# SAFETY STUDY

## SR 134 (103 Street)
## from east of Norde Drive to
## west of Wesconnett Boulevard
## Duval County, Florida

**Section No. 72220000, Milepost 8.300 to 9.092**

**FDOT Task Work Order No. 16 and 24**
**Contract No. C-9B75**
**FM No. 211079-8-32-01**

Prepared for

**Florida Department of Transportation**
**District 2 Traffic Operations Office**

Prepared by
**AECOM**

**December 2018**

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**AECOM**
7800 Congress Avenue, Suite 200
Boca Raton, FL 33487

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# 1. INTRODUCTION

The Florida Department of Transportation (FDOT) has retained AECOM Technical Services, Inc. (AECOM) to conduct a safety assessment along SR 134 (103rd Street) from east of Norde Drive to west of Wesconnett Boulevard to determine if a raised median will help improve safety (TWO 24). As part of TWO 16, safety studies were conducted at the intersections of SR 134/Jammes Road and SR 134/SR 21 (Blanding Boulevard). The study locations are located in Duval County, Florida. An aerial map of the study segment is shown in **Figure 1**. As part of this study, the following tasks were conducted:

- Turning Movement Counts
- Crash Analysis
- Field Reviews
- Collision Diagrams
- Existing Condition Diagram
- Operational Analysis
- Proposed Condition Diagram
- Preliminary Estimate of Construction Costs
- Benefit/Cost Analysis
- Net Present Value Analysis

It should be noted that the scope of TWO 24 does not include TMCs, Field Reviews, and Operational Analysis. The following sections of this report summarize the findings and results of the analyses conducted as part of this study.

# 2. EXISTING CONDITIONS

*State Road 134*

State Road 134 is identified as Section 72220000 on the State Highway System and the study limits are from Milepost 8.300 to 9.092. The study segment of SR 134 is an east-west, six-lane roadway (three lanes in each direction) with a two-way left-turn lane. The posted speed limit along the study segment is 45 miles per hour. Street lights are present on both sides of the roadway. Sidewalks exist along both sides of the roadway. Designated bicycle lanes do not exist along SR 134. The land uses along SR 134 consist of primarily commercial developments (including shopping plazas, restaurants, and churches) with some residential developments (mostly single family units on the west end of the project). The study segment consists of three unsignalized and two signalized intersections. A condition diagram showing the existing features for the intersections and a Straight Line Diagram (SLD) of the corridor are included in **Appendix A**. Based on the Florida Traffic Information Online Website, SR 134 carries an annual average daily traffic (AADT) of 27,500 vehicles based on the 2016 traffic data for the PTMS 720930 located 0.1 mile west of SR 21.

- One unsignalized T-intersection at Batley Road
- One unsignalized T-intersection at Cardan Road
- One unsignalized intersection at Moret Drive/Dugdale Road
- One signalized intersection at Jammes Road
- One signalized intersection at SR 21 (Blanding Boulevard)

*State Road 21*

State Road 21 is identified as Section 72170000 on the State Highway System and the study limits are from Milepost 3.991 to 4.171. The study segment of SR 21 is a north-south, six-lane divided roadway south of SR 134 and it is a four-lane roadway (with a two-way left-turn lane) north of SR 134. The rightmost lanes along SR 21 south of SR 134 are designated as bus lanes. The study segment of SR 21 consists of one signalized intersection at SR 134 as mentioned above and a full median opening south of SR 134 (see **Figure 3**). The posted speed limit along the study segment is 45 miles per hour. Street lights and sidewalk are present on both sides of the roadway. There are pedestrian features such as crosswalks and pedestrian signals at all four corners of the signalized intersection. A condition diagram showing the existing features is included in **Appendix A**. Based on the Florida Traffic Information Online Website, SR 21 north of SR 134 carries an annual average daily traffic (AADT) of 27,000 vehicles based on the 2016 traffic data for the PTMS 720650.

*Jammes Road:*

The study segment of Jammes Road is a north-south, two-lane undivided roadway. The posted speed limit along the study segment is 35 miles per hour. Street lights attached to the utility poles are located along the east side north of SR 134, and only on the west side south of SR 134. Sidewalks are present on both sides of the roadway north of SR 134 and only on the east side south of SR 134. There are pedestrian features such as crosswalks and pedestrian signals at all four corners of the signalized intersection. A condition diagram showing the existing features is included in **Appendix A**. Based on the Florida Traffic Information Online Website, Jammes Road north (PTMS 729205) and south (PTMS 729250) of SR 134 carries an annual average daily traffic (AADT) of 8,100 and 8,200 vehicles, respectively, based on the 2017 traffic data. is included in **Appendix A**.

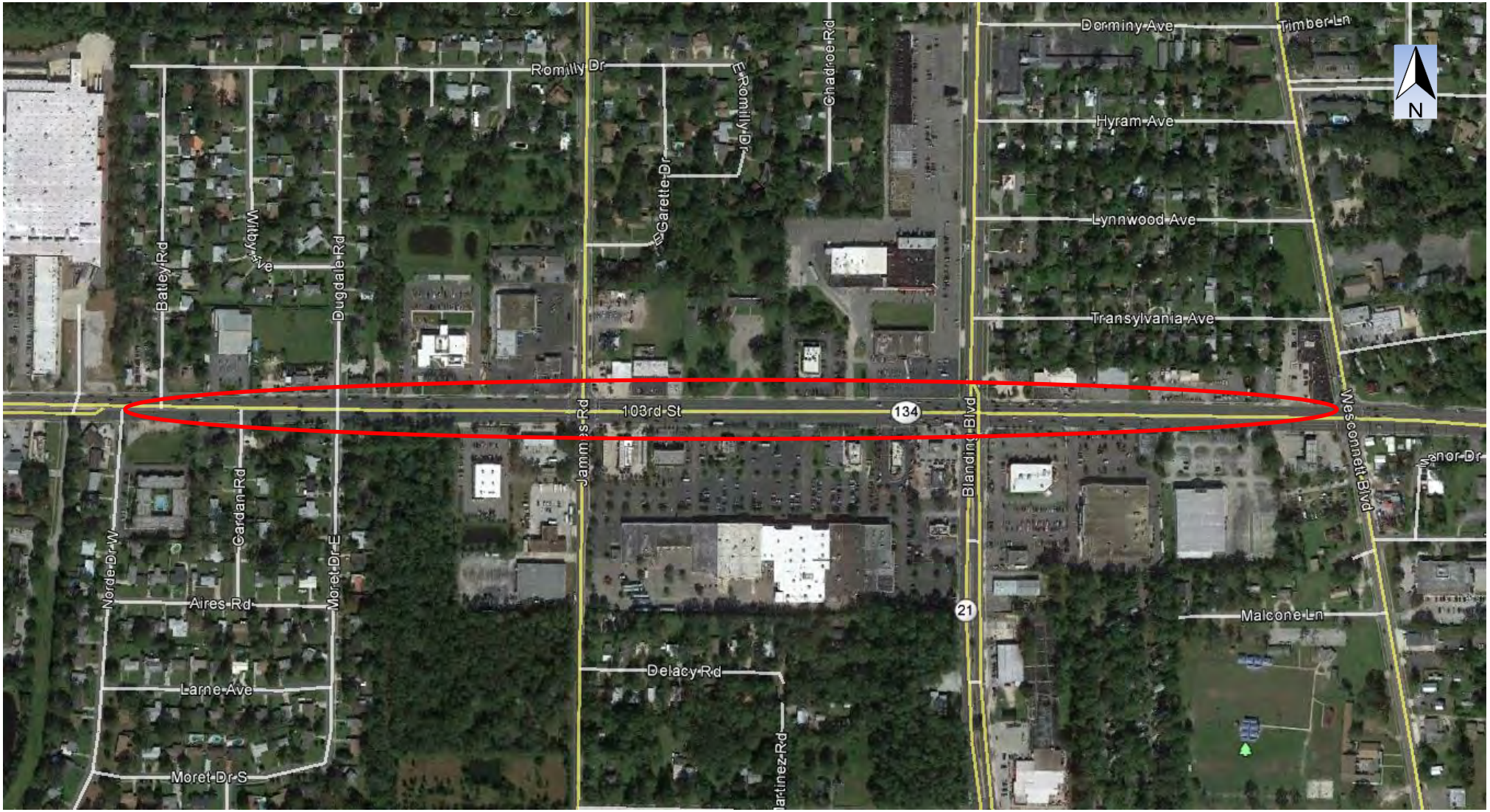



**Figure 1 – SR 134 from east of Norde Dr. to west of Wesconnett Blvd.**


**Figure 2 – Aerial Map of SR 134 and Jammes Road Intersection**

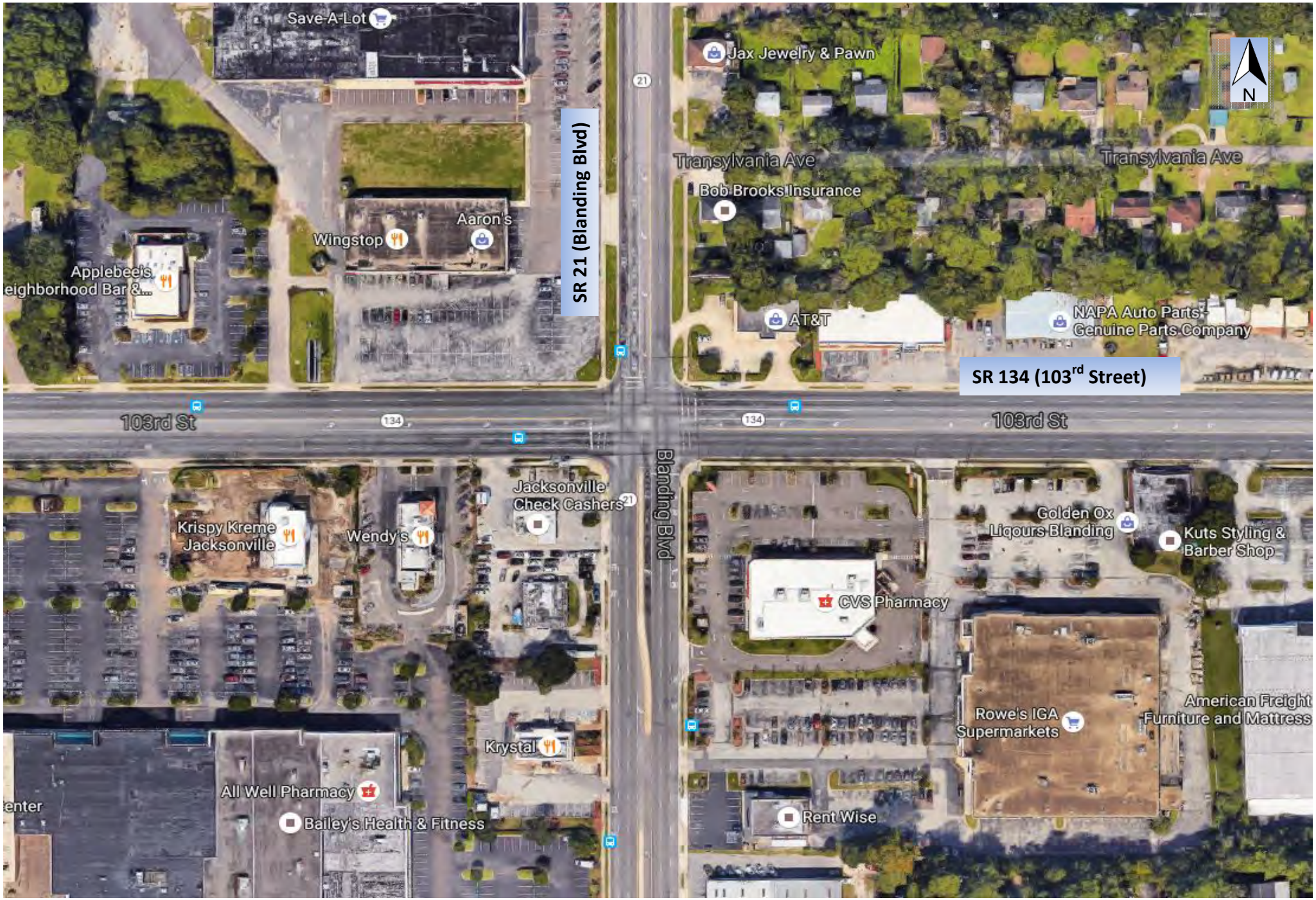



**Figure 3 – Aerial Map of SR 134 and SR 21 Intersection**

# 3. CRASH DATA ANALYSIS

The primary focus of the crash analysis for the study segment is to determine if there are crash patterns that can be addressed by installing a raised median. Detailed crash analysis was conducted separately for the two signalized intersections (SR 134/Jammes Road and SR 134/SR 21) to identify crash patterns and potential intersection safety improvements.

**SR 134 from east of Norde Drive to west of Wesconnett Boulevard**

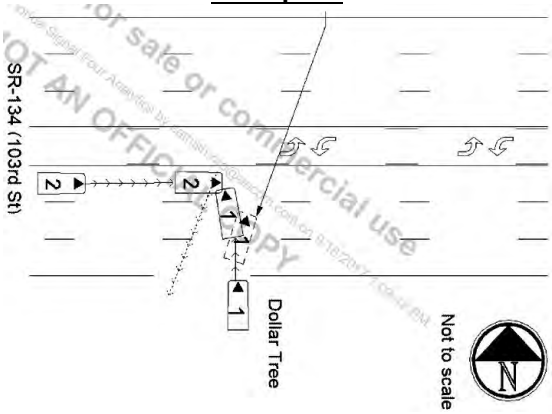
Crash data for the four-year period from 2012 to 2015 obtained from the Department's Crash Analysis Reporting System (CARS) was analyzed and crash summaries were developed. In addition, collision diagrams were prepared to gain insight into the crash patterns. The crash summaries and the collision diagrams are included as **Appendix B**. The following is a summary of findings:

- A total of 98 crashes were reported during the referenced four-year period, with 21 crashes in 2012, 32 crashes in 2013, 21 crashes in 2014 and 24 crashes in 2015. A majority of these crashes were rear-end (36), angle (19), sideswipe (13), right-turn (8), left-turn (6), and pedestrian (6) collisions. See
- **Figure 4** for crash distribution by crash type.
- A review of the Department's High Crash Segment Lists for the referenced four-year period indicates that the study segment was identified as a high crash segment in all four years (2012, 2013, 2014 and 2015).
- A review of the crash data indicates that "careless or negligent manner" (34 crashes), and "failed to yield right-of-way" (23 crashes) were stated as contributing causes for a majority (58%) of the crashes. See **Figure 5** for crash distribution by contributing cause.
- Based on the crash distribution by time of day, a majority of the crashes appear to have occurred during the Mid-day and PM Peak periods between 11:00 am to 12:00 pm and 3:00 pm to 7:00 pm, respectively. **Figure 6** and **7** show the distribution of crashes by time of day and day of week, respectively.
- Approximately 27% (26 crashes) of the 98 crashes occurred during night/dusk/dawn, which is lower than the statewide average of 29.94% (for all roadways).
- Approximately 16% (16 crashes) of the 98 crashes occurred on a wet roadway, which is slightly lower than the statewide average of 18.13% (for all roadways).
- A total of six pedestrian crashes and three bicycle crashes were reported during the four-year referenced period. Five pedestrian crashes occurred while pedestrian was crossing at a mid-block location on SR 134 to access the commercial development or bus stop on the north/south side of SR 134. One of these five mid-block pedestrian crashes resulted in a fatality. Two bicycle crashes occurred as vehicles (while turning in/out of the side streets or driveways) hit the bicyclists riding on the sidewalk. The remaining bicycle crash occurred along Batley Road north of SR 134.
- A fatal crash occurred on 11/10/2012 in the vicinity of the SR 134/Norde Drive West intersection.

Vehicle 1 was reported to be travelling eastbound on SR 134 and the pedestrian was on the sidewalk on the north side of SR 134. Pedestrian crossed (diagonally) the three westbound lanes, the center turn lane, the inside eastbound lane and was hit in the middle eastbound lane by vehicle 1. Vehicle 1 then veered to the right, overturned and the occupants were ejected. The crash occurred around 7:30 PM (in dark condition) and the roadway surface condition was dry.

- Based on crash severity, of the 98 crashes reported, 57 (58%) were property damage only (PDO) crashes and 40 (41%) were injury type crashes. See
- **Figure 8** for crash distribution by crash severity. One fatal crash was reported during the referenced four-year period.
- In general, most of the angle crashes occurred at driveways involving northbound vehicles exiting commercial driveways from the south side of SR 134. Northbound vehicles were at fault in most of the angle crashes.
- Some of the driveways are within the influence area of the signalized intersections at Jammes Road and at SR 21. During field reviews, it was observed that queues from these two signalized intersections extend past these driveways. Some angle crashes occurred within the influence area as described below.
    - For example, a total of 8 angle and 2 left-turn crashes occurred at the Dollar Tree and BP Gas Station driveways, located just west of Jammes Road. In 5 angle crashes, the northbound left-turn vehicles attempted to turn between eastbound through vehicles that were stopped/queued at the Jammes Road intersection. In those five instances, eastbound vehicles in the outside through lane were stopped to allow (see next page for excerpts for “Good Samaritan” type crashes) the northbound left-turning vehicle to complete the turn. While the left-turning vehicle was completing its turn, it was hit by an eastbound vehicle in the inside through lane. The vehicles stopped in the eastbound through lanes (outside and middle lane) may restrict the line of sight for northbound left-turn vehicle.

## Example 1




**NARRATIVE**

| ID Number | Rank | Name | Troop / Post | Officer Agency | Phone Number | Date Created |
|---|---|---|---|---|---|---|
| 3703 | TROOPER | I. DRAGOMIR-RAMIREZ G | | FLORIDA HIGHWAY PATROL | 904-695-4115 | May 02, 2015 |

V01 was stopped facing northbound on SR-134 (103rd St) at the Dollar Tree parking lot. V02 was traveling eastbound on SR-134 in the left travel lane. V01 proceeded to make a left turn crossing the eastbound lanes of SR-134 where V02 was traveling and the left front of V01 collided with the right front of V02. V02 relocated to the Dollar Tree parking lot prior to my arrival. V01 came to rest facing northbound across the right and center travel lanes of SR-134 eastbound.
Driver of V01 stated she was making a left turn and a motorist in the right travel lane waved her by which is why she proceeded. She also stated she cleared the eastbound lanes prior to proceeding and she didn't know where V02 came from.
Driver of V02 was stated she couldn't remember which lanes she was traveling from, but stated she was traveling eastbound on SR-134 when V01 came into her travel lane.

**REPORTING OFFICER**

| ID/Badge # | Rank and Name | Department | Type of Department |
|---|---|---|---|
| 3703 | TROOPER I. DRAGOMIR-RAMIREZ | FLORIDA HIGHWAY PATROL | FHP |

## Example 2

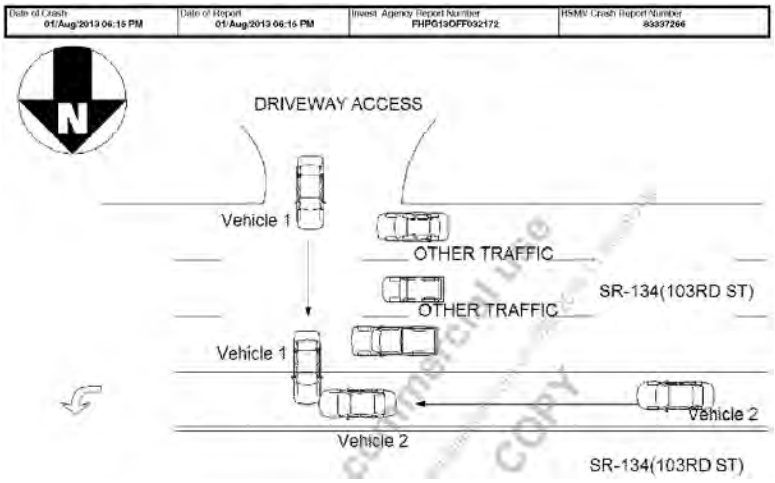
| Date of Crash | Date of Report | Invest. Agency Report Number | HSMV Crash Report Number |
|---|---|---|---|
| 22/Aug/2012 12:40 PM | 22/Aug/2012 12:40 PM | FHPG12OFF033870 | 82032171 |

**NARRATIVE**

| ID Number | Rank | Name | Troop / Post | Officer Agency | Phone Number | Date Created |
|---|---|---|---|---|---|---|
| 2147 | TROOPER | D.S CIMINO | G | FLORIDA HIGHWAY PATROL | 904-695-4115 | Aug 22, 2012 |

V-2 WAS TRAVELING EASTBOUND ON 103RD STREET IN THE CENTER TURN LANE WITH INTENTIONS ON MAKING A LEFT/NORTH TURN ONTO JAMMES ROAD. V-1 WAS ATTEMPTING TO EXIT THE BP GAS STATION AT THE NORTH EXIT WITH INTENTIONS OF MAKING A LEFT/WEST TURN ONTO 103RD STREET. EASTBOUND TRAFFIC IN LANES ONE THRU THREE STOPPED IN AN ATTEMPT TO LET V-1 OUT. V-1 TRAVELED ACROSS 103RD STREET INTO THE PATH OF V-2 WHEN THE FRONT OF V-2 STRUCK THE LEFT FRONT SIDE OF V-1.

## Example 3



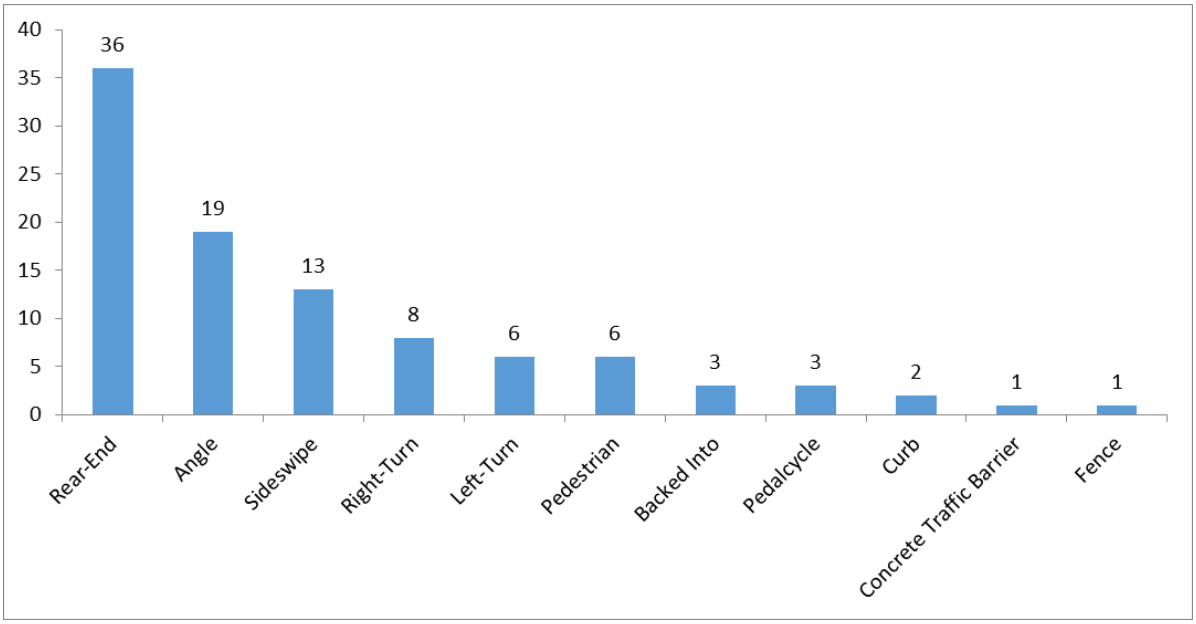




**Figure 4 – Crash Distribution by Crash Type (Norde Dr. to Wesconnett Blvd.)**

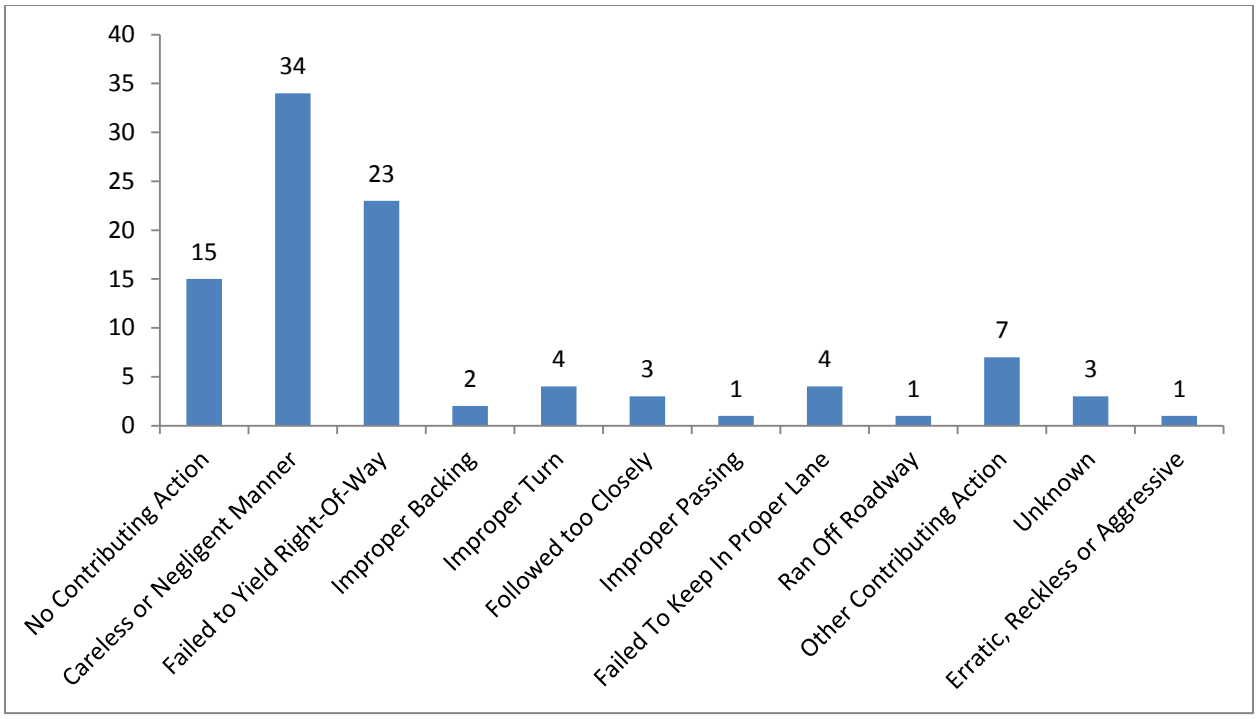



**Figure 5 – Crash Distribution by Contributing Cause (Norde Dr. to Wesconnett Blvd.)**

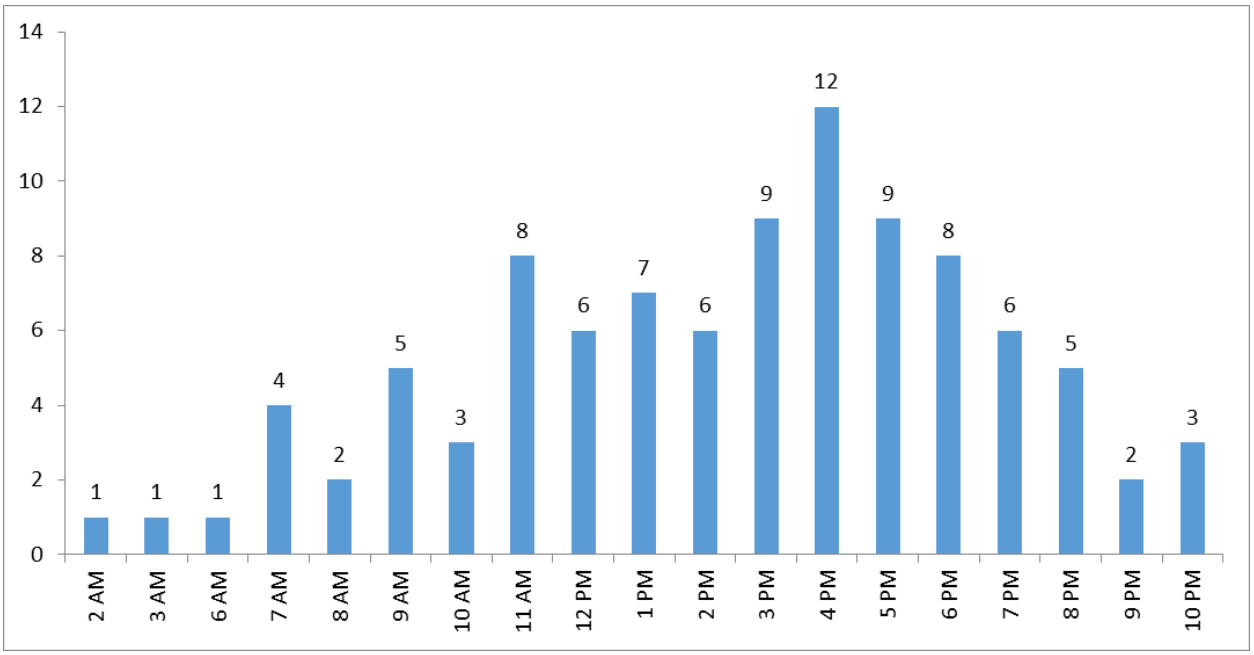



**Figure 6 – Crash Distribution by Time of Day (Norde Dr. to Wesconnett Blvd.)**

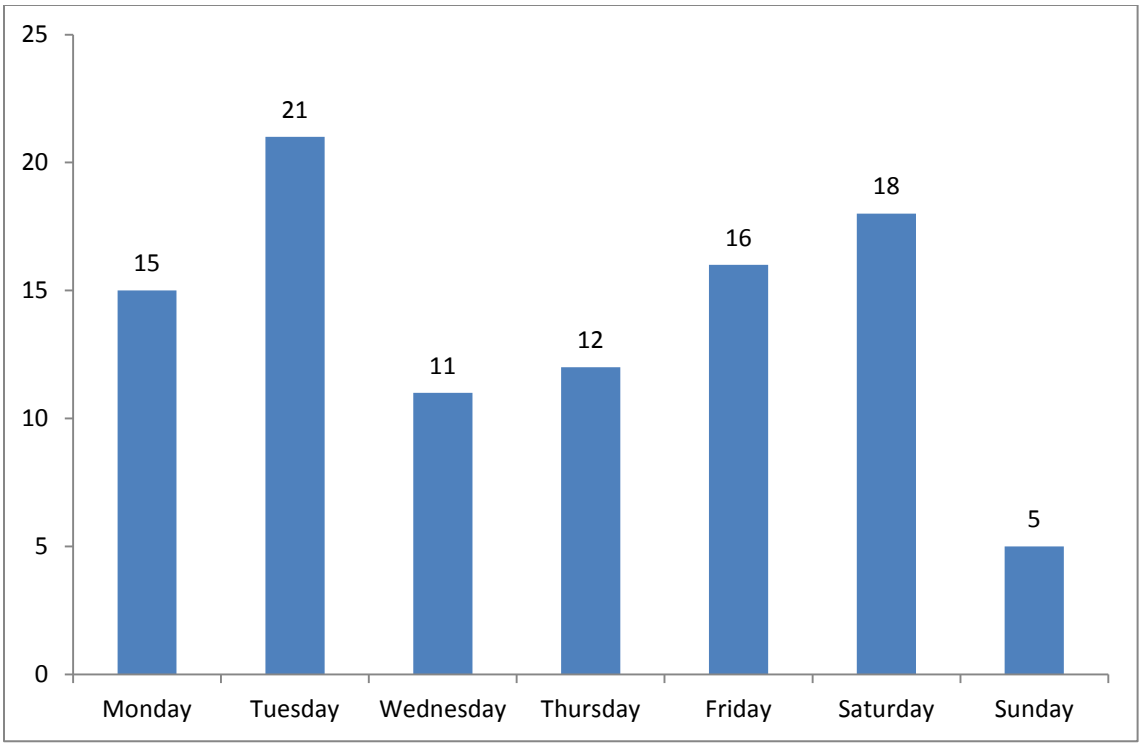



**Figure 7 – Crash Distribution by Day of Week (Norde Dr. to Wesconnett Blvd.)**

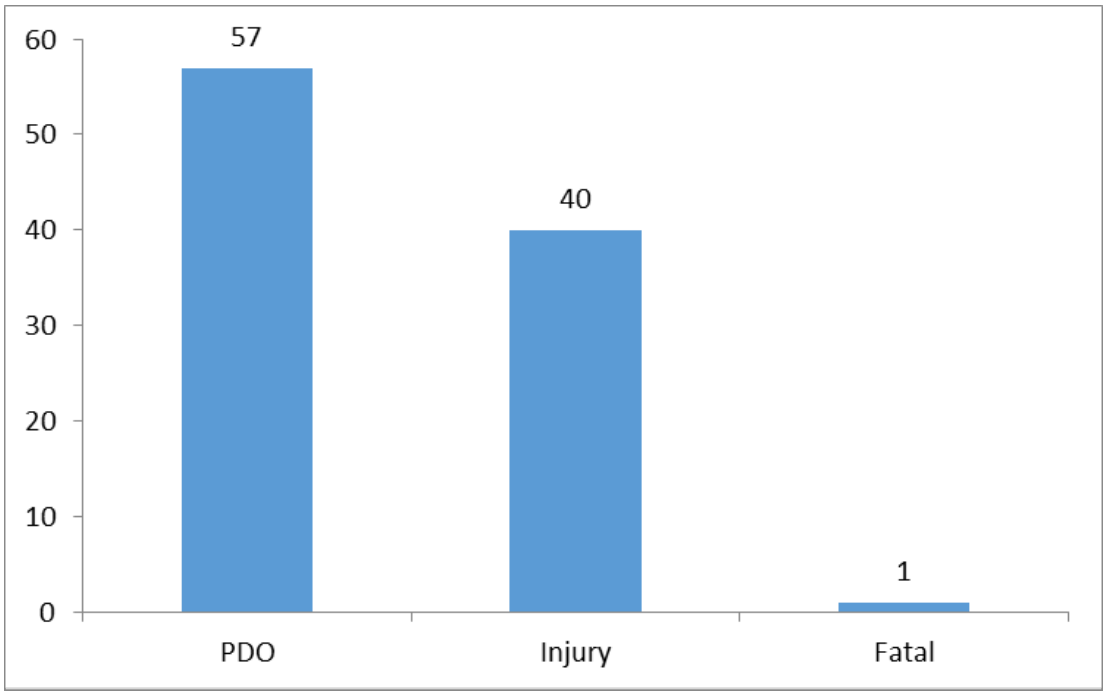



**Figure 8 – Crash Distribution by Crash Severity (Norde Dr. to Wesconnett Blvd.)**

**SR 134 and Jammes Road**

Crash data for the three-year period from 2012 to 2014 obtained from the Department's Crash Analysis Reporting System (CARS) was analyzed and crash summaries were developed. In addition, collision diagrams were prepared to gain insight into the crash patterns. The crash summaries and the collision diagrams are included as **Appendix B**. The following is a summary of findings:

- A total of 76 crashes were reported during the referenced three-year period, with 30 crashes in 2012, 29 crashes in 2013, and 17 crashes in 2014. A majority of these crashes were rear end (29), angle (20), and left-turn (13) collisions. See **Figure 9** for crash distribution by crash type.
- A total of two bicycle crashes and two pedestrian crashes were reported during the three-year referenced period. Three out of the four pedestrian/bicycle crashes occurred on a wet roadway surface. All four pedestrian/bicycle crashes occurred during daytime. The two bicycle crashes and one pedestrian crash occurred on the north leg of the intersection. One pedestrian crash occurred on the south leg resulted in a fatality. The following is a brief description of the fatal crash.
- A fatal crash, involving a pedestrian and a vehicle occurred on 05/07/2012 approximately 200 feet south of the SR 134 and Jammes Road intersection. The vehicle was reported to be traveling southbound at a high rate of speed. The driver lost control of the vehicle and hit a pedestrian who was standing on the east side of Jammes Road at a driveway entrance. The crash occurred around 05:20 PM in daytime and under wet roadway conditions.
- One crash involving a pedestrian occurred on 1/31/2014. The pedestrian while crossing the north leg (not in crosswalk) was struck by a southbound through vehicle.
- One crash involving a bicyclist occurred on 5/7/2012. The bicyclist while crossing (not in crosswalk) Jammes Road on the north leg in the eastbound direction was struck by a northbound through vehicle.
- Another crash involving a bicyclist occurred on 6/7/2012. The bicyclist while crossing Jammes Road (in the crosswalk on the north leg, was riding in the opposing direction to traffic flow) was struck by a southbound right-turn vehicle who failed to yield.
- A review of the Department's High Crash Spot List for the referenced three-year period indicates that the study intersection was identified as a high crash spot in the year 2013.
- A review of the crash data indicates that "failed to yield right-of-way" (24 crashes) and "careless driving" (23 crashes) were stated as contributing causes for a majority (62%) of the crashes. See **Figure 10** for crash distribution by contributing cause.
- Based on the crash distribution by time of day, a majority of the crashes appear to have occurred during the PM Peak period between 5:00 PM and 8:00 PM. **Figures 11** and **12** show the distribution of crashes by time of day and day of week, respectively.
- Approximately 25% (19 crashes) of the 76 crashes occurred during night/dusk/dawn, which is lower than the statewide average of 29.89% (for all roadways).

- Approximately 21% (16 crashes) of the 76 crashes occurred on a wet roadway, which is higher than the statewide average of 18.69% (for all roadways).
- Based on crash severity, of the 76 crashes reported, 48 (63%) were property damage only (PDO) crashes and 27 (36%) were injury type crashes. One fatal crash was reported during the referenced three-year period. See **Figure 13** for crash distribution by crash severity.
- A total of 29 rear end crashes were reported during the referenced three-year period, of which (23 crashes) occurred on SR 134. The majority of rear-end crashes occurred during the PM peak period. Three rear-end crashes occurred under wet pavement conditions. Ten rear-end crashes occurred during non-daylight conditions. “Careless driving or failed to stop” was stated as contributing causes for a total of 26 rear-end crashes. In addition, motorists’ inattention combined with congestion, queuing and associated stop and go conditions during peak hours could be contributing to some of these rear-end crashes.
- Seven out of eight left-turn crashes occurred at the intersection involving east/west left-turn vehicles. Failed to Yield Right-of-Way was mentioned as a contributing cause for all of the left-turn crashes. Most of these crashes appeared to have occurred during the permissive left-turn phase.
- Six out of 20 angle crashes occurred at the intersection. Red light running was stated as a contributing cause for 4 crashes (two involving eastbound through vehicles and two westbound through vehicles).
- Fourteen out of 20 angle crashes occurred at median openings/driveways, of which a majority occurred on the east/west legs on SR 134. Eastbound traffic queues from the study intersection extend past these driveways. The left-turn vehicles from the driveways attempted to turn left between queued through/left-turn vehicles. There were numerous instances in which vehicles in the through lane were stopped to allow the turning vehicle to complete their turn. The vehicles stopped in the eastbound through lane appear to restrict the line of sight for northbound left-turn vehicles from these driveways. A review of the crash data revealed that there were documented crashes related to this condition including some “Good Samaritan” type crashes.

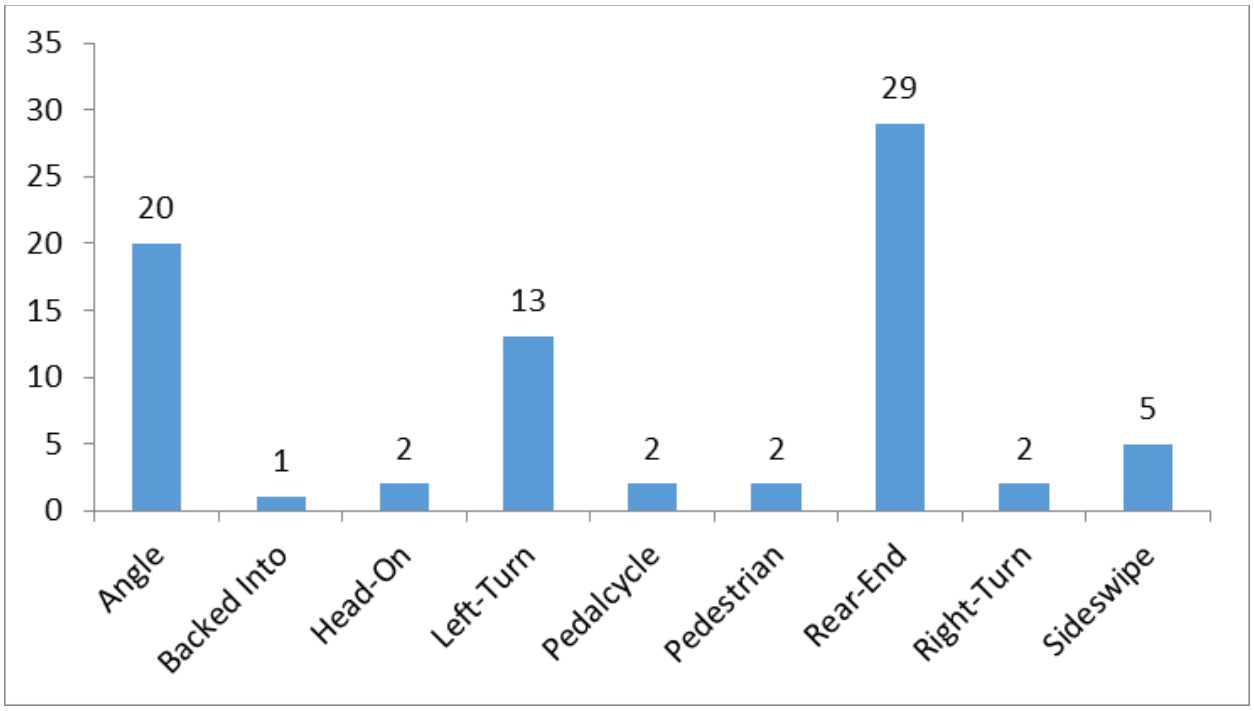



**Figure 9 – Crash Distribution by Crash Type (SR 134 at Jammes Road)**

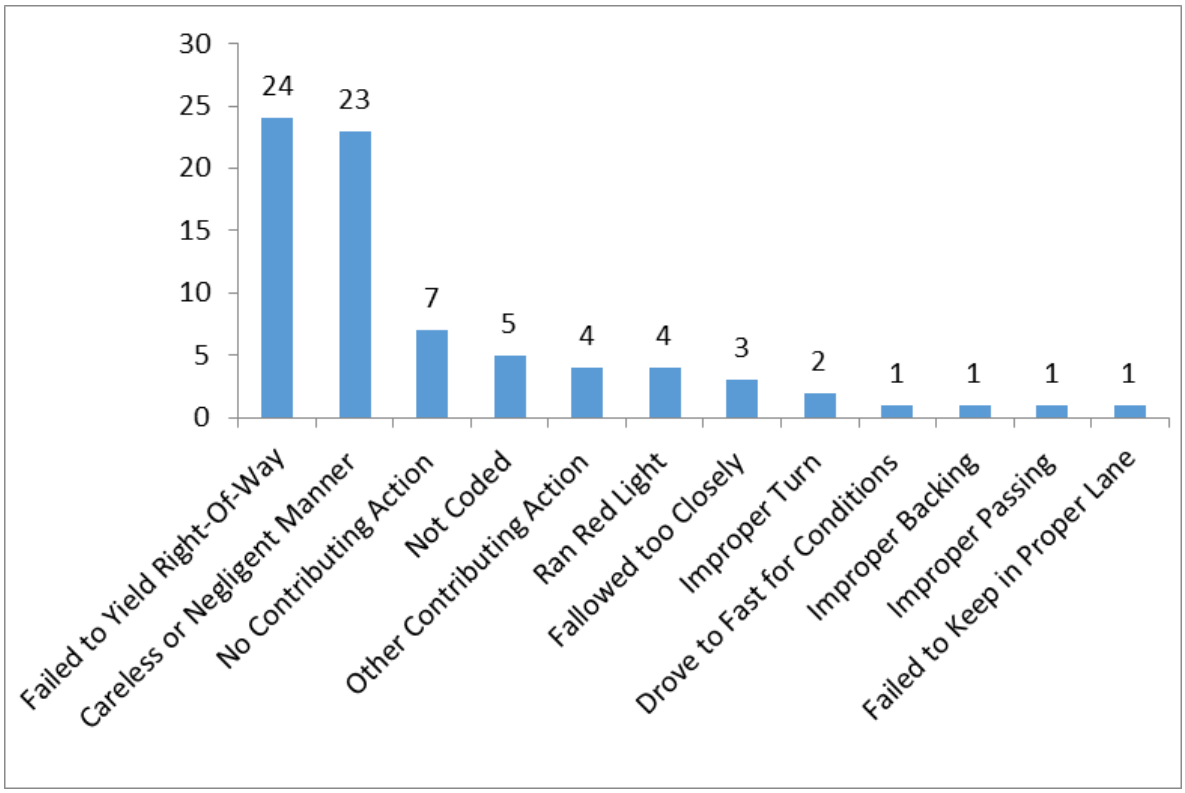



**Figure 10 – Crash Distribution by Contributing Cause (SR 134 at Jammes Road)**

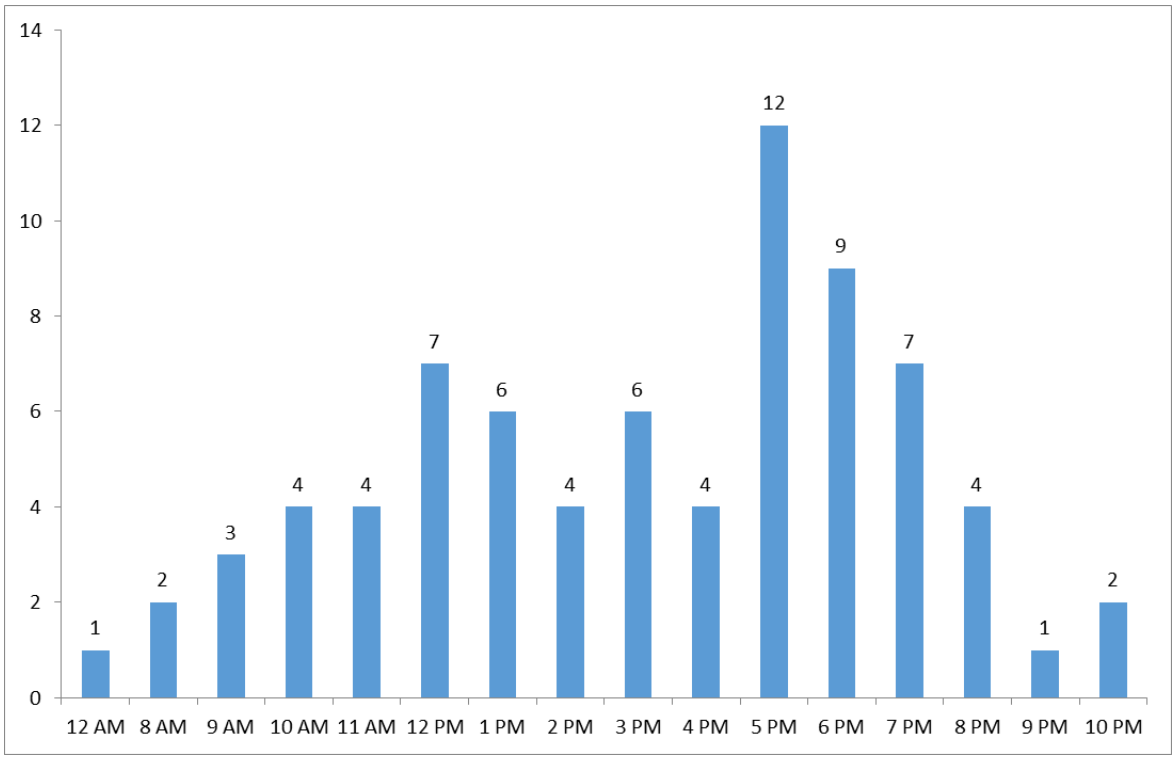



**Figure 11 – Crash Distribution by Time of Day (SR 134 at Jammes Road)**

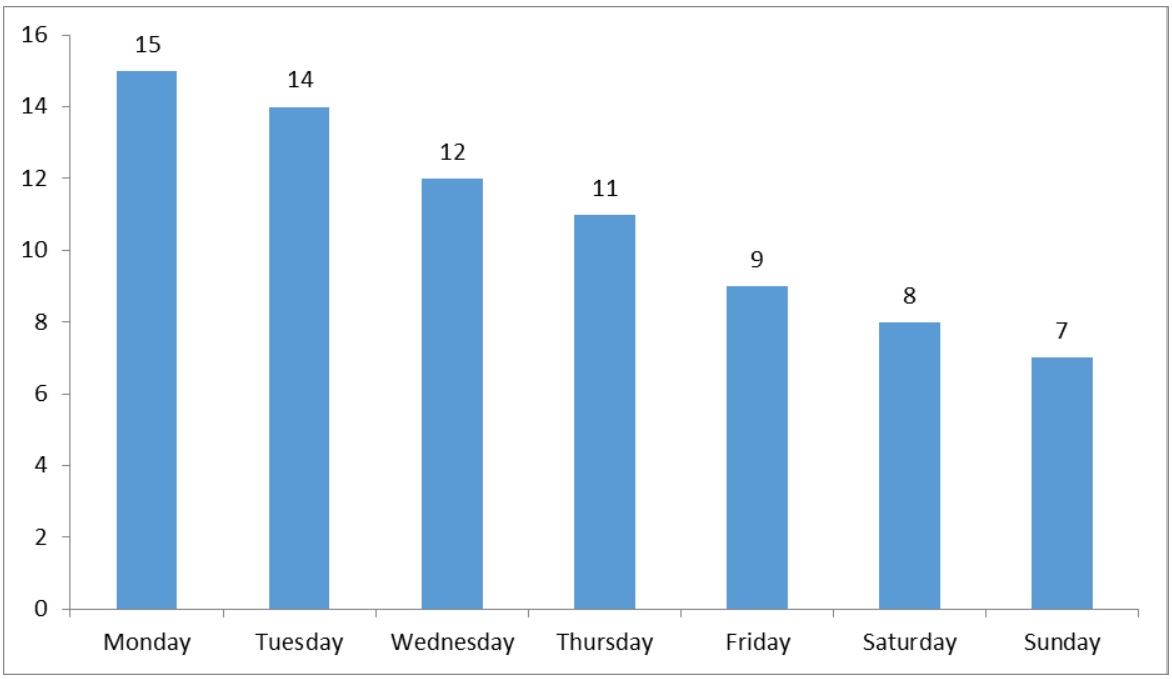



**Figure 12 – Crash Distribution by Day of Week (SR 134 at Jammes Road)**

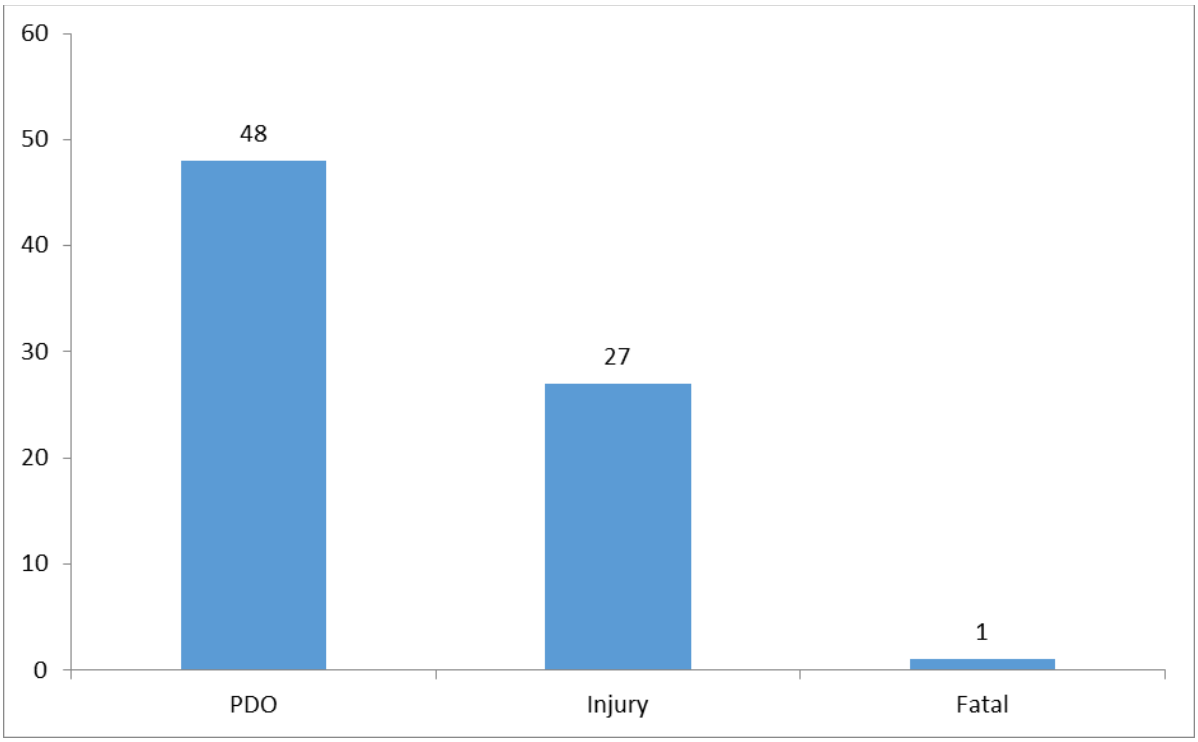



**Figure 13 – Crash Distribution by Crash Severity (SR 134 at Jammes Road)**

**SR 134 at SR 21**

Crash data for the three-year period from 2012 to 2014 obtained from the Department's Crash Analysis Reporting System (CARS) was analyzed and crash summaries were developed. In addition, collision diagrams were prepared to gain insight into the crash patterns. The crash summaries and the collision diagrams are included as **Appendix B**. The following is a summary of findings:

- A total of 147 crashes were reported during the referenced three-year period, with 57 crashes in 2012, 42 crashes in 2013, and 48 crashes in 2014. A majority of these crashes were rear-end (66), left-turn (23), and angle (20) collisions. See **Figure 14** for crash distribution by crash type.
- A total of three pedestrian crashes were reported during the referenced three-year period. Two pedestrian crashes occurred on the north leg of the intersection. Two of the three pedestrian crashes occurred during non-daylight conditions. One pedestrian crash occurred on the south leg of the intersection resulted in a fatality. The following is a brief description of the fatal crash:
    - A fatal crash, involving a pedestrian and a vehicle occurred on 01/30/2014 at the SR 134 and SR 21 intersection. The vehicle was reported to be traveling northbound. The pedestrian attempted to cross the south leg of SR 21 (within the crosswalk) against pedestrian signal indication displaying stop and was hit by a car traveling approximately 45 mph in the outside through lane who did not observe the pedestrian. The crash occurred around 5:55 am under wet roadway conditions.

- One pedestrian crash occurred on 7/20/2012. The pedestrian was crossing SR 21 (not in crosswalk) on the north leg and was struck by a southbound left-turn vehicle. Another pedestrian crash occurred during the nighttime on 10/13/2013 in a similar manner.
- A review of the Department's High Crash Spot/Segment Lists for the referenced three-year period indicates that the study intersection was identified as a high crash spot in 2012 and 2014. In addition, the study segment of SR 21 was identified as a high crash segment for all the years included in the study analysis (2012, 2013, and 2014).
- A review of the crash data indicates that "careless or negligent manner" (81 crashes) and "failed to yield right-of-way" (28 crashes) were stated as contributing causes for a majority (65%) of the crashes. See **Figure 15** for crash distribution by contributing cause.
- Based on the crash distribution by time of day, a majority of the crashes appear to have occurred during the PM Peak period between 3:00 PM and 5:00 PM. **Figures 16** and **17** show the distribution of crashes by time of day and day of week, respectively.
- Approximately 27% (40 crashes) of the 147 crashes occurred during night/dusk/dawn, which is slightly lower than the statewide average of 29.89% (for all roadways). 11 out of 17 intersection left-turn crashes (65%) occurred during the nighttime. Of the 11 crashes, a majority of the crashes (8) potentially or appear to have occurred due to the left-turning vehicles failing to yield right-of-way during the permissive phase.
- Approximately 18% (26 crashes) of the 147 crashes occurred on a wet roadway, which is slightly lower than the statewide average of 18.69% (for all roadways).
- Based on crash severity, of the 147 crashes reported, 91 were property damage only (PDO) crashes and 55 were injury type crashes. In addition, one pedestrian fatal crash was reported during the referenced three-year period. See **Figure 18** for crash distribution by crash severity.
- A total of 66 rear-end crashes were reported during the referenced three-year period. Thirty-two (32%) of crashes occurred under wet pavement conditions. "Careless or Negligent Manner" was stated as contributing cause for a total of 56 rear-end crashes. In addition, motorists' inattention combined with congestion, queuing and associated stop and go conditions during peak hours could be contributing to some of the rear-end crashes.
- Red light violations appear to have contributed to eight angle and one left-turn crash at the intersection.
- Seventeen out of 23 left-turn crashes occurred at the intersection. Breakdown of these 17 crashes by the direction and year is provided below:

  NB [2012 (3), 2013 (1), 2014 (6)];
  SB [2012 (1), 2014 (1)];
  EB [2012 (1), 2013 (1), 2014 (2)];
  WB [2013 (1)];

Six occurred at median openings/driveways, mostly on south leg. Failed to yield right-of-way was mentioned as a contributing cause for 22 left-turn crashes and remaining 1 left-turn crash occurred due to red light violation. Most of the intersection left-turn crashes appeared to have occurred during the permissive left-turn phase. Sixty-five (65%) of the left-turn crashes occurred during nighttime. During the PM Peak period, some northbound left-turn vehicles were not able to clear during the permissive phase due to inadequate gaps.

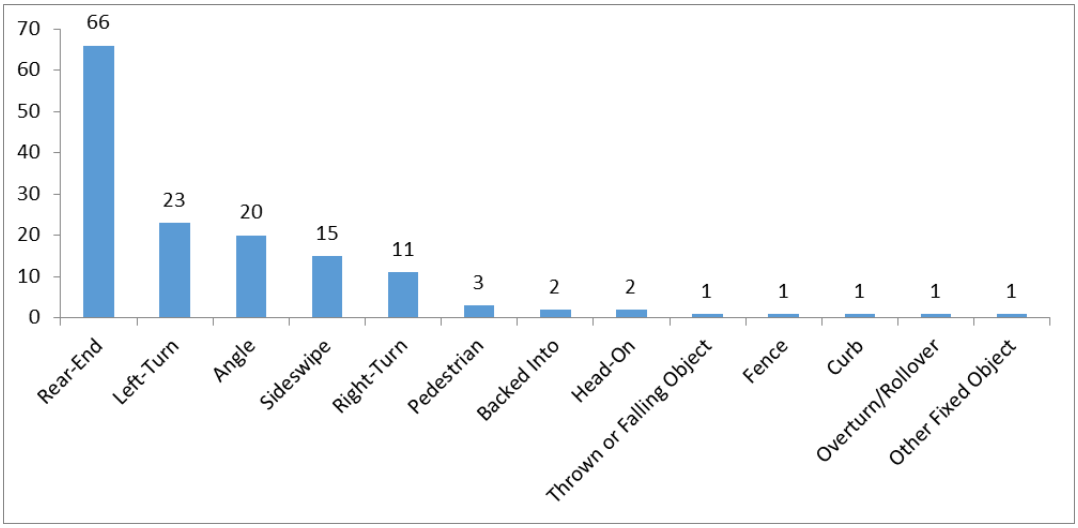



**Figure 14 – Crash Distribution by Crash Type (SR 134 at SR 21)**

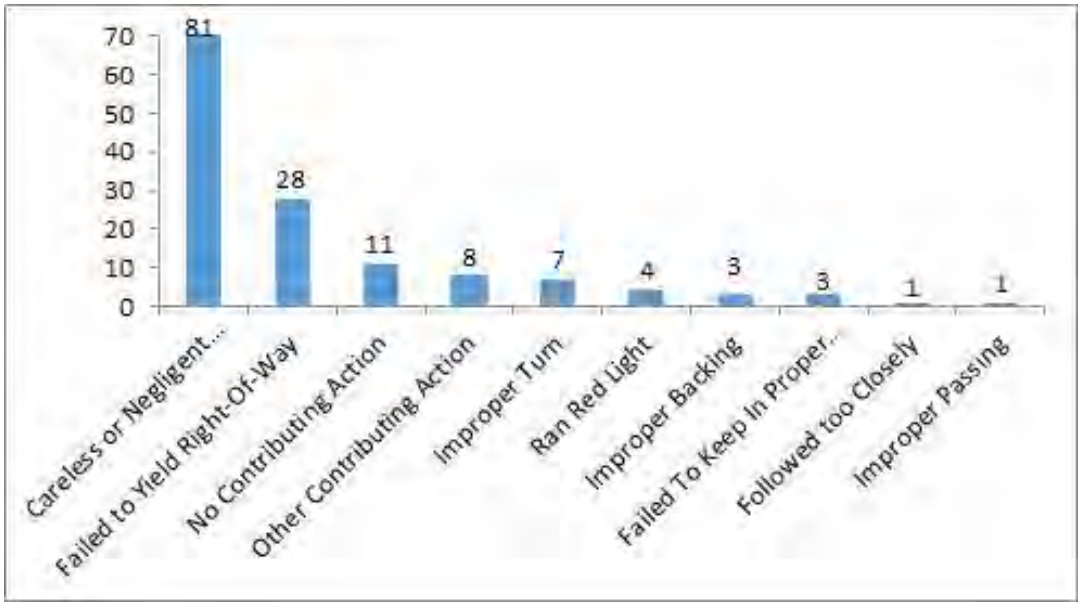



**Figure 15 – Crash Distribution by Contributing Cause (SR 134 at SR 21)**

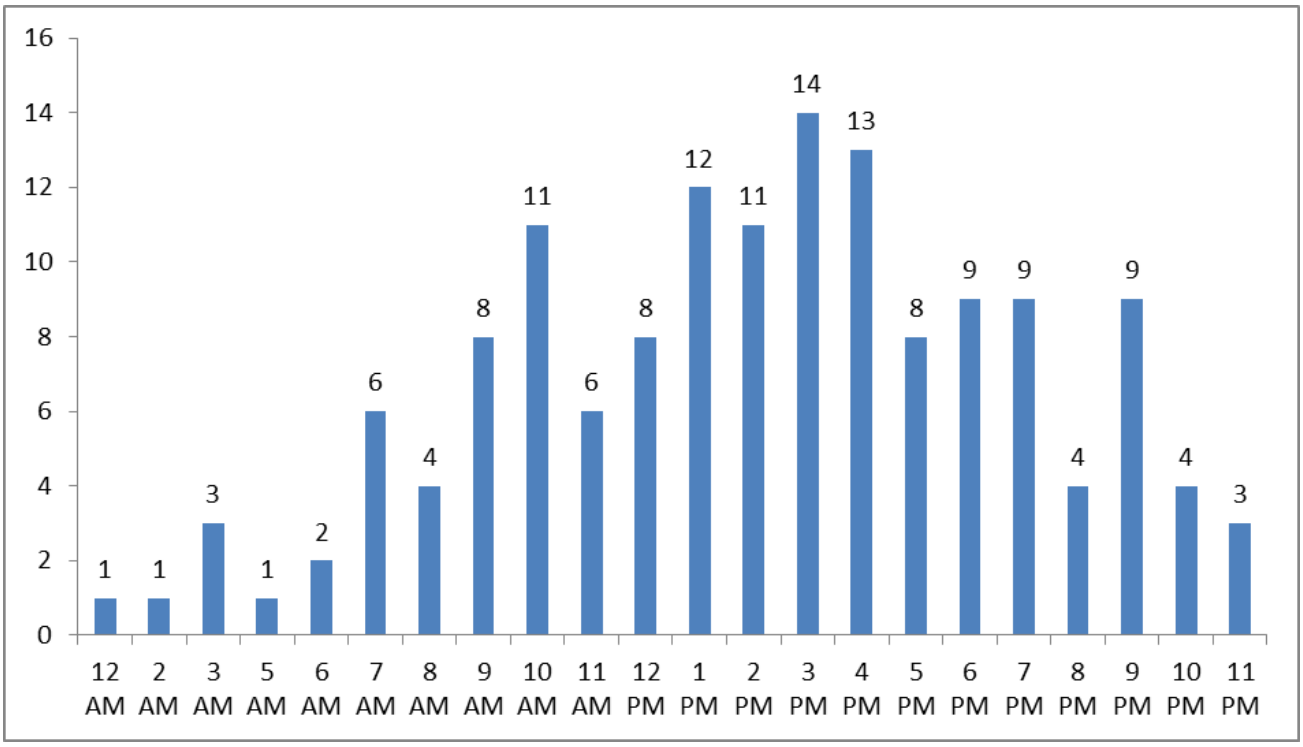



**Figure 16 – Crash Distribution by Time of Day (SR 134 at SR 21)**

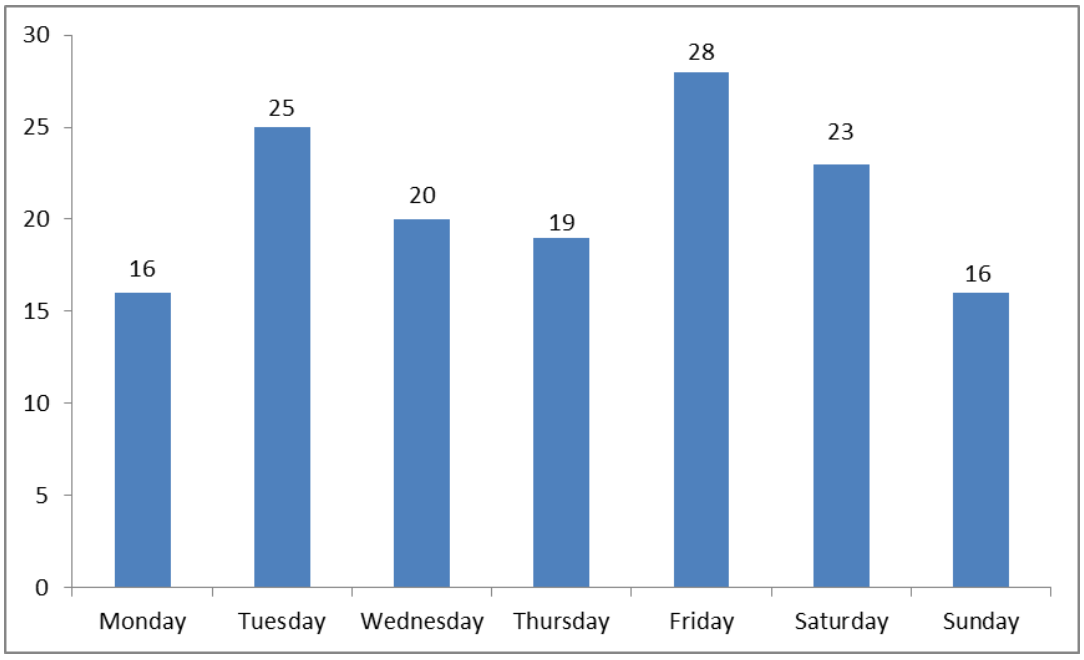



**Figure 17 – Crash Distribution by Day of Week (SR 134 at SR 21)**

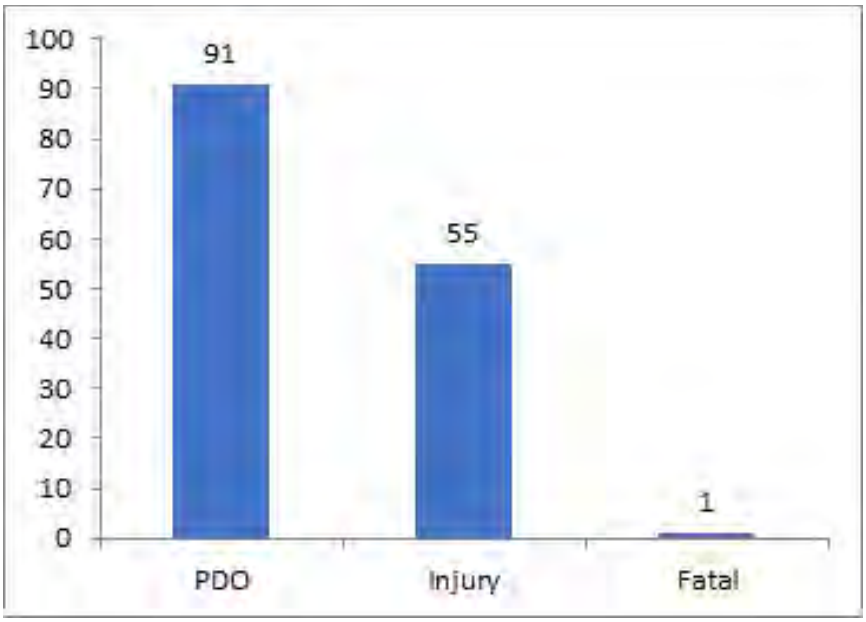



**Figure 18 – Crash Distribution by Crash Severity (SR 134 at SR 21)**

# 4. TRAFFIC COUNT DATA

As part of this study, eight-hour turning movement counts (TMCs) were collected on Wednesday, June 1, 2016 at the intersections of SR 134/Jammes Road and SR 134/SR 21. TMCs are included in **Appendix D** and peak-hour TMCs are summarized in **Tables 1, 2, and 3**.

