

**TEXAS-AMERICANA
ROAD SAFETY SMALL AREA STUDY
ORANGE COUNTY DISTRICT 6**



**PUBLIC WORKS DEPARTMENT
TRAFFIC ENGINEERING DIVISION**

Ruby Dempsey-Rozier, Manager
John Klimovitch, P.E., County Traffic Engineer
Christine Lofye, P.E., Project Manager
4200 S John Young Parkway ♦ Orlando, FL 32839-9205
407-836-7890 ♦ Fax 407-836-7869
www.orangecountyfl.net

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The following Orange County staff members were participants in the study process, participating in either field reviews or data collection, but in all cases providing valuable knowledge and expertise.

Contributors

Traffic Engineering Division

Christine Lofye, P.E., Project Manager
Darryl Johnson, Assistant Project Manager
Kevin Miller, School Safety Coordinator
Krista Barber, Engineer II
Nadine Sequeira, Administrative Assistant
Arthur Woods, Technician IV
Todd Henderson, Senior CADD Technician

Roads and Drainage Division

Duane Alvarado, Senior Foreman
Elbert Walker, Foreman

Highway Construction Division

Roberto Ng, P.E., Senior Engineer
Guy King, Engineering Inspector III

Neighborhood Preservation Division

Cristina Pichardo-Cruz, Planner II
Levi Stewart, intern

Transportation Planning Division

Alissa Barber-Torres, Ph.D., AICP, Chief Planner
Yvette Brandt, AICP, Senior Planner

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I. Introduction

The Orange County Traffic Engineering Division has conducted a comprehensive evaluation in the Texas-Americana area of safety for all road users, including drivers of vehicles, pedestrians, bicyclists, and transit users. The study was completed entirely in-house by Orange County staff. The study consisted of daytime drives and walks of the identified study area roadways, analysis of crash records for study area roadways and intersections, the collection of citizen concerns at a community meeting, and input from the District 6 County Commissioner.

Identified traffic safety issues were evaluated and appropriate improvements were determined. The improvements were classified as either a short-term high priority safety improvement, short-term low or medium priority safety improvement, or long-term capital improvement. The results of the study are presented herein.

II. Purpose

The purpose of this road safety small area study is to evaluate the study focus roads and intersections in the Texas-Americana area of Orange County from a safety perspective and recommend improvement strategies.

According to the Federal Highway Administration “a Road Safety Audit (RSA) is the formal safety performance examination of an existing or future road or intersection by an independent, multidisciplinary team. It qualitatively estimates and reports on potential road safety issues and identifies opportunities for improvement in safety for all road users.

The aim of an RSA is to answer the following questions:

- What elements of the road may present a safety concern: to what extent, to which road user, and under what circumstances?
- What opportunities exist to eliminate or mitigate identified safety concerns?”

The study also aimed to identify Americans with Disabilities Act (ADA) issues found within county right-of-way related to transportation facilities. And for the first time, Crime Prevention through Environmental Design (CEPTED) issues were informally evaluated within this study area.

III. Study Area

The study area is bounded by John Young Parkway on the west, S. Orange Blossom Trail on the east, 33rd Street on the north, and Oak Ridge Road on the south. The study area is located entirely in District 6. The location of the study area is presented in **Figure 1**.

Texas - Americana Road Safety Small Area Study

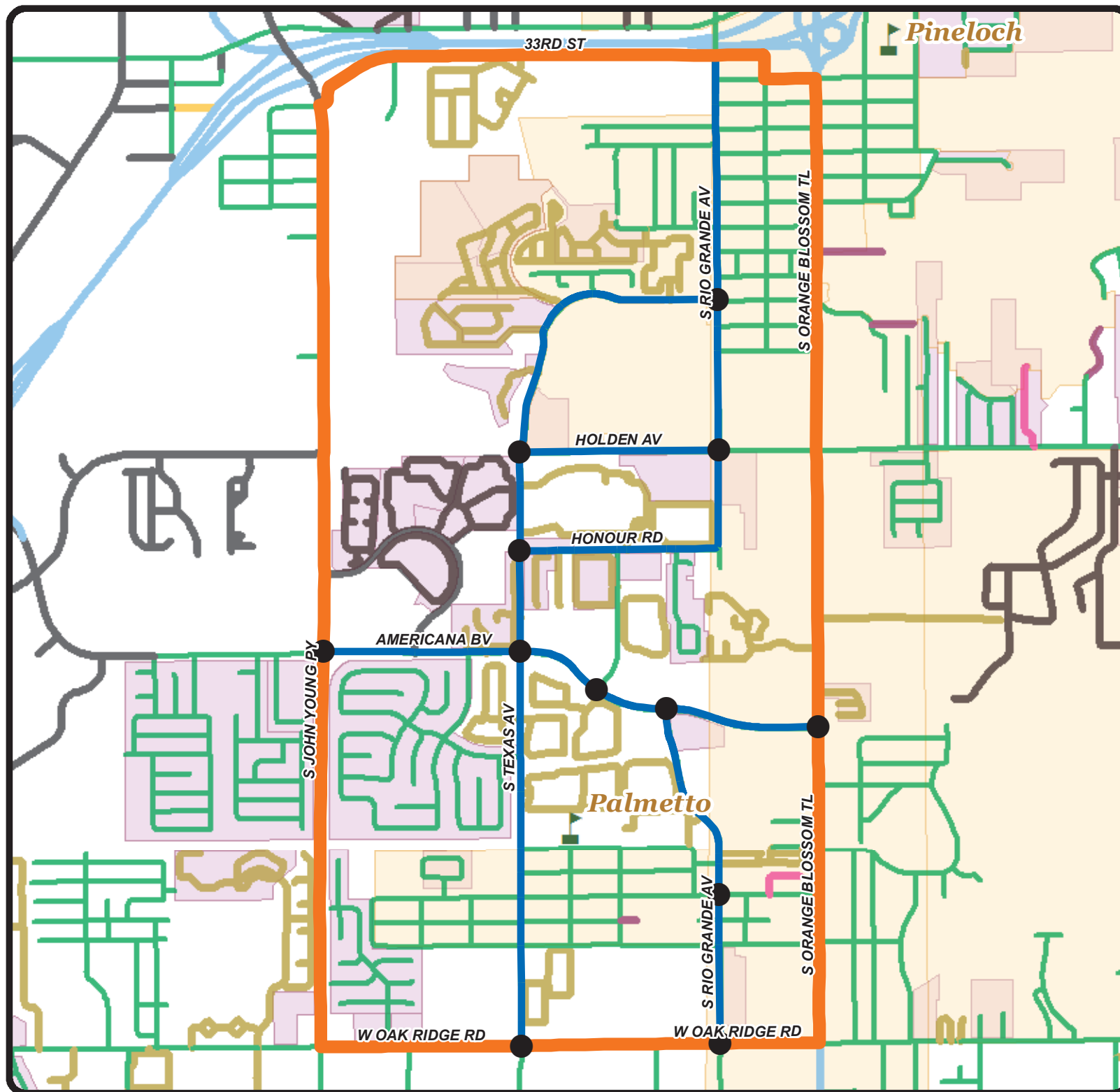
Legend

- Study Intersections
- ▭ Study Area
- Community Organizations
- Neighborhood Organizations
- Study Roads
- Full Maintained
- Open Non Maintained
- Not Maintained
- Under Bond
- City
- Private Road
- Unopened Right-of-way
- State of Florida
- OOCEA
- No Data
- Elementary Schools



0 700 1,400
Feet

Figure 1
Project Location Map



The study area consists of mostly residential land uses including various apartment complexes, condominiums, and single family residential communities. Commercial uses are located along Americana Boulevard between Texas Avenue and San Antonio Avenue and also along the S. Orange Blossom Trail and Oak Ridge Road corridors. Some industrial use is located north of Oak Ridge Road. The land use of the study area is presented in **Figure 2**.

The study area overlaps the Orange Blossom Trail Safe Neighborhood Council (Holden Heights) safe neighborhood between S. Rio Grande Avenue and S. Orange Blossom Trail.

The roads that were identified to be audited are listed in **Table 1**. The table includes the roadway section, distance, functional classification, number of lanes, most recent daily traffic count, and posted speed limit.

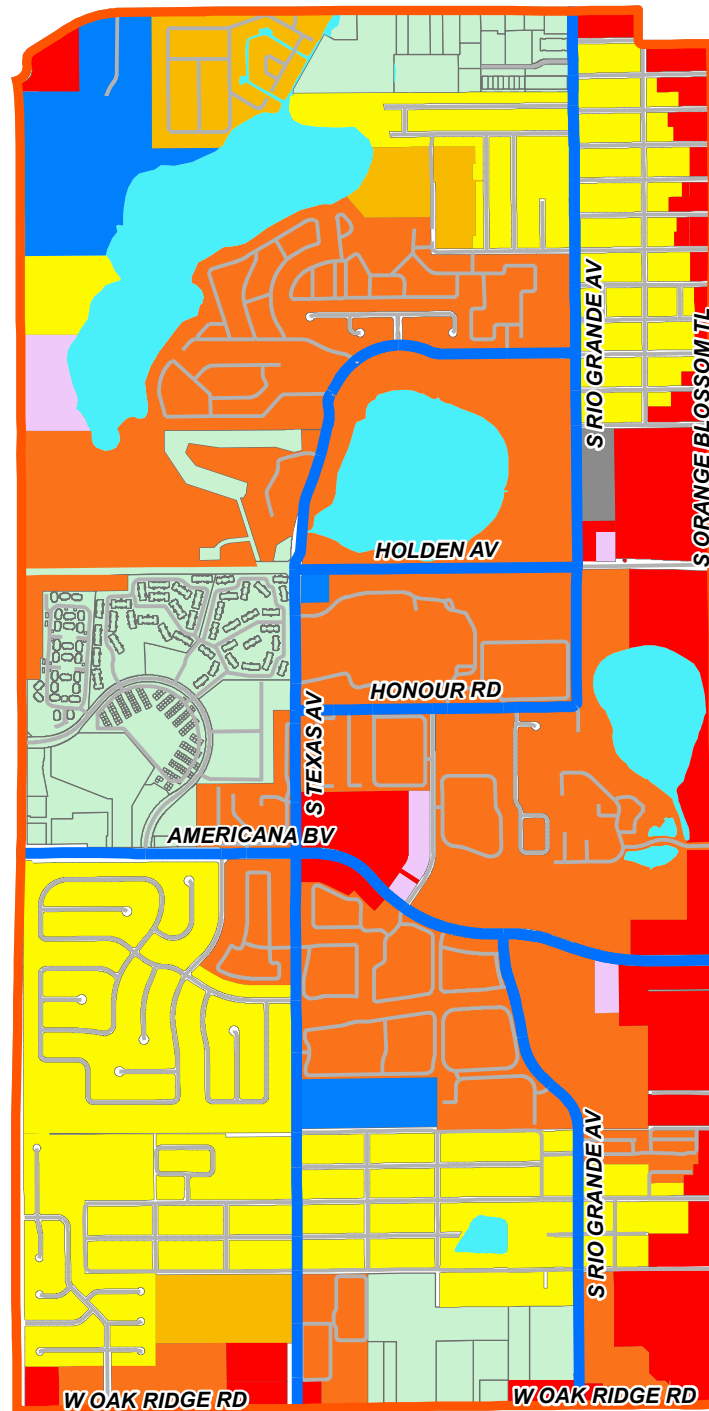
Signalized intersections that were evaluated as part of the study are:

- Americana Boulevard at John Young Parkway
- Americana Boulevard at Texas Avenue
- Americana Boulevard at San Antonio Avenue
- Americana Boulevard at S. Rio Grande Avenue
- Americana Boulevard at S. Orange Blossom Trail
- Texas Avenue at Oak Ridge Road
- Texas Avenue at S. Rio Grande Avenue
- S. Rio Grande Avenue at Holden Avenue
- S. Rio Grande Avenue at Oak Ridge Road

Unsignalized intersections that were evaluated as part of the study are:

- Texas Avenue at Holden Avenue
- Texas Avenue at Honour Road
- S. Rio Grande Avenue at Rose Avenue

Texas - Americana Road Safety Small Area Study



Legend

-  Study Area
-  Study Roads
-  Low Density Residential
-  Low-Medium Density
-  Medium Density Residential
-  High Density Residential
-  Office
-  Commercial
-  Institutional
-  Planned Development **
-  Water Body
-  City

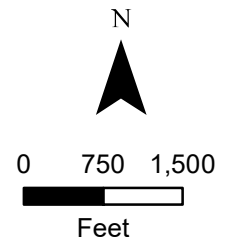


Figure 2
Future Land Use Map

Table 1
Texas-Americana Road Safety Small Area Study
Study Roadways and Traffic Counts

Cnt. Sta.	Roadway	From	To	Distance	Jrsdct	Func.	# Lanes	2013 AADT	2014 ADT	Count Location	Spd
181	Americana Boulevard	John Young Parkway	Orange Blossom Trail	1.31 miles	County	Urban Minor Arterial	4	19,298	n/a	0.67 miles E. of John Young Py	35
184 & 182	Texas Avenue	Oak Ridge Road	Rio Grande Avenue	2.30 miles	County	Urban Major Collector	2	11,007	n/a	0.2 miles N. of Americana Bv	35
								9,782	n/a	0.25 miles N. of Oak Ridge Rd	35
1053	Rio Grande Avenue	Holden Avenue	33rd Street	1.00 mile	County	Urban Minor Arterial	2	11,576	n/a	0.25 miles N. of Holden Av	35
n/a	Rio Grande Avenue	Honour Road	Holden Avenue	0.220 mile	County	Urban Major Collector	2	n/a	8,778	0.1 mile N. of Honour Rd	35
344	Rio Grande Avenue	Oak Ridge Road	Americana Boulevard	0.890 mile	County	Urban Major Collector	2	7,113	n/a	N. of Wakulla wy	30
n/a	Holden Avenue	Texas Avenue	Rio Grande Avenue	0.505 mile	County	Urban Major Collector	2	n/a	5,142	0.25 mile E. of Texas Ave	35
n/a	Honour Road	Texas Avenue	Rio Grande Avenue	0.510 mile	County	Urban Major Collector	2	n/a	8,251	0.25 mile E. of Texas Ave	30

IV. Data Collection

A. Intersection Traffic Control

Of the twelve study focus intersections within the study area, nine are signalized intersections. The intersection of Texas Avenue with Holden Avenue is a three-way stop controlled intersection. The intersection of Texas Avenue with Honour Road is a “T”-intersection with stop-control on Honour Road. The intersection of S. Rio Grande Avenue with Rose Avenue is a two-way stop controlled intersection. Stop signs are posted on the Rose Avenue approaches and an overhead flashing beacon flashes red for Rose Avenue and yellow for Rio Grande Avenue. The intersection traffic control for the twelve study intersections is depicted in **Figure 3**.

B. School Locations and School Safety Studies

There is one school located within the study area; it is Palmetto Elementary School located at 2015 Duskin Avenue, at the intersection of Duskin Avenue and Texas Avenue (see **Figure 1**). School Hours are 7:50 AM to 2:30 PM weekdays other than Wednesday. On Wednesday school get out one hour earlier, at 1:30 PM.

A reduced-speed school zone currently exists on Texas Avenue north and south of Duskin Avenue. School crossing guards are posted at the Americana Boulevard/Texas Avenue intersection and also at the Texas Avenue/Duskin Avenue intersection from 7:05 AM to 8:05 AM and 2:15 PM to 3:15 PM (1:15 PM to 2:15 PM Wed).

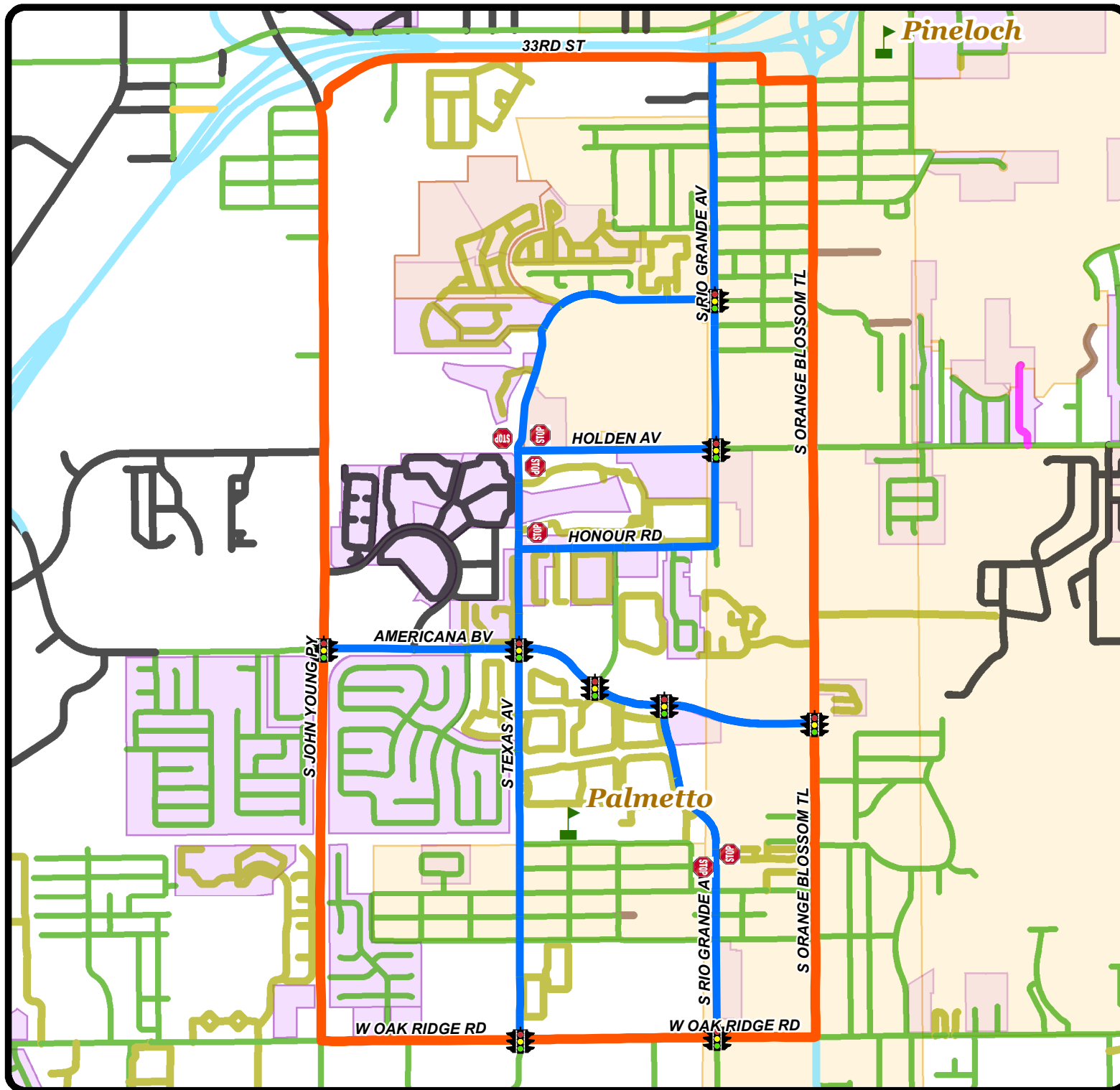
A school safety study for Palmetto Elementary School was completed by HNTB in 2007. Recommended improvements for student safety were installed at that time.

Although Palmetto Elementary School is the only school located within the study area, there are five other schools located near the study area. They are Pineloch Elementary School, Catalina Elementary School, Memorial Middle School, Oak Ridge High School and, and Jones High School. The school zones for each of these schools overlap the study area, and as such, students from these schools may also walk along study area roadways.

C. Planned and Programmed Improvements

The following road widening projects are planned within the study area:

Holden Avenue from John Young Parkway to Orange Blossom Trail (US 441) – 2 to 4 lane widening and extension. Improvements will include 11-foot travel lanes, sidewalk, bicycle lanes, landscaping, roadway lighting, and an enclosed drainage system. For the section within the study area between Texas Avenue and Rio Grande Avenue, a retaining wall and pedestrian handrail is included. This project includes traffic signals at John Young Parkway, Texas Avenue, Rio Grande Avenue, and Orange Blossom Trail (US



Texas - Americana Road Safety Small Area Study Legend

- Signalized
- Stop Control
- Study Area
- Study Roads
- Full Maintained
- Open Non Maintained
- Not Maintained
- Under Bond
- City
- Private Road
- Unopened Right-of-way
- State of Florida
- OOCEA
- No Data
- Elementary Schools
- Community Organizations
- Neighborhood Organizations

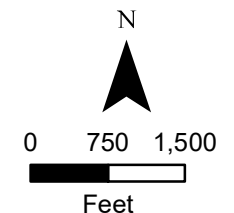


Figure 3

Study Intersection
Traffic Control



441). The project is currently in the right-of-way acquisition phase. Construction is scheduled to begin January 2016 and be complete January 2018, pending the ability to timely acquire right-of-way. The proposed typical section is found in **Appendix A**.

Texas Avenue from south of Oak Ridge Road to south of Holden Avenue - 2 to 4 lane widening. Improvement will include 11-foot travel lanes, a raised landscaped median, sidewalk, bicycle lanes, roadway lighting, and an enclosed curb and gutter drainage system. This project includes traffic signals at Oak Ridge Road, Duskin Avenue, and Americana Boulevard. Design is complete, but no funding has been identified for right-of-way acquisition or construction.

D. Existing Bicycle and Pedestrian Facilities

Due to the high number of pedestrians within the study area and the walking routes to school along each study area roadway, it is important to have adequate sidewalks. All study area roadways currently have sidewalk on at least one side of the road except for Holden Avenue. Locations of existing sidewalk are depicted in **Figure 4**. Existing sidewalk gaps were noted at the following locations:

- Texas Avenue (west side) – between Americana Boulevard and Honour Road
- Texas Avenue (west side) – between Holden Avenue and Skan Court
- Texas Avenue (south side) – between Dunwoodie Boulevard and S. Rio Grande Avenue
- S. Rio Grande Avenue (east side) – from 360 feet north of Oak Ridge Road to approximately 600 feet north of Nimrod Lane
- S. Rio Grande Avenue (east side) – from Honour Road to Holden Avenue
- Holden Avenue (both sides) – from Texas Avenue to S. Rio Grande Avenue
- Honour Road (south side) – from 160 feet west of S. Rio Grande Avenue to S. Rio Grande Avenue
- Americana Boulevard (north side) – from 150 feet west of Orange Blossom Trail to Orange Blossom Trail
- Americana Boulevard (south side) - from 30 feet west of Orange Blossom Trail to Orange Blossom Trail

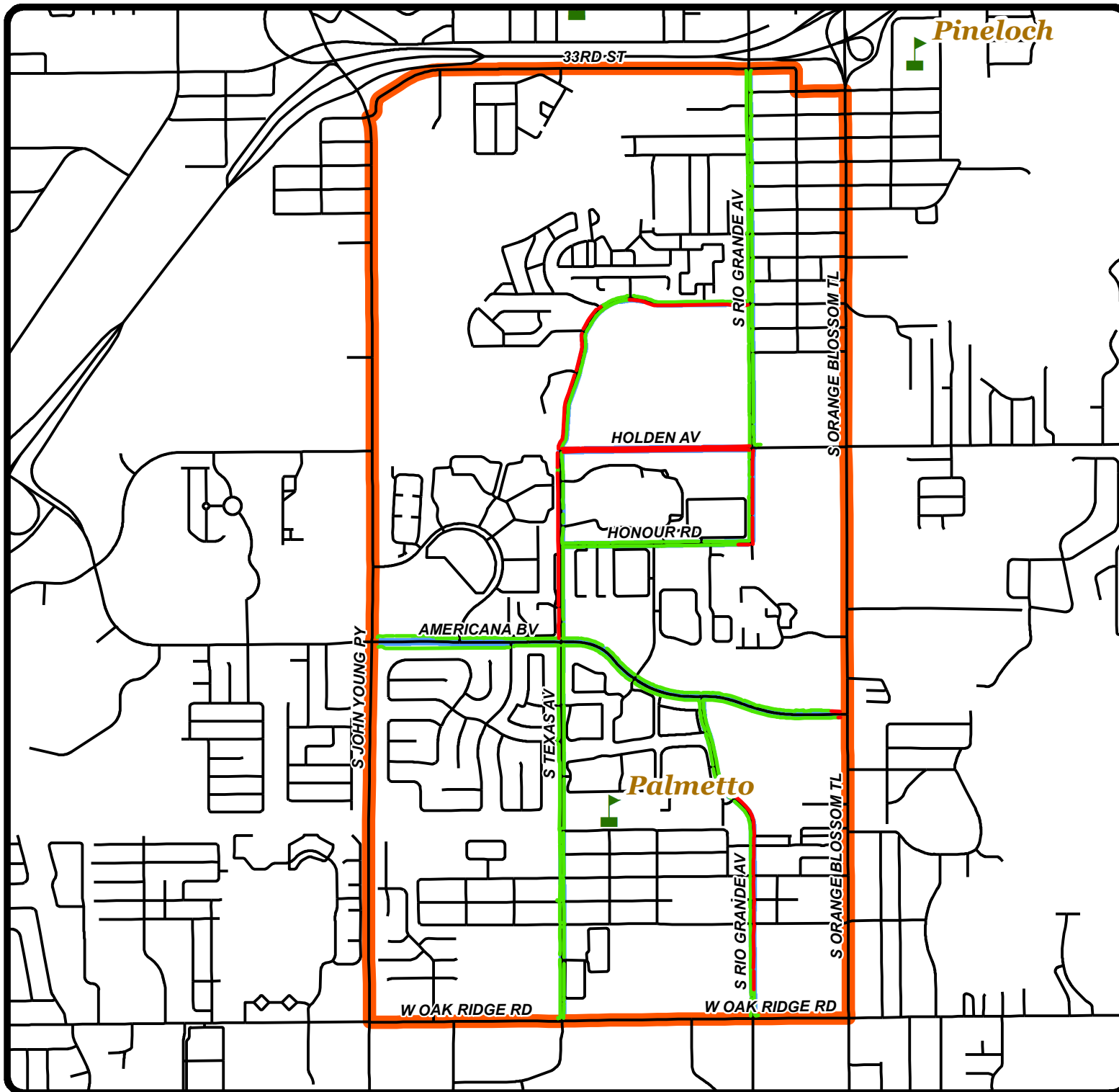
Insufficient right-of-way exists to install sidewalk on Texas Avenue on the south side between Dunwoodie Boulevard and S. Rio Grande Avenue.

Both the Holden Avenue and Texas Avenue widening projects will include installation of sidewalk and bike lanes on both sides of the road. Sidewalk will be constructed on the east side of S. Rio Grande Avenue from Holden Avenue to 750' south of Holden Avenue as part of the Holden Avenue widening project. However, insufficient right-of-way exists to install sidewalk on S. Rio Grande Avenue on the east side for the remaining 500' south to Honour Road.

The sidewalk needed on Americana Boulevard was identified through study field reviews and constructed in September 2014 prior to study completion.

Currently no bike lanes exist on study area roadways.

Texas - Americana Road Safety Small Area Study



Sidewalk Location

Placement

- Existing
- Missing
- Study Area
- Study Roads
- Elementary Schools

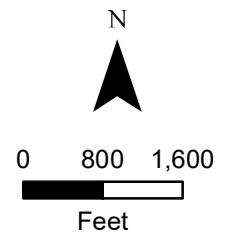


Figure 4
Existing Sidewalk Location

E. Existing Transit Service

A portion of the community within the study area is transportation disadvantaged, relying on walking, biking, and transit for their transportation needs. LYNX currently provides transit service to the study area through three bus links illustrated in **Figure 5**:

Link 40 – Americana Boulevard/Universal Orlando

This bus route travels within the study area along Americana Boulevard from John Young Parkway to San Antonio Avenue, north on San Antonio Avenue to Honour Road, east on Honour Road to S. Rio Grande Avenue, and north on S. Rio Grande Avenue through the study area.

Link 8 – W. Oak Ridge Road/International Drive

This bus route travels within the study area along S. Rio Grande Avenue from Oak Ridge Road to Americana Boulevard, Americana Boulevard west to Texas Avenue, north on Texas Avenue to Holden Avenue, and then east on Holden Avenue through the study area.

Link 304 – Rio Grande Avenue/Vistana Resort

This bus route travels within the study area along S. Rio Grande Avenue from Oak Ridge Road to Americana Boulevard, west on Americana Boulevard to San Antonio Avenue, north on San Antonio Avenue to Honour Road, east on Honour Road to S. Rio Grande Avenue, and then north on S. Rio Grande Avenue through the study area.

There are currently 56 existing LYNX bus stops within the study area. Daily ridership data as of June 2014 was provided by LYNX for these bus stops. **Appendix B** provides a summary of the average daily ridership for each stop, the rank for stop use out of approximately 4,400 LYNX bus stops region-wide, and the amenities currently existing at each stop.



Texas - Americana Road Safety Small Area Study

Transit Routes



Figure 5
Existing Transit Service



F. Speed Studies

Speed studies were conducted on all study area roadways to determine the 85th percentile and the 50th percentile speed. The results of the speed studies are found in **Table 2** below.

Table 2
Texas-Americana Road Safety Small Area Study
Speed Studies

Roadway	Location	Posted Speed	Study Date	50%-ile Speed	85%-ile Speed
Americana Boulevard	between John Young Parkway and Texas Avenue	35	2/18-20/14	37.90	44.57
Americana Boulevard	east of Rio Grande Avenue	35	2/18-20/14	38.55	44.65
Texas Avenue	north of Holden Avenue	35	2/18-20/14	31.75	37.30
Texas Avenue	south of Americana Boulevard	35	2/18-20/14	29.02	36.00
Rio Grande Avenue	north of Holden Avenue	35	2/18-20/14	32.13	38.43
Rio Grande Avenue	north of Oak Ridge Road	30	2/18-20/14	29.95	34.58
Holden Avenue	between Texas Avenue and Rio Grande Avenue	35	2/18-20/14	38.57	43.98
Honour Road	between Texas Avenue and Rio Grande Avenue	30	2/18-20/14	29.20	34.97

Some speeding was found to occur on all study area roadways, with the worst speeding found to occur on Americana Boulevard and Holden Avenue.

G. Crash Data

Although the road safety audit process is intended to be proactive in its approach by anticipating safety hazards and implementing improvements prior to crashes occurring, the analysis of crash data is equally important in order to address existing safety problems.

One reason for selecting this study area for the audit was related to crash statistics within the study area compared to county-wide statistics. Table 2 summarizes this

information. The percentage of both pedestrian crashes and bicycle crashes within the study area are more than double the county-wide percentage. Distraction-related crashes are also higher within the study area than within the county as a whole. All other metrics compared closely.

Table 3
Texas-Americana Road Safety Small Area Study
Comparison of Study Area Crash Statistics to County-wide Crash Statistics

Metric	County-wide 2013	Study Area 2011-2013	Study Area 2013
Night-time crashes	33.51%	34.50%	32.71%
Pedestrian crashes	1.45%	3.16%	3.33%
Bicycle crashes	1.05%	1.89%	2.19%
Injury crashes	27.38%	27.19%	25.63%
Fatality crashes	0.33%	0.34%	0.10%
Alcohol-related crashes	2.26%	2.51%	2.08%
Drug-related crashes	0.51%	0.48%	0.42%
Distraction-related crashes	24.55%	32.85%	33.23%

Source: Signal4 Analytics

The Orange County Multimodal Corridor Plan Technical Memorandum 1 prepared by Luke Transportation Engineering Consultants evaluated crash data for years 2009-2011. The following study area roads ranked in the top fifteen of county roadways for crashes of all types:

- 8th – Holden Avenue from Texas Avenue to Orange Blossom Trail
- 12th – Honour Road from Texas Avenue to Rio Grande Avenue
- 15th – Americana Boulevard from John Young Parkway to Orange Blossom Trail

The following study area intersections ranked in the top fifteen of county intersections for crashes of all types:

- 11th – S. Texas Avenue at W. Oak Ridge Road
- 13th – S. John Young Parkway at Americana Boulevard

In addition, two locations within the study area ranked within the top ten off-system, non-intersection pedestrian crash locations within the nine counties of Florida Department of Transportation, District 5. These are: Americana Boulevard near Texas Avenue, and Oak Ridge Road near Texas Avenue.

Crash data for three years from 2011 to 2013 was collected and analyzed in order to identify patterns in crashes and areas for improvement. Crash data was separated into roadway segment crashes and intersection crashes. An intersection crash was defined to be a crash occurring within 300 feet of the intersection, as stated in the crash report. All other crashes were classified as roadway segment crashes.

Figure 6 depicts the number of segment crashes and intersection crashes on study area roadways for years 2011 through 2013. An in-depth analysis of all study intersections was conducted, consisting of a crash summary table and a conflict diagram. The summaries and conflict diagrams are included in Section VII under the appropriate roadway. **Figure 7** depicts the number of pedestrian and bicycle crashes on study area roadways for the same three years.

Intersection approach counts were taken for all study area intersections so that intersection crash rates could be calculated. Crash rates take into account not only the frequency of crashes at an intersection, but also the volume of traffic entering the intersection, and are defined as the average number of crashes per million entering vehicles. **Table 4** below summarizes the average crash rate for years 2011-2013. Highlighted crash rates were especially high.

Table 4
Texas-Americana Road Safety Small Area Study
Study Intersection Crash Rates

Intersection	# crashes	# years	Entering AADT	Crash Rate
Americana Blvd and Texas Ave	132	3	37733	3.194762
Americana Blvd and Rio Grande Ave	27	3	20,184	1.221638
Americana Blvd and John Young Pkwy	150	3	78,833	1.737677
Americana Blvd and Orange Blossom Tr	116	3	61,298	1.728214
Americana Blvd and San Antonio Ave	28	3	19,459	1.314085
Texas Ave and Oak Ridge Rd	107	3	40,529	2.411036
Texas Ave and Holden Ave	17	3	10,670	1.455025
Texas Ave and Honour Rd	19	3	25,099	0.691326
Texas Ave and Rio Grande Ave	19	3	18,181	0.954381
Rio Grande Ave and Rose Blvd	23	3	9,658	2.174836
Rio Grande Ave and Holden Ave	26	3	19,086	1.244069
Rio Grande Ave and Oak Ridge Rd	71	3	38,332	1.691542

H. Red Light Running Camera Enforcement

In 2011 Orange County began its Photo Enforced Red Light Running Program with the installation of ten enforcement cameras. One of the ten locations selected for initial installation was the eastbound approach of the intersection of Oak Ridge Road and Texas Avenue. In 2014 Orange County expanded the program installing forty additional cameras. As part of this expansion, cameras were installed at the intersection of Americana Boulevard and Texas Avenue for both the eastbound and westbound approaches. A camera was also installed for the northbound approach of the intersection of Orange Blossom Trail at Americana Boulevard. These intersections were selected because of the high crash rates at these intersections and high incidence of left turn and right angle crashes, which tend to be high severity crashes.

