

# **Project Intention**

The Pedestrian Advisory Council intends to create an information leaflet on Pedestrian Crossing Rules & Regulations with input and advice from APD & ATD.

This is a working document to generate & discuss content for that leaflet.

## Scope

This discussion document is produced by the Pedestrian Advisory Council for the information and education of its members.

This document is not officially adopted or endorsed by City Council or any City Departments

The scope of this project is to focus on pedestrian traveling on foot rather than drivers of broken down vehicles or those placed in prohibited areas due to a crash or other incident.

This document is not intended to be an exhaustive capture of policy although it does include reference material from several sources. It principally a record of the PAC Technical-subcommittee's efforts in educating themselves and discussing the relevant rules and regulations necessary to improve safety education, engineering, and enforcement in the city of

Austin.

### **PAC** Motivation

In order to achieve effective solutions in our continuing traffic safety efforts we need to tackle education and interpretation so all users have a good understanding of rules and regulations.

The proposed leaflet is to educate both vehicle operators and pedestrians.

This project has received collaboration and cross-working on questions raised in relation to interpretation of regulations and has already made progress in finding common understanding between groups.

It focuses solely on what the laws are today and does not suggest what SHOULD BE, although it does provide a basis for these conversations at a later date.

# Using this Document

Discussions and direct comment from various meetings are referenced as such where possible and direct quotes from source documents are highlighted in *blue* for ease of reference.

The following quote speaks to the power of education and improvement in safety by raising awareness as part of coordinated safety efforts.

"In central Florida, the Best Foot Forward coalition has set a goal to reduce the number of pedestrian fatalities and injuries by 50 percent in 5 years by employing engineering, education and enforcement strategies. With a specific focus on making sure people driving vehicles yield to people crossing the street on foot, the coalition has already seen great results.

In one year, law enforcement issued more than 3,200 warnings to drivers who failed to yield. An estimated 91,000 households in Orange County and Orlando have been exposed to the effort through flyers, television coverage and outreach to schools and homeowner associations. Crosswalks were improved too, including 37 near schools. As a result, the number of drivers who yield has jumped to 48 percent—compared with the baseline of 12 percent."

Dangerous By Design 2014

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# 1. Thoroughfare Components

# **Defining Thoroughfare Components**

'Thoroughfare' has been agreed by the group as a generic term to define all corridors allowing public movement and access.

The reason this is important is because unless we have an agreed terminology we cannot describe where crashes take place, for consistent recording and analysis later to inform improvements to the system.

The Texas Transportation Code [TTC] is used as the default for definitions as it is state law.

Paragraphs with a are considered of particular importance for ongoing discussion.

Within a Thoroughfare there are components defined in the TTC:

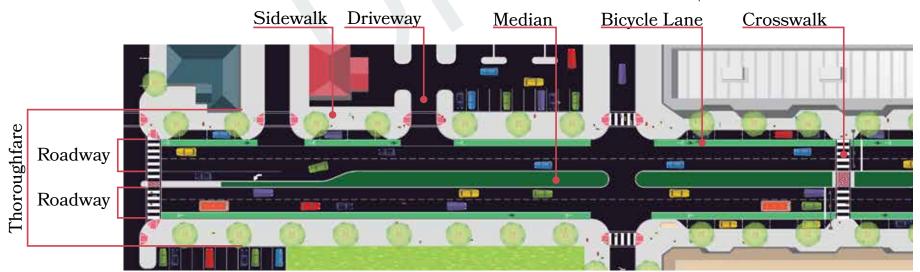
- "Roadway" means the portion of a highway, other than the berm or shoulder, that is improved, designed, or ordinarily used for vehicular travel.
   If a highway includes at least two separate roadways, the term applies to each roadway separately. [TTC]
- "Shoulder" the portion of a highway adjacent to the roadway; designed or ordinarily used for parking; not intended for normal vehicular travel. [TTC]
- "Sidewalk" area intended for pedestrian use between a curb or lateral line of a roadway and the adjacent property line. [TTC]
- "Private road or driveway" means a privately owned way or place used for vehicular travel and used only by the owner and persons who have the owner's express or implied permission. [TTC]

Other components are defined in the Texas Manual for Uniform Traffic Control Devises (MUTCD):

- "Travelled Way" the portion of the roadway for the movement of vehicles, exclusive of the shoulders, berms, sidewalks, and parking lanes.
- Bicycle Lane—a portion of a roadway that has been designated for preferential or exclusive use by bicyclists by pavement markings and, if used, signs.
- Median—the area between two roadways of a divided highway measured from edge of traveled way to edge of traveled way. The median excludes turn lanes.

Component without definition in TTC or MUTCD:

 Sidewalk Buffer – grass or other planted area between the lateral line of a roadway or shoulder, if present, and the sidewalk, if a constructed sidewalk is present.



# 2. Thoroughfare Types

This background discussion is intended to help to understand that there are different types of thoroughfare, which affects whether they are appropriate for pedestrians to cross.

Types of thoroughfares are defined in several different documents:

- Texas Transportation Code [TTC], Title 7.
   Vehicles And Traffic, Subtitle C. Rules Of
   The Road, Chapter 541. Definitions
- 2. TxDOT Access Management Manual
- 3. Texas Manual for Uniform Traffic Control Devices (MUTCD)
- 4. The Transportation Criteria Manual
- 5. City Development Code Sub-chapter E
  For the purposes of this document the TTC is
  used as the principal definition with others used
  to provide additional information.

Note: some definitions have been omitted for brevity, please refer to original source text for full details.

# Texas Transportation Code

"Sec. 541.302. TRAFFIC AREAS. In this subtitle:

- "Freeway" means a divided, controlled-access highway for through traffic.
- "Highway or street" means the width between the boundary lines of a publicly maintained way any part of which is open to the public for vehicular travel.
- "Laned roadway" means a roadway that is divided into at least two clearly marked lanes for vehicular travel."
- "Alley" means a street that is not used primarily for through traffic; and provides access to rear entrances of buildings or lots along a street.
- Frontage road is: Defined as "Highways or Streets" by the Texas Transportation Code Title 7, Section 541.302 (5).

