



VISION ZERO

City of Austin and TxDOT



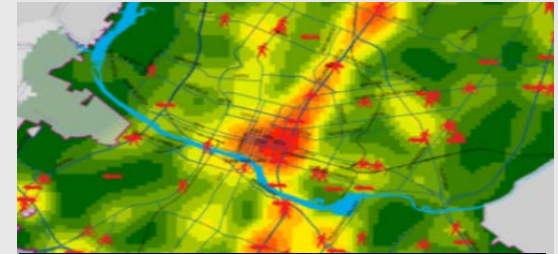
Who was involved in Vision Zero from TxDOT?:

- James Bailey
- Will Bozeman
- Bonnie Lister
- Jude Schexnyder
- Lisa Johnson

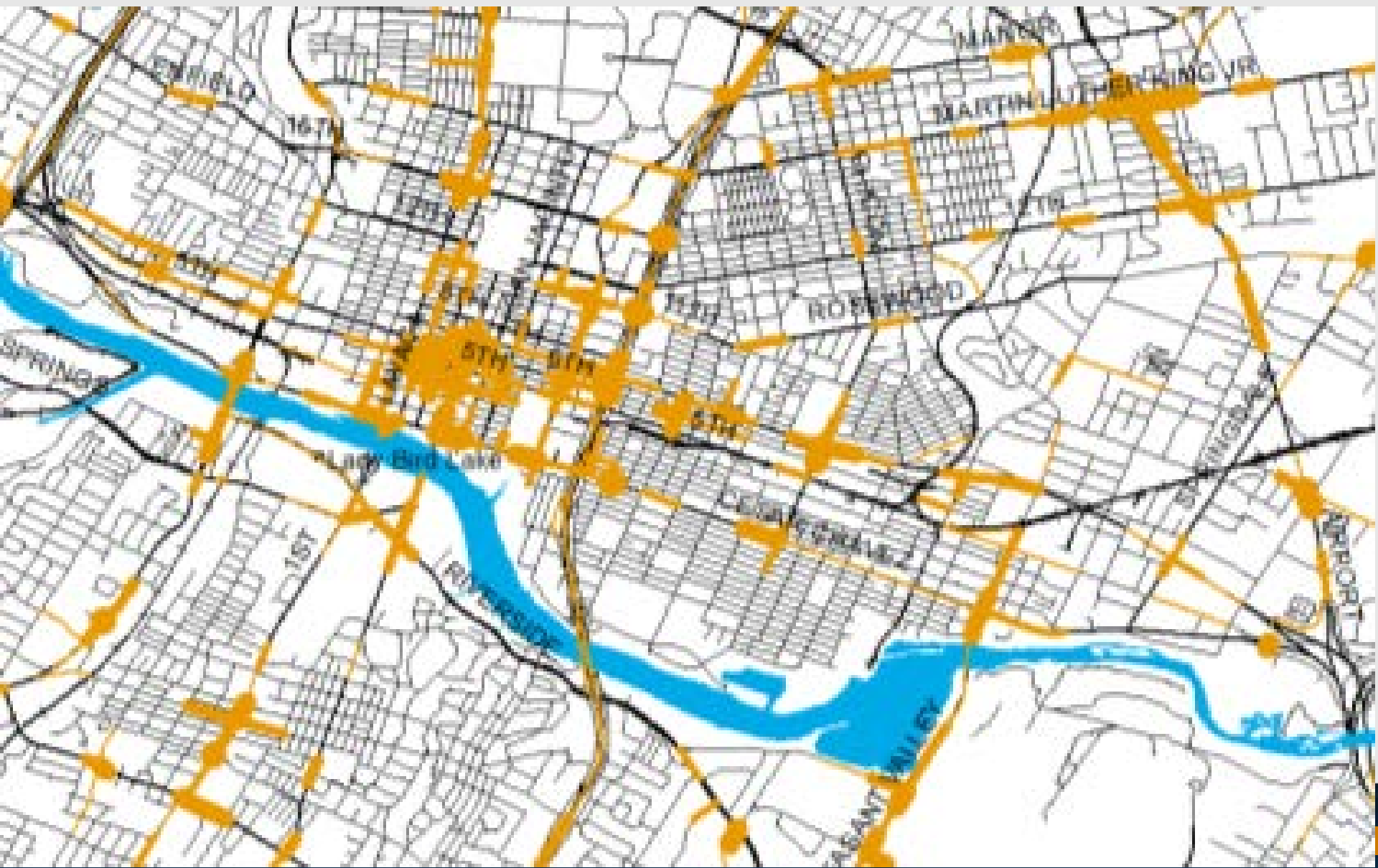


City of Austin Vision Zero Actions:

1. **EVALUATION:** Collect, analyze, communicate & share data that documents fatal & incapacitating crashes & top contributing factors. (TxDOT Key Actions)
2. **ENFORCEMENT:** Strengthen the ability to focus enforcement on hotspot locations of crashes resulting in deaths or incapacitating injuries.
3. **ENGINEERING:** Bolster key initiatives for which Complete Street Design, Traffic Engineering, & Transportation Planning can prevent deadly or incapacitating collisions. (TxDOT Key Actions)
4. **EDUCATION:** Create a targeted, branded Vision Zero education & media campaign raising awareness of the severity of the problem & solutions, including behavior changes.
5. **POLICY:** Policy changes will be necessary to support many of the actions & bolster the work already underway.