**Table 1 – SR 134 at Jammes Road TMCs**

| Intersection | Movement | AM Peak Hour (7:00 AM to 8:00 AM) | | | | PM Peak Hour (3:45 PM to 4:45 PM) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | SB | WB | NB | EB | SB | WB | NB | EB |
| SR 134 at Jammes Road | Right-Turn | 40 | 36 | 64 | 103 | 131 | 82 | 70 | 175 |
| | Through | 64 | 486 | 144 | 976 | 140 | 1123 | 122 | 836 |
| | Left-Turn | 52 | 22 | 127 | 156 | 99 | 59 | 199 | 123 |

EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound

**Table 2 – SR 134 at SR 21 TMCs**

| Intersection | Movement | AM Peak Hour (7:00 AM to 8:00 AM) | | | | PM Peak Hour (4:15 PM to 5:15 PM) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | EB | WB | NB | SB | EB | WB | NB | SB |
| SR 134 and SR 21 | Right-Turn | 158 | 28 | 62 | 95 | 179 | 85 | 54 | 212 |
| | Through | 629 | 334 | 1019 | 381 | 500 | 798 | 565 | 866 |
| | Left-Turn | 282 | 36 | 109 | 71 | 169 | 168 | 208 | 120 |

EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound

**Table 3 – First Median Opening South of SR 134/SR 21 (Kyrstal Restaurant)**

| Intersection | Movement | AM Peak Hour (7:00 AM to 8:00 AM) | | | | PM Peak Hour (4:15 PM to 5:15 PM) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | EB | WB | NB | SB | EB | WB | NB | SB |
| SR 21 south of SR 134 (Rowes Median opening) | Right-Turn | 27 | 3 | 12 | 0 | 18 | 35 | 42 | 0 |
| | Through | 2 | 0 | 1175 | 535 | 0 | 0 | 759 | 1186 |
| | Left-Turn | 16 | 4 | 16 | 6 | 18 | 39 | 29 | 15 |
| | U-Turn | 0 | 0 | 10 | 2 | 0 | 0 | 31 | 10 |

EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound

# 5. FIELD OBSERVATIONS

**SR 134 at Jammes Road Intersection**

Field reviews of the study segment were conducted on July 29, 2016 during the AM peak period and on July 28, 2016 during the Mid-day and PM peak periods to observe existing conditions. The following is a list of field observations. Photos taken during the field reviews are included in **Appendix E**.

- Posted speed limit along SR 134 is 45 MPH.
- Posted speed limit along Jammes Road is 35 MPH.
- Protected/permissive left-turn phasing exists in all four directions.
- Street lighting exists on both sides of SR 134.
- Pedestrian signals at the intersection are not countdown type signals.
- Westbound pedestrian walk signal was not working on the south leg.
- Faded pavement markings were observed on the south leg of Jammes Road (see **Photo 4**).
- Observed short right-turn flare for northbound and southbound traffic.
- Northbound/southbound traffic volumes were relatively low. An average of 5 to 8 vehicle queues was observed (see **Photos 1 & 2**).
- Pavement cracking was observed in the westbound lanes west of the intersection and in the northbound lanes north of the intersection.
- Double yellow-line pavement markings were observed within the turn-lane at the Dollar Tree driveway (see **Photo 5**).
- Observed cracking in the sidewalk on the southwest corner of the intersection.
- Pavement rutting and cracking was observed in the eastbound/westbound lanes approaching and within the intersection (see **Photos 6 and 8**).
- A fence and roadside landscaping just west of the Dollar Tree store (on the south side) appear to restrict line of sight for NB vehicles (see **Photo 7**).
- Stop bars on the east/west legs and double yellow line on the west leg were observed to be faded (see **Photo 9**).
- Northbound left-turn queue extended up to the gas station driveway during PM Peak period.
- Many northbound left-turning vehicles were observed to clear the intersection during the northbound/southbound permissive phase.
- Eastbound through and left-turn queues were observed to extend past the Dollar Tree driveway during Mid-day and PM Peak periods.
- More than 10 northbound left-turn vehicles were able to clear the intersection during the protected/permissive phase per cycle.
- Observed no cycle failures in the northbound and southbound directions.
- Average queues of 15 to 20 vehicles were observed in the eastbound direction (see **Photo 10**).

**SR 134 at SR 21 Intersection**

Field reviews at this intersection were conducted on July 28 and 29, 2016 (during the AM/Midday/PM Peak periods) to observe existing conditions. The following is a list of field observations:

**AM Period:**

- Observed no backplates for the signal heads (see **Photo 1**).
- Faded crosswalks and stop bars were observed in all directions (see **Photos 2 & 3**).
- A maximum queue of 15 vehicles was observed in the eastbound left-turn lane (see **Photo 4**). Left-turning vehicles were observed utilizing gaps in the westbound through traffic. A few left-turn motorists were observed to run red light (see **Photo 5**).
- Red-light enforcement camera facing westbound traffic was observed.
- Observed pavement rutting in the eastbound lanes through the intersection (see **Photo 6**).
- Northbound left-turning vehicles were not able to clear during the protected phase, but were able to clear during the permissive phase. Almost all southbound left-turn vehicles cleared during the protected left-turn phase.
- It appears that more than adequate green timing was provided to northbound/southbound through traffic.
- Pedestrians were observed crossing SR 21 at the median opening south of the study intersection. Most of the pedestrian activity generated from the bus stop located in the vicinity of the median opening.
- No Stop sign exists facing the westbound traffic coming out of Rowe's Supermarket on the south leg of the study intersection.
- Sometimes, EB left-turn vehicles while waiting in the TWLTL (for gaps in westbound traffic) to enter the plaza on the northwest corner were observed to delay the vehicles trying to enter the eastbound left lane at the intersection.
- Some westbound left-turn vehicles at the Wendy's driveway were observed to stop in the inside through lane while waiting for a gap in the eastbound traffic as queues extend beyond the driveway (see **Photos 7**).

**Midday Period:**

- Protected/permissive left-turn phasing exists in all four directions.
- Pedestrian activity was observed during the midday period (see **Photo 9**).
- There is an existing bus lane (northbound and southbound direction), on the south leg of the intersection.
- Southbound left-turning vehicles were able to clear during the protected phase.
- Northbound through queues were observed to extend past the first median opening at Krystal restaurant driveway (see **Photo 10**).

- Occasional cycle failures were observed for eastbound left-turn movement and approximately 11 vehicle queue (see **Photo 11**) was observed.
- Approximately 13 to 15 vehicle queues were observed in the eastbound left-turn lane. Occasional cycle failures were observed for this movement. Some vehicles were observed to run red light.
- Southbound right-turn volume at this intersection was observed to be heavy. A maximum queue of 22 vehicles observed (see **Photos 12 and 13**).
- A maximum queue of 12 vehicles was observed in the westbound left-turn lane.
- Observed bicyclist riding on the eastbound sidewalk (in the opposite direction to traffic flow).
- Lighting exists on both sides of SR 134 and SR 21.
- Observed pedestrians crossing at mid-block locations on the south leg.

**PM Period:**

- A few cycle failures were observed in the southbound direction. Approximately 20 vehicle queue was observed. Some motorists were observed to run red light. Almost 50% of the SB vehicles from the outside through lane turned right onto SR 134.
- Many northbound left-turning vehicles were unable to turn left during the permissive phase due to inadequate gaps in the southbound through traffic. Frequent cycle failures were observed for northbound left-turn movement. An average of 12 vehicles (see **Photo 14**) in the queue was observed. Left-turn vehicle queue extends into the inside through lane (see **Photo 15**).
- The SR 134/SR 21 intersection has a raised median only on the south leg. Westbound left-turns at the median opening were observed to conflict with northbound traffic some times.
- Northbound right-turn lane appears to be underutilized throughout the PM Peak period (see **Photo 17**).
- A maximum of 12 vehicles observed in the eastbound left-turn lane (see **Photo 18**).
- Observed pavement cracking in the southbound and westbound lanes.
- Observed cycle failures in the westbound direction and only 50% of the queue cleared the intersection during some cycles.

# 6. OPERATIONAL ANALYSIS

Operational analyses for the intersections of SR 134 at Jammes Road and SR 134 at SR 21 were performed using Synchro software to evaluate the intersection's performance (during AM and PM peak hours) under existing and proposed conditions. The major intersection characteristics used in Synchro include traffic volumes, signal phasing/timing information, and roadway geometry. Synchro uses this information and other input data in conjunction with procedures documented in the Highway Capacity Manual to estimate Level of Service (LOS), delay, and queue lengths. Operational analysis results are summarized in **Tables 4 and 5**. Signal timing data (including time-of-day schedule, phasing information, patterns, cycle, offset, splits, etc.) for the study intersections were obtained from Mr. Carlton Copeland, Traffic Signal Supervisor, ITS Manager, City of Jacksonville. Signal timing information is included in **Appendix D**.

**SR 134 at Jammes Road Intersection**

As can be seen from the results of the operational analysis in **Table 4**, this intersection currently operates at an acceptable level of service during AM/PM peak periods, and will continue to operate at acceptable levels of service under proposed conditions.

**Table 4 – Summary of Operational Analysis (SR 134 at Jammes Road)**

| Peak Period | Existing | | ALT 1: EB/WB protected only + long median on the west leg | | ALT 2: EB/WB protected only + short median on the west leg | |
|---|---|---|---|---|---|---|
| | Delay | Intersection LOS | Delay | Intersection LOS | Delay | Intersection LOS |
| AM | 21.9 | C | 34.7 | C | 34.7 | C |
| PM | 25 | C | 31.5 | C | 31.5 | C |

**SR 134 at SR 21 Intersection**

An operational analysis was performed to evaluate the following improvements:

*"Protected-only" left-turn phase for NB/SB left-turn traffic*

Converting the existing northbound/southbound "protected/permissive" left-turn phase to "protected-only" left-turn phase was evaluated to help improve safety. As can been seen from **Table 5,** the overall intersection delay increases by an average of 6 seconds if the protected/permissive phase is converted to protected-only and the intersection LOS for the PM Peak period is expected to degrade from LOS D to E. Also, the left-turn storage needs to be extended to accommodate additional queue due to protected-only phase. To be able to extend the storage, the first median opening south of the intersection needs to be closed. As such, it is suggested that a 4-section signal head (with flashing yellow for permissive period) be installed so that it can be operated as protected-only by time of day, maybe during the peak hours (7-9 AM and 3-7 PM).

*Add a SB right-turn lane*

This improvement provides an exclusive right-turn only lane in the southbound direction to accommodate relatively heavy right-turn volume. This improvement helps to reduce the potential for rear-end crashes occurring in the southbound direction and also increases the capacity and reduces the delay. Also, this improvement reduces the overall intersection delay by approximately 5 seconds during the PM Peak period.

**Table 5 – Summary of Proposed Operational Analysis (SR 134 at SR 21)**

| Peak Period | Approach | Existing | | ALTERNATIVE 1 | | ALTERNATIVE 2 | | ALTERNATIVE 3 | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | NB/SB Protected Only Phase + SBRT Lane + channelize M.O on the south leg | | NB/SB Protected Only Phase + SBRT Lane + channelize M.O on the south leg | | NB/SB Protected Only Phase + SBRT Lane | |
| | | Delay | LOS | Delay | LOS | Delay | LOS | Delay | Delay |
| AM | Intersection | 36.6 | D | 43.5 | D | 42.8 | D | 42.8 | D |
| PM | Intersection | 51.0 | D | 54.5 | D | 51.8 | D | 51.8 | D |

The Department has notified AECOM that the proposed SB right-turn lane maybe used by transit buses in the future. As such, additional operational analysis was conducted to determine which of the following 3 options (see **Table 6**) is better from a traffic operations standpoint.

Option 1: Southbound exclusive right-turn Lane (Buses are not allowed to use this lane)

Option 2: Southbound exclusive right-turn Lane (but uses can use this lane to go through the intersection)

Option 3: Southbound Shared Through/Right. Buses can use this lane to go through the intersection.

Based on the operational analysis, Option 2 (buses using exclusive right-turn lane) and Option 1 (exclusive right-turn lane with no buses) appear to have the same performance. However, when comparing Option 1 (exclusive right-turn lane) vs. Option 3 (shared through/right-turn lane), Option 1 appears to provide slightly better operational performance as compared to Option 3. Based on positive safety performance (potential for rear-end crashes on the north leg and potential for sideswipe crashes on the south leg due to vehicles merging from Bus Lane to middle through lane) of Option 1 as compared to Option 3, Option 1 still may be a better alternative. See Table 6 for operational analysis results.

**Table 6 – Summary of Operational Analysis Results for Bus Options (SR 134 at SR 21)**

| Peak Period | | Option 1<br>SB Exclusive Right-turn Lane | Option 2*<br>SB Exclusive Right-turn Lane<br>(Buses allowed to use this lane to go through the intersection) | Option 3<br>SB Shared Through/Right |
|---|---|---|---|---|
| | | Delay/LOS | Delay/LOS | Delay/LOS |
| AM | SB Through | 23.3/C | 23.3/C | Not Applicable |
| | SB Right | 0.3/A | 0.3/A | Not Applicable |
| | SB Through/Right | 18.7/B | 18.7/B | 20.1/C |
| | SB Approach | 28.1/C | 28.1/C | 29.3/C |
| | Intersection | 42.8/D | 42.8/D | 43.0/D |
| MID | SB Through | 41.9/D | 41.9/D | Not Applicable |
| | SB Right | 5.9/A | 9.3/A | Not Applicable |
| | SB Through/Right | 33.4/C | 34.21/C | 36.5/D |
| | SB Approach | 38.7/D | 39.5/D | 41.5/D |
| | Intersection | 42.7/D | 42.9/D | 43.5/D |
| PM | SB Through | 40.4/D | 40.4/D | Not Applicable |
| | SB Right | 5.8/A | 9.4/A | Not Applicable |
| | SB Through/Right | 33.6/C | 34.3/C | 35.3/D |
| | SB Approach | 38.3/D | 38.9/D | 39.8/D |
| | Intersection | 51.8/D | 52.0/D | 52.3/D |

* RTOR volume reduced to account for potential delay to motorists due to stopped buses

RTOR reduction is calculated as follows:
1. Determine number of cycles per hour (NC) = 3600 / cycle length
2. Determine number of right-turn vehicles per cycle (NRTC) = Peak hour right-turn volume / NC
3. Per JTA, the frequency of buses during peak hours is 5 per hour
4. Determine RTOR reduction = Synchro RTOR saturated flow rate – 5 * NRTC

Assumptions:
1. 1. Bus arrives on red
2. 2. Each stopped bus affects RTOR for one cycle only

# 7. MEDIAN FEASIBILITY REVIEW

As part of this task, AECOM reviewed roadway plans provided by FDOT and assessed the feasibility of implementing a raised median along the study segment. The existing typical section consists of 6 through lanes (two 12 feet lanes, two 11.5 foot lanes, two11 foot lanes) and a 14.5 foot two-way left turn lane (TWLTL), with a total width (curb to curb) of 86.5 feet. Based on the results of the feasibility review, two alternatives for adding a raised median were developed. See below for a brief description for both the alternatives and associated typical sections.

***Alternative 1***

Alternative 1 provides standard lane widths of at least 11 ft. as well as a standard 4 ft. traffic separator. The alternative would require milling and resurfacing of the entire roadway in order to transition each of the through lanes to a smaller width. The alternative would require a median width variation per PPM Chapter 2, Table 2.2.1 which allows a minimum 19.5 ft. for 45 MPH.

***Alternative 2***

Alternative 2 maintains the existing through lane widths and does not require any transitions. This allows the proposed work to be confined to the median area and does not require milling and resurfacing of the through lanes. The alternative proposes the use of a non-standard 2 ft. traffic separator which does not provide pedestrian refuge. The alternative would require a median width variation per PPM Chapter 2, Table 2.2.1 which allows a minimum 19.5 ft. for 45 MPH.

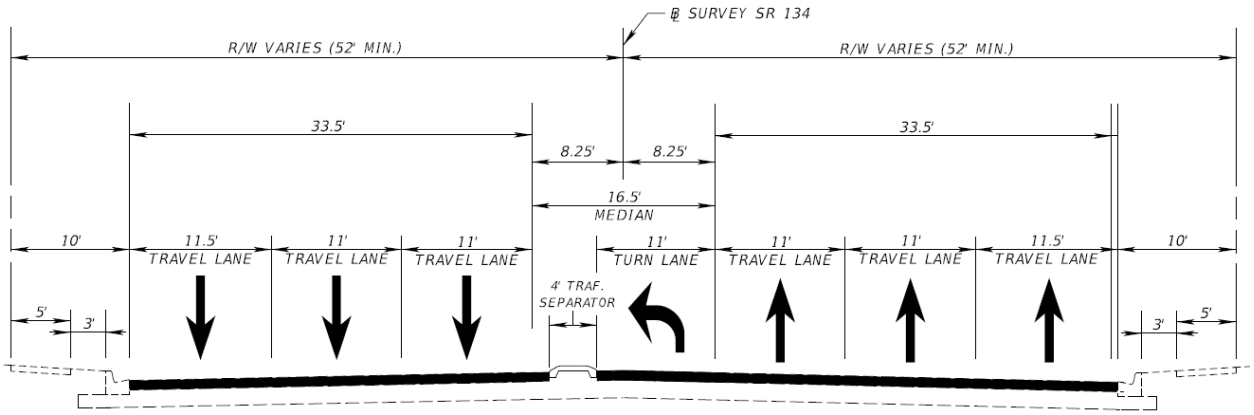



**Figure 19 – Typical Section (Alternative 1)**

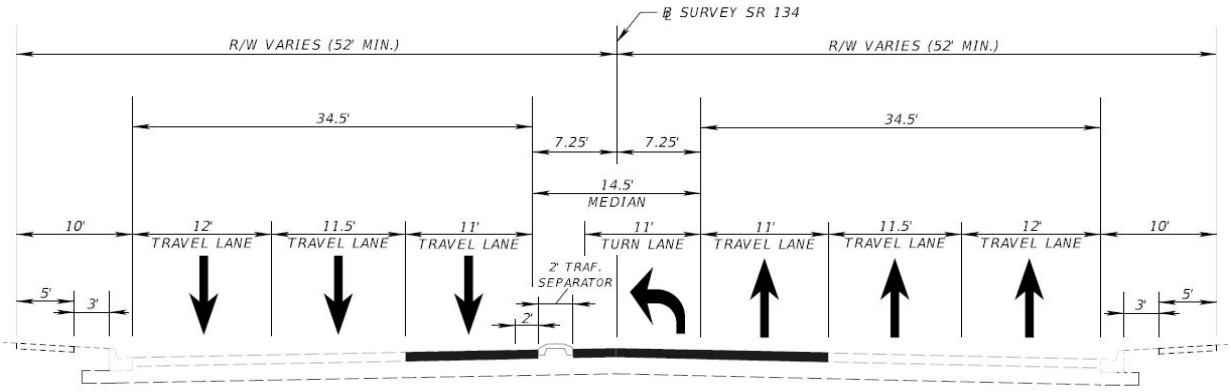



**Figure 20 – Typical Section (Alternative 2)**

The benefits associated with the expected reduction in crashes due to the proposed raised median is estimated based on the crash reduction factors obtained from the Crash Modification Factor Clearinghouse website. SR 134 within the study limits is a 6-lane roadway with a two-way left-turn lane. The cost per crash for a 6-lane urban divided roadway is $117,867 and it is $62,606 for an undivided roadway. The CAR system classifies the study segment of SR 134 as a 6-lane divided roadway with a painted median. Thus, the B/C analysis was performed using average costs for both divided and undivided roadways. The results are presented below.

**Based on a cost per crash of $117,867 (Divided Roadway)**

| *Alternative 1:* | | *Alternative 2:* | |
|---|---|---|---|
| Annual Benefit: | $854,536 | Annual Benefit: | $729,597 |
| Estimated Cost: | $1,191,568 | Estimated Cost: | $504,270 |
| Annualized Cost: | $107,848 | Annualized Cost: | $45,610 |
| Benefit/Cost (B/C): | 7.94 | Benefit/Cost (B/C): | 16.10 |
| Net Present Value: | $7,592,695 | Net Present Value: | $6,995,673 |

**Based on a cost per crash of $62,606 (Undivided Roadway)**

| *Alternative 1:* | | *Alternative 2:* | |
|---|---|---|---|
| Annual Benefit: | $453,894 | Annual Benefit: | $387,531 |
| Estimated Cost: | $1,191,568 | Estimated Cost: | $504,270 |
| Annualized Cost: | $107,848 | Annualized Cost: | $45,322 |
| Benefit/Cost (B/C): | 4.22 | Benefit/Cost (B/C): | 8.55 |
| Net Present Value: | $3,326,774 | Net Present Value: | $3,479,38 |

# 8. RECOMMENDATIONS

Several short-term and mid-term improvements were considered and evaluated as part of this study to enhance motorist safety and traffic operations. Short-term improvements are related to signal timing modifications and minor signing and pavement markings changes. Mid-term improvements are related to changes to the roadway geometry and/or signal system. The proposed improvement concept sketches are included in **Appendix F**. These improvements are discussed below.

**SR 134 at Jammes Road Intersection**

*Short-Term Improvements*

1. Increase all-red clearance intervals (SB left-turn by 0.5 second and NB through by 1.0 second from existing 2 second intervals) to help reduce the potential for angle and left-turn crashes. Six out of 20 angle crashes occurred at the intersection. Red light running was stated as a contributing cause for 4 crashes.
2. Refurbish pavement markings on the south leg (double yellow line and the gore area) and east/west legs (stop bar).
3. Repair WALK signal at southwest corner for westbound pedestrians to enhance pedestrian/bicycle safety.
4. Remove double yellow-line pavement markings within the turn-lane at the Dollar Tree driveway. It is suggested that coordination be conducted to have the property owner of Dollar Tree store to modify these markings.
5. Trim the trees and roadside landscaping to improve sight-distance for vehicles exiting Dollar Tree driveway on the west leg and thus reduce the potential for left-turn and angle crashes.
6. Install Bicycle WRONG WAY (R5-1b) sign and RIDE WITH TRAFFIC (R9-3c) supplemental plaques facing wrong-way bicycle traffic. Both bicycle crashes occurred when a bicyclist was riding against the flow of traffic.

*Mid-Term Improvements*

There is a programmed 3R project (FM No. 4412611, in FY 2021) along SR 134. It is possible that the following improvements can be incorporated as part of this 3R project.

7. It is suggested that a drainage analysis to be conducted as part of 3R project to evaluate roadway drainage at this intersection and appropriate improvements be implemented. Approximately 21% of all crashes occurred on a wet roadway, which is higher than the statewide average of 18.69% (for all roadways).
8. Install backplates with yellow reflective borders on signal heads to improve visibility and reduce the potential for angle and rear-end crashes.
9. Install countdown pedestrian signals at the intersection to enhance pedestrian/bicycle safety.
10. As part of future roadway projects along Jammes Road, consider extending the northbound and southbound right-turn flares to increase the storage, and northbound left-turn storage to reduce the potential for sideswipe and rear-end crashes. This improvement requires roadway widening and potentially additional right-of-way.
11. Rebuild the cracked sidewalk on the southwest corner to enhance pedestrian/bicycle safety.
12. Consider installing Left-Turn Yield on Green sign adjacent to the 5-section signal head on all the approaches. A structural analysis needs to be conducted to evaluate whether the existing signal support system can accommodate these signs. This sign is not applicable if signal improvements mentioned in Alternative 1 or 2 are implemented.

In addition to the improvements listed above, a total of 2 alternatives were developed for this intersection to address identified crash patterns:

*Alternative 1*

13. Implement flashing yellow arrow indications for permissive left-turn phase on all four approaches to reduce the potential for left-turn crashes by replacing the existing 5-section signal head with 4-section signal head (flashing yellow for permissive period). With this signal head configuration, left-turn phase can be operated as protected-only phase by time of day (maybe during peak hours, from 7 to 9 am, and 3 to 7 pm). And, install Left-Turn Yield on Flashing Yellow sign (FTP-B5-13) adjacent to the 4-section signal head.
14. Install additional signal heads facing east/west traffic so that traffic in each through lane has one 3-section signal head.
15. The signal improvements listed above may require the replacement of the existing signal support system. Install new mast arms, if needed, to accommodate the additional signal heads.
16. Install a raised median on the west leg from Norde Drive to Jammes Road as shown in the conceptual improvement sketch (see Appendix F for proposed condition diagram) to reduce the potential for left-turn and angle crashes. A total of 20 crashes (2012 (4), 2013 (3), 2014 (10), and

2015 (3) can potentially be reduced by installing the median. Coordination with affected property owners is required to implement this improvement.

*Alternative 2*

17. Implement flashing yellow arrow indications for permissive left-turn phase on all four approaches to reduce the potential for left-turn crashes by replacing the existing 5-section signal head with 4-section signal head (flashing yellow for permissive period). With this signal head configuration, left-turn phase can be operated as protected-only phase by time of day (maybe during peak hours, from 7 to 9 am, and 3 to 7 pm). And, install Left-Turn Yield on Flashing Yellow sign (FTP-B5-13) adjacent to the 4-section signal head.
18. Install additional signal heads facing east/west traffic so that traffic in each through lane has one 3-section signal head.
19. The signal improvements listed above may require the replacement of the existing signal support system. Install new mast arms, if needed, to accommodate the additional signal heads.
20. Install a raised median on the west leg for approximately 385 feet west of Jammes Road as shown in the conceptual improvement sketch (see Appendix E for proposed condition diagram) to reduce the potential for left-turn and angle crashes. A total of 14 crashes (2012 (4), 2013 (3), 2014 (5), and 2015 (2) can potentially be reduced by installing the median. Coordination with affected property owners is required to implement this improvement.

**SR 134 at SR 21 Intersection**

*Short-Term Improvements*

21. Refurbish all crosswalks and stop bars at the intersection to enhance pedestrian/bicycle safety.

*Mid-Term Improvements*

In addition to the short-term improvements discussed above, several roadway improvements were considered and evaluated to help improve safety and traffic operations. It should be noted that the conceptual improvement sketches were prepared using aerial photos and are not based on an engineering survey. As such, it is recommended that design elements such as roadway transitions, sight distance, signal visibility requirements, drainage, and utility conflicts be verified and addressed during the design phase based on an engineering survey and applicable standards. The following are the recommended mid-term improvements. There is a programmed 3R project (FM No. 4412611, in FY 2021) along SR 134. It is possible that the following improvements can be incorporated as part of this 3R project.

22. Install countdown pedestrian signals at the intersection to enhance pedestrian/bicycle safety.
23. Install back plates with yellow reflectorized tape facing traffic in all four directions.

24. Consider installing Left-Turn Yield on Green adjacent to the 5-section signal head on all four approaches. A structural analysis needs to be conducted to evaluate whether the existing signal support system can accommodate these signs. This sign is not applicable if signal improvements mentioned in Alternative 1 or 2 or 3 are implemented.

In addition to the previously discussed short-term and mid-term improvements, a total of 2 alternatives were developed for this intersection, as follows:

*Alternative 1*

25. Implement flashing yellow arrow indications for permissive left-turn phase on all four approaches to reduce the potential for left-turn crashes by replacing the existing 5-section signal head with 4-section signal head (flashing yellow for permissive period). With this signal head configuration, left-turn phase can be operated as protected-only phase by time of day (maybe during peak hours from 7-9 am and 3-7 pm). And, install Left-Turn Yield on Flashing Yellow sign (FTP-B5-13) adjacent to the 4-section signal head.
26. Install additional signal heads facing east/west and north/south traffic so that traffic in each through lane has one 3-section signal head.
27. The signal improvements listed above may require the replacement of the existing signal support system. Install new mast arms, if needed, to accommodate the additional signal heads.
28. Add an exclusive right-turn lane in the southbound direction to accommodate relatively heavy right-turn volume. This improvement helps to reduce the potential for rear-end crashes occurring in the southbound direction and also increases the capacity for through traffic at the same time.
29. Channelize the first median opening (from full to NB directional, at Krystal restaurant) along SR 21 south of the study intersection to reduce angle and left-turn crashes at the median opening and to extend northbound left-turn storage at the intersection. Also, the proposed median modification will bring this segment into better compliance with access management spacing criteria, and reduces spacing variance from 66% to 32%. See conceptual improvement sketch (see **Appendix F** for proposed condition diagram). This improvement eliminates the southbound, eastbound and westbound left-turn movements at this median opening.

*Alternative 2*

30. Implement flashing yellow arrow indications for permissive left-turn phase on all four approaches to reduce the potential for left-turn crashes by replacing the existing 5-section signal head with 4-section signal head (flashing yellow for permissive period). With this signal head configuration, left-turn phase can be operated as protected-only phase by time of day (maybe during peak hours from 7-9 am and 3-7 pm). And, install Left-Turn Yield on Flashing Yellow sign (FTP-B5-13) adjacent to the 4-section signal head.
31. Install additional signal heads facing east/west and north/south traffic so that traffic in each through lane has one 3-section signal head.

32. The signal improvements listed above may require the replacement of the existing signal support system. Install new mast arms, if needed, to accommodate the additional signal heads.
33. Add an exclusive right-turn lane in the SB direction to accommodate relatively heavy right-turn volume. This improvement helps to reduce the potential for rear-end crashes occurring in the SB direction and also increases the capacity for through traffic at the same time.
34. Channelize the first median opening (from full to NB directional, at Krystal restaurant) along SR 21 south of the study intersection to reduce angle and left-turn crashes at the median opening and to extend northbound left-turn storage at the intersection. Also, the proposed median modification will bring this segment into better compliance with access management spacing criteria, and reduces spacing variance from 66% to 32%. See conceptual improvement sketch (see **Appendix F** for proposed condition diagram). This improvement eliminates the southbound left-turn movement at this median opening.

*Alternative 3*

35. Implement flashing yellow arrow indications for permissive left-turn phase on all four approaches to reduce the potential for left-turn crashes by replacing the existing 5-section signal head with 4-section signal head (flashing yellow for permissive period). With this signal head configuration, left-turn phase can be operated as protected-only phase by time of day (maybe during peak hours from 7-9 am and 3-7 pm). And, install Left-Turn Yield on Flashing Yellow sign (FTP-B5-13) adjacent to the 4-section signal head.
36. Install additional signal heads facing east/west and north/south traffic so that traffic in each through lane has one 3-section signal head.
37. The signal improvements listed above may require the replacement of the existing signal support system. Install new mast arms, if needed, to accommodate the additional signal heads.
38. Add an exclusive right-turn lane in the southbound direction to accommodate relatively heavy right-turn volume. This improvement helps to reduce the potential for rear-end and sideswipe crashes occurring in the southbound direction and also increases the capacity for through traffic.

**SR 134 from Norde Drive to Wesconnett Boulevard**

*Improvements considered but not recommended*

Initially it was suggested that a raised median (Typical Section Alternative 1) be considered to help reduce angle and left-turn crashes along this segment (see **Appendix F** for concept sketch). A total of 41 crashes can potentially be reduced by installing the median (see **Appendix C** for collision diagram that shows potential correctable crashes). The Department has decided to install a raised median only at those locations that have higher concentration of correctable crashes as opposed to installing a median within the entire limits from Norde Drive to Wesconnett Boulevard.

The improvements discussed in the Recommendations section of this report (Section No. 8) were presented to the District 2 Traffic Operations Office at a progress meeting held on December 19, 2016. This report is updated based on input received at this meeting and follow-up coordination with FDOT.

# 9. BENEFIT - COST ANALYSIS AND NET PRESENT VALUE

The benefits associated with the expected reduction in crashes due to the proposed improvements are based on the crash reduction factors obtained from the FHWA Desktop Reference for Crash Reduction Factors, the FDOT Technical Report (Update of Florida Crash Reduction Factors and Countermeasures to improve the Development of District Safety Improvement Projects), Crash Modification Factor Clearinghouse Website and the FHWA-SA-18-041 Toolbox of Pedestrian Countermeasures. SR 134 within the study limits is a 6-lane roadway with a two-way left-turn lane. The cost per crash for a 6-lane urban divided roadway is $116,034. The CAR system classifies the study segment of SR 134 as a 6-lane divided roadway with a painted median. The results are presented below. The B/C and Net Present Value calculations are included in **Appendix G**.

**SR 134 at Jammes Road Intersection**

| *Alternative 1:* | | *Alternative 2:* | |
|---|---|---|---|
| Annual Benefit: | $653,271 | Annual Benefit: | $530,275 |
| Estimated Cost: | $1,315,042 | Estimated Cost: | $707,537 |
| Annualized Cost: | $150,685 | Annualized Cost: | $87,296 |
| Benefit/Cost (B/C): | 4.34 | Benefit/Cost (B/C): | 6.07 |
| Net Present Value: | $5,142,028 | Net Present Value: | $4,533,814 |

**SR 134 at SR 21 Intersection**

| *Alternative 1:* | | *Alternative 2:* | |
|---|---|---|---|
| Annual Benefit: | $675,318 | Annual Benefit: | $620,782 |
| Estimated Cost: | $1,295,280 | Estimated Cost: | $1,245,712 |
| Annualized Cost: | $156,570 | Annualized Cost: | $151,038 |
| Benefit/Cost (B/C): | 4.31 | Benefit/Cost (B/C): | 4.11 |
| Net Present Value: | $5,379,701 | Net Present Value: | $4,890,224 |

*Alternative 3:*

| | |
|---|---|
| Annual Benefit: | $538,398 |
| Estimated Cost: | $921,456 |
| Annualized Cost: | $115,520 |
| Benefit/Cost (B/C): | 4.66 |
| Net Present Value: | $4,440,178 |

# APPENDIX A – STRAIGHT LINE DIAGRAM AND EXISTING CONDITION DIAGRAMS

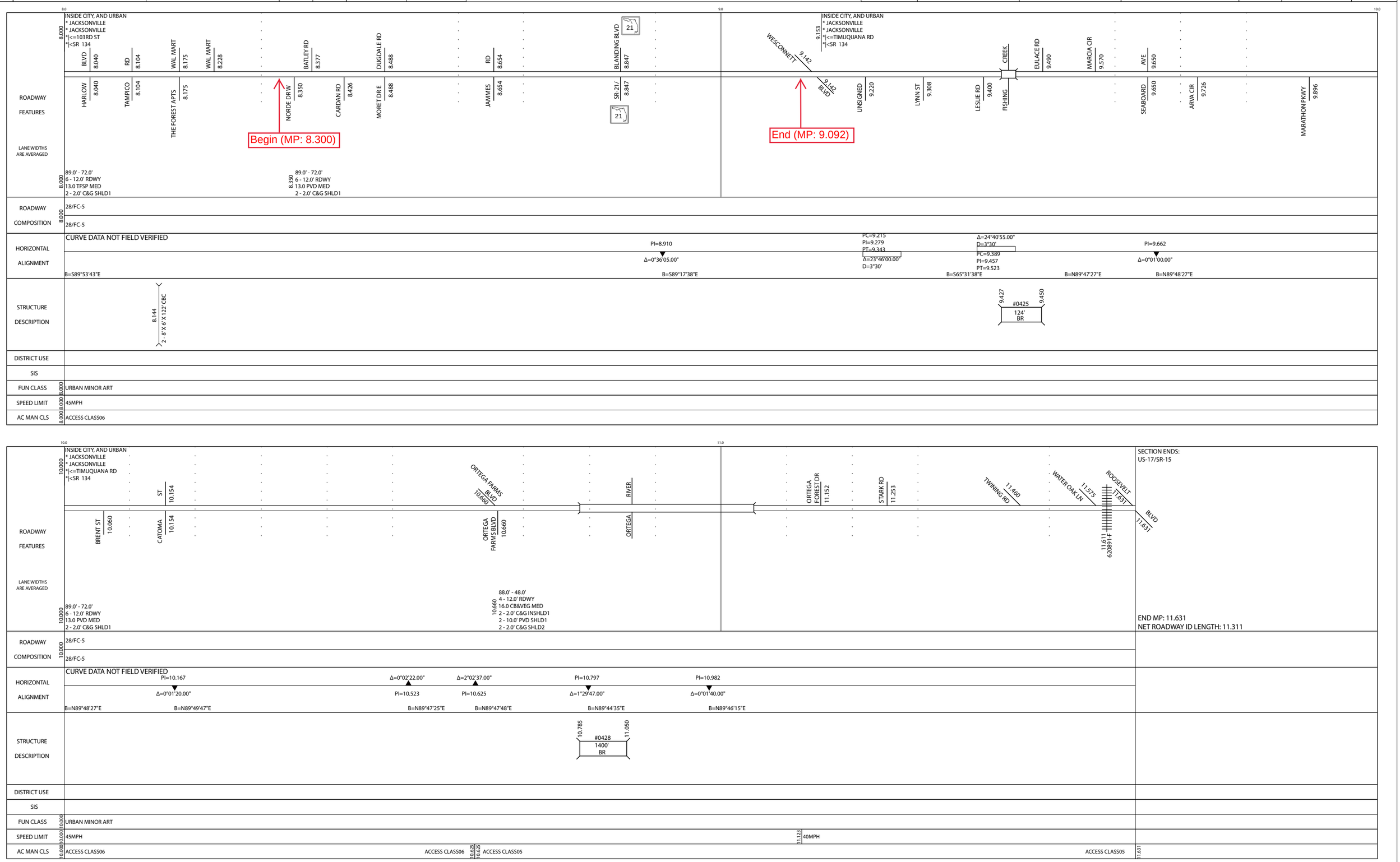
| | 5 YR INV | SLD REV |
|---|---|---|
| DATE | 05/01/2015 | 05/14/2015 |
| BY | Metric Engineering, Inc. | HSA Consulting, Inc. |

| BMP | EMP | INV | SLD REV |
|---|---|---|---|
| 0.320 | 11.631 | CROSSDRAINS | 02/05/2016 METRIC |
| 0.320 | 11.631 | 06/18/2015 Metric Engineering, Inc. | 06/18/2015 Metric Engineering, Inc. |

FLORIDA DEPARTMENT OF TRANSPORTATION

# STRAIGHT LINE DIAGRAM OF ROAD INVENTORY

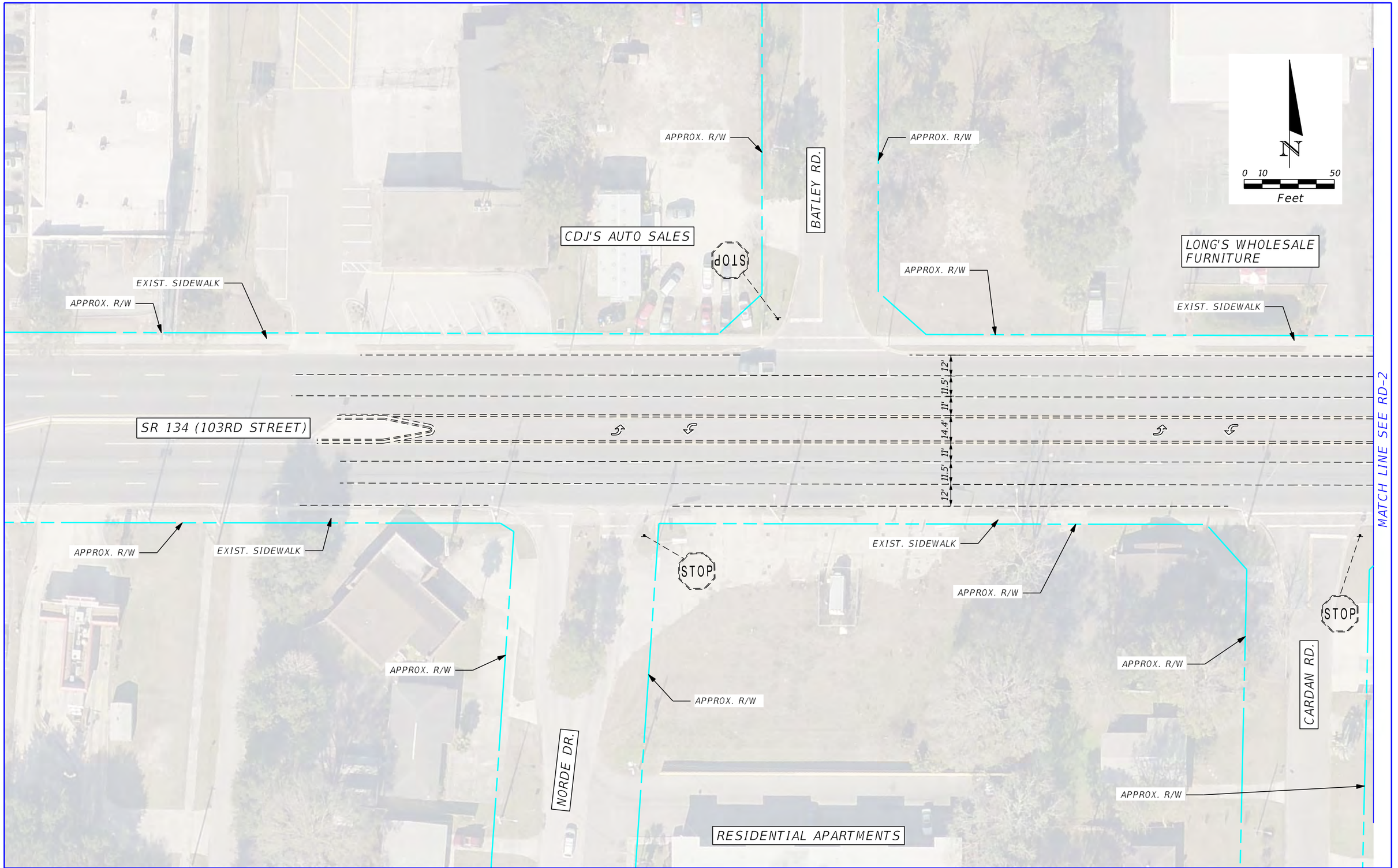
| SECTION STATUS | INT. or US ROUTE NO. | STATE ROAD NO. | COUNTY | DISTRICT | ROADWAY ID | SHEET NO: |
|---|---|---|---|---|---|---|
| 12 | | SR 134 | DUVAL | 02 | 72220000 | 3 OF 3 |







Version: 1.4.2.24 02/05/2016



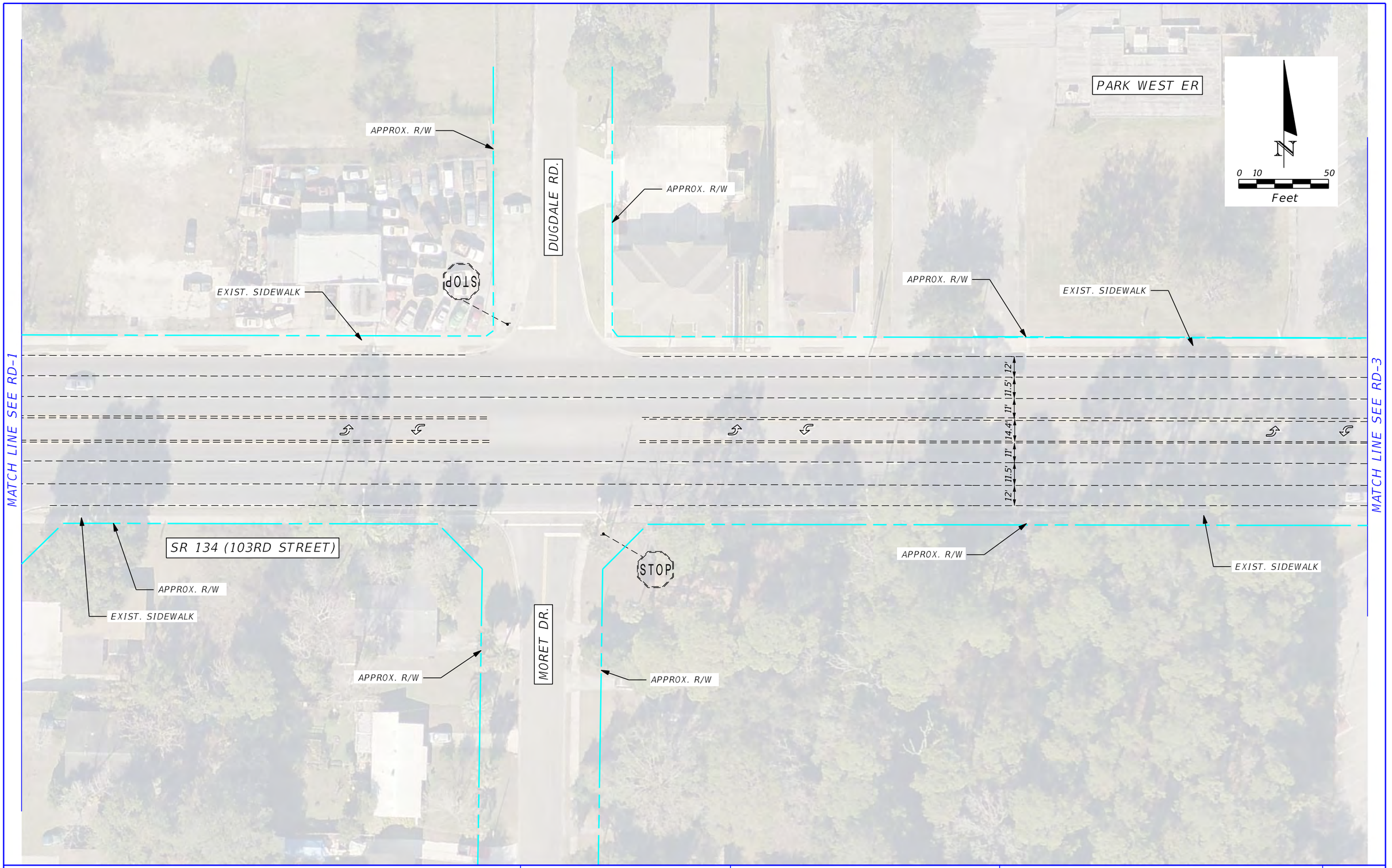

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| 134 | DUVAL | |

# EXISTING CONDITION DIAGRAM
## SR 134

SHEET NO.
RD-1



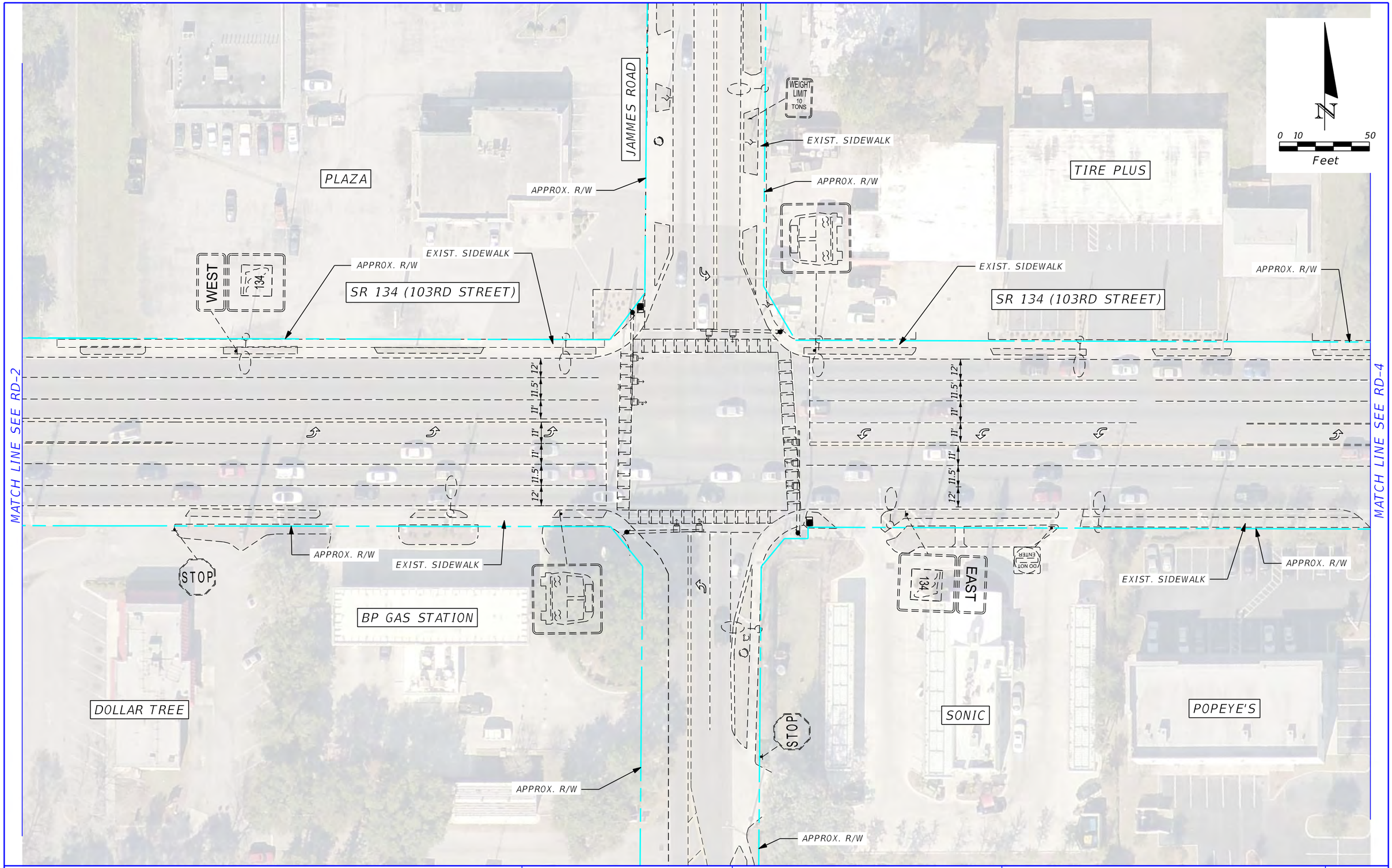

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| 134 | DUVAL | |

# EXISTING CONDITION DIAGRAM
## SR 134

SHEET NO.
RD-2




| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| 134 | DUVAL | |

# EXISTING CONDITION DIAGRAM
## SR 134 AND JAMMES RD

SHEET NO.
RD-3

ST. ANDREWS CHURCH

APPLEBEES

AARON'S

N

0 10 50

Feet

APPROX. R/W

SPEED LIMIT 45

SR 134 (103RD STREET)

EXIST. SIDEWALK

APPROX. R/W

MATCH LINE SEE RD-3

MATCH LINE SEE RD-5

12' 11.5' 11' 14.4' 11' 11.5' 12'

12' 11.5' 11' 11' 11.5' 12'

STOP

SPEED LIMIT 45

APPROX. R/W

JCT 21

EXIST. SIDEWALK

APPROX. R/W

POPEYE'S

PLAZA

KRISPY KREME DONUTS

WENDY'S

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

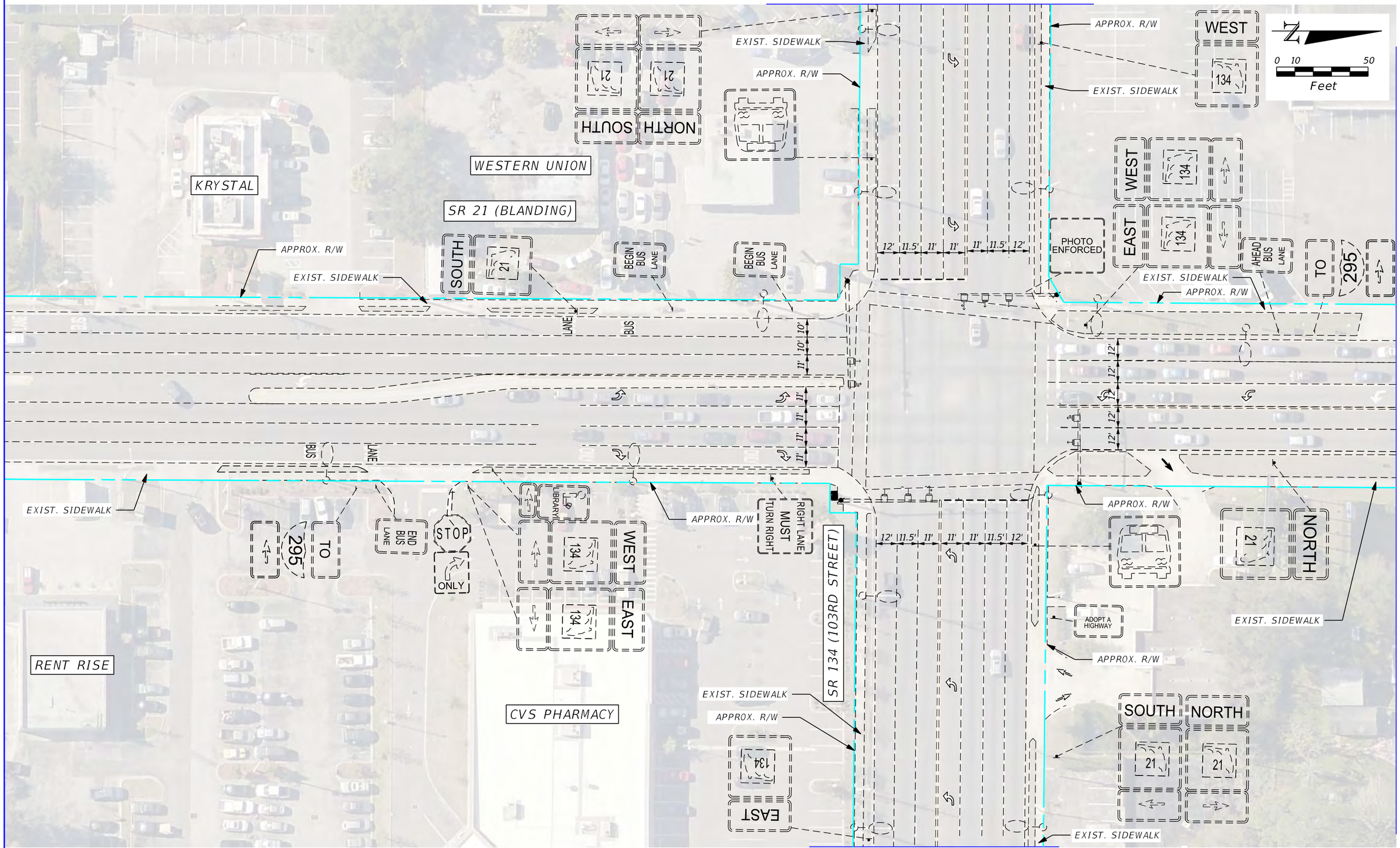
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| 134 | DUVAL | |

# EXISTING CONDITION DIAGRAM
## SR 134

SHEET NO.
RD-4

MATCH LINE SEE RD-4




MATCH LINE SEE RD-6

MATCH LINE SEE RD-7

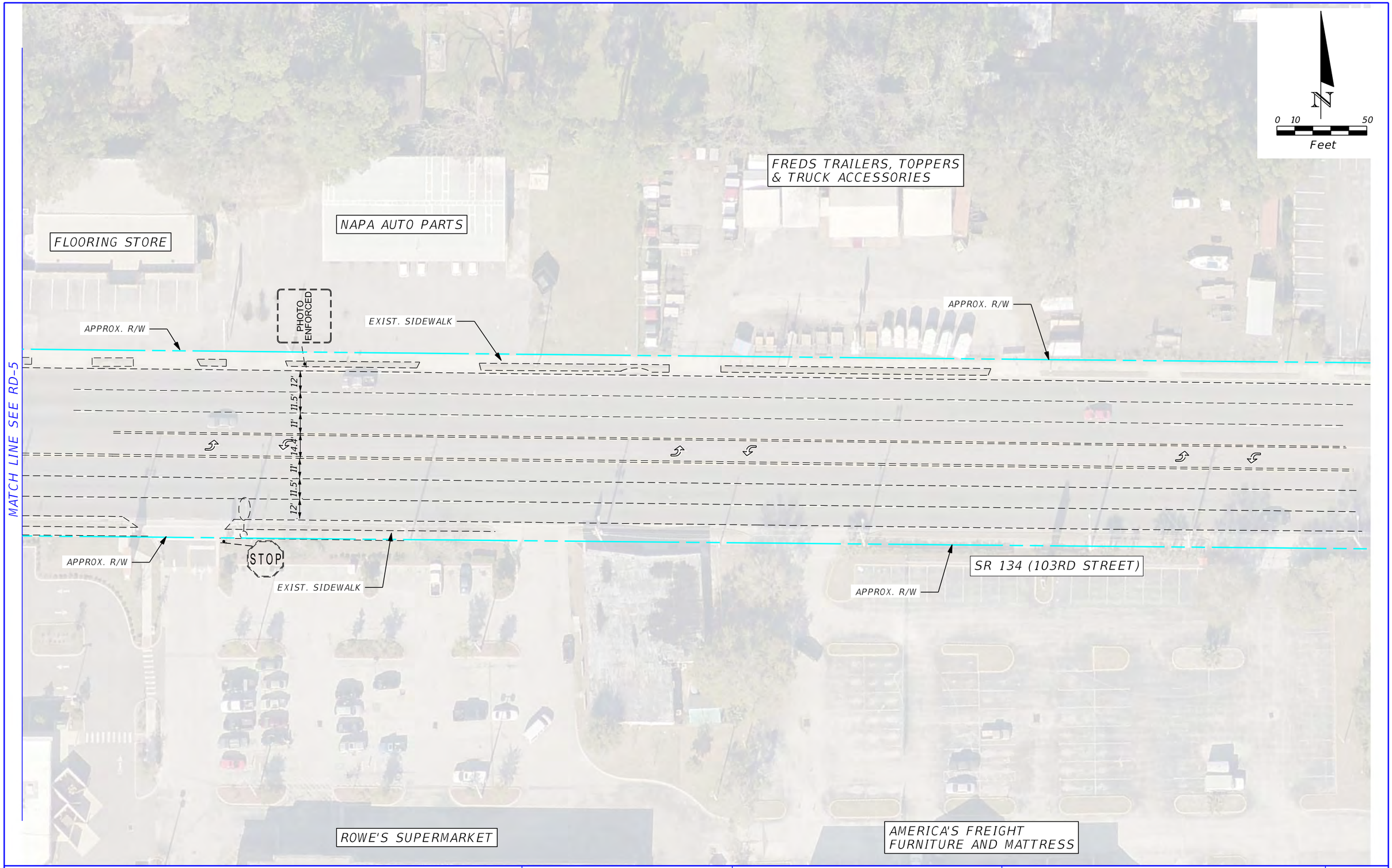
| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| 134 | DUVAL | |

