

# BIKEWAYS

---

Can We Talk

# Table of Contents

1	Bikeway Terminology	3-84
2	Demonstration Project - Tyler District – Phase 1	85-92
3	Statewide Bikeway Map – Data Collection	93-101

# Bikeway Terminology

- Signed Shared Roadway
- Signed Shoulder Bikeway
- Bike Lane
- Shared Use Path
- Cycle Tracks

# SHARED ROADWAY

Definition from:

2012 AASHTO Guide for the Development of Bicycle Facilities

*“A roadway that is open to both bicycle and motor vehicle travel.”*

Definition from:

2011 Texas Manual on Uniform Traffic Control Devices

*“A roadway that is officially designated and marked as a bicycle route, but which is open to motor vehicle travel and upon which no bicycle lane is designated.”*

# Shared Roadway



# Shared Roadway



# Shared Roadway



# Shared Roadway



# Shared Roadway



# Shared Roadway



*Standard 14- to 15- Foot Lane Width*

# Signed Shared Roadway





# Signed Shared Roadway



# Signed Shared Roadway







# Signed Shared Roadway

# SHOULDER

Shoulder Definition:

2012 AASHTO Guide for the Development of Bicycle Facilities:

“The portion of roadway contiguous with the travel way that accommodates stopped vehicles, emergency use, and lateral support for sub base, base, and surface course. Shoulders where paved are often used by bicyclists.”

A Signed Shoulder Bike Route shall include posted bike route signs and may include pavement markings.

# Typical Roadway Without A Shoulder





# Typical Roadway Without A Shoulder

# Typ. Roadway With A 4- to 6-Foot Shoulder



# Typ. Roadway With A 6- to 8-Foot Shoulder



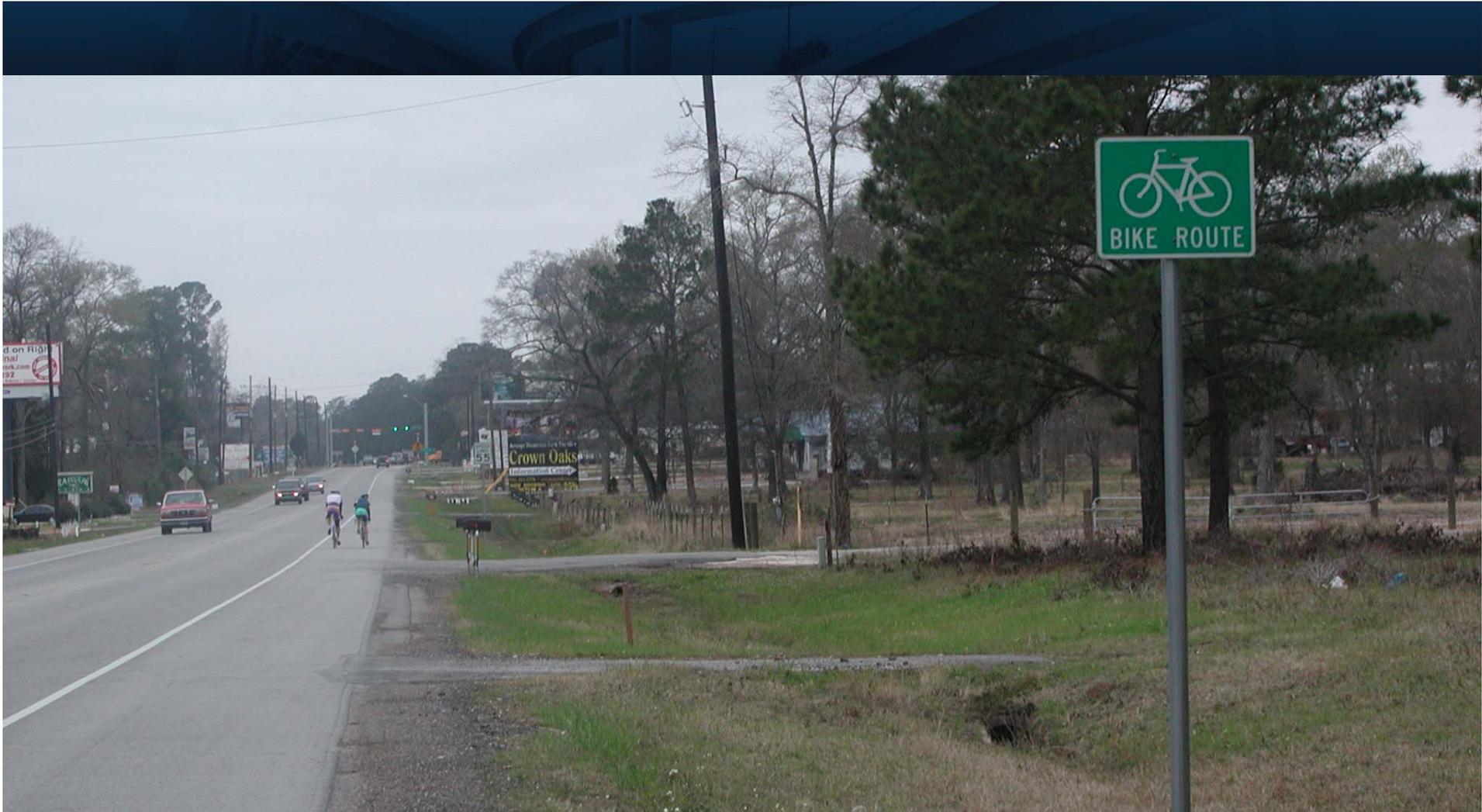
# Typical Roadway With An 8-Foot Shoulder



