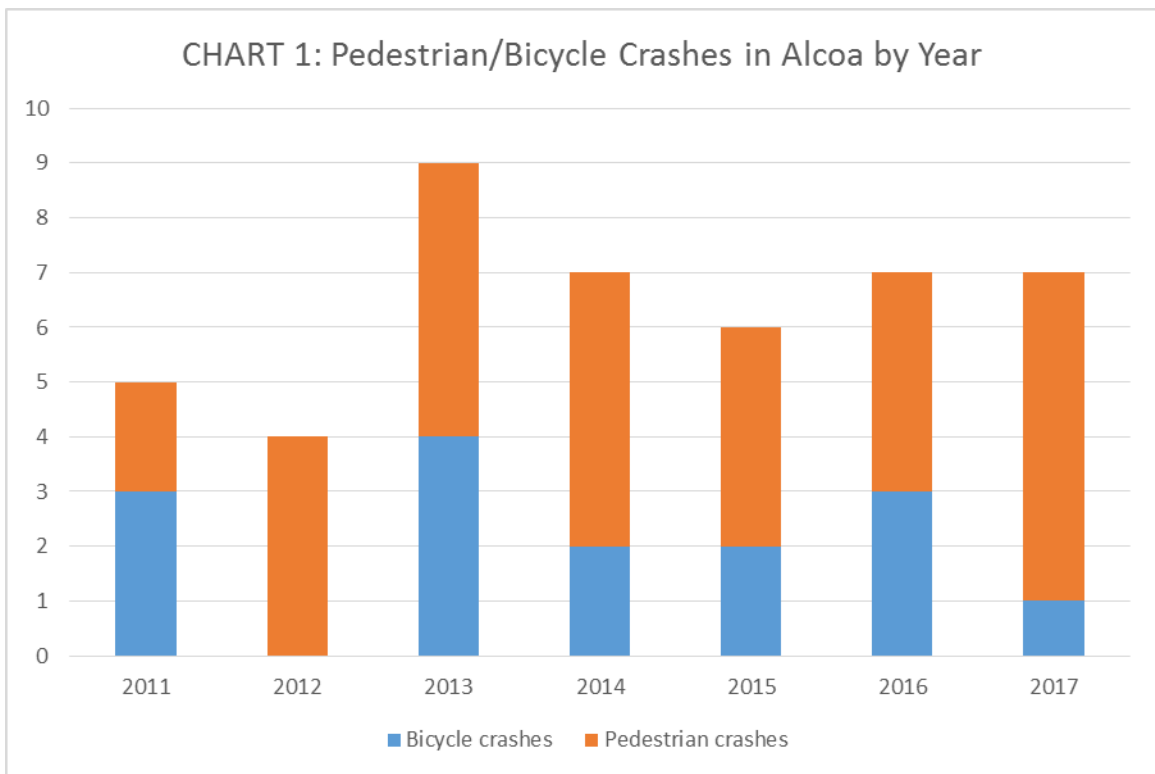


# Alcoa ped/bike crashes: March 2011-March 2018

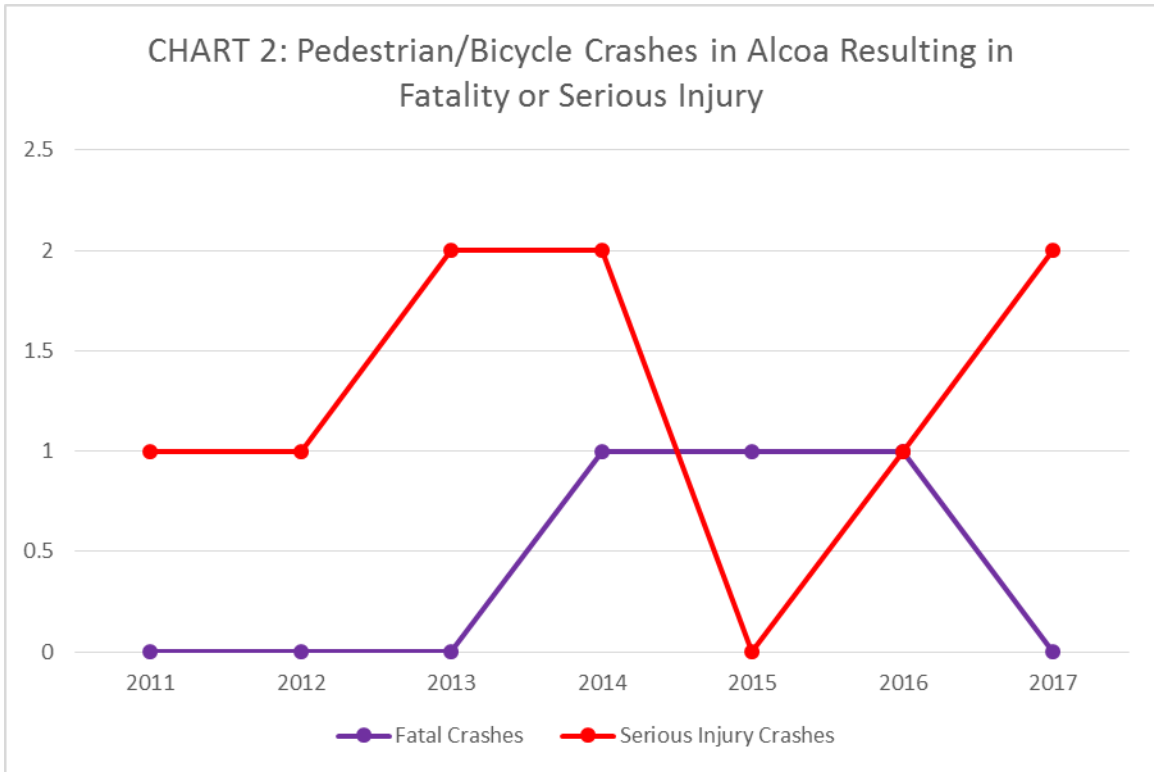
## Overview

- Between March of 2011 and March of 2018, there were 45 crashes involving either pedestrians or bicyclists. This results in a rate of 0.5 crashes per month, 6 crashes per year.
- 30 crashes (67 percent) involved pedestrians, and 15 involved bicyclists.
- All of the crashes involved the injury or death of a person walking or bicycling.
  - 42 crashes involved injuries only, and another 3 involved a fatality. Of the 3 fatalities, all were killed while walking.
  - 21 percent of injury-only crashes involved serious injuries.<sup>1</sup>
- Chart 1 shows the number of crashes by year. Chart 2 shows the number of fatal and serious injury crashes by year.



Ped	2	4	5	5	4	4	6
Bike	3	0	4	2	2	3	1
Total	5	4	9	7	6	7	7

<sup>1</sup> Crash reports rank the severity of crashes as either fatal, suspected serious injury, suspected minor injury, possible injury, or no injury. Suspected serious injury crashes used to be reported as “incapacitating,” and suspected minor injury were reported as “non-incapacitating.” For this report, suspected serious and incapacitating crashes are combined as “serious injury” crashes.



- 7 of the 45 crashes (16%) occurred on major arterials. 5 of the 7 major arterial crashes involved people walking, while 2 involved bicyclists. None of those were fatal crashes, but 3 of the 7 involved serious injuries.
- 6 of the 7 major arterial crashes occurred on U.S. 129, while the other occurred on S Hall Road.

## Types of crashes analyzed in this report

This report analyzes certain crash factors. It focuses on identifying locations and behaviors where interventions – in the form of design changes, education, or enforcement – may help to prevent future crashes. 19 (42 percent) of the 45 total crashes fit into one of these categories. Categories of crashes analyzed in this report are:

- **Drivers failing to yield while turning.** These are crashes where the report indicates that the pedestrian or bicyclist was behaving properly while traveling along or across a street, and the driver failed to yield while making a turn. These crashes suggest the need for changes to the geometry of the intersections and/or to the function of the traffic signals to prevent future crashes. Education and traffic enforcement can also help prevent these types of crashes.
- **People struck by cars while walking in locations without sidewalks.** These are crashes where the report indicates the pedestrian was walking along a street without sidewalks and was struck by a car. These crashes indicate the need for sidewalks to be installed.
- **Drivers failing to yield while going straight.** These are crashes where the report indicates that the pedestrian or cyclist was crossing the street in a legal crosswalk<sup>2</sup>, either marked or unmarked, and was struck by a driver. These crashes indicate the need for better design of crossing locations, which may include reducing crossing distances and the addition of signs, beacons, or signals. Education and traffic enforcement can also help prevent this type of crash.
- **Bicyclists riding in locations without safe facilities.** These are crashes where the report indicates a bicyclist was struck from behind or while riding on the sidewalk.<sup>3</sup> These crashes indicate the need for a safe bicycle facility along a corridor.
- **People struck by cars while crossing a street outside of an intersection or marked midblock crossing.** These are crashes where the report indicates a pedestrian was struck while crossing a street at a location other than an intersection or a marked midblock crossing. These crashes suggest the need for additional crossings, as the existing crossings may be dangerous or inconvenient. Education of pedestrians can also help prevent this type of crash.
- **Bicyclists riding in an unsafe manner or location.** These are crashes where the report indicates that the bicyclist was either riding on the street against traffic, or riding at night with no lights. These crashes suggest the need for better education of bicyclists.

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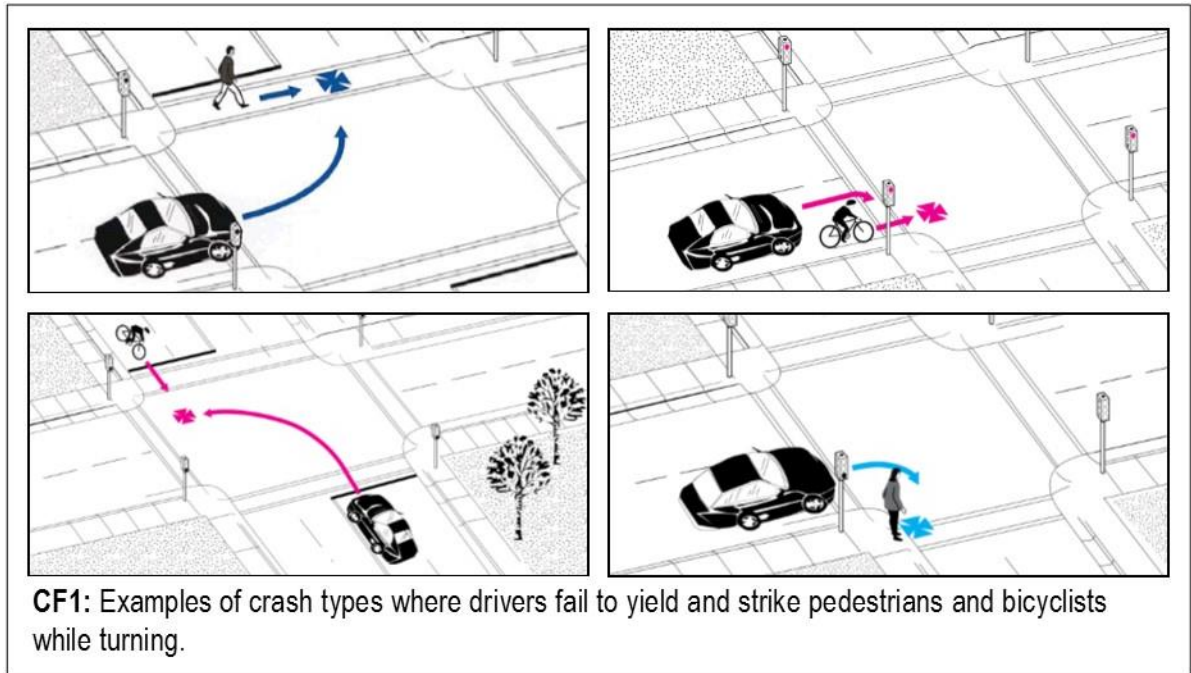
<sup>2</sup> Tennessee Code Annotated 55-8-101 (11) defines “crosswalk” as “(A) That part of a roadway at an intersection included within the connections of the lateral lines of the sidewalks on opposite sides of the highway measured from the curbs or, in the absence of curbs, from the edges of the traversable roadway; or (B) Any portion of a roadway at an intersection or elsewhere distinctly indicated for pedestrian crossing by lines or other markings on the surface.”

<sup>3</sup> Riding a bicycle on the sidewalk is legal. Bicycle safety educators generally warn against it, because of the danger from turning motor vehicles.