# TxDOT Access Management Manual

- Freeways provide the highest level of mobility
  and are intended to carry the greatest amount of
  traffic at the highest speeds. Accordingly, freeway
  mainlanes provide no direct access to property
  and access to the freeway mainlanes is provided
  only at interchanges and ramps.
- Arterials provide the next highest level of mobility and are intended to carry substantial amounts of traffic over relatively long distances and at relatively high speeds. Direct property access may be provided but must be carefully managed to preserve arterial mobility and avoid creating unsafe and congested traffic operations.
- Collectors provide lower mobility and are intended to carry lower volumes of traffic at lower speeds. Since most of the trips on collectors are shorter distance local trips, these streets can safely provide a higher amount of property access.
- Local streets provide the lowest level of mobility and are intended to provide direct access to properties, preserve the neighborhood environment, and enhance pedestrian and bicycle safety.

An additional definition the PAC discussed the definition of Frontage Roads as they are unique to Texas. The TxDOT AMM states:

"A frontage road is a local street or road along an arterial highway allowing control of access and service to adjacent areas and property. A frontage road my also be referred to a service road."

### Texas MUTCD

- Highway A general term for denoting a public way for purposes of vehicular travel, including the entire area within the right-of-way.
- Expressway—a divided highway with partial control of access.
- Freeway—a divided highway with full control of access.
- Arterial Highway (Street)—a general term denoting a highway primarily used by through traffic, usually on a continuous route or a highway designated as part of an arterial system
- Collector Highway—a term denoting a highway
  that in rural areas connects small towns and local
  highways to arterial highways, and in urban areas
  provides land access and traffic circulation within
  residential, commercial, and business areas and
  connects local highways to the arterial highways.
- Major Street—the street normally carrying the higher volume of vehicular traffic.
- Minor Street—the street normally carrying the lower volume of vehicular traffic.
- Urban Street—a type of street normally characterized by relatively low speeds, wide ranges of traffic volumes, narrower lanes, frequent intersections and driveways, significant pedestrian traffic, and more businesses and houses.
- Alley—a street or highway intended to provide access to the rear or side of lots or buildings in urban areas and not intended for the purpose of through vehicular traffic.

# Transportation Criteria Manual

- A. Alley. An alley is a passageway designed primarily to provide access to or from the rear or side of property otherwise abutting on a public street.
- B. Local Street. The primary function of a local street is to serve abutting land use and traffic within a neighborhood or limited residential district. A local street is not generally continuous through several districts.
- C. Collector Street. The primary function of a collector street is to intercept traffic from intersecting local streets and expedite the movement of this traffic in the most direct route to an arterial street or other collector street.
- D. Arterial Street. Arterial streets are designed to carry high volumes of through traffic. Access is usually limited to intersections and major driveways. Arterial streets serve as a link between major activity centers within the urban area.
- E. Freeway. Freeways are divided arterial highways designed with full control of access and grade separations at all intersections. Freeways provide movement of high volumes of traffic at relatively high speeds. This system carries most of the trips entering and leaving the urban area, as well as most of the through movements by-passing the central city.
- F. Parkway. A parkway is a freeway which does not have continuous frontage roads. Parkways have a greenspace buffer between the roadway and adjacent development and preserves and enhances the natural landscape as much as possible.

## Austin City Code: Sub-chapter E

"The following five roadway types are listed from highest to lowest priority for purposes of this Subchapter:

- Core Transit Corridor:
- Internal Circulation Route;
- Urban Roadway;
- Suburban Roadway; and
- Highway or Hill Country Roadway."

# Thoroughfare Type Comparison Matrix Conclusions

Thoroughfare					Source	
Freeway		Highway or Street		Alleyway		
	Freeway (Controlled Access highway)		Highway or Street	Laned Roadway	Alley	Texas Transportation Code
Interstate Highway	Freeway	Arterial	Collector	Local street, Frontage Road		TxDOT Access Management Manual
	Expressway, Freeway	Arterial Highway (Stret), Rural Highway	Collector Highway	Major Street, Minor Street, Special Purpose Road, Urban Street	Alley	Texas MUTCD
		Highway/Hill Country Roadway	Core transit corridor, Urban Roadway, Suburban Roadway	Internal Circulation Route		Sub-chapter E
	Freeway, Parkway	Arterial Street	Collector Street	Local Street	Alley	Transportation Criteria Manual

Based on the above analysis from the TTC (Sec. 541.302) there are three main typologies of thoroughfares. These are:

- "Freeway" means a divided, controlled-access highway for through traffic.
- "Highway or street" means the width between the boundary lines of a publicly maintained way any part of which is open to the public for vehicular travel.
- "Alley" means a street that is not used primarily for through traffic; and provides access to rear entrances of buildings or lots along a street.

For clarification, frontage/service roads are considered to fall under the "highways/street" typology.

# 3. Pedestrians on "Certain Roadways"

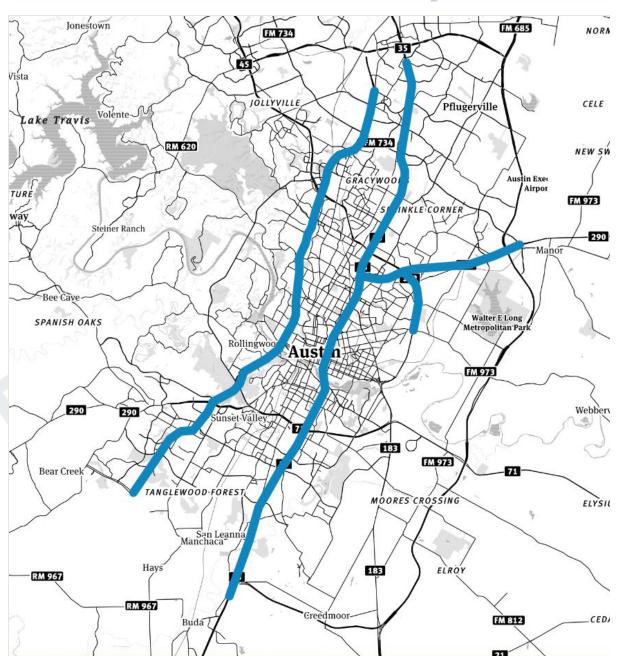
Now different thoroughfare types are defined we are better able to understand the intention of City Ordinances applied to the types of thoroughfare pedestrians should and should not cross.

