



**Save a Life™**  
Texas Department of Transportation



# Center for Transportation Safety

*Safety Research and Outreach*

Pedestrian and Bicycle Law Training

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# Introductions

1. Name and agency
2. How long have you been there/in law enforcement?
3. What are your expectations of this course?
  - Is there something specific you are looking to learn more about?

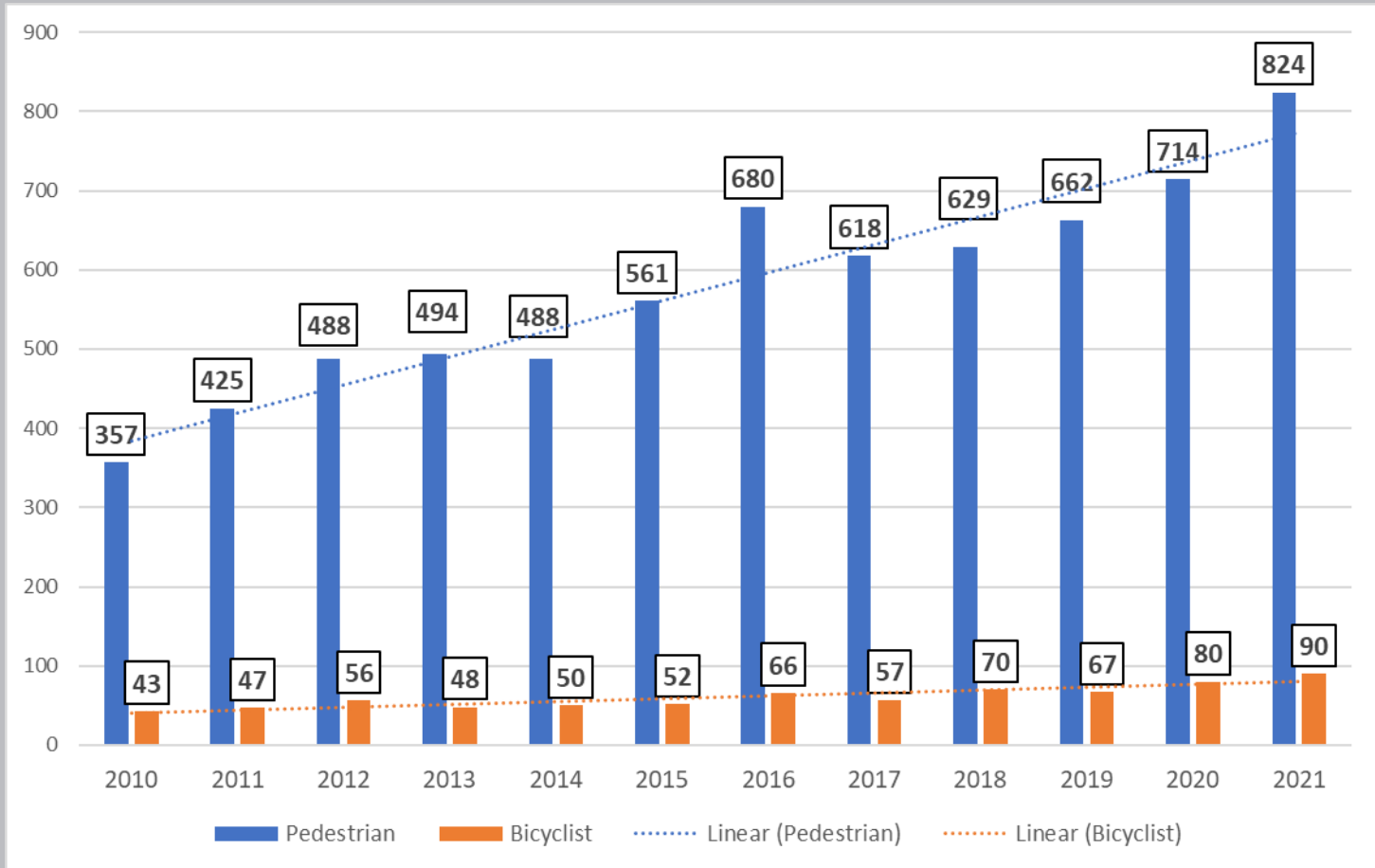


# Course Logistics

- We encourage questions and discussion
- The course is split into two main sections:
  - Section 1
    - Overview/Objectives/Laws
    - Definitions
    - Pedestrian regulations
    - Bicyclist regulations
    - Pedestrian right-of-way
  - Section 2
    - Bicyclist right-of-way
    - Common violations
    - Crash Reporting
    - Prioritizing safety risk
- Pre and post tests
- Evaluations



# Bicycle and Pedestrian Fatal Crashes in Texas







# Course Overview

During this course, we will cover:

- Texas Transportation Code definitions of the rights and responsibilities for bicyclists and pedestrians
- A review of the importance of crash data
- Different bicyclist and pedestrian crash scenarios and how they should be reported
- Importance of enforcement



# Course Objectives

- Motivation to increase enforcement for bicyclist and pedestrian safety
- Knowledge, skills, and abilities to conduct enforcement for bicyclist and pedestrian safety
- Knowledge, skills, and abilities to accurately complete crash reports for bicyclist and pedestrian related crashes





## What the Laws tell us...and what they don't

- There are definite “gray” areas in the law.
- The training is based on our interpretation of the laws.
- The goal of the training is to equip you with as much knowledge of the laws and what they mean.
  - Officer discretion
- Do you already have some questions about gray areas in the laws?





# Sidewalk Definition

The Texas Transportation Code (Sec.541.302(16)) defines a sidewalk as the portion of a street that is:

- A. between a curb or lateral line of a roadway and the adjacent property line; and
- B. intended for pedestrian use.

According to this definition a sidewalk is simply the area intended for pedestrians that is between the curb or lateral line of a road and the property line.

This means that sidewalks do not necessarily have to be paved to be considered a sidewalk.

However, it does need to be “accessible to the pedestrian” (Sec. 552.006)



# Sidewalk Definition





# Crosswalk Definition

According to the Texas Transportation Code (Sec. 541.302(2)) a crosswalk is defined as:



- A. the portion of a roadway, including an intersection, designated as a pedestrian crossing by surface markings, including lines; or
- B. the portion of a roadway at an intersection that is within the connections of the lateral lines of the sidewalks on opposite sides of the highway measured from the curbs or, in the absence of curbs, from the edges of the traversable roadway.





# Crosswalks

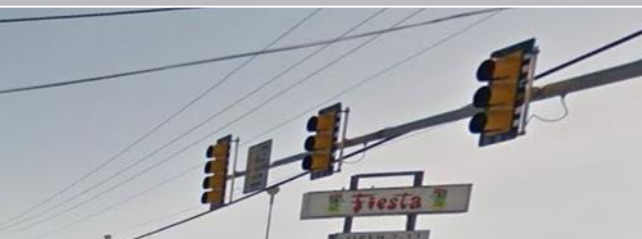


- **All** 4-way intersections have crosswalks on all four legs even if it is not marked with lines.





