



## BICYCLE AND PEDESTRIAN SCHOOL SAFETY REVIEW STUDY

# OLD KINGS ELEMENTARY SCHOOL

PALM COAST, FLAGLER COUNTY, FL

Assessment & Implementation Report | June 2017

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# **River to Sea Transportation Planning Organization Bicycle and Pedestrian School Safety Review Study**

## **Old Kings Elementary School Palm Coast, Flagler County, FL**

### **Assessment and Implementation Report**

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## Acknowledgments

River to Sea TPO and Kittelson & Associates, Inc. would like to thank the following people for their help and contribution in developing this Bicycle and Pedestrian School Safety Review Study for Old Kings Elementary School. The information and advice they have given, as well as the connections they shared was invaluable.

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# Executive Summary

Kittelson and Associates, Inc. (KAI) was contracted by the River to Sea Transportation Planning Organization (R2CTPO) to prepare Assessment and Implementation Report for the Bicycle and Pedestrian School Safety Review Study for seven Flagler County schools. The Assessment Report for the Bicycle and Pedestrian School Safety Review Study will enable the R2CTPO to make recommendations for projects that will improve the walkability and bikability of students living within the school walk zone. The Implementation Report for the Pedestrian and Bicycle School Safety Review Study is based on observations and recommendations of the Assessment Report and includes cost data, ranking criterion for the recommended improvements, and the best practices to follow on old and new developments. The subject of this report is Old Kings Elementary School located at 301 Old Kings Rd, Flagler Beach, FL 32136.

## Purpose

The purpose of the Bicycle and Pedestrian School Safety Review Study is to create a safe environment for students to walk or bicycle to school. The goal for the assessment phase of this study is to provide the R2CTPO with a comprehensive study that will delineate each of the listed school's concerns, document the observed pedestrian and bicycle circulation routes adjacent to the school sites, and then make recommendations for improvements. The assessment includes the walk zone surrounding the school and it will evaluate safety issues that may affect students walking or bicycling to school. Another goal of the assessment report is to continue the coordination among the stakeholders to implement the recommendations of these studies. The purpose of the Implementation Report for the Bicycle and Pedestrian School Safety Review Study is to conduct a constructibility review and develop a cost feasibility plan that is based upon the recommendations from Old Kings Elementary School's Assessment Report. Ultimately, the recommendations within the Implementation Report should create a safer environment for children who live within the walk zone that choose to walk or bicycle to and from the school.

To make walking and bicycling a chosen mode of transportation for students at Old Kings Elementary School, remedial measures have been recommended that should make the school walk zone safer. Many local, state, and federal laws require transportation agencies to focus on walking and bicycling infrastructure as part of the overall transportation network. The Safe, Accountable, Flexible, Efficient Transportation Equity Act (SAFETEA-LU) of 2005 established the Safe Routes to School program that explicitly focused on funding projects to enhance pedestrian and bicycling infrastructure around schools. Fixing America's Surface Transportation Act (FAST) of 2015 reinforces the Safe Routes to School program. The goal of this report is to create a safer environment along the streets adjacent to Old Kings Elementary School and recommend best practices for older and new developments.

The U.S. Department of Health and Human Services Center for Disease Control (CDC) and Prevention has determined that students are not as active as they were 10 years ago when physical activity was incorporated into each student's schedule (KidsWalk-to-School, CDC). This has caused the percentage of overweight students from ages six to eleven years to double over the past 30 years. The CDC has determined that the following are benefits associated with students who walk or ride bicycle to school.

- Increased practice of safe bicycling, walking, and navigating traffic
- Knowledge of their surrounding neighborhood environment
- Improved childhood health
- Improved sense of self-image and autonomy
- Reduce risk of childhood obesity
- Contributes to a healthy social and emotional development
- More alert students who do better in school
- Increased likelihood that students will grow up to lead a healthy lifestyle

The Safe Routes to School (SRTS) program and the CDC went on to say that not only does a safe walking and bicycling environment benefit students, but it also benefits the community in the following ways:

- Decline in traffic congestion
- Reduce the number of traffic accidents
- Improved air quality
- Improved community security
- Reduced fuel consumption
- Enhanced community accessibility
- Increased community involvement
- Improved partnerships among schools, parents, community groups, and local government leaders

Old Kings Elementary School is unique among all seven Elementary and Middle Schools in Flagler County, because no student walks or bikes to the school. This is because there are no residential land uses and hence no students living within its identified walk zone.

Table 1 summarizes concerns observed within Old Kings Elementary School's walk zone with recommendations documented in this report.



**Table 1: Observations and Recommendations Summary**

Location	Responsible Agency	Observation	Recommendation
Old Kings Road and School's middle entrance gate	Old Kings Elementary School, City of Palm Coast, and Flagler County Sheriff's Office	Few parents park their cars on the grass shoulders on both sides of Old Kings Road. Those who park their cars on west side of the road, run across the road to drop off and pick up students. This is mainly done to avoid waiting in the queue within the school campus. This is a significant safety hazard.	Representatives from the City of Palm Coast, Old Kings Elementary School, and County Sheriff's office should take more proactive actions and run education campaigns to educate parents and students, not to cross at an mid-block locations without crosswalks especially with students.  Install 'no parking' signs along both sides of Old Kings Road in front of the school's campus and enforce no parking regulation by periodically issuing tickets.
SR 100 and Old Kings Road	City of Palm Coast and FDOT	Very long queues were observed at the signalized intersection of SR 100 and Old Kings Road during the school drop off and pick up periods.	Conduct an intersection operations study to evaluate geometric as well as signal timing changes to reduce long queues.
Walk zone	City of Palm Coast and Flagler County	Most of the land surrounding the school is currently undeveloped vacant land.	As new development occurs within the immediate surroundings of the school campus, the City and the County should enforce good site design and neighborhood design guidelines. These guidelines should ensure that new street network is well connected and creates a street and block pattern that is walkable. Street design standards should be enforced to ensure that ADA compliant pedestrian and bicycle facilities are provided to create direct, comfortable, and safe connections to the school campus.

# Introduction

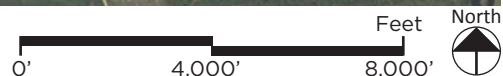
In the winter of 2016/2017, a comprehensive bicycle and pedestrian safety review was performed for Old Kings Elementary School in Palm Coast, Flagler County. The purpose of this study is to evaluate the walk zone of Old Kings Elementary School for any safety issues that students might encounter if they choose to walk or ride their bicycles to school. This review included an information-gathering and coordination meeting with the School, Flagler County School Board representatives, City of Palm Coast, Flagler County, and R2CTPO officials. The coordination meeting was followed by a field review by the consultants. The review also included analysis of mapped conditions including infrastructure mapping and crash reports. The results of this review have been synthesized into the following existing conditions and safety improvement recommendations report.

## Background on Old Kings Elementary School

Old Kings Elementary School is located at 301 Old Kings Rd, Flagler Beach, FL. It is on east of I-95 and south of the SR 100 and Old Kings Road intersection. The School currently has 1280 enrolled students. The school campus is relatively isolated with no residential development surrounding it. Hence all the enrolled students are either transported by school buses or dropped off and picked up by parents/family members by cars. Figure 1 shows the school location.



Figure 1: School location map



# Assessment Report

This section of the report will document existing condition within the Old Kings Elementary School walk zone, summarize the co-ordination meeting, and observations from the field review. Each school, in co-ordination with the Flagler County School Board establishes a walk zone. The walk zone is the area around the school within which no school bus service is provided. County guidelines recommend a one mile radius walk zone around elementary schools, and two mile radius walk zone around middle schools. In both cases, the walk zone excludes pedestrian hazardous areas as per 2016 Florida State Statute Title XLVIII K-20 Education Code, Chapter 1006. More details about this statute are included in Appendix A. Hazardous areas are generally identified as areas that are separated from the school by major physical barriers such as Interstate Highways, even if they are within the designated radius.

The Assessment Report for the Bicycle and Pedestrian School Safety Review Study will enable the R2CTPO to make recommendations for projects that will improve the walkability and bikability of students living within the school walk zone.

## Existing Conditions Analysis

The existing bicycle and pedestrian infrastructure, safety conditions, and surrounding land uses at each school were evaluated through map review, administrator and school safety officer inputs, and field visits. The field visits included observation of the drop off and pick up periods, and complete review of the presence, absence, and condition of bicycle and pedestrian infrastructure within the walk zone.

Figure 2 shows the walk zone for Old Kings Elementary School that covers area surrounding the I-95 and SR 100 intersection as well as the SR 100 and Old Kings Road intersection. Apart from few commercial developments clustered around the above mentioned intersections, much of the walk zone is currently undeveloped and vacant.



*Main entrance to the Old Kings Elementary School building*



*Old Kings Road with shared use path/trail in front of the school campus.*





## Existing Conditions Analysis

**Pedestrian Infrastructure:** Apart from a small segment of I-95, there are only two other roads within the walk zone, SR 100 and Old Kings Road. Old Kings Road from the school campus to SR 100 intersection has a 12 feet wide shared use path/trail on east side. This section of the road also has a 5 feet wide sidewalk on west side fronting the developed commercial properties. South of the school campus Old Kings Road does not have any dedicated pedestrian facilities. North of SR 100 intersection, Old Kings Road has 8 feet wide shared use path/trails on both sides of the road.

SR 100 also has a 8 feet wide shared use path/trail on north side of the roadway. It does not have any dedicated pedestrian facilities on south side.

Since there are no pedestrian facilities on south side of SR 100, marked crosswalks are only located across northern leg of the I-95 and SR 100 intersection. There are marked crosswalks across northern, western, and southern leg of Old Kings and SR 100 intersection. Marked crosswalks are also striped at all major driveways within the school's walk zone.

Since there are no students walking to the school, no observations were made regarding use of pedestrian facilities by school students.

**Bicycle Infrastructure:** Old Kings Road from the school campus to SR 100 intersection has a 12 feet wide shared use path/trail on east side. It is directly in front of the school campus. North of SR 100 intersection, Old Kings Road has 5 feet wide bike lanes as well as 8 feet wide shared use path/trail on both sides of the road.

SR 100 has 5 feet wide bike lanes on both sides as well as 8 feet wide shared use path/trail on north side of the roadway.

Since there are no students biking to the school, no observations were made regarding use of bicycle facilities by school students.

**Crash Analysis:** There were six reported pedestrian and bicycle crashes within the walk zone in last six years (2010 - 2015) including 1 fatal and six four injury crashes. None of these were school related. These crashes are summarized in the tables below. Detailed crash reports of these crashes are also included in Appendix H.

Pedestrian Crashes	Bicycle Crashes	Fatal Crashes	Injury Crashes	Year	Pedestrian Crashes	Bicycle Crashes
2	4	1	4	2010	0	0
				2011	0	1
				2012	1	0
				2013	0	1
				2014	0	0
				2015	1	0

Table 2: Summary of pedestrian and bicycle crashes (2010 - 2015)







*Shared use path/trail along east side of Old Kings Road.*



*Crosswalk across the school's middle entrance gate. This is the main gate that parents enter to drop off and pick up students as well by the school buses use to exit the campus.*



*Old Kings Road, north of SR 100 intersection has bike lanes and shared use path/trails on both sides.*



*SR 100 and Old Kings Road intersection.*

**Existing Land Use:** There are no existing residential land uses within the school's walk zone. Most of the existing land uses within the school's walk zone consist of conservation areas or undeveloped vacant land. Properties fronting SR 100 and around I-95 and SR 100 as well as SR 100 and Old kings Road intersection have developed into suburban commercial properties. As the area within the walk zone develops into residential neighborhoods, it will be important for the City and the County to ensure that new developments are built with good pedestrian and bicycle infrastructure that connects new development to the school campus in a direct, comfortable and safe manner. Figure 4 maps the existing land uses.







**School Campus:** The school campus has three entrances on Old Kings Road. The southern entrance gate is only used for school bus entry. The middle entrance is the main gate in front the building entrance. This gate is used by parents to enter the campus to drop off and pick up. This gate is also used by buses to exit the campus and by staff and visitors to access the surface car parking lot. The northern gate is used as exit gate by parents who come in to drop of or pick up students. It is also used by staff to enter and exit.

The drop off and pick up loop runs through the surface parking lot fronting the building. The total length of the drop off and pick up loop is approximately 700 feet and can fit 25 cars. The school also utilizes the 1,500 feet long southbound left turn lane as well as 350 feet long northbound right turn lane on Old Kings Road as de facto queueing area, especially during the PM pickup period.

It was also observed during the field review that few parents stop on the grass shoulders on both sides of Old kings Road to drop-off and pick-up students. This is mainly done to avoid waiting in queues inside the school pick-up and drop-off queues. However, this behavior leads to some parents and students running crossing to cross Old Kings Roads. This is a substantial safety hazard considering that Old kings road is a 4 lane undivided facility in front of the school campus.

The school campus has no designated bicycle parking racks since no students bike to school.

During the field review, all the pedestrian infrastructure including sidewalks and crosswalks inside the school campus were observed to be in good condition.



*Long queues were observed, especially in the PM pick up period on Old Kings Road. This image shows queues occupying south-bound left turn lane that backs up till SR 100 intersection.*



*Long queues were observed, especially in the PM pick up period on Old Kings Road. This image shows queues occupying north bound right turn lane.*



Figure 5: School campus



## Coordination Meeting

The coordination meeting for Old Kings Elementary School was held on the school's campus on February 1st, 2017. The meeting was attended by representatives from the Flagler County School Board, Old Kings Elementary School, City of Palm Coast, Flagler County Sheriff's Office, River to Sea TPO, and Kittelson & Associates.

- Bobby Bossardet, Flagler County School Board
- Stephan Harris, River to Sea TPO
- Wendy Hickey, Flagler County Planning and Zoning
- Aditya Inamdar, Kittelson & Associates
- Deputy Ralph Lilavois, Sheriff's Office
- Chad Lingenfelter, Florida DOT District 5, Traffic Operations and Safety
- Like Liu, Kittelson & Associates
- Winnie Oden, Flagler County School Board
- Benjamin Osypian, Principal, Old Kings Elementary School
- Jose Papa, City of Palm Coast
- Nick Schell, Assistant Principal, Old Kings Elementary School
- Alex Spiller, Flagler County Engineering
- Kirianne Suriano, Assistant Principal, Old Kings Elementary School

Stephan Harris and Aditya Inamdar introduced the purpose and explained the study background. This introduction was followed up a group discussion. Following were the main points of the follow up discussion:

- Old Kings Elementary School hours were confirmed to be from 9:00 AM – 3:30 PM
- Site review periods for arrival/dismissal was decided as follows:  
Arrival field review period- 7:50 AM – 9:10 AM  
Dismissal field review period- 2:15 PM – 4:15 PM
- The school was started in 1990.
- There are no students who walk or bike to and from Old Kings Elementary School. This is because there are no residential areas within the school's walk zone.
- There are around 1280 students currently enrolled in Old Kings Elementary School.
- Around 60% or little over 730 students are transported by 18 school buses.
- Around 40% or 550 students are dropped off and picked up by parents.
- The school enforces a single line drop-off and pick-up.

- Since there are no students walking or biking, there is no crossing guard at the Old Kings Elementary School.
- There are long car queues backing onto Old Kings Rd in both directions during drop off and pick up periods.
- The school staff mentioned that they do not have any pressing needs and are doing the best out of their current campus circulation. But they see opportunities for improvements, especially related to SR 100 and Old Kings signal timing.
- The signal timings at SR 100 and Old Kings Rd affect the queue lengths in PM pick up period. The northbound queues at the signal back up to the school's northern entrance there by not allowing cars to exit the school campus and hence limiting new cars entering the pickup queue at the school's middle entrance gate.
- City of Palm Coast will be sharing signal timings for the signal at SR 100 and Old Kings Rd.
- Parents start queueing for PM pick up around 12:40 PM for school dismissal at 3:30 PM.
- Southbound left turn lane is fully occupied from the school's middle entrance gate till SR 100 intersection during PM pick up period.
- Parent's drop off and pick up gate is located towards back of the school building. School bus entrance is located towards front of the building.
- School bus circulation loop and parents' car drop off pick up loop are separate. However, school's middle gate is shared by school buses as their exit gate and by parents' as their entry gate.
- No new major construction projects are planned by the school or by the City in the study area. However, there are multiple DRIs (Developments of Regional Influence) planned all around the school campus. Once these DRI are fully developed, there will be lot more residential development within the school's walk zone.
- Shared use path/trail as well as open drainage swale is located on the east side of Old Kings Rd fronting the school campus. However the trail stops at the south entrance gate of the school. There is no sidewalk or shared use path south of school campus.
- Few students clubs are hosted at the school after school hours. Pickup for it is well after regular school pick up hours.
- There is a 20MPH school zone with flashing yellow signal on Old Kings Rd.

## Field Review Observations

The field review for Old Kings Elementary school was conducted on February 3rd, 2017 by Kittelson and Associates. The weather conditions on the day of the review were typical for the season in Palm Coast, FL. The weather was dry and sunny with clear skies. The temperatures ranged from low 60s to mid 70s. The field review observed the drop-off activity from 7:50 to 9:10 AM and pick-up activity from 2:15 to 4:15PM. The field review also included documenting conditions within the school's walk zone.

Following are the observations from the field review.

### General Observations:

- There are three entrance gates to the school campus. The northern entrance gate is used as an exit gate by parents for drop-off and pick up, while the middle gate is used as an entry gate. Both, the northern and middle gate are used as entry and exit gates by school staff and visitors. The southern gate is used by school buses as entry gate. School buses use the middle gate as exit gate.
- No students walk or bike to the school as there are no residences within the school's walk zone. Hence there is no crossing guard at this school.

### Drop-Off Observations:

- Flashing yellow school zone light is on between 8: 15 AM to 9:15 AM.

### Northern Entrance Gate on Old Kings Road

- This gate is used as exist gate by parents after dropping off students. It is also used as an entry and exit gate by school staff and visitors.



*Northern entrance gate is used by parents to exit the campus onto Old Kings Road.*



*Internal driveway with marked crosswalk in front of School building's main entrance.*

- No left turn allowed from the school campus onto Old Kings Road between Monday to Friday, 8:30 AM to 9:30 AM and 3:00 PM to 4:00 PM.
- Around 8:40 AM north bound queues at SR 100 and Old Kings Road signal back up to this gate. Due to this, cars leaving the school campus are not able to exit by making a right turn onto Old Kings Road.

### **Middle Entrance Gate on Old Kings Road**

- Parents enter through this gate and loop around the internal drive aisle to drop off students at the back entrance to the school building.
- The gate at the back of the school building opens at 8:15 AM for drop off. Around 15 cars are already in the queue when the gate opens.
- The longest drop off queue is observed between 8:45 AM to 8:55 AM when the queue backs onto Old Kings Road. There are around 10 cars waiting in the south bound left turn lane to get inside the school campus.
- Few parents, to avoid the long queues, park their cars across on grass shoulder on west side of Old Kings Road across the school gate and run across Old Kings Road with students.
- This gate is also used by school buses to exit the school campus. When school buses are exiting, other cars have to wait to get in or out of the campus.



*School Buses exit from the middle gate onto Old Kings Road.*



*Southern Entrance Gate is used by School buses to enter the school's campus.*

### **Southern Entrance Gate on Old Kings Road**

- This gate is used as an entrance gate by school buses as well as entry and exit gate by school staff.
- School buses arrive around 8:30 AM.
- Multi use path/trail located on east side of Old Kings Road ends at this gate

### **Pick-Up Observations:**

- Flashing yellow school zone light is on between 3:00 PM to 4:00 PM.

### **Northern Entrance Gate on Old Kings Road**

- Around 3:45 to 3:50 PM, due to signal timings at SR 100 and Old Kings Road intersection, northbound queues back up to this entrance gate. Due to this, cars are not able to exit the school campus.
- No left turn possible due to long queues in the southbound left turn lane waiting to get inside the school campus from the middle gate. Sign also prohibits left turn lane between Monday to Friday, 8:30 AM to 9:30 AM and 3:00 PM to 4:00 PM.

### **Middle Entrance Gate on Old Kings Road**

- Parents start queueing inside the campus from 12:45 PM for school dismissal at 3:30 PM.
- Long queues are observed for PM pick up period. Longest queues are between 3:15 PM to 3:40 PM and take up entire southbound left turn lane from this entrance to SR 100 intersection.
- Few parents and school staff members mentioned that there are times when the queue backs beyond SR 100 intersection to the north.
- Long queue is also observed taking up the entire northbound right turn lane south of the entrance gate.
- Parents have mutual understanding and let one car go at a time from southbound left turn lane and northbound right turn lane in an alternating fashion.
- School buses leave around 3:45 to 3:50 PM. When school buses leave, no other cars can enter or leave through this gate. Due to number of buses, it is not possible for cars to exit from the northern gate as well. Hence the pickup loop is stagnant for the period of time when school buses leave the campus till they clear the SR 100 signal.

- Few parents, to avoid the long queues, park their cars across on grass shoulder on west side of Old Kings Road across the school gate and run across Old Kings Road to pick up students and run back with the students to their parked cars.

#### **Southern Entrance Gate on Old Kings Road**

- School buses arrive to pick up students around 3:15 PM

#### **Walk Zone Observations:**

- There are no streets except for SR 100 and Old Kings Road within the walk zone.
- Except for few commercial developments, there are no other land uses within the walk zone and majority of the area surrounding school is currently vacant.
- Bike lanes and shared use path exist on both sides of Old Kings Road north of SR 100. South of SR 100, there is sidewalk on west side fronting the commercial development and shared use path on west side till the southern entrance gate of the school. South of the school campus there is no sidewalk or shared use path on any sides.
- On SR 100, there are bike lanes on both sides as well as shared use path on north side. There is no sidewalk or shared use path on the south side.



## Implementation Report

This section of the report will build on analysis and observations documented in the Assessment Report to make recommendations. Purpose of the Implementation Report for the Bicycle and Pedestrian School Safety Review Study is to conduct a constructibility review and develop a cost feasibility plan. The Old Kings Elementary School is unique among all elementary and middle schools in Flagler County. This is because it is relatively isolated with no residential development surrounding it. Hence all the enrolled students are either transported by school buses or dropped off and picked up by parents/family members by cars. Since there are no students who walk or bike to Old Kings Elementary School, there are only two minor specific recommendations as well as one overall broad recommendation listed in this report.

### Walk Zone Related Recommendations:

#### Location: Old Kings Road

**Observation:** Few parents park their cars on the grass shoulders on both sides of Old Kings Road. Those who park their cars on west side of the road, run across the road to drop off and pick up students. This is mainly done to avoid waiting in the queue within the school campus. This is a significant safety hazard.

**Recommendation:** Representatives from the City of Palm Coast, Old Kings Elementary School, and County Sheriff's office should take more proactive actions and run education campaigns to educate parents and students, not to cross at an mid-block locations without crosswalks especially with students.

Install 'no parking' signs along both sides of Old Kings Road in front of the school's campus and enforce no parking regulation by periodically issuing tickets.

**Observation:** Very long queues were observed at the signalized intersection of SR 100 and Old Kings Road during the school drop off and pick up periods.

**Recommendation:** Conduct an intersection operations study to evaluate geometric as well as signal timing changes to reduce long queues.

**Observation:** Most of the land surrounding the school is currently undeveloped vacant land.

**Recommendation:** As new development occurs within the immediate surroundings of the school campus, the City and the County should enforce good site design and neighborhood design guidelines. These guidelines should ensure that new street network is well connected and creates a street and block pattern that is walkable. Street design standards should be enforced to ensure that ADA compliant pedestrian and bicycle facilities are provided to create direct, comfortable, and safe connections to the school campus.

## School Campus Related Recommendations:

There were no significant issues identified on the school campus as part of the co-ordination meeting or as part of the field review. Overall school campus circulation system seemed to work well. All the pedestrian and parking facilities within the school campus were identified as ADA compliant. Therefore, there are no school campus related recommendations as part of this report.

## Recommended Priority Projects:

This section lists all the recommended priority engineering and construction projects that address the observations and recommendations noted in the earlier section. However, it does not list educational, enforcement, and policy changes which are also recommended in the earlier section.

The following engineering and construction projects are recommended to be implemented as part of this Old Kings Elementary School Bicycle and Pedestrian school Safety Review study:

### Old Kings Road Improvements:

- Install 'No Parking' signs along both sides of Old Kings Road in from the school campus.

## Constructibility Matrix of Priority Projects:

The matrix in Table 3 shows the estimated cost for recommended priority projects. FDOT item average unit costs from 1st December 2015 to 30th November 2016 for Area 7 that includes Flagler county were used to develop the constructibility matrix. The costs shown in the constructibility matrix include construction and labor fees. Grading costs are not included. These improvements are based on field observations and should be verified by a contractor prior to construction.

Location	Description of Project	Pay Item Number	Pay Item Description	Plan Qty	Unit	Unit Price	Contract Amount
Old Kings Road, in front of the School campus	Install 'No Parking' signs along Old Kings Drive in from the school campus.	0700 1 11	Single Post Sign, F&I Gm, <12 Sf	20	EA	\$277	\$5,540
<b>TOTAL</b>							<b>\$5,540</b>
<b>40% Contingency</b>							<b>\$2,220</b>
<b>GRAND TOTAL</b>							<b>\$7,760</b>

Table 3: Constructibility matrix



# Appendices

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## **A. 2016 Florida Statutes Excerpts**

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## The 2016 Florida Statutes

Title XLVIII

K-20 EDUCATION CODE

Chapter 1006

SUPPORT FOR LEARNING

**(1) DEFINITION.**—As used in this section, the term “student” means any public elementary school student whose grade level does not exceed grade 6.

**(2) HAZARDOUS WALKING CONDITIONS.—**

(a) Walkways parallel to the road.—

1. It shall be considered a hazardous walking condition with respect to any road along which students must walk in order to walk to and from school if there is not an area at least 4 feet wide adjacent to the road, not including drainage ditches, sluiceways, swales, or channels, having a surface upon which students may walk without being required to walk on the road surface. In addition, whenever the road along which students must walk is uncurbed and has a posted speed limit of 50 miles per hour or greater, the area as described above for students to walk upon shall be set off the road by no less than 3 feet from the edge of the road.

2. Subparagraph 1. does not apply when the road along which students must walk:

a. Is a road on which the volume of traffic is less than 180 vehicles per hour, per direction, during the time students walk to and from school; or

b. Is located in a residential area and has a posted speed limit of 30 miles per hour or less.

(b) Walkways perpendicular to the road.—It shall be considered a hazardous walking condition with respect to any road across which students must walk in order to walk to and from school if:

1. The traffic volume on the road exceeds the rate of 360 vehicles per hour, per direction (including all lanes), during the time students walk to and from school and if the crossing site is uncontrolled. For purposes of this subsection, an “uncontrolled crossing site” is an intersection or other designated crossing site where no crossing guard, traffic enforcement officer, or stop sign or other traffic control signal is present during the times students walk to and from school.

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2. The total traffic volume on the road exceeds 4,000 vehicles per hour through an intersection or other crossing site controlled by a stop sign or other traffic control signal, unless crossing guards or other traffic enforcement officers are also present during the times students walk to and from school. Traffic volume shall be determined by the most current traffic engineering study conducted by a state or local governmental agency.

(c) Crossings over the road.—It shall be considered a hazardous walking condition with respect to any road at any uncontrolled crossing site which students must walk in order to walk to and from school if:

1. The road has a posted speed limit of 50 miles per hour or greater; or
2. The road has six lanes or more, not including turn lanes, regardless of the speed limit.

### **(3) IDENTIFICATION OF HAZARDOUS CONDITIONS.—**

(a) When a request for review is made by the district school superintendent with respect to a road over which a state or local governmental entity has jurisdiction concerning a condition perceived to be hazardous to students in that district who live within the 2-mile limit and who walk to school, such condition shall be inspected jointly by a representative of the school district, a representative of the state or local governmental entity with jurisdiction over the perceived hazardous location, and a representative of the municipal police department for a municipal road, a representative of the sheriff's office for a county road, or a representative of the Department of Transportation for a state road. If the jurisdiction is within an area for which there is a metropolitan planning organization, a representative of that organization shall also be included. The governmental representatives shall determine whether the condition constitutes a hazardous walking condition as provided in subsection (2). If the governmental representatives concur that a condition constitutes a hazardous walking condition as provided in subsection (2), the governmental entity with jurisdiction shall report that determination in writing to the district school superintendent, who shall initiate a formal request for correction as provided in subsection (4).

(b) If the governmental representatives are unable to reach a consensus, the reasons for lack of consensus shall be reported to the district school superintendent, who shall provide a report and recommendation to the district school board. The district school board may initiate a proceeding under chapter 86 seeking a determination as to whether the condition constitutes a hazardous walking condition as provided in subsection (2) after providing at least 30 days' notice in writing to the state or local governmental entity having jurisdiction over the road of its intent to do so unless, within 30 days after such notice is provided, the state or local governmental entity concurs in writing that the condition is a hazardous walking condition as provided in subsection (2) and provides the position statement pursuant to subsection (4). If a proceeding is initiated under this paragraph, the district school board has the burden of proving such condition by the greater weight of evidence. If the district school board prevails, the district school superintendent shall report the outcome to the Department of Education and initiate a formal request for correction of the hazardous walking condition as provided in subsection (4).



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**(4) TRANSPORTATION; CORRECTION OF HAZARDS.—**

(a) A district school board and other governmental entities shall work cooperatively to identify conditions that are hazardous along student walking routes to school, and a district school board shall provide transportation to students who would be subjected to such conditions. Additionally, state or local governmental entities with jurisdiction over a road along which a hazardous walking condition is determined to exist shall correct the condition within a reasonable period of time.

(b) Upon a determination pursuant to subsection (3) that a hazardous walking condition exists, the district school superintendent shall request a position statement with respect to correction of such condition from the state or local governmental entity with jurisdiction over the road. Within 90 days after receiving such request, the state or local governmental entity shall inform the district school superintendent whether the entity will include correction of the hazardous walking condition in its next annual 5-year transportation work program and, if so, when correction of the condition will be completed. If the hazardous walking condition will not be included in the state or local governmental entity's next annual 5-year transportation work program, the factors justifying such conclusion must be stated in writing to the district school superintendent and the Department of Education.

(c) State funds shall be allocated for the transportation of students subjected to a hazardous walking condition. However, such funding shall cease upon correction of the hazardous walking condition or upon the projected completion date, whichever occurs first.

(5) **CIVIL ACTION.**—In a civil action for damages brought against a governmental entity under s. 768.28, the designation of a hazardous walking condition under this section is not admissible in evidence.

(6) **INTERLOCAL AGREEMENTS.**—This section does not prohibit a district school board and other governmental entities from entering into an interlocal agreement pursuant to s. 163.31777 that addresses the identification and correction of hazardous walking conditions, if such agreement:

- (a) Implements the Safe Paths to Schools Program as provided in s. 335.066; or
- (b) Establishes standards for the safety of students walking to school and procedures for identifying and correcting hazardous walking conditions that meet or exceed the standards and procedures provided in subsections (2), (3), and (4).

History.—s. 297, ch. 2002-387; s. 2, ch. 2015-101.



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## **B. Americans with Disabilities Accessibility Guidelines Excerpts**

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## **4.7 Curb Ramps.**

**4.7.1 Location.** Curb ramps complying with 4.7 shall be provided wherever an accessible route crosses a curb.

**4.7.2 Slope.** Slopes of curb ramps shall comply with [4.8.2](#). The slope shall be measured as shown in [Fig. 11](#). Transitions from ramps to walks, gutters, or streets shall be flush and free of abrupt changes. Maximum slopes of adjoining gutters, road surface immediately adjacent to the curb ramp, or accessible route shall not exceed 1:20.

**4.7.3 Width.** The minimum width of a curb ramp shall be 36 in (915 mm), exclusive of flared sides.

**4.7.4 Surface.** Surfaces of curb ramps shall comply with [4.5](#).

**4.7.5 Sides of Curb Ramps.** If a curb ramp is located where pedestrians must walk across the ramp, or where it is not protected by handrails or guardrails, it shall have flared sides; the maximum slope of the flare shall be 1:10 (see [Fig. 12\(a\)](#)). Curb ramps with returned curbs may be used where pedestrians would not normally walk across the ramp (see [Fig. 12\(b\)](#)).

**4.7.6 Built-up Curb Ramps.** Built-up curb ramps shall be located so that they do not project into vehicular traffic lanes (see [Fig. 13](#)).

**4.7.7 Detectable Warnings.** A curb ramp shall have a detectable warning complying with [4.29.2](#). The detectable warning shall extend the full width and depth of the curb ramp.

**4.7.8 Obstructions.** Curb ramps shall be located or protected to prevent their obstruction by parked vehicles.

**4.7.9 Location at Marked Crossings.** Curb ramps at marked crossings shall be wholly contained within the markings, excluding any flared sides (see [Fig. 15](#)).

**4.7.10 Diagonal Curb Ramps.** If diagonal (or corner type) curb ramps have returned curbs or other well-defined edges, such edges shall be parallel to the direction of pedestrian flow. The bottom of diagonal curb ramps shall have 48 in (1220 mm) minimum clear space as shown in [Fig. 15\(c\)](#) and [\(d\)](#). If diagonal curb ramps are provided at marked crossings, the 48 in (1220 mm) clear space shall be within the markings (see [Fig. 15\(c\)](#) and [\(d\)](#)). If diagonal curb ramps have flared sides, they shall also have at least a 24 in (610 mm) long segment of straight curb located on each side of the curb ramp and within the marked crossing (see [Fig. 15\(c\)](#)).

**4.7.11 Islands.** Any raised islands in crossings shall be cut through level with the street or have curb ramps at both sides and a level area at least 48 in (1220 mm) long between the curb ramps in the part of the island intersected by the crossings (see [Fig. 15\(a\)](#) and [\(b\)](#)).

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## 4.8 Ramps.

**4.8.1\* General.** Any part of an accessible route with a slope greater than 1:20 shall be considered a ramp and shall comply with 4.8. [Appendix Note](#)

**4.8.2\* Slope and Rise.** The least possible slope shall be used for any ramp. The maximum slope of a ramp in new construction shall be 1:12. The maximum rise for any run shall be 30 in (760 mm) (see [Fig. 16](#)). Curb ramps and ramps to be constructed on existing sites or in existing buildings or facilities may have slopes and rises as allowed in [4.1.6\(3\)\(a\)](#) if space limitations prohibit the use of a 1:12 slope or less. [Appendix Note](#)

**4.8.3 Clear Width.** The minimum clear width of a ramp shall be 36 in (915 mm).

**4.8.4\* Landings.** Ramps shall have level landings at bottom and top of each ramp and each ramp run. Landings shall have the following features:

- (1) The landing shall be at least as wide as the ramp run leading to it.
- (2) The landing length shall be a minimum of 60 in (1525 mm) clear.
- (3) If ramps change direction at landings, the minimum landing size shall be 60 in by 60 in (1525 mm by 1525 mm).
- (4) If a doorway is located at a landing, then the area in front of the doorway shall comply with [4.13.6](#). [Appendix Note](#)

**4.8.5\* Handrails.** If a ramp run has a rise greater than 6 in (150 mm) or a horizontal projection greater than 72 in (1830 mm), then it shall have handrails on both sides. Handrails are not required on curb ramps or adjacent to seating in assembly areas. Handrails shall comply with [4.26](#) and shall have the following features:

- (1) Handrails shall be provided along both sides of ramp segments. The inside handrail on switchback or dogleg ramps shall always be continuous.
- (2) If handrails are not continuous, they shall extend at least 12 in (305 mm) beyond the top and bottom of the ramp segment and shall be parallel with the floor or ground surface (see [Fig. 17](#)).
- (3) The clear space between the handrail and the wall shall be 1 - 1/2 in (38 mm).
- (4) Gripping surfaces shall be continuous.
- (5) Top of handrail gripping surfaces shall be mounted between 34 in and 38 in (865 mm and 965 mm) above ramp surfaces.
- (6) Ends of handrails shall be either rounded or returned smoothly to floor, wall, or post.