In monitoring the number of violations at these intersections in comparison to other intersections that are photo enforced, the intersection of Americana Boulevard and Texas Avenue is consistently ranked as one of the top locations for red light running infractions.

I. Field Reviews

A multi-disciplinary audit team conducted field reviews which began July 29th and continued weekly through September 23rd. Each study area roadway was driven both directions to identify issues from the perspective of a driver. Each study area roadway was also walked both directions to identify issues from the perspective of a pedestrian. Preparation for the field work included the development of forms and field notation sheets, a prompt list, and gathering of equipment. Team members were also trained in how to capture GPS coordinates when taking a picture with their County-issued cell phone camera.

A field prompt list was developed for reference in the field to ensure that important aspects were not overlooked. This field prompt list is included as **Figure 8**. An intersection field inspection form, **Figure 9**, was also used in auditing signalized intersections. This form is from the *Field Guide for Inspecting Signalized Intersections to Reduce Red Light Running*, published by ITE. **Appendix C** includes the ADA criteria and corresponding references used during the field reviews.

Figure 8
Field Review Prompt List

I. PAV Pavement – Roads and Drainage

- a. Poor surface condition – **R&D**
- b. Poor shoulder condition - **R&D**
- c. Pavement edge deterioration/drop offs – **R&D**
- d. Evidence of ponding and/or flooding – **R&D**
- e. Need for pavement widening along curve - **TE**

II. VIS Visibility – Traffic Engineering

- a. Vegetation obstructing traffic control devices
- b. Vegetation obstructing sight distance
- c. Obstructions to the sight distance triangle
- d. Inadequate stopping sight distance
- e. Passing may need to be restricted
- f. Hidden driveway

III. SGN Signing - Traffic Engineering

- a. Poor sign face legibility
- b. Poor sign face retroreflectivity
- c. Poor condition of sign supports
- d. Sign clutter
- e. Need for advance warning signs
- f. Need for advisory speed plate
- g. Need for object markers/delineators
- h. Need for chevrons
- i. Need for guide signing
- j. Need for regulatory signing
- k. Not appropriate height, offset, or distance

IV. PMS Pavement Markings - Traffic Engineering

- a. Need to be refreshed
- b. Need edge line
- c. Need RPM's
- d. Need intersection markings
- e. Need rumble strips
- f. Not visible at night
- g. Old pavement markings still visible

V. INT Intersections - Traffic Engineering

- a. Maneuvers/lane use not obvious
- b. Insufficient length of auxiliary/turn lanes

VI. PDS Posted Speed – Traffic Engineering

- a. Speed limit appropriate?
- b. Advisory speed needed on curve
- c. Traffic observed to be speeding
- d. Improper transition between speed limits

VII. PED Pedestrians & Bicyclists – Traffic/Transp. Plan.

- a. High usage/need for facilities – **TE/TP**
- b. Inadequate facilities – **TE/TP**
- c. Need signing for facilities - **TE**
- d. Need pavement markings for facilities - **TE**
- e. Need maintenance of facilities – **R&D**

VIII. BCZ Barriers and Clear Zone –Highway Const./TE

- a. Need for guardrail
- b. Poor condition of guardrail – **R&D**
- c. Need for delineation of guardrail or barrier
- d. Presence of fixed object within clear zone
- e. sign within clear zone not break-away
- f. barrier needs proper end treatment

IX. CRM Crime Prevention -

Neighborhood Preservation, OCSO

- a. Trees and shrubs trimmed back from walkways
- b. Need for litter control
- c. Need for lighting for dark areas, bus stops

X. ADA Compliance -

Development Eng./Highway Const./Traffic

- a. Sidewalk and pathway clear width
- b. Sidewalk and pathway cross slope
- c. Landings along sidewalk and pathway grade
- d. materials, finishes, gratings
- e. detectable warnings
- f. obstructions
- g. curb ramps and curb ramp flares
- h. traffic signal systems - **TE**
- i. transit boarding and alighting areas

INTERSECTION FIELD INSPECTION FORM

LOCATION INFORMATION

Intersection Identification: _____ with _____

Approach Name: _____ Direction Heading: _____

PART 1. CHECK SIGNAL VISIBILITY

Type of Signal Mounting: **Span Wire** **Mast Arm** **Pole** **Structure** Sight Distance to the Signal: _____ feet

Requires Advance Warning Sign? **Y** **N** Advance Signal Warning Sign Present: **Y** **N**

Is anything blocking the view of the signals? **Y** **N** If yes, describe _____

Can signal faces on other approaches be seen? **Y** **N** If yes, do these signals have visors, shields, or programmable lenses? **Y** **N**

PART 2. CHECK SIGNAL CONSPICUITY

Could visual clutter detract from the signal? **Y** **N** Signal Lens Size Adequate?:

Are the signal indications confusing? **Y** **N** Red signal lens size: **8 inch** **12 inch**

If yes, explain: _____ Distance from stop line to signal: _____ feet

_____ Near side signal? **Y** **N**

Are backplates present? **Y** **N** Is existing size adequate? **Y** **N**

Are backplates necessary? **Y** **N** Number of Signal Heads Adequate?

Are other glare-reducing steps needed? **Y** **N** Total number of signal heads for major movement: _____

Signal lens type: **Incandescent** **LEDs** Total number of lanes for major movement: _____

Is existing number adequate? **Y** **N**

Signal Heads Placement Adequate? **Y** **N**

PART 3. CHECK SIGNAL CONTROL PARAMETERS

Grade (as decimal) $g =$ _____ (uphill is positive) Calculate the needed change period (CP) for this approach using agency practice or the following equation:

Approach speed $V =$ _____ mph

Cross street width $W =$ _____ feet

$$CP = 1.0 + \frac{\text{Yellow}}{1.0 + \frac{1.47 * V}{(20 + 64.4g)}} + \frac{\text{All-red}}{\frac{W + 20}{1.47 * V}}$$

	Actual Value	Calculated Value	Is Existing Adequate?
Yellow Interval	_____	_____	Y N
All Red Interval	_____	_____	Y N

PART 4. CHECK OTHER FACTORS

Is horizontal location adequate? **Y** **N** Pavement condition on approach: **Adequate** **Polished** **Severely Rutted**

Should signal warranting study be conducted? **Y** **N** Other concerns: _____

PART 5. IDENTIFY PROMISING COUNTERMEASURES

Visibility Deficiency	Conspicuity Deficiency	Signal Timing Operation Deficiency
_____ Install additional signals on near side	_____ Add signals to achieve one per lane	_____ Change yellow interval
_____ Change signal mounting	_____ Replace with LED lens type	_____ Add/change all-red interval
_____ Install SIGNAL AHEAD sign	_____ Replace with 12" signal head	
_____ Install Advance Warning Flashers	_____ Install double red signal	Other Measures
_____ Remove/relocate sight obstruction	_____ Install/enhance backplates	_____ Determine if signal is warranted
_____ Install programmable lenses	_____ Install rumble strips on approach	_____ Consider roundabout or innovative design
_____ Install shields and visors	_____ Install near side signal	_____ Improve pavement condition
_____ Other _____		

Inspection By: _____

Date: _____

V. Public Involvement and Outreach

A. Education

After reviewing crash data, the audit team noted the frequency of bicycle and pedestrian crashes within the study area and observed equally unsafe behavior on the part of both drivers and pedestrians. It was decided that safety education needed to be a component of the project.

Traffic Engineering Division staff attended bicycle helmet promotion training and became certified bike helmet fitters in July. This qualified them to participate in the Florida Bicycle Helmet Distribution Program and receive an FDOT grant for bike helmets from Florida's Pedestrian and Bicycling Safety Resource Center. Once certified, they approached Palmetto Elementary School and offered to participate in the school's Meet Your Teacher Day on August 14th, providing the perfect opportunity to promote bicycle and pedestrian safety to both children and their parents. Representatives from Orlando Health and Best Foot Forward also participated in the event.

During the event team members passed out the following informational flyers to adults:

- FDOT's Alert Today Alive Tomorrow campaign for bike and pedestrian safety in English, Spanish, and Creole
- Best Foot Forward Yield to Pedestrian informational brochures
- Orange County Red Light Running information, and
- Informational flyers on how to teach your child to safely walk to school

For the children, team members passed out the following bike and pedestrian safety-related freebies:

- Coloring books
- Bookmarks
- Stickers
- Tattoos
- reflective armbands and zipper-pulls

In addition, approximately 100 bike helmets were properly fitted and distributed to the children to start their school year safely.

B. Community Meeting

A community meeting notice, presented as **Figure 10**, was mailed to the owners of all parcels within the study area boundaries as well as neighborhood associations, community organizations, and stakeholders. Extra meeting notices were distributed to apartment complexes for their bulletin boards and posted at bus shelters.

The community meeting was conducted on December 4th at Palmetto Elementary School. The primary purpose was for the Traffic Engineering Division to present the

Figure 10

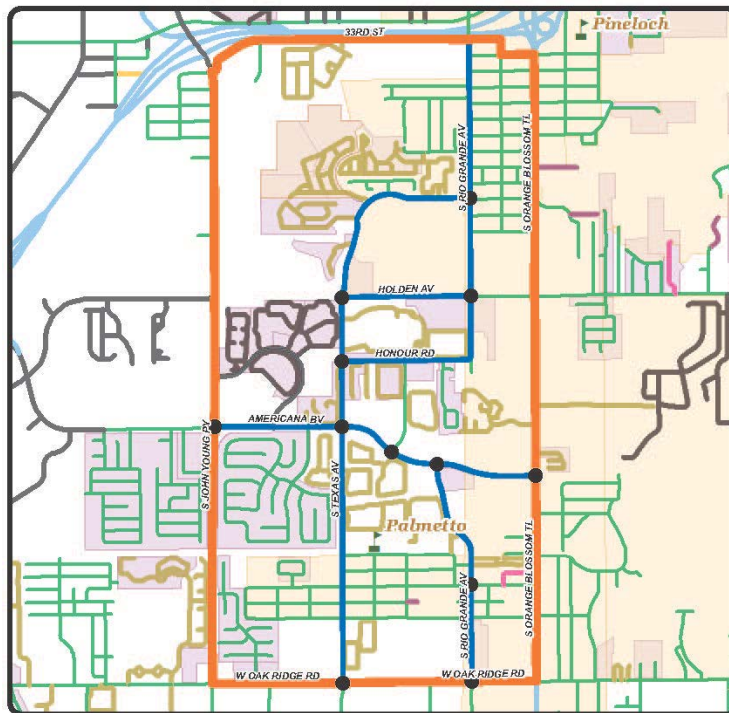
COMMUNITY MEETING



Texas-Americana Road Safety Small Area Study

December 4, 2014 from 6:30pm-8:00pm
Palmetto Elementary School cafeteria
2015 Duskin Avenue, Orlando, Florida 32839

Orange County is conducting a road safety small area study of Orange County roads bounded by John Young Parkway, Orange Blossom Trail, Oak Ridge Road, and 33rd Street. Please join your County Commissioner-Elect Victoria Siplin, Orange County staff, and your neighbors at a community meeting to discuss traffic safety issues and possible solutions within the study area.



Representatives from the Orange County Traffic Engineering Division, the Orange County Neighborhood Preservation and Revitalization Division, and Florida Highway Patrol will give presentations. The purpose of the meeting will be to present the focus of the traffic safety study, the roads and intersections being studied, and the project status. Traffic safety laws and tips to keep your family safe will also be shared, as well as programs and opportunities available to residents. The evening will conclude with an opportunity to submit comments regarding traffic safety issues within the study area.

If you have questions regarding this community meeting, please call Christine Lofye, P.E. of the Orange County Traffic Engineering Division at (407) 836-8682 or via e-mail at Christine.Lofye@ocfl.net.

This project is located in District # 6
Commissioner-Elect Victoria Siplin

focus of the study, present the roads and intersections being studied and the status of the project. Secondary purposes were to have another opportunity to present traffic safety education and also to notify the citizens of programs available to them through Neighborhood Preservation and Revitalization Division.

Sgt. Kim Montes, Public Information Officer for the Florida Highway Patrol, gave a presentation on traffic safety laws and tips. She addressed issues of right-of-way laws, the importance of pedestrians crossing roadways at marked crosswalks, the importance of yielding to pedestrians, distracted driving and walking, red light running, and safety within school zones.

Information on community clean-ups and information on the new St.art Something program for community art on traffic signal controller boxes was also presented. The meeting concluded with an opportunity for citizens to complete comment forms on traffic safety concerns within the study area. A Creole translator was present to assist residents if needed and Best Foot Forward had a table with safety informational material on-hand to distribute.

The sign-in sheets for the meeting are included in the **Appendix D**. Citizen concerns collected from the community meeting comment forms are listed in **Table 5**. Several citizens volunteered to serve on a community clean-up committee for a Spring clean-up.

C. Agency Outreach

Meetings were held with the agencies that have a vested interest in the study area. These meetings were held to inform agencies of the project and its purpose and scope and to receive feedback on safety concerns. Meetings were held with Mr. Randall Grief of the OBT Development Board, Mr. Jeff Reine of LYNX, and Mr. Shaun Kelly, assistant principal at Palmetto Elementary School. Concerns were noted and evaluated as part of the study.

Table 5
Texas-Americana Road Safety Small Area Study
Citizen Concerns

Main Street	Cross Street	Citizen	Concern	Jurisdiction	Response
Americana Boulevard	Publix driveway	Eddie Whitted, Sr.	Inability to exit parking lot, making left turn, accidents	Orange Co. study road	During congested periods, drivers should make a right turn and u-turn downstream
Americana Boulevard	Arpana Drive	Eddie Whitted, Sr.	unable to depart subdivision due to cars blocking intersection, accidents	Orange Co. study road	A request was made for enforcement of the "do not block intersection".
Americana Boulevard	Arpana Drive	no name given	cannot make left turn during rush hour, accidents, not enough space in median for making left turn	Orange Co. study road	This is a standard 22' median. Drivers must angle their car in the median so they do not extend into the travel lane.
Rio Grande Avenue	Rose Boulevard	Irene A. Taylor	need a traffic light at this intersection	Orange Co. study road	Traffic counts collected. Traffic volumes do not warrant a signal.
Texas Avenue	Rose Boulevard	Irene A. Taylor	need a traffic light at this intersection	Orange Co. study road	Traffic counts collected. Traffic volumes do not warrant a signal.
Americana Boulevard	Texas Avenue	Joanne Tobiasen	not a proper line so busses can turn onto Texas; can cause accidents	Orange Co. study road	Staff will review during signal re-design.
Texas Avenue	Huntington on the Green driveway	Joanne Tobiasen	There used to be a left turn lane into the complex, but it was removed	Orange Co. study road	Drivers may cross the double yellow line to enter the driveway.
Oak Ridge Road	Oak Hill Manor Drive	Deby Smith	Can't get in and out of neighborhood. Request signal warrant study	Orange Co.	Signal warrant study conducted and found not to be warranted at Oak Hill Manor Drive. Signal warrant study conducted at Oak Ridge Rd and Chancellor Drive found to be warranted. Signal will be installed which would provide gaps due to close proximity. Will request enforcement of "do not block intersection" signs.
Oak Ridge Road	Mid-Florida Tech entrance	Richardson	Request traffic light	Orange Co.	This driveway is too close to the signal at John Young Parkway, but a signal warrant study was conducted at Chancellor Drive and was found to be warranted. Chancellor Drive connects to Mid Florida Tech.
Within study area	Within study area	no name given	Requests parks or other green space	Orange Co.	Orange County Parks and Recreation has reviewed the area and there is no park land for sale of which funding is available. Cypress Grove Park serves this area.
Americana Boulevard	Arpana Drive	Carlos Gonzalez	Stop sign set too far back from Americana for residents of Southpointe Subdivision	Orange Co.	County plans to construct sidewalk connection closer to Americana Bv so that the stop sign can be moved closer.
Within study area	Within study area	Carlos Gonzalez	People are covering the vehicle tags so they don't have to pay tolls	E-PASS	Referred him to E-PASS
Texas Avenue	between Holden and Rio Grande	Susan Hampton	Requests roadway lighting; it is very dark, lots of bicyclists, and high crime	Orange Co. study road	The County lighting program has been reinstated, but we are starting with 4 and 6 lane roadways first, then moving to 2 lane roadways.

VI. LYNX Bus Stop Review

Within the study area there are currently fifty-six (56) LYNX bus stops. Ridership data was requested from LYNX and analyzed to determine the location of bus stops, the most heavily used bus stops, and bus routes. Existing bus stop amenities were collected through field reviews and by using Google Maps and then reviewed against the ridership data provided to determine the need for amenities and/or repairs to existing amenities.

FDOT's *Accessing Transit Design Handbook for Florida Bus Passenger Facilities* states that 50 to 100 minimum boardings per day are suggested for considering a bus shelter. Using this guideline, four shelters were requested and approved by LYNX (Table 6).

Table 6
Texas-Americana Road Safety Small Area Study
Requested Bus Stop Shelters

Road	Location	Time Point	Dir.	Route	Stop ID
Americana Blvd	West of San Antonio Ave	2000 Americana Blvd and San Antonio Ave	EB	8, 40	2807
Americana Blvd	Between San Antonio and Rio Grande	1900 Americana Blvd	WB	8, 304	2281
S. Rio Grande Ave	North of Oak Ridge Rd	5800 Rio Grande Ave and Oak Ridge Rd	NB	8, 304	2834
S. Rio Grande Ave	Front of Esplanade Apartments	5400 Rio Grande Ave	SB	8, 304	2809 *

*Bus stop location may have to be shifted slightly north for shelter right-of-way needs.



In addition, bus stop shelters were reviewed to identify the need for shelter lighting. Orange County's "Public Right-of-Way Transit Facilities Ordinance", Ord. 2014-06, requires that a transit shelter be lit and illuminated from dusk to dawn. Lighting or repairs to lighting were requested of LYNX for the locations listed in **Table 7**.

LYNX provides trash receptacles at all bus shelters, but the field review revealed many bus stops with just a bus stop sign where no trash receptacle is provided. The field reviews also noted heavy litter throughout the study area, so it was requested that LYNX provide trash receptacles at bus stops with no

bench and currently no trash receptacle. LYNX has agreed to provide the trash receptacles at the seven bus stops requested.

Table 7
Texas-Americana Road Safety Small Area Study
Requested Bus Stop Shelter Lighting

Road	Location	Time Point	Dir.	Route	Stop ID
Americana Blvd	East of Texas Ave	2100 Americana Blvd and Texas Ave	EB	8, 40	2311
Americana Blvd	East of Texas Ave	2100 Americana Blvd and Texas Ave	WB	8, 40	2260
Americana Blvd	Between San Antonio and Rio Grande	1900 Americana Blvd and Rio Grande Ave	EB	8, 304	2808
S. Rio Grande Ave	South of Royal Grande of Orlando Apts	5301 Rio Grande Ave and Americana Blvd	NB	8, 304	2880

In addition to requests for new amenities, repair was requested for the bus shelter roof for Bus Stop ID 2880 located on Rio Grande Avenue south of Lake Heritage Circle northbound.

FDOT's *Accessing Transit Design Handbook for Florida Bus Passenger Facilities* states that "lighting is the most critical factor in the Crime Prevention Through Environmental Design (CPTED) program", and that local transit stops without a shelter should be located within 30 feet of an overhead light source. The study area is lacking in the area of lighting at bus stops. Orange County's reinstated highway lighting program is beginning with its four and six-lane roadways. Americana Boulevard is one of the first roadways in this program. It is recommended that as the County's highway lighting program proceeds and works toward installation of lighting on its two-lane roadways, that priority be given to roadways such as Rio Grande Avenue north of Oak Ridge Road where the combination of heavy transit ridership and high crime make highway lighting important.

Pedestrian and bicycle crash data was also compared with bus stop locations to determine whether there was a correlation. No pattern of crashes was found to be related to the locations of bus stops. Even so, bus stop locations were reviewed with respect to the possibility of increasing safety. It was requested, and LYNX has agreed, to review the potential for bus stop relocation for Bus Stop ID's 2808 and 2281, both located on Americana Boulevard between San Antonio Boulevard and Rio Grande Avenue. It was requested to possibly move these bus stops to the intersections to reduce the number of mid-block crossing of pedestrians between these two stops and encourage pedestrians to cross the street at signalized intersections with pedestrian signals.

VII. Findings and Recommended Countermeasures

This section includes a description of existing conditions for each study area roadway, and a summary of findings from the crash history and analyses. A spreadsheet was developed for each study area roadway which tabulates issues the audit team found while in the field. The description of the problem as well as the proposed solution is included.

Issues listed in the spreadsheet are rated by safety priority. The following describes the meaning of these ratings:

High-Priority Safety Improvement – Items where immediate safety improvements should be made

Medium- and Low-Priority Safety Improvement – Items where low-cost improvements could have a positive impact on safety and should be considered in a reasonable period of time

Following the sections for each roadway, capital improvements are listed for the long term. These are defined below:

Capital Improvements – Items that should be considered as funds become available for major reconstruction of the roadway or intersection.

A. Americana Boulevard

Existing Conditions

Americana Boulevard is a four-lane divided roadway running east-west from John Young Parkway to Orange Blossom Trail (US 441). The cross section is rural between John Young Parkway and Texas Avenue and urban between Texas Avenue and Orange Blossom Trail. It serves residential uses, mainly apartment complexes, and commercial land uses. The speed limit is 35 mph throughout.

A sidewalk runs the entire length of the road on both sides of the road until just west of Orange Blossom Trail. These sidewalk gaps were recently constructed as part of this project. No bike lanes are provided.

Overhead utilities are provided on both sides of the road between John Young Parkway and Texas Avenue. Roadway lighting currently exists mainly in the median between Texas Avenue and Orange Blossom Trail.

Crash History and Analysis

Crash summaries and crash diagrams were prepared and follow for the key study intersections along Americana Boulevard. These are the intersections of Americana Boulevard with John Young Parkway, Texas Avenue, San Antonio Avenue, Rio Grande Avenue, and Orange Blossom Trail (US 441), all signalized. Because of the high number of crashes at the intersections of John Young Parkway, Texas Avenue, and Orange Blossom Trail, crash summaries and crash diagrams depict crashes for only one year of data (2013). For the intersections of Americana Boulevard with both San Antonio Avenue and Rio Grande Avenue, crashes for three years are included (2011-2013).

Of particular note and as previously shown in Table 3, the intersection of Americana Boulevard with Texas Avenue has a very high crash rate at 3.194762 crashes per million entering vehicles. This intersection also ranks as the highest for red light running infractions out of all the unincorporated Orange County red light camera locations.

Recommended Countermeasures

The following tables list the recommended improvements for Americana Boulevard. The first table lists the general recommendations and the second table lists sidewalk and ADA-related issues.

An item believed to be a high priority is related to the amount of pedestrians crossing Americana Boulevard at uncontrolled mid-block locations between Texas Avenue and San Antonio Avenue. It is recommended that two mid-block crosswalks with rectangular rapid flashing beacons (RRFBs) be installed and that pedestrian channelization barrier be considered for installation in the median. A crosswalk and signalized pedestrian crossing for the west leg of the San Antonio Avenue intersection is

also recommended to provide an additional safe pedestrian crossing location. See depiction of recommended improvements, page 83.

At the intersection of Americana Boulevard and Texas Avenue it is recommended that the signal be reconstructed due to its age and a leaning signal pole in the northwest corner. In order to address the high crash rate and red light running at the intersection, with the reconstruction of this intersection signal head backplates will be installed to increase the visibility of signal head indications in the eastbound and westbound directions. Sidewalk curb ramps and pedestrian pushbuttons and signing will be upgraded to meet current ADA requirements.

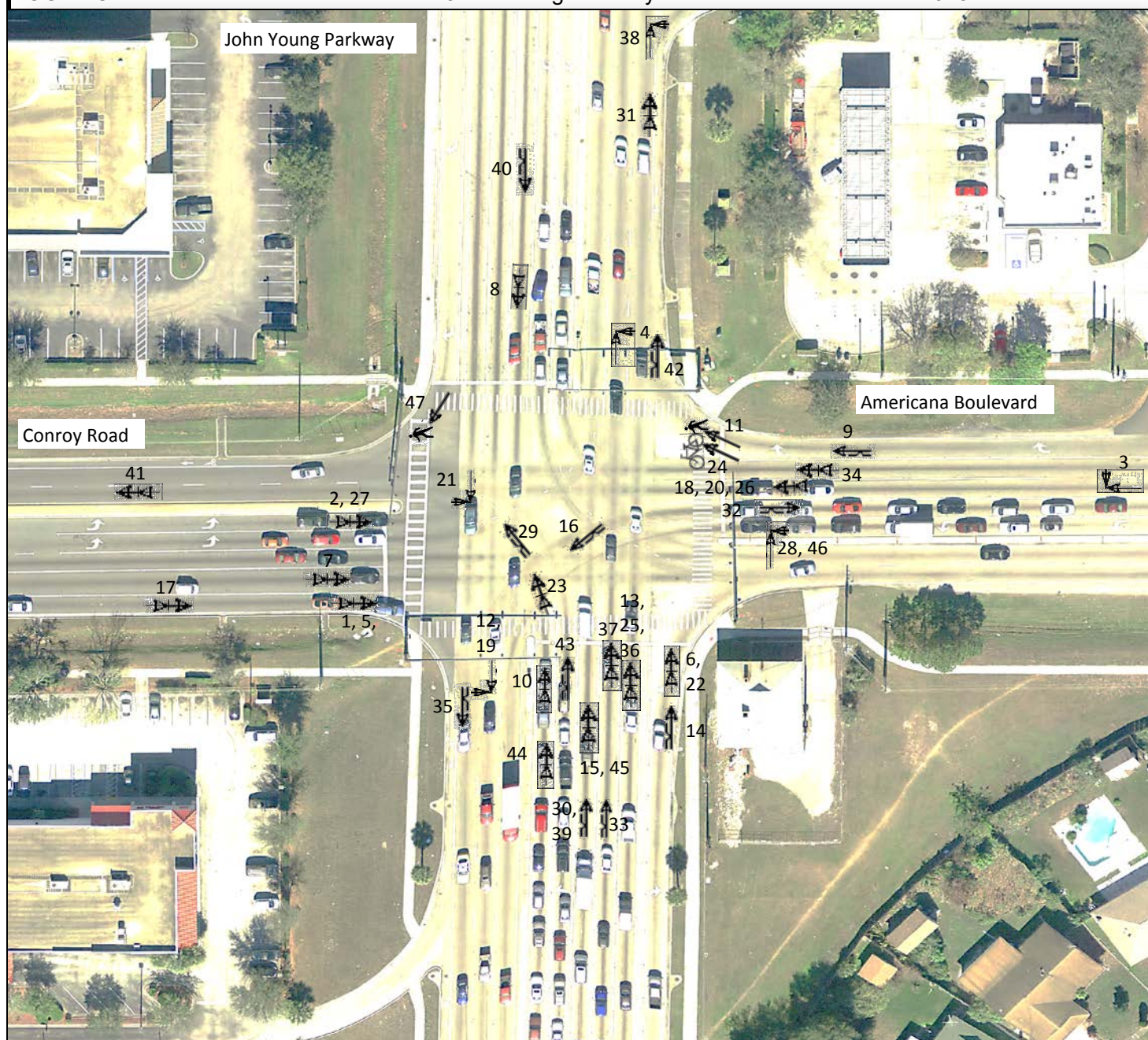
In addition, four-section signal heads will be considered for the left turn lanes instead of the current five-section cluster signal heads. These signal heads have been shown to increase safety by improving yielding to oncoming vehicles for vehicles turning left permissively. These signal heads also allow flexibility in timing protected and/or permitted left turns by time of day. Protected-only signal phasing increases congestion, but has been shown to reduce left turn crashes and left turn pedestrian crashes.

Crash Summary											
Location:		AMERICANA BOULEVARD					Intersection Control: Signalized				
Intersecting Route:		JOHN YOUNG PARKWAY					Prepared by: CNL				
Study Period From:		2013					County: Orange				
NO	DATE	DAY	TIME	TYPE	FATAL	INJURY	PROPERTY DAMAGE	WEATHER	DAY/NIGHT	CONTRIBUTING CAUSE	ACCIDENT REPORT #
1	1/19/2013	Sat	4:49 PM	Rear End	No	No	\$663	Clear	Daylight	Careless Driving	FHPD13OFF005275
2	2/23/2013	Sat	3:55 AM	Rear End	No	No	\$1,100	Clear	Dark - Lighted	Following Too Close	2013-00080301
3	3/5/2013	Tue	6:50 PM	Right Turn	No	Yes	\$3,000	Clear	Dark - Lighted	Ran Stop Sign	FHPD13OFF018205
4	3/18/2013	Mon	11:08 AM	Angle	No	No	\$6,000	Clear	Daylight	Failure to Obey Signal	FHPD13OFF022205
5	3/19/2013	Tue	1:45 PM	Rear End	No	No	\$2,000	Clear	Daylight	Careless Driving	FHPD13OFF022512
6	3/26/2013	Tue	6:56 PM	Rear End	No	No	\$2,500	Clear	Dusk	Careless Driving	FHPD13OFF024817
7	4/1/2013	Mon	5:03 PM	Rear End	No	No	\$1,900	Clear	Daylight	Careless Driving	FHPD13OFF026538
8	4/8/2013	Mon	9:30 PM	Rear End	No	No	\$3,951	Clear	Dark - Lighted	Careless Driving	FHPD13OFF028915
9	4/18/2013	Thu	11:00 AM	Sideswipe	No	No	\$6,000	Clear	Daylight	Improper Lane Change	FHPD13OFF031786
10	4/18/2013	Thu	10:00 PM	Rear End	No	No	\$1,750	Clear	Dark - Lighted	Unknown	FHPD13OFF031992
11	4/21/2013	Sun	9:36 PM	Pedestrian	No	Yes	\$0	Cloudy	Dark - Lighted	FTY R/W	FHPD13OFF032817
12	4/30/2013	Tue	5:30 PM	Right Turn	No	No	\$4,000	Clear	Daylight	FTY R/W	FHPD13OFF035452
13	5/4/2013	Sat	1:22 AM	Rear End	No	No	\$2,000	Rain	Dark - Lighted	DUI & Careless Driving	FHPD13OFF036634
14	5/13/2013	Mon	12:45 PM	Other	No	No	\$1,600	Clear	Daylight	Careless Driving	FHPD13OFF039387
15	5/15/2013	Wed	9:40 PM	Rear End	No	Yes	\$1,500	Clear	Dark - Lighted	DUI	FHPD13OFF040126
16	5/22/2013	Wed	9:55 PM	Sideswipe	No	No	\$200	Clear	Dark - Lighted	Unknown	FHPD13OFF042256
17	5/28/2013	Tue	3:46 PM	Rear End	No	No	\$2,000	Clear	Daylight	Unknown	2013-00218795
18	5/31/2013	Fri	9:09 PM	Rear End	No	No	\$1,100	Clear	Dark - Not Lighted	Careless Driving	FHPD13OFF045099
19	6/1/2013	Sat	12:13 PM	Other	No	No	\$3,500	Clear	Daylight	Careless Driving	FHPD13OFF045248
20	6/3/2013	Mon	5:20 PM	Rear End	No	No	\$2,000	Clear	Daylight	Careless Driving	FHPD13OFF046022
21	6/4/2013	Tue	12:00 PM	Left Turn	No	No	\$10,000	Clear	Daylight	Failure to Obey Signal	FHPD13OFF046227
22	6/27/2013	Thu	4:25 PM	Rear End	No	Yes	\$1,000	Clear	Daylight	Unknown	FHPD13OFF053744
23	6/28/2013	Fri	5:18 PM	Rear End	No	No	\$600	Rain	Daylight	Careless Driving	FHPD13OFF054119
24	7/29/2013	Mon	12:30 PM	Bicycle	No	Yes	\$0	Clear	Daylight	Unknown	FHPD13OFF064080
25	7/31/2013	Wed	7:45 AM	Rear End	No	No	\$400	Clear	Daylight	Careless Driving	FHPD13OFF064609
26	8/5/2013	Mon	7:43 AM	Rear End	No	Yes	\$2,000	Clear	Daylight	Careless Driving	FHPD13OFF066262
27	8/21/2013	Wed	9:14 PM	Rear End	No	No	\$1,100	Clear	Dark - Lighted	Careless Driving	FHPD13OFF071736
28	8/23/2013	Fri	7:55 PM	Angle	No	No	\$1,000	Clear	Dark - Lighted	Unknown	FHPD13OFF072343
29	8/26/2013	Mon	6:33 AM	Sideswipe	No	No	\$4,000	Clear	Daylight	Unknown	FHPD13OFF073001
30	8/26/2013	Mon	1:05 PM	Sideswipe	No	No	\$1,600	Cloudy	Daylight	Careless Driving	FHPD13OFF073121
31	8/28/2013	Wed	12:30 PM	Rear End	No	Yes	\$7,500	Clear	Daylight	Careless Driving	FHPD13OFF073745
32	9/8/2013	Sun	7:37 AM	Sideswipe	No	No	\$1,100	Clear	Daylight	Improper Lane Change	FHPD13OFF077282
33	9/10/2013	Tue	9:00 AM	Sideswipe	No	No	\$2,600	Clear	Daylight	Unknown	FHPD13OFF077856
34	9/12/2013	Thu	3:07 PM	Rear End	No	No	\$2,400	Clear	Daylight	Careless Driving	FHPD13OFF078534
35	9/17/2013	Tue	9:50 PM	Sideswipe	No	No	\$3,000	Clear	Dark - Lighted	FT Drive in One Lane	FHPD13OFF080127
36	9/22/2013	Sun	5:45 PM	Rear End	No	No	\$3,300	Cloudy	Daylight	Careless Driving	FHPD13OFF081552
37	10/3/2013	Thu	6:43 PM	Rear End	No	Yes	\$5,600	Clear	Daylight	Careless Driving	FHPD13OFF084924
38	10/6/2013	Sun	7:16 PM	Angle	No	Yes	\$8,000	Cloudy	Dusk	FTY R/W	2013-00418534
39	10/11/2013	Fri	4:12 PM	Sideswipe	No	No	\$6,000	Clear	Daylight	Improper Lane Change	FHPD13OFF087299
40	10/12/2013	Sat	6:48 PM	Sideswipe	No	No	\$600	Clear	Dark - Lighted	Improper Lane Change	FHPD13OFF087679
41	10/19/2013	Sat	12:34 PM	Rear End	No	Yes	\$7,100	Clear	Daylight	Careless Driving	FHPD13OFF089597
42	10/27/2013	Sun	4:19 PM	Right Turn	No	No	\$2,900	Clear	Daylight	Failure to Obey Signal	FHPD13OFF092019
43	11/11/2013	Mon	2:11 PM	Sideswipe	No	No	\$250	Clear	Daylight	FT Drive in One Lane	FHPD13OFF096392
44	11/13/2013	Wed	1:33 PM	Rear End	No	Yes	\$800	Clear	Daylight	Careless Driving	FHPD13OFF096897
45	11/21/2013	Thu	6:45 AM	Rear End	No	No	\$13,500	Rain	Dark - Lighted	Careless Driving	FHPD13OFF099696
46	12/1/2013	Sun	5:30 PM	Angle	No	No	\$6,000	Cloudy	Dark - Lighted	Careless Driving	FHPD13OFF102713
47	12/28/2013	Sat	4:43 PM	Sideswipe	No	No	\$0	Clear	Daylight	Unknown	2013-00542817
TOTAL											
TOTAL NO		FATAL	INJURY	PDO	ANGLE	LEFT	RIGHT	REAR END	SIDE SWIPE	HEAD ON	IMPROPER LANE CHANGE
	47	0	11	36	4	1	3	24	11	0	4
	%	0%	23%	77%	9%	2%	6%	51%	23%	0%	9%
ONE VEHICLE		PED/BIKE	DAY	DUSK/NIGHT	WET	DRY	SPEEDING	FTY R/W	ALCOHOL/DRUGS	DISTRACTED	FAIL TO OBEY SIGNAL
	0	2	30	17	3	44	0	3	2	20	3
	0%	4%	64%	36%	6%	94%	0%	6%	4%	43%	6%

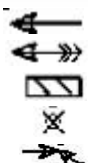
Orange County Traffic Engineering Division Collision Diagram

LOCATION: Americana Boulevard at John Young Parkway

YEAR: 2013



COLLISION SYMBOLS



VEHICLE PATH
BACKING VEHICLE
PARKED VEHICLE
FATALITY
RIGHT TURN COLLISION



REAR-END COLLISION
HEAD-ON COLLISION
OVERTURNED VEHICLE
LEFT TURN COLLISION
RIGHT ANGLE COLLISION



FIXED OBJECT
OUT OF CONTROL
SIDE SWIPE
PEDESTRIAN COLLISION
BICYCLIST COLLISION

* Numbers that appear multiple times indicate more than one collision in that incident.