# Marked Crosswalks



(Images from Google Maps)





# Unmarked Crosswalks



(Image from Google Maps)



# Crosswalk Video







# What about 3-way Intersections?





# Crash Example #1



FACTORS & CONDITIONS	36 Contributing Factors (Investigator's Opinion)					37 Vehicle Defects (Investigator's Opinion)					Environmental and Roadway Conditions						
	Unit #	Contributing		May Have Contrib.		Contributing		May Have Contrib.		38 Weather Cond.	39 Light Cond.	40 Entering Roads	41 Roadway Type	42 Roadway Alignment	43 Surface Condition	44 Traffic Control	
	2	59									2	1	97	2	1	1	11

**Investigator's Narrative Opinion of What Happened**  
(Attach Additional Sheets if Necessary)

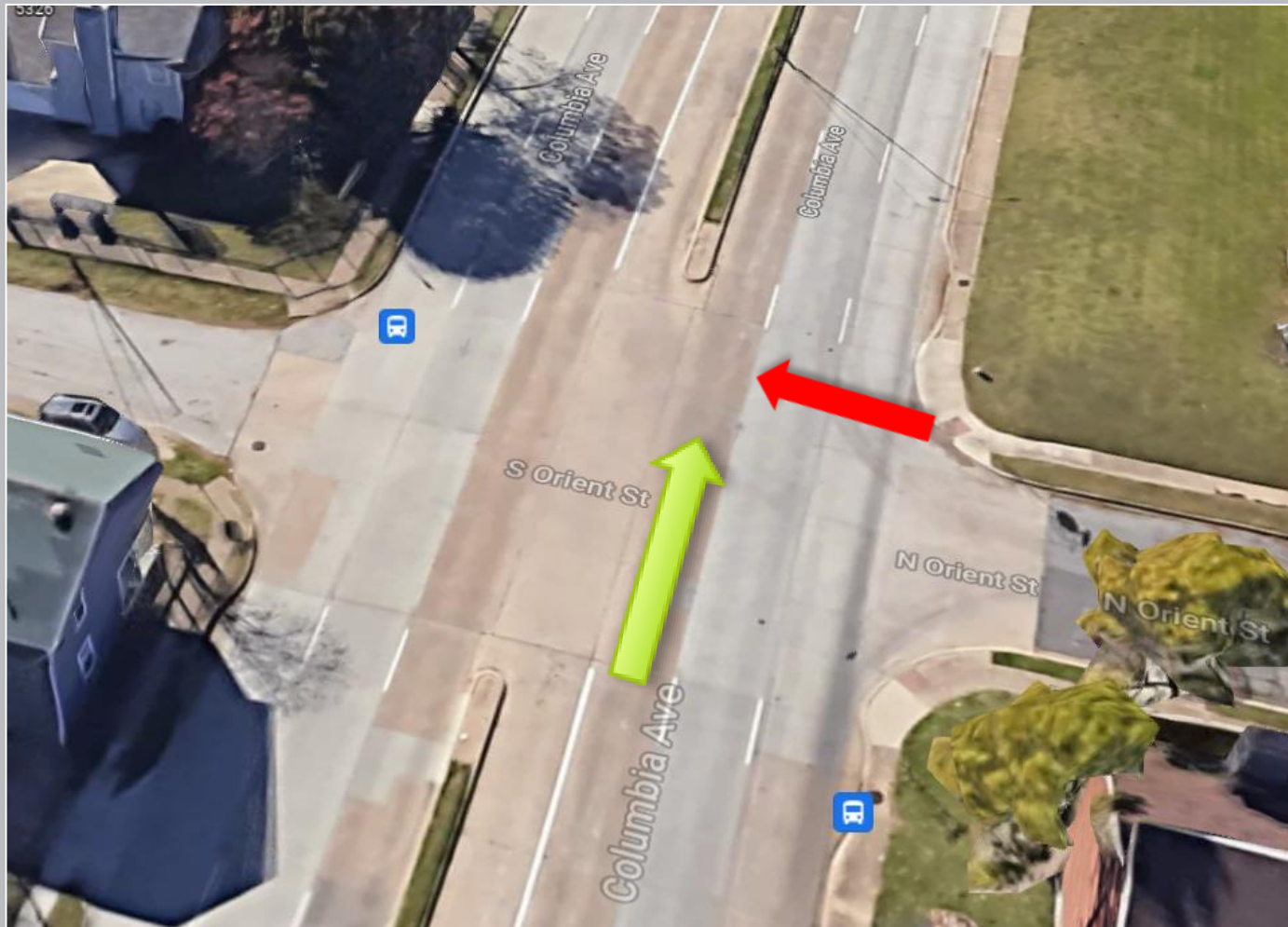
RELATED CASE NUMBER IS 294080-2017. UNIT 1 WAS GOING NORTHEAST ON COLUMBIA AVE, AT S ORIENT ST, IN THE INSIDE TRAFFIC LANE. UNIT 2, A PEDESTRIAN, WAS WALKING NORTHWEST ACROSS COLUMBIA AVE. UNIT 2 WAS IN AN UNMARKED CROSSWALK AREA AT THE INTERSECTION. THERE IS NO TRAFFIC CONTROL AT THE INTERSECTION REQUIRING UNIT 1 TO STOP. UNIT 2 WAS CROSSING FROM A STOP SIGN. UNIT 1 COLLIDED FRONT LEFT TO THE LEFT SIDE OF UNIT 2. UNIT 2 WENT UP ON THE HOOD AND WINDSHIELD AREA OF THE VEHICLE. UNIT 2 THEN FELL TO THE ROADWAY. THE DRIVER OF UNIT 1 STATED THAT SHE OBSERVED UNIT 2 APPEAR IN FRONT OF HER VEHICLE. SHE STATED THAT SHE BRAKED BUT WAS UNABLE TO AVOID UNIT 2. A WITNESS AT THE SCENE WAS WALKING SOUTHWEST ON THE SOUTH SIDEWALK OF COLUMBIA AVE. THE WITNESS WAS WATCHING TRAFFIC APPROACHING. SHE STATED THAT UNIT 1 WAS IN THE TRAFFIC. SHE STATED THAT NO VEHICLES WERE SPEEDING OR DRIVING RECKLESSLY. SHE STATED THAT SHE OBSERVED UNIT 1 HIT UNIT 2. SHE DID NOT KNOW WHICH WAY UNIT 2 WAS WALKING AND DID NOT IMMEDIATELY OBSERVE UNIT 2 IN THE ROADWAY. SHE STATED THAT UNIT 1 STOPPED IMMEDIATELY. UNIT 2 WAS PRONOUNCED DECEASED ON 12/28/2017 AT 10:00 PM BY DR RON BAXTER AT BAYLOR DALLAS HOSPITAL. UNIT 2 DIED AS A RESULT OF INJURIES SUSTAINED IN THE CRASH. THIS REPORT IS INCOMPLETE PENDING BLOOD TOXICOLOGY RESULTS FOR UNIT 2. THIS IS TRAFFIC FATALITY #155 FOR THE DALLAS POLICE DEPARTMENT FOR 2017. DETECTIVE J STACEY #10023 RESPONDED TO THE SCENE FROM THE VEHICLE CRIMES UNIT. SGT O PRICE #7464 WAS THE TRAFFIC SUPERVISOR AT THE SCENE. NFI.

**Field Diagram - Not to Scale**





# Crash Example #1





# Pedestrian Regulations



- Use of sidewalks (TTC 552.006)
  - Pedestrians must use a sidewalk if one is *available and accessible* to them.
  - If there are no sidewalks, a pedestrian shall, *if possible*, walk on the left side of the road or shoulder facing oncoming traffic.