<b>TABLE 1: Crash Factors</b>		<b>Number of Crashes</b>	<b>Percent of Crashes*</b>
1. Drivers failing to yield while turning (4 total crashes)	Turning left	3	16
	Turning right (not right on red)	1	5
	Turning right on red light	0	0
	Direction of turn unclear	0	0
2. Pedestrian struck while walking along corridor without sidewalks		2	11
3. Driver failing to yield while going straight		4	21
4. Bicyclist riding on sidewalk		2	11
5. Pedestrian crossing street outside of an intersection or marked crosswalk		3	16
6. Bicyclist riding against traffic		0	0
7. Driver striking bicyclist from behind		2	11
8. Bicyclist riding at night with no lights		2	11

\*Percentages do not total to 100 due to rounding

## Crash Factor 1: Drivers failing to yield while turning



- Of the crashes where a crash factor has been identified, 4 (21 percent) involved a pedestrian or bicyclist hit by a car whose driver failed to yield properly when turning.<sup>4</sup> Of these, 3 crashes involved drivers turning left, and 1 involved a right turn (not on a red light).
- All of these crashes involved injuries, with no fatalities.
- 2 of these cases involved pedestrians, and the remaining 2 involved bicyclists.
- The crashes occurred in the following locations:

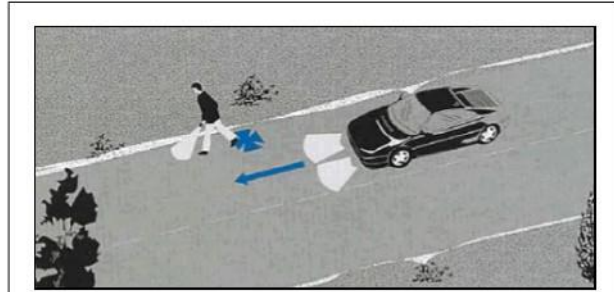
Corridor	Cross street	Left turns	Right turn (not on red)	Right turn on red	Turn direction unclear
McArthur Rd	N Wright Rd		1		
	Parking lot of New Midland Plaza	1			
S Hall Road	South of Lindsay St	1			
W Lincoln Rd	Rankin Rd	1			

Number in **red** indicates that crashes involved a bicyclist.

<sup>4</sup> This crash factor is identified only where the bicyclist or pedestrian involved was traveling safely and within the law and the driver failed to yield.

## Crash Factor 2: People struck by cars while walking in locations without sidewalks

In 2 (11 percent) crashes, a person walking along a street without a sidewalk was hit by a driver.<sup>5</sup> Both of these crashes involved injuries, with no fatalities. The crashes occurred in the following locations:



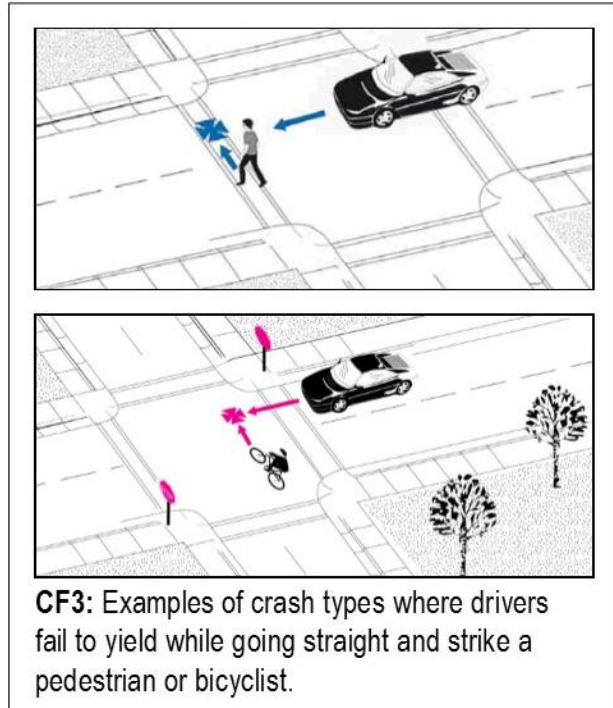
**CF2:** A frequent crash type in rural & suburban areas is pedestrians being struck while walking in locations lacking sidewalks.