CRASH SUMMARY

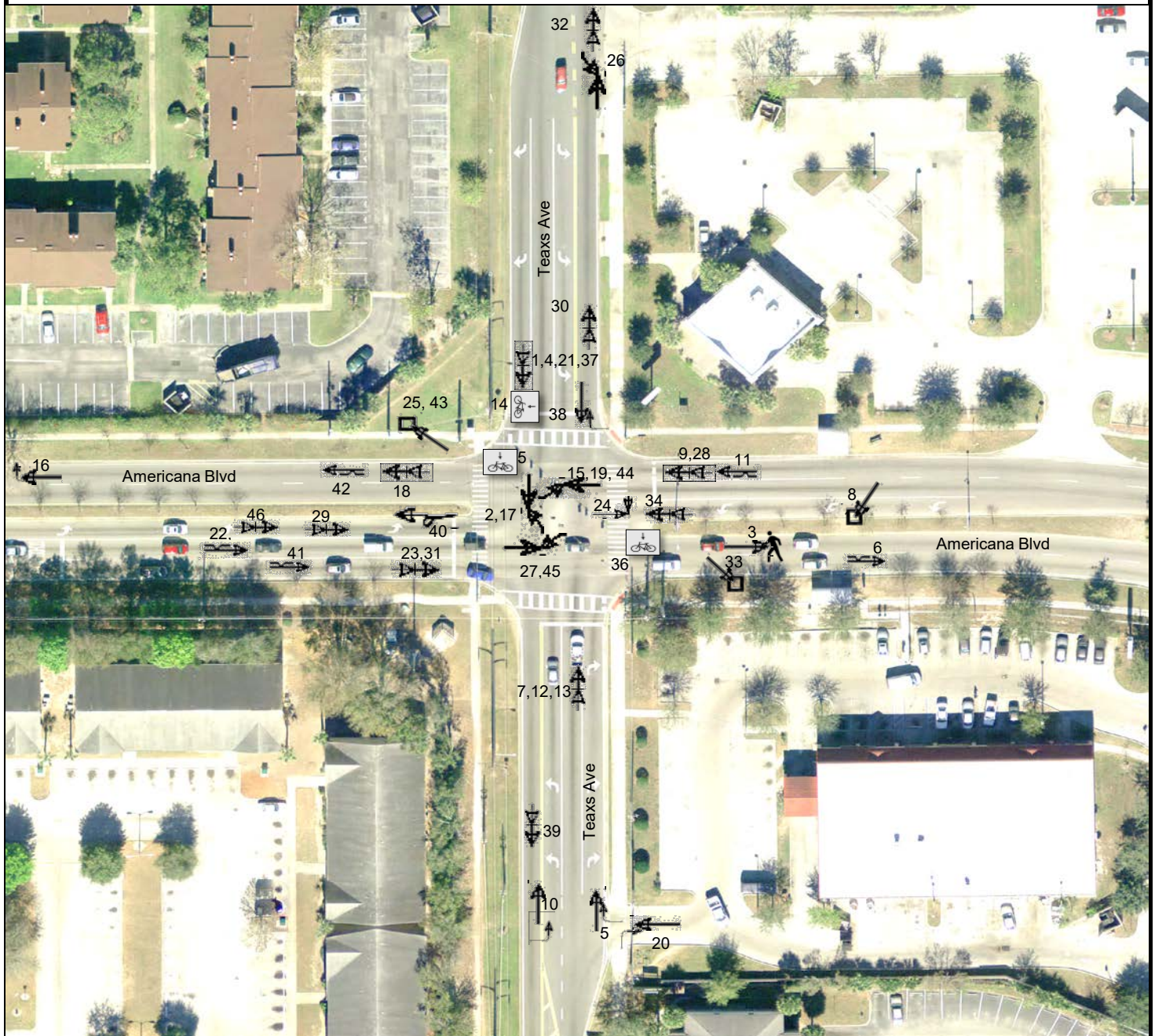
	PROP. DMG ONLY	INJURY	FATAL	TOTAL
DAYTIME	23	7	0	30
NIGHTTIME	13	4	0	17
TOTAL	36	11	0	47

Crash Summary											
Location:		AMERICANA BOULEVARD					Intersection Control: Signalized				
Intersecting Route:		TEXAS AVENUE					Prepared by: CNL				
Study Period From:		2013					County: Orange				
NO	DATE	DAY	TIME	TYPE	FATAL	INJURY	PROPERTY DAMAGE	WEATHER	DAY/NIGHT	CONTRIBUTING CAUSE	ACCIDENT REPORT #
1	1/10/2013	Thu	3:02 PM	Rear End	No	Yes	\$1,000	Clear	Daylight	Careless Driving	FHPD13OFF002735
2	1/22/2013	Tue	9:56 PM	Left Turn	No	No	\$4,000	Clear	Dark - Lighted	FTY R/W	FHPD13OFF006066
3	1/30/2013	Wed	8:41 AM	Pedestrian	No	Yes	\$0	Clear	Daylight	Ped--Jay Walking	FHPD13OFF007952
4	1/30/2013	Wed	8:45 AM	Rear End	No	No	\$5,000	Clear	Daylight	Careless Driving	FHPD13OFF007955
5	2/3/2013	Sun	1:00 PM	Right Turn	No	No	\$7,000	Clear	Daylight	FTY R/W	FHPD13OFF009182
6	2/6/2013	Wed	4:45 PM	Sideswipe	No	No	\$1,100	Clear	Daylight	Improper Lane Change	FHPD13OFF01006
7	2/19/2013	Tue	11:24 AM	Rear End	No	No	\$0	Clear	Daylight	Careless Driving	FHPD13OFF013787
8	3/5/2013	Tue	12:14 AM	Off Road	No	No	\$2,000	Clear	Dark - Lighted	Careless Driving	FHPD13OFF017964
9	3/6/2013	Wed	2:04 PM	Rear End	No	No	\$2,800	Clear	Daylight	Careless Driving	FHPD13OFF018379
10	3/8/2013	Fri	10:09 AM	Left Turn	No	No	\$5,000	Clear	Daylight	FTY R/W	FHPD13OFF018899
11	3/11/2013	Mon	12:00 PM	Sideswipe	No	No	\$12,000	Clear	Daylight	Improper Lane Change	FHPD13OFF019858
12	3/20/2013	Wed	4:39 PM	Rear End	No	No	\$12,311	Clear	Daylight	Careless Driving	FHPD13OFF022889
13	4/1/2013	Mon	6:32 PM	Rear End	No	No	\$431	Clear	Daylight	Careless Driving	FHPD13OFF026585
14	4/2/2013	Tue	2:20 PM	Bicycle	No	No	\$884	Clear	Daylight	Careless Driving	FHPD13OFF026789
15	4/2/2013	Tue	4:19 PM	Left Turn	No	Yes	\$18,000	Clear	Daylight	FTY R/W	FHPD13OFF026835
16	4/3/2013	Wed	10:46 PM	Rear End	No	Yes	\$0	Rain	Dark - Lighted	Careless Driving	FHPD13OFF027295
17	4/23/2013	Tue	11:21 PM	Left Turn	No	No	\$1,000	Clear	Dark - Lighted	FTY R/W	FHPD13OFF033436
18	5/5/2013	Sun	7:50 PM	Right Turn	No	No	\$1,200	Clear	Dawn	FTY R/W	FHPD13OFF037163
19	5/13/2013	Mon	12:25 AM	Left Turn	No	No	\$1,300	Clear	Dark - Lighted	Fail to Obey Signal	FHPD13OFF039297
20	5/26/2013	Sun	10:29 PM	Unknown	No	No	\$1,000	Clear	Dark - Lighted	Careless Driving	FHPD13OFF043569
21	5/30/2013	Thu	8:48 PM	Rear End	No	No	\$800	Clear	Dark - Lighted	Careless Driving	FHPD13OFF044764
22	6/8/2013	Sat	6:14 PM	Sideswipe	No	No	\$1,500	Rain	Daylight	Improper Lane Change	FHPD13OFF047750
23	6/14/2013	Fri	10:12 PM	Rear End	No	No	\$6,900	Clear	Dark - Not Lighted	Careless Driving	FHPD13OFF049705
24	6/17/2013	Mon	10:00 PM	Angle	No	Yes	\$8,000	Cloudy	Dark - Lighted	Fail to Stop	FHPD13OFF050620
25	7/12/2013	Fri	4:00 PM	Off Road	No	No	\$1,509	Cloudy	Daylight	Careless Driving	FHPD13OFF058673
26	7/27/2013	Sat	8:37 PM	Left Turn	No	Yes	\$15,000	Clear	Dark - Lighted	FTY R/W	FHPD13OFF063599
27	8/1/2013	Thu	4:35 AM	Left Turn	No	Yes	\$14,000	Clear	Dark - Lighted	FTY R/W	FHPD13OFF064879
28	8/13/2013	Tue	12:05 PM	Rear End	No	No	\$5,000	Clear	Daylight	Careless Driving	FHPD13OFF068914
29	8/20/2013	Tue	4:13 PM	Rear End	No	Yes	\$6,000	Clear	Daylight	Careless Driving	FHPD13OFF071310
30	9/18/2013	Wed	4:55 PM	Rear End	No	No	\$2,500	Rain	Daylight	Careless Driving	FHPD13OFF080391
31	9/20/2013	Fri	11:12 AM	Rear End	No	No	\$800	Clear	Daylight	Careless Driving	FHPD13OFF080928
32	9/21/2013	Sat	2:48 PM	Rear End	No	Yes	\$6,000	Clear	Daylight	Careless Driving	FHPD13OFF081287
33	10/10/2013	Thu	7:40 AM	Off Road	No	No	\$2,200	Clear	Daylight	Careless Driving	FHPD13OFF086834
34	10/18/2013	Fri	6:35 PM	Rear End	No	No	\$1,500	Clear	Daylight	Careless Driving	FHPD13OFF089422
35	10/25/2013	Fri	7:00 PM	Bicycle	No	Yes	\$500	Clear	Dusk	FTY R/W	FHPD13OFF091477
36	10/25/2013	Fri	8:05 PM	Bicycle	No	Yes	\$2,500	Clear	Dark - Lighted	FTY R/W	FHPD13OFF091506
37	11/17/2013	Sun	4:05 PM	Rear End	No	No	\$1,800	Clear	Daylight	Careless Driving	FHPD13OFF098368
38	11/23/2013	Sat	5:25 PM	Angle	No	Yes	\$500	Clear	Daylight	Careless Driving	FHPD13OFF100346
39	11/29/2013	Fri	3:55 PM	Rear End	No	Yes	\$4,000	Clear	Daylight	Careless Driving	FHPD13OFF102153
40	12/8/2013	Sun	3:28 PM	Left Turn	No	Yes	\$8,000	Clear	Daylight	FTY R/W	FHPD13OFF104693
41	12/16/2013	Mon	4:28 PM	Sideswipe	No	No	\$600	Clear	Daylight	Careless Driving	FHPD13OFF107143
42	12/17/2013	Tue	8:54 AM	Sideswipe	No	No	\$2,000	Clear	Daylight	Careless Driving	FHPD13OFF107302
43	12/24/2013	Tue	6:00 PM	Off Road	No	No	\$5,900	Clear	Dark - Lighted	Careless Driving	FHPD13OFF109823
44	12/26/2013	Thu	10:32 AM	Left Turn	No	Yes	\$1,800	Clear	Daylight	FTY R/W	FHPD13OFF110169
45	12/28/2013	Sat	2:05 PM	Left Turn	No	No	\$400	Clear	Daylight	FTY R/W	FHPD13OFF110862
46	12/28/2013	Sat	9:30 AM	Rear End	No	No	\$18,000	Cloudy	Daylight	Careless Driving	FHPD13OFF110778
TOTAL											
TOTAL NO		FATAL	INJURY	PDO	ANGLE	LEFT	RIGHT	REAR END	SIDE SWIPE	HEAD ON	IMPROPER LANE CHANGE
	46	0	15	31	2	10	2	18	5	0	3
	%	0%	33%	67%	4%	22%	4%	39%	11%	0%	7%
ONE VEHICLE		PED/BIKE	DAY	DUSK/NIGHT	WET	DRY	SPEEDING	FTY R/W	ALCOHOL/DRUGS	DISTRACTED	FAIL TO OBEY SIGNAL
	4	4	31	15	3	43	0	13	0	13	1
	9%	9%	67%	33%	7%	93%	0%	28%	0%	28%	2%

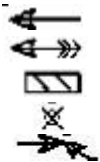
Orange County Traffic Engineering Division Collision Diagram

LOCATION: Americana Boulevard and Texas Avenue

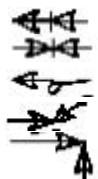
YEAR: 2013



COLLISION SYMBOLS



VEHICLE PATH
BACKING VEHICLE
PARKED VEHICLE
FATALITY
RIGHT TURN COLLISION



REAR-END COLLISION
HEAD-ON COLLISION
OVERTURNED VEHICLE
LEFT TURN COLLISION
RIGHT ANGLE COLLISION



FIXED OBJECT
OUT OF CONTROL
SIDE SWIPE
PEDESTRIAN COLLISION
BICYCLIST COLLISION

CRASH SUMMARY

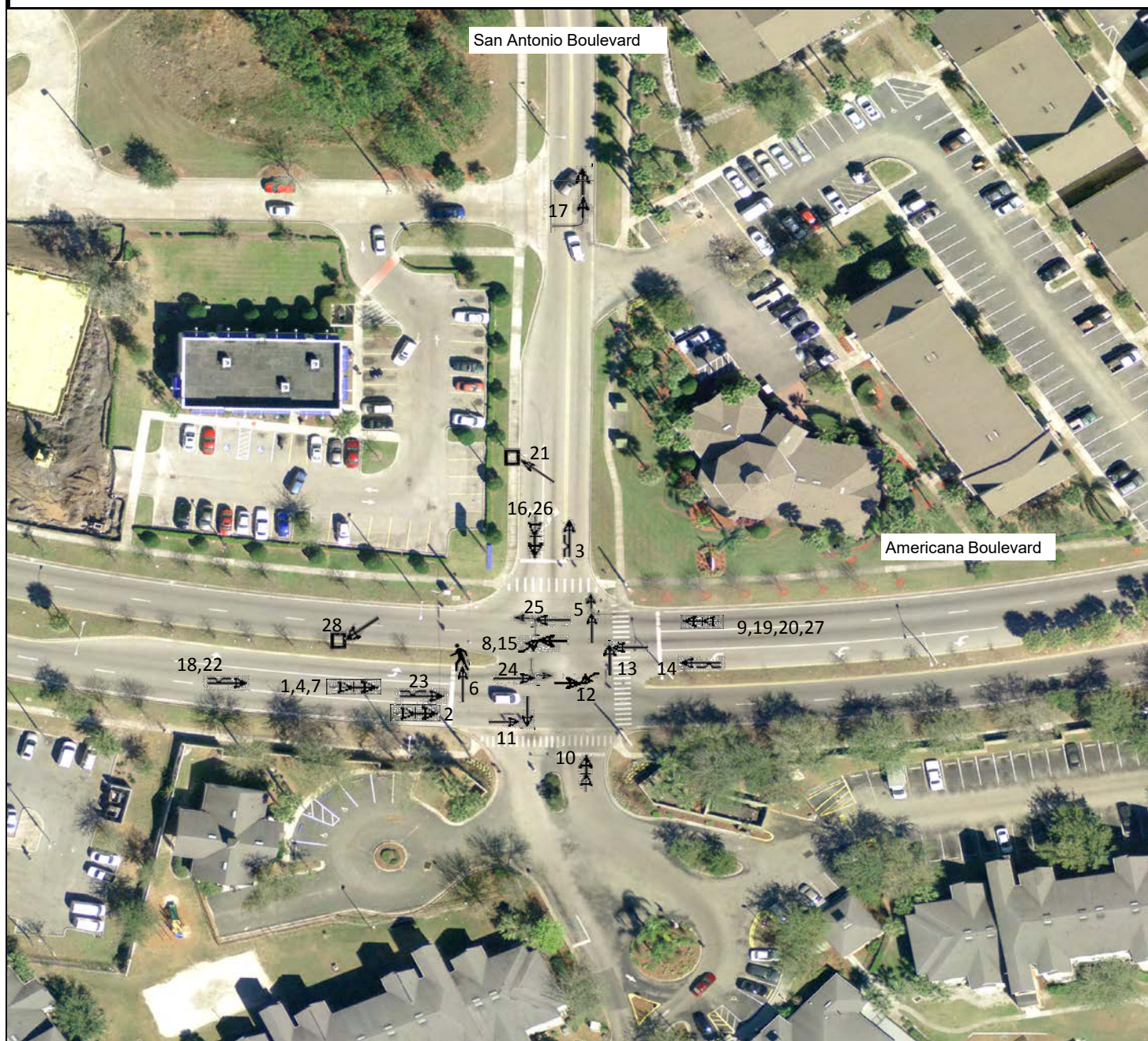
	PROP. DMG ONLY	INJURY	FATAL	TOTAL
DAYTIME	22	9	0	31
NIGHTTIME	9	6	0	15
TOTAL	31	15	0	46

Crash Summary											
Location:		AMERICANA BOULEVARD						Intersection Control: Signalized			
Intersecting Route:		SAN ANTONIO AVENUE						Prepared by: CNL			
Study Period From:		2011 - 2013						County: Orange			
NO	DATE	DAY	TIME	TYPE	FATAL	INJURY	PROPERTY DAMAGE	WEATHER	DAY/NIGHT	CONTRIBUTING CAUSE	ACCIDENT REPORT #
1	1/25/2011	Tue	7:54 AM	Rear End	No	Yes	\$3,500	Clear	Daylight	Careless Driving	FHPD11OFF006521
2	2/9/2011	Wed	9:30 AM	Rear End	No	Yes	\$4,500	Clear	Daylight	Careless Driving	FHPD11OFF010732
3	2/28/2011	Mon	4:20 PM	Sideswipe	No	No	\$800	Clear	Daylight	Careless Driving	FHPD11OFF016571
4	5/7/2011	Sat	4:56 PM	Rear End	No	No	\$2,250	Clear	Daylight	Careless Driving	FHPD11OFF037581
5	5/23/2011	Mon	7:46 AM	Right Turn	No	No	\$1,000	Clear	Daylight	Failure to Yield ROW	FHPD11OFF041963
6	5/24/2011	Tue	3:23 PM	Pedestrian	No	Yes	\$25	Clear	Daylight	Careless Driving	FHPD11OFF042350
7	6/1/2011	Wed	2:40 PM	Rear End	No	No	\$200	Clear	Daylight	Careless Driving	FHPD11OFF044785
8	7/23/2011	Sat	8:59 PM	Left Turn	No	No	\$11,000	Clear	Dark - Lighted	Failure to Yield ROW	FHPD11OFF060618
9	11/18/2011	Fri	12:21 PM	Rear End	No	No	\$1,000	Clear	Daylight	Careless Driving	FHPD11OFF095699
10	1/2/2012	Mon	7:53 PM	Rear End	No	No	\$200	Clear	Dark - Lighted	Careless Driving	FHPD12OFF000401
11	1/31/2012	Tue	2:48 PM	Angle	No	Yes	\$4,000	Clear	Daylight	Fail to Obey Signal	FHPD12OFF008009
12	2/1/2012	Wed	6:36 PM	Left Turn	No	No	\$3,000	Clear	Dark - Lighted	Failure to Yield ROW	FHPD12OFF008391
13	5/30/2012	Wed	6:38 PM	Angle	No	No	\$2,300	Clear	Daylight	Fail to Obey Signal	FHPD12OFF045665
14	5/31/2012	Thu	2:20 PM	Sideswipe	No	No	\$3,000	Cloudy	Daylight	Careless Driving	FHPD12OFF045864
15	7/25/2012	Wed	8:50 PM	Left Turn	No	No	\$3,000	Clear	Dark - Lighted	Failure to Yield ROW	FHPD12OFF063156
16	8/27/2012	Mon	7:05 PM	Rear End	No	No	\$1,000	Cloudy	Dusk	Careless Driving	FHPD12OFF073401
17	10/25/2012	Thu	4:14 PM	Left Turn	No	No	\$2,510	Cloudy	Daylight	Failure to Yield ROW	FHPD12OFF091552
18	12/16/2012	Sun	7:45 AM	Sideswipe	No	No	\$100	Clear	Daylight	Unknown	FHPD12OFF106837
19	1/16/2013	Wed	10:00 AM	Rear End	No	No	\$21,000	Clear	Daylight	Careless Driving	FHPD13OFF004313
20	2/6/2013	Wed	12:42 PM	Rear End	No	No	\$7,000	Clear	Daylight	Careless Driving	FHPD13OFF010000
21	2/26/2013	Tue	12:30 AM	Off Road	No	No	\$12,000	Clear	Dawn	Careless Driving	FHPD13OFF015836
22	3/21/2013	Thu	3:49 PM	Sideswipe	No	No	\$1,364	Clear	Daylight	Improper Lane Change	FHPD13OFF023191
23	4/16/2013	Tue	6:11 PM	Other	No	No	\$500	Clear	Daylight	Unknown	FHPD13OFF031350
24	6/3/2013	Mon	6:07 PM	Left Turn	No	Yes	\$5,500	Clear	Daylight	Fail to Obey Signal	FHPD13OFF046044
25	6/13/2013	Thu	12:35 AM	Left Turn	No	No	\$8,000	Clear	Dark - Lighted	Fail to Obey Signal	FHPD13OFF049068
26	6/13/2013	Thu	9:45 PM	Rear End	No	No	\$1,500	Clear	Dark - Lighted	Careless Driving	FHPD13OFF049344
27	10/11/2013	Fri	7:09 PM	Other	No	No	\$5,000	Clear	Dusk	Careless Driving	FHPD13OFF087384
28	11/2/2013	Sat	9:50 AM	Off Road	No	No	\$600	Cloudy	Daylight	Careless Driving	FHPD13OFF093799
TOTAL NO		FATAL	INJURY	PDO	ANGLE	LEFT	RIGHT	REAR END	SIDE SWIPE	HEAD ON	IMPROPER LANE CHANGE
		28	0	5	23	2	6	1	9	4	1
		%	0%	18%	82%	7%	21%	4%	32%	14%	4%
ONE VEHICLE		PED/BIKE	DAY	DUSK/NIGHT	WET	DRY	SPEEDING	FTY R/W	ALCOHOL/DRUGS	DISTRACTED	FAIL TO OBEY SIGNAL
		1	1	18	10	0	28	0	5	2	4
		4%	4%	64%	36%	0%	100%	0%	18%	7%	14%

Orange County Traffic Engineering Division Collision Diagram

LOCATION: Americana Boulevard at San Antonio Boulevard

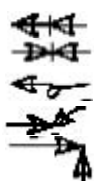
YEAR: 2011-2013



COLLISION SYMBOLS



VEHICLE PATH
BACKING VEHICLE
PARKED VEHICLE
FATALITY
RIGHT TURN COLLISION



REAR-END COLLISION
HEAD-ON COLLISION
OVERTURNED VEHICLE
LEFT TURN COLLISION
RIGHT ANGLE COLLISION



FIXED OBJECT
OUT OF CONTROL
SIDE SWIPE
PEDESTRIAN COLLISION
BICYCLIST COLLISION

CRASH SUMMARY

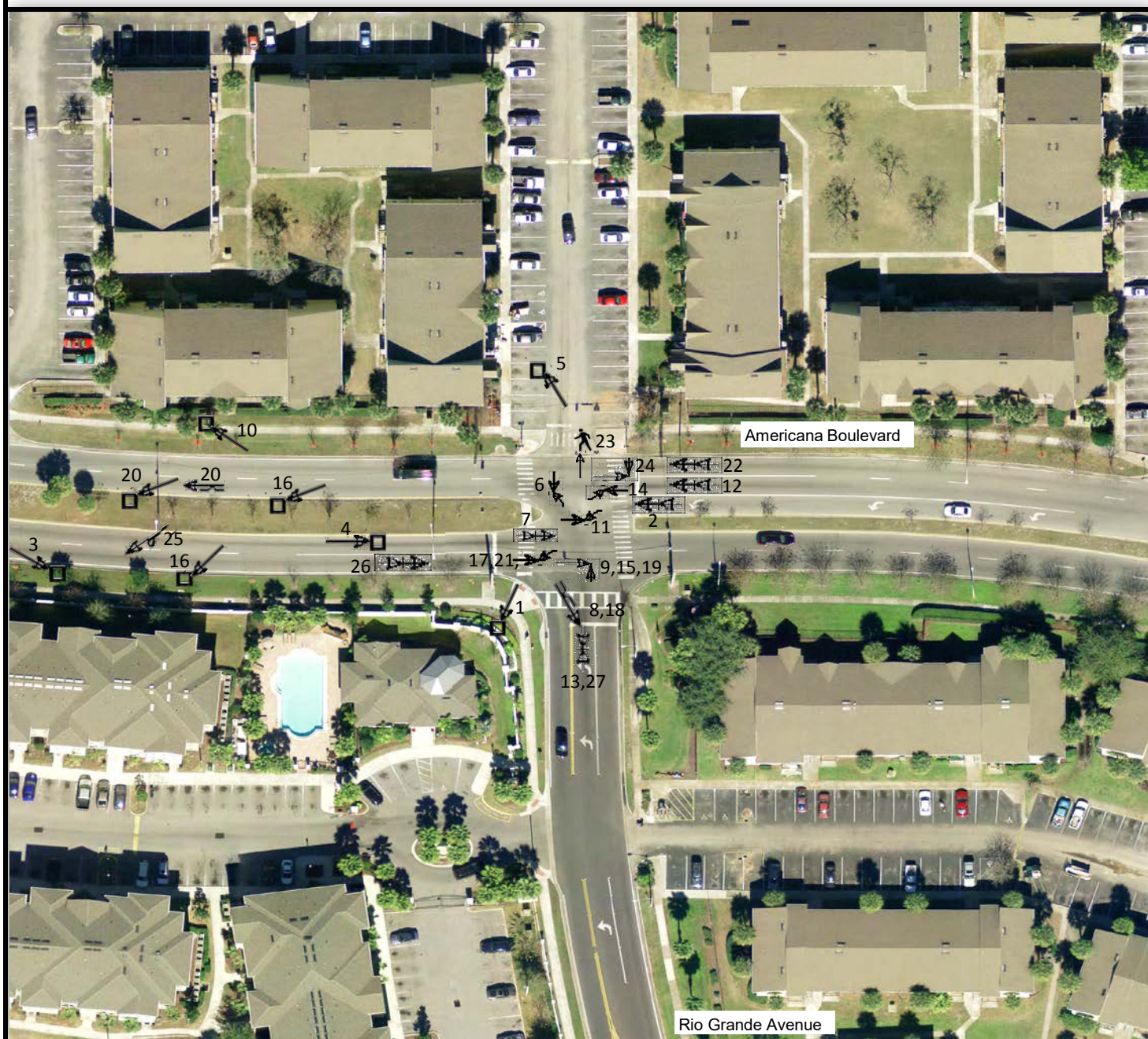
	PROP. DMG ONLY	INJURY	FATAL	TOTAL
DAYTIME	13	5	0	18
NIGHTTIME	10	0	0	10
TOTAL	23	5	0	28

Crash Summary											
Location:		AMERICANA BOULEVARD						Intersection Control: Signalized			
Intersecting Route:		S RIO GRANDE AVENUE						Prepared by: CNL			
Study Period From:		2011 - 2013						County: Orange			
NO	DATE	DAY	TIME	TYPE	FATAL	INJURY	PROPERTY DAMAGE	WEATHER	DAY/NIGHT	CONTRIBUTING CAUSE	ACCIDENT REPORT #
1	1/26/2011	Wed	2:00 AM	Off Road	No	No	\$250	Rain	Dark - Lighted	Unknown	FHPD11OFF006757
2	3/5/2011	Sat	11:26 AM	Rear End	No	Yes	\$150	Clear	Daylight	Unknown	FHPD11OFF018125
3	3/9/2011	Wed	10:50 AM	Off Road	No	Yes	\$2,000	Clear	Daylight	Unknown	FHPD11OFF019267
4	4/6/2011	Wed	2:16 PM	Other	No	No	\$2,500	Clear	Daylight	Unknown	FHPD11OFF028335
5	4/15/2011	Fri	12:05 AM	Other	No	No	\$15,000	Clear	Dark - Lighted	Unknown	FHPD11OFF030895
6	5/17/2011	Tue	8:56 PM	Angle	No	Yes	\$6,000	Clear	Dark - Lighted	Fail to Yield ROW	FHPD11OFF040554
7	7/27/2011	Wed	6:28 PM	Rear End	No	No	\$1,300	Rain	Daylight	Careless Driving	ORCC11OFF000947
8	7/28/2011	Thu	7:06 PM	Sideswipe	No	No	\$200	Clear	Daylight	Unknown	FHPD11OFF062011
9	3/3/2012	Sat	1:04 PM	Angle	No	Yes	\$2,800	Clear	Daylight	Fail to Obey Signal	FHPD12OFF017875
10	3/11/2012	Sun	7:05 AM	Off Road	No	No	\$8,000	Clear	Dawn	Unknown	FHPD12OFF020387
11	3/22/2012	Thu	7:25 AM	Left Turn	No	No	\$400	Clear	Daylight	Fail to Yield ROW	FHPD12OFF024181
12	5/15/2012	Tue	4:52 PM	Rear End	No	No	\$2,000	Clear	Daylight	Careless Driving	FHPD12OFF040837
13	5/30/2012	Wed	6:20 PM	Head On	No	No	\$2,000	Clear	Daylight	Careless Driving	FHPD12OFF045661
14	7/23/2012	Mon	1:02 PM	Left Turn	No	Yes	\$2,500	Clear	Daylight	Fail to Yield ROW	FHPD12OFF062380
15	9/28/2012	Fri	8:00 AM	Angle	No	No	\$13,000	Clear	Daylight	Fail to Obey Signal	FHPD12OFF083011
16	10/5/2012	Fri	1:16 PM	Off Road	No	No	\$500	Clear	Daylight	Unknown	FHPD12OFF085384
17	1/7/2013	Mon	1:50 PM	Left Turn	No	Yes	\$5,500	Clear	Daylight	Careless Driving	FHPD13OFF001801
18	6/10/2013	Mon	1:00 PM	Sideswipe	No	No	\$550	Clear	Daylight	Improper Right Turn	FHPD13OFF048246
19	6/24/2013	Mon	8:54 AM	Angle	No	Yes	\$7,000	Clear	Daylight	Fail to Obey Signal	FHPD13OFF052658
20	7/14/2013	Sun	5:42 PM	Sideswipe	No	No	\$7,400	Rain	Daylight	Improper Lane Change	FHPD13OFF059379
21	8/24/2013	Sat	8:30 PM	Left Turn	No	Yes	\$6,000	Cloudy	Dark - Lighted	Unknown	FHPD13OFF072710
22	9/23/2013	Mon	5:04 PM	Rear End	No	No	\$6,200	Rain	Daylight	Careless Driving	FHPD13OFF081839
23	10/4/2013	Fri	6:10 PM	Pedestrian	No	No	\$0	Clear	Daylight	Unknown	FHPD13OFF085264
24	10/10/2013	Thu	8:45 PM	Left Turn	No	No	\$16,000	Clear	Dusk	Fail to Yield ROW	FHPD13OFF087058
25	10/28/2013	Mon	6:20 PM	Rollover/ Off Road	No	No	\$7,700	Clear	Dusk	Careless Driving	FHPD13OFF092356
26	11/20/2013	Wed	5:33 PM	Rear End	No	Yes	\$1,000	Clear	Dusk	Careless Driving	FHPD13OFF099230
27	12/17/2013	Tue	8:32 AM	Head On	No	No	\$500	Clear	Daylight	Careless Driving	FHPD13OFF107292
TOTAL											
TOTAL NO		FATAL	INJURY	PDO	ANGLE	LEFT	RIGHT	REAR END	SIDE SWIPE	HEAD ON	IMPROPER LANE CHANGE
		27	0	9	18	4	5	0	5	3	2
		%	0%	33%	67%	15%	19%	0%	19%	11%	7%
ONE VEHICLE		PED/BIKE	DAY	DUSK/NIGH	WET	DRY	SPEEDING	FTY R/W	ALCOHOL/DRUGS	DISTRACTED	FAIL TO OBEY SIGNAL
		5	1	19	4	23	0	4	0	6	3
		19%	4%	70%	30	15	85%	0%	15%	0%	22%