# Designated Shoulder Bike Route



6-Foot Shoulder

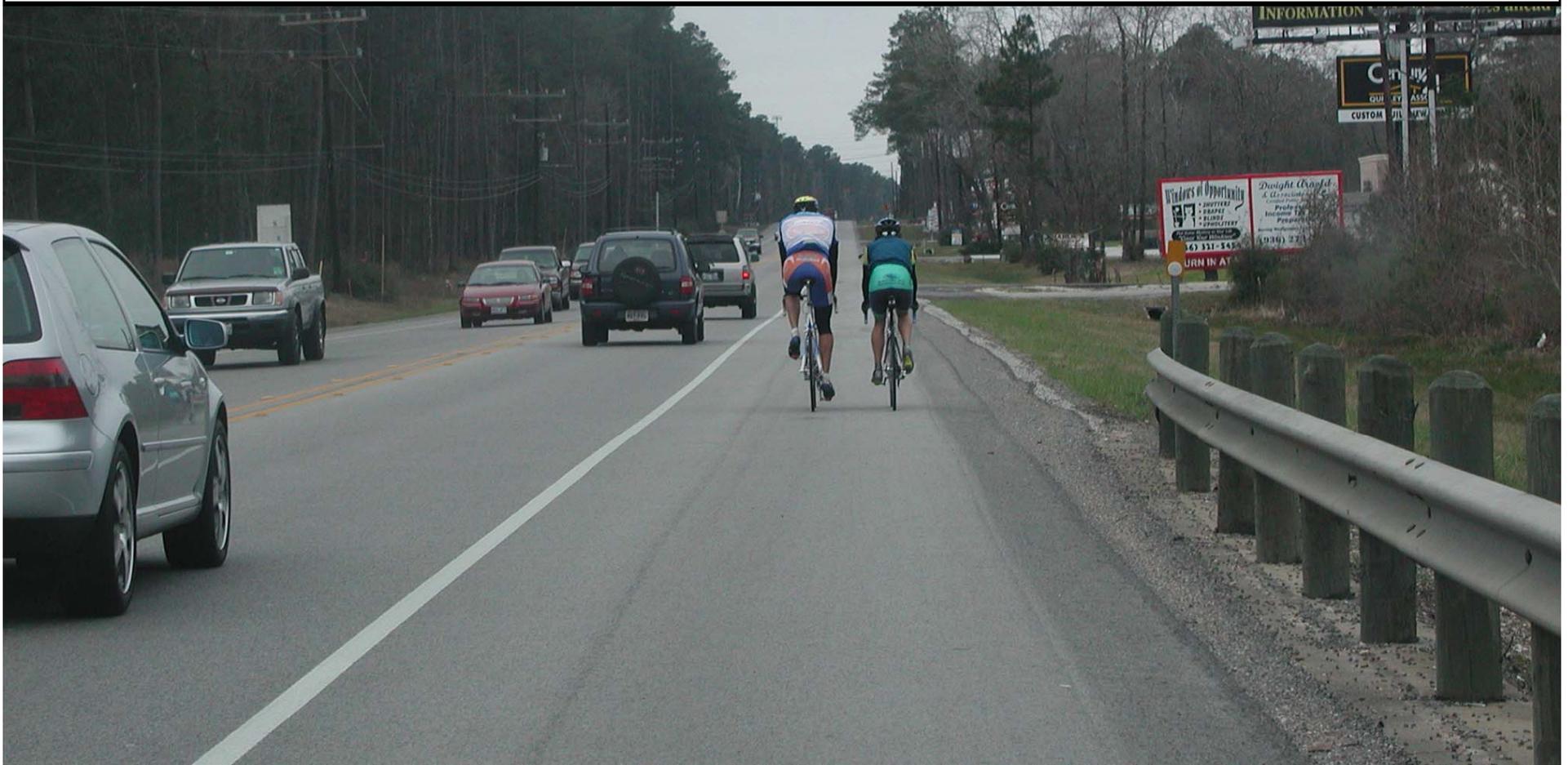


## Typical FM Roadway With A 10-Foot Shoulder and Signed as A Bike Route



**Most cyclists would feel somewhat comfortable riding on this shoulder.**

# FM Roadway With A 10-Foot Shoulder and Signed as A Bike Route



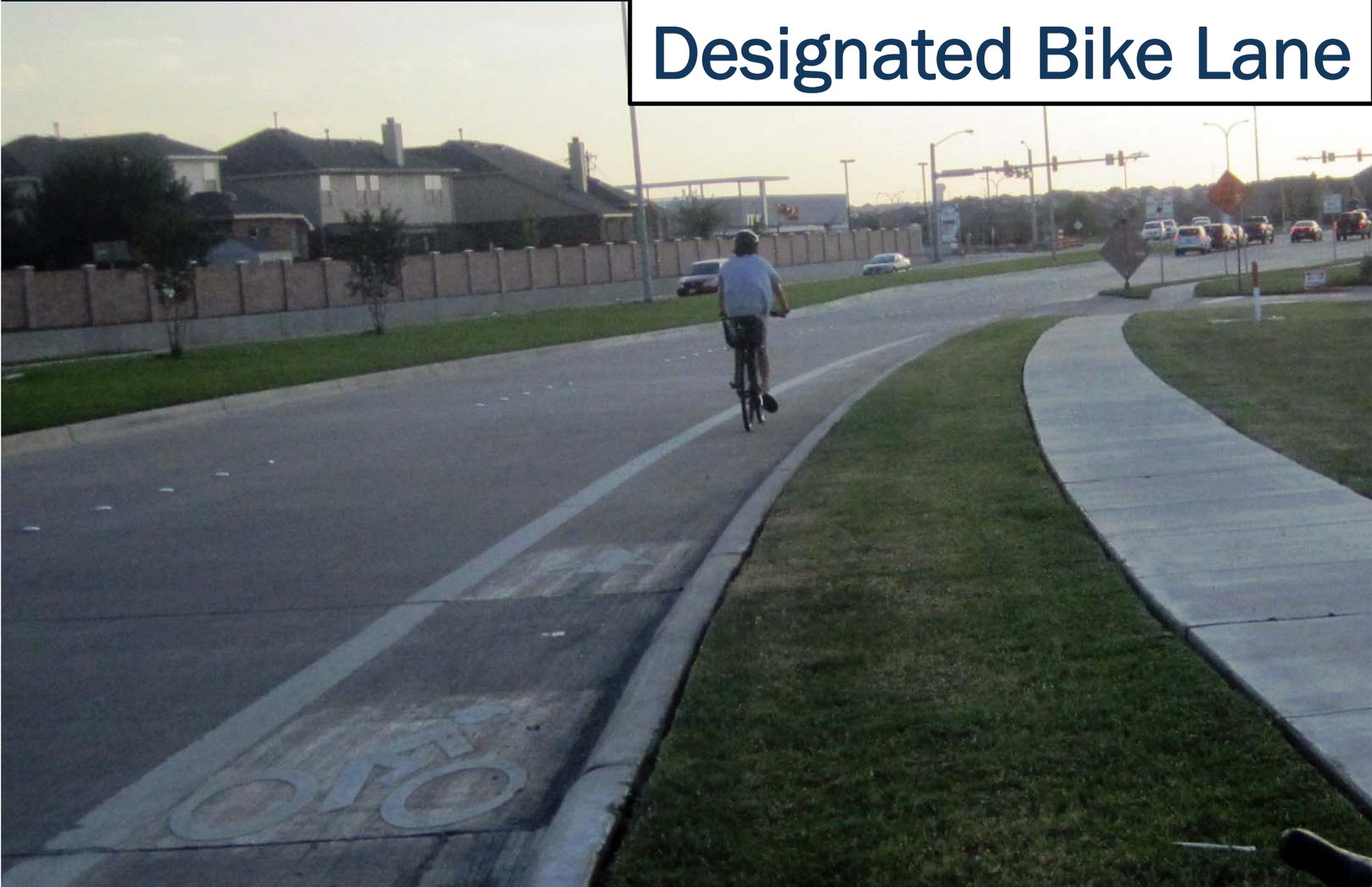
# BIKE LANE

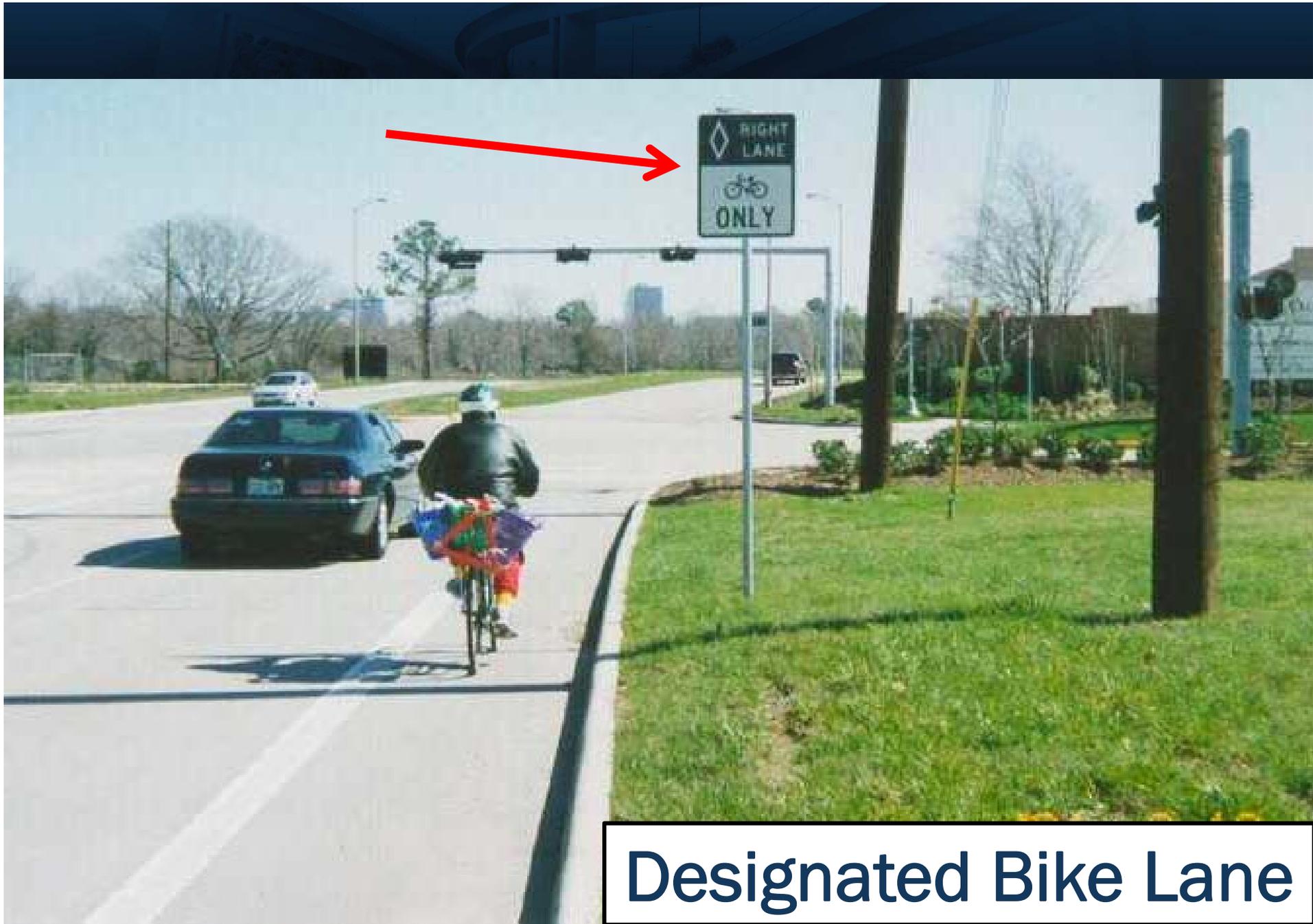
Definition from:

2012 AASHTO Guide for the Development of Bicycle Facilities &  
2011 Texas Manual on Uniform Traffic Control Devices

“A portion of a roadway that has been designated for preferential or exclusive use by bicyclists by pavement markings and, if used, signs. AASHTO added: *It is intended for one-way travel, usually in the same direction as the adjacent traffic lane, unless designated as a contra-flow lane.*”

# Designated Bike Lane





**Designated Bike Lane**

# Designated Bike Lane





← Standard Sign Used to Identify Designated Bike Routes

Signage

Pavement  
Markings



# Designated Bike Lane



**Designated Bike Lane**

# Designated Bike Lane



To be AASHTO compliant, a Bike Lane must be at least 5 feet wide in a curb and gutter section.

2004 12 20



**Designated Bike Lane**



# Designated Bike Lane



# Designated Bike Lane

# Fort Worth, Texas Skyline



# Shared Use Path

## Definition from:

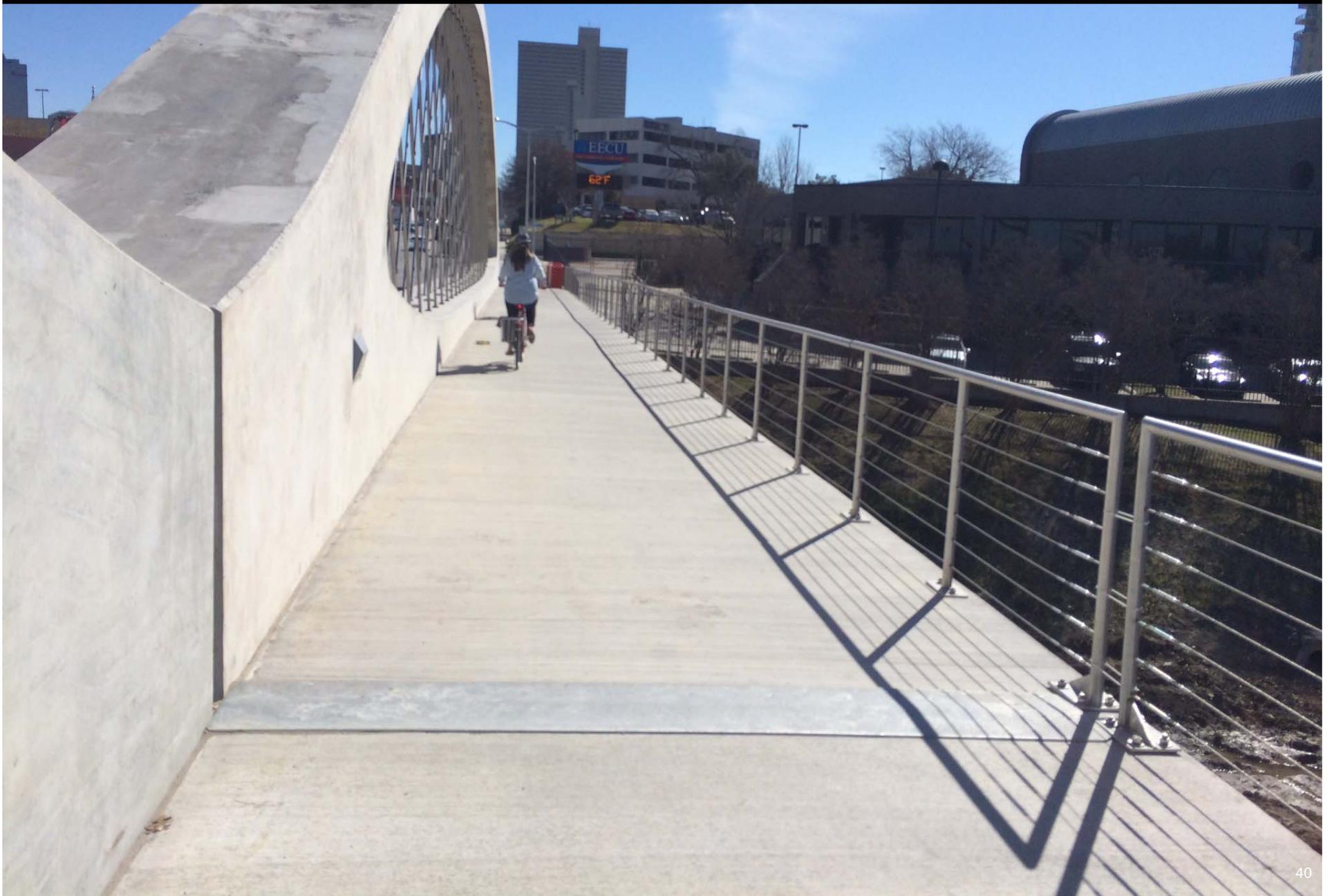
2012 AASHTO Guide for the Development of Bicycle Facilities &  
2011 Texas Manual on Uniform Traffic Control Devices

*“A bikeway outside the traveled way and physically separated from motor vehicle traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way or within an independent alignment. Shared use paths may also be used by pedestrians (including skaters, users of manual and motorized wheelchairs, joggers) and other authorized motorized and non-motorized users. Most shared use paths are designed for two-way travel.”*

