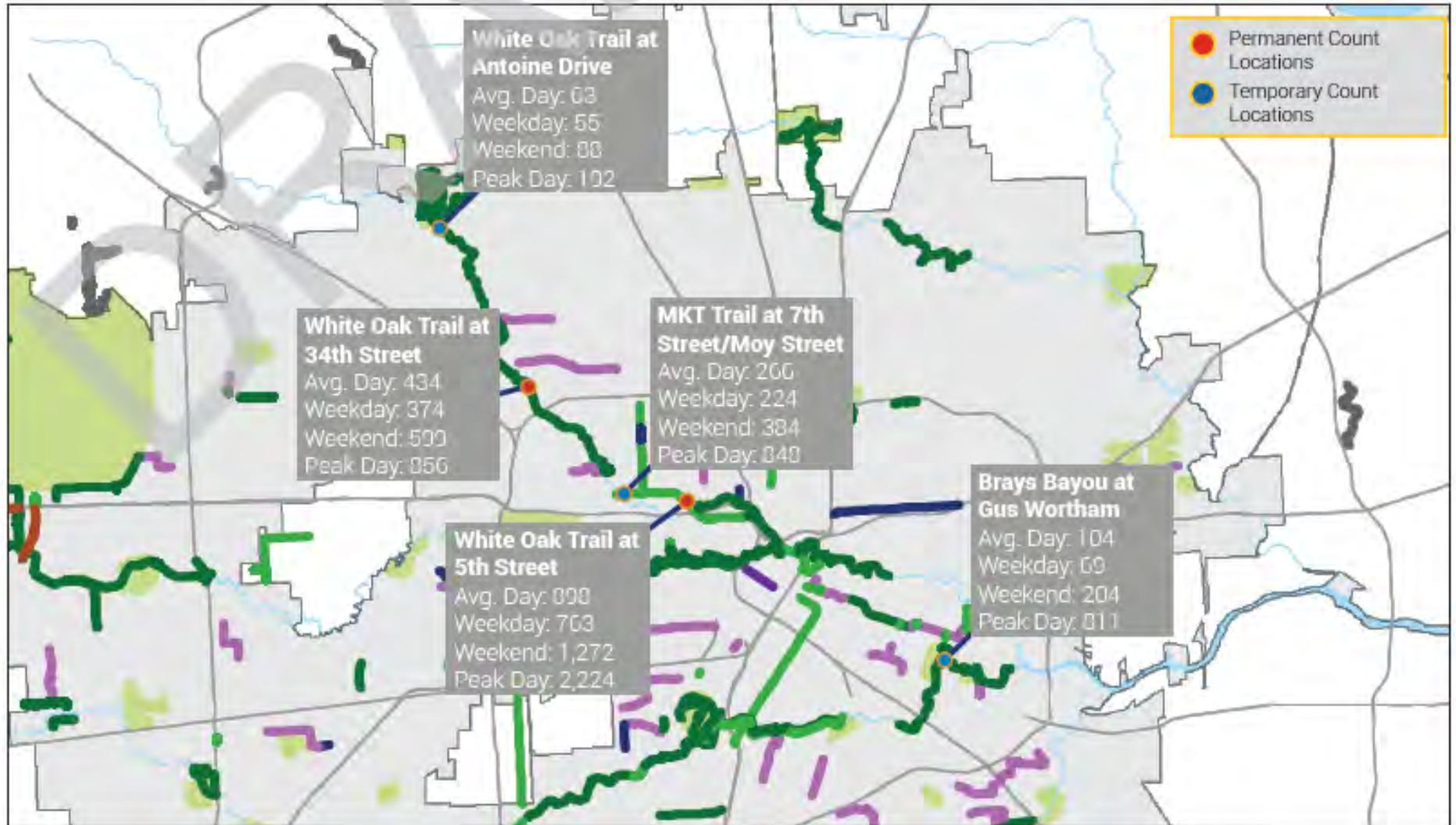
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
--	----------	----------	----------	----------