Specifically this relates to:

§ 12-1-26 PEDESTRIANS ON CERTAIN ROADWAYS (City of Austin Code of Ordinance)

- (B) A pedestrian may not cross the following roadways except on an overpass or underpass that crosses the roadway:
- *IH-35*;
- Loop 1 (MoPac Expressway);
- U.S. Highway 290 (East) from IH-35 to the east city limits; or
- U.S. Highway 183 (Ed Bluestein Boulevard) from U.S. Highway 290 (East) to Farm Road 969 (Webberville Road).

Therefore, pedestrians are prohibited from crossing the above roadways by City Ordinance. This does not include any other freeways, highways or streets.



Map of road identified in § 12-1-26 PEDESTRIANS ON CERTAIN ROADWAYS (Source: Nic Moe)

### Discussion

IH-35 is a controlled access roadway through the city limits. US290 East is also (now). However, there are intersections with traffic signals on US183 (at Loyola & at 51st for example) that have marked crosswalks and pedestrian signals. However, these are not overpasses or underpasses. Loop 1 also has at-grade signalized intersections at Slaughter and Lacrosse. Each of these has pedestrian signals and a crosswalk.

According to this ordinance, pedestrian crossings are prohibited at these intersections—in spite of the traffic signal, crosswalk, and pedestrian signals.

It is likely that this ordinance predates these infrastructure improvements. And that the intent is not to prohibit crossings where there is a marked crosswalk or a signal with pedestrian signals in locations where there are no controlled access main lanes.

This aerial illustrates that MoPAC has marked pedestrian crosswalks and signal heads.

We assume the Ordinance prohibiting pedestrian crossing does not apply in this location, or others with Marked Pedestrian Crosswalks.

### Conclusion

Our conclusion, using the thoroughfare types identified by the TTC, is that:

- Freeway = The implication is from the TTC that the roadway portion of a Freeway is not permitted for pedestrians to cross as part of the intended uninterrupted flow of through traffic.
- Highway & Streets = Pedestrian crossing/use permitted unless specifically restricted by State Law [TTC] or City Ordinance
- Alleyway = No restrictions on pedestrian use/ crossing.



# 4. What is an Intersection

This section provides definitions of when an intersection is formed and interpretation of the extent of such an intersection. This is critically important as intersections are the principal structure around which 'marked' and 'unmarked' crosswalks are based.

The TTC States under Sect. 1A.13. 94.

Intersection—intersection is defined as follows:

- (a) The area embraced within the prolongation or connection of the lateral curb lines, or if none, the lateral boundary lines of the roadways of two highways that join one another at, or approximately at, right angles, or the area within which vehicles traveling on different highways that join at any other angle might come into conflict.
- (b) The junction of an <u>alley or driveway with</u>
   a roadway or highway shall not constitute an
   intersection, unless the roadway or highway at
   said junction is controlled by a traffic control
   device.
- (c) If a highway includes two roadways that are 30 feet or more apart (see definition of Median), then every crossing of each roadway of such divided highway by an intersecting highway shall be a separate intersection.
- (d) If both intersecting highways include two roadways that are 30 feet or more apart, then every crossing of any two roadways of such highways shall be a separate intersection.

- (e) At a location controlled by a traffic control signal, regardless of the distance between the separate intersections as defined in (c) and (d) above:
  - (1) If a stop line, yield line, or crosswalk has not been designated on the roadway (within the median) between the separate intersections, the two intersections and the roadway (median) between them shall be considered as one intersection;
  - (2) Where a stop line, yield line, or crosswalk is designated on the roadway on the intersection approach, the area within the crosswalk and/or beyond the designated stop line or yield line shall be part of the intersection: and
  - (3) Where a crosswalk is designated on a roadway on the departure from the intersection, the intersection shall include the area extending to the far side of such crosswalk.

# Discussion: Creation of an Intersection Conclusions

A street or road does not in itself create an intersection. A location where two or more thoroughfares meet may or may not create an intersection depending on circumstances.

- Freeway/on-ramp joining a frontage road Does not create intersection with the controlled access lanes of the freeway.
- Street/highway joining another street/highway
   Does create an intersection as defined by the TTC.
- Altey or driveway joining a street/highway Does not create an intersection unless the street/highway at said junction is controlled by a traffic control device.

# 5. Crosswalks at Intersections

A crosswalk that most pedestrians are familiar with is where white striped or paralell lines painted on the road. However, Under the Texas transportation Code (TTC) these 'marked' crosswalks form only a small number of the crosswalks in the city.

TTC Sec. 541.302. TRAFFIC AREAS. In this subtitle:

#### (2) "Crosswalk" means:

- (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.

'B' above describes an 'implied crosswalk', more commonly called an 'Unmarked' crosswalk. This crosswalk has the same legal and functional interpretation as a marked crosswalk even though it has no roadway paint or marking to alert drivers or pedestrians to it.

Additional Definition MUTCD:

#### "Crosswalk—

(a) that part of a roadway at an intersection included 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, and in the absence of a sidewalk on one side of the roadway, the part of a roadway included within the extension of the lateral lines of the sidewalk at right angles to the center line;

(b) any portion of a roadway at an intersection or elsewhere distinctly indicated as a pedestrian crossing by pavement marking lines on the surface, which might be supplemented by contrasting pavement texture, style, or color.

Crosswalk Lines—"white pavement marking lines that identify a crosswalk."

For example the PAC has illustrated the following intersection:



Residential street intersection annotated to show unmarked crosswalk

At the above intersection no crosswalk is marked. However, 'unmarked crosswalks' still exist as highlighted in green up to the line of the Right-of-Way.