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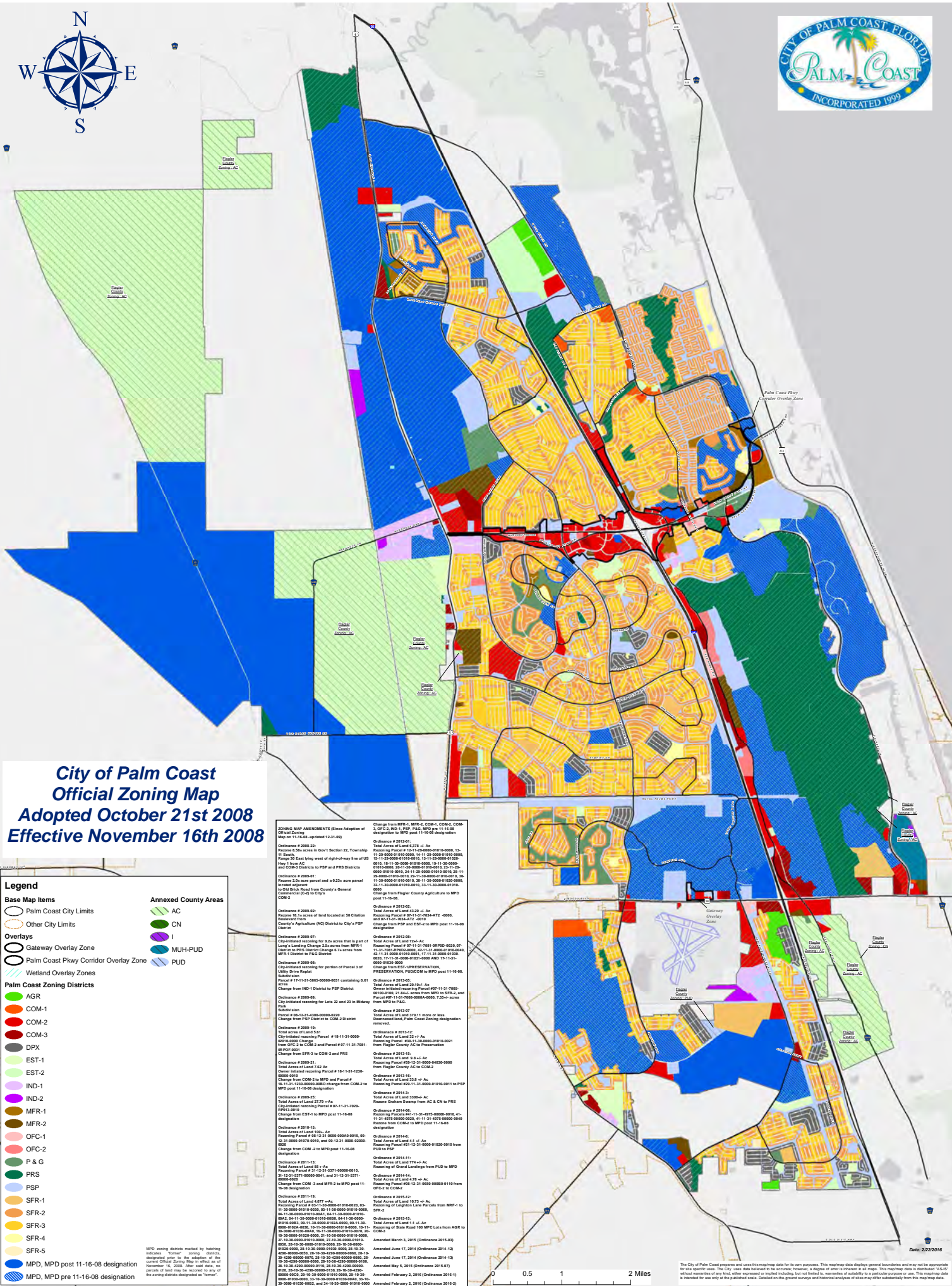
(7) Handrails shall not rotate within their fittings. [Appendix Note](#)

**4.8.6 Cross Slope and Surfaces.** The cross slope of ramp surfaces shall be no greater than 1:50. Ramp surfaces shall comply with [4.5](#).

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## **C. City of Palm Coast Zoning Map, Future Land Use Map, and Land Development Excerpts**



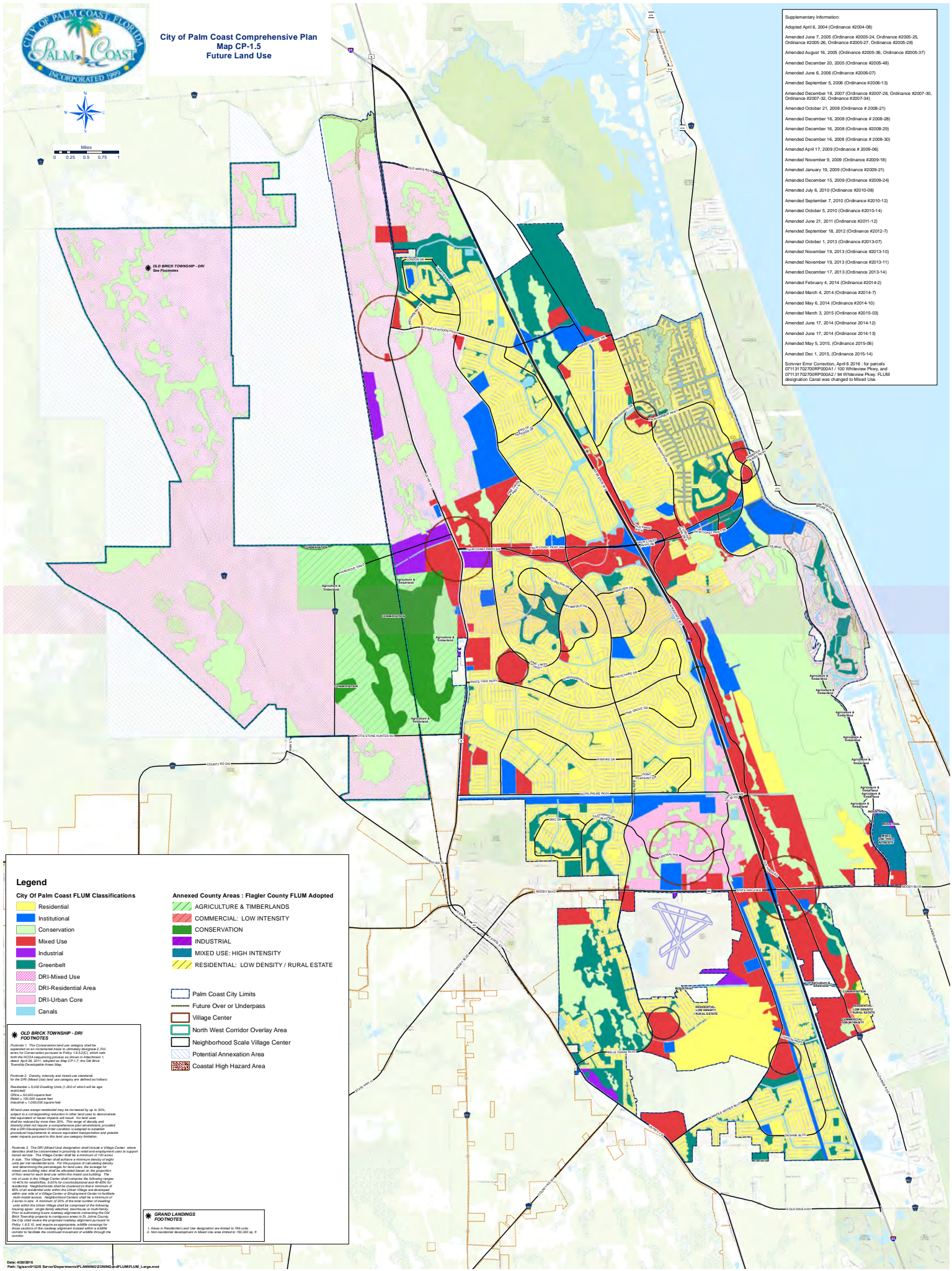


Date: 3/23/201





City of Palm Coast Comprehensive Plan  
Map CP-1.5  
Future Land Use



Supplementary Information:

Adopted April 6, 2004 (Ordinance #2004-08)
Amended June 7, 2005 (Ordinance #2005-24, Ordinance #2005-25, Ordinance #2005-26, Ordinance #2005-27, Ordinance #2005-28)
Amended August 16, 2005 (Ordinance #2005-36, Ordinance #2005-37)
Amended December 20, 2005 (Ordinance #2005-48)
Amended June 6, 2006 (Ordinance #2006-07)
Amended September 5, 2006 (Ordinance #2006-13)
Amended December 18, 2007 (Ordinance #2007-28, Ordinance #2007-30, Ordinance #2007-32, Ordinance #2007-34)
Amended October 21, 2008 (Ordinance #2008-21)
Amended December 16, 2008 (Ordinance #2008-28)
Amended December 16, 2008 (Ordinance #2008-29)
Amended December 16, 2008 (Ordinance #2008-30)
Amended April 17, 2009 (Ordinance #2009-06)
Amended November 9, 2009 (Ordinance #2009-18)
Amended January 19, 2009 (Ordinance #2009-21)
Amended December 15, 2009 (Ordinance #2009-24)
Amended July 6, 2010 (Ordinance #2010-08)
Amended September 7, 2010 (Ordinance #2010-12)
Amended October 5, 2010 (Ordinance #2010-14)
Amended June 21, 2011 (Ordinance #2011-12)
Amended September 18, 2012 (Ordinance #2012-7)
Amended October 1, 2013 (Ordinance #2013-07)
Amended November 19, 2013 (Ordinance #2013-10)
Amended November 19, 2013 (Ordinance #2013-11)
Amended December 17, 2013 (Ordinance #2013-14)
Amended February 4, 2014 (Ordinance #2014-2)
Amended March 4, 2014 (Ordinance #2014-7)
Amended May 6, 2014 (Ordinance #2014-10)
Amended March 3, 2015 (Ordinance #2015-03)
Amended June 17, 2014 (Ordinance #2014-13)
Amended June 17, 2014 (Ordinance #2014-13)
Amended May 5, 2015 (Ordinance #2015-06)
Amended Dec 1, 2015 (Ordinance #2015-14)

Solver Error Correction, April 6 2016: for parcels 071131702700RPO0A1 / 100 Whiteview Pkwy. and 071131702700RPO0A2 / 94 Whiteview Pkwy. FLUM designation Canal was changed to Mixed Use.

**Legend**

**City of Palm Coast FLUM Classifications**

- Residential
- Institutional
- Conservation
- Mixed Use
- Industrial
- Greenbelt
- DRI-Mixed Use
- DRI-Residential Area
- DRI-Urban Core
- Canals

**Annexed County Areas : Flagler County FLUM Adopted**

- AGRICULTURE & TIMBERLANDS
- COMMERCIAL: LOW INTENSITY
- CONSERVATION
- INDUSTRIAL
- MIXED USE: HIGH INTENSITY
- RESIDENTIAL: LOW DENSITY / RURAL ESTATE

**Other Features**

- Palm Coast City Limits
- Future Over or Underpass
- Village Center
- North West Corridor Overlay Area
- Neighborhood Scale Village Center
- Potential Annexation Area
- Coastal High Hazard Area

**\* OLD BRICK TOWNSHIP - DRI FOOTNOTES**

Footnote 1: The Conservation land use category shall be...  
Footnote 2: Density, intensity and related use standards...  
Footnote 3: The DRI Mixed Use designation shall include a Village Center...

**\* GRAND LANDINGS FOOTNOTES**

1. Areas in Residential and Use designations are limited to 750 units...  
2. Non-residential development in Mixed Use area limited to 150,000 sq. ft.

## Chapter 5 - TRANSPORTATION, CONNECTIVITY, ACCESS, AND PARKING

### Sec. 5.01. - Purpose and Applicability.

5.01.01. *Purpose.* The purpose of this chapter is to establish requirements for a transportation system that operates by moving people and goods efficiently, safely, and provides a balance between mobility and accessibility.

5.01.02. *Applicability.* All development shall provide transportation, access, parking, loading, bicycle, and pedestrian facilities in compliance with the standards of this chapter. All facilities shall be maintained as long as the principal use continues.

### Sec. 5.02. - Transportation and Connectivity.

#### 5.02.01. *Streets.*

- A. All proposed developments, except for sites developed with utility facilities such as cable substations, communication towers, etc., shall front on a paved street or paved access easement. This street, if not already paved, shall be paved by the developer from the entrance of the development to the nearest public paved street(s). The character, width, grade, and location of all streets shall conform to City standards and shall be considered in their relation to existing and planned streets, to topographical conditions, to public convenience and safety, and in their appropriate relation to the proposed uses of the land to be served by such streets. Construction and material specifications for streets shall conform to the Florida Department of Transportation Standard Specifications for Road and Bridge Construction and the following:
1. All newly platted streets intended to serve residential uses shall be public. The Land Use Administrator may approve private streets, provided all such streets meet all design and construction criteria of the City, and a condominium or homeowners association is created with all duties and powers necessary to ensure perpetual maintenance of such private streets. All streets shall be constructed to the exterior property lines of the development unless they are permanently terminated by a cul-de-sac or an intersection with another street.
  2. Newly platted streets intended to serve business or industrial uses may be private if approved by the City Council. In such cases, all streets shall meet the design and construction criteria of the City unless overriding conditions, such as sharing entrances or parking areas, require different design criteria as determined by the Land Use Administrator. A property owners' association shall maintain such streets.
- B. The arrangement of streets in a development shall:
1. Provide efficient and orderly hierarchy of streets.
  2. Conform to official plans and maps of the City.



3. Be integrated with the existing and planned street system of the surrounding area in a manner that is not detrimental to existing neighborhoods.
4. Ensure that the use of local streets by through or nonresidential traffic is discouraged.
5. Provide at least two separate and remote entrances to a development, unless other provisions, such as easements, are made for emergency ingress and egress, and provided such entrances will not adversely affect the overall street system and meet the required 24-foot right-of-way width.
6. Facilitate and coordinate with the future development of adjoining property of a similar character, and provide for local circulation and convenient access to neighborhood facilities.
7. Local streets shall be patterned in such a way that continuous traffic from a collector road to another collector road is discouraged.

5.02.02. *Minimum right-of-way and pavement widths.* The following are the minimum right-of-way widths required for streets within the City. Developers shall dedicate sufficient land to meet the right-of-way requirement resulting from the development in accordance with a rational nexus and rough proportionality analysis.

*Table 5-1: Minimum Right-of-Way Width*

Functional Classification	Minimum Right-of-Way (ft.)
Principal Arterial	200
Minor Arterial	120
Collector/Minor Collector	100/80
Local Streets	50

*Table 5-2: Required Right-of-Way and Pavement Width*

Street Type	Right-of-Way In Feet		Pavement In Feet	
	Urban	Rural	Urban	Rural
Local (> 75 lots)	50	80	24	24

Residential Up to 75 lots	50	70	24	24
Cul-de-sac (radius)	60	60	50	50

**Note:** The Land Use Administrator may approve, based upon sound and generally acceptable engineering practices and principles, narrower rights-of-way, provided adequate utility and sidewalk easements can be accommodated and granted to the City.

5.02.03. *Additional right-of-way.*

- A. Within the area of the setbacks required by this Land Development Code, additional right-of-way may be required to promote public safety and convenience or to ensure adequate access, circulation, and parking based upon a rational nexus and rough proportionality analysis.
- B. Whenever a street is programmed for improvement (in the adopted budget and the Capital Improvements Element of the Comprehensive Plan) and the need for the improvement is due to development being approved, as determined in a rational nexus and rough proportionality analysis, necessary right-of-way shall be required to be conveyed to the City.
- C. Where a proposed subdivision or site development abuts an existing street of inadequate right-of-way, and the need for additional right-of-way is rationally related to the development being approved, additional right-of-way shall be dedicated based upon a rational nexus and rough proportionality analysis.
- D. All right-of-way dedications, except easements, shall be conveyed to the City by means of a warranty deed or dedication by plat. Easements shall be conveyed to the City in a form acceptable to the City.
- E. All right-of-way dedications are subject to acceptance by the City Council or the Land Use Administrator. The City Attorney shall review all right-of-way dedications and dedication of easements.
- F. The following requirements shall be adhered to regarding right-of-way for corner clip radius:
  1. On any corner parcel with access to at least one adjacent road classified as a collector or above, additional right-of-way shall be dedicated to the City if needed to accommodate intersection radius improvements.
  2. Property lines at street intersections shall be rounded with a minimum radius of 25 feet. A greater radius shall be required at an angle of intersection of less than 75 degrees, as determined by the Land Use Administrator based upon sound and generally accepted

engineering practices and principles.

5.02.04. *Connectivity and interconnectivity.*

- A. When nonresidential developments are proposed to front on public streets, the City shall require the use of joint driveways and/or cross-access easements in order to minimize the number and maximize the spacing of access connections. Whenever cross-access corridors or coordinated or joint parking designs are provided to accomplish access management, each applicant for development approval shall provide such easements or agreements as may be necessary to ensure that adjoining properties shall be appropriately connected in order to implement a unified system allowing general cross-access to and from the other properties in the affected area. Such easements or agreements shall be recorded in the Public Records of Flagler County and shall constitute a covenant running with the land.
- B. All new residential developments of more than 50 dwelling units or 2,500 feet of road length shall provide a minimum of two vehicular entrances from a public right-of-way, with at least one of the vehicular entrances connecting to a public collector or arterial road, but both directly connecting to a public road. A deviation to the requirement that at least one of the vehicular entrances connect to a public connector or arterial road may be granted by the Land Use Administrator if it is determined by a traffic study administered by a licensed engineer that the additional traffic will not exceed the capacity of surrounding local streets at build-out of the surrounding area.
- C. All developments shall provide for bicycle and pedestrian interconnectivity between residential developments and between residential and adjacent nonresidential developments to reduce traffic on collector and arterial roads. Nonresidential development abutting undeveloped properties shall provide for future bicycle and pedestrian interconnectivity.
- D. All residential and nonresidential development that abuts an existing or proposed trail system shall provide pedestrian and bicycle links to the trail system.
- E. All new roads, except those where bicyclists are unlawful, such as controlled access highways, shall be designed and constructed for the provision of bicycle access. Bicycle safe design practices shall be followed including, but not limited to, safe drainage grates, railroad crossings, smooth pavements, and signals responsive to bicycles. In addition, the desirability of adding facilities such as bicycle lanes, bicycle routes, shoulder improvements, and wide curb lanes shall be considered.
- F. To the fullest extent practicable, all rural arterial and collector sections within one mile of an urbanized area shall be given consideration for the construction of paved shoulders four feet in width, and all urban arterial and collector sections shall be given consideration for either a curb lane 14 feet in width or an undesignated lane four feet in width. Generally, such facilities shall not be marked to attract bicycle traffic.

5.02.05. *Intersections.*

- A.

Streets shall intersect at an angle of 90 degrees, unless unique circumstances justify a lesser angle of intersection as determined by the Land Use Administrator, based upon sound and generally accepted engineering practices and principles.

- B. Spacing of street intersections shall be in accordance with Table 5-3:

*Table 5-3: Intersection Spacing in Feet*

Street Type	Collector	Arterial	T-type Intersection with a Collector
Local	330	660	330
Collector	660	1320	N/A
Arterial	N/A	N/A	N/A

5.02.06. *Visibility at intersections.*

- A. Sight triangles and sight distance requirements shall meet, at a minimum, Florida Department of Transportation Design Standards.
- B. Within that portion of a lot or parcel that lies within the clear visibility triangle, as defined in Chapter 14, nothing shall be erected, placed, planted, or allowed to grow in such a manner as to materially obstruct vision between a height of 24 inches to seven feet above the average grade at the centerline of the right-of-way, provided, however, that in case of a conflict, Subsection 5.02.06.A shall prevail over this requirement.
- C. The requirements of this section shall not be deemed to prohibit any necessary retaining wall.
- D. Trees may be permitted in the triangle area if the foliage is pruned within the heights noted in Subsection 5.02.06.B.
- E. Streetlights and street name signposts may be permitted if illuminating fixtures or nameplates are not located within the prescribed clear space.

Sec. 5.03. - Access.

5.03.01. *Vehicular access.*

- A. Access management, location, design, and construction of driveway connections to the City's road network shall, at a minimum, follow criteria and standard practices as established by the Florida Department of Transportation Design Standards and the City.

- B. All development sites shall provide permanent access from a paved street to each lot or parcel within the development in accordance with City standards.
- C. Cutting or altering a curb on a public street is prohibited without a permit issued by the City in accordance with Chapter 9.
- D. In addition to City approval, approval from Florida Department of Transportation for state roads, or Flagler County for county roads, is also required for any access onto a road.
- E. All driveways shall be designed and constructed to comply with all drainage standards as outlined in Chapter 9 and shall be constructed utilizing an approved paving material in accordance with City standards.

5.03.02. *Pedestrian access.*

- A. All development shall provide paved sidewalks, meeting the latest ADA (Americans with Disabilities Act) and City standards, along both abutting sides of a collector or arterial street. An alternate design to provide a 12-foot wide paved multipurpose pathway abutting on one side and a four-foot-wide sidewalk on the opposite side of a collector street may be proposed to the City and is subject to approval by the Land Use Administrator based upon public benefit.
- B. All proposed development fronting a local street shall provide a five-foot-wide paved sidewalk(s) along the entire length of side(s) abutting the street based on the following standards:
  - 1. Where sidewalks are present on the abutting local street, a sidewalk shall be provided along the property line connecting the existing sidewalks from one edge of the property to the opposite edge.
  - 2. Where no sidewalks are present, a sidewalk shall be provided. The City shall determine the location and size of the sidewalk based on the characteristics of the right-of-way.
  - 3. If the construction of a sidewalk is not feasible or practical at the time, the Land Use Administrator may allow the developer to make a payment into the Palm Coast Sidewalk Improvement Trust Fund in lieu of sidewalk construction.
- C. All new residential and nonresidential development that abuts a proposed or planned trail system shall provide an eight-foot-wide trail pathway (hard or soft surface per City standards) within a ten-foot-wide right-of-way to provide for the extension of the trail system based upon a rational nexus and rough proportionality analysis.
- D. Where development abuts a collector or arterial road, a five-foot paved sidewalk shall be provided to connect the public sidewalk to the principal building(s) with the sidewalk abutting the collector or arterial road. Five-foot paved sidewalks shall also be provided to connect to adjacent properties.
- E. All new nonresidential and multifamily residential development shall provide safe pedestrian access and connectivity throughout the site.

5.03.03. *Surfacing.* Access to any project or development shall require a hard surface driveway apron meeting City engineering standards connecting the driveway to the pavement of a public street.





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## **D. FHWA Guidelines for New Sidewalk Installation**

# Bicycle and Pedestrian Program

Legislation

Funding

Guidance

Resources

## Designing Sidewalks and Trails for Access

### Chapter 4 - Sidewalk Design Guidelines and Existing Practices

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[Contents](#)
[Next >](#)

State  
Coordinator and  
FHWA Division  
Coordinator

Each State has a  
[Bicycle and  
Pedestrian  
Coordinator](#), and  
each [FHWA Division  
office](#) has a point of  
contact.

FHWA  
Headquarters  
Contact

For more information,  
please contact [Dan  
Goodman](#), 202-366-  
9064.

Sidewalks form the backbone of the pedestrian transportation network. According to the Institute of Transportation Engineers, Technical Council Committee 5A-5 (1998), sidewalks "reduce the incidence of pedestrian collisions, injuries, and deaths in residential areas and along two-lane roadways." Without sidewalks, public rights-of-way are inaccessible to all pedestrians, including people with disabilities. When sidewalks are not available, pedestrians are forced to share the street with motorists, access to public transportation is restricted, and children might not have safe play areas. Because Federal regulations do not require agencies to build sidewalks, the decision is left to States and local agencies. Some agencies prioritize sidewalk installation, while others do not.

Accessible pedestrian facilities should be considered part of every new public right-of-way project where pedestrians are permitted. Sidewalk installation and the linking of pedestrian routes to transportation stops and major corridors should always be a priority. The decision to install sidewalks should not be optional. "Sidewalks should be built and maintained in all urban areas, along non-Interstate public highway rights-of-way, in commercial areas where the public is invited, and between all commercial transportation stops and public areas" (Institute of Transportation Engineers, Technical Council Committee 5A-5, 1998). This chapter examines the elements and characteristics of sidewalks that have the greatest impact on access. These characteristics include grade, cross-slope, and the design of specific elements such as curb ramps, driveway crossings, and intersections.

#### [4.1 Location Research](#)

The researchers visited a variety of sidewalk locations to determine what access provisions were being made for pedestrians. Eighteen jurisdictions across the United States were selected; some were chosen for their pedestrian-friendly reputations, while others were visited because the researchers had other business in the area. Measurements were taken during these visits to determine if the access needs of people with disabilities were being addressed and where improvements needed to be made.

During the site visits, local transportation officials responsible for sidewalk design and construction were interviewed about the ways their agencies were making sidewalks more accessible. Officials contacted included engineers responsible for implementing access improvements, ADA compliance officers, pedestrian/bicycle coordinators, and planners overseeing the construction of access features for new construction and renovations.

The interviews indicated that many sidewalk professionals have a desire to make sidewalks accessible. Designers and builders are beginning to realize that the standard pedestrian is a myth and that, in reality, sidewalk users are very diverse. However, there remains a need to provide information to designers and builders on ways to develop accessible facilities within the constraints of existing facilities, as well as in new construction.

During the visits, it became clear that techniques needed to be developed to accurately measure sidewalk elements such as curb ramps, driveway crossings, and medians. Techniques to quickly and accurately assess sidewalk environments were adapted from the Universal Trail Assessment Process (UTAP), originally developed to assess access conditions on recreational trails. The tools used to measure sidewalks were identical to those used in the UTAP, with the addition of a profile gauge to record small changes in level and raised tactile surfaces (see Section 5.1 for more information about the UTAP). The terminology and measurement process was standardized to ensure consistency among personnel.

General information about each sidewalk feature was recorded, including type, dimensions, and location with respect to other sidewalk elements. A data sheet was developed for quick recording of general access information. More detailed measurements of curb ramps, driveway crossings, and medians were recorded on a separate form. Up to 10 grade segments, 8 lengths, and 6 transition heights were recorded for these elements for full characterization of the dimensions and grades of each ramp, street, and gutter.

## 4.2 Design Guideline Comparisons

In addition to visiting a variety of sidewalk locations, the researchers identified existing guidelines that could be applied to public rights-of-way. The guidelines were collected from Federal, State, and city agencies, as well as private research and advocacy organizations. Guidelines for sidewalks were compiled in Tables 4-2.1 to 4-2.4. Guidelines for curb ramps were compiled in Tables 4-3.1 to 4-3.4. Both sets of tables are located at the end of this chapter.

The degree of accessibility provided by each guideline depends on the focus of the authorizing agency or organization. For example, the design guidelines produced by the American Association of State Highway and Transportation Officials (AASHTO) focus primarily on vehicle use, whereas ADAAG emphasizes accessible design for pedestrians. The AASHTO guidelines for public rights-of-way are titled A Policy on Geometric Design of Highways and Streets; however, the document is commonly referred to as the AASHTO Green Book. This terminology will be used throughout this report to avoid confusion with the AASHTO guidelines for bicycle and shared-use paths.

The Federal accessibility guidelines (the ADA Standards for Accessible Design and UFAS) were originally developed for accessible routes in buildings and on building sites. Many of the requirements for accessible routes can be extrapolated to public rights-of-way. In 1994, the U.S. Access Board developed draft accessibility guidelines, proposed by ADAAG (1994), that specifically applied to public rights-of-way. Even though proposed Section 14 (1994) is now reserved, some State DOTs have adopted it as their accessibility standard for public rights-of-way. Some State and local transportation agencies have also developed their own standards for sidewalk design because traditional guidelines, such as the AASHTO Green Book, do not include comprehensive sidewalk recommendations. Other organizations, such as the Institute of Transportation Engineers and the Federal Highway Administration, have also developed sidewalk and curb ramp design recommendations.

## 4.3 Access Characteristics

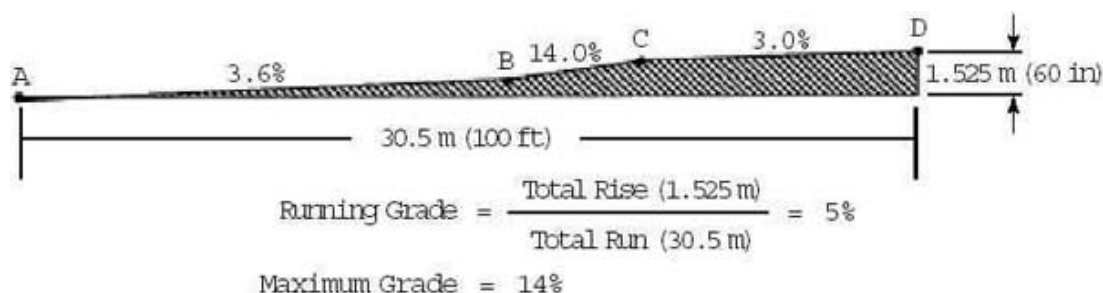
The design of a sidewalk can be described by a variety of characteristics. This report focuses on sidewalk characteristics that have the greatest impact on accessibility, such as grade and surface type. Other characteristics such as location, type of street, and climate also affect the pedestrian friendliness of a sidewalk but do not directly impact access. Access characteristics directly affect usability of a sidewalk. The amount of attention paid to these details will determine whether a facility is accessible or not. Even mildly difficult features in combination can add up to an inaccessible pathway.

### 4.3.1 Grade

Grade (slope) is defined as the slope parallel to the direction of travel and is calculated by dividing the vertical change in elevation by the horizontal distance covered. For example, a path that gains 2 m in elevation over 50 m of horizontal distance has a grade of 4 percent. Although some guidelines use the term "slope" instead of "grade," the term "grade" is used in this report to avoid confusion with cross-slope.

Running grade is defined as the average grade along a contiguous grade. Maximum grade is defined as a limited section of path that exceeds the typical running grade. In the pedestrian environment, maximum grade should be measured over 0.610 m (24 in) intervals (the approximate length of a wheelchair wheelbase, or a single walking pace). When measuring sidewalk grade, both running grade and maximum grade should be determined. Measuring running grade only does not give an accurate understanding of the sidewalk environment because small steep sections may not be detected. Figure 4-1 provides an example of a typical grade that is fairly negotiable, with a maximum grade that could be very difficult for some users to traverse. In the illustration, the running grade between Points A and D is 5 percent, but the grade between Points B and C is 14 percent. A person who could negotiate a 5 percent grade might not be able to negotiate a 14 percent grade, even for short distances.

Figure 4-1: Maximum grades can make a sidewalk difficult to traverse, even if the overall running grade is moderate.



The rate of change of grade is defined as the change in grade over a given distance. The rate of grade change is determined by measuring the grade and the distance over which it occurs for each segment of the overall distance. For the purposes of this report, rate of change of grade is measured over 0.610 m (2 ft) intervals, which represent the approximate length of a single walking pace and a wheelchair wheelbase (Figure 4-2). In the sidewalk environment, rate of change of grade should not exceed 13 percent. An example of a 13 percent change in grade occurs at a curb ramp if the slope of the gutter is 5 percent and the slope of the curb ramp is 8 percent (Figure 4-2).

Figure 4-2: The gutter slopes counter to the slope of the curb ramp to promote drainage.



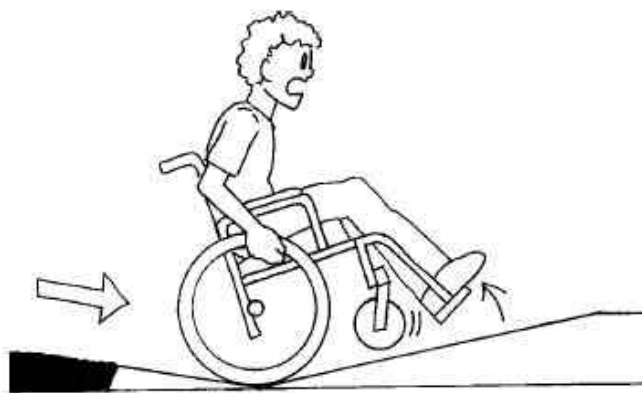
If the rate of change of grade exceeds 13 percent over a 0.610 m (2 ft) interval, the ground clearance of the footrests and or antitip wheels might be compromised. Antitip wheels are placed on the back of some wheelchairs to improve stability and prevent tipping. Even wheelchair users traveling slowly can get stuck if the footrest or antitip wheels get caught.

If the rate of change of grade exceeds 13 percent, the dynamic stability of the sidewalk user can also be significantly compromised, depending on the speed at which the wheelchair user goes through the curb ramp. Dynamic stability is compromised because the negative slope of the gutter causes the wheelchair to rotate forward. However, upon reaching the bottom of the transition, the wheelchair begins to pitch back rapidly as the wheelchair travels up onto the positive slope in front of the chair (Figure 4-3). Rapid changes in grade can also cause a wheelchair user traveling with speed to flip over backward, as illustrated in Figure 4-4. Any amount of height transition between the curb ramp and the gutter can intensify problems for wheelchair users.

Figure 4-3: Excessive slope differences between gutter and ramp can cause a wheelchair to tip forward.



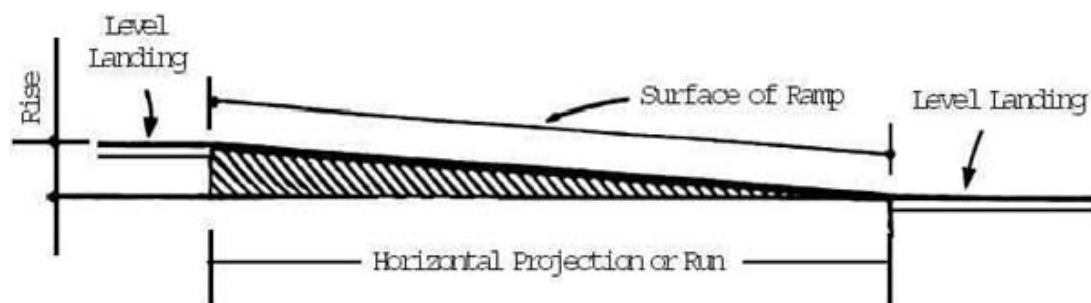
[Figure 4-4: Excessive slope differences between a gutter and a ramp can cause wheelchairs to flip over backward.](#)



Counter slope is defined as a grade that is opposite to the general running grade of a path. For example, at a curb ramp, the slope of the gutter is generally counter to the slope of the ramp (Figure 4-2). According to ADAAG, the counter slope to a curb ramp should not exceed 5 percent (ADAAG, U.S. Access Board, 1991). If the counter slope of a curb ramp exceeds 5 percent, the rate of change of grade is likely to exceed 13 percent, depending upon the grade of the ramp.

The guidelines and recommendations that were reviewed for running grade and maximum grade are included in Tables 4-2.1 through 4-2.4, located at the end of this chapter. ADAAG and UFAS specify that the maximum grade of an accessible route on a building site be no more than 8.33 percent with a maximum rise of 0.760 m (30 in). Grades greater than 5 percent require handrails and level landings at least 1.525 m (60 in) wide. If the ramp turns, the landing dimensions should be 1.525 m x 1.525 m (60 in x 60 in). A ramp with level landings at both ends is illustrated in Figure 4-5. The distance between level landings is dependent on the grade of the ramp. For example, if the ramp grade is 8.33 percent, a level landing is required at least every 9.1 m (30 ft). However, if the grade of the ramp is 6.5 percent, a level landing is required only every 12 m (40 ft). (ADAAG, U.S. Access Board, 1991; UFAS, U.S. DoD et al., 1984). Level landings provided at regular intervals allow wheelchair users and others a place to rest, turn around, and gain relief from prevailing grade demands. Level landings at storefronts and driveway crossings can also provide valuable resting spots for sidewalk users.

[Figure 4-5: Ramps must have level landings \(based on ADAAG Figure 16, U.S. Access Board, 1991\).](#)



The AASHTO Green Book recommends that the running grade of sidewalks be consistent with the running grade of adjacent roadways. Section 14.2.1 (2a) in ADAAG proposed Section 14 (1994), now reserved, permits the running grade of the sidewalk to be consistent with the grade of adjacent roadways but recommends that the minimum feasible slope be used (U.S. Access Board, 1994b). State guidelines examined concur with the Federal accessibility standards, proposed Section 14 (1994), or the AASHTO Green Book.

### [4.3.2 Cross-Slope](#)

Cross-slope is defined as the slope measured perpendicular to the direction of travel. Unlike grade, cross-slope can be measured only at specific points. Steep cross-slopes can make it difficult for wheelchair or crutch users to maintain lateral balance and can cause wheelchairs



to veer downhill or into the street. Cross-slope is determined by taking measurements at intervals throughout a section of sidewalk and then averaging the values.