# Shared Use Path



# Shared Use Path - 7<sup>th</sup> St. Bridge - Fort Worth





# Shared Use Path

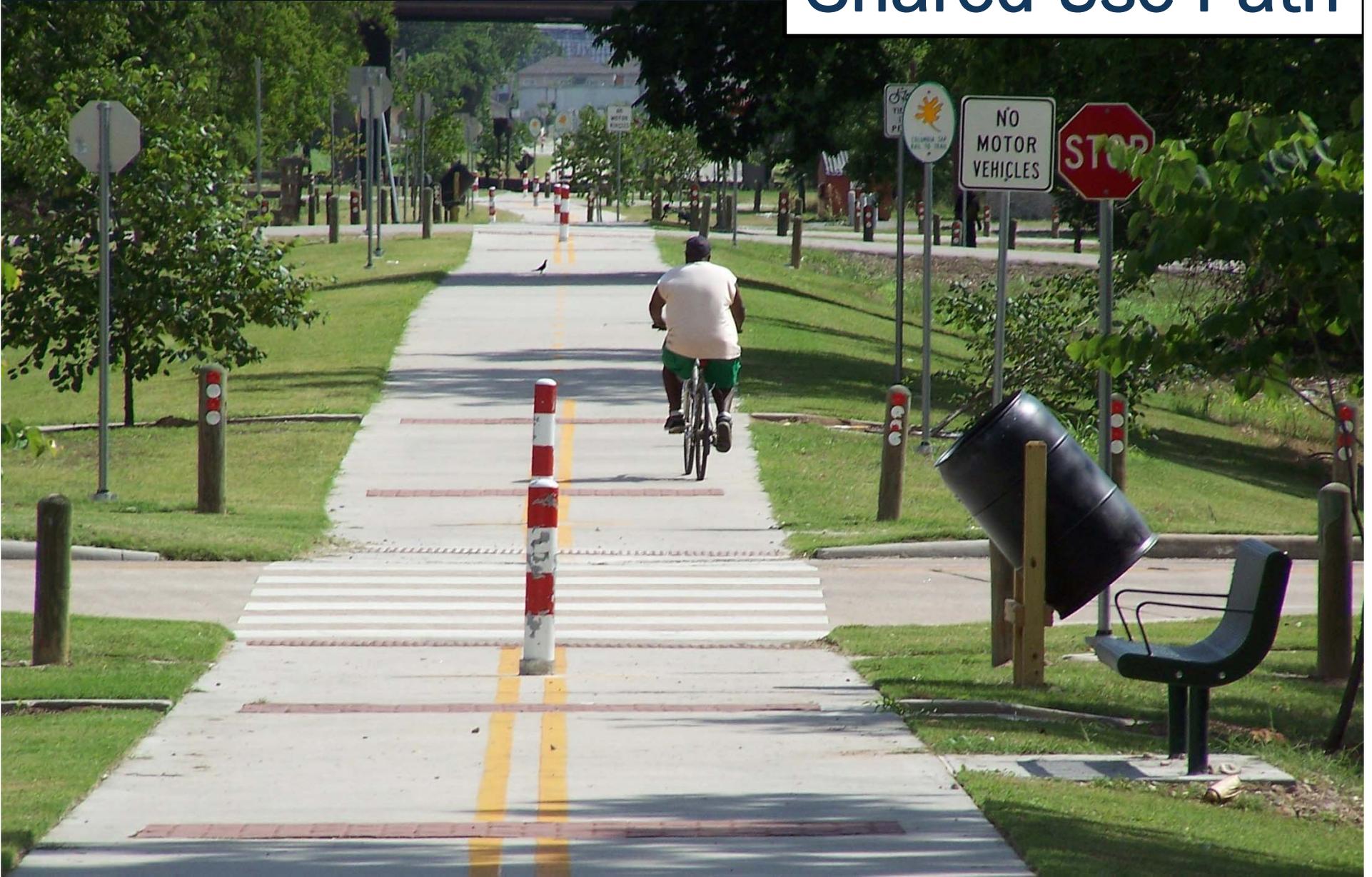
# Shared Use Path



# Shared Use Path



# Shared Use Path



# Shared Use Path



# Shared Use Path





# Shared Use Path

To be AASHTO compliant, the Shared Use Path must be 10 feet wide with a 5-foot (Minimum) Separation From the Roadway

# Cycle Track

## Definition from:

National Association of City Transportation Officials (NACTO)  
2011 Urban Bikeway Design Guide

*“A Cycle Track is an exclusive bicycle facility that has elements of a separated path and on-road bike lane. A cycle Track, while still within the roadway, is physically separated from motor traffic and is distinct from the sidewalk. If at street level, they can be separated from motor traffic by raised medians, on-street parking, or bollards. By separating cyclists from motor traffic, cycle tracks can offer a higher level of security than bike lanes and are attractive to a wider spectrum of the public.”*



# Cycle Track

*“A Cycle Track is an exclusive bicycle facility that has elements of a separated path and on-road bike lane. A cycle Track, while still within the roadway, is physically separated from motor traffic and is distinct from the sidewalk.”*

# Cycle Track



# Cycle Track



# Cycle Track



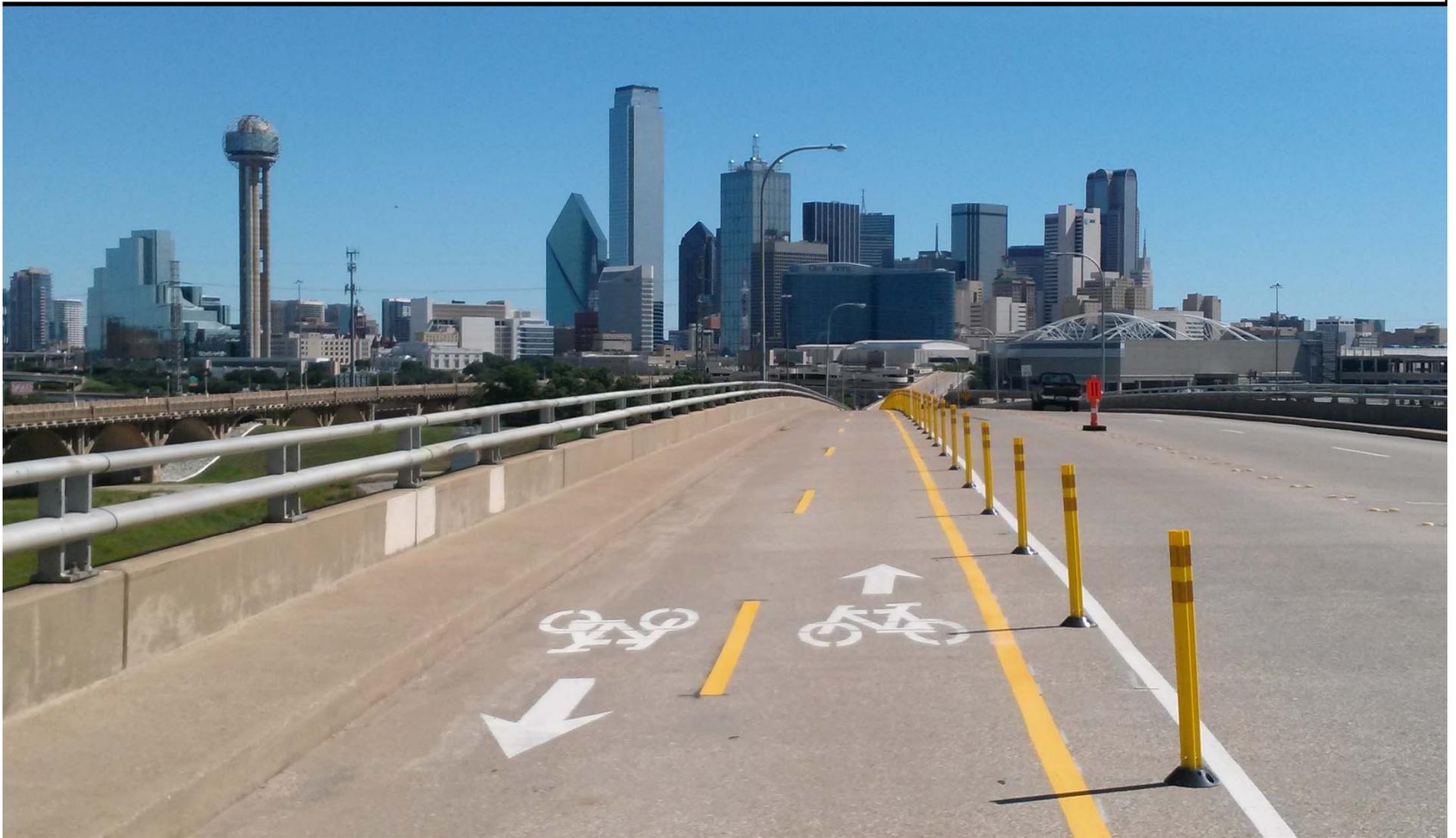
# Cycle Track



# Cycle Track



# Cycle Track – Jefferson Street Bridge - Dallas



# Cycle Track



# Cycle Track



In the following slides I am going to review each bikeway type and show you an image of a bikeway and ask you to register on your keypad “*How comfortable you would feel cycling on that specific bikeway.*” Your response should be one of the following:

A = Very Comfortable

B = Somewhat Comfortable

C = Somewhat Uncomfortable

D = Very Uncomfortable

You will have 20 seconds to provide your response. Let's get started.