# Crosswalk Types

Crosswalk types, therefore, fall into two main categories:

- Marked
- Unmarked

#### Marked

- Parallel Lines two parallel white lines
- Continental a series of rectangular white "blocks"
- Ladder combination of parallel lines and continental "blocks"

Marked Crosswalks may exist anywhere where they are installed by the Austin Transportation Department. Whether they are at intersections or not.

#### Unmarked

• Unmarked Crosswalks – "as 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." [TTC]

### Discussion

PAC interpretation: Unmarked crosswalks exist in any location where a street/highway joins another street/highway, where there isn't a marked crosswalk and where there is no state law or city ordinance prohibiting pedestrian crossing.

The PAC discussed whether an unmarked crosswalk is formed when sidewalks on either side of a roadway form aligned pedestrian curb cuts. It was concluded that as this is not an intersection no unmarked crosswalk is created.

The introduction of markings or a pedestrian signal would form a crosswalk at this location.



For example, this instance does not form an unmarked crosswalk (MoPac and Barton Skyway)

# 6. Right-of-Way at Crosswalks

Now we have a clear definition of where crosswalks do and do not exist it is important to understand who should yield the right of way to whom in using them. As usual the TTC is the first point of call for a response.

Sec. 552.003. PEDESTRIAN RIGHT-OF-WAY AT CROSSWAI K.

- (a) The operator of a vehicle shall yield the rightof-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.
- (b) Notwithstanding Subsection (a), 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 yield.
- (c) The operator of a vehicle approaching from the rear of a vehicle that is stopped at a crosswalk to permit a pedestrian to cross a roadway may not pass the stopped vehicle.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

APD commented that: "The statute does not specifically define that "light signals" are necessary define the crosswalk as "controlled", per the Texas Transportation Code, Title 7, Sec. 541.304. TRAFFIC CONTROL:

- (1) "Official traffic-control device" means a sign, signal, marking, or device that is:
  - (A) consistent with this subtitle;
  - (B) placed or erected by a public body or officer having jurisdiction; and
  - (C) used to regulate, warn, or guide traffic.
- (2) "Railroad sign or signal" means a sign, signal, or device erected by a railroad, public body, or public officer to notify traffic of railroad tracks or an approaching railroad train.
- (3) "Traffic-control signal" means a manual, electric, or mechanical device that alternately directs traffic to stop and to proceed.

Therefore an intersection with Stop signs is considered 'controlled'. However, for application to pedestrians they are legally allowed to cross and the vehicles should yield the right of way under (a)(2)(A) in any situation where there is a crosswalk (either marked or unmarked).

This is the basis of the phrase used on new sign-age within the city: "State Law, Yield to Pedestrians within Crosswalk"

Part (b) adds further clarification that while the pedestrian has the right of way when crossing at a crosswalk, they:



"...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 yield."

The PAC had several discussions around the definition of "impossible to yield". It was found that there is no definitive understanding of this and that this is a critical component of both communication and shared understanding between road uses in order to allow this to function safely.

We identified a significant number of factors which may influence the ability for a driver to yield including:

- What is the vehicle type and its stopping ability?
- What are the roadway conditions?
- How visible is the pedestrian when approaching the location or at the location waiting to cross?
- Do any other factors, such as sun glare, fog, rain, etc., impact visibility at the time?

# 7. Crosswalks with Signal Heads

Where traffic signals or pedestrian signals are present the pedestrian should follow their instruction. Signals are defined as:

Sec. 552.001. TRAFFIC CONTROL SIGNALS.

- (a) A traffic control signal displaying green, red, and yellow lights or lighted arrows applies to a pedestrian as provided by this section unless the pedestrian is otherwise directed by a special pedestrian control signal.
- (b) A pedestrian facing a green signal may proceed across a roadway within a marked or unmarked crosswalk unless the sole green signal is a turn arrow.
- (c) A pedestrian facing a steady red signal alone or a steady yellow signal may not enter a roadway

### Discussion

If a pedestrian signal is present, pedestrian movement is controlled by the pedestrian signal, otherwise the pedestrian movement is controlled by the traffic signals containing the red, yellow, and green indications.

The following observation were made about the actions of drivers and pedestrians at intersections with pedestrian and traffic signals.

# ght turn on red with pedestrian about to cross

 Turning in front of or after a pedestrian: leave a safe distance from the vulnerable road user [Common good practice identified by PAC, see later section on Vulnerable Road Users].

### Passing a stopped car at a crosswalk

 It is illegal to pass a car stopped at a crosswalk to permit a pedestrian to cross the roadway -552.003(c)

### tocking a crosswalk:

• Other than turn on red, it is illegal for a vehicle to be stopped in the crosswalk [Common good practice identified by PAC].

# Alleys and Driveways

For alleys or driveways either commercial or residential the following applies:

Sec. 545.256. EMERGING FROM AN ALLEY, DRIVEWAY, OR BUILDING. An operator emerging from an alley, driveway, or building in a business or residence district shall:

- (1) stop the vehicle before moving on a sidewalk or the sidewalk area extending across an alley or driveway;
- (2) yield the right-of-way to a pedestrian to avoid collision; and
- (3) on entering the roadway, yield the right-ofway to an approaching vehicle.

# 8. Crossing other than a Crosswalk

In most cases, it is legal for a pedestrian to cross the road at a location where there is not a crosswalk. This section identifies where a pedestrian may cross the road outside of a crosswalk by yielding the right of way to vehicles and where, due to the specific circumstances of the location, it is prohibited to cross unless at a crosswalk.

The relevant TTC section states:

Sec. 552.005. CROSSING AT POINT OTHER THAN CROSSWALK.

- (a) A pedestrian shall yield the right-of-way to a vehicle on the highway if crossing a roadway at a place:
- (1) other than in a marked crosswalk or in an unmarked crosswalk at an intersection: or
- (2) where a pedestrian tunnel or overhead pedestrian crossing has been provided.
- (b) Between adjacent intersections at which traffic control signals are in operation, a pedestrian may cross only in a marked crosswalk.
- (c) A pedestrian may cross a roadway intersection diagonally only if and in the manner authorized by a traffic control device.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

### Discussion

Following TTC Sec.552.005, our understanding is that it is legal to cross in the following circumstances:

- Crossing where vehicles must yield the Right of Way (i.e. within a marked crosswalk or in an unmarked crosswalk at an intersection)
- Crossing where pedestrians must yield the right of way (i.e. Crossing at point other than crosswalk)

And that it is only illegal in certain locations by TTC, signage, or City ordinance as described below:

- "between adjacent intersections at which traffic control signals are in operation" [TTC]
- Road types which are prohibited for pedestrian access (i.e. Roadways defined § 12-1-26 PEDESTRIANS ON CERTAIN ROADWAYS, Part B. (City of Austin Code of Ordinance)
- Where signage specifies pedestrian crossing is prohibited.