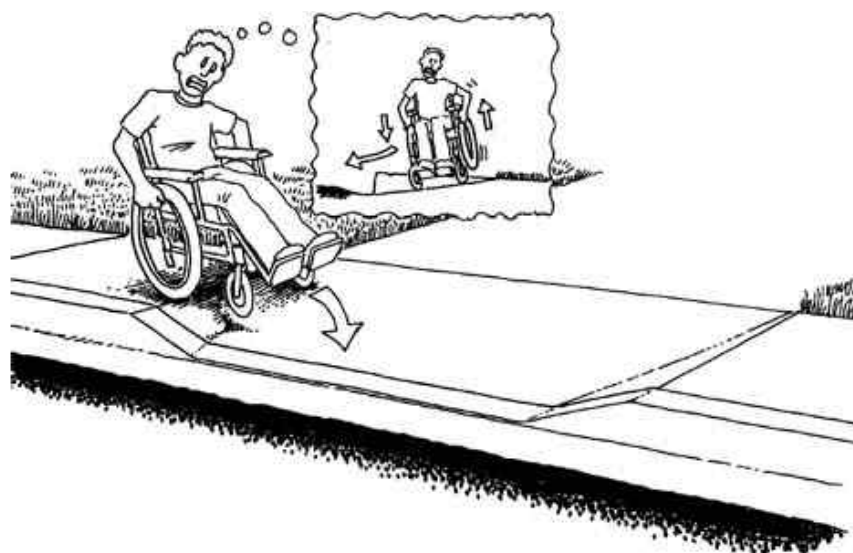
Running cross-slope is defined as the average cross-slope of a contiguous section of sidewalk. Often within the typical running cross-slope, there are inaccessible maximum cross-slopes that exceed the running cross-slope. The distance over which a maximum cross-slope occurs significantly influences how difficult a section of sidewalk is to negotiate.

Rate of change of cross-slope is defined as the change in cross-slope over a given distance. Rate of change of cross-slope can be measured by placing a digital level a specified distance before and after a maximum cross-slope. The specified distance should be about 0.610 m (2 ft) to represent the approximate stride of a pedestrian or the wheelbase of a wheelchair.

A cross-slope that changes so rapidly that there is no planar surface within 0.610 m (2 ft) could create a safety hazard. As the wheelchair moves over a surface that is severely warped, it will first balance on the two rear wheels and one front caster. As the wheelchair moves forward, it then tips onto both front casters and one rear wheel. This transition could cause the wheelchair user to lose control and tip over.

Proposed Section 14 (1994) specifies that sidewalks should lie in a continuous plane with a minimum of surface warping. Nonplanar surfaces are frequently found at driveway crossing flares and curb ramps without landings. Rapidly changing cross-slopes can cause one wheel of a wheelchair or one leg of a walker to lose contact with the ground (Figure 4-6) and also can cause walking pedestrians to stumble or fall.

[Figure 4-6: When cross-slopes change rapidly over a short distance, wheelchair use becomes extremely unstable.](#)



Most sidewalks are built with some degree of cross-slope, to allow water to drain into the street and to prevent water from collecting on the path. Water puddles pose a slipping hazard to sidewalk users and are even more difficult to negotiate when frozen into ice sheets in colder climates.

The guidelines and recommendations that were reviewed for running cross-slope are included in Tables 4-2.1 through 4-2.4 at the end of this chapter. ADAAG and the State pedestrian facility guidelines reviewed for this report do not permit cross-slopes to exceed 2 percent. The AASHTO Green Book requires the cross-slope of roads to be at least 1.5 percent to permit adequate drainage. The AASHTO Green Book does not provide cross-slope specifications for sidewalks. No guidelines or recommendations for maximum cross-slopes on sidewalks were identified.

### [4.3.3 Width](#)

The widths of sidewalks not only affect pedestrian usability but also determine the types of access and other pedestrian elements that can be installed. For example, a 1.525-m (60-in)

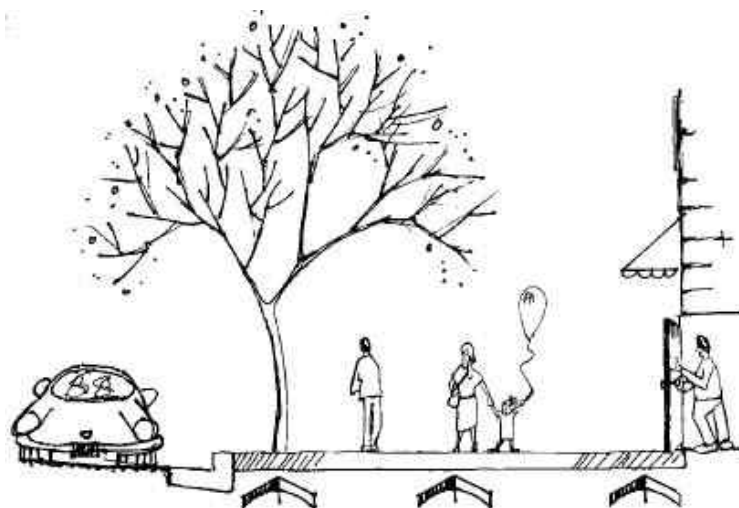
sidewalk is probably wide enough to accommodate pedestrian traffic in a residential area, but a much wider sidewalk would be necessary to include amenities such as street furniture or newspaper stands. Design width is defined as the width specification the sidewalk was intended to meet; it extends from the curb or planting strip to any buildings or landscaping that form the opposite borders of the sidewalk. Minimum clearance width is defined as the narrowest point on a sidewalk. An inaccessible minimum clearance width is created when obstacles such as utility poles protrude into the sidewalk and reduce the design width. A reduction in the design width could also create a minimum clearance width.

Although most guidelines require sidewalk design widths to be at least 1.525 m (60 in) wide, larger design widths can accommodate more pedestrians and improve ease of access. The AASHTO Green Book, the Oregon Department of Transportation guidebook, and other guidelines recommend wider design widths in areas with high volumes of pedestrians. The sidewalk width often depends on the type of street. In general, residential streets have narrower sidewalks than commercial streets.

The guidelines and recommendations that were reviewed for minimum clearance width are included in Tables 4-2.1 through 4-2.4 at the end of this chapter. Most of the guidelines reviewed concur with ADAAG, which specifies that the minimum passage width for wheelchairs should be 0.815 m (32 in) at a point and 0.915 m (36 in) continuously (ADAAG, U.S. Access Board, 1991). Additional width is necessary for turning and maneuvering.

The width of the sidewalk is also affected by pedestrian travel tendencies. Pedestrians tend to travel in the center of sidewalks to separate themselves from the rush of traffic and avoid street furniture, vertical obstructions, and other pedestrians entering and exiting buildings. Pedestrians avoid the edge of the sidewalk close to the street because it often contains utility poles, bus shelters, parking meters, sign poles, and other street furniture. Pedestrians also avoid traveling in the 0.610 m (24 in) of the sidewalk close to buildings to avoid retaining walls, street furniture, and fences (OR DOT, 1995). The sidewalk area that pedestrians tend to avoid is referred to as the shy distance. Taking into account the shy distance, only the center 1.830 m (6 ft) of a 3.050-m (10-ft) sidewalk is used by pedestrians for travel, as shown in Figure 4-7. Thus, the effective width of a sidewalk, not the design width, constitutes the sidewalk area needed to accommodate anticipated levels of pedestrian traffic.

*[Figure 4-7: Most pedestrians prefer to travel in the center of the sidewalk.](#)*

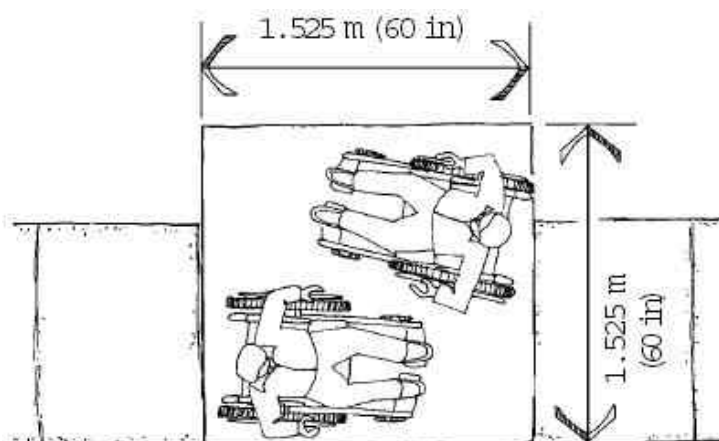


When right-of-way is acquired for sidewalk construction, it is important that adequate width be included to make the facility accessible. If sidewalks are not currently included, the agency responsible for sidewalk construction might consider purchasing additional right-of-way to anticipate future construction. When improving existing facilities, designers should consider purchasing additional right-of-way or narrowing the vehicle portion of the roadway.

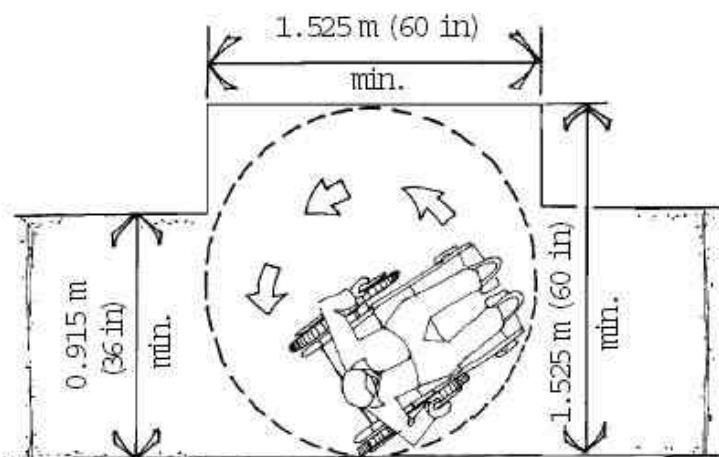
#### [4.3.4 Passing Space and Passing Space Interval](#)

Passing space is defined as a section of path wide enough to allow two wheelchair users to pass one another or travel abreast (Figure 4-8). The passing space provided should also be designed to allow one wheelchair user to turn in a complete circle (Figure 4-9).

[Figure 4-8: Passing spaces should be included at intervals on narrow sidewalks to allow wheelchair users to pass one another.](#)



[Figure 4-9: Wheelchair users require 1.525 m x 1.525 m \(60 in x 60 in\) to maneuver in a complete circle.](#)



Passing space interval is defined as the distance between passing spaces. Passing spaces should be provided when the sidewalk width is narrow for a prolonged extent because of a narrow design width or continuous obstacles.

Many agencies and private organizations do not provide guidelines for passing space or passing space intervals. Those that do provide guidelines concur with ADAAG Section 4.3.4, which specifies that accessible routes with less than 1.525 m (60 in) of clear width must provide passing spaces at least 1.525 m (60 in) wide at reasonable intervals not exceeding 61 m (200 ft). If turning or maneuvering is necessary, a turning space of 1.525 m x 1.525 m (60 in x 60 in) should be provided (ADAAG, U.S. Access Board, 1991).

### [4.3.5 Vertical Clearance](#)

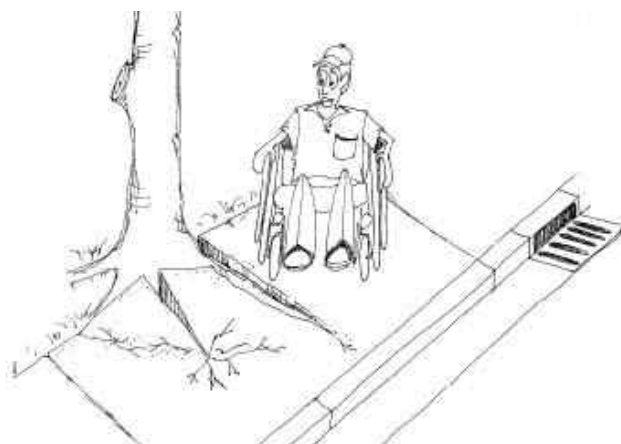
Vertical clearance is defined as the minimum unobstructed vertical passage space required along a sidewalk. Vertical clearance is often limited by obstacles such as building overhangs, tree branches, signs, and awnings.

The guidelines and recommendations that were reviewed for minimum allowable vertical clearance are included in Tables 4-2.1 through 4-2.4 at the end of this chapter. The majority of guidelines require a minimum of 2.030 m (80 in) of unobstructed vertical passage space. However, Oregon and Pennsylvania require 2.1 and 2.4 m (83 and 94 in) of vertical passage space, respectively (OR DOT, 1995; PA DOT, 1996). ADAAG states that circulation spaces, such as corridors, should have at least 2.030 m (80 in) of head room. ADAAG further specifies that if the vertical clearance of an area next to a circulation route is less than 2.030 m (80 in), elements that project into the circulation space must be protected by a barrier to warn people who are visually disabled or blind (ADAAG, U.S. Access Board, 1991).

### 4.3.6 Changes in Level

Changes in level are defined as vertical height transitions between adjacent surfaces or along the surface of a path. In the sidewalk environment, curbs without curb ramps, cracks (Figure 4-10), and dislocations in the surface material are common examples of changes in level. Changes in level also can result at expansion joints between elements such as curb ramps and gutters.

Figure 4-10: Changes in level are often caused by tree roots that break through the sidewalk surface.



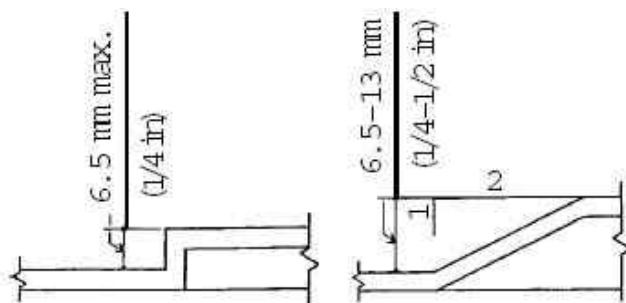
Changes in level can cause ambulatory pedestrians to trip or catch the casters of a manual wheelchair, causing the chair to come to an abrupt stop. People who are blind or who have low vision might not anticipate changes in level such as a buckling brick sidewalk.

The following conditions were observed to cause changes in level:

- Buckled bricks
- Cracks
- Curbs without ramps
- Drainage grates
- Grooves in concrete
- Heaving and settlement due to frost
- Lips at curb ramp frames
- Railroad tracks
- Roots
- Small steps
- Tree grates
- Uneven transitions between streets, gutters, and ramps

The guidelines and recommendations that were reviewed for changes in level are included in Tables 4-2.1 through 4-2.4 at the end of this chapter. The Federal accessibility standards permit changes in level less than 6 mm (0.25 in) high to be vertical but require changes in level between 6 mm and 13 mm (0.25 in and 0.50 in) to have a maximum bevel of 50 percent, as shown in Figure 4-11. A ramp is required for changes in level that exceed 13 mm (0.50 in) (US DOJ, 1991; UFAS, U.S. DoD et al., 1984).

Figure 4-11: Vertical and beveled changes in level [ADAAG, Figure 7 (c, d), U.S. Access Board, 1991].



#### 4.3.7 Grates and Gaps

A grate is a framework of latticed or parallel bars that prevents large objects from falling through a drainage inlet but permits water and some debris to fall through the slots (Figure 4-12). A gap is defined as a single channel embedded in the travel surface of a path. Gaps are often found at intersections where railroad tracks are embedded into the road surface.

*Figure 4-12: Wheelchair casters and cane and crutch tips can easily get caught in wide grates.*



Wheelchair casters and crutch tips can get caught in poorly aligned grate and gap openings. ADAAG specifies that grates located in walking surfaces should have spaces no greater than 13 mm (0.5 in) wide in one direction. It also states that gratings with elongated openings should be oriented so that the long dimension is perpendicular to the dominant direction of travel (ADAAG, U.S. Access Board, 1991). Although ADAAG does not directly address gaps, the similarity of a gap to a single grate slot suggests that ADAAG's grate specifications also apply to gaps.

#### 4.3.8 Obstacles and Protruding Objects

Obstacles in the pedestrian environment are defined as objects that limit the vertical passage space, protrude into the circulation route, or reduce the clearance width of the sidewalk. Obstacles with large overhangs that protrude into the path of travel can be hazardous for people with visual impairments if they are difficult to detect. The full width of the circulation path should be free of protruding objects. Obstacles that reduce the minimum clearance width, such as decorative planters on a narrow sidewalk, can create significant barriers for wheelchair or walker users.

Most guidelines for accessibility concur with the ADAAG specifications for protruding objects. ADAAG states that objects projecting from walls that have leading edges between 0.685 m and 2.030 m (27 in and 80 in) should not protrude more than 100 mm (4 in) into walks and passageways. Freestanding objects mounted on posts or pylons may overhang a maximum of 0.305 m (12 in) from 0.685 m to 2.030 m (27 in to 80 in) above the ground (ADAAG, U.S. Access Board, 1991), as shown in Figure 4-13.

During the sidewalk assessments, potential obstacles and protruding objects were measured as they occurred along the sidewalk. Characteristics of obstacles measured in the sidewalk assessment include height, amount of overhang over the supporting structure (if any), and minimum clearance width around the obstacle.



The following objects can make a sidewalk difficult for some users to traverse if they protrude into the pathway or reduce the vertical or horizontal clear space:

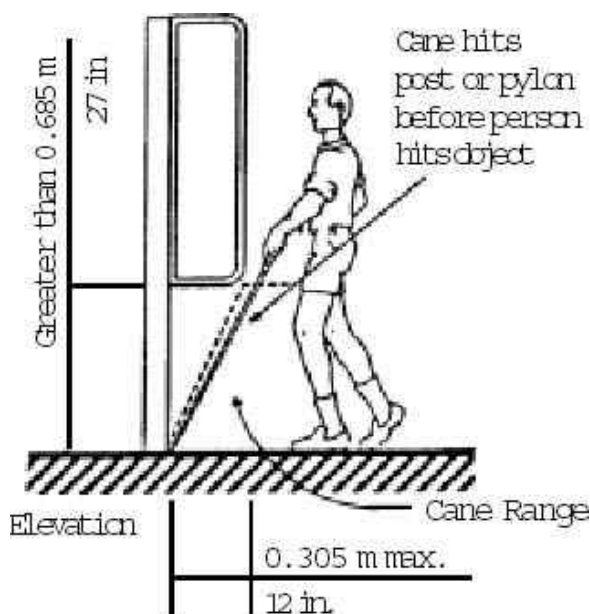
- Awnings
- Benches
- Bike racks
- Bollards
- Cafe tables and chairs
- Drinking fountains
- Fire hydrants
- Folding business signs
- Grates
- Guy wires
- Landscaping
- Mailboxes (public and private)
- Newspaper vending machines
- Parking meters
- Planters
- Public telephones (mounted)
- Puddles
- Signal control boxes
- Sign poles
- Snow
- Street vendors' carts
- Street light poles
- Street sculptures
- Telephone booths
- Telephone/utility poles and their stabilizing wires
- Traffic sign poles
- Transit shelters
- Trash bags and cans
- Tree, bush, and shrub branches
- Utility boxes

#### 4.3.9 Surface

Surface is defined as the material on which a person walks or wheels in the pedestrian environment. The type of surface often determines how difficult an area is to negotiate. For example, wood floors can be traversed without much difficulty by most people, while a gravel surface can be impossible for some people, especially wheelchair users, to cross. Surfaces in sidewalk environments are generally concrete or asphalt but commonly include tile, stone, and brick.

Most guidelines for accessibility adhere to ADAAG, which defines accessible surfaces as firm, stable, and slip-resistant. Firm and stable surfaces resist deformation, especially by indentation or the movement of objects. For example, a firm and stable surface, such as concrete, resists indentation from the forces applied by a walking person's feet and reduces the rolling resistance experienced by a wheelchair (U.S. Access Board, 1994a). When a pedestrian or wheelchair user crosses a surface that is not firm or stable, energy that would otherwise cause forward motion deforms or displaces the surface instead.

Figure 4-13: Obstacles mounted on posts should not protrude more than 0.305 m (12 in) into a circulation corridor [ADAAG, Figure 8(d), U.S. Access Board, 1991].



A slip-resistant surface provides enough frictional counterforce to the forces exerted in ambulation to permit effective travel (ibid.). For example, a slip-resistant surface prevents a person's shoes, crutch tips, or tires from sliding across the surface while bearing weight. A broom finish is used on many concrete sidewalks to provide sufficient slip resistance for pedestrians. The AASHTO Green Book requires sidewalks to have all-weather surfacing. The surface texture of curb ramps should be coarse enough to provide slip resistance when wet.

Although asphalt and concrete are the most common surfaces for sidewalks, many sidewalks are designed using brick or cobblestones. Although these surfaces are decorative, they increase the amount of work required for mobility. In addition, brick and cobblestone have inherent changes in level that are often tripping hazards. Alternatives to brick sidewalks include colored concrete stamped to look like brick, and asphalt or concrete paths with brick trim. Both alternatives preserve the decorative quality of brick but are easier for people with disabilities to negotiate.

## 4.4 Sidewalk Elements

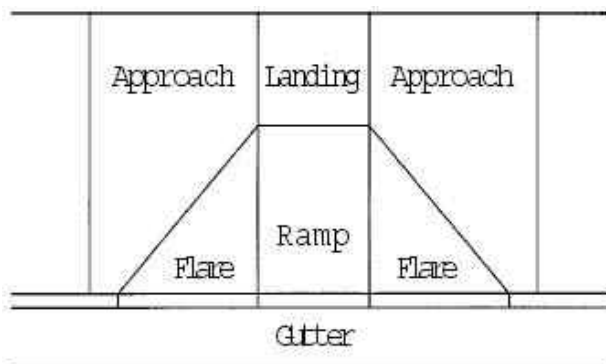
### 4.4.1 Curb Ramps

Curb ramps provide critical access between the sidewalk and the street for people with mobility impairments. Without curb ramps, people who use wheelchairs cannot access the sidewalk. Curb ramps are most commonly found at intersections but may also be used at midblock crossings and medians. The implementing regulations for Title II of the ADA require curb ramps to be included in all new construction of sidewalks. The regulations also require curb ramps to be installed where existing pedestrian walkways cross a curb or other barrier (US DOJ, 1994b). Although no city surveyed has installed curb ramps in all existing pedestrian walkways, some cities have initiated aggressive plans calling for up to 500 curb ramp installations per year.

#### 4.4.1.1 Curb ramp components

Although there are a variety of curb ramp designs, each type of curb ramp comprises some or all of the following elements, which are illustrated in Figure 4-14:

Figure 4-14: Components of a curb ramp.



- Landing — level area of sidewalk at the top of a curb ramp facing the ramp path.
- Approach — section of the accessible route flanking the landing of a curb ramp. The approach may be slightly graded if the landing level is below the elevation of the adjoining sidewalk.
- Flare — sloped transition between the curb ramp and the sidewalk. The path along the flare has a significant cross-slope and is not considered an accessible path of travel. When the sidewalk is set back from the street, returned curbs often replace flares (see Figure 4-20, p. 44).
- Ramp — sloped transition between the street and the sidewalk where the grade is constant and the cross-slope is at a minimum (preferably less than 2 percent).
- Gutter — trough or dip used for drainage purposes that runs along the edge of the street and the curb or curb ramp.

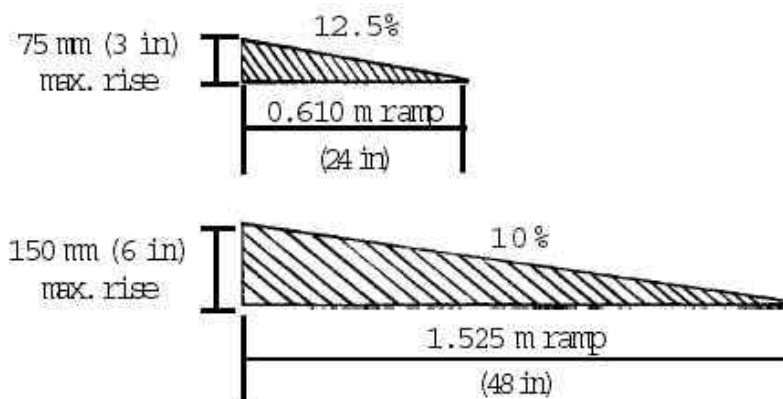
#### 4.4.1.2 Curb ramp specifications

Curb ramps should be designed to minimize the grade, cross-slope, and changes in level experienced by users. Most agencies use standard drawings to design curb ramps. Some of these guidelines are compiled in Tables 4-3.1 to 4-3.4 at the end of this chapter. The majority of the guidelines reviewed agree with ADAAG Section 4.7 specifications for curb ramps.

##### 4.4.1.2.1 Ramps

According to ADAAG, the slope of a curb ramp should not exceed 8.33 percent, and the cross-slope should not exceed 2 percent. ADAAG also states that the least severe slope should be used in every situation. In retrofitting situations in which space prohibits the installation of an 8.33 percent ramp, ADAAG allows a slope between 8.33 percent and 10 percent for a maximum rise of 150 mm (6 in) or a slope between 10 percent and 12.5 percent for a maximum rise of 75 mm (3 in) (ADAAG, U.S. Access Board, 1991), as demonstrated in Figure 4-15.

*Figure 4-15: Alternative slope profiles for alterations when an 8.33 percent slope is not achievable.*



Curb ramp widths should depend on the volume of pedestrian traffic at the specified intersection. Although ramp widths are permitted to vary, they must always be wide enough for comfortable use by wheelchair users. For this reason, ADAAG specifies that curb ramps

should be at least 0.915 m (36 in) wide, not including the width of the flared sides (ADAAG, U.S. Access Board, 1991). The AASHTO Green Book states that curb ramps, a minimum of 1.0 m (39 in) wide or of the same width as the approach sidewalk, should be provided at crosswalks (AASHTO, 1995).

Curb ramps that are too wide and curb ramps with gradual slopes are difficult for pedestrians with visual impairments to detect. Adding a 0.610 m (2 ft) detectable warning at the bottom of these types of ramps will improve detectability. In many cities, grooves, which are intended to work as detectable warnings, are placed along the top of the ramp and/or on the ramp surface. However, grooves are difficult for people with visual impairments to detect. In addition, detectable warnings are most effective if placed at the location of the hazard. For sidewalks, the hazard occurs at the transition point between the sidewalk and the street. Section 4.4.2 contains additional information for pedestrians with visual impairments.

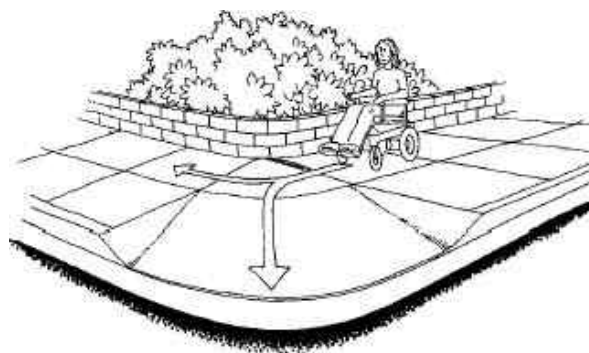
#### 4.4.1.2.2 Gutters

The slopes of adjacent gutters and streets significantly affect the overall accessibility of curb ramps. When the rate of change of grade between the gutter and the ramp exceeds 13 percent over a 0.610-m (2-ft) interval, wheelchair users can lose their balance. Any amount of height transition between the curb ramp and the gutter can compound the difficulties caused by rapidly changing grades. According to ADAAG, the slope of the road or gutter surface immediately adjacent to the curb ramp should not exceed 5 percent, and the transition between the ramp and the gutter should be smooth (ADAAG, U.S. Access Board, 1991). Section 4.3.1 contains additional information on rate of change of grade.

#### 4.4.1.2.3 Landings

Curb ramp landings allow people with mobility impairments to move completely off the curb ramp and onto the sidewalk, as shown in Figure 4-16. Curb ramps without landings force wheelchair users entering the ramp from the street, as well as people turning the corner, to travel on the ramp flares (Figures 4-17 and 4-18). According to ADAAG, the landing should be a level surface at least 0.915 m (36 in) wide to prevent pedestrians from having to cross the curb ramp flare. ADAAG Section 14 (1994) recommends a 1.220-m (48-in) landing for perpendicular curb ramps and a 1.525-m (60-in) landing for parallel curb ramps (U.S. Access Board, 1994b).

[Figure 4-16: This wheelchair user is maneuvering successfully a curb ramp because a level landing is provided.](#)



[Figure 4-17: This wheelchair user will have difficulty entering the sidewalk because the curb ramp lacks a landing.](#)

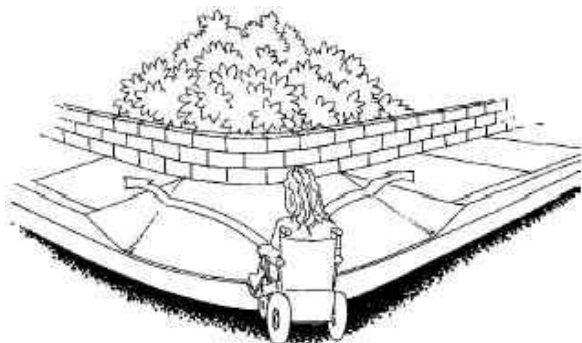
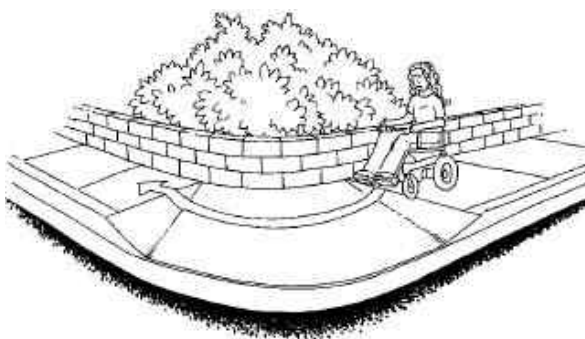


Figure 4-18: This wheelchair user will have difficulty traveling around the corner because the curb ramp lacks a landing.



#### 4.4.1.2.4 Flares

The flared sides of curb ramps provide a graded transition between the ramp and the surrounding sidewalk (Figure 4-19). Flares are not considered an accessible path of travel because they are generally steeper than the ramp and often feature significant cross-slopes with excessive rate of change of cross-slope. According to ADAAG, if the landing width is less than 1.220 m (48 in), then the slope of the flares at the curb face should not exceed 8.33 percent. If the landing width is greater than 1.220 m (48 in), a 10 percent slope is acceptable (ADAAG, U.S. Access Board, 1991). If the curb ramp is located where a pedestrian might normally walk, flares are useful indicators to people with visual disabilities. Flares may be replaced with returned curbs if the curb ramp is located where a pedestrian does not have to walk across the ramp or if the sides are protected by guardrails or handrails (Figure 4-20).

Figure 4-19: Flares provide a sloped transition between the ramp and the surrounding sidewalk and are designed to prevent ambulatory pedestrians from tripping.

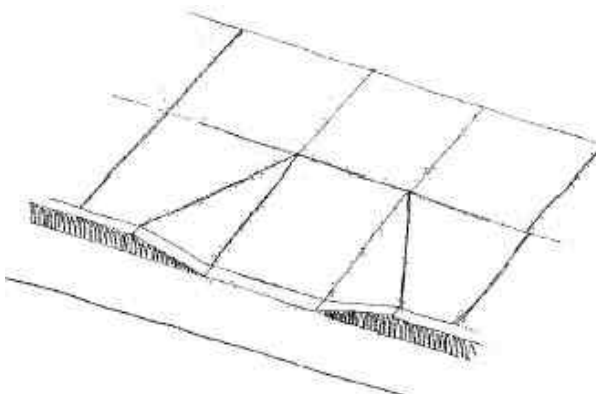
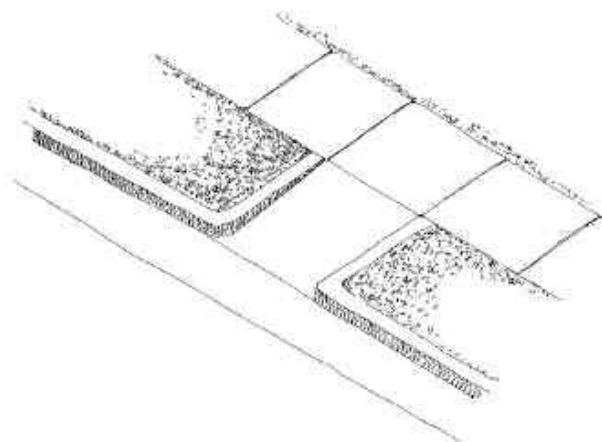


Figure 4-20: Returned curbs may be used when the curb ramp is located outside the pedestrian walkway, such as in a planting strip.





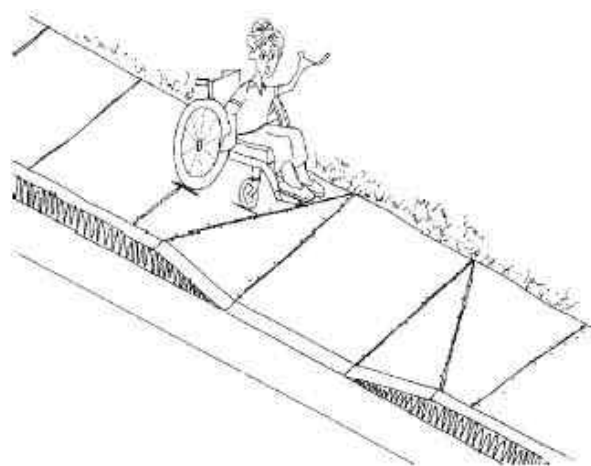
#### 4.4.1.3 Curb ramp types

Curb ramps can be configured in a variety of patterns, depending on the location, type of street, and existing design constraints. Curb ramps are often categorized by their position relative to the curb line. The three most common and basic configurations are termed perpendicular, parallel, and diagonal.

##### 4.4.1.3.1 Perpendicular curb ramps

The path of travel along a perpendicular curb ramp is oriented at a 90-degree angle to the curb face. Perpendicular curb ramps are difficult for wheelchair users to negotiate if they do not have a level landing (Figure 4-21). When the sidewalk is very narrow, it can be costly to purchase additional right-of-way to accommodate a landing for perpendicular curb ramps. An alternative to purchasing more land is to extend the corner into the parking lane with a curb extension (also known as a bulbout). In addition to providing space for a level landing, curb extensions calm traffic, reduce the crossing distance, and provide a larger refuge for pedestrians to congregate while waiting to cross the street (reference Section 4.4.9 for additional information on curb extensions). An additional option for providing landings is to increase the overall width of the sidewalk by adding right-of-way from the roadway. Perpendicular curb ramps are often installed in pairs at a corner (Figure 4-22). For new construction, Section 14 (1994) proposed that two perpendicular curb ramps with level landings should be provided at street crossings. This recommendation was included because two accessible perpendicular curb ramps are generally safer and more usable for pedestrians than a single curb ramp.

Figure 4-21: Without level landings, perpendicular curb ramps are problematic for wheelchair users and others to travel across.

