Center for Transportation Safety

Safety Research and Outreach

Law Enforcement Training on Pedestrian and Bicycle Laws

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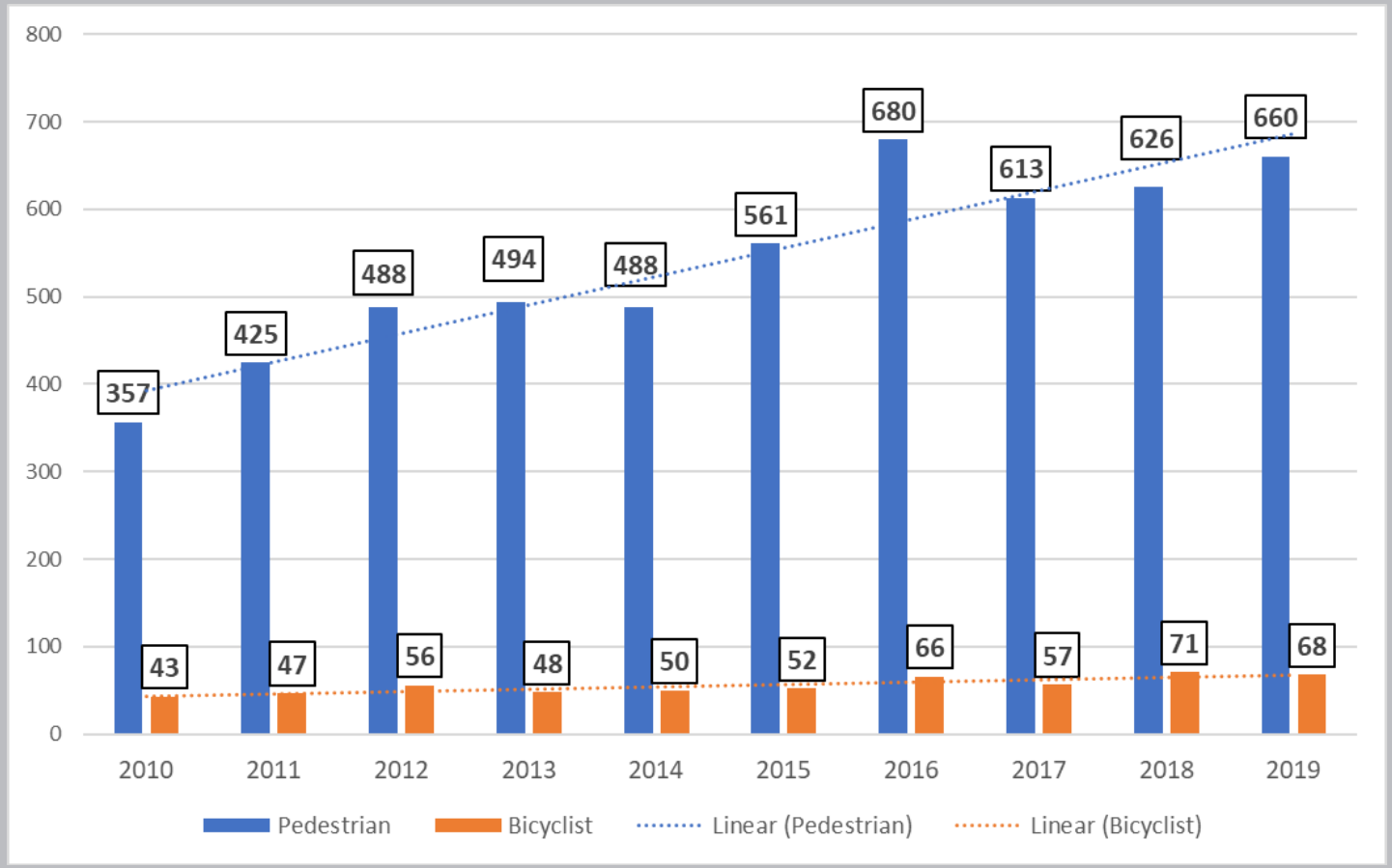
Bicycle and Pedestrian Crashes in Texas



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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