Orange County Traffic Engineering Division Collision Diagram

LOCATION: Americana Boulevard at Rio Grande Avenue

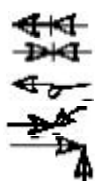
YEAR: 2011-2013



COLLISION SYMBOLS



VEHICLE PATH
BACKING VEHICLE
PARKED VEHICLE
FATALITY
RIGHT TURN COLLISION



REAR-END COLLISION
HEAD-ON COLLISION
OVERTURNED VEHICLE
LEFT TURN COLLISION
RIGHT ANGLE COLLISION



FIXED OBJECT
OUT OF CONTROL
SIDE SWIPE
PEDESTRIAN COLLISION
BICYCLIST COLLISION

CRASH SUMMARY

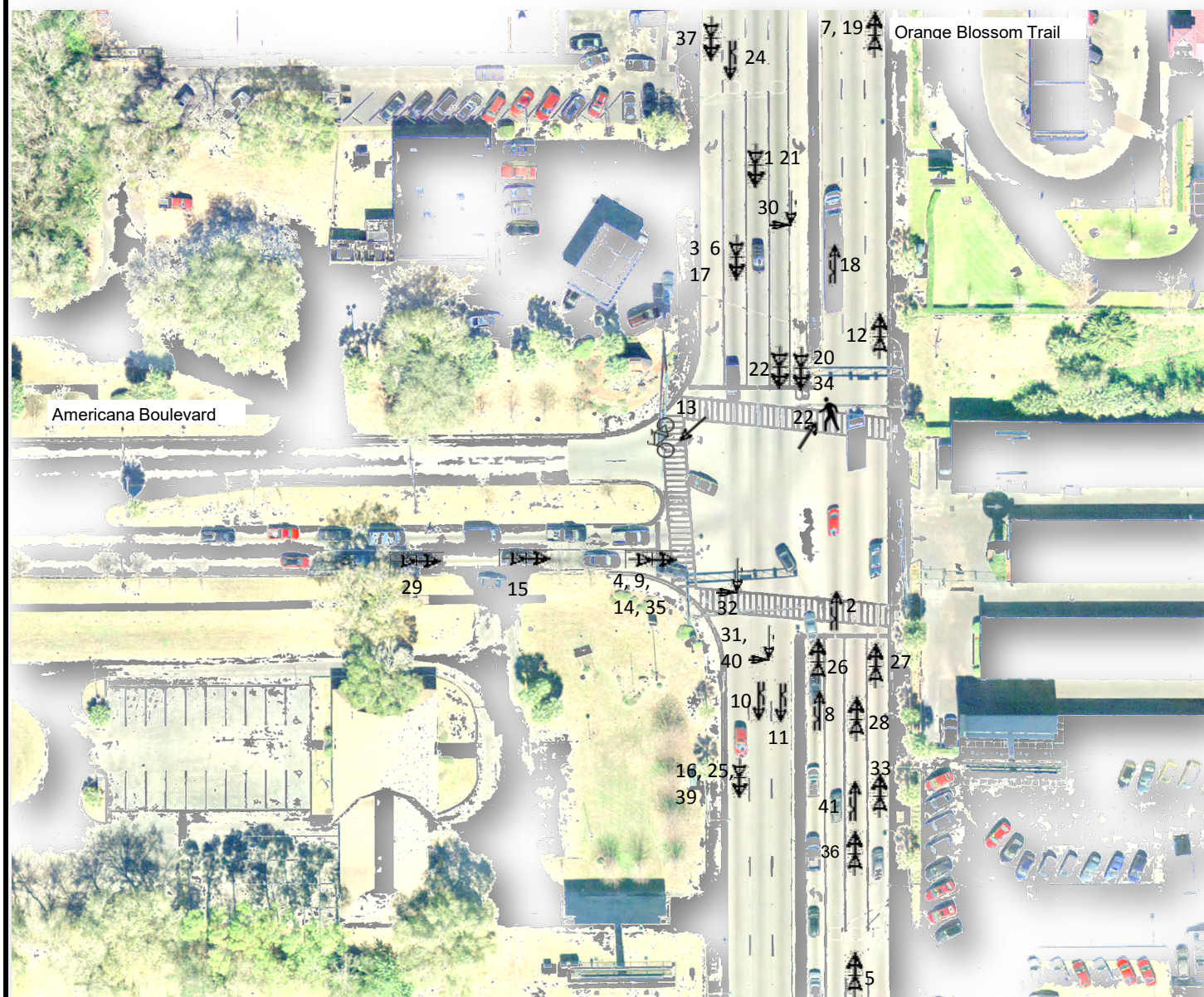
	PROP. DMG ONLY	INJURY	FATAL	TOTAL
DAYTIME	13	6	0	19
NIGHTTIME	5	3	0	8
TOTAL	18	9	0	27

Crash Summary											
Location:		AMERICANA BOULEVARD						Intersection Control: Signalized			
Intersecting Route:		ORANGE BLOSSOM TRAIL (US 441)						Prepared by: CNL			
Study Period From:		2013						County: Orange			
NO	DATE	DAY	TIME	TYPE	FATAL	INJURY	PROPERTY DAMAGE	WEATHER	DAY/NIGHT	CONTRIBUTING CAUSE	ACCIDENT REPORT #
1	1/26/2013	Sat	12:34 PM	Sideswipe	No	Yes	\$500	Clear	Daylight	Unknown	FHPD13OFF007017
2	1/28/2013	Mon	12:36 PM	Sideswipe	No	No	\$600	Clear	Daylight	Unknown	FHPD13OFF007502
3	2/11/2013	Mon	8:20 AM	Rear End	No	No	\$792	Clear	Daylight	Careless Driving	FHPD13OFF011358
4	2/13/2013	Wed	12:57 PM	Rear End	No	No	\$250	Clear	Daylight	Careless Driving	FHPD13OFF011977
5	2/23/2013	Sat	7:51 PM	Rear End	No	No	\$400	Clear	Dark - Lighted	Unknown	FHPD13OFF015167
6	3/6/2013	Wed	9:16 AM	Rear End	No	No	\$4,000	Clear	Daylight	Careless Driving	FHPD13OFF018311
7	3/6/2013	Wed	3:05 PM	Rear End	No	No	\$12,700	Clear	Daylight	Careless Driving	FHPD13OFF018403
8	3/9/2013	Sat	3:12 PM	Sideswipe	No	No	\$1,166	Clear	Daylight	Improper Lane Change	FHPD13OFF019342
9	4/8/2013	Mon	5:40 PM	Rear End	No	No	\$3,600	Clear	Daylight	Careless Driving	FHPD13OFF028840
10	4/11/2013	Thu	8:55 AM	Sideswipe	No	No	\$2,500	Cloudy	Daylight	Unknown	FHPD13OFF029612
11	4/13/2013	Sat	9:59 PM	Sideswipe	No	No	\$3,000	Clear	Dark - Lighted	Unknown	FHPD13OFF030441
12	4/30/2013	Tue	4:20 PM	Rear End	No	No	\$11,000	Clear	Daylight	Careless Driving	FHPD13OFF035434
13	5/1/2013	Wed	1:35 PM	Bicycle	No	Yes	\$10	Rain	Daylight	Unknown	FHPD13OFF035652
14	5/9/2013	Thu	6:13 AM	Rear End	No	No	\$1,550	Clear	Daylight	Careless Driving	FHPD13OFF038088
15	5/23/2013	Thu	6:40 PM	Rear End	No	Yes	\$310	Cloudy	Daylight	Careless Driving	FHPD13OFF042507
16	5/30/2013	Thu	10:20 AM	Rear End	No	No	\$450	Clear	Daylight	Careless Driving	FHPD13OFF044563
17	6/8/2013	Sat	2:37 PM	Rear End	No	No	\$3,000	Clear	Daylight	Careless Driving	FHPD13OFF047651
18	7/3/2013	Wed	3:15 PM	Sideswipe	No	No	\$1,100	Cloudy	Daylight	Improper Lane Change	FHPD13OFF055779
19	7/6/2013	Sat	3:40 AM	Rear End	No	Yes	\$12,000	Clear	Dark - Lighted	Careless Driving	FHPD13OFF056638
20	7/13/2013	Sat	8:35 PM	Rear End	No	No	\$1,100	Clear	Dark - Lighted	Unknown	FHPD13OFF059094
21	7/16/2013	Tue	5:53 PM	Rear End	No	Yes	\$3,300	Cloudy	Daylight	Careless Driving	FHPD13OFF060007
22	7/20/2013	Sat	1:31 AM	Pedestrian	No	Yes	\$1,000	Cloudy	Dark - Lighted	Failure to Yield ROW	FHPD13OFF061138
23	7/27/2013	Sat	5:15 AM	Rear End	No	No	\$8,000	Clear	Dark - Lighted	Careless Driving	FHPD13OFF063372
24	8/1/2013	Thu	5:25 PM	Sideswipe	No	No	\$1,000	Cloudy	Daylight	Improper Lane Change	FHPD13OFF065087
25	8/7/2013	Wed	7:18 AM	Rear End	No	Yes	\$10,000	Clear	Daylight	Careless Driving	FHPD13OFF066897
26	8/10/2013	Sat	12:10 AM	Rear End	No	No	\$750	Clear	Dark - Lighted	Careless Driving	FHPD13OFF067899
27	9/4/2013	Wed	12:00 AM	Rear End	No	No	\$1,000	Clear	Dark - Lighted	Unknown	FHPD13OFF075898
28	9/18/2013	Wed	10:12 PM	Rear End	No	Yes	\$1,000	Clear	Dark - Lighted	Careless Driving	FHPD13OFF080481
29	9/30/2013	Mon	8:15 PM	Rear End	No	Yes	\$0	Clear	Dark - Not Lighted	Unknown	FHPD13OFF084111
30	10/2/2013	Wed	2:43 AM	Other	No	No	\$39,500	Clear	Dark - Lighted	Failure to Yield ROW	FHPD13OFF084401
31	10/6/2013	Sun	11:13 AM	Other	No	No	\$3,200	Clear	Daylight	Improper Right Turn	FHPD13OFF085731
32	10/10/2013	Thu	11:18 AM	Right Turn	No	No	\$1,500	Clear	Daylight	Fail to Stop on Red	FHPD13OFF086882
33	10/24/2013	Thu	4:03 PM	Rear End	No	No	\$10,700	Clear	Daylight	Careless Driving	FHPD13OFF091099
34	11/5/2013	Tue	12:12 PM	Rear End	No	No	\$600	Clear	Daylight	Careless Driving	FHPD13OFF094652
35	11/6/2013	Wed	10:21 AM	Rear End	No	Yes	\$1,000	Cloudy	Daylight	Careless Driving	FHPD13OFF094945
36	11/16/2013	Sat	8:35 PM	Rear End	No	Yes	\$700	Cloudy	Dark - Lighted	Unknown	FHPD13OFF098188
37	11/21/2013	Thu	5:12 PM	Rear End	No	Yes	\$1,500	Rain	Dusk	Careless Driving	FHPD13OFF099606
38	12/4/2013	Wed	3:35 PM	Sideswipe	No	No	\$200	Clear	Daylight	Careless Driving	FHPD13OFF103554
39	12/10/2013	Tue	11:49 AM	Rear End	No	No	\$3,000	Clear	Daylight	Unknown	FHPD13OFF105149
40	12/25/2013	Wed	3:20 AM	Right Turn	No	No	\$5,000	Clear	Dark - Lighted	Fail to Obey Signal	FHPD13OFF109909
41	12/26/2013	Thu	3:55 PM	Sideswipe	No	No	\$300	Clear	Daylight	Unknown	FHPD13OFF110266
TOTAL											
TOTAL NO		FATAL	INJURY	PDO	ANGLE	LEFT	RIGHT	REAR END	SIDE SWIPE	HEAD ON	IMPROPER LANE CHANGE
		41	0	1	2	0	2	26	9	0	3
		%	0%	29%	71	0%	0%	5%	63%	22%	7%
ONE VEHICLE		PED/BIKE	DAY	DUSK/NIGHT	WET	DRY	SPEEDING	FTY R/W	ALCOHOL/DRUGS	DISTRACTED	FAIL TO OBEY SIGNAL
		0	2	27	14	2	39	0	2	1	13
		0%	5%	66%	34%	5%	95%	0%	5%	2%	32%

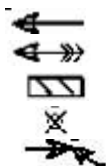
Orange County Traffic Engineering Division Collision Diagram

LOCATION: Americana Boulevard at Orange Blossom Trail

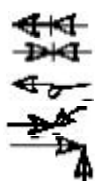
YEAR: 2013



COLLISION SYMBOLS



VEHICLE PATH
BACKING VEHICLE
PARKED VEHICLE
FATALITY
RIGHT TURN COLLISION



REAR-END COLLISION
HEAD-ON COLLISION
OVERTURNED VEHICLE
LEFT TURN COLLISION
RIGHT ANGLE COLLISION



FIXED OBJECT
OUT OF CONTROL
SIDE SWIPE
PEDESTRIAN COLLISION
BICYCLIST COLLISION

CRASH SUMMARY

	PROP. DMG ONLY	INJURY	FATAL	TOTAL
DAYTIME	21	6	0	27
NIGHTTIME	8	6	0	14
TOTAL	29	12	0	41

Texas-Americana RSA Field Review Sheet

Americana Boulevard

General

No.	From	To	Cross Street	Direction	Problem	Solution	Severity (L, M, H)	Photo Name
1	n/a	n/a	John Young Parkway	EB & WB	Signal heads have backplates, but no reflective borders; E/W approaches	Enhance signal head backplates with reflective borders	L	VIS_kb_1.jpg
2	n/a	n/a	John Young Parkway	NB & SB	Signal heads have no backplates; 45 mph approaches	Install reflective border signal head backplates	L	VIS_kb_2.jpg
3	n/a	n/a	John Young Parkway	N, W, and S legs	Crosswalks are in poor condition	Short term: refresh crosswalks. After resurfacing: upgrade to high-emphasis crosswalks.	M	PMS_kb_1.jpg
4	n/a	n/a	John Young Parkway	all corners	Pedestrian crossing signs are outdated Drivers turning right observed not yielding to pedestrians	As signs become faded or damaged, replace with current sign R10-3i which includes pedestrian countdown information	L	SGN_cl_70.jpg
5	n/a	n/a	John Young Parkway	WB		Install "Turning Vehicles Yield to Pedestrians" sign	M	PED_km_5.jpg
6	10'	north of	John Young Parkway	median	"Keep Right" sign leaning	Reset "Keep Right" sign	L	SGN_kb_4.jpg
7	150' east of	n/a	John Young Parkway	north side	drainage structure is blocked with debris	clear and remove debris, provide ditch pavement, and possibly widen opening to structure	L	BCZ_cl_61.jpg
8	250' east of	n/a	John Young Parkway	EB	Fence falling toward sidewalk	Request owner of fence to repair it	L	ADA_m_5.jpg
9	250' east of	n/a	John Young Parkway	north side	stop sign is bent over	request property owner to reset stop sign	L	SGN_cl_53.jpg
10	300' east of	n/a	John Young Parkway	north side	pavement edge drop-off around NE corner of shopping center driveway	repair drop-off	L	PAV_cl_52.jpg
11	300' east of	n/a	John Young Parkway	north side	broken mitered end section	replace mitered end section	L	BCZ_RN_7.jpg
12	400' east of	n/a	John Young Parkway	north side	Tree limbs too low over sidewalk	trim tree branches	L	ADA_RN_85.jpg
13	450' east of	n/a	John Young Parkway	EB	Fence falling toward sidewalk	Request owner of fence to repair it	L	ADA_m_9.jpg
14	500' east of	n/a	John Young Parkway	north side	broken mitered end section	replace mitered end section	L	BCZ_RN_8.jpg
15	540' east of	n/a	John Young Parkway	north side	pavement edge drop-off around NW corner of shopping center driveway	repair drop-off	L	PAV_cl_60.jpg
16	620' east of	n/a	John Young Parkway	north side	pavement edge drop-off around NE corner of shopping center driveway	repair drop-off	L	PAV_cl_59.jpg
17	740' east of	n/a	John Young Parkway	north side	broken mitered end section	replace mitered end section	L	BCZ_RN_5.jpg
18	800' east of	n/a	John Young Parkway	north side	Utility box in NE corner of shopping center driveway is littered with graffiti	request utility owner clean box	L	CRM_cl_51.jpg
19	880' east of	n/a	John Young Parkway	north side	Mitered end section is cracked and blocked with weeds and trash	repair and clean out mitered end section	L	BCZ_cl_26.jpg
20	880' east of	n/a	John Young Parkway	north side	pavement edge drop-off	fill in pavement edge drop-off	L	PAV_cl_58.jpg
21	50' west of	n/a	Grande Central Py	NW corner	pavement edge drop-off around NW corner	fill in pavement edge drop-off	L	PAV_cl_57.jpg
22	n/a	n/a	Grande Central Py	NE corner	water ponding	convey runoff to swale	L	ADA_RN_83.jpg
23	50' east of	n/a	Grande Central Py	north side	Mitered end section is cracked and blocked with weeds and trash	repair and clean out mitered end section	L	BCZ_cl_56.jpg
24	620' west of	n/a	Arpana Drive	north side	sidewalk drop-off and dirt washed away partially under sidewalk	fill under and edge of sidewalk	L	PED_cl_55.jpg
25	approx. 100' west of	n/a	Arpana Drive	both sides	lighting is needed for sidewalk for better visibility	Roadway lighting will be installed along Americana from John Young Parkway to Texas Avenue as part of County's lighting program	M	CRM_CPC_230.jpg
26	60' west of	620' west of	Arpana Drive	north side	dense wooded area adjacent to sidewalk	request property owner to thin out brush to increase safety	L	CRM_cl_54.jpg
27	west of	n/a	Arpana Drive	EB	LYNX bus stop sign is knocked down (bus stop ID 2310)	request that LYNX replace sign	L	SGN_cl_2.jpg

28	west of	n/a	Arpana Drive	EB	Litter around LYNX bus stop ID 2310, no trash can	request that LYNX install trash can	L	CRM_CPC_035.jpg
29	n/a	n/a	Arpana Drive	SW Corner	Inlet curb damage	Repair inlet top	L	PAV_da_5.jpg
30	n/a	n/a	Arpana Drive	NB	Stop sign is too far south of intersection	Relocate stop sign closer to intersection	M	SGN_cl_2.jpg
31	770' west of	n/a	Texas Avenue	north side	sidewalk ramp to street is filled with water because of poor water flow to drainage structure	convey runoff to swale and clear drainage structure	L	PED_cl_27(2).jpg
32	272' north of	n/a	Texas Avenue	SB	"Americana Bv NEXT SIGNAL" sign has damaged panel	Replace sign	L	SGN_kb_7.jpg
33	n/a	n/a	Texas Avenue	NW corner	Signal pole is leaning in toward intersection	Reconstruct signal at the intersection	M	INT_cl_9.jpg
34	n/a	n/a	Texas Avenue	EB & WB across N and E legs	Signal heads have no backplates and there is high incidence of red light running infractions EB	Install reflective border signal head backplates with new signal reconstruction	M	VIS_kb_3.jpg
35	n/a	n/a	Texas Avenue		Pavement was patched, covering portion of crosswalk	Replace crosswalk pavement markings	M	PMS_kb_2.jpg
36	n/a	n/a	Texas Avenue	EB & WB	Stop bars are faded.	Refresh stop bars.	M	PMS_kb_3.jpg
37	n/a	n/a	Texas Avenue	WB	There is no "Keep Right" sign in median nose	Install "Keep Right" sign	L	SGN_cl_10.jpg
38	n/a	n/a	Texas Avenue	NW	Signal controller cabinet is littered with trash	Clean controller cabinet	L	CRM_km_1.jpg
39	n/a	n/a	Texas Avenue	SE & NW corners	Pedestrian signal push buttons don't work for SW corner crossing Texas and NE corner crossing Americana	Repair broken pedestrian signal pushbuttons	M	
40	west of	n/a	Texas Avenue	EB	Crepe Myrtles block view of pedestrians in SW corner waiting to cross	Remove crepe myrtle trees	M	PED_kb_2.jpg
41	west of	n/a	Texas Avenue	EB	Tree branches reduce visibility of lane use sign.	Trim tree branches	L	SGN_cl_7.jpg
42	n/a	n/a	Texas Avenue	EB	Loop lead-in is visible on EB approach outside through lane	patch pavement	L	PAV_cl_6.jpg
43	n/a	n/a	Texas Avenue	all corners	Pedestrian crossing signs are outdated	Replace signs with new signal reconstruction	L	SGN_cl_5.jpg
44	n/a	n/a	Texas Avenue	SE corner	Broken top of utility box	Request utility owner to fix the top	L	ADA_m_24.jpg
45	275' east of	700' east of	Texas Avenue	EB & WB	Pedestrians are crossing mid-block between trees creating goat path	consider pedestrian fencing in the median, mid-block crossings, and RRFB's	H	PED_cl_11.jpg
46	370' east of	500' east of	Texas Avenue	WB	visibility of School Crossing Ahead and Signal Ahead Signs reduced by tree branches	Trim tree branches	M	SGN_kb_5.jpg
47	east of	n/a	Texas Avenue	EB & WB	LYNX bus shelters (stop IDs 2311 and 2260) are not lighted	Install shelter lighting for security and in accordance with Ordinance No. 2014-06	M	CRM_cl_78.jpg
48	east of	n/a	Texas Avenue	EB & WB	LYNX bus shelters (stop IDs 2311 and 2260) are heavily littered even though large trash bins are available	Try to organize a community clean-up and educate the public	L	CRM_CPC_907.jpg
49	Texas Avenue	to	Orange Blossom Trail	EB & WB	Randall Grief requested removal of several dead trees in County right-of-way	Remove dead trees	L	completed before photo taken
50	n/a	n/a	Americana Plaza Rin/Rout driveway	SB	stop sign is bent over	request owner to re-set sign	L	SGN_cl_50.jpg
51	100' east of	n/a	Chevron driveway	EB	tree branches hang too low over sidewalk	trim tree branches	L	ADA_cl_19.jpg
52	west of	n/a	Americana Plaza full driveway	WB	tree branches hang too low over sidewalk	trim tree branches	L	ADA_cl_49.jpg
53	n/a	n/a	Americana Plaza full driveway	WB departure	alignment of road has contributed to drivers hitting NW curb	Provide dashed white guide line across driveway	M	PAV_kb_1.jpg
54	n/a	n/a	Americana Plaza full driveway	WB departure	SCHOOL pavement markings are faded	Refresh SCHOOL pavement markings	M	PMS_kb_4.jpg
55	just east of	120' east of	Americana Plaza full driveway	WB	shopping center planter is broken in sections spilling mulch into sidewalk	remove mulch and request owner repair planter	L	PED_cl_47.jpg
56	100' east of	n/a	Americana Plaza full driveway	WB	tree branches hang too low over sidewalk	trim tree branches	L	ADA_cl_48.jpg
57	90' west of	n/a	San Antonio Avenue	EB	sidewalk drop-off at bus stop	fill edge of sidewalk	L	PED_cl_24.jpg
58	west of	n/a	San Antonio Avenue	EB	Protruding metal post near bus stop bench (bus stop ID 2807)	If this is a missing sign, replace sign. If this is a missing trash can, call LYNX to replace.	L	SGN_cl_15.jpg
59	west of	n/a	San Antonio Avenue	EB	cable is a trip hazard in front of bus bench (bus stop ID 2807)	request utility owner to bury or remove	M	ADA_CPC_951.jpg

60	west of	n/a	San Antonio Avenue	EB	Root system in front of bus stop bench (bus stop ID 2807) is a trip hazard and doesn't meet ADA	Cut away roots if possible. If not, consider relocating bus stop 20 feet west.	M	ADA_cl_16.jpg
61	west of	n/a	San Antonio Avenue	EB	Sidewalk drop-off behind bus stop bench (bus stop ID 2807)	fill drop-off	L	ADA_cl_14.jpg
62	west of	n/a	San Antonio Avenue	EB	Tree branches reduce visibility of bus stop sign (bus stop ID 2807).	Trim tree branches	L	VIS_cl_13.jpg
63	west of	n/a	San Antonio Avenue	EB	Object obstructing sidewalk	Request owner to fix or remove object through Code Enforcement; found it is a PVC pile for electrical wiring for street lights to secure to.	L	ADA_m_41.jpg
64	west of	n/a	San Antonio Avenue	EB	Tree limbs obstructing sidewalk	Trim tree branches	L	ADA_m_42.jpg
65	n/a	n/a	San Antonio Avenue	NB approach	No lane use arrow pavement markings; wide enough for 2 cars	Private drive; could request Pointe Vista Apartments add pavement arrows	L	PMS_kb_5.jpg
66	n/a	n/a	San Antonio Avenue	NB approach	Crosswalk is in poor condition	Private drive; could request Pointe Vista Apartments refresh crosswalk	L	PMS_kb_6.jpg
67	n/a	n/a	San Antonio Avenue	W leg	No marked crosswalk or pedestrian signal for crossing west leg	Add crosswalk, pedestrian signals, and pedestrian refuge in median for this leg	L	PED_kb_4.jpg
68	n/a	n/a	San Antonio Avenue	EB & WB	"Keep Right" signs are missing from the median noses	Install "Keep Right" signs	L	SGN_cl_12.jpg
69	n/a	n/a	San Antonio Avenue	EB & WB	Signal heads have no backplates; E/W approaches	Install reflective border signal head backplates	L	VIS_kb_5.jpg
70	n/a	n/a	San Antonio Avenue	WB	Sight distance for signal heads is limited by crepe myrtle trees on north side of road	Trim trees to meet minimum sight distance of 460 ft (MUTCD Table 4D-1) or install "Signal Ahead"	M	VIS_kb_6.jpg
71	n/a	n/a	San Antonio Avenue	NW and NE corners	3 underdrain clean-outs are missing caps	Request that Utilities replace caps	L	fixed before picture was available
72	n/a	n/a	San Antonio Avenue	SW Corner	underdrain clean-outs located within ramp	Reconstruct clean-out structure	L	ADA_m_34.jpg
73	n/a	n/a	San Antonio Avenue	all corners	Pedestrian crossing signs are outdated	As signs become faded or damaged, replace with current sign R10-3i which includes pedestrian countdown information	L	SGN_cl_25.jpg
74	n/a	n/a	Pointe Vista Apts driveway/San Antonio Ave	NB approach	Signal loop lead-in is exposed	patch pavement	L	PAV_cl_30.jpg
75	n/a	n/a	Rio Grande Avenue	North, East & West Legs	Pedestrians crosswalks faded and old standard	Short term: refresh crosswalks. After resurfacing: upgrade to high-emphasis crosswalks.	M	PMS_kb_8.jpg
76	n/a	n/a	Rio Grande Avenue	SW Corner	Pedestrian Button difficult to get to	Relocate to same side as crossing and closer to ramp	L	PED_kb_5.jpg
77	n/a	n/a	Rio Grande Avenue	SB approach	Crosswalk and stop bar are in poor condition	Private drive; consider asking property owner to refresh crosswalk	L	PMS_kb_7.jpg
78	n/a	n/a	Rio Grande Avenue	SW corner	large rut in edge of curb where trucks/busses have left the pavement	repair rutted area; consider restriping 10' approach lanes NB to increase width for EBR turning vehicles	M	INT_kb_1.jpg
79	n/a	n/a	Rio Grande Avenue	EB approach	No left turn lane into apartments	Investigate installation of an EBL turn lane; TMC's were taken and turn lane found to not be needed	L	INT_kb_3.jpg
80	n/a	n/a	Rio Grande Avenue	NE corner	water is collecting at bottom of pedestrian curb ramp	convey water to inlet	L	PED_cl_43.jpg
81	n/a	n/a	Rio Grande Avenue	all corners	Pedestrian crossing signs are outdated	As signs become faded or damaged, replace with current sign R10-3i which includes pedestrian countdown information	L	SGN_cl_44.jpg
82	n/a	n/a	Rio Grande Avenue	SW corner	Tree limbs too low over sidewalk	trim tree branches	L	ADA_RN_60.jpg
83	20' east of	30' east of	Rio Grande Avenue	WB	sidewalk drop-off	fill edge of sidewalk	L	PED_cl_41.jpg
84	east of	n/a	Rio Grande Avenue	WB	sidewalk drop-off near utility box	fill edge of sidewalk	L	PED_cl_36.jpg
85	east of	n/a	Rio Grande Avenue	WB	sidewalk drop-off	fill edge of sidewalk	L	PED_cl_39.jpg
86	300' east of	n/a	Rio Grande Avenue	SB	Stop sign exiting Grandview Apartments is bent over	request that owner reset sign	L	SGN_cl_38.jpg
87	575' east of	n/a	Rio Grande Avenue	SB	Stop sign exiting Grandview Apartments is bent over	request that owner reset sign	L	SGN_cl_37.jpg
88	approx. 750' east of	n/a	Rio Grande Avenue	WB	Large utility boxes need painting; request by Randall Grief, OBTDDB	request that utility owner repaint utility boxes	L	CRM_cl_63.jpg
89	west of	n/a	Orange Blossom Trail	WB	At 7-11 driveway, pavement around radius return is crumbling	Repair pavement or install curb	L	PAV_cl_18.jpg
90	west of	n/a	Orange Blossom Trail	WB	West of 7-11 driveway, tree limbs obstructing sidewalk	Trim tree branches	L	ADA_m_47.jpg

91	west of	n/a	Orange Blossom Trail	WB	concrete planter is breaking apart and tree is leaning and pushing wall - hazard to pedestrians	remove or rebuild planter; remove tree. Referred to Code Enforcement	M	PED_cl_35(2).jpg
92	west of	n/a	Orange Blossom Trail	WB	East of 7-11 driveway, tree limbs obstructing sidewalk	Trim tree branches	L	ADA_RN_62.jpg
93	approx. 200' west of	n/a	Orange Blossom Trail	EB	drainage outfall near 7-11 is unsafe for pedestrians near apartment complex	Install pedestrian handrail or otherwise shield	M	BCZ_CPC_500.jpg
94	100' west of	n/a	Orange Blossom Trail	EB approach	Curb holding water	Continue curb with apron	L	PAV_da_4(2).jpg
95	50' west of	n/a	Orange Blossom Trail	EB	Arrow Lane Designations worn and faded	Refresh Pavement Markings	L	PMS_kb_10.jpg
96	n/a	n/a	Orange Blossom Trail	EB approach	Signal heads have no backplates; E/W approaches	Install reflective border signal head backplates	M	VIS_kb_7.jpg
97	n/a	n/a	Orange Blossom Trail	EB approach	Two sets of route assemblies are not visible because of crepe myrtles.	Could not just trim trees; they would have to be removed. Request FDOT re-locate signs in front of trees.	L	SGN_kb_1.jpg
98	n/a	n/a	Orange Blossom Trail	EB approach	EB turning vehicles observed to not yield to pedestrians in crosswalk	Install "Turning Vehicles Yield to Pedestrians" sign	M	PED_cl_76.jpg
99	n/a	west of	Orange Blossom Trail	West leg	Sidewalks on both sides of the road do not connect to OBT sidewalks	Extend Americana sidewalks to OBT (approx. 150' on north side; 30' on south side)	L	PED_kb_6.jpg
100	n/a	n/a	Orange Blossom Trail	all corners	Pedestrian crossing signs are outdated	As signs become faded or damaged, replace with current sign R10-3i which includes pedestrian countdown information	L	SGN_cl_31.jpg
101	John Young Pkwy	OBT	n/a	EB & WB	no shoulder or bike lane	Consider adding paved bike lane in rural section west of Texas Ave and restriping wide outside curb lane east of Texas at time of resurfacing. Or investigate constructing multi-use path.	L	PED_cl_77.jpg

Texas-Americana RSA Field Review Sheet

Americana Boulevard

Sidewalk and ADA Issues

No.	From	To	Cross Street	Direction	Problem	Solution	Severity (L, M, H)	Photo Name
1	n/a	n/a	John Young Parkway	SW Corner	Stamped Concrete ramp faded	Replace with Standard Truncated dome mats	L	ADA_kb_2.jpg
2	n/a	n/a	John Young Parkway	SE corner	Ramp out of tolerance	Construct sidewalk that meets ADA standards	L	ADA_rm_1.jpg
3	15' east of	n/a	John Young Parkway	north side	sidewalk running slope is much steeper than road	Construct sidewalk that meets ADA standards	L	ADA_cl_71.jpg
4	107' east of	n/a	John Young Parkway	north side	sidewalk vertical discontinuity - trip hazard	repair sidewalk	L	ADA_cl_72.jpg
5	133' east of	n/a	John Young Parkway	north side	sidewalk vertical discontinuity - trip hazard	repair sidewalk	L	ADA_cl_73.jpg
6	162' east of	n/a	John Young Parkway	north side	sidewalk vertical discontinuity - trip hazard	repair sidewalk	L	ADA_cl_74.jpg
7	200' east of	n/a	John Young Parkway	EB	Broken sidewalk	Repair sidewalk panel	L	ADA_rm_3.jpg
8	300' east of	n/a	John Young Parkway	EB	Broken sidewalk	Repair sidewalk panel	L	ADA_rm_6.jpg
9	800' east of	n/a	John Young Parkway	south side	broken sidewalk	repair sidewalk	L	PED_cl_75.jpg
10	John Young Pkwy	Texas Ave	n/a	south side	Utility poles located in sidewalk. Some reduce PAR to less than 4'.	construct sidewalk around utility poles	L	ADA_RN_8.jpg
11	n/a	n/a	Grand Central Py	EB	Grade from sidewalk to bus stop bench is too steep. (bus stop ID 2309)	Construct ADA-compliant connection from sidewalk to bus stop	L	ADA_cl_1.jpg
12	west of	n/a	Arpana Drive	EB & WB	Sidewalk meeting pavement with no truncated dome mates	Install truncated dome mats	L	ADA_rm_17.jpg
13	n/a	n/a	Arpana Drive	EB	Pedestrian crossing too far south of intersection	construct sidewalk connection closer to intersection and add a crosswalk	M	PED_cl_4.jpg
14	n/a	n/a	Texas Avenue	all corners	Truncated domes do not exist or are worn down on concrete.	Replace with truncated dome mats.	L	ADA_kb_1.jpg
15	n/a	n/a	Texas Avenue	all corners	Ramps out of tolerance	Construct sidewalk ramps that meets ADA standards	L	ADA_rm_23.jpg
16	100' east of	n/a	Chevron driveway	EB	sidewalk vertical discontinuity - trip hazard	repair sidewalk	L	ADA_cl_20.jpg
17	150' east of	n/a	Chevron driveway	EB	sidewalk vertical discontinuity - trip hazard	repair sidewalk	L	ADA_cl_21.jpg
18	120' west of	n/a	San Antonio Avenue	EB	sidewalk vertical discontinuity - trip hazard	repair sidewalk	L	ADA_cl_22.jpg
19	90' west of	n/a	San Antonio Avenue	EB	sidewalk vertical discontinuity - trip hazard	repair sidewalk	L	ADA_cl_23.jpg
20	n/a	n/a	San Antonio Avenue	NE corner	ADA ramp and curb repair	Repair and bring up to standard	L	ADA_da_2.jpg
21	n/a	n/a	San Antonio Avenue	NW, SW, SE corners	Ramps out of tolerance and no truncated dome mats	Construct sidewalk ramps that meets ADA standards	L	ADA_rm_33.jpg
22	n/a	n/a	San Antonio Avenue	SE corner	Sidewalk curb ramp does not line up with crosswalk crossing Americana	Expand curb ramp to line up with both crosswalks	L	PED_cl_17.jpg
23	n/a	n/a	San Antonio Avenue	NW corner	Sidewalk width is 5-ft adjacent to curb	Construct 6-foot sidewalk north on San Antonio Avenue for distance adjacent to curb	L	ADA_rm_44.jpg
24	40' east of	n/a	San Antonio Avenue	EB	sidewalk vertical discontinuity - trip hazard	repair sidewalk	L	ADA_cl_32.jpg
25	70' east of	n/a	San Antonio Avenue	EB	sidewalk vertical discontinuity - trip hazard	repair sidewalk	L	ADA_cl_33.jpg
26	86' east of	n/a	San Antonio Avenue	EB	sidewalk vertical discontinuity - trip hazard	repair sidewalk	L	ADA_RN_53.jpg
27	130' east of	n/a	San Antonio Avenue	EB	sidewalk vertical discontinuity - trip hazard	repair sidewalk	L	ADA_RN_54.jpg
28	170' east of	n/a	San Antonio Avenue	EB	sidewalk vertical discontinuity - trip hazard	repair sidewalk	L	ADA_RN_55.jpg

29	350' east of	n/a	San Antonio Avenue	EB	sidewalk vertical discontinuity - trip hazard	repair sidewalk	L	ADA_RN_56.jpg
30	380' east of	n/a	San Antonio Avenue	EB	sidewalk vertical discontinuity - trip hazard	repair sidewalk	L	ADA_RN_57.jpg
31	200' west of	n/a	Rio Grande Avenue	WB	Sidewalk concrete is deteriorating	replace sidewalk panel	L	ADA_RN_68.jpg
32	n/a	n/a	Rio Grande Avenue	median	Ramp out of tolerance and no truncated dome mats	Construct sidewalk ramps that meets ADA standards	L	ADA_m_48.jpg
33	n/a	n/a	Rio Grande Avenue	SE corner	Ramp out of tolerance and no truncated dome mats	Construct sidewalk ramps that meets ADA standards	L	ADA_RN_59.jpg
34	just east of	n/a	Rio Grande Avenue	WB	sidewalk vertical discontinuity - trip hazard	repair sidewalk	L	ADA_cl_42.jpg
35	90' east of	n/a	Rio Grande Avenue	WB	cracked sidewalk panel	repair sidewalk	L	PED_cl_40.jpg
36	800' east of	n/a	Rio Grande Avenue	WB	sidewalk vertical discontinuity - trip hazard	repair sidewalk	L	ADA_cl_34.jpg
37	1100' west of	n/a	Orange Blossom Trail	EB	Ramps at FDOT pond driveway out of tolerance	Construct sidewalk ramps that meets ADA standards	L	ADA_RN_61.jpg
38	west of	n/a	Orange Blossom Trail	WB	West of 7-11 driveway, silt within sidewalk	Construct barrier to prevent silt from flowing toward sidewalk	L	ADA_m_46.jpg

B. Texas Avenue

Existing Conditions

Texas Avenue is a two-lane undivided roadway running north-south from Oak Ridge Road to Rio Grande Avenue. The cross section is rural from Oak Ridge Road to Duskin Avenue and urban from Duskin Avenue to Americana Boulevard. North of Americana Boulevard the roadway has a rural cross section, but curb and gutter begins again north of Honour Road through Rio Grande Avenue. Texas Avenue serves residential uses including single family homes, apartments, and condominiums. The speed limit is 35 mph throughout.