1. Evaluation



Evaluation Actions involving TxDOT:

DEVELOP better analytical tools and metrics:

Integrate state and local tools into a common crash analysis tool that can identify and report on crash patterns and trends across the region, as well as along a roadway and within or at an intersection and automatically generate collision diagrams. (Vision Zero Key Action1)

APPLY existing data to focus resources:

Incorporate TXDOT datasets to analyze, map, and/or improve for a better understanding of factors contributing to fatal and serious injury crashes. (Vision Zero Key Action 6)

Action: TxDOT will help COA get access and training to state CRIS database and mapping tools.

Crash Records Information System (CRIS)

- TxDOT is responsible for the collection and analysis of crash data submitted by law enforcement on form [CR-3, Texas Peace Officer's Crash Report](#). We maintain a statewide automated database for all reported motor vehicle traffic crashes received by TxDOT.
- Summary reports of various data collected from reportable motor vehicle traffic crashes are published annually. The previous year's data are published by June of the following year. These Texas Motor Vehicle Crash Statistics reports are [available for download](#). Statistics contained in these reports are generated from data provided by TxDOT's Crash Records Information System (CRIS) ®.
- City of Austin can have access to CRIS.

Fatalities & Contributing Factors Statewide



Fatalities Highlights

On-System Only - 2016

Fatalities by District

		YTD-LY	YTD	% Change	
Metro	Austin	66	54	-18%	●
	Dallas	67	101	51%	●
	Ft. Worth	62	44	-29%	●
	Houston	95	123	29%	●
	San Antonio	51	60	18%	●
Urban	Beaumont	27	29	7%	●
	Bryan	28	26	-7%	●
	Corpus Christi	27	21	-22%	●
	El Paso	20	22	10%	●
	Laredo	18	17	-6%	●
	Lubbock	31	19	-39%	●
	Pharr	28	32	14%	●
	Tyler	42	27	-36%	●
Rural	Waco	31	21	-32%	●
	Abilene	14	9	-36%	●
	Amarillo	26	15	-42%	●
	Atlanta	24	18	-25%	●
	Brownwood	10	9	-10%	●
	Childress	3	5	67%	●
	Lufkin	29	30	3%	●
	Odessa	60	28	-53%	●
	Paris	27	23	-15%	●
	San Angelo	25	10	-60%	●
	Wichita Falls	7	7	0%	-
	Yoakum	26	18	-31%	●
Statewide		844	768	-9%	●

Fatalities by Category

<u>Unrestrained Occupant</u>	<u>DUI - ALL</u>	<u>Alcohol Related</u>
YTD = 210	YTD = 191	YTD = 166
YTD - LY= 226	YTD - LY= 307	YTD - LY= 234
% Change = -7.1%	% Change = -37.8%	% Change = -29.1%
% of Total= 27.3%	% of Total= 24.9%	% of Total= 21.6%
<u>Single Vehicle - ROR</u>	<u>Pedestrians</u>	<u>Pedalcyclists</u>
YTD = 262	YTD = 114	YTD = 12
YTD - LY= 290	YTD - LY= 106	YTD - LY= 7
% Change = -9.7%	% Change = 7.5%	% Change = 71.4%
% of Total= 34.1%	% of Total= 14.8%	% of Total= 1.6%
<u>Distracted Driver</u>	<u>Work Zones</u>	<u>Rural Areas</u>
YTD = 103	YTD = 39	YTD = 420
YTD - LY= 125	YTD - LY= 43	YTD - LY= 516
% Change = -17.6%	% Change = -9.3%	% Change = -18.6%
% of Total= 13.4%	% of Total= 5.1%	% of Total= 54.7%
<u>Intersection Related</u>	<u>Head-On</u>	<u>Motorcyclists</u>
YTD = 152	YTD = 159	YTD = 73
YTD - LY= 173	YTD - LY= 174	YTD - LY= 79
% Change = -12.1%	% Change = -8.6%	% Change = -7.6%
% of Total= 19.8%	% of Total= 20.7%	% of Total= 9.5%
<u>Speed Related</u>	<u>DUI-Alcohol</u>	
YTD = 133	YTD = 156	
YTD - LY= 172	YTD - LY= 217	
% Change = -22.7%	% Change = -28.1%	
% of Total= 17.3%	% of Total= 20.3%	

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Contributing Factors and Conditions (examples)