Sidewalk Definition

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

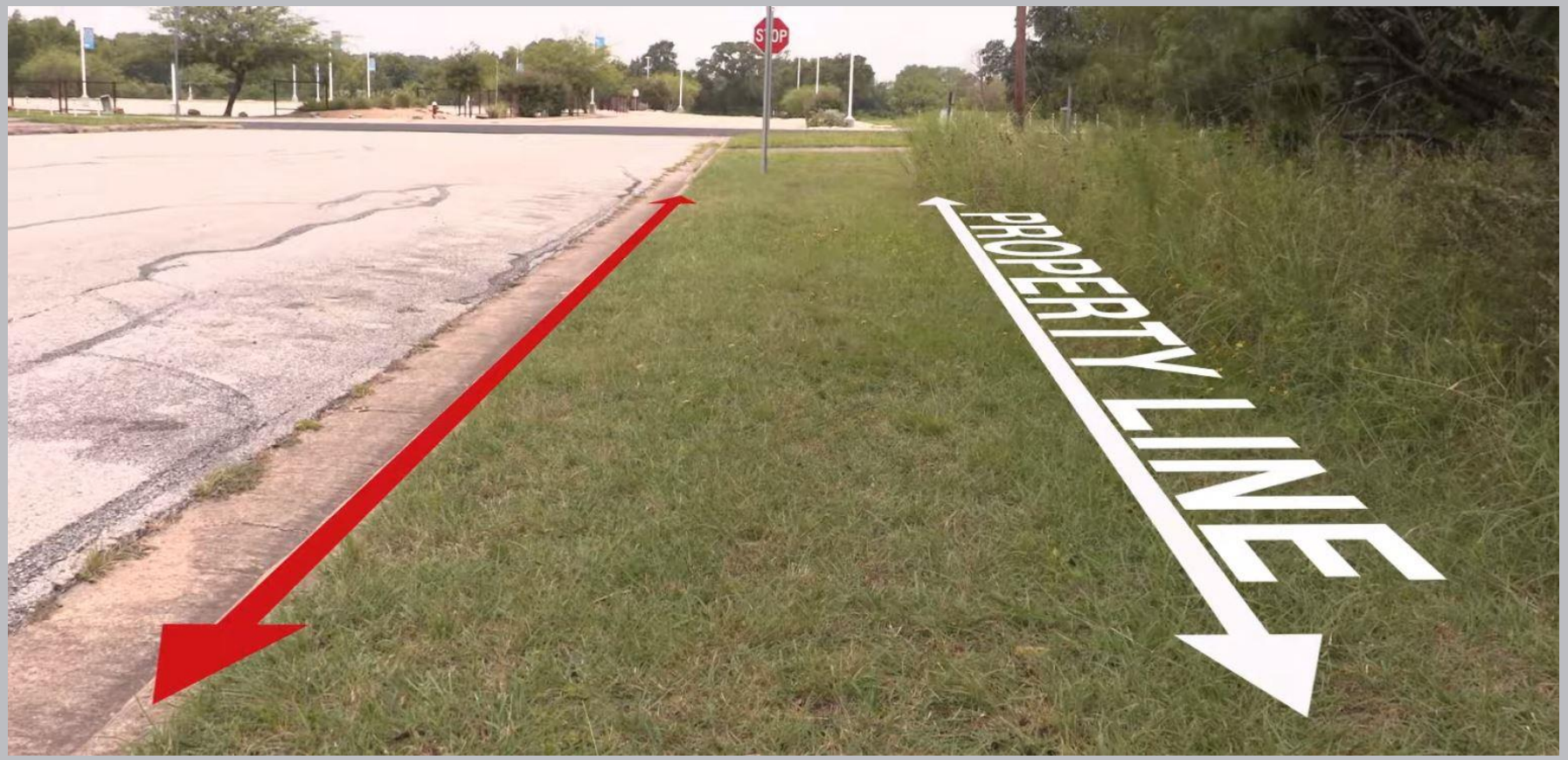
A. between a curb or lateral line of a roadway and the adjacent property line; and
B. intended for pedestrian use.