# EXISTING CONDITION DIAGRAM
## SR 134 AND SR 21

SHEET NO.
RD-5



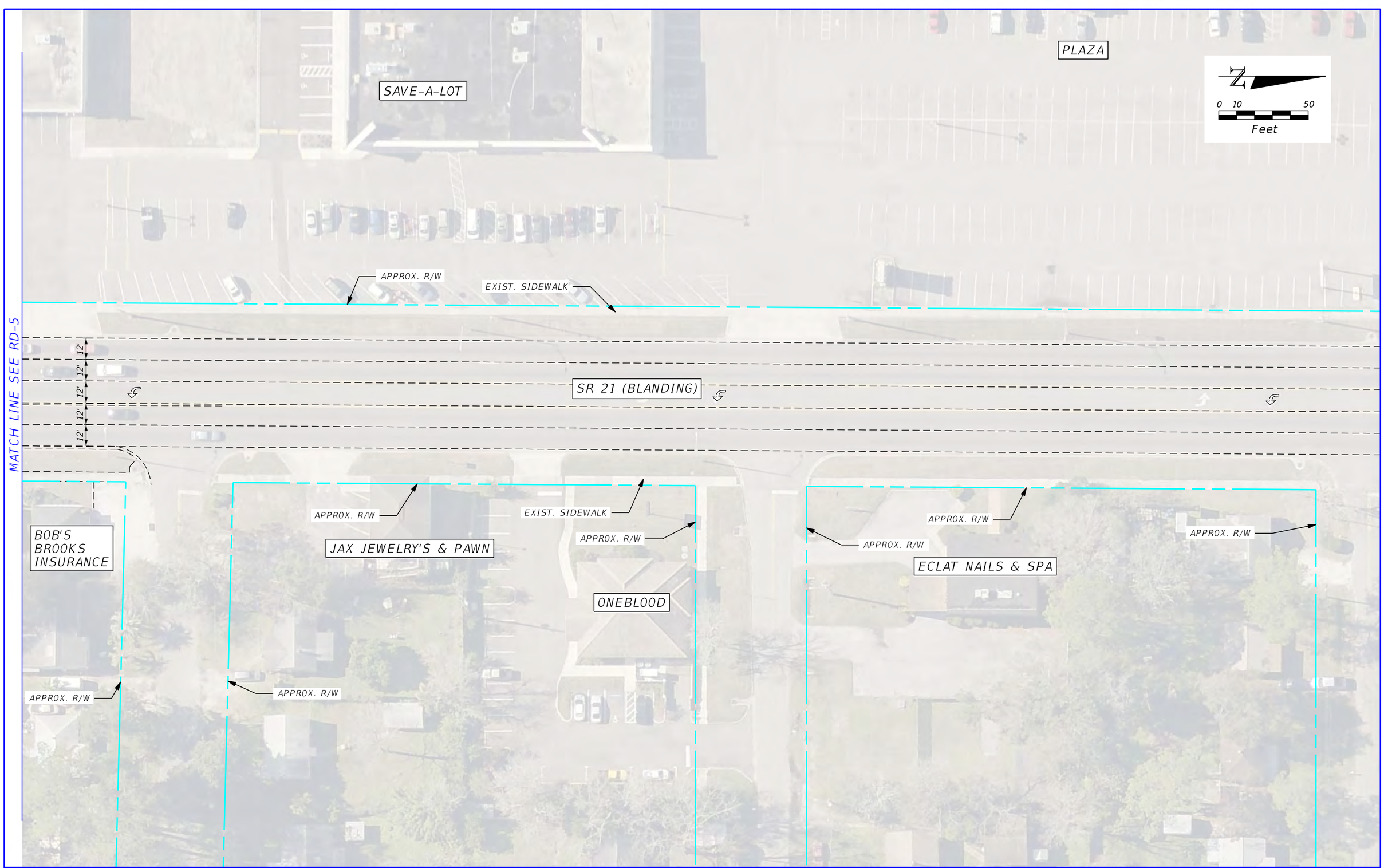

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| 134 | DUVAL | |

# EXISTING CONDITION DIAGRAM
## SR 134

SHEET NO.
RD-6




| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| 134 | DUVAL | |

# EXISTING CONDITION DIAGRAM
## SR 134 AND SR 21

SHEET NO.
RD-7

# APPENDIX B – CRASH SUMMARY AND COLLISION DIAGRAMS

# State of Florida Department of Transportation
## CRASH SUMMARY

SECTION: 72220000 STATE ROUTE: 134

INTERSECTING ROADWAY: **EXCLUDING INTERSECTIONS AT JAMMES RD & AT SR 21** M.P. 8.300 TO 9.092 ENGINEER: AECOM

STUDY PERIOD: FROM 1/ 2012 TO 12/ 2012 COUNTY: Duval

| No. | MILE POST | DATE | DAY | TIME | CRASH TYPE | FATAL | INJURIES | PROP DAM | DAY / NIGHT | WET / DRY | CONTRIBUTING CAUSE (VEHICLE ONLY) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 8.322 | 03/29/12 | Thu | 0712 | Sideswipe | 0 | 1 | 0 | Day | Dry | Failed To Keep In Proper Lane |
| 2 | 8.348 | 03/29/12 | Thu | 0750 | Sideswipe | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 3 | 8.350 | 11/10/12 | Sat | 1930 | Pedestrian | 1 | 2 | 0 | Night | Dry | No Contributing Action |
| 4 | 8.373 | 06/30/12 | Sat | 2132 | Rear-End | 0 | 0 | 1 | Night | Dry | Careless or Negligent Manner |
| 5 | 8.388 | 12/12/12 | Wed | 1810 | Rear-End | 0 | 2 | 0 | Night | Wet | Careless or Negligent Manner |
| 6 | 8.393 | 02/11/12 | Sat | 1440 | Rear-End | 0 | 0 | 1 | Day | Dry | No Contributing Action |
| 7 | 8.445 | 02/06/12 | Mon | 1600 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 8 | 8.479 | 09/10/12 | Mon | 1250 | Backed Into | 0 | 1 | 0 | Day | Dry | Careless or Negligent Manner |
| 9 | 8.488 | 02/02/12 | Thu | 1850 | Rear-End | 0 | 1 | 0 | Night | Dry | No Contributing Action |
| 10 | 8.488 | 10/09/12 | Tue | 1258 | Fence | 0 | 0 | 1 | Day | Other | Unknown |
| 11 | 8.502 | 02/24/12 | Fri | 2000 | Rear-End | 0 | 0 | 1 | Night | Wet | No Contributing Action |
| 12 | 8.502 | 05/19/12 | Sat | 1900 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 13 | 8.554 | 08/18/12 | Sat | 0312 | Rear-End | 0 | 3 | 0 | Night | Dry | Careless or Negligent Manner |
| 14 | 8.590 | 02/02/12 | Thu | 1735 | Angle | 0 | 0 | 1 | Day | Dry | Failed to Yield Right-Of-Way |
| 15 | 8.749 | 05/25/12 | Fri | 1232 | Sideswipe | 0 | 0 | 1 | Day | Dry | Other Contributing Action |
| 16 | 8.752 | 01/21/12 | Sat | 1145 | Left-Turn | 0 | 0 | 1 | Day | Dry | Failed to Yield Right-Of-Way |
| 17 | 8.789 | 05/16/12 | Wed | 1332 | Rear-End | 0 | 0 | 1 | Day | Wet | Careless or Negligent Manner |
| 18 | 8.790 | 11/20/12 | Tue | 1932 | Rear-End | 0 | 1 | 0 | Night | Dry | No Contributing Action |
| 19 | 8.907 | 01/26/12 | Thu | 0928 | Left-Turn | 0 | 0 | 1 | Day | Dry | Failed to Yield Right-Of-Way |
| 20 | 8.940 | 02/20/12 | Mon | 1600 | Right-Turn | 0 | 1 | 0 | Day | Dry | Careless or Negligent Manner |
| 21 | 8.942 | 04/26/12 | Thu | 1644 | Sideswipe | 0 | 0 | 1 | Day | Dry | Other Contributing Action |

| Total No. | Fatal | Injury | PDO | Rear-End | Head-On | Angle | Left-Turn | Right-Turn | Sideswipe | Backed Into | Ped/Bike | Parked Car | Fixed Object | Ran into Water | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21 | 1 | 8 | 13 | 10 | 0 | 1 | 2 | 1 | 4 | 1 | 1 | 0 | 1 | 0 | 0 |
| Percent | 4.76% | 38.10% | 61.90% | 47.62% | 0.00% | 4.76% | 9.52% | 4.76% | 19.05% | 4.76% | 4.76% | 0.00% | 4.76% | 0.00% | 0.00% |

| Contrib. Cause | Day | Night | Wet | Dry | Careless Driving | FTYRW | Improper Turn | Ran Red Light | Exceeded Speed | Improper Passing | Disreg Cntl Dev | Erratic/ Aggress | Ran off Road | DUI | Wrong Way |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | 14 | 7 | 3 | 17 | 9 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| Percent | 66.67% | 33.33% | 14.29% | 80.95% | 42.86% | 14.29% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 9.52% | 0.00% |

# State of Florida Department of Transportation
## CRASH SUMMARY

SECTION: 72220000 STATE ROUTE: 134

INTERSECTING ROADWAY: **EXCLUDING INTERSECTIONS AT JAMMES RD & AT SR 21** M.P. 8.300 TO 9.092 ENGINEER: AECOM

STUDY PERIOD: FROM 1/ 2013 TO 12/ 2013 COUNTY: Duval

| No. | MILE POST | DATE | DAY | TIME | CRASH TYPE | FATAL | INJURIES | PROP DAM | DAY / NIGHT | WET / DRY | CONTRIBUTING CAUSE (VEHICLE ONLY) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 8.331 | 01/08/13 | Tue | 0927 | Right-Turn | 0 | 0 | 1 | Day | Dry | Failed to Yield Right-Of-Way |
| 2 | 8.349 | 06/14/13 | Fri | 1115 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 3 | 8.349 | 07/11/13 | Thu | 1645 | Rear-End | 0 | 0 | 1 | Day | Wet | Followed too Closely |
| 4 | 8.350 | 03/22/13 | Fri | 1600 | Sideswipe | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 5 | 8.354 | 05/03/13 | Fri | 1900 | Left-Turn | 0 | 2 | 0 | Night | Wet | No Contributing Action |
| 6 | 8.358 | 11/26/13 | Tue | 1500 | Rear-End | 0 | 1 | 0 | Day | Wet | Careless or Negligent Manner |
| 7 | 8.369 | 01/08/13 | Tue | 0830 | Sideswipe | 0 | 0 | 1 | Day | Dry | Failed To Keep In Proper Lane |
| 8 | 8.377 | 09/22/13 | Sun | 1625 | Curb | 0 | 1 | 0 | Day | Wet | Other Contributing Action |
| 9 | 8.377 | 11/20/13 | Wed | 1723 | Rear-End | 0 | 0 | 1 | Night | Dry | Unknown |
| 10 | 8.388 | 02/15/13 | Fri | 2055 | Right-Turn | 0 | 0 | 1 | Night | Dry | No Contributing Action |
| 11 | 8.388 | 10/31/13 | Thu | 1900 | Sideswipe | 0 | 0 | 1 | Night | Dry | Improper Passing |
| 12 | 8.404 | 06/06/13 | Thu | 1615 | Right-Turn | 0 | 0 | 1 | Day | Wet | Failed to Yield Right-Of-Way |
| 13 | 8.486 | 08/26/13 | Mon | 2040 | Rear-End | 0 | 0 | 1 | Night | Dry | Careless or Negligent Manner |
| 14 | 8.578 | 06/15/13 | Sat | 1136 | Rear-End | 0 | 0 | 1 | Day | Dry | No Contributing Action |
| 15 | 8.597 | 08/31/13 | Sat | 1839 | Pedestrian | 0 | 1 | 0 | Day | Wet | No Contributing Action |
| 16 | 8.598 | 06/01/13 | Sat | 1320 | Angle | 0 | 0 | 1 | Day | Dry | No Contributing Action |
| 17 | 8.717 | 12/16/13 | Mon | 1733 | Rear-End | 0 | 0 | 1 | Night | Dry | Careless or Negligent Manner |
| 18 | 8.730 | 01/01/13 | Tue | 1130 | Sideswipe | 0 | 0 | 1 | Day | Dry | No Contributing Action |
| 19 | 8.749 | 05/06/13 | Mon | 1255 | Pedestrian | 0 | 1 | 0 | Day | Dry | Careless or Negligent Manner |
| 20 | 8.752 | 01/11/13 | Fri | 1100 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 21 | 8.752 | 01/22/13 | Tue | 1556 | Rear-End | 0 | 0 | 1 | Day | Dry | Followed too Closely |
| 22 | 8.752 | 04/08/13 | Mon | 1155 | Rear-End | 0 | 2 | 0 | Day | Dry | Careless or Negligent Manner |
| 23 | 8.754 | 10/25/13 | Fri | 1643 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 24 | 8.762 | 10/15/13 | Tue | 1716 | Rear-End | 0 | 2 | 0 | Day | Wet | Careless or Negligent Manner |
| 25 | 8.790 | 05/25/13 | Sat | 1715 | Left-Turn | 0 | 1 | 0 | Day | Dry | Failed to Yield Right-Of-Way |
| 26 | 8.904 | 02/13/13 | Wed | 1500 | Rear-End | 0 | 0 | 1 | Day | Wet | Careless or Negligent Manner |
| 27 | 8.904 | 05/14/13 | Tue | 1036 | Rear-End | 0 | 2 | 0 | Day | Dry | Careless or Negligent Manner |
| 28 | 8.932 | 11/29/13 | Fri | 1945 | Left-Turn | 0 | 1 | 0 | Night | Dry | Failed to Yield Right-Of-Way |
| 29 | 8.942 | 03/19/13 | Tue | 1104 | Left-Turn | 0 | 0 | 1 | Day | Dry | Improper Turn |
| 30 | 8.942 | 05/28/13 | Tue | 1543 | Right-Turn | 0 | 0 | 1 | Day | Dry | Improper Turn |
| 31 | 9.036 | 02/04/13 | Mon | 1645 | Rear-End | 0 | 3 | 0 | Day | Dry | Careless or Negligent Manner |
| 32 | 9.047 | 09/22/13 | Sun | 1316 | Pedestrian | 0 | 1 | 0 | Day | Dry | No Contributing Action |

| Total No. | Fatal | Injury | PDO | Rear-End | Head-On | Angle | Left-Turn | Right-Turn | Sideswipe | Backed Into | Ped/Bike | Parked Car | Fixed Object | Ran into Water | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 | 0 | 12 | 20 | 15 | 0 | 1 | 4 | 4 | 4 | 0 | 3 | 0 | 1 | 0 | 0 |
| Percent | 0.00% | 37.50% | 62.50% | 46.88% | 0.00% | 3.13% | 12.50% | 12.50% | 12.50% | 0.00% | 9.38% | 0.00% | 3.13% | 0.00% | 0.00% |

| Contrib. Cause | Day | Night | Wet | Dry | Careless Driving | FTYRW | Improper Turn | Ran Red Light | Exceeded Speed | Improper Passing | Disreg Cntl Dev | Erratic/ Aggress | Ran off Road | DUI | Wrong Way |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | 25 | 7 | 8 | 24 | 13 | 4 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 0 |
| Percent | 78.13% | 21.88% | 25.00% | 75.00% | 40.63% | 12.50% | 6.25% | 0.00% | 0.00% | 3.13% | 0.00% | 0.00% | 0.00% | 9.38% | 0.00% |

# State of Florida Department of Transportation
## CRASH SUMMARY

SECTION: 72220000 STATE ROUTE: 134

INTERSECTING ROADWAY: **EXCLUDING INTERSECTIONS AT JAMMES RD & AT SR 21** M.P. 8.300 TO 9.092 ENGINEER: AECOM

STUDY PERIOD: FROM 1/ 2014 TO 12/ 2014 COUNTY: Duval

| No. | MILE POST | DATE | DAY | TIME | CRASH TYPE | FATAL | INJURIES | PROP DAM | DAY / NIGHT | WET / DRY | CONTRIBUTING CAUSE (VEHICLE ONLY) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 8.322 | 01/25/14 | Sat | 1800 | Concrete Traffic Barrier | 0 | 0 | 1 | Night | Dry | Ran Off Roadway |
| 2 | 8.323 | 05/07/14 | Wed | 1604 | Angle | 0 | 1 | 0 | Day | Dry | Failed to Yield Right-Of-Way |
| 3 | 8.340 | 03/09/14 | Sun | 0726 | Rear-End | 0 | 0 | 1 | Day | Dry | Improper Turn |
| 4 | 8.350 | 04/01/14 | Tue | 1326 | Head-On | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 5 | 8.350 | 02/28/14 | Fri | 1645 | Right-Turn | 0 | 0 | 1 | Day | Dry | Failed To Keep In Proper Lane |
| 6 | 8.359 | 06/02/14 | Mon | 1738 | Rear-End | 0 | 1 | 0 | Day | Dry | Unknown |
| 7 | 8.404 | 05/30/14 | Fri | 1515 | Left-Turn | 0 | 0 | 1 | Day | Dry | Failed to Yield Right-Of-Way |
| 8 | 8.426 | 10/14/14 | Tue | 1022 | Backed Into | 0 | 0 | 1 | Day | Dry | Improper Backing |
| 9 | 8.468 | 10/05/14 | Sun | 0800 | Sideswipe | 0 | 0 | 1 | Day | Dry | Failed To Keep In Proper Lane |
| 10 | 8.469 | 12/11/14 | Thu | 1630 | Pedalcycle | 0 | 1 | 0 | Day | Dry | Failed to Yield Right-Of-Way |
| 11 | 8.483 | 06/04/14 | Wed | 2230 | Rear-End | 0 | 3 | 0 | Night | Dry | No Contributing Action |
| 12 | 8.488 | 06/04/14 | Wed | 2220 | Sideswipe | 0 | 0 | 1 | Night | Dry | Erratic, Reckless or Aggressive |
| 13 | 8.488 | 05/07/14 | Wed | 1535 | Backed Into | 0 | 0 | 1 | Day | Dry | Improper Backing |
| 14 | 8.540 | 04/14/14 | Mon | 1717 | Rear-End | 0 | 2 | 0 | Day | Dry | Careless or Negligent Manner |
| 15 | 8.597 | 02/27/14 | Thu | 1454 | Left-Turn | 0 | 0 | 1 | Day | Dry | Failed to Yield Right-Of-Way |
| 16 | 8.747 | 09/27/14 | Sat | 1420 | Rear-End | 0 | 1 | 0 | Day | Dry | Careless or Negligent Manner |
| 17 | 8.752 | 11/03/14 | Mon | 0954 | Left-Turn | 0 | 0 | 1 | Day | Dry | Failed to Yield Right-Of-Way |
| 18 | 8.790 | 02/21/14 | Fri | 1230 | Left-Turn | 0 | 2 | 0 | Day | Wet | Failed to Yield Right-Of-Way |
| 19 | 8.923 | 11/10/14 | Mon | 1419 | Left-Turn | 0 | 1 | 0 | Day | Dry | Failed to Yield Right-Of-Way |
| 20 | 9.047 | 10/01/14 | Wed | 0751 | Sideswipe | 0 | 8 | 0 | Day | Dry | Improper Turn |
| 21 | 9.071 | 11/08/14 | Sat | 1535 | Left-Turn | 0 | 2 | 0 | Day | Dry | Failed to Yield Right-Of-Way |

| Total No. | Fatal | Injury | PDO | Rear-End | Head-On | Angle | Left-Turn | Right-Turn | Sideswipe | Backed Into | Ped/Bike | Parked Car | Fixed Object | Ran into Water | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21 | 0 | 10 | 11 | 5 | 1 | 1 | 6 | 1 | 3 | 2 | 1 | 0 | 1 | 0 | 0 |
| Percent | 0.00% | 47.62% | 52.38% | 23.81% | 4.76% | 4.76% | 28.57% | 4.76% | 14.29% | 9.52% | 4.76% | 0.00% | 4.76% | 0.00% | 0.00% |

| Contrib. Cause | Day | Night | Wet | Dry | Careless Driving | FTYRW | Improper Turn | Ran Red Light | Exceeded Speed | Improper Passing | Disreg Cntl Dev | Erratic/ Aggress | Ran off Road | DUI | Wrong Way |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | 18 | 3 | 1 | 20 | 3 | 8 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 |
| Percent | 85.71% | 14.29% | 4.76% | 95.24% | 14.29% | 38.10% | 9.52% | 0.00% | 0.00% | 0.00% | 0.00% | 4.76% | 4.76% | 4.76% | 0.00% |

# State of Florida Department of Transportation
## CRASH SUMMARY

SECTION: 72220000 STATE ROUTE: 134

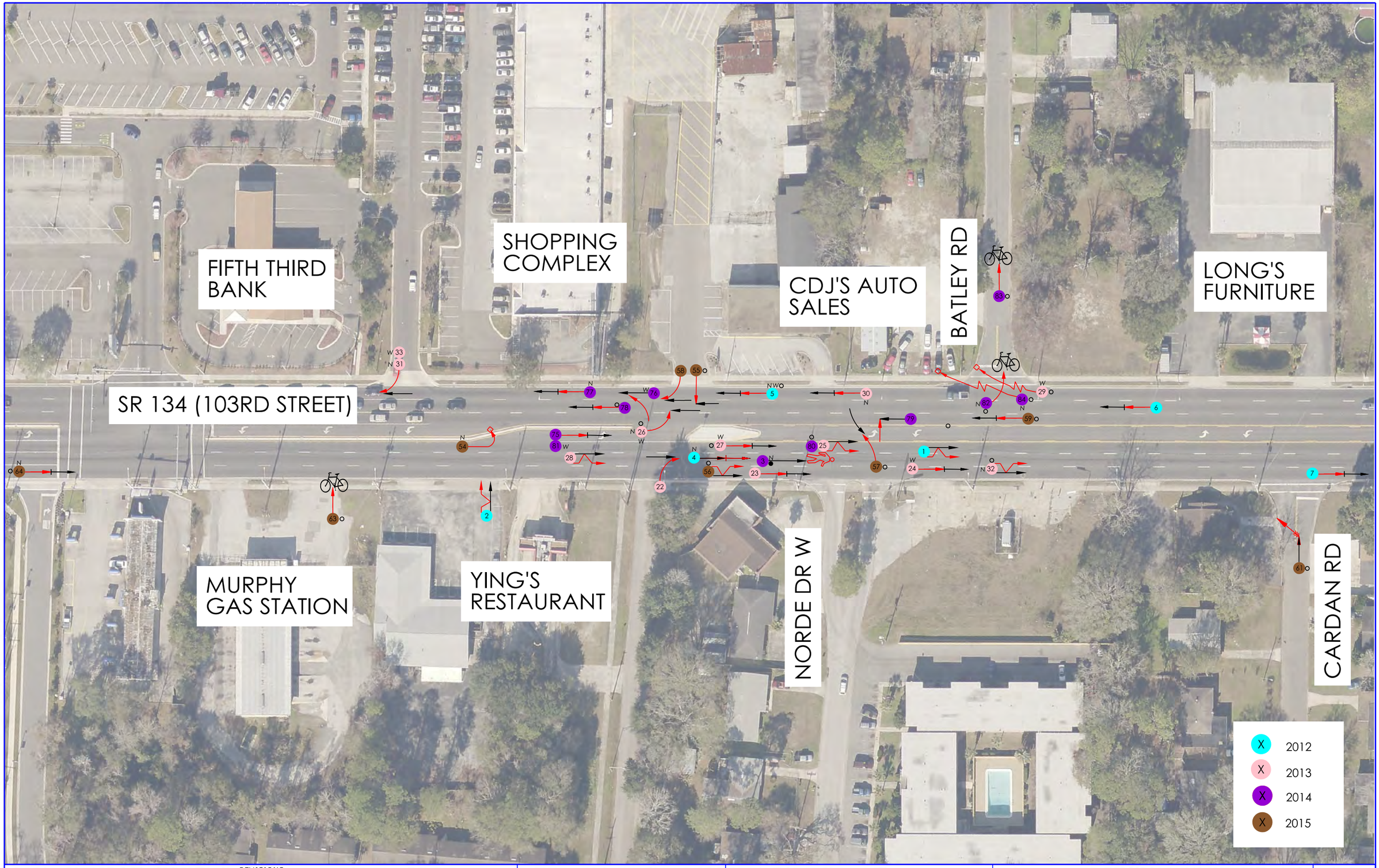
INTERSECTING ROADWAY: **EXCLUDING INTERSECTIONS AT JAMMES RD & AT SR 21** M.P. 8.300 TO 9.092 ENGINEER: AECOM

STUDY PERIOD: FROM 1/ 2015 TO 12/ 2015 COUNTY: Duval

| No. | MILE POST | DATE | DAY | TIME | CRASH TYPE | FATAL | INJURIES | PROP DAM | DAY / NIGHT | WET / DRY | CONTRIBUTING CAUSE (VEHICLE ONLY) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 8.320 | 01/18/15 | Sun | 0920 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 2 | 8.320 | 02/24/15 | Tue | 1715 | Left-Turn | 0 | 0 | 1 | Day | Wet | Careless or Negligent Manner |
| 3 | 8.320 | 12/24/15 | Thu | 1830 | Rear-End | 0 | 0 | 1 | Night | Dry | No Contributing Action |
| 4 | 8.339 | 03/03/15 | Tue | 1135 | Rear-End | 0 | 1 | 0 | Day | Dry | Careless or Negligent Manner |
| 5 | 8.351 | 02/03/15 | Tue | 1452 | Angle | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 6 | 8.352 | 04/03/15 | Fri | 1330 | Sideswipe | 0 | 2 | 0 | Day | Dry | Other Contributing Action |
| 7 | 8.368 | 06/02/15 | Tue | 1557 | Rear-End | 0 | 0 | 1 | Day | Wet | Careless or Negligent Manner |
| 8 | 8.377 | 10/13/15 | Tue | 0620 | Pedalcycle | 0 | 1 | 0 | Night | Dry | Failed to Yield Right-Of-Way |
| 9 | 8.377 | 10/05/15 | Mon | 1430 | Pedalcycle | 0 | 1 | 0 | Day | Dry | No Contributing Action |
| 10 | 8.384 | 05/15/15 | Fri | 2015 | Curb | 0 | 4 | 0 | Night | Dry | Other Contributing Action |
| 11 | 8.488 | 01/05/15 | Mon | 2000 | Pedestrian | 0 | 1 | 0 | Night | Dry | Failed to Yield Right-Of-Way |
| 12 | 8.559 | 05/04/15 | Mon | 0904 | Sideswipe | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 13 | 8.559 | 10/24/15 | Sat | 2152 | Angle | 0 | 0 | 1 | Night | Dry | Failed to Yield Right-Of-Way |
| 14 | 8.597 | 01/28/15 | Wed | 2205 | Left-Turn | 0 | 0 | 1 | Night | Dry | Failed to Yield Right-Of-Way |
| 15 | 8.597 | 02/10/15 | Tue | 1735 | Rear-End | 0 | 3 | 0 | Day | Dry | Followed too Closely |
| 16 | 8.597 | 02/17/15 | Tue | 1530 | Rear-End | 0 | 0 | 1 | Day | Wet | Other Contributing Action |
| 17 | 8.749 | 05/16/15 | Sat | 1815 | Left-Turn | 0 | 0 | 1 | Day | Dry | Failed to Yield Right-Of-Way |
| 18 | 8.749 | 05/02/15 | Sat | 1350 | Left-Turn | 0 | 2 | 0 | Day | Dry | Other Contributing Action |
| 19 | 8.768 | 02/06/15 | Fri | 1805 | Left-Turn | 0 | 1 | 0 | Night | Dry | Failed to Yield Right-Of-Way |
| 20 | 8.787 | 02/28/15 | Sat | 1205 | Left-Turn | 0 | 1 | 0 | Day | Wet | Failed to Yield Right-Of-Way |
| 21 | 8.790 | 12/05/15 | Sat | 1819 | Rear-End | 0 | 0 | 1 | Night | Dry | Careless or Negligent Manner |
| 22 | 8.904 | 12/29/15 | Tue | 1335 | Left-Turn | 0 | 0 | 1 | Day | Dry | Failed to Yield Right-Of-Way |
| 23 | 8.923 | 12/30/15 | Wed | 2055 | Pedestrian | 0 | 1 | 0 | Night | Dry | Careless or Negligent Manner |
| 24 | 8.942 | 11/20/15 | Fri | 1050 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |

| Total No. | Fatal | Injury | PDO | Rear-End | Head-On | Angle | Left-Turn | Right-Turn | Sideswipe | Backed Into | Ped/Bike | Parked Car | Fixed Object | Ran into Water | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 | 0 | 11 | 13 | 8 | 0 | 2 | 7 | 0 | 2 | 0 | 4 | 0 | 1 | 0 | 0 |
| Percent | 0.00% | 45.83% | 54.17% | 33.33% | 0.00% | 8.33% | 29.17% | 0.00% | 8.33% | 0.00% | 16.67% | 0.00% | 4.17% | 0.00% | 0.00% |

| Contrib. Cause | Day | Night | Wet | Dry | Careless Driving | FTYRW | Improper Turn | Ran Red Light | Exceeded Speed | Improper Passing | Disreg Cntl Dev | Erratic/ Aggress | Ran off Road | DUI | Wrong Way |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | 15 | 9 | 4 | 20 | 9 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Percent | 62.50% | 37.50% | 16.67% | 83.33% | 37.50% | 33.33% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 4.17% | 0.00% |




| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

AECOM
7800 CONGRESS AVENUE
BOCA RATON, FL 33487
TEL (561) 862 1051

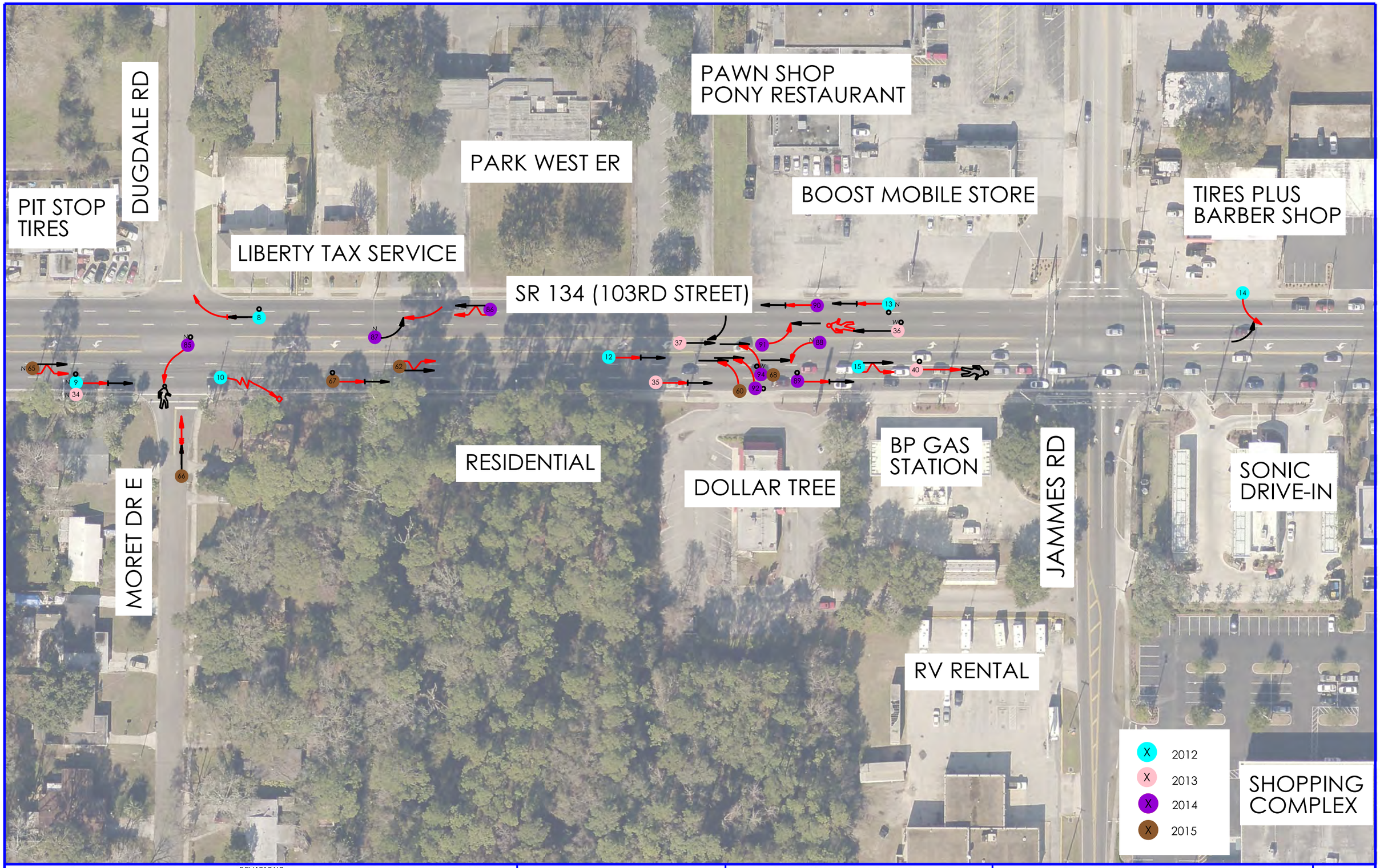
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| SR 134 | DUVAL | |

# SR 134 (NORDE DR-WESCONNETT BLVD) COLLISION DIAGRAM (2012-2015)

SHEET NO. 1

$USER$ $DATE$ $TIME$ $FILE$




| REVISIONS | | | | AECOM<br>7800 CONGRESS AVENUE<br>BOCA RATON, FL 33487<br>TEL (561) 862 1051 | STATE OF FLORIDA<br>DEPARTMENT OF TRANSPORTATION | | | SR 134 (NORDE DR-WESCONNETT BLVD)<br>COLLISION DIAGRAM (2012-2015) | SHEET NO. |
|---|---|---|---|---|---|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION | | ROAD NO. | COUNTY | FINANCIAL PROJECT ID | | |
| | | | | | SR 134 | DUVAL | | | 2 |

$USERS $DATES $TIMES $FILES

CHURCH

APPLEBEE'S

WINGSTOP RESTAURANT

SR 134 (103RD STREET)

BLANDING BLVD

POPEYES

KRISPY KREME

WENDY'S

CHECK CASHERS

CVS

CAR RENTAL

FITNESS CENTER

PHARMACY

KRYSTAL RESTAURANT

X 2012
X 2013
X 2014
X 2015

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| SR 134 | DUVAL | |

$USERS $DATES $TIMES $FILES

# SR 134 (NORDE DR-WESCONNETT BLVD)
## COLLISION DIAGRAM (2012-2015)

SHEET NO. 3


| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| SR 134 | DUVAL | |

# SR 134 (NORDE DR-WESCONNETT BLVD) COLLISION DIAGRAM (2012-2015)

SHEET NO. 4

$USER$ $DATE$ $TIME$ $FILE$

# State of Florida Department of Transportation
## CRASH SUMMARY

SECTION: 72220000 STATE ROUTE: 134
INTERSECTING ROADWAY: SR 134 and James Road M.P. 8.**604** TO **8.704** ENGINEER: FDOT D2
STUDY PERIOD: FROM 1/ 2012 TO 12/ 2012 COUNTY: Duval

| No. | MILE POST | DATE | DAY | TIME | CRASH TYPE | FATAL | INJURIES | PROP DAM | DAY / NIGHT | WET / DRY | CONTRIBUTING CAUSE (VEHICLE ONLY) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 8.607 | 08/22/12 | Wed | 1240 | Angle | 0 | 3 | 0 | Day | Wet | Failed to Yield Right-Of-Way |
| 2 | 8.610 | 06/26/12 | Tue | 2024 | Left-Turn | 0 | 1 | 0 | Night | Wet | Other Contributing Action |
| 3 | 8.626 | 10/12/12 | Fri | 1349 | Angle | 0 | 0 | 1 | Day | Dry | Failed to Yield Right-Of-Way |
| 4 | 8.635 | 02/17/12 | Fri | 1612 | Angle | 0 | 0 | 1 | Day | Wet | Failed to Yield Right-Of-Way |
| 5 | 8.640 | 04/08/12 | Sun | 1215 | Rear-End | 0 | 0 | 1 | Day | Dry | Followed too Closely |
| 6 | 8.645 | 12/05/12 | Wed | 1725 | Rear-End | 0 | 5 | 0 | Night | Dry | Careless or Negligent Manner |
| 7 | 8.645 | 06/04/12 | Mon | 1130 | Right-Turn | 0 | 1 | 0 | Day | Dry | Careless or Negligent Manner |
| 8 | 8.649 | 05/01/12 | Tue | 0950 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 9 | 8.649 | 06/18/12 | Mon | 1545 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 10 | 8.654 | 08/01/12 | Wed | 0930 | Left-Turn | 0 | 1 | 0 | Day | Dry | Failed to Yield Right-Of-Way |
| 11 | 8.654 | 01/18/12 | Wed | 0808 | Angle | 0 | 7 | 0 | Day | Wet | Ran Red Light |
| 12 | 8.654 | 08/25/12 | Sat | 1000 | Rear-End | 0 | 0 | 1 | Day | Dry | No Contributing Action |
| 13 | 8.654 | 01/19/12 | Thu | 1722 | Angle | 0 | 1 | 0 | Day | Dry | Failed to Yield Right-Of-Way |
| 14 | 8.654 | 04/26/12 | Thu | 1718 | Left-Turn | 0 | 0 | 1 | Day | Dry | Failed to Yield Right-Of-Way |
| 15 | 8.654 | 06/07/12 | Thu | 1831 | Pedalcycle | 0 | 1 | 0 | Day | Wet | No Contributing Action |
| 16 | 8.654 | 01/21/12 | Sat | 1233 | Angle | 0 | 0 | 1 | Day | Dry | Failed to Yield Right-Of-Way |
| 17 | 8.654 | 09/01/12 | Sat | 2222 | Left-Turn | 0 | 0 | 1 | Night | Dry | Failed to Yield Right-Of-Way |
| 18 | 8.654 | 07/29/12 | Sun | 2113 | Left-Turn | 0 | 1 | 0 | Night | Dry | No Contributing Action |
| 19 | 8.654 | 10/05/12 | Fri | 1915 | Left-Turn | 0 | 2 | 0 | Night | Wet | Failed to Yield Right-Of-Way |
| 20 | 8.654 | 05/07/12 | Mon | 1720 | Pedestrian | 1 | 1 | 0 | Day | Wet | Drove too Fast for Conditions |
| 21 | 8.654 | 05/07/12 | Mon | 1826 | Pedalcycle | 0 | 1 | 0 | Day | Wet | Failed to Yield Right-Of-Way |
| 22 | 8.654 | 06/06/12 | Wed | 1138 | Angle | 0 | 1 | 0 | Day | Dry | Other Contributing Action |
| 23 | 8.654 | 07/17/12 | Tue | 1345 | Rear-End | 0 | 1 | 0 | Day | Dry | Other Contributing Action |
| 24 | 8.654 | 06/21/12 | Thu | 1658 | Sideswipe | 0 | 0 | 1 | Day | Dry | Other Contributing Action |
| 25 | 8.654 | 07/09/12 | Mon | 1730 | Rear-End | 0 | 0 | 1 | Day | Dry | No Contributing Action |
| 26 | 8.654 | 09/24/12 | Mon | 1020 | Angle | 0 | 1 | 0 | Day | Dry | Ran Red Light |
| 27 | 8.657 | 06/01/12 | Fri | 1504 | Angle | 0 | 0 | 1 | Day | Dry | Failed to Yield Right-Of-Way |
| 28 | 8.658 | 05/29/12 | Tue | 1932 | Sideswipe | 0 | 1 | 0 | Day | Wet | Careless or Negligent Manner |
| 29 | 8.658 | 07/03/12 | Tue | 2000 | Rear-End | 0 | 0 | 1 | Night | Dry | No Contributing Action |
| 30 | 8.673 | 07/26/12 | Thu | 1801 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |

| Total No. | Fatal | Injury | PDO | Rear-End | Head-On | Angle | Left-Turn | Right-Turn | Sideswipe | Backed Into | Ped/Bike | Parked Car | Fixed Object | Ran into Water | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 | 1 | 16 | 14 | 9 | 0 | 9 | 6 | 1 | 2 | 0 | 3 | 0 | 0 | 0 | 0 |
| Percent | 3.33% | 53.33% | 46.67% | 30.00% | 0.00% | 30.00% | 20.00% | 3.33% | 6.67% | 0.00% | 10.00% | 0.00% | 0.00% | 0.00% | 0.00% |

| Contrib. Cause | Day | Night | Wet | Dry | Careless Driving | FTYRW | Improper Turn | Ran Red Light | Exceeded Speed | Improper Passing | Disreg Cntl Dev | Erratic/ Aggress | Ran off Road | DUI | Wrong Way |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | 24 | 6 | 9 | 21 | 6 | 11 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| Percent | 80.00% | 20.00% | 30.00% | 70.00% | 20.00% | 36.67% | 0.00% | 6.67% | 3.33% | 0.00% | 0.00% | 0.00% | 0.00% | 3.33% | 0.00% |

# State of Florida Department of Transportation
## CRASH SUMMARY

SECTION: 72220000 STATE ROUTE: 134

INTERSECTING ROADWAY: SR 134 and James Road M.P. 8.**604** TO **8.704** ENGINEER: FDOT D2

STUDY PERIOD: FROM 1/ 2013 TO 12/ 2013 COUNTY: Duval

| No. | MILE POST | DATE | DAY | TIME | CRASH TYPE | FATAL | INJURIES | PROP DAM | DAY / NIGHT | WET / DRY | CONTRIBUTING CAUSE (VEHICLE ONLY) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 8.616 | 08/01/13 | Thu | 1815 | Angle | 0 | 2 | 0 | Day | Wet | Failed to Yield Right-Of-Way |
| 2 | 8.635 | 07/01/13 | Mon | 1344 | Sideswipe | 0 | 0 | 1 | Day | Wet | Improper Turn |
| 3 | 8.635 | 08/05/13 | Mon | 1454 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 4 | 8.639 | 01/29/13 | Tue | 1800 | Rear-End | 0 | 1 | 0 | Night | Dry | Careless or Negligent Manner |
| 5 | 8.646 | 01/14/13 | Mon | 1712 | Rear-End | 0 | 0 | 1 | Night | Dry | Careless or Negligent Manner |
| 6 | 8.648 | 08/17/13 | Sat | 2006 | Rear-End | 0 | 0 | 1 | Night | Wet | Careless or Negligent Manner |
| 7 | 8.650 | 08/19/13 | Mon | 1407 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 8 | 8.651 | 12/29/13 | Sun | 1322 | Rear-End | 0 | 0 | 1 | Day | Dry | Followed too Closely |
| 9 | 8.653 | 03/08/13 | Fri | 1520 | Head-On | 0 | 3 | 0 | Day | Dry | Careless or Negligent Manner |
| 10 | 8.653 | 12/23/13 | Mon | 1800 | Rear-End | 0 | 0 | 1 | Night | Dry | Careless or Negligent Manner |
| 11 | 8.654 | 03/17/13 | Sun | 0809 | Angle | 0 | 0 | 1 | Day | Dry | Ran Red Light |
| 12 | 8.654 | 01/23/13 | Wed | 1926 | Rear-End | 0 | 0 | 1 | Night | Dry | Careless or Negligent Manner |
| 13 | 8.654 | 06/15/13 | Sat | 1922 | Angle | 0 | 1 | 0 | Day | Dry | Improper Passing |
| 14 | 8.654 | 03/25/13 | Mon | 1755 | Angle | 0 | 0 | 1 | Day | Dry | Ran Red Light |
| 15 | 8.654 | 07/24/13 | Wed | 2237 | Left-Turn | 0 | 0 | 1 | Night | Dry | Improper Turn |
| 16 | 8.654 | 01/15/13 | Tue | 1650 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 17 | 8.654 | 10/13/13 | Sun | 1911 | Left-Turn | 0 | 4 | 0 | Night | Dry | Failed to Yield Right-Of-Way |
| 18 | 8.654 | 12/03/13 | Tue | 1122 | Angle | 0 | 1 | 0 | Day | Dry | No Contributing Action |
| 19 | 8.654 | 07/18/13 | Thu | 1720 | Angle | 0 | 0 | 1 | Day | Dry | Failed to Yield Right-Of-Way |
| 20 | 8.654 | 07/17/13 | Wed | 1725 | Left-Turn | 0 | 0 | 1 | Day | Dry | Failed to Yield Right-Of-Way |
| 21 | 8.654 | 09/18/13 | Wed | 2020 | Left-Turn | 0 | 0 | 1 | Night | Dry | Failed to Yield Right-Of-Way |
| 22 | 8.654 | 10/03/13 | Thu | 1811 | Rear-End | 0 | 0 | 1 | Day | Dry | Not Coded |
| 23 | 8.654 | 10/01/13 | Tue | 1005 | Backed Into | 0 | 0 | 1 | Day | Dry | Improper Backing |
| 24 | 8.658 | 11/26/13 | Tue | 1250 | Rear-End | 0 | 0 | 1 | Day | Wet | Not Coded |
| 25 | 8.662 | 06/25/13 | Tue | 1520 | Left-Turn | 0 | 0 | 1 | Day | Dry | Failed to Yield Right-Of-Way |
| 26 | 8.673 | 05/04/13 | Sat | 0005 | Rear-End | 0 | 0 | 1 | Night | Wet | Careless or Negligent Manner |
| 27 | 8.682 | 11/05/13 | Tue | 1433 | Angle | 0 | 0 | 1 | Day | Dry | Failed to Yield Right-Of-Way |
| 28 | 8.692 | 04/26/13 | Fri | 1525 | Rear-End | 0 | 1 | 0 | Day | Dry | Followed too Closely |
| 29 | 8.692 | 12/31/13 | Tue | 1749 | Left-Turn | 0 | 0 | 1 | Night | Dry | Failed to Yield Right-Of-Way |

| Total No. | Fatal | Injury | PDO | Rear-End | Head-On | Angle | Left-Turn | Right-Turn | Sideswipe | Backed Into | Ped/Bike | Parked Car | Fixed Object | Ran into Water | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 29 | 0 | 7 | 22 | 13 | 1 | 7 | 6 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| Percent | 0.00% | 24.14% | 75.86% | 44.83% | 3.45% | 24.14% | 20.69% | 0.00% | 3.45% | 3.45% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |

| Contrib. Cause | Day | Night | Wet | Dry | Careless Driving | FTYRW | Improper Turn | Ran Red Light | Exceeded Speed | Improper Passing | Disreg Cntl Dev | Erratic/ Aggress | Ran off Road | DUI | Wrong Way |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | 19 | 10 | 5 | 24 | 10 | 8 | 2 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| Percent | 65.52% | 34.48% | 17.24% | 82.76% | 34.48% | 27.59% | 6.90% | 6.90% | 0.00% | 3.45% | 0.00% | 0.00% | 0.00% | 3.45% | 0.00% |

# State of Florida Department of Transportation
## CRASH SUMMARY

SECTION: 72220000 STATE ROUTE: 134

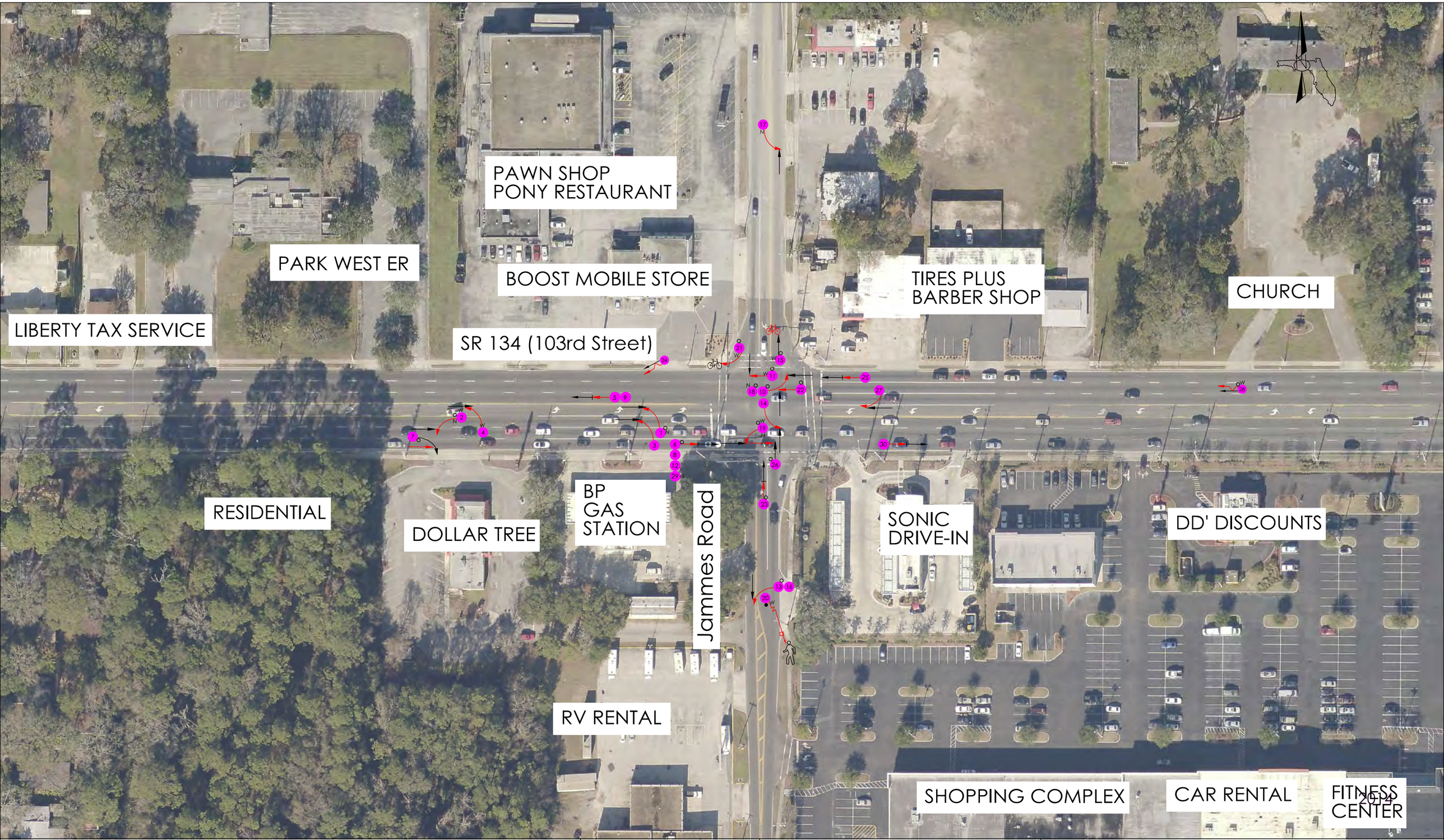
INTERSECTING ROADWAY: SR 134 and James Road M.P. 8.**604** TO **8.704** ENGINEER: FDOT D2

STUDY PERIOD: FROM 1/ 2014 TO 12/ 2014 COUNTY: Duval

| No. | MILE POST | DATE | DAY | TIME | CRASH TYPE | FATAL | INJURIES | PROP DAM | DAY / NIGHT | WET / DRY | CONTRIBUTING CAUSE (VEHICLE ONLY) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 8.616 | 12/29/14 | Mon | 1715 | Head-On | 0 | 1 | 0 | Day | Dry | No Contributing Action |
| 2 | 8.635 | 05/05/14 | Mon | 1410 | Angle | 0 | 0 | 1 | Day | Dry | Not Coded |
| 3 | 8.635 | 12/03/14 | Wed | 1925 | Rear-End | 0 | 1 | 0 | Night | Dry | Careless or Negligent Manner |
| 4 | 8.640 | 02/18/14 | Tue | 1035 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 5 | 8.654 | 01/02/14 | Thu | 1325 | Right-Turn | 0 | 0 | 1 | Day | Wet | Failed to Yield Right-Of-Way |
| 6 | 8.654 | 04/26/14 | Sat | 1720 | Angle | 0 | 0 | 1 | Day | Dry | Failed to Yield Right-Of-Way |
| 7 | 8.654 | 08/31/14 | Sun | 1530 | Rear-End | 0 | 1 | 0 | Day | Dry | Careless or Negligent Manner |
| 8 | 8.654 | 01/31/14 | Fri | 1140 | Pedestrian | 0 | 1 | 0 | Day | Dry | No Contributing Action |
| 9 | 8.654 | 11/30/14 | Sun | 1208 | Left-Turn | 0 | 2 | 0 | Day | Dry | Failed to Yield Right-Of-Way |
| 10 | 8.654 | 04/04/14 | Fri | 1305 | Angle | 0 | 0 | 1 | Day | Dry | Failed to Yield Right-Of-Way |
| 11 | 8.654 | 08/07/14 | Thu | 0900 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 12 | 8.654 | 07/28/14 | Mon | 1215 | Sideswipe | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 13 | 8.655 | 03/29/14 | Sat | 1200 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 14 | 8.658 | 09/10/14 | Wed | 1820 | Rear-End | 0 | 0 | 1 | Night | Dry | Not Coded |
| 15 | 8.658 | 01/08/14 | Wed | 1603 | Sideswipe | 0 | 0 | 1 | Day | Dry | Failed To Keep In Proper Lane |
| 16 | 8.659 | 10/31/14 | Fri | 1840 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 17 | 8.668 | 05/01/14 | Thu | 1944 | Angle | 0 | 0 | 1 | Night | Wet | Failed to Yield Right-Of-Way |

| Total No. | Fatal | Injury | PDO | Rear-End | Head-On | Angle | Left-Turn | Right-Turn | Sideswipe | Backed Into | Ped/Bike | Parked Car | Fixed Object | Ran into Water | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 0 | 5 | 12 | 7 | 1 | 4 | 1 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 |
| Percent | 0.00% | 29.41% | 70.59% | 41.18% | 5.88% | 23.53% | 5.88% | 5.88% | 11.76% | 0.00% | 5.88% | 0.00% | 0.00% | 0.00% | 0.00% |

| Contrib. Cause | Day | Night | Wet | Dry | Careless Driving | FTYRW | Improper Turn | Ran Red Light | Exceeded Speed | Improper Passing | Disreg Cntl Dev | Erratic/ Aggress | Ran off Road | DUI | Wrong Way |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | 14 | 3 | 2 | 15 | 7 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Percent | 82.35% | 17.65% | 11.76% | 88.24% | 41.18% | 29.41% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 5.88% | 0.00% |




LEGEND:

- BACKING VEHICLE
- SIDESWIPE
- OUT OF CONTROL
- PEDESTRIAN /BIKE COLLISION
- REAR-END COLLISION
- HEAD-ON COLLISION
- OVERTURNED VEHICLE
- PARKED VEHICLE
- PERSONAL INJURY
- FATALITY
- CRASH DETAILS UNKNOWN
- LEFT TURN COLLISION
- RIGHT TURN COLLISION
- COMMERCIAL TRUCK
- N DARK LIGHTING CONDITION
- W WET CONDITIONS
- FIXED/MOVEABLE OBJECT
- X OCCUPANT FELL FROM VEHICLE


AECOM
7800 CONGRESS AVENUE, SUITE 200
BOCA RATON, FL 33487
TEL: (561) 994-6500

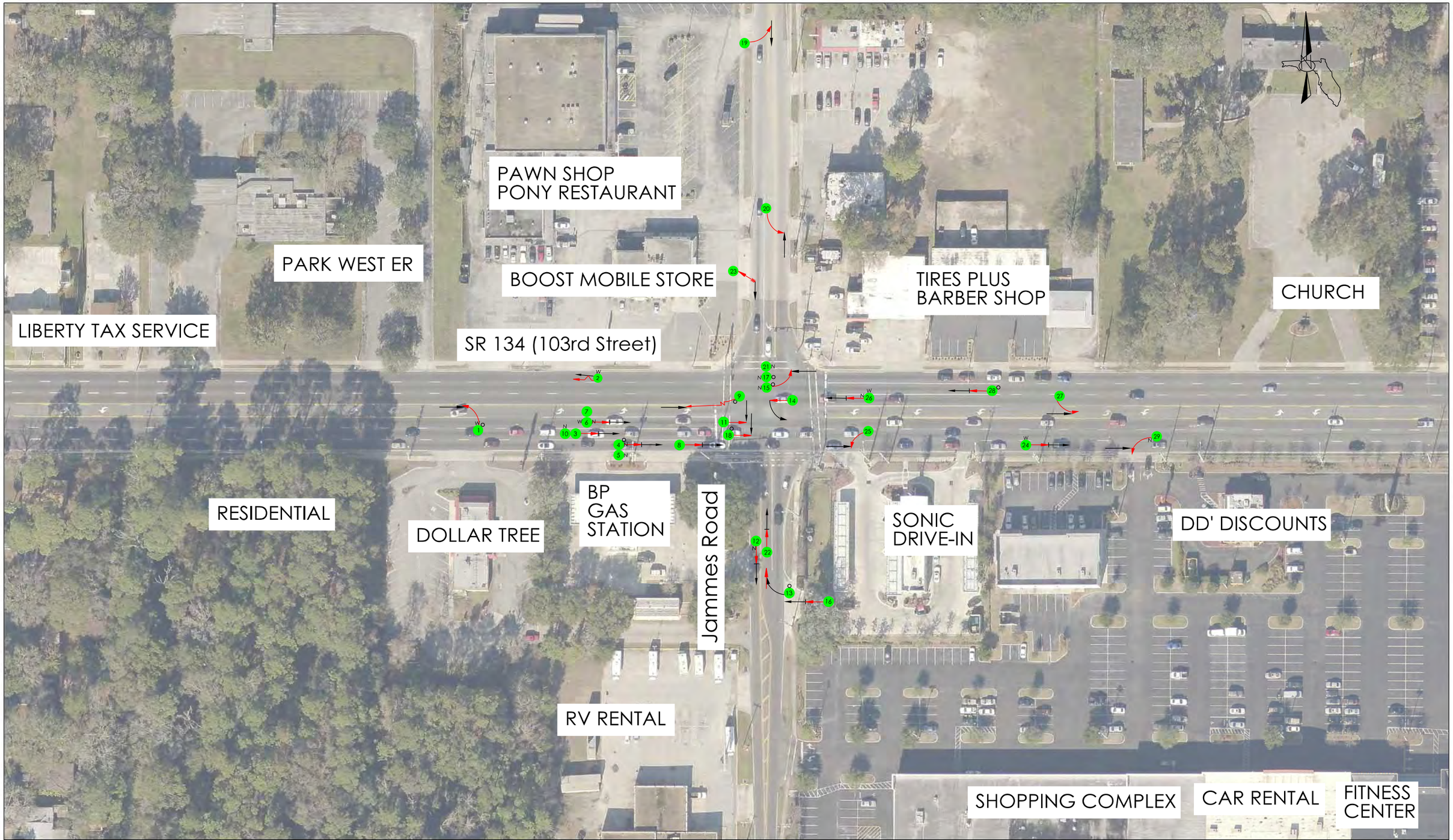

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| SR-134 | DUVAL COUNTY | 211079-8-32-01 |

# COLLISION DIAGRAM

SR 134 AND JAMMES ROAD

2012




LEGEND:

- BACKING VEHICLE
- SIDESWIPE
- OUT OF CONTROL
- PEDESTRIAN /BIKE COLLISION
- REAR-END COLLISION
- HEAD-ON COLLISION
- OVERTURNED VEHICLE
- PARKED VEHICLE
- PERSONAL INJURY
- FATALITY
- CRASH DETAILS UNKNOWN
- LEFT TURN COLLISION
- RIGHT TURN COLLISION
- COMMERCIAL TRUCK
- N DARK LIGHTING CONDITION
- W WET CONDITIONS
- FIXED/MOVEABLE OBJECT
- X OCCUPANT FELL FROM VEHICLE

AECOM
7800 CONGRESS AVENUE, SUITE 200
BOCA RATON, FL 33487
TEL: (561) 994-6500

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| SR-134 | DUVAL COUNTY | 211079-8-32-01 |

# COLLISION DIAGRAM

SR 134 AND JAMMES ROAD

YEAR 2013


LEGEND:

- BACKING VEHICLE
- SIDESWIPE
- OUT OF CONTROL
- PEDESTRIAN /BIKE COLLISION
- REAR-END COLLISION
- HEAD-ON COLLISION
- OVERTURNED VEHICLE
- PARKED VEHICLE
- PERSONAL INJURY
- FATALITY
- CRASH DETAILS UNKNOWN
- LEFT TURN COLLISION
- RIGHT TURN COLLISION
- COMMERCIAL TRUCK

| | |
|---|---|
| N | DARK LIGHTING CONDITION |
| W | WET CONDITIONS |
| □ | FIXED/MOVEABLE OBJECT |
| X | OCCUPANT FELL FROM VEHICLE |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| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| SR-134 | DUVAL COUNTY | 211079-8-32-01 |

# COLLISION DIAGRAM

SR 134 AND JAMMES ROAD

2014

# State of Florida Department of Transportation
## CRASH SUMMARY

SECTION: 72220000 STATE ROUTE: 134

INTERSECTING ROADWAY: SR 134 at SR 21 M.P. **8.797** TO **8.897** ENGINEER: FDOT D2

STUDY PERIOD: FROM 1/ 2012 TO 12/ 2012 COUNTY: Duval

| No. | MILE POST | DATE | DAY | TIME | CRASH TYPE | FATAL | INJURIES | PROP DAM | DAY / NIGHT | WET / DRY | CONTRIBUTING CAUSE (VEHICLE ONLY) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.993 | 06/26/12 | Tue | 1640 | Right-Turn | 0 | 0 | 1 | Day | Wet | Other Contributing Action |
| 2 | 4.021 | 07/26/12 | Thu | 1000 | Left-Turn | 0 | 2 | 0 | Day | Dry | Improper Turn |
| 3 | 4.026 | 07/23/12 | Mon | 1605 | Sideswipe | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 4 | 4.052 | 02/23/12 | Thu | 1836 | Left-Turn | 0 | 1 | 0 | Night | Dry | Failed to Yield Right-Of-Way |
| 5 | 4.064 | 03/05/12 | Mon | 1059 | Right-Turn | 0 | 0 | 1 | Day | Dry | Failed to Yield Right-Of-Way |
| 6 | 4.083 | 02/18/12 | Sat | 1420 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 7 | 4.083 | 11/02/12 | Fri | 1330 | Sideswipe | 0 | 0 | 1 | Day | Dry | Failed To Keep In Proper Lane |
| 8 | 4.102 | 02/16/12 | Thu | 1137 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 9 | 4.102 | 04/28/12 | Sat | 1134 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 10 | 4.102 | 06/25/12 | Mon | 1735 | Rear-End | 0 | 0 | 1 | Day | Wet | Careless or Negligent Manner |
| 11 | 4.112 | 02/07/12 | Tue | 1216 | Sideswipe | 0 | 0 | 1 | Day | Dry | Other Contributing Action |
| 12 | 4.112 | 09/04/12 | Tue | 1520 | Sideswipe | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 13 | 4.115 | 09/13/12 | Thu | 1015 | Right-Turn | 0 | 0 | 1 | Day | Wet | Careless or Negligent Manner |
| 14 | 4.115 | 11/17/12 | Sat | 1845 | Rear-End | 0 | 3 | 0 | Night | Dry | Careless or Negligent Manner |
| 15 | 4.121 | 01/14/12 | Sat | 1413 | Rear-End | 0 | 1 | 0 | Day | Dry | Careless or Negligent Manner |
| 16 | 4.121 | 02/25/12 | Sat | 1915 | Angle | 0 | 0 | 1 | Night | Dry | Careless or Negligent Manner |
| 17 | 4.121 | 07/04/12 | Wed | 0625 | Left-Turn | 0 | 0 | 1 | Day | Dry | Improper Turn |
| 18 | 4.121 | 07/29/12 | Sun | 1543 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 19 | 4.121 | 09/30/12 | Sun | 2120 | Left-Turn | 0 | 1 | 0 | Night | Wet | No Contributing Action |
| 20 | 4.121 | 03/09/12 | Fri | 1606 | Rear-End | 0 | 1 | 0 | Day | Dry | Careless or Negligent Manner |
| 21 | 4.121 | 09/12/12 | Wed | 0615 | Left-Turn | 0 | 1 | 0 | Night | Wet | Failed to Yield Right-Of-Way |
| 22 | 4.121 | 03/17/12 | Sat | 1305 | Left-Turn | 0 | 1 | 0 | Day | Dry | Failed to Yield Right-Of-Way |
| 23 | 4.121 | 05/30/12 | Wed | 1421 | Angle | 0 | 0 | 1 | Day | Dry | Failed to Yield Right-Of-Way |
| 24 | 4.121 | 06/01/12 | Fri | 2041 | Head-On | 0 | 0 | 1 | Night | Dry | Careless or Negligent Manner |
| 25 | 4.121 | 07/11/12 | Wed | 1030 | Rear-End | 0 | 0 | 1 | Day | Dry | No Contributing Action |
| 26 | 4.121 | 08/28/12 | Tue | 1550 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 27 | 4.121 | 07/28/12 | Sat | 1355 | Left-Turn | 0 | 2 | 0 | Day | Dry | Failed to Yield Right-Of-Way |
| 28 | 4.121 | 11/29/12 | Thu | 2345 | Rear-End | 0 | 0 | 1 | Night | Dry | Careless or Negligent Manner |
| 29 | 4.123 | 09/18/12 | Tue | 1325 | Rear-End | 0 | 2 | 0 | Day | Wet | Careless or Negligent Manner |
| 30 | 4.126 | 06/23/12 | Sat | 1615 | Curb | 0 | 0 | 1 | Day | Wet | Careless or Negligent Manner |
| 31 | 4.130 | 04/17/12 | Tue | 1508 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 32 | 4.130 | 05/31/12 | Thu | 1357 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 33 | 4.133 | 10/26/12 | Fri | 1108 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 34 | 4.140 | 11/30/12 | Fri | 2130 | Rear-End | 0 | 2 | 0 | Night | Wet | Careless or Negligent Manner |
| 35 | 4.140 | 05/08/12 | Tue | 0840 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 36 | 4.140 | 10/30/12 | Tue | 1400 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 37 | 4.146 | 11/30/12 | Fri | 1538 | Angle | 0 | 2 | 0 | Day | Dry | Failed to Yield Right-Of-Way |
| 38 | 4.149 | 06/01/12 | Fri | 0948 | Angle | 0 | 0 | 1 | Day | Dry | No Contributing Action |
| 39 | 4.159 | 10/17/12 | Wed | 1430 | Rear-End | 0 | 0 | 1 | Day | Dry | Followed too Closely |
| 40 | 4.159 | 07/20/12 | Fri | 1755 | Pedestrian | 0 | 1 | 0 | Day | Dry | No Contributing Action |
| 41 | 4.159 | 09/17/12 | Mon | 0843 | Rear-End | 0 | 2 | 0 | Day | Dry | Careless or Negligent Manner |
| 42 | 8.823 | 10/10/12 | Wed | 1737 | Rear-End | 0 | 2 | 0 | Day | Dry | Careless or Negligent Manner |
| 43 | 8.828 | 03/02/12 | Fri | 1614 | Rear-End | 0 | 1 | 0 | Day | Dry | Careless or Negligent Manner |
| 44 | 8.833 | 10/11/12 | Thu | 1406 | Angle | 0 | 0 | 1 | Day | Dry | Failed to Yield Right-Of-Way |
| 45 | 8.840 | 09/30/12 | Sun | 1700 | Sideswipe | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 46 | 8.844 | 12/16/12 | Sun | 1211 | Rear-End | 0 | 1 | 0 | Day | Dry | Careless or Negligent Manner |
| 47 | 8.846 | 02/02/12 | Thu | 1350 | Rear-End | 0 | 1 | 0 | Day | Dry | Careless or Negligent Manner |
| 48 | 8.847 | 02/20/12 | Mon | 1905 | Angle | 0 | 1 | 0 | Night | Dry | Failed to Yield Right-Of-Way |
| 49 | 8.847 | 06/21/12 | Thu | 2325 | Left-Turn | 0 | 0 | 1 | Night | Dry | Failed to Yield Right-Of-Way |
| 50 | 8.847 | 08/19/12 | Sun | 0318 | Angle | 0 | 1 | 0 | Night | Dry | Ran Red Light |
| 51 | 8.847 | 10/06/12 | Sat | 2232 | Angle | 0 | 0 | 1 | Night | Dry | Careless or Negligent Manner |
| 52 | 8.847 | 04/27/12 | Fri | 1228 | Right-Turn | 0 | 0 | 1 | Day | Dry | Failed to Yield Right-Of-Way |
| 53 | 8.847 | 05/30/12 | Wed | 0723 | Angle | 0 | 0 | 1 | Day | Dry | Ran Red Light |
| 54 | 8.855 | 02/22/12 | Wed | 0959 | Right-Turn | 0 | 0 | 1 | Day | Dry | Other Contributing Action |
| 55 | 8.856 | 04/02/12 | Mon | 1530 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 56 | 8.856 | 02/24/12 | Fri | 1525 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 57 | 8.861 | 09/20/12 | Thu | 2107 | Other Fixed Object | 0 | 0 | 1 | Night | Wet | No Contributing Action |

| Total No. | Fatal | Injury | PDO | Rear-End | Head-On | Angle | Left-Turn | Right-Turn | Sideswipe | Backed Into | Ped/Bike | Parked Car | Fixed Object | Ran into Water | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 57 | 0 | 20 | 37 | 26 | 1 | 9 | 8 | 5 | 5 | 0 | 1 | 0 | 2 | 0 | 0 |
| Percent | 0.00% | 35.09% | 64.91% | 45.61% | 1.75% | 15.79% | 14.04% | 8.77% | 8.77% | 0.00% | 1.75% | 0.00% | 3.51% | 0.00% | 0.00% |

| Contrib. Cause | Day | Night | Wet | Dry | Careless Driving | FTYRW | Improper Turn | Ran Red Light | Exceeded Speed | Improper Passing | Disreg Cntl Dev | Erratic/ Aggress | Ran off Road | DUI | Wrong Way |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | 44 | 13 | 9 | 48 | 32 | 11 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 0 |
| Percent | 77.19% | 22.81% | 15.79% | 84.21% | 56.14% | 19.30% | 3.51% | 3.51% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 7.02% | 0.00% |