**OFF-STREET**

<b>CROSSING FREQUENCY</b>	RARE	INFREQUENT	MODERATE	FREQUENT
<b>TYPE OF CROSSINGS</b>	CALM & NARROW OR CONTROLLED	UNCONTROLLED BUT NARROW	UNCONTROLLED WIDE OR FAST	UNCONTROLLED WIDE & FAST



# Evaluation: Bike-Ped Count





# Complete Streets Executive Order 1-15

## Approved:

- November 1, 2013

## Purpose:

- Achieve complete streets

## Objective:

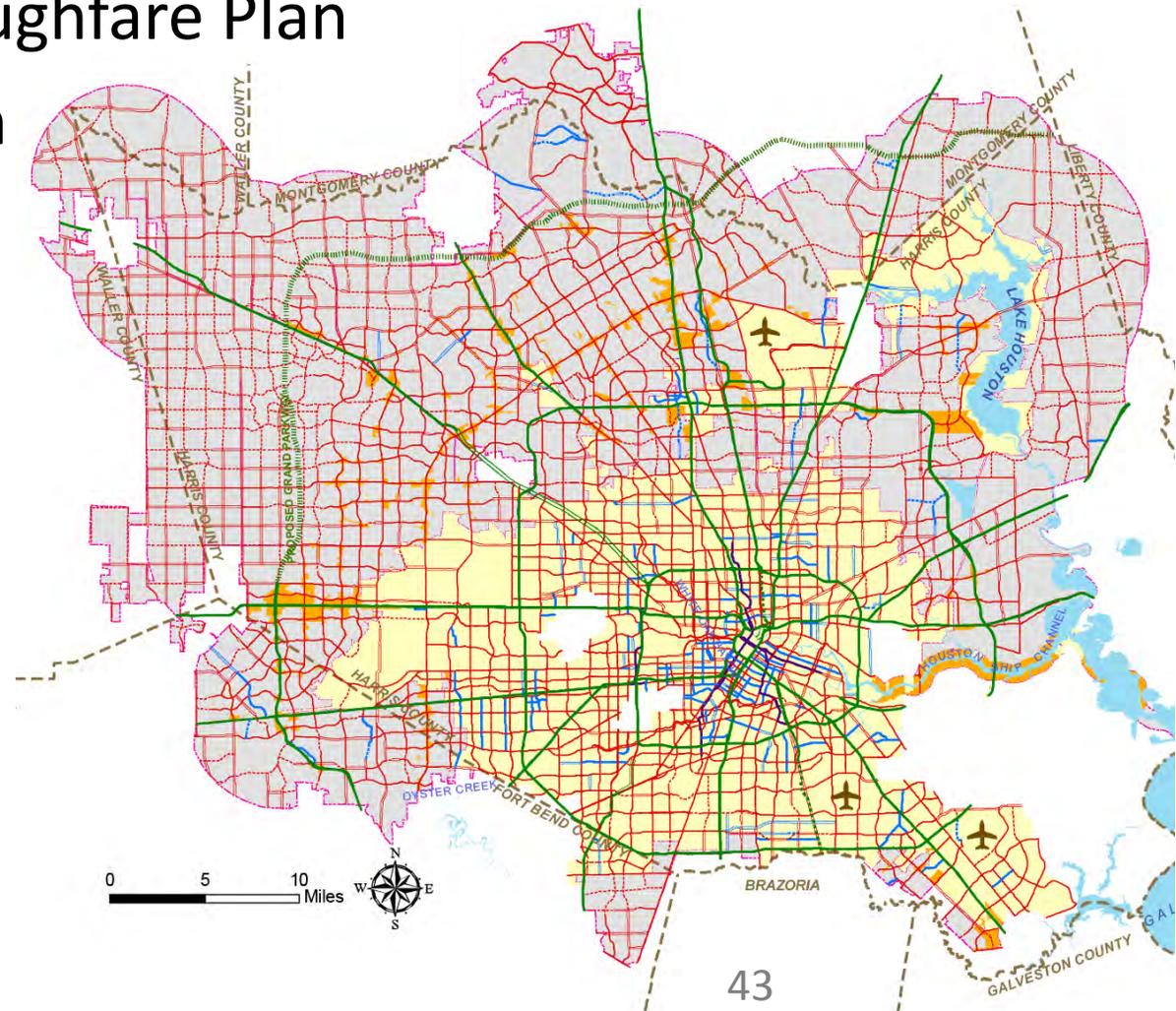
- Develop Houston Complete Streets & Transportation Plan
- Provide an overall framework
- Develop an implementation plan
- Revisions to the current plans and manuals