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



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Crosswalk Definition

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

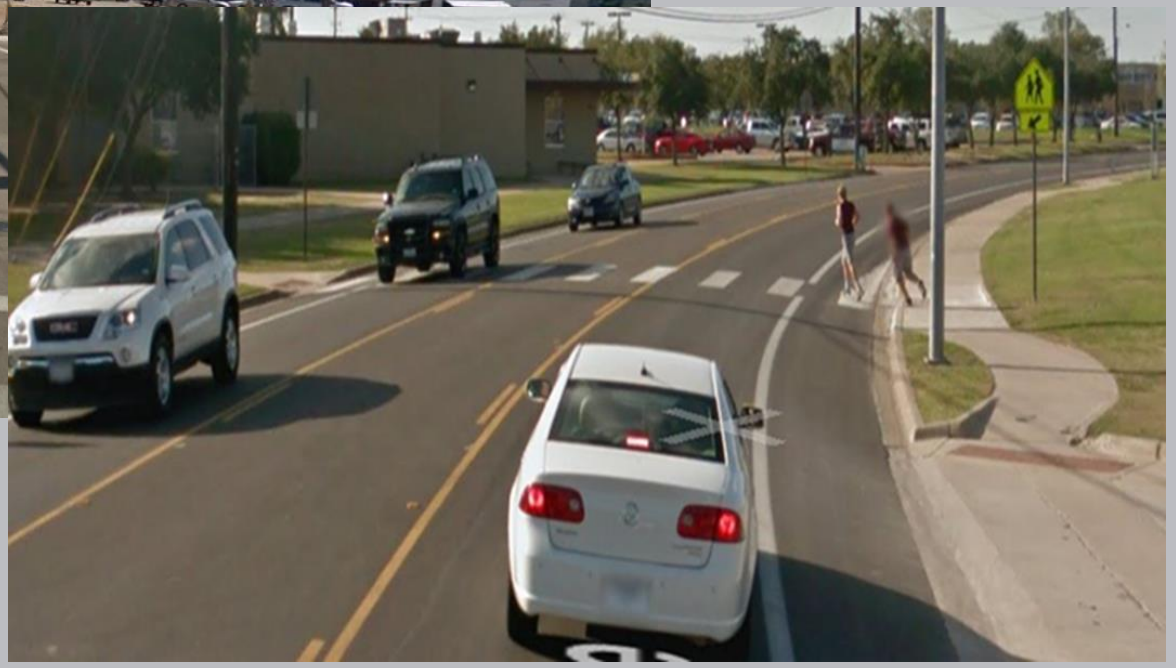
A. the portion of a roadway, including an intersection, designated as a pedestrian crossing by surface markings, including lines; or

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)

Crash Example #1

Unmarked Crosswalks

- Stop sign in only one direction
- No marked crosswalks

(Image from Google Maps)

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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)

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Bicycle & Micro-Mobility Regulations