# Jaywalking

APD comment: "Jaywalking "is a commonly misused term used when describing pedestrians who fail to abide by the pedestrian control device or who cross an intersection diagonally, etc. APD uses varying citation titles to help the municipal court when writing the complaint following the issuance citation. Often times there are multiple citation titles that are derived from an ordinance or law. The citation title "Pedestrian in Roadway" is used to refer to behavior that violates City Ordinance or state law, depending on the behavior observed.

Therefore APD uses "Pedestrian in the Roadway" or "Pedestrian in the travel lane of the road way" under § 12-1-26 PEDESTRIANS ON CERTAIN ROADWAYS. (City of Austin Code of Ordinance) to describe pedestrians crossing in prohibited locations.

#### For clarification:

- In our discussion the PAC did not use the phrase "Crossing Mid-Block" to denote illegal crossing, as this does not universally apply as prohibited.
- When crossing, either with or without the right of way, pedestrians should exercise due caution and observation of other road user's actions.
- The PAC is not advocating for pedestrians to unsafely cross even if the vehicle should yield the right of way.

# 9. Austin Examples

The following images illustrate the above points for discussion of how to illustrate the rules to pedestrians, cyclists, and drivers.

The illustrations include the following color coding:



### Scramble Crossing

A scramble crossing refers to a type of signal operation that, at time, permits pedestrians to simultaneously cross the intersection in any direction, including diagonal





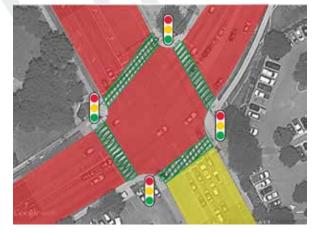
Intersection location: W Dean Keeton St. and Whitis Avenue

### Pedestrian Signal

One of the most common crossing types.



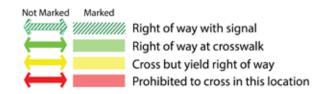
Intersection location: Barton Springs Road and 1st Street





### Pedestrian Signal: Stop/Go

Even though crosswalks are not identified on all four sides of the intersection there is no legal restriction to crossing, at the unmarked crosswalks. The engineering design would strongly suggest using the marked crosswalks as the safe course of action.









Intersection at MoPAC and Barton Skyway

### Discussion:

To the south of the intersection there is a curb-cut, where the sidewalk does not reach the intersection. APD Response to the question of whether the curb cuts form a crosswalk: Refer to Texas Transportation Code, Title 7, Sec. 552.005. CROSSING AT POINT OTHER THAN CROSSWALK. Although the laws can't specifically describe every situation, the spirit of the law should prevail. Good judgment would always error on the side of caution by crossing at areas specifically designed for pedestrians to cross. The final interpretation would be responsibility of the court.

### Marked crosswalk

One crosswalk is stripped in a ladder style, another has parallel lines, and the third has no marking at all. All implied crosswalks carry the same pedestrian right of way. Outside a marked or implied crosswalk the pedestrian may cross the roadway if yielding right of way.







Intersection location: Shoal Creek and Treadwell Boulevard

#### Discussion

APD commented: Texas Transportation Code, Title 7, Sec. 552.005. CROSSING AT POINT OTHER THAN CROSSWALK. Although the laws can't specifically describe every situation, the spirit of the law should prevail. Good judgement would always error on the side of caution by crossing at areas specifically designed for pedestrians to cross. The final interpretation would be responsibility of the court

The discussion considered that if there is a crosswalk at an uncontrolled intersection, a pedestrian should use it. Therefore, while pedestrian do not have to use the marked crosswalk if one is present. It would be common sense good practice interpretation of the engineering intention of this intersection.

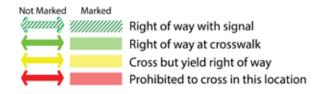
Pedestrians are prohibited, per TTC 552.005 (c), from crossing diagonally unless authorized by a traffic control device. This is typically a traffic signal with pedestrian signals heads.

# 10. Simple Intersections

Marked crosswalk: Roundabout

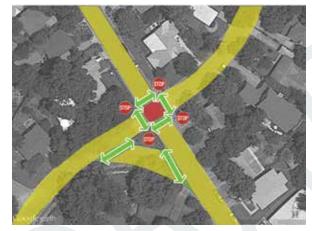
Four Way Stop

Note: Outside the implied crosswalk the pedestrian may cross if yielding right of way.



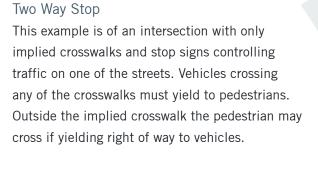


Rio Grande & 10th





Garner Street and Goodrich Street



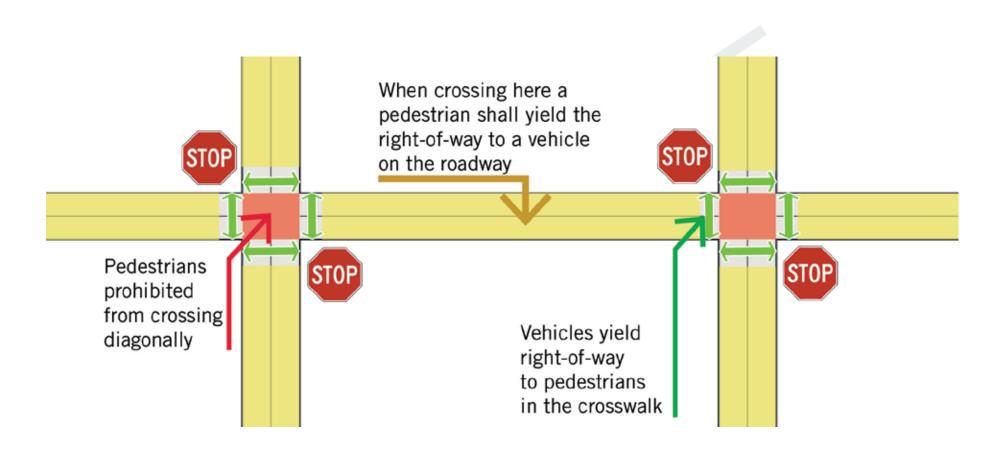




Simple two way stop example common in most residential neighborhoods.