<b>TABLE 3: Locations of people being struck while walking along streets without sidewalks</b>	
<b>Crash occurred on this street</b>	<b>Near the intersection with this street</b>
Alcoa Highway on-ramp	From W Hunt Rd
McArthur Rd	Pritchard Court

<sup>5</sup> This crash factor is identified only where the crash report finds that the pedestrian was walking along the side of the road when the crash happened, not cases where pedestrians entered the road to cross.

### Crash Factor 3: Driver failing to yield while going straight

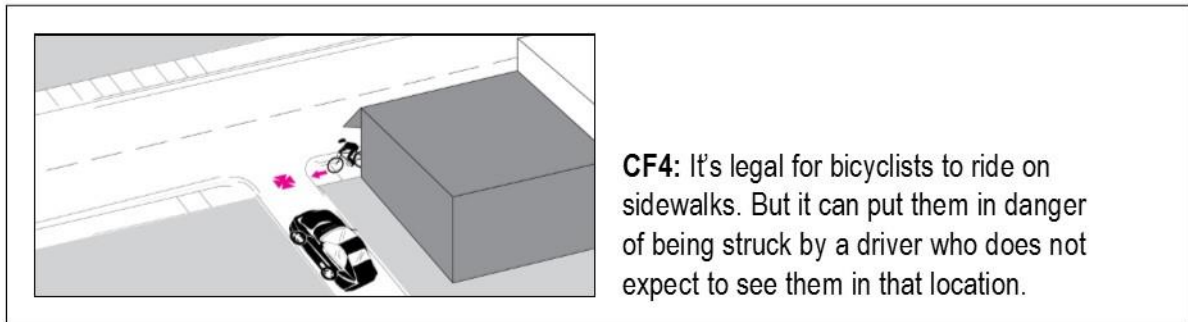
- In 4 crashes (21 percent), drivers were going straight and failed to yield for a person walking or bicycling across the street in a legal crosswalk, either marked or unmarked, or who otherwise has the right of way.<sup>6</sup> 3 of these crashes involved pedestrians, and 1 a bicyclist. 1 of the pedestrian crashes was a fatality (on Calderwood), and all of the others involved injuries. The crashes occurred in the following locations:



<b>TABLE 4: Areas with pedestrians struck by drivers going straight and failing to yield</b>	
<b>Crash occurred on/near this street</b>	<b>In this area</b>
N Calderwood St	in New Midland Plaza parking lot
N Wright Rd	at Birch St/Vose Rd
S Calderwood St	at Sanderson St
S Hall Rd	in Kroger parking lot

<sup>6</sup> This crash factor is not identified where the crash report finds that the person walking or bicycling entered the street in a way that failed to give the driver sufficient time to yield the right of way.

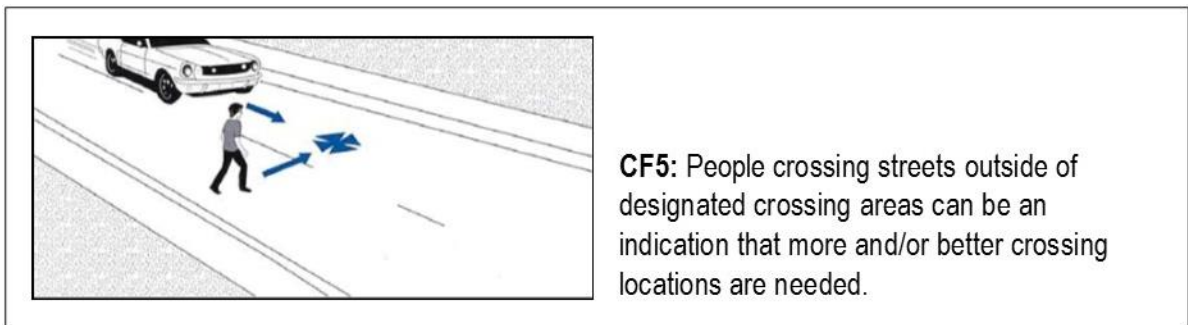
**Crash Factor 4: Bicyclist riding on sidewalk**



2 crashes (11 percent) were associated with bicyclists riding on the sidewalk. Both of these crashes involved injuries, with no fatalities. The crashes occurred in the following locations:

<b>TABLE 5: Locations of bicyclists being struck while riding on sidewalks</b>	
<b>Crash occurred on this street</b>	<b>In this area</b>
Springbrook Rd	at E Edison St
Gill St	East of S Calderwood St

**Crash Factor 5: Pedestrian crossing street outside of an intersection or marked crosswalk**



In 3 crashes (16 percent), pedestrians were crossing the street outside of an intersection or marked crosswalk. All 3 of these crashes involved injuries, with no fatalities. The crashes occurred in the following locations:

<b>TABLE 6: Areas with pedestrians struck while crossing outside of an intersection or marked crosswalk</b>	
<b>Crash occurred on this street</b>	<b>In this area</b>
E Hunt Rd	West of Springbrook Rd
U.S. 129	North of Buick Dr
U.S. 129	South of Louisville Rd

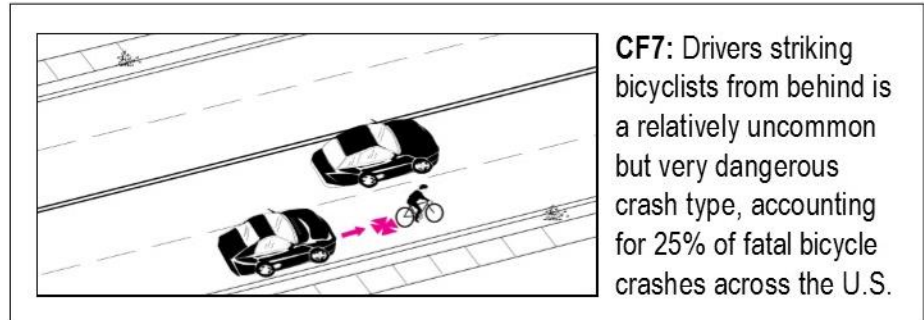


### Crash Factor 6: Bicyclist riding against traffic

No crashes of this type were reported in Alcoa during the time analyzed in this report.

### Crash Factor 7: Driver striking bicyclist from behind

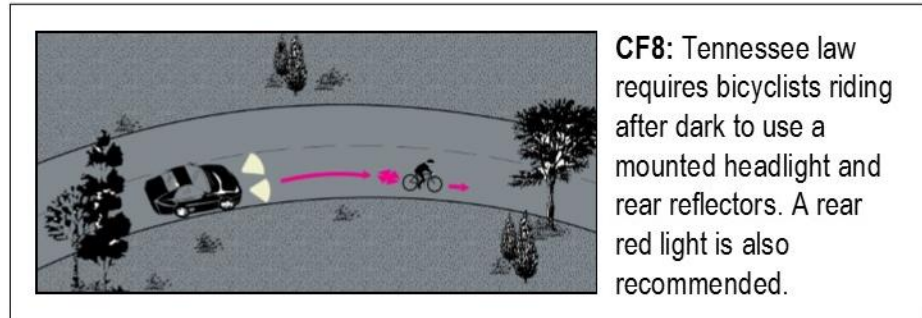
2 bicyclists were struck from behind by drivers. Both of these crashes involved injuries, with no fatalities. The crashes occurred in the following locations:



<b>Crash occurred on this street</b>	<b>In this area</b>
E Edison St	East of Springbrook Rd
W Hunt Rd	West of Clingman View Dr

## Crash Factor 8: Bicyclist riding at night with no lights

2 bicyclists were struck while riding at night with no lights. They were both injury crashes, with no fatalities.



**CF8:** Tennessee law requires bicyclists riding after dark to use a mounted headlight and rear reflectors. A rear red light is also recommended.

## Methodology

Crash data were obtained directly from KPD (all crashes prior to June 2009) or downloaded from the TITAN database maintained by the State of Tennessee. Crashes were mapped in ArcMap GIS software based on latitude/longitude or closest intersection, where lat/long data were not available. TPO staff then reviewed the location of each crash to correct data errors. TPO staff assigned crash factors based on information obtained from individual crash reports, including crash narratives and information about citations issued.

## Image credit

All crash type images are from the Pedestrian and Bicycle Crash Analysis Tool (PBCAT), which was developed by the Federal Highway Administration (FHWA), in cooperation with the National Highway Traffic Safety Administration (NHTSA). The purpose of the PBCAT is to assist with analysis of pedestrian/bicycle crashes with the goal of preventing them.