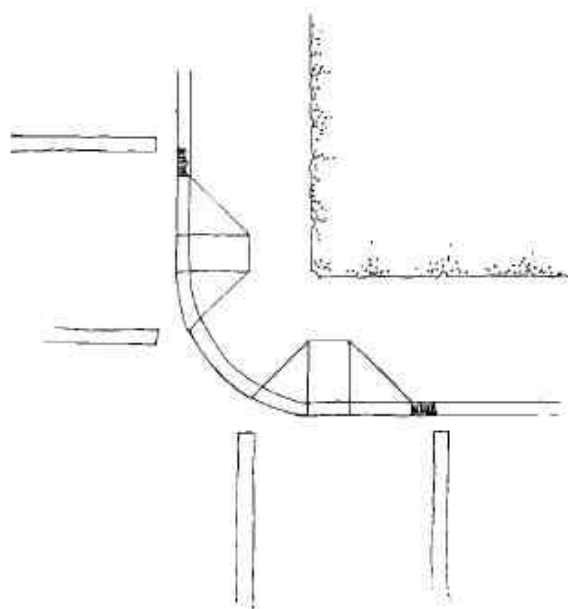


##### 4.4.1.3.2 Diagonal curb ramps

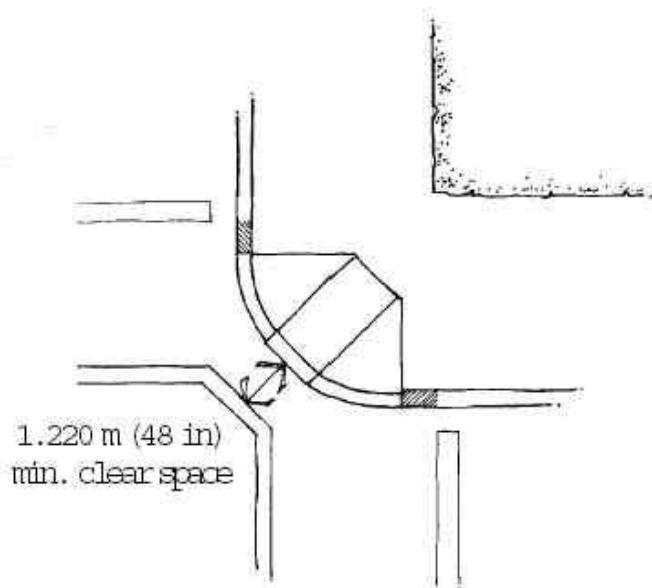
Diagonal curb ramps are single curb ramps installed at the apex of a corner (Figure 4-23). Diagonal curb ramps force pedestrians descending the ramp to proceed into the intersection before turning to the left or right to cross the street. This puts them in danger of being hit by turning cars. A marked clear space of 1.220 m (48 in) at the base of diagonal curb ramps is necessary to allow ramp users in wheelchairs enough room to maneuver into the crosswalk (Figure 4-23) (ADAAG, U.S. Access Board, 1991). A designer's ability to create a clear space

at a diagonal curb ramp might depend on the turning radius of the corner. For example, a tight turning radius requires the crosswalk line to extend too far into the intersection and exposes pedestrians to being hit by oncoming traffic. In many situations, diagonal curb ramps are less costly to install than two perpendicular curb ramps. Although diagonal curb ramps might save money, they create potential safety and mobility problems for pedestrians, including reduced maneuverability and increased interaction with turning vehicles, particularly in areas with high traffic volumes. Diagonal curb ramps are not

[Figure 4-22: Two perpendicular curb ramps with level landings maximize access for pedestrians at intersections.](#)



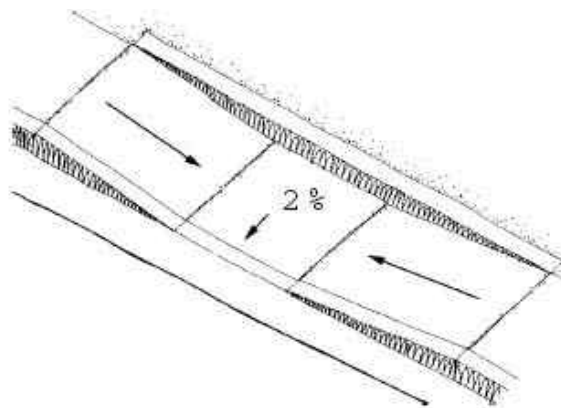
[Figure 4-23: If diagonal curb ramps are installed, a 1.220-m \(48-in\) clear space should be provided to allow wheelchair users enough room to maneuver into the crosswalk.](#)



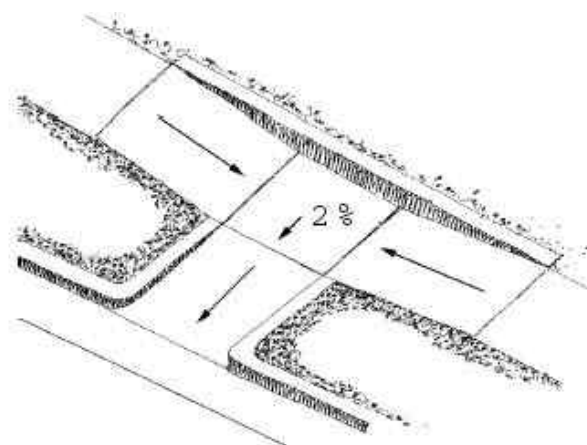
#### 4.4.1.3.3 Parallel curb ramps

The path of travel along a parallel curb ramp is a continuation of the sidewalk, as shown in Figure 4-24. Parallel curb ramps provide an accessible transition to the street on narrow sidewalks. However, if the landing on parallel curb ramps is not sloped toward the gutter (no more than 2 percent), water and debris can pool there and obstruct passage along the sidewalk. Parallel curb ramps also require those wishing to continue along the sidewalk to negotiate two ramp grades, unless a wide buffer zone permits the sidewalk to be set back behind the ramps. A combination perpendicular and parallel ramp will significantly reduce the ramp grades for people who wish to continue along the sidewalk (Figure 4-25).

[Figure 4-24: Parallel curb ramps work well on narrow sidewalks but require users continuing on the pathway to negotiate two ramp grades.](#)



[Figure 4-25: A combination curb ramp is a creative way to avoid steep curb ramps and still provide level landings.](#)



#### 4.4.1.3.4 Built-up curb ramps

Built-up curb ramps are oriented in the same direction as perpendicular curb ramps but project out from the curb. For this reason, built-up curb ramps can be installed on narrow sidewalks but are most often installed in parking lots. If an edge protection is not provided on built-up curb ramps between the ramp and the sidewalk, people with visual disabilities might not be able to distinguish between the sidewalk and the street. According to ADAAG, built-up curb ramps should not extend into a vehicular traffic lane (ADAAG, U.S. Access Board, 1991). Built-up curb ramps also should not extend into bicycle lanes because they might present a hazard for cyclists.

Built-up curb ramps have additional drainage requirements because they block the gutter. Possible solutions include providing drainage inlets or placing a drainage pipe under the curb ramp (Figures 4-26 and 4-27).

[Figure 4-26: Built-up curb ramp with drainage inlets.](#)

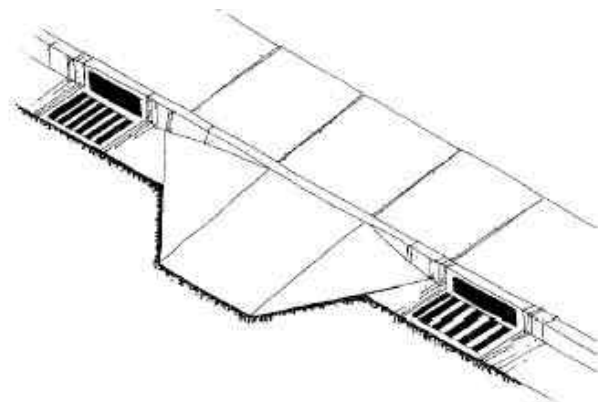
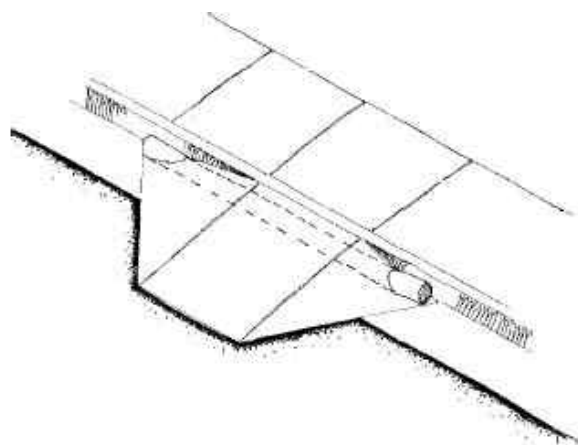


Figure 4-27: Built-up curb ramp with a drainage pipe.

#### 4.4.1.4 Curb ramp placement

In addition to specifying curb ramp designs, most transportation agencies provide specifications for their placement. Curb ramp placement can be especially complicated in retrofit situations.

Relocating or redesigning the intersection and street furniture can be expensive. Many sidewalk characteristics, including width, elevation of buildings, and position of street furniture, can affect the curb ramp design chosen. In retrofit situations in which sidewalk width is limited, parallel curb ramps might provide more gradual slopes and landings.

Curb ramps that force users to cross storm drain inlets often present hidden risks to pedestrians. The grates covering such inlets can catch the casters of wheelchairs or the tips of canes and walkers, causing falls and injuries. Water at the base of curb ramps can obscure the transition from the ramp to the gutter and cause pedestrians to misjudge the terrain. Puddles at the base of curb ramps can also freeze and cause users to slip. Locating drain inlets uphill from curb ramps will reduce the amount of water that collects at the base.

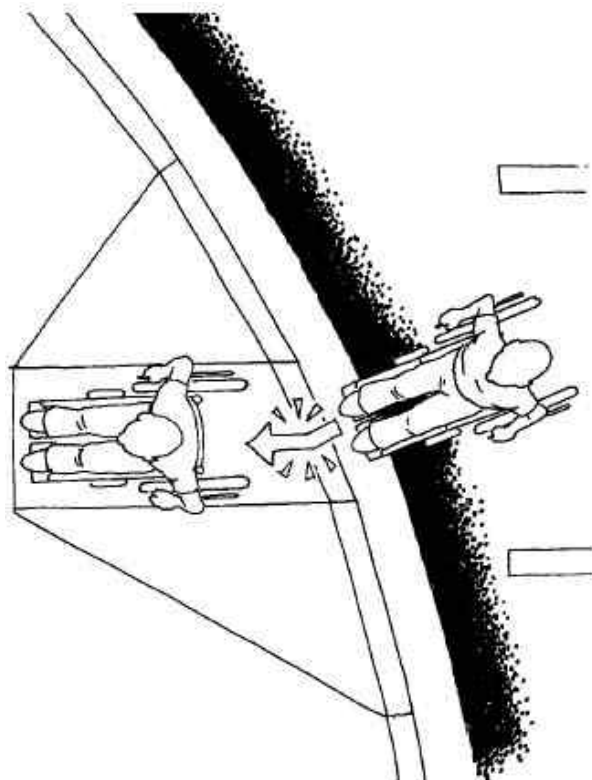
Curb ramps ending in parking spaces are not usable when blocked by parked vehicles. This situation can be prevented through parking enforcement and warning signs but perhaps more effectively through the use of curb extensions (see Section 4.4.9 for additional information on curb extensions).

Perpendicular curb ramps should be built 90 degrees to the curb face. At a corner with a tight turning radius, a perpendicular curb ramp built 90 degrees to the curb face will be oriented toward the crosswalk. This is helpful to users because they can follow the ramp path directly across the street. Curb ramps aligned with the crosswalk also reduce the maneuvering that wheelchair users must perform to use the ramp.

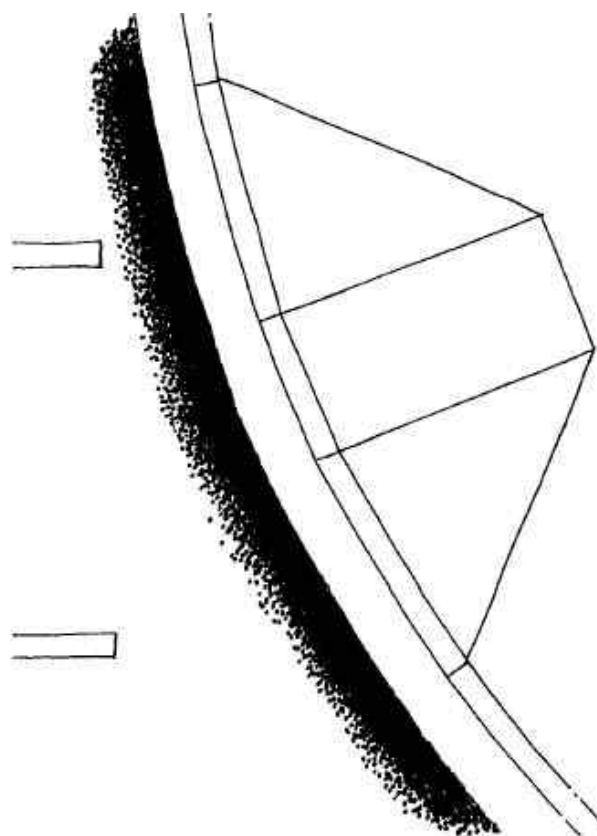
At corners with larger turning radii, the curb ramp cannot always point in the direction of the crosswalk and be perpendicular to the curb face. In some cities, designers align curb ramps parallel to the crosswalk, causing the ramp face to be skewed. This design has some benefit to people with visual impairments because they can use the path of the curb ramp to direct them across the street. However, people with visual impairments tend not to rely on the direction of curb ramps because of the abundance of diagonal curb ramps that point into the center of the street.

In addition, if the curb ramp is not perpendicular to the curb, as illustrated in Figure 4-28, wheelchair users have to negotiate changing cross-slopes and changing grades simultaneously, or they have to turn while making the grade transition. Turning at the grade transition requires a wheelchair user traveling down a curb ramp to go down one edge of the ramp and try to turn while on a significant grade. Curb ramps that are perpendicular to the curb prevent wheelchair users from having to turn at the ramp to a gutter transition (Figure 4-29).

Figure 4-28: To avoid having to negotiate changing grades and changing cross-slope simultaneously, a wheelchair user has to turn at the grade transition.



*Figure 4-29: Curb ramps designed with the ramp perpendicular the curb eliminate rapidly changing grades and cross-slopes at the grade transition.*



#### 4.4.1.5 Curb ramps and people with visual impairments

People with visual impairments do not use curb ramps in the same manner as people with mobility impairments. Although people with visual impairments can obtain helpful navigational cues from perpendicular curb ramps, they can learn the same information from the edge of the curb. Curb ramps and flare slopes that are steep enough relative to the grade of the surrounding sidewalk are more detectable than gradually sloped curb ramps or



depressed corners (GA Institute of Technology, 1979). If people with visual impairments are unable to detect a curb ramp, they will not know that they are moving into the street. Installing detectable warnings on ramps can help people with visual impairments detect the upcoming intersection (see Section 4.4.2). Some States also require minimum curb ramp slopes to improve detectability for people with visual impairments.

It is commonly believed that the orientation of curb ramps helps people with visual impairments determine the direction of the crosswalk. However, this technique is generally not taught or used because many curb ramps are not aligned with the path of travel across the street. The skew of diagonal curb ramps can be a particular source of confusion to people with visual impairments if other sidewalk cues present conflicting information about the intersection. Some dog-guide users interviewed for this project said they were most wary of diagonal curb ramps because their dogs might follow the curb ramp path out into the middle of the intersection. However, most people with visual impairments interviewed said that while a diagonal slope to the sidewalk indicated the presence of an intersection, they used other cues, such as the sound of traffic, to orient for the crossing.

#### [4.4.2 Conveying Information to Pedestrians with Visual Impairments](#)

All pedestrians must obtain a certain amount of information from the environment to travel along sidewalks safely and efficiently. Most pedestrians obtain this essential information visually, by seeing such cues as intersections, traffic lights, street signs, and traffic movements. People with visual impairments also use cues in the environment to travel along sidewalks. For example, the sound of traffic, the slope of curb ramps, changes in surface texture, and a shadow from an overhead awning serve as primary indicators of an upcoming intersection for people with visual impairments. Blind pedestrians also use their ability to estimate distances and directions they have walked (dead reckoning) to determine their location relative to desired destinations (Long and Hill, in Blasch et al., 1997).

Good design in the form of regularly aligned streets, simple crossing patterns, and easy-to-understand city layouts is generally the best method to provide good orientation cues for pedestrians with visual impairments. However, accessible information might be needed in some situations to supplement existing information. Locations where supplementary information is most beneficial include irregular intersections, open spaces such as plazas, raised intersections, and curb ramps with a slope less than 8.33 percent.

Some cues that people with visual impairments use are permanent, such as the edge of the curb; other cues, such as the sound of traffic, are intermittent. Although the sound of traffic is a very effective way for people with visual impairments to identify an intersection, it is unreliable because cars are not always present. Another issue that affects the usefulness of cues is a person's familiarity with the environment. For example, a person who lives near an intersection with a pedestrian-actuated control signal might be able to identify it easily because of repeated use and familiarity with its presence. However, a person who is unfamiliar with the intersection would be less likely to detect such a device. The most reliable cues for people with visual impairments are permanent and can be detected even in unfamiliar environments.

People with visual impairments should have access to the same information as sighted pedestrians when traveling in unfamiliar areas. To accommodate all pedestrians, it is important to provide information that can be assimilated using more than one sense. For example, an intersection that contains a raised tactile surface warning, a WALK signal light, and an audible pedestrian signal would be more accessible than an intersection that provides only a WALK signal light. Redundancy and multiplicity of formats increase the likelihood that people with impairments and others will be able to make informed traveling decisions.

The most effective accessible information is easy to locate and intuitive to understand, even for pedestrians who are unfamiliar with an area. People with visual impairments stress the importance of consistency in design because accessible information added to the environment is most useful "when used in consistent locations so that the traveler can rely on their existence" and find them reliably (Peck and Bentzen, 1987). Users would benefit if each type of accessible indicator were exclusively reserved to indicate a specific situation in the pedestrian environment and consistently installed to avoid conveying conflicting and confusing information. Studies in the United Kingdom have shown that pedestrians with visual impairments can reliably detect, distinguish, and remember a limited number of

different tactile paving surfaces and the distinct meanings assigned to them (Department of the Environment, Transport, and the Regions, Scottish Office, Notified Draft, 1997).

Visual, auditory, and tactile perceptual information is very useful in detecting cues and landmarks essential to wayfinding and is also important in detecting obstacles and hazards. Mobility is defined as "the act or ability to move from one's present position to one's desired position in another part of the environment safely, gracefully, and comfortably." Wayfinding is defined as "the process of navigating through an environment and traveling to places by relatively direct paths" (Long and Hill, in Blasch et al., 1997). The long cane is a primary example of an environmental probe that allows blind pedestrians to acquire perceptual information about their immediate environment systematically and efficiently. The long cane helps users establish and maintain orientation, as well as detect and avoid hazards.

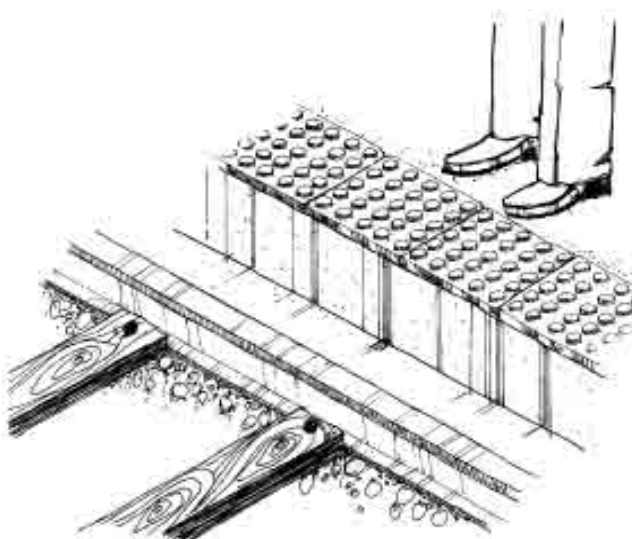
Because people with visual impairments obtain information about the environment in many ways, the most effective cues convey information in more than one format. For example, truncated domes can be detected not only by texture but by sound and color contrast as well. The greater number of sensory qualities (color, texture, resilience, and sound) the cue has, the more likely it will be detected and understood (Sanford and Steinfeld, 1985). The following are common types of accessible information added to sidewalk environments:

- Raised tactile surfaces used as detectable warnings
- Raised tactile surfaces used for wayfinding
- Materials with contrasting sound properties
- Grooves
- Contrasting colors for people with low vision
- Audible and vibrotactile pedestrian signals

#### *4.4.2.1 Raised tactile surfaces used as detectable warnings*

Raised tactile surfaces used as warnings employ textures detectable with the touch of a foot or sweep of a cane to indicate upcoming hazards or changes in the pedestrian environment. Many different types of raised tactile surfaces have been proven to be detectable by people with visual disabilities. However, tactile surfaces used as detectable warnings should meet the technical specifications in ADAAG (see Section 4.4.2.7) to avoid confusion with tactile surfaces used for wayfinding. Raised tactile surfaces include truncated domes, patterned panels, and other textured designs. Tactile surfaces used as detectable warnings must also provide color contrast with surrounding surface materials.

*Figure 4-30: Truncated domes are an effective way of indicating a drop-off at transit platform.*



Raised tactile surfaces have been shown to be very effective in actual application. BART in the San Francisco Bay Area and METRO DADE transit in Miami have used raised tactile

surfaces as systemwide warnings on platform edges since 1989 and have documented no instances of rider dissatisfaction with truncated dome surfaces (Figure 4-30). In contrast, the overall incidence of trips, slips, and falls at platform edges has been significantly reduced. In addition, BART riders exhibit an increased sense of drop-off awareness by tending to "stand farther from the platform edge than MUNI (San Francisco) riders standing at different tracks in the same stations but lacking detectable warnings" (Bentzen, Nolin, and Easton, 1994).

Domes with truncated tops are generally more comfortable than other dome designs for pedestrians to travel across (O'Leary, Lockwood, Taylor, and Lavelly, 1995). Low truncated domes have been used to provide warning information in a number of countries, including the United Kingdom (Department of the Environment, Transport, and the Regions, Scottish Office, Notified Draft, 1997), and Japan (Sawai, Takato, and Tauchi, 1998). In the United States, truncated domes are required at transit platform drop-offs (US DOJ, 1991; US DOT, 1991).

The detectability of raised tactile surfaces can depend upon the degree of contrast between the surface and the surrounding surface materials. For example, raised detectable surfaces have been shown to be significantly less detectable when located adjacent to coarse aggregate concrete (Bentzen, Nolin, Easton, Desmarais, and Mitchell, 1994). Raised surfaces are thus much more effective when placed next to smooth paving materials such as brushed concrete.

Climate can determine what type of detectable surface is most appropriate for a region. For example, ice was found to obscure the textural contrast of some raised surface materials (U.S. Access Board, 1985). Surfaces that withstand scraping by snowplows, minimize the collection of precipitation such as snow and ice, and resist degradation by snowmelting additives such as salt are most effective in colder areas. Some cities in the United States have discontinued the use of truncated domes at curb ramps because the materials used wore down quickly and could not be plowed free of snow. However, New York and New Jersey, both areas that experience significant amounts of snow and ice, continue to use raised tactile surfaces (O'Leary, Lockwood, Taylor, and Lavelly, 1995).

The length of raised tactile surfaces in the path of travel is most effective when "beyond the average stride in length" so that pedestrians with visual disabilities can "sense it physically, understand its meaning, and react appropriately" before the hazard is encountered (U.S. Access Board, 1995). However, there is a definite trade-off between the high detectability of raised tactile surfaces for people with visual disabilities and ease of movement for people with mobility disabilities (O'Leary, Lockwood, Taylor, and Lavelly, 1995).

Several researchers suggested limiting the width of detectable warnings to no more than that required to provide effective warning for people with visual impairments "given the moderately increased level of difficulty and decrease in safety" that raised tactile surfaces on slopes pose for people with physical disabilities (Bentzen, Nolin, Easton, Desmarais, and Mitchell, 1994; Rabelle, Zabihaylo, and Gresset, 1998; Hughes, 1995). Truncated domes that are uneven or too high can cause navigation difficulties for certain sidewalk users, including some bicyclists and in-line skaters. People who use walking aids and pedestrians wearing high heels might lose some stability along ramps covered with raised tactile surfaces. Neither manual nor powered wheelchair users appear to be at significant risk of instability when traveling on ramps with raised warnings (Hughes, 1995).

#### *4.4.2.2 Raised tactile surfaces used for wayfinding*

Raised tactile surfaces also might provide wayfinding information to people with visual impairments, delineating paths across open plazas, crosswalks, and complex indoor environments such as transit stations. Wayfinding cues include raised tactile surfaces covered with bar patterns laid out in a path to indicate the appropriate walking direction, especially along routes where traditional cues such as property lines, curb edges, and building perimeters are unavailable. In Japan, bar tile has been used to direct pedestrians with visual impairments along transit stations and other heavily used pedestrian areas (Sawai, Takato, and Tauchi, 1998).

The city of Sacramento, California, uses a tactile guidestrip located in the center of some crosswalks to direct people with visual impairments across "irregular and complex" intersections. A San Francisco report recommended guidestrips at intersections with more than two streets, unusual crosswalks, right-turn lanes, diagonal crossings, exceptionally wide

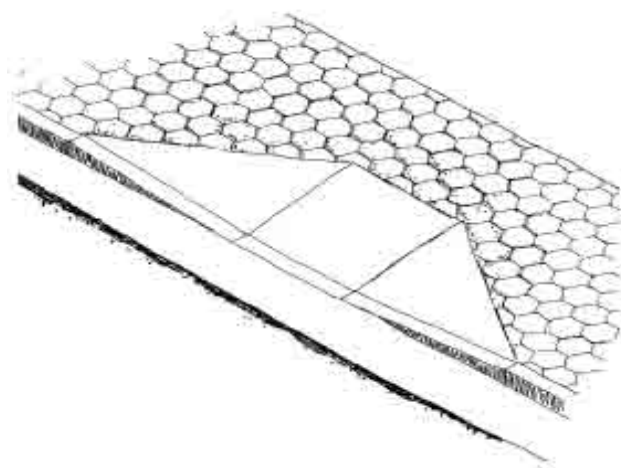
streets, and intersections with other unusual geometric designs (San Francisco Bureau of Engineering, 1996).

Hughes (1995) recommended that "mixed" patterns of both bar tiles and dome tiles be developed for use on curb ramps to provide orientation, as well as warning information, at intersections. However, research in Japan indicated that subjects who were blind had difficulty distinguishing between detectable surfaces with bars and dots or domes. In fact, confusion between warning and guiding tiles was suspected as the cause of several train platform accidents in Japan (Bentzen, Nolin, and Easton, 1994).

#### *4.4.2.3 Materials with contrasting sound properties*

Adjacent surfacing materials that make different sounds when tapped by a cane can also serve as navigation cues (U.S. Access Board, 1985). Examples of materials with contrasting sound properties include concrete sidewalks next to textured metal, or paving tiles next to rubberized raised tactile surfaces. Materials with contrasting sound properties are used along curb ramps, crosswalks, and transportation platforms. Contrasting materials can also be colored differently from the surrounding paving material (Figure 4-31) or textured to provide visual and tactile information as well.

*Figure 4-31: Colored stone sidewalks with concrete curb ramps have a detectable color change.*



Materials used to provide sound contrasts should be appropriate to the given setting. For example, materials that degrade in harsh weather conditions or become slippery or hazardous when icy should not be installed outdoors but might be appropriate for indoor environments such as transit stations. People who use dog guides have a reduced opportunity to use sound cues, as described in this section.

#### *4.4.2.4 Grooves*

Grooves are common and inexpensive to install, but there is little evidence that they can be detected or used by people with visual disabilities. One study indicated that concrete panels with various groove configurations had only a 9 to 40 percent detectability rate (Templer, Wineman, and Zimring, 1982). Cane users could confuse them with the grooves between sidewalk panels and cracks in the sidewalk.

Long-cane users typically travel using a "two-point touch" technique and only scrape the tip of the cane along the ground in the "constant contact" technique when more in-depth exploration of an area is warranted. However, in general, grooves can be detected only by a cane if the constant-contact technique is used to scan the environment. For this reason, grooves are generally ineffective to warn of a potentially hazardous situation such as an intersection. In addition, dirt, snow, ice, weeds, and other debris in the sidewalk environment are likely to collect in grooves and obscure any warning provided.

#### *4.4.2.5 Contrasting colors for people with low vision*

Contrasting colors such as yellow paint against black asphalt can indicate a change in environment for people with low vision. Texture differences may also be detected by people with low vision. For example, although sidewalk grooves do not provide a significant tactile contrast, some people with low vision can detect groove patterns visually. The color contrast of visual warnings helps both sighted and partially sighted pedestrians to identify potentially hazardous areas. Colorized warnings are particularly useful for all pedestrians at night, when visual acuity and contrast sensitivity are impaired. Variations in surface coloring between the crosswalk and the street can also be used to mark the best path across an intersection. Reflective paint and building materials of contrasting colors are common methods used to provide visual warnings.

ADAAG Section 4.29.2 specifies that detectable warnings "shall contrast visually with adjoining surfaces, either light-on-dark, or dark-on-light." ADAAG Section A4.29.2 further specifies that "the material used to provide contrast should contrast by at least 70%" (ADAAG, U.S. Access Board, 1991). The effectiveness of ADAAG's recommendations for color contrast was evaluated by Bentzen, Lolin, and Easton (1994). The study concluded that the ADAAG 70 percent contrast recommendation "appears adequate to provide high visual detectability" but cautioned that minimum reflectance values should also be specified for the lighter surface to limit the effects of glare. The study also reported that surfaces colored safety yellow (ISO 3864) were most frequently chosen by low vision subjects as "most visually detectable" (Bentzen, Nolin, and Easton, 1994).

During the sidewalk assessments, visual warnings used on sidewalks were observed to include painted curb edges, tinted curb ramps, colored sidewalks (Figure 4-31), colorized raised tactile warnings, and painted crosswalks.

#### *4.4.2.6 Audible and vibrotactile pedestrian signals*

Although people with visual impairments generally rely on traffic signals to determine when it is safe to cross an intersection, additional information about crossing conditions can be very useful when traffic sounds are sporadic or masked by ambient noise, the geometry of the intersection is irregular, or acoustics are poor. Accessible pedestrian signals can provide supplementary information, such as timing (when the signal cycle allows pedestrians to cross the street), wayfinding (which roads intersect at the junction), and orientation (the directional heading of each crosswalk). Accessible pedestrian signals are generally installed at complex intersections; intersections experiencing high volumes of turning traffic; major corridors leading to areas of fundamental importance such as post offices, courthouses, and hospitals; and places where people with visual impairments request them (Bentzen, 1998).

A number of different types of accessible pedestrian signals have been developed and were analyzed in a 1998 synthesis by B.L. Bentzen. These include audible broadcast, tactile, vibrotactile, and receiver-based systems, many of which may be integrated with each other to provide additional sources of information.

Audible traffic signals (ATSSs) include devices that emit audible sounds when the signal permits pedestrians to cross. ATSSs "comprise a warning system that alerts the pedestrian to the onset of a green light" (Hall, Rabelle, and Zabihaylo, 1994). Simple systems use a consistent sound to indicate when the signal has changed. More complex systems use one sound pattern to indicate north/south streets, and another sound to indicate east/west streets, providing both timing and orientation information. Others broadcast prerecorded speech messages telling the name of the street being crossed and the status of the signal cycle (Bentzen, 1998). Street crossings that can be negotiated easily by people with visual impairments are preferred to ATS systems. These systems should be installed only "as a last resort, and only when the installation will guarantee the safety of the visually impaired pedestrian" (Hall, Rabelle, and Zabihaylo, 1994).

Alternating ATS systems, in which speakers on either side of the street alternate indicator sounds, provide alignment assistance for pedestrians with visual impairments. "An alternating signal counters the masking effect of the nearby signal [and] promotes more accurate alignment before crossing and straight-line travel throughout the crossing" (Hall, Rabelle, and Zabihaylo, 1994). Alternating ATS systems result in a straighter line of travel because they allow people with visual disabilities "to align themselves more accurately before and during the crossing. . . ." (Hall, Rabelle, and Zabihaylo, 1994).



Audible information is also useful to identify pedestrian-actuated control signals. Audible pedestrian signals that alert pedestrians to the existence and location of the signal actuator include push-button devices that emit sounds. Tactile pedestrian signals include raised arrows on the signal actuator that indicate which street is controlled by the push button. Tactile pedestrian signals can also provide map information, using raised dot and line symbols to indicate details such as the number of lanes to be crossed, the direction of traffic in each lane, and whether there is a median (Bentzen, 1998).

Vibrotactile traffic devices also can provide information about the presence and location of a pedestrian-actuated signal. In vibrotactile systems, the push-button apparatus will vibrate while pedestrians are permitted to cross. Such systems allow deaf-blind pedestrians to identify the WALK interval and can be installed at medians to prevent signal overlap when audible broadcast signals are in effect (Bentzen, 1998).

Receiver-based systems provide audible or other accessible information only when triggered by a nearby pedestrian-carried receiver. The Talking Signs® system, for example, uses transmitters that emit infrared beams containing prerecorded speech information. The speech message can label streets, transit kiosks, and other areas. The transmitters can be mounted on traffic poles, buildings, and other significant locations. Pedestrians using the system carry a receiver that picks up the infrared signals and plays them back as audible messages. This system provides both orientation and wayfinding information. The user can hone in on the transmitter's location because the messages are played most clearly when the receiver is oriented directly toward the transmitter (Bentzen, 1997, in Blasch et al.).

#### *4.4.2.7 ADAAG requirements for detectable warnings*

When ADAAG was first approved in 1991, it contained requirements for detectable warnings at curb ramps, transit platforms, reflecting pools, and hazardous vehicular areas. ADAAG defined a detectable warning as "a standardized surface feature built in or applied to walking surfaces or other elements to warn visually impaired people of hazards on a circulation path." Detectable warnings on walking surfaces were required to be truncated domes with a diameter of 23 mm (0.9 in.), a height of 5 mm (0.2 in.) and a center-to-center spacing of 60 mm (2.35 in.). In addition, detectable warnings had to offer a strong visual contrast to adjacent pedestrian surfaces and had to be an integral part of the walking surface (ADAAG, U.S. Access Board, 1991).

On April 1, 1994, the ADAAG scoping provisions for detectable warnings at curb ramps, hazardous vehicular areas, and reflecting pools were initially suspended until July 1996, and were later extended until July 26, 1998, and 2001, while the requirements for detectable warnings at transit platforms remained in effect. The requirement was initially suspended to allow the U.S. Access Board, the US DOJ, and the US DOT to consider the results of additional research on the need for and safety effects of detectable warnings at vehicular–pedestrian intersections.

The study found that, although detectable warnings were not shown to be needed at all curb ramp locations, they did provide "the blind traveler with one potential additional cue that is especially useful in a low-cue environment." Many nonvisual cues used to detect streets are intermittent, such as the sound of traffic. Detectable warning surfaces provide a permanent cue that identifies the transition between the sidewalk and the street. The study concluded that "the effectiveness of detectable warning surfaces on curb ramps depends greatly on other aspects of the design of the intersection, as well as on such social factors as the density of traffic and the skills of the traveler." The study recommended the installation of a 2-foot-wide strip of detectable surface at the curb line as an alternative to covering the entire surface of the ramp (Hauger et al., 1996).

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## **E. Letter and Questionnaire to School**



Dear Teachers:

All elementary and middle schools are participating in a Bicycle and Pedestrian School Safety Review Study, aimed at identifying procedures, programs and projects that will help improve safety for our students choosing to walk or bike to school. Additionally the study will review related factors such as: timing of traffic lights, sidewalk gaps, traffic patterns, and other factors that might affect car riders. We are working with the team of *Kittelson and Associates, Inc.* [Transportation Engineering/Planning] and *River To Sea* [Transportation, Planning, Organization]. The study will identify areas at each school and in the surrounding communities, that with some adjustments or additions, will improve safe routes for students. Gathering this information now, will help when we apply for grants to make those changes.

There are a number of parts to the study:

- The team meets with each school administration to discuss any concerns or suggestions as it relates to students' arrival and departure; followed by a field study at the school campus as well as the surrounding neighborhoods to note any impediments to safe routes for students.
- The information gathered will be presented to each school for review and discussion.
- We are asking parents/guardians to take a brief online survey. If they have students at more than one school, they will fill out the survey for the child with the birthday closest to the date on the parent letter that will be sent home. Responses will be kept confidential and no names will be associated with the responses.
- Classroom teachers will be asked to do a tally sheet two days in a row [Wednesday and Thursday, 11th and 12th]. With a show of hands, students will answer how they arrived at school that day and how they plan on returning home. This will be done school-wide in the morning. We are asking principals to briefly meet with teachers to give more specific details.

Sincerely,

Winnie Oden  
Flagler Schools  
District Safety Consultant



January 9, 2017

Dear Parents/Guardians Students:

All elementary and middle schools are participating in a Bicycle and Pedestrian School Safety Review Study, aimed at identifying procedures, programs and projects that will help improve safety for our students choosing to walk or bike to school. Additionally the study will review related factors such as: sidewalk gaps, timing of traffic lights, traffic patterns and other issues that might affect car riders. We are working with the team of *Kittelson and Associates, Inc.* [Transportation Engineering/Planning] and *River To Sea* [Transportation, Planning Organization]. The study will identify areas at each school and in the surrounding communities, that with some adjustments or additions, will improve safe routes for students. Gathering this information now, will help when we apply for grants to make those changes.

There are a number of parts to the study:

- The team meets with each school administration to discuss any concerns or suggestions as it relates to students' arrival and departure; followed by a field study at the school campus as well as the surrounding neighborhoods to note any impediments to safe routes for students.
- The information gathered will be presented to each school for review and discussion.
- Classroom teachers will be asked to do a tally sheet two days in a row. With a show of hands, students will answer how they arrived at school those days and how they plan on returning home.
- We are asking parents/guardians to take a brief online survey. If you have students at more than one school, you will fill out the survey for the child with the closest birthday to the date listed above. Responses will be kept confidential and no names will be associated with the responses.