# REVIEW



## Shared Roadways

(May or May Not Include Pavement Markings & Signage)

**Shared Roadway** - 2012 AASHTO Definition: *"A roadway that is open to both bicycle and motor vehicle travel."*  
2011 Texas MUTCD Definition: *"A roadway that is officially designated and marked as a bicycle route, but which is open to motor vehicle travel and upon which no bicycle lane is designated."*

A **Signed Shared Roadway** shall include posted bike route signs & may include pavement markings.

# How comfortable would you feel cycling on the “Shared Roadway” shown?

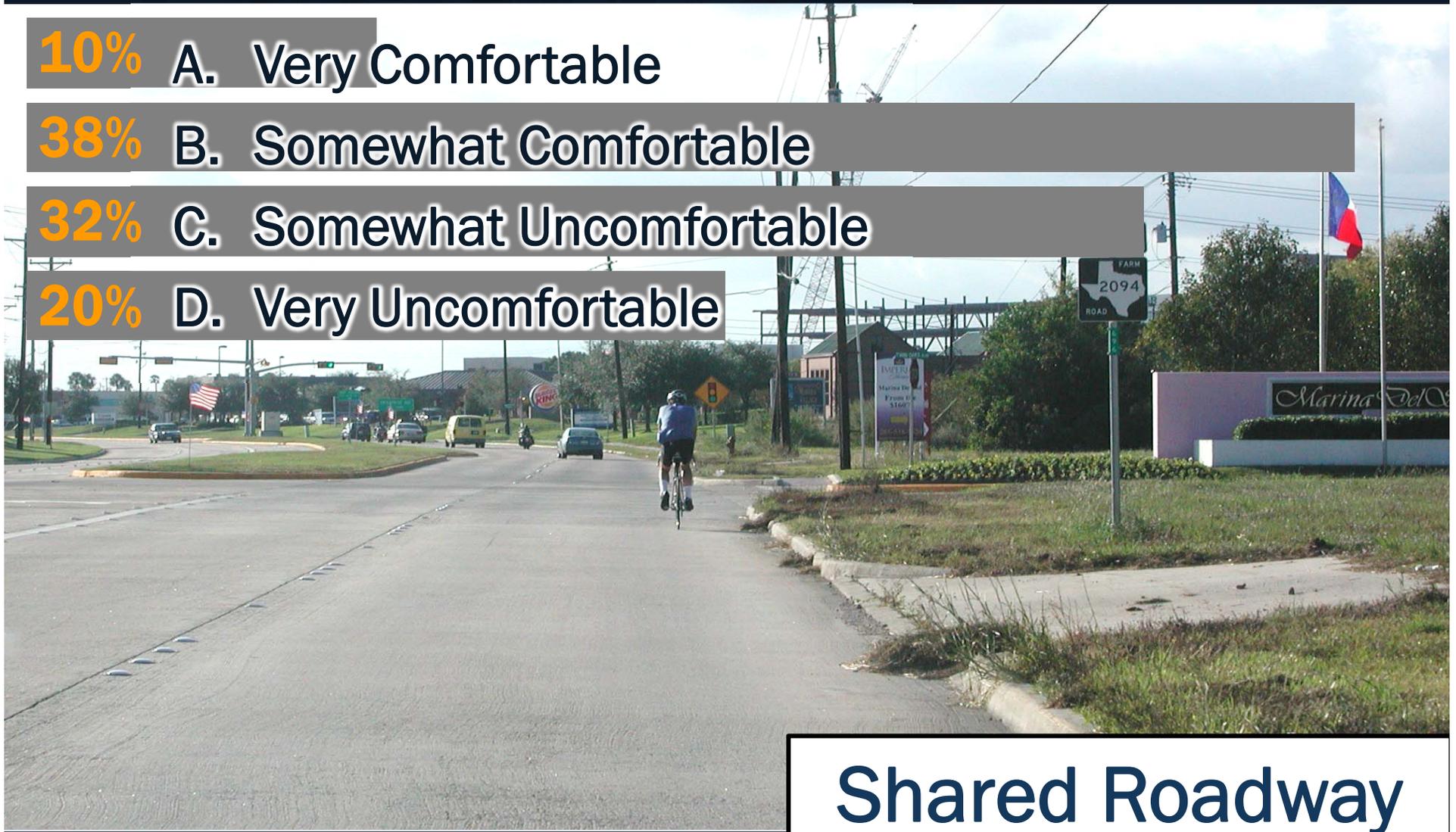
20

10% A. Very Comfortable

38% B. Somewhat Comfortable

32% C. Somewhat Uncomfortable

20% D. Very Uncomfortable



## Shared Roadway

# How comfortable would you feel cycling on the “Signed Shared Roadway” shown?

20

- 28% A. Very Comfortable
- 40% B. Somewhat Comfortable
- 26% C. Somewhat Uncomfortable
- 6% D. Very Uncomfortable



## Signed Shared Roadway

# REVIEW



# How comfortable would you feel cycling on the 4-foot “Shoulder” shown?

20

- 3% A. Very Comfortable
- 16% B. Somewhat Comfortable
- 40% C. Somewhat Uncomfortable
- 41% D. Very Uncomfortable



# How comfortable would you feel cycling on the 10-foot “Shoulder” shown?

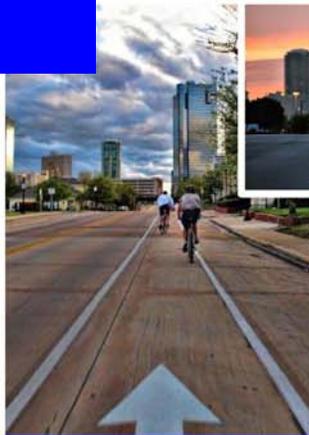
20

- 38% A. Very Comfortable
- 35% B. Somewhat Comfortable
- 24% C. Somewhat Uncomfortable
- 3% D. Very Uncomfortable



Typ. Roadway With A 10-Foot Shoulder  
and Signed as A Bike Route

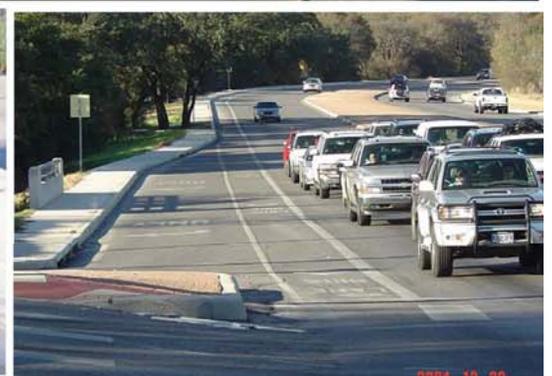
# REVIEW



## Designated Bike Lanes

(Pavement Markings & Signage)

**Bicycle Lane** - 2012 AASHTO and 2011 Texas MUTCD Definitions are the same: *"A portion of a roadway that has been designated for preferential or exclusive use by bicyclists by pavement markings and, if used, signs. AASHTO added: It is intended for one-way travel, usually in the same direction as the adjacent traffic lane, unless designated as a contra-flow lane."*



June 12, 2014

# How comfortable would you feel cycling on the 5-foot “Designated Bike Lane” shown?

20

26% A. Very Comfortable

43% B. Somewhat Comfortable

27% C. Somewhat Uncomfortable

4% D. Very Uncomfortable



Designated Bike Lane

# How comfortable would you feel cycling on the 5-foot “Designated Bike Lane” shown?

20

- 67% A. Very Comfortable
- 30% B. Somewhat Comfortable
- 3% C. Somewhat Uncomfortable
- 0% D. Very Uncomfortable



Designated Bike Lane

# REVIEW



2010/05/20

## Shared Use Path

(Includes Pavement Markings & Signage)

**Shared Use Path** - 2012 AASHTO and 2011 Texas MUTCD Definitions are basically the same: "A bikeway outside the traveled way and physically separated from motor vehicle traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way or within an independent alignment. Shared use paths may also be used by pedestrians (including skaters, users of manual and motorized wheelchairs, joggers) and other authorized motorized and non-motorized users. Most shared use paths are designed for two-way travel."