# State of Florida Department of Transportation
## CRASH SUMMARY

SECTION: 72220000 STATE ROUTE: 134

INTERSECTING ROADWAY: SR 134 at SR 21 M.P. 8.**797** TO **8.897** ENGINEER: FDOT D2

STUDY PERIOD: FROM 1/ 2013 TO 12/ 2013 COUNTY: Duval

| No. | MILE POST | DATE | DAY | TIME | CRASH TYPE | FATAL | INJURIES | PROP DAM | DAY / NIGHT | WET / DRY | CONTRIBUTING CAUSE (VEHICLE ONLY) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.021 | 01/12/13 | Sat | 1526 | Rear-End | 0 | 1 | 0 | Day | Dry | Careless or Negligent Manner |
| 2 | 4.026 | 01/22/13 | Tue | 2204 | Backed Into | 0 | 0 | 1 | Night | Dry | Improper Backing |
| 3 | 4.026 | 03/29/13 | Fri | 1600 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 4 | 4.026 | 05/31/13 | Fri | 0840 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 5 | 4.026 | 10/06/13 | Sun | 1405 | Angle | 0 | 2 | 0 | Day | Dry | Failed to Yield Right-Of-Way |
| 6 | 4.064 | 07/12/13 | Fri | 1650 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 7 | 4.083 | 12/17/13 | Tue | 1500 | Thrown or Falling Object | 0 | 0 | 1 | Day | Dry | Other Contributing Action |
| 8 | 4.102 | 11/13/13 | Wed | 0915 | Left-Turn | 0 | 0 | 1 | Day | Dry | Improper Turn |
| 9 | 4.107 | 09/16/13 | Mon | 1328 | Rear-End | 0 | 1 | 0 | Day | Dry | Careless or Negligent Manner |
| 10 | 4.112 | 02/25/13 | Mon | 1327 | Overturn/Rollover | 0 | 1 | 0 | Day | Wet | Other Contributing Action |
| 11 | 4.112 | 05/06/13 | Mon | 1740 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 12 | 4.112 | 11/08/13 | Fri | 1300 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 13 | 4.115 | 08/24/13 | Sat | 1422 | Left-Turn | 0 | 0 | 1 | Day | Dry | Failed to Yield Right-Of-Way |
| 14 | 4.121 | 01/02/13 | Wed | 1035 | Left-Turn | 0 | 1 | 0 | Day | Dry | Ran Red Light |
| 15 | 4.121 | 05/05/13 | Sun | 0313 | Angle | 0 | 0 | 1 | Night | Wet | Careless or Negligent Manner |
| 16 | 4.121 | 05/05/13 | Sun | 1330 | Angle | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 17 | 4.121 | 07/11/13 | Thu | 1915 | Left-Turn | 0 | 0 | 1 | Night | Wet | Failed to Yield Right-Of-Way |
| 18 | 4.126 | 04/05/13 | Fri | 1130 | Rear-End | 0 | 0 | 1 | Day | Wet | Other Contributing Action |
| 19 | 4.129 | 06/07/13 | Fri | 1935 | Rear-End | 0 | 1 | 0 | Day | Dry | Careless or Negligent Manner |
| 20 | 4.138 | 05/28/13 | Tue | 1252 | Angle | 0 | 2 | 0 | Day | Dry | Failed to Yield Right-Of-Way |
| 21 | 4.140 | 10/23/13 | Wed | 0330 | Sideswipe | 0 | 0 | 1 | Night | Wet | Careless or Negligent Manner |
| 22 | 4.150 | 10/13/13 | Sun | 2030 | Pedestrian | 0 | 1 | 0 | Night | Dry | No Contributing Action |
| 23 | 4.159 | 06/21/13 | Fri | 1800 | Angle | 0 | 0 | 1 | Day | Wet | Failed to Yield Right-Of-Way |
| 24 | 8.828 | 01/17/13 | Thu | 1526 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 25 | 8.828 | 06/02/13 | Sun | 1407 | Sideswipe | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 26 | 8.828 | 06/27/13 | Thu | 1430 | Angle | 0 | 1 | 0 | Day | Dry | Failed to Yield Right-Of-Way |
| 27 | 8.838 | 03/05/13 | Tue | 1820 | Rear-End | 0 | 0 | 1 | Night | Dry | Careless or Negligent Manner |
| 28 | 8.842 | 11/27/13 | Wed | 1552 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 29 | 8.844 | 07/01/13 | Mon | 2140 | Sideswipe | 0 | 0 | 1 | Night | Wet | Careless or Negligent Manner |
| 30 | 8.845 | 03/23/13 | Sat | 1040 | Right-Turn | 0 | 2 | 0 | Day | Wet | Improper Turn |
| 31 | 8.845 | 06/16/13 | Sun | 1032 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 32 | 8.847 | 11/12/13 | Tue | 2400 | Rear-End | 0 | 1 | 0 | Day | Dry | Careless or Negligent Manner |
| 33 | 8.847 | 06/19/13 | Wed | 1830 | Sideswipe | 0 | 0 | 1 | Day | Dry | Improper Turn |
| 34 | 8.847 | 06/14/13 | Fri | 0832 | Angle | 0 | 7 | 0 | Day | Dry | Ran Red Light |
| 35 | 8.847 | 10/09/13 | Wed | 2105 | Rear-End | 0 | 2 | 0 | Night | Dry | Careless or Negligent Manner |
| 36 | 8.847 | 12/19/13 | Thu | 1225 | Angle | 0 | 0 | 1 | Day | Dry | Failed to Yield Right-Of-Way |
| 37 | 8.848 | 12/24/13 | Tue | 0939 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 38 | 8.849 | 03/08/13 | Fri | 1305 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 39 | 8.853 | 04/12/13 | Fri | 1945 | Rear-End | 0 | 1 | 0 | Night | Dry | Careless or Negligent Manner |
| 40 | 8.861 | 02/06/13 | Wed | 1500 | Angle | 0 | 0 | 1 | Day | Dry | Failed to Yield Right-Of-Way |
| 41 | 8.875 | 09/19/13 | Thu | 1842 | Right-Turn | 0 | 0 | 1 | Day | Dry | Failed to Yield Right-Of-Way |
| 42 | 8.885 | 04/19/13 | Fri | 1715 | Sideswipe | 0 | 1 | 0 | Day | Dry | Careless or Negligent Manner |

| Total No. | Fatal | Injury | PDO | Rear-End | Head-On | Angle | Left-Turn | Right-Turn | Sideswipe | Backed Into | Ped/Bike | Parked Car | Fixed Object | Ran into Water | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 42 | 0 | 15 | 27 | 18 | 0 | 9 | 4 | 2 | 5 | 1 | 1 | 0 | 0 | 0 | 0 |
| Percent | 0.00% | 35.71% | 64.29% | 42.86% | 0.00% | 21.43% | 9.52% | 4.76% | 11.90% | 2.38% | 2.38% | 0.00% | 0.00% | 0.00% | 0.00% |

| Contrib. Cause | Day | Night | Wet | Dry | Careless Driving | FTYRW | Improper Turn | Ran Red Light | Exceeded Speed | Improper Passing | Disreg Cntl Dev | Erratic/ Aggress | Ran off Road | DUI | Wrong Way |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | 33 | 9 | 8 | 34 | 23 | 9 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| Percent | 78.57% | 21.43% | 19.05% | 80.95% | 54.76% | 21.43% | 7.14% | 4.76% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 4.76% | 0.00% |

# State of Florida Department of Transportation
## CRASH SUMMARY

SECTION: 72220000 STATE ROUTE: 134

INTERSECTING ROADWAY: SR 134 at SR 21 M.P. 8.**797** TO **8.897** ENGINEER: FDOT D2

STUDY PERIOD: FROM 1/ 2014 TO 12/ 2014 COUNTY: Duval

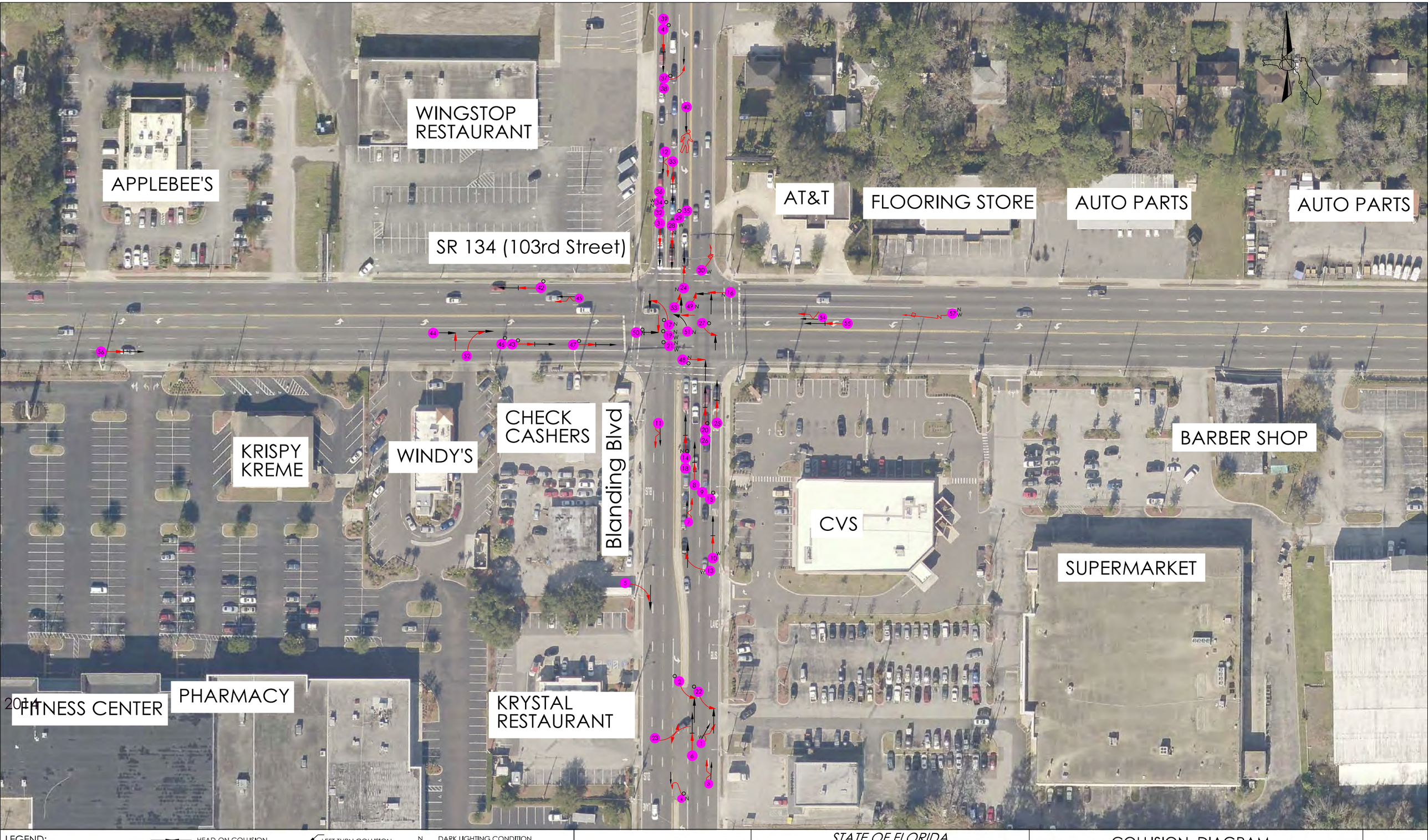
| No. | MILE POST | DATE | DAY | TIME | CRASH TYPE | FATAL | INJURIES | PROP DAM | DAY / NIGHT | WET / DRY | CONTRIBUTING CAUSE (VEHICLE ONLY) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.026 | 04/25/14 | Fri | 1834 | Head-On | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 2 | 4.064 | 11/26/14 | Wed | 1201 | Left-Turn | 0 | 0 | 1 | Day | Dry | Improper Turn |
| 3 | 4.069 | 02/22/14 | Sat | 1742 | Rear-End | 0 | 0 | 1 | Day | Dry | Improper Backing |
| 4 | 4.083 | 03/02/14 | Sun | 1200 | Backed Into | 0 | 0 | 1 | Day | Dry | Improper Backing |
| 5 | 4.112 | 04/05/14 | Sat | 0715 | Rear-End | 0 | 1 | 0 | Day | Dry | Careless or Negligent Manner |
| 6 | 4.113 | 09/16/14 | Tue | 1932 | Rear-End | 0 | 1 | 0 | Night | Wet | Careless or Negligent Manner |
| 7 | 4.116 | 06/24/14 | Tue | 1913 | Rear-End | 0 | 1 | 0 | Day | Dry | Careless or Negligent Manner |
| 8 | 4.116 | 06/20/14 | Fri | 1635 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 9 | 4.119 | 02/14/14 | Fri | 1519 | Sideswipe | 0 | 0 | 1 | Day | Dry | Failed To Keep In Proper Lane |
| 10 | 4.119 | 03/23/14 | Sun | 2012 | Rear-End | 0 | 0 | 1 | Night | Dry | Careless or Negligent Manner |
| 11 | 4.119 | 11/09/14 | Sun | 2220 | Rear-End | 0 | 3 | 0 | Night | Dry | Careless or Negligent Manner |
| 12 | 4.121 | 09/23/14 | Tue | 2105 | Left-Turn | 0 | 0 | 1 | Night | Wet | No Contributing Action |
| 13 | 4.121 | 02/19/14 | Wed | 1000 | Left-Turn | 0 | 2 | 0 | Day | Dry | Failed to Yield Right-Of-Way |
| 14 | 4.121 | 01/30/14 | Thu | 0555 | Pedestrian | 1 | 0 | 0 | Night | Wet | No Contributing Action |
| 15 | 4.121 | 03/22/14 | Sat | 1605 | Left-Turn | 0 | 5 | 0 | Day | Dry | Failed to Yield Right-Of-Way |
| 16 | 4.121 | 06/05/14 | Thu | 0900 | Left-Turn | 0 | 1 | 0 | Night | Dry | Failed to Yield Right-Of-Way |
| 17 | 4.121 | 07/01/14 | Tue | 0755 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 18 | 4.121 | 07/25/14 | Fri | 2140 | Left-Turn | 0 | 1 | 0 | Night | Dry | No Contributing Action |
| 19 | 4.121 | 08/03/14 | Sun | 2037 | Rear-End | 0 | 1 | 0 | Night | Dry | Careless or Negligent Manner |
| 20 | 4.121 | 08/23/14 | Sat | 0705 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 21 | 4.121 | 09/01/14 | Mon | 0255 | Left-Turn | 0 | 0 | 1 | Night | Dry | Careless or Negligent Manner |
| 22 | 4.121 | 11/24/14 | Mon | 1832 | Right-Turn | 0 | 1 | 0 | Night | Dry | Improper Turn |
| 23 | 4.121 | 11/17/14 | Mon | 1905 | Left-Turn | 0 | 0 | 1 | Night | Dry | Careless or Negligent Manner |
| 24 | 4.121 | 10/21/14 | Tue | 1000 | Left-Turn | 0 | 0 | 1 | Day | Dry | No Contributing Action |
| 25 | 4.121 | 11/08/14 | Sat | 0730 | Rear-End | 0 | 1 | 0 | Day | Dry | Careless or Negligent Manner |
| 26 | 4.124 | 03/01/14 | Sat | 1136 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 27 | 4.130 | 11/20/14 | Thu | 0725 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 28 | 4.135 | 12/09/14 | Tue | 1610 | Sideswipe | 0 | 0 | 1 | Day | Dry | Other Contributing Action |
| 29 | 4.140 | 03/17/14 | Mon | 0940 | Rear-End | 0 | 0 | 1 | Day | Wet | Careless or Negligent Manner |
| 30 | 4.140 | 11/04/14 | Tue | 1808 | Angle | 0 | 3 | 0 | Night | Dry | Failed to Yield Right-Of-Way |
| 31 | 4.149 | 07/22/14 | Tue | 1510 | Rear-End | 0 | 0 | 1 | Day | Wet | Careless or Negligent Manner |
| 32 | 4.149 | 12/21/14 | Sun | 0953 | Rear-End | 0 | 0 | 1 | Day | Wet | Careless or Negligent Manner |
| 33 | 4.159 | 03/05/14 | Wed | 1935 | Angle | 0 | 0 | 1 | Night | Wet | Failed to Yield Right-Of-Way |
| 34 | 4.168 | 02/01/14 | Sat | 1042 | Rear-End | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |
| 35 | 8.800 | 10/25/14 | Sat | 1717 | Sideswipe | 0 | 0 | 1 | Night | Dry | Improper Passing |
| 36 | 8.806 | 03/25/14 | Tue | 2210 | Right-Turn | 0 | 2 | 0 | Night | Dry | Failed to Yield Right-Of-Way |
| 37 | 8.838 | 11/21/14 | Fri | 1647 | Rear-End | 0 | 1 | 0 | Day | Dry | Careless or Negligent Manner |
| 38 | 8.847 | 02/03/14 | Mon | 1149 | Left-Turn | 0 | 2 | 0 | Day | Dry | Failed to Yield Right-Of-Way |
| 39 | 8.847 | 02/22/14 | Sat | 2155 | Right-Turn | 0 | 6 | 0 | Night | Dry | Failed To Keep In Proper Lane |
| 40 | 8.847 | 10/21/14 | Tue | 1640 | Rear-End | 0 | 1 | 0 | Day | Dry | Careless or Negligent Manner |
| 41 | 8.847 | 12/24/14 | Wed | 2350 | Left-Turn | 0 | 0 | 1 | Night | Dry | Failed to Yield Right-Of-Way |
| 42 | 8.851 | 03/08/14 | Sat | 2142 | Rear-End | 0 | 0 | 1 | Night | Dry | Careless or Negligent Manner |
| 43 | 8.852 | 03/17/14 | Mon | 1021 | Rear-End | 0 | 1 | 0 | Day | Wet | Careless or Negligent Manner |
| 44 | 8.858 | 11/18/14 | Tue | 1410 | Right-Turn | 0 | 0 | 1 | Day | Dry | No Contributing Action |
| 45 | 8.866 | 01/10/14 | Fri | 1314 | Sideswipe | 0 | 1 | 0 | Day | Dry | Careless or Negligent Manner |
| 46 | 8.871 | 12/17/14 | Wed | 0950 | Sideswipe | 0 | 0 | 1 | Day | Dry | Other Contributing Action |
| 47 | 8.885 | 01/02/14 | Thu | 1215 | Rear-End | 0 | 1 | 0 | Day | Wet | Careless or Negligent Manner |
| 48 | 8.885 | 12/13/14 | Sat | 1655 | Fence | 0 | 0 | 1 | Day | Dry | Careless or Negligent Manner |

| Total No. | Fatal | Injury | PDO | Rear-End | Head-On | Angle | Left-Turn | Right-Turn | Sideswipe | Backed Into | Ped/Bike | Parked Car | Fixed Object | Ran into Water | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 48 | 1 | 20 | 27 | 22 | 1 | 2 | 11 | 4 | 5 | 1 | 1 | 0 | 1 | 0 | 0 |
| Percent | 2.08% | 41.67% | 56.25% | 45.83% | 2.08% | 4.17% | 22.92% | 8.33% | 10.42% | 2.08% | 2.08% | 0.00% | 2.08% | 0.00% | 0.00% |

| Contrib. Cause | Day | Night | Wet | Dry | Careless Driving | FTYRW | Improper Turn | Ran Red Light | Exceeded Speed | Improper Passing | Disreg Cntl Dev | Erratic/ Aggress | Ran off Road | DUI | Wrong Way |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | 30 | 18 | 9 | 39 | 26 | 8 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 5 | 0 |
| Percent | 62.50% | 37.50% | 18.75% | 81.25% | 54.17% | 16.67% | 4.17% | 0.00% | 0.00% | 2.08% | 0.00% | 0.00% | 0.00% | 10.42% | 0.00% |

TOTAL ENTERING VEHICLES/ADT: 27,500

SPOT CRASH RATE: 4.782 CRASHES PER MILLION ENTERING VEHICLES




LEGEND:

- BACKING VEHICLE
- SIDESWIPE
- OUT OF CONTROL
- PEDESTRIAN /BIKE COLLISION
- REAR-END COLLISION
- HEAD-ON COLLISION
- OVERTURNED VEHICLE
- PARKED VEHICLE
- PERSONAL INJURY
- FATALITY
- CRASH DETAILS UNKNOWN
- LEFT TURN COLLISION
- RIGHT TURN COLLISION
- COMMERCIAL TRUCK
- N DARK LIGHTING CONDITION
- W WET CONDITIONS
- FIXED/MOVEABLE OBJECT
- X OCCUPANT FELL FROM VEHICLE


AECOM
7800 CONGRESS AVENUE, SUITE 200
BOCA RATON, FL 33487
TEL: (561) 994-6500

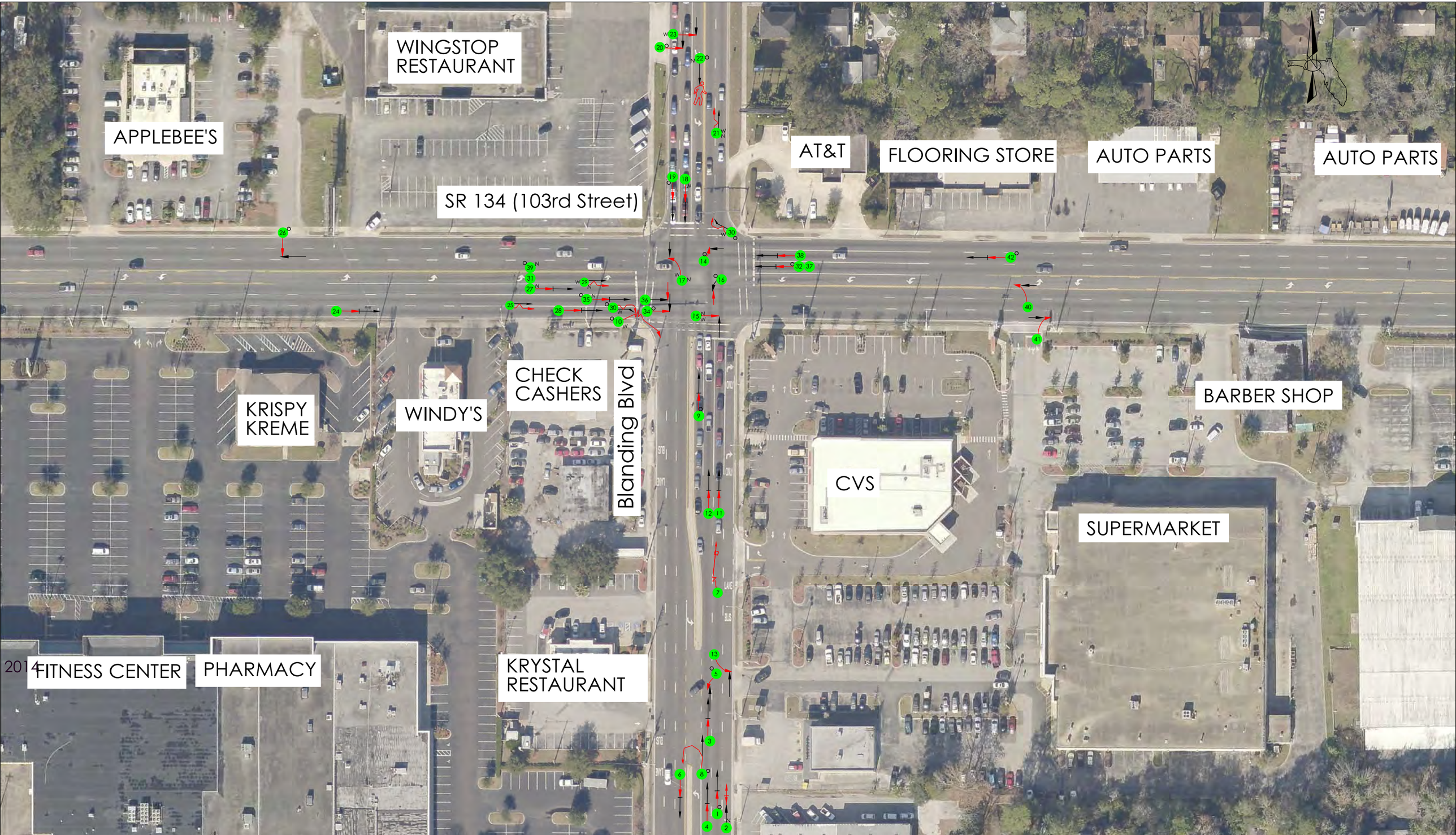

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| SR-134 | DUVAL COUNTY | 211079-8-32-01 |

# COLLISION DIAGRAM

SR 134 AND SR 21

2012




LEGEND:

- BACKING VEHICLE
- SIDESWIPE
- OUT OF CONTROL
- PEDESTRIAN /BIKE COLLISION
- REAR-END COLLISION
- HEAD-ON COLLISION
- OVERTURNED VEHICLE
- PARKED VEHICLE
- PERSONAL INJURY
- FATALITY
- CRASH DETAILS UNKNOWN
- LEFT TURN COLLISION
- RIGHT TURN COLLISION
- COMMERCIAL TRUCK
- N DARK LIGHTING CONDITION
- W WET CONDITIONS
- FIXED/MOVEABLE OBJECT
- X OCCUPANT FELL FROM VEHICLE

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*DEPARTMENT OF TRANSPORTATION*

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|---|---|---|
| SR-134 | DUVAL COUNTY | 211079-8-32-01 |

# COLLISION DIAGRAM

SR 134 AND SR 21

2013


LEGEND:

- BACKING VEHICLE
- SIDESWIPE
- OUT OF CONTROL
- PEDESTRIAN /BIKE COLLISION
- REAR-END COLLISION
- HEAD-ON COLLISION
- OVERTURNED VEHICLE
- PARKED VEHICLE
- PERSONAL INJURY
- FATALITY
- CRASH DETAILS UNKNOWN
- LEFT TURN COLLISION
- RIGHT TURN COLLISION
- COMMERCIAL TRUCK
- N DARK LIGHTING CONDITION
- W WET CONDITIONS
- FIXED/MOVEABLE OBJECT
- X OCCUPANT FELL FROM VEHICLE

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DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| SR-134 | DUVAL COUNTY | 211079-8-32-01 |

# COLLISION DIAGRAM

SR 134 AND SR 21

2014

# APPENDIX C – CORRECTABLE CRASHES BY MEDIAN INSTALLATION


LEGEND:

- BACKING VEHICLE
- SIDESWIPE
- OUT OF CONTROL
- PEDESTRIAN /BIKE COLLISION
- REAR-END COLLISION
- HEAD-ON COLLISION
- OVERTURNED VEHICLE
- PARKED VEHICLE
- PERSONAL INJURY
- FATALITY
- CRASH DETAILS UNKNOWN
- LEFT TURN COLLISION
- RIGHT TURN COLLISION
- COMMERCIAL TRUCK
- N DARK LIGHTING CONDITION
- W WET CONDITIONS
- FIXED/MOVEABLE OBJECT
- X INCORPORATED INTERSECTION COLLISIONS

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DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| SR 134 | DUVAL | |

# SR 134 (NORDE DR-WESCONNETT BLVD) COLLISION DIAGRAM (2012-2015)

SHEET NO. 1

$USER$ $DATE$ $TIME$ $FILE$


LEGEND:

- BACKING VEHICLE
- SIDESWIPE
- OUT OF CONTROL
- PEDESTRIAN /BIKE COLLISION
- REAR-END COLLISION
- HEAD-ON COLLISION
- OVERTURNED VEHICLE
- PARKED VEHICLE
- PERSONAL INJURY
- FATALITY
- CRASH DETAILS UNKNOWN
- LEFT TURN COLLISION
- RIGHT TURN COLLISION
- COMMERCIAL TRUCK
- N DARK LIGHTING CONDITION
- W WET CONDITIONS
- FIXED/MOVEABLE OBJECT
- X INCORPORATED INTERSECTION COLLISIONS

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| SR 134 | DUVAL | |

# SR 134 (NORDE DR-WESCONNETT BLVD)
## COLLISION DIAGRAM (2012-2015)

SHEET NO. 2

$USER$ $DATE$ $TIME$ $FILE$


LEGEND:

BACKING VEHICLE
SIDESWIPE
OUT OF CONTROL
PEDESTRIAN /BIKE COLLISION
REAR-END COLLISION
HEAD-ON COLLISION
OVERTURNED VEHICLE
PARKED VEHICLE
PERSONAL INJURY
FATALITY
CRASH DETAILS UNKNOWN
LEFT TURN COLLISION
RIGHT TURN COLLISION
COMMERCIAL TRUCK
N DARK LIGHTING CONDITION
W WET CONDITIONS
FIXED/MOVEABLE OBJECT
X INCORPORATED INTERSECTION COLLISIONS

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| SR 134 | DUVAL | |

# SR 134 (NORDE DR-WESCONNETT BLVD)
## COLLISION DIAGRAM (2012-2015)

SHEET NO. 3

$USER$ $DATE$ $TIME$ $FILE$


LEGEND:

- BACKING VEHICLE
- SIDESWIPE
- OUT OF CONTROL
- PEDESTRIAN / BIKE COLLISION
- REAR-END COLLISION
- HEAD-ON COLLISION
- OVERTURNED VEHICLE
- PARKED VEHICLE
- PERSONAL INJURY
- FATALITY
- CRASH DETAILS UNKNOWN
- LEFT TURN COLLISION
- RIGHT TURN COLLISION
- COMMERCIAL TRUCK
- N DARK LIGHTING CONDITION
- W WET CONDITIONS
- FIXED/MOVEABLE OBJECT
- X INCORPORATED INTERSECTION COLLISIONS

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TEL (561) 862 1051

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| SR 134 | DUVAL | |

# SR 134 (NORDE DR-WESCONNETT BLVD)
## COLLISION DIAGRAM (2012-2015)

SHEET NO. 4

$USER$ $DATE$ $TIME$ $FILE$

# APPENDIX D – TURNING MOVEMENT COUNTS AND SIGNAL TIMING SHEETS

# Peggy Malone & Associates

File Name : 4-Jammes Rd. and 103rd St. AM
Site Code :
Start Date : 6/1/2016
Page No : 1

Groups Printed- Car

| | Jammes Rd. Southbound | | | | | 103rd St. Westbound | | | | | Jammes Rd. Northbound | | | | | 103rd St. Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Int. Total |
| 07:00 AM | 6 | 9 | 8 | 0 | 23 | 6 | 100 | 5 | 0 | 111 | 18 | 26 | 38 | 0 | 82 | 23 | 232 | 29 | 0 | 284 | 500 |
| 07:15 AM | 8 | 13 | 10 | 3 | 34 | 7 | 114 | 2 | 0 | 123 | 17 | 47 | 29 | 0 | 93 | 24 | 231 | 31 | 1 | 287 | 537 |
| 07:30 AM | 13 | 19 | 14 | 1 | 47 | 6 | 122 | 9 | 0 | 137 | 16 | 28 | 26 | 0 | 70 | 21 | 219 | 38 | 0 | 278 | 532 |
| 07:45 AM | 12 | 22 | 17 | 0 | 51 | 17 | 128 | 5 | 0 | 150 | 13 | 42 | 32 | 0 | 87 | 27 | 266 | 53 | 1 | 347 | 635 |
| Total | 39 | 63 | 49 | 4 | 155 | 36 | 464 | 21 | 0 | 521 | 64 | 143 | 125 | 0 | 332 | 95 | 948 | 151 | 2 | 1196 | 2204 |
| | | | | | | | | | | | | | | | | | | | | | |
| Grand Total | 39 | 63 | 49 | 4 | 155 | 36 | 464 | 21 | 0 | 521 | 64 | 143 | 125 | 0 | 332 | 95 | 948 | 151 | 2 | 1196 | 2204 |
| Apprch % | 25.2 | 40.6 | 31.6 | 2.6 | | 6.9 | 89.1 | 4 | 0 | | 19.3 | 43.1 | 37.7 | 0 | | 7.9 | 79.3 | 12.6 | 0.2 | | |
| Total % | 1.8 | 2.9 | 2.2 | 0.2 | 7 | 1.6 | 21.1 | 1 | 0 | 23.6 | 2.9 | 6.5 | 5.7 | 0 | 15.1 | 4.3 | 43 | 6.9 | 0.1 | 54.3 | |

| | Jammes Rd. Southbound | | | | 103rd St. Westbound | | | | Jammes Rd. Northbound | | | | 103rd St. Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:00 AM | | | | | | | | | | | | | | | | | |
| 07:00 AM | 6 | 9 | 8 | 23 | 6 | 100 | 5 | 111 | **18** | 26 | **38** | 82 | 23 | 232 | 29 | 284 | 500 |
| 07:15 AM | 8 | 13 | 10 | 31 | 7 | 114 | 2 | 123 | 17 | **47** | 29 | **93** | 24 | 231 | 31 | 286 | 533 |
| 07:30 AM | **13** | 19 | 14 | 46 | 6 | 122 | **9** | 137 | 16 | 28 | 26 | 70 | 21 | 219 | 38 | 278 | 531 |
| 07:45 AM | 12 | **22** | **17** | **51** | **17** | **128** | 5 | **150** | 13 | 42 | 32 | 87 | **27** | **266** | **53** | **346** | **634** |
| Total Volume | 39 | 63 | 49 | 151 | 36 | 464 | 21 | 521 | 64 | 143 | 125 | 332 | 95 | 948 | 151 | 1194 | 2198 |
| % App. Total | 25.8 | 41.7 | 32.5 | | 6.9 | 89.1 | 4 | | 19.3 | 43.1 | 37.7 | | 8 | 79.4 | 12.6 | | |
| PHF | .750 | .716 | .721 | .740 | .529 | .906 | .583 | .868 | .889 | .761 | .822 | .892 | .880 | .891 | .712 | .863 | .867 |

# Peggy Malone & Associates

File Name : 4-Jammes Rd. and 103rd St. AM
Site Code :
Start Date : 6/1/2016
Page No : 1

Groups Printed- Truck

| | Jammes Rd. Southbound | | | | | 103rd St. Westbound | | | | | Jammes Rd. Northbound | | | | | 103rd St. Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Int. Total |
| 07:00 AM | 0 | 0 | 1 | 0 | 1 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 1 | 0 | 1 | 5 | 14 | 1 | 0 | 20 | 27 |
| 07:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 4 | 0 | 9 | 13 |
| 07:30 AM | 0 | 1 | 0 | 0 | 1 | 0 | 7 | 1 | 0 | 8 | 0 | 0 | 1 | 0 | 1 | 2 | 3 | 0 | 0 | 5 | 15 |
| 07:45 AM | 1 | 0 | 2 | 0 | 3 | 0 | 6 | 0 | 0 | 6 | 0 | 1 | 0 | 0 | 1 | 1 | 6 | 0 | 0 | 7 | 17 |
| Total | 1 | 1 | 3 | 0 | 5 | 0 | 22 | 1 | 0 | 23 | 0 | 1 | 2 | 0 | 3 | 8 | 28 | 5 | 0 | 41 | 72 |
| Grand Total | 1 | 1 | 3 | 0 | 5 | 0 | 22 | 1 | 0 | 23 | 0 | 1 | 2 | 0 | 3 | 8 | 28 | 5 | 0 | 41 | 72 |
| Apprch % | 20 | 20 | 60 | 0 | | 0 | 95.7 | 4.3 | 0 | | 0 | 33.3 | 66.7 | 0 | | 19.5 | 68.3 | 12.2 | 0 | | |
| Total % | 1.4 | 1.4 | 4.2 | 0 | 6.9 | 0 | 30.6 | 1.4 | 0 | 31.9 | 0 | 1.4 | 2.8 | 0 | 4.2 | 11.1 | 38.9 | 6.9 | 0 | 56.9 | |

| | Jammes Rd. Southbound | | | | 103rd St. Westbound | | | | Jammes Rd. Northbound | | | | 103rd St. Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:00 AM | | | | | | | | | | | | | | | | | |
| 07:00 AM | 0 | 0 | 1 | 1 | 0 | 5 | 0 | 5 | 0 | 0 | **1** | **1** | **5** | **14** | 1 | **20** | **27** |
| 07:15 AM | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 5 | **4** | 9 | 13 |
| 07:30 AM | 0 | **1** | 0 | 1 | 0 | **7** | **1** | **8** | 0 | 0 | 1 | 1 | 2 | 3 | 0 | 5 | 15 |
| 07:45 AM | **1** | 0 | **2** | **3** | 0 | 6 | 0 | 6 | 0 | **1** | 0 | 1 | 1 | 6 | 0 | 7 | 17 |
| Total Volume | 1 | 1 | 3 | 5 | 0 | 22 | 1 | 23 | 0 | 1 | 2 | 3 | 8 | 28 | 5 | 41 | 72 |
| % App. Total | 20 | 20 | 60 | | 0 | 95.7 | 4.3 | | 0 | 33.3 | 66.7 | | 19.5 | 68.3 | 12.2 | | |
| PHF | .250 | .250 | .375 | .417 | .000 | .786 | .250 | .719 | .000 | .250 | .500 | .750 | .400 | .500 | .313 | .513 | .667 |

# Peggy Malone & Associates

File Name : 4-Jammes Rd. and 103rd St. AM
Site Code :
Start Date : 6/1/2016
Page No : 1

Groups Printed- Combined

| | Jammes Rd. Southbound | | | | | 103rd St. Westbound | | | | | Jammes Rd. Northbound | | | | | 103rd St. Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Int. Total |
| 07:00 AM | 6 | 9 | 9 | 0 | 24 | 6 | 105 | 5 | 0 | 116 | 18 | 26 | 39 | 0 | 83 | 28 | 246 | 30 | 0 | 304 | 527 |
| 07:15 AM | 8 | 13 | 10 | 3 | 34 | 7 | 118 | 2 | 0 | 127 | 17 | 47 | 29 | 0 | 93 | 24 | 236 | 35 | 1 | 296 | 550 |
| 07:30 AM | 13 | 20 | 14 | 1 | 48 | 6 | 129 | 10 | 0 | 145 | 16 | 28 | 27 | 0 | 71 | 23 | 222 | 38 | 0 | 283 | 547 |
| 07:45 AM | 13 | 22 | 19 | 0 | 54 | 17 | 134 | 5 | 0 | 156 | 13 | 43 | 32 | 0 | 88 | 28 | 272 | 53 | 1 | 354 | 652 |
| Total | 40 | 64 | 52 | 4 | 160 | 36 | 486 | 22 | 0 | 544 | 64 | 144 | 127 | 0 | 335 | 103 | 976 | 156 | 2 | 1237 | 2276 |
| | | | | | | | | | | | | | | | | | | | | | |
| Grand Total | 40 | 64 | 52 | 4 | 160 | 36 | 486 | 22 | 0 | 544 | 64 | 144 | 127 | 0 | 335 | 103 | 976 | 156 | 2 | 1237 | 2276 |
| Apprch % | 25 | 40 | 32.5 | 2.5 | | 6.6 | 89.3 | 4 | 0 | | 19.1 | 43 | 37.9 | 0 | | 8.3 | 78.9 | 12.6 | 0.2 | | |
| Total % | 1.8 | 2.8 | 2.3 | 0.2 | 7 | 1.6 | 21.4 | 1 | 0 | 23.9 | 2.8 | 6.3 | 5.6 | 0 | 14.7 | 4.5 | 42.9 | 6.9 | 0.1 | 54.3 | |

| | Jammes Rd. Southbound | | | | 103rd St. Westbound | | | | Jammes Rd. Northbound | | | | 103rd St. Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:00 AM | | | | | | | | | | | | | | | | | |
| 07:00 AM | 6 | 9 | 9 | 24 | 6 | 105 | 5 | 116 | **18** | 26 | **39** | 83 | **28** | 246 | 30 | 304 | 527 |
| 07:15 AM | 8 | 13 | 10 | 31 | 7 | 118 | 2 | 127 | 17 | **47** | 29 | **93** | 24 | 236 | 35 | 295 | 546 |
| 07:30 AM | **13** | 20 | 14 | 47 | 6 | 129 | **10** | 145 | 16 | 28 | 27 | 71 | 23 | 222 | 38 | 283 | 546 |
| 07:45 AM | 13 | **22** | **19** | **54** | **17** | **134** | 5 | **156** | 13 | 43 | 32 | 88 | 28 | **272** | **53** | **353** | **651** |
| Total Volume | 40 | 64 | 52 | 156 | 36 | 486 | 22 | 544 | 64 | 144 | 127 | 335 | 103 | 976 | 156 | 1235 | 2270 |
| % App. Total | 25.6 | 41 | 33.3 | | 6.6 | 89.3 | 4 | | 19.1 | 43 | 37.9 | | 8.3 | 79 | 12.6 | | |
| PHF | .769 | .727 | .684 | .722 | .529 | .907 | .550 | .872 | .889 | .766 | .814 | .901 | .920 | .897 | .736 | .875 | .872 |

# Peggy Malone & Associates

File Name : 4-Jammes Rd. and 103rd St. PM
Site Code :
Start Date : 6/1/2016
Page No : 1

Groups Printed- Car

| | Jammes Rd. Southbound | | | | | 103rd St. Westbound | | | | | Jammes Rd. Northbound | | | | | 103rd St. Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Int. Total |
| 12:00 PM | 24 | 24 | 26 | 1 | 75 | 23 | 225 | 8 | 0 | 256 | 17 | 23 | 48 | 3 | 91 | 28 | 185 | 26 | 2 | 241 | 663 |
| 12:15 PM | 13 | 21 | 27 | 0 | 61 | 12 | 220 | 14 | 1 | 247 | 8 | 26 | 45 | 0 | 79 | 39 | 216 | 23 | 0 | 278 | 665 |
| 12:30 PM | 26 | 21 | 15 | 0 | 62 | 20 | 234 | 10 | 1 | 265 | 15 | 23 | 39 | 0 | 77 | 22 | 188 | 22 | 2 | 234 | 638 |
| 12:45 PM | 21 | 25 | 17 | 3 | 66 | 13 | 229 | 9 | 0 | 251 | 11 | 16 | 31 | 0 | 58 | 25 | 238 | 27 | 0 | 290 | 665 |
| Total | 84 | 91 | 85 | 4 | 264 | 68 | 908 | 41 | 2 | 1019 | 51 | 88 | 163 | 3 | 305 | 114 | 827 | 98 | 4 | 1043 | 2631 |
| 01:00 PM | 27 | 29 | 18 | 0 | 74 | 11 | 230 | 9 | 0 | 250 | 10 | 17 | 43 | 0 | 70 | 28 | 201 | 32 | 0 | 261 | 655 |
| 01:15 PM | 24 | 24 | 20 | 0 | 68 | 20 | 230 | 9 | 1 | 260 | 7 | 21 | 41 | 0 | 69 | 28 | 199 | 29 | 2 | 258 | 655 |
| 01:30 PM | 35 | 26 | 26 | 1 | 88 | 12 | 216 | 15 | 1 | 244 | 9 | 34 | 42 | 0 | 85 | 27 | 161 | 38 | 1 | 227 | 644 |
| 01:45 PM | 15 | 23 | 15 | 3 | 56 | 22 | 211 | 8 | 0 | 241 | 6 | 28 | 62 | 0 | 96 | 26 | 210 | 37 | 0 | 273 | 666 |
| Total | 101 | 102 | 79 | 4 | 286 | 65 | 887 | 41 | 2 | 995 | 32 | 100 | 188 | 0 | 320 | 109 | 771 | 136 | 3 | 1019 | 2620 |
| 02:00 PM | 23 | 22 | 14 | 0 | 59 | 21 | 224 | 14 | 0 | 259 | 16 | 26 | 40 | 2 | 84 | 25 | 184 | 25 | 4 | 238 | 640 |
| 02:15 PM | 19 | 25 | 17 | 3 | 64 | 16 | 263 | 10 | 0 | 289 | 10 | 27 | 30 | 0 | 67 | 38 | 221 | 32 | 0 | 291 | 711 |
| 02:30 PM | 41 | 31 | 20 | 2 | 94 | 19 | 211 | 9 | 0 | 239 | 9 | 25 | 53 | 2 | 89 | 44 | 190 | 33 | 0 | 267 | 689 |
| 02:45 PM | 26 | 26 | 25 | 4 | 81 | 25 | 284 | 11 | 0 | 320 | 13 | 22 | 34 | 1 | 70 | 37 | 226 | 24 | 2 | 289 | 760 |
| Total | 109 | 104 | 76 | 9 | 298 | 81 | 982 | 44 | 0 | 1107 | 48 | 100 | 157 | 5 | 310 | 144 | 821 | 114 | 6 | 1085 | 2800 |
| 03:00 PM | 24 | 35 | 30 | 1 | 90 | 21 | 255 | 15 | 0 | 291 | 10 | 33 | 47 | 0 | 90 | 36 | 231 | 17 | 1 | 285 | 756 |
| 03:15 PM | 39 | 30 | 27 | 1 | 97 | 22 | 267 | 13 | 1 | 303 | 13 | 19 | 52 | 1 | 85 | 33 | 238 | 32 | 2 | 305 | 790 |
| 03:30 PM | 27 | 36 | 27 | 1 | 91 | 21 | 268 | 21 | 0 | 310 | 12 | 33 | 48 | 0 | 93 | 35 | 215 | 28 | 1 | 279 | 773 |
| 03:45 PM | 25 | 29 | 27 | 4 | 85 | 15 | 277 | 15 | 0 | 307 | 14 | 31 | 58 | 1 | 104 | 50 | 225 | 32 | 0 | 307 | 803 |
| Total | 115 | 130 | 111 | 7 | 363 | 79 | 1067 | 64 | 1 | 1211 | 49 | 116 | 205 | 2 | 372 | 154 | 909 | 109 | 4 | 1176 | 3122 |
| 04:00 PM | 37 | 29 | 34 | 3 | 103 | 14 | 249 | 15 | 1 | 279 | 18 | 31 | 52 | 0 | 101 | 39 | 219 | 35 | 0 | 293 | 776 |
| 04:15 PM | 38 | 44 | 22 | 0 | 104 | 23 | 293 | 13 | 2 | 331 | 13 | 31 | 42 | 1 | 87 | 41 | 180 | 25 | 0 | 246 | 768 |
| 04:30 PM | 28 | 35 | 16 | 0 | 79 | 28 | 275 | 12 | 3 | 318 | 24 | 28 | 43 | 0 | 95 | 37 | 191 | 30 | 0 | 258 | 750 |
| 04:45 PM | 28 | 43 | 29 | 0 | 100 | 25 | 266 | 21 | 0 | 312 | 8 | 24 | 44 | 1 | 77 | 33 | 196 | 24 | 0 | 253 | 742 |
| Total | 131 | 151 | 101 | 3 | 386 | 90 | 1083 | 61 | 6 | 1240 | 63 | 114 | 181 | 2 | 360 | 150 | 786 | 114 | 0 | 1050 | 3036 |
| 05:00 PM | 29 | 48 | 20 | 0 | 97 | 21 | 272 | 24 | 0 | 317 | 13 | 24 | 25 | 0 | 62 | 39 | 189 | 17 | 0 | 245 | 721 |
| 05:15 PM | 17 | 49 | 31 | 0 | 97 | 23 | 242 | 19 | 0 | 284 | 8 | 26 | 28 | 0 | 62 | 45 | 169 | 21 | 0 | 235 | 678 |
| 05:30 PM | 27 | 47 | 26 | 0 | 100 | 19 | 242 | 14 | 0 | 275 | 6 | 31 | 36 | 0 | 73 | 31 | 163 | 28 | 2 | 224 | 672 |
| 05:45 PM | 28 | 57 | 37 | 0 | 122 | 18 | 212 | 25 | 2 | 257 | 11 | 38 | 38 | 0 | 87 | 34 | 239 | 28 | 0 | 301 | 767 |
| Total | 101 | 201 | 114 | 0 | 416 | 81 | 968 | 82 | 2 | 1133 | 38 | 119 | 127 | 0 | 284 | 149 | 760 | 94 | 2 | 1005 | 2838 |
| 06:00 PM | 33 | 55 | 38 | 2 | 128 | 18 | 239 | 16 | 0 | 273 | 16 | 23 | 42 | 0 | 81 | 36 | 189 | 21 | 0 | 246 | 728 |
| 06:15 PM | 36 | 48 | 34 | 0 | 118 | 27 | 233 | 13 | 0 | 273 | 10 | 30 | 45 | 1 | 86 | 44 | 208 | 25 | 1 | 278 | 755 |
| 06:30 PM | 32 | 40 | 24 | 1 | 97 | 21 | 206 | 12 | 0 | 239 | 8 | 28 | 47 | 1 | 84 | 39 | 185 | 29 | 1 | 254 | 674 |
| 06:45 PM | 15 | 31 | 27 | 2 | 75 | 20 | 200 | 11 | 1 | 232 | 12 | 27 | 45 | 1 | 85 | 34 | 171 | 29 | 1 | 235 | 627 |
| Total | 116 | 174 | 123 | 5 | 418 | 86 | 878 | 52 | 1 | 1017 | 46 | 108 | 179 | 3 | 336 | 153 | 753 | 104 | 3 | 1013 | 2784 |
| Grand Total | 757 | 953 | 689 | 32 | 2431 | 550 | 6773 | 385 | 14 | 7722 | 327 | 745 | 1200 | 15 | 2287 | 973 | 5627 | 769 | 22 | 7391 | 19831 |
| Apprch % | 31.1 | 39.2 | 28.3 | 1.3 | | 7.1 | 87.7 | 5 | 0.2 | | 14.3 | 32.6 | 52.5 | 0.7 | | 13.2 | 76.1 | 10.4 | 0.3 | | |
| Total % | 3.8 | 4.8 | 3.5 | 0.2 | 12.3 | 2.8 | 34.2 | 1.9 | 0.1 | 38.9 | 1.6 | 3.8 | 6.1 | 0.1 | 11.5 | 4.9 | 28.4 | 3.9 | 0.1 | 37.3 | |

| | Jammes Rd. Southbound | | | | 103rd St. Westbound | | | | Jammes Rd. Northbound | | | | 103rd St. Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 12:00 PM to 03:30 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 02:45 PM | | | | | | | | | | | | | | | | | |
| 02:45 PM | 26 | 26 | 25 | 77 | **25** | **284** | 11 | **320** | **13** | 22 | 34 | 69 | **37** | 226 | 24 | 287 | 753 |
| 03:00 PM | 24 | 35 | **30** | 89 | 21 | 255 | 15 | 291 | 10 | **33** | 47 | 90 | 36 | 231 | 17 | 284 | 754 |
| 03:15 PM | **39** | 30 | 27 | **96** | 22 | 267 | 13 | 302 | 13 | 19 | **52** | 84 | 33 | **238** | **32** | **303** | **785** |
| 03:30 PM | 27 | **36** | 27 | 90 | 21 | 268 | **21** | 310 | 12 | 33 | 48 | **93** | 35 | 215 | 28 | 278 | 771 |
| Total Volume | 116 | 127 | 109 | 352 | 89 | 1074 | 60 | 1223 | 48 | 107 | 181 | 336 | 141 | 910 | 101 | 1152 | 3063 |
| % App. Total | 33 | 36.1 | 31 | | 7.3 | 87.8 | 4.9 | | 14.3 | 31.8 | 53.9 | | 12.2 | 79 | 8.8 | | |
| PHF | .744 | .882 | .908 | .917 | .890 | .945 | .714 | .955 | .923 | .811 | .870 | .903 | .953 | .956 | .789 | .950 | .975 |
| Peak Hour Analysis From 03:45 PM to 06:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 03:45 PM | | | | | | | | | | | | | | | | | |
| 03:45 PM | 25 | 29 | 27 | 81 | 15 | 277 | **15** | 307 | 14 | **31** | **58** | **103** | **50** | **225** | 32 | **307** | **798** |
| 04:00 PM | 37 | 29 | **34** | 100 | 14 | 249 | 15 | 278 | 18 | 31 | 52 | 101 | 39 | 219 | **35** | 293 | 772 |
| 04:15 PM | **38** | **44** | 22 | **104** | 23 | **293** | 13 | **329** | 13 | 31 | 42 | 86 | 41 | 180 | 25 | 246 | 765 |
| 04:30 PM | 28 | 35 | 16 | 79 | **28** | 275 | 12 | 315 | **24** | 28 | 43 | 95 | 37 | 191 | 30 | 258 | 747 |
| Total Volume | 128 | 137 | 99 | 364 | 80 | 1094 | 55 | 1229 | 69 | 121 | 195 | 385 | 167 | 815 | 122 | 1104 | 3082 |
| % App. Total | 35.2 | 37.6 | 27.2 | | 6.5 | 89 | 4.5 | | 17.9 | 31.4 | 50.6 | | 15.1 | 73.8 | 11.1 | | |
| PHF | .842 | .778 | .728 | .875 | .714 | .933 | .917 | .934 | .719 | .976 | .841 | .934 | .835 | .906 | .871 | .899 | .966 |

# Peggy Malone & Associates

File Name : 4-Jammes Rd. and 103rd St. PM
Site Code :
Start Date : 6/1/2016
Page No : 1

Groups Printed- Truck

| | Jammes Rd. Southbound | | | | | 103rd St. Westbound | | | | | Jammes Rd. Northbound | | | | | 103rd St. Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Int. Total |
| 12:00 PM | 2 | 0 | 2 | 0 | 4 | 1 | 5 | 0 | 0 | 6 | 0 | 1 | 0 | 0 | 1 | 1 | 4 | 0 | 0 | 5 | 16 |
| 12:15 PM | 1 | 0 | 0 | 0 | 1 | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 1 | 0 | 1 | 1 | 5 | 0 | 0 | 6 | 14 |
| 12:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 12 | 0 | 0 | 3 | 0 | 3 | 0 | 1 | 0 | 0 | 1 | 16 |
| 12:45 PM | 2 | 0 | 0 | 0 | 2 | 0 | 6 | 1 | 0 | 7 | 1 | 1 | 1 | 0 | 3 | 2 | 11 | 0 | 0 | 13 | 25 |
| Total | 5 | 0 | 2 | 0 | 7 | 1 | 29 | 1 | 0 | 31 | 1 | 2 | 5 | 0 | 8 | 4 | 21 | 0 | 0 | 25 | 71 |
| 01:00 PM | 0 | 2 | 0 | 0 | 2 | 0 | 10 | 0 | 0 | 10 | 1 | 0 | 1 | 0 | 2 | 0 | 7 | 0 | 0 | 7 | 21 |
| 01:15 PM | 0 | 1 | 0 | 0 | 1 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 1 | 0 | 12 | 20 |
| 01:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 1 | 0 | 1 | 1 | 5 | 0 | 0 | 6 | 13 |
| 01:45 PM | 0 | 1 | 3 | 0 | 4 | 1 | 8 | 0 | 0 | 9 | 0 | 0 | 1 | 0 | 1 | 0 | 7 | 0 | 0 | 7 | 21 |
| Total | 0 | 4 | 3 | 0 | 7 | 1 | 31 | 0 | 0 | 32 | 1 | 0 | 3 | 0 | 4 | 1 | 30 | 1 | 0 | 32 | 75 |
| 02:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 2 | 8 | 0 | 0 | 10 | 15 |
| 02:15 PM | 1 | 2 | 0 | 0 | 3 | 1 | 5 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 1 | 0 | 8 | 17 |
| 02:30 PM | 0 | 2 | 0 | 0 | 2 | 1 | 6 | 0 | 0 | 7 | 1 | 0 | 3 | 0 | 4 | 2 | 3 | 0 | 0 | 5 | 18 |
| 02:45 PM | 0 | 0 | 1 | 0 | 1 | 0 | 4 | 0 | 0 | 4 | 2 | 1 | 1 | 0 | 4 | 2 | 8 | 0 | 0 | 10 | 19 |
| Total | 1 | 4 | 1 | 0 | 6 | 2 | 19 | 1 | 0 | 22 | 3 | 1 | 4 | 0 | 8 | 6 | 26 | 1 | 0 | 33 | 69 |
| 03:00 PM | 2 | 0 | 2 | 0 | 4 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 2 | 0 | 2 | 2 | 5 | 1 | 0 | 8 | 21 |
| 03:15 PM | 0 | 1 | 0 | 0 | 1 | 0 | 5 | 1 | 0 | 6 | 0 | 0 | 2 | 0 | 2 | 3 | 5 | 0 | 0 | 8 | 17 |
| 03:30 PM | 0 | 0 | 1 | 0 | 1 | 0 | 10 | 0 | 0 | 10 | 0 | 1 | 3 | 0 | 4 | 1 | 7 | 0 | 0 | 8 | 23 |
| 03:45 PM | 0 | 0 | 0 | 0 | 0 | 1 | 7 | 1 | 0 | 9 | 1 | 0 | 0 | 0 | 1 | 0 | 7 | 1 | 0 | 8 | 18 |
| Total | 2 | 1 | 3 | 0 | 6 | 1 | 29 | 2 | 0 | 32 | 1 | 1 | 7 | 0 | 9 | 6 | 24 | 2 | 0 | 32 | 79 |
| 04:00 PM | 1 | 0 | 0 | 0 | 1 | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 1 | 0 | 1 | 3 | 4 | 0 | 0 | 7 | 15 |
| 04:15 PM | 2 | 0 | 0 | 0 | 2 | 1 | 7 | 2 | 0 | 10 | 0 | 1 | 2 | 0 | 3 | 3 | 7 | 0 | 0 | 10 | 25 |
| 04:30 PM | 0 | 3 | 0 | 0 | 3 | 0 | 9 | 1 | 0 | 10 | 0 | 0 | 1 | 0 | 1 | 2 | 3 | 0 | 0 | 5 | 19 |
| 04:45 PM | 0 | 0 | 1 | 0 | 1 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 8 |
| Total | 3 | 3 | 1 | 0 | 7 | 1 | 25 | 3 | 0 | 29 | 0 | 1 | 4 | 0 | 5 | 8 | 18 | 0 | 0 | 26 | 67 |
| 05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 7 |
| 05:15 PM | 1 | 0 | 0 | 0 | 1 | 1 | 3 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 1 | 2 | 7 | 0 | 0 | 9 | 15 |
| 05:30 PM | 2 | 1 | 0 | 0 | 3 | 1 | 6 | 0 | 0 | 7 | 0 | 0 | 1 | 0 | 1 | 0 | 6 | 0 | 0 | 6 | 17 |
| 05:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 5 | 11 |
| Total | 3 | 1 | 0 | 0 | 4 | 2 | 20 | 0 | 0 | 22 | 0 | 0 | 2 | 0 | 2 | 2 | 19 | 1 | 0 | 22 | 50 |
| 06:00 PM | 0 | 1 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 3 | 8 |
| 06:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 1 | 0 | 1 | 1 | 5 | 0 | 0 | 6 | 10 |
| 06:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 1 | 1 | 0 | 2 | 1 | 1 | 0 | 0 | 2 | 8 |
| 06:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 2 | 11 |
| Total | 0 | 1 | 0 | 0 | 1 | 0 | 18 | 0 | 0 | 18 | 1 | 1 | 3 | 0 | 5 | 2 | 11 | 0 | 0 | 13 | 37 |
| Grand Total | 14 | 14 | 10 | 0 | 38 | 8 | 171 | 7 | 0 | 186 | 7 | 6 | 28 | 0 | 41 | 29 | 149 | 5 | 0 | 183 | 448 |
| Apprch % | 36.8 | 36.8 | 26.3 | 0 | | 4.3 | 91.9 | 3.8 | 0 | | 17.1 | 14.6 | 68.3 | 0 | | 15.8 | 81.4 | 2.7 | 0 | | |
| Total % | 3.1 | 3.1 | 2.2 | 0 | 8.5 | 1.8 | 38.2 | 1.6 | 0 | 41.5 | 1.6 | 1.3 | 6.2 | 0 | 9.2 | 6.5 | 33.3 | 1.1 | 0 | 40.8 | |

| | Jammes Rd. Southbound | | | | 103rd St. Westbound | | | | Jammes Rd. Northbound | | | | 103rd St. Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 12:00 PM to 03:30 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 12:30 PM | | | | | | | | | | | | | | | | | |
| 12:30 PM | 0 | 0 | 0 | 0 | 0 | **12** | 0 | **12** | 0 | 0 | **3** | **3** | 0 | 1 | 0 | 1 | 16 |
| 12:45 PM | **2** | 0 | 0 | **2** | 0 | 6 | **1** | 7 | **1** | **1** | 1 | 3 | **2** | **11** | 0 | **13** | **25** |
| 01:00 PM | 0 | **2** | 0 | 2 | 0 | 10 | 0 | 10 | 1 | 0 | 1 | 2 | 0 | 7 | 0 | 7 | 21 |
| 01:15 PM | 0 | 1 | 0 | 1 | 0 | 7 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 11 | **1** | 12 | 20 |
| Total Volume | 2 | 3 | 0 | 5 | 0 | 35 | 1 | 36 | 2 | 1 | 5 | 8 | 2 | 30 | 1 | 33 | 82 |
| % App. Total | 40 | 60 | 0 | | 0 | 97.2 | 2.8 | | 25 | 12.5 | 62.5 | | 6.1 | 90.9 | 3 | | |
| PHF | .250 | .375 | .000 | .625 | .000 | .729 | .250 | .750 | .500 | .250 | .417 | .667 | .250 | .682 | .250 | .635 | .820 |
| Peak Hour Analysis From 03:45 PM to 06:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 03:45 PM | | | | | | | | | | | | | | | | | |
| 03:45 PM | 0 | 0 | 0 | 0 | **1** | 7 | 1 | 9 | **1** | 0 | 0 | 1 | 0 | **7** | **1** | 8 | 18 |
| 04:00 PM | 1 | 0 | 0 | 1 | 0 | 6 | 0 | 6 | 0 | 0 | 1 | 1 | **3** | 4 | 0 | 7 | 15 |
| 04:15 PM | **2** | 0 | 0 | 2 | 1 | 7 | **2** | **10** | 0 | **1** | **2** | **3** | 3 | 7 | 0 | **10** | **25** |
| 04:30 PM | 0 | **3** | 0 | **3** | 0 | **9** | 1 | 10 | 0 | 0 | 1 | 1 | 2 | 3 | 0 | 5 | 19 |
| Total Volume | 3 | 3 | 0 | 6 | 2 | 29 | 4 | 35 | 1 | 1 | 4 | 6 | 8 | 21 | 1 | 30 | 77 |
| % App. Total | 50 | 50 | 0 | | 5.7 | 82.9 | 11.4 | | 16.7 | 16.7 | 66.7 | | 26.7 | 70 | 3.3 | | |
| PHF | .375 | .250 | .000 | .500 | .500 | .806 | .500 | .875 | .250 | .250 | .500 | .500 | .667 | .750 | .250 | .750 | .770 |

# Peggy Malone & Associates

File Name : 4-Jammes Rd. and 103rd St. PM
Site Code :
Start Date : 6/1/2016
Page No : 1