Your survey can be found at:

<http://www.saferoutesdata.org/surveyformparent.cfm?key=5112310>

Thanks in advance for your prompt attention to the survey. Please complete the survey by Tuesday, January 17th. Your school's administrators will be able to answer any questions.

Sincerely,

Winnie Oden  
Flagler Schools  
District Safety Consultant





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## **F. Best Practices**

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This section of the report will address the best practices which make walking and bicycling a safer mode of transportation for students. These practices are not only applicable to the walk zone but to any new or old development that supports walking and bicycling. The data gathered for this section of the report comes from the Federal Highway Administration (FHWA), Americans with Disabilities Act of 1990 (ADA), and other documents that are supported by the FDOT and the Flagler County School District.

### **Sidewalk Design for New Roadways and Developments**

#### **Findings**

Sidewalk design for new roadways and developments are usually based on anticipated pedestrian demand, the type of development, whether residential, industrial, or commercial, and the jurisdiction. Developers may not want to construct sidewalks because the adjoining properties may not have sidewalks. In some cases, development requirements did not address sidewalk construction or connectivity. These conditions have led to developments that do not include sidewalk connectivity.

#### **Best Practices**

When planning a development which is located within the walk zone of a school, safe, connected networks of sidewalks that can be easily navigated by students should be required. If it is not possible to have safe sidewalks then multi-use trails should be considered.

All sidewalks should provide for disabled pedestrians and ought to be incorporated into the planning process for all new roadways and developments. The FHWA has established the following guidelines to assist local jurisdiction with determining when and where pedestrian facilities are needed.

- Develop sidewalks as integral parts of all city streets
- If land use plans anticipate pedestrian activity then sidewalks should be constructed as part of the street development
- Sidewalks should connect nearby urban communities
- Provide sidewalks in rural and suburban areas at schools, local businesses, and industrial plants that result in pedestrian concentrations
- Provide sidewalks whenever the roadside and land development conditions are such that pedestrians regularly move along a main or high-speed highway
- Incorporate sidewalks in rural areas with higher traffic speeds and the general absence of lighting
- Construct sidewalks along any street or highway without shoulders, even if there is light pedestrian traffic

The FHWA went on to say that to initiate the sidewalk installation guidelines above and to promote accessible sidewalk facilities, municipalities should consider the following recommendations:

- Agencies should accept bids from contractors who understand and construct accessible facilities

- 
- Require employees and contractors to demonstrate their knowledge of accessibility topics. If, at any stage of the development process (i.e., planning, design, or installation) accessibility is not addressed, hold the responsible party accountable and make improvements.
  - Engineering, transportation, and public policy decision makers should partner with transit providers on projects and programs, and require that transit systems include accessible pedestrian facilities
  - Consult with representatives from disability agencies and organizations during all phases of project development
  - Include persons with disabilities in the first phases of programming, planning, designing, operating, and constructing pedestrian facilities
  - Agencies should ensure that accessibility guidelines are followed throughout planning, project development, and construction of pedestrian facilities

Other local agencies, such as the school board within which the development falls, and the city or county planner, should make sure that the sidewalks are within the minimum set requirements, have good connectivity between residential and commercial developments, increases the allowable densities near major intersections (wider sidewalks), are near major shopping areas and transit lines, and ensure pedestrian friendly sidewalk designs. However, specific design principles must be in place before these options can be exercised. Planning for pedestrian sidewalk usage should be one of the primary goals for developers and should be an integral part of planning for walkable communities.

Appendix D presents the FHWA's guidelines of best practices for the installation of new sidewalks. New developments should consider the following sidewalk safety features to plan for walkers and bicyclists:

- Sidewalks should be constructed on both sides of the road
- Wide pathways
- Acceptable lighting
- No obstacles within walkway
- Sidewalk connectivity
- Sidewalk network
- ADA compliant
- Pedestrian facilities (e.g., shaded benches)
- Changes in grade and slope should be moderate

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## **Sidewalk Retrofit**

### **Findings**

Cities, counties, and states have codes and regulations that determine how wide a sidewalk must be and how much shoulder should exist between the sidewalk and pavement. The cities and counties must also follow regulations, set by the ADA, to aid disabled pedestrians. These codes have changed as a result of society working towards consuming less energy and promoting safety and healthier lifestyles. In some older neighborhoods, sidewalks are not up to standards since ADA guidelines were not developed and implemented until the 1990s. If the roadway is retrofitted in the future, then existing sidewalks must be brought into compliance with current ADA standards.

Issues with retrofitting sidewalks may include right-of-way costs, conflicting drainage features or swales in the right-of-way, and steep grades. Some sidewalks may have all the aforementioned issues but insufficient right-of-way for retrofitting.

### **Best Practices**

It is best to create developments with school routes, pedestrian transit routes, and amenities within close walking distances. However, retrofitting sidewalks should be considered in older, noncompliant developments. Additional right-of-way may be required to implement retrofit recommendations.

Projects aimed at retrofitting older sidewalks should research data pertaining to what type of right-of-way exists, a cost analysis of the right-of-way purchase, cost of construction, the condition of existing sidewalks, and the benefits associated with the project. The right-of-way acquisitions process is detailed in *The Real Estate Acquisition Handbook* and is produced by the FDOT.

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## **Existing Substandard Sidewalk**

### **Findings**

Older neighborhoods and developments that did not plan for pedestrians may have existing substandard sidewalks. Substandard sidewalk issues include the following (Pedestrian and Bicycle Information Center):

- Sidewalks are buckled, lifted, or cracked due to tree roots or other causes
- Sidewalks are blocked due to the placement of utility poles, sign posts, potholes, fire hydrants, bus benches, newspaper racks, parked cars, or other obstructions
- Sidewalks are blocked by bushes or low tree branches
- Sidewalks lack curb ramps at street corners, crosswalks, and driveways
- The driveway side slopes are steep and hard to cross
- Sidewalk shoulders and adjacent drop-offs are excessive

Any of these existing conditions may make walking and bicycling difficult. When sidewalks are obstructed or do not have curb ramps, it is difficult for walkers and bicyclists to get off the sidewalk and on to the pavement to walk around the obstruction. Driveways with steep side slopes may cause walkers to trip or bicyclists to lose balance.

### **Best Practices**

It is important to determine what sidewalks are substandard and those sidewalks should be placed on a prioritized list to be repaired or brought up to current standards. Maintaining existing sidewalks is paramount to providing a safe walking and bicycling environment.

The restriction of heavy vehicles on the sidewalk, installing root barriers if trees are planted too close to a sidewalk, and removing obstacles will keep sidewalks safe for students who are walking or bicycling to school. Depending on the average width of tree root spread, there should be rules that determine what species, and how far, trees must be planted from the sidewalk to prevent cracks and buckling. Trees and bushes should be kept trimmed to avoid blocking the sidewalk and to maximize the mobility of pedestrians. For obstacles that cannot be moved, regulations should be developed that prevent future installations affecting the sidewalk.

Driveways that have steep slopes should be re-graded to conform to ADA approved practices. This will allow for an easy transition between the sidewalk and the driveway for all pedestrians and bicyclists.

Curb ramps should be installed at all crossings, wherever applicable, such as at an intersection or at a mid-block crossing. Sidewalks should end at a detectable warning strip or whenever the sidewalk changes, such as at a mid-block crossing, and should conform to standards approved by the ADA. Standards set by the ADA include the width, length, slope, and texture of curb ramps and the width and length of landings, if they are needed.



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## **Sidewalk Maintenance**

### **Findings**

A sidewalk that clearly has maintenance issues may inhibit pedestrian and bicyclist usage. Existing sidewalks may be hazardous to pedestrians and bicyclists if the following issues exist (FHWA):

- Step separation - a vertical displacement of 13 mm (0.5 in) or greater that could cause pedestrians to trip or prevent the wheels of a wheelchair or stroller from rolling smoothly
- Badly cracked concrete - holes and rough spots ranging from hairline cracks to indentations wider than 13 mm (0.5 in)
- Spalled areas - fragments of concrete or other building material detached from larger structures
- Settled areas that trap water - sidewalk segments with depressions, reverse cross slopes, or other indentations that make the sidewalk path lower than the curb; these depressions trap silt and water on the sidewalk and reduce the slip resistant nature of the surface.
- Tree root damage - roots from trees growing in adjacent landscaping that cause the walkway surface to buckle and crack
- Vegetation overgrowth - ground cover, trees, or shrubs on properties or setbacks adjacent to the path that have not been pruned can encroach onto the path and create obstacles
- Obstacles - objects located on the sidewalk, in setbacks, or on properties adjacent to the sidewalk that obstruct the passage space or the visibility of sidewalk users; obstacles commonly include trash receptacles, utility poles, newspaper vending machines, and mailboxes
- Blocked or inadequately protected drainage inlets and inadequate flow planning
- Temporary construction interruptions
- Inadequate patching after utility installation

Sidewalks are typically in the public right-of-ways and are the sole responsibility of the City or County, depending on who has jurisdiction over that roadway. In some cases, sidewalks are provided along privately maintained roads and common spaces and are the responsibility of a Homeowners Association (HOA) or other property management entity.

### **Best Practices**

- A division of the City or County should be solely dedicated to sidewalk maintenance or, if in the case of privately maintained sidewalks, should be addressed through code enforcement procedures.
- Sidewalk maintenance issues should be placed on a prioritized list of sidewalk projects to be completed.
- Maintenance issues should be solved by using strategies standard to road maintenance. This will minimize the risk of walkers and bicyclists on their way to and from school; and all maintenance issues should be handled consistently throughout the jurisdiction.

## **Improving Existing Roadway Conditions**

### **Findings**

Existing roadway conditions may not offer enough safety for walkers and bicyclists. Motorists may speed within school walk zones and not pay attention to their surroundings. Motorists pulling out of driveways may look for oncoming vehicles but may not look for walkers and bicyclists crossing the driveway.

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## **Best Practices**

Roadway conditions can be improved to maintain safety and accessibility for walkers and students who may want to ride their bicycles to school. The following are best practices that improve existing roadway conditions for walkers and students who choose to ride their bicycles to school.

- Signage and pavement markings should be highly visible and current
- Traffic calming devices should be considered to reduce speeds
- Speed studies should be conducted to lower speed limits year-round
- ADA standards should be adhered to
- Consider one-way streets if traffic is too congested during the arrival and dismissal times
- Strict police enforcement should be imposed to deter illegal and unsafe parking practices as well as moving violations within the school zone

## **Pavement Markings**

### **Findings**

Pavement markings are essential to the transportation system to communicate and enhance the messages of roadway operational conditions by augmenting other traffic control devices. School pavement markings and crosswalk markings are especially important since they alert the motorist of walkers and bicyclists entering the pavement at crosswalks and intersections. Pavement markings can easily fade or become obliterated over time. It was observed that SCHOOL markings, which warn motorists that they will soon enter into a school zone, are often faded, cracked, or chipped.

### **Best Practices**

The following best practices are recommended to improve the safety, life, and effectiveness of pavement markings.

- SCHOOL pavement markings and crosswalk markings should be clear and visible in order to warn motorists that they are entering a school zone and/or children are crossing.
- The FDOT's current standard (Index No. 17346) uses a special emphasis crosswalk that lengthens the life of the crosswalk marking.
- Thermoplastic paint should be used for all pavement and school markings to enhance the visibility of walkers and bicyclists. Thermoplastic paint should be used since it is durable, retro-reflective.
- The crosswalk should align with the sidewalk ramps.
- Crosswalks should be installed where walkers and bicyclists are in the pavement for the shortest distance and time possible.
- Pavement markings should be accompanied by the proper signage.
- Pedestrian median refuges should be installed for long crosswalks with interim medians.
- Walkers and bicyclists should be dissuaded from crossing at intersections or mid-block crossings where heavy traffic exists unless accompanied by crossing guards.

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## **Traffic Signal Control**

### **Findings**

Traffic signalization has an important role in promoting safety for students who walk or bicycle to school. Drivers at busy intersections can easily overlook students trying to cross a street; consequently, signals allow students the necessary time to safely cross busy intersections.

School flashing beacons (Illustration 11) also play an important role in safety. Flashing beacons alert drivers that they are entering a school zone and indicate that the displayed speed limit is in effect. It was observed that school flashing beacons can be operated manually or can be pre-set to turn off/on during pre-programmed timeframes. Manually run school flashing beacons are usually operated by school crossing guards, who are primarily assigned to cross elementary school students. Unfortunately, this does not address the needs of middle school students.



**Illustration 11: Flashing beacon traffic signal control**

### **Best Practices**

- Pedestrian signal heads should be considered at all intersections that utilize traffic control signals for motor vehicles within the school walk zones.
- Pedestrian signal buttons should be placed such that it is obvious to elementary and middle school students which buttons to press to access the desired sidewalk.
- Pedestrian signal heads should employ the countdown display which exhibits the symbols of the WALKING MAN beside the numerical countdown. This will help students to decide if they have enough time to cross or if they should wait for the next pedestrian signal phase.
- Students should be educated on the proper ways to cross an intersection when using a pedestrian signal head.
- For students who must cross more than two lanes of traffic, the assignment of crossing guards or overhead pedestrian bridges should be considered.
- U-turns and right-on-reds should be prohibited at intersections where students utilize pedestrian crossings.
- School attendance zones that have crossings at heavily congested intersections should have their walk zones re-evaluated so that students can either walk to another school or transportation could be provided.

## **Enforcement and Education**

### **Findings**

Walkers and bicyclists do not always follow proper crossing procedures. Students may dart through traffic to access the school in the mornings or access a vehicle parked across the road from the school in the afternoons. Students may also cross streets at mid-block without the aid of a crosswalk or an adult. When crosswalks do exist, students do not always follow proper crossing procedures.

Regulations are not always followed by adults dropping off/picking up students (Illustration 12). Motorists were observed to park in No Parking areas and make prohibited vehicular movements, including u-turns. Some motorists were observed to be speeding within the reduced-speed zone.



**Illustration 12: Intersection of Ohio Avenue and Scholars Path at dismissal**

Students who choose to ride their bicycles to school do not always wear helmets.

### **Best Practices**

- Students and parents should be educated on proper crossing procedures. Parents, crossing guards, and School Resource Officers (SRO) should be the main resources for safety.
- Parents should receive flyers or recorded messages on a school-wide basis to inform them of the proper drop-off/pick-up procedures. Strict enforcement of these procedures should eventually deter parents from practicing unsafe drop-off/pick-up actions.
- Prohibited vehicular movements should be strictly handled and higher fines could be considered, where allowable by law, during the arrival and dismissal times of school.
- Helmets should always be worn by bicycling students. Parents, school staff, crossing guards, and school resource officers should encourage helmet usage. Non-compliant helmet users should be dealt with consistently and strictly.
- Encourage walking and bicycling by providing free helmets, stickers, reflective gear, or create an incentive program.
- Schools should provide a safe and secure bicycle storage facility for students who choose to ride their bicycles to school.
- Parents should be informed about the different walking and bicycling programs available and the school and its volunteers should assist in planning and implementing those programs.
- Students who are regular walkers and bicyclists should be paired with other walkers and bicyclists who live in the same area.
- Crossing guards should be involved in the re-zoning of walk zones since they have a better understanding of the distribution of the walker and bicyclist population.

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## **School Board Considerations**

### **Findings**

School districts generally employ the two-mile walk route to determine the walk zone. This is not always the best option to promote safety. Students may have to cross congested intersections, too many intersections, and/or busy driveways.

Sidewalks are not always located on both sides of the road. This may encourage unsafe crossings where no crosswalks exist. Walk zones can also include sidewalks that end at an unsignalized intersection with no safe alternative to gain access to the sidewalk on the opposite side of the roadway.

It was noted that schools prefer to have one controlled point of entry that is monitored by school staff. In these cases, students who walk or ride their bicycles to school may have to cross busy driveways including drop-off/pick-up loops, bus loops, and even parent and teacher parking lots, to enter/exit the controlled point of entry.

### **Best Practices**

- **As defined in F.S. 1006.23, the School District staff collaborates with the Sheriff's crossing** guards, City and County Public Works and FDOT to evaluate a school's walk zone and its hazardous walking conditions as defined.
- In effort to avoid the inter-mingling of elementary, middle, and high school traffic, school arrival and dismissal, Flagler County School District has a three-tiered bell schedule. Further, each school separates bus traffic from parent pick-up drop-off traffic.
- It is necessary to review all new development plans within the school walk zone to ensure that developers are providing sidewalks on either side of the road and maintaining sidewalk connectivity and networking to the school. Flagler County School District is a member of city and county development review teams and reviews new site plans and subdivisions to ensure adequate area is designated for school bus stops and sidewalks. City and County land development regulations require sidewalks.
- All new schools should be planned with good sidewalk connectivity/network to all neighborhoods and developments within its walk zone.
- As required by F.S. 1006.23, Flagler County School District provides bus service to students who do not have access to safe routes to school.
- There are certain programs which promote walking and bicycling to school. Flagler County School District currently participates in such programs (e.g. Walking School Bus, SAFE KIDS Walk This Way, and International Walk to School Day). Bicycle and pedestrian safety is part of the existing elementary physical education curriculum.
- A No Backpack policy should be considered to encourage walking and bicycling to school and consideration to the following is recommended:
  - All textbooks should be accessible on-line
  - A set of textbooks should be available at the local library
  - Provide students with a set of textbooks to keep at home
- Each school should enforce bicycle safety, helmet usage should be closely monitored for compliance, and PTA meetings to ensure parent support and compliance with these policies should be promoted.
- All teachers assisting during arrival/dismissal should wear safety vests when they are crossing students or interacting with vehicular traffic.



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## **G. Funding Sources**

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## Florida Safe Routes to School Funding

Florida's SRTS Program is 100 percent federally funded, and is managed through the Florida Department of Transportation (FDOT) on a cost-reimbursement basis. Most of Florida's SRTS funds are distributed to the seven FDOT Districts based on the number of children in grades K-8 in the District compared to the state.

The federal SRTS Guidance directs that seventy to ninety percent of each state's SRTS funds go toward Infrastructure (Engineering or construction) projects, and the remaining ten to thirty percent toward Non-Infrastructure programs (Education, Encouragement, Enforcement, and Evaluation). Each state develops their SRTS Guidelines within the federal Guidance. In Florida, generally ninety percent of each District's SRTS funds will be dedicated to Infrastructure and the remaining ten percent will go toward Non-Infrastructure. However, each District Secretary can adjust the percentages within the federal limits. Projects will be awarded through a District-wide competitive process. See the Infrastructure and Non-Infrastructure sections below for more specifics on the application and selection processes.

SRTS funds may not be used to supplant or replace existing funds. Because federal SRTS funds are limited:

- Applicants must prioritize their requests for Infrastructure projects and Non-Infrastructure programs.
- Applicants are encouraged to be as cost effective as possible so that more SRTS projects and programs can be funded.
- Districts will do their best to select good proposals from around their District so their SRTS funds are implemented as equitably as possible.

Source: FDOT's Guidelines for Florida's Safe Routes to School Program

Additional Funding Information for Safe Routes to School Projects can be found here:  
<http://www.saferoutesinfo.org/program-tools/funding>

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## **H. Pedestrian and Bicycle Crash Reports**

# FLORIDA TRAFFIC CRASH REPORT

LONG FORM ☐ SHORT FORM ☐ UPDATE ☒

HIGHWAY SAFETY & MOTOR VEHICLES,  
TRAFFIC CRASH RECORDS  
NEIL KIRKMAN BUILDING, TALLAHASSEE, FL 32399-0537

(Electronic Version)

Date of Crash <b>10/May/2012 09:35 PM</b>	Time of Crash <b>10/May/2012 09:35 PM</b>	Date of Report <b>07/Nov/2012 10:20 AM</b>	Invest. Agency Report Number <b>FHPG12OFF018147</b>	HSMV Crash Report Number <b>82892726</b>
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## CRASH IDENTIFIERS

County Code <b>61</b>	City Code <b>53</b>	County of Crash <b>FLAGLER</b>	Place or City of Crash <b>PALM COAST</b>	Within City Limits <b>Yes</b>	Time Reported <b>10/May/2012 09:40 PM</b>	Time Dispatched <b>10/May/2012 09:43 PM</b>
Time on Scene <b>10/May/2012 10:01 PM</b>	Time Cleared Scene <b>11/May/2012 12:13 AM</b>	Completed <b>Yes</b>	Reason (if Investigation NOT Completed)			Notified By <b>Law Enforcement</b>

## ROADWAY INFORMATION

Crash Occured On Street, Road, Highway <b>STATE ROAD 100</b>			At Street Address#	At Latitude <b>29.475683333333301</b>	and Longitude <b>-81.185680000000005</b>
At Feet	Or Miles <b>.25</b>	Direction <b>West</b>	From Intersection With Street, Road, Highway <b>I95 (STATE ROAD 9)</b>	Or From Milepost #	
Road System Identifier <b>3 State</b>		Type Of Shoulder <b>1 Paved</b>	Type Of Intersection <b>1 Not at Intersection</b>		

## CRASH INFORMATION (Check if Pictures Taken) ☐

Light Condition <b>5 Dark-Not Lighted</b>	Weather Condition <b>1 Clear</b>	Roadway Surface Condition <b>1 Dry</b>	School Bus Related <b>1 No</b>	Manner Of Collision <b>77 Other, Explain in Narrative</b>
First Harmful Event Type	First Harmful Event <b>10</b>	First Harmful Event Location <b>1 On Roadway</b>	Within Interchange <b>No</b>	First Harmful Event Relation to Junction <b>1 Non-Junction</b>
Contributing Circumstances: Road <b>1 None</b>		Contributing Circumstances: Road		Contributing Circumstances: Road
Contributing Circumstances: Environment <b>1 None</b>		Contributing Circumstances: Environment		Contributing Circumstances: Environment
Work Zone Related <b>1 No</b>	Crash In Work Zone	Type Of Work Zone	Workers In Work Zone	Law Enforcement In Work Zone

## VEHICLE (Check if Commercial) ☐

Vehicle <b>1</b>	Motor Vehicle Type <b>1 Vehicle in Transport</b>	Hit and Run <b>1 No</b>	Veh License Number <b>084YXL</b>	State <b>FL</b>	Reg. Expires <b>11/Sep/2012</b>	Permanent Reg. <b>No</b>	VIN <b>JT3GN86R020231220</b>		
Year <b>2002</b>	Make <b>TOYT</b>	Model <b>4RUNNER</b>	Style <b>UT</b>	Color <b>SIL</b>	Extent of Damage <b>Disabling</b>	Est. Damage <b>4000</b>	Towed Due To Damage <b>Yes</b>	Vehicle Removed By <b>ROGERS TOWING</b>	Rotation <b>Rotation</b>
Insurance Company <b>FLORIDA FARM BUREAU INSUR CO.</b>				Insurance Policy Number <b>AP1219762</b>					
Name of Vehicle Owner (Check Box If Business) <b>ANGELA RENEE RICKS</b>				Current Address (Number and Street) <b>7 IBIS LANE</b>			City and State <b>PALM COAST FL</b>	Zip Code <b>32137</b>	
Trailer One:	License Number	State	Reg. Expires	Permanent Reg.	VIN	Year	Make	Length	Axles
Trailer Two:	License Number	State	Reg. Expires	Permanent Reg.	VIN	Year	Make	Length	Axles
Vehicle Traveling:	Direction <b>East</b>	On Street, Road, Highway <b>STATE ROAD 100</b>				At Est. Speed <b>45</b>	Posted Speed <b>45</b>	Total Lanes <b>4</b>	
CMV Configuration			Cargo Body Type			Area of Initial Impact		Most Damaged Area	
Comm GVWR/GCWR			Trailer Type (trailer one)			Trailer Type (trailer two)			
Haz. Mat. Release		Haz Mat. Placard	Number	Class					
Motor Carrier Name				US DOT Number					
Motor Carrier Address				City and State				Zip Code	Phone Number
Comm/Non-Commercial	Vehicle Body Type <b>16 (Sport) Utility Vehicle</b>	Vehicle Defects (one) <b>1 None</b>		Vehicle Defects (two)		Emergency Vehicle Use <b>1 No</b>		Special Function of MV <b>1 No Special Function</b>	
Vehicle Maneuver Action <b>1 Straight Ahead</b>	Trafficway <b>4 Two-Way, Divided, Positive Median Barrier</b>	Roadway Grade <b>1 Level</b>		Roadway Alignment <b>1 Straight</b>		Most Harmful Event <b>2 Collision with Non-Fixed Object</b>		Most Harmful Event Detail <b>10 Pedestrian</b>	
Traffic Control Device For This Vehicle <b>1 No Controls</b>		First (1) Sequence of Events <b>2 Collision with Non-Fixed Object 10 Pedestrian</b>		Second (2) Sequence of Events		Third (3) Sequence of Events		Fourth (4) Sequence of Events	

## PERSON RECORD

Person# <b>1</b>	Description <b>1 Driver</b>	Vehicle # <b>1</b>	Name <b>ANGELA RENEE RICKS</b>	Date of Birth <b>11/Sep/1973</b>	Sex <b>2 Female</b>	Phone Number	Re-Exam <b>No</b>
Address <b>7 IBIS LANE</b>		City <b>PALM COAST</b>	State <b>FL</b>	Zip Code <b>32137</b>			
Driver License Number <b>R200016738310</b>	State <b>FL</b>	Expires <b>11/Sep/2012</b>	DL Type <b>5 E/Operator</b>	Req. End.	Injury Severity <b>1 None</b>	Ejection <b>1 Not Ejected</b>	

Date of Crash 10/May/2012 09:35 PM	Date of Report 10/May/2012 09:35 PM	Invest. Agency Report Number FHPG12OFF018147	HSMV Crash Report Number 82892726
---------------------------------------	--	---	--------------------------------------

Restraint System 3 Shoulder and Lap Belt Used	Air Bag Deployed 2 Not Deployed	Helmet Use	Eye Protection 3 Not Applicable	Seating Location Seat 1 Left	Seating Location Row 1 Front	Seating Location Other 1 Not Applicable		
Drivers Actions at Time of Crash (first) 1 No Contributing Action		Drivers Actions at Time of Crash (second)			Driver Distracted By 1 Not Distracted	Vision Obstruction 1 Vision Not Obscured		
Drivers Actions at Time of Crash (third)		Drivers Actions at Time of Crash (fourth)			Drivers Condition at Time of Crash 1 Apparently Normal			
Suspected Alcohol Use 1 No	Alcohol Tested 1 Test Not Given	Alcohol Test Type	Alcohol Test Result	BAC	Suspected Drug Use 1 No	Drug Tested 1 Test Not Given	Drug Test Type	Drug Test Result
Source of Transport to Medical Facility 1 Not Transported		EMS Agency Name or ID NA		EMS Run Number NA		Medical Facility Transported To NA		

#### PERSON RECORD

Person# 2	Description 2 Non-Motorist	Name ERIC LEE ZIMMERMAN	Date of Birth 11/Aug/1969	Sex 1 Male	Injury Severity 5 Fatal (within 30 days)	Phone Number		
Address 15 RED FOX LN		City FLAGLER BEACH	State FL		Zip Code 32136			
Non-Motorist Description Detail 1 Pedestrian			Non-Motorist Action Prior to Crash 1 Crossing Roadway		Non-Motorist Location at Time of Crash 5 Travel Lane - Other Location			
Non-Motorist Actions/Circumstance (First) 3 Failure to Yield Right-of-Way		Non-Motorist Actions/Circumstance (Second)		Non-Motorist Safety Equipment (One) 1 None		Non-Motorist Safety Equipment (Two)		
Suspected Alcohol Use 88 Unknown	Alcohol Tested 3 Test Given	Alcohol Test Type 1 Blood	Alcohol Test Result 2 Completed	BAC 0.00	Suspected Drug Use 88 Unknown	Drug Tested 3 Test Given	Drug Test Type 1 Blood	Drug Test Result 2 Negative
Source of Transport to Medical Facility 1 Not Transported		EMS Agency Name or ID NA		EMS Run Number NA		Medical Facility Transported To NA		

#### WITNESSES

Name JULIA WATSON	Address 10 CAMPBELL CT	City PALM COAST	State FL	Zip Code 32137
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#### NARRATIVE

ID Number 1864	Rank TROOPER	Name D.J. SCHLOSSER	Troop / Post G	Officer Agency FLORIDA HIGHWAY PATROL	Phone Number	Date Created May 18, 2012
<p>V01 was traveling east on State Road 100 in the outside lane. NM01 was in the State Road 100 center median. NM01 attempted to cross the eastbound lanes of State Road 100 without yielding the right of way to oncoming traffic. The front of V01 then collided with NM01 in the State Road 100 eastbound outside lane. V01 was driven by it's Driver onto the State Road 100 eastbound shoulder and came to a controlled stop. NM01 came to final rest in the State Road 100 eastbound outside lane. Other: Manner of Crash Collision/Impact: Collision with Pedestrian. Note: During the Course of the Crash Investigation I didn't observe any Indication of Impairment for the Driver of V01.</p> <p>Eric L. Zimmerman (DOB 08/11/69) was pronounced deceased at the scene by Paramedic Dennis Kline at 9:43 PM hours.</p> <p>Next of Kin (Harold Zimmerman; the deceased's father) was notified by Chaplain George Huhn of Flagler County Fire Rescue at 12:24 AM hours on 05/11/12.</p> <p>Traffic Homicide Investigator: Cpl. Greg Cohn.</p> <p>Traffic Homicide Case Number: FHP712-61-005.</p> <p>Photos taken by: Cpl. Greg Cohn 875 State Road 16 St. Augustine, FL 32084. Pierre Tristam PO Box 354263 Palm Coast, FL 32135.</p>						
ID Number 0893	Rank CORPORAL	Name G.A. COHN	Troop / Post G	Officer Agency FLORIDA HIGHWAY PATROL	Phone Number	Date Created Nov 07, 2012
<p>On Thursday, May 11th, 2012, at 12:00 P.M., Doctor Frederick Hobin, Medical Examiner for the 23rd District, performed an autopsy to determine the cause of death for Eric Zimmerman, (P-1). Doctor Hobin determined the cause of death to be, "Multiple Injuries". Doctor Hobin also requested special studies to determine the presence of alcohol and/or controlled substances. The special studies revealed: Chest Blood: Positive for Caffeine and Theobromine. Theobromine is an alkaloid substance found in chocolate. Like caffeine, theobromine is a stimulant and a diuretic. No alcohol and/or controlled substances were found.</p> <p>Traffic Homicide Investigator: Master Corporal Gregory A. Cohn</p> <p>Traffic Homicide Case Number: FHP 712-61-005</p>						

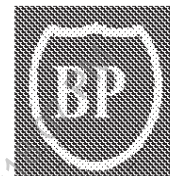
#### REPORTING OFFICER

ID/Badge # 0893	Rank and Name CORPORAL G.A. COHN	Department FLORIDA HIGHWAY PATROL	Type of Department FHP
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- A. STATE ROAD 100 WB
- B. STATE ROAD 100 EB
- C. PAVED SHOULDER
- D. LEFT TURN LANE
- E. CENTER GRASS MEDIAN
- F. CONCRETE DIVIDER
- G. OTHER TRAFFIC

**NOT TO SCALE**



# STATE ROAD 100

# FLORIDA TRAFFIC CRASH REPORT

LONG FORM ☒ SHORT FORM ☐ UPDATE ☐

(Electronic Version)

HIGHWAY SAFETY & MOTOR VEHICLES,  
TRAFFIC CRASH RECORDS  
NEIL KIRKMAN BUILDING, TALLAHASSEE, FL 32399-0537

Date of Crash 15/Dec/2015 01:20 AM	Time of Crash 15/Dec/2015 01:20 AM	Date of Report 15/Dec/2015 01:42 AM	Invest. Agency Report Number FHPG15OFF050319	HSMV Crash Report Number 85235753
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## CRASH IDENTIFIERS

County Code 61	City Code 53	County of Crash FLAGLER	Place or City of Crash PALM COAST	Within City Limits Yes	Time Reported 15/Dec/2015 01:27 AM	Time Dispatched 15/Dec/2015 01:30 AM
Time on Scene 15/Dec/2015 01:35 AM	Time Cleared Scene 15/Dec/2015 01:53 AM	Completed Yes	Reason (if Investigation NOT Completed)			Notified By Law Enforcement

## ROADWAY INFORMATION

Crash Occured On Street, Road, Highway STATE ROAD 100			① At Street Address#	② At Latitude 29.475709999999999	and Longitude -81.1938600000000001
At Feet 200	Or Miles	Direction East	③ From Intersection With Street, Road, Highway MEMORIAL MEDICAL PARKWAY		④ Or From Milepost #
Road System Identifier 3 State		Type Of Shoulder 2 Unpaved	Type Of Intersection 1 Not at Intersection		

## CRASH INFORMATION (Check if Pictures Taken) ☐

Light Condition 4 Dark-Lighted	Weather Condition 1 Clear	Roadway Surface Condition 1 Dry	School Bus Related 1 No	Manner Of Collision 77 Other, Explain in Narrative
First Harmful Event Type	First Harmful Event 10	First Harmful Event Location 1 On Roadway	Within Interchange No	First Harmful Event Relation to Junction 1 Non-Junction
Contributing Circumstances: Road 1 None	Contributing Circumstances: Road	Contributing Circumstances: Road	Contributing Circumstances: Road	
Contributing Circumstances: Environment 1 None	Contributing Circumstances: Environment	Contributing Circumstances: Environment	Contributing Circumstances: Environment	
Work Zone Related 1 No	Crash In Work Zone	Type Of Work Zone	Workers In Work Zone	Law Enforcement In Work Zone

## VEHICLE (Check if Commercial) ☐

Vehicle 1	Motor Vehicle Type 1 Vehicle in Transport	Hit and Run 1 No	Veh License Number 7164NS	State FL	Reg. Expires 21/Apr/2016	Permanent Reg. No	VIN 1HD1FFW176Y641354		
Year 2006	Make HD	Model FLHTCI	Style MC	Color BRO	Extent of Damage Functional	Est. Damage 3000	Towed Due To Damage No	Vehicle Removed By	Rotation
Insurance Company EXEMPT				Insurance Policy Number 0000					
Name of Vehicle Owner (Check Box If Business) <input type="checkbox"/> RONALD SCOTT HUTH			Current Address (Number and Street) 17 ZORRO CT			City and State PALM COAST FL		Zip Code 32164-5850	
Trailer One:	License Number	State	Reg. Expires	Permanent Reg.	VIN	Year	Make	Length	Axles
Trailer Two:	License Number	State	Reg. Expires	Permanent Reg.	VIN	Year	Make	Length	Axles
Vehicle Traveling:	Direction West	On Street, Road, Highway STATE ROAD 100				At Est. Speed 50	Posted Speed 50	Total Lanes 4	
CMV Configuration			Cargo Body Type			Area of Initial Impact		Most Damaged Area	
Comm GVWR/GCWR			Trailer Type (trailer one)			Trailer Type (trailer two)			
Haz. Mat. Release		Haz Mat. Placard	Number	Class					
Motor Carrier Name				US DOT Number					
Motor Carrier Address				City and State		Zip Code		Phone Number	
Comm/Non-Commercial	Vehicle Body Type 11 Motorcycle	Vehicle Defects (one) 1 None		Vehicle Defects (two)		Emergency Vehicle Use 1 No		Special Function of MV 1 No Special Function	
Vehicle Maneuver Action 1 Straight Ahead	Trafficway 4 Two-Way, Divided, Positive Median Barrier	Roadway Grade 1 Level		Roadway Alignment 1 Straight		Most Harmful Event 2 Collision with Non-Fixed Object		Most Harmful Event Detail 10 Pedestrian	
Traffic Control Device For This Vehicle 1 No Controls		First (1) Sequence of Events 2 Collision with Non-Fixed Object 10 Pedestrian		Second (2) Sequence of Events		Third (3) Sequence of Events		Fourth (4) Sequence of Events	

## PERSON RECORD

Person# 1	Description 1 Driver	Vehicle # 1	Name RONALD SCOTT HUTH	Date of Birth 21/Apr/1967	Sex 1 Male	Phone Number 4074020781	Re-Exam No
Address 17 ZORRO CT		City PALM COAST	State FL	Zip Code 32164			
Driver License Number H300737671410		State FL	Expires 21/Apr/2020	DL Type 2 B	Req. End. 3 No Req Endorsement	Injury Severity 3 Non-incapacitating	Ejection 4 Not Applicable