2010/05/19

# How comfortable would you feel cycling on the two-way off-road "Shared Use Path" shown?

20

- 78%** A. Very Comfortable
- 15%** B. Somewhat Comfortable
- 6%** C. Somewhat Uncomfortable
- 1%** D. Very Uncomfortable



**Shared Use Path**

# How comfortable would you feel cycling on the two-way off-road "Shared Use Path" shown?

20

**74%** A. Very Comfortable

**12%** B. Somewhat Comfortable

**9%** C. Somewhat Uncomfortable

**6%** D. Very Uncomfortable



**Shared Use Path**

# REVIEW



## Cycle Tracks

(Pavement Markings & Signage)

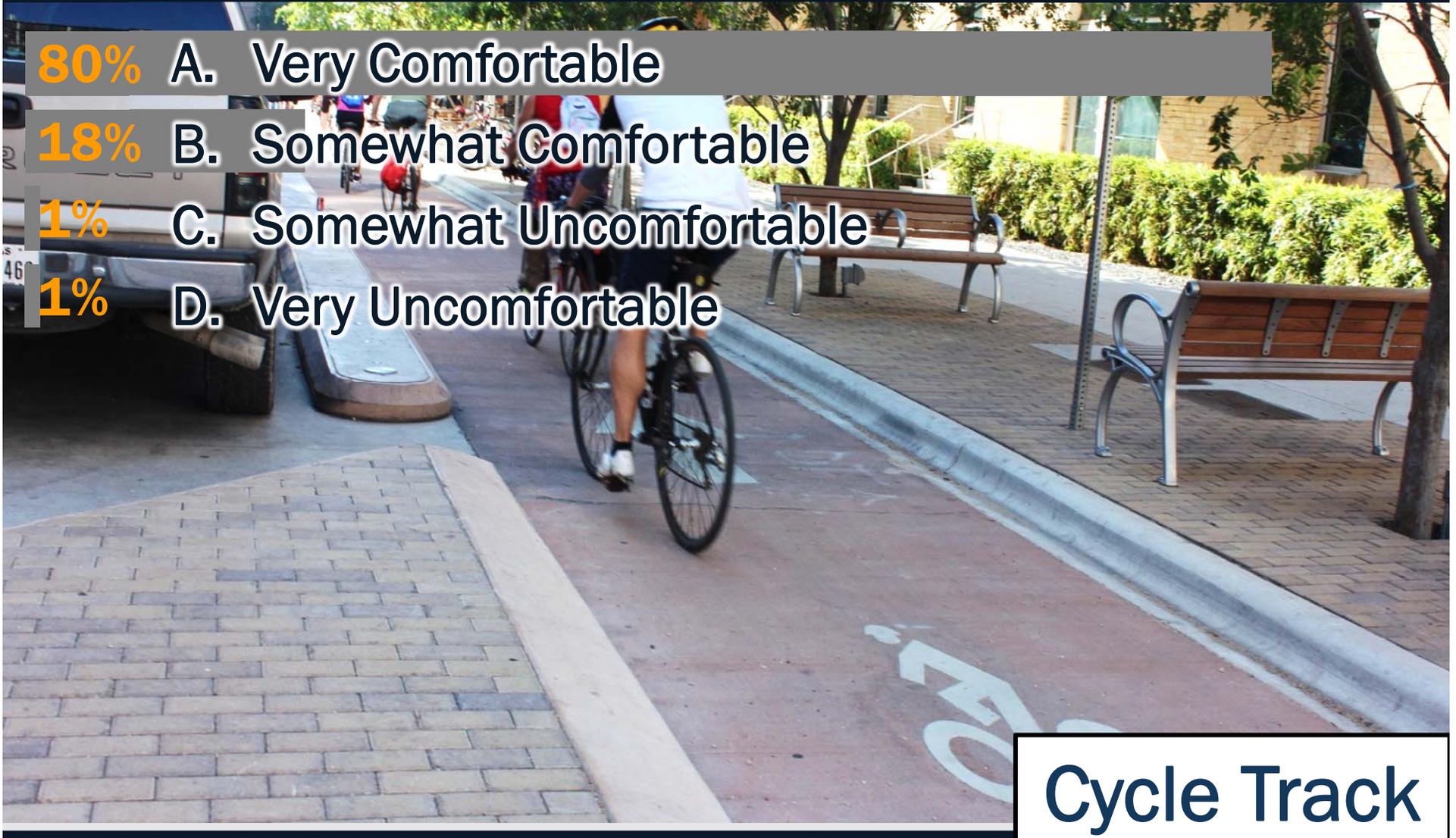
**Cycle Track** - Defined by the National Association of City Transportation Officials (NACTO) 2011 Urban Bikeway Design Guide: "*A Cycle Track is an exclusive bicycle facility that has elements of a separated path and on-road bike lane. A Cycle Track, while still within the roadway, is physically separated from motor traffic and is distinct from the sidewalk.*"



# How comfortable would you feel cycling on the one-way “Cycle Track” shown?

20

- 80% A. Very Comfortable
- 18% B. Somewhat Comfortable
- 1% C. Somewhat Uncomfortable
- 1% D. Very Uncomfortable



**Cycle Track**

# How comfortable would you feel cycling on the two-way “Cycle Track” shown?

20

- 61% A. Very Comfortable
- 29% B. Somewhat Comfortable
- 6% C. Somewhat Uncomfortable
- 4% D. Very Uncomfortable