		<b>CITY OF HOUSTON</b> Executive Order
Subject: <b>Houston Complete Streets and Transportation Plan</b>		E.O. No: <b>1-15</b>
		Effective Date: <b>November 1, 2013</b>
<b>1. AUTHORITY</b> Article II. – Corporate and General Powers, Sec. 4 – Street Powers, of the City Charter of the City of Houston.		
<b>2. PURPOSE</b>		
2.1 To direct City efforts to achieve complete streets, as defined herein, through the planning, designing, budgeting, constructing, and reconstructing of all transportation improvements while recognizing that complete streets are achieved over time through single projects, new and redevelopment, and through a series of incremental improvements. \		
2.2 To build upon recent code and policy improvements such as, Chapter 42 of the Code of Ordinances including the requirement for existing conditions surveys and plans for recently completed and on-going city mobility studies.		
<b>3. OBJECTIVES</b>		
3.1 Establish a menu of complete street types based upon Multi Modal Classification.		
3.2 Develop a forecast of street type citywide to complement and extend currently established plans to create the long range vision of complete streets.		
3.3 Establish city standards to minimize obstructions in public pedestrian travel ways.		
3.4 Benefit from community input and thought rendered through reports such as Livable Center Studies and Scenic Houston's Streetscape Resource Guide.		
3.5 Recognize the role streets play in drainage and water quality.		
<b>4. PRODUCTS</b>		
4.1 Provide policies and procedures that shall direct the development of the Houston Complete Streets and Transportation Plan (The Plan) by utilizing City Mobility Planning efforts conducted by Planning and Development Department (PDD) and the Public Works and Engineering Department (PWE); and by utilizing prior and existing governance and existing planning tools as a basis.		
4.2 Provide an overall framework for revision and expansion of City Mobility Planning and deliverables.		
4.3 Transition to and then sustain The Plan.		
Approved: 	Date Approved: 11/01/2013	Page 1 of 5

# Complete Street Components

## Implementation Projects

- Major Thoroughfare Plan
- Ped-Bike Plan
- Transit Plan
- Rail Plan
- Context
- Parking Plan





# Bike&Ride

**Russ Frank**

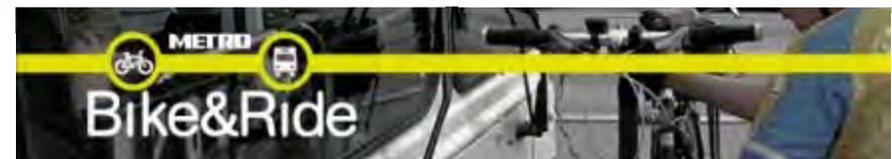
January 2016

Metropolitan Transit Authority of Harris County, Texas

# BIKE & RIDE IMPLEMENTATION

## Bike & Ride Access & Implementation Plan Background

- METRO and H-GAC complete *Bike & Ride Access & Implementation Plan (BRAIP)* in January 2014
- Strategic Planning Committee was briefed on the Plan in March and June 2014
- H-GAC Transportation Policy Committee adopted *BRAIP* in April 2014
- The Plan includes short, medium, and long-term recommendations
- Stakeholders: City of Houston, Houston B-Cycle, Bike Houston, and citizens