Sidewalk exists on both sides of the road between Oak Ridge Road and Americana Boulevard, but gaps exist north of Americana Boulevard as detailed on page 8. No bike lanes are provided.

Overhead utilities exist on the west side of the road between Oak Ridge Road and Holden Avenue. Roadway lighting currently exists on the west side of the road from north of Duskin Avenue to Honour Road.

Crash History and Analysis

Crash summaries and crash diagrams were prepared and follow for the key study intersections along Texas Avenue. These are the intersections of Texas Avenue with Oak Ridge Road, Honour Road, Holden Avenue, and Rio Grande Avenue. Crash summaries and diagrams for the intersection of Texas Avenue with Americana Boulevard can be found under the Americana Boulevard section of this report. Because of the high number of crashes at the intersection of Texas Avenue with Oak Ridge Road, the crash summary and crash diagram for this intersection depict crashes for only one year of data (2013). For the other intersections crashes for three years are included (2011-2013).

Of particular note and as previously shown in Table 4, the intersection of Texas Avenue with Oak Ridge Road has a high crash rate at 2.411036 crashes per million entering vehicles. This intersection is also a red light running enforcement intersection.

In addition, a high percentage of crashes (47%) at the intersection of Texas Avenue at Honour Road are left turn or right angle crashes.

Recommended Countermeasures

The following tables list the recommended improvements for Texas Avenue. The first table lists the general recommendations and the second table lists sidewalk and ADA-related issues.

There are several items believed to be a high priority along Texas Avenue. Some of these have already been addressed. Tree branches have been trimmed around the school flasher for Palmetto Elementary School and a large pavement edge drop-off just

south of Honour Road has been repaired. A gap in the fencing surrounding the canal at Wakulla has been closed with new fencing to protect pedestrians.

In investigating possible causes of the left turn and right angle crashes at the intersection of Texas Avenue and Honour Road, it was observed that there is reduced sight distance on Honour Road at the stop bar. It is recommended that the stop bar be moved forward to increase visibility around the wall in the southeast corner. A crosswalk is also recommended to be installed to both serve the high volume of pedestrians and also to emphasize the stop condition, as drivers ran the stop sign in 26% of the crashes.

The intersection of Texas Avenue and Rio Grande Avenue is severely offset in the westbound direction. Although only one head-on crash occurred at the intersection and the westbound volume is very low, head-on crashes tend to be severe. A missing “Keep Right” sign was replaced in the median westbound and a yellow guideline was installed across the intersection to guide drivers to the appropriate lane westbound. The feasibility of correcting or reducing this offset will be studied as part of a future intersection improvement project described under Capital Improvements.

Due to the high crash rate at the intersection of Texas Avenue at Oak Ridge Road, the number of pedestrian crashes on Oak Ridge Road in the vicinity of Texas Avenue, and the age of the existing signal, the signal at this intersection is recommended to be reconstructed. As part of this reconstruction, the sidewalks and curb ramps will be brought into compliance with ADA. The median nose for the northbound approach will be modified to allow a full crosswalk across the south leg. The pedestrian signal pushbuttons in the northwest corner will be brought closer to the sidewalk ramps, and sidewalk and curb ramps will be installed in the NE corner of the intersection.

Four-section signal heads will be considered for the left turn lanes instead of the current five-section cluster signal heads. These signal heads have been shown to increase safety by improving yielding to oncoming vehicles by vehicles turning left permissively. These signal heads also allow flexibility in timing protected and/or permitted left turns by time of day. Protected-only signal phasing increases congestion, but has been shown to reduce left turn crashes and left turn pedestrian crashes by reducing conflict points. In order to address the high incidence of crashes and red light running at the intersection, with the reconstruction of this intersection signal head backplates will be installed to increase the visibility of signal head indications in the eastbound and westbound directions.

Crash Summary											
Location:		TEXAS AVENUE					Intersection Control: Signalized				
Intersecting Route:		OAK RIDGE ROAD					Prepared by: CNL				
Study Period From:		2013					County: Orange				
NO	DATE	DAY	TIME	TYPE	FATAL	INJURY	PROPERTY DAMAGE	WEATHER	DAY/NIGHT	CONTRIBUTING CAUSE	ACCIDENT REPORT #
1	1/8/2013	Tue	11:55 AM	Rear End	No	No	\$3,500	Clear	Daylight	Careless Driving	FHPD13OFF002083
2	2/9/2013	Sat	4:49 PM	Angle	No	No	\$8,500	Clear	Daylight	Ran Stop Sign	FHPD13OFF010970
3	2/17/2013	Sun	10:00 PM	Sideswipe	No	No	\$1,000	Clear	Dusk	Unknown	FHPD13OFF013431
4	2/20/2013	Wed	9:15 PM	Right Turn	No	No	\$4,500	Clear	Dark - Lighted	Fail to Obey Signal	FHPD13OFF014223
5	2/22/2013	Fri	12:01 PM	Left Turn	No	Yes	\$13,200	Clear	Daylight	FTY R/W	FHPD13OFF014635
6	3/2/2013	Sat	5:25 PM	Sideswipe	No	No	\$3,000	Clear	Daylight	Unkown	FHPD13OFF017326
7	3/7/2013	Thu	9:21 AM	Angle	No	Yes	\$8,000	Clear	Daylight	FTY R/W	FHPD13OFF018606
8	3/16/2013	Sat	4:36 PM	Angle	No	No	\$3,300	Clear	Daylight	Ran Stop Sign	FHPD13OFF021661
9	3/28/2013	Thu	6:59 AM	Unknown	No	No	\$1,200	Clear	Dark - Lighted	Unknown	FHPD13OFF025212
10	4/18/2013	Thu	12:40 AM	Rear End	No	No	\$0	Clear	Daylight	Unknown	FHPD13OFF031824
11	5/8/2013	Wed	2:40 PM	Bicycle	No	Yes	\$250	Clear	Daylight	FTY R/W	FHPD13OFF037917
12	5/18/2013	Sat	11:01 PM	Sideswipe	No	No	\$1,000	Clear	Dark - Lighted	Unknown	FHPD13OFF041101
13	5/28/2013	Tue	2:13 PM	Angle	No	No	\$1,500	Clear	Daylight	Unknown	FHPD13OFF044052
14	6/18/2013	Tue	4:55 PM	Left Turn	No	No	\$2,500	Clear	Daylight	Unknown	FHPD13OFF050842
15	6/22/2013	Sat	12:07 PM	Rear End	No	Yes	\$300	Clear	Daylight	Careless Driving	FHPD13OFF052118
16	7/16/2013	Tue	9:50 PM	Left Turn	No	No	\$7,000	Cloudy	Dark - Not Lighted	Unknown	FHPD13OFF060070
17	7/22/2013	Mon	6:20 PM	Angle	No	No	\$10,500	Cloudy	Daylight	FTY R/W	FHPD13OFF061981
18	7/28/2013	Sun	11:44 AM	Rear End	No	No	\$1,600	Clear	Daylight	Careless Driving	FHPD13OFF063742
19	8/4/2013	Sun	4:30 PM	Left Turn	No	No	\$9,000	Clear	Daylight	FTY R/W	FHPD13OFF066127
20	8/6/2013	Tue	1:35 PM	Left Turn	No	Yes	\$3,200	Clear	Daylight	Careless Driving	FHPD13OFF066693
21	8/8/2013	Thu	9:06 PM	Rear End	No	No	\$3,500	Clear	Dark - Lighted	Careless Driving	FHPD13OFF067511
22	9/12/2013	Thu	1:11 PM	Other	No	No	\$2,000	Clear	Daylight	Unknown	FHPD13OFF078498
23	9/21/2013	Sat	2:33 AM	Pedestrian	No	Yes	\$0	Clear	Dark - Lighted	Unknown	FHPD13OFF081169
24	9/26/2013	Thu	6:00 PM	Other	No	No	\$3,200	Clear	Dusk	Improper Backing	FHPD13OFF082880
25	9/29/2013	Sun	1:40 PM	Sideswipe	No	No	\$2,000	Clear	Daylight	Unknown	FHPD13OFF083735
26	10/10/2013	Thu	7:52 AM	Rear End	No	Yes	\$4,000	Clear	Daylight	Careless Driving	FHPD13OFF086838
27	10/12/2013	Sat	6:46 AM	Rear End	No	Yes	\$12,000	Clear	Dark - Lighted	Careless Driving	FHPD13OFF087482
28	10/23/2013	Wed	7:21 PM	Left Turn	No	Yes	\$9,000	Cloudy	Dark - Lighted	Unknown	FHPD13OFF090884
29	11/4/2013	Mon	7:44 AM	Off Road	No	No	\$40,000	Clear	Daylight	Careless Driving	FHPD13OFF094313
30	12/15/2013	Sun	6:10 PM	Off Road	No	No	\$4,200	Clear	Dark - Lighted	Careless Driving	FHPD13OFF106903
TOTAL											
TOTAL NO		FATAL	INJURY	PDO	ANGLE	LEFT	RIGHT	REAR END	SIDE SWIPE	HEAD ON	IMPROPER LANE CHANGE
	30	0		2	5	6	1	7	4		0
	%	0%	30%	70	17%	20%	3%	23%	13%	0	0
ONE VEHICLE		PED/BIKE	DAY	DUSK/NIGH	WET	DRY	SPEEDING	FTY R/W	ALCOHOL/DRUGS	DISTRACTED	FAIL TO OBEY SIGNAL
	2	2	19	1	0	30	0	5	1	9	
	7%	7%	63%	37	0	100%	0%	17%	3%	30%	3

Orange County Traffic Engineering Division Collision Diagram

LOCATION: Texas Avenue at Oak Ridge Road

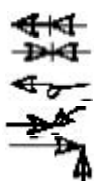
YEAR: 2013



COLLISION SYMBOLS



VEHICLE PATH
BACKING VEHICLE
PARKED VEHICLE
FATALITY
RIGHT TURN COLLISION



REAR-END COLLISION
HEAD-ON COLLISION
OVERTURNED VEHICLE
LEFT TURN COLLISION
RIGHT ANGLE COLLISION



FIXED OBJECT
OUT OF CONTROL
SIDE SWIPE
PEDESTRIAN COLLISION
BICYCLIST COLLISION

* Numbers that appear multiple times indicate more than one collision in that incident.

CRASH SUMMARY

	PROP. DMG ONLY	INJURY	FATAL	TOTAL
DAYTIME	13	6	0	19
NIGHTTIME	8	3	0	11
TOTAL	21	9	0	30

Crash Summary	
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[illegible]

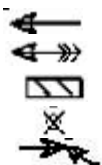
Orange County Traffic Engineering Division Collision Diagram

LOCATION: Texas Avenue at Honour Avenue

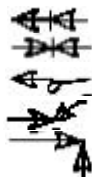
YEAR: 2011-2013



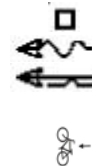
COLLISION SYMBOLS



VEHICLE PATH
BACKING VEHICLE
PARKED VEHICLE
FATALITY
RIGHT TURN COLLISION



REAR-END COLLISION
HEAD-ON COLLISION
OVERTURNED VEHICLE
LEFT TURN COLLISION
RIGHT ANGLE COLLISION



FIXED OBJECT
OUT OF CONTROL
SIDE SWIPE
PEDESTRIAN COLLISION
BICYCLIST COLLISION

CRASH SUMMARY

	PROP. DMG ONLY	INJURY	FATAL	TOTAL
DAYTIME	10	0	0	10
NIGHTTIME	9	0	0	9
TOTAL	19	0	0	19

[illegible]

Orange County Traffic Engineering Division Collision Diagram

LOCATION: Texas Avenue at Holden Avenue

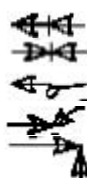
YEAR: 2011-2013



COLLISION SYMBOLS



VEHICLE PATH
BACKING VEHICLE
PARKED VEHICLE
FATALITY
RIGHT TURN COLLISION



REAR-END COLLISION
HEAD-ON COLLISION
OVERTURNED VEHICLE
LEFT TURN COLLISION
RIGHT ANGLE COLLISION



FIXED OBJECT
OUT OF CONTROL
SIDE SWIPE
PEDESTRIAN COLLISION
BICYCLIST COLLISION

CRASH SUMMARY

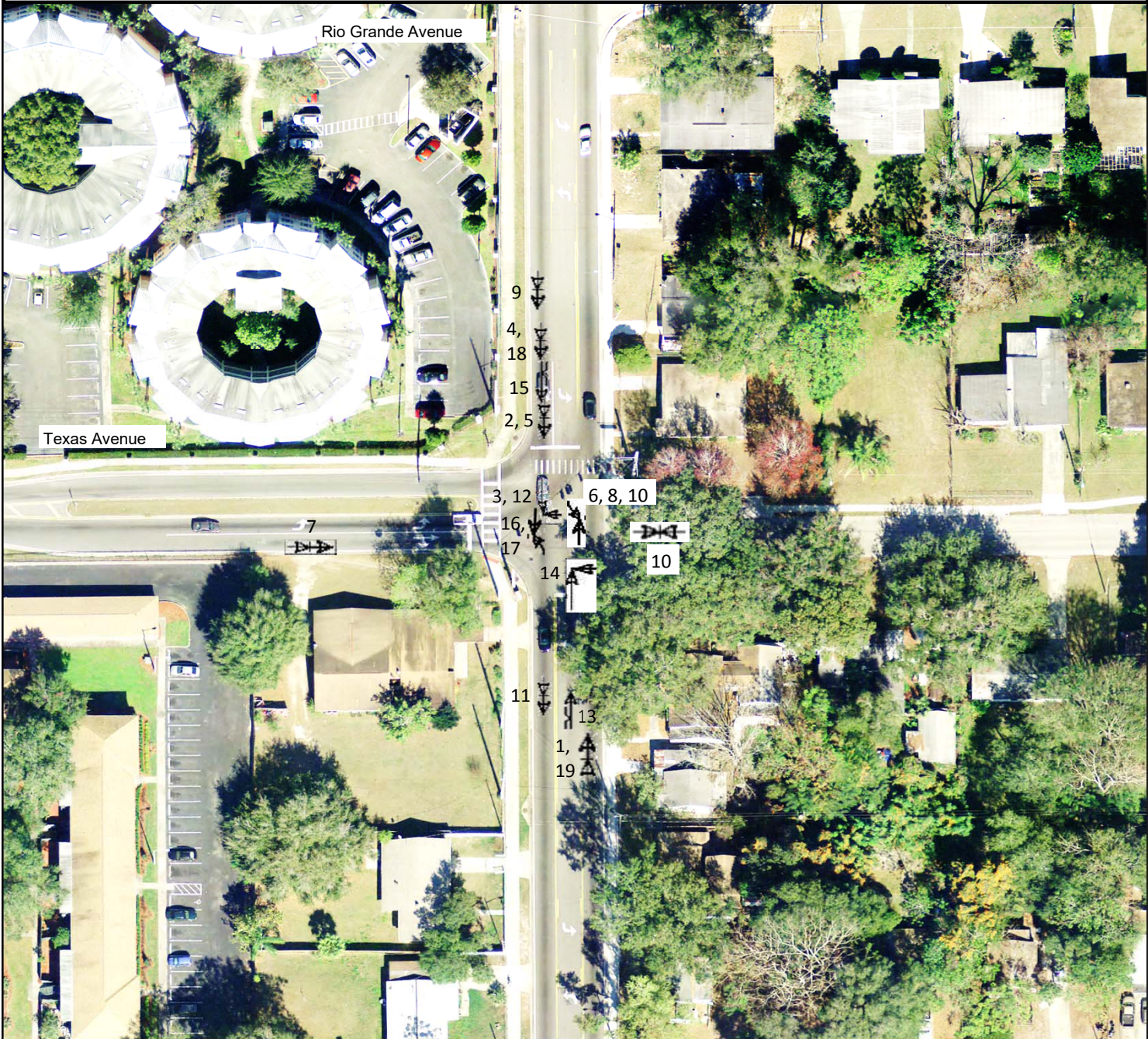
	PROP. DMG ONLY	INJURY	FATAL	TOTAL
DAYTIME	8	1	0	9
NIGHTTIME	4	4	0	8
TOTAL	12	5	0	17

[illegible]

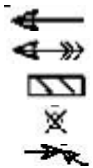
Orange County Traffic Engineering Division Collision Diagram

LOCATION: Texas Avenue at Rio Grande Avenue

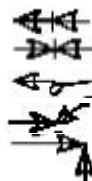
YEAR: 2013



COLLISION SYMBOLS



VEHICLE PATH
BACKING VEHICLE
PARKED VEHICLE
FATALITY
RIGHT TURN COLLISION



REAR-END COLLISION
HEAD-ON COLLISION
OVERTURNED VEHICLE
LEFT TURN COLLISION
RIGHT ANGLE COLLISION



FIXED OBJECT
OUT OF CONTROL
SIDE SWIPE
PEDESTRIAN COLLISION
BICYCLIST COLLISION

CRASH SUMMARY

	PROP. DMG ONLY	INJURY	FATAL	TOTAL
DAYTIME	6	4	0	10
NIGHTTIME	7	2	0	9
TOTAL	13	6	0	19

Texas-Americana RSA Field Review Sheet

Texas Avenue

General

No.	From	To	Cross Street	Direction	Problem	Solution	Severity (L, M, H)	Photo Name
1	50' east of	n/a	Texas Avenue	WB	The driveway for the Chinese restaurant is too close to the intersection.	Consider closing driveway; other access is available	M	INT_cl_100.jpg
2	n/a	n/a	Oak Ridge Road	all	signal poles are short, minimizing vertical clearance. Signal is showing signs of age.	Reconstruct signal	M	
3	n/a	n/a	Oak Ridge Road	SW corner	crosswalk pavement markings faded for crossing west leg	refresh pavement markings	L	PMS_cl_103.jpg
4	n/a	n/a	Oak Ridge Road	NW corner	Pedestrian push button too far (30') from curb ramp	Install separate pedestrian pushbutton on post with signal reconstruction	L	PED_cl_104.jpg
5	n/a	n/a	Oak Ridge Road	NB	Lots of litter found on the street	Try to organize a Community Clean-up	L	CRM_CPC_213.jpg
6	approx. 175'	north of	Oak Ridge Road	east side	commercial driveway has potholes and needs maintenance	request that property owner maintain driveway	L	BCZ_RN_15.jpg
7	approx. 350'	south of	Wakulla Way	east side	palm tree protruding over sidewalk	Trim tree branches	L	ADA_CPC_145.jpg
8	south of	n/a	Wakulla Way	NB	Tree branches reduce visibility of pedestrian crossing ahead sign	Trim tree branches	M	SGN_cl_105.jpg
9	n/a	n/a	Wakulla Way	SW corner	canal is shielded by guardrail along Wakulla, but only by chain link fence along Texas	investigate the possibility of shielding the canal along Texas	M	BCZ_cl_191.jpg
10	n/a	n/a	Wakulla Way	SW corner	chain link fence leaves gap to canal at sidewalk	close gap	H	BCZ_cl_192.jpg
11	n/a	n/a	Wakulla Way	SW corner	trees are overgrown; CEPTED	Trim tree branches	M	CRM_CPC_423.jpg
12	n/a	n/a	Wakulla Way	west and east sides	No marked crosswalks crossing Wakulla Way	install marked crosswalk both sides of Texas	L	PMS_RN_2.jpg
13	n/a	n/a	Texas Avenue	EB & WB approaches	Need to emphasize stop condition on intersection of two 2-lane roadways	install stop bars on both eastbound and westbound approaches	L	PMS_RN_1.jpg
14	n/a	n/a	Pineway Drive	NE corner	crumbling pavement and drop-off	repair pavement	L	BCZ_RN_14.jpg
15	n/a	n/a	Pineway Drive	west and east sides	No marked crosswalks crossing Pineway Drive	install marked crosswalk both sides of Texas	L	PMS_RN_5.jpg
16	n/a	n/a	Rose Avenue	NE corner	Headwall within clear zone	Consider adding concrete and mitered end section	M	BCZ_RN_11.jpg
17	n/a	n/a	Rose Avenue	NE corner	Pedestrian hazard with ditch on the side	Review criteria for pedestrian handrail	L	ADA_RN_96.jpg
18	just north of	n/a	Rose Avenue	NE corner	Pipe without end treatment	Reconstruct with end treatment	M	ADA_RN_148.jpg
19	just east of	n/a	Texas Avenue	north side	Sidewalk is blocked by tree branches fallen from dead tree	Clear sidewalk. Request property owner to remove dead tree.	L	ADA_cl_106.jpg
20	just north of	n/a	Blossom Terrace	NB	Tree branches reduce visibility of school flasher	Trim tree branches	H	PED_cl_107.jpg
21	approx. 120' south of	n/a	Blossom Terrace	SB	Overgrown tree near sidewalk, CEPTED	Request property owner to trim or remove tree	M	CRM_CPC_920.jpg
22	n/a	n/a	Blossom Terrace	NE corner	hole adjacent to road	fill hole	L	BCZ_RN_13.jpg
23	n/a	n/a	Blossom Terrace	NE corner	street name signs in poor condition	Replace street name signs	L	SGN_RN_1.jpg
24	n/a	n/a	Blossom Terrace	west side	Dark corner with dumpster, CEPTED	Request property owner to trim trees	M	CRM_CPC_218.jpg
25	approx. 150' north of	n/a	Blossom Terrace	west side	Overgrown tree and dark area adjacent to Royal Academy near sidewalk, CEPTED	Request property owner to trim trees	M	CRM_CPC_416.jpg
26	n/a	n/a	Duskin Avenue	NB & SB	Need to enhance school crossing due to heavy usage	Add school crossing sign to both sides of the road	M	PED_km_1.jpg
27	approx. 300'	south of	Americana Boulevard	SB	Open utility box next to sidewalk	request utility owner to maintain	L	PED_RN_900.jpg

28	south of	n/a	Americana Boulevard	NB	Tree branches reduce visibility of "Americana Bv NEXT SIGNAL" sign	Trim tree branches	L	SGN_cl_108.jpg
29	south of	n/a	Americana Boulevard	NB	Tree branches reduce visibility of school crossing ahead sign	Trim tree branches	L	SGN_cl_109.jpg
30	just south of	n/a	Honour Road	SB	large pavement edge drop-off	repair drop-off	H	PAV_cl_114.jpg
31	n/a	n/a	Honour Road	WB approach	High incidence of left turn and right angle crashes. Sight distance is reduced by a concrete wall in the SE corner.	Stripe a high emphasis crosswalk across Honour Road, pull the stop bar forward 6' to 4' behind the crosswalk.	H	PMS_cl_110.jpg
32	n/a	n/a	Honour Road	WB approach	End of road treatment is missing.	Add yellow object markers and double arrow panel for end of road treatment.	L	SGN_cl_111.jpg
33	n/a	n/a	Honour Road	west side	utility box has tree growing inside it	request utility owner to maintain or remove	L	BCZ_cl_189.jpg
34	n/a	n/a	Honour Road	across south leg	pedestrians crossing street to get to bus stop with no sidewalk or crosswalk	install pedestrian crosswalk with pedestrian warning signs	M	PED_cl_191.jpg
35	approx. 20'	north of	Honour Road	NB	Overgrown tree near sidewalk, CEPTED	Request property owner to trim trees	M	CRM_CPC_959.jpg
36	approx. 180'	north of	Buchanan Bay Cir S	SB	at bus stop ID 2804, trash can is not secured	request that LYNX secure trash can	L	PED_cl_187.jpg
37	approx. 325'	north of	Buchanan Bay Cir S	NB	at bus stop ID 2884, boarding and alighting area doesn't appear to be sufficient size (5' X 8')	review with LYNX	L	ADA_cl_132.jpg
38	approx. 300'	south of	Holden Road	SB	tree branches too low over sidewalk	Trim tree branches	L	ADA_cl_182.jpg
39	approx. 200'	south of	Holden Road	SB	tree branches too low over sidewalk	Trim tree branches	L	ADA_cl_181.jpg
40	south of	n/a	Holden Road	SB	pavement edge drop-off	repair drop-off	M	PAV_cl_115.jpg
41	south of	n/a	Holden Road	SB	Bus stop ID 2803 - cable line is draping low within reach of pedestrians.	Contact Brighthouse to tighten slack in cable	M	BCZ_cl_118.jpg
42	south of	n/a	Holden Road	SB	Bus stop ID 2803 - grass is extremely high in boarding and alighting area	Recommend increasing mowing schedule for roadways with heavy transit usage at bus stops	M	ADA_RN_109.jpg
43	n/a	n/a	Holden Road	SE corner	Evidence of vehicles leaving pavement around corner, pavement rutting	extend/repair pavement around radius	L	PAV_cl_140.jpg
44	n/a	n/a	Holden Road	SW corner	Evidence of vehicles leaving pavement around corner, pavement rutting	extend/repair pavement around radius	L	PAV_cl_116.jpg
45	n/a	n/a	Holden Road	east side	No crosswalk near bus stop	Stripe a high emphasis crosswalk across Holden Road	L	PMS_cl_112.jpg
46	n/a	n/a	Holden Road	south leg	No crosswalk across Texas Avenue to get to bus stop on west side of road	Stripe a high emphasis crosswalk across Texas Avenue	M	PMS_cl_179.jpg
47	n/a	n/a	Holden Road	NB	Stop sign is laterally offset due to concrete.	Replace standard panel with oversized panel.	L	SGN_cl_113.jpg
48	approx. 200'	north of	Holden Road	SB	fiber optic cable needs maintenance	Contact AT&T to repair	L	BCZ_cl_177.jpg
49	approx. 350'	north of	Holden Road	SB	Sign post has no sign panel	Research missing sign	L	SGN_cl_178.jpg
50	approx. 350'	north of	Holden Road	west side	steep drop-off into drainage basin	not within CZ - install fence to protect children	M	BCZ_cl_180.jpg
51	n/a	n/a	Tower Pine Road	SB	Stop sign bent over	request that property owner reset stop sign	L	SGN_cl_176.jpg
52	approx. 150'	north of	Tower Pine Road	west side	No Parking sign double arrow doesn't have signs for limits	install no parkings signs with outside limits	L	SGN_cl_147.jpg
53	n/a	n/a	Lemon Tree Lane	SW corner	Trees at entry are overgrown; CEPTED	request property owner to trim trees	M	CRM_LS_433.jpg
54	approx. 100'	south of	Skaneateles Court	SB	Visibility of reverse turn warning sign reduced by tree branches	Trim tree branches	M	VIS_cl_175.jpg
55	approx. 25'	south of	Skaneateles Court	NB	branches too low over sidewalk	Trim tree branches	L	ADA_cl_151.jpg
56	just south of	n/a	Skaneateles Court	west side	No Parking sign double arrow doesn't have signs for limits	install no parkings signs with outside limits	L	SGN_cl_154.jpg
57	n/a	n/a	Skaneateles Court	NE corner	rutting/drop-off around radius	repair drop-off	L	PAV_cl_174.jpg
58	n/a	n/a	Dunwoodie Street	EB	tree branches too low over sidewalk if pedestrian continues to walk on east side	Trim tree branches	L	ADA_cl_159.jpg
59	n/a	n/a	Dunwoodie Street	SB	Street name sign for Texas needs to be replaced, needs block number	Replace sign	L	SGN_cl_172.jpg

60	n/a	n/a	Dunwoodie Street	SB	Stop bar is faded	refresh pavement markings	L	PMS_cl_173.jpg
61	approx. 100'	east of	Dunwoodie Street	EB	Reverse curve sign is located near the end of the first curve. A second reverse curve sign is located closer to the beginning of the curve	Remove sign	L	SGN_cl_160.jpg
62	approx. 700' west of	280' west of	Rio Grande Avenue	east side	3 no parking signs are out-dated with no arrows	replace signs with current standard	L	SGN_cl_161.jpg
63	370'	west of	Rio Grande Avenue	WB	Speed limit sign has damaged sheeting	replace sign	L	SGN_cl_169.jpg
64	330'	west of	Rio Grande Avenue	WB	telephone box with exposed wiring	Contact AT&T to repair/remove	L	BCZ_cl_168.jpg
65	200'	west of	Rio Grande Avenue	WB	median curb is broken	repair curb	L	PAV_cl_165.jpg
66	200'	west of	Rio Grande Avenue	EB	Object marker below Keep Right sign is faded.	replace object marker panel	M	SGN_cl_166.jpg
67	100' west of	n/a	Rio Grande Avenue	EB	Curb needs repair	Repair curb	L	PAV_cl_122.jpg
68	n/a	n/a	Rio Grande Avenue	WB approach	"Keep Right" sign is missing	Install "Keep Right" sign in median on west leg, westbound.	H	SGN_cl_119.jpg
69	n/a	n/a	Rio Grande Avenue	WB approach	WB approach is severely offset at intersection; lines up with oncoming westbound traffic	Install guide lines across intersection.	H	PMS_cl_120.jpg