# Pedestrian Regulations

- A pedestrian may not suddenly leave a curb or other place of safety and proceed into a crosswalk in the path of a vehicle so close that it is impossible for the vehicle operator to stop and yield. (TTC 552.003b)



# Pedestrian Regulations

- Driver to Exercise Due Care (552.008)
  - Due care to avoid collision
  - Give warning (sounding horn)
  - Proper precautions around children and confused or incapacitated persons





# Crash Example #2



FACTORS & CONDITIONS	36 Contributing Factors (Investigator's Opinion)					37 Vehicle Defects (Investigator's Opinion)					Environmental and Roadway Conditions						
	Unit #	Contributing		May Have Contrib.		Contributing		May Have Contrib.		38 Weather Cond.	39 Light Cond.	40 Entering Roads	41 Roadway Type	42 Roadway Alignment	43 Surface Condition	44 Traffic Control	
	2	59									1	2	2	1	1	1	96

**Investigator's Narrative Opinion of What Happened**  
(Attach Additional Sheets if Necessary)

Unit 1 was traveling west on Mesa Dr. A pedestrian in a wheelchair was travelling west on Mesa Dr., facing west with his back to traffic. The pedestrian was not on the left side of the roadway or on the shoulder of the highway facing oncoming traffic as required by law. Unit 1 struck the pedestrian on its left rear side. The pedestrian and wheelchair were pushed into the barrow ditch of Mesa Dr., and came to rest with moderate damage to the wheelchair and incapacitating injuries to the pedestrian. Unit 1 came to rest facing west on Mesa Dr. with minimal right front quarter panel damage.

**Field Diagram - Not to Scale**



## Crash Example #2





# Bicycle & Micro-Mobility Regulations



- The Texas Transportation Code states that bicyclists have the same rights and duties as a motor vehicle driver. (TTC, 551.101)
- The same applies to motor-assisted scooters. (TTC, 551.352)
- Bicycle & motor- assisted scooter operators have the same rights and duties as drivers of vehicles. This includes...



# Bicycle & Micro-Mobility Regulations



- Stop at stop signs and red lights



(TTC, 551.101)





# Bicycle & Micro-Mobility Regulations



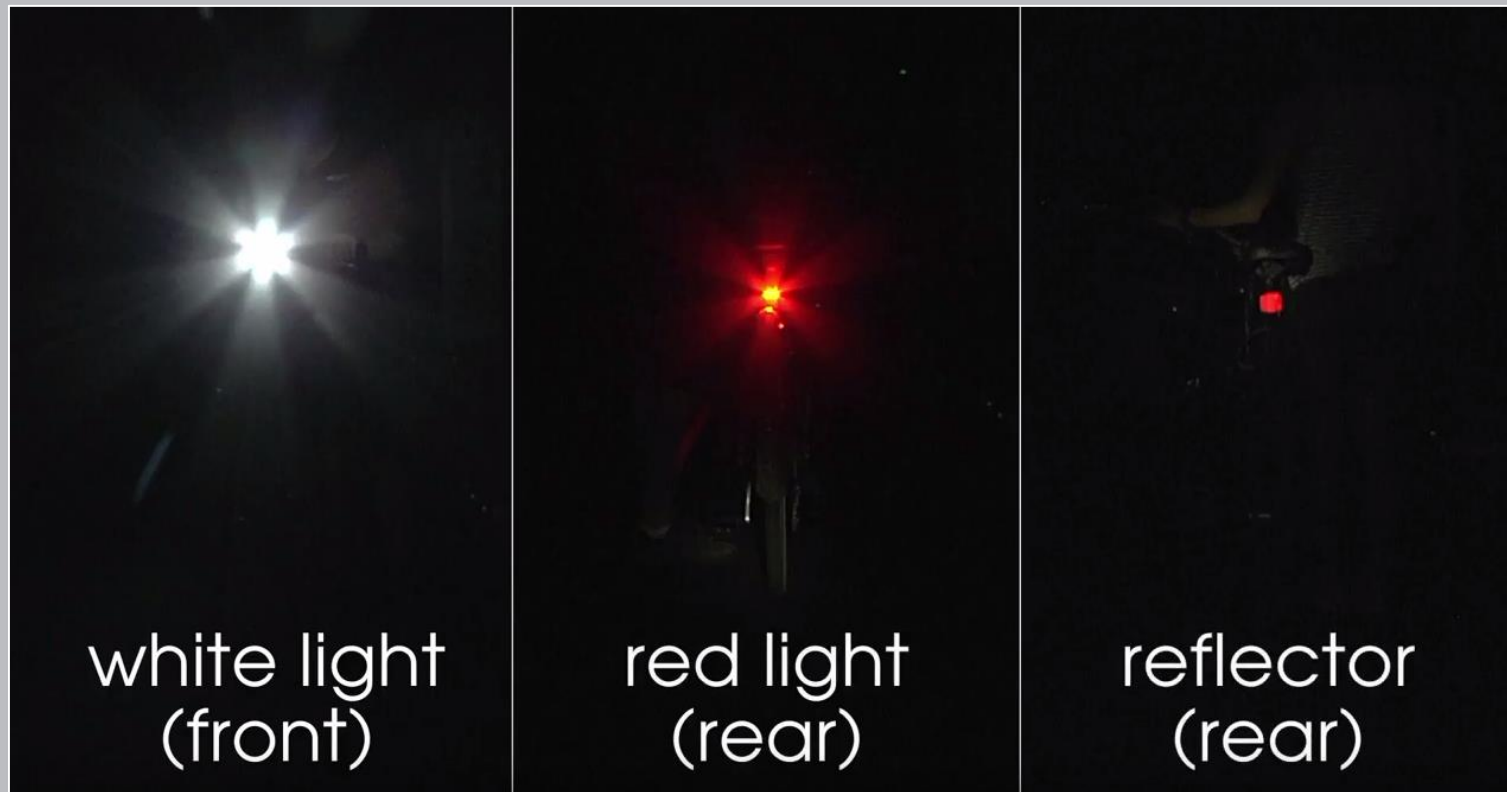
(TTC, 551.101, 545.104-107)



# Bicycle & Micro-Mobility Regulations



- Bicyclists riding at night are required to have:



(TTC, 551.104)



# Bicycle & Micro-Mobility Regulations



(TTC, 551.101)





# Bicycle & Micro-Mobility Regulations



- Ride as far to the right as practicable.



(TTC, 551.103)





# Bicycle & Micro-Mobility Regulations



- Bicyclists are allowed to ride in the travel lane, even when a bike lane is present for a few reasons (TTC, 551.103):



# Bicycle & Micro-Mobility Regulations



- To avoid obstructions and uneven surfaces





# Bicycle & Micro-Mobility Regulations



- To make a left turn





# Bicycle & Micro-Mobility Regulations



- If the travel lane is less than 14 feet wide or if it is too narrow for a bicycle and motor vehicle to safely travel side-by-side.







# Bicycle & Micro-Mobility Regulations



- A bicyclist is also allowed to travel on the **left** side of the road on a one-way street.