Date of Crash 15/Dec/2015 01:20 AM	Date of Report 15/Dec/2015 01:20 AM	Invest. Agency Report Number FHPG15OFF050319	HSMV Crash Report Number 85235753
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Restraint System	Air Bag Deployed	Helmet Use 1 DOT-Compliant Motorcycle Helmet	Eye Protection 1 Yes	Seating Location Seat 2 Middle	Seating Location Row 1 Front	Seating Location Other		
Drivers Actions at Time of Crash (first) 1 No Contributing Action			Drivers Actions at Time of Crash (second)		Driver Distracted By 1 Not Distracted	Vision Obstruction 1 Vision Not Obscured		
Drivers Actions at Time of Crash (third)			Drivers Actions at Time of Crash (fourth)		Drivers Condition at Time of Crash 1 Apparently Normal			
Suspected Alcohol Use 1 No	Alcohol Tested 1 Test Not Given	Alcohol Test Type	Alcohol Test Result	BAC	Suspected Drug Use 1 No	Drug Tested 1 Test Not Given	Drug Test Type	Drug Test Result
Source of Transport to Medical Facility 77 Other, Explain in Narrative		EMS Agency Name or ID		EMS Run Number		Medical Facility Transported To		

#### PERSON RECORD

Person# 2	Description 3 Passenger	Vehicle # 1	Name JACQUELINE M HUTH	Date of Birth 08/Feb/1966	Sex 2 Female	Injury Severity 3 Non-incapacitating	Ejection 4 Not Applicable
Address 17 ZORRO CT			City PALM COAST			State FL	Zip Code 32164
Restraint System	Air Bag Deployed	Helmet Use 1 DOT-Compliant Motorcycle Helmet	Eye Protection 1 Yes	Seating Location Seat 2	Seating Location Row 2	Seating Location Other	
Source of Transport to Medical Facility 1 Not Transported		EMS Agency Name or ID		EMS Run Number		Medical Facility Transported To	

#### PERSON RECORD

Person# 3	Description 2 Non-Motorist	Name PATRICIA ANN RAMIREZ			Date of Birth 16/May/1963	Sex 2 Female	Injury Severity 4 Incapacitating		Phone Number	
Address PO BOX 2058		City BUNNELL		State FL		Zip Code 32110				
Non-Motorist Description Detail 1 Pedestrian			Non-Motorist Action Prior to Crash 2 Waiting to Cross Roadway			Non-Motorist Location at Time of Crash 5 Travel Lane - Other Location				
Non-Motorist Actions/Circumstance (First) 2 Dart/Dash		Non-Motorist Actions/Circumstance (Second)		Non-Motorist Safety Equipment (One) 1 None			Non-Motorist Safety Equipment (Two)			
Suspected Alcohol Use 1 No	Alcohol Tested 1 Test Not Given	Alcohol Test Type	Alcohol Test Result	BAC	Suspected Drug Use 1 No	Drug Tested 1 Test Not Given		Drug Test Type		Drug Test Result
Source of Transport to Medical Facility 2 EMS		EMS Agency Name or ID FCFR 92		EMS Run Number 15-14859		Medical Facility Transported To FLORIDA HOSPITAL				

#### VIOLATIONS

Person# 3	Name PATRICIA ANN RAMIREZ	Florida Statute Number 316.130(10)	Charge PEDESTRIAN FAILED TO YIELD TO TRAFFIC	Citation A4XA40E
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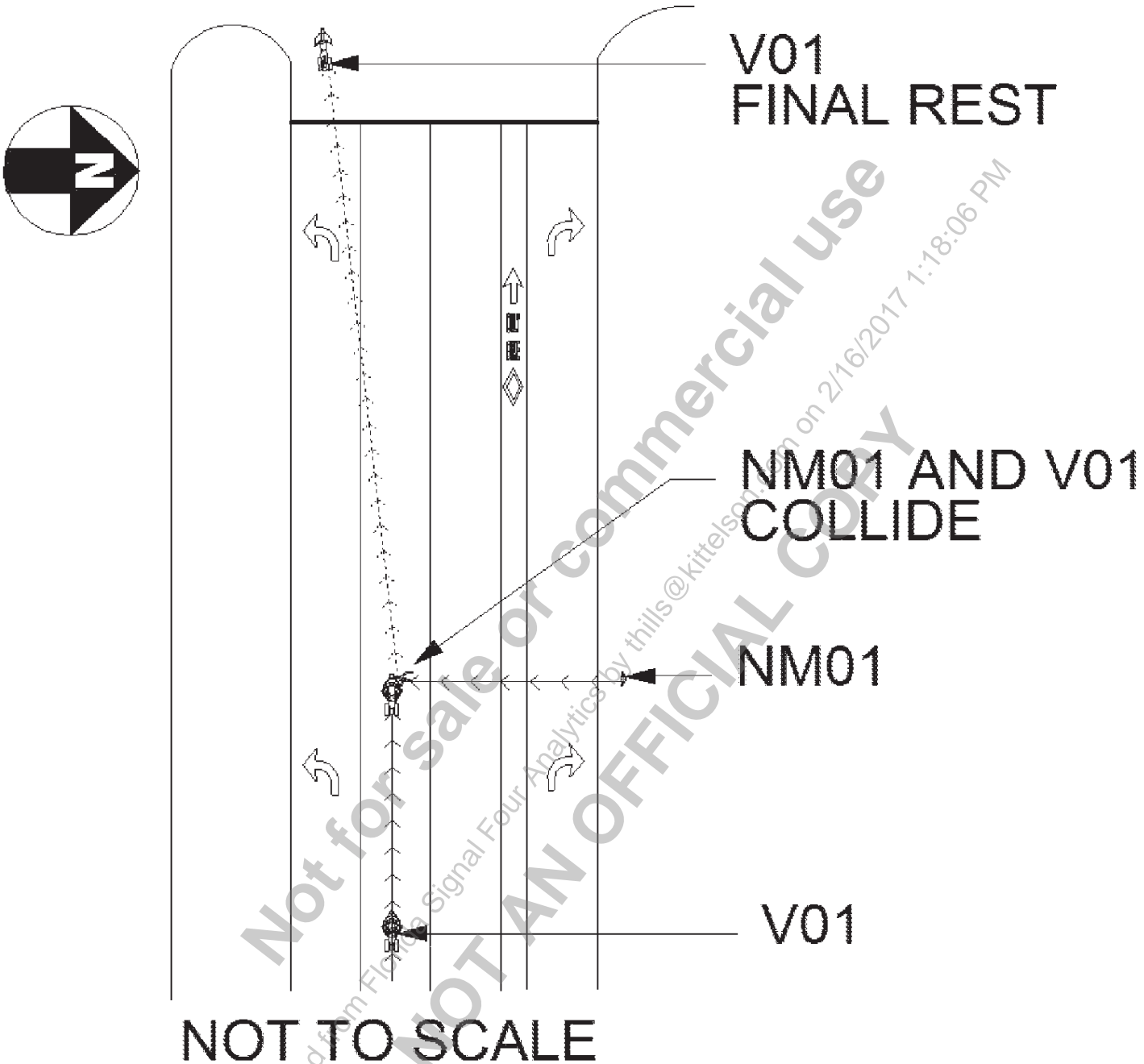
#### NARRATIVE

ID Number 3328	Rank TROOPER	Name B. A. BOWMAN	Troop / Post G	Officer Agency FLORIDA HIGHWAY PATROL	Phone Number 904-825-5080	Date Created Dec 15, 2015
V01 was traveling west in the left lane of State Road 100. NM01 was stopped on the north shoulder of State Road 100. NM01 stated that she "ran" across State Road 100 "as fast as she could". NM01 crossed State Road 100, failing to yield the right of way to V01. This caused the front of V01 to strike NM01. After impact, Driver 01 laid V01 down on the left side. Upon my arrival, V01 was stopped in the left turn lane of State Road 100 and NM01 had been transported to Florida Hospital.						
Physical evidence showed that V01 produced approximately 62 feet of skid marks, indicating that Driver 01 attempted to avoid a collision with NM01. V01 continued 145 feet to final rest, leaving gouge marks in the roadway.						

#### REPORTING OFFICER

ID/Badge # 3328	Rank and Name TROOPER B. A. BOWMAN	Department FLORIDA HIGHWAY PATROL	Type of Department FHP
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# SR 100 WB LANES ONLY





# FLORIDA TRAFFIC CRASH REPORT

LONG FORM ☒ SHORT FORM ☐ UPDATE ☐  
(Shaded Areas)

MAIL TO: DEPARTMENT OF HIGHWAY SAFETY & MOTOR VEHICLES  
TRAFFIC CRASH RECORDS, NEIL KIRKMAN BUILDING  
TALLAHASSEE, FL 32399-0537

TOTAL # OF VEHICLE SECTION(S) 2  
TOTAL # OF PERSON SECTION(S) 2  
TOTAL # OF NARRATIVE SECTION(S) 1

CRASH DATE 03/24/12		TIME OF CRASH 7:54pm		DATE OF REPORT 03/24/2012		REPORTING AGENCY CASE NUMBER 20625-12		HSMV CRASH REPORT NUMBER 82347739		
<b>CRASH IDENTIFIERS</b>										
COUNTY CODE 61	CITY CODE 53	COUNTY OF CRASH Flagler			PLACE OR CITY OF CRASH Palm Coast			CHECK IF WITHIN CITY LIMITS <input checked="" type="checkbox"/>	TIME REPORTED 7:54pm	TIME DISPATCHED 7:54pm
TIME ON SCENE 7:59pm		TIME CLEARED SCENE 8:45pm		CHECK IF COMPLETED <input checked="" type="checkbox"/>	REASON (if Investigation NOT Complete)				Notified By: 1 Motorist 2 Law Enforcement <u>1</u>	
<b>ROADWAY INFORMATION (CHOOSE ONLY 1 OF 4 OPTIONS)</b>										
CRASH OCCURRED ON STREET, ROAD, HIGHWAY State Road 100						AT STREET ADDRESS # 6125		AT LATITUDE AND LONGITUDE		
FEET	MILES	N S E W <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		AT / FROM INTERSECTION WITH STREET, ROAD, HIGHWAY E State Road 100				OR FROM MILEPOST #		
<b>Road System Identifier</b> 3 1 Interstate 2 U.S. 3 State				7 Forest Road 8 Private Roadway 9 Parking Lot 77 Other, Explain in Narrative		<b>Type of Shoulder</b> 1 Paved 2 Unpaved 3 Curb		<b>Type of Intersection</b> 3 1 Not at Intersection 2 Four-Way Intersection 3 T-Intersection 4 Y-Intersection		
4 County 5 Local 6 Turnpike/Toll				5 Traffic Circle 6 Roundabout 7 Five-Point, or More 77 Other, Explain in Narrative						
<b>CRASH INFORMATION (CHECK IF PICTURES TAKEN) <input checked="" type="checkbox"/></b>										
<b>Light Condition</b> 4 1 Daylight 2 Dusk 3 Dawn 4 Dark-Lighted		<b>Weather Condition</b> 2 5 Dark-Not Lighted 6 Dark-Unknown Lighting 77 Other, Explain in Narrative 88 Unknown		<b>Roadway Surface Condition</b> 1 5 Oil 6 Mud, Dirt, Gravel 7 Sand 8 Water (standing, moving) 77 Other, Explain in Narrative 88 Unknown		<b>School Bus Related</b> 1 1 No 2 Yes, School Bus Directly Involved 3 Yes, School Bus Indirectly Involved		<b>Manner of Collision/Impact</b> 77 4 Sideswipe, Same Direction 5 Sideswipe, Opposite Direction 6 Rear to Side 7 Rear to Rear 77 Other, Explain in Narrative 88 Unknown		
<b>First Harmful Event</b> 11 1 No 2 Yes 88 Unknown		<b>Non-Collision</b> 1 Overturn/Rollover 2 Fire/Explosion 3 Immersion 4 Jackknife 5 Cargo/Equipment Loss or Shift 6 Fell/Jumped From Motor Vehicle 7 Thrown or Falling Object 8 Ran into Water/Canal 9 Other Non-Collision		<b>Collision Non-Fixed Object</b> 10 Pedestrian 11 Pedalcycle 12 Railway Vehicle (train, engine) 13 Animal 14 Motor Vehicle in Transport 15 Parked Motor Vehicle 16 Work Zone/Maintenance Equipment 17 Struck By Falling, Shifting Cargo 18 Other Non-Fixed Object		<b>Collision with Fixed Object</b> 19 Impact Attenuator/Crash Cushion 20 Bridge Overhead Structure 21 Bridge Pier or Support 22 Bridge Rail 23 Culvert 24 Curb 25 Ditch 26 Embankment 27 Guardrail Face 28 Guardrail End 29 Cable Barrier		<b>First Harmful Event Location</b> 3 1 On Roadway 2 Off Roadway 3 Shoulder 4 Median 6 Gore 7 Separator 8 In Parking Lane or Zone 9 Outside Right-of-way 10 Roadside 88 Unknown		
<b>First Harmful Event Relation to Junction</b> 4 1 Non-Junction 2 Intersection 3 Intersection-Related 4 Driveway/Alley Access Related		<b>Contributing Circumstances: Road</b> 1 9 Worn, Travel-Polished Surface 10 Road Surface Condition (wet, icy, snow, slush, etc.) 11 Obstruction in Roadway 12 Debris 13 Traffic Control Device Inoperative, Missing or Obscured 14 Non-Highway Work 77 Other, Explain in Narrative 88 Unknown		<b>Contributing Circumstances: Environment</b> 1 1 None 2 Weather Conditions 3 Physical Obstruction(s) 4 Glare		<b>Work Zone Related</b> 1 1 No 2 Yes 88 Unknown		<b>Crash in Work Zone</b> 1 1 Before the First Work Zone Warning Sign 2 Advance Warning Area 3 Transition Area 4 Activity Area 5 Termination Area		
<b>Type of Work Zone</b> 1 Lane Closure 2 Lane Shift/Crossover 3 Work on Shoulder or Median 4 Intermittent or Moving Work 77 Other, Explain in Narrative		<b>Workers in Work Zone</b> 1 1 No 2 Yes 88 Unknown		<b>Law Enforcement In Work Zone</b> 1 1 No 2 Officer Present 3 Law Enforcement Vehicle Only Present						
<b>WITNESSES</b>										
NAME		ADDRESS		CITY & STATE		ZIP CODE				
NAME		ADDRESS		CITY & STATE		ZIP CODE				
NAME		ADDRESS		CITY & STATE		ZIP CODE				
<b>NON VEHICLE PROPERTY DAMAGE</b>										
VEHICLE #	PERSON #	PROPERTY DAMAGE - OTHER THAN VEHICLE	EST. AMOUNT	OWNER'S NAME <input type="checkbox"/> (Check if Business)	ADDRESS	CITY & STATE	ZIP CODE			
VEHICLE #	PERSON #	PROPERTY DAMAGE - OTHER THAN VEHICLE	EST. AMOUNT	OWNER'S NAME <input type="checkbox"/> (Check if Business)	ADDRESS	CITY & STATE	ZIP CODE			



<b>PERSON #</b> 1		<b>REPORTING AGENCY CASE NUMBER</b> 20625-17		<b>HSMV CRASH REPORT NUMBER</b> 82347739																								
1 Driver 2 Non-Motorist 3 Passenger		<b>VEHICLE #</b> 2	<b>NAME</b> Rita Ann Gonzalez		<b>PHONE NUMBER</b> 386-693-4420																							
<b>CURRENT ADDRESS (Number and Street)</b> 600 Madison Green Cir #601			<b>CITY &amp; STATE</b> Palm Coast, FL		<b>ZIP CODE</b> 32164																							
<b>DATE OF BIRTH</b> 10/7/63		<b>SEX:</b> 1 Male 2 Female 88 Unknown	<b>DRIVER LICENSE NUMBER</b> G52472163886	<b>STATE</b> IL	<b>EXPIRES</b> 10/7/12																							
			<b>INJURY SEVERITY (INJ)</b> 1 None 2 Possible 3 Non-incapacitating 4 Incapacitating 5 Fatal (within 30 days) 6 Non-Traffic Fatality		3																							
<b>DRIVER</b>																												
<b>DL Type</b> 7 1A 2B 3C 4 D/Chauffeur 5 E/Operator 6 F/Oper - Rest 7 None		<b>Required Endorsements</b> 2 1 Yes 2 No 3 No Req. Endorsement		<b>Driver's Actions at Time of Crash</b>																								
<b>Driver Distracted By</b> 1 1 Not Distracted 2 Electronic Communication Devices (cell phone, etc.) 3 Other Electronic Device (navigation device, DVD player)		<b>4 Other Inside the Vehicle</b> (explain in narrative) 5 External Distraction (outside the vehicle, explain in narrative) 6 Texting 7 Inattentive 88 Unknown		<b>1st</b> 21 1 No Contributing Action 2 Operated MV in Careless or Negligent Manner 3 Failed to Yield Right-of-Way 4 Improper Backing 6 Improper Turn 10 Followed too Closely 11 Ran Red Light 12 Drove too Fast for Conditions 13 Ran Stop Sign 15 Improper Passing 17 Exceeded Posted Speed 21 Wrong Side of Wrong Way 25 Failed to Keep in Proper Lane																								
<b>Driver Vision Obstructions</b> 1 1 Vision Not Obscured 2 Inclement Weather 3 Parked/Stopped Vehicle 4 Trees/Crops/Bushes		<b>5 Load on Vehicle</b> 6 Building/Fixed Object 7 Signs/Billboards 8 Fog		<b>9 Smoke</b> 10 Glare 77 All Other, Explain in Narrative																								
<b>DRIVER OR PASSENGER</b>																												
<b>Motor Vehicle Seating Position:</b> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Seat</th> <th>Row</th> <th>Other</th> </tr> <tr> <td>1 Left</td> <td>1 Front</td> <td>1 Not Applicable</td> </tr> <tr> <td>2 Middle</td> <td>2 Second</td> <td>2 Sleeper Section of Truck Cab</td> </tr> <tr> <td>3 Right</td> <td>3 Third</td> <td>3 Other Enclosed Cargo Area</td> </tr> <tr> <td>77 Other</td> <td>4 Fourth</td> <td>4 Unenclosed Cargo Area</td> </tr> <tr> <td>(explain in narrative)</td> <td>77 Other Row</td> <td>5 Trailing Unit</td> </tr> <tr> <td>88 Unknown</td> <td>88 Unknown</td> <td>6 Riding on Motor Vehicle Exterior (non-trailing unit)</td> </tr> <tr> <td></td> <td></td> <td>88 Unknown</td> </tr> </table>		Seat	Row	Other	1 Left	1 Front	1 Not Applicable	2 Middle	2 Second	2 Sleeper Section of Truck Cab	3 Right	3 Third	3 Other Enclosed Cargo Area	77 Other	4 Fourth	4 Unenclosed Cargo Area	(explain in narrative)	77 Other Row	5 Trailing Unit	88 Unknown	88 Unknown	6 Riding on Motor Vehicle Exterior (non-trailing unit)			88 Unknown	<b>LOCATION: SEAT ROW OTHER</b> (LOC) 77 77		<b>Helmet Use (HU)</b> 3 1 DOT-Compliant Motorcycle Helmet 2 Other Helmet 3 No Helmet
Seat	Row	Other																										
1 Left	1 Front	1 Not Applicable																										
2 Middle	2 Second	2 Sleeper Section of Truck Cab																										
3 Right	3 Third	3 Other Enclosed Cargo Area																										
77 Other	4 Fourth	4 Unenclosed Cargo Area																										
(explain in narrative)	77 Other Row	5 Trailing Unit																										
88 Unknown	88 Unknown	6 Riding on Motor Vehicle Exterior (non-trailing unit)																										
		88 Unknown																										
		<b>Ejection (EJECT)</b> 2 1 Not Ejected 2 Ejected, Totally 3 Ejected, Partially 4 Not Applicable 88 Unknown	<b>Air Bag Deployed (ABD)</b> 1 1 Not Applicable 2 Not Deployed 3 Deployed-Front 4 Deployed-Side																									
			<b>Eye Protection (EP)</b> 2 1 Yes 2 No 3 Not Applicable																									
			<b>Restraint Systems (RS)</b> 1 Not Applicable 2 None Used - Motor Vehicle Occupant 3 Shoulder and Lap Belt Used 4 Shoulder Belt Only Used 5 Lap Belt Only Used 6 Restraint Used - Type Unknown 7 Child Restraint System - Forward Facing 8 Child Restraint System - Rear Facing 9 Booster Seat 10 Child Restraint Type Unknown 77 Other, Explain in Narrative																									
<b>NON-MOTORIST</b>																												
<b>Non-Motorist Description</b> 3 1 Pedestrian 2 Other Pedestrian (wheelchair, person in a building, skater, pedestrian conveyance, etc.) 3 Bicyclist 4 Other Cyclist 5 Occupant of Motor Vehicle Not in Transport (parked, etc.) 6 Occupant of a Non-Motor Vehicle Transportation Device 7 Unknown Type of Non-Motorist		<b>Non-Motorist Location At Time of Crash</b> 10 1 Intersection - Marked Crosswalk 2 Intersection - Unmarked Crosswalk 3 Intersection - Other 4 Midblock - Marked Crosswalk 5 Travel Lane - Other Location 6 Bicycle Lane 7 Shoulder/Roadside		<b>Action Prior to Crash</b> 4 5 Walking/Cycling on Sidewalk 6 In Roadway - Other (working, playing, etc.) 7 Adjacent to Roadway (e.g., shoulder, median) 8 Going to or from School (K-12) 9 Working in Trafficway (incident response) 10 None 77 Other, Explain in Narrative 88 Unknown																								
<b>Safety Equipment</b> 1 None 2 Helmet 3 Protective Pads Used (elbows, knees, shins, etc.) 4 Reflective Clothing (jacket, backpack, etc.)		<b>5 Lighting</b> 6 Not Applicable 77 Other, Explain in Narrative 88 Unknown		<b>Non-Motorist Actions/Circumstances</b> 1st 9 1 No Improper Action 2 Dart/Dash 3 Failure to Yield Right-of-Way 4 Failure to Obey Traffic Signs, Signals, or Officer 5 In Roadway Improperly (standing, lying, working, playing) 6 Disabled Vehicle Related (working on, pushing, leaving/approaching)																								
		<b>2nd</b> 12 7 Entering/Exiting Parked/Standing Vehicle 8 Inattentive (talking, eating, etc.) 9 Not Visible (dark clothing, no lighting, etc.)																										
<b>ALCOHOL/DRUG/EMS</b>																												
<b>SUSPECTED ALCOHOL USE:</b> 1 No 2 Yes 88 Unknown		<b>ALCOHOL TESTED:</b> 1 Test Not Given 2 Test Refused 3 Test Given 88 Unknown, if Tested		<b>ALCOHOL TEST TYPE:</b> 1 Blood 2 Breath 3 Urine 77 Other, Explain in Narrative																								
		<b>ALCOHOL TEST RESULT:</b> 1 Pending 2 Completed 88 Unknown		<b>BAC</b>																								
		<b>SUSPECTED DRUG USE:</b> 1 No 2 Yes 88 Unknown		<b>DRUG TESTED:</b> 1 Test Not Given 2 Test Refused 3 Test Given 88 Unknown, if Tested																								
		<b>DRUG TEST TYPE:</b> 1 Blood 3 Urine 77 Other, Explain in Narrative		<b>DRUG TEST RESULT:</b> 1 Positive 2 Negative 3 Pending 88 Unknown																								
<b>SOURCE OF TRANSPORT TO MEDICAL FACILITY</b> 1 Not Transported 2 EMS 3 Law Enforcement 77 Other, Explain in Narrative		<b>EMS AGENCY NAME OR ID</b> 2 Rescue 92		<b>EMS RUN NUMBER</b> 2783																								
		<b>MEDICAL FACILITY TRANSPORTED TO</b> Florida Hospital Flagler																										
<b>ADDITIONAL PASSENGERS</b>																												
<b>PERSON #</b>	<b>VEHICLE #</b>	<b>NAME</b>	<b>DATE OF BIRTH</b>	<b>INJ</b>	<b>SEX</b>																							
<b>CURRENT ADDRESS (Number and Street)</b>			<b>CITY &amp; STATE</b>		<b>ZIP CODE</b>																							
<b>SOURCE OF TRANSPORT TO MEDICAL FACILITY</b> 1 Not Transported 2 EMS 3 Law Enforcement 77 Other, Explain in Narrative			<b>EMS AGENCY NAME OR ID</b>		<b>EMS RUN NUMBER</b>																							
<b>PERSON #</b>	<b>VEHICLE #</b>	<b>NAME</b>	<b>DATE OF BIRTH</b>	<b>INJ</b>	<b>SEX</b>																							
<b>CURRENT ADDRESS (Number and Street)</b>			<b>CITY &amp; STATE</b>		<b>ZIP CODE</b>																							
<b>SOURCE OF TRANSPORT TO MEDICAL FACILITY</b> 1 Not Transported 2 EMS 3 Law Enforcement 77 Other, Explain in Narrative			<b>EMS AGENCY NAME OR ID</b>		<b>EMS RUN NUMBER</b>																							



<b>VEHICLE #</b> 2		<b>Check if Commercial</b> <input type="checkbox"/>		<b>REPORTING AGENCY CASE NUMBER</b> 20625-12		<b>HSMV CRASH REPORT NUMBER</b> 62347739		
1 Vehicle in Transport 2 Parked Motor Vehicle 3 Working Vehicle		<b>VEHICLE LICENSE NUMBER</b> S14001	<b>STATE</b> FL	<b>REGISTRATION EXPIRES</b> 12/1912	<b>Check if Permanent Registration</b> <input type="checkbox"/>	<b>VIN</b> JM1NB353410207948		
<b>Hit and Run</b> 1 No 2 Yes 88 Unknown	<b>YEAR</b> 2001	<b>MAKE</b> Mazda	<b>MODEL</b> Miata	<b>STYLE</b> 2D	<b>COLOR</b> BLK	<b>DAMAGE:</b> 1 Disabling 2 Functional 3 None	<b>EST. AMOUNT</b> 4 Minor 88 Unknown 4 \$100.00	
<b>INSURANCE COMPANY</b> State Farm		<b>INSURANCE POLICY NUMBER</b> 129873259		<b>Towed due to Damage:</b> 1 No 2 Yes	<b>VEHICLE REMOVED BY</b> Driver	<b>1 Rotation 2 Owner Request 3 Driver 4 Other, Explain in Narrative</b> 3		
<b>NAME OF VEHICLE OWNER (Check if Business)</b> Carmen Milagros Miranda		<b>CURRENT ADDRESS</b> 4 Broadmore Cir.		<b>CITY &amp; STATE</b> Palm Coast, FL		<b>ZIP CODE</b> 32164		
<b>TRAILER #</b>	<b>LICENSE NUMBER</b>	<b>STATE</b>	<b>REGISTRATION EXPIRES</b>	<b>Check if Permanent Registration</b>	<b>VIN</b>	<b>YEAR</b>	<b>MAKE</b>	
<b>TRAILER #</b>	<b>LICENSE NUMBER</b>	<b>STATE</b>	<b>REGISTRATION EXPIRES</b>	<b>Check if Permanent Registration</b>	<b>VIN</b>	<b>YEAR</b>	<b>MAKE</b>	
<b>VEHICLE TRAVELING</b> N <input type="checkbox"/> S <input type="checkbox"/> E <input checked="" type="checkbox"/> W <input type="checkbox"/> Off-Road <input type="checkbox"/> Unknown <input type="checkbox"/>		<b>ON STREET, ROAD, HIGHWAY</b> E State Road 100				<b>AT EST. SPEED</b> 20	<b>POSTED SPEED</b> 45	<b>TOTAL LANES</b> 2
<b>HAZ. MAT. RELEASED</b> 1 No 2 Yes 88 Unknown		<b>HAZ. MAT. PLACARD</b> 1 No 2 Yes 88 Unknown		<b>HAZ. MAT. NUMBER</b>		<b>HAZ. MAT. CLASS</b>		
<b>MOTOR CARRIER NAME</b>		<b>US DOT NUMBER</b>		<b>Area of Initial Impact</b>		<b>Most Damaged Area</b>		
<b>MOTOR CARRIER ADDRESS</b>		<b>CITY &amp; STATE</b> Palm Coast, FL		<b>ZIP CODE</b> 32164		<b>PHONE NUMBER</b> 386-446-6974		
<b>Vehicle Body Type</b> 1 Passenger Car 2 Passenger Van 3 Pickup 7 Motor Home 8 Bus 11 Motorcycle 12 Moped 13 All Terrain Vehicle (ATV)		<b>Trafficway</b> 1 Two-Way, Not Divided 2 Two-Way, Not Divided, with a Continuous Left Turn Lane 3 Two-Way, Divided, Unprotected (painted >4 feet) Median 4 Two-Way, Divided, Positive Median Barrier 5 One-Way Trafficway 88 Unknown		<b>Commercial Motor Vehicle Configuration</b> 1 Vehicle 10,000 lbs or less Placarded for Hazardous Materials 2 Single-Unit Truck (2-axle and GVWR more than 10,000 lbs (4,536 kg)) 3 Single-Unit Truck (3 or more axles) 4 Truck Pulling Trailer(s) 5 Truck Tractor (bobtail) 6 Truck Tractor/Semi-Trailer 7 Truck Tractor/Double Truck		<b>Cargo Body Type</b> 3 Van/Enclosed Box 4 Hopper 5 Pole-Trailer 6 Cargo Tank 7 Flatbed 8 Dump 9 Concrete Mixer 10 Auto Transport 11 Garbage/Refuse 12 Log		
<b>Comm/Non-Commercial</b> 1 Interstate Carrier 2 Intrastate Carrier 3 Not in Commerce/Government 4 Not in Commerce/Other Truck		<b>Trailer Type</b> 1 Single Semi Trailer 2 Tandem Semi Trailer 3 Tank Trailer 4 Saddle Mount/Trailer 5 Boat Trailer 6 Utility Trailer 7 House Trailer		<b>Emergency Vehicle Use</b> 1 No 2 Yes 88 Unknown				
<b>Most Harmful Event</b> 1 Overtaken/Rollover 2 Fire/Explosion 3 Immersion 4 Jackknife 5 Cargo/Equipment Loss or Shift 6 Fell/Jumped From Motor Vehicle 7 Thrown or Falling Object 8 Ran into Water/ Canal 9 Other Non-Collision		<b>Collision with Non-Fixed Object</b> 10 Pedestrian 11 Pedalcycle 12 Railway Vehicle (train, engine) 13 Animal 14 Motor Vehicle in Transport 15 Parked Motor Vehicle 16 Work Zone/Maintenance Equipment 17 Struck By Falling, Shifting Cargo or Anything Set in Motion by Motor Vehicle 18 Other Non-Fixed Object		<b>Collision Fixed Object</b> 19 Impact Attenuator/Crash Cushion 20 Bridge Overhead Structure 21 Bridge Pier or Support 22 Bridge Rail 23 Culvert 24 Curb 25 Ditch 26 Embankment 27 Guardrail Face 28 Guardrail End		<b>Sequence of Events</b> 1st 2nd 3rd 4th		
<b>Roadway Grade</b> 1 Level 2 Hillcrest 3 Uphill 4 Downhill 5 Sag (bottom)		<b>Roadway Alignment</b> 1 Straight 2 Curve Right 3 Curve Left		<b>Vehicle Maneuver Action</b> 1 Straight Ahead 2 Turning Left 3 Backing 4 Turning Right 5 Changing Lanes 6 Parked 8 Making U-Turn 11 Overtaking/ Passing		<b>Traffic Control Device For This Vehicle</b> 1 No Controls 4 School Zone Sign/ Device 5 Traffic Control Signal 6 Stop Sign 7 Yield Sign		
<b>Special Function of Motor Vehicle</b> 1 No Special Function 2 Farm Vehicle 3 Police 7 Taxi 8 Military		<b>Vehicle Defects</b> 1 None 2 Brakes 3 Tires 4 Lights (head, signal, tail) 6 Steering 7 Wipers 9 Exhaust System 10 Body, Doors 11 Power Train		<b>Vehicle Defects</b> 12 Suspension 13 Wheels 14 Windows/ Windshield 15 Mirrors 16 Truck Coupling/ Trailer Hitch/ Safety Chains 77 Other, Explain in Narrative 88 Unknown				
<b>VIOLATIONS</b>								
<b>PERSON #</b>	<b>NAME OF VIOLATOR</b>	<b>FL STATUTE NUMBER</b>	<b>CHARGE</b>	<b>CITATION NUMBER</b>				
<b>PERSON #</b>	<b>NAME OF VIOLATOR</b>	<b>FL STATUTE NUMBER</b>	<b>CHARGE</b>	<b>CITATION NUMBER</b>				
<b>PERSON #</b>	<b>NAME OF VIOLATOR</b>	<b>FL STATUTE NUMBER</b>	<b>CHARGE</b>	<b>CITATION NUMBER</b>				



<b>PERSON #</b> 2		<b>REPORTING AGENCY CASE NUMBER</b> 20625-12		<b>HSMV CRASH REPORT NUMBER</b> 82347739	
1 Driver 2 Non-Motorist 3 Passenger		<b>VEHICLE #</b> 1	<b>NAME</b> Carmen Milagros Miranda		<b>PHONE NUMBER</b> 386-446-6974
<b>CURRENT ADDRESS (Number and Street)</b> 4 Broadmore Cir.			<b>CITY &amp; STATE</b> Palm Coast, FL		<b>ZIP CODE</b> 32164
<b>DATE OF BIRTH</b> 12/19/53		<b>SEX:</b> 1 Male 2 Female 88 Unknown	<b>DRIVER LICENSE NUMBER</b> M653113539590		<b>STATE</b> FL
<b>EXPIRES</b> 12/19/19		<b>INJURY SEVERITY (INJ)</b> 1 None 2 Possible 3 Non-incapacitating 4 Incapacitating 5 Fatal (within 30 days) 6 Non-Traffic Fatality		1	
<b>DRIVER</b>					
<b>DL Type</b> 5		<b>Required Endorsements</b> 2		<b>Driver's Actions at Time of Crash</b>	
<b>Driver Distracted By</b> 1		<b>Driver Vision Obstructions</b> 1		<b>Condition At Time of Crash</b> 1	
<b>DRIVER OR PASSENGER</b>					
<b>Motor Vehicle Seating Position:</b>		<b>LOCATION: SEAT ROW OTHER</b>		<b>Restraint Systems (RS)</b>	
<b>Seat</b>		<b>Row</b>		<b>Other</b>	
1 Left 2 Middle 3 Right 77 Other (explain in narrative) 88 Unknown		1 Front 2 Second 3 Third 4 Fourth 77 Other Row 88 Unknown		1 Not Applicable 2 Sleeper Section of Truck Cab 3 Other Enclosed Cargo Area 4 Unenclosed Cargo Area 5 Trailing Unit 6 Riding on Motor Vehicle Exterior (non-trailing unit) 88 Unknown	
<b>NON MOTORIST</b>					
<b>Non-Motorist Description</b>		<b>Non-Motorist Location At Time of Crash</b>		<b>Action Prior to Crash</b>	
1 Pedestrian 2 Other Pedestrian (wheelchair, person in a building, skater, pedestrian conveyance, etc.) 3 Bicyclist 4 Other Cyclist 5 Occupant of Motor Vehicle Not in Transport (parked, etc.) 6 Occupant of a Non-Motor Vehicle Transportation Device 7 Unknown Type of Non-Motorist		1 Intersection - Marked Crosswalk 2 Intersection - Unmarked Crosswalk 3 Intersection - Other 4 Midblock - Marked Crosswalk 5 Travel Lane - Other Location 6 Bicycle Lane 7 Shoulder/Roadside 8 Sidewalk 9 Median/Crossing Island 10 Driveway Access 11 Shared-Use Path or Trail 12 Non-Trafficway Area 77 Other, Explain in Narrative 88 Unknown		1 Crossing Roadway 2 Waiting to Cross Roadway 3 Walking/Cycling Along Roadway with Traffic (in or adjacent to travel lane) 4 Walking/Cycling Along Roadway Against Traffic (in or adjacent to travel lane) 5 Walking/Cycling on Sidewalk 6 In Roadway - Other (working, playing, etc.) 7 Adjacent to Roadway (e.g., shoulder, median) 8 Going to or from School (K-12) 9 Working in Trafficway (incident response) 10 None 77 Other, Explain in Narrative 88 Unknown	
<b>SAFETY EQUIPMENT</b>					
1 None 2 Helmet 3 Protective Pads Used (elbows, knees, shins, etc.) 4 Reflective Clothing (jacket, backpack, etc.)		5 Lighting 6 Not Applicable 77 Other, Explain in Narrative 88 Unknown		7 Entering/Exiting Parked/Standing Vehicle 8 Inattentive (talking, eating, etc.) 9 Not Visible (dark clothing, no lighting, etc.) 10 Improper Turn/Merge 11 Improper Passing 12 Wrong-Way Riding or Walking 77 Other, Explain in Narrative 88 Unknown	
<b>ALCOHOL/DRUG/EMS</b>					
<b>SUSPECTED ALCOHOL USE:</b> 1 No 2 Yes 88 Unknown		<b>ALCOHOL TESTED:</b> 1 Test Not Given 2 Test Refused 3 Test Given 88 Unknown, if Tested		<b>ALCOHOL TEST TYPE:</b> 1 Blood 2 Breath 3 Urine 77 Other, Explain in Narrative	
<b>SOURCE OF TRANSPORT TO MEDICAL FACILITY</b> 1 Not Transported 2 EMS 3 Law Enforcement 77 Other, Explain in Narrative 88 Unknown		<b>EMS AGENCY NAME OR ID</b>		<b>EMS RUN NUMBER</b>	
<b>ADDITIONAL PASSENGERS</b>					
<b>PERSON #</b>		<b>VEHICLE #</b>		<b>NAME</b>	
DATE OF BIRTH		INI		SEX	
LOC: S		R		O	
EJECT		HU		EP	
ABD		RS			
<b>CURRENT ADDRESS (Number and Street)</b>					
<b>CITY &amp; STATE</b>					
<b>ZIP CODE</b>					
<b>SOURCE OF TRANSPORT TO MEDICAL FACILITY</b> 1 Not Transported 2 EMS 3 Law Enforcement 77 Other, Explain in Narrative 88 Unknown					
<b>EMS AGENCY NAME OR ID</b>					
<b>EMS RUN NUMBER</b>					
<b>MEDICAL FACILITY TRANSPORTED TO</b>					
<b>PERSON #</b>					
<b>VEHICLE #</b>					
<b>NAME</b>					
DATE OF BIRTH					
INI					
SEX					
LOC: S					
R					
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EJECT					
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EP					
ABD					
RS					
<b>CURRENT ADDRESS (Number and Street)</b>					
<b>CITY &amp; STATE</b>					
<b>ZIP CODE</b>					
<b>SOURCE OF TRANSPORT TO MEDICAL FACILITY</b> 1 Not Transported 2 EMS 3 Law Enforcement 77 Other, Explain in Narrative 88 Unknown					
<b>EMS AGENCY NAME OR ID</b>					
<b>EMS RUN NUMBER</b>					
<b>MEDICAL FACILITY TRANSPORTED TO</b>					



# NARRATIVE

REPORTING AGENCY CASE NUMBER

20625-12

HSMV CRASH REPORT NUMBER

82347739

Driver of vehicle two stated that she was traveling east bound on SR 100 attempting to turn into the Kangaroo parking lot. She advised that as she turned in a bicycle ran into her vehicle. She advised she did not see the bicycle coming. She advised she was slowing down to make her turn so she was only traveling approximately 5 mph.