3 = Backed without Safety

4 = Changed Lane when Unsafe

14 = Disabled in Traffic Lane

15 = Disregard Stop and Go Signal

16 = Disregard Stop Sign or Light

17 = Disregard Turn Marks at Intersection

19 = Distraction in Vehicle

20 = Driver Inattention

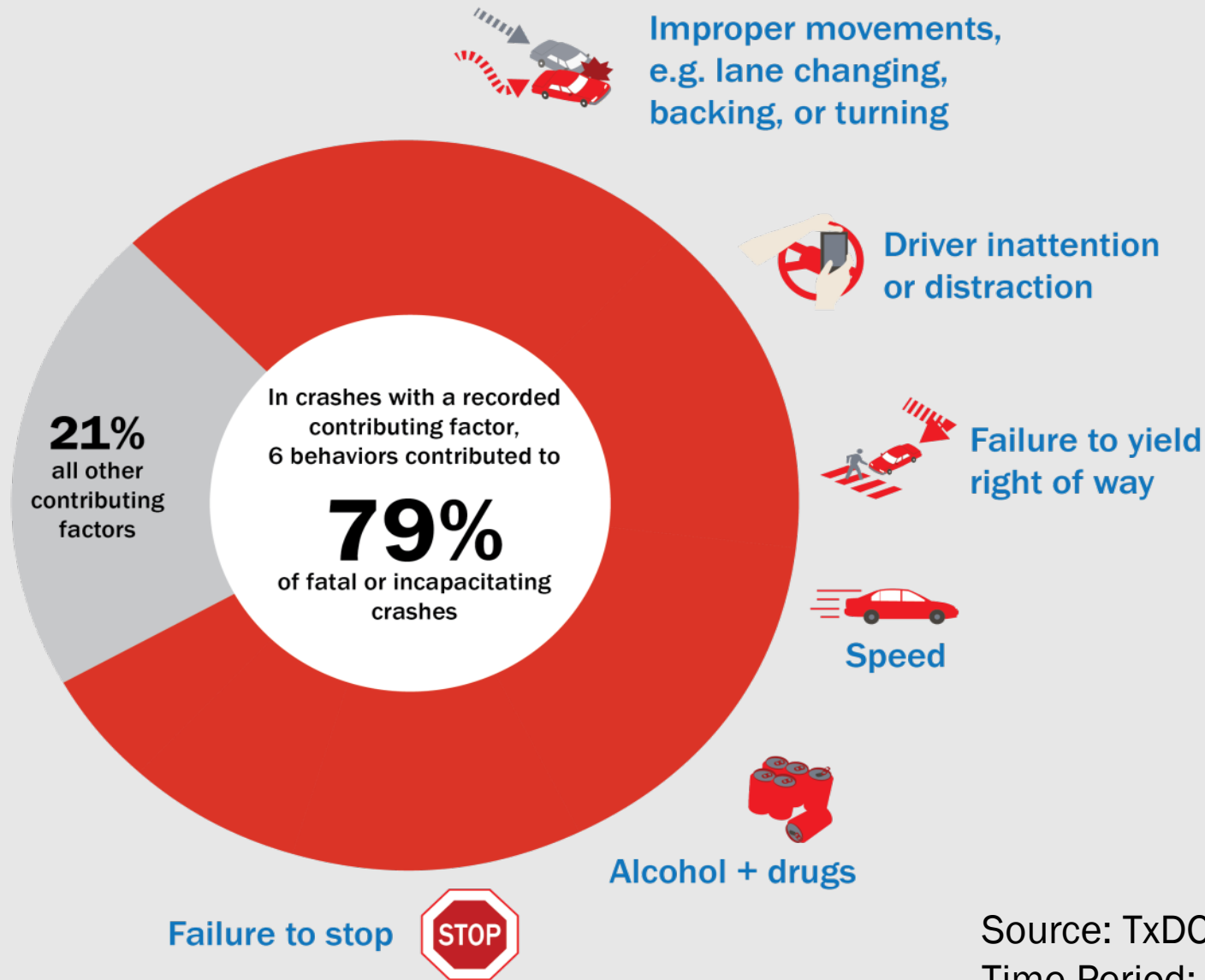
21 = Drove Without Headlights

22 = Failed to Control Speed

23 = Failed to Drive in Single Lane



Focus on Key Dangerous Behaviors



Source: TxDOT crash data
Time Period: 2010-2014

3. Engineering



Complete Street Design, Traffic Engineering, & Transportation Planning

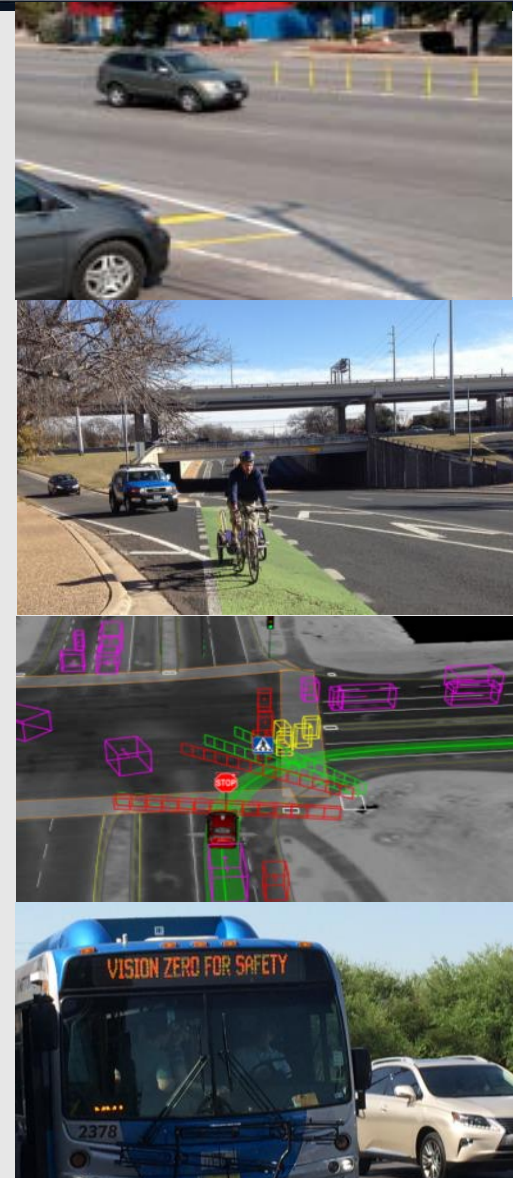
Actions address

Safety
engineering
projects

Implement
Complete Streets

Technology

CapMetro

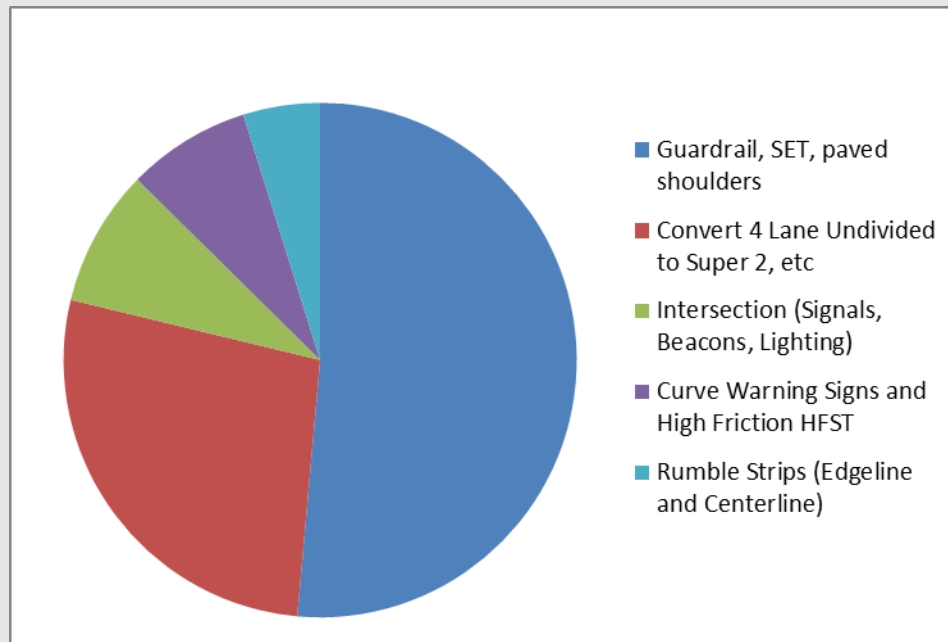


3 Engineering

- Work with CAMPO and TXDOT for funding opportunities for safety improvements. (Vision Zero Key Action 27)
- TxDOT attends City of Austin Fatality Review meetings with ATP and APD to discuss and implement countermeasures.
- Hazard Safety Elimination Program HSIP uses a cost benefit ratio to prioritize projects statewide.
- HSIP is open to projects on non-state highways and state highways in the City of Austin.

2015 Awarded HSIP Breakdown

Guardrail, SET, paved shoulders	\$	9,614,440
Convert 4 Lane Undivided to Super 2, etc	\$	5,113,135
Intersection (Signals, Beacons, Lighting)	\$	1,609,971
Curve Warning Signs and High Friction HFST	\$	1,454,967
Rumble Strips (Edgeline and Centerline)	\$	905,627
TOTAL Austin District 2015	\$	18,698,140



Safety Improvement Projects City of Austin