TTC, 551.101, 545.104-107

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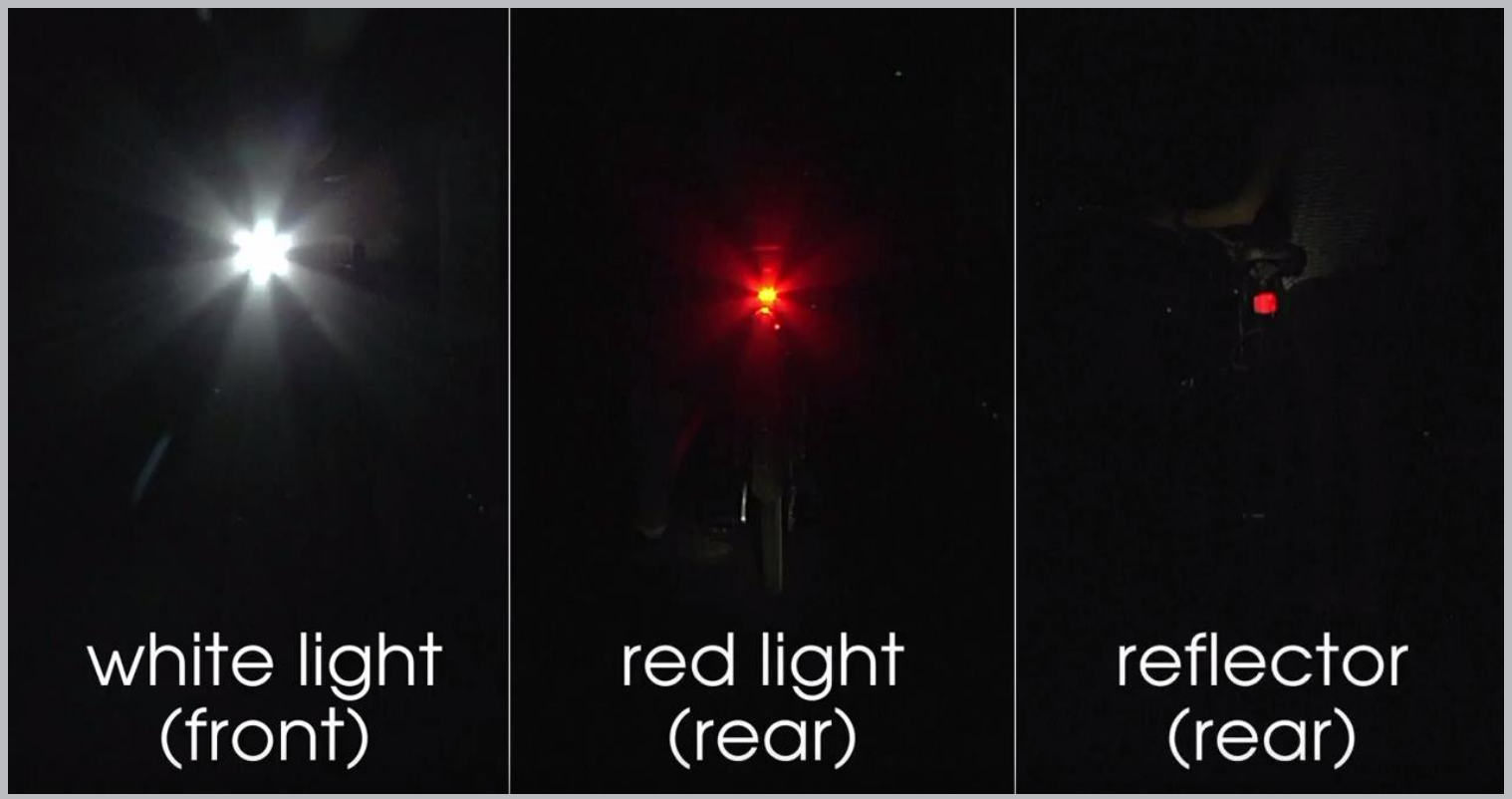
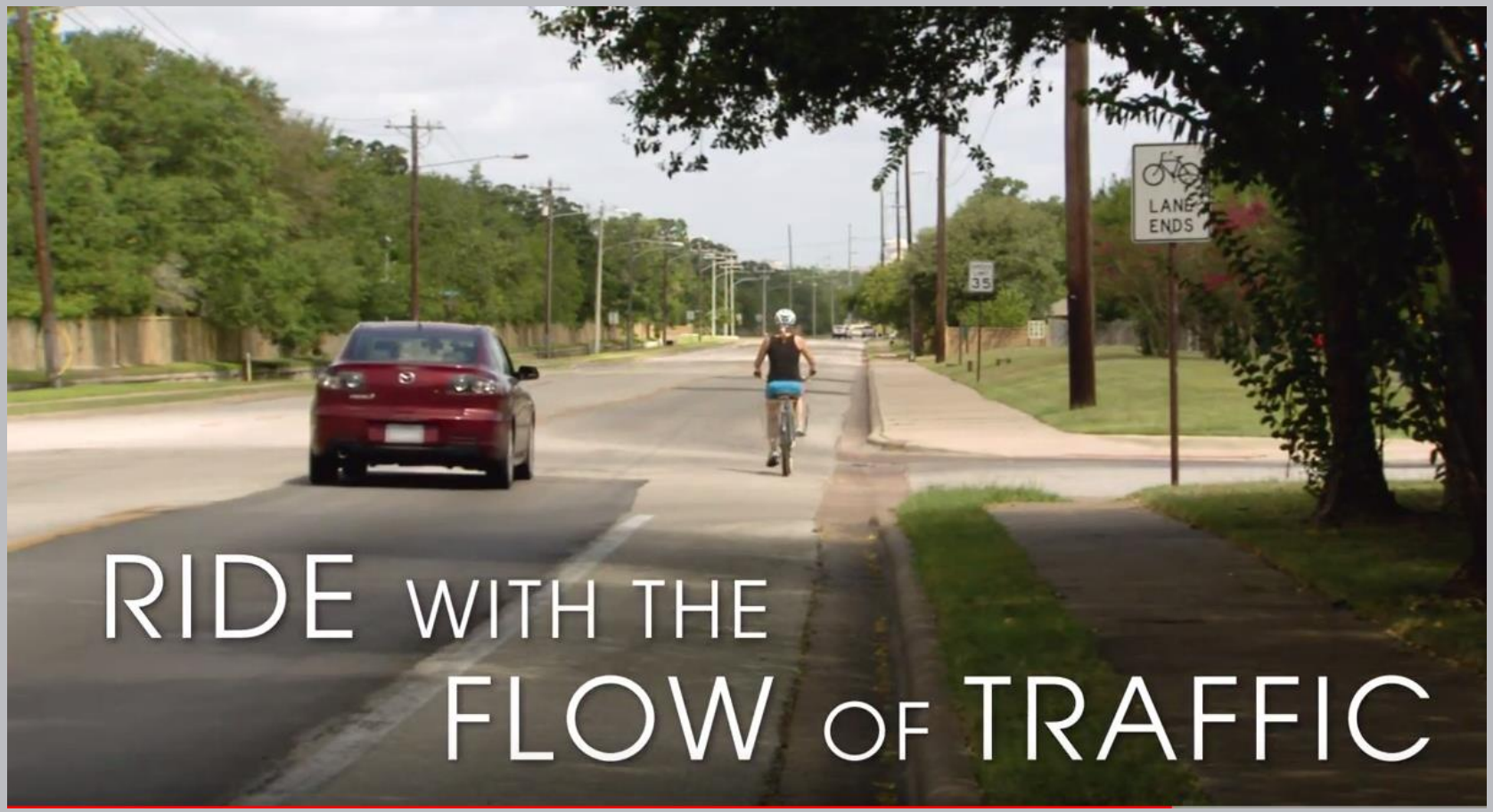
Bicycle & Micro-Mobility Regulations