(TTC, 551.103)



# Crash Example #3



FACTORS & CONDITIONS	36 Contributing Factors (Investigator's Opinion)					37 Vehicle Defects (Investigator's Opinion)					Environmental and Roadway Conditions					
	Unit #	Contributing		May Have Contrib.		Contributing		May Have Contrib.		38 Weather Cond.	39 Light Cond.	40 Entering Roads	41 Roadway Type	42 Roadway Alignment	43 Surface Condition	44 Traffic Control
	2	98									1	3	98	4	2	1

NARRATIVE AND DIAGRAM	Investigator's Narrative Opinion of What Happened (Attach Additional Sheets if Necessary)		Field Diagram - Not to Scale	
	<p>UNIT 2 IS A BICYCLE. THE RIDER OF UNIT 2 WAS NOT WEARING A HELMET. THE BICYCLE WAS NOT EQUIPPED WITH LIGHTS OR REFLECTIVE GEAR. UNIT 2 WAS HEADED SB ALONG THE RIGHT SHOULDER OF S IH 35 SVRD SB NEAR WHERE THE FRONTAGE ROAD SPLIT OFF INTO A TURNAROUND LANE. UNIT 1 HAD TAKEN THAT SPLIT AND BEGAN DRIVING SB PARALLEL TO UNIT 2. ACCORDING TO WITNESS MADELINE HORGE WHO WAS DRIVING BEHIND UNIT 1, UNIT 2 VEERED TO THE LEFT TO CROSS THE ROAD. ACCORDING TO THIS WITNESS THE RIDER OF UNIT 2 MADE NO SIGNAL THAT SHE WAS GOING TO MOVE TO THE LEFT. ACCORDING TO THE DRIVER OF UNIT 1, UNIT 2 CAME INTO HIS PERIPHERAL VISION. HE BRAKED IMMEDIATELY AND VEERED LEFT TO AVOID HITTING UNIT 2. HIS MANEUVERING WAS SUCCESSFUL, UNIT 1 DID NOT STRIKE UNIT 2. UNIT 2 COLLIDED INTO THE RIGHT SIDE OF UNIT 1, DAMAGING THE SIDE MIRROR. UNIT 2 WAS BARELY DAMAGED AS A RESULT OF THE COLLISION AND APPEARED FULLY FUNCTIONAL (NO BENT RIMS). THE ONLY DAMAGE I OBSERVED WAS THAT THE BICYCLE SEAT WAS TURNED SLIGHTLY COUNTER CLOCKWISE. THE RIDER OF UNIT 2 FELL ON THE BACK OF HER HEAD AND WAS BLEEDING PROFUSELY AND TAKEN TO THE HOSPITAL.</p>			



# Crash Example #3





# Bicycle & Micro-Mobility Regulations

- By Texas law, micro-mobility (or motor-assisted scooters) may operate on streets with speeds limit of up to 35 mph, but a local jurisdiction may prohibit use on certain roads/sidewalks. (TTC, 551.352)







# Bicycle & Micro-Mobility Regulations



- Unless prohibited by city ordinance, a bicyclist has the right to ride on the sidewalk.
- TTC 545.428 clarifies that bicyclists using the sidewalk are treated more as a pedestrian when they reach a crosswalk.





# Crash Example #4



FACTORS & CONDITIONS	36 Contributing Factors (Investigator's Opinion)					37 Vehicle Defects (Investigator's Opinion)					Environmental and Roadway Conditions						
	Unit Num.	Contributing		May Have Contrib.		Contributing		May Have Contrib.		38 Weather Cond.	39 Light Cond.	40 Entering Roads	41 Roadway Type	42 Roadway Alignment	43 Surface Condition	44 Traffic Control	
	2	36									2	1	97	1	1	1	8

NARRATIVE AND DIAGRAM	Investigator's Narrative Opinion of What Happened (Attach Additional Sheets If Necessary)	Field Diagram – Not to Scale
	<p>DRIVER OF U#1 STATED SHE WAS S/B ON W PRAIRIE CREEK DR AND STOPPED AT THE STOP SIGN, BEFORE THE SIDEWALK, FOR W. CAMPBELL RD. DRIVER OF U#1 STATED AFTER STOPPING SHE SLOWLY DROVE FORWARD SO SHE COULD SEE WESTBOUND TRAFFIC ON CAMPBELL RD AND HER VEHICLE WAS STRUCK BY DRIVER OF U#2 WHO WAS RIDING HIS BICYCLE E/B ON THE NORTHERN SIDEWALK. DRIVER OF U#1 STATED SHE NEVER SAW U#2 AS SHE ENTERED THE INTERSECTION. DRIVER OF U#2 STATED HE WAS COMING DOWN THE HILL E/B ON THE NORTHERN SIDEWALK OF 400 W. CAMPBELL RD APPROACHING W. PRAIRIE CREEK DR. DRIVER OF U#2 STATED DUE TO BUSHES HE COULD NOT SEE U#1 AS SHE STOPPED AT THE STOP SIGN AND THEREFORE THOUGHT THE INTERSECTION WAS CLEAR. DRIVER OF U#2 SAID U#1 PULLED OUT IN FRONT OF HIM AND HE WAS UNABLE TO STOP IN TIME AND STRUCK U#1. OFFICER NOTED SEVERAL BUSHES OBSTRUCT THE VIEW OF THE INTERSECTION FOR BOTH U#1 AND U#2. OFFICERS INVESTIGATION REVEALED U#2 WAS OPERATING A BICYCLE ON THE SIDEWALK AND DID NOT YIELD RIGHT OF WAY TO U#1 WHO WAS ALREADY IN THE INTERSECTION AFTER STOPPING AT THE STOP SIGN. AOI DETERMINED BY EVIDENCE.</p>	



## Crash Example #4







# Bicycle & Micro-Mobility Regulations



- The Texas Transportation Code requires a vehicle to pass a bicyclist “**at a safe distance.**” However, it does not define what a safe distance is.



(TTC, 545.053, 551.101)



# Bicycle Safe Passing Video







# Additional Bicycle Regulations



- Working brakes (551.104)
- Only ride astride a permanent and regular seat attached to the bike. (551.102)
- May not carry more persons than designed to (551.102)





# Additional Bicycle Regulations



- Carrying of large objects that prevent you from having at least one hand on the handlebars (551.102)
- May not attach to another vehicle (551.102)





# Additional Bicycle Regulations



- May ride two abreast (551.103c)
  - In a single lane
  - May not impede normal and reasonable traffic flow
  - May not ride more than two unless on a part of the roadway set aside for bicycles.





# Micro-mobility



Safety information from the provider:

- Obey traffic laws
  - State laws
  - Consult any local ordinances
- Where to ride
  - Not on the sidewalk
- Age restrictions
- Helmet use  
(not required by law)



(Pictures by: Neal Johnson)





# Right-of-Way Definition



- The right of one vehicle or pedestrian to **proceed** in a lawful manner **in preference to another vehicle or pedestrian** that is approaching from a direction, at a speed, and within a proximity that could cause a collision unless one grants precedence to the other.  
(TTC, 541.401)



# Right-of-Way Definition

- To yield is to give way, letting others go first.
- Traffic control devices (signals, signs and markings) tell the road user how to behave and indicate who has the right of way.
- Where no traffic control devices exist, basic rules of the road apply
- Road users include motor vehicles, bicyclists, pedestrians, and others.
- Who yields to whom may be seen as simple, but in reality, it can be quite complicated.



# Pedestrian Right-of-Way

- The operator of a vehicle shall **stop and yield** the right-of-way to a pedestrian crossing a roadway in a crosswalk if:
  - 1) no traffic control signal is in place or in operation; and
  - 2) the pedestrian is:
    - a) on the half of the roadway in which the vehicle is traveling; or
    - b) approaching so closely from the opposite half of the roadway as to be in danger.



# Pedestrian Right-of-Way

- Right-of-way at signalized intersections is dictated by:
  - A separate pedestrian signal (if equipped).