# BIKE & RIDE IMPLEMENTATION

## Bike & Ride Access & Implementation Plan Elements

- Communicate – branding and internal/external program marketing
- Integrate – bike parking, on-vehicle accommodations, bike sharing program elements
- Connect – link city and regional bike/multi-use paths to transit facilities



# BIKE & RIDE IMPLEMENTATION

## Bike & Ride Project Programming

- Projects are being reviewed and selected based on recommendations from BRAIP, internal/external stakeholder, changing ridership patterns
- Projects integrated into Capital Improvement Plan (CIP)
- METRO expenditures may be used to leverage federal and other matching funds
- METRO bike program will complement other agency and jurisdiction bike planning efforts



# BIKE & RIDE IMPLEMENTATION

## Bike & Ride Efforts Completed

- Bike racks (2) installed on buses and rail cars
- Peak-hour restrictions on rail cars rescinded
- Bike Working Group created
- Bike boardings recorded by bus stop by bus operators
- On-board surveys (2013, 2015) – includes bike access queries
- Successful partnerships



## Bike & Ride Efforts In-progress

- Comprehensive integration of short-term program of projects into CIP
- Comprehensive integration with safety planning (regional effort)
- Integration with TOD study and Houston Bike Plan

# BIKE & RIDE IMPLEMENTATION

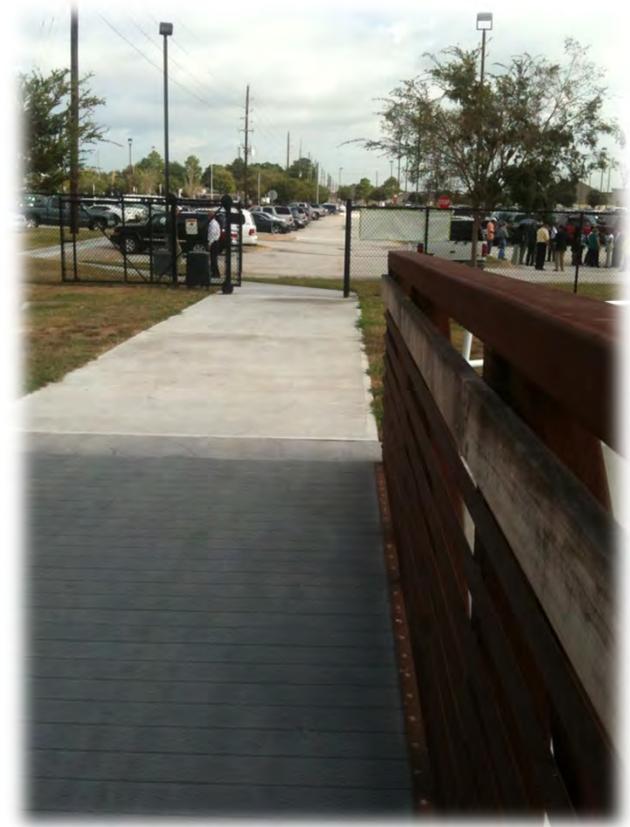
## **METRO Bike Working Group**

- Provides forum to review bike and ride recommendations
- Facilitates interdepartmental coordination
  - Facilities Maintenance
  - Police and Safety
  - Planning and Engineering
  - Marketing
  - IT
  - Project Estimating and Scheduling
  - Legal
  - Operations

# BIKE & RIDE IMPLEMENTATION

## Successful Partnerships – Kingsland Park & Ride

- City of Houston, Harris County partners
- Completed between 2011 and 2013
- METRO committed \$84,000
  - Bridge
  - Path
  - Fencing
  - Camera
  - Lighting
  - Bike parking