Groups Printed- Combined

| | Jammes Rd. Southbound | | | | | 103rd St. Westbound | | | | | Jammes Rd. Northbound | | | | | 103rd St. Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Int. Total |
| 12:00 PM | 26 | 24 | 28 | 1 | 79 | 24 | 230 | 8 | 0 | 262 | 17 | 24 | 48 | 3 | 92 | 29 | 189 | 26 | 2 | 246 | 679 |
| 12:15 PM | 14 | 21 | 27 | 0 | 62 | 12 | 226 | 14 | 1 | 253 | 8 | 26 | 46 | 0 | 80 | 40 | 221 | 23 | 0 | 284 | 679 |
| 12:30 PM | 26 | 21 | 15 | 0 | 62 | 20 | 246 | 10 | 1 | 277 | 15 | 23 | 42 | 0 | 80 | 22 | 189 | 22 | 2 | 235 | 654 |
| 12:45 PM | 23 | 25 | 17 | 3 | 68 | 13 | 235 | 10 | 0 | 258 | 12 | 17 | 32 | 0 | 61 | 27 | 249 | 27 | 0 | 303 | 690 |
| Total | 89 | 91 | 87 | 4 | 271 | 69 | 937 | 42 | 2 | 1050 | 52 | 90 | 168 | 3 | 313 | 118 | 848 | 98 | 4 | 1068 | 2702 |
| 01:00 PM | 27 | 31 | 18 | 0 | 76 | 11 | 240 | 9 | 0 | 260 | 11 | 17 | 44 | 0 | 72 | 28 | 208 | 32 | 0 | 268 | 676 |
| 01:15 PM | 24 | 25 | 20 | 0 | 69 | 20 | 237 | 9 | 1 | 267 | 7 | 21 | 41 | 0 | 69 | 28 | 210 | 30 | 2 | 270 | 675 |
| 01:30 PM | 35 | 26 | 26 | 1 | 88 | 12 | 222 | 15 | 1 | 250 | 9 | 34 | 43 | 0 | 86 | 28 | 166 | 38 | 1 | 233 | 657 |
| 01:45 PM | 15 | 24 | 18 | 3 | 60 | 23 | 219 | 8 | 0 | 250 | 6 | 28 | 63 | 0 | 97 | 26 | 217 | 37 | 0 | 280 | 687 |
| Total | 101 | 106 | 82 | 4 | 293 | 66 | 918 | 41 | 2 | 1027 | 33 | 100 | 191 | 0 | 324 | 110 | 801 | 137 | 3 | 1051 | 2695 |
| 02:00 PM | 23 | 22 | 14 | 0 | 59 | 21 | 228 | 15 | 0 | 264 | 16 | 26 | 40 | 2 | 84 | 27 | 192 | 25 | 4 | 248 | 655 |
| 02:15 PM | 20 | 27 | 17 | 3 | 67 | 17 | 268 | 10 | 0 | 295 | 10 | 27 | 30 | 0 | 67 | 38 | 228 | 33 | 0 | 299 | 728 |
| 02:30 PM | 41 | 33 | 20 | 2 | 96 | 20 | 217 | 9 | 0 | 246 | 10 | 25 | 56 | 2 | 93 | 46 | 193 | 33 | 0 | 272 | 707 |
| 02:45 PM | 26 | 26 | 26 | 4 | 82 | 25 | 288 | 11 | 0 | 324 | 15 | 23 | 35 | 1 | 74 | 39 | 234 | 24 | 2 | 299 | 779 |
| Total | 110 | 108 | 77 | 9 | 304 | 83 | 1001 | 45 | 0 | 1129 | 51 | 101 | 161 | 5 | 318 | 150 | 847 | 115 | 6 | 1118 | 2869 |
| 03:00 PM | 26 | 35 | 32 | 1 | 94 | 21 | 262 | 15 | 0 | 298 | 10 | 33 | 49 | 0 | 92 | 38 | 236 | 18 | 1 | 293 | 777 |
| 03:15 PM | 39 | 31 | 27 | 1 | 98 | 22 | 272 | 14 | 1 | 309 | 13 | 19 | 54 | 1 | 87 | 36 | 243 | 32 | 2 | 313 | 807 |
| 03:30 PM | 27 | 36 | 28 | 1 | 92 | 21 | 278 | 21 | 0 | 320 | 12 | 34 | 51 | 0 | 97 | 36 | 222 | 28 | 1 | 287 | 796 |
| 03:45 PM | 25 | 29 | 27 | 4 | 85 | 16 | 284 | 16 | 0 | 316 | 15 | 31 | 58 | 1 | 105 | 50 | 232 | 33 | 0 | 315 | 821 |
| Total | 117 | 131 | 114 | 7 | 369 | 80 | 1096 | 66 | 1 | 1243 | 50 | 117 | 212 | 2 | 381 | 160 | 933 | 111 | 4 | 1208 | 3201 |
| 04:00 PM | 38 | 29 | 34 | 3 | 104 | 14 | 255 | 15 | 1 | 285 | 18 | 31 | 53 | 0 | 102 | 42 | 223 | 35 | 0 | 300 | 791 |
| 04:15 PM | 40 | 44 | 22 | 0 | 106 | 24 | 300 | 15 | 2 | 341 | 13 | 32 | 44 | 1 | 90 | 44 | 187 | 25 | 0 | 256 | 793 |
| 04:30 PM | 28 | 38 | 16 | 0 | 82 | 28 | 284 | 13 | 3 | 328 | 24 | 28 | 44 | 0 | 96 | 39 | 194 | 30 | 0 | 263 | 769 |
| 04:45 PM | 28 | 43 | 30 | 0 | 101 | 25 | 269 | 21 | 0 | 315 | 8 | 24 | 44 | 1 | 77 | 33 | 200 | 24 | 0 | 257 | 750 |
| Total | 134 | 154 | 102 | 3 | 393 | 91 | 1108 | 64 | 6 | 1269 | 63 | 115 | 185 | 2 | 365 | 158 | 804 | 114 | 0 | 1076 | 3103 |
| 05:00 PM | 29 | 48 | 20 | 0 | 97 | 21 | 277 | 24 | 0 | 322 | 13 | 24 | 25 | 0 | 62 | 39 | 191 | 17 | 0 | 247 | 728 |
| 05:15 PM | 18 | 49 | 31 | 0 | 98 | 24 | 245 | 19 | 0 | 288 | 8 | 26 | 29 | 0 | 63 | 47 | 176 | 21 | 0 | 244 | 693 |
| 05:30 PM | 29 | 48 | 26 | 0 | 103 | 20 | 248 | 14 | 0 | 282 | 6 | 31 | 37 | 0 | 74 | 31 | 169 | 28 | 2 | 230 | 689 |
| 05:45 PM | 28 | 57 | 37 | 0 | 122 | 18 | 218 | 25 | 2 | 263 | 11 | 38 | 38 | 0 | 87 | 34 | 243 | 29 | 0 | 306 | 778 |
| Total | 104 | 202 | 114 | 0 | 420 | 83 | 988 | 82 | 2 | 1155 | 38 | 119 | 129 | 0 | 286 | 151 | 779 | 95 | 2 | 1027 | 2888 |
| 06:00 PM | 33 | 56 | 38 | 2 | 129 | 18 | 242 | 16 | 0 | 276 | 17 | 23 | 42 | 0 | 82 | 36 | 192 | 21 | 0 | 249 | 736 |
| 06:15 PM | 36 | 48 | 34 | 0 | 118 | 27 | 236 | 13 | 0 | 276 | 10 | 30 | 46 | 1 | 87 | 45 | 213 | 25 | 1 | 284 | 765 |
| 06:30 PM | 32 | 40 | 24 | 1 | 97 | 21 | 210 | 12 | 0 | 243 | 8 | 29 | 48 | 1 | 86 | 40 | 186 | 29 | 1 | 256 | 682 |
| 06:45 PM | 15 | 31 | 27 | 2 | 75 | 20 | 208 | 11 | 1 | 240 | 12 | 27 | 46 | 1 | 86 | 34 | 173 | 29 | 1 | 237 | 638 |
| Total | 116 | 175 | 123 | 5 | 419 | 86 | 896 | 52 | 1 | 1035 | 47 | 109 | 182 | 3 | 341 | 155 | 764 | 104 | 3 | 1026 | 2821 |
| Grand Total | 771 | 967 | 699 | 32 | 2469 | 558 | 6944 | 392 | 14 | 7908 | 334 | 751 | 1228 | 15 | 2328 | 1002 | 5776 | 774 | 22 | 7574 | 20279 |
| Apprch % | 31.2 | 39.2 | 28.3 | 1.3 | | 7.1 | 87.8 | 5 | 0.2 | | 14.3 | 32.3 | 52.7 | 0.6 | | 13.2 | 76.3 | 10.2 | 0.3 | | |
| Total % | 3.8 | 4.8 | 3.4 | 0.2 | 12.2 | 2.8 | 34.2 | 1.9 | 0.1 | 39 | 1.6 | 3.7 | 6.1 | 0.1 | 11.5 | 4.9 | 28.5 | 3.8 | 0.1 | 37.3 | |

| | Jammes Rd. Southbound | | | | 103rd St. Westbound | | | | Jammes Rd. Northbound | | | | 103rd St. Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 12:00 PM to 03:30 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 02:45 PM | | | | | | | | | | | | | | | | | |
| 02:45 PM | 26 | 26 | 26 | 78 | **25** | **288** | 11 | **324** | **15** | 23 | 35 | 73 | **39** | 234 | 24 | 297 | 772 |
| 03:00 PM | 26 | 35 | **32** | 93 | 21 | 262 | 15 | 298 | 10 | 33 | 49 | 92 | 38 | 236 | 18 | 292 | 775 |
| 03:15 PM | **39** | 31 | 27 | **97** | 22 | 272 | 14 | 308 | 13 | 19 | **54** | 86 | 36 | **243** | **32** | **311** | **802** |
| 03:30 PM | 27 | **36** | 28 | 91 | 21 | 278 | **21** | 320 | 12 | **34** | 51 | **97** | 36 | 222 | 28 | 286 | 794 |
| Total Volume | 118 | 128 | 113 | 359 | 89 | 1100 | 61 | 1250 | 50 | 109 | 189 | 348 | 149 | 935 | 102 | 1186 | 3143 |
| % App. Total | 32.9 | 35.7 | 31.5 | | 7.1 | 88 | 4.9 | | 14.4 | 31.3 | 54.3 | | 12.6 | 78.8 | 8.6 | | |
| PHF | .756 | .889 | .883 | .925 | .890 | .955 | .726 | .965 | .833 | .801 | .875 | .897 | .955 | .962 | .797 | .953 | .980 |
| Peak Hour Analysis From 03:45 PM to 06:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 03:45 PM | | | | | | | | | | | | | | | | | |
| 03:45 PM | 25 | 29 | 27 | 81 | 16 | 284 | **16** | 316 | 15 | 31 | **58** | **104** | **50** | **232** | 33 | **315** | **816** |
| 04:00 PM | 38 | 29 | **34** | 101 | 14 | 255 | 15 | 284 | 18 | 31 | 53 | 102 | 42 | 223 | **35** | 300 | 787 |
| 04:15 PM | **40** | **44** | 22 | **106** | 24 | **300** | 15 | **339** | 13 | **32** | 44 | 89 | 44 | 187 | 25 | 256 | 790 |
| 04:30 PM | 28 | 38 | 16 | 82 | **28** | 284 | 13 | 325 | **24** | 28 | 44 | 96 | 39 | 194 | 30 | 263 | 766 |
| Total Volume | 131 | 140 | 99 | 370 | 82 | 1123 | 59 | 1264 | 70 | 122 | 199 | 391 | 175 | 836 | 123 | 1134 | 3159 |
| % App. Total | 35.4 | 37.8 | 26.8 | | 6.5 | 88.8 | 4.7 | | 17.9 | 31.2 | 50.9 | | 15.4 | 73.7 | 10.8 | | |
| PHF | .819 | .795 | .728 | .873 | .732 | .936 | .922 | .932 | .729 | .953 | .858 | .940 | .875 | .901 | .879 | .900 | .968 |

# Peggy Malone & Associates

File Name : 5-Blanding Blvd. and 103rd St. AM
Site Code :
Start Date : 6/1/2016
Page No : 1

Groups Printed- Car

| | Blanding Blvd. Southbound | | | | | 103rd St. Westbound | | | | | Blanding Blvd. Northbound | | | | | 103rd St. Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Int. Total |
| 07:00 AM | 16 | 76 | 13 | 0 | 105 | 4 | 62 | 6 | 0 | 72 | 13 | 247 | 20 | 0 | 280 | 33 | 141 | 65 | 0 | 239 | 696 |
| 07:15 AM | 17 | 73 | 18 | 0 | 108 | 7 | 89 | 9 | 1 | 106 | 16 | 259 | 23 | 0 | 298 | 40 | 156 | 73 | 0 | 269 | 781 |
| 07:30 AM | 22 | 114 | 23 | 0 | 159 | 12 | 86 | 13 | 1 | 112 | 9 | 267 | 23 | 1 | 300 | 32 | 151 | 70 | 0 | 253 | 824 |
| 07:45 AM | 35 | 107 | 16 | 1 | 159 | 4 | 85 | 7 | 0 | 96 | 22 | 235 | 43 | 0 | 300 | 48 | 164 | 67 | 0 | 279 | 834 |
| Total | 90 | 370 | 70 | 1 | 531 | 27 | 322 | 35 | 2 | 386 | 60 | 1008 | 109 | 1 | 1178 | 153 | 612 | 275 | 0 | 1040 | 3135 |
| | | | | | | | | | | | | | | | | | | | | | |
| Grand Total | 90 | 370 | 70 | 1 | 531 | 27 | 322 | 35 | 2 | 386 | 60 | 1008 | 109 | 1 | 1178 | 153 | 612 | 275 | 0 | 1040 | 3135 |
| Apprch % | 16.9 | 69.7 | 13.2 | 0.2 | | 7 | 83.4 | 9.1 | 0.5 | | 5.1 | 85.6 | 9.3 | 0.1 | | 14.7 | 58.8 | 26.4 | 0 | | |
| Total % | 2.9 | 11.8 | 2.2 | 0 | 16.9 | 0.9 | 10.3 | 1.1 | 0.1 | 12.3 | 1.9 | 32.2 | 3.5 | 0 | 37.6 | 4.9 | 19.5 | 8.8 | 0 | 33.2 | |

| | Blanding Blvd. Southbound | | | | 103rd St. Westbound | | | | Blanding Blvd. Northbound | | | | 103rd St. Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:00 AM | | | | | | | | | | | | | | | | | |
| 07:00 AM | 16 | 76 | 13 | 105 | 4 | 62 | 6 | 72 | 13 | 247 | 20 | 280 | 33 | 141 | 65 | 239 | 696 |
| 07:15 AM | 17 | 73 | 18 | 108 | 7 | **89** | 9 | 105 | 16 | 259 | 23 | 298 | 40 | 156 | **73** | 269 | 780 |
| 07:30 AM | 22 | **114** | **23** | **159** | **12** | 86 | **13** | **111** | 9 | **267** | 23 | 299 | 32 | 151 | 70 | 253 | 822 |
| 07:45 AM | **35** | 107 | 16 | 158 | 4 | 85 | 7 | 96 | **22** | 235 | **43** | **300** | **48** | **164** | 67 | **279** | **833** |
| Total Volume | 90 | 370 | 70 | 530 | 27 | 322 | 35 | 384 | 60 | 1008 | 109 | 1177 | 153 | 612 | 275 | 1040 | 3131 |
| % App. Total | 17 | 69.8 | 13.2 | | 7 | 83.9 | 9.1 | | 5.1 | 85.6 | 9.3 | | 14.7 | 58.8 | 26.4 | | |
| PHF | .643 | .811 | .761 | .833 | .563 | .904 | .673 | .865 | .682 | .944 | .634 | .981 | .797 | .933 | .942 | .932 | .940 |

# Peggy Malone & Associates

File Name : 5-Blanding Blvd. and 103rd St. AM
Site Code :
Start Date : 6/1/2016
Page No : 1

Groups Printed- Truck

| | Blanding Blvd. Southbound | | | | | 103rd St. Westbound | | | | | Blanding Blvd. Northbound | | | | | 103rd St. Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Int. Total |
| 07:00 AM | 1 | 2 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 1 | 2 | 7 | 3 | 0 | 12 | 18 |
| 07:15 AM | 2 | 2 | 0 | 0 | 4 | 0 | 2 | 1 | 0 | 3 | 1 | 1 | 0 | 0 | 2 | 0 | 4 | 1 | 0 | 5 | 14 |
| 07:30 AM | 2 | 2 | 1 | 0 | 5 | 1 | 4 | 0 | 0 | 5 | 1 | 2 | 0 | 0 | 3 | 2 | 0 | 2 | 0 | 4 | 17 |
| 07:45 AM | 0 | 5 | 0 | 0 | 5 | 0 | 4 | 0 | 0 | 4 | 0 | 7 | 0 | 0 | 7 | 1 | 6 | 1 | 0 | 8 | 24 |
| Total | 5 | 11 | 1 | 0 | 17 | 1 | 12 | 1 | 0 | 14 | 2 | 11 | 0 | 0 | 13 | 5 | 17 | 7 | 0 | 29 | 73 |
| | | | | | | | | | | | | | | | | | | | | | |
| Grand Total | 5 | 11 | 1 | 0 | 17 | 1 | 12 | 1 | 0 | 14 | 2 | 11 | 0 | 0 | 13 | 5 | 17 | 7 | 0 | 29 | 73 |
| Apprch % | 29.4 | 64.7 | 5.9 | 0 | | 7.1 | 85.7 | 7.1 | 0 | | 15.4 | 84.6 | 0 | 0 | | 17.2 | 58.6 | 24.1 | 0 | | |
| Total % | 6.8 | 15.1 | 1.4 | 0 | 23.3 | 1.4 | 16.4 | 1.4 | 0 | 19.2 | 2.7 | 15.1 | 0 | 0 | 17.8 | 6.8 | 23.3 | 9.6 | 0 | 39.7 | |

| | Blanding Blvd. Southbound | | | | 103rd St. Westbound | | | | Blanding Blvd. Northbound | | | | 103rd St. Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:00 AM | | | | | | | | | | | | | | | | | |
| 07:00 AM | 1 | 2 | 0 | 3 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 1 | **2** | **7** | **3** | **12** | 18 |
| 07:15 AM | **2** | 2 | 0 | 4 | 0 | 2 | **1** | 3 | **1** | 1 | 0 | 2 | 0 | 4 | 1 | 5 | 14 |
| 07:30 AM | 2 | 2 | **1** | **5** | **1** | **4** | 0 | **5** | 1 | 2 | 0 | 3 | 2 | 0 | 2 | 4 | 17 |
| 07:45 AM | 0 | **5** | 0 | 5 | 0 | 4 | 0 | 4 | 0 | **7** | 0 | **7** | 1 | 6 | 1 | 8 | **24** |
| Total Volume | 5 | 11 | 1 | 17 | 1 | 12 | 1 | 14 | 2 | 11 | 0 | 13 | 5 | 17 | 7 | 29 | 73 |
| % App. Total | 29.4 | 64.7 | 5.9 | | 7.1 | 85.7 | 7.1 | | 15.4 | 84.6 | 0 | | 17.2 | 58.6 | 24.1 | | |
| PHF | .625 | .550 | .250 | .850 | .250 | .750 | .250 | .700 | .500 | .393 | .000 | .464 | .625 | .607 | .583 | .604 | .760 |

# Peggy Malone & Associates

File Name : 5-Blanding Blvd. and 103rd St. AM
Site Code :
Start Date : 6/1/2016
Page No : 1

Groups Printed- Combined

| | Blanding Blvd. Southbound | | | | | 103rd St. Westbound | | | | | Blanding Blvd. Northbound | | | | | 103rd St. Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Int. Total |
| 07:00 AM | 17 | 78 | 13 | 0 | 108 | 4 | 64 | 6 | 0 | 74 | 13 | 248 | 20 | 0 | 281 | 35 | 148 | 68 | 0 | 251 | 714 |
| 07:15 AM | 19 | 75 | 18 | 0 | 112 | 7 | 91 | 10 | 1 | 109 | 17 | 260 | 23 | 0 | 300 | 40 | 160 | 74 | 0 | 274 | 795 |
| 07:30 AM | 24 | 116 | 24 | 0 | 164 | 13 | 90 | 13 | 1 | 117 | 10 | 269 | 23 | 1 | 303 | 34 | 151 | 72 | 0 | 257 | 841 |
| 07:45 AM | 35 | 112 | 16 | 1 | 164 | 4 | 89 | 7 | 0 | 100 | 22 | 242 | 43 | 0 | 307 | 49 | 170 | 68 | 0 | 287 | 858 |
| Total | 95 | 381 | 71 | 1 | 548 | 28 | 334 | 36 | 2 | 400 | 62 | 1019 | 109 | 1 | 1191 | 158 | 629 | 282 | 0 | 1069 | 3208 |
| | | | | | | | | | | | | | | | | | | | | | |
| Grand Total | 95 | 381 | 71 | 1 | 548 | 28 | 334 | 36 | 2 | 400 | 62 | 1019 | 109 | 1 | 1191 | 158 | 629 | 282 | 0 | 1069 | 3208 |
| Apprch % | 17.3 | 69.5 | 13 | 0.2 | | 7 | 83.5 | 9 | 0.5 | | 5.2 | 85.6 | 9.2 | 0.1 | | 14.8 | 58.8 | 26.4 | 0 | | |
| Total % | 3 | 11.9 | 2.2 | 0 | 17.1 | 0.9 | 10.4 | 1.1 | 0.1 | 12.5 | 1.9 | 31.8 | 3.4 | 0 | 37.1 | 4.9 | 19.6 | 8.8 | 0 | 33.3 | |

| | Blanding Blvd. Southbound | | | | 103rd St. Westbound | | | | Blanding Blvd. Northbound | | | | 103rd St. Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:00 AM | | | | | | | | | | | | | | | | | |
| 07:00 AM | 17 | 78 | 13 | 108 | 4 | 64 | 6 | 74 | 13 | 248 | 20 | 281 | 35 | 148 | 68 | 251 | 714 |
| 07:15 AM | 19 | 75 | 18 | 112 | 7 | **91** | 10 | 108 | 17 | 260 | 23 | 300 | 40 | 160 | **74** | 274 | 794 |
| 07:30 AM | 24 | **116** | **24** | **164** | **13** | 90 | **13** | **116** | 10 | **269** | 23 | 302 | 34 | 151 | 72 | 257 | 839 |
| 07:45 AM | **35** | 112 | 16 | 163 | 4 | 89 | 7 | 100 | **22** | 242 | **43** | **307** | **49** | **170** | 68 | **287** | **857** |
| Total Volume | 95 | 381 | 71 | 547 | 28 | 334 | 36 | 398 | 62 | 1019 | 109 | 1190 | 158 | 629 | 282 | 1069 | 3204 |
| % App. Total | 17.4 | 69.7 | 13 | | 7 | 83.9 | 9 | | 5.2 | 85.6 | 9.2 | | 14.8 | 58.8 | 26.4 | | |
| PHF | .679 | .821 | .740 | .834 | .538 | .918 | .692 | .858 | .705 | .947 | .634 | .969 | .806 | .925 | .953 | .931 | .935 |

# Peggy Malone & Associates

File Name : 5-Blanding Blvd. and 103rd St. PM
Site Code :
Start Date : 6/1/2016
Page No : 1

Groups Printed- Car

| | Blanding Blvd. Southbound | | | | | 103rd St. Westbound | | | | | Blanding Blvd. Northbound | | | | | 103rd St. Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Int. Total |
| 12:00 PM | 51 | 150 | 28 | 3 | 232 | 14 | 135 | 17 | 3 | 169 | 20 | 125 | 50 | 2 | 197 | 53 | 130 | 55 | 4 | 242 | 840 |
| 12:15 PM | 58 | 126 | 36 | 0 | 220 | 13 | 127 | 20 | 7 | 167 | 11 | 143 | 57 | 3 | 214 | 52 | 131 | 54 | 0 | 237 | 838 |
| 12:30 PM | 63 | 138 | 24 | 1 | 226 | 18 | 143 | 17 | 2 | 180 | 18 | 133 | 47 | 0 | 198 | 49 | 117 | 50 | 0 | 216 | 820 |
| 12:45 PM | 55 | 144 | 23 | 2 | 224 | 17 | 127 | 16 | 1 | 161 | 19 | 128 | 54 | 1 | 202 | 55 | 126 | 49 | 2 | 232 | 819 |
| Total | 227 | 558 | 111 | 6 | 902 | 62 | 532 | 70 | 13 | 677 | 68 | 529 | 208 | 6 | 811 | 209 | 504 | 208 | 6 | 927 | 3317 |
| 01:00 PM | 72 | 111 | 33 | 0 | 216 | 22 | 139 | 24 | 7 | 192 | 16 | 139 | 42 | 2 | 199 | 39 | 128 | 44 | 0 | 211 | 818 |
| 01:15 PM | 44 | 135 | 20 | 0 | 199 | 19 | 120 | 22 | 1 | 162 | 17 | 136 | 47 | 4 | 204 | 44 | 115 | 56 | 3 | 218 | 783 |
| 01:30 PM | 63 | 135 | 15 | 2 | 215 | 14 | 132 | 18 | 2 | 166 | 14 | 154 | 59 | 1 | 228 | 46 | 109 | 42 | 1 | 198 | 807 |
| 01:45 PM | 47 | 147 | 32 | 1 | 227 | 13 | 140 | 14 | 0 | 167 | 14 | 136 | 46 | 2 | 198 | 52 | 106 | 45 | 0 | 203 | 795 |
| Total | 226 | 528 | 100 | 3 | 857 | 68 | 531 | 78 | 10 | 687 | 61 | 565 | 194 | 9 | 829 | 181 | 458 | 187 | 4 | 830 | 3203 |
| 02:00 PM | 57 | 129 | 24 | 0 | 210 | 18 | 124 | 17 | 0 | 159 | 20 | 141 | 56 | 0 | 217 | 48 | 116 | 45 | 0 | 209 | 795 |
| 02:15 PM | 54 | 129 | 19 | 1 | 203 | 18 | 185 | 20 | 0 | 223 | 13 | 129 | 42 | 2 | 186 | 51 | 143 | 39 | 1 | 234 | 846 |
| 02:30 PM | 67 | 149 | 33 | 1 | 250 | 22 | 142 | 20 | 1 | 185 | 13 | 135 | 47 | 2 | 197 | 29 | 128 | 43 | 3 | 203 | 835 |
| 02:45 PM | 45 | 157 | 33 | 0 | 235 | 16 | 190 | 21 | 0 | 227 | 23 | 125 | 54 | 1 | 203 | 39 | 141 | 54 | 0 | 234 | 899 |
| Total | 223 | 564 | 109 | 2 | 898 | 74 | 641 | 78 | 1 | 794 | 69 | 530 | 199 | 5 | 803 | 167 | 528 | 181 | 4 | 880 | 3375 |
| 03:00 PM | 55 | 163 | 30 | 1 | 249 | 15 | 217 | 32 | 0 | 264 | 12 | 145 | 39 | 1 | 197 | 42 | 179 | 47 | 0 | 268 | 978 |
| 03:15 PM | 55 | 190 | 27 | 1 | 273 | 25 | 213 | 34 | 0 | 272 | 19 | 108 | 31 | 0 | 158 | 46 | 164 | 48 | 0 | 258 | 961 |
| 03:30 PM | 56 | 184 | 37 | 0 | 277 | 20 | 204 | 30 | 0 | 254 | 19 | 138 | 33 | 0 | 190 | 49 | 140 | 46 | 0 | 235 | 956 |
| 03:45 PM | 54 | 178 | 27 | 1 | 260 | 20 | 179 | 33 | 0 | 232 | 16 | 146 | 67 | 0 | 229 | 41 | 154 | 42 | 0 | 237 | 958 |
| Total | 220 | 715 | 121 | 3 | 1059 | 80 | 813 | 129 | 0 | 1022 | 66 | 537 | 170 | 1 | 774 | 178 | 637 | 183 | 0 | 998 | 3853 |
| 04:00 PM | 53 | 178 | 36 | 1 | 268 | 21 | 158 | 29 | 3 | 211 | 11 | 127 | 38 | 1 | 177 | 42 | 146 | 47 | 1 | 236 | 892 |
| 04:15 PM | 58 | 197 | 29 | 0 | 284 | 16 | 193 | 38 | 0 | 247 | 15 | 142 | 51 | 1 | 209 | 35 | 104 | 44 | 0 | 183 | 923 |
| 04:30 PM | 49 | 210 | 36 | 0 | 295 | 24 | 191 | 37 | 2 | 254 | 12 | 138 | 51 | 3 | 204 | 42 | 142 | 40 | 0 | 224 | 977 |
| 04:45 PM | 50 | 233 | 34 | 0 | 317 | 20 | 199 | 47 | 0 | 266 | 13 | 152 | 50 | 0 | 215 | 46 | 127 | 46 | 0 | 219 | 1017 |
| Total | 210 | 818 | 135 | 1 | 1164 | 81 | 741 | 151 | 5 | 978 | 51 | 559 | 190 | 5 | 805 | 165 | 519 | 177 | 1 | 862 | 3809 |
| 05:00 PM | 46 | 211 | 18 | 0 | 275 | 22 | 197 | 45 | 0 | 264 | 12 | 122 | 54 | 0 | 188 | 54 | 113 | 36 | 0 | 203 | 930 |
| 05:15 PM | 36 | 198 | 24 | 0 | 258 | 9 | 176 | 41 | 0 | 226 | 12 | 121 | 30 | 0 | 163 | 48 | 111 | 46 | 0 | 205 | 852 |
| 05:30 PM | 38 | 204 | 23 | 0 | 265 | 15 | 176 | 39 | 0 | 230 | 7 | 136 | 44 | 0 | 187 | 49 | 108 | 35 | 0 | 192 | 874 |
| 05:45 PM | 37 | 216 | 17 | 2 | 272 | 9 | 142 | 48 | 2 | 201 | 15 | 125 | 52 | 3 | 195 | 57 | 132 | 49 | 1 | 239 | 907 |
| Total | 157 | 829 | 82 | 2 | 1070 | 55 | 691 | 173 | 2 | 921 | 46 | 504 | 180 | 3 | 733 | 208 | 464 | 166 | 1 | 839 | 3563 |
| 06:00 PM | 50 | 209 | 14 | 3 | 276 | 9 | 159 | 38 | 0 | 206 | 11 | 146 | 54 | 5 | 216 | 57 | 132 | 46 | 3 | 238 | 936 |
| 06:15 PM | 50 | 217 | 24 | 0 | 291 | 19 | 151 | 23 | 1 | 194 | 10 | 115 | 47 | 1 | 173 | 50 | 135 | 44 | 0 | 229 | 887 |
| 06:30 PM | 54 | 155 | 21 | 3 | 233 | 17 | 138 | 28 | 2 | 185 | 8 | 120 | 46 | 0 | 174 | 23 | 119 | 47 | 1 | 190 | 782 |
| 06:45 PM | 65 | 151 | 18 | 0 | 234 | 12 | 106 | 17 | 0 | 135 | 8 | 89 | 58 | 4 | 159 | 34 | 119 | 49 | 1 | 203 | 731 |
| Total | 219 | 732 | 77 | 6 | 1034 | 57 | 554 | 106 | 3 | 720 | 37 | 470 | 205 | 10 | 722 | 164 | 505 | 186 | 5 | 860 | 3336 |
| Grand Total | 1482 | 4744 | 735 | 23 | 6984 | 477 | 4503 | 785 | 34 | 5799 | 398 | 3694 | 1346 | 39 | 5477 | 1272 | 3615 | 1288 | 21 | 6196 | 24456 |
| Apprch % | 21.2 | 67.9 | 10.5 | 0.3 | | 8.2 | 77.7 | 13.5 | 0.6 | | 7.3 | 67.4 | 24.6 | 0.7 | | 20.5 | 58.3 | 20.8 | 0.3 | | |
| Total % | 6.1 | 19.4 | 3 | 0.1 | 28.6 | 2 | 18.4 | 3.2 | 0.1 | 23.7 | 1.6 | 15.1 | 5.5 | 0.2 | 22.4 | 5.2 | 14.8 | 5.3 | 0.1 | 25.3 | |

| | Blanding Blvd. Southbound | | | | 103rd St. Westbound | | | | Blanding Blvd. Northbound | | | | 103rd St. Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 12:00 PM to 03:30 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 02:45 PM | | | | | | | | | | | | | | | | | |
| 02:45 PM | 45 | 157 | 33 | 235 | 16 | 190 | 21 | 227 | **23** | 125 | **54** | **202** | 39 | 141 | **54** | 234 | 898 |
| 03:00 PM | 55 | 163 | 30 | 248 | 15 | **217** | 32 | 264 | 12 | **145** | 39 | 196 | 42 | **179** | 47 | **268** | **976** |
| 03:15 PM | 55 | **190** | 27 | 272 | **25** | 213 | **34** | **272** | 19 | 108 | 31 | 158 | 46 | 164 | 48 | 258 | 960 |
| 03:30 PM | **56** | 184 | **37** | **277** | 20 | 204 | 30 | 254 | 19 | 138 | 33 | 190 | **49** | 140 | 46 | 235 | 956 |
| Total Volume | 211 | 694 | 127 | 1032 | 76 | 824 | 117 | 1017 | 73 | 516 | 157 | 746 | 176 | 624 | 195 | 995 | 3790 |
| % App. Total | 20.4 | 67.2 | 12.3 | | 7.5 | 81 | 11.5 | | 9.8 | 69.2 | 21 | | 17.7 | 62.7 | 19.6 | | |
| PHF | .942 | .913 | .858 | .931 | .760 | .949 | .860 | .935 | .793 | .890 | .727 | .923 | .898 | .872 | .903 | .928 | .971 |
| Peak Hour Analysis From 03:45 PM to 06:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:15 PM | | | | | | | | | | | | | | | | | |
| 04:15 PM | **58** | 197 | 29 | 284 | 16 | 193 | 38 | 247 | **15** | 142 | 51 | 208 | 35 | 104 | 44 | 183 | 922 |
| 04:30 PM | 49 | 210 | **36** | 295 | **24** | 191 | 37 | 252 | 12 | 138 | 51 | 201 | 42 | **142** | 40 | **224** | 972 |
| 04:45 PM | 50 | **233** | 34 | **317** | 20 | **199** | **47** | **266** | 13 | **152** | 50 | **215** | 46 | 127 | **46** | 219 | **1017** |
| 05:00 PM | 46 | 211 | 18 | 275 | 22 | 197 | 45 | 264 | 12 | 122 | **54** | 188 | **54** | 113 | 36 | 203 | 930 |
| Total Volume | 203 | 851 | 117 | 1171 | 82 | 780 | 167 | 1029 | 52 | 554 | 206 | 812 | 177 | 486 | 166 | 829 | 3841 |
| % App. Total | 17.3 | 72.7 | 10 | | 8 | 75.8 | 16.2 | | 6.4 | 68.2 | 25.4 | | 21.4 | 58.6 | 20 | | |
| PHF | .875 | .913 | .813 | .924 | .854 | .980 | .888 | .967 | .867 | .911 | .954 | .944 | .819 | .856 | .902 | .925 | .944 |

# Peggy Malone & Associates

File Name : 5-Blanding Blvd. and 103rd St. PM
Site Code :
Start Date : 6/1/2016
Page No : 1

Groups Printed- Truck

| | Blanding Blvd. Southbound | | | | | 103rd St. Westbound | | | | | Blanding Blvd. Northbound | | | | | 103rd St. Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Int. Total |
| 12:00 PM | 3 | 6 | 0 | 0 | 9 | 1 | 2 | 3 | 0 | 6 | 1 | 5 | 0 | 0 | 6 | 4 | 5 | 0 | 0 | 9 | 30 |
| 12:15 PM | 1 | 1 | 0 | 0 | 2 | 1 | 4 | 2 | 0 | 7 | 1 | 0 | 2 | 0 | 3 | 1 | 5 | 2 | 0 | 8 | 20 |
| 12:30 PM | 3 | 3 | 2 | 0 | 8 | 1 | 6 | 2 | 0 | 9 | 1 | 1 | 2 | 0 | 4 | 0 | 3 | 0 | 0 | 3 | 24 |
| 12:45 PM | 2 | 5 | 0 | 0 | 7 | 0 | 2 | 0 | 0 | 2 | 1 | 6 | 3 | 0 | 10 | 1 | 10 | 1 | 0 | 12 | 31 |
| Total | 9 | 15 | 2 | 0 | 26 | 3 | 14 | 7 | 0 | 24 | 4 | 12 | 7 | 0 | 23 | 6 | 23 | 3 | 0 | 32 | 105 |
| 01:00 PM | 2 | 0 | 1 | 0 | 3 | 0 | 6 | 0 | 0 | 6 | 2 | 6 | 1 | 0 | 9 | 0 | 4 | 2 | 0 | 6 | 24 |
| 01:15 PM | 1 | 5 | 2 | 0 | 8 | 0 | 5 | 2 | 0 | 7 | 0 | 1 | 1 | 0 | 2 | 1 | 8 | 1 | 0 | 10 | 27 |
| 01:30 PM | 2 | 1 | 0 | 0 | 3 | 0 | 2 | 1 | 0 | 3 | 1 | 2 | 2 | 0 | 5 | 1 | 4 | 2 | 0 | 7 | 18 |
| 01:45 PM | 1 | 3 | 0 | 0 | 4 | 0 | 4 | 1 | 0 | 5 | 1 | 6 | 1 | 0 | 8 | 0 | 6 | 2 | 0 | 8 | 25 |
| Total | 6 | 9 | 3 | 0 | 18 | 0 | 17 | 4 | 0 | 21 | 4 | 15 | 5 | 0 | 24 | 2 | 22 | 7 | 0 | 31 | 94 |
| 02:00 PM | 1 | 1 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 3 | 0 | 4 | 1 | 0 | 5 | 1 | 6 | 2 | 0 | 9 | 19 |
| 02:15 PM | 1 | 11 | 0 | 0 | 12 | 1 | 2 | 3 | 0 | 6 | 0 | 2 | 0 | 0 | 2 | 0 | 6 | 2 | 0 | 8 | 28 |
| 02:30 PM | 3 | 3 | 0 | 0 | 6 | 3 | 3 | 1 | 0 | 7 | 0 | 2 | 3 | 0 | 5 | 2 | 2 | 0 | 0 | 4 | 22 |
| 02:45 PM | 1 | 6 | 1 | 0 | 8 | 2 | 3 | 0 | 0 | 5 | 1 | 4 | 0 | 0 | 5 | 1 | 7 | 4 | 0 | 12 | 30 |
| Total | 6 | 21 | 1 | 0 | 28 | 6 | 11 | 4 | 0 | 21 | 1 | 12 | 4 | 0 | 17 | 4 | 21 | 8 | 0 | 33 | 99 |
| 03:00 PM | 3 | 2 | 1 | 0 | 6 | 0 | 5 | 0 | 0 | 5 | 1 | 7 | 2 | 0 | 10 | 3 | 3 | 1 | 0 | 7 | 28 |
| 03:15 PM | 1 | 5 | 0 | 0 | 6 | 1 | 2 | 3 | 0 | 6 | 1 | 4 | 1 | 0 | 6 | 0 | 2 | 3 | 0 | 5 | 23 |
| 03:30 PM | 4 | 6 | 1 | 0 | 11 | 0 | 5 | 0 | 0 | 5 | 0 | 6 | 2 | 0 | 8 | 1 | 4 | 1 | 0 | 6 | 30 |
| 03:45 PM | 0 | 2 | 0 | 0 | 2 | 0 | 4 | 0 | 0 | 4 | 2 | 7 | 1 | 0 | 10 | 0 | 7 | 1 | 0 | 8 | 24 |
| Total | 8 | 15 | 2 | 0 | 25 | 1 | 16 | 3 | 0 | 20 | 4 | 24 | 6 | 0 | 34 | 4 | 16 | 6 | 0 | 26 | 105 |
| 04:00 PM | 1 | 6 | 5 | 0 | 12 | 0 | 7 | 0 | 0 | 7 | 1 | 7 | 0 | 0 | 8 | 1 | 3 | 1 | 0 | 5 | 32 |
| 04:15 PM | 6 | 6 | 0 | 0 | 12 | 2 | 4 | 1 | 0 | 7 | 1 | 7 | 2 | 0 | 10 | 0 | 6 | 0 | 0 | 6 | 35 |
| 04:30 PM | 2 | 5 | 0 | 0 | 7 | 1 | 6 | 0 | 0 | 7 | 0 | 2 | 0 | 0 | 2 | 1 | 4 | 1 | 0 | 6 | 22 |
| 04:45 PM | 0 | 3 | 1 | 0 | 4 | 0 | 3 | 0 | 0 | 3 | 1 | 2 | 0 | 0 | 3 | 1 | 1 | 1 | 0 | 3 | 13 |
| Total | 9 | 20 | 6 | 0 | 35 | 3 | 20 | 1 | 0 | 24 | 3 | 18 | 2 | 0 | 23 | 3 | 14 | 3 | 0 | 20 | 102 |
| 05:00 PM | 1 | 1 | 2 | 0 | 4 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 4 | 13 |
| 05:15 PM | 0 | 3 | 0 | 0 | 3 | 1 | 4 | 0 | 0 | 5 | 0 | 1 | 1 | 0 | 2 | 0 | 4 | 1 | 0 | 5 | 15 |
| 05:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 5 | 0 | 0 | 2 | 0 | 2 | 0 | 3 | 2 | 0 | 5 | 12 |
| 05:45 PM | 2 | 1 | 0 | 0 | 3 | 0 | 3 | 1 | 0 | 4 | 0 | 1 | 1 | 0 | 2 | 2 | 2 | 0 | 0 | 4 | 13 |
| Total | 3 | 5 | 2 | 0 | 10 | 1 | 16 | 2 | 0 | 19 | 0 | 2 | 4 | 0 | 6 | 2 | 12 | 4 | 0 | 18 | 53 |
| 06:00 PM | 1 | 5 | 0 | 0 | 6 | 1 | 1 | 0 | 0 | 2 | 1 | 3 | 1 | 0 | 5 | 2 | 1 | 3 | 0 | 6 | 19 |
| 06:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 4 | 1 | 6 | 1 | 0 | 8 | 2 | 2 | 1 | 0 | 5 | 17 |
| 06:30 PM | 1 | 4 | 0 | 0 | 5 | 0 | 5 | 1 | 0 | 6 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 13 |
| 06:45 PM | 2 | 2 | 0 | 0 | 4 | 0 | 3 | 0 | 0 | 3 | 0 | 3 | 1 | 0 | 4 | 0 | 2 | 1 | 0 | 3 | 14 |
| Total | 4 | 11 | 0 | 0 | 15 | 1 | 11 | 3 | 0 | 15 | 2 | 12 | 4 | 0 | 18 | 4 | 6 | 5 | 0 | 15 | 63 |
| Grand Total | 45 | 96 | 16 | 0 | 157 | 15 | 105 | 24 | 0 | 144 | 18 | 95 | 32 | 0 | 145 | 25 | 114 | 36 | 0 | 175 | 621 |
| Apprch % | 28.7 | 61.1 | 10.2 | 0 | | 10.4 | 72.9 | 16.7 | 0 | | 12.4 | 65.5 | 22.1 | 0 | | 14.3 | 65.1 | 20.6 | 0 | | |
| Total % | 7.2 | 15.5 | 2.6 | 0 | 25.3 | 2.4 | 16.9 | 3.9 | 0 | 23.2 | 2.9 | 15.3 | 5.2 | 0 | 23.3 | 4 | 18.4 | 5.8 | 0 | 28.2 | |

| | Blanding Blvd. Southbound | | | | 103rd St. Westbound | | | | Blanding Blvd. Northbound | | | | 103rd St. Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 12:00 PM to 03:30 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 02:45 PM | | | | | | | | | | | | | | | | | |
| 02:45 PM | 1 | **6** | **1** | 8 | **2** | 3 | 0 | 5 | **1** | 4 | 0 | 5 | 1 | **7** | **4** | **12** | **30** |
| 03:00 PM | 3 | 2 | 1 | 6 | 0 | **5** | 0 | 5 | 1 | **7** | **2** | **10** | **3** | 3 | 1 | 7 | 28 |
| 03:15 PM | 1 | 5 | 0 | 6 | 1 | 2 | **3** | **6** | 1 | 4 | 1 | 6 | 0 | 2 | 3 | 5 | 23 |
| 03:30 PM | **4** | 6 | 1 | **11** | 0 | 5 | 0 | 5 | 0 | 6 | 2 | 8 | 1 | 4 | 1 | 6 | 30 |
| Total Volume | 9 | 19 | 3 | 31 | 3 | 15 | 3 | 21 | 3 | 21 | 5 | 29 | 5 | 16 | 9 | 30 | 111 |
| % App. Total | 29 | 61.3 | 9.7 | | 14.3 | 71.4 | 14.3 | | 10.3 | 72.4 | 17.2 | | 16.7 | 53.3 | 30 | | |
| PHF | .563 | .792 | .750 | .705 | .375 | .750 | .250 | .875 | .750 | .750 | .625 | .725 | .417 | .571 | .563 | .625 | .925 |
| Peak Hour Analysis From 03:45 PM to 06:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 03:45 PM | | | | | | | | | | | | | | | | | |
| 03:45 PM | 0 | 2 | 0 | 2 | 0 | 4 | 0 | 4 | **2** | **7** | 1 | **10** | 0 | **7** | **1** | **8** | 24 |
| 04:00 PM | 1 | **6** | **5** | **12** | 0 | **7** | 0 | **7** | 1 | 7 | 0 | 8 | **1** | 3 | 1 | 5 | 32 |
| 04:15 PM | **6** | 6 | 0 | 12 | **2** | 4 | **1** | 7 | 1 | 7 | **2** | 10 | 0 | 6 | 0 | 6 | **35** |
| 04:30 PM | 2 | 5 | 0 | 7 | 1 | 6 | 0 | 7 | 0 | 2 | 0 | 2 | 1 | 4 | 1 | 6 | 22 |
| Total Volume | 9 | 19 | 5 | 33 | 3 | 21 | 1 | 25 | 4 | 23 | 3 | 30 | 2 | 20 | 3 | 25 | 113 |
| % App. Total | 27.3 | 57.6 | 15.2 | | 12 | 84 | 4 | | 13.3 | 76.7 | 10 | | 8 | 80 | 12 | | |
| PHF | .375 | .792 | .250 | .688 | .375 | .750 | .250 | .893 | .500 | .821 | .375 | .750 | .500 | .714 | .750 | .781 | .807 |

# Peggy Malone & Associates

File Name : 5-Blanding Blvd. and 103rd St. PM
Site Code :
Start Date : 6/1/2016
Page No : 1

Groups Printed- Combined

| | Blanding Blvd. Southbound | | | | | 103rd St. Westbound | | | | | Blanding Blvd. Northbound | | | | | 103rd St. Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Int. Total |
| 12:00 PM | 54 | 156 | 28 | 3 | 241 | 15 | 137 | 20 | 3 | 175 | 21 | 130 | 50 | 2 | 203 | 57 | 135 | 55 | 4 | 251 | 870 |
| 12:15 PM | 59 | 127 | 36 | 0 | 222 | 14 | 131 | 22 | 7 | 174 | 12 | 143 | 59 | 3 | 217 | 53 | 136 | 56 | 0 | 245 | 858 |
| 12:30 PM | 66 | 141 | 26 | 1 | 234 | 19 | 149 | 19 | 2 | 189 | 19 | 134 | 49 | 0 | 202 | 49 | 120 | 50 | 0 | 219 | 844 |
| 12:45 PM | 57 | 149 | 23 | 2 | 231 | 17 | 129 | 16 | 1 | 163 | 20 | 134 | 57 | 1 | 212 | 56 | 136 | 50 | 2 | 244 | 850 |
| Total | 236 | 573 | 113 | 6 | 928 | 65 | 546 | 77 | 13 | 701 | 72 | 541 | 215 | 6 | 834 | 215 | 527 | 211 | 6 | 959 | 3422 |
| 01:00 PM | 74 | 111 | 34 | 0 | 219 | 22 | 145 | 24 | 7 | 198 | 18 | 145 | 43 | 2 | 208 | 39 | 132 | 46 | 0 | 217 | 842 |
| 01:15 PM | 45 | 140 | 22 | 0 | 207 | 19 | 125 | 24 | 1 | 169 | 17 | 137 | 48 | 4 | 206 | 45 | 123 | 57 | 3 | 228 | 810 |
| 01:30 PM | 65 | 136 | 15 | 2 | 218 | 14 | 134 | 19 | 2 | 169 | 15 | 156 | 61 | 1 | 233 | 47 | 113 | 44 | 1 | 205 | 825 |
| 01:45 PM | 48 | 150 | 32 | 1 | 231 | 13 | 144 | 15 | 0 | 172 | 15 | 142 | 47 | 2 | 206 | 52 | 112 | 47 | 0 | 211 | 820 |
| Total | 232 | 537 | 103 | 3 | 875 | 68 | 548 | 82 | 10 | 708 | 65 | 580 | 199 | 9 | 853 | 183 | 480 | 194 | 4 | 861 | 3297 |
| 02:00 PM | 58 | 130 | 24 | 0 | 212 | 18 | 127 | 17 | 0 | 162 | 20 | 145 | 57 | 0 | 222 | 49 | 122 | 47 | 0 | 218 | 814 |
| 02:15 PM | 55 | 140 | 19 | 1 | 215 | 19 | 187 | 23 | 0 | 229 | 13 | 131 | 42 | 2 | 188 | 51 | 149 | 41 | 1 | 242 | 874 |
| 02:30 PM | 70 | 152 | 33 | 1 | 256 | 25 | 145 | 21 | 1 | 192 | 13 | 137 | 50 | 2 | 202 | 31 | 130 | 43 | 3 | 207 | 857 |
| 02:45 PM | 46 | 163 | 34 | 0 | 243 | 18 | 193 | 21 | 0 | 232 | 24 | 129 | 54 | 1 | 208 | 40 | 148 | 58 | 0 | 246 | 929 |
| Total | 229 | 585 | 110 | 2 | 926 | 80 | 652 | 82 | 1 | 815 | 70 | 542 | 203 | 5 | 820 | 171 | 549 | 189 | 4 | 913 | 3474 |
| 03:00 PM | 58 | 165 | 31 | 1 | 255 | 15 | 222 | 32 | 0 | 269 | 13 | 152 | 41 | 1 | 207 | 45 | 182 | 48 | 0 | 275 | 1006 |
| 03:15 PM | 56 | 195 | 27 | 1 | 279 | 26 | 215 | 37 | 0 | 278 | 20 | 112 | 32 | 0 | 164 | 46 | 166 | 51 | 0 | 263 | 984 |
| 03:30 PM | 60 | 190 | 38 | 0 | 288 | 20 | 209 | 30 | 0 | 259 | 19 | 144 | 35 | 0 | 198 | 50 | 144 | 47 | 0 | 241 | 986 |
| 03:45 PM | 54 | 180 | 27 | 1 | 262 | 20 | 183 | 33 | 0 | 236 | 18 | 153 | 68 | 0 | 239 | 41 | 161 | 43 | 0 | 245 | 982 |
| Total | 228 | 730 | 123 | 3 | 1084 | 81 | 829 | 132 | 0 | 1042 | 70 | 561 | 176 | 1 | 808 | 182 | 653 | 189 | 0 | 1024 | 3958 |
| 04:00 PM | 54 | 184 | 41 | 1 | 280 | 21 | 165 | 29 | 3 | 218 | 12 | 134 | 38 | 1 | 185 | 43 | 149 | 48 | 1 | 241 | 924 |
| 04:15 PM | 64 | 203 | 29 | 0 | 296 | 18 | 197 | 39 | 0 | 254 | 16 | 149 | 53 | 1 | 219 | 35 | 110 | 44 | 0 | 189 | 958 |
| 04:30 PM | 51 | 215 | 36 | 0 | 302 | 25 | 197 | 37 | 2 | 261 | 12 | 140 | 51 | 3 | 206 | 43 | 146 | 41 | 0 | 230 | 999 |
| 04:45 PM | 50 | 236 | 35 | 0 | 321 | 20 | 202 | 47 | 0 | 269 | 14 | 154 | 50 | 0 | 218 | 47 | 128 | 47 | 0 | 222 | 1030 |
| Total | 219 | 838 | 141 | 1 | 1199 | 84 | 761 | 152 | 5 | 1002 | 54 | 577 | 192 | 5 | 828 | 168 | 533 | 180 | 1 | 882 | 3911 |
| 05:00 PM | 47 | 212 | 20 | 0 | 279 | 22 | 202 | 45 | 0 | 269 | 12 | 122 | 54 | 0 | 188 | 54 | 116 | 37 | 0 | 207 | 943 |
| 05:15 PM | 36 | 201 | 24 | 0 | 261 | 10 | 180 | 41 | 0 | 231 | 12 | 122 | 31 | 0 | 165 | 48 | 115 | 47 | 0 | 210 | 867 |
| 05:30 PM | 38 | 204 | 23 | 0 | 265 | 15 | 180 | 40 | 0 | 235 | 7 | 136 | 46 | 0 | 189 | 49 | 111 | 37 | 0 | 197 | 886 |
| 05:45 PM | 39 | 217 | 17 | 2 | 275 | 9 | 145 | 49 | 2 | 205 | 15 | 126 | 53 | 3 | 197 | 59 | 134 | 49 | 1 | 243 | 920 |
| Total | 160 | 834 | 84 | 2 | 1080 | 56 | 707 | 175 | 2 | 940 | 46 | 506 | 184 | 3 | 739 | 210 | 476 | 170 | 1 | 857 | 3616 |
| 06:00 PM | 51 | 214 | 14 | 3 | 282 | 10 | 160 | 38 | 0 | 208 | 12 | 149 | 55 | 5 | 221 | 59 | 133 | 49 | 3 | 244 | 955 |
| 06:15 PM | 50 | 217 | 24 | 0 | 291 | 19 | 153 | 25 | 1 | 198 | 11 | 121 | 48 | 1 | 181 | 52 | 137 | 45 | 0 | 234 | 904 |
| 06:30 PM | 55 | 159 | 21 | 3 | 238 | 17 | 143 | 29 | 2 | 191 | 8 | 120 | 47 | 0 | 175 | 23 | 120 | 47 | 1 | 191 | 795 |
| 06:45 PM | 67 | 153 | 18 | 0 | 238 | 12 | 109 | 17 | 0 | 138 | 8 | 92 | 59 | 4 | 163 | 34 | 121 | 50 | 1 | 206 | 745 |
| Total | 223 | 743 | 77 | 6 | 1049 | 58 | 565 | 109 | 3 | 735 | 39 | 482 | 209 | 10 | 740 | 168 | 511 | 191 | 5 | 875 | 3399 |
| Grand Total | 1527 | 4840 | 751 | 23 | 7141 | 492 | 4608 | 809 | 34 | 5943 | 416 | 3789 | 1378 | 39 | 5622 | 1297 | 3729 | 1324 | 21 | 6371 | 25077 |
| Apprch % | 21.4 | 67.8 | 10.5 | 0.3 | | 8.3 | 77.5 | 13.6 | 0.6 | | 7.4 | 67.4 | 24.5 | 0.7 | | 20.4 | 58.5 | 20.8 | 0.3 | | |
| Total % | 6.1 | 19.3 | 3 | 0.1 | 28.5 | 2 | 18.4 | 3.2 | 0.1 | 23.7 | 1.7 | 15.1 | 5.5 | 0.2 | 22.4 | 5.2 | 14.9 | 5.3 | 0.1 | 25.4 | |

| | Blanding Blvd. Southbound | | | | 103rd St. Westbound | | | | Blanding Blvd. Northbound | | | | 103rd St. Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 12:00 PM to 03:30 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 02:45 PM | | | | | | | | | | | | | | | | | |
| 02:45 PM | 46 | 163 | 34 | 243 | 18 | 193 | 21 | 232 | **24** | 129 | **54** | **207** | 40 | 148 | **58** | 246 | 928 |
| 03:00 PM | 58 | 165 | 31 | 254 | 15 | **222** | 32 | 269 | 13 | **152** | 41 | 206 | 45 | **182** | 48 | **275** | **1004** |
| 03:15 PM | 56 | **195** | 27 | 278 | **26** | 215 | **37** | **278** | 20 | 112 | 32 | 164 | 46 | 166 | 51 | 263 | 983 |
| 03:30 PM | **60** | 190 | **38** | **288** | 20 | 209 | 30 | 259 | 19 | 144 | 35 | 198 | **50** | 144 | 47 | 241 | 986 |
| Total Volume | 220 | 713 | 130 | 1063 | 79 | 839 | 120 | 1038 | 76 | 537 | 162 | 775 | 181 | 640 | 204 | 1025 | 3901 |
| % App. Total | 20.7 | 67.1 | 12.2 | | 7.6 | 80.8 | 11.6 | | 9.8 | 69.3 | 20.9 | | 17.7 | 62.4 | 19.9 | | |
| PHF | .917 | .914 | .855 | .923 | .760 | .945 | .811 | .933 | .792 | .883 | .750 | .936 | .905 | .879 | .879 | .932 | .971 |
| Peak Hour Analysis From 03:45 PM to 06:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:15 PM | | | | | | | | | | | | | | | | | |
| 04:15 PM | **64** | 203 | 29 | 296 | 18 | 197 | 39 | 254 | **16** | 149 | 53 | **218** | 35 | 110 | 44 | 189 | 957 |
| 04:30 PM | 51 | 215 | **36** | 302 | **25** | 197 | 37 | 259 | 12 | 140 | 51 | 203 | 43 | **146** | 41 | **230** | 994 |
| 04:45 PM | 50 | **236** | 35 | **321** | 20 | **202** | **47** | **269** | 14 | **154** | 50 | 218 | 47 | 128 | **47** | 222 | **1030** |
| 05:00 PM | 47 | 212 | 20 | 279 | 22 | 202 | 45 | 269 | 12 | 122 | **54** | 188 | **54** | 116 | 37 | 207 | 943 |
| Total Volume | 212 | 866 | 120 | 1198 | 85 | 798 | 168 | 1051 | 54 | 565 | 208 | 827 | 179 | 500 | 169 | 848 | 3924 |
| % App. Total | 17.7 | 72.3 | 10 | | 8.1 | 75.9 | 16 | | 6.5 | 68.3 | 25.2 | | 21.1 | 59 | 19.9 | | |
| PHF | .828 | .917 | .833 | .933 | .850 | .988 | .894 | .977 | .844 | .917 | .963 | .948 | .829 | .856 | .899 | .922 | .952 |

# Peggy Malone & Associates
(888) 247-8602

File Name : 6-Blanding Blvd. and Krystal_Rowes AM w Uturns
Site Code :
Start Date : 6/1/2016
Page No : 1

Groups Printed- Car

| | Blanding Blvd. Southbound | | | | | Rowe's Driveway Westbound | | | | | Blanding Blvd. Northbound | | | | | Krystal's South Driveway Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Int. Total |
| 07:00 AM | 0 | 111 | 1 | 0 | 112 | 1 | 0 | 0 | 0 | 1 | 1 | 275 | 1 | 0 | 277 | 1 | 0 | 4 | 1 | 6 | 396 |
| 07:15 AM | 0 | 109 | 0 | 0 | 109 | 0 | 0 | 2 | 1 | 3 | 2 | 292 | 2 | 0 | 296 | 7 | 0 | 5 | 1 | 13 | 421 |
| 07:30 AM | 0 | 151 | 2 | 0 | 153 | 1 | 0 | 1 | 0 | 2 | 3 | 303 | 1 | 0 | 307 | 6 | 1 | 0 | 2 | 9 | 471 |
| 07:45 AM | 0 | 148 | 1 | 0 | 149 | 1 | 0 | 1 | 0 | 2 | 5 | 292 | 2 | 0 | 299 | 13 | 1 | 7 | 2 | 23 | 473 |
| Total | 0 | 519 | 4 | 0 | 523 | 3 | 0 | 4 | 1 | 8 | 11 | 1162 | 6 | 0 | 1179 | 27 | 2 | 16 | 6 | 51 | 1761 |
| Grand Total | 0 | 519 | 4 | 0 | 523 | 3 | 0 | 4 | 1 | 8 | 11 | 1162 | 6 | 0 | 1179 | 27 | 2 | 16 | 6 | 51 | 1761 |
| Apprch % | 0 | 99.2 | 0.8 | 0 | | 37.5 | 0 | 50 | 12.5 | | 0.9 | 98.6 | 0.5 | 0 | | 52.9 | 3.9 | 31.4 | 11.8 | | |
| Total % | 0 | 29.5 | 0.2 | 0 | 29.7 | 0.2 | 0 | 0.2 | 0.1 | 0.5 | 0.6 | 66 | 0.3 | 0 | 67 | 1.5 | 0.1 | 0.9 | 0.3 | 2.9 | |

| | Blanding Blvd. Southbound | | | | Rowe's Driveway Westbound | | | | Blanding Blvd. Northbound | | | | Krystal's South Driveway Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:00 AM | | | | | | | | | | | | | | | | | |
| 07:00 AM | 0 | 111 | 1 | 112 | **1** | 0 | 0 | 1 | 1 | 275 | 1 | 277 | 1 | 0 | 4 | 5 | 395 |
| 07:15 AM | 0 | 109 | 0 | 109 | 0 | 0 | **2** | **2** | 2 | 292 | **2** | 296 | 7 | 0 | 5 | 12 | 419 |
| 07:30 AM | 0 | **151** | **2** | **153** | 1 | 0 | 1 | 2 | 3 | **303** | 1 | **307** | 6 | **1** | 0 | 7 | 469 |
| 07:45 AM | 0 | 148 | 1 | 149 | 1 | 0 | 1 | 2 | **5** | 292 | 2 | 299 | **13** | 1 | **7** | **21** | **471** |
| Total Volume | 0 | 519 | 4 | 523 | 3 | 0 | 4 | 7 | 11 | 1162 | 6 | 1179 | 27 | 2 | 16 | 45 | 1754 |
| % App. Total | 0 | 99.2 | 0.8 | | 42.9 | 0 | 57.1 | | 0.9 | 98.6 | 0.5 | | 60 | 4.4 | 35.6 | | |
| PHF | .000 | .859 | .500 | .855 | .750 | .000 | .500 | .875 | .550 | .959 | .750 | .960 | .519 | .500 | .571 | .536 | .931 |

# Peggy Malone & Associates
(888) 247-8602

File Name : 6-Blanding Blvd. and Krystal_Rowes AM w Uturns
Site Code :
Start Date : 6/1/2016
Page No : 1

Groups Printed- Truck

| | Blanding Blvd. Southbound | | | | | Rowe's Driveway Westbound | | | | | Blanding Blvd. Northbound | | | | | Krystal's South Driveway Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Int. Total |
| 07:00 AM | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 5 |
| 07:15 AM | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 6 |
| 07:30 AM | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 6 |
| 07:45 AM | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 1 | 7 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 13 |
| Total | 0 | 16 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 1 | 13 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 30 |
| Grand Total | 0 | 16 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 1 | 13 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 30 |
| Apprch % | 0 | 100 | 0 | 0 | | 0 | 0 | 0 | 0 | | 7.1 | 92.9 | 0 | 0 | | 0 | 0 | 0 | 0 | | |
| Total % | 0 | 53.3 | 0 | 0 | 53.3 | 0 | 0 | 0 | 0 | 0 | 3.3 | 43.3 | 0 | 0 | 46.7 | 0 | 0 | 0 | 0 | 0 | |

| | Blanding Blvd. Southbound | | | | Rowe's Driveway Westbound | | | | Blanding Blvd. Northbound | | | | Krystal's South Driveway Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:00 AM | | | | | | | | | | | | | | | | | |
| 07:00 AM | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 5 |
| 07:15 AM | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 6 |
| 07:30 AM | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 6 |
| 07:45 AM | 0 | **5** | 0 | **5** | 0 | 0 | 0 | 0 | **1** | **7** | 0 | **8** | 0 | 0 | 0 | 0 | **13** |
| Total Volume | 0 | 16 | 0 | 16 | 0 | 0 | 0 | 0 | 1 | 13 | 0 | 14 | 0 | 0 | 0 | 0 | 30 |
| % App. Total | 0 | 100 | 0 | | 0 | 0 | 0 | | 7.1 | 92.9 | 0 | | 0 | 0 | 0 | | |
| PHF | .000 | .800 | .000 | .800 | .000 | .000 | .000 | .000 | .250 | .464 | .000 | .438 | .000 | .000 | .000 | .000 | .577 |

# Peggy Malone & Associates
(888) 247-8602

File Name : 6-Blanding Blvd. and Krystal_Rowes AM w Uturns
Site Code :
Start Date : 6/1/2016
Page No : 1

Groups Printed- Uturns

| | Blanding Blvd. Southbound | | | | | Rowe's Driveway Westbound | | | | | Blanding Blvd. Northbound | | | | | Krystal's South Driveway Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Int. Total |
| 07:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| 07:15 AM | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| 07:45 AM | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 6 |
| Total | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 12 |
| Grand Total | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 12 |
| Apprch % | 0 | 0 | 100 | 0 | | 0 | 0 | 0 | 0 | | 0 | 0 | 100 | 0 | | 0 | 0 | 0 | 0 | | |
| Total % | 0 | 0 | 16.7 | 0 | 16.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 83.3 | 0 | 83.3 | 0 | 0 | 0 | 0 | 0 | |

| | Blanding Blvd. Southbound | | | | Rowe's Driveway Westbound | | | | Blanding Blvd. Northbound | | | | Krystal's South Driveway Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:00 AM | | | | | | | | | | | | | | | | | |
| 07:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 |
| 07:15 AM | 0 | 0 | **1** | **1** | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 |
| 07:45 AM | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | **5** | **5** | 0 | 0 | 0 | 0 | **6** |
| Total Volume | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 10 | 0 | 0 | 0 | 0 | 12 |
| % App. Total | 0 | 0 | 100 | | 0 | 0 | 0 | | 0 | 0 | 100 | | 0 | 0 | 0 | | |
| PHF | .000 | .000 | .500 | .500 | .000 | .000 | .000 | .000 | .000 | .000 | .500 | .500 | .000 | .000 | .000 | .000 | .500 |

# Peggy Malone & Associates
(888) 247-8602

File Name : 6-Blanding Blvd. and Krystal_Rowes AM w Uturns
Site Code :
Start Date : 6/1/2016
Page No : 1