**Cycle Track**

# Questions

*I want to thank TxDOT's TPP Section for guidance and GIS staff assistance.*

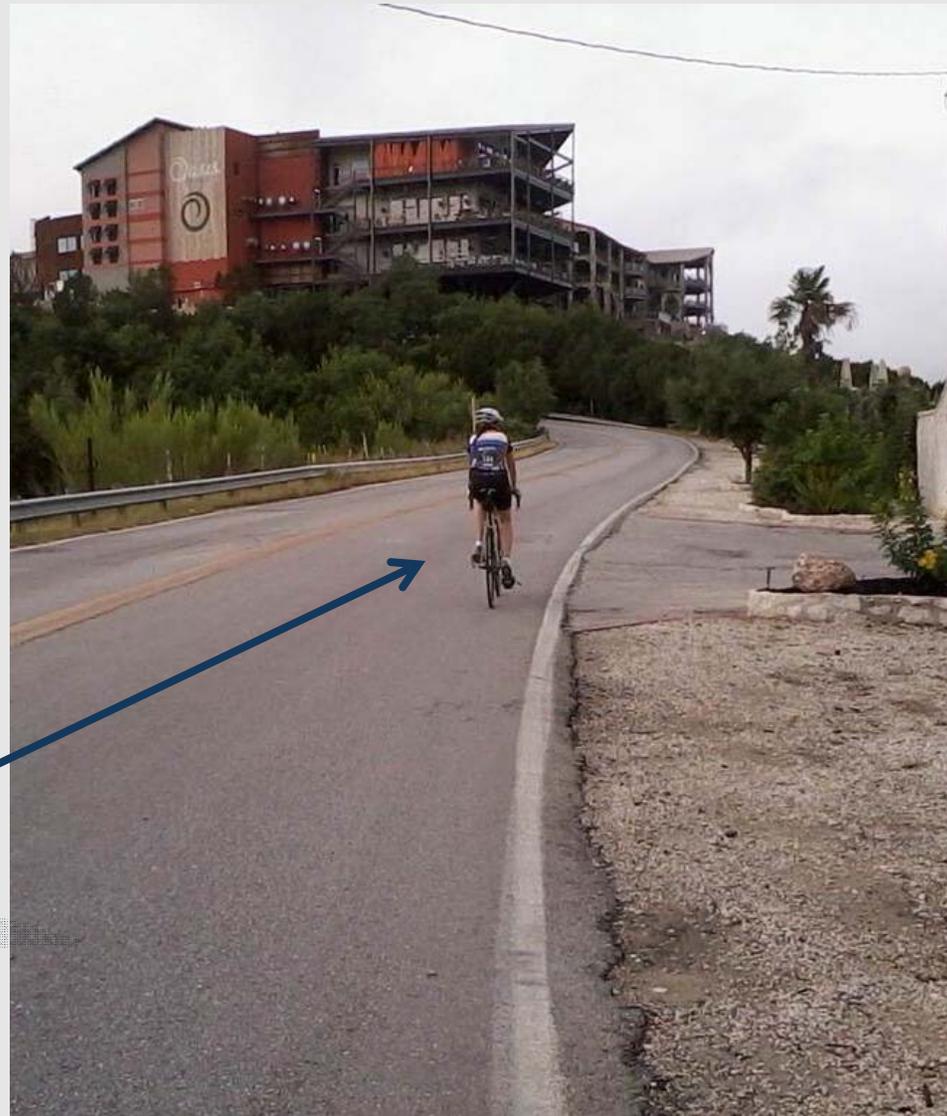
**Special Thanks to:**

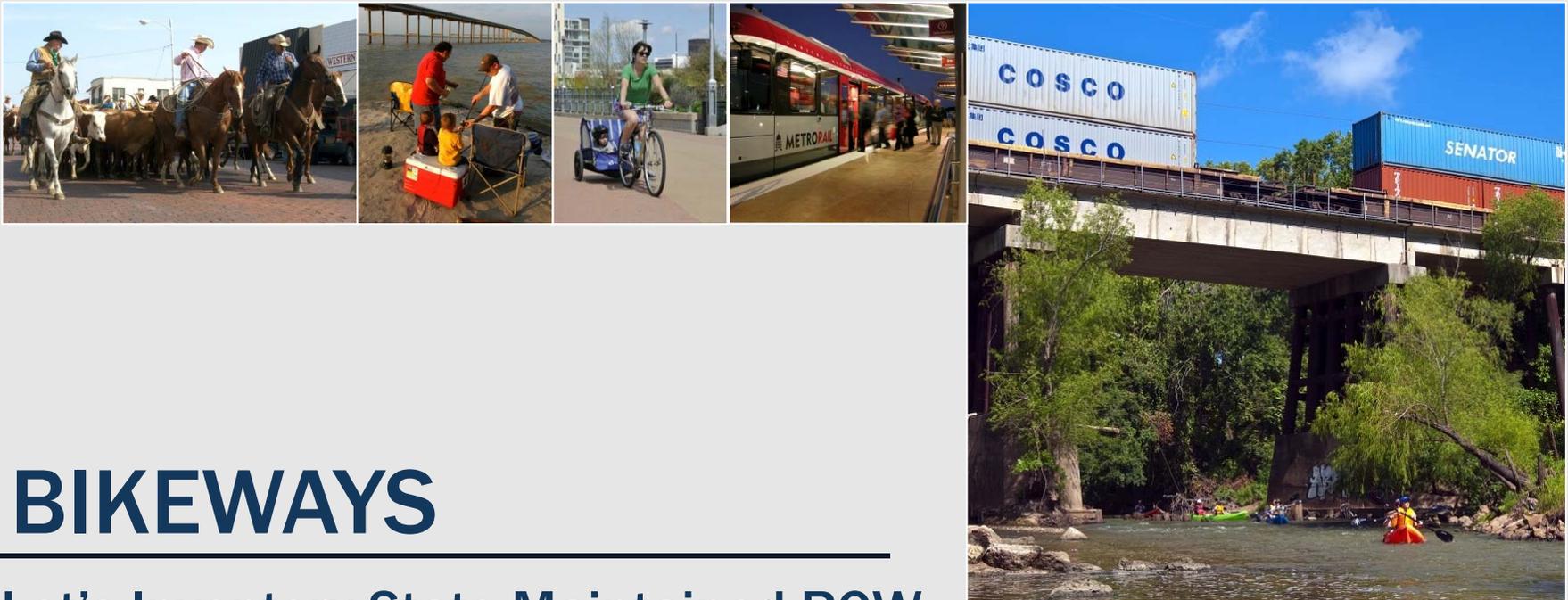
*Michael Chamberlain, TPP  
David Freidenfeld, TPP  
Michael Zugelder, TPP  
Todd Copenhaver, M&P*

**and GIS Technicians :**

*Aja Davidson  
Megan Kennison*

And by the way...  
Aja's a cyclist too.





# BIKEWAYS

Let's Inventory State Maintained ROW

## Bikeway Types (Photographs are for illustrative purpose only)

### Shared Roadway – 2012 AASHTO

Definition: *"A roadway that is open to both bicycle and motor vehicle travel."* 2011 Texas MUTCD Definition: *"A roadway that is officially designated and marked as a bicycle route, but which is open to motor vehicle travel and upon which no bicycle lane is designated."* A **Signed Shared Roadway** shall include posted bike route signs & may include pavement markings.

**Bicycle Lane** - - 2011 AASHTO and 2012 Texas MUTCD Definitions are the same: *"A portion of a roadway that has been designated for preferential or exclusive use by bicyclists by pavement markings and, if used, signs."* AASHTO added: *"It is intended for one-way travel, usually in the same direction as the adjacent traffic lane, unless designated as a contra-flow lane."*

**Shoulder** - 2012 AASHTO Definition: *"The portion of roadway contiguous with the travel way that accommodates stopped vehicles, emergency use, and lateral support for sub base, base, and surface course. Shoulders where paved are often used by bicyclists."* A **Signed Shoulder** shall include posted bike route signs and may include pavement markings.

**Shared Use Path** - 2011 AASHTO and 2012 Texas MUTCD Definitions are basically the same: *"A bikeway outside the traveled way and physically separated from motor vehicle traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way or within an independent alignment. Shared use paths may also be used by pedestrians (including skaters, users of manual and motorized wheelchairs, joggers) and other authorized motorized and non-motorized users. Most shared use paths are designed for two-way travel."*

**Cycle Track** - Defined by the National Association of City Transportation Officials (NACTO) as – *"A Cycle Track is an exclusive bicycle facility that has elements of a separated path and on-road bike lane. A Cycle Track, while still within the roadway, is physically separated from motor traffic and is distinct from the sidewalk."*



# Bikeway Terminology

Transportation planners, engineers, technicians, and managers need to understand the different types of bikeways.

And, use the same bikeway terminology adopted for use by TxDOT and Local Entities

- AASHTO
- TxMUTCD
- NACTO



## 2014 Bikeway Inventory Chart Instructions

<u>Column Name</u>	<u>Instruction</u>
Date Inventory Completed (MM-YY)	Type MM-YY
Completed By (Last, First Name)	Type District Bicycle Coordinator's Name
District (Drop-Down)	Select District Abbreviation From Drop-Down List
County	Type Jurisdictional County Name
Area Office	Type Area Engineers Last, First Name
TxDOT Roadway	Use TxDOT Route ID (6 characters)
From Physical Description	Cross Street Name or Landmark
To Physical Description	Cross Street Name or Landmark
From GIS Description (DFO)	Use Distance From Origin (DFO) Information
To GIS Description (DFO)	Use Distance From Origin (DFO) Information
Bikeway Length (Miles)	Provide length in miles (3 Decimal Places)
Bikeway Type (Drop-Down)	Select Bikeway Types from Drop-Down List
Bikeway Width (Feet)	Provide length in Feet (@ Decimal Places)
Surface Material (Drop-Down)	Select Type From Drop-Down List
Comments	Type Brief Comment, Only If Necessary. Do Not Type Sentences.

**(Note: For clarification of bikeway types, refer to Bikeway Types Description & Images page.)**

## Instructions to fill-out the Bikeway Inventory Chart.

Begin with an inventory of the designated bikeways on state maintained ROW

- Simple Step By Step Instructions
- Consistent Data Format
- Inventory by District & Area Office
- Relate to TPP Roadway Data
- Require Annual Updates

## 2014 Bikeway Inventory By Area Office

**Bikeway Types:** The Definitions here are from the American Association of State Highway and Transportation Officials' (AASHTO) 2012 *Guide for the Development of Bicycle Facilities*, except for the term Cycle Track. The term Cycle Track is being used in other countries and is currently being used by some agencies in the US, however, the term was not defined in AAHTO's 2012 bikeway guide.