Texas-Americana RSA Field Review Sheet

Texas Avenue

Sidewalk and ADA issues

No.	From	To	Cross Street	Direction	Problem	Solution	Severity (L, M, H)	Photo Name
1	n/a	n/a	Oak Ridge Road	NE corner	No curb ramps for pedestrians crossing Oak Ridge Road	Install curb ramp with signal reconstruction	L	ADA_RN_90.jpg
2	n/a	n/a	Oak Ridge Road	NE corner	Ramp out of tolerance and no truncated dome mats	Construct curb ramp that meets ADA criteria including truncated dome mats with signal reconstruction	L	ADA_RN_88.jpg
3	n/a	n/a	Oak Ridge Road	south leg	Median nose extends into crosswalk	Pull back median or cut median to crosswalk with signal reconstruction	L	ADA_RN_93.jpg
4	n/a	n/a	Oak Ridge Road	SW corner	Ramp out of tolerance and no truncated dome mats	Construct curb ramp that meets ADA criteria including truncated dome mats with signal reconstruction	L	ADA_RN_92.jpg
5	n/a	n/a	Oak Ridge Road	NW corner	Ramp out of tolerance for crosswalk across Texas Avenue. Also no truncated dome mats.	Construct curb ramp that meets ADA criteria including truncated dome mats with signal reconstruction.	L	ADA_RN_89.jpg
6	n/a	n/a	Oak Ridge Road	NW corner	Ramp out of tolerance for crosswalk across Oak Ridge Road	Construct curb ramp that meets ADA criteria including truncated dome mats with signal reconstruction.	L	ADA_RN_91.jpg
7	approx. 450'	north of	Oak Ridge Road	west side	4 sidewalk panels are broken with vertical discontinuities	repair sidewalk	L	ADA_RN_134.jpg
8	approx. 375'	south of	Wakulla Way	west side	sidewalk drop-off at utility pole just north of Seasons Resort main entrance	fill drop-off	L	ADA_RN_140.jpg
9	approx. 180'	south of	Wakulla Way	NB	Sand on sidewalk next to driveway apron	Add sod	L	ADA_RN_128.jpg
10	approx. 150'	south of	Wakulla Way	west side	sidewalk drop-off at utility pole	fill drop-off	L	ADA_RN_142.jpg
11	approx. 40'	south of	Wakulla Way	west side	utility pole within sidewalk leaving less than 4' for pedestrian access route	widen sidewalk around utility pole	L	ADA_RN_143.jpg
12	n/a	n/a	Pineway Drive	NE corner	Ramp out of tolerance and no truncated dome mats	Construct sidewalk that meets ADA standards including truncated dome mats	L	ADA_RN_125.jpg
13	n/a	n/a	Pineway Drive	NW corner	No truncated dome mats	Install truncated dome mats	L	ADA_cl_199.jpg
14	n/a	n/a	Pineway Drive	SW corner	No truncated dome mats	Install truncated dome mats	L	ADA_cl_198.jpg
15	n/a	n/a	Pineway Drive	SE corner	Ramp out of tolerance and no truncated dome mats	Construct sidewalk that meets ADA standards including truncated dome mats	L	ADA_RN_126.jpg
16	just south of	n/a	Pineway Drive	SE corner	sidewalk drop-off at drainage structure	Consider adding pedestrian handrail	L	PED_cl_197.jpg
17	n/a	n/a	Rose Avenue	SW corner	Ramp out of tolerance and no truncated dome mats	Construct sidewalk that meets ADA standards including truncated dome mats	L	ADA_RN_146.jpg
18	n/a	n/a	Rose Avenue	NW corner	Ramp out of tolerance and no truncated dome mats	Construct sidewalk that meets ADA standards including truncated dome mats	L	ADA_RN_146.jpg
19	n/a	n/a	Rose Avenue	SE corner	No truncated dome mats	Install truncated dome mats	L	ADA_cl_195.jpg
20	n/a	n/a	Rose Avenue	NE corner	No truncated dome mats	Install truncated dome mats	L	ADA_cl_194.jpg
21	n/a	n/a	Blossom Terrace	NE corner	No truncated dome mats	Install truncated dome mats	L	ADA_cl_192.jpg
22	n/a	n/a	Blossom Terrace	SE corner	No truncated dome mats	Install truncated dome mats	L	ADA_cl_193.jpg
23	n/a	n/a	Blossom Terrace	west side	broken sidewalk	repair sidewalk	L	ADA_RN_150.jpg
24	just south of	n/a	Duskin Avenue	east side	sidewalk drop-off at drainage structure	Consider adding pedestrian handrail	L	ADA_RN_124.jpg
25	n/a	n/a	Duskin Avenue	NE corner	ramp out of tolerance and no truncated dome mats	Construct sidewalk that meets ADA standards including truncated dome mats	L	ADA_RN_122.jpg

26	n/a	n/a	Duskin Avenue	SE corner	ramp out of tolerance and no truncated dome mats	Construct sidewalk that meets ADA standards including truncated dome mats	L	ADA RN 123.jpg
27	n/a	n/a	Myakka Drive	NW corner	ramp out of tolerance and no truncated dome mats	Construct sidewalk that meets ADA standards including truncated dome mats	L	ADA RN 162.jpg
28	n/a	n/a	Myakka Drive	SW corner	ramp out of tolerance and no truncated dome mats	Construct sidewalk that meets ADA standards including truncated dome mats	L	ADA RN 163.jpg
29	approx. 900'	south of	Americana Boulevard	NB	sand on sidewalk south of Millenia West apartments driveway	Consider barrier to prevent sand spillage onto sidewalk	L	ADA RN 118.jpg
30	approx. 250'	south of	Americana Boulevard	SB	vertical discontinuity in sidewalk, trip hazard	repair sidewalk	L	ADA RN 114.jpg
31	approx. 200'	south of	Americana Boulevard	SB	vertical discontinuity in sidewalk, trip hazard	repair sidewalk	L	ADA RN 113.jpg
32	approx. 525'	north of	Americana Boulevard	NB	broken sidewalk approx. 50' south of bus stop, trip hazard	repair sidewalk	L	ADA cl 123.jpg
33	approx. 670'	south of	Honour Road	NB	cracked sidewalk approx. 30' north of bus stop	repair sidewalk	L	PED cl 124.jpg
34	approx. 250'	south of	Honour Road	NB	concrete spillover on sidewalk is trip hazard	remove/grind down concrete spillover from sidewalk	L	ADA cl 125.jpg
35	approx. 200'	south of	Honour Road	NB	5 sidewalk panels are cracked	repair sidewalk	L	PED cl 126.jpg
36	approx. 150'	south of	Honour Road	NB	concrete spillover on sidewalk is trip hazard	remove/grind down concrete spillover from sidewalk	L	ADA cl 127.jpg
37	approx. 50'	south of	Honour Road	NB	at bus stop ID 2883 boarding and alighting area is not flat	recommend concrete pad	M	ADA cl 128.jpg
38	n/a	n/a	Honour Road	east side	no truncated dome mats at ends of sidewalk	add truncated dome mats	L	ADA cl 129.jpg
39	n/a	n/a	Honour Road	SB	sidewalk ends on west side; forces pedestrians to cross at uncontrolled location	remove bushes and construct sidewalk to Americana (minimum to SB bus stop ID 2805)	M	PED cl 190.jpg
40	approx. 100'	north of	Honour Road	SB	grass has grown over sidewalk creating vertical discontinuity, trip hazard	remove grass over sidewalk	L	ADA cl 188.jpg
41	n/a	n/a	between Honour and Buchanan Bay Cir S	NB	6 sidewalk panels are cracked, trip hazards	repair/replace sidewalk panels	L	ADA cl 130.jpg
42	just south of	n/a	Buchanan Bay Cir S	NB	4 sidewalk panels have graffiti	repair/replace sidewalk panels	L	CRM cl 131.jpg
43	approx. 180'	north of	Buchanan Bay Cir S	SB	at bus stop ID 2804, sidewalk running slope is steeper than road, not ADA compliant	make sidewalk ADA compliant with Texas widening project	L	ADA cl 185.jpg
44	approx. 180'	north of	Buchanan Bay Cir S	SB	at bus stop ID 2804, cross slope from sidewalk to bus stop is too steep (>1:20)	recommend constructing concrete pad for bus stop with sidewalk connection at slope <5%	M	ADA cl 186.jpg
45	approx. 325'	north of	Buchanan Bay Cir S	SB	sidewalk drop-off	repair drop-off, possibly broken irrigation?	M	PED cl 184.jpg
46	approx. 300'	north of	Buchanan Bay Cir S	SB	2 sidewalk panels are broken with vertical discontinuity; trip hazard	repair/replace sidewalk panels	L	ADA cl 183.jpg
47	approx. 20'	south of	Buchanan Bay Cir N	NB	vertical discontinuity in sidewalk, trip hazard	repair sidewalk	L	ADA cl 133.jpg
48	approx. 150'	south of	Holden Road	SB	cracked sidewalk with vertical discontinuity, trip hazard	repair sidewalk	L	ADA cl 180.jpg
49	approx. 350'	south of	Holden Road	NB	vertical discontinuity in sidewalk, trip hazard	repair sidewalk	L	ADA cl 134.jpg
50	approx. 345'	south of	Holden Road	NB	cracked sidewalk	repair sidewalk	L	PED cl 135.jpg
51	approx. 335'	south of	Holden Road	NB	cracked sidewalk	repair sidewalk	L	PED cl 136.jpg
52	approx. 150'	south of	Holden Road	NB	cracked sidewalk	repair sidewalk	L	PED cl 137.jpg
53	approx. 130'	south of	Holden Road	NB	2 panels cracked sidewalk	repair sidewalk	L	PED cl 138.jpg
54	south of	n/a	Holden Road	SB	pavement edge drop-off	repair drop-off	M	PAV cl 115.jpg
55	south of	n/a	Holden Road	SB	Bus stop ID 2803 - bus bench is blocking pedestrian access route minimum 4'	relocate bus bench off sidewalk off sidewalk and closer to bus stop in firm, level area	L	ADA cl 117.jpg
56	n/a	n/a	Holden Road	SE corner	cracked sidewalk	repair sidewalk	L	PED cl 139.jpg
57	n/a	n/a	Holden Road	SE corner	Ramp does not have truncated dome mats	Install truncated dome mats	L	ADA RN 99.jpg

58	n/a	n/a	Holden Road	NE corner	Ramp does not have truncated dome mats	Install truncated dome mats	L	ADA RN 100.jpg
59	approx. 400' north of	approx. 800' north of	Holden Road	NB	4' sidewalk with no passing space. 5' X 5' passing space required every 200'.	Construct passing spaces every 200'	L	ADA cl 191.jpg
60	approx. 450'	north of	Holden Road	NB	sidewalk panel on north side of Alhambra Club driveway is too steep; doesn't meet ADA running slope requirement	Repair to meet ADA criteria	L	ADA cl 141.jpg
61	approx. 600'	north of	Holden Road	NB	New sidewalk panel has void underneath	Backfill under new sidewalk panel	L	PED cl 142.jpg
62	approx. 620'	north of	Holden Road	NB	cracked sidewalk	repair sidewalk	L	PED cl 143.jpg
63	n/a	n/a	Tower Pine Road	NB	2 cracked sidewalk panels on east side of road with vertical discontinuity, trip hazard	repair sidewalk	L	ADA cl 144.jpg
64	approx. 100'	north of	Tower Pine Road	NB	cracked sidewalk on east side of road on north side of apartment complex driveway	repair sidewalk	L	PED cl 145.jpg
65	approx. 150'	north of	Tower Pine Road	NB	cracked sidewalk on east side of road approx. 50' north of apartment complex driveway	repair sidewalk	L	PED cl 146.jpg
66	approx. 200'	south of	Lemon Tree Lane	NB	cracked sidewalk	repair sidewalk	L	PED cl 148.jpg
67	approx. 50'	north of	Lemon Tree Lane	NB	2 cracked sidewalk panels with vertical discontinuity, trip hazard	repair sidewalk	L	ADA cl 149.jpg
68	approx. 75'	north of	Lemon Tree Lane	NB	cracked sidewalk panel with vertical discontinuity, trip hazard	repair sidewalk	L	ADA cl 150.jpg
69	approx. 25'	south of	Skan Court	NB	broken sidewalk with vertical discontinuity, trip hazard	repair sidewalk	L	ADA cl 152.jpg
70	across from	n/a	Skan Court	EB	cracked sidewalk	repair sidewalk	L	PED cl 153.jpg
71	approx. 75'	east of	Skan Court	EB	cracked sidewalk	repair sidewalk	L	PED cl 155.jpg
72	approx. 100'	east of	Dunwoodie Street	EB	sidewalk running slope is too steep for ADA; something spilled	Repair to meet ADA criteria; try to clean spill	L	ADA cl 156.jpg
73	approx. 25'	east of	Dunwoodie Street	EB	sidewalk drop-off	fill drop-off	M	PED cl 157.jpg
74	n/a	n/a	Dunwoodie Street	EB	sidewalk ends; pedestrians may cross within curve to sidewalk on west side of road	investigate continuation of sidewalk to safe crossing location at a minimum; preferred to Rio Grande with intersection improvement project	M	PED cl 158.jpg
75	approx. 100'	west of	Barwood Drive	WB	cracked sidewalk	repair sidewalk	L	PED cl 171.jpg
76	approx. 50'	west of	Barwood Drive	WB	3 panels of cracked sidewalk	repair sidewalk	L	PED cl 170.jpg
77	310'	west of	Rio Grande Avenue	WB	2 cracked sidewalk panels at corner of driveway	repair sidewalk	L	PED cl 167.jpg
78	200' west of	100' west of	Rio Grande Avenue	EB	4' pedestrian access route not available per ADA	Re-align eastbound approach to Rio Grande Avenue to allow for sidewalk construction on south side of Texas Avenue	M	ADA cl 162.jpg
79	20' west of	n/a	Rio Grande Avenue	WB	4' pedestrian access route not available per ADA	construct addition to sidewalk to meet 4' requirement	M	ADA cl 164.jpg
80	n/a	n/a	Rio Grande Avenue	EB	Pedestrians have created a goat path; sidewalk needed, but R/W needed at fence	Re-align eastbound approach to Rio Grande Avenue to allow for sidewalk construction on south side of Texas Avenue	M	PED cl 121.jpg
81	n/a	n/a	Rio Grande Avenue	NW corner	cracked sidewalk	repair sidewalk	L	PED cl 163.jpg

C. Rio Grande Avenue

Existing Conditions

Rio Grande Avenue is a two-lane undivided roadway running north-south from Oak Ridge Road to Americana Boulevard and from Honour Road to Holden Avenue. From Holden Avenue to the northern limit of the study area at 33rd Street the road has a 3-lane section with a center turn lane.

The cross section is rural between Oak Ridge Road and Blossom Terrace, but changes to an urban section from Blossom Terrace to Americana Boulevard. Rio Grande Avenue has a mostly rural cross section between Honour Road and Holden Avenue, but has an urban cross section from Holden Avenue to 33rd Street. Rio Grande Avenue serves residential uses including single family homes, apartments, and condominiums. The speed limit is 30 miles per hour between Oak Ridge Road and Americana Boulevard. The speed limit is 35 mph between Holden Avenue and 33rd Street.

Sidewalk exists on both sides of the road between Holden Avenue and 33rd Street, but only on the west side of the road between Honour Road and Holden Avenue. Sidewalk exists on both sides of the road between Americana Boulevard and Nimrod Lane, but only on the west side of the road between Nimrod Lane and Oak Ridge Road. No bike lanes are provided.

Overhead utilities exist on the east side of Rio Grande Avenue between Oak Ridge Road and Rose Avenue. Overhead utilities exist on the west side of Rio Grande Avenue from Honour Road to Holden Avenue and again from 43rd Street to and 33rd Street. Roadway lighting is currently provided on the east side of Rio Grande Avenue from Ole Heritage Drive to Americana Boulevard, on the west side from Honour Road to Holden Avenue, on the east side from Holden Avenue to 44th Street, and on both sides of the road from 44th Street to 33rd Street.

Crash History and Analysis

Crash summaries and crash diagrams were prepared and follow for the key study intersections along Rio Grande Avenue. These are the intersections of Rio Grande Avenue with Oak Ridge Road, Rose Avenue, and Holden Avenue. The crash summary and diagram for the intersection of Rio Grande Avenue with Americana Boulevard can be found under the Americana Boulevard section of this report. The crash summary and crash diagram for the intersection of Rio Grande Avenue with Texas Avenue can be found under the Texas Avenue section of this report. The crash summaries and crash diagrams depict crashes for three years (2011-2013).

Of particular note and as previously shown in Table 4, the intersection of Rio Grande Avenue with Rose Avenue has a high crash rate at 2.174836 crashes per million entering vehicles. This intersection is stop sign controlled on the Rose Avenue approaches and also has a flashing beacon flashing yellow on the Rio Grande Avenue approaches and

red on the Rose Avenue approaches. A very high percentage of crashes (65%) at the intersection of Rio Grande Avenue and Rose Avenue are right angle crashes.

Recommended Countermeasures

The following tables list the recommended improvements for Rio Grande Avenue. The first table lists the general recommendations and the second table lists sidewalk and ADA-related issues.

There are several items believed to be a high priority along Rio Grande Avenue. All of them are related to vegetation reducing the visibility of traffic control devices. The tree trimming for all of these high priority items have been completed.

Countermeasures recommended for the high incidence of right angle crashes at Rio Grande Avenue and Rose Avenue, are that vegetation be trimmed on all approaches to improve sight distance. In order to further emphasize the approach to an intersection and stop condition, double yellow pavement markings are recommended on both Rose Avenue approaches, oversized stop signs are recommended to replace standard size stop signs, and crosswalks are recommended to be added across the eastbound and westbound Rose Avenue approaches.

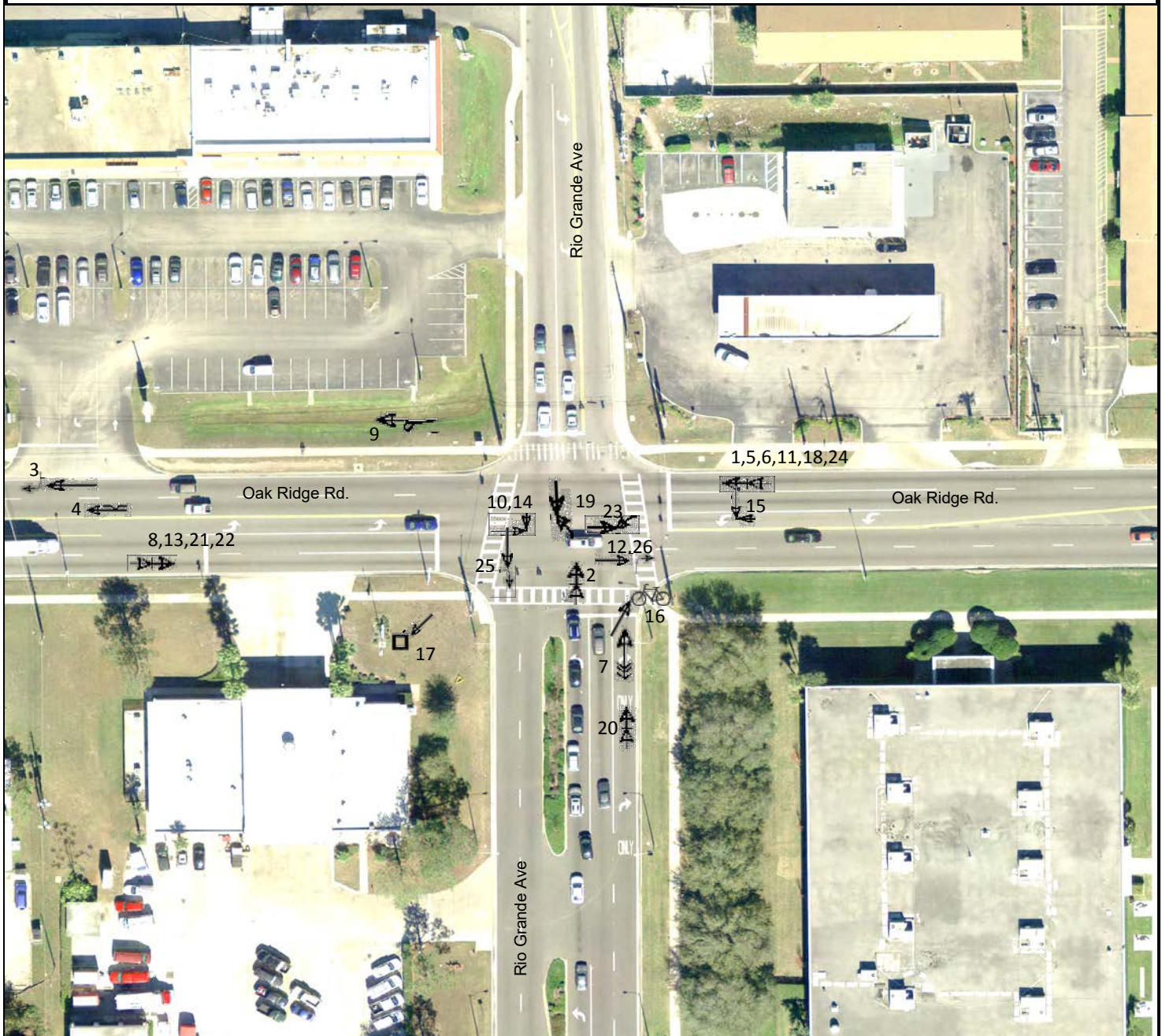
Throughout Rio Grande Avenue, where two lane roads approach a two lane road, the stop condition for the side street needs to be emphasized. Crosswalks are recommended to be added at all side street approaches parallel to Rio Grande Avenue where sidewalk exists to further emphasize the stop condition and also to increase awareness of pedestrians.

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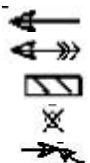
Orange County Traffic Engineering Division Collision Diagram

LOCATION: Oak Ridge Rd at Rio Grande Ave

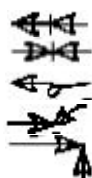
YEAR: 2013



COLLISION SYMBOLS



VEHICLE PATH
BACKING VEHICLE
PARKED VEHICLE
FATALITY
RIGHT TURN COLLISION



REAR-END COLLISION
HEAD-ON COLLISION
OVERTURNED VEHICLE
LEFT TURN COLLISION
RIGHT ANGLE COLLISION



FIXED OBJECT
OUT OF CONTROL
SIDE SWIPE
PEDESTRIAN COLLISION
BICYCLIST COLLISION

CRASH SUMMARY

	PROP. DMG ONLY	INJURY	FATAL	TOTAL
DAYTIME	21	3	0	24
NIGHTTIME	5	2	0	7
TOTAL	26	5	0	31

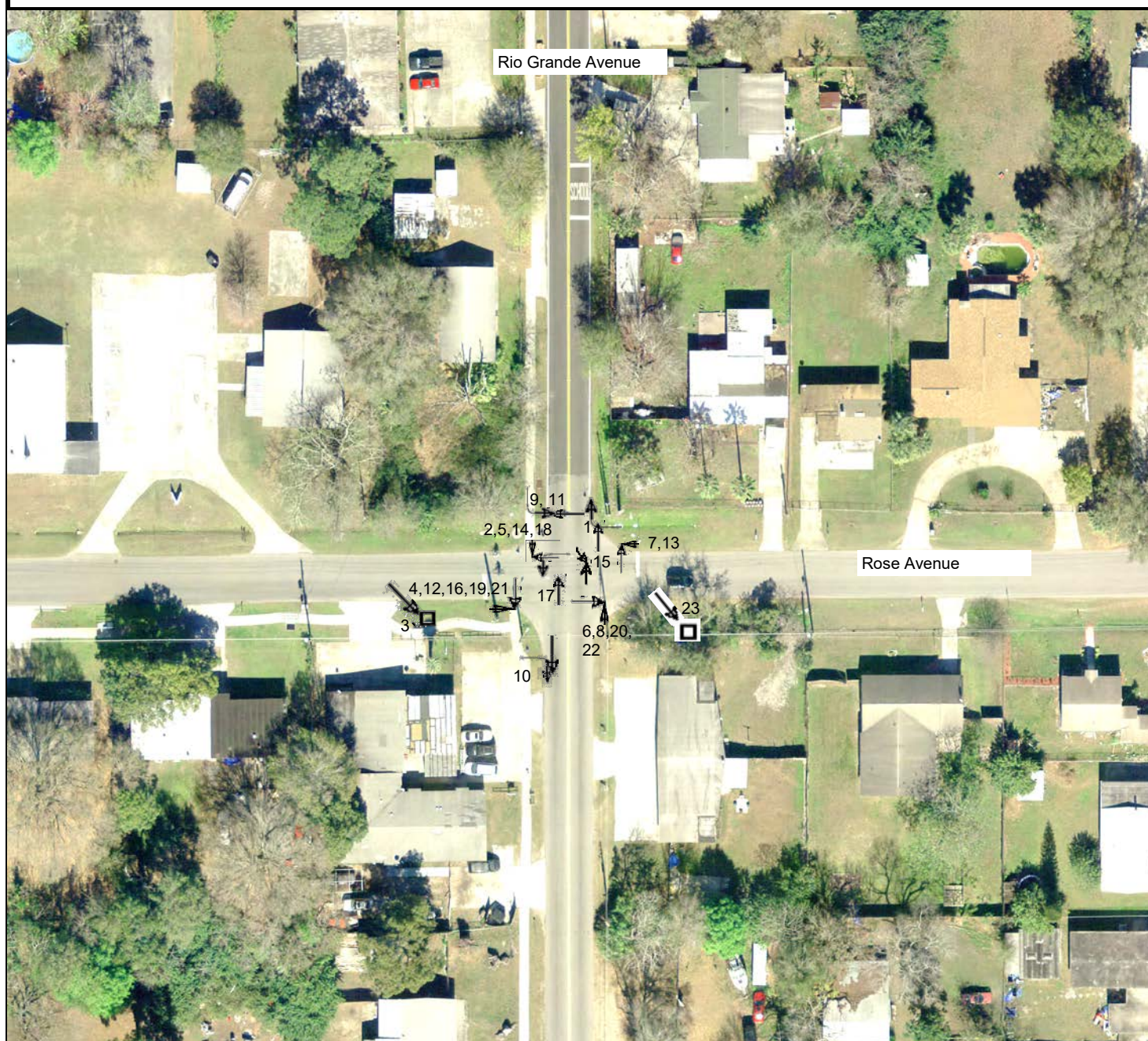
Crash Summary

[illegible]

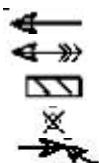
Orange County Traffic Engineering Division Collision Diagram

LOCATION: Rio Grande Avenue at Rose Avenue

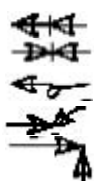
YEAR: 2011-2013



COLLISION SYMBOLS



VEHICLE PATH
BACKING VEHICLE
PARKED VEHICLE
FATALITY
RIGHT TURN COLLISION



REAR-END COLLISION
HEAD-ON COLLISION
OVERTURNED VEHICLE
LEFT TURN COLLISION
RIGHT ANGLE COLLISION



FIXED OBJECT
OUT OF CONTROL
SIDE SWIPE
PEDESTRIAN COLLISION
BICYCLIST COLLISION

CRASH SUMMARY

	PROP. DMG ONLY	INJURY	FATAL	TOTAL
DAYTIME	13	4	0	17
NIGHTTIME	4	2	0	6
TOTAL	17	6	0	23

Crash Summary											
Location:		HOLDEN AVENUE						Intersection Control: Signalized			
Intersecting Route:		S RIO GRANDE AVENUE						Prepared by:			
Study Period From:		2011 - 2013						County: Orange			
NO	DATE	DAY	TIME	TYPE	FATAL	INJURY	PROPERTY DAMAGE	WEATHER	DAY/NIGHT	CONTRIBUTING CAUSE	ACCIDENT REPORT #
1	2/1/2011	Tues	6:20 PM	Angle	No	Yes	\$6,000	Clear	Daylight	Failure to Stop at Signal	FHPD11OFF008652
2	3/2/2011	Wed	12:15 PM	Rear End	No	No	\$2,000	Clear	Daylight	Careless Driving	FHPD11OFF017114
3	4/23/2011	Sat	3:32 AM	Off Road	No	No	\$21,000	Clear	Dark - Not Lighted	Careless Driving	FHPD11OFF033370
4	8/3/2011	Wed	6:42 PM	Rear End	No	No	\$700	Clear	Daylight	Careless Driving	FHPD11OFF063922
5	9/3/2011	Sat	2:39 AM	Off Road	No	No	\$3,500	Clear	Dark - Lighted	Careless Driving	FHPD11OFF073157
6	9/25/2011	Sun	5:48 PM	Pedestrian	No	Yes	\$15	Clear	Daylight	Fail to Yield ROW	FHPD11OFF079909
7	10/14/2011	Fri	3:44 PM	Sideswipe	No	No	\$300	Clear	Daylight	Improper Lane Change	FHPD11OFF085645
8	10/28/2011	Fri	4:33 PM	Pedestrian	No	Yes	\$0	Cloudy	Daylight	Collision w Ped	FHPD11OFF089732
9	11/8/2011	Tues	5:25 PM	Pedestrian	No	Yes	\$1,000	Clear	Dusk	Fail to Yield ROW	FHPD11OFF092882
10	12/27/2011	Tues	7:25 PM	Left Turn	No	Yes	\$6,500	Clear	Dusk	Fail to Yield ROW	FHPD11OFF107233
11	1/16/2012	Mon	9:48 AM	Rear End	No	No	\$950	Clear	Daylight	Careless Driving	FHPD12OFF003945
12	1/17/2012	Tues	7:22 PM	Rear End	No	Yes	\$0	Clear	Dark - Not Lighted	Careless Driving	FHPD12OFF004321
13	1/20/2012	Fri	3:05 PM	Sideswipe	No	No	\$10,000	Clear	Daylight	Careless Driving	FHPD12OFF005100
14	4/6/2012	Fri	6:55 PM	Rear End	No	No	\$4,500	Clear	Dusk	Careless Driving	FHPD12OFF029347
15	5/29/2012	Tues	5:42 PM	Pedestrian	No	No	\$100	Rain	Daylight	Ped run into street	FHPD12OFF045319
16	8/20/2012	Mon	11:40 AM	Rear End	No	Yes	\$200	Clear	Daylight	Careless Driving	FHPD12OFF071056
17	9/10/2012	Mon	8:27 AM	Other	No	No	\$1,100	Clear	Daylight	Stalled Vehicle	FHPD12OFF077550
18	9/11/2012	Tues	9:33 PM	Left Turn	No	No	\$7,500	Clear	Dark - Lighted	Fail to Yield ROW	FHPD12OFF078061
19	9/30/2012	Sun	8:47 PM	Left Turn	No	No	\$2,500	Clear	Dark - Lighted	Fail to Yield ROW	FHPD12OFF083783
20	10/8/2012	Mon	4:38 PM	Rear End	No	No	\$800	Clear	Daylight	Careless Driving	FHPD12OFF086420
21	10/9/2012	Tues	10:50 AM	Sideswipe	No	No	\$2,200	Clear	Daylight	Fail to Yield ROW	FHPD12OFF086622
22	1/26/2013	Sat	4:36 PM	Left Turn	No	No	\$2,500	Clear	Daylight	Careless Driving	FHPD13OFF007097
23	3/17/2013	Sun	8:15 PM	Left Turn	No	Yes	\$11,000	Cloudy	Dark - Not Lighted	Fail to Yield ROW	FHPD13OFF022037
24	10/20/2013	Sun	3:15 AM	Left Turn	No	No	\$1,500	Clear	Dark - Not Lighted	Fail to Yield ROW	FHPD13OFF089820
25	11/9/2013	Sat	4:44 AM	Left Turn	No	No	\$4,000	Clear	Dark - Lighted	Fail to Yield ROW	FHPD13OFF095771
26	12/17/2013	Tues	11:14 AM	Rear End	No	No	\$5,500	Clear	Daylight	Careless Driving	FHPD13OFF107333
TOTAL											
TOTAL NO		FATAL	INJURY	PDO	ANGLE	LEFT	RIGHT	REAR END	SIDE SWIPE	HEAD ON	IMPROPER LANE CHANGE
	26	0	8	18	1	7	0	8	3	0	1
	%	0%	31%	69%	4%	27%	0%	31%	12%	0%	0%
ONE VEHICLE		PED/BIKE	DAY	DUSK/NIGHT	WET	DRY	SPEEDING	FTY R/W	ALCOHOL/DRUGS	DISTRACTED	FAIL TO OBEY SIGNAL
	2	4	15	11	1	25	0	9	0	10	1
	8%	15%	58%	42%	4%	96%	0%	35%	0%	38%	4%

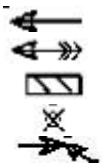
Orange County Traffic Engineering Division Collision Diagram

LOCATION: Holden Ave and Rio Grande

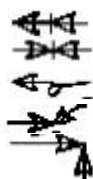
YEAR: 2011-2013



COLLISION SYMBOLS



VEHICLE PATH
BACKING VEHICLE
PARKED VEHICLE
FATALITY
RIGHT TURN COLLISION



REAR-END COLLISION
HEAD-ON COLLISION
OVERTURNED VEHICLE
LEFT TURN COLLISION
RIGHT ANGLE COLLISION



FIXED OBJECT
OUT OF CONTROL
SIDE SWIPE
PEDESTRIAN COLLISION
BICYCLIST COLLISION

CRASH SUMMARY

	PROP. DMG ONLY	INJURY	FATAL	TOTAL
DAYTIME	11	4	0	15
NIGHTTIME	7	4	0	11
TOTAL	18	8	0	26

Texas-Americana RSA Field Review Sheet

Rio Grande Avenue

General

No.	From	To	Cross Street	Direction	Problem	Solution	Severity (L, M, H)	Photo Name
1	n/a	n/a	33rd Street	all	No street name signs	Install street name signs	L	SGN_cl_205.jpg
2	n/a	n/a	33rd Street	NB	OCSO sign is old and faded	Replace double-sided sign	L	SGN_cl_270.jpg
3	just south of	n/a	33rd Street	SB	tree branches reduce visibility of LYNX bus stop sign	Trim tree branches	L	VIS_cl_204.jpg
4	just south of	n/a	33rd Street	NB	litter around bus stop ID 2317	request LYNX install trash can	L	CRM_cl_269.jpg
5	n/a	n/a	34th Street	WB approach	stop bar is faded and there is no pedestrian crosswalk	re-stripe stop bar and add crosswalk	L	PMS_cl_268.jpg
6	n/a	n/a	35th Street	WB approach	stop bar is faded and there is no pedestrian crosswalk	re-stripe stop bar and add crosswalk	L	ADA_cl_265.jpg
7	n/a	n/a	36th Street	EB approach	stop bar is faded and there is no pedestrian crosswalk	re-stripe stop bar and add crosswalk	L	PMS_cl_274.jpg
8	n/a	n/a	36th Street	WB approach	stop bar is faded and there is no pedestrian crosswalk	re-stripe stop bar and add crosswalk	L	PMS_cl_262.jpg
9	100' south of	n/a	36th Street	NB	palm tree branch hangs too low over sidewalk	Trim tree branches	L	ADA_cl_259.jpg
10	n/a	n/a	37th Street (N)	EB approach	stop bar is faded and there is no pedestrian crosswalk	re-stripe stop bar and add crosswalk	L	PMS_cl_276.jpg
11	approx. 100' south of	n/a	37th Street (N)	SB	palm tree branch hangs too low over sidewalk	Trim tree branches	L	ADA_cl_277.jpg
12	n/a	n/a	37th Street (S)	WB approach	stop bar is faded and there is no pedestrian crosswalk	re-stripe stop bar and add crosswalk	L	PMS_cl_256.jpg
13	n/a	n/a	38th Street	NE corner	tree branches hang too low over sidewalk	Trim tree branches	L	ADA_cl_253.jpg
14	n/a	n/a	38th Street	WB approach	stop bar is faded and there is no pedestrian crosswalk	re-stripe stop bar and add crosswalk	L	PMS_cl_252.jpg
15	50' south of	n/a	38th Street	NB	vegetation with thorns hangs low over sidewalk	Trim tree branches	L	ADA_cl_249.jpg
16	n/a	n/a	39th Street	WB approach	stop bar is faded and there is no pedestrian crosswalk	re-stripe stop bar and add crosswalk	L	PMS_cl_247.jpg
17	n/a	n/a	40th Street	WB approach	stop bar is faded and there is no pedestrian crosswalk	re-stripe stop bar and add crosswalk	L	PMS_cl_242.jpg
18	n/a	n/a	41st Street	EB approach	stop bar is faded and there is no pedestrian crosswalk	re-stripe stop bar and add crosswalk	L	PMS_cl_280.jpg
19	n/a	n/a	41st Street	WB approach	stop bar is faded and there is no pedestrian crosswalk	re-stripe stop bar and add crosswalk	L	PMS_cl_241.jpg
20	80' north of	n/a	42nd Street	NB	No 5' X 8' B&A area for LYNX Bus Stop ID 2314	Discuss possible relocation of bus stop with LYNX	L	ADA_cl_240.jpg
21	n/a	n/a	42nd Street	WB approach	stop bar is almost completely faded and there is no marked pedestrian crosswalk; also stop bar is located at pedestrian curb ramps	Add crosswalk and relocate stop bar 4 feet behind crosswalk	L	PED_cl_239.jpg
22	n/a	n/a	43rd Street	WB approach	vegetation hangs low over sidewalk on north side of street	trim back vegetation	L	ADA_cl_203.jpg
23	n/a	n/a	43rd Street	EB departure	brush is so thick on SE corner that visibility is reduced	trim back vegetation	M	VIS_cl_201.jpg
24	n/a	n/a	Texas Avenue	SE corner	No crosswalk across south leg and no pedestrian signal, but a signal pushbutton and sign exists on pole in SE corner.	Remove pedestrian pushbutton and sign	L	PED_cl_200.jpg
25	n/a	n/a	Texas Avenue	SE corner	Pedestrian pushbutton to cross 43rd Street northbound doesn't work	Repair pedestrian pushbutton	M	PED_cl_202.jpg
26	n/a	n/a	Texas Avenue	NB approach	Oak tree branches reduce visibility of signal heads	Trim tree branches	H	VIS_cl_207.jpg