Groups Printed- Combined

| | Blanding Blvd. Southbound | | | | | Rowe's Driveway Westbound | | | | | Blanding Blvd. Northbound | | | | | Krystal's South Driveway Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Int. Total |
| 07:00 AM | 0 | 115 | 1 | 0 | 116 | 1 | 0 | 0 | 0 | 1 | 1 | 276 | 3 | 0 | 280 | 1 | 0 | 4 | 1 | 6 | 403 |
| 07:15 AM | 0 | 113 | 1 | 0 | 114 | 0 | 0 | 2 | 1 | 3 | 2 | 294 | 3 | 0 | 299 | 7 | 0 | 5 | 1 | 13 | 429 |
| 07:30 AM | 0 | 154 | 2 | 0 | 156 | 1 | 0 | 1 | 0 | 2 | 3 | 306 | 3 | 0 | 312 | 6 | 1 | 0 | 2 | 9 | 479 |
| 07:45 AM | 0 | 153 | 2 | 0 | 155 | 1 | 0 | 1 | 0 | 2 | 6 | 299 | 7 | 0 | 312 | 13 | 1 | 7 | 2 | 23 | 492 |
| Total | 0 | 535 | 6 | 0 | 541 | 3 | 0 | 4 | 1 | 8 | 12 | 1175 | 16 | 0 | 1203 | 27 | 2 | 16 | 6 | 51 | 1803 |
| Grand Total | 0 | 535 | 6 | 0 | 541 | 3 | 0 | 4 | 1 | 8 | 12 | 1175 | 16 | 0 | 1203 | 27 | 2 | 16 | 6 | 51 | 1803 |
| Apprch % | 0 | 98.9 | 1.1 | 0 | | 37.5 | 0 | 50 | 12.5 | | 1 | 97.7 | 1.3 | 0 | | 52.9 | 3.9 | 31.4 | 11.8 | | |
| Total % | 0 | 29.7 | 0.3 | 0 | 30 | 0.2 | 0 | 0.2 | 0.1 | 0.4 | 0.7 | 65.2 | 0.9 | 0 | 66.7 | 1.5 | 0.1 | 0.9 | 0.3 | 2.8 | |

| | Blanding Blvd. Southbound | | | | Rowe's Driveway Westbound | | | | Blanding Blvd. Northbound | | | | Krystal's South Driveway Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:00 AM | | | | | | | | | | | | | | | | | |
| 07:00 AM | 0 | 115 | 1 | 116 | **1** | 0 | 0 | 1 | 1 | 276 | 3 | 280 | 1 | 0 | 4 | 5 | 402 |
| 07:15 AM | 0 | 113 | 1 | 114 | 0 | 0 | **2** | **2** | 2 | 294 | 3 | 299 | 7 | 0 | 5 | 12 | 427 |
| 07:30 AM | 0 | **154** | **2** | **156** | 1 | 0 | 1 | 2 | 3 | **306** | 3 | **312** | 6 | **1** | 0 | 7 | 477 |
| 07:45 AM | 0 | 153 | 2 | 155 | 1 | 0 | 1 | 2 | **6** | 299 | **7** | 312 | **13** | 1 | **7** | **21** | **490** |
| Total Volume | 0 | 535 | 6 | 541 | 3 | 0 | 4 | 7 | 12 | 1175 | 16 | 1203 | 27 | 2 | 16 | 45 | 1796 |
| % App. Total | 0 | 98.9 | 1.1 | | 42.9 | 0 | 57.1 | | 1 | 97.7 | 1.3 | | 60 | 4.4 | 35.6 | | |
| PHF | .000 | .869 | .750 | .867 | .750 | .000 | .500 | .875 | .500 | .960 | .571 | .964 | .519 | .500 | .571 | .536 | .916 |

# Peggy Malone & Associates
(888) 247-8602

File Name : 6-Blanding Blvd. and Krystal_Rowes PM w Uturns
Site Code :
Start Date : 6/1/2016
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Groups Printed- Car

| | Blanding Blvd. Southbound | | | | | Rowe's Driveway Westbound | | | | | Blanding Blvd. Northbound | | | | | Krystal's South Driveway Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Int. Total |
| 12:00 PM | 0 | 212 | 1 | 0 | 213 | 13 | 0 | 4 | 2 | 19 | 8 | 201 | 5 | 2 | 216 | 5 | 0 | 4 | 0 | 9 | 457 |
| 12:15 PM | 0 | 195 | 1 | 0 | 196 | 6 | 0 | 6 | 6 | 18 | 6 | 193 | 0 | 0 | 199 | 8 | 0 | 5 | 1 | 14 | 427 |
| 12:30 PM | 1 | 193 | 4 | 1 | 199 | 7 | 0 | 3 | 1 | 11 | 13 | 181 | 3 | 2 | 199 | 6 | 0 | 2 | 1 | 9 | 418 |
| 12:45 PM | 0 | 206 | 3 | 0 | 209 | 7 | 0 | 4 | 1 | 12 | 14 | 195 | 7 | 1 | 217 | 7 | 0 | 3 | 2 | 12 | 450 |
| Total | 1 | 806 | 9 | 1 | 817 | 33 | 0 | 17 | 10 | 60 | 41 | 770 | 15 | 5 | 831 | 26 | 0 | 14 | 4 | 44 | 1752 |
| 01:00 PM | 0 | 159 | 4 | 2 | 165 | 5 | 0 | 4 | 2 | 11 | 6 | 183 | 5 | 0 | 194 | 9 | 0 | 4 | 0 | 13 | 383 |
| 01:15 PM | 0 | 192 | 3 | 1 | 196 | 13 | 0 | 14 | 1 | 28 | 10 | 178 | 0 | 0 | 188 | 9 | 0 | 2 | 2 | 13 | 425 |
| 01:30 PM | 1 | 193 | 2 | 0 | 196 | 3 | 0 | 11 | 2 | 16 | 8 | 213 | 3 | 0 | 224 | 4 | 0 | 2 | 1 | 7 | 443 |
| 01:45 PM | 0 | 204 | 6 | 0 | 210 | 7 | 0 | 3 | 0 | 10 | 12 | 186 | 1 | 0 | 199 | 1 | 0 | 1 | 2 | 4 | 423 |
| Total | 1 | 748 | 15 | 3 | 767 | 28 | 0 | 32 | 5 | 65 | 36 | 760 | 9 | 0 | 805 | 23 | 0 | 9 | 5 | 37 | 1674 |
| 02:00 PM | 1 | 189 | 3 | 0 | 193 | 10 | 0 | 7 | 1 | 18 | 6 | 196 | 1 | 0 | 203 | 4 | 0 | 3 | 2 | 9 | 423 |
| 02:15 PM | 1 | 183 | 9 | 1 | 194 | 8 | 0 | 8 | 0 | 16 | 10 | 181 | 2 | 2 | 195 | 3 | 0 | 2 | 0 | 5 | 410 |
| 02:30 PM | 0 | 198 | 5 | 0 | 203 | 4 | 0 | 5 | 0 | 9 | 11 | 183 | 2 | 2 | 198 | 11 | 0 | 2 | 2 | 15 | 425 |
| 02:45 PM | 0 | 227 | 2 | 2 | 231 | 18 | 0 | 3 | 0 | 21 | 15 | 185 | 1 | 0 | 201 | 4 | 0 | 0 | 0 | 4 | 457 |
| Total | 2 | 797 | 19 | 3 | 821 | 40 | 0 | 23 | 1 | 64 | 42 | 745 | 6 | 4 | 797 | 22 | 0 | 7 | 4 | 33 | 1715 |
| 03:00 PM | 0 | 229 | 5 | 2 | 236 | 7 | 0 | 5 | 0 | 12 | 6 | 178 | 3 | 2 | 189 | 3 | 0 | 3 | 0 | 6 | 443 |
| 03:15 PM | 0 | 264 | 3 | 1 | 268 | 6 | 1 | 5 | 0 | 12 | 10 | 151 | 2 | 2 | 165 | 7 | 0 | 0 | 0 | 7 | 452 |
| 03:30 PM | 0 | 257 | 1 | 4 | 262 | 7 | 0 | 10 | 2 | 19 | 7 | 190 | 3 | 0 | 200 | 5 | 0 | 7 | 0 | 12 | 493 |
| 03:45 PM | 0 | 238 | 6 | 0 | 244 | 15 | 0 | 2 | 1 | 18 | 11 | 192 | 0 | 1 | 204 | 6 | 0 | 1 | 0 | 7 | 473 |
| Total | 0 | 988 | 15 | 7 | 1010 | 35 | 1 | 22 | 3 | 61 | 34 | 711 | 8 | 5 | 758 | 21 | 0 | 11 | 0 | 32 | 1861 |
| 04:00 PM | 0 | 235 | 6 | 0 | 241 | 7 | 0 | 12 | 1 | 20 | 7 | 171 | 1 | 0 | 179 | 9 | 0 | 3 | 0 | 12 | 452 |
| 04:15 PM | 0 | 266 | 2 | 2 | 270 | 5 | 0 | 13 | 0 | 18 | 11 | 202 | 0 | 0 | 213 | 3 | 0 | 4 | 3 | 10 | 511 |
| 04:30 PM | 0 | 286 | 2 | 0 | 288 | 8 | 0 | 11 | 0 | 19 | 7 | 186 | 0 | 1 | 194 | 3 | 0 | 6 | 0 | 9 | 510 |
| 04:45 PM | 0 | 320 | 3 | 1 | 324 | 9 | 0 | 7 | 0 | 16 | 15 | 191 | 0 | 1 | 207 | 3 | 0 | 2 | 2 | 7 | 554 |
| Total | 0 | 1107 | 13 | 3 | 1123 | 29 | 0 | 43 | 1 | 73 | 40 | 750 | 1 | 2 | 793 | 18 | 0 | 15 | 5 | 38 | 2027 |
| 05:00 PM | 0 | 298 | 2 | 1 | 301 | 13 | 0 | 8 | 0 | 21 | 9 | 168 | 1 | 0 | 178 | 9 | 0 | 6 | 1 | 16 | 516 |
| 05:15 PM | 1 | 288 | 3 | 1 | 293 | 4 | 0 | 5 | 2 | 11 | 4 | 160 | 2 | 0 | 166 | 4 | 1 | 1 | 5 | 11 | 481 |
| 05:30 PM | 0 | 283 | 5 | 1 | 289 | 3 | 0 | 3 | 1 | 7 | 6 | 171 | 0 | 0 | 177 | 4 | 0 | 0 | 0 | 4 | 477 |
| 05:45 PM | 0 | 315 | 6 | 3 | 324 | 8 | 0 | 7 | 1 | 16 | 4 | 174 | 3 | 0 | 181 | 2 | 0 | 2 | 5 | 9 | 530 |
| Total | 1 | 1184 | 16 | 6 | 1207 | 28 | 0 | 23 | 4 | 55 | 23 | 673 | 6 | 0 | 702 | 19 | 1 | 9 | 11 | 40 | 2004 |
| 06:00 PM | 0 | 298 | 5 | 2 | 305 | 6 | 1 | 2 | 0 | 9 | 3 | 208 | 0 | 0 | 211 | 0 | 0 | 1 | 3 | 4 | 529 |
| 06:15 PM | 0 | 285 | 3 | 0 | 288 | 6 | 0 | 8 | 0 | 14 | 7 | 163 | 1 | 0 | 171 | 5 | 0 | 4 | 0 | 9 | 482 |
| 06:30 PM | 0 | 200 | 2 | 0 | 202 | 4 | 2 | 7 | 0 | 13 | 13 | 157 | 1 | 0 | 171 | 8 | 0 | 4 | 0 | 12 | 398 |
| 06:45 PM | 0 | 190 | 4 | 0 | 194 | 9 | 0 | 7 | 0 | 16 | 15 | 145 | 0 | 1 | 161 | 4 | 0 | 1 | 1 | 6 | 377 |
| Total | 0 | 973 | 14 | 2 | 989 | 25 | 3 | 24 | 0 | 52 | 38 | 673 | 2 | 1 | 714 | 17 | 0 | 10 | 4 | 31 | 1786 |
| Grand Total | 5 | 6603 | 101 | 25 | 6734 | 218 | 4 | 184 | 24 | 430 | 254 | 5082 | 47 | 17 | 5400 | 146 | 1 | 75 | 33 | 255 | 12819 |
| Apprch % | 0.1 | 98.1 | 1.5 | 0.4 | | 50.7 | 0.9 | 42.8 | 5.6 | | 4.7 | 94.1 | 0.9 | 0.3 | | 57.3 | 0.4 | 29.4 | 12.9 | | |
| Total % | 0 | 51.5 | 0.8 | 0.2 | 52.5 | 1.7 | 0 | 1.4 | 0.2 | 3.4 | 2 | 39.6 | 0.4 | 0.1 | 42.1 | 1.1 | 0 | 0.6 | 0.3 | 2 | |

| | Blanding Blvd. Southbound | | | | Rowe's Driveway Westbound | | | | Blanding Blvd. Northbound | | | | Krystal's South Driveway Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 12:00 PM to 03:30 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 02:45 PM | | | | | | | | | | | | | | | | | |
| 02:45 PM | 0 | 227 | 2 | 229 | **18** | 0 | 3 | **21** | **15** | 185 | 1 | **201** | 4 | 0 | 0 | 4 | 455 |
| 03:00 PM | 0 | 229 | **5** | 234 | 7 | 0 | 5 | 12 | 6 | 178 | **3** | 187 | 3 | 0 | 3 | 6 | 439 |
| 03:15 PM | 0 | **264** | 3 | **267** | 6 | **1** | 5 | 12 | 10 | 151 | 2 | 163 | **7** | 0 | 0 | 7 | 449 |
| 03:30 PM | 0 | 257 | 1 | 258 | 7 | 0 | **10** | 17 | 7 | **190** | 3 | 200 | 5 | 0 | **7** | **12** | **487** |
| Total Volume | 0 | 977 | 11 | 988 | 38 | 1 | 23 | 62 | 38 | 704 | 9 | 751 | 19 | 0 | 10 | 29 | 1830 |
| % App. Total | 0 | 98.9 | 1.1 | | 61.3 | 1.6 | 37.1 | | 5.1 | 93.7 | 1.2 | | 65.5 | 0 | 34.5 | | |
| PHF | .000 | .925 | .550 | .925 | .528 | .250 | .575 | .738 | .633 | .926 | .750 | .934 | .679 | .000 | .357 | .604 | .939 |
| Peak Hour Analysis From 03:45 PM to 06:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:15 PM | | | | | | | | | | | | | | | | | |
| 04:15 PM | 0 | 266 | 2 | 268 | 5 | 0 | **13** | 18 | 11 | **202** | 0 | **213** | 3 | 0 | 4 | 7 | 506 |
| 04:30 PM | 0 | 286 | 2 | 288 | 8 | 0 | 11 | 19 | 7 | 186 | 0 | 193 | 3 | 0 | **6** | 9 | 509 |
| 04:45 PM | 0 | **320** | **3** | **323** | 9 | 0 | 7 | 16 | **15** | 191 | 0 | 206 | 3 | 0 | 2 | 5 | **550** |
| 05:00 PM | 0 | 298 | 2 | 300 | **13** | 0 | 8 | **21** | 9 | 168 | **1** | 178 | **9** | 0 | 6 | **15** | 514 |
| Total Volume | 0 | 1170 | 9 | 1179 | 35 | 0 | 39 | 74 | 42 | 747 | 1 | 790 | 18 | 0 | 18 | 36 | 2079 |
| % App. Total | 0 | 99.2 | 0.8 | | 47.3 | 0 | 52.7 | | 5.3 | 94.6 | 0.1 | | 50 | 0 | 50 | | |
| PHF | .000 | .914 | .750 | .913 | .673 | .000 | .750 | .881 | .700 | .925 | .250 | .927 | .500 | .000 | .750 | .600 | .945 |

# Peggy Malone & Associates
(888) 247-8602

File Name : 6-Blanding Blvd. and Krystal_Rowes PM w Uturns
Site Code :
Start Date : 6/1/2016
Page No : 1

Groups Printed- Truck

| | Blanding Blvd. Southbound | | | | | Rowe's Driveway Westbound | | | | | Blanding Blvd. Northbound | | | | | Krystal's South Driveway Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Int. Total |
| 12:00 PM | 0 | 13 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 20 |
| 12:15 PM | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 8 |
| 12:30 PM | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 11 |
| 12:45 PM | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 17 |
| Total | 0 | 27 | 0 | 0 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 0 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 56 |
| 01:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 8 |
| 01:15 PM | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 12 |
| 01:30 PM | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 5 |
| 01:45 PM | 0 | 3 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 1 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 12 |
| Total | 0 | 13 | 0 | 0 | 13 | 0 | 1 | 0 | 0 | 1 | 0 | 23 | 0 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 37 |
| 02:00 PM | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 5 |
| 02:15 PM | 0 | 14 | 0 | 0 | 14 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 16 |
| 02:30 PM | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 9 |
| 02:45 PM | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 13 |
| Total | 0 | 28 | 0 | 0 | 28 | 0 | 0 | 1 | 0 | 1 | 1 | 13 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 43 |
| 03:00 PM | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 14 |
| 03:15 PM | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 1 | 7 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 16 |
| 03:30 PM | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 16 |
| 03:45 PM | 0 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 11 |
| Total | 0 | 20 | 1 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 1 | 35 | 0 | 0 | 36 | 0 | 0 | 0 | 0 | 0 | 57 |
| 04:00 PM | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 13 |
| 04:15 PM | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 14 |
| 04:30 PM | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 8 |
| 04:45 PM | 0 | 3 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 6 |
| Total | 0 | 22 | 1 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 41 |
| 05:00 PM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| 05:15 PM | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| 05:30 PM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 3 |
| 05:45 PM | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 6 |
| Total | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 1 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 15 |
| 06:00 PM | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 11 |
| 06:15 PM | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 8 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 12 |
| 06:30 PM | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 8 |
| 06:45 PM | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 6 |
| Total | 0 | 16 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 1 | 20 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 37 |
| Grand Total | 0 | 134 | 2 | 0 | 136 | 0 | 1 | 1 | 0 | 2 | 3 | 144 | 1 | 0 | 148 | 0 | 0 | 0 | 0 | 0 | 286 |
| Apprch % | 0 | 98.5 | 1.5 | 0 | | 0 | 50 | 50 | 0 | | 2 | 97.3 | 0.7 | 0 | | 0 | 0 | 0 | 0 | | |
| Total % | 0 | 46.9 | 0.7 | 0 | 47.6 | 0 | 0.3 | 0.3 | 0 | 0.7 | 1 | 50.3 | 0.3 | 0 | 51.7 | 0 | 0 | 0 | 0 | 0 | |

| | Blanding Blvd. Southbound | | | | Rowe's Driveway Westbound | | | | Blanding Blvd. Northbound | | | | Krystal's South Driveway Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 12:00 PM to 03:30 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 02:45 PM | | | | | | | | | | | | | | | | | |
| 02:45 PM | 0 | 7 | 0 | 7 | 0 | 0 | 0 | 0 | **1** | 5 | 0 | 6 | 0 | 0 | 0 | 0 | 13 |
| 03:00 PM | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | **10** | 0 | **10** | 0 | 0 | 0 | 0 | 14 |
| 03:15 PM | 0 | **8** | 0 | **8** | 0 | 0 | 0 | 0 | 1 | 7 | 0 | 8 | 0 | 0 | 0 | 0 | **16** |
| 03:30 PM | 0 | 7 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 9 | 0 | 0 | 0 | 0 | 16 |
| Total Volume | 0 | 26 | 0 | 26 | 0 | 0 | 0 | 0 | 2 | 31 | 0 | 33 | 0 | 0 | 0 | 0 | 59 |
| % App. Total | 0 | 100 | 0 | | 0 | 0 | 0 | | 6.1 | 93.9 | 0 | | 0 | 0 | 0 | | |
| PHF | .000 | .813 | .000 | .813 | .000 | .000 | .000 | .000 | .500 | .775 | .000 | .825 | .000 | .000 | .000 | .000 | .922 |
| Peak Hour Analysis From 03:45 PM to 06:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 03:45 PM | | | | | | | | | | | | | | | | | |
| 03:45 PM | 0 | 1 | **1** | 2 | 0 | 0 | 0 | 0 | 0 | **9** | 0 | **9** | 0 | 0 | 0 | 0 | 11 |
| 04:00 PM | 0 | **7** | 0 | **7** | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 13 |
| 04:15 PM | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 8 | 0 | 0 | 0 | 0 | **14** |
| 04:30 PM | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 8 |
| Total Volume | 0 | 20 | 1 | 21 | 0 | 0 | 0 | 0 | 0 | 25 | 0 | 25 | 0 | 0 | 0 | 0 | 46 |
| % App. Total | 0 | 95.2 | 4.8 | | 0 | 0 | 0 | | 0 | 100 | 0 | | 0 | 0 | 0 | | |
| PHF | .000 | .714 | .250 | .750 | .000 | .000 | .000 | .000 | .000 | .694 | .000 | .694 | .000 | .000 | .000 | .000 | .821 |

# Peggy Malone & Associates
(888) 247-8602

File Name : 6-Blanding Blvd. and Krystal_Rowes PM w Uturns
Site Code :
Start Date : 6/1/2016
Page No : 1

Groups Printed- Uturns

| | Blanding Blvd. Southbound | | | | | Rowe's Driveway Westbound | | | | | Blanding Blvd. Northbound | | | | | Krystal's South Driveway Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Int. Total |
| 12:00 PM | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 3 |
| 12:15 PM | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 15 |
| 12:30 PM | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 13 |
| 12:45 PM | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 15 |
| Total | 0 | 0 | 11 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | 0 | 35 | 0 | 0 | 0 | 0 | 0 | 46 |
| 01:00 PM | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 6 |
| 01:15 PM | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 9 |
| 01:30 PM | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 10 |
| 01:45 PM | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 9 |
| Total | 0 | 0 | 13 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 34 |
| 02:00 PM | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 11 |
| 02:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 5 |
| 02:30 PM | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 9 |
| 02:45 PM | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 9 |
| Total | 0 | 0 | 8 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 0 | 26 | 0 | 0 | 0 | 0 | 0 | 34 |
| 03:00 PM | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 11 |
| 03:15 PM | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 4 |
| 03:30 PM | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 8 |
| 03:45 PM | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 13 |
| Total | 0 | 0 | 9 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 0 | 27 | 0 | 0 | 0 | 0 | 0 | 36 |
| 04:00 PM | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 9 |
| 04:15 PM | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 8 |
| 04:30 PM | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 11 |
| 04:45 PM | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 7 |
| Total | 0 | 0 | 8 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 0 | 27 | 0 | 0 | 0 | 0 | 0 | 35 |
| 05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 6 |
| 05:15 PM | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 5 |
| 05:30 PM | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 11 |
| 05:45 PM | 0 | 0 | 5 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 9 |
| Total | 0 | 0 | 8 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 31 |
| 06:00 PM | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 12 |
| 06:15 PM | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 7 |
| 06:30 PM | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 10 |
| 06:45 PM | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 8 |
| Total | 0 | 0 | 9 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 37 |
| Grand Total | 0 | 0 | 66 | 0 | 66 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 187 | 0 | 187 | 0 | 0 | 0 | 0 | 0 | 253 |
| Apprch % | 0 | 0 | 100 | 0 | | 0 | 0 | 0 | 0 | | 0 | 0 | 100 | 0 | | 0 | 0 | 0 | 0 | | |
| Total % | 0 | 0 | 26.1 | 0 | 26.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 73.9 | 0 | 73.9 | 0 | 0 | 0 | 0 | 0 | |

| | Blanding Blvd. Southbound | | | | Rowe's Driveway Westbound | | | | Blanding Blvd. Northbound | | | | Krystal's South Driveway Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 12:00 PM to 03:30 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 12:15 PM | | | | | | | | | | | | | | | | | |
| 12:15 PM | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | **12** | **12** | 0 | 0 | 0 | 0 | **15** |
| 12:30 PM | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 10 | 0 | 0 | 0 | 0 | 13 |
| 12:45 PM | 0 | 0 | **4** | **4** | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 0 | 0 | 0 | 0 | 15 |
| 01:00 PM | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 6 |
| Total Volume | 0 | 0 | 14 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | 35 | 0 | 0 | 0 | 0 | 49 |
| % App. Total | 0 | 0 | 100 | | 0 | 0 | 0 | | 0 | 0 | 100 | | 0 | 0 | 0 | | |
| PHF | .000 | .000 | .875 | .875 | .000 | .000 | .000 | .000 | .000 | .000 | .729 | .729 | .000 | .000 | .000 | .000 | .817 |
| Peak Hour Analysis From 03:45 PM to 06:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 03:45 PM | | | | | | | | | | | | | | | | | |
| 03:45 PM | 0 | 0 | **3** | **3** | 0 | 0 | 0 | 0 | 0 | 0 | **10** | **10** | 0 | 0 | 0 | 0 | **13** |
| 04:00 PM | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 9 |
| 04:15 PM | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 7 | 0 | 0 | 0 | 0 | 8 |
| 04:30 PM | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 0 | 0 | 0 | 0 | 11 |
| Total Volume | 0 | 0 | 10 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 31 | 0 | 0 | 0 | 0 | 41 |
| % App. Total | 0 | 0 | 100 | | 0 | 0 | 0 | | 0 | 0 | 100 | | 0 | 0 | 0 | | |
| PHF | .000 | .000 | .833 | .833 | .000 | .000 | .000 | .000 | .000 | .000 | .775 | .775 | .000 | .000 | .000 | .000 | .788 |

# Peggy Malone & Associates
(888) 247-8602

File Name : 6-Blanding Blvd. and Krystal_Rowes PM w Uturns
Site Code :
Start Date : 6/1/2016
Page No : 1

Groups Printed- Combined

| | Blanding Blvd. Southbound | | | | | Rowe's Driveway Westbound | | | | | Blanding Blvd. Northbound | | | | | Krystal's South Driveway Eastbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Int. Total |
| 12:00 PM | 0 | 225 | 2 | 0 | 227 | 13 | 0 | 4 | 2 | 19 | 8 | 208 | 7 | 2 | 225 | 5 | 0 | 4 | 0 | 9 | 480 |
| 12:15 PM | 0 | 199 | 4 | 0 | 203 | 6 | 0 | 6 | 6 | 18 | 6 | 197 | 12 | 0 | 215 | 8 | 0 | 5 | 1 | 14 | 450 |
| 12:30 PM | 1 | 197 | 7 | 1 | 206 | 7 | 0 | 3 | 1 | 11 | 13 | 188 | 13 | 2 | 216 | 6 | 0 | 2 | 1 | 9 | 442 |
| 12:45 PM | 0 | 212 | 7 | 0 | 219 | 7 | 0 | 4 | 1 | 12 | 14 | 206 | 18 | 1 | 239 | 7 | 0 | 3 | 2 | 12 | 482 |
| Total | 1 | 833 | 20 | 1 | 855 | 33 | 0 | 17 | 10 | 60 | 41 | 799 | 50 | 5 | 895 | 26 | 0 | 14 | 4 | 44 | 1854 |
| 01:00 PM | 0 | 159 | 8 | 2 | 169 | 5 | 0 | 4 | 2 | 11 | 6 | 191 | 7 | 0 | 204 | 9 | 0 | 4 | 0 | 13 | 397 |
| 01:15 PM | 0 | 200 | 6 | 1 | 207 | 13 | 0 | 14 | 1 | 28 | 10 | 182 | 6 | 0 | 198 | 9 | 0 | 2 | 2 | 13 | 446 |
| 01:30 PM | 1 | 195 | 5 | 0 | 201 | 3 | 0 | 11 | 2 | 16 | 8 | 216 | 10 | 0 | 234 | 4 | 0 | 2 | 1 | 7 | 458 |
| 01:45 PM | 0 | 207 | 9 | 0 | 216 | 7 | 1 | 3 | 0 | 11 | 12 | 194 | 7 | 0 | 213 | 1 | 0 | 1 | 2 | 4 | 444 |
| Total | 1 | 761 | 28 | 3 | 793 | 28 | 1 | 32 | 5 | 66 | 36 | 783 | 30 | 0 | 849 | 23 | 0 | 9 | 5 | 37 | 1745 |
| 02:00 PM | 1 | 191 | 6 | 0 | 198 | 10 | 0 | 7 | 1 | 18 | 6 | 199 | 9 | 0 | 214 | 4 | 0 | 3 | 2 | 9 | 439 |
| 02:15 PM | 1 | 197 | 9 | 1 | 208 | 8 | 0 | 9 | 0 | 17 | 10 | 182 | 7 | 2 | 201 | 3 | 0 | 2 | 0 | 5 | 431 |
| 02:30 PM | 0 | 203 | 7 | 0 | 210 | 4 | 0 | 5 | 0 | 9 | 11 | 187 | 9 | 2 | 209 | 11 | 0 | 2 | 2 | 15 | 443 |
| 02:45 PM | 0 | 234 | 5 | 2 | 241 | 18 | 0 | 3 | 0 | 21 | 16 | 190 | 7 | 0 | 213 | 4 | 0 | 0 | 0 | 4 | 479 |
| Total | 2 | 825 | 27 | 3 | 857 | 40 | 0 | 24 | 1 | 65 | 43 | 758 | 32 | 4 | 837 | 22 | 0 | 7 | 4 | 33 | 1792 |
| 03:00 PM | 0 | 233 | 9 | 2 | 244 | 7 | 0 | 5 | 0 | 12 | 6 | 188 | 10 | 2 | 206 | 3 | 0 | 3 | 0 | 6 | 468 |
| 03:15 PM | 0 | 272 | 4 | 1 | 277 | 6 | 1 | 5 | 0 | 12 | 11 | 158 | 5 | 2 | 176 | 7 | 0 | 0 | 0 | 7 | 472 |
| 03:30 PM | 0 | 264 | 2 | 4 | 270 | 7 | 0 | 10 | 2 | 19 | 7 | 199 | 10 | 0 | 216 | 5 | 0 | 7 | 0 | 12 | 517 |
| 03:45 PM | 0 | 239 | 10 | 0 | 249 | 15 | 0 | 2 | 1 | 18 | 11 | 201 | 10 | 1 | 223 | 6 | 0 | 1 | 0 | 7 | 497 |
| Total | 0 | 1008 | 25 | 7 | 1040 | 35 | 1 | 22 | 3 | 61 | 35 | 746 | 35 | 5 | 821 | 21 | 0 | 11 | 0 | 32 | 1954 |
| 04:00 PM | 0 | 242 | 9 | 0 | 251 | 7 | 0 | 12 | 1 | 20 | 7 | 177 | 7 | 0 | 191 | 9 | 0 | 3 | 0 | 12 | 474 |
| 04:15 PM | 0 | 272 | 3 | 2 | 277 | 5 | 0 | 13 | 0 | 18 | 11 | 210 | 7 | 0 | 228 | 3 | 0 | 4 | 3 | 10 | 533 |
| 04:30 PM | 0 | 292 | 5 | 0 | 297 | 8 | 0 | 11 | 0 | 19 | 7 | 188 | 8 | 1 | 204 | 3 | 0 | 6 | 0 | 9 | 529 |
| 04:45 PM | 0 | 323 | 5 | 1 | 329 | 9 | 0 | 7 | 0 | 16 | 15 | 193 | 6 | 1 | 215 | 3 | 0 | 2 | 2 | 7 | 567 |
| Total | 0 | 1129 | 22 | 3 | 1154 | 29 | 0 | 43 | 1 | 73 | 40 | 768 | 28 | 2 | 838 | 18 | 0 | 15 | 5 | 38 | 2103 |
| 05:00 PM | 0 | 299 | 2 | 1 | 302 | 13 | 0 | 8 | 0 | 21 | 9 | 168 | 8 | 0 | 185 | 9 | 0 | 6 | 1 | 16 | 524 |
| 05:15 PM | 1 | 290 | 5 | 1 | 297 | 4 | 0 | 5 | 2 | 11 | 4 | 162 | 5 | 0 | 171 | 4 | 1 | 1 | 5 | 11 | 490 |
| 05:30 PM | 0 | 284 | 6 | 1 | 291 | 3 | 0 | 3 | 1 | 7 | 6 | 173 | 10 | 0 | 189 | 4 | 0 | 0 | 0 | 4 | 491 |
| 05:45 PM | 0 | 319 | 11 | 3 | 333 | 8 | 0 | 7 | 1 | 16 | 4 | 176 | 7 | 0 | 187 | 2 | 0 | 2 | 5 | 9 | 545 |
| Total | 1 | 1192 | 24 | 6 | 1223 | 28 | 0 | 23 | 4 | 55 | 23 | 679 | 30 | 0 | 732 | 19 | 1 | 9 | 11 | 40 | 2050 |
| 06:00 PM | 0 | 304 | 11 | 2 | 317 | 6 | 1 | 2 | 0 | 9 | 3 | 213 | 6 | 0 | 222 | 0 | 0 | 1 | 3 | 4 | 552 |
| 06:15 PM | 0 | 288 | 4 | 0 | 292 | 6 | 0 | 8 | 0 | 14 | 8 | 171 | 7 | 0 | 186 | 5 | 0 | 4 | 0 | 9 | 501 |
| 06:30 PM | 0 | 205 | 3 | 0 | 208 | 4 | 2 | 7 | 0 | 13 | 13 | 160 | 10 | 0 | 183 | 8 | 0 | 4 | 0 | 12 | 416 |
| 06:45 PM | 0 | 192 | 5 | 0 | 197 | 9 | 0 | 7 | 0 | 16 | 15 | 149 | 7 | 1 | 172 | 4 | 0 | 1 | 1 | 6 | 391 |
| Total | 0 | 989 | 23 | 2 | 1014 | 25 | 3 | 24 | 0 | 52 | 39 | 693 | 30 | 1 | 763 | 17 | 0 | 10 | 4 | 31 | 1860 |
| Grand Total | 5 | 6737 | 169 | 25 | 6936 | 218 | 5 | 185 | 24 | 432 | 257 | 5226 | 235 | 17 | 5735 | 146 | 1 | 75 | 33 | 255 | 13358 |
| Apprch % | 0.1 | 97.1 | 2.4 | 0.4 | | 50.5 | 1.2 | 42.8 | 5.6 | | 4.5 | 91.1 | 4.1 | 0.3 | | 57.3 | 0.4 | 29.4 | 12.9 | | |
| Total % | 0 | 50.4 | 1.3 | 0.2 | 51.9 | 1.6 | 0 | 1.4 | 0.2 | 3.2 | 1.9 | 39.1 | 1.8 | 0.1 | 42.9 | 1.1 | 0 | 0.6 | 0.2 | 1.9 | |

| | Blanding Blvd. Southbound | | | | Rowe's Driveway Westbound | | | | Blanding Blvd. Northbound | | | | Krystal's South Driveway Eastbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 12:00 PM to 03:30 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 02:45 PM | | | | | | | | | | | | | | | | | |
| 02:45 PM | 0 | 234 | 5 | 239 | **18** | 0 | 3 | **21** | **16** | 190 | 7 | 213 | 4 | 0 | 0 | 4 | 477 |
| 03:00 PM | 0 | 233 | **9** | 242 | 7 | 0 | 5 | 12 | 6 | 188 | **10** | 204 | 3 | 0 | 3 | 6 | 464 |
| 03:15 PM | 0 | **272** | 4 | **276** | 6 | **1** | 5 | 12 | 11 | 158 | 5 | 174 | **7** | 0 | 0 | 7 | 469 |
| 03:30 PM | 0 | 264 | 2 | 266 | 7 | 0 | **10** | 17 | 7 | **199** | 10 | **216** | 5 | 0 | **7** | **12** | **511** |
| Total Volume | 0 | 1003 | 20 | 1023 | 38 | 1 | 23 | 62 | 40 | 735 | 32 | 807 | 19 | 0 | 10 | 29 | 1921 |
| % App. Total | 0 | 98 | 2 | | 61.3 | 1.6 | 37.1 | | 5 | 91.1 | 4 | | 65.5 | 0 | 34.5 | | |
| PHF | .000 | .922 | .556 | .927 | .528 | .250 | .575 | .738 | .625 | .923 | .800 | .934 | .679 | .000 | .357 | .604 | .940 |
| Peak Hour Analysis From 03:45 PM to 06:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:15 PM | | | | | | | | | | | | | | | | | |
| 04:15 PM | 0 | 272 | 3 | 275 | 5 | 0 | **13** | 18 | 11 | **210** | 7 | **228** | 3 | 0 | 4 | 7 | 528 |
| 04:30 PM | 0 | 292 | **5** | 297 | 8 | 0 | 11 | 19 | 7 | 188 | **8** | 203 | 3 | 0 | **6** | 9 | 528 |
| 04:45 PM | 0 | **323** | 5 | **328** | 9 | 0 | 7 | 16 | **15** | 193 | 6 | 214 | 3 | 0 | 2 | 5 | **563** |
| 05:00 PM | 0 | 299 | 2 | 301 | **13** | 0 | 8 | **21** | 9 | 168 | 8 | 185 | **9** | 0 | 6 | **15** | 522 |
| Total Volume | 0 | 1186 | 15 | 1201 | 35 | 0 | 39 | 74 | 42 | 759 | 29 | 830 | 18 | 0 | 18 | 36 | 2141 |
| % App. Total | 0 | 98.8 | 1.2 | | 47.3 | 0 | 52.7 | | 5.1 | 91.4 | 3.5 | | 50 | 0 | 50 | | |
| PHF | .000 | .918 | .750 | .915 | .673 | .000 | .750 | .881 | .700 | .904 | .906 | .910 | .500 | .000 | .750 | .600 | .951 |

**Traffic Signal Controller Parameters**
**Duval County, City of Jacksonville, Florida** Rev 4/28/2015

**Intersection: Jammes & 103rd** **Controller Type: Naztec** Int # 3460

**Time of Day Events**

| Day | Time | Cycle | Offset | Split | Lag LT |
|---|---|---|---|---|---|
| M-TH | 12:00 AM | FREE | | | |
| M-TH | 6:00 AM | 1 | 1 | 1 | |
| M-TH | 9:30 AM | 2 | 1 | 2 | |
| M-TH | 1:30 PM | 3 | 1 | 3 | |
| M-TH | 7:30 PM | 4 | 1 | 4 | |
| M-TH | 9:30 PM | FREE | | | |
| | | | | | |
| SAT | 12:00 AM | FREE | | | |
| SAT | 8:00 AM | 5 | 1 | 5 | |
| SAT | 10:00 AM | 6 | 1 | 6 | |
| SAT | 8:30 PM | 7 | 1 | 7 | |
| SAT | 10:30 PM | FREE | | | |
| | | | | | |
| SUN | 12:00 AM | FREE | | | |
| SUN | 9:30 AM | 5 | 1 | 5 | |
| SUN | 11:30 AM | 6 | 1 | 6 | |
| SUN | 6:30 PM | 7 | 1 | 7 | |
| SUN | 9:00 PM | FREE | | | |
| | | | | | |
| FRI | 12:00 AM | FREE | | | |
| FRI | 6:00 AM | 1 | 1 | 1 | |
| FRI | 9:30 AM | 2 | 1 | 2 | |
| FRI | 1:30 PM | 3 | 1 | 3 | |
| FRI | 7:30 PM | 4 | 1 | 4 | |
| FRI | 9:30 PM | FREE | | | |
| | | | | | |

**Phase Allocations**

| Plan | AM | MD | PM | OP | WND | WND | WKD |
|---|---|---|---|---|---|---|---|
| Cycle | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Length | 130 | 120 | 130 | 120 | 120 | 130 | 120 |
| Offset 1 | 120 | 93 | 46 | 116 | 93 | 119 | 63 |
| Offset 2 | | | | | | | |
| Offset 3 | | | | | | | |
| Hold | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| **Percent of Cycle** | | | | | | | |
| 1 | 18 | 15 | 16 | 15 | 15 | 17 | 15 |
| 2 | 64 | 54 | 63 | 60 | 62 | 65 | 60 |
| 3 | 18 | 15 | 18 | 15 | 15 | 18 | 15 |
| 4 | 30 | 36 | 33 | 30 | 28 | 30 | 30 |
| 5 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| 6 | 67 | 54 | 64 | 60 | 62 | 67 | 60 |
| 7 | 21 | 21 | 18 | 18 | 18 | 23 | 18 |
| 8 | 27 | 30 | 33 | 27 | 25 | 25 | 27 |
| Max Rcl | | | | | | | |

**Phase Times**

| | | INT | EXT | AMB | RED | MX1 | WLK | DW | LPI |
|---|---|---|---|---|---|---|---|---|---|
| WLT | PHASE 1 | 4 | 3 | 4.8 | 2 | 20 | | | |
| EA | PHASE 2 | 18 | 3 | 4.8 | 2 | 40 | 7 | 26 | |
| NLT | PHASE 3 | 4 | 3 | 4.1 | 2 | 20 | | | |
| SA | PHASE 4 | 6 | 3 | 4.1 | 2 | 30 | 7 | 28 | 5 |
| ELT | PHASE 5 | 4 | 3 | 4.8 | 2 | 20 | | | |
| WA | PHASE 6 | 18 | 3 | 4.8 | 2 | 40 | 7 | 28 | |
| SLT | PHASE 7 | 4 | 3 | 4.1 | 2 | 20 | | | |
| NA | PHASE 8 | 6 | 3 | 4.1 | 2 | 30 | 7 | 29 | 5 |

Note:

**Overlaps**

| A | B | C | D |
|---|---|---|---|
| | | | |

**Sequence**

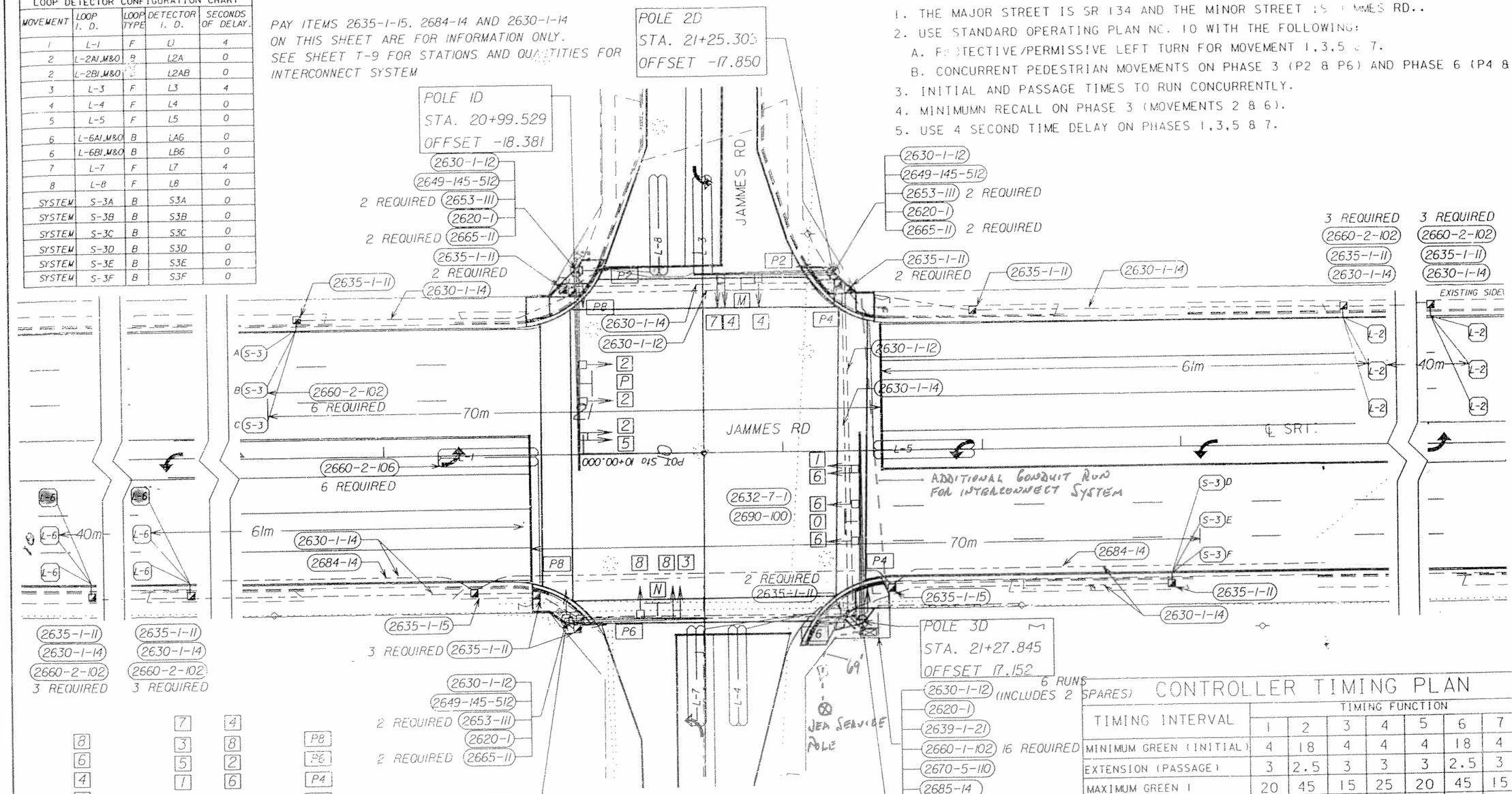
| | | | |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 |

| LOOP DETECTOR CONFIGURATION CHART | | | | |
|---|---|---|---|---|
| MOVEMENT | LOOP I. D. | LOOP TYPE | DETECTOR I. D. | SECONDS OF DELAY |
| 1 | L-1 | F | L1 | 4 |
| 2 | L-2A1,M&O | B | L2A | 0 |
| 2 | L-2B1,M&O | B | L2AB | 0 |
| 3 | L-3 | F | L3 | 4 |
| 4 | L-4 | F | L4 | 0 |
| 5 | L-5 | F | L5 | 0 |
| 6 | L-6A1,M&O | B | LA6 | 0 |
| 6 | L-6B1,M&O | B | LB6 | 0 |
| 7 | L-7 | F | L7 | 4 |
| 8 | L-8 | F | L8 | 0 |
| SYSTEM | S-3A | B | S3A | 0 |
| SYSTEM | S-3B | B | S3B | 0 |
| SYSTEM | S-3C | B | S3C | 0 |
| SYSTEM | S-3D | B | S3D | 0 |
| SYSTEM | S-3E | B | S3E | 0 |
| SYSTEM | S-3F | B | S3F | 0 |

PAY ITEMS 2635-1-15, 2684-14 AND 2630-1-14 ON THIS SHEET ARE FOR INFORMATION ONLY. SEE SHEET T-9 FOR STATIONS AND QUANTITIES FOR INTERCONNECT SYSTEM

CONTROLLER OPERATIONS:

1. THE MAJOR STREET IS SR 134 AND THE MINOR STREET IS JAMMES RD..
2. USE STANDARD OPERATING PLAN NO. 10 WITH THE FOLLOWING:
   A. PROTECTIVE/PERMISSIVE LEFT TURN FOR MOVEMENT 1,3,5 & 7.
   B. CONCURRENT PEDESTRIAN MOVEMENTS ON PHASE 3 (P2 & P6) AND PHASE 6 (P4 & P8).
3. INITIAL AND PASSAGE TIMES TO RUN CONCURRENTLY.
4. MINIMUMN RECALL ON PHASE 3 (MOVEMENTS 2 & 6).
5. USE 4 SECOND TIME DELAY ON PHASES 1,3,5 & 7.




3 SECT. 1-WAY (2635-51-511) 4 REQUIRED

5-SECT. CLUSTER (2650-51-511)

INTERNATIONAL PEDESTRIAN SIGNAL I-SECTION. 1-WAY (2653-111) 8 REQUIRED

NOTE:
SEE SHEET T-13 FOR LOCATION OF STREET NAME SIGNS ON MAST ARM
PAY ITEM 2690-100 IS FOR REMOVAL OF ALLEXISTING SIGNAL EQUIPMENT INCLUDING POLES, FOUNDATIONS AND JUNCTION BOXES.
SEE SHEET T-24 FOR SOIL BORING INFORMATION

CONTROLLER TIMING PLAN

| TIMING INTERVAL | TIMING FUNCTION 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| MINIMUM GREEN (INITIAL) | 4 | 18 | 4 | 4 | 4 | 18 | 4 | 4 |
| EXTENSION (PASSAGE) | 3 | 2.5 | 3 | 3 | 3 | 2.5 | 3 | 3 |
| MAXIMUM GREEN I | 20 | 45 | 15 | 25 | 20 | 45 | 15 | 25 |
| MAXIMUM GREEN II | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| YELLOW | 4 | 4.5 | 4 | 4 | 4 | 4.5 | 4 | 4 |
| ALL RED | 1 | 1 | 1 | 1.5 | 1 | 1 | 1 | 1.5 |
| PEDESTRAIN WALK | | 7 | | 7 | | 7 | | 7 |
| PEDESTRAIN CLEAR | | 19 | | 22 | | 19 | | 22 |
| MEMORY | OFF | ON | OFF | OFF | OFF | ON | OFF | OFF |
| RECALL | OFF | MIN | OFF | OFF | OFF | MIN | OFF | OFF |

| REVISIONS | | | | | |
|---|---|---|---|---|---|
| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
| | | | | | |


ENGINEER OF RECORD
JAMES G. BENNETT, P.E.
P.E. NO. 49918
1901 SOUTH MARION STREET
LAKE CITY, FL 32025


7-1981

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| 134 | DUVAL | 209714-1-52-01 |

# SIGNALIZATION

SHEET NO. T-7

$DATE$ $TIME$ $FILE$

1415201\plansg04.dgn 07/18/01 11:05:06 AM

**Traffic Signal Controller Parameters**
**Duval County, City of Jacksonville, Florida**

**Intersection: Blanding & 103rd** **Controller Type: Naztec** Int # 1910

**Time of Day Events**

| Day | Time | Cycle | Offset | Split | Lag LT |
|---|---|---|---|---|---|
| M-TH | 12:00 AM | FREE | | | |
| M-TH | 6:00 AM | 1 | 1 | 1 | |
| M-TH | 9:30 AM | 2 | 1 | 2 | |
| M-TH | 1:30 PM | 3 | 1 | 3 | |
| M-TH | 7:30 PM | 4 | 1 | 4 | |
| M-TH | 9:30 PM | FREE | | | |
| | | | | | |
| SAT | 12:00 AM | FREE | | | |
| SAT | 8:00 AM | 5 | 1 | 5 | |
| SAT | 10:00 AM | 6 | 1 | 6 | |
| SAT | 8:30 PM | 7 | 1 | 7 | |
| SAT | 10:30 PM | FREE | | | |
| | | | | | |
| SUN | 12:00 AM | FREE | | | |
| SUN | 9:30 AM | 5 | 1 | 5 | |
| SUN | 11:30 AM | 6 | 1 | 6 | |
| SUN | 6:30 PM | 7 | 1 | 7 | |
| SUN | 9:00 PM | FREE | | | |
| | | | | | |
| FRI | 12:00 AM | FREE | | | |
| FRI | 6:00 AM | 1 | 1 | 1 | |
| FRI | 9:30 AM | 2 | 1 | 2 | |
| FRI | 1:30 PM | 3 | 1 | 3 | |
| FRI | 7:30 PM | 4 | 1 | 4 | |
| FRI | 9:30 PM | FREE | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

**Phase Allocations**

| Plan | AM | MD | PM | OP | WND | WND | WKD |
|---|---|---|---|---|---|---|---|
| Cycle | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Length | 130 | 120 | 130 | 120 | 120 | 130 | 120 |
| Offset 1 | 41 | 28 | 100 | 45 | 28 | 43 | 112 |
| Offset 2 | | | | | | | |
| Offset 3 | | | | | | | |
| Hold | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| **Percent of Cycle** | | | | | | | |
| 1 | 15 | 20 | 21 | 15 | 18 | 19 | 15 |
| 2 | 60 | 44 | 55 | 47 | 50 | 50 | 47 |
| 3 | 17 | 18 | 23 | 17 | 18 | 17 | 17 |
| 4 | 38 | 38 | 31 | 41 | 34 | 44 | 41 |
| 5 | 15 | 23 | 25 | 18 | 24 | 29 | 18 |
| 6 | 60 | 41 | 51 | 44 | 44 | 40 | 44 |
| 7 | 28 | 20 | 23 | 19 | 21 | 23 | 19 |
| 8 | 27 | 36 | 31 | 39 | 31 | 38 | 39 |
| Max Rcl | | | | | | | |

**Phase Times**

| | | INT | EXT | AMB | RED | MX1 | WLK | DW |
|---|---|---|---|---|---|---|---|---|
| NLT | PHASE 1 | 4 | 3 | 4.8 | 2 | 30 | | |
| SA | PHASE 2 | 18 | 3 | 4.8 | 2 | 70 | 7 | 29 |
| ELT | PHASE 3 | 4 | 3 | 4.8 | 2 | 30 | | |
| WA | PHASE 4 | 6 | 3 | 4.8 | 2 | 50 | 7 | 30 |
| SLT | PHASE 5 | 4 | 3 | 4.8 | 2 | 30 | | |
| NA | PHASE 6 | 18 | 3 | 4.8 | 2 | 70 | 7 | 29 |
| WLT | PHASE 7 | 4 | 3 | 4.8 | 2 | 30 | | |
| EA | PHASE 8 | 6 | 3 | 4.8 | 2 | 50 | 7 | 26 |

Note:

**Overlaps**

| A | B | C | D |
|---|---|---|---|
| | | | |

**Sequence**

| | | | |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 |

NOTE:
SEE SHEET T-7 FOR LOCATION OF STREET NAME SIGNS ON MAST ARM

PAY ITEM 2690-100 IS FOR REMOVAL OF ALL EXISTING SIGNAL EQUIPMENT INCLUDING POLES, FOUNDATIONS AND JUNCTION BOXES.

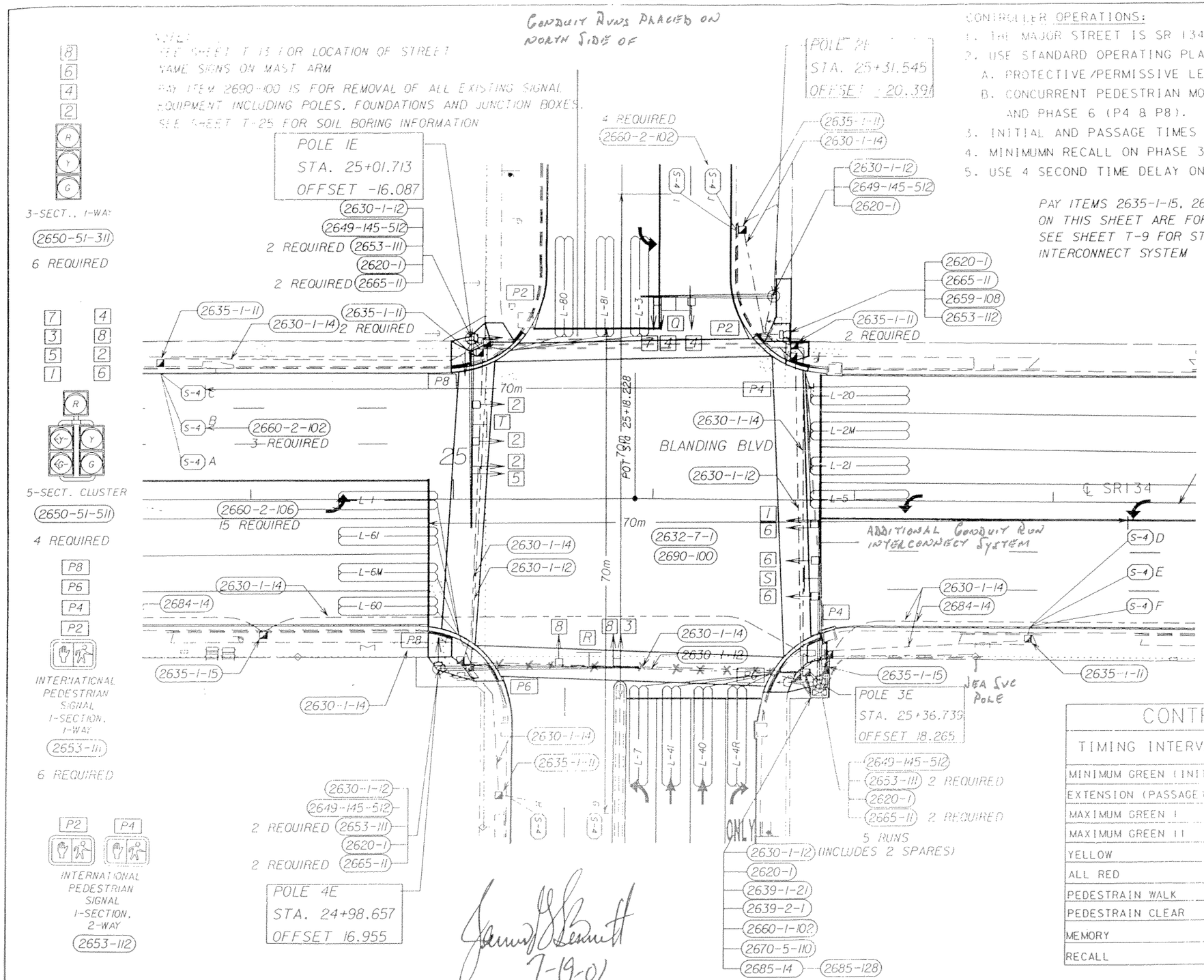
SEE SHEET T-25 FOR SOIL BORING INFORMATION

CONDUIT RUNS PLACED ON NORTH SIDE OF

CONTROLLER OPERATIONS:

1. THE MAJOR STREET IS SR 134 AND THE MINOR STREET IS BLANDING BLVD.
2. USE STANDARD OPERATING PLAN NO. 10 WITH THE FOLLOWING:
   A. PROTECTIVE/PERMISSIVE LEFT TURN FOR MOVEMENT 1,3,5, & 7.
   B. CONCURRENT PEDESTRIAN MOVEMENTS ON PHASE 3 (P2 & P6) AND PHASE 6 (P4 & P8).
3. INITIAL AND PASSAGE TIMES TO RUN CONCURRENTLY.
4. MINIMUMN RECALL ON PHASE 3 (MOVEMENTS 2 & 6).
5. USE 4 SECOND TIME DELAY ON MOVEMENTS 1,3,5 &7.

PAY ITEMS 2635-1-15, 2684-14 AND 2630-1-14 ON THIS SHEET ARE FOR INFORMATION ONLY. SEE SHEET T-9 FOR STATIONS AND QUANTITIES FOR INTERCONNECT SYSTEM




| LOOP DETECTOR CONFIGURATION CHART | | | | |
|---|---|---|---|---|
| MOVEMENT | LOOP I. D. | LOOP TYPE | DETECTOR I. D. | SECONDS OF DELAY. |
| 1 | L-1 | F | L1 | 4 |
| 2 | L-21,M&O | F | L2 | 0 |
| 3 | L-3 | F | L3 | 4 |
| 4 | L-4 | F | L4 | 0 |
| 4 | L-4R | F | L4R | 0 |
| 5 | L-5 | F | L5 | 4 |
| 6 | L-6I,M&O | F | L6 | 0 |
| 7 | L-7 | F | L7 | 4 |
| 8 | L-8 | F | L8 | 0 |
| SYSTEM | S-4A | B | S4A | 0 |
| SYSTEM | S-4B | B | S4B | 0 |
| SYSTEM | S-4C | B | S4C | 0 |
| SYSTEM | S-4D | B | S4D | 0 |
| SYSTEM | S-4E | B | S4E | 0 |
| SYSTEM | S-4F | B | S4F | 0 |
| SYSTEM | S-4G | B | S4G | 0 |
| SYSTEM | S-4H | B | S4H | 0 |
| SYSTEM | S-4I | B | S4I | 0 |
| SYSTEM | S-4J | B | S4J | 0 |

| CONTROLLER TIMING PLAN | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| TIMING INTERVAL | TIMING FUNCTION | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| MINIMUM GREEN (INITIAL) | 4 | 10 | 4 | 10 | 4 | 10 | 4 | 10 |
| EXTENSION (PASSAGE) | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| MAXIMUM GREEN I | 20 | 45 | 20 | 45 | 20 | 45 | 20 | 45 |
| MAXIMUM GREEN II | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| YELLOW | 4 | 4.5 | 4 | 4.5 | 4 | 4.5 | 4 | 4.5 |
| ALL RED | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| PEDESTRAIN WALK | | 7 | | 7 | | 7 | | 7 |
| PEDESTRAIN CLEAR | | 21 | | 23 | | 23 | | 23 |
| MEMORY | OFF | ON | OFF | OFF | OFF | ON | OFF | OFF |
| RECALL | OFF | MIN | OFF | OFF | OFF | MIN | OFF | OFF |

James G. Bennett 7-19-01

| REVISIONS | | | | | |
|---|---|---|---|---|---|
| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
| | | | | | |


ENGINEER OF RECORD
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| 134 | DUVAL | 209714-1-52-01 |

# SIGNALIZATION

SHEET NO. T-8

#DATE$ #TIME$ #FILE$

2630-1-12

.7
1.3
1.0
3.0
1.0
3.8
7.7
1.0
38.2
38.2
.9
.5
3.2
6.5
35.7
5.0
.9
.8
32.8

2630-1-14

26.9
29.6
37.9
17.0
35.7
22.0
36.0

205.1

2635-1-11

13 EA

BLANDING & 103RD 1910

209714-1-52-01

103rd. St. @ Blanding Blvd.

Sheet No. T-8

N

1 @ 3.0
2630-1-12

1 EA
2635-1-11

1 @ 29.6
2630-1-14

2 EA.
2635-1-11

1 @ 1.0
2630-1-12
1 @ 3.8

1 @ 7.7
2630-1-12

1 EA.
2635-1-11

2630-1-12
1 @ 1.0

1 @ 1.3
2630-1-12

1 @ 26.9
2630-1-14

1 EA
2635-1-11

1 EA
2635-1-11

1 @ 1.0
2630-1-12

2630-1-12
1 @ .9

2635-1-11
1 EA

1 @ 32.8
2630-1-12
2630-1-14
1 @ 36.0

2 @ 38.2
2630-1-12

BLANDING Blvd.

1 @ 5.0
2630-1-12

2635-1-11
2 EA.

1 @ .8
2630-1-12

TO LOT P.8

1 @ 22.0
2630-1-14
1 @

1 EA
2635-1-11

1 @ .9
2630-1-12

1 @ 35.7
2630-1-12
2630-1-14
1 @ 35.7

1 @ 3.2
2630-1-12

2 EA
2635-1-11

1 @ 1.3
2630-1-12

2630-1-12
5 @ 1.3 = 6.5

1 @ 37.9
2630-1-14

1 EA
2635-1-11

1 @ .7
2630-1-12

JER SER.

2630-1-14
1 @ 17.0

POWER SER.