(TTC, 552.002)





# Pedestrian Right-of-Way

- Pedestrians are required to follow the pedestrian signals and cross only on the walk signal.
  - A pedestrian should not enter the crosswalk when it says DON'T WALK or WAIT or when the red hand is lit or flashing.



(TTC, 552.002)



# Pedestrian Right-of-Way

- If no pedestrian signals are installed or in operation, the pedestrian should cross a street when the signal light is green in their direction of travel.





# Pedestrian Right-of-Way

- At all 4-way intersections not controlled by a traffic signal, pedestrians have the right-of-way, even at intersections with stop control only in one direction.



(TTC, 552.003)





# Pedestrian Right-of-Way

- However, when crossing the road at a point other than a 4-way intersection or marked crosswalk a pedestrian must yield the right-of-way to all vehicles.



(TTC, 552.005)





# Pedestrian Right-of-Way

- It is illegal for a pedestrian to cross a road between two adjacent intersections at which traffic control signals are in use.



(TTC, 552.005)



# Pedestrian Right-of-Way

- Motorists making turns while the signal light is green or when there is a flashing yellow arrow are required to stop and yield the right-of-way to pedestrians on their left and right.



(TTC, 552.002)



# Pedestrian Right-of-Way

- Unless motorists are making a turn in accordance with a green lighted arrow.



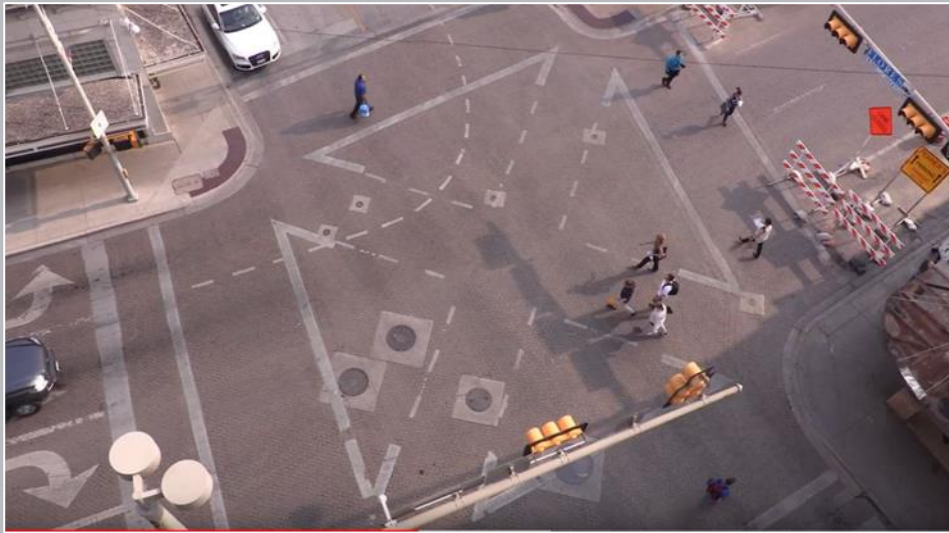
(TTC, 552.001 & 002)





# Pedestrian Right-of-Way

- If the intersection uses a pedestrian only phase, driver and pedestrian movements each receive a separate signal phase where pedestrians cross from all directions at the same time.

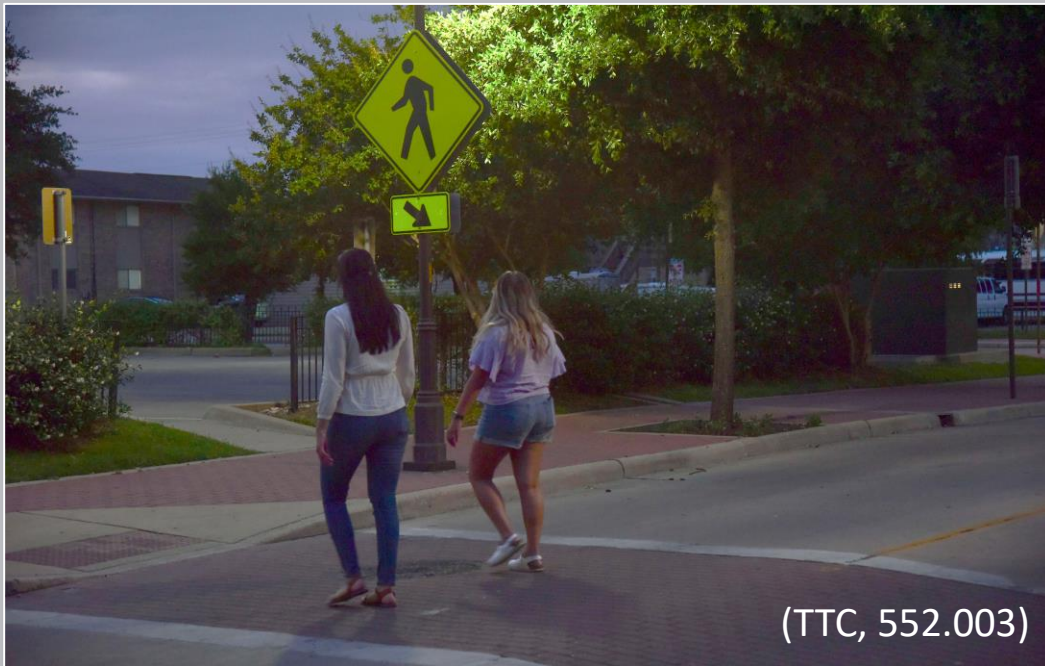






# Pedestrian Right-of-Way

- Motorists are also required to stop and yield to pedestrians who are in a marked crosswalk that is **NOT** at an intersection.





## Pedestrian Right-of-Way

- A motorist approaching another vehicle from behind may not pass that vehicle if they are stopped to allow a pedestrian to cross the roadway.





# Crash Example #5

## Determining Right of Way



- Right turning vehicle (blue arrow) turned first in front of pedestrian during "WALK" signal
- Pedestrian (red arrow) began crossing after "DON'T WALK" signal had begun flashing
- Car turning left (yellow arrow) on green light, not green arrow



# END OF SECTION 1

What is one key takeaway from the first section of the course?





# Contributing Factors

8 = Non-Collision: Cross Median/Centerline

16 = Collision Involving Pedalcycle

## **36. Factors and Conditions**

1 = Animal on Road - Domestic  
 2 = Animal on Road - Wild  
 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  
 18 = Disregard Warning Sign at Construction  
 19 = Distraction in Vehicle  
 20 = Driver Inattention  
 21 = Drove Without Headlights  
 22 = Failed to Control Speed  
 23 = Failed to Drive in Single Lane  
 24 = Failed to Give Half of Roadway  
 25 = Failed to Heed Warning Sign  
 26 = Failed to Pass to Left Safely  
 27 = Failed to Pass to Right Safely  
 28 = Failed to Signal or Gave Wrong Signal  
 29 = Failed to Stop at Proper Place  
 30 = Failed to Stop for School Bus  
 31 = Failed to Stop for Train  
 32 = Failed to Yield ROW – Emergency Vehicle