27	n/a	n/a	Texas Avenue	NE corner	Pedestrian pushbutton to cross east leg southbound doesn't work	Repair pedestrian pushbutton	M	PED_cl_202.jpg
28	n/a	n/a	Texas Avenue	NW corner	Pedestrian pushbutton to cross Rio Grande eastbound doesn't work and the pedestrian signal sign is missing	Repair pedestrian pushbutton and add pushbutton sign	M	PED_cl_283.jpg
29	approx. 160' south of	n/a	44th Street	SB	Bus Stop ID 2251 has a lot of litter and the sprinkler head is a trip hazard	request LYNX install trash can	L	CRM_cl_285.jpg
30	n/a	n/a	44th Street	WB approach	stop bar is almost completely faded and there is no marked pedestrian crosswalk	re-stripe stop bar and add crosswalk	L	PMS_cl_238.jpg
31	across from approx. 390' south of	n/a	45th Street	WB approach	tree branches too low over sidewalk	Trim tree branches	L	ADA_cl_285.jpg
32		n/a	45th Street	NB	hole adjacent to sidewalk near drainage inlet across street from Lakeview Pointe apartments entrance	fill hole	L	PED_cl_237.jpg
33	370' north of approx. 180' north of	n/a	Holden Avenue	NB	tree branches too low over sidewalk, just north of 2nd Chevron driveway	Trim tree branches	L	PED_cl_235.jpg
34		n/a	Holden Avenue	SB	Bus stop ID 2252 has a lot of litter	Request LYNX install trash can	L	CRM_cl_290.jpg
35	n/a	n/a	Holden Avenue	EB & WB	Signal heads have no backplates; E/W approaches	investigate whether signal heads on the same hanger can have backplates installed EB/WB	L	VIS_cl_297.jpg
36	n/a	n/a	Holden Avenue	EB	Oak tree branches reduce visibility of signal heads	Trim tree branches	H	VIS_cl_296.jpg
37	n/a	n/a	Holden Avenue	NE corner	Tree branches are too low over sidewalk	Trim tree branches	L	ADA_cl_233.jpg
38	n/a	n/a	Holden Avenue	NE corner	White walk symbol is not appearing to cross Holden NB	Repair pedestrian signal	M	PED_cl_232.jpg
39	n/a	n/a	Holden Avenue	NW corner	School crossing guard says pedestrian push button to cross Rio Grande works about 50% of the time	Repair pedestrian push button	M	PED_cl_208.jpg
40	n/a	n/a	Holden Avenue	NB approach	tree branches reduce visibility of signal heads	Trim tree branches	H	VIS_cl_212.jpg
41	approx. 50' south of approx. 410' south of	n/a	Holden Avenue	west side	No parking sign has double arrows, but signs marking ends of zone are missing	Install no parking signs showing limits of zone	L	SGN_cl_210.jpg
42		n/a	Holden Avenue	NB	pavement edge drop-off at SE corner of apartment complex driveway	repair drop-off	L	PAV_cl_231.jpg
43	65' north of	n/a	Honour Road	NB	crumbling pavement; losing edge line	repair pavement	L	PAV_cl_229.jpg
44	n/a	n/a	Honour Road	SB	Stop sign is missing 3-way panel	Missing 3-way panel under stop sign	M	SGN_kb_281.jpg
45	n/a	n/a	Honour Road	NB	double yellow pavement markings are faded	refresh double yellow pavement markings	L	PMS_kb_280.jpg
46	n/a	n/a	Honour Road	SB	tree branches reduce visibility of one-way arrow panel and dead end sign	trim tree branches	M	SGN_kb_319.jpg
47	n/a	n/a	Honour Road	NB	stop sign is tilted	reset stop sign and trim tree branches around	L	SGN_kb_320.jpg
48	n/a	n/a	Americana Boulevard	SE corner	Signal pull box sinking causing trip hazard	raise pullbox or grind edges for smooth transition	L	ADA_KB_1.jpg
49	approx. 50' south of	n/a	Lake Heritage Circle	NB	Bus stop ID 2879 sign is down	request LYNX re-install sign	L	SGN_RN_201.jpg
50	approx. 50' south of	n/a	Lake Heritage Circle	NB	Bus stop ID 2879, the shelter does not have lighting	request that LYNX install lighting	M	CRM_RN_202.jpg
51	approx. 50' south of	n/a	Lake Heritage Circle	NB	Bus stop ID 2879, the additional bench blocks access from the sidewalk	request that LYNX relocate bench	L	ADA_RN_203.jpg
52	approx. 50' south of	n/a	Lake Heritage Circle	NB	Bus stop ID 2879, the bus shelter roof needs repair	request that LYNX repair shelter roof	L	CRM_RN_204.jpg
53	approx. 140' north of	n/a	Ole Heritage Circle	SB	drainage issue at manhole in front of Andover Place Apartments	refer to Orlando Utilities	L	PAV_RN_298.jpg
54	n/a	n/a	Ole Heritage Circle	SB	drainage issue at manhole in front of Andover Place Apartments	refer to Orlando Utilities	L	PAV_RN_299.jpg
55	approx. 50' north of	n/a	Blossom Terrace	SB	tree canopy too low over sidewalk	Trim tree branches	L	ADA_RN_215.jpg
56	n/a	n/a	Blossom Terrace	WB approach	no stop sign out of mobile home park	request owner to install stop sign	M	SGN_cl_216.jpg
57	just south of approx. 100' north of	n/a	Blossom Terrace	NB	tree branches reduce visibility of school crossing sign	Trim tree branches	H	SGN_cl_213.jpg
58		n/a	Blossom Terrace	NB	tree branches reduce visibility of advance school crossing sign	Trim tree branches	H	SGN_cl_215.jpg

59	approx. 75' north of	n/a	Rose Boulevard	NB	pavement edge drop-off	repair drop-off	M	PAV cl 214.jpg
60	n/a	n/a	Rose Boulevard	WB approach	trees reduce visibility of on-coming southbound vehicles	trim trees	L	VIS cl 223.jpg
61	n/a	n/a	Rose Boulevard	WB approach	fence with vines and trash (mattress and couch) block view of northbound vehicles	request that property owner keep line of sight clear	M	VIS cl 224.jpg
62	n/a	n/a	Rose Boulevard	W & E side	no painted crosswalk	install crosswalks parallel to Rio Grande both sides of the road	L	PED cl 225.jpg
63	n/a	n/a	Rose Boulevard	EB approach	trees reduce visibility of on-coming southbound vehicles	trim trees	M	VIS-cl 226.jpg
64	n/a	n/a	Rose Boulevard	SB approach	trees reduce visibility of flashing beacon	Trim tree branches	H	VIS cl 227.jpg
65	approx. 190' south of	n/a	Rose Boulevard	SB WB	no parking sign leaning and missing limits	reset sign and add end arrow signs to complete no parking zone	L	sgn kb 1.jpg
66	n/a	n/a	Michael Terrace	approach	stop sign leaning and blocked by trees	reset sign and trim trees	H	vis kb 1.jpg
67	approx. 100' north of	n/a	Rose Boulevard	SB	tree canopy too low over sidewalk	trim tree branches	L	ADA RN 214.jpg
68	approx. 25' north of	n/a	Rose Boulevard	SB	Bus stop ID 2813, a lot of litter	request LYNX provide trash can at bus stop	L	CRM RN 212.jpg
69	approx. 10' south of	n/a	Wakulla Way	NB	speed limit sign 14' off of roadway and blocking LYNX sign	relocate speed limit sign to north of Wakulla Way	L	sgn kb 2.jpg
70	approx. 150' south of	n/a	Wakulla Way	SB	tree canopy too low over sidewalk	trim tree branches	L	ADA RN 211.jpg
71	approx. 330' south of	n/a	Wakulla Way	SB	tree canopy too low over sidewalk	trim tree branches	L	ADA RN 209.jpg
72	approx. 650' north of	n/a	Oak Ridge Road	WB approach	stop sign completely faded to white at driveway from Weatherly at Central Park apartments	request property owner to replace stop sign	M	SGN cl 217.jpg
73	420' north of	560' north of	Oak Ridge Road	SB	poor pavement condition	repair pavement	M	PAV cl 222.jpg
74	approx. 390' north of	n/a	Oak Ridge Road	SB	pavement edge drop-off	repair drop-off	M	PAV cl 221.jpg
75	approx. 100' north of	n/a	Oak Ridge Road	NB	vegetation protrudes horizontally into sidewalk path	trim vegetation	L	ADA RN 208.jpg
76	n/a	n/a	Oak Ridge Road	north leg	pavement depression across crosswalk across Rio Grande Avenue north side	repair pavement	L	PAV cl 218.jpg
77	n/a	n/a	Oak Ridge Road	north leg	crosswalk does not meet current standard	upgrade crosswalk to high-emphasis crosswalk when resurfaced	L	PMS cl 219.jpg
78	n/a	n/a	Oak Ridge Road	SW corner	Sign post foundation, but no sign	Research what sign is missing.	L	SGN cl 220.jpg
79	n/a	n/a	Oak Ridge Road	SE corner	Hole under curb ramp	fill hole	L	PED RN 175.jpg

Texas-Americana RSA Field Review Sheet

Rio Grande Avenue

Sidewalk and ADA Issues

No.	From	To	Cross Street	Direction	Problem	Solution	Severity (L, M, H)	Photo Name
1	n/a	n/a	34th Street	NE corner	ramp is not ADA compliant, no truncated dome mats	construct curb ramp that meets ADA criteria	L	ADA_cl_267.jpg
2	n/a	n/a	35th Street	SE corner	ramp is not ADA compliant, no truncated dome mats	construct curb ramp that meets ADA criteria	L	ADA_cl_264.jpg
3	n/a	n/a	35th Street	NE corner	ramp is not ADA compliant, no truncated dome mats	construct curb ramp that meets ADA criteria	L	ADA_cl_266.jpg
4	170' south of	n/a	35th Street	NB	Retaining wall at edge of sidewalk is falling apart; no 4-foot PAR	repair retaining wall	L	ADA_cl_263.jpg
5	n/a	n/a	36th Street	SE corner	curb ramp is covered in dirt and needs truncated dome mats	clear ramp and install truncated dome mat	L	ADA_cl_260.jpg
6	n/a	n/a	36th Street	NE corner	curb ramp is covered in dirt and needs truncated dome mats	clear ramp and install truncated dome mat	L	ADA_cl_261.jpg
7	n/a	n/a	36th Street	NW corner	ramp without truncated dome mats	install truncated dome mats	L	ADA_cl_272.jpg
8	n/a	n/a	36th Street	SW corner	ramp without truncated dome mats	install truncated dome mats	L	ADA_cl_273.jpg
9	n/a	n/a	37th Street (N)	SW corner	ramp without truncated dome mats	install truncated dome mats	L	ADA_cl_275.jpg
10	n/a	n/a	37th Street (S)	NE corner	curb ramp is completely covered in grass and leaves	clear curb ramp of debris and install truncated dome mat	L	ADA_cl_255.jpg
11	150' south of	n/a	37th Street (S)	NB	no 4-foot PAR due to dirt and pine needles over sidewalk	clear sidewalk	L	ADA_cl_254.jpg
12	25' north of	n/a	37th Street (S)	NB	Retaining wall at edge of sidewalk is falling apart	repair retaining wall	L	ADA_cl_258.jpg
13	just north of	n/a	37th Street (S)	NB	Retaining wall at edge of sidewalk is falling apart into sidewalk	repair retaining wall	L	ADA_cl_257.jpg
14	n/a	n/a	38th Street	SE corner	ramp is not ADA compliant, no truncated dome mats	construct curb ramp that meets ADA criteria	L	ADA_cl_250.jpg
15	n/a	n/a	38th Street	NE corner	ramp is not ADA compliant, no truncated dome mats	construct curb ramp that meets ADA criteria	L	ADA_cl_251.jpg
16	across from	n/a	38th Street	SB	cracked sidewalk panel	repair sidewalk	L	PED_cl_278.jpg
17	60' south of	n/a	38th Street	SB	cracked sidewalk panel	repair sidewalk	L	ADA_cl_279.jpg
18	65' south of	n/a	38th Street	NB	no 4-foot PAR due to grass grown over sidewalk and steep slope from driveway to road	remove grass over sidewalk	L	ADA_cl_248.jpg
19	approx. 70' north of	n/a	39th Street	NB	Retaining wall at edge of sidewalk is falling apart	repair retaining wall	L	CRM_cl_244.jpg
20	n/a	n/a	39th Street	SE corner	ramp is not ADA compliant, no truncated dome mats	construct curb ramp that meets ADA criteria	L	ADA_cl_245.jpg
21	n/a	n/a	39th Street	NE corner	ramp is not ADA compliant, no truncated dome mats	construct curb ramp that meets ADA criteria	L	ADA_cl_246.jpg
22	n/a	n/a	40th Street	NB	at 3905 driveway, grass and dirt are overgrown sidewalk and reducing PAR to less than 4'	remove grass over sidewalk	L	ADA_cl_243.jpg
23	n/a	n/a	40th Street	NW corner	ramp without truncated dome mats	install truncated dome mats	L	ADA_cl_281.jpg
24	n/a	n/a	40th Street	SW corner	ramp without truncated dome mats	install truncated dome mats	L	ADA_cl_282.jpg
25	80' north of	n/a	42nd Street	NB	No 4' PAR due to utility pole in 4' sidewalk	Investigate relocation of utility pole, possible easement on residential property	L	ADA_cl_240.jpg
26	80' north of	n/a	42nd Street	NB	No 5'X8' B&A area for LYNX Bus Stop ID 2314	Discuss possible relocation of bus stop with LYNX	L	ADA_cl_240.jpg
27	approx. 160' south of	n/a	44th Street	SB	sprinkler head is a trip hazard	possibly remove sprinkler head (no grass)	L	ADA_cl_286.jpg

28	120' south of	n/a	Texas Avenue	SB	cracked sidewalk panel	repair sidewalk	L	ADA cl 284.jpg
29	n/a	n/a	Texas Avenue	SW corner	sidewalk curb ramp out of tolerance	construct curb ramp that meets ADA criteria	L	ADA RN 101.jpg
30	n/a	n/a	Texas Avenue	NE corner	sidewalk is 4' adjacent to curb; standard is 6'	Construct 6' sidewalk where R/W permits or where easements can be obtained	M	PED RN 104.jpg
31	n/a	n/a	Texas Avenue	NW corner	sidewalk curb ramp is out of tolerance and does not have truncated dome mat	construct curb ramp that meets ADA criteria including truncated dome mat	L	ADA RN 105.jpg
32	455' north of	n/a	Holden Avenue	NB	cracked sidewalk panel	repair sidewalk	L	PED cl 236.jpg
33	450' north of	n/a	Holden Avenue	SB	sidewalk ramps at Royal Springs have very steep running slope	reconstruct sidewalks with ADA compliant running slope	L	ADA cl 289.jpg
34	approx. 200' south of	n/a	Holden Avenue	SB	cracked sidewalk panels	repair sidewalk	L	PED cl 291.jpg
35	approx. 475' south of	n/a	Holden Avenue	NB	LYNX bus stop NB on east side does not have 4' PAR and is not level	move bench to provide 4' PAR and consider adding concrete pad	L	ADA cl 230.jpg
36	approx. 580' south of	n/a	Holden Avenue	SB	cracked sidewalk panels north of London Pointe apartments entrance	repair sidewalk	L	ADA cl 292.jpg
37	approx. 670' south of	n/a	Holden Avenue	SB	sidewalk drop-off south of London Pointe apartments entrance	consider pedestrian handrail	L	PED cl 293.jpg
38	approx. 720' south of	n/a	Holden Avenue	SB	cracked sidewalk panels with vertical discontinuity, trip hazard	repair sidewalk	L	ADA cl 294.jpg
39	n/a	n/a	Holden Avenue	SW corner	Detectable warning mat does not extend the full width of the ramp run	fill in the gaps or wait for Holden widening project	L	ADA cl 291.jpg
40	n/a	n/a	Holden Avenue	SE corner	PAR for pedestrians on WB Holden to pedestrian push button not 4' minimum due to curb inlet above grade, utility post, etc. No curb cut ramps. Person in motorized wheelchair observed to have difficulty.	Install sidewalk and curb ramps	M	ADA cl 209.jpg
41	Honour Rd	n/a	Holden Avenue	east side	heavily used goat path and no sidewalk	700' sidewalk to be installed with Holden widening; may need maintenance plat for remaining sidewalk	M	PED cl 211.jpg
42	180' north of	n/a	Honour Road	SB	broken sidewalk with vertical discontinuity, trip hazard	repair sidewalk	M	ADA cl 295.jpg
43	approx. 470' south of	n/a	Americana Boulevard	NB	no curb cut ramps at 5401 S. Rio Grande Driveway, tennis courts	request OCPS to install ADA ramps	L	ADA RN 204.jpg
44	approx. 150' south of	n/a	Lake Heritage Circle	NB	mailbox protrudes horizontally over sidewalk	request property owner to relocate mailbox	L	ADA RN 205.jpg
45	approx. 160' south of	n/a	Lake Heritage Circle	NB	sidewalk curbing on east side limits width to 3'8", need 4' PAR	remove portion of curb	L	ADA RN 200.jpg
46	approx. 410' south of	n/a	Lake Heritage Circle	NB	sidewalk curbing on east side limits width to 3'9", need 4' PAR	remove portion of curb	L	ADA RN 206.jpg
47	approx. 430' south of	n/a	Lake Heritage Circle	NB	church fencing poles on east side limits sidewalk access to 3'9", need 4' PAR	request that property owner relocate fence pole on site	L	ADA RN 207.jpg
48	n/a	n/a	Blossom Terrace	SW corner	ramp without truncated dome mats	install truncated dome mats	L	ADA RN 176.jpg
49	n/a	n/a	Blossom Terrace	NW corner	ramp without truncated dome mats	install truncated dome mats	L	ADA RN 177.jpg
50	approx. 20' north of	n/a	Rose Boulevard	SB	foundation for missing pedestrian handrail in sidewalk adjacent to grate	grate poses no observable hazard/need for handrail; remove foundation plates which poses trip hazard	L	ADA cl 228.jpg
51	n/a	n/a	Rose Boulevard	NW corner	ramp without truncated dome mats	install truncated dome mats	L	ADA RN 167.jpg
52	n/a	n/a	Rose Boulevard	SW corner	ramp without truncated dome mats	install truncated dome mats	L	ADA RN 168.jpg
53	approx. 10' south of	n/a	Michael Terrace	SB	vertical discontinuity between sidewalk panels; trip hazard	repair sidewalk	L	ADA RN 213.jpg
54	approx. 180' south of	n/a	Michael Terrace	SB	Sidewalk drop-off in front of 5656 address	fill edge of sidewalk	L	ada kb 3.jpg
55	approx. 150' south of	n/a	Wakulla Way	SB	cracked sidewalk with vertical discontinuity; trip hazard	repair sidewalk	L	ADA RN 212.jpg
56	approx. 200' south of	n/a	Wakulla Way	SB	cracked sidewalk with vertical discontinuity; trip hazard	repair sidewalk	L	ADA RN 210.jpg
57	approx. 360' north of	n/a	Oak Ridge Road	NB	sidewalk ends on the east side	Investigate whether sidewalk can be constructed on east side from approx. 360' north of Oak Ridge Road to approx. 600' north of Nimrod Lane	L	PED cl 009.jpg

58	n/a	n/a	Oak Ridge Road	SE corner	Hole under curb ramp	fill hole	L	PED RN 175.jpg
59	n/a	n/a	Oak Ridge Road	SW corner	ramp without truncated dome mats	install truncated dome mats	L	ADA RN 173.jpg
60	n/a	n/a	Oak Ridge Road	SE corner	ramp without truncated dome mats	install truncated dome mats	L	ADA RN 174.jpg
61	n/a	n/a	Oak Ridge Road	NE corner	ramp without truncated dome mats	install truncated dome mats	L	ADA RN 170.jpg
62	n/a	n/a	Oak Ridge Road	NW corner	ramp without truncated dome mats	install truncated dome mats	L	ADA RN 171.jpg

D. Honour Road

Existing Conditions

Honour Road is a two-lane undivided roadway running east-west from Texas Avenue to Rio Grande Avenue. The road has an urban section and serves residential uses including apartments and condominiums. The speed limit is 30 miles per hour throughout.

Sidewalk exists on both sides of the road. Pavement markings consist of double yellow centerline and white edge lines for the length of the road. Overhead utilities and roadway lighting exist on the east side of Honour Road. There are no bike lanes.

Crash History and Analysis

Crash summaries and crash diagrams were prepared for the key study intersections within the study area. The crash summary and diagram for the intersection of Honour Road with Texas Avenue can be found under the Texas Avenue section of this report. The crash summary and crash diagram depicts crashes for three years (2011-2013).

Recommended Countermeasures

The following tables list the recommended improvements for Honour Road. The first table lists the general recommendations and the second table lists sidewalk and ADA-related issues.

There are no items believed to be a high safety priority along Honour Road. Some improvements to signing and pavement markings are recommended at the intersection of Honour Road and Adventura Boulevard, including upgrading the Adventura Boulevard end-of-road treatment in accordance with FDOT Index 17349.

For the intersection of Honour Road and Rio Grande Avenue it is recommended that sidewalk be constructed to fill the gap on the south side of Honour Road to Rio Grande and that curb ramps and crosswalks be installed. It is also recommended that the Honour Road end-of-road treatment be upgraded.

Texas-Americana RSA Field Review Sheet

Honour Road

General

No.	From	To	Cross Street	Direction	Problem	Solution	Severity (L, M, H)	Photo Name
1	115' east of	n/a	Texas Avenue	WB	palm tree branches hang too low over sidewalk	trim tree branches	L	ADA_kb_301.jpg
2	279' east of	320' east of	Texas Avenue	WB	tree branches hang too low over sidewalk	trim tree branches	L	ADA_kb_303.jpg
3	512' east of	647' east of	Texas Avenue	WB	tree branches and bushes overgrown sidewalk	trim bushes and tree branches	L	ADA_kb_304.jpg
4	25' east of	n/a	Via Hacienda Circle	EB	landscaping needs trimming over sidewalk	trim landscaping	L	ADA_RN_319.jpg
5	approx. 150' east of	n/a	Via Alizar Drive	EB	tree branches hang too low over sidewalk	trim tree branches	L	ADA_RN_323.jpg
6	approx. 500' east of	n/a	Via Alizar Drive	EB	landscaping needs trimming over sidewalk	trim landscaping	L	ADA_RN_324.jpg
7	approx. 800' east of	n/a	Via Alizar Drive	EB	tree branches hang too low over sidewalk	trim tree branches	L	ADA_RN_325.jpg
8	approx. 225' west of	n/a	San Antonio Avenue	EB	tree branches hang too low over sidewalk	trim tree branches	L	ADA_RN_327.jpg
9	n/a	n/a	San Antonio Avenue	NB	T-intersection needs proper end of road treatment; double arrow panel need to be reset parallel to Honour	install 2 type 1 object markers to the left and one to the right of the double arrow panel in accordance with Index 17349	L	SGN_kb_306.jpg
10	n/a	n/a	San Antonio Avenue	south side	no cross walk on south side crossing San Antonio Avenue	install crosswalk	L	PMS_RN_330.jpg
11	143' east of	n/a	San Antonio Avenue	EB	landscaping needs trimming over sidewalk	trim landscaping	L	PED_RN_331.jpg
12	300' east of	n/a	San Antonio Avenue	EB	tree branches hang too low over sidewalk	trim tree branches	L	ADA_RN_332.jpg
13	612' east of	n/a	San Antonio Avenue	WB	bushes over sidewalk reduces PAR to less than 4'	trim bushes	L	ADA_kb_311.jpg
14	700' east of	n/a	San Antonio Avenue	EB	tree branches hang too low over sidewalk	trim tree branches	L	ADA_RN_333.jpg
15	n/a	n/a	Adventura Boulevard	NB	T-intersection needs end of road treatment	Install a double arrow panel, 2 type 1 object markers to the left and one to the right of the double arrow panel in accordance with Index 17349	L	SGN_kb_313.jpg
16	n/a	n/a	Adventura Boulevard	south side	no cross walk on south side crossing Adventura Boulevard	install crosswalk	L	PMS_RN_334.jpg
17	n/a	n/a	Adventura Boulevard	NB	Stop bar is not 2' wide	Re-stripe a 2-foot stop bar.	L	PMS_RN_337.jpg
18	120' south of	n/a	Honour Road	NB&SB	mid-block crosswalk is faded and gore markings are incorrect	Stripe a high-emphasis crosswalk and proper gore markings with double yellow and 18" yellow diagonal markings according to Index 17346, sheet 5 of 14	M	PMS_kb_314.jpg
19	approx. 180' west of	n/a	S. Rio Grande Avenue	EB	Stop Ahead sign is blocking view of LYNX bus stop sign	relocate Stop Ahead sign further upstream to create view of LYNX bus stop sign	L	SGN_kb_315.jpg
20	approx. 150' west of	n/a	S. Rio Grande Avenue	EB	water meter cover near bus stop needs to be re-attached	contact OC Utilities to re-attach cover	L	BCZ_kb_316.jpg
21	n/a	n/a	S. Rio Grande Avenue	SW corner	hole in ground near stop sign - no drainage pipe	fill hole	L	PED_RN_338.jpg
22	n/a	n/a	S. Rio Grande Avenue	EB	T-intersection needs proper end of road treatment	install 2 type 1 object markers to the left and one to the right of the double arrow panel in accordance with Index 17349	M	SGN_kb_318.jpg

Texas-Americana RSA Field Review Sheet

Honour Road

Sidewalk and ADA Issues

No.	From	To	Cross Street	Direction	Problem	Solution	Severity (L, M, H)	Photo Name
1	97' east of	n/a	Texas Avenue	WB	cracked/broken sidewalk	repair sidewalk	L	ADA kb 300.jpg
2	156' east of	n/a	Texas Avenue	WB	cracked sidewalk with vertical discrepancy between panels; trip hazard	repair sidewalk	L	ADA kb 302.jpg
3	542' east of	n/a	Texas Avenue	WB	sidewalk with vertical discrepancy; trip hazard	repair sidewalk	L	ADA kb 305.jpg
4	25' east of	n/a	Via Hacienda Circle	EB	broken sidewalk	repair sidewalk	L	PED RN 320.jpg
5	n/a	n/a	Via Alizar Drive	EB	gap between sidewalk and driveway both sides	fill gap	L	ADA RN 321.jpg
6	n/a	n/a	Via Alizar Drive	EB	cracked sidewalk on east side of driveway	repair sidewalk	L	PED RN 322.jpg
7	approx. 250' west of	n/a	San Antonio Avenue	EB	cracked sidewalk	repair sidewalk	L	PED RN 326.jpg
8	n/a	n/a	San Antonio Avenue	SW corner	west side curb ramp too steep, out of tolerance	construct ADA-compliant curb ramp including truncated dome mat	L	ADA RN 328.jpg
9	n/a	n/a	San Antonio Avenue	SE corner	east side curb ramp too steep, out of tolerance	construct ADA-compliant curb ramp including truncated dome mat	L	ADA RN 329.jpg
10	26' east of	n/a	San Antonio Avenue	WB	cracked sidewalk with vertical discrepancy; trip hazard	repair sidewalk	L	ADA kb 307.jpg
11	221' east of	n/a	San Antonio Avenue	WB	Bus stop does not have 5'X8' level B&A area; too steep on either side of sidewalk	re-grade to create 8' depth that is level	L	ADA kb 308.jpg
12	381' east of	n/a	San Antonio Avenue	WB	sidewalk with vertical discrepancy; trip hazard	repair sidewalk	L	ADA kb 309.jpg
13	516' east of	n/a	San Antonio Avenue	WB	sidewalk with vertical discrepancy; trip hazard	repair sidewalk	L	ADA kb 310.jpg
14	631' east of	n/a	San Antonio Avenue	WB	cracked/broken curb ramp and curb at Landon Pointe Apartments	repair curb ramp and curb	L	ADA kb 312.jpg
15	n/a	n/a	Adventura Boulevard	SW corner	curb ramp with no truncated dome mats	install truncated dome mats	L	ADA RN 335.jpg
16	n/a	n/a	Adventura Boulevard	SE corner	curb ramp too steep and no truncated dome mat	construct ADA-compliant curb ramp including truncated dome mat	L	ADA RN 336.jpg
17	approx. 150' west of	n/a	S. Rio Grande Avenue	EB	sidewalk ends and goat path continues to Rio Grande	construct sidewalk to Rio Grande	L	PED kb 317.jpg
18	n/a	n/a	S. Rio Grande Avenue	EB	no curb ramps for a future crosswalk across EB approach	if sidewalk can be constructed on south side to Rio Grande, construct curb ramps in both NW and SW corners	L	PED RN 339.jpg
19	n/a	n/a	S. Rio Grande Avenue	EB	stop bar too far forward for future crosswalk across EB approach	if sidewalk can be constructed on south side to Rio Grande and curb ramps can be constructed, pull stop bar back and install crosswalk	L	PMS RN 340.jpg

E. Holden Avenue

Existing Conditions

Holden Avenue is a two-lane undivided roadway running east-west. The study limits for Holden Avenue are from Texas Avenue to Rio Grande Avenue. The cross section is rural and serves residential uses, mainly apartment complexes and condominiums. The speed limit is 35 mph throughout.

There is no existing sidewalk and no bike lanes are provided. Pavement markings consist of double yellow centerline and white edge lines throughout.

Overhead utilities are provided on the north side of Holden Avenue. No roadway lighting currently exists.

Crash History and Analysis

Crash summaries and crash diagrams were prepared for the key study intersections along Holden Avenue. The crash summary and crash diagram for the intersection of Holden Avenue with Texas Avenue can be found under the Texas Avenue section of this report. The crash summary and crash diagram for the intersection of Holden Avenue with Rio Grande Avenue can be found under the Rio Grande section of this report. Crashes for three years are included (2011-2013).

Recommended Countermeasures

The following tables list the recommended improvements for Holden Avenue. The first table lists the general recommendations and the second table lists sidewalk and ADA-related issues.

There are two items believed to be a high priority for Holden Avenue. There was a significant pavement edge drop-off identified in the eastbound direction that has since been repaired. In addition, the condition of LYNX Bus Stop ID 2801 was very poor. There was a large pavement edge drop-off running approximately thirty feet and the bus stop was not ADA accessible. Both of these conditions have been repaired.

Other items which would otherwise be recommended, such as sidewalk, bike lanes, and roadway lighting, are being included in the Holden Avenue construction project.