- Bicyclists riding at night are required to have:



TTC, 551.104

Bicycle & Micro-Mobility Regulations



TTC, 551.101

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Bicycle & Micro-Mobility Regulations

- Ride as far to the right as practicable (TTC, 551.103)

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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

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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.

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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)

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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.

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Crash Example #2

Bicyclist on the Sidewalk

- What happens when they get to an intersection or driveway?
- Do they have the rights of pedestrians if they are on the sidewalk?

(Image from Google Maps)

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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

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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

- Right-of-way at signalized intersections is dictated by:
  - A separate pedestrian signal (if equipped).
  - The signal for vehicular traffic in your direction of travel.

TTC, 552.002

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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

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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

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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)

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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).

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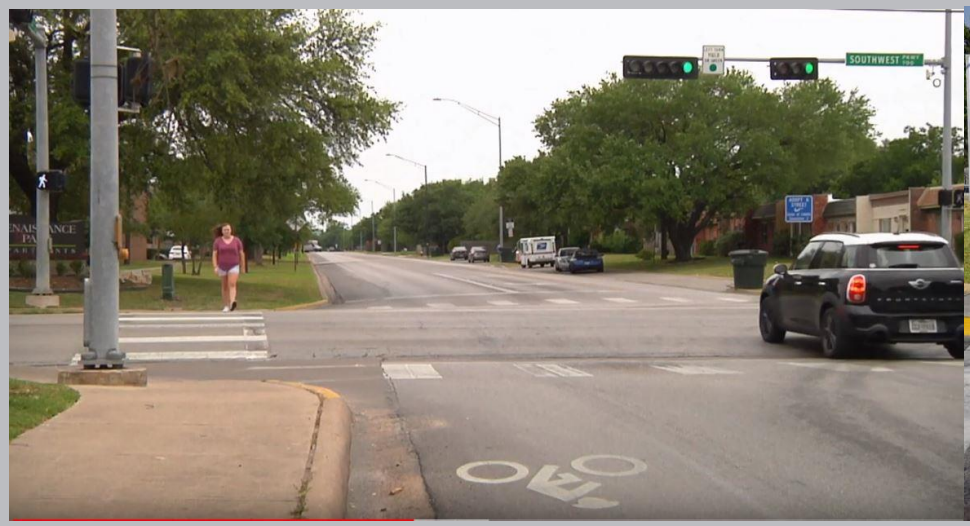
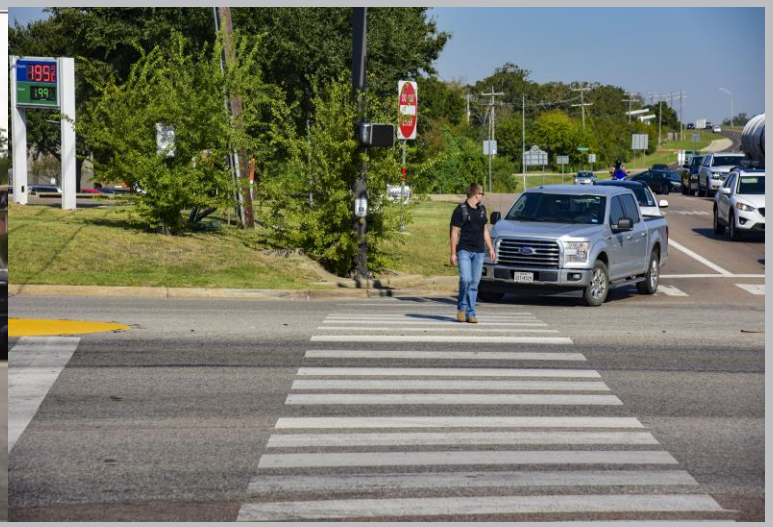
Pedestrian Right-of-Way