33 = Failed to Yield ROW – Open Intersection  
 34 = Failed to Yield ROW – Private Drive  
 35 = Failed to Yield ROW – Stop Sign  
 36 = Failed to Yield ROW – To Pedestrian  
 37 = Failed to Yield ROW – Turning Left  
 38 = Failed to Yield ROW – Turn on Red  
 39 = Failed to Yield ROW – Yield Sign  
 40 = Fatigued or Asleep  
 41 = Faulty Evasive Action  
 42 = Fire in Vehicle  
 43 = Fleeing or Evading Police  
 44 = Followed Too Closely  
 45 = Had Been Drinking  
 46 = Handicapped Driver (Explain in Narrative)  
 47 = Ill (Explain in Narrative)  
 48 = Impaired Visibility (Explain in Narrative)  
 49 = Improper Start from Parked Position  
 50 = Load Not Secured  
 51 = Opened Door Into Traffic Lane  
 52 = Oversized Vehicle or Load  
 53 = Overtake and Pass Insufficient Clearance  
 54 = Parked and Failed to Set Brakes  
 55 = Parked in Traffic Lane

56 = Parked without Lights  
 57 = Passed in No Passing Lane  
 58 = Passed on Right Shoulder  
 59 = Pedestrian FTYROW to Vehicle  
 60 = Unsafe Speed  
 61 = Speeding – (Over Limit)  
 62 = Taking Medication (Explain in Narrative)  
 63 = Turned Improperly – Cut Corner on Left  
 64 = Turned Improperly – Wide Right  
 65 = Turned Improperly – Wrong Lane  
 66 = Turned when Unsafe  
 67 = Under Influence – Alcohol  
 68 = Under Influence – Drug  
 69 = Wrong Side – Approach or Intersection  
 70 = Wrong Side – Not Passing  
 71 = Wrong Way – One Way Road  
 72 = Cell/Mobile Phone Use  
 73 = Road Rage  
 98 = Other (Explain in Narrative)

AND CONDITIONS



## Bicyclist Right-of-way

- A person operating a bicycle has the same rights and responsibilities as a driver operating a vehicle (TTC, 552.101).

As such,

- The bicyclist must yield to the vehicle that arrived before them at an all-way stop.
- The bicyclist must yield to the opposing through vehicles when turning left at an intersection.





# Bicyclist Right-of-way





# Bicyclist Right-of-way



A person may operate a bicycle in an outside lane that is:

- Less than 14 feet in width and does not have a designated bicycle lane adjacent to that lane; or
- Too narrow for a bicycle and a motor vehicle to safely travel side by side.



(TTC, 551.103)







# Crash Example #6



## Bicyclist Taking the Lane

### Investigator's Narrative Opinion of What Happened (Attach Additional Sheets if Necessary)

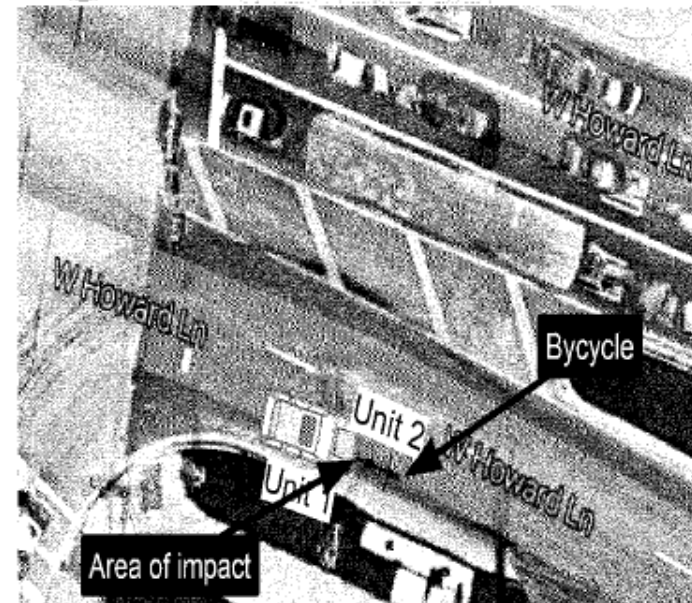
UNIT 1 & 2 WERE EAST BOUND IN THE 1200 BLK OF W HOWARD LN IN THE OUTSIDE LANE. UNIT 1 WAS TRAVELING BEHIND UNIT 2 IN LOW LIGHT. UNIT 1 DID NOT SEE UNIT 2 UNTIL IT WAS TOO LATE AND STRUCK UNIT 2'S REAR END CAUSING UNIT 2 RIDER TO FALL TO THE GROUND. UNIT 2 RIDER SUSTAINED MINOR INJURIES AND REFUSED TRANSPORT TO A HOSPITAL BY EMS. UNIT 2 WAS DAMAGED TO THE POINT WHERE IT HAD TO BE CARRIED FROM THE SCENE. UNIT 2 DISPLAYED SEVERAL ILLUMINATED FLASHING LIGHTS ON THE FRONT AND REAR OF THE BICYCLE AS WELL AS THE RIDER WAS WEARING A BRIGHT YELLOW COLORED SHIRT FOR VISIBILITY. UNIT 1 DRIVER STATED THAT HE SIMPLY DID NOT SEE UNIT 2. NOIWN4958

NARRATIVE AND DIAGRAM

### Field Diagram - Not to Scale



Not To Scale





# Motorist /Bicyclist Right-of-way



(TTC, 545.101, 545.103, 541.401, 551.101)



# Crash Example #7

## Right Hook



FACTORS & CONDITIONS	36 Contributing Factors (Investigator's Opinion)					37 Vehicle Defects (Investigator's Opinion)					Environmental and Roadway Conditions							
	Unit #	Contributing		May Have Contrib.			Contributing		May Have Contrib.			38 Weather Cond.	39 Light Cond.	40 Entering Roads	41 Roadway Type	42 Roadway Alignment	43 Surface Condition	44 Traffic Control
	1	98											2	1	2	1	1	1

NARRATIVE AND DIAGRAM	Investigator's Narrative Opinion of What Happened (Attach Additional Sheets if Necessary)	Field Diagram - Not to Scale
	<p>UNIT 1 WAS TRAVELING NORTH IN THE RIGHT LANE OF THE 1100 BLOCK OF S LAMAR BLVD. UNIT 2, A BICYCLE, WAS TRAVELING NORTH IN THE BICYCLE LANE. ACCORDING TO AN INDEPENDENT WITNESS, UNIT 1 WAS WELL AHEAD OF THE BICYCLE AND ACTIVATED ITS RIGHT TURN SIGNAL TO MAKE A RIGHT ONTO W GIBSON ST. UNIT 1 BEGAN THE TURN, AND UNIT 2 RAN INTO THE RIGHT BACK QUARTER. THE BICYCLIST COMPLAINED OF NECK PAIN AND WAS TRANSPORTED TO SOUTH AUSTIN HOSPITAL.</p>	





# Motorist /Bicyclist Right-of-way



- Motorists are also required to yield to an oncoming bicyclist when making a left turn.