The bicyclist, Rita Gonzalez, advised she was riding west bound on the east bound side, heading home from the store. She advised that she was crossing the entrance to the Kangaroo when a small vehicle turned into her. She fell off the bicycle and was complaining of leg and hip pain. She advised she hit her head on the vehicle and had some head pain as well. She was not wearing a helmet and did not have any lights on her bicycle. She advised she is from Illinois and wasn't aware that she had to have lights on her bike.

Rita was transported to Florida Hospital Flagler. The driver of vehicle two did not complain of any injuries. Rita's bicycle was taken to the Flagler County Sheriff's Office for safe keeping. Carmen's vehicle had minor damage and was drivable.

## ADDITIONAL PASSENGERS

PERSON #	VEHICLE #	NAME	DATE OF BIRTH	INI	SEX	LOC: S	R	O	EJECT	HU	EP	ABD	RS

CURRENT ADDRESS (Number and Street)

CITY & STATE

ZIP CODE

SOURCE OF TRANSPORT TO MEDICAL FACILITY

1 Not Transported  
2 EMS 3 Law Enforcement  
77 Other, Explain in Narrative 88 Unknown

☐

EMS AGENCY NAME OR ID

EMS RUN NUMBER

MEDICAL FACILITY TRANSPORTED TO

PERSON # VEHICLE # NAME

DATE OF BIRTH

INI

SEX

LOC: S

R

O

EJECT

HU

EP

ABD

RS

CURRENT ADDRESS (Number and Street)

CITY & STATE

ZIP CODE

SOURCE OF TRANSPORT TO MEDICAL FACILITY

1 Not Transported  
2 EMS 3 Law Enforcement  
77 Other, Explain in Narrative 88 Unknown

☐

EMS AGENCY NAME OR ID

EMS RUN NUMBER

MEDICAL FACILITY TRANSPORTED TO

## ADDITIONAL VIOLATIONS

PERSON #	NAME OF VIOLATOR	FL STATUTE NUMBER	CHARGE	CITATION NUMBER

PERSON #	NAME OF VIOLATOR	FL STATUTE NUMBER	CHARGE	CITATION NUMBER

## REPORTING OFFICER

ID/BADGE NUMBER RANK & NAME

DEPARTMENT

FHP SO PD OTHER

510

D/S J. Garcia D/S J. Gonzalez

Flagler County

☐ ☒ ☐ ☐

HSMV 90010 S (N/D) (rev. 10/10)

DIAGRAM

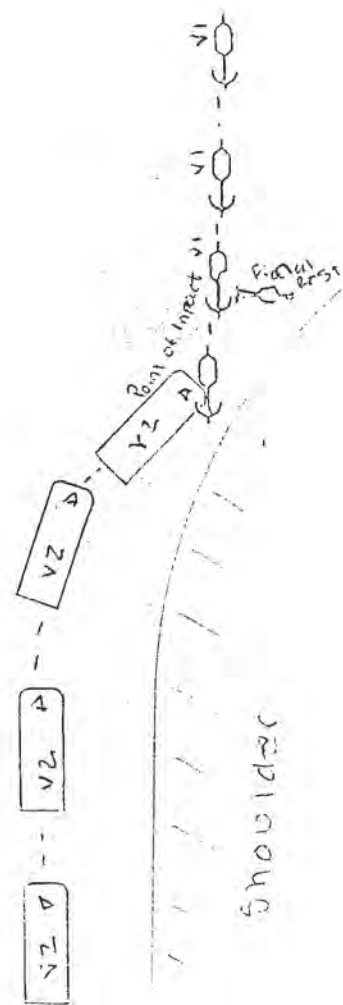


Not to Scale

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Median

Median



6125 E 52nd



<b>VEHICLE #</b> 1		<b>Check if Commercial</b> <input type="checkbox"/>		<b>REPORTING AGENCY CASE NUMBER</b> 20625-12		<b>HSMV CRASH REPORT NUMBER</b> 823 47739	
1 Vehicle in Transport 2 Parked Motor Vehicle 3 Working Vehicle		<b>VEHICLE LICENSE NUMBER</b>		<b>STATE</b>		<b>REGISTRATION EXPIRES</b>	
Hit and Run 1 No 2 Yes 88 Unknown		<b>YEAR</b>		<b>MAKE</b> Huffy		<b>MODEL</b> Santa Fe	
<b>STYLE</b> Bike		<b>COLOR</b> Pur		<b>DAMAGE:</b> 1 Disabling 2 Functional 3 None		<b>EST. AMOUNT</b> \$100.00	
<b>INSURANCE COMPANY</b>		<b>INSURANCE POLICY NUMBER</b>		<b>Towed due to Damage:</b> 1 No 2 Yes		<b>VEHICLE REMOVED BY</b> Law Enforcement	
<b>NAME OF VEHICLE OWNER</b> (Check if Business) <input type="checkbox"/>		<b>CURRENT ADDRESS</b> 600 Madison Green Cir. #601		<b>CITY &amp; STATE</b> Palm Coast, FL		<b>ZIP CODE</b> 32164	
<b>TRAILER #</b>		<b>LICENSE NUMBER</b>		<b>STATE</b>		<b>REGISTRATION EXPIRES</b>	
<b>TRAILER #</b>		<b>LICENSE NUMBER</b>		<b>STATE</b>		<b>REGISTRATION EXPIRES</b>	
<b>VEHICLE TRAVELING</b> N S E W Off-Road Unknown		<b>ON STREET, ROAD, HIGHWAY</b> E State Road 100		<b>AT EST. SPEED</b> 5		<b>POSTED SPEED</b> 45	
<b>HAZ. MAT. RELEASED</b> 1 No 2 Yes 88 Unknown		<b>HAZ. MAT. PLACARD</b> 1 No 2 Yes 88 Unknown		<b>HAZ. MAT. NUMBER</b>		<b>HAZ. MAT. CLASS</b>	
<b>MOTOR CARRIER NAME</b>		<b>US DOT NUMBER</b>		<b>Area of Initial Impact</b>		<b>Most Damaged Area</b>	
<b>MOTOR CARRIER ADDRESS</b>		<b>CITY &amp; STATE</b> Palm Coast, FL		<b>ZIP CODE</b> 32164		<b>PHONE NUMBER</b> 386-693-4420	
<b>Vehicle Body Type</b> 77		<b>Trafficway</b> 4		<b>Commercial Motor Vehicle Configuration</b>		<b>Tractor Configuration</b>	
<b>Comm/Non-Commercial</b>		<b>Trailer Type</b>		<b>Cargo Body Type</b>		<b>Emergency Vehicle Use</b>	
<b>Most Harmful Event</b> 14		<b>Collision with Non-Fixed Object</b>		<b>Collision Fixed Object</b>		<b>Sequence of Events</b>	
<b>Roadway Grade</b> 1		<b>Vehicle Maneuver Action</b>		<b>Traffic Control Device For This Vehicle</b> 1		<b>Vehicle Defects</b> 4	
<b>Special Function of Motor Vehicle</b>		<b>Violations</b>					



# FLORIDA TRAFFIC CRASH REPORT

LONG FORM ☐ SHORT FORM ☐ UPDATE ☒

HIGHWAY SAFETY & MOTOR VEHICLES,  
TRAFFIC CRASH RECORDS  
NEIL KIRKMAN BUILDING, TALLAHASSEE, FL 32399-0537

(Electronic Version)

Date of Crash 19/Mar/2013 02:35 PM	Time of Crash 19/Mar/2013 02:35 PM	Date of Report 23/Aug/2013 10:20 AM	Invest. Agency Report Number FHPG13OFF011056	HSMV Crash Report Number 82875338
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## CRASH IDENTIFIERS

County Code 61	City Code 53	County of Crash FLAGLER	Place or City of Crash PALM COAST	Within City Limits Yes	Time Reported 19/Mar/2013 02:42 PM	Time Dispatched 19/Mar/2013 02:42 PM
Time on Scene 19/Mar/2013 02:52 PM	Time Cleared Scene 19/Mar/2013 05:05 PM	Completed Yes	Reason (if Investigation NOT Completed)			Notified By Law Enforcement

## ROADWAY INFORMATION

Crash Occured On Street, Road, Highway STATE ROAD 100			At Street Address# 1	At Latitude 29.475941557162901	and Longitude -81.176261681323595
At Feet	Or Miles .10	Direction East	From Intersection With Street, Road, Highway COUNTY ROAD 5A(OLD KINGS RD)		Or From Milepost #
Road System Identifier 3 State		Type Of Shoulder 2 Unpaved	Type Of Intersection 1 Not at Intersection		

## CRASH INFORMATION (Check if Pictures Taken)

☒

Light Condition 1 Daylight	Weather Condition 1 Clear	Roadway Surface Condition 1 Dry	School Bus Related 1 No	Manner Of Collision 1 Front to Rear
First Harmful Event Type	First Harmful Event 11	First Harmful Event Location 1 On Roadway	Within Interchange No	First Harmful Event Relation to Junction 1 Non-Junction
Contributing Circumstances: Road 1 None		Contributing Circumstances: Road		Contributing Circumstances: Road
Contributing Circumstances: Environment 1 None		Contributing Circumstances: Environment		Contributing Circumstances: Environment
Work Zone Related 1 No	Crash In Work Zone	Type Of Work Zone	Workers In Work Zone	Law Enforcement In Work Zone

## VEHICLE (Check if Commercial)

☐

Vehicle 1	Motor Vehicle Type 1 Vehicle in Transport	Hit and Run 1 No	Veh License Number 906JJB	State FL	Reg. Expires 31/Dec/2013	Permanent Reg. No	VIN 1FTNE2EWXBDA59455
Year 2011	Make FORD	Model E150 VAN	Style VN	Color WHI	Extent of Damage Functional	Est. Damage 1500	Towed Due To Damage No
Insurance Company OWNERS INS COMPANY				Insurance Policy Number 4794955300			
Name of Vehicle Owner (Check Box If Business) KIMBLE ELECTRIC COMPANY			Current Address (Number and Street) 873 HULL RD UNIT 12			City and State ORMOND BEACH FL	
						Zip Code 32174	
Trailer One:	License Number	State	Reg. Expires	Permanent Reg.	VIN	Year	Make
Trailer Two:	License Number	State	Reg. Expires	Permanent Reg.	VIN	Year	Make
Vehicle Traveling:	Direction East	On Street, Road, Highway STATE ROAD 100				At Est. Speed 55	Posted Speed 55
CMV Configuration		Cargo Body Type		Area of Initial Impact		Most Damaged Area	
Comm GVWR/GCWR		Trailer Type (trailer one)		Trailer Type (trailer two)			
Haz. Mat. Release	Haz Mat. Placard	Number	Class				
Motor Carrier Name			US DOT Number				
Motor Carrier Address			City and State			Zip Code	Phone Number
Comm/Non-Commercial	Vehicle Body Type 2 Passenger Van	Vehicle Defects (one) 1 None		Vehicle Defects (two)		Emergency Vehicle Use 1 No	Special Function of MV 1 No Special Function
Vehicle Maneuver Action 1 Straight Ahead	Trafficway 3 Two-Way, Divided, Unprotected (painted >4 feet) Median	Roadway Grade 1 Level	Roadway Alignment 1 Straight	Most Harmful Event 2 Collision with Non-Fixed Object		Most Harmful Event Detail 11 Pedalcycle	
Traffic Control Device For This Vehicle 1 No Controls	First (1) Sequence of Events 2 Collision with Non-Fixed Object 11 Pedalcycle		Second (2) Sequence of Events		Third (3) Sequence of Events		Fourth (4) Sequence of Events

## PERSON RECORD

Person# 1	Description 1 Driver	Vehicle # 1	Name ROBERT CARLTON LITTLE	Date of Birth 24/Mar/1980	Sex 1 Male	Phone Number	Re-Exam No
Address 16 SEA FLOWER PATH		City PALM COAST	State FL	Zip Code 32164			

Date of Crash 19/Mar/2013 02:35 PM	Date of Report 19/Mar/2013 02:35 PM	Invest. Agency Report Number FHPG13OFF011056	HSMV Crash Report Number 82875338
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Driver License Number L340763801040		State FL	Expires 24/Mar/2020	DL Type 5 E/Operator	Req. End. 3 No Req Endorsement	Injury Severity 1 None	Ejection 1 Not Ejected	
Restraint System 3 Shoulder and Lap Belt Used		Air Bag Deployed 2 Not Deployed	Helmet Use	Eye Protection 3 Not Applicable	Seating Location Seat 1 Left	Seating Location Row 1 Front	Seating Location Other 1 Not Applicable	
Drivers Actions at Time of Crash (first) 2 Operated MV in Careless or Negligent Manner			Drivers Actions at Time of Crash (second)			Driver Distracted By 88 Unknown	Vision Obstruction 1 Vision Not Obscured	
Drivers Actions at Time of Crash (third)			Drivers Actions at Time of Crash (fourth)			Drivers Condition at Time of Crash 1 Apparently Normal		
Suspected Alcohol Use 1 No	Alcohol Tested 3 Test Given	Alcohol Test Type 1 Blood	Alcohol Test Result 2 Completed	BAC 0.00	Suspected Drug Use 1 No	Drug Tested 3 Test Given	Drug Test Type 1 Blood	Drug Test Result 2 Negative
Source of Transport to Medical Facility 1 Not Transported		EMS Agency Name or ID			EMS Run Number		Medical Facility Transported To	

#### PERSON RECORD

Person# 2	Description 2 Non-Motorist	Name FREDRICK J MARTINEZ	Date of Birth 04/Dec/1961	Sex 1 Male	Injury Severity 5 Fatal (within 30 days)	Phone Number		
Address 209 S 4TH STREET APT A		City FLAGLER BEACH	State FL		Zip Code 32136			
Non-Motorist Description Detail 3 Bicyclist		Non-Motorist Action Prior to Crash 3 Walking/Cycling Along Roadway with Traffic (in or adjacent to travel lane)			Non-Motorist Location at Time of Crash 6 Bicycle Lane			
Non-Motorist Actions/Circumstance (First) 1 No Improper Action		Non-Motorist Actions/Circumstance (Second)		Non-Motorist Safety Equipment (One) 1 None		Non-Motorist Safety Equipment (Two)		
Suspected Alcohol Use 88 Unknown	Alcohol Tested 3 Test Given	Alcohol Test Type 1 Blood	Alcohol Test Result 2 Completed	BAC 0.00	Suspected Drug Use 88 Unknown	Drug Tested 3 Test Given	Drug Test Type 1 Blood	Drug Test Result 2 Negative
Source of Transport to Medical Facility 1 Not Transported		EMS Agency Name or ID		EMS Run Number		Medical Facility Transported To		

#### WITNESSES

Name TIMOTHY L STRANGE	Address 2302 BEACH VILLAGE CIRCLE	City PALM COAST	State FL	Zip Code 32164
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#### VIOLATIONS

Person# 1	Name ROBERT CARLTON LITTLE	Florida Statute Number 316.1925(1)	Charge CARELESS DRIVING	Citation 9362-WPR
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#### NON VEHICLE PROPERTY DAMAGE

Vehicle#	Person#	Property Damage - Other Than Vehicle NEXT AVALON INTERNATIONAL BICYCLE VIN#GS	Est. Amount 150	Business No	Owner's Name FREDRICK J MARTINEZ	Address 209 S 4TH STREET APT A	City & State FLAGLER BEACH FL	Zip Code 32136
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#### NARRATIVE

ID Number 1898	Rank TROOPER	Name R.D. LEWIS	Troop / Post G	Officer Agency FLORIDA HIGHWAY PATROL	Phone Number	Date Created Mar 27, 2013
<p>V01 was traveling eastbound on State Road 100 occupying the right lane approaching a pedicyclist that was also traveling eastbound on State Road 100 occupying the marked bicycle lane. V01's driver stated he sneezed which caused V01 to swerve right and enter the bicycle lane. V01's right front bumper struck the pedicyclist. V01 came to final rest on the State Road 100's south shoulder. The pedicyclist came to final rest on State Road 100's eastbound bicycle lane.</p> <p>Frederick J. Martinez, DOB 12/4/1961. was pronounced at the scene by Flagler County Fire Rescue Paramedic Bolster, on 3/19/2013, at 2:46pm.</p> <p>Traffic Homicide Case # FHP 713-61-007; Traffic Homicide Investigator Cpl. Peter G. Young. Photographs by Cpl. Peter G. Young.</p>						

#### REPORTING OFFICER

ID/Badge # 0838	Rank and Name CORPORAL P.G. YOUNG	Department FLORIDA HIGHWAY PATROL	Type of Department FHP
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STATE ROAD 100

GRASS MEDIAN

FINAL REST



FINAL REST



BICYCLE FINAL REST



V01 STRIKING BICYCLE



BIKE LANE





# FLORIDA TRAFFIC CRASH REPORT

LONG FORM ☒ SHORT FORM ☐ UPDATE ☐  
(Shaded Areas)

MAIL TO: DEPARTMENT OF HIGHWAY SAFETY & MOTOR VEHICLES  
TRAFFIC CRASH RECORDS, NEIL KIRKMAN BUILDING  
TALLAHASSEE, FL 32399-0537

TOTAL # OF VEHICLE SECTION(S) 1  
TOTAL # OF PERSON SECTION(S) 2  
TOTAL # OF NARRATIVE SECTION(S) 1

CRASH DATE 10/26/13		TIME OF CRASH 7:35pm		DATE OF REPORT 10/26/13		REPORTING AGENCY CASE NUMBER 82071-13		HSMV CRASH REPORT NUMBER 84019335		
<b>CRASH IDENTIFIERS</b>										
COUNTY CODE 61	CITY CODE 53	COUNTY OF CRASH Flagler			PLACE OR CITY OF CRASH Palm Coast			CHECK IF WITHIN CITY LIMITS <input checked="" type="checkbox"/>	TIME REPORTED 7:45pm	TIME DISPATCHED 7:46pm
TIME ON SCENE 7:51pm		TIME CLEARED SCENE 9:06pm		CHECK IF COMPLETED <input checked="" type="checkbox"/>	REASON (If Investigation NOT Complete)				Notified By: 1 Motorist 2 Law Enforcement <u>2</u>	
<b>ROADWAY INFORMATION (CHOOSE ONLY 1 OF 4 OPTIONS)</b>										
CRASH OCCURRED ON STREET, ROAD, HIGHWAY Memorial Medical Parkway					AT STREET ADDRESS # 1		AT LATITUDE AND LONGITUDE 2			
FEET	MILES	N S E W <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		AT / FROM INTERSECTION WITH STREET, ROAD, HIGHWAY 3 State Route 100 westbound				OR FROM MILEPOST # 4		
<b>Road System Identifier</b>			<b>Type of Shoulder</b>			<b>Type of Intersection</b>				
4 1 Interstate 2 U.S. 3 State 4 County 5 Local 6 Turnpike/Toll 7 Forest Road 8 Private Roadway 9 Parking Lot 77 Other, Explain in Narrative			2 1 Paved 2 Unpaved 3 Curb			3 1 Not at Intersection 2 Four-Way Intersection 3 T-Intersection 4 Y-Intersection 5 Traffic Circle 6 Roundabout 7 Five-Point, or More 77 Other, Explain in Narrative				
<b>CRASH INFORMATION (CHECK IF PICTURES TAKEN) <input type="checkbox"/></b>										
<b>Light Condition</b>		<b>Weather Condition</b>		<b>Roadway Surface Condition</b>		<b>School Bus Related</b>		<b>Manner of Collision/Impact</b>		
5 1 Daylight 2 Dusk 3 Dawn 4 Dark-Lighted 5 Dark-Not Lighted 6 Dark-Unknown Lighting 77 Other, Explain in Narrative 88 Unknown		1 1 Clear 2 Cloudy 3 Rain 4 Fog, Smog, Smoke 5 Sleet/Hail/ Freezing Rain 6 Blowing Sand, Soil, Dirt 7 Severe Crosswinds 77 Other, Explain in Narrative		1 1 Dry 2 Wet 4 Ice/Frost 5 Oil 6 Mud, Dirt, Gravel 7 Sand 8 Water (standing/moving) 77 Other, Explain in Narrative 88 Unknown		1 1 No 2 Yes, School Bus Directly Involved 3 Yes, School Bus Indirectly Involved		3 1 Front to Rear 2 Front to Front 3 Angle 4 Sideswipe, Same Direction 5 Sideswipe, Opposite Direction 6 Rear to Side 7 Rear to Rear 77 Other, Explain in Narrative 88 Unknown		
<b>First Harmful Event</b>		<b>Non-Collision</b>		<b>Collision Non-Fixed Object</b>		<b>Collision with Fixed Object</b>		<b>First Harmful Event Location</b>		
11 1 No 2 Yes 88 Unknown		1 Overturn/Rollover 2 Fire/Explosion 3 Immersion 4 Jackknife 5 Cargo/Equipment Loss or Shift 6 Fell/Jumped From Motor Vehicle 7 Thrown or Falling Object 8 Ran into Water/Canal 9 Other Non-Collision		10 Pedestrian 11 Pedalcycle 12 Railway Vehicle (train, engine) 13 Animal 14 Motor Vehicle in Transport 15 Parked Motor Vehicle 16 Work Zone/Maintenance Equipment 17 Struck By Falling, Shifting Cargo 18 Other Non-Fixed Object		19 Impact Attenuator/Crash Cushion 20 Bridge Overhead Structure 21 Bridge Pier or Support 22 Bridge Rail 23 Culvert 24 Curb 25 Ditch 26 Embankment 27 Guardrail Face 28 Guardrail End 29 Cable Barrier 30 Concrete Traffic Barrier 31 Other Traffic Barrier 32 Tree (standing) 33 Utility Pole/Light Support 34 Traffic Sign Support 35 Traffic Signal Support 36 Other Post, Pole or Support 37 Fence 38 Mailbox 39 Other Fixed Object (wall, building, tunnel, etc.)		1 1 On Roadway 2 Off Roadway 3 Shoulder 4 Median 6 Gore 7 Separator 8 In Parking Lane or Zone 9 Outside Right-of-way 10 Roadside 88 Unknown		
<b>First Harmful Event within Interchange</b>		<b>First Harmful Event Relation to Junction</b>		<b>Contributing Circumstances: Road</b>		<b>Contributing Circumstances: Environment</b>				
1 1 Non-Junction 2 Intersection 3 Intersection-Related 4 Driveway/Alley Access Related		2 5 Railway Grade Crossing 14 Entrance/Exit Ramp 15 Crossover - Related 16 Shared-Use Path or Trail 17 Acceleration/Deceleration Lane 18 Through Roadway 77 Other, Explain in Narrative 88 Unknown		1 1 None 4 Work Zone (construction/maintenance/utility) 6 Shoulders (none, low, soft, high) 7 Rut, Holes, Bumps 9 Worn, Travel-Polished Surface 10 Road Surface Condition (wet, icy, snow, slush, etc.) 11 Obstruction in Roadway 12 Debris 13 Traffic Control Device Inoperative, Missing or Obscured 14 Non-Highway Work 77 Other, Explain in Narrative 88 Unknown		1 1 None 2 Weather Conditions 3 Physical Obstruction(s) 4 Glare 5 Animal(s) in Roadway 77 Other, Explain in Narrative 88 Unknown				
<b>Work Zone Related</b>		<b>Crash in Work Zone</b>		<b>Type of Work Zone</b>		<b>Workers in Work Zone</b>		<b>Law Enforcement in Work Zone</b>		
1 1 No 2 Yes 88 Unknown		n/a 1 Before the First Work Zone Warning Sign 2 Advance Warning Area 3 Transition Area 4 Activity Area 5 Termination Area		n/a 1 Lane Closure 2 Lane Shift/Crossover 3 Work on Shoulder or Median 4 Intermittent or Moving Work 77 Other, Explain in Narrative		n/a 1 No 2 Yes 88 Unknown		n/a 1 No 2 Officer Present 3 Law Enforcement Vehicle Only Present		
<b>WITNESSES</b>										
NAME Jacob Boyer		ADDRESS 34 Piedmont Drive		CITY & STATE Palm Coast, FL		ZIP CODE 32164				
NAME Martin Bacon		ADDRESS 33 Ryapple Lane		CITY & STATE Palm Coast, FL		ZIP CODE 32164				
NAME		ADDRESS		CITY & STATE		ZIP CODE				
<b>NON VEHICLE PROPERTY DAMAGE</b>										
VEHICLE #	PERSON #	PROPERTY DAMAGE - OTHER THAN VEHICLE	EST. AMOUNT	OWNER'S NAME <input type="checkbox"/> (Check if Business)	ADDRESS	CITY & STATE	ZIP CODE			
VEHICLE #	PERSON #	PROPERTY DAMAGE - OTHER THAN VEHICLE	EST. AMOUNT	OWNER'S NAME <input type="checkbox"/> (Check if Business)	ADDRESS	CITY & STATE	ZIP CODE			