# BIKE & RIDE IMPLEMENTATION

## Successful Partnerships – Townsen Park & Ride

- Harris County partners
- Under development
- METRO provided letter of support – 2014
  - Lighting
  - Security
  - Access
  - Bike parking



# BIKE & RIDE IMPLEMENTATION

## Successful Partnerships – Bike Lids and Racks

- City of Houston
  - donated 6 bike lids
- Harris County Public Health and Environmental Services
  - grant for bike racks along Red Line extension – 2014



# BIKE & RIDE IMPLEMENTATION

## Bike & Ride Short-Term Program of Projects

- Wayfinding and Maps
- Bike Parking – locations to be determined
- Safety Signage
- Integration with Houston Bike Plan



 BIKE ROUTES	miles
 Park	1
 Community Center	2
  Transit Center	4



ALWAYS CROSS TRACKS AT  
**90° ANGLE**



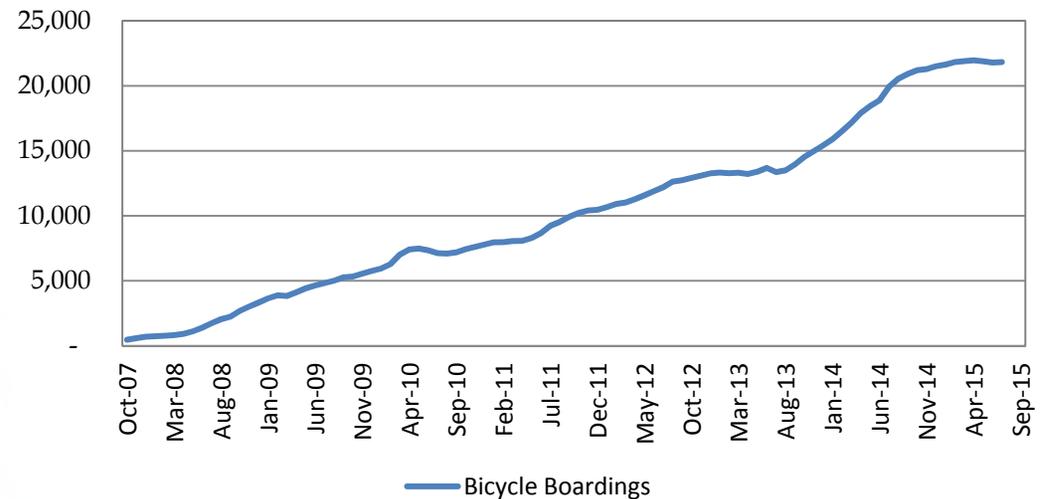
# BIKE & RIDE IMPLEMENTATION

## Bike & Ride Trends

- Increasing ridership
- High frequency bus routes serve known high ridership corridors



Monthly Fixed-Route Bus Bicycle Boardings  
12 Month Rolling Average



# BIKE & RIDE IMPLEMENTATION

## METRO External Coordination Efforts

- H-GAC Pedestrian – Bicyclist Subcommittee
- Houston Bike Plan – Stakeholder
- Vision Zero Campaign – Stakeholder



**BIKEHOUSTON™**

# BIKE & RIDE IMPLEMENTATION

## Other Regional Efforts

- H-GAC – Pedestrian and bike projects programmed in TIP
- City of Houston – Bike Plan, B-Cycle, Lamar Street Cycle Track
- Midtown Management District – Sidewalks and bike parking
- Greater East End Management District – Trails and sidewalks



# Building A Trail and A Bicycle Culture

## Québec's Route verte and beyond



Presented by Vélo Québec to...

Texas Trails and Active Transportation Conference, March, 2014

Jean-Francois Pronovost, Vice President for Development and Public Affairs

Subset re-presented by BikeTexas to...