(TTC 545.152,  
551.101)





# Crash Example #8

## Motorist Turning Left



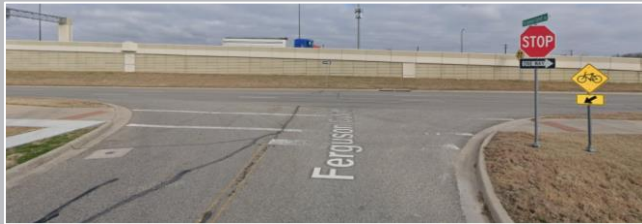
- Bicyclist going straight (toward camera)
- Motorist turning left on permissive (green ball) left
- Motorist failed to yield to thru bicyclist





# Motorist /Bicyclist Right-of-way

## Shared Use Paths







# Crash Example #9

## Shared Use Paths



Narrative and Diagram	
Investigator's Narrative Opinion of What Happened (Explain all "98-Other" answers in narrative. Attach additional sheets if necessary.)	
MATTHEW WAS PEDALING A TREK	
BICYCLE, UNIT 1, EAST BOUND, MATTHEW	
CROSSED N. IH 35 S/A SUC RD, AS	
ROBERT WAS DRIVING A BLUE VAN,	
UNIT 2, SOUTHBOUND ON N. IH	
35 S/A SUC RD IN THE FAR EAST	
LANE. MATTHEW BELIEVED ROBERT	
WAS TURNING ONTO THIS TURN	
AROUND ON E 4TH ST, AND ATTEMPTED	
TO CROSS ROBERT CONTINUED S/A	
AND COLLIDED WITH MATTHEW.	
MATTHEW FAILED TO YIELD THE	
RIGHT OF WAY TO ROBERT.	

Indicate North

E. 4TH

RAILROAD

CROSSWALK

PEDESTRIAN CROSSING

N. IH 35 S/A SUC RD

10. Contributing Factors (Investigator's Opinion)			11. Vehicle Defects		11. Vehicle Defects (Investigator's Opinion)		
Unit Num.	Contributing	May Have Contributed			Unit Num.	Contributing	May Have Contributed
1	33		5-Defective or No Headlamps	11-Defective or No Vehicle Brakes			
2		38	6-Defective or No Stop Lamps	12-Defective or No Tires			
			7-Defective or No Tail Lamps	13-Defective Trailer Hitch			
			8-Defective or No Turn Signal Lamps	98-Other (Narrative)			
			9-Defective or No Trailer Brakes				

Unit Num.	Person Num.	Charge	Citation/Reference Num.
1	1	FAILED TO YIELD R.O.W. - OPEN INTERSECTION	13838432

- Contributing Factor
  - Failed to yield right of way – Open Intersection
- May Have Contributed
  - Failed to signal





# Right of Way Order

## Shared Use Paths



- Crosswalk for pedestrians
- Motorist has a warning sign for bike crossing. No yield or stop sign
- Yield sign for bikes crossing





## Common Violations

- This section is an overview of some of the other common laws that you may see during enforcement efforts.





# Common Violations

- Texas has a statewide texting ban.



(TTC 545.4251)



# Common Violations



- Impairment



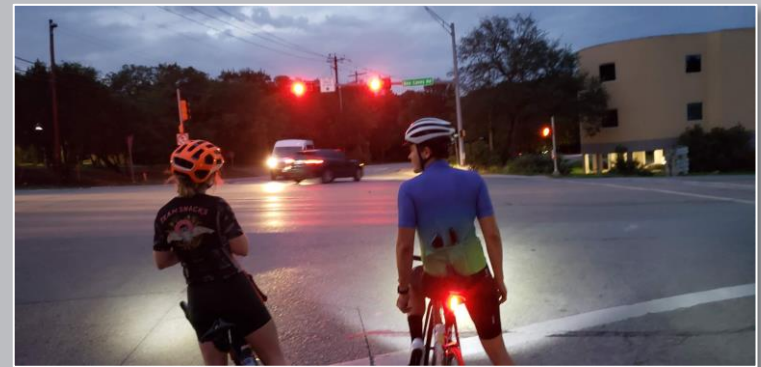
(Texas Penal Code, 49.04)



# Common Violations



- Disregarding signal or stop sign – all vehicles



(TTC, 545.151, 551.101, 552.001-003)





# Common Violations



- Door Zone Laws



(TTC, 545.418)



# Crash Example #10



Narrative and Diagram	
<b>Investigator's Narrative Opinion of What Happened</b> (Explain all "SB-Other" answers in narrative. Attach additional sheets if necessary.)	
UNIT 1 WAS PARKED IN THE OUTSIDE LN OF S/B LINDAWE ST. TO ALLOW A PASSENGER TO EXIT THE VEHICLE. UNIT 2 (A BICYCLE) WAS TRAVELING S/B IN THE BEFF LN WHEN UNIT 1 PASSENGER DOOR OPENED UNIT 2 STRUCK THE OPEN DOOR.	
<b>Field Diagram - Not to Scale</b>	
Indicate North ↑	

10. Contributing Factors (Investigator's Opinion)					
Unit Num.	Contributing			May Have Contributed	
1				55	



# Top Pedestrian Crash Contributing Factors

## Contributing Factors of Drivers

CF Category	n	%
FTYROW	3407	34.4%
Distraction (other than cell phone)	2867	29.0%
Person Failure	2450	24.7%
Other	1401	14.2%
Impaired	837	8.5%
Impaired Visibility	409	4.1%
Speed	421	4.3%
Disabled in Traffic Lane	238	2.4%
Person Disregard	294	3.0%
Turned Improperly	193	1.9%

## Contributing Factors of Pedestrians

CF Category	n	%
FTYROW	8308	77.8%
Other	2074	19.4%
Impaired	1215	11.4%
Person Disregard	106	1.0%
Distraction (other than cell phone)	104	1.0%
Cell Phone Use	89	0.8%
Impaired Visibility	47	0.4%
Ill	45	0.4%
Person Failure	34	0.3%
Disabled in Traffic Lane	32	0.3%

- Could the “disabled in traffic lane” point to stranded motorists after a vehicle break-down, flat tire, or post-crash response?
- What has your experience been when using this contributing factor?



# Top Bicycle Crash Contributing Factors

## Contributing Factors of Drivers

CF Category	n	%
FTYROW	1567	39.9%
Distraction (other than cell phone)	1220	31.0%
Person Failure	873	22.2%
Other	349	8.9%
Impaired Visibility	171	4.4%
Turned Improperly	201	5.1%
Person Disregard	174	4.4%
Impaired	130	3.3%
Speed	75	1.9%
Risky Behavior	46	1.2%

## Contributing Factors of Bicyclists

CF Category	n	%
FTYROW	1403	35.9%
Other	909	23.2%
Distraction (other than cell phone)	535	13.7%
Person Disregard	530	13.6%
Person Failure	506	12.9%
Wrong Way/Side or Approach	391	10.0%
Impaired	110	2.8%
Turned Improperly	107	2.7%
Impaired Visibility	53	1.4%
Speed	23	0.6%





# Importance of Crash Reporting

- Contributing Factors
  - This section of the report is designed for the investigating officer to determine which factor(s) or condition(s) contributed to the crash for each unit. The officer may not have enough evidence to file a traffic charge, but does have enough data to render an opinion as to the contributing factors of the crash.