- Lamar Blvd and Rundberg Lane – Add Raised Median
- Parmer Blvd and Lamar Blvd – Removal of Free Right Turn
- 183 Service Road and Cameron Road – Removal of Free Right turn and Add a Raised Island
- IH 35 Service Road and MLK – Enlargement of Island for Safety
- Slaughter Ln. and Manchaca Rd. – Convert Left Turn Lanes from Single to Double Left Turn Lanes.

Pedestrian and Bicycle Crash Analysis Work

- FHWA Pedestrian and Bicycle Crash Prediction Tool (PBCAT)

- Joan G. Hudson, P.E., Associate Research Engineer

Texas A&M Transportation Institute

- Researchers extracted information on reportable crashes involving pedestrians and bicyclists from the TxDOT CRIS database. Since CRIS does not provide the level of detail needed for bicycle and pedestrian crash analysis, crash narratives were obtained from the police reports (CR-3s). The details found in each CR-3 were entered into a software program called PBCAT, which is recommended in the *2012 AASHTO Guide for the Development of Bicycle Facilities*, the Federal Highway Administration's (FHWA's) ***Bikesafe: Bicycle Countermeasure Selection System***, and the ***FHWA's Pedestrian Safety Guide and Countermeasure Selection System***. Researchers at the University of North Carolina developed the PBCAT software package for FHWA to better understand these bicycle and pedestrian crashes and guide the selection of countermeasures. The data from the CR-3s were manually entered into the PBCAT software and exported to Excel® spreadsheets for further analyses.