TxDOT Bicycle Advisory Committee, Jan 29, 2016

Mark Stine, Special Projects, [mark@biketexas.org](mailto:mark@biketexas.org), 512-921-0581

Robin Stallings, Executive Director, [robin@biketexas.org](mailto:robin@biketexas.org), 512-694-9158





Canada

Québec

Océan  
Pacifique

États-Unis

Océan  
Atlantique

Mexique















**lait** PRÉSENTE  
**VÉLO SOUS ZÉRO**

**COMPLÈT** DIMANCHE  
**16 FÉVRIER**  
2014  
DÉPART: 10 H

EN COLLABORATION AVEC  
**provigo**

Un événement de  
**VO**  
Vélo Québec

En partenariat avec  
**Environnement jeunesse**







# For transportation purposes

Increasing

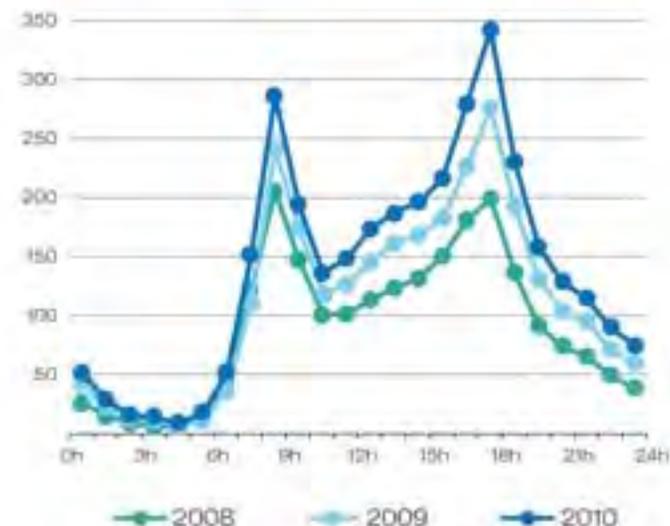
53 % of cyclists

vs 25 % en 2000

385 000

2008 à 2010 : + 30 à 40 %

Réseau cyclable montréalais  
Variations horaires moyennes 2008 à 2010



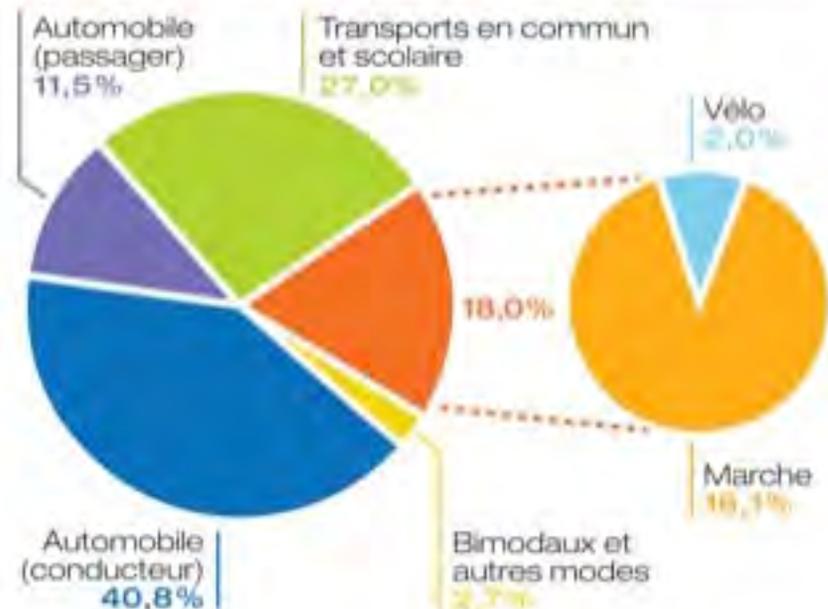
Source: Miranda-Moreno et Nosal, 2010

# Transport

## Modal share (all trips)

The entire island:	2 %
Central boroughs:	4 %
Plateau M.-R.	8,6 %
Sud-Est	5,1 %
Villeray	4,4 %
Rosemont	3,8 %