(TxDOT CR-100)



# Importance of Crash Reporting

- May Have Contributed Factors
  - It is sometimes difficult to form an **opinion** as to whether a factor or condition did or did not contribute to a crash. This section is to record the fact that the condition was present, but the investigator is unable to determine whether the factor/condition contributed.  
(TxDOT CR-100)





# Importance of Crash Reporting

- Not all contributing factors are law violations. Law violations show a legal reference to the Texas Transportation Code or the Texas Penal Code.  
(TxDOT CR-100)
- All factors found must be described in the narrative, even if they have been addressed in another place on the report. (TxDOT CR-100)



# Importance of Crash Reporting

- Contributing Factors referencing pedestrians should be used only for pedestrians, not bicyclists or micromobility users.
- 36 = FTYROW – To Pedestrian
- 59 = Pedestrian FTYROW to Vehicle





# Importance of Crash Reporting

- Capture the code for the traffic control that is present at the location of the crash, even though it may have had no bearing on the causation of the crash. (TxDOT CR-100)
- If more than one traffic control is present, indicate the one most affecting this crash. (TxDOT CR-100)

CODE SHEET VALUES FOR TRAFFIC CONTROL	
2 = Inoperative (Explain in Narrative)	11 = Center Stripe/Divider
3 = Officer	12 = No Passing Zone
4 = Flagman	13 = RR Gate/Signal
5 = Signal Light	15 = Crosswalk
6 = Flashing Red Light	16 = Bike Lane
7 = Flashing Yellow Light	17 = Marked Lanes
8 = Stop Sign	18 = Signal Light With Red Light Running Camera
9 = Yield Sign	96 = None
10 = Warning Sign	98 = Other (Explain in Narrative)



# Importance of Crash Reporting





# Importance of Crash Reporting

- Motor Vehicle vs. Motorized Conveyance
  - Motor Vehicle
    - ATVs
    - Golf Cart
    - Moped
    - Recreational Off Highway/Utility Vehicle
    - Autocycle



# Importance of Crash Reporting



## Motor Vehicle

ATVs



Golf Carts



Mopeds



Off Highway/  
Utility Vehicles







# Electric Bicycles



- "Electric bicycle" means a bicycle:
  - (A) equipped with:
    - (i) fully operable pedals; and
    - (ii) an electric motor of fewer than 750 watts; and
  - (B) with a top assisted speed of 28 miles per hour or less.
- Top assisted speed - the speed at which the bicycle's motor ceases propelling the bicycle or assisting the rider. (TTC 664.001)



# Electric Bicycle Classes



## ■ Class 1

- Equipped with a motor that assists the rider only when the rider is pedaling; and
- Top assisted speed of 20 miles per hour or less.

## ■ Class 2

- Equipped with a motor that may be used to propel the bicycle without the pedaling of the rider; and
- Top assisted speed of 20 miles per hour or less.

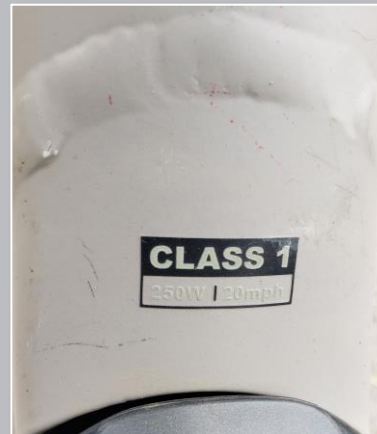
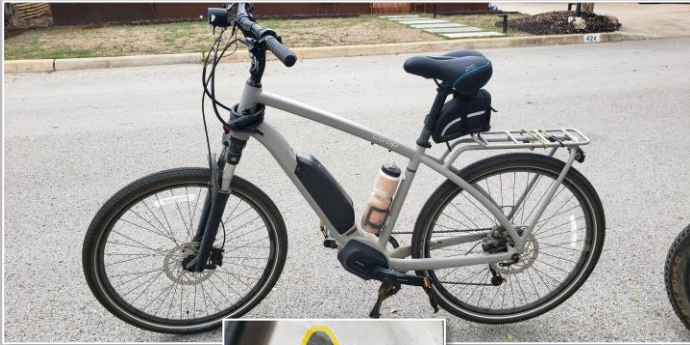
## ■ Class 3

- Equipped with a motor that assists the rider only when the rider is pedaling; and
- Top assisted speed of more than 20 but less than 28 miles per hour.
- Must have a speedometer. (TTC 664.004)
- Must be 15 or older to operate. (TTC 551.107)

(TTC 664.001)



# Electric Bicycles



Must be labeled with the class of the bicycle. (TTC 664.002)



# Other Shared Mobility/Motor Vehicle Examples







# Importance of Crash Reporting

- Motor Vehicle vs. Motorized Conveyance
  - Motorized Conveyance
    - Pocket Bikes
    - Go-carts
    - Riding Lawn Mowers
    - Segways
    - Motor Assisted Scooter (does not include moped, motorcycle or motor driven cycle)



# Importance of Crash Reporting

## Motorized Conveyance

Riding Lawn Mower



Segway

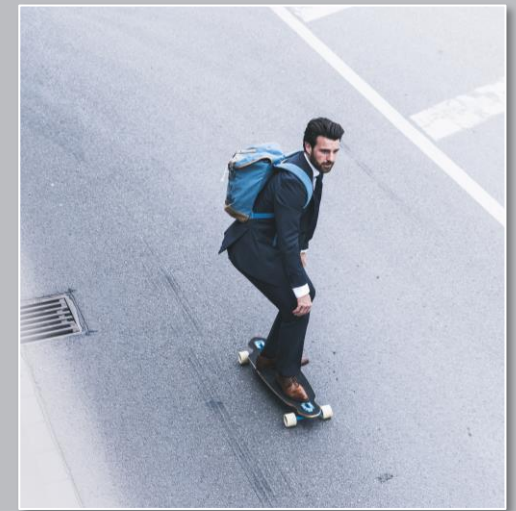


Motor Assisted  
Scooter





## Other Motorized Conveyance Examples





# Importance of Crash Reporting

## Data Driven Decision Making

- Engineering
- Education
  - Outreach
  - Training
- Enforcement
- Emergency Medical Services (EMS)





# Importance of Crash Reporting

## Engineering Decisions

- Traffic engineering departments rely on the crash data for decisions related to:
  - Traffic signal, pedestrian hybrid beacon, or all-way stop installation
  - Signal phasing changes like removing the permissive phase of a left turn movement
  - Safety countermeasures – high crash intersections/corridors



# Importance of Crash Reporting

- Document the details with whatever tools/technology you have available
  - Body camera
  - Dashboard camera
  - Audio recording
  - Writing equipment
- Interview witnesses as soon as possible
- Treat every crash/citation as if it will be heard in court. You may have to testify.



# Prioritizing Safety Risk



- Targeting the riskier behaviors such as:
  - Pedestrians not yielding when crossing outside of an intersection or crosswalk
  - Drivers not yielding when required
  - Bicyclist riding against traffic in road
  - Bicyclist not using light at night
- Using enforcement resources to have the greatest safety benefit





# Additional Stakeholders/Resources

- Engineering
  - TxDOT
  - Local Transportation Departments
- Enforcement
  - Other LEAs (such as ISD and University PD's)
  - Data (DPS, TxDOT, TTI)
- Education
  - Bicycle and Pedestrian Safety Outreach Groups
  - TxDOT
  - TTI
  - School Districts
- What additional resources does law enforcement need?









## END OF SECTION 2

What is one key takeaway from the second section of the course?



# Post – Test Questions





## Discussion Questions

- What are some common misconceptions when it comes to where pedestrians are able to cross the roadway legally?
- What right of way laws pertaining to pedestrian and bicyclist travel do you find confusing or do you think need clarifying?
- Do you have ideas on ways to educate road users on the right of way laws pertaining to bicyclists, pedestrians and motorists?





## Resources/Contact Information

- **Neal Johnson** – [neal-johnson@tti.tamu.edu](mailto:neal-johnson@tti.tamu.edu)
- <https://groups.tti.tamu.edu/cts/lepedbike/>
- <https://www.walkbikesafetexas.org/>