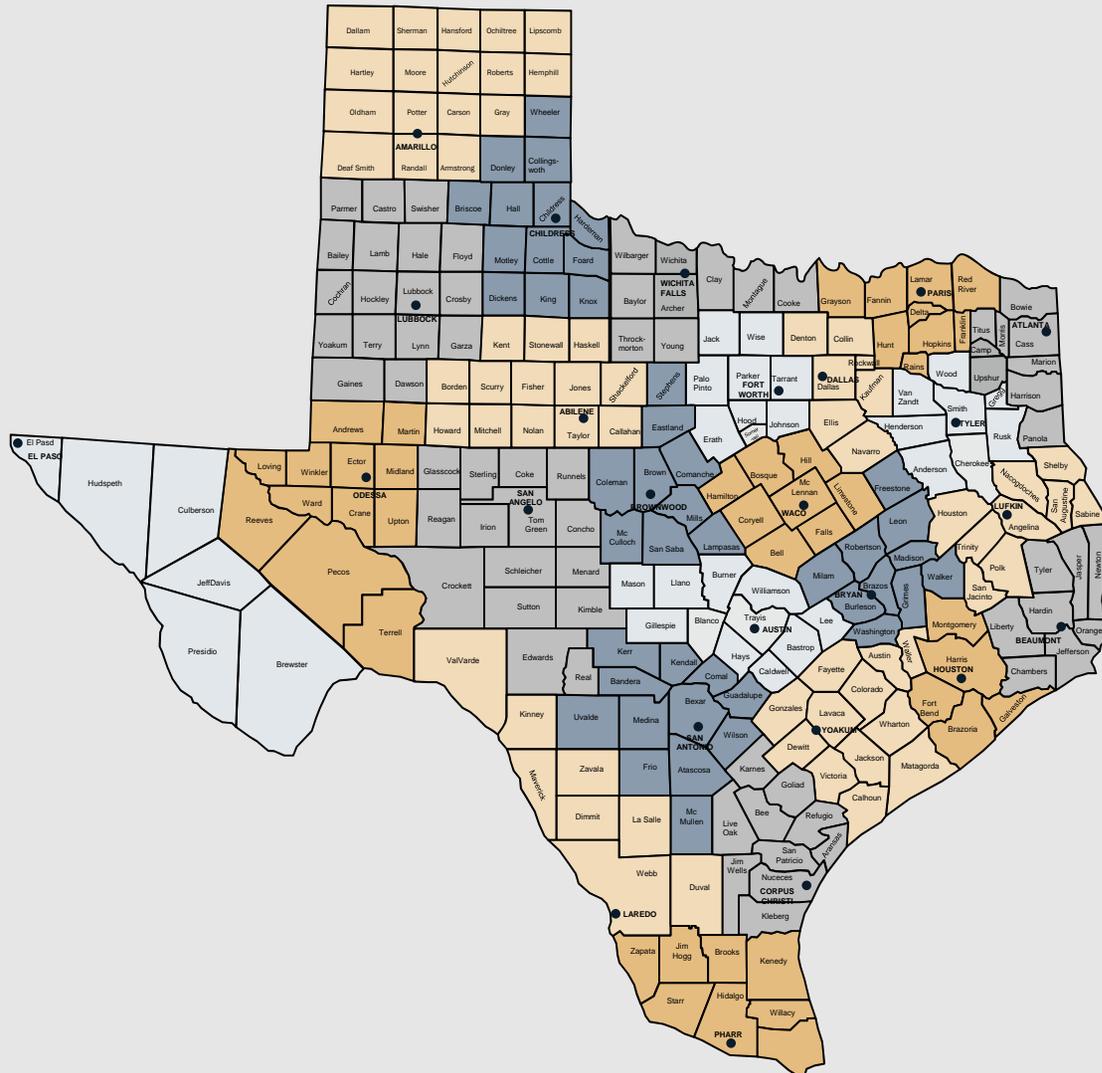
Signed Shared Roadway		Shared Roadway - Defined by AASHTO as a roadway that is open to both bicycle and motor vehicle travel. A "signed" Shared Roadway <u>shall</u> include posted bike route signage and <u>may</u> include pavement markings.												
Bike Lane		Bike Lane - A portion of roadway that has been designated for preferential or exclusive use by bicyclists by pavement markings and, if used, signs. It is intended for one-way travel, usually in the same direction as the adjacent traffic lane, unless designated as a contra-flow lane.												
Signed Shoulder		Shoulder - Defined by AASHTO as the portion of roadway contiguous with the travel way that accommodates stopped vehicles, emergency use, and lateral support for sub base, base, and surface course. Shoulders where paved are often used by bicyclists. A "signed" Shoulder <u>shall</u> include posted bike route signage and <u>may</u> include pavement markings.												
Shared Use Path		Shared Use Path - A bikeway physically separated from motor vehicle traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way. Shared use paths <u>may</u> also be used by pedestrians, skaters, wheelchair users, joggers, and other non-motorized users. Most shared use paths are designed for two-way travel.												
Cycle Track		Cycle Track - Is defined by the National Association of City Transportation Officials (NACTO) as follows: A Cycle Track is an exclusive bicycle facility that is a combination of a shared use path and on-road bike lane. A Cycle Track, while still within the roadway, is physically separated from motor traffic and is distinct from the sidewalk.												
Date Inventory Completed	Completed By (Last, First Name)	District (Drop-Down)	County	Area Office	TxDOT Roadway (Use TxDOT Route ID)	From Physical Description	To Physical Description	From GIS Description (DFO)	To GIS Description (DFO)	Length (Miles)	Bikeway Type (Drop-Down)	Bikeway Width (Feet)	Surface Material (Drop-Down)	Comments
May-14	Jacob, Maurice	BRY	Freestone	Huntsville										Freestone County does not have any signed bicycle paths in our county or the State Park.
May-14	Jacob, Maurice	BRY	Washington	Brenham										After checking with my maintenance sections to make sure, we do not have any bicycle facilities.
May-14	Jacob, Maurice	BRY	Grimes	Bryan										After checking with my maintenance sections to make sure, we do not have any bicycle facilities.
May-14	Jacob, Maurice	BRY	Burleson	Brenham										After checking with my maintenance sections to make sure, we do not have any bicycle facilities.
May-14	Jacob, Maurice	BRY	Madison	Huntsville										There are no such facilities in Madison County
May-14	Jacob, Maurice	BRY	Walker	Huntsville										None in Walker County
May-14	Jacob, Maurice	BRY	Leon	Huntsville										
May-14	Jacob, Maurice	BRY	Milam	Brenham										After checking with my maintenance sections to make sure, we do not have any bicycle facilities.
May-14	Jacob, Maurice	BRY	Brazos	Bryan	FM 2154	ROW of FM 2154	BS6-R			1.330	Bike Lane	5.00	Asphalt	The bikeway continues along Geworge Bush on College Station Streets past BS6-R to Holleman Drive
May-14	Jacob, Maurice	BRY	Robertson	Bryan										Robertson County has none
May-14	Jacob, Maurice	BRY	Grimes	Bryan										None in Grimes County
May-14	Jacob, Maurice	BRY	Freestone	Huntsville										Freestone County does not have any signed bicycle paths in our county or the State Park.
May-14	Jacob, Maurice	BRY	Washington	Brenham										After checking with my maintenance sections to make sure, we do not have any bicycle facilities.

Thank you Maury Jacob,  
Bryan District Bicycle Coordinator

# Next Steps

1. Received Inventory from District Bicycle Coordinators
2. Map Bikeway Data Received from District Bicycle Coordinators
3. Link Bikeway Data to TxDOT Statewide Roadway Planning Data
4. Create Phase 2 Tyler District Demonstration Project
  - Interactive map with pop-up box to provide roadway data
5. Test Demonstration Project

# TxDOT Districts



If you **BUILD BIKEWAYS**,  
they will come...

...please make **SAFETY** your  
planning priority

Thank you

Teri Kaplan  
Bicycle and Pedestrian Coordinator  
TxDOT-Public Transportation Division  
[Teri.Kaplan@txdot.gov](mailto:Teri.Kaplan@txdot.gov)  
(512) 374-5235