### Clarification on Crossing at Intersections

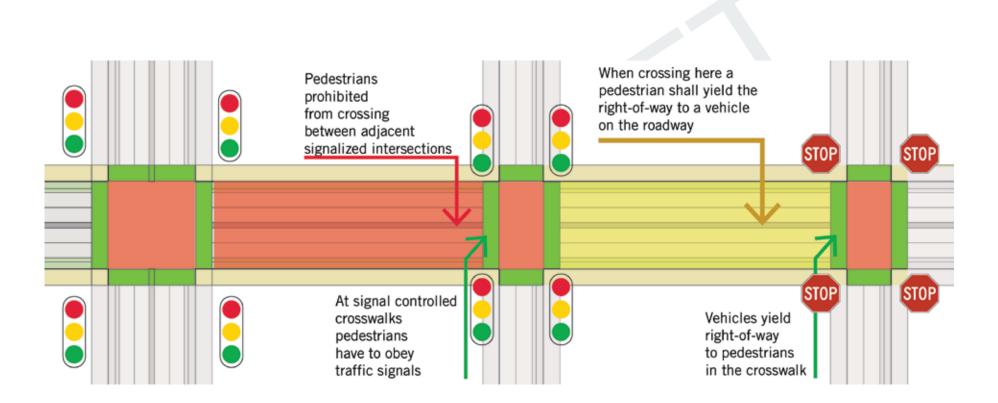
The following theoretical situations have been created based on the Austin examples.



# 11. Complex Intersections

# Clarification on Crossing at complex Intersections

It is prohibited to cross anywhere between two 'signalized' intersections unless there is a marked crosswalk. Crossing is permitted anywhere between signalized and any non-signalized intersection.



# Complex Crossing Locations

The sidewalk indicates for pedestrians to cross a location where no crosswalk is marked. However, the introduction of a pedestrian signal means the is an unmarked crosswalk with a signal which is unusual in Austin.



# 12. Pedestrian Signal Head Indications

The following section provides further details on the interpretation of pedestrian signals at crosswalks.

Texas Transportation Code, Title 7, Sec. 552.002.

PEDESTRIAN RIGHT-OF-WAY IF CONTROL

SIGNAL PRESENT.

- (a) A pedestrian control signal displaying "Walk," "Don't Walk," or "Wait" applies to a pedestrian as provided by this section.
- (b) A pedestrian facing a "Walk" signal may proceed across a roadway in the direction of the signal, and the operator of a vehicle shall yield the right-of-way to the pedestrian.
- (c) A pedestrian may not start to cross a roadway in the direction of a "Don't Walk" signal or a "Wait" signal. A pedestrian who has partially crossed while the "Walk" signal is displayed shall proceed to a sidewalk or safety island while the "Don't Walk" signal or "Wait" signal is displayed.

Additional detail is provided in the Texas MUTCD: Section 4E.02 Meaning of Pedestrian Signal Head Indications

#### Standard:

- Pedestrian signal head indications shall have the following meanings:
  - A steady WALKING PERSON (symbolizing WALK) signal indication means that a pedestrian facing the signal indication is permitted to start to cross the roadway in the direction of the signal indication, possibly in conflict with turning vehicles. The pedestrian shall yield the right-of-way to vehicles lawfully within the intersection at the time that the WALKING PERSON (symbolizing WALK) signal indication is first shown.
  - A flashing UPRAISED HAND (symbolizing DONT WALK) signal indication means that a pedestrian shall not start to cross the roadway in the direction of the signal indication, but that any pedestrian who has already started to cross on a steady WALKING PERSON (symbolizing WALK) signal indication shall proceed to the far side of the traveled way of the street or highway, unless otherwise directed by a traffic control device to proceed only to the median of a divided highway or only to some other island or pedestrian refuge area.
  - A steady UPRAISED HAND (symbolizing DONT WALK) signal indication means that a pedestrian shall not enter the roadway in the direction of the signal indication.

#### Discussion:

APD Response: "The law does not specifically mention countdown timers. It is generally understood that the timers are intended to provide pedestrians with an idea about how long they have before the control device will display a signal indicating 'Don't Walk'."

The APD comment, relates to time remaining before the steady UPRAISED HAND signal will be displayed. The PAC interpretation is that the countdown timer starts with the flashing "don't walk" signal. If the countdown has started a pedestrian should not begin to cross.

The PAC discussed that as long as the pedestrian started to cross at any time while the WALK signal is illuminated, regardless of how much longer it will be illuminated, they are considered to have begun their crossing and that vehicles should continue to yield the right of way.

APD Commented: Vehicles should yield to pedestrians if they are turning right or left on red and the pedestrian has the green or yellow light.