Example of Pedestrian Crash Types in PBCAT

INTERSECTION CRASH - TYPICAL PEDESTRIAN ACTION

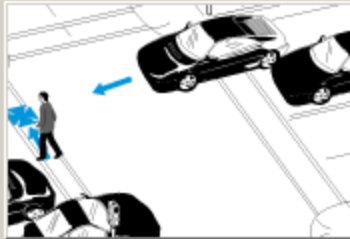
Which of the following best describes the pedestrian action at the time of the crash?

The pedestrian was crossing a driveway intersection on a sidewalk crossing, shared use path, shoulder, or edge of the travel lane.

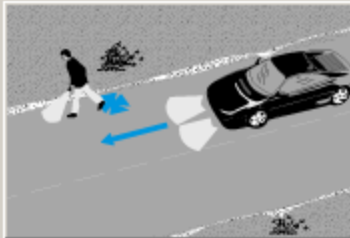
Waiting to Cross



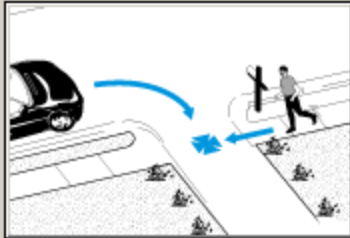
Crossing the Roadway or In the Roadway



Walking Along Roadway



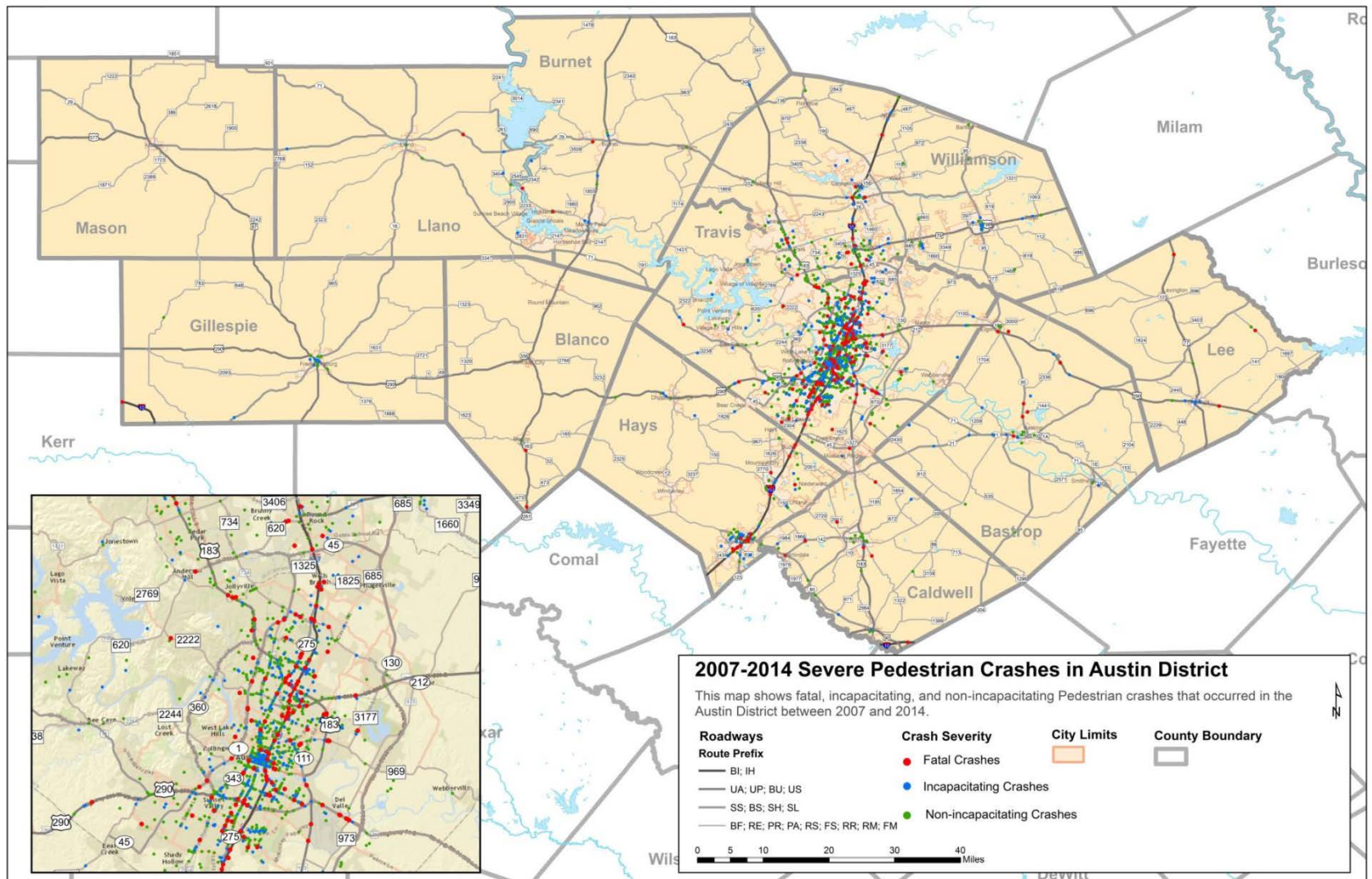