### Part modale des déplacements



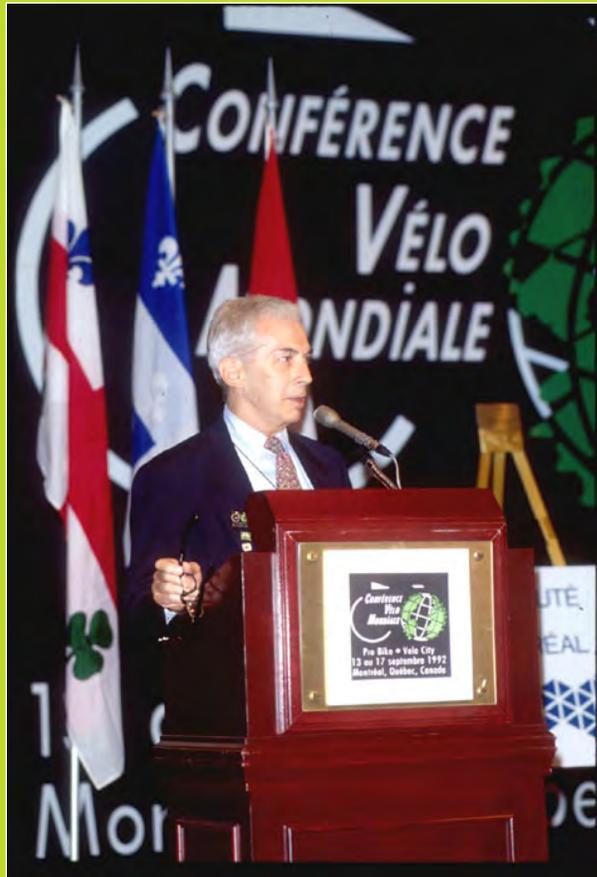


**WE HAD A DREAM. . .**

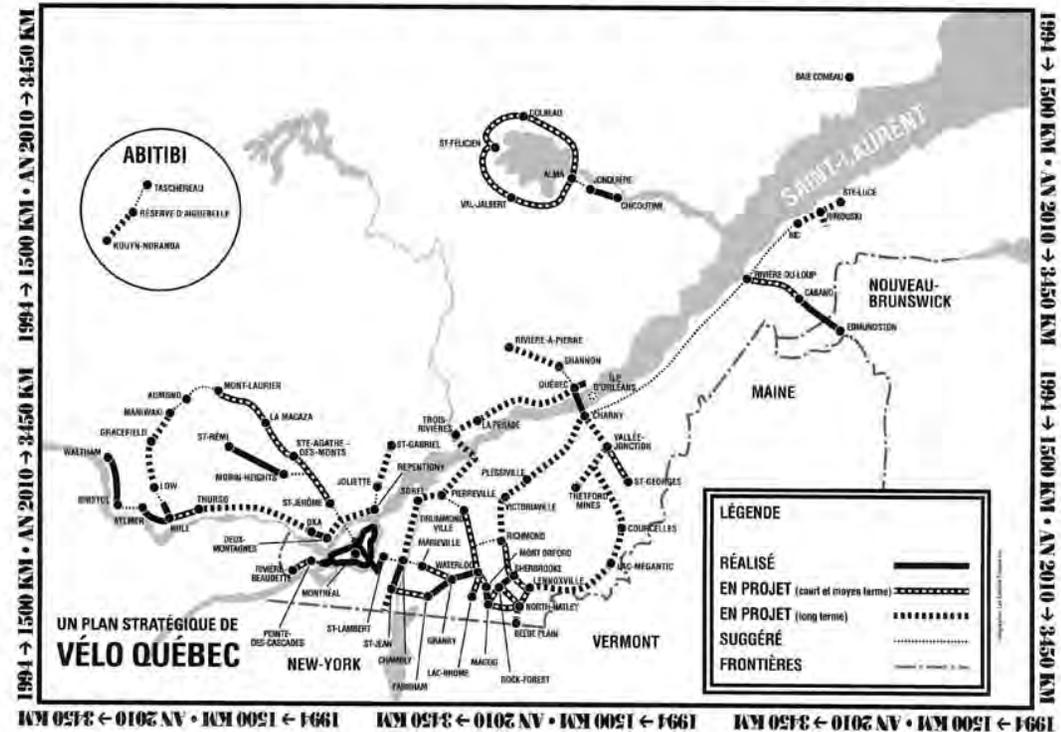


- **Creating a bicycle network across the province**
- **Set up a project that mobilize the regions**
- **Boost the local and regional economy**
- **Build an international class facility**





## LE PLAN DU QUÉBEC CYCLABLE ET DES CORRIDORS VERTS DE L'AN 2000





Transports  
Québec 

# From a Dream to a Public Project

- **Long-term general agreement**

- 1996-2005
- 2006-2008
- 2008-2013



- **Content :**

- MTQ and VQ responsibilities
- Interministerial committee
- Financial support





# 1996





2000





2005





2013





## Off Road (40%)



**Parcours des Anses (Lévis)**



**Véloroute de la Chaudière**



**Le Petit Témis**



## On Road (60%)





NEW

Calculate your route online

**LA ROUTE VERTE™**  
**ON THE ROUTE VERTE**  
Plan your route

**From**  
Drag the icon on the map

**To**  
Drag the icon on the map

Reset

Home About us **Maps** Routes Bienvenue cyclistes! MD Accommodations Français VO







# Brief History of Route verte Partnership

Source: [http://www.routeverte.com/e/historique\\_e](http://www.routeverte.com/e/historique_e)

- **Vision formed...** The Route verte concept dates back to the late 1980s, when the key members of Vélo Québec were already articulating their plans for the future of cycling in Québec.
- **Plan developed...** In 1992, Vélo Québec took advantage of its role as the host of the Conférence Vélo Mondiale, along with the celebration of its 25th anniversary, to publicly present the Plan du Québec cyclable et des corridors verts de l'an 2000.