## YELLOW CHANGE INTERVAL, RED CLEARANCE INTERVAL, WALK INTERVAL AND PEDESTRIAN CHANGE INTERVAL CALCULATIONS

Location: SR21, Blanding Blvd and SR134, 103rd St
ID #: 72170000-4.12

Reviewed: May 20, 2015
By: ETM (LAH)

| Approach Characteristics | | | | | | | Intersection Characteristics | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ø # | Movement | Left Turn Type Prot Only or Prot/Perm | Possible Left Turn Operation (Lead, Lag, Split) | Approach Grade (G) (%) | Pedestrian Detector (Y or N) | Extended Push Button (Y or N) | Curb to Pedestrian Detector (ft) Note 1 | w (ft) | Crosswalk Distance (ft) Note 2 | Posted Approach Speed (mph) Note 3 | Speed used for the Yellow Change Interval Calculation (mph) | Speed used for the Red Clearance Interval Calculation (mph) |
| Ø 1 | SBLT | Prot/Perm | Lead Only | 0 | | | | 80 | | 45 | 45 | 45 |
| Ø 2 | NB | | | 0 | Y | N | 14 | 104 | 97 | 45 | 45 | 45 |
| Ø 3 | WBLT | Prot/Perm | Lead Only | 0 | | | | 92 | | 45 | 45 | 45 |
| Ø 4 | EB | | | -0.5 | Y | N | 15 | 93 | 100 | 45 | 45 | 45 |
| Ø 5 | NBLT | Prot/Perm | Lead Only | 0 | | | | 89 | | 45 | 45 | 45 |
| Ø 6 | SB | | | 0 | Y | N | 12 | 101 | 96 | 45 | 45 | 45 |
| Ø 7 | EBLT | Prot/Perm | Lead Only | -0.5 | | | | 89 | | 45 | 45 | 45 |
| Ø 8 | WB | | | 0 | Y | N | 11 | 93 | 86 | 45 | 45 | 45 |

Note 1: If no pedestrian detector present use 6 ft

Note 2: Measured from curb to curb, middle of crosswalk

Note 3: No Posted Speed Limit (NPSL) - For Duval County, assume 30 mph

Pedestrian Crossing (Y/N): Y
School Zone (Y/N): N
School Zone Walking Speed:
School Zone Minimum Walk Time:

| Agency Rounding Rules | | |
|---|---|---|
| | Yellow | Red |
| Up | x | x |
| Down | | |
| Nearest | | |
| Significance | 0.1 sec | 0.1 sec |

### 2009 MUTCD

**Yellow Change Interval and Red Clearance Interval Calculations:**

Formulas:

$$\text{Yellow} = t + \frac{1.47v}{2(a + Gg)} \qquad \text{Red (w)} = \frac{w + L}{1.47v} - 1$$

| Values used for Calculations | | | |
|---|---|---|---|
| Vehicle Length, L | Perception-Reaction Time, t | Deceleration Rate, a | Walking Speed |
| 20 ft | 1.4 sec | 10 ft/sec^2 | 3.5 ft/sec |

| Agency Minimum and Maximums | | | |
|---|---|---|---|
| Minimum Yellow Interval | Maximum Yellow Interval | Minimum Red Interval | Maximum Red Interval |
| 3.4 sec | 6.0 sec | 2.0 sec | 6.0 sec |

Where: L = Vehicle Length (feet)
t = Perception-reaction Time (seconds)
a = Deceleration Rate (10 ft/sec$^2$)
g = acceleration due to gravity (32.2 ft/sec$^2$)
v = Posted Approach Speed (mph)
G = grade, with uphill positive and downhill negative (percent grade / 100)
w = total traversed width, from the approach stop bar to the far side of no conflict point (ft)

**Walk Interval and Pedestrian Change Interval Calculations:**

Sample calculation using Ø2

Pedestrian Change Interval = crosswalk distance/pedestrian walking speed = ( 50 ÷ 3.5 = 15)
Notes: Round to the next higher whole number

If (Walk Interval + Pedestrian Change Interval + Buffer (equal to the Yellow Change Interval + Red Clearance Interval)) ≥ (Crosswalk Distance + Curb to pedestrian detector) ÷ 3 ft/sec => Pedestrian clearances are sufficient, if not then add difference to the Walk interval

**Results**

| | | | | Clearances | |
|---|---|---|---|---|---|
| | | | | ITE Yellow | ITE Red (w) |
| Ø 1 | Prot/Perm | Lead Only | SBLT | 4.8 | 1.6 |
| Ø 2 | 0 | 0 | NB | 4.8 | 1.9 |
| Ø 3 | Prot/Perm | Lead Only | WBLT | 4.8 | 1.7 |
| Ø 4 | 0 | 0 | EB | 4.8 | 1.8 |
| Ø 5 | Prot/Perm | Lead Only | NBLT | 4.8 | 1.7 |
| Ø 6 | 0 | 0 | SB | 4.8 | 1.9 |
| Ø 7 | Prot/Perm | Lead Only | EBLT | 4.8 | 1.7 |
| Ø 8 | 0 | 0 | WB | 4.8 | 1.8 |

| | Existing Clearances (seconds) | | | | | |
|---|---|---|---|---|---|---|
| | Yellow Change Interval | Red Clearance Interval | Sum of Yellow Change and Red Clearance | Walk Interval | Pedestrian Change Interval | |
| Ø 1 | 4.3 | 2.0 | 6.3 | | | Ø 1 |
| Ø 2 | 4.3 | 1.9 | 6.2 | 7 | 29 | Ø 2 |
| Ø 3 | 4.3 | 2.0 | 6.3 | | | Ø 3 |
| Ø 4 | 4.3 | 2.0 | 6.3 | 7 | 30 | Ø 4 |
| Ø 5 | 4.3 | 2.2 | 6.5 | | | Ø 5 |
| Ø 6 | 4.3 | 1.9 | 6.2 | 7 | 29 | Ø 6 |
| Ø 7 | 4.3 | 2.1 | 6.4 | | | Ø 7 |
| Ø 8 | 4.3 | 2.0 | 6.3 | 7 | 30 | Ø 8 |

| | Recommended Clearances (seconds) | | | | | | |
|---|---|---|---|---|---|---|---|
| | Yellow Change Interval | Red Clearance Interval | Sum of Yellow Change and Red Clearance | Walk Interval | Pedestrian Change Interval | Check of Walk Timing | |
| Ø 1 | 4.8 | 2.0 | 6.8 | | | | Ø 1 |
| Ø 2 | 4.8 | 2.0 | 6.8 | 7 | 28 | Clear | Ø 2 |
| Ø 3 | 4.8 | 2.0 | 6.8 | | | | Ø 3 |
| Ø 4 | 4.8 | 2.0 | 6.8 | 7 | 29 | Clear | Ø 4 |
| Ø 5 | 4.8 | 2.0 | 6.8 | | | | Ø 5 |
| Ø 6 | 4.8 | 2.0 | 6.8 | 7 | 28 | Clear | Ø 6 |
| Ø 7 | 4.8 | 2.0 | 6.8 | | | | Ø 7 |
| Ø 8 | 4.8 | 2.0 | 6.8 | 7 | 25 | Clear | Ø 8 |

Notes:
- Protected/Permissive and Protected Only left turn Yellow Change and Red clearance intervals are calculated using the posted speed limits.
- Match Yellow Change and All Red Clearance intervals on concurrent lagging or possibly lagging phases; increase to highest values.
- As per the September 2013 F.D.O.T. T.E.M Section 3.6, the minimum Yellow Change Interval is 3.4 seconds and the minimum Red Clearance Interval is 2.0 seconds. Also a 1.0 second reduction is allowed due to reaction time delay from the conflicting movement.

# APPENDIX E – PHOTOS FROM FIELD OBSERVATIONS

## PHOTOS FROM FIELD OBSERVATIONS

**SR 134 at Jammes Road Intersection**

**Photo 1: Looking south: Note short right-turn flare for northbound traffic**

**Photo 2: Looking north: Note short right-turn flare for southbound traffic**


**Photo 3: South leg: Note faded pavement markings 125 feet south of the intersection**

**Photo 4: South leg: Note faded pavement markings 325 feet south of the intersection**


**Photo 5: Looking north: Note improper pavement marking at Dollar Tree driveway**

**Photo 6: Looking south: Note pavement rutting and cracking within the intersection**

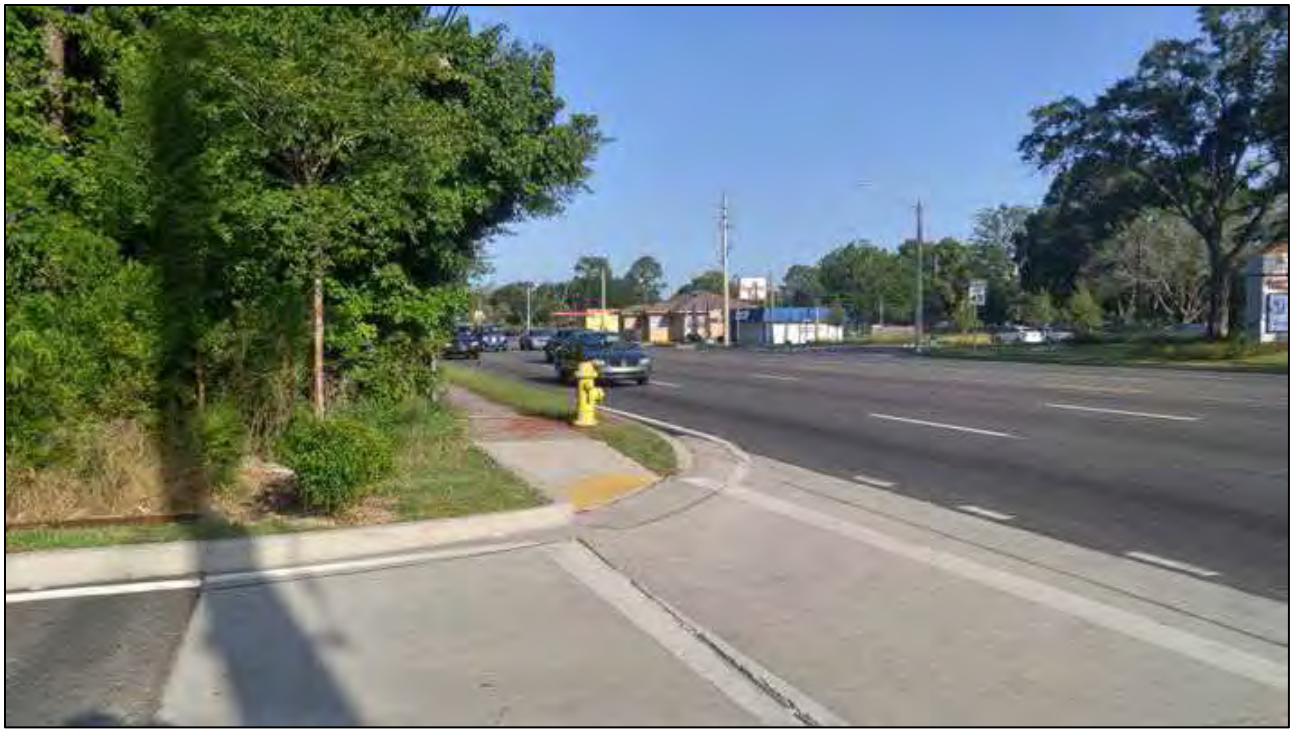


**Photo 7: Looking west: Limited visibility due to fence and overgrown trees for northbound vehicles from Dollar Tree driveway**

**Photo 8: Looking north: Note pavement rutting in the eastbound lanes**

**Photo 9: Looking north: Note faded stop bar on the west leg**


**Photo 10: Looking west: Note eastbound traffic queues**

**SR 134 at SR 21 Intersection**

**Photo 1: Looking East – Sun Glare (no backplates for the signal heads)**

**Photo 2: Looking southeast – Faded crosswalk on the west leg**

**Photo 3: Looking East – Faded crosswalk north leg and pavement rutting**

**Photo 4: Looking West – Eastbound queue and faded lane markings in westbound lanes**

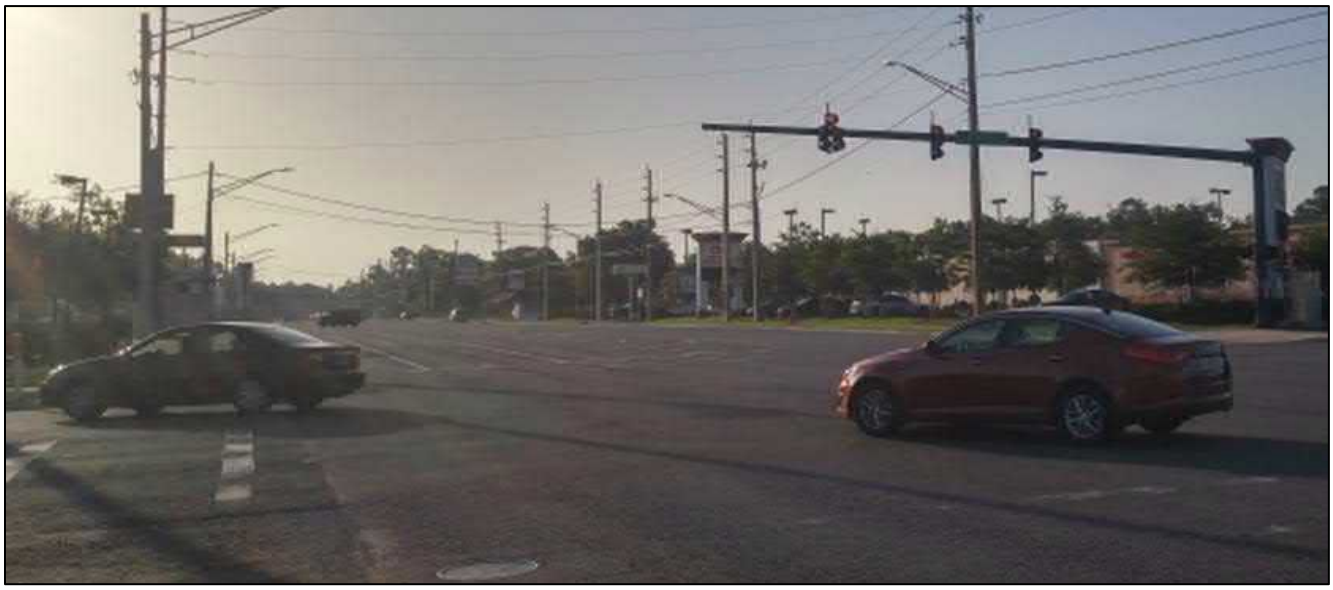


**Photo 5: Looking East – Eastbound left-turning vehicle running red light**

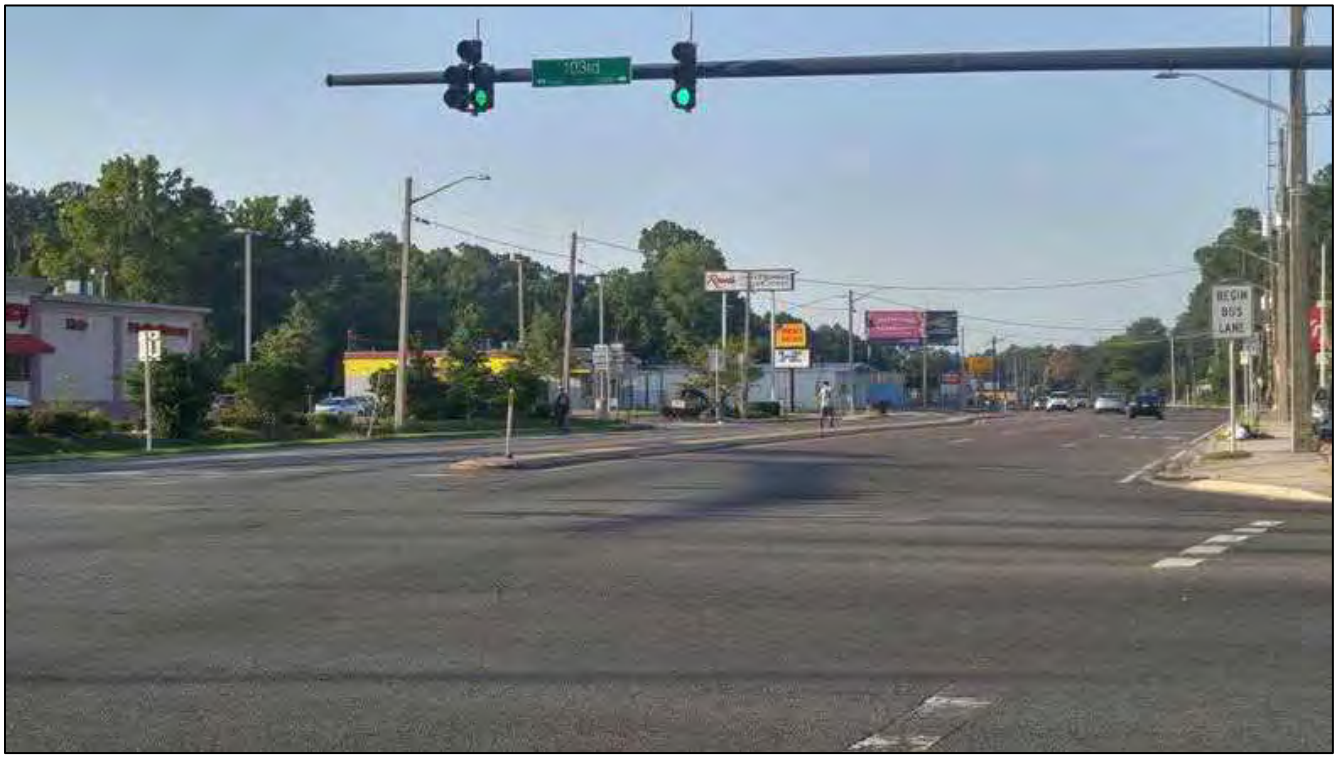



**Photo 6: Looking south – Rutting in EB lanes**

**Photo 7: Looking West – Eastbound left-turn vehicle and pedestrian**

**Photo 8: Looking West – Eastbound left-turn vehicle and pedestrian follow-up**

**Photo 9: Looking East – Pedestrian Activity**

**Photo 10: Looking North – Northbound queue extends past Rowe's median opening**

**Photo 11: Looking Southwest – Eastbound queue**


**Photo 12: Looking North – Southbound queue**


**Photo 13: Looking North – Southbound queue**


**Photo 14: Looking South – Northbound left-turn queue extends past left-turn storage lane**

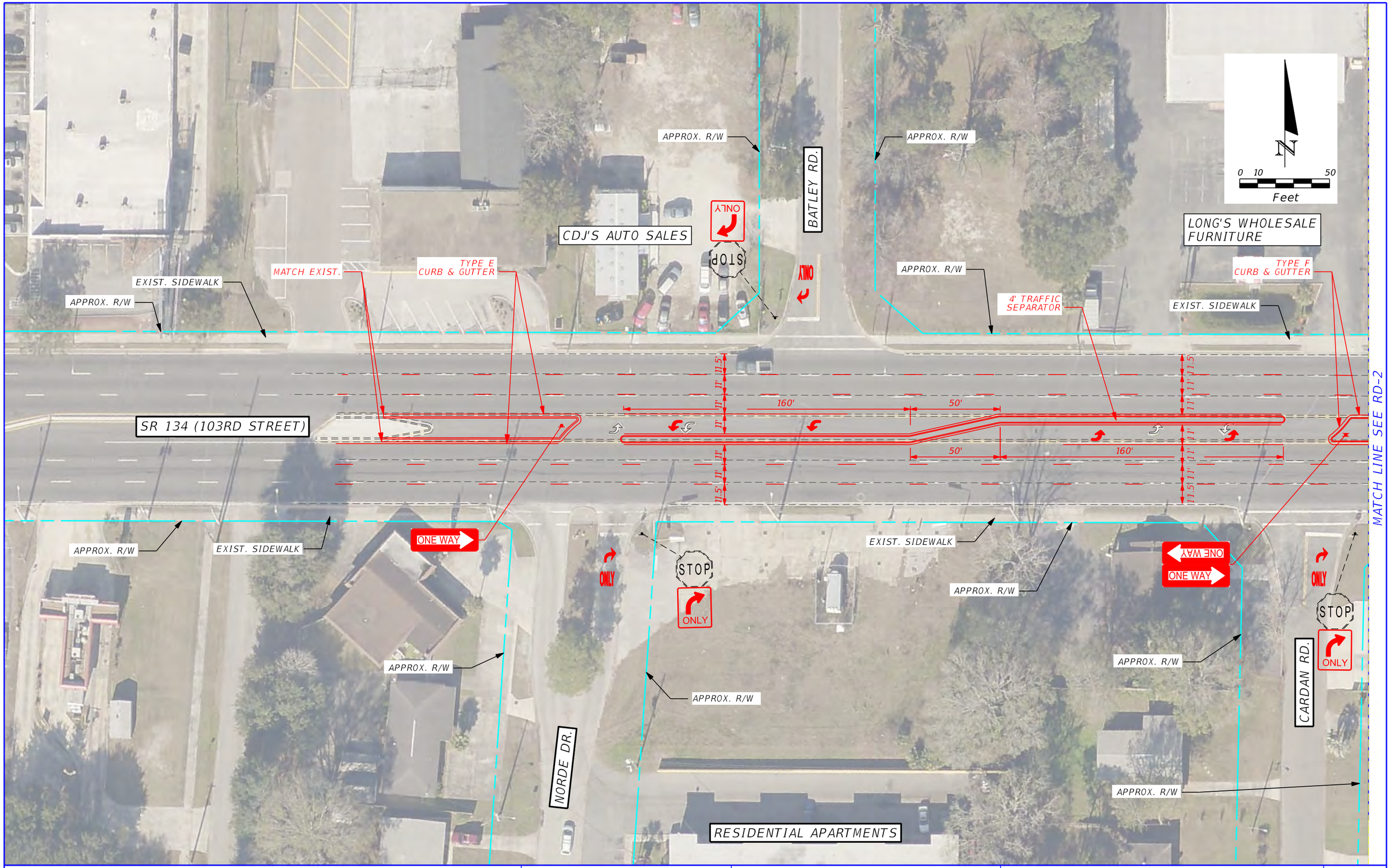
**Photo 15: Looking North – Northbound left-turn queue extends past the left-turn storage lane**

**Photo 16: Looking South – Median opening south of the SR 134/SR 21 intersection**

**Photo 17: Looking South – Underutilized northbound right-turn lane**


**Photo 18: Looking West – Eastbound left-turn queue**

# APPENDIX F – PROPOSED CONDITION DIAGRAMS




| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| 134 | DUVAL | |

# PROPOSED CONDITION DIAGRAM
## SR 134 AND JAMMES RD.
## ALT #1

SHEET NO.
RD-1

MATCH LINE SEE RD-1

MATCH LINE SEE RD-3

PARK WEST ER

APPROX. R/W

DUGDALE RD.

APPROX. R/W

EXIST. SIDEWALK

4' TRAFFIC SEPARATOR

TYPE F CURB & GUTTER

ONLY

STOP

ONLY

TYPE F CURB & GUTTER

APPROX. R/W

4' TRAFFIC SEPARATOR

EXIST. SIDEWALK

TYPE F CURB & GUTTER

N

0 10 50

Feet

11'

11'

11.5'

50'

185'

135'

50'

50'

135'

SR 134 (103RD STREET)

APPROX. R/W

EXIST. SIDEWALK

APPROX. R/W

MORET DR.

ONLY

ONE WAY

STOP

ONLY

APPROX. R/W

EXIST. SIDEWALK

APPROX. R/W

NOTE: LEFT-TURN STORAGE SHOWN IS FOR ILLUSTRATION PURPOSES ONLY NOT BASED ON TRAFFIC COUNTS

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| 134 | DUVAL | |

# PROPOSED CONDITION DIAGRAM
## SR 134 AND JAMMES RD.
## ALT #1

SHEET NO. RD-2

APPROX. R/W

APPROX. R/W

JAMMES ROAD

WEIGHT LIMIT 10 TONS

N

0 10 50

Feet

PLAZA

EXIST. SIDEWALK

TIRE PLUS

APPROX. R/W

EXIST. SIDEWALK

WEST

134

SR 134 (103RD STREET)

SR 134 (103RD STREET)

APPROX. R/W

TYPE F CURB & GUTTER

4' TRAFFIC SEPARATOR

11.5' 11' 11' 11' 11' 11.5'

50'

235'

MATCH LINE SEE RD-2

MATCH LINE SEE RD-4

EXIST. SIDEWALK

APPROX. R/W

STOP

ONLY

BP GAS STATION

STOP

ONLY

EAST

134

DO NOT ENTER

EXIST. SIDEWALK

APPROX. R/W

DOLLAR TREE

SONIC

STOP

POPEYE'S

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| 134 | DUVAL | |

# PROPOSED CONDITION DIAGRAM
## SR 134 AND JAMMES RD
## ALT #1

SHEET NO.

RD-3

AECOM 1/18/2019 11:53:24 AM ...\CADD\PLANRD03 - alt2.dgn

PARK WEST ER

PLAZA

APPROX. R/W

JAMMES ROAD

APPROX. R/W

WEIGHT LIMIT 10 TONS

N

0 10 50

Feet

TIRE PLUS

EXIST. SIDEWALK

TYPE F CURB & GUTTER

ONE WAY

WEST 134

APPROX. R/W

EXIST. SIDEWALK

EXIST. SIDEWALK

SR 134 (103RD STREET)

4' TRAFFIC SEPARATOR

SR 134 (103RD STREET)

11.5' 11' 11' 11' 11' 11.5'

50'

235'

EXIST. SIDEWALK

STOP

ONLY

APPROX. R/W

EXIST. SIDEWALK

BP GAS STATION

STOP

ONLY

DOLLAR TREE

STOP

EAST 134

DO NOT ENTER

EXIST. SIDEWALK

SONIC

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

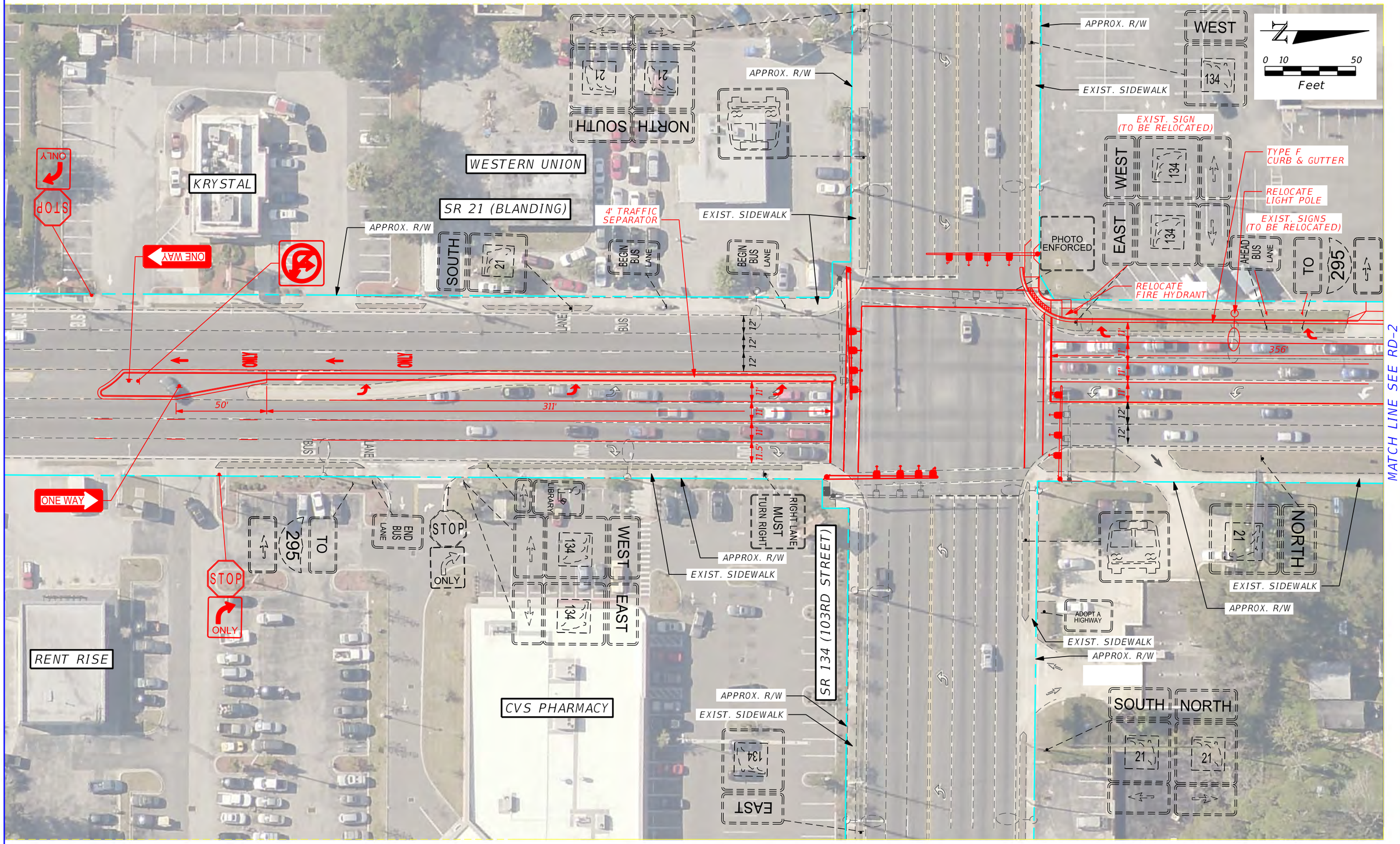
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| 134 | DUVAL | |

# PROPOSED CONDITION DIAGRAM
## SR 134 AND JAMMES RD
## ALT #2

SHEET NO.
RD-1

AECOM 1/18/2019 11:53:27 AM ...\CADD\PLANRD03.dgn



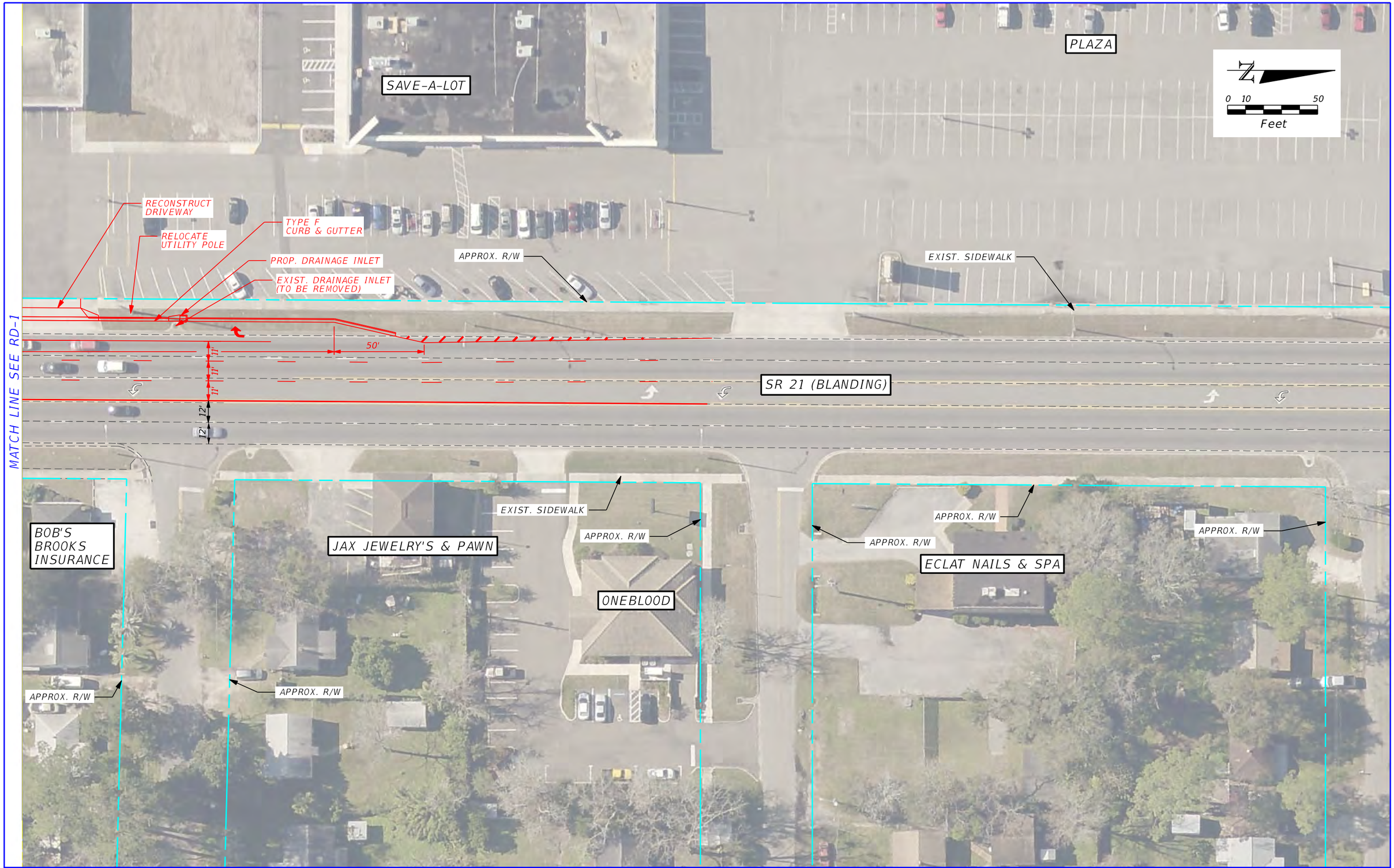

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| 134 | DUVAL | |

# PROPOSED CONDITION DIAGRAM
## SR 134 AND SR 21
## ALT #1

SHEET NO.
RD-1



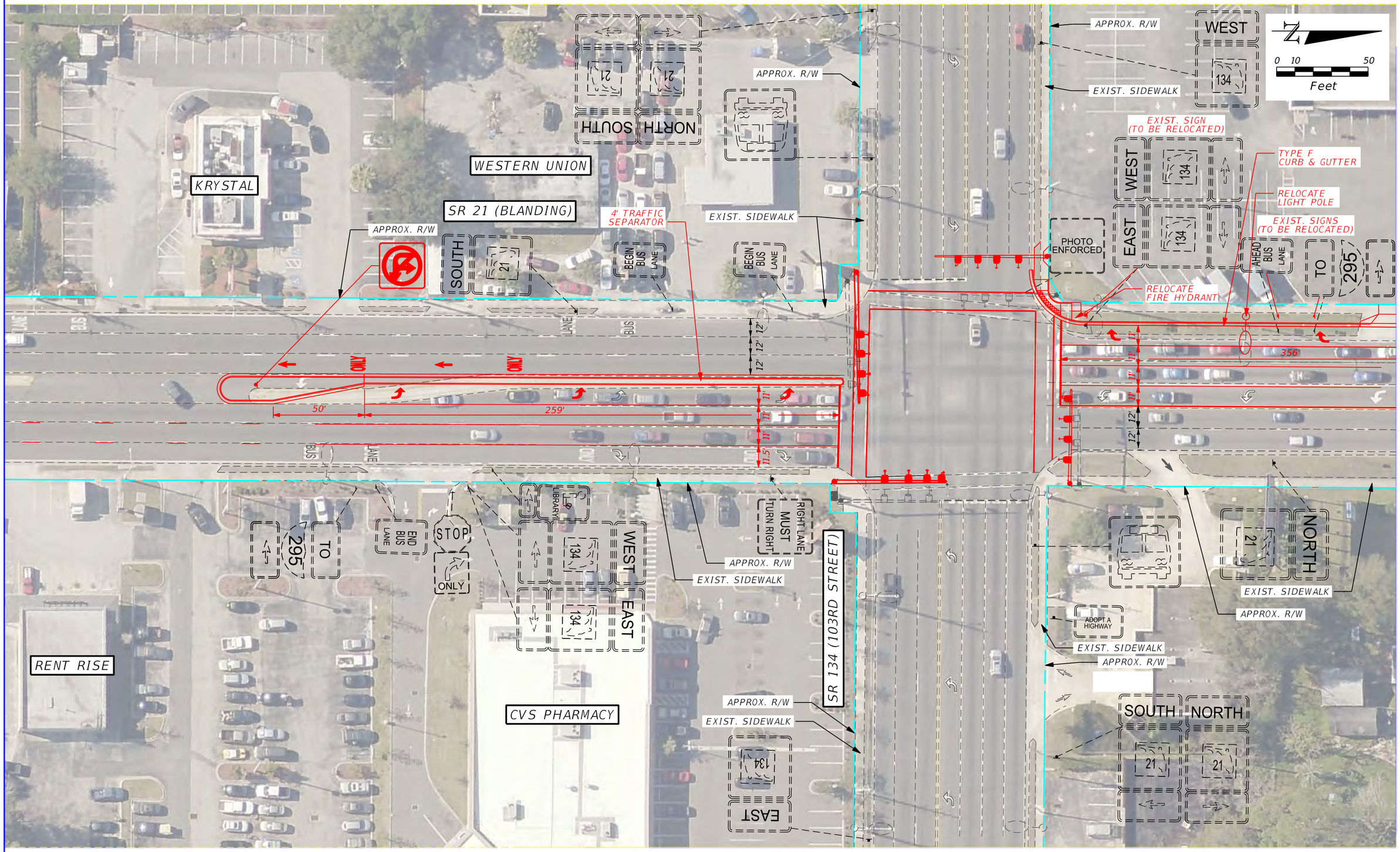

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| 134 | DUVAL | |

# PROPOSED CONDITION DIAGRAM
## SR 134 AND SR 21
## ALT #1

SHEET NO.
RD-2



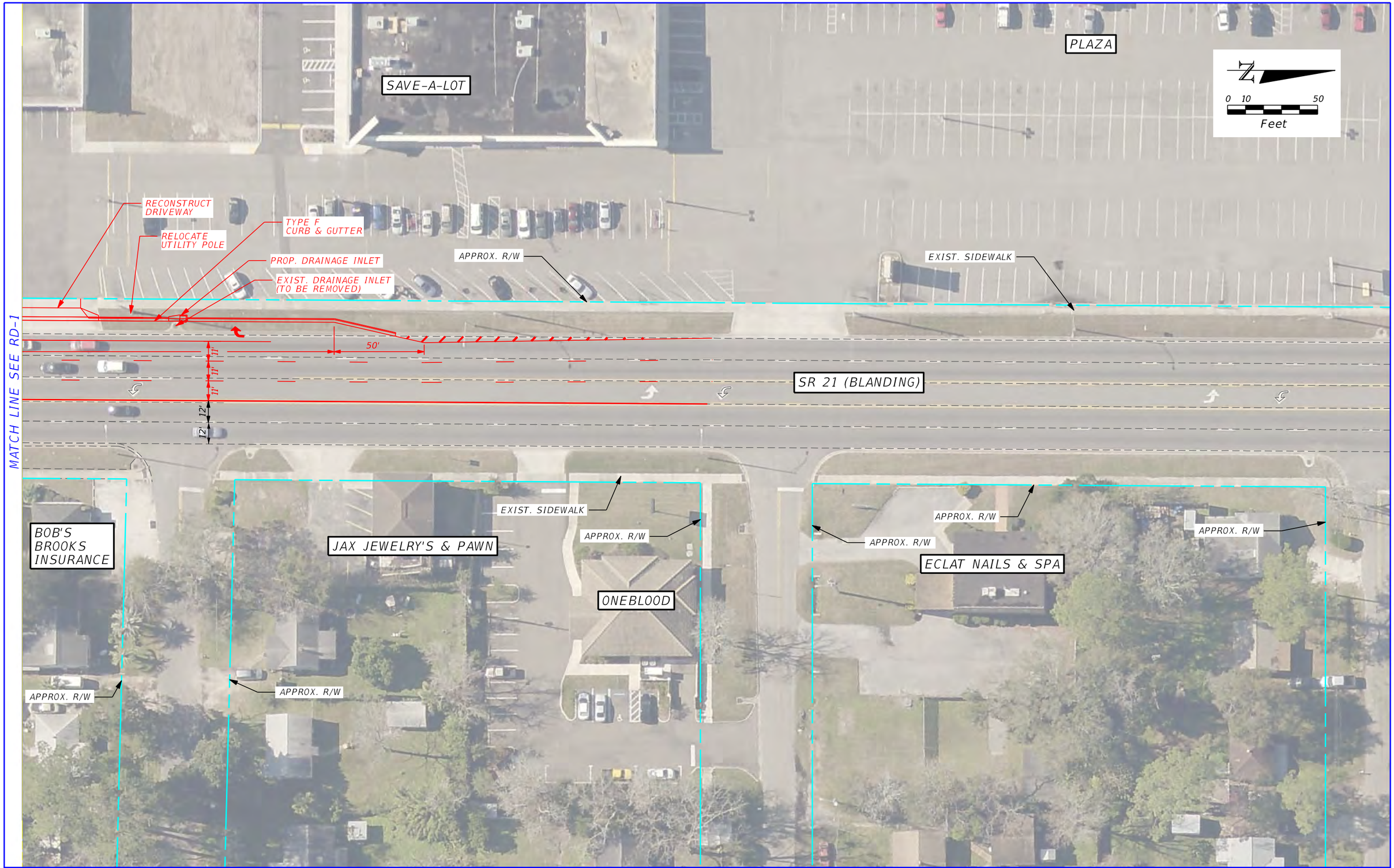

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| 134 | DUVAL | |

# PROPOSED CONDITION DIAGRAM
## SR 134 AND SR 21
## ALT #2

SHEET NO.
RD-1



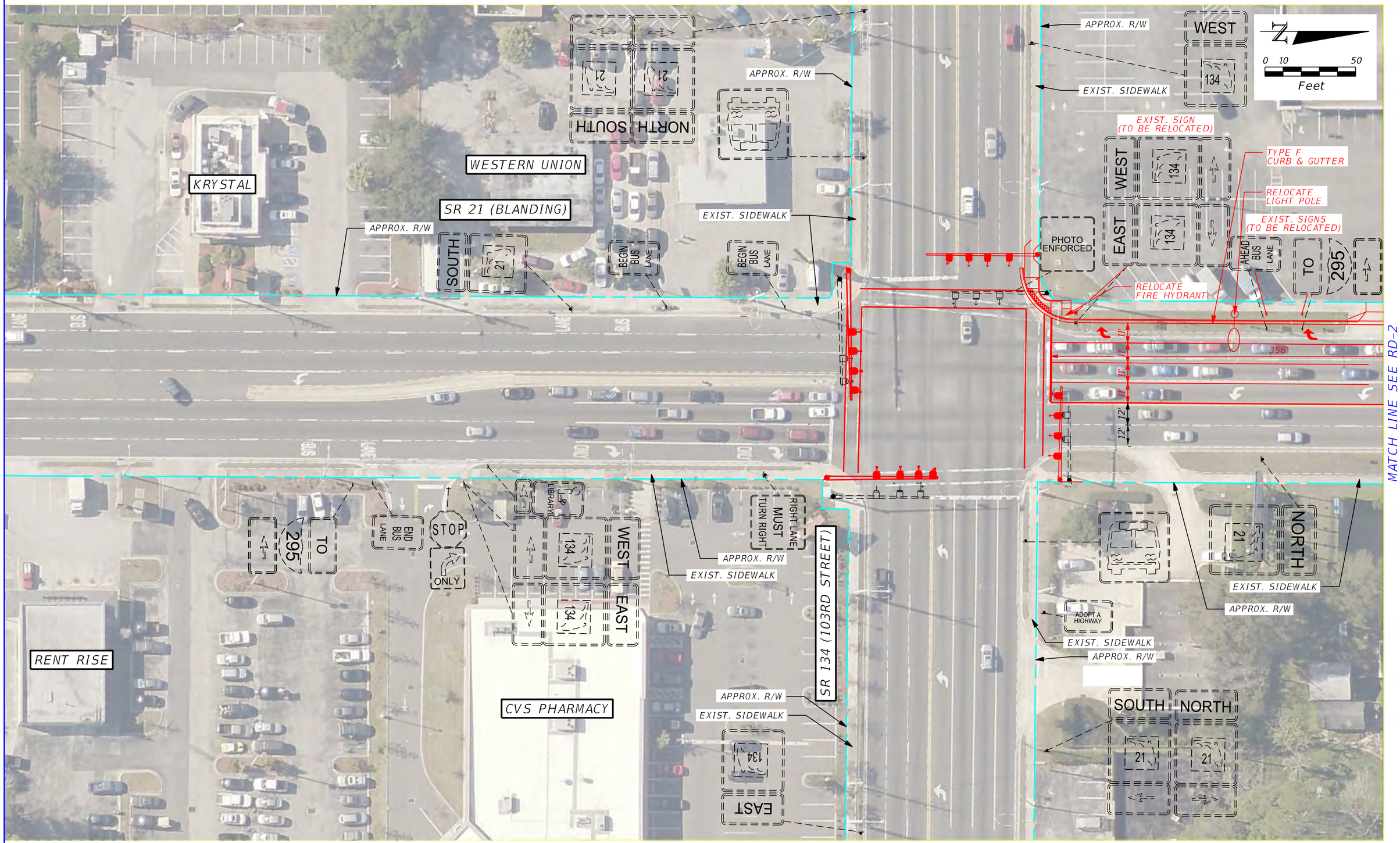

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| 134 | DUVAL | |

# PROPOSED CONDITION DIAGRAM
## SR 134 AND SR 21
## ALT #2

SHEET NO.
RD-2




| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| 134 | DUVAL | |

# PROPOSED CONDITION DIAGRAM
## SR 134 AND SR 21
## ALT #3

SHEET NO.
RD-1

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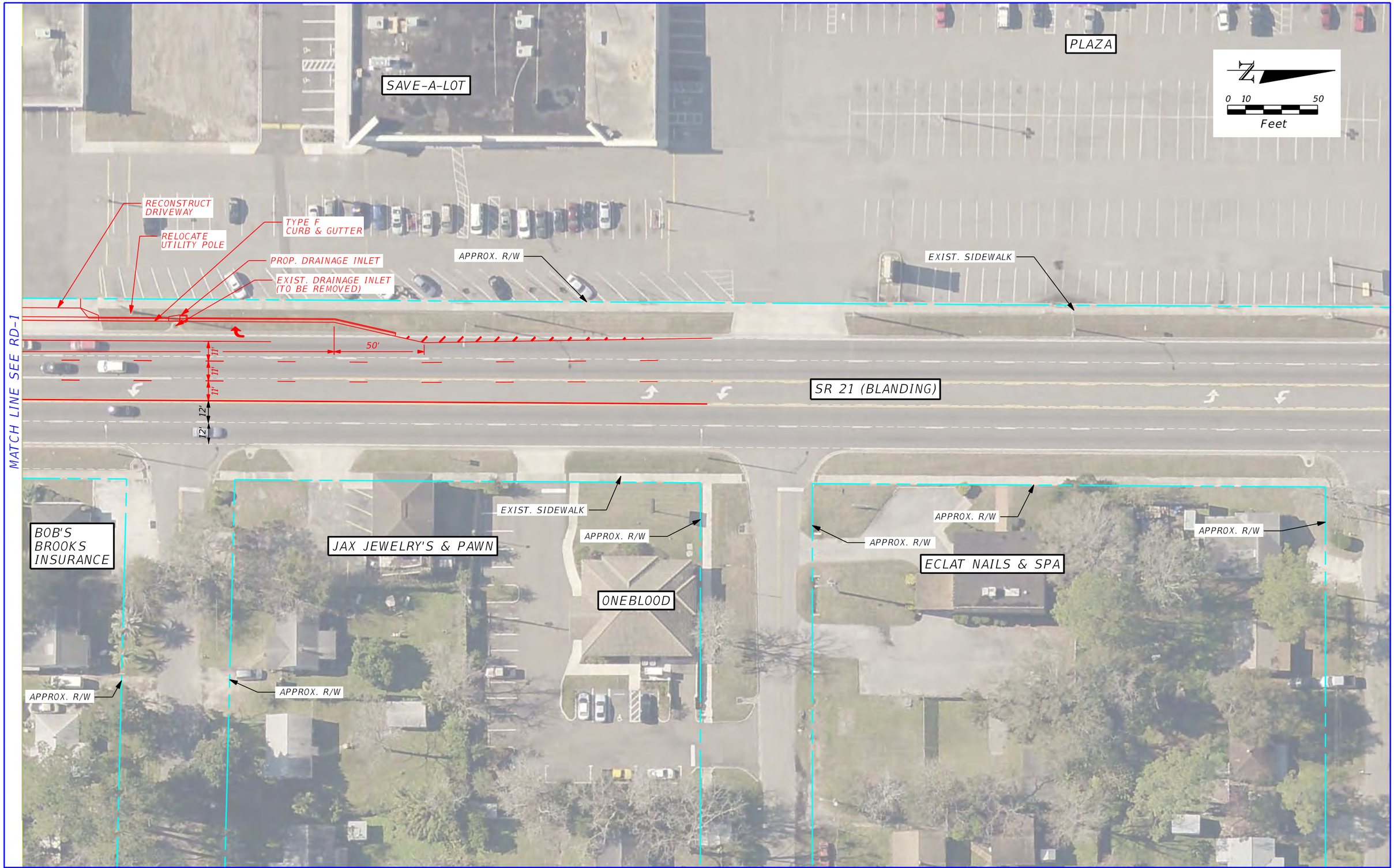


| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|---|---|---|
| 134 | DUVAL | |

# PROPOSED CONDITION DIAGRAM
## SR 134 AND SR 21
## ALT #3

SHEET NO.
RD-2

AECOM 12/19/2018 11:36:00 AM ...\CADD\PLANRD07 - alt5.dgn

# APPENDIX G – BENEFIT COST AND NET PRESENT VALUE ANALYSIS

## Estimated Crash Reduction - ALT 1

| IMPROVEMENT | CRF Source | NUMBER OF CRASHES POTENTIALLY IMPACTED (2012-2014) | | | | | | ARF[X] | | | | | | ESTIMATED REDUCTION IN CRASHES (2012-2014) | | | | | | AVERAGE CRASH REDUCTION PER YR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | REAR END | LEFT-TURN | SIDESWIPE | ANGLE | MEDIAN RELATED | PEDESTRIAN | REAR END | LEFT-TURN | SIDESWIPE | ANGLE | MEDIAN RELATED | PEDESTRIAN | REAR END | LEFT-TURN | SIDESWIPE | ANGLE | MEDIAN RELATED | PEDESTRIAN | |
| CONVERT 5 SECTION TO 4 SECTION HEAD WITH FLASHING YELLOW ARROW | 3 | | 7.0 | | | | | | 0.16 | | | | | | 1.13 | | | | | 0.38 |
| INSTALL RAISED MEDIAN | 3 | | | | | 20.0 | | | | | | 0.71 | | | | | | 14.15 | | 3.54 |
| INSTALL COUNTDOWN PED SIGNALS | 4 | | | | | | 2.0 | | | | | | 0.70 | | | | | | 1.40 | 0.47 |
| INSTALL BACKPLATE | 3 | 19.0 | | | 6.0 | | | 0.15 | | | 0.15 | | | 2.85 | | | 0.90 | | | 1.25 |

1 - FHWA Desktop Reference for Crash Reduction Factors
2 - the FDOT approved Technical Report "Update of Florida Crash Reduction Factors and Countermeasures to improvethe Development of District Safety Improvement Projects"
3 - the CMFClearinghouse.org website
4 - An official FHWA-SA-18-041 Toolbox of Pedestrian Countermeasures

**NUMBER OF CRASHES (Per Year) THAT ARE LIKELY TO BE REDUCED WITH PROPOSED IMPROVEMENTS =** 5.63

# BENEFIT-COST FORM

FORM 511

## STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

### SAFETY OFFICE ANNUAL BENEFIT COST ANALYSIS

1. SUBMITTED BY: AECOM — WPA NO. — 5. X SAFETY STUDY
2. DATE SUBMITTED: Dec-18 — ENV. STUDY
3. PROJECT NO. — SKID (ID)
4. ALTERNATIVE NO.: 1 — SN — SPEED: 45 MPH

6. DISTRICT: 2 — SECTION: 72220000 — STATE RD: 134

7. BEGIN MILE POST: 8.604 — END MILE POST: 8.704 — LENGTH — NODE

8. DESCRIPTION OF LOCATION/FACILITY TYPE

The study segment of SR 134 is an east-west, six-lane roadway (three lanes in each direction) with a two-way left-turn lane.

9. CAUSE OF ACCIDENT PROBLEMS (LIST AND DISCUSS)

Rear-end, angle and left-turn were the leading crash types. Motorists' inattention combined with congestion, queuing and associated stop and go conditions during peak hours could be contributing to some of these rear-end crashes. The left-turn vehicles from the driveways attempting to turn left between queued through/left-turn vehicles. Most of left-turn crashes appeared to have occurred during the permissive
left-turn phase.

10. PROPOSED IMPROVEMENTS (LIST AND DISCUSS):

Install 4-section signal head (flashing yellow for permissive period) for EB/WB traffic
Install a raised median
Install countdown pedestrian signals
Install backplates

| | YEAR | | 2012 | 2013 | 2014 | AVG |
|---|---|---|---|---|---|---|
| 11. | No. of Crashes | | 30 | 29 | 17 | 25.3 |
| 12. | No. of Crashes Potentially Reduced By Project | | | 16.89 | | 5.63 |

14. CRASH INFORMATION FOR FACILITY

| | | |
|---|---|---|
| COST/CRASH | $ | 116,034 |
| CRASH CLEANUP | $ | -100 |

13.

| TYPE | | 2012 | 2013 | 2014 | Total |
|---|---|---|---|---|---|
| Angle | | 9 | 7 | 4 | 20 |
| Left-Turn | | 6 | 6 | 1 | 13 |
| Pedalcycle | | 2 | | | 2 |
| Pedestrian | | 1 | | 1 | 2 |
| Rear-End | | 9 | 13 | 7 | 29 |
| Right-Turn | | 1 | | 1 | 2 |
| Sideswipe | | 2 | 1 | 2 | 5 |
| Backed Into | | | 1 | | 1 |
| Head-On | | | 1 | 1 | 2 |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| TOTAL | 0 | 30 | 29 | 17 | 76 |

15. ANNUAL COST OF IMPROVEMENTS

| | TYPE | COST | LIFE | AN'L FACTOR | AN'L COST |
|---|---|---|---|---|---|
| A. | UTILITY | | 20 | 0.0736 | $ - |
| B. | LIGHTING | | 15 | 0.0899 | $ - |
| C. | SIGNALIZATION | $ 257,465.30 | 10 | 0.1233 | $ 31,743.14 |
| D. | SIGNING & PVMNT | $ 11,800.72 | 6 | 0.1908 | $ 2,251.13 |
| E. | ROADWAY | $ 389,625.23 | 20 | 0.0736 | $ 28,669.31 |
| F. | CONT | $ 39,138.14 | 15 | 0.0899 | $ 3,520.13 |
| G. | MOT | $ 65,889.13 | 15 | 0.0899 | $ 5,926.14 |
| H. | MOB | $ 57,982.43 | 15 | 0.0899 | $ 5,215.00 |
| I. | SUBTOTAL | $ 821,900.95 | 15 | 0.0899 | $ 73,922.68 |
| J. | PE/CEI | $ 493,140.57 | | | $ 151,247.52 |
| K. | RIGHT-OF-WAY | $ - | 15 | 0.0899 | $ - |
| L. | CRASH CLEANUP | | | | ($563.00) |
| M. | TOTAL | $ 1,315,041.51 | | | $ 150,684.52 |

16. BENEFIT: $653,271

17. BENEFIT / COST: 4.34

PREPARED BY: AECOM

APPROVED BY: Byungkon (Cody) Ko, P.E. (District 2 Safety Engineer)

DATE: December 2018

COMMENTS/CRASH REDUCTION METHOD:

Crash Reduction Factors from the following source were used to estimate the reduction in crashes:
1. FHWA Desktop Reference for Crash Reduction Factors
2. the FDOT approved Technical Report "Update of Florida Crash Reduction Factors and Countermeasures to improve the Development of District Safety Improvement Projects"
3. the CMFClearinghouse.org website
4. An official FHWA-SA-18-041 Toolbox of Pedestrian Countermeasures

HIGH CRASH LISTINGS:

The study segment was identified as a high crash spot for the year 2013.

**PROJECT NET PRESENT VALUE (NPV) - ALT 1**

| | |
|---|---|
| Project Name | **SR 134** |
| Current Year | 2018 |
| Project Completion | 2022 |
| Project Life | 15 |
| Project Category | Corridor Improvements |
| Discount Rate | 0.04 |
| **Project Ends** | 2036 |

| Year # | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Calendar Year | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| Estimated Cost | $1,315,042 | | | | | | | | | | | | | | | | | | |
| Estimated Benefits | | | | | 653,271 | 653,271 | 653,271 | 653,271 | 653,271 | 653,271 | 653,271 | 653,271 | 653,271 | 653,271 | 653,271 | 653,271 | 653,271 | 653,271 | 653,271 |
| **Calculation** | | | | | | | | | | | | | | | | | | | |
| Discount Factor | 1.000 | 0.962 | 0.925 | 0.889 | 0.855 | 0.822 | 0.790 | 0.760 | 0.731 | 0.703 | 0.676 | 0.650 | 0.625 | 0.601 | 0.577 | 0.555 | 0.534 | 0.513 | 0.494 |
| Discounted Cost | -1,315,042 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Discounted Benefits | 0 | 0 | 0 | 0 | 558,419 | 536,941 | 516,290 | 496,433 | 477,339 | 458,980 | 441,327 | 424,353 | 408,031 | 392,338 | 377,248 | 362,738 | 348,787 | 335,372 | 322,473 |
| **NPV** | **5,142,028** | | | | | | | | | | | | | | | | | | |

Date: 1/18/2019 11:42:55 AM

# FDOT Long Range Estimating System - Production

## R3: Project Details by Sequence Report

**Project:** 000000-0-10-01 **Letting Date:** 01/2099

**Description:** SR 134 (103rd street) & Jammes rd

**District:** 02 **County:** 72 DUVAL **Market Area:** 05 **Units:** English

**Contract Class:** **Lump Sum Project:** N **Design/Build:** N **Project Length:** 0.083 MI

**Project Manager:**

**Version 2 Project Grand Total** **$821,900.94**

**Description:** SR 134 (103rd street) & Jammes rd Alt 1

**Sequence:** 1 RSU - Resurfacing, Undivided **Net Length:** 0.325 MI 1,717 LF

**Description:** SR 134 (103rd street) & Jammes rd Alternative 1

### EARTHWORK COMPONENT

**User Input Data**

| Description | Value |
|---|---|
| Standard Clearing and Grubbing Limits L/R | 0.00 / 0.00 |
| Incidental Clearing and Grubbing Area | 0.00 |

**X-Items**

| Pay item | Description | Quantity Unit | Unit Price | Extended Amount |
|---|---|---|---|---|
| 110-1-1 | CLEARING & GRUBBING | 0.22 AC | $62,055.00 | $13,652.10 |
| 110-4-10 | REMOVAL OF EXIST CONC | 14.50 SY | $30.80 | $446.60 |
| | **Earthwork Component Total** | | | $14,098.70 |

### ROADWAY COMPONENT

**User Input Data**

| Description | Value |
|---|---|
| Number of Lanes | 2 |
| Roadway Pavement Width L/R | 12.00 / 12.00 |
| Structural Spread Rate | 165 |
| Friction Course Spread Rate | 165 |

**X-Items**

| Pay item | Description | Quantity Unit | Unit Price | Extended Amount |
|---|---|---|---|---|
| 120-1 | REGULAR EXCAVATION | 118.41 CY | $18.29 | $2,165.72 |
| 120-6 | EMBANKMENT | 47.51 CY | $23.75 | $1,128.36 |
| 327-70-6 | MILLING EXIST ASPH PAVT,1 1/2" AVG DEPTH | 14,100.47 SY | $5.00 | $70,502.35 |
| 337-7-83 | ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22 | 1,163.29 TN | $130.04 | $151,274.23 |
| 520-5-11 | TRAF SEP CONC-TYPE I, 4' WIDE | 2,249.03 LF | $39.50 | $88,836.68 |
| 711-11-125 | THERMOPLASTIC, STD, WHITE, SOLID, 24" | 43.00 LF | $5.08 | $218.44 |

| | | | | |
|---|---|---|---|---|
| 711-11-160 | THERMOPLASTIC, STD, WHITE, MESSAGE | 5.00 EA | $115.61 | $578.05 |
| 711-11-170 | THERMOPLASTIC, STD, WHITE, ARROW | 19.00 EA | $74.10 | $1,407.90 |
| 711-16-101 | THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6" | 0.79 GM | $4,426.11 | $3,496.63 |
| 711-16-131 | THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6" | 1.17 GM | $1,374.97 | $1,608.71 |
| 711-16-201 | THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6" | 0.57 GM | $4,328.97 | $2,467.51 |

**Pavement Marking Subcomponent**

| Description | Value |
|---|---|
| Include Thermo/Tape/Other | N |
| Pavement Type | Asphalt |
| Solid Stripe No. of Paint Applications | 2 |
| Solid Stripe No. of Stripes | 2 |
| Skip Stripe No. of Paint Applications | 2 |
| Skip Stripe No. of Stripes | 1 |

**Roadway Component Total** $323,684.59

## SHOULDER COMPONENT

**User Input Data**

| Description | Value |
|---|---|
| Total Outside Shoulder Width L/R | 10.00 / 10.00 |
| Total Outside Shoulder Perf. Turf Width L/R | 2.67 / 2.67 |
| Paved Outside Shoulder Width L/R | 5.00 / 5.00 |
| Structural Spread Rate | 110 |
| Friction Course Spread Rate | 80 |
| Total Width (T) / 8" Overlap (O) | T |
| Rumble Strips ï¿½No. of Sides | 0 |

**X-Items**

| Pay item | Description | Quantity Unit | Unit Price | Extended Amount |
|---|---|---|---|---|
| 520-1-7 | CONCRETE CURB & GUTTER, TYPE E | 229.00 LF | $27.78 | $6,361.62 |
| 520-1-10 | CONCRETE CURB & GUTTER, TYPE F | 575.00 LF | $38.73 | $22,269.75 |
| 522-1 | CONCRETE SIDEWALK AND DRIVEWAYS, 4" | 387.23 SY | $59.94 | $23,210.57 |

**Shoulder Component Total** $51,841.94

## SIGNING COMPONENT

**Pay Items**

| Pay item | Description | Quantity Unit | Unit Price | Extended Amount |
|---|---|---|---|---|
| 700-1-11 | SINGLE POST SIGN, F&I GM, <12 SF | 6.00 AS | $375.88 | $2,255.28 |

**X-Items**

| Pay item | Description | Quantity Unit | Unit Price |
|---|---|---|---|

| | | | | Extended Amount |
|---|---|---|---|---|
| 700-3-101 | SIGN PANEL, F&I GM, UP TO 12 SF | 6.00 EA | $146.70 | $880.20 |
| 700-5-11 | INTERNAL ILLUM SIGN, F&I GM, UP TO 12 SF | 2.00 EA | $4,332.62 | $8,665.24 |
| | **Signing Component Total** | | | $11,800.72 |

**SIGNALIZATIONS COMPONENT**

**Signalization 1**

| Description | Value |
|---|---|
| Type | Miscellaneous |
| Multiplier | 1 |
| Description | |

**X-Items**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 630-2-12 | CONDUIT, F& I, DIRECTIONAL BORE | 321.00 | LF | $20.16 | $6,471.36 |
| 632-7-1 | SIGNAL CABLE- NEW OR RECO, FUR & INSTALL | 1.00 | PI | $3,812.33 | $3,812.33 |
| 635-2-11 | PULL & SPLICE BOX, F&I, 13" x 24" | 16.00 | EA | $651.42 | $10,422.72 |
| 639-1-620 | ELECTRICAL POWER SRV,REM UND | 1.00 | AS | $410.53 | $410.53 |
| 639-2-1 | ELECTRICAL SERVICE WIRE, F&I | 180.00 | LF | $4.62 | $831.60 |
| 639-3-11 | ELEC SERV DISCON, F&I, POLE MNT | 1.00 | EA | $875.60 | $875.60 |
| 641-2-12 | PREST CNC POLE,F&I,TYP P-II SRV POLE | 1.00 | EA | $1,216.10 | $1,216.10 |
| 649-21-6 | STEEL MAST ARM ASSEMBLY, F&I, 50' | 1.00 | EA | $38,541.21 | $38,541.21 |
| 649-21-10 | STEEL MAST ARM ASSEMBLY, F&I, 60' | 1.00 | EA | $39,745.82 | $39,745.82 |
| 649-21-15 | STEEL MAST ARM ASSEMBLY, F&I, 70' | 2.00 | EA | $45,153.06 | $90,306.12 |
| 649-26-3 | STEEL MAST ARM ASSEMBLY, REMOVE | 4.00 | EA | $3,415.10 | $13,660.40 |
| 650-1-14 | VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W | 8.00 | AS | $969.21 | $7,753.68 |
| 650-1-16 | VEH TRAF SIGNAL,F&I ALUMINUM, 4 S 1 W | 4.00 | AS | $1,286.84 | $5,147.36 |
| 653-1-12 | PEDESTRIAN SIGNAL, F&I LED COUNT, 2 WAYS | 4.00 | AS | $1,197.58 | $4,790.32 |
| 660-1-109 | LOOP DETECTOR INDUCTIVE, F&I, TYPE 9 | 10.00 | EA | $256.29 | $2,562.90 |
| 660-2-106 | LOOP ASSEMBLY, F&I, TYPE F | 4.00 | AS | $678.32 | $2,713.28 |
| 665-1-11 | PEDESTRIAN DETECTOR, F&I, STANDARD | 4.00 | EA | $232.99 | $931.96 |
| 670-5-110 | TRAF CNTL ASSEM, F&I, NEMA | 1.00 | AS | $26,763.86 | $26,763.86 |
| 670-5-600 | TRAF CNTL ASSEM, REMOVE | 1.00 | AS | $508.15 | $508.15 |
| | **Signalizations Component Total** | | | | $257,465.30 |

| | |
|---|---|
| **Sequence 1 Total** | $658,891.25 |

Date: 1/18/2019 11:42:56 AM

# FDOT Long Range Estimating System - Production

## R3: Project Details by Sequence Report

**Project:** 000000-0-10-01 **Letting Date:** 01/2099

**Description:** SR 134 (103rd street) & Jammes rd

**District:** 02 **County:** 72 DUVAL **Market Area:** 05 **Units:** English

**Contract Class:** **Lump Sum Project:** N **Design/Build:** N **Project Length:** 0.083 MI

**Project Manager:**

**Version 2 Project Grand Total** **$821,900.94**

**Description:** SR 134 (103rd street) & Jammes rd Alt 1

| | | | |
|---|---|---|---|
| **Project Sequences Subtotal** | | | **$658,891.25** |
| 102-1 | Maintenance of Traffic | 10.00 % | $65,889.12 |
| 101-1 | Mobilization | 8.00 % | $57,982.43 |
| **Project Sequences Total** | | | **$782,762.80** |
| Project Unknowns | | 0.00 % | $0.00 |
| Design/Build | | 0.00 % | $0.00 |

**Non-Bid Components:**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 999-25 | INITIAL CONTINGENCY AMOUNT (DO NOT BID) | | LS | $39,138.14 | $39,138.14 |
| **Project Non-Bid Subtotal** | | | | | **$39,138.14** |
| **Version 2 Project Grand Total** | | | | | **$821,900.94** |

## Estimated Crash Reduction - ALT 2

| IMPROVEMENT | CRF Source | NUMBER OF CRASHES POTENTIALLY IMPACTED (2012-2014) | | | | | | ARF[x] | | | | | | ESTIMATED REDUCTION IN CRASHES (2012-2014) | | | | | | AVERAGE CRASH REDUCTION PER YR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | REAR END | LEFT-TURN | SIDESWIPE | ANGLE | MEDIAN RELATED | PEDESTRIAN | REAR END | LEFT-TURN | SIDESWIPE | ANGLE | MEDIAN RELATED | PEDESTRIAN | REAR END | LEFT-TURN | SIDESWIPE | ANGLE | MEDIAN RELATED | PEDESTRIAN | |
| CONVERT 5 SECTION TO 4 SECTION HEAD WITH FLASHING YELLOW ARROW | 3 | | 7.0 | | | | | | 0.16 | | | | | | 1.13 | | | | | 0.38 |
| INSTALL RAISED MEDIAN | 3 | | | | | 14.0 | | | | | | 0.71 | | | | | | 9.91 | | 2.48 |
| INSTALL COUNTDOWN PED SIGNALS | 4 | | | | | | 2.0 | | | | | | 0.70 | | | | | | 1.40 | 0.47 |
| INSTALL BACKPLATE | 3 | 19.0 | | | 6.0 | | | 0.15 | | | 0.15 | | | 2.85 | | | 0.90 | | | 1.25 |

1 - FHWA Desktop Reference for Crash Reduction Factors
2 - the FDOT approved Technical Report "Update of Florida Crash Reduction Factors and Countermeasures to improvethe Development of District Safety Improvement Projects"
3 - the CMFClearinghouse.org website
4 - An official FHWA-SA-18-041 Toolbox of Pedestrian Countermeasures

**NUMBER OF CRASHES (Per Year) THAT ARE LIKELY TO BE REDUCED WITH PROPOSED IMPROVEMENTS =** 4.57

# BENEFIT-COST FORM

FORM 511

## STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

### SAFETY OFFICE ANNUAL BENEFIT COST ANALYSIS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. | SUBMITTED BY | AECOM | WPA NO. | | 5. X | SAFETY STUDY | |
| 2. | DATE SUBMITTED | Dec-18 | | | | ENV. STUDY | |
| 3. | PROJECT NO. | | | | | SKID (ID) | |
| 4. | ALTERNATIVE NO. | 2 | | | SN | SPEED | 45 MPH |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6. | DISTRICT | 2 | SECTION | 72220000 | STATE RD | 134 | |
| 7. | BEGIN MILE POST | 8.604 | END MILE POST | 8.704 | LENGTH | NODE | |

8. DESCRIPTION OF LOCATION/FACILITY TYPE

The study segment of SR 134 is an east-west, six-lane roadway (three lanes in each direction) with a two-way left-turn lane.