Crossing a Driveway



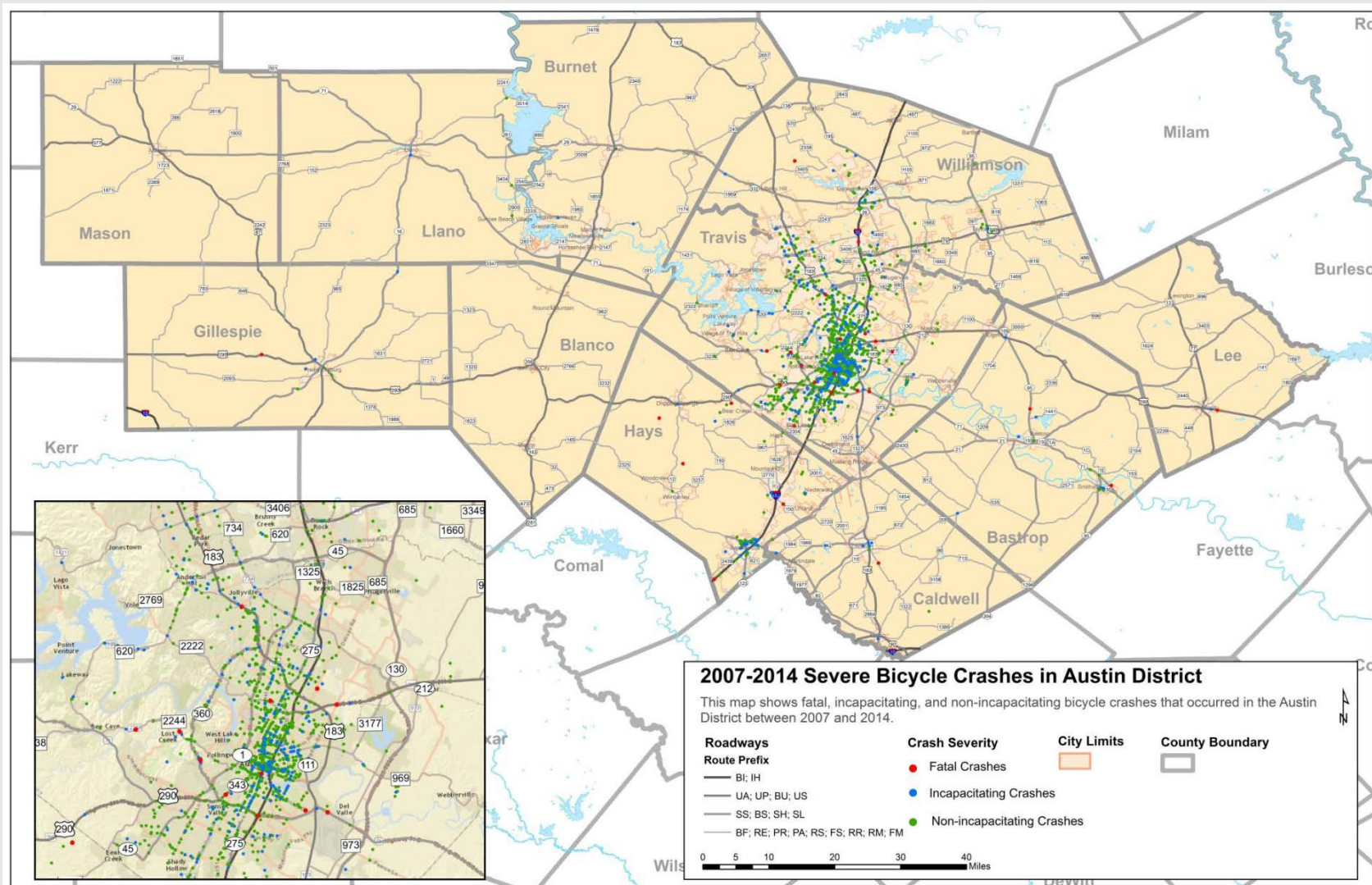
Unknown

Back **Close**

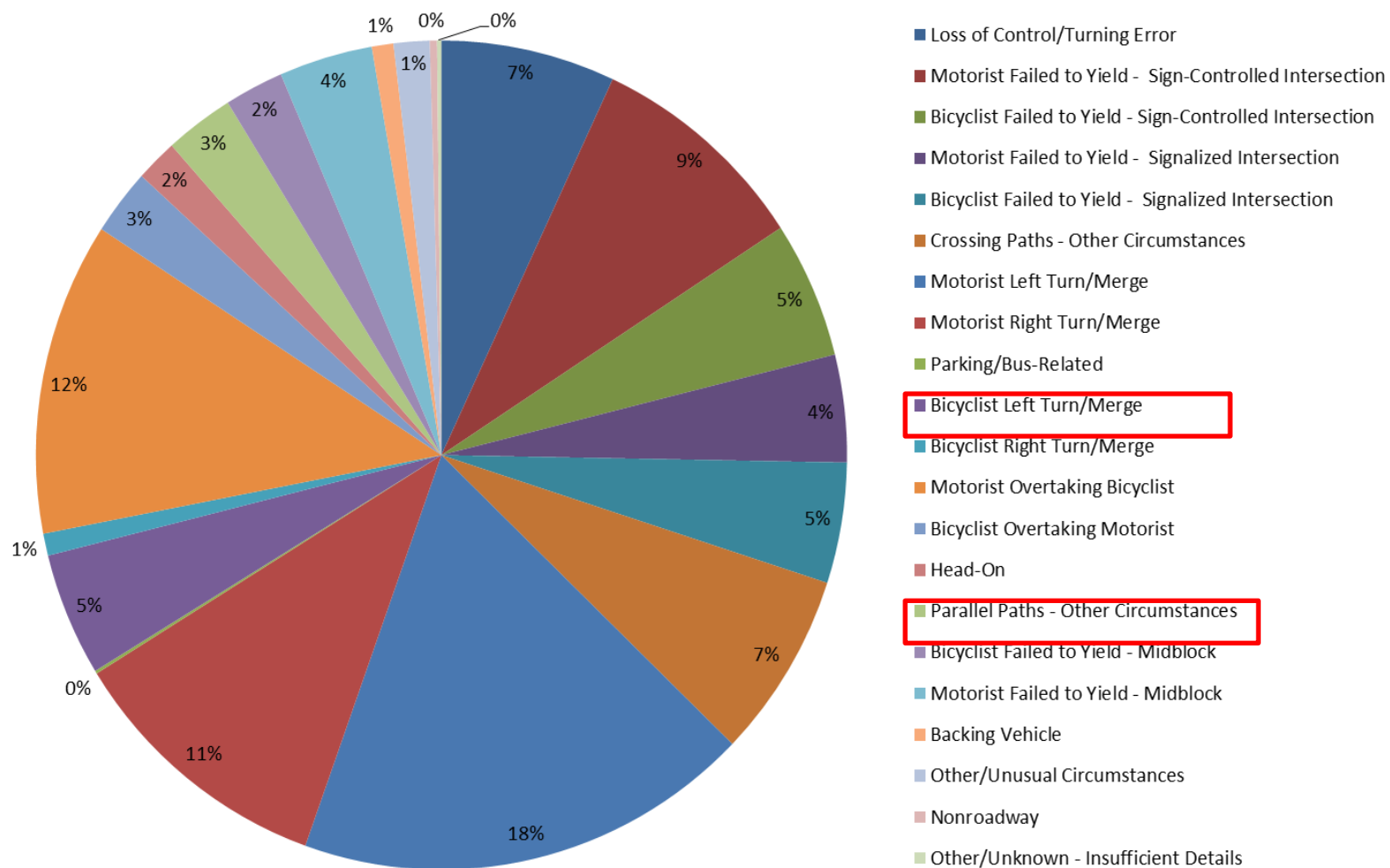
Severe Pedestrian Crashes in Austin District



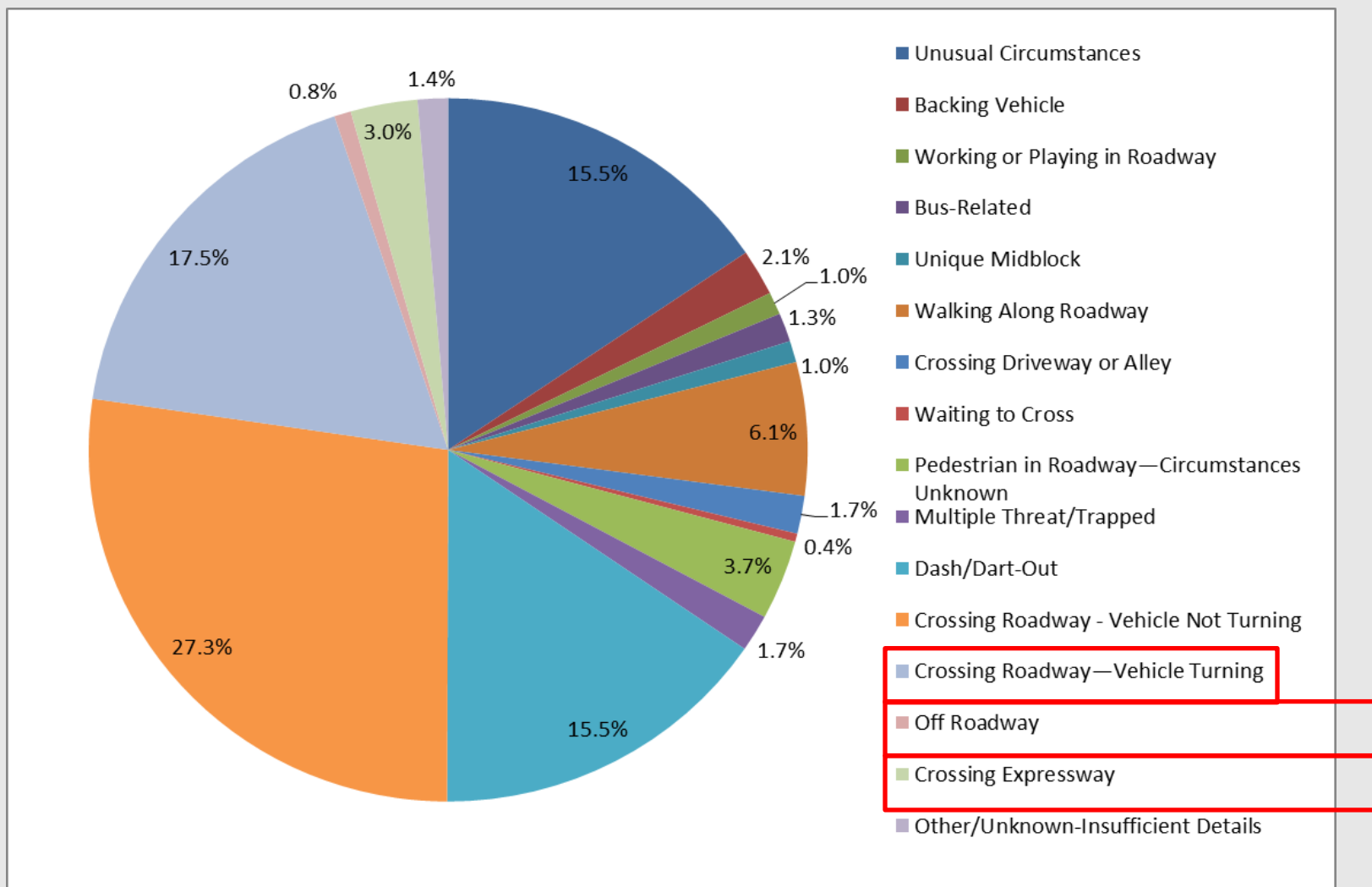
Sever Bicycle Crashes in Austin District