**Partnership established...** In 1995, the Government of Québec announced that it would collaborate with Vélo Québec on the planning and construction of the Route verte, investing \$88.5 million over ten years to develop a bikeway over 4,000 kilometres linking all parts of Québec.

- **Partnership nurtured...** This initiative requires a great deal of effort within the various regions as well as the involvement of several different ministries — work that is coordinated within the Government by the Québec ministry of transportation.
- **Champion role formalized...** Since 1995, Vélo Québec has overseen the development of the Route verte on behalf of the Government. It coordinates planning, interregional cooperation, communications and promotion of the initiative.



**What we' ve learned?**



So, what we've learned?

1-Bring more people to cycling



- **5,3 millions of bicycles (760 bicycles/1000)**
- **Usage : 54 % of the population (47 % of adults)**





So, what we've learned?

2-Good for health

## Safety in numbers

1987 – 2010 in Québec

# of bicycles has doubled  
cyclists + 50 %  
crashes

fatalities ↓ 58 %

severe injuries ↓ 72 %

minor injuries ↓ 52 %





So, what we've learned?

**3-Good for local business**



## Local tourism industry





## Local tourism industry





So, what we've learned?

4-Good return on the investment



## 18 years later. . .

- 5 000 Km
- more than **250 M\$ invested** (gov + mun)
- 1000 partners involved
- **134M\$/year by users**



## **They spend more**

(102\$ / day / adult / 83\$ in 2005)

## **Longer journeys**

**May until the end of September**



# STILL CHALLENGES



Vélo Québec





Vélo Québec





**THANK YOU!**  
**[www.velo.qc.ca](http://www.velo.qc.ca)**