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





TTC, 552.002

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Pedestrian Right-of-Way

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

TTC, 552.001 & 002

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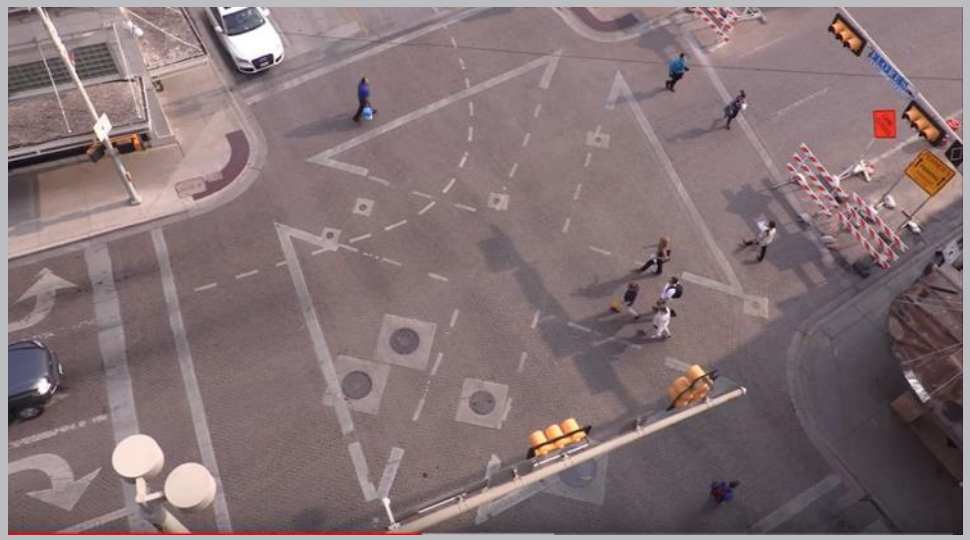
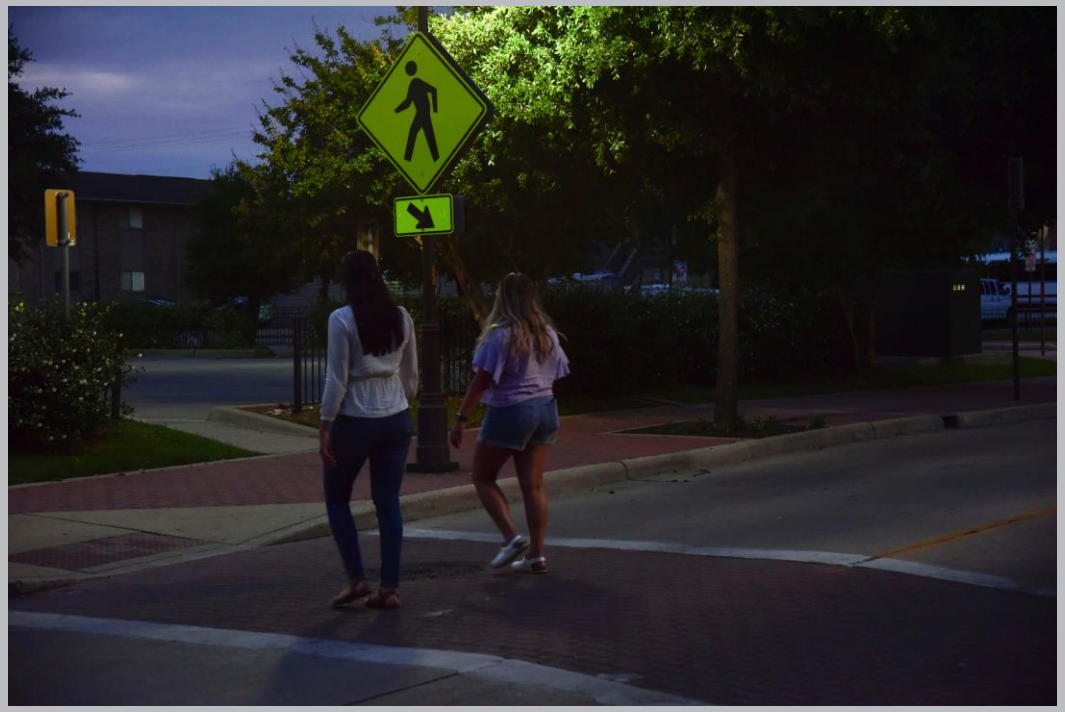
Pedestrian Right-of-Way