Bicycle crash type



Pedestrian Crash Type



Engineering Countermeasures Examples

- Reduction in curb radius & Curb Ramp Extensions
- No turn on red signs
- Bicycle lanes (ideally, these should be physically separated in some way)
- Colored bike lanes especially in conflict areas
- Clear traffic control signals (Flashing Yellow Arrow)
- Bicycle lanes with clear markings of how to turn
- Adding Paved shoulders & Sidewalks & Curb Ramps
- Improved lighting
- Accessible Pedestrian Signals (APS) & Countdown Timers
- Pedestrian barriers along roadside or sidewalk (such as railings, chains, fences, guardrails, meter post barriers, etc.)

Flashing Yellow Arrow

- 2009 MUTCD standard for signal heads over turn bays
- Safer Left Turns are better for Pedestrians



MUTCD Section 4E.07 Countdown pedestrian displays

- Required for all ped signals except where ped change interval is ≤ 7 sec.
- No specific compliance date for retrofitting existing ped signals (can remain w/o countdown until ped heads replaced)
- May be used even if ped change interval is 7 sec. or less



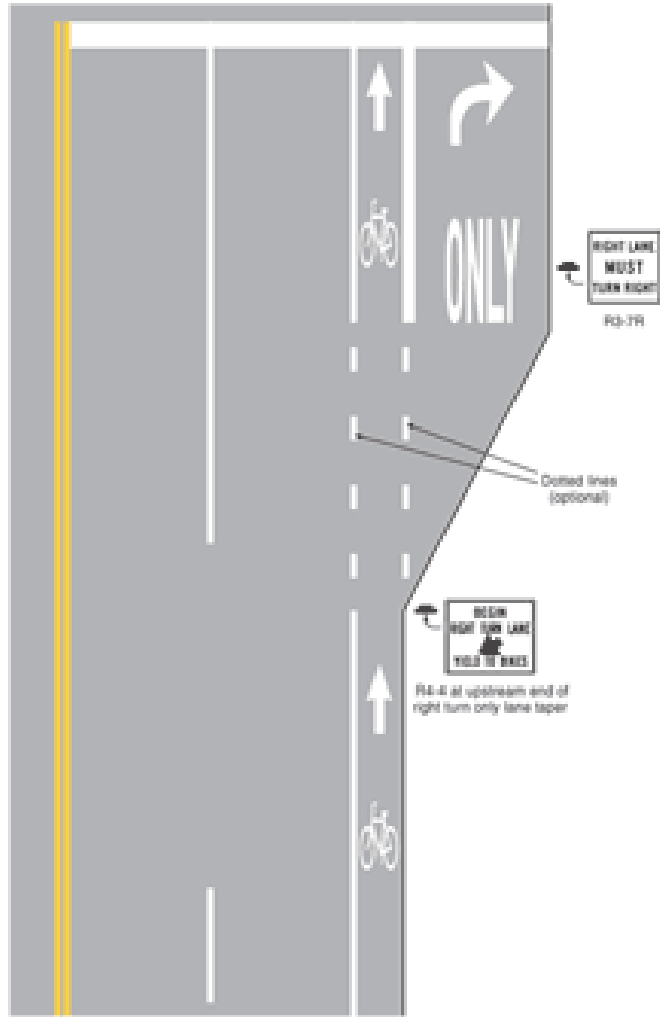
Sections 4E.09 through 4E.13 – APS revised provisions

Design fetures, extended button presses, audible beaconing, special requirements if two buttons must be located < 10 ft apart or on one pole



Road Diet and Bicycle Lanes

Figure 9C-4. Example of Bicycle Lane Treatment at a Right Turn Only Lane



Barrier Separated Bicycle Path