# 13. Crosswalk – Types of Traffic Control

Туре	Name	Description
Uncontrolled	Uncontrolled	No traffic control ('sign' or 'signal') is in place for traffic crossing the crosswalk. Such traffic is required to yield to a pedestrian crossing in the crosswalk.
Beacon	Flashing yellow beacon	A circular yellow flashing beacon is sometimes used to supplement traffic control signs that may be in place at or approaching the crosswalk. The flashing yellow beacon does not require approaching traffic to yield or stop, but the presence of a pedestrian crossing in the crosswalk requires an approaching traffic to yield to the pedestrian. Such flashing yellow beacons may flash continuously, only during certain periods, or when activated by a pedestrian wanting to cross.
Beacon	Rapid flashing beacons	A type of yellow flashing beacons that utilizes highly visible LEDs that flash in a staggered flashing pattern. These are installed to supplement traffic control signs at a crosswalk. Vehicular and pedestrian movements are governed the same as by a flashing yellow beacon. Rapid flashing beacons only operate when activated by a pedestrian wanting to cross
Sign	Yield Sign	A Yield Sign is in place for traffic crossing the crosswalk. Such traffic is required to yield to traffic on the intersecting roadway and to a pedestrian crossing the crosswalk.
Sign	Stop Sign	A Stop Sign is in place for traffic crossing the crosswalk. Such traffic is required to stop and yield to traffic on the intersecting roadway and to a pedestrian crossing in the crosswalk.
Beacon	Pedestrian Hybrid Beacon	A special type beacon used to warn and control traffic at an unsignalized location to assist pedestrians in crossing a street or highway at a marked crosswalk. A PHB is pedestrian activated. When activated, circular signal indications are displayed to traffic crossing the crosswalk and pedestrian signal indications display a walk indication followed by a flashing don't walk indication. Between activations, the signal heads for vehicular traffic are dark (no color is displayed) and a steady don't walk indication is displayed to pedestrians wishing to cross in the crosswalk. The steady don't walk indication for pedestrians means they are not permitted to begin crossing.
Signalized	Traffic Control System	A traffic control signal is in place to control traffic crossing the crosswalk. Such traffic is required to stop and/or proceed based on the meanings of the various traffic signal indications. A traffic control signal may, but also may not, include pedestrian signals. If no pedestrian signals are present at a traffic control signal, the movement of pedestrians is governed by the red, yellow, and green traffic signal indications. If pedestrian signals are present, the movement of pedestrians using a crosswalk is governed by the pedestrian signal indications. Pedestrian signals may, but also may not, include a countdown indication that is active (counting down) during part of the signal cycle.

The introduction of PHBs has meant there is a new type of crossing for pedestrians. However, they are unique in terms of traffic signals as they do not have a green 'go phase. They become 'dark' or non-illuminated when not activated.

• (2) "Pedestrian hybrid beacon" means a pedestrian-controlled traffic-control signal that displays different colored lights successively only when activated by a pedestrian.

Sec. 544.007. TRAFFIC-CONTROL SIGNALS IN GENERAL.

### Discussion

Do PHBs constitute a "traffic control signals"/
Conflict between Transportation Code and
MUTCD.

If PHBs are not traffic control signals, they do not establish a location as being 'between adjacent signalized intersections" even if the PHB is located at an intersection.

The reason this is important is that if the introduction of a PHB is considered to create a signalized intersection then it will potentially impact where pedestrians are prohibited to cross the roadway outside of the crosswalk on either side of the PHB.

The group discussed that the MUTCD treats a PHB as a special type of hybrid beacon rather than a traffic control signal. Following is the definition of traffic control signal from TTC section 541.304 (3):

"Traffic-control signal" means a manual, electric, or mechanical device that alternately directs traffic to stop and to proceed.

A PHB does not contain green indications for vehicular traffic and therefore does not "direct traffic to proceed". It does include pedestrian WALK and DON'T WALK indications so it does direct pedestrians to alternately stop and to proceed.

However, based on the wording of TTC 544.007 (j) (2), it seems that a pedestrian hybrid beacon could be considered a traffic control signal in Texas.

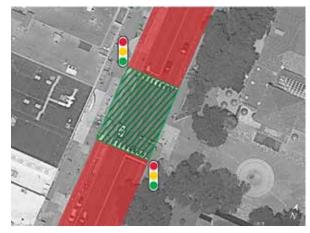
"Pedestrian hybrid beacon" means a pedestriancontrolled traffic-control signal that displays different colored lights successively only when activated by a pedestrian.

This is an internal conflict in the TCC which should be clarified in the future.

### Crosswalk: Not at an Intersection

This is an unusual example of an "extra wide" crosswalk to accommodate very high pedestrian crossing volumes. This does not constitute an intersection.





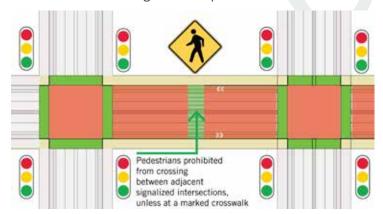




Guadalupe "the Drag" near 23rd Street

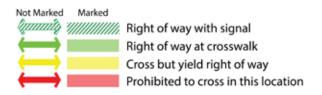
### Discussion:

The introduction of a crosswalk allows pedestrians to cross in another wise prohibited location. The example below illustrates that between adjacent signalized intersections crossing would be prohibited without the addition of the crosswalk



# Pedestrian Hybrid Beacons

Note: the installation of PHB requires pedestrians to activate the PHB and wait for a walk signal indication before beginning to cross. In these locations the PHB does not constitute an intersection.









South Lamar near Oltorf

Barton Springs Road in Zilker Park

# Discussion:

Note: bike lane follows the same rules as the other travel lanes.

is our understanding that the addition of a PHB signal does not change the areas either side of that crossing to an prohibited to cross, unless that PHBs is installed at existing intersections.



The PHB at this location on Guadalupe aligns with the intresection and marked crosswalk therefore potentially making this intersection 'signalized'

# Rapid Flashing Beacon

Note: Rapid Flashing Beacon. This is not a "traffic signal" therefore crossing outside the crosswalk is not prohibited if the pedestrian yields to vehicles.



Location:

### Discussion:

The group confirmed that an RFB is not a traffic signal, Neither are "typical" circular warning beacons, school speed limit beacons, or yellow or red beacons installed at some intersections.

### Marked Crosswalk

Note: "State Law Vehicles must Yield to pedestrians within Crosswalk" sign recently introduced in this location. Marked crosswalk specifically allows crossing here regardless of whether or not signals exist at nearby intersections.







Location: Barton Springs Road

# 14. Pedestrians on the Roadway

The PAC felt there was also a need to clarify the position as it applies to pedestrain walking along streets without sidewalks as there are large areas of the city where there in no sidewalk infrastructure.