- 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 yield to pedestrians who are in a marked crosswalk that is **NOT** at an intersection.



TTC, 552.003

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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.

TTC, 552.003

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Crash Example #3

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

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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

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Motorist /Bicyclist Right-of-way

TTC, 545.101, 545.103, 541.401, 551.101

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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

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Crash Example #4

Shared Use Paths

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

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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)

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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)

Top Pedestrian Crash Contributing Factors

Contributing Factors of Motorists		
Major Contributing Factors	**Number**	**%**
Failed to Yield Right-of-Way to Pedestrian	4,276	31.4%
Driver Inattention	2,228	16.4%
Failed to Control Speed	889	6.5%
Failed to Drive in Single Lane	440	3.2%

Contributing Factors of Pedestrians		
Major Contributing Factors	**Number**	**%**
Failed to Yield Right-of-Way to Motorist	10,320	85.2%
Had Been Drinking	601	5.0%
Under the Influence	529	4.4%
Pedestrian Inattention	104	0.9%

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Top Bicycle Crash Contributing Factors

Contributing Factors of Motorists		
Major Contributing Factors	**Number**	**%**
Driver Inattention	1,329	24.7%
Failed to Yield Right of Way to Bicyclist	731	13.6%
Failed to Yield Right of Way at Stop Sign	473	8.8%
Failed to Yield Right of Way Turning Left	462	8.6%
Failure to Control Speed	344	6.4%

Contributing Factors of Bicyclists		
Major Contributing Factors	**Number**	**%**
Failed to Yield Right of Way to Motorist	873	15.7%
Bicyclist Inattention	513	9.3%
Disregard Stop Sign or Light	363	6.5%
Failed to Yield Right of Way at Stop Sign	325	5.9%
Disregard Stop and Go Signal	303	5.5%

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)

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

Importance of Crash Reporting

- Motor Vehicle
  - Golf Cart

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Importance of Crash Reporting

- Motor Vehicle
  - Moped

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Importance of Crash Reporting

- Motor Vehicle
  - Recreational Off Highway/Utility Vehicle

Importance of Crash Reporting

- Motor Vehicle
  - Autocycle

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
  - Pocket Bikes

Importance of Crash Reporting

- Motorized Conveyance
  - Go-carts

Importance of Crash Reporting

- Motorized Conveyance
  - Riding Lawn Mowers

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Importance of Crash Reporting

- Motorized Conveyance
  - Segways

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Importance of Crash Reporting

- Motorized Conveyance
  - Motor Assisted Scooter (does not include moped, motorcycle or motor driven cycle)

Importance of Crash Reporting

Data Driven Decision Making

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

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?

Discussion Questions

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

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https://groups.tti.tamu.edu/cts/lepedbike/

OR

https://www.walkbikesafetexas.org/

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