<b>VEHICLE #</b> 1		<b>Check if Commercial</b> <input type="checkbox"/>		<b>REPORTING AGENCY CASE NUMBER</b> 82071-13		<b>HSMV CRASH REPORT NUMBER</b> 84019335		
1 Vehicle in Transport 2 Parked Motor Vehicle 3 Working Vehicle		<b>VEHICLE LICENSE NUMBER</b> K656QG	<b>STATE</b> FL	<b>REGISTRATION EXPIRES</b> 05/22/14	<b>Check if Permanent Registration</b> <input checked="" type="checkbox"/>	<b>VIN</b> WVGMM77L05D072861		
<b>Hit and Run</b> 1 No 2 Yes 88 Unknown	<b>YEAR</b> 2005	<b>MAKE</b> VOLKS	<b>MODEL</b> TOUREG	<b>STYLE</b> SUV	<b>COLOR</b> BLACK	<b>DAMAGE:</b> 1 Disabling 2 Functional 3 None	<b>EST. AMOUNT</b> 4 Minor 88 Unknown 3	
<b>INSURANCE COMPANY</b> GEICO		<b>INSURANCE POLICY NUMBER</b> 428470593809170		<b>Towed due to Damage:</b> 1 No 2 Yes	<b>VEHICLE REMOVED BY</b>		<b>1 Rotation</b> <b>2 Owner Request</b> <b>3 Driver</b> <b>4 Other, Explain in Narrative</b>	
<b>NAME OF VEHICLE OWNER</b> (Check if Business) <input type="checkbox"/>		<b>CURRENT ADDRESS</b>		<b>CITY &amp; STATE</b>		<b>ZIP CODE</b>		
MARTA ABDUSATTAROV		17 ROCKY LANE				32164		
<b>TRAILER #</b>	<b>LICENSE NUMBER</b>	<b>STATE</b>	<b>REGISTRATION EXPIRES</b>	<b>Check if Permanent Registration</b> <input type="checkbox"/>	<b>VIN</b>	<b>YEAR</b>	<b>MAKE</b>	
<b>TRAILER #</b>	<b>LICENSE NUMBER</b>	<b>STATE</b>	<b>REGISTRATION EXPIRES</b>	<b>Check if Permanent Registration</b> <input type="checkbox"/>	<b>VIN</b>	<b>YEAR</b>	<b>MAKE</b>	
<b>VEHICLE TRAVELING</b> N <input type="checkbox"/> S <input checked="" type="checkbox"/> E <input type="checkbox"/> W <input type="checkbox"/> Off-Road <input type="checkbox"/> Unknown <input type="checkbox"/>		<b>ON STREET, ROAD, HIGHWAY</b> MEMORIAL MEDICAL PARKWAY				<b>AT EST. SPEED</b> 5 MPH	<b>POSTED SPEED</b> 30	<b>TOTAL LANES</b> 4
<b>HAZ. MAT. RELEASED</b> 1 No 2 Yes 88 Unknown	<b>HAZ. MAT. PLACARD</b> 1 No 2 Yes 88 Unknown	<b>HAZ. MAT. NUMBER</b>	<b>HAZ. MAT. CLASS</b>	<b>Area of Initial Impact</b>		<b>Most Damaged Area</b>		
<b>MOTOR CARRIER NAME</b>		<b>US DOT NUMBER</b>		<b>MOTOR CARRIER ADDRESS</b>		<b>CITY &amp; STATE</b>	<b>ZIP CODE</b>	
							<b>PHONE NUMBER</b>	
<b>Vehicle Body Type</b> 1 Passenger Car 2 Passenger Van 3 Pickup 7 Motor Home 8 Bus 11 Motorcycle 12 Moped 13 All Terrain Vehicle (ATV)		<b>1</b> 15 Low Speed Vehicle 16 (Sport) Utility Vehicle 17 Cargo Van (10,000 lbs (4,536 kg) or less) 18 Motor Coach 19 Other Light Trucks (10,000 lbs (4,536 kg) or less) 20 Medium/Heavy Trucks (more than 10,000 lbs (4,536 kg)) 21 Farm Labor Vehicle 77 Other, Explain in Narrative 88 Unknown		<b>1</b> <b>Trafficway</b> 1 Two-Way, Not Divided 2 Two-Way, Not Divided, with a Continuous Left Turn Lane 3 Two-Way, Divided, Unprotected (painted >4 feet) Median 4 Two-Way, Divided, Positive Median Barrier 5 One-Way Trafficway 88 Unknown		<b>N/A</b> <b>Commercial Motor Vehicle Configuration</b> 1 Vehicle 10,000 lbs or less Placarded for Hazardous Materials 2 Single-Unit Truck (2-axle and GVWR more than 10,000 lbs (4,536 kg)) 3 Single-Unit Truck (3 or more axles) 4 Truck Pulling Trailer(s) 5 Truck Tractor (bobtail) 6 Truck Tractor/Semi-Trailer 7 Truck Tractor/Double Truck		
<b>Comm/Non-Commercial</b> 1 Interstate Carrier 2 Intrastate Carrier 3 Not in Commerce/Government 4 Not in Commerce/Other Truck		<b>Trailer Type</b> 1 Single Semi Trailer 2 Tandem Semi Trailer 3 Tank Trailer 4 Saddle Mount/Trailer 5 Boat Trailer 6 Utility Trailer 7 House Trailer		<b>Cargo Body Type</b> 1 No Cargo 2 Bus 3 Van/Enclosed Box 4 Hopper 5 Pole-Trailer 6 Cargo Tank 7 Flatbed 8 Dump 9 Concrete Mixer 10 Auto Transport 11 Garbage/Refuse 12 Log		<b>13 Intermodal Container Chassis</b> 14 Vehicle Towing Another Vehicle 15 Not Applicable (vehicle 10,000 lbs (4,536 kg) or less not displaying HM placard) 77 Other, Explain in Narrative 88 Unknown		
<b>Most Harmful Event</b> 11 Sequence of Events 1st 11 2nd 3rd 4th		<b>Non-Collision</b> 1 Overturn/Rollover 2 Fire/Explosion 3 Immersion 4 Jackknife 5 Cargo/Equipment Loss or Shift 6 Fell/Jumped From Motor Vehicle 7 Thrown or Falling Object 8 Ran into Water/ Canal 9 Other Non-Collision [40-46 Sequence of Events only] 40 Equipment Failure (blown tire, brake failure, etc.) 41 Separation of Units 42 Ran Off Roadway, Right 43 Ran Off Roadway, Left 44 Cross Median 45 Cross Centerline 46 Downhill Runaway		<b>Collision with Non-Fixed Object</b> 10 Pedestrian 11 Pedalcycle 12 Railway Vehicle (train, engine) 13 Animal 14 Motor Vehicle in Transport 15 Parked Motor Vehicle 16 Work Zone/Maintenance Equipment 17 Struck By Falling, Shifting Cargo or Anything Set in Motion by Motor Vehicle 18 Other Non-Fixed Object		<b>Collision Fixed Object</b> 19 Impact Attenuator/Crash Cushion 20 Bridge Overhead Structure 21 Bridge Pier or Support 22 Bridge Rail 23 Culvert 24 Curb 25 Ditch 26 Embankment 27 Guardrail Face 28 Guardrail End		
<b>Roadway Grade</b> 1 Level 2 Hillcrest 3 Uphill 4 Downhill 5 Sag (bottom)		<b>Roadway Alignment</b> 1 Straight 2 Curve Right 3 Curve Left		<b>Vehicle Maneuver Action</b> 1 Straight Ahead 2 Turning Left 3 Turning Right 4 Backing 5 Turning Right 6 Changing Lanes 8 Parked 10 Making U-Turn 11 Overtaking/Passing 13 Stopped in Traffic 14 Slowing 15 Negotiating a Curve 16 Leaving Traffic Lane 17 Entering Traffic Lane 77 Other, Explain in Narrative 88 Unknown		<b>Traffic Control Device For This Vehicle</b> 5 1 No Controls 4 School Zone Sign/Device 5 Traffic Control Signal 6 Stop Sign 7 Yield Sign		
<b>Special Function of Motor Vehicle</b> 1 No Special Function 2 Farm Vehicle 3 Police 7 Taxi 8 Military		<b>9 Ambulance</b> 10 Fire Truck 11 Farm Labor Transport 12 School Bus 13 Transit/Commuter Bus		<b>14 Intercity Bus</b> 15 Charter/Tour Bus 16 Shuttle Bus 17 Farm Labor Bus 88 Unknown		<b>Vehicle Defects</b> 1 None 2 Brakes 3 Tires 4 Lights (head, signal, tail) 6 Steering 7 Wipers 9 Exhaust System 10 Body, Doors 11 Power Train 12 Suspension 13 Wheels 14 Windshields/Windshield 15 Mirrors 16 Truck Coupling/Trailer Hitch/Safety Chains 77 Other, Explain in Narrative 88 Unknown		
<b>VIOLATIONS</b>								
<b>PERSON #</b>	<b>NAME OF VIOLATOR</b>	<b>FL STATUTE NUMBER</b>	<b>CHARGE</b>	<b>CITATION NUMBER</b>				
<b>PERSON #</b>	<b>NAME OF VIOLATOR</b>	<b>FL STATUTE NUMBER</b>	<b>CHARGE</b>	<b>CITATION NUMBER</b>				
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<b>PERSON #</b> 1		<b>REPORTING AGENCY CASE NUMBER</b> 82071-13		<b>HSMV CRASH REPORT NUMBER</b> 84019335																									
1 Driver 2 Non-Motorist 3 Passenger		<b>VEHICLE #</b> 1 <b>NAME</b> MARTA ABDUSATTAROV	<b>PHONE NUMBER</b> 386-682-9233		Check if Recommend <input type="checkbox"/> Driver Re-exam <input type="checkbox"/>																								
<b>CURRENT ADDRESS (Number and Street)</b> 17 ROCKY LANE			<b>CITY &amp; STATE</b> PALM COAST, FL		<b>ZIP CODE</b> 32137																								
<b>DATE OF BIRTH</b> 04/16/82		<b>SEX:</b> 1 Male 2 Female 88 Unknown	<b>DRIVER LICENSE NUMBER</b> A132540826360	<b>STATE</b> FL <b>EXPIRES</b> 02/20/14	<b>INJURY SEVERITY (INJ)</b> 1 None 2 Possible 3 Non-incapacitating 4 Incapacitating 5 Fatal (within 30 days) 6 Non-Traffic Fatality																								
<b>DRIVER</b>																													
<b>DL Type</b> 5 1 A 2 B 3 C 4 D/Chauffeur 5 E/Operator 6 E/Oper - Rest 7 None		<b>Required Endorsements</b> 2 1 Yes 2 No 3 No Req. Endorsement		<b>Driver's Actions at Time of Crash</b> 1st 1 No Contributing Action 2 Operated MV in Careless or Negligent Manner 3 Failed to Yield Right-of-Way 4 Improper Backing 6 Improper Turn 10 Followed too Closely 11 Ran Red Light 12 Drove too Fast for Conditions 13 Ran Stop Sign 15 Improper Passing 17 Exceeded Posted Speed 21 Wrong Side of Wrong Way 25 Failed to Keep in Proper Lane 26 Ran off Roadway 27 Disregarded other Traffic Sign 28 Disregarded Other Road Markings 29 Over-Correcting/Over-Steering 30 Swerved or Avoided : Due to Wind, Slippery Surface, MV, Object, Non-Motorist in Roadway, etc. 31 Operated MV in Erratic, Reckless or Aggressive Manner 77 Other Contributing Action																									
<b>Driver Distracted By</b> 1 1 Not Distracted 2 Electronic Communication Devices (cell phone, etc.) 3 Other Electronic Device (navigation device, DVD player)		<b>Other Inside the Vehicle (explain in narrative)</b> 4 Other Inside the Vehicle (explain in narrative) 5 External Distraction (outside the vehicle, explain in narrative) 6 Texting 7 Inattentive 88 Unknown		<b>Condition At Time of Crash</b> 1 1 Apparently Normal 3 Asleep or Fatigued 5 Ill (sick) or Fainted 6 Seizure, Epilepsy, Blackout 7 Physically Impaired, angry, disturbed, etc.) 8 Emotional (depression, angry, disturbed, etc.) 9 Under the Influence of Medications/Drugs/Alcohol 77 Other, Explain in Narrative 88 Unknown																									
<b>Driver Vision Obstructions</b> 1 1 Vision Not Obscured 2 Inclement Weather 3 Parked/Stopped Vehicle 4 Trees/Crops/Bushes		5 Load on Vehicle 6 Building/Fixed Object 7 Signs/Billboards 8 Fog		9 Smoke 10 Glare 77 All Other, Explain in Narrative																									
<b>DRIVER OR PASSENGER</b>																													
<b>Motor Vehicle Seating Position:</b> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Seat</th> <th>Row</th> <th>Other</th> </tr> <tr> <td>1 Left</td> <td>1 Front</td> <td>1 Not Applicable</td> </tr> <tr> <td>2 Middle</td> <td>2 Second</td> <td>2 Sleeper Section of Truck Cab</td> </tr> <tr> <td>3 Right</td> <td>3 Third</td> <td>3 Other Enclosed Cargo Area</td> </tr> <tr> <td>77 Other (explain in narrative)</td> <td>4 Fourth</td> <td>4 Unenclosed Cargo Area</td> </tr> <tr> <td>88 Unknown</td> <td>77 Other Row</td> <td>5 Trailing Unit</td> </tr> <tr> <td></td> <td>88 Unknown</td> <td>6 Riding on Motor Vehicle Exterior (non-trailing unit)</td> </tr> <tr> <td></td> <td></td> <td>88 Unknown</td> </tr> </table>		Seat	Row	Other	1 Left	1 Front	1 Not Applicable	2 Middle	2 Second	2 Sleeper Section of Truck Cab	3 Right	3 Third	3 Other Enclosed Cargo Area	77 Other (explain in narrative)	4 Fourth	4 Unenclosed Cargo Area	88 Unknown	77 Other Row	5 Trailing Unit		88 Unknown	6 Riding on Motor Vehicle Exterior (non-trailing unit)			88 Unknown	<b>LOCATION: SEAT ROW OTHER (LOC)</b> 1 1 1		<b>Helmet Use (HU)</b> N/A 1 DOT-Compliant Motorcycle Helmet 2 Other Helmet 3 No Helmet	
Seat	Row	Other																											
1 Left	1 Front	1 Not Applicable																											
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		88 Unknown																											
		<b>Ejection (EJECT)</b> 1 1 Not Ejected 2 Ejected, Totally 3 Ejected, Partially 4 Not Applicable 88 Unknown		<b>Eye Protection (EP)</b> N/A 1 Yes 2 No 3 Not Applicable																									
		<b>Air Bag Deployed (ABD)</b> 2 1 Not Applicable 2 Not Deployed 3 Deployed-Front 4 Deployed-Side		<b>Restraint Systems (RS)</b> 3 1 Not Applicable 2 None Used - Motor Vehicle Occupant 3 Shoulder and Lap Belt Used 4 Shoulder Belt Only Used 5 Lap Belt Only Used 6 Restraint Used - Type Unknown 7 Child Restraint System - Forward Facing 8 Child Restraint System - Rear Facing 9 Booster Seat 10 Child Restraint Type Unknown 77 Other, Explain in Narrative																									
<b>NON MOTORIST</b>																													
<b>Non-Motorist Description</b> 1 Pedestrian 2 Other Pedestrian (wheelchair, person in a building, skater, pedestrian conveyance, etc.) 3 Bicyclist 4 Other Cyclist 5 Occupant of Motor Vehicle Not in Transport (parked, etc.) 6 Occupant of a Non-Motor Vehicle Transportation Device 7 Unknown Type of Non-Motorist		<b>Non-Motorist Location At Time of Crash</b> 1 Intersection - Marked Crosswalk 2 Intersection - Unmarked Crosswalk 3 Intersection - Other 4 Midblock - Marked Crosswalk 5 Travel Lane - Other Location 6 Bicycle Lane 7 Shoulder/Roadside 8 Sidewalk 9 Median/Crossing Island 10 Driveway Access 11 Shared-Use Path or Trail 12 Non-Trafficway Area 77 Other, Explain in Narrative 88 Unknown		<b>Action Prior to Crash</b> 1 Crossing Roadway 2 Waiting to Cross Roadway 3 Walking/Cycling Along Roadway with Traffic (in or adjacent to travel lane) 4 Walking/Cycling Along Roadway Against Traffic (in or adjacent to travel lane) 5 Walking/Cycling on Sidewalk 6 In Roadway -- Other (working, playing, etc.) 7 Adjacent to Roadway (e.g., shoulder, median) 8 Going to or from School (K-12) 9 Working in Trafficway (incident response) 10 None 77 Other, Explain in Narrative 88 Unknown																									
<b>Safety Equipment</b> 1 None 2 Helmet 3 Protective Pads Used (elbows, knees, shins, etc.) 4 Reflective Clothing (jacket, backpack, etc.) 5 Lighting 6 Not Applicable 77 Other, Explain in Narrative 88 Unknown		<b>Non-Motorist Actions/Circumstances</b> 1st 1 No Improper Action 2 Dart/Dash 3 Failure to Yield Right-of-Way 4 Failure to Obey Traffic Signs, Signals, or Officer 5 In Roadway Improperly (standing, lying, working, playing) 6 Disabled Vehicle Related (working on, pushing, leaving/approaching) 7 Entering/Exiting Parked/Standing Vehicle 8 Inattentive (talking, eating, etc.) 9 Not Visible (dark clothing, no lighting, etc.)		10 Improper Turn/Merge 11 Improper Passing 12 Wrong-Way Riding or Walking 77 Other, Explain in Narrative 88 Unknown																									
<b>ALCOHOL/DRUG/EMS</b>																													
<b>SUSPECTED ALCOHOL USE:</b> 1 No 2 Yes 88 Unknown		<b>ALCOHOL TESTED:</b> 1 Test Not Given 2 Test Refused 3 Test Given 88 Unknown, if Tested		<b>ALCOHOL TEST TYPE:</b> 1 Blood 2 Breath 3 Urine 77 Other, Explain in Narrative																									
<b>ALCOHOL TEST RESULT:</b> 1 Pending 2 Completed 88 Unknown		<b>BAC</b> N/A		<b>SUSPECTED DRUG USE:</b> 1 No 2 Yes 88 Unknown																									
		<b>DRUG TESTED:</b> 1 Test Not Given 2 Test Refused 3 Test Given 88 Unknown, if Tested		<b>DRUG TEST TYPE:</b> 1 Blood 3 Urine 77 Other, Explain in Narrative																									
		<b>DRUG TEST RESULT:</b> 1 Positive 2 Negative 3 Pending 88 Unknown																											
<b>SOURCE OF TRANSPORT TO MEDICAL FACILITY</b> 1 Not Transported 2 EMS 3 Law Enforcement 77 Other, Explain in Narrative		<b>EMS AGENCY NAME OR ID</b>		<b>FMS RUN NUMBER</b>																									
		<b>MEDICAL FACILITY TRANSPORTED TO</b>																											
<b>ADDITIONAL PASSENGERS</b>																													
<b>PERSON #</b>		<b>VEHICLE #</b>		<b>NAME</b>																									
<b>DATE OF BIRTH</b>		<b>INJ</b>		<b>SEX</b>																									
<b>LOC: S R O</b>		<b>EJECT</b>		<b>HU</b>																									
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<b>PERSON #</b> 2		<b>REPORTING AGENCY CASE NUMBER</b> 82071-13		<b>HSMV CRASH REPORT NUMBER</b> 84019335	
1 Driver 2 Non-Motorist 3 Passenger		<b>VEHICLE #</b> 2	<b>NAME</b> JEFFREY JORDAN BARTLETT		<b>PHONE NUMBER</b> 386-585-2667
<b>CURRENT ADDRESS (Number and Street)</b> 89 RADCLIFFE DRIVE			<b>CITY &amp; STATE</b> PALM COAST, FL		<b>ZIP CODE</b> 32164
<b>DATE OF BIRTH</b> 09/02/97		<b>SEX</b> 1 Male 2 Female 88 Unknown	<b>DRIVER LICENSE NUMBER</b> B634430973220	<b>STATE</b> FL	<b>EXPIRES</b> 09/02/21
				<b>INJURY SEVERITY (INJ)</b> 1 None 2 Possible 3 Non-incapacitating 4 Incapacitating 5 Fatal (within 30 days) 6 Non-Traffic Fatality	3
<b>DRIVER</b>					
<b>DL Type</b> 1 A 2 B 3 C 4 D/Chauffeur 5 E/Operator 6 E/Oper - Rest 7 None		<b>Required Endorsements</b> 1 Yes 2 No 3 No Req. Endorsement		<b>Driver's Actions at Time of Crash</b>	
<b>Driver Distracted By</b> 1 Not Distracted 2 Electronic Communication 3 Other Electronic Device (navigation device, DVD player)		<b>Other Inside the Vehicle</b> (explain in narrative) 4 External Distraction (outside the vehicle, explain in narrative) 5 Testing 6 Inattentive 88 Unknown		<b>Driver's Actions at Time of Crash</b> 1st 1 No Contributing Action 2 Operated MV in Careless or Negligent Manner 3 Failed to Yield Right-of-Way 4 Improper Backing 5 Improper Turn 6 Followed too Closely 7 Ran Red Light 8 Drove too Fast for Conditions 9 Ran Stop Sign 10 Improper Passing 11 Exceeded Posted Speed 12 Wrong Side of Wrong Way 13 Failed to Keep in Proper Lane 2nd 10 Followed too Closely 11 Ran Red Light 12 Drove too Fast for Conditions 13 Ran Stop Sign 14 Improper Passing 15 Exceeded Posted Speed 16 Wrong Side of Wrong Way 17 Failed to Keep in Proper Lane 3rd 1 No Contributing Action 2 Operated MV in Careless or Negligent Manner 3 Failed to Yield Right-of-Way 4 Improper Backing 5 Improper Turn 6 Followed too Closely 7 Ran Red Light 8 Drove too Fast for Conditions 9 Ran Stop Sign 10 Improper Passing 11 Exceeded Posted Speed 12 Wrong Side of Wrong Way 13 Failed to Keep in Proper Lane 4th 1 No Contributing Action 2 Operated MV in Careless or Negligent Manner 3 Failed to Yield Right-of-Way 4 Improper Backing 5 Improper Turn 6 Followed too Closely 7 Ran Red Light 8 Drove too Fast for Conditions 9 Ran Stop Sign 10 Improper Passing 11 Exceeded Posted Speed 12 Wrong Side of Wrong Way 13 Failed to Keep in Proper Lane	
<b>Driver Vision Obstructions</b> 1 Vision Not Obscured 2 Inclement Weather 3 Parked/Stopped Vehicle 4 Trees/Crops/Bushes		<b>5 Load on Vehicle</b> 6 Building/Fixed Object 7 Signs/Billboards 8 Fog		<b>9 Smoke</b> 10 Glare 77 All Other, Explain in Narrative	
<b>DRIVER OR PASSENGER</b>					
<b>Motor Vehicle Seating Position:</b> Seat Row Other 1 Left 1 Front 1 Not Applicable 2 Middle 2 Second 2 Sleeper Section of Truck Cab 3 Right 3 Third 3 Other Enclosed Cargo Area 77 Other 4 Fourth 4 Unenclosed Cargo Area (explain in narrative) 77 Other Row 5 Trailing Unit 88 Unknown 88 Unknown 6 Riding on Motor Vehicle Exterior (non-trailing unit) 88 Unknown 88 Unknown		<b>LOCATION: SEAT ROW OTHER (LOC)</b>		<b>Helmet Use (HU)</b> 1 DOT-Compliant Motorcycle Helmet 2 Other Helmet 3 No Helmet	
				<b>Eye Protection (EP)</b> 1 Yes 2 No 3 Not Applicable	
				<b>Restraint Systems (RS)</b> 1 Not Applicable 2 None Used - Motor Vehicle Occupant 3 Shoulder and Lap Belt Used 4 Shoulder Belt Only Used 5 Lap Belt Only Used 6 Restraint Used - Type Unknown 7 Child Restraint System - Forward Facing 8 Child Restraint System - Rear Facing 9 Booster Seat 10 Child Restraint Type Unknown 77 Other, Explain in Narrative	
				<b>Air Bag Deployed (ABD)</b> 1 Not Applicable 2 Not Deployed 3 Deployed-Front 4 Deployed-Side 5 Deployed-Other (knee, air belt, etc.) 6 Deployed-Combination 7 Deployed Curtain 88 Deployment Unknown	
<b>NON MOTORIST</b>					
<b>Non-Motorist Description</b> 1 Pedestrian 2 Other Pedestrian (wheelchair, person in a building, skater, pedestrian conveyance, etc.) 3 Bicyclist 4 Other Cyclist 5 Occupant of Motor Vehicle Not in Transport (parked, etc.) 6 Occupant of a Non-Motor Vehicle Transportation Device 7 Unknown Type of Non-Motorist		<b>Non-Motorist Location At Time of Crash</b> 1 Intersection - Marked Crosswalk 2 Intersection - Unmarked Crosswalk 3 Intersection - Other 4 Midblock - Marked Crosswalk 5 Travel Lane - Other Location 6 Bicycle Lane 7 Shoulder/Roadside 8 Sidewalk 9 Median/Crossing Island 10 Driveway Access 11 Shared-Use Path or Trail 12 Non-Trafficway Area 77 Other, Explain in Narrative 88 Unknown		<b>Action Prior to Crash</b> 1 Crossing Roadway 2 Waiting to Cross Roadway 3 Walking/Cycling Along Roadway with Traffic (in or adjacent to travel lane) 4 Walking/Cycling Along Roadway Against Traffic (in or adjacent to travel lane) 5 Walking/Cycling on Sidewalk 6 In Roadway -- Other (working, playing, etc.) 7 Adjacent to Roadway (e.g., shoulder, median) 8 Going to or from School (K-12) 9 Working in Trafficway (incident response) 10 None 77 Other, Explain in Narrative 88 Unknown	
<b>Safety Equipment</b> 1 None 2 Helmet 3 Protective Pads Used (elbows, knees, shins, etc.) 4 Reflective Clothing (jacket, backpack, etc.) 5 Lighting 6 Not Applicable 77 Other, Explain in Narrative 88 Unknown		<b>Non-Motorist Actions/Circumstances</b> 1 No Improper Action 2 Dart/Dash 3 Failure to Yield Right-of-Way 4 Failure to Obey Traffic Signs, Signals, or Officer 5 In Roadway Improperly (standing, lying, working, playing) 6 Disabled Vehicle Related (working on, pushing, leaving/approaching) 7 Entering/Exiting Parked/Standing Vehicle 8 Inattentive (talking, eating, etc.) 9 Not Visible (dark clothing, no lighting, etc.) 10 Improper Turn/Merge 11 Improper Passing 12 Wrong-Way Riding or Walking 77 Other, Explain in Narrative 88 Unknown			
<b>ALCOHOL/DRUG/EMS</b>					
<b>SUSPECTED ALCOHOL USE:</b> 1 No 2 Yes 88 Unknown		<b>ALCOHOL TESTED:</b> 1 Test Not Given 2 Test Refused 3 Test Given 88 Unknown, if Tested		<b>ALCOHOL TEST TYPE:</b> 1 Blood 2 Breath 3 Urine 77 Other, Explain in Narrative 88 Unknown	
				<b>ALCOHOL TEST RESULT:</b> 1 Pending 2 Completed 88 Unknown	
				<b>BAC</b>	
				<b>SUSPECTED DRUG USE:</b> 1 No 2 Yes 88 Unknown	
				<b>DRUG TESTED:</b> 1 Test Not Given 2 Test Refused 3 Test Given 88 Unknown, if Tested	
				<b>DRUG TEST TYPE:</b> 1 Blood 3 Urine 77 Other, Explain in Narrative 88 Unknown	
				<b>DRUG TEST RESULT:</b> 1 Positive 2 Negative 3 Pending 88 Unknown	
<b>SOURCE OF TRANSPORT TO MEDICAL FACILITY</b> 1 Not Transported 2 EMS 3 Law Enforcement 77 Other, Explain in Narrative 88 Unknown		<b>EMS AGENCY NAME OR ID</b>		<b>EMS RUN NUMBER</b>	
				<b>MEDICAL FACILITY TRANSPORTED TO</b>	
<b>ADDITIONAL PASSENGERS</b>					
<b>PERSON #</b>		<b>VEHICLE #</b>		<b>NAME</b>	
<b>DATE OF BIRTH</b>		<b>INJ</b>		<b>SEX</b>	
<b>LOC: S R O</b>		<b>EJECT</b>		<b>HU</b>	
<b>EP</b>		<b>ABD</b>		<b>RS</b>	
<b>CURRENT ADDRESS (Number and Street)</b>		<b>CITY &amp; STATE</b>		<b>ZIP CODE</b>	
<b>SOURCE OF TRANSPORT TO MEDICAL FACILITY</b> 1 Not Transported 2 EMS 3 Law Enforcement 77 Other, Explain in Narrative 88 Unknown		<b>EMS AGENCY NAME OR ID</b>		<b>EMS RUN NUMBER</b>	
				<b>MEDICAL FACILITY TRANSPORTED TO</b>	
<b>PERSON #</b>		<b>VEHICLE #</b>		<b>NAME</b>	
<b>DATE OF BIRTH</b>		<b>INJ</b>		<b>SEX</b>	
<b>LOC: S R O</b>		<b>EJECT</b>		<b>HU</b>	
<b>EP</b>		<b>ABD</b>		<b>RS</b>	
<b>CURRENT ADDRESS (Number and Street)</b>		<b>CITY &amp; STATE</b>		<b>ZIP CODE</b>	
<b>SOURCE OF TRANSPORT TO MEDICAL FACILITY</b> 1 Not Transported 2 EMS 3 Law Enforcement 77 Other, Explain in Narrative 88 Unknown		<b>EMS AGENCY NAME OR ID</b>		<b>EMS RUN NUMBER</b>	
				<b>MEDICAL FACILITY TRANSPORTED TO</b>	



# NARRATIVE

REPORTING AGENCY CASE NUMBER

82071-13

HSMV CRASH REPORT NUMBER

84019335

Driver of vehicle #1 was traveling south on Memorial Medical Parkway in the right lane approaching the intersection with westbound State Route 100. Driver of vehicle 1 stopped for a red traffic signal and began to turn right. Person #2 was traveling on the westbound shoulder of State Route 100 on a bicycle and was crossing the intersection with Memorial Medical Parkway. Person #2 had a green traffic signal. The driver of vehicle #1 failed to see person #2 as he crossed the intersection and struck him with the front of vehicle #1. At the time of the crash the weather was clear, light conditions were dark, and person #2 was not wearing reflective clothing nor was his bicycle equipped with a light.

## ADDITIONAL PASSENGERS

PERSON #	VEHICLE #	NAME	DATE OF BIRTH	INJ	SEX	LOC: S	R	O	EJECT	HU	EP	ABD	RS

CURRENT ADDRESS (Number and Street)

CITY & STATE

ZIP CODE

SOURCE OF TRANSPORT TO MEDICAL FACILITY

1 Not Transported  
2 EMS 3 Law Enforcement  
77 Other, Explain in Narrative 88 Unknown

EMS AGENCY NAME OR ID

EMS RUN NUMBER

MEDICAL FACILITY TRANSPORTED TO

PERSON # VEHICLE # NAME

DATE OF BIRTH

INJ

SEX

LOC: S

R

O

EJECT

HU

EP

ABD

RS

CURRENT ADDRESS (Number and Street)

CITY & STATE

ZIP CODE

SOURCE OF TRANSPORT TO MEDICAL FACILITY

1 Not Transported  
2 EMS 3 Law Enforcement  
77 Other, Explain in Narrative 88 Unknown

EMS AGENCY NAME OR ID

EMS RUN NUMBER

MEDICAL FACILITY TRANSPORTED TO

## ADDITIONAL VIOLATIONS

PERSON #	NAME OF VIOLATOR	FL STATUTE NUMBER	CHARGE	CITATION NUMBER

## REPORTING OFFICER

ID/BADGE NUMBER

615

RANK & NAME

Robert D. Thoubboron

DEPARTMENT

Flagler County

FHP SO PD OTHER

☐ ☒ ☐ ☐

DIAGRAM

\* NOT TO SCALE \*

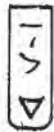
FCSO

CASE # 82071-13



MEMORIAL MEDICAL  
PARKWAY

MEDIAN



BICYCLE LANE

BICYCLE



BICYCLE LANE

STATE ROUT 100

WESTBOUND





# FLORIDA TRAFFIC CRASH REPORT

LONG FORM ☒ SHORT FORM ☐ UPDATE ☐

HIGHWAY SAFETY & MOTOR VEHICLES,  
TRAFFIC CRASH RECORDS  
NEIL KIRKMAN BUILDING, TALLAHASSEE, FL 32399-0537

(Electronic Version)

Date of Crash 14/Aug/2011 11:08 AM	Time of Crash 14/Aug/2011 11:08 AM	Date of Report 14/Aug/2011 11:35 AM	Invest. Agency Report Number FHPG11OFF032126	HSMV Crash Report Number 82054736
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## CRASH IDENTIFIERS

County Code 61	City Code 53	County of Crash FLAGLER	Place or City of Crash PALM COAST	Within City Limits Yes	Time Reported 14/Aug/2011 11:11 AM	Time Dispatched 14/Aug/2011 11:12 AM
Time on Scene 14/Aug/2011 11:17 AM	Time Cleared Scene 14/Aug/2011 12:38 PM	Completed Yes	Reason (if Investigation NOT Completed)			Notified By Law Enforcement

## ROADWAY INFORMATION

Crash Occured On Street, Road, Highway 4800 STATE ROAD 100			At Street Address#	At Latitude 29.475681666666699	and Longitude -81.181946666666704
At Feet	Or Miles .01	Direction East	From Intersection With Street, Road, Highway I95 (STATE ROAD 9)	Or From Milepost #	
Road System Identifier 9 Parking Lot		Type Of Shoulder 1 Paved	Type Of Intersection 3 T-Intersection		

## CRASH INFORMATION (Check if Pictures Taken) ☐

Light Condition 1 Daylight	Weather Condition 1 Clear	Roadway Surface Condition 1 Dry	School Bus Related 1 No	Manner Of Collision 3 Angle
First Harmful Event Type	First Harmful Event 11	First Harmful Event Location 1 On Roadway	Within Interchange Yes	First Harmful Event Relation to Junction 2 Intersection
Contributing Circumstances: Road 1 None		Contributing Circumstances: Road		Contributing Circumstances: Road
Contributing Circumstances: Environment 1 None		Contributing Circumstances: Environment		Contributing Circumstances: Environment
Work Zone Related 1 No	Crash In Work Zone	Type Of Work Zone	Workers In Work Zone	Law Enforcement In Work Zone

## VEHICLE (Check if Commercial) ☐

Vehicle 1	Motor Vehicle Type 1 Vehicle in Transport	Hit and Run 1 No	Veh License Number M447YJ	State FL	Reg. Expires 17/Jul/2011	Permanent Reg. No	VIN 1G1NE52M9WY153354			
Year 1998	Make CHEV	Model MALIBU	Style 4D	Color TAN	Extent of Damage Minor	Est. Damage 50	Towed Due To Damage No	Vehicle Removed By	Rotation	
Insurance Company PROGRESSIVE AMERICAN INSUR CO				Insurance Policy Number 17690701						
Name of Vehicle Owner (Check Box If Business) JENNIFER MICHAEL KEENEY <input type="checkbox"/>			Current Address (Number and Street) 4 RYBAR LN			City and State PALM COAST FL		Zip Code 32164		
Trailer One:	License Number	State	Reg. Expires	Permanent Reg.	VIN	Year	Make	Length	Axles	
Trailer Two:	License Number	State	Reg. Expires	Permanent Reg.	VIN	Year	Make	Length	Axles	
Vehicle Traveling:	Direction North	On Street, Road, Highway 4800 STATE ROAD 100				At Est. Speed 4	Posted Speed 15	Total Lanes 2		
CMV Configuration			Cargo Body Type			Area of Initial Impact		Most Damaged Area		
Comm GVWR/GCWR			Trailer Type (trailer one)			Trailer Type (trailer two)				
Haz. Mat. Release		Haz Mat. Placard	Number	Class						
Motor Carrier Name				US DOT Number						
Motor Carrier Address				City and State				Zip Code		Phone Number
Comm/Non-Commercial	Vehicle Body Type 1 Passenger Car	Vehicle Defects (one) 1 None		Vehicle Defects (two)		Emergency Vehicle Use 1 No		Special Function of MV 1 No Special Function		
Vehicle Maneuver Action 1 Straight Ahead	Trafficway 4 Two-Way, Divided, Positive Median Barrier	Roadway Grade 1 Level		Roadway Alignment 1 Straight		Most Harmful Event 2 Collision with Non-Fixed Object		Most Harmful Event Detail 11 Pedalcycle		
Traffic Control Device For This Vehicle 6 Stop Sign		First (1) Sequence of Events 2 Collision with Non-Fixed Object 11 Pedalcycle		Second (2) Sequence of Events		Third (3) Sequence of Events		Fourth (4) Sequence of Events		

## PERSON RECORD

Person# 1	Description 1 Driver	Vehicle # 1	Name JOHN M PRUETT	Date of Birth 13/May/1977	Sex 1 Male	Phone Number	Re-Exam No
Address 4 RYBAR LN		City PALM COAST	State FL	Zip Code 32164			
Driver License Number P630473771730	State FL	Expires 13/May/2013	DL Type 5 E/Operator	Req. End.	Injury Severity 1 None	Ejection 1 Not Ejected	

Date of Crash <b>14/Aug/2011 11:08 AM</b>	Date of Report <b>14/Aug/2011 11:08 AM</b>	Invest. Agency Report Number <b>FHPG11OFF032126</b>	HSMV Crash Report Number <b>82054736</b>
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Restraint System 3 Shoulder and Lap Belt Used	Air Bag Deployed 2 Not Deployed	Helmet Use	Eye Protection 3 Not Applicable	Seating Location Seat 1 Left	Seating Location Row 1 Front	Seating Location Other 1 Not Applicable		
Drivers Actions at Time of Crash (first) 3 Failed to Yield Right of Way			Drivers Actions at Time of Crash (second)			Driver Distracted By 1 Not Distracted	Vision Obstruction 1 Vision Not Obscured	
Drivers Actions at Time of Crash (third)			Drivers Actions at Time of Crash (fourth)			Drivers Condition at Time of Crash 1 Apparently Normal		
Suspected Alcohol Use 1 No	Alcohol Tested 1 Test Not Given	Alcohol Test Type	Alcohol Test Result	BAC	Suspected Drug Use 1 No	Drug Tested 1 Test Not Given	Drug Test Type	Drug Test Result
Source of Transport to Medical Facility 1 Not Transported		EMS Agency Name or ID NA			EMS Run Number NA		Medical Facility Transported To NA	

#### PERSON RECORD

Person# <b>3</b>	Description <b>3 Passenger</b>	Vehicle # <b>1</b>	Name <b>JENNIFER MICHAEL KEENEY</b>	Date of Birth <b>17/Jul/1976</b>	Sex <b>2 Female</b>	Injury Severity <b>1 None</b>	Ejection <b>1 Not Ejected</b>
Address <b>4 RYBAR LN</b>			City <b>PALM COAST</b>			State <b>FL</b>	Zip Code <b>32164</b>
Restraint System <b>3 Shoulder and Lap Belt Used</b>	Air Bag Deployed <b>2 Not Deployed</b>	Helmet Use	Eye Protection <b>3 Not Applicable</b>	Seating Location Seat <b>3</b>	Seating Location Row <b>1</b>	Seating Location Other <b>1</b>	
Source of Transport to Medical Facility <b>1 Not Transported</b>		EMS Agency Name or ID <b>NA</b>		EMS Run Number <b>NA</b>		Medical Facility Transported To <b>NA</b>	

#### PERSON RECORD

Person# <b>5</b>	Description <b>3 Passenger</b>	Vehicle # <b>1</b>	Name <b>JOHNATHEN KEENEY</b>	Date of Birth <b>18/Jan/2000</b>	Sex <b>1 Male</b>	Injury Severity <b>1 None</b>	Ejection <b>1 Not Ejected</b>
Address <b>4 RYBAR LANE</b>			City <b>PALM COAST</b>			State <b>FL</b>	Zip Code <b>32164</b>
Restraint System <b>3 Shoulder and Lap Belt Used</b>	Air Bag Deployed <b>1 Not Applicable</b>	Helmet Use	Eye Protection <b>3 Not Applicable</b>	Seating Location Seat <b>3</b>	Seating Location Row <b>2</b>	Seating Location Other <b>1</b>	
Source of Transport to Medical Facility <b>1 Not Transported</b>		EMS Agency Name or ID <b>NA</b>		EMS Run Number <b>NA</b>		Medical Facility Transported To <b>NA</b>	

#### PERSON RECORD

Person# <b>4</b>	Description <b>3 Passenger</b>	Vehicle # <b>1</b>	Name <b>AIDEN KEENEY</b>	Date of Birth <b>23/Sep/2003</b>	Sex <b>1 Male</b>	Injury Severity <b>1 None</b>	Ejection <b>1 Not Ejected</b>
Address <b>4 RYBAR LANE</b>			City <b>PALM COAST</b>			State <b>FL</b>	Zip Code <b>32164</b>
Restraint System <b>3 Shoulder and Lap Belt Used</b>	Air Bag Deployed <b>1 Not Applicable</b>	Helmet Use	Eye Protection <b>3 Not Applicable</b>	Seating Location Seat <b>1</b>	Seating Location Row <b>2</b>	Seating Location Other <b>1</b>	
Source of Transport to Medical Facility <b>1 Not Transported</b>		EMS Agency Name or ID <b>NA</b>		EMS Run Number <b>NA</b>		Medical Facility Transported To <b>NA</b>	

#### PERSON RECORD

Person# 2	Description 2 Non-Motorist	Name CHRIS MIKENAS			Date of Birth 01/May/1960	Sex 1 Male	Injury Severity 3 Non-incapacitating	Phone Number	
Address 217 NE TUSCAWILLA AVE		City OCALA		State FL			Zip Code 34470		
Non-Motorist Description Detail 3 Bicyclist			Non-Motorist Action Prior to Crash 7 Adjacent to Roadway (e.g., shoulder, median)			Non-Motorist Location at Time of Crash 77 Other, Explain in Narrative			
Non-Motorist Actions/Circumstance (First) 1 No Improper Action		Non-Motorist Actions/Circumstance (Second)		Non-Motorist Safety Equipment (One) 2 Helmet			Non-Motorist Safety Equipment (Two)		
Suspected Alcohol Use 1 No	Alcohol Tested 1 Test Not Given	Alcohol Test Type	Alcohol Test Result	BAC	Suspected Drug Use 1 No	Drug Tested 1 Test Not Given	Drug Test Type	Drug Test Result	
Source of Transport to Medical Facility 2 EMS		EMS Agency Name or ID F.C.F.R. RESCUE 92		EMS Run Number 110-7523			Medical Facility Transported To FLORIDA HOSPITAL FLAGLER		

#### VIOLATIONS

Person# <b>1</b>	Name <b>JOHN M PRUETT</b>	Florida Statute Number <b>316.123(2)(a)</b>	Charge <b>RAN STOP SIGN</b>	Citation <b>8019-SVH</b>
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#### NON VEHICLE PROPERTY DAMAGE

Vehicle#	Person#	Property Damage - Other Than Vehicle <b>BICYCLE</b>	Est. Amount <b>300</b>	Business <b>No</b>	Owner's Name <b>CHRIS MIKENAS</b>	Address <b>217 NE TUSCAWILLA AVE</b>	City & State <b>OCALA FL</b>	Zip Code <b>34470</b>
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#### NARRATIVE

Date of Crash 14/Aug/2011 11:08 AM	Date of Report 14/Aug/2011 11:08 AM	Invest. Agency Report Number FHPG11OFF032126	HSMV Crash Report Number 82054736
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Officer: D.J. SCHLOSSER  
Date: Aug 16 2011 10:38AM

V01 was stopped in the Chevron parking lot (4800 State Road 100 Palm Coast, Fl. 32164), waiting to enter State Road 100 eastbound. NM01 was traveling west on the State Road 100 eastbound shoulder. V01 proceeded forward without yielding the right of way to bicyclist/pedestrians that were crossing the parking lot. NM01 attempted to travel across the Chevron parking lot. The front of V01 then collided with the left side of NM01 in the Chevron parking lot. V01 came to final rest in the Chevron parking lot facing north. NM01 came to final rest on the State Road 100 eastbound grass shoulder facing southeast. Other: Non Motorist location at time of crash: parking lot.

#### REPORTING OFFICER

ID/Badge # 1864	Rank and Name TROOPER D.J. SCHLOSSER	Department FLORIDA HIGHWAY PATROL	Type of Department FHP
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- A. STATE ROAD 100 WB
- B. STATE ROAD 100 EB
- C. RAISED CONCRETE MEDIAN
- D. CHEVRON PARKING LOT
- E. PAVED SHOULDER
- F. GRASS SHOULDER