APD recommended that the first consideration should be City ordinance titled Pedestrians Prohibited on Certain Roads (Part a)

- (A) A pedestrian may not stand in a roadway to:
  - Solicit a ride from the driver of a vehicle; or
  - Linger, loiter, or remain on a roadway for any purpose.

§ 12-1-26 PEDESTRIANS ON CERTAIN ROADWAYS (City of Austin Code of Ordinance)

#### Discussion:

This ordinance appears to be targeted at a specific issue of roadway soliciting.

It is our interpretation that this does not apply to other situations, such as children playing in the roadway, or someone stopping for a period of time on a median waiting to finish crossing.

This does not address whether that pedestrian is in a crosswalk, central median or an other part of the roadway.

We do not interpret that means pedestrian should cross in one single continuous movement.

It does not seem that this ordinance is well fitted to prohibiting roadway crossings. It could be applied as written to someone who has crossed to a median in a crosswalk but is waiting to begin crossing the second half of the roadway because vehicles are too close to safely yield.

Use of the Sidewalk

• Sec. 552.006. USE OF SIDEWALK. (a) A pedestrian may not walk along and on a roadway if an adjacent sidewalk is provided and is accessible to the pedestrian.

#### Question:

The PAC raised at question about how is "accessible" interpreted?

As far as we could find "accessible" as used in this portion of the TTC, is not specifically defined. Therefore, as with many traffic violations (unsafe lane change, failure to yield ROW, following too closely), it would be a judgment call of the officer enforcing the law.

# **Exercising Due Care**

What is considered a safe passing distance?

APD Comment: Obviously there can be many factors involved here that would call for both the pedestrian and driver to use due caution. Below are two sections (in order of their appearance) that would apply:

- Texas Transportation Code, Title 7, Sec. 552.006.
   USE OF SIDEWALK.
- (a) A pedestrian may not walk along and on a roadway if an adjacent sidewalk is provided and is accessible to the pedestrian.
- (b) If a sidewalk is not provided, a pedestrian walking along and on a highway shall if possible walk on:
  - (1) the left side of the roadway; or
  - (2) the shoulder of the highway facing oncoming traffic.
- (c) The operator of a vehicle emerging from or entering an alley, building, or private road or driveway shall yield the right-of-way to a pedestrian approaching on a sidewalk extending across the alley, building entrance or exit, road, or driveway.

- Texas Transportation Code, Title 7, Sec. 552.008. DRIVERS TO EXERCISE DUE CARE. Notwithstanding another provision of this chapter, the operator of a vehicle shall:
  - (1) exercise due care to avoid colliding with a pedestrian on a roadway;
  - (2) give warning by sounding the horn when necessary; and
- exercise proper precaution on observing a child or an obviously confused or incapacitated person on a roadway.

#### Discussion:

The Code of Ordinances Section 12-1-35 does not address whether or not there is a sidewalk. It simply requires the operator of a motor vehicle to pass a venerable road user at a safe distance. It also defines that safe distance – 3 feet for some vehicle types (cars) and 6 feet for other vehicle types (trucks).

Therefore there is a requirement for vehicles to pass a pedestrian or other vulnerable road user at a safe distance, determined by the vehicle they are driving.

#### § 12-1-35 VULNERABLE ROAD USERS.

- (a) In this section, a Vulnerable Road User means:
  - (1) a pedestrian, including a runner, physically disabled person, child, skater, highway construction and maintenance worker, tow truck operator, utility worker, other worker with legitimate business in or near the road or right-of-way, or stranded motorist or passenger;
  - (2) a person on horseback;
  - (3) a person operating equipment other than a motor vehicle, including, but notlimited to, a bicycle, handcycle, horse-driven conveyance, or unprotected farm equipment; or
  - (4) a person operating a motorcycle, moped, motor-driven cycle, or motor- assisted scooter.
- (b) An operator of a motor vehicle passing a vulnerable road user operating on a highway or street shall:
  - (1) vacate the lane in which the vulnerable road user is located if the highway has two or more marked lanes running in the same direction: or
  - (2) pass the vulnerable road user at a safe distance.

- (c) For the purpose of Subsection (b)(2), when road conditions allow, safe distance is at least:
  - (1) three feet if the operator's vehicle is a passenger car or light truck; or
  - (2) six feet if the operator's vehicle is a truck, other than a light truck, or a commercial motor vehicle as defined by Texas Transportation Code Section 522.003.
- (d) An operator of a motor vehicle that is making a left turn at an intersection, including an intersection with an alley or private road or driveway, shall yield the right- of-way to a vulnerable road user who is approaching from the opposite direction and is in the intersection, or is in such proximity to the intersection as to be an immediate hazard.
- (e) An operator of a motor vehicle may not overtake a vulnerable road user traveling in the same direction and subsequently make a right-hand turn in front of the vulnerable road user unless the operator is safely clear of the vulnerable road user, taking into account the speed at which the vulnerable road user is traveling and the braking requirements of the motor vehicle making the right-hand turn.

- (f) An operator of a motor vehicle may not maneuver the vehicle in a manner that:
  - (1) is intended to cause intimidation or harassment to a vulnerable road user; or
  - (2) threatens a vulnerable road user.
- (g) An operator of a motor vehicle shall exercise due care to avoid colliding with any vulnerable road user on a roadway or in an intersection of roadways.
- (h) It is an affirmative defense to prosecution under this section that at the time of the offense the vulnerable road user was acting in violation of the law.

### **Private Streets**

APD Response: With the exception of DWI, reckless driving and certain parking violations (handicapped/fire zone) Law Enforcement officers do not have the authority to enforce traffic laws on private property. Refer to Texas Transportation Code, Title 7, Section 542.001 VEHICLES ON HIGHWAYS and Section 545.401 RECKLESS DRIVING

# 15. Bike Lanes

Bikes obey the same rules and regulations as vehicles. Bicycles must therefore:

• Yield to pedestrians in a crosswalk.

Pedestrians crossing cycle lane must:

• Follow the same rules as crossing any roadway



Lance Armstrong Bikeway Crossing