Texas-Americana RSA Field Review Sheet

Holden Avenue

General

No.	From	To	Cross Street	Direction	Problem	Solution	Severity (L, M, H)	Photo Name
1	approx. 438' west of	672' west of	Rio Grande Avenue	EB	3 No Parking signs have double arrows, but no signs show limits	Add No Parking signs with limits	L	SGN_kb_400.jpg
2	approx. 1000' west of	n/a	Rio Grande Avenue	EB	pavement edge drop-off in radius and merge of Chowder Bay Apartments driveway	request apartment complex to repair driveway	L	PAV_kb_404.jpg
3	approx. 1200' west of	1270' west of	Rio Grande Avenue	EB	pavement edge drop-off	repair drop-off	H	PAV_kb_405.jpg
4	approx. 1300' west of	n/a	Rio Grande Avenue	EB	litter	address at community meeting/possibly organize clean-up	L	CRM_kb_406.jpg
5	approx. 1600' west of	n/a	Rio Grande Avenue	EB&WB	drainage headwall located at 13.5' from edge of travel lane; evidence of being hit on north side of	Holden widening project will have closed drainage system	M	BCZ_kb_407.jpg

Texas-Americana RSA Field Review Sheet

Holden Avenue

Sidewalk and ADA Issues

No.	From	To	Cross Street	Direction	Problem	Solution	Severity (L, M, H)	Photo Name
1	Texas Avenue	n/a	Rio Grande Avenue	EB & WB	no sidewalk leading to very heavily used bus stops	Sidewalks will be constructed with Holden Avenue widening project	L	PED_CPC_4434.jpg
2	approx. 200' west of	n/a	Rio Grande Avenue	WB	LYNX bus stop ID 2801, not ADA accessible. Pavement edge drop-off.	Provide level base for bus stop.	H	ADA_CPC_4340.jpg
3	approx. 900' west of	n/a	Rio Grande Avenue	EB	LYNX bus stop ID 2887, loose gravel in B&A area	construct firm surface	L	ADA_kb_402.jpg
4	approx. 900' west of	n/a	Rio Grande Avenue	WB	LYNX bus stop ID 2802, steep grade in B&A area	construct firm, level surface	L	ADA_kb_403.jpg

VIII. Recommended Mid-Range and Long-Term Capital Improvements

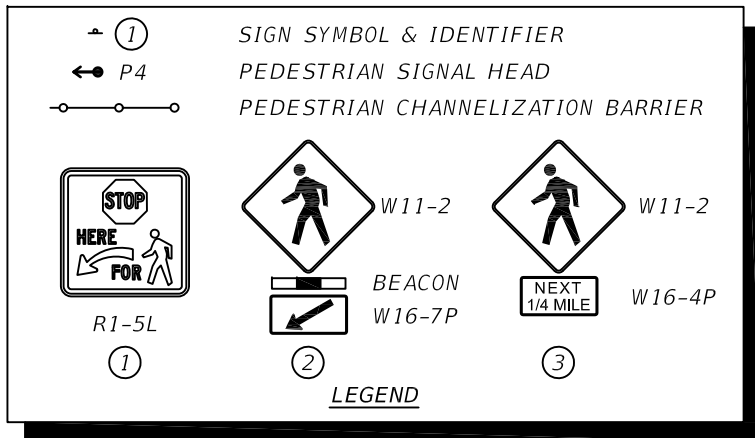
As funds become available for major roadway or intersection improvements, the following projects should be considered:

Mid-Range Improvements

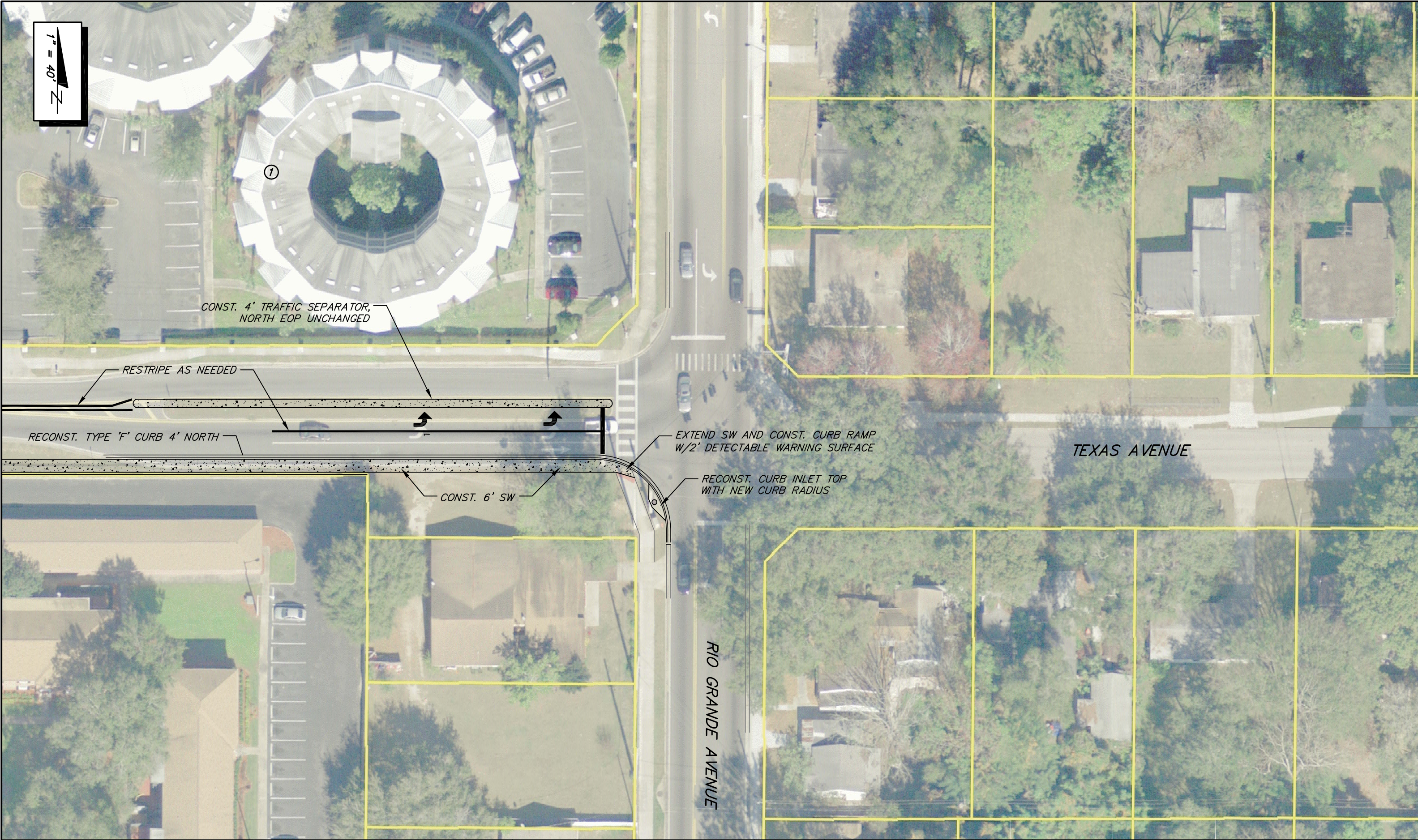
- Americana Boulevard at Texas Avenue – reconstruct signal including upgraded ADA-compliant curb ramps and 4-section left turn signal heads
- Oak Ridge Road at Texas Avenue – reconstruct signal including sidewalk and upgraded ADA-compliant curb ramps and 4-section left turn signal heads
- Americana Boulevard between Texas Avenue and San Antonio Boulevard – install 2 mid-block crosswalks with rectangular rapid flashing beacons and pedestrian warning signing. Consider the use of pedestrian channelization barrier in the median between mid-block crossings. (See concept sheet which follows.)

Long-Term Capital Improvements

- Texas Avenue at Rio Grande Avenue – shift eastbound lanes north, reducing median width, and construct sidewalk on the south side of Texas Avenue from the current terminus near Dunwoodie Street to Rio Grande Avenue. Investigate the feasibility of shifting westbound lanes north to reduce the offset at the intersection. (See concept sheet which follows.)
- Rio Grande Avenue – install roadway lighting between Oak Ridge Road and south of Ole Heritage Drive for security in high-crime area, for Link 8 and 304 LYNX transit riders, and for increased visibility of pedestrians and bicyclists.
- Texas Avenue – install roadway lighting between Oak Ridge Road and Duskin Avenue and from Honour Road to Rio Grande Avenue for security in high-crime area and for increased visibility of pedestrians and bicyclists.
- Texas-Avenue – design and construct missing sidewalk gaps.
- Rio Grande Avenue – design and construct missing sidewalk gaps.

[illegible]

AMERICANA BOULEVARD
PEDESTRIAN SAFETY
IMPROVEMENTS



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

SOUTH TEXAS AVENUE
AT RIO GRANDE AVENUE

ORANGE
COUNTY
GOVERNMENT
FLORIDA

TRAFFIC ENGINEERING DIVISION

4200 S. JOHN YOUNG PKWY.
ORLANDO, FLORIDA 32839-9205
(407) 836-7830

INTERSECTION REALIGNMENT

SOUTH SIDEWALK ADDITION

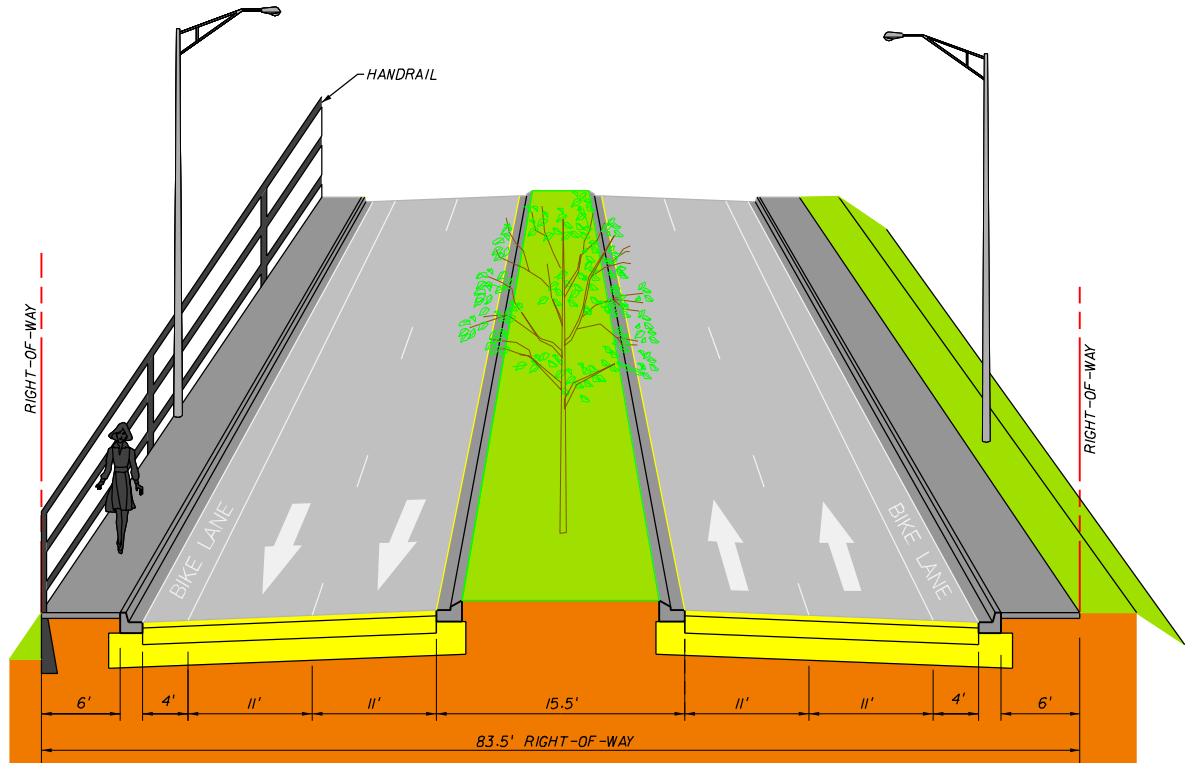
SHEET
NO.

1/1

Appendix A
Holden Avenue Typical Section

HOLDEN AVENUE

**RAISED MEDIAN
DESIGN SPEED 45 MPH**



TEXAS AVENUE TO RIO GRANDE AVENUE

Appendix B
Existing Transit Ridership

LYNX Existing Transit Ridership

Consideration for
Bus Shelter (8.5' X
4.5' X 8')

Consideration for
Longer Bus Shelter (12'
X 4.5' X 8')

No.	Road	Location	Time Point	Direction	Route	Stop ID	Rank for Stop Use	Avg Daily on Bus	Avg Daily off Bus	Avg Daily Use	Shelter?/Type	Bench?	S/W Access?	Concrete Pad?	Trash Can?	Minimum Boardings 50 - 100 per day?	Minimum Boardings 100 per day?	Notes	Night-time service?	If no shelter, Lighting 15-30' from stop?	Need
1	Americana Blvd	at Grand Central Pkwy	Americana Blvd and Grand Central Pkwy	EB	40	2309	1977	9	4	12	no	yes	yes	no	no	no	no	steep slope from sidewalk	yes	no, but lighting is coming	trash can, accessioie path to stop from sidewalk
2	Americana Blvd	east of Grand Central Pkwy	2500 Americana Blvd and Grand Central Pkwy	WB	40	2262	1692	4	12	16	no	yes	yes	no	no	no	no	check if bench/sign is in best location	yes	no, but lighting is coming	trash can, relocate bench outside clear zone (10')
3	Americana Blvd	west of Arpana Dr	Americana Blvd and Arpana Dr	EB	40	2310	2862	0	6	6	no	no	yes, sidewalk to street	no	no	no	no	sidewalk connection to Americana both sides, but no marked crosswalk	yes	no, but lighting is coming	trash can
4	Americana Blvd	at Arpana Dr	2300 Americana Blvd and Arpana Dr	WB	40	2261	3774	1	1	2	no	yes	yes	no	no	no	no	Sign hidden in trees	yes	no, but lighting is coming	trash can, trim trees around sign
5	Americana Blvd	east of Texas Avenue	2100 Americana Blvd and Texas Ave	EB	8, 40	2311	50	193	137	330	yes	yes, 2 inside	yes, including to street	yes	yes, large can	yes	yes	circular seating in shelter	yes	shelter is not lighted, median lighting 85'	shelter lighting
6	Americana Blvd	east of Texas Avenue	2100 Americana Blvd and Texas Ave	WB	8, 40	2260	41	229	133	361	yes	yes, 2 inside, 1 outside	yes, including to street	yes	yes, large can	yes	yes		yes	shelter is not lighted, median lighting 85'	shelter lighting
7	Americana Blvd	west of San Antonio Avenue	2000 Americana Blvd and San Antonio Ave	EB	8, 40	2807	153	86	47	133	no	yes	yes	no	no	yes	no	metal protruding near stop; is this missing trash can?	yes	yes	a shelter, trash can, roots removed or bus stop relocated 20' west
8	Americana Blvd	between San Antonio and Rio Grande	1900 Americana Blvd and Rio Grande Ave	EB	8, 304	2808	408	49	19	69	yes	yes	yes, including to street	yes	yes, large can	no	no	nice bus stop	yes	yes	potential to move these mid-block stops to an intersection? Shelter lighting is either burnt out or very dim.
9	Americana Blvd	between San Antonio and Rio Grande	1900 Americana Blvd	WB	8, 304	2281	143	63	80	143	no	yes	yes	no	yes	yes	no	check if bench is in best location	yes	median lighting 70'	a shelter with lighting
10	Texas Avenue	north of Huntington Green Ct	5300 Texas Ave and Huntington Green Ct	NB	8	2882	1499	14	4	18	no	yes	yes	no	yes	no	no		yes	west side 105'	
11	Texas Avenue	north of Huntington Green Ct	5400 Texas Ave	SB	8	2806	897	9	25	34	no	yes	no	no	yes	no	no		yes	west side lighting 45'	
12	Texas Avenue	south of Honour Rd	4800 Texas Ave and Honour Rd	NB	8	2883	780	23	16	39	no	yes	yes	no	yes	no	no	B&A area is not level	yes	east side 60'	need level B&A area
13	Texas Avenue	south of Honour Rd	5000 Texas Ave and Honour Rd	SB	8	2805	929	18	14	33	no	yes	no	no	yes	no	no		yes	yes	
14	Texas Avenue	between Buchanan Bay Circle N and S	4700 Texas Ave	NB	8	2884	522	32	25	57	no	no	yes	no	yes	no	no		yes	no	
15	Texas Avenue	between Buchanan Bay Circle N and S	4700 Texas Ave	SB	8	2804	542	33	21	54	no	yes	yes	no	yes	no	no	cross slope from sidewalk to bus stop is too steep, greater than 5% slope	yes	no	need ADA-compliant slope from sidewalk to bus stop, need trash can
16	Texas Avenue	south of Holden Ave	4700 Texas Ave and Holden Ave	NB	8	2885	970	14	17	31	no	yes	yes, including to street	yes	yes	no	no		yes	no	
17	Texas Avenue	south of Holden Ave	Texas Ave and Holden Ave	SB	8	2803	672	28	16	44	no	yes	yes	no	yes	no	no		yes	no	
18	Holden Ave	approx. 940 ft west of Rio Grande	1600 Holden Ave	EB	8	2886	1531	7	11	18	no	yes	no	no	no	no	no	loose gravel in B&A area; sign is badly faded	yes	no, but lighting is coming	need firm, level B&A area; replace sign
19	Holden Ave	approx. 900 ft west of Rio Grande	1700 Holden Ave	WB	8	2802	2,127	9	2	11	no	yes	no	no	no	no	no	looks like an alternative surface has been used instead of concrete pad; steep grade in B&A area	yes	no, but lighting is coming	need firm, level B&A area
20	Holden Ave	approx. 180 ft west of Rio Grande	1600 Holden Ave and Rio Grande Ave	EB	8	2887	142	54	91	145	no	yes	no	no	no	yes	no	worn walking path to Rio Grande	yes	no, but lighting is coming	
21	Holden Ave	approx. 200 ft west of Rio Grande	1600 Holden Ave and Rio Grande Ave	WB	8	2801	138	114	32	146	no	yes	no	no	no	yes	yes	worn walking path to Rio Grande; looks like an alternative surface has been used instead of a concrete pad; drop-off to B&A area not ADA- compliant	yes	no, but lighting is coming	need firm, level B&A area
22	San Antonio Ave	approx. 330 ft north of Americana	1900 San Antonio Ave and Americana Blvd	NB	40, 304	2,259	634	23	24	46	no	yes	yes	no	no	no	no	check distances in field; may have stops reversed	yes	west side 80'	
23	San Antonio Ave	approx. 150 ft north of Americana	1900 San Antonio Ave and Americana Blvd	SB	40, 304	2,236	818	18	19	37	no	yes	yes	no	no	no	no	check distances in field; may have stops reversed	yes	yes	
24	San Antonio Ave	north of Lake Fountain Dr	5200 San Antonio Ave and Lake Fountain Dr	NB	40, 304	2,254	2,356	5	4	9	no	yes	yes	no	no	no	no		yes	yes	
25	San Antonio Ave	north of Lake Fountain Dr	5200 San Antonio Ave and Lake Fountain Dr	SB	40, 304	2,258	2611	1	6	7	no	yes	yes	no	no	no	no		yes	yes	
26	San Antonio Ave	approx 320 ft south of Honour Rd	5201 San Antonio Ave and Honour Rd	SB	40, 304	2,693	1124	11	15	26	no	yes	yes	yes	yes, large can	no	no		yes	west side 50'	
27	San Antonio Ave	? There are 2 on LYNX GIS, but only 1 on Googlemaps	5200 San Antonio Ave and Honour Rd	NB	40, 304	2,692	1440	13	7	19	?					no	no		yes		
28	San Antonio Ave	south of Honour Rd	2000 Honour Rd and San Antonio Ave	NB	40, 304	2257	1723	7	9	15	yes	yes, 1 extra	yes	yes	yes, large can	no	no		yes	yes	
29	Honour Rd	west of Rio Grande Ave	1600 Honour Rd and Rio Grande Ave	EB	40, 304	2255	1249	15	8	23	no	yes	1 side	no	no	no	no	Need sidewalk to continue to Rio Grand Ave	yes	yes	
30	S. Rio Grande Ave	north of Honour Rd	4800 Rio Grande Ave and Honour Rd	SB	40, 304	2256	1692	8	8	16	no	yes	yes	no	no	no	no		yes	yes	
31	S. Rio Grande Ave	north of Holden Rd	4600 Rio Grande Ave and Holden Rd	NB	40, 304	2312	651	17	29	45	no	yes	yes	no	no	no	no		yes	yes	
32	S. Rio Grande Ave	north of Holden Rd	4600 Rio Grande Ave and Holden Rd	SB	40, 304	2252	604	32	17	48	no	yes	yes	no	no	no	no		yes	east side 60'	
33	S. Rio Grande Ave	south of 44th St	4400 Rio Grande Ave and 44th St	NB	40, 304	2313	1480	8	10	18	no	no	yes	no	no	no	no	no 5'X8' B&A area - right-of-way restricted	yes	east side 60'	
34	S. Rio Grande Ave	south of 44th St	4400 Rio Grande Ave and 44th St	SB	40, 304	2251	1187	15	10	25	no	yes	yes	no	no	no	no		yes	east side 60'	
35	S. Rio Grande Ave	south of 42nd St	4200 Rio Grande Ave and 42nd St	SB	40, 304	2250	893	15	20	34	no	yes	yes	no	no	no	no		yes	yes	
36	S. Rio Grande Ave	north of 42nd St	4100 Rio Grande Ave and 42nd St	NB	40, 304	2314	985	25	6	31	no	no	yes	no	no	no	no	no 5'X8' B&A area - right-of-way restricted	yes	east side 60'	
37	S. Rio Grande Ave	south of 40th St	3900 Rio Grande Ave and 40th St	NB	40, 304	2315	1692	9	7	16	no	yes	yes	no	no	no	no		yes	yes	
38	S. Rio Grande Ave	north of 40th St	3900 Rio Grande Ave and 40th St	SB	40, 304	2249	1488	8	10	18	no	yes	yes	no	no	no	no		yes	west side 70'	
39	S. Rio Grande Ave	south of 37th St	3700 Rio Grande Ave and 37th St	NB	40, 304	2316	2024	6	6	12	no	no	yes	no	no	no	no	no 5'X8' B&A area - right-of-way restricted	yes	west side 60'	
40	S. Rio Grande Ave	north of 37th St	3600 Rio Grande Ave and 37th St	SB	40, 304	2248	2366	2	7	9	no	yes	yes	no	no	no	no		yes	yes	
41	S. Rio Grande Ave	north of 34th St	3500 Rio Grande Ave and 34th St	NB	40, 304	2317	2686	5	2	7	no	yes	yes	no	no	no	no		yes	east side 50'	
42	S. Rio Grande Ave	south of 34th St	3500 Rio Grande Ave and 34th St	SB	40, 304	2247	2781	5	2	6	no	yes	yes	no	no	no	no		yes	yes	
43	S. Rio Grande Ave	north of Oak Ridge Rd	5800 Rio Grande Ave and Oak Ridge Rd	NB	8, 304	2834	133	80	80	151	no	yes	no	no	no	yes	no		yes	no	a shelter with lighting
44	S. Rio Grande Ave	north of Oak Ridge Rd	6000 Rio Grande Ave and Oak Ridge Rd	SB	8, 304	2815	274	8	84	92	no	no	yes	no	yes	no	no		yes	no	

LYNX Existing Transit Ridership

Consideration for
Bus Shelter (8.5' X
4.5' X 8')

Consideration for
Longer Bus Shelter (12'
X 4.5' X 8')

No.	Road	Location	Time Point	Direction	Route	Stop ID	Rank for Stop Use	Avg Daily on Bus	Avg Daily off Bus	Avg Daily Use	Shelter?/Type	Bench?	S/W Access?	Concrete Pad?	Trash Can?	Minimum Boardings 50 - 100 per day?	Minimum Boardings 100 per day?	Notes	Night-time service?	If no shelter, Lighting 15-30' from stop?	Need
45	S. Rio Grande Ave	at Weatherly at Central Park Apartments	5700 Rio Grande Ave	NB	8, 304	2835	3360	3	0	3	no	yes	no	no	no	no	no		yes	no	
46	S. Rio Grande Ave	at Weatherly at Central Park Apartments	5700 Rio Grande Ave	SB	8, 304	2814	3410	0	3	3	no	no	yes	no	yes	no	no		yes	no	
47	S. Rio Grande Ave	south of Wakulla Way	5600 Rio Grande Ave and Wakulla Way	NB	8, 304	2836	1919	8	4	13	no	yes	no	no	no	no	no		yes	no	
48	S. Rio Grande Ave	north of Wakulla Way	5700 Rio Grande Ave and Wakulla Way	SB	8, 304	2813	1267	8	14	23	no	yes	yes	no	no	no	no		yes	no	
49	S. Rio Grande Ave	south of Rose Blvd	5600 Rio Grande Ave and Rose Ave	SB	8, 304	2812	2151	4	6	10	no	yes	yes	no	no	no	no		yes	west side 80'	
50	S. Rio Grande Ave	south of Rose Blvd	5600 Rio Grande Ave and Rose Ave	NB	8, 304	2877	2212	6	4	10	no	no	no	no	no	no	no		yes	west side 40'	
51	S. Rio Grande Ave	north of Blossom Terrace	5500 Rio Grande Ave and Blossom Terr	NB	8, 304	2878	1448	8	10	19	no	no	no	no	no	no	no	lighting is on east side private property for mobile home park	yes	yes	
52	S. Rio Grande Ave	north of Blossom Terrace	5500 Rio Grande Ave and Blossom Terr	SB	8, 304	2811	1006	15	15	30	no	yes	yes	no	no	no	no	lighting is on east side private property for mobile home park	yes	east side 60'	
53	S. Rio Grande Ave	north of Lake Heritage Circle	5400 Rio Grande Ave and Lake Heritage Cir	SB	8, 304	2810	1135	13	13	26	no	no	yes	no	no	no	no		yes	east side 90'	
54	S. Rio Grande Ave	south of Lake Heritage Circle	5411 Rio Grande Ave and Amer	NB	8, 304	2879	1165	13	12	25	yes	yes	yes, including to pad	yes	yes, large can	no	no	shelter roof needs repair	yes	yes	need shelter roof repair
55	S. Rio Grande Ave	south of Royal Grande of Orlando Apartments	5301 Rio Grande Ave and Amer	NB	8, 304	2880	518	19	39	57	yes	yes, 1 extra	yes, including to pad	yes	yes, large can	no	no	connection from sidewalk to curb is blocked by bench;	yes	yes	shelter lighting
56	S. Rio Grande Ave	front of Esplanade Apartments	5400 Rio Grande Ave	SB	8, 304	2809	347	63	15	78	no	yes	yes, including to street	yes	no	yes	no		yes	east side 70'	

Appendix C
ADA Criteria

ADA Compliance
Texas-Americana Road Safety Small Area Study

Component		Location	Criteria	Additional Description	Reference
Pedestrian Access Route (PAR)	Continuous Width	sidewalks, paths, ped. street crossings, at-grade rail crossings	continuous clear width of 4.0 ft minimum	does not include the width of curb	See Figure R302.3, PROWAG Chapter R3
		medians and pedestrian refuge islands	5.0 ft minimum	n/a	R302.3.1
		passing spaces	if PAR < 5 ft, provide passing spaces at 200 ft intervals, maximum.	Passing spaces are 5.0 ft X 5.0 ft minimum	See Figure R302.4, PROWAG Chapter R3
	Running slopes	sidewalks, paths, ped. street crossings, at-grade rail crossings	shall not exceed the general grade for the adjacent street	Running slope is measured parallel to the direction of pedestrian travel.	R302.5
		pedestrian street crossings	5% maximum	n/a	R302.5.1
	Cross slopes	sidewalks, paths, ped. street crossings, at-grade rail crossings	2% maximum	Cross slope is measured perpendicular to the direction of pedestrian travel.	R302.6
		pedestrian street crossings without yield or stop control	5% maximum	n/a	R302.6.1
		mid-block pedestrian street crossings	can be equal to the street grade	n/a	R302.6.2
Surfaces	vertical alignment	sidewalks, paths, ped. street crossings, at-grade rail crossings, curb ramps, blended transitions, accessible pedestrian signals, pedestrian pushbuttons, benches, boarding and alighting areas at transit stops, ramp runs and landings	firm, stable and slip resistant. generally planar and smooth; grade breaks shall be flush	n/a	R302.7.1
	vertical surface discontinuities	sidewalks, paths, ped. street crossings, at-grade rail crossings, curb ramps, blended transitions, accessible pedestrian signals, pedestrian pushbuttons, benches, boarding and alighting areas at transit stops, ramp runs and landings	0.5 inch maximum; discontinuities between 0.25 inch and 0.5 inch shall be beveled with a slope not steeper than 50%	n/a	See Figure R302.7.2, PROWAG Chapter R3
	Horizontal openings	sidewalks, paths, ped. street crossings, at-grade rail crossings, curb ramps, blended transitions, accessible pedestrian signals, pedestrian pushbuttons, benches, boarding and alighting areas at transit stops, ramp runs and landings	Shall not permit passage of a sphere more than 0.5 inch in diameter.	Elongated openings in gratings shall be placed so that the long dimension is perpendicular to the dominant direction of travel.	See Figure R302.7.3, PROWAG Chapter R3
Curb Ramp Landings	Turning Space	sidewalks - top of curb ramps	4.0 ft X 4.0 ft minimum; 4.0 ft X 5.0 ft when constrained at the back of sidewalk. Longer dimension in direction of ramp run.	may overlap other clear spaces	See Figure R304.2.1, PROWAG Chapter R3
		sidewalks - bottom of curb ramps	4.0 ft X 4.0 ft minimum ; 4.0 ft X 5.0 ft when constrained on 2 or more sides. Longer dimension in direction of the pedestrian street crossing.	may overlap other clear spaces	See Figure R304.3.1, PROWAG Chapter R3

Component		Location	Criteria	Additional Description	Reference
Curb Ramps	Running slopes	n/a	5% minimum, 8.3% maximum	Shall not require the ramp length to exceed 15.0 ft.	R304.2.2
	Flared sides	n/a	10% maximum slope	Measured parallel to the curb line	See Figure R304.2.3, PROWAG Chapter R3
	Cross slopes	n/a	2% maximum	n/a	R304.5.3
	Counter slope	n/a	5% maximum	If difference between ramp grade and grade of adjacent street is greater than 11.3%, provide 2 ft level area	R304.5.4, Dean Perkins (FDOT) presentation, p 16
Blended transitions	Running slopes	n/a	5% maximum	n/a	See Figure R304.4.1, PROWAG Chapter R3
	Cross slopes	n/a	2% maximum	n/a	R304.5.3
Detectable Warning Surfaces	Size	all	Shall extend 2.0 feet minimum in the direction of pedestrian travel (depth).	n/a	See Figure R305.1.4, PROWAG Chapter R3
		curb ramps, blended transitions	shall extend the full width of the ramp run (excluding flared sides), blended transition or turning space	n/a	R305.1.4
		boarding platforms for buses	shall extend the full length of the public use area of the platform	n/a	R305.2.6
		perpendicular curb ramps	place at back of curb or at grade break	n/a	R305.2.1, Dean Perkins (FDOT) presentation p. 17
		directional/linear ramps	Place at grade break if level landing at bottom or ramp is 5 ft deep or less. Place on bottom landing if level landing is more than 5 ft deep at any point.	n/a	See Figure 305.2.1, PROWAG Chapter R3 Dean Perkins (FDOT) presentation p. 17
		parallel ramps	on the turning space located at back of curb	n/a	See Figure R305.2.2, PROWAG Chapter R3
		pedestrian refuge islands	at the edges of the pedestrian island and separate by a 2.0 ft minimum length of surface without detectable warnings	n/a	See Figure R305.2.4, PROWAG Chapter R3
Transit Boarding and Alighting Areas	Dimensions	n/a	5.0 ft wide X 8.0 ft deep	level and stable surface	See Figure R308.1.1.1, PROWAG Chapter R3
	Grade	n/a	Parallel to the street, the same as the street; Perpendicular to the street, 2% maximum	n/a	R308.1.2.2
	Connection	n/a	the connection between boarding and alighting area and the bus shelter	Must meet criteria for a pedestrian accessible route (PAR)	Figure R308.1.3.2, PROWAG Chapter R3
Protruding Objects	Limits	Objects with leading edges between 27 inches and 80 inches above finished surface	Cannot protrude more than 4 inches horizontally into pedestrian circulation path	n/a	See Figure R402.2, PROWAG Chapter R4
		Post-Mounted Objects between 27 inches and 80 inches above finished surface	Cannot protrude more than 12 inches horizontally into pedestrian circulation path	n/a	Dean Perkins (FDOT) presentation, p. 10

Component		Location	Criteria	Additional Description	Reference
Traffic Signal Systems	pedestrian activated signals	channelized turn lanes at signalized intersections	Pedestrian activated signals shall be provided at pedestrian street crossings at multi-lane channelized turn lanes	n/a	R306.5
		n/a	Where pedestrian signals are provided, they shall include accessible pedestrian signals complying with sections 4E.08 through 4E.13 of the MUTCD.	n/a	R209.1
		Unobstructed Forward Reach	High forward reach shall be 4.0 ft maximum (FDOT standard is 3.5 ft); low forward reach shall be 1.25 ft minimum above finish surface.	Forward reach over an obstruction is not permitted.	See Figure R406.2, PROWAG Chapter R4
		Unobstructed Side Reach	High side reach shall be 4.0 ft maximum (FDOT standard is 3.5 ft); low side reach shall be 1.25 ft minimum above finish surface.	An obstruction shall be permitted between the clear space and the element where the depth of the obstruction is 10 inches maximum.	See Figure R406.3, PROWAG Chapter R4
		Location	Between 1.5 ft and 6 ft from the edge of the curb, shoulder, or pavement. If impractical, not farther than 10 ft.	n/a	See MUTCD Figure 4E-3
			Not greater than 5 ft from edge of the crosswalk line farthest from the center of the intersection.	n/a	See MUTCD Figure 4E-3
			Two pedestrian pushbuttons provided in the same corner should be separated by a distance of at least 10 ft.	n/a	see MUTCD 4E-09
		Pushbutton face	Should be parallel to the crosswalk to be used.	n/a	see MUTCD 4E-09
		Pushbutton signs	Shall clearly indicate which crosswalk signal is actuated by each pedestrian pushbutton.	n/a	see MUTCD 4E-09

Appendix D
Community Meeting Sign-In Sheets

SIGN IN SHEET

Texas-Americana Road Safety Small Area Study
December 4, 2014

NAME	ADDRESS	TELEPHONE	EMAIL
Eddie E. Herrera Whitted	5432 Arpana Dr ³²⁸³⁹	407/8560558	AEretirees@msn.com
Manuela Davies	5452 Coral Way	321/202-0214	manuela@manuela.com
Elbert Warner	4200 74th Ave	888 -407 836-7822	
Thurman Hill	5437 Arpana DR	407-2401383	
Antonio Diaz	5226 Mason CT	407-902-5341	
Laurie Combs	2215 Pineway Dr		lcombs9@csi.RR.com
Tina Wells	U.C. Commissioner Ofc	407-836-5860	
Irene A. Taylor	5513 Pendleton Dr.	407 716 5195	Telougon@gmail.com
LEDA DOMINGUEZ	2513 ROSA BLV	407 968 9661	
JoAnn C. Tobiasen	2767 Huntington Green ^{CT}	407 312 7983	
Paula Cruz	7208 TUES	407-8442330	

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NAME	ADDRESS	TELEPHONE	EMAIL
Linda Claude	5319 W Solvia Court	600	
Deby Smith	2919 Marchfield Dr	OC FL 32839	dsmith@midfloridaelearning.com
FERN Hampton	5512 S Tampa Ave	OR 32829	fern.hampton@gmail.com
Shawn Hampton	5512 Tampa Ave	407 325 7506	
Commissioner Victoria Siplin	O.C. Commissioner	407-836-5860	
GARY Siplin	1320 Pine	407 802 2400	
Carla D. McCendon	OCNTRD	407-836-0916	Carla.McCendon@ocfl.net
Marty Hunter	4302 Agua Vista Dr	407-903-0865	
OSWALDO BRYAN	2810 Rose Blvd	407-857-8675	
Wes Johnson	450 E South Street	407-836-5895	Wes.Johnson@ocfl.net

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