9. CAUSE OF ACCIDENT PROBLEMS (LIST AND DISCUSS)

Rear-end, angle and left-turn were the leading crash types. Motorists' inattention combined with congestion, queuing and associated stop and go conditions during peak hours could be contributing to some of these rear-end crashes. The left-turn vehicles from the driveways attempting to turn left between queued through/left-turn vehicles. Most of left-turn crashes appeared to have occurred during the permissive
left-turn phase.

10. PROPOSED IMPROVEMENTS (LIST AND DISCUSS):

Install 4-section signal head (flashing yellow for permissive period) for EB/WB traffic
Install a raised median
Install countdown pedestrian signals
Install backplates

| | YEAR | | 2012 | 2013 | 2014 | AVG |
|---|---|---|---|---|---|---|
| 11. | No. of Crashes | | 30 | 29 | 17 | 25.3 |
| 12. | No. of Crashes Potentially Reduced By Project | | | 13.71 | | 4.57 |

14. CRASH INFORMATION FOR FACILITY

| | | |
|---|---|---|
| COST/CRASH | $ | 116,034 |
| CRASH CLEANUP | $ | -100 |

13.

| TYPE | | 2012 | 2013 | 2014 | Total |
|---|---|---|---|---|---|
| Angle | | 9 | 7 | 4 | 20 |
| Left-Turn | | 6 | 6 | 1 | 13 |
| Pedalcycle | | 2 | | | 2 |
| Pedestrian | | 1 | | 1 | 2 |
| Rear-End | | 9 | 13 | 7 | 29 |
| Right-Turn | | 1 | | 1 | 2 |
| Sideswipe | | 2 | 1 | 2 | 5 |
| Backed Into | | | 1 | | 1 |
| Head-On | | | 1 | 1 | 2 |
| | | | | | |
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| | | | | | |
| | | | | | |
| TOTAL | 0 | 30 | 29 | 17 | 76 |

15. ANNUAL COST OF IMPROVEMENTS

| | TYPE | COST | LIFE | AN'L FACTOR | AN'L COST |
|---|---|---|---|---|---|
| A. | UTILITY | | 20 | 0.0736 | $ - |
| B. | LIGHTING | | 15 | 0.0899 | $ - |
| C. | SIGNALIZATION | $ 257,465.30 | 10 | 0.1233 | $ 31,743.14 |
| D. | SIGNING & PVMNT | $ 10,315.46 | 6 | 0.1908 | $ 1,967.80 |
| E. | ROADWAY | $ 86,724.94 | 20 | 0.0736 | $ 6,381.37 |
| F. | CONT | $ 21,057.64 | 15 | 0.0899 | $ 1,893.95 |
| G. | MOT | $ 35,450.57 | 15 | 0.0899 | $ 3,188.46 |
| H. | MOB | $ 31,196.50 | 15 | 0.0899 | $ 2,805.85 |
| I. | SUBTOTAL | $ 442,210.41 | 15 | 0.0899 | $ 39,772.89 |
| J. | PE/CEI | $ 265,326.25 | | | $ 87,753.46 |
| K. | RIGHT-OF-WAY | $ - | 15 | 0.0899 | $ - |
| L. | CRASH CLEANUP | | | | ($457.00) |
| M. | TOTAL | $ 707,536.66 | | | $ 87,296.46 |

16. BENEFIT $530,275

17. BENEFIT / COST 6.07

PREPARED BY: AECOM

APPROVED BY: Byungkon (Cody) Ko, P.E. (District 2 Safety Engineer)

DATE: December 2018

COMMENTS/CRASH REDUCTION METHOD:

Crash Reduction Factors from the following source were used to estimate the reduction in crashes:
1. FHWA Desktop Reference for Crash Reduction Factors
2. the FDOT approved Technical Report "Update of Florida Crash Reduction Factors and Countermeasures to improve the Development of District Safety Improvement Projects"
3. the CMFClearinghouse.org website
4. An official FHWA-SA-18-041 Toolbox of Pedestrian Countermeasures

HIGH CRASH LISTINGS:

The study segment was identified as a high crash spot for the year 2013.

**PROJECT NET PRESENT VALUE (NPV) - ALT 2**

| | |
|---|---|
| Project Name | **SR 134** |
| Current Year | 2018 |
| Project Completion | 2022 |
| Project Life | 15 |
| Project Category | Corridor Improvements |
| Discount Rate | 0.04 |
| **Project Ends** | 2036 |

| Year # | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Calendar Year | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| Estimated Cost | $707,537 | | | | | | | | | | | | | | | | | | |
| Estimated Benefits | | | | | 530,275 | 530,275 | 530,275 | 530,275 | 530,275 | 530,275 | 530,275 | 530,275 | 530,275 | 530,275 | 530,275 | 530,275 | 530,275 | 530,275 | 530,275 |
| **Calculation** | | | | | | | | | | | | | | | | | | | |
| Discount Factor | 1.000 | 0.962 | 0.925 | 0.889 | 0.855 | 0.822 | 0.790 | 0.760 | 0.731 | 0.703 | 0.676 | 0.650 | 0.625 | 0.601 | 0.577 | 0.555 | 0.534 | 0.513 | 0.494 |
| Discounted Cost | -707,537 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Discounted Benefits | 0 | 0 | 0 | 0 | 453,282 | 435,848 | 419,084 | 402,966 | 387,467 | 372,564 | 358,235 | 344,457 | 331,208 | 318,470 | 306,221 | 294,443 | 283,118 | 272,229 | 261,759 |
| **NPV** | **4,533,814** | | | | | | | | | | | | | | | | | | |

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# FDOT Long Range Estimating System - Production

## R3: Project Details by Sequence Report

**Project:** 000000-0-10-01 **Letting Date:** 01/2099

**Description:** SR 134 (103rd street) & Jammes rd

**District:** 02 **County:** 72 DUVAL **Market Area:** 05 **Units:** English

**Contract Class:** **Lump Sum Project:** N **Design/Build:** N **Project Length:** 0.083 MI

**Project Manager:**

**Version 1-P Project Grand Total** **$442,210.41**

**Description:** SR 134 (103rd street) & Jammes rd Alt 2

**Sequence:** 1 RSU - Resurfacing, Undivided **Net Length:** 0.083 MI
438 LF

**Description:** SR 134 (103rd street) & Jammes rd Alt 2

### EARTHWORK COMPONENT

**User Input Data**

| Description | Value |
|---|---|
| Standard Clearing and Grubbing Limits L/R | 0.00 / 0.00 |
| Incidental Clearing and Grubbing Area | 0.00 |

**X-Items**

| Pay item | Description | Quantity Unit | Unit Price | Extended Amount |
|---|---|---|---|---|
| 110-1-1 | CLEARING & GRUBBING | 0.05 AC | $62,055.00 | $3,102.75 |
| | **Earthwork Component Total** | | | $3,102.75 |

### ROADWAY COMPONENT

**User Input Data**

| Description | Value |
|---|---|
| Number of Lanes | 2 |
| Roadway Pavement Width L/R | 12.00 / 12.00 |
| Structural Spread Rate | 165 |
| Friction Course Spread Rate | 165 |

**X-Items**

| Pay item | Description | Quantity Unit | Unit Price | Extended Amount |
|---|---|---|---|---|
| 120-1 | REGULAR EXCAVATION | 24.20 CY | $18.29 | $442.62 |
| 120-6 | EMBANKMENT | 9.39 CY | $23.75 | $223.01 |
| 327-70-6 | MILLING EXIST ASPH PAVT,1 1/2" AVG DEPTH | 3,199.59 SY | $5.00 | $15,997.95 |
| 337-7-83 | ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22 | 263.97 TN | $130.04 | $34,326.66 |
| 520-5-11 | TRAF SEP CONC-TYPE I, 4' WIDE | 476.04 LF | $39.50 | $18,803.58 |
| 711-11-125 | THERMOPLASTIC, STD, WHITE, SOLID, 24" | 43.00 LF | $5.08 | $218.44 |
| 711-11-170 | | 3.00 EA | $74.10 | $222.30 |

| | | | | |
|---|---|---|---|---|
| | THERMOPLASTIC, STD, WHITE, ARROW | | | |
| 711-16-101 | THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6" | 0.29 GM | $4,426.11 | $1,283.57 |
| 711-16-131 | THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6" | 0.19 GM | $1,374.97 | $261.24 |
| 711-16-201 | THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6" | 0.17 GM | $4,328.97 | $735.92 |

**Pavement Marking Subcomponent**

| Description | Value |
|---|---|
| Include Thermo/Tape/Other | N |
| Pavement Type | Asphalt |
| Solid Stripe No. of Paint Applications | 2 |
| Solid Stripe No. of Stripes | 2 |
| Skip Stripe No. of Paint Applications | 2 |
| Skip Stripe No. of Stripes | 1 |

**Roadway Component Total** $72,515.29

## SHOULDER COMPONENT

**User Input Data**

| Description | Value |
|---|---|
| Total Outside Shoulder Width L/R | 10.00 / 10.00 |
| Total Outside Shoulder Perf. Turf Width L/R | 2.67 / 2.67 |
| Paved Outside Shoulder Width L/R | 5.00 / 5.00 |
| Structural Spread Rate | 110 |
| Friction Course Spread Rate | 80 |
| Total Width (T) / 8" Overlap (O) | T |
| Rumble Strips ï¿½No. of Sides | 0 |

**X-Items**

| Pay item | Description | Quantity Unit | Unit Price | Extended Amount |
|---|---|---|---|---|
| 520-1-10 | CONCRETE CURB & GUTTER, TYPE F | 168.60 LF | $38.73 | $6,529.88 |
| 522-1 | CONCRETE SIDEWALK AND DRIVEWAYS, 4" | 76.36 SY | $59.94 | $4,577.02 |

**Shoulder Component Total** $11,106.90

## SIGNING COMPONENT

**Pay Items**

| Pay item | Description | Quantity Unit | Unit Price | Extended Amount |
|---|---|---|---|---|
| 700-1-11 | SINGLE POST SIGN, F&I GM, <12 SF | 4.00 AS | $375.88 | $1,503.52 |

**X-Items**

| Pay item | Description | Quantity Unit | Unit Price | Extended Amount |
|---|---|---|---|---|
| 700-3-101 | SIGN PANEL, F&I GM, UP TO 12 SF | 1.00 EA | $146.70 | $146.70 |
| 700-5-11 | INTERNAL ILLUM SIGN, F&I GM, UP TO 12 SF | 2.00 EA | $4,332.62 | $8,665.24 |

| | | |
|---|---|---|
| | **Signing Component Total** | $10,315.46 |

**SIGNALIZATIONS COMPONENT**

**Signalization 1**

| Description | Value |
|---|---|
| Type | Miscellaneous |
| Multiplier | 1 |
| Description | |

**X-Items**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 630-2-12 | CONDUIT, F& I, DIRECTIONAL BORE | 321.00 | LF | $20.16 | $6,471.36 |
| 632-7-1 | SIGNAL CABLE- NEW OR RECO, FUR & INSTALL | 1.00 | PI | $3,812.33 | $3,812.33 |
| 635-2-11 | PULL & SPLICE BOX, F&I, 13" x 24" | 16.00 | EA | $651.42 | $10,422.72 |
| 639-1-620 | ELECTRICAL POWER SRV,REM UND | 1.00 | AS | $410.53 | $410.53 |
| 639-2-1 | ELECTRICAL SERVICE WIRE, F&I | 180.00 | LF | $4.62 | $831.60 |
| 639-3-11 | ELEC SERV DISCON, F&I, POLE MNT | 1.00 | EA | $875.60 | $875.60 |
| 641-2-12 | PREST CNC POLE,F&I,TYP P-II SRV POLE | 1.00 | EA | $1,216.10 | $1,216.10 |
| 649-21-6 | STEEL MAST ARM ASSEMBLY, F&I, 50' | 1.00 | EA | $38,541.21 | $38,541.21 |
| 649-21-10 | STEEL MAST ARM ASSEMBLY, F&I, 60' | 1.00 | EA | $39,745.82 | $39,745.82 |
| 649-21-15 | STEEL MAST ARM ASSEMBLY, F&I, 70' | 2.00 | EA | $45,153.06 | $90,306.12 |
| 649-26-3 | STEEL MAST ARM ASSEMBLY, REMOVE | 4.00 | EA | $3,415.10 | $13,660.40 |
| 650-1-14 | VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W | 8.00 | AS | $969.21 | $7,753.68 |
| 650-1-16 | VEH TRAF SIGNAL,F&I ALUMINUM, 4 S 1 W | 4.00 | AS | $1,286.84 | $5,147.36 |
| 653-1-12 | PEDESTRIAN SIGNAL, F&I LED COUNT, 2 WAYS | 4.00 | AS | $1,197.58 | $4,790.32 |
| 660-1-109 | LOOP DETECTOR INDUCTIVE, F&I, TYPE 9 | 10.00 | EA | $256.29 | $2,562.90 |
| 660-2-106 | LOOP ASSEMBLY, F&I, TYPE F | 4.00 | AS | $678.32 | $2,713.28 |
| 665-1-11 | PEDESTRIAN DETECTOR, F&I, STANDARD | 4.00 | EA | $232.99 | $931.96 |
| 670-5-110 | TRAF CNTL ASSEM, F&I, NEMA | 1.00 | AS | $26,763.86 | $26,763.86 |
| 670-5-600 | TRAF CNTL ASSEM, REMOVE | 1.00 | AS | $508.15 | $508.15 |
| | **Signalizations Component Total** | | | | $257,465.30 |

| | |
|---|---|
| **Sequence 1 Total** | $354,505.70 |

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# FDOT Long Range Estimating System - Production

## R3: Project Details by Sequence Report

**Project:** 000000-0-10-01 **Letting Date:** 01/2099

**Description:** SR 134 (103rd street) & Jammes rd

**District:** 02 **County:** 72 DUVAL **Market Area:** 05 **Units:** English

**Contract Class:** **Lump Sum Project:** N **Design/Build:** N **Project Length:** 0.083 MI

**Project Manager:**

**Version 1-P Project Grand Total** **$442,210.41**

**Description:** SR 134 (103rd street) & Jammes rd Alt 2

| | | | |
|---|---|---|---|
| **Project Sequences Subtotal** | | | **$354,505.70** |
| 102-1 | Maintenance of Traffic | 10.00 % | $35,450.57 |
| 101-1 | Mobilization | 8.00 % | $31,196.50 |
| **Project Sequences Total** | | | **$421,152.77** |
| Project Unknowns | | 0.00 % | $0.00 |
| Design/Build | | 0.00 % | $0.00 |

**Non-Bid Components:**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 999-25 | INITIAL CONTINGENCY AMOUNT (DO NOT BID) | | LS | $21,057.64 | $21,057.64 |
| **Project Non-Bid Subtotal** | | | | | **$21,057.64** |
| **Version 1-P Project Grand Total** | | | | | **$442,210.41** |

## Estimated Crash Reduction - ALT 1

| IMPROVEMENT | CRF Source | NUMBER OF CRASHES POTENTIALLY IMPACTED (2012-2014) | | | | | | ARF[x] | | | | | | ESTIMATED REDUCTION IN CRASHES (2012-2014) | | | | | | AVERAGE CRASH REDUCTION PER YR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | REAR END | LEFT-TURN | SIDESWIPE | ANGLE | RIGHT-TURN | PEDESTRIAN | REAR END | LEFT-TURN | SIDESWIPE | ANGLE | RIGHT-TURN | PEDESTRIAN | REAR END | LEFT-TURN | SIDESWIPE | ANGLE | RIGHT-TURN | PEDESTRIAN | |
| CONVERT 5 SECTION TO 4 SECTION HEAD WITH FLASHING YELLOW ARROW | 3 | | 12.0 | | | | | | 0.16 | | | | | | 1.94 | | | | | 0.65 |
| CHANNELIZE MEDIAN ON SOUTH LEG | 3 | | 5.0 | | | | | | 0.71 | | 0.71 | | | | 3.54 | | | | | 1.18 |
| INSTALL PED COUNTDOWN SIGNAL | 4 | | | | | | 1.0 | | | | | | 0.70 | | | | | | 0.70 | 0.23 |
| INSTALL BACKPLATE | 3 | 45.3 | | | 10.0 | | | 0.15 | | | 0.15 | | | 6.79 | | | 1.50 | | | 2.76 |
| ADD SB RIGHT TURN LANE ON NORTH LEG | 2 | 11.0 | | 1.0 | | | | 0.25 | | 0.25 | | | | 2.75 | | 0.25 | | | | 1.00 |

1 - FHWA Desktop Reference for Crash Reduction Factors
2 - the FDOT approved Technical Report "Update of Florida Crash Reduction Factors and Countermeasures to improvethe Development of District Safety Improvement Projects"
3 - the CMFClearinghouse.org website
4 - An official FHWA-SA-18-041 Toolbox of Pedestrian Countermeasures

**NUMBER OF CRASHES (Per Year) THAT ARE LIKELY TO BE REDUCED WITH PROPOSED IMPROVEMENTS =** 5.82

# BENEFIT-COST FORM

FORM 511

## STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

### SAFETY OFFICE ANNUAL BENEFIT COST ANALYSIS

1. SUBMITTED BY: AECOM — WPA NO. — 5. X SAFETY STUDY
2. DATE SUBMITTED: Dec-18 — ENV. STUDY
3. PROJECT NO. — SKID (ID)
4. ALTERNATIVE NO.: 1 — SN — SPEED: 45 MPH

6. DISTRICT: 2 — SECTION: 72220000 — STATE RD: 134

7. BEGIN MILE POST: 8.797 — END MILE POST: 8.897 — LENGTH — NODE

8. DESCRIPTION OF LOCATION/FACILITY TYPE

The study segment of SR 134 is an east-west, six-lane roadway (three lanes in each direction) with a two-way left-turn lane.
The study segment of SR 21 is a north-south, six-lane divided roadway south of SR 134 and it is a four-lane roadway (with a two-way left-turn lane) north of SR 134.

9. CAUSE OF ACCIDENT PROBLEMS (LIST AND DISCUSS)

Rear-end, angle and left-turn were the leading crash types. Motorists' inattention combined with congestion, queuing and associated stop and go conditions during peak hours could be contributing to some of these rear-end crashes. The left-turn vehicles from the driveways attempting to turn left between queued through/left-turn vehicles. Most of left-turn crashes appeared to have occurred during the permissive
left-turn phase.

10. PROPOSED IMPROVEMENTS (LIST AND DISCUSS):

Install 4-section signal head (flashing yellow for permissive period) for NB/SB traffic
Channelize median on south leg
Install countdown pedestrian signals
Install backplates
Increase left-turn lane length on south leg
Add SB right-turn lane on north leg

| | YEAR | | 2012 | 2013 | 2014 | AVG |
|---|---|---|---|---|---|---|
| 11. | No. of Crashes | | 57 | 41 | 47 | 48.3 |
| 12. | No. of Crashes Potentially Reduced By Project | | | 17.46 | | 5.82 |

13.

| TYPE | | 2012 | 2013 | 2014 | Total |
|---|---|---|---|---|---|
| Rear-End | | 26 | 18 | 22 | 66 |
| Angle | | 9 | 9 | 2 | 20 |
| Left-Turn | | 8 | 4 | 11 | 23 |
| Sideswipe | | 5 | 5 | 5 | 15 |
| Right-Turn | | 5 | 2 | 4 | 11 |
| Head-On | | 1 | | 1 | 2 |
| Curb | | 1 | | | 1 |
| Pedestrian | | 1 | | 1 | 2 |
| Other Fixed Object | | 1 | 1 | | 2 |
| Backed Into | | | 1 | 1 | 2 |
| Thrown or Falling Object | | | 1 | | 1 |
| Overturn/Rollover | | | 1 | | 1 |
| Fence | | | | 1 | 1 |
| | | | | | |
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| | | | | | |
| TOTAL | 0 | 57 | 42 | 48 | 147 |

14. CRASH INFORMATION FOR FACILITY

| | | |
|---|---|---|
| COST/CRASH | $ | 116,034 |
| CRASH CLEANUP | $ | -100 |

15. ANNUAL COST OF IMPROVEMENTS

| | TYPE | | COST | LIFE | AN'L FACTOR | | AN'L COST |
|---|---|---|---|---|---|---|---|
| A. | DRAINAGE | $ | 15,363.16 | 20 | 0.0736 | $ | 1,130.45 |
| B. | LIGHTING/UTILITY | $ | 52,242.88 | 15 | 0.0899 | $ | 4,698.78 |
| C. | SIGNALIZATION | $ | 258,153.54 | 10 | 0.1233 | $ | 31,827.99 |
| D. | SIGNING & PVMNT | $ | 19,803.88 | 6 | 0.1908 | $ | 3,777.83 |
| E. | ROADWAY | $ | 335,499.90 | 20 | 0.0736 | $ | 24,686.67 |
| F. | CONT | $ | 37,485.16 | 15 | 0.0899 | $ | 3,371.46 |
| G. | MOT | $ | 68,106.34 | 15 | 0.0899 | $ | 6,125.56 |
| H. | MOB | $ | 59,933.58 | 15 | 0.0899 | $ | 5,390.49 |
| I. | SUBTOTAL | $ | 846,588.43 | 15 | 0.0899 | $ | 76,143.10 |
| J. | PE/CEI | $ | 448,691.87 | | | $ | 157,152.32 |
| K. | RIGHT-OF-WAY | $ | - | 15 | 0.0899 | $ | - |
| L. | CRASH CLEANUP | | | | | | ($582.00) |
| M. | TOTAL | $ | 1,295,280.30 | | | $ | 156,570.32 |

16. BENEFIT: $675,318

17. BENEFIT / COST: **4.31**

PREPARED BY: AECOM

APPROVED BY: Byungkon (Cody) Ko, P.E. (District 2 Safety Engineer)

DATE: December 2018

COMMENTS/CRASH REDUCTION METHOD:

Crash Reduction Factors from the following source were used to estimate the reduction in crashes:
1. FHWA Desktop Reference for Crash Reduction Factors
2. the FDOT approved Technical Report "Update of Florida Crash Reduction Factors and Countermeasures to improve the Development of District Safety Improvement Projects"
3. the CMFClearinghouse.org website
4. An official FHWA-SA-18-041 Toolbox of Pedestrian Countermeasures

HIGH CRASH LISTINGS:

The study segment was identified as a high crash spot for the years 2012 and 2014. The study segment was identified as a high crash segment for all three years (2012 to 2014).

**PROJECT NET PRESENT VALUE (NPV) - ALT 1**

| | |
|---|---|
| Project Name | **SR 134** |
| Current Year | 2018 |
| Project Completion | 2022 |
| Project Life | 15 |
| Project Category | Corridor Improvements |
| Discount Rate | 0.04 |
| **Project Ends** | 2036 |

| Year # | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Calendar Year | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| Estimated Cost | $1,295,280 | | | | | | | | | | | | | | | | | | |
| Estimated Benefits | | | | | 675,318 | 675,318 | 675,318 | 675,318 | 675,318 | 675,318 | 675,318 | 675,318 | 675,318 | 675,318 | 675,318 | 675,318 | 675,318 | 675,318 | 675,318 |
| **Calculation** | | | | | | | | | | | | | | | | | | | |
| Discount Factor | 1.000 | 0.962 | 0.925 | 0.889 | 0.855 | 0.822 | 0.790 | 0.760 | 0.731 | 0.703 | 0.676 | 0.650 | 0.625 | 0.601 | 0.577 | 0.555 | 0.534 | 0.513 | 0.494 |
| Discounted Cost | -1,295,280 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Discounted Benefits | 0 | 0 | 0 | 0 | 577,265 | 555,062 | 533,714 | 513,186 | 493,448 | 474,469 | 456,221 | 438,674 | 421,802 | 405,578 | 389,979 | 374,980 | 360,558 | 346,690 | 333,356 |
| **NPV** | **5,379,701** | | | | | | | | | | | | | | | | | | |

Date: 12/10/2018 4:30:54 PM

# FDOT Long Range Estimating System - Production

## R3: Project Details by Sequence Report

**Project:** 000000-0-10-01 **Letting Date:** 01/2099

**Description:** SR 134 (103rd street) & Jammes rd

**District:** 02 **County:** 72 DUVAL **Market Area:** 05 **Units:** English
**Contract Class:** **Lump Sum Project:** N **Design/Build:** N **Project Length:** 0.083 MI

**Project Manager:**

**Version 3 Project Grand Total** **$787,188.44**
**Description:** SR 134 & SR 21 Alternative 1

**Sequence:** 1 RSU - Resurfacing, Undivided **Net Length:** 0.185 MI
977 LF

**Description:** SR 134 (103rd street) & SR 21 (Blanding)Alt 1

### EARTHWORK COMPONENT

**User Input Data**

| Description | Value |
|---|---|
| Standard Clearing and Grubbing Limits L/R | 0.00 / 0.00 |
| Incidental Clearing and Grubbing Area | 0.00 |

**X-Items**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 110-1-1 | CLEARING & GRUBBING | 0.15 | AC | $62,055.00 | $9,308.25 |
| 110-4-10 | REMOVAL OF EXIST CONC | 448.74 | SY | $30.80 | $13,821.19 |
| | **Earthwork Component Total** | | | | $23,129.44 |

### ROADWAY COMPONENT

**User Input Data**

| Description | Value |
|---|---|
| Number of Lanes | 2 |
| Roadway Pavement Width L/R | 12.00 / 12.00 |
| Structural Spread Rate | 165 |
| Friction Course Spread Rate | 165 |

**X-Items**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 120-1 | REGULAR EXCAVATION | 137.15 | CY | $18.29 | $2,508.47 |
| 120-6 | EMBANKMENT | 7.60 | CY | $23.75 | $180.50 |
| 160-4 | TYPE B STABILIZATION | 490.82 | SY | $15.40 | $7,558.63 |
| 285-706 | OPTIONAL BASE,BASE GROUP 06 | 465.25 | SY | $33.46 | $15,567.26 |
| 327-70-6 | MILLING EXIST ASPH PAVT,1 1/2" AVG DEPTH | 8,614.80 | SY | $5.00 | $43,074.00 |
| 334-1-53 | SUPERPAVE ASPH CONC, TRAF C, PG76-22 | 460.60 | TN | $162.37 | $74,787.62 |

| | | | | |
|---|---|---|---|---|
| 337-7-83 | ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22 | 749.10 TN | $130.04 | $97,412.96 |
| 520-5-11 | TRAF SEP CONC-TYPE I, 4' WIDE | 629.66 LF | $39.50 | $24,871.57 |
| 711-11-102 | THERMOPLASTIC, STD, WHITE, SOLID, 8" | 0.03 GM | $7,481.35 | $224.44 |
| 711-11-123 | THERMOPLASTIC, STD, WHITE, SOLID, 12" | 532.00 LF | $3.09 | $1,643.88 |
| 711-11-124 | THERMOPLASTIC, STD, WHITE, SOLID, 18" | 259.00 LF | $4.09 | $1,059.31 |
| 711-11-125 | THERMOPLASTIC, STD, WHITE, SOLID, 24" | 91.00 LF | $5.08 | $462.28 |
| 711-11-160 | THERMOPLASTIC, STD, WHITE, MESSAGE | 6.00 EA | $115.61 | $693.66 |
| 711-11-170 | THERMOPLASTIC, STD, WHITE, ARROW | 13.00 EA | $74.10 | $963.30 |
| 711-16-101 | THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6" | 0.51 GM | $4,426.11 | $2,257.32 |
| 711-16-131 | THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6" | 0.46 GM | $1,374.97 | $632.49 |
| 711-16-201 | THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6" | 0.36 GM | $4,328.97 | $1,558.43 |

**Pavement Marking Subcomponent**

| Description | Value |
|---|---|
| Include Thermo/Tape/Other | N |
| Pavement Type | Asphalt |
| Solid Stripe No. of Paint Applications | 2 |
| Solid Stripe No. of Stripes | 2 |
| Skip Stripe No. of Paint Applications | 2 |
| Skip Stripe No. of Stripes | 1 |

**Roadway Component Total** $275,456.13

## SHOULDER COMPONENT

**User Input Data**

| Description | Value |
|---|---|
| Total Outside Shoulder Width L/R | 10.00 / 10.00 |
| Total Outside Shoulder Perf. Turf Width L/R | 2.67 / 2.67 |
| Paved Outside Shoulder Width L/R | 5.00 / 5.00 |
| Structural Spread Rate | 110 |
| Friction Course Spread Rate | 80 |
| Total Width (T) / 8" Overlap (O) | T |
| Rumble Strips ï¿½No. of Sides | 0 |

**X-Items**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 520-1-10 | CONCRETE CURB & GUTTER, TYPE F | 620.00 | LF | $38.73 | $24,012.60 |
| 522-1 | CONCRETE SIDEWALK AND DRIVEWAYS, 4" | 108.47 | SY | $59.94 | $6,501.69 |
| 522-2 | CONCRETE SIDEWALK AND DRIVEWAYS, 6" | 72.36 | SY | $74.90 | $5,419.76 |
| 570-1-2 | PERFORMANCE TURF, SOD | 203.38 | SY | $4.82 | $980.29 |

| | | |
|---|---|---|
| | **Shoulder Component Total** | $36,914.33 |

## DRAINAGE COMPONENT

**X-Items**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 425-1-352 | INLETS, CURB, TYPE P-5, >10' | 1.00 | EA | $7,396.53 | $7,396.53 |
| 425-2-62 | MANHOLES, P-8, >10' | 1.00 | EA | $4,596.55 | $4,596.55 |
| 430-174-130 | PIPE CULV, OPT MATL, ROUND,30"SD | 16.00 | LF | $210.63 | $3,370.08 |

| | | |
|---|---|---|
| | **Drainage Component Total** | $15,363.16 |

## SIGNING COMPONENT

**Pay Items**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 700-1-11 | SINGLE POST SIGN, F&I GM, <12 SF | 5.00 | AS | $375.88 | $1,879.40 |

**X-Items**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 700-1-50 | SINGLE POST SIGN, RELOCATE | 3.00 | AS | $198.00 | $594.00 |
| 700-5-11 | INTERNAL ILLUM SIGN, F&I GM, UP TO 12 SF | 4.00 | EA | $4,332.62 | $17,330.48 |

| | | |
|---|---|---|
| | **Signing Component Total** | $19,803.88 |

## SIGNALIZATIONS COMPONENT

**Signalization 1**

| Description | Value |
|---|---|
| Type | Miscellaneous |
| Multiplier | 1 |
| Description | |

**X-Items**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 630-2-12 | CONDUIT, F& I, DIRECTIONAL BORE | 380.00 | LF | $20.16 | $7,660.80 |
| 632-7-1 | SIGNAL CABLE- NEW OR RECO, FUR & INSTALL | 1.00 | PI | $3,812.33 | $3,812.33 |
| 635-2-11 | PULL & SPLICE BOX, F&I, 13" x 24" | 11.00 | EA | $651.42 | $7,165.62 |
| 639-1-620 | ELECTRICAL POWER SRV,REM UND | 1.00 | AS | $410.53 | $410.53 |
| 639-2-1 | ELECTRICAL SERVICE WIRE, F&I | 180.00 | LF | $4.76 | $856.80 |
| 639-3-11 | ELEC SERV DISCON, F&I, POLE MNT | 1.00 | EA | $875.60 | $875.60 |
| 641-2-12 | PREST CNC POLE,F&I,TYP P-II SRV POLE | 1.00 | EA | $1,183.31 | $1,183.31 |
| 646-1-11 | ALUMINUM SIGNALS POLE, PEDESTAL | 4.00 | EA | $1,216.02 | $4,864.08 |

| | | | | |
|---|---|---|---|---|
| 649-21-6 | STEEL MAST ARM ASSEMBLY, F&I, 50' | 1.00 EA | $36,320.96 | $36,320.96 |
| 649-21-10 | STEEL MAST ARM ASSEMBLY, F&I, 60' | 2.00 EA | $38,701.87 | $77,403.74 |
| 649-21-15 | STEEL MAST ARM ASSEMBLY, F&I, 70' | 1.00 EA | $45,153.06 | $45,153.06 |
| 649-26-3 | STEEL MAST ARM ASSEMBLY, REMOVE | 4.00 EA | $3,415.10 | $13,660.40 |
| 650-1-14 | VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W | 12.00 AS | $969.21 | $11,630.52 |
| 650-1-16 | VEH TRAF SIGNAL,F&I ALUMINUM, 4 S 1 W | 4.00 AS | $1,286.84 | $5,147.36 |
| 653-1-12 | PEDESTRIAN SIGNAL, F&I LED COUNT, 2 WAYS | 4.00 AS | $1,197.58 | $4,790.32 |
| 660-1-109 | LOOP DETECTOR INDUCTIVE, F&I, TYPE 9 | 8.00 EA | $256.29 | $2,050.32 |
| 660-2-106 | LOOP ASSEMBLY, F&I, TYPE F | 10.00 AS | $678.32 | $6,783.20 |
| 665-1-11 | PEDESTRIAN DETECTOR, F&I, STANDARD | 8.00 EA | $232.99 | $1,863.92 |
| 670-5-110 | TRAF CNTL ASSEM, F&I, NEMA | 1.00 AS | $26,066.59 | $26,066.59 |
| 670-5-600 | TRAF CNTL ASSEM, REMOVE | 1.00 AS | $454.08 | $454.08 |
| | **Signalizations Component Total** | | | $258,153.54 |

**LIGHTING COMPONENT**

**Conventional Lighting Subcomponent**

| Description | Value |
|---|---|
| Spacing | MAX |

**X-Items**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 715-4-60 | LIGHT POLE COMPLETE, RELOCATE | 1.00 | EA | $2,242.88 | $2,242.88 |
| | **Lighting Component Total** | | | | $2,242.88 |

**Sequence 1 Total** $631,063.36

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# FDOT Long Range Estimating System - Production

## R3: Project Details by Sequence Report

**Project:** 000000-0-10-01 **Letting Date:** 01/2099

**Description:** SR 134 (103rd street) & Jammes rd

**District:** 02 **County:** 72 DUVAL **Market Area:** 05 **Units:** English

**Contract Class:** **Lump Sum Project:** N **Design/Build:** N **Project Length:** 0.083 MI

**Project Manager:**

**Version 3 Project Grand Total** **$787,188.44**

**Description:** SR 134 & SR 21 Alternative 1

---

| | | | |
|---|---|---|---|
| **Project Sequences Subtotal** | | | **$631,063.36** |
| 102-1 | Maintenance of Traffic | 10.00 % | $63,106.34 |
| 101-1 | Mobilization | 8.00 % | $55,533.58 |
| **Project Sequences Total** | | | **$749,703.28** |
| Project Unknowns | | 0.00 % | $0.00 |
| Design/Build | | 0.00 % | $0.00 |

**Non-Bid Components:**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 999-25 | INITIAL CONTINGENCY AMOUNT (DO NOT BID) | | LS | $37,485.16 | $37,485.16 |
| **Project Non-Bid Subtotal** | | | | | **$37,485.16** |
| **Version 3 Project Grand Total** | | | | | **$787,188.44** |

## Estimated Crash Reduction - ALT 2

| IMPROVEMENT | CRF Source | NUMBER OF CRASHES POTENTIALLY IMPACTED (2012-2014) | | | | | | ARF[x] | | | | | | ESTIMATED REDUCTION IN CRASHES (2012-2014) | | | | | | AVERAGE CRASH REDUCTION PER YR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | REAR END | LEFT-TURN | SIDESWIPE | ANGLE | RIGHT-TURN | PEDESTRIAN | REAR END | LEFT-TURN | SIDESWIPE | ANGLE | RIGHT-TURN | PEDESTRIAN | REAR END | LEFT-TURN | SIDESWIPE | ANGLE | RIGHT-TURN | PEDESTRIAN | |
| CONVERT 5 SECTION TO 4 SECTION HEAD WITH FLASHING YELLOW ARROW | 3 | | 12.0 | | | | | | 0.16 | | | | | | 1.94 | | | | | 0.65 |
| CHANNELIZE MEDIAN ON SOUTH LEG | 3 | | 3.0 | | | | | | 0.71 | | 0.71 | | | | 2.12 | | | | | 0.71 |
| INSTALL PED COUNTDOWN SIGNAL | 4 | | | | | | 1.0 | | | | | | 0.70 | | | | | | 0.70 | 0.23 |
| INSTALL BACKPLATE | 3 | 45.3 | | | 10.0 | | | 0.15 | | | 0.15 | | | 6.79 | | | 1.50 | | | 2.76 |
| ADD SB RIGHT TURN LANE ON NORTH LEG | 2 | 11.0 | | 1.0 | | | | 0.25 | | 0.25 | | | | 2.75 | | 0.25 | | | | 1.00 |

1 - FHWA Desktop Reference for Crash Reduction Factors
2 - the FDOT approved Technical Report "Update of Florida Crash Reduction Factors and Countermeasures to improvethe Development of District Safety Improvement Projects"
3 - the CMFClearinghouse.org website
4 - An official FHWA-SA-18-041 Toolbox of Pedestrian Countermeasures

**NUMBER OF CRASHES (Per Year) THAT ARE LIKELY TO BE REDUCED WITH PROPOSED IMPROVEMENTS =** 5.35

# BENEFIT-COST FORM

FORM 511

## STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

### SAFETY OFFICE ANNUAL BENEFIT COST ANALYSIS

1. SUBMITTED BY: AECOM — WPA NO. — 5. X SAFETY STUDY
2. DATE SUBMITTED: Dec-18 — ENV. STUDY
3. PROJECT NO. — SKID (ID)
4. ALTERNATIVE NO.: 2 — SN — SPEED: 45 MPH

6. DISTRICT: 2 — SECTION: 72220000 — STATE RD: 134

7. BEGIN MILE POST: 8.797 — END MILE POST: 8.897 — LENGTH — NODE

8. DESCRIPTION OF LOCATION/FACILITY TYPE

The study segment of SR 134 is an east-west, six-lane roadway (three lanes in each direction) with a two-way left-turn lane.
The study segment of SR 21 is a north-south, six-lane divided roadway south of SR 134 and it is a four-lane roadway (with a two-way left-turn lane) north of SR 134.

9. CAUSE OF ACCIDENT PROBLEMS (LIST AND DISCUSS)

Rear-end, angle and left-turn were the leading crash types. Motorists' inattention combined with congestion, queuing and associated stop and go conditions during peak hours could be contributing to some of these rear-end crashes. The left-turn vehicles from the driveways attempting to turn left between queued through/left-turn vehicles. Most of left-turn crashes appeared to have occurred during the permissive
left-turn phase.

10. PROPOSED IMPROVEMENTS (LIST AND DISCUSS):

Install 4-section signal head (flashing yellow for permissive period) for NB/SB traffic
Channelize median on south leg
Install countdown pedestrian signals
Install backplates
Increase left-turn lane length on south leg
Add SB right-turn lane on north leg

| | YEAR | | 2012 | 2013 | 2014 | AVG |
|---|---|---|---|---|---|---|
| 11. | No. of Crashes | | 57 | 41 | 47 | 48.3 |
| 12. | No. of Crashes Potentially Reduced By Project | | | 16.05 | | 5.35 |

13.

| TYPE | | 2012 | 2013 | 2014 | Total |
|---|---|---|---|---|---|
| Rear-End | | 26 | 18 | 22 | 66 |
| Angle | | 9 | 9 | 2 | 20 |
| Left-Turn | | 8 | 4 | 11 | 23 |
| Sideswipe | | 5 | 5 | 5 | 15 |
| Right-Turn | | 5 | 2 | 4 | 11 |
| Head-On | | 1 | | 1 | 2 |
| Curb | | 1 | | | 1 |
| Pedestrian | | 1 | | 1 | 2 |
| Other Fixed Object | | 1 | 1 | | 2 |
| Backed Into | | | 1 | 1 | 2 |
| Thrown or Falling Object | | | 1 | | 1 |
| Overturn/Rollover | | | 1 | | 1 |
| Fence | | | | 1 | 1 |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| TOTAL | 0 | 57 | 42 | 48 | 147 |

14. CRASH INFORMATION FOR FACILITY

| | | |
|---|---|---|
| COST/CRASH | $ | 116,034 |
| CRASH CLEANUP | $ | -100 |

15. ANNUAL COST OF IMPROVEMENTS

| | TYPE | | COST | LIFE | AN'L FACTOR | | AN'L COST |
|---|---|---|---|---|---|---|---|
| A. | DRAINAGE | $ | 15,363.16 | 20 | 0.0736 | $ | 1,130.45 |
| B. | LIGHTING/UTILITY | $ | 52,242.88 | 15 | 0.0899 | $ | 4,698.78 |
| C. | SIGNALIZATION | $ | 258,153.54 | 10 | 0.1233 | $ | 31,827.99 |
| D. | SIGNING & PVMNT | $ | 18,300.36 | 6 | 0.1908 | $ | 3,491.01 |
| E. | ROADWAY | $ | 311,031.46 | 20 | 0.0736 | $ | 22,886.24 |
| F. | CONT | $ | 35,942.43 | 15 | 0.0899 | $ | 3,232.70 |
| G. | MOT | $ | 65,509.14 | 15 | 0.0899 | $ | 5,891.96 |
| H. | MOB | $ | 57,648.04 | 15 | 0.0899 | $ | 5,184.93 |
| I. | SUBTOTAL | $ | 814,191.01 | 15 | 0.0899 | $ | 73,229.24 |
| J. | PE/CEI | $ | 431,521.24 | | | $ | 151,573.30 |
| K. | RIGHT-OF-WAY | $ | - | 15 | 0.0899 | $ | - |
| L. | CRASH CLEANUP | | | | | | ($535.00) |
| M. | TOTAL | $ | 1,245,712.25 | | | $ | 151,038.30 |

16. BENEFIT: $620,782

17. BENEFIT / COST: 4.11

PREPARED BY: AECOM

APPROVED BY: Byungkon (Cody) Ko, P.E. (District 2 Safety Engineer)

DATE: December 2018

COMMENTS/CRASH REDUCTION METHOD:

Crash Reduction Factors from the following source were used to estimate the reduction in crashes:
1. FHWA Desktop Reference for Crash Reduction Factors
2. the FDOT approved Technical Report "Update of Florida Crash Reduction Factors and Countermeasures to improve the Development of District Safety Improvement Projects"
3. the CMFClearinghouse.org website
4. An official FHWA-SA-18-041 Toolbox of Pedestrian Countermeasures

HIGH CRASH LISTINGS:

The study segment was identified as a high crash spot for the years 2012 and 2014. The study segment was identified as a high crash segment for all three years (2012 to 2014).

**PROJECT NET PRESENT VALUE (NPV) - ALT 2**

| | |
|---|---|
| Project Name | **SR 134** |
| Current Year | 2018 |
| Project Completion | 2022 |
| Project Life | 15 |
| Project Category | Corridor Improvements |
| Discount Rate | 0.04 |
| **Project Ends** | 2036 |

| Year # | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Calendar Year | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| Estimated Cost | $1,245,712 | | | | | | | | | | | | | | | | | | |
| Estimated Benefits | | | | | 620,782 | 620,782 | 620,782 | 620,782 | 620,782 | 620,782 | 620,782 | 620,782 | 620,782 | 620,782 | 620,782 | 620,782 | 620,782 | 620,782 | 620,782 |
| **Calculation** | | | | | | | | | | | | | | | | | | | |
| Discount Factor | 1.000 | 0.962 | 0.925 | 0.889 | 0.855 | 0.822 | 0.790 | 0.760 | 0.731 | 0.703 | 0.676 | 0.650 | 0.625 | 0.601 | 0.577 | 0.555 | 0.534 | 0.513 | 0.494 |
| Discounted Cost | -1,245,712 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Discounted Benefits | 0 | 0 | 0 | 0 | 530,647 | 510,237 | 490,613 | 471,743 | 453,599 | 436,153 | 419,378 | 403,248 | 387,739 | 372,826 | 358,486 | 344,698 | 331,441 | 318,693 | 306,435 |
| **NPV** | **4,890,224** | | | | | | | | | | | | | | | | | | |

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# FDOT Long Range Estimating System - Production

## R3: Project Details by Sequence Report

**Project:** 000000-0-10-01 **Letting Date:** 01/2099

**Description:** SR 134 (103rd street) & Jammes rd

**District:** 02 **County:** 72 DUVAL **Market Area:** 05 **Units:** English
**Contract Class:** **Lump Sum Project:** N **Design/Build:** N **Project Length:** 0.083 MI

**Project Manager:**

**Version 4 Project Grand Total** **$754,791.01**
**Description:** SR 134 & SR 21 Alternative 2

**Sequence:** 1 RSU - Resurfacing, Undivided **Net Length:** 0.185 MI
977 LF

**Description:** SR 134 (103rd street) & SR 21 (Blanding)Alt 2

### EARTHWORK COMPONENT

**User Input Data**

| Description | Value |
|---|---|
| Standard Clearing and Grubbing Limits L/R | 0.00 / 0.00 |
| Incidental Clearing and Grubbing Area | 0.00 |

**X-Items**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 110-1-1 | CLEARING & GRUBBING | 0.11 | AC | $62,055.00 | $6,826.05 |
| 110-4-10 | REMOVAL OF EXIST CONC | 448.74 | SY | $30.80 | $13,821.19 |
| | **Earthwork Component Total** | | | | $20,647.24 |

### ROADWAY COMPONENT

**User Input Data**

| Description | Value |
|---|---|
| Number of Lanes | 2 |
| Roadway Pavement Width L/R | 12.00 / 12.00 |
| Structural Spread Rate | 165 |
| Friction Course Spread Rate | 165 |

**X-Items**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 120-1 | REGULAR EXCAVATION | 146.63 | CY | $18.29 | $2,681.86 |
| 120-6 | EMBANKMENT | 6.72 | CY | $23.75 | $159.60 |
| 160-4 | TYPE B STABILIZATION | 458.65 | SY | $15.40 | $7,063.21 |
| 285-706 | OPTIONAL BASE,BASE GROUP 06 | 433.08 | SY | $33.46 | $14,490.86 |
| 327-70-6 | MILLING EXIST ASPH PAVT,1 1/2" AVG DEPTH | 7,946.80 | SY | $5.00 | $39,734.00 |
| 334-1-53 | SUPERPAVE ASPH CONC, TRAF C, PG76-22 | 428.75 | TN | $162.37 | $69,616.14 |

| | | | | |
|---|---|---|---|---|
| 337-7-83 | ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22 | 693.45 TN | $130.04 | $90,176.24 |
| 520-5-11 | TRAF SEP CONC-TYPE I, 4' WIDE | 525.52 LF | $39.50 | $20,758.04 |
| 711-11-102 | THERMOPLASTIC, STD, WHITE, SOLID, 8" | 0.03 GM | $7,481.35 | $224.44 |
| 711-11-123 | THERMOPLASTIC, STD, WHITE, SOLID, 12" | 532.00 LF | $3.09 | $1,643.88 |
| 711-11-124 | THERMOPLASTIC, STD, WHITE, SOLID, 18" | 259.00 LF | $4.09 | $1,059.31 |
| 711-11-125 | THERMOPLASTIC, STD, WHITE, SOLID, 24" | 91.00 LF | $5.08 | $462.28 |
| 711-11-160 | THERMOPLASTIC, STD, WHITE, MESSAGE | 6.00 EA | $115.61 | $693.66 |
| 711-11-170 | THERMOPLASTIC, STD, WHITE, ARROW | 13.00 EA | $74.10 | $963.30 |
| 711-16-101 | THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6" | 0.57 GM | $4,426.11 | $2,522.88 |
| 711-16-131 | THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6" | 0.44 GM | $1,374.97 | $604.99 |
| 711-16-201 | THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6" | 0.29 GM | $4,328.97 | $1,255.40 |

**Pavement Marking Subcomponent**

| Description | Value |
|---|---|
| Include Thermo/Tape/Other | N |
| Pavement Type | Asphalt |
| Solid Stripe No. of Paint Applications | 2 |
| Solid Stripe No. of Stripes | 2 |
| Skip Stripe No. of Paint Applications | 2 |
| Skip Stripe No. of Stripes | 1 |

**Roadway Component Total** $254,110.09

## SHOULDER COMPONENT

**User Input Data**

| Description | Value |
|---|---|
| Total Outside Shoulder Width L/R | 10.00 / 10.00 |
| Total Outside Shoulder Perf. Turf Width L/R | 2.67 / 2.67 |
| Paved Outside Shoulder Width L/R | 5.00 / 5.00 |
| Structural Spread Rate | 110 |
| Friction Course Spread Rate | 80 |
| Total Width (T) / 8" Overlap (O) | T |
| Rumble Strips ï¿½No. of Sides | 0 |

**X-Items**

| Pay item | Description | Quantity Unit | Unit Price | Extended Amount |
|---|---|---|---|---|
| 520-1-10 | CONCRETE CURB & GUTTER, TYPE F | 620.03 LF | $38.73 | $24,013.76 |
| 522-1 | CONCRETE SIDEWALK AND DRIVEWAYS, 4" | 97.77 SY | $59.94 | $5,860.33 |
| 522-2 | CONCRETE SIDEWALK AND DRIVEWAYS, 6" | 72.36 SY | $74.90 | $5,419.76 |
| 570-1-2 | PERFORMANCE TURF, SOD | 203.38 SY | $4.82 | $980.29 |

| | | |
|---|---|---|
| | **Shoulder Component Total** | $36,274.13 |

## DRAINAGE COMPONENT

**X-Items**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 425-1-352 | INLETS, CURB, TYPE P-5, >10' | 1.00 | EA | $7,396.53 | $7,396.53 |
| 425-2-62 | MANHOLES, P-8, >10' | 1.00 | EA | $4,596.55 | $4,596.55 |
| 430-174-130 | PIPE CULV, OPT MATL, ROUND,30"SD | 16.00 | LF | $210.63 | $3,370.08 |
| | **Drainage Component Total** | | | | $15,363.16 |

## SIGNING COMPONENT

**Pay Items**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 700-1-11 | SINGLE POST SIGN, F&I GM, <12 SF | 1.00 | AS | $375.88 | $375.88 |

**X-Items**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 700-1-50 | SINGLE POST SIGN, RELOCATE | 3.00 | AS | $198.00 | $594.00 |
| 700-5-11 | INTERNAL ILLUM SIGN, F&I GM, UP TO 12 SF | 4.00 | EA | $4,332.62 | $17,330.48 |
| | **Signing Component Total** | | | | $18,300.36 |

## SIGNALIZATIONS COMPONENT

**Signalization 1**

| Description | Value |
|---|---|
| Type | Miscellaneous |
| Multiplier | 1 |
| Description | |

**X-Items**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 630-2-12 | CONDUIT, F& I, DIRECTIONAL BORE | 380.00 | LF | $20.16 | $7,660.80 |
| 632-7-1 | SIGNAL CABLE- NEW OR RECO, FUR & INSTALL | 1.00 | PI | $3,812.33 | $3,812.33 |
| 635-2-11 | PULL & SPLICE BOX, F&I, 13" x 24" | 11.00 | EA | $651.42 | $7,165.62 |
| 639-1-620 | ELECTRICAL POWER SRV,REM UND | 1.00 | AS | $410.53 | $410.53 |
| 639-2-1 | ELECTRICAL SERVICE WIRE, F&I | 180.00 | LF | $4.76 | $856.80 |
| 639-3-11 | ELEC SERV DISCON, F&I, POLE MNT | 1.00 | EA | $875.60 | $875.60 |
| 641-2-12 | PREST CNC POLE,F&I,TYP P-II SRV POLE | 1.00 | EA | $1,183.31 | $1,183.31 |
| 646-1-11 | ALUMINUM SIGNALS POLE, PEDESTAL | 4.00 | EA | $1,216.02 | $4,864.08 |

| | | | | |
|---|---|---|---|---|
| 649-21-6 | STEEL MAST ARM ASSEMBLY, F&I, 50' | 1.00 EA | $36,320.96 | $36,320.96 |
| 649-21-10 | STEEL MAST ARM ASSEMBLY, F&I, 60' | 2.00 EA | $38,701.87 | $77,403.74 |
| 649-21-15 | STEEL MAST ARM ASSEMBLY, F&I, 70' | 1.00 EA | $45,153.06 | $45,153.06 |
| 649-26-3 | STEEL MAST ARM ASSEMBLY, REMOVE | 4.00 EA | $3,415.10 | $13,660.40 |
| 650-1-14 | VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W | 12.00 AS | $969.21 | $11,630.52 |
| 650-1-16 | VEH TRAF SIGNAL,F&I ALUMINUM, 4 S 1 W | 4.00 AS | $1,286.84 | $5,147.36 |
| 653-1-12 | PEDESTRIAN SIGNAL, F&I LED COUNT, 2 WAYS | 4.00 AS | $1,197.58 | $4,790.32 |
| 660-1-109 | LOOP DETECTOR INDUCTIVE, F&I, TYPE 9 | 8.00 EA | $256.29 | $2,050.32 |
| 660-2-106 | LOOP ASSEMBLY, F&I, TYPE F | 10.00 AS | $678.32 | $6,783.20 |
| 665-1-11 | PEDESTRIAN DETECTOR, F&I, STANDARD | 8.00 EA | $232.99 | $1,863.92 |
| 670-5-110 | TRAF CNTL ASSEM, F&I, NEMA | 1.00 AS | $26,066.59 | $26,066.59 |
| 670-5-600 | TRAF CNTL ASSEM, REMOVE | 1.00 AS | $454.08 | $454.08 |
| | **Signalizations Component Total** | | | $258,153.54 |

**LIGHTING COMPONENT**

**Conventional Lighting Subcomponent**

| Description | Value |
|---|---|
| Spacing | MAX |

**X-Items**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 715-4-60 | LIGHT POLE COMPLETE, RELOCATE | 1.00 | EA | $2,242.88 | $2,242.88 |
| | **Lighting Component Total** | | | | $2,242.88 |

**Sequence 1 Total** $605,091.40

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# FDOT Long Range Estimating System - Production

## R3: Project Details by Sequence Report

**Project:** 000000-0-10-01 **Letting Date:** 01/2099

**Description:** SR 134 (103rd street) & Jammes rd

**District:** 02 **County:** 72 DUVAL **Market Area:** 05 **Units:** English

**Contract Class:** **Lump Sum Project:** N **Design/Build:** N **Project Length:** 0.083 MI

**Project Manager:**

**Version 4 Project Grand Total** **$754,791.01**

**Description:** SR 134 & SR 21 Alternative 2

---

| | | | |
|---|---|---|---|
| **Project Sequences Subtotal** | | | **$605,091.40** |
| 102-1 | Maintenance of Traffic | 10.00 % | $60,509.14 |
| 101-1 | Mobilization | 8.00 % | $53,248.04 |
| **Project Sequences Total** | | | **$718,848.58** |
| Project Unknowns | | 0.00 % | $0.00 |
| Design/Build | | 0.00 % | $0.00 |

**Non-Bid Components:**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 999-25 | INITIAL CONTINGENCY AMOUNT (DO NOT BID) | | LS | $35,942.43 | $35,942.43 |
| **Project Non-Bid Subtotal** | | | | | **$35,942.43** |
| **Version 4 Project Grand Total** | | | | | **$754,791.01** |

## Estimated Crash Reduction - ALT 3

| IMPROVEMENT | CRF Source | NUMBER OF CRASHES POTENTIALLY IMPACTED (2012-2014) | | | | | | ARF[x] | | | | | | ESTIMATED REDUCTION IN CRASHES (2012-2014) | | | | | | AVERAGE CRASH REDUCTION PER YR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | REAR END | LEFT-TURN | SIDESWIPE | ANGLE | RIGHT-TURN | PEDESTRIAN | REAR END | LEFT-TURN | SIDESWIPE | ANGLE | RIGHT-TURN | PEDESTRIAN | REAR END | LEFT-TURN | SIDESWIPE | ANGLE | RIGHT-TURN | PEDESTRIAN | |
| CONVERT 5 SECTION TO 4 SECTION HEAD WITH FLASHING YELLOW ARROW | 3 | | 12.0 | | | | | | 0.16 | | | | | | 1.94 | | | | | 0.65 |
| INSTALL PED COUNTDOWN SIGNAL | 4 | | | | | | 1.0 | | | | | | 0.70 | | | | | | 0.70 | 0.23 |
| INSTALL BACKPLATE | 3 | 45.3 | | | 10.0 | | | 0.15 | | | 0.15 | | | 6.79 | | | 1.50 | | | 2.76 |
| ADD SB RIGHT TURN LANE ON NORTH LEG | 2 | 11.0 | | 1.0 | | | | 0.25 | | 0.25 | | | | 2.75 | | 0.25 | | | | 1.00 |

1 - FHWA Desktop Reference for Crash Reduction Factors
2 - the FDOT approved Technical Report "Update of Florida Crash Reduction Factors and Countermeasures to improvethe Development of District Safety Improvement Projects"
3 - the CMFClearinghouse.org website
4 - An official FHWA-SA-18-041 Toolbox of Pedestrian Countermeasures

**NUMBER OF CRASHES (Per Year) THAT ARE LIKELY TO BE REDUCED WITH PROPOSED IMPROVEMENTS =** 4.64

# BENEFIT-COST FORM

FORM 511

## STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

### SAFETY OFFICE ANNUAL BENEFIT COST ANALYSIS

1. SUBMITTED BY: AECOM — WPA NO. — 5. X SAFETY STUDY
2. DATE SUBMITTED: Dec-18 — ENV. STUDY
3. PROJECT NO. — SKID (ID)
4. ALTERNATIVE NO.: 3 — SN — SPEED: 45 MPH

6. DISTRICT: 2 — SECTION: 72220000 — STATE RD: 134

7. BEGIN MILE POST: 8.797 — END MILE POST: 8.897 — LENGTH — NODE

8. DESCRIPTION OF LOCATION/FACILITY TYPE

The study segment of SR 134 is an east-west, six-lane roadway (three lanes in each direction) with a two-way left-turn lane.
The study segment of SR 21 is a north-south, six-lane divided roadway south of SR 134 and it is a four-lane roadway (with a two-way left-turn lane) north of SR 134.

9. CAUSE OF ACCIDENT PROBLEMS (LIST AND DISCUSS)

Rear-end, angle and left-turn were the leading crash types. Motorists' inattention combined with congestion, queuing and associated stop and go conditions during peak hours could be contributing to some of these rear-end crashes. The left-turn vehicles from the driveways attempting to turn left between queued through/left-turn vehicles. Most of left-turn crashes appeared to have occurred during the permissive
left-turn phase.

10. PROPOSED IMPROVEMENTS (LIST AND DISCUSS):

Install 4-section signal head (flashing yellow for permissive period) for NB/SB traffic
Install countdown pedestrian signals
Install backplates
Add SB right-turn lane on north leg

| | YEAR | | 2012 | 2013 | 2014 | AVG |
|---|---|---|---|---|---|---|
| 11. | No. of Crashes | | 57 | 41 | 47 | 48.3 |
| 12. | No. of Crashes Potentially Reduced By Project | | | 13.92 | | 4.64 |

14. CRASH INFORMATION FOR FACILITY

| | | |
|---|---|---|
| COST/CRASH | $ | 116,034 |
| CRASH CLEANUP | $ | -100 |

13.

| TYPE | | 2012 | 2013 | 2014 | Total |
|---|---|---|---|---|---|
| Rear-End | | 26 | 18 | 22 | 66 |
| Angle | | 9 | 9 | 2 | 20 |
| Left-Turn | | 8 | 4 | 11 | 23 |
| Sideswipe | | 5 | 5 | 5 | 15 |
| Right-Turn | | 5 | 2 | 4 | 11 |
| Head-On | | 1 | | 1 | 2 |
| Curb | | 1 | | | 1 |
| Pedestrian | | 1 | | 1 | 2 |
| Other Fixed Object | | 1 | 1 | | 2 |
| Backed Into | | | 1 | 1 | 2 |
| Thrown or Falling Object | | | 1 | | 1 |
| Overturn/Rollover | | | 1 | | 1 |
| Fence | | | | 1 | 1 |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| TOTAL | 0 | 57 | 42 | 48 | 147 |

15. ANNUAL COST OF IMPROVEMENTS

| | TYPE | | COST | LIFE | AN'L FACTOR | | AN'L COST |
|---|---|---|---|---|---|---|---|
| A. | DRAINAGE | $ | 15,363.16 | 20 | 0.0736 | $ | 1,130.45 |
| B. | LIGHTING/UTILITY | $ | 52,242.88 | 15 | 0.0899 | $ | 4,698.78 |
| C. | SIGNALIZATION | $ | 254,083.62 | 10 | 0.1233 | $ | 31,326.21 |
| D. | SIGNING & PVMNT | $ | 17,924.48 | 6 | 0.1908 | $ | 3,419.31 |
| E. | ROADWAY | $ | 145,578.16 | 20 | 0.0736 | $ | 10,711.90 |
| F. | CONT | $ | 25,850.42 | 15 | 0.0899 | $ | 2,325.02 |
| G. | MOT | $ | 48,519.23 | 15 | 0.0899 | $ | 4,363.87 |
| H. | MOB | $ | 42,696.92 | 15 | 0.0899 | $ | 3,840.21 |
| I. | SUBTOTAL | $ | 602,258.87 | 15 | 0.0899 | $ | 54,167.83 |
| J. | PE/CEI | $ | 319,197.20 | | | $ | 115,983.57 |
| K. | RIGHT-OF-WAY | $ | - | 15 | 0.0899 | $ | - |
| L. | CRASH CLEANUP | | | | | | ($464.00) |
| M. | TOTAL | $ | 921,456.07 | | | $ | 115,519.57 |

16. BENEFIT: $538,398

17. BENEFIT / COST: 4.66

PREPARED BY: AECOM

APPROVED BY: Byungkon (Cody) Ko, P.E. (District 2 Safety Engineer)

DATE: December 2018

COMMENTS/CRASH REDUCTION METHOD:

Crash Reduction Factors from the following source were used to estimate the reduction in crashes:
1. FHWA Desktop Reference for Crash Reduction Factors
2. the FDOT approved Technical Report "Update of Florida Crash Reduction Factors and Countermeasures to improve the Development of District Safety Improvement Projects"
3. the CMFClearinghouse.org website
4. An official FHWA-SA-18-041 Toolbox of Pedestrian Countermeasures

HIGH CRASH LISTINGS:

The study segment was identified as a high crash spot for the years 2012 and 2014. The study segment was identified as a high crash segment for all three years (2012 to 2014).

**PROJECT NET PRESENT VALUE (NPV) - ALT 3**

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Project Name | **SR 134** | Year # | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| Current Year | 2018 | Calendar Year | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| Project Completion | 2022 | Estimated Cost | $921,456 | | | | | | | | | | | | | | | | | | |
| Project Life | 15 | Estimated Benefits | | | | | 538,398 | 538,398 | 538,398 | 538,398 | 538,398 | 538,398 | 538,398 | 538,398 | 538,398 | 538,398 | 538,398 | 538,398 | 538,398 | 538,398 | 538,398 |
| Project Category | Corridor Improvements | **Calculation** | | | | | | | | | | | | | | | | | | | |
| Discount Rate | 0.04 | Discount Factor | 1.000 | 0.962 | 0.925 | 0.889 | 0.855 | 0.822 | 0.790 | 0.760 | 0.731 | 0.703 | 0.676 | 0.650 | 0.625 | 0.601 | 0.577 | 0.555 | 0.534 | 0.513 | 0.494 |
| **Project Ends** | 2036 | Discounted Cost | -921,456 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Discounted Benefits | 0 | 0 | 0 | 0 | 460,225 | 442,524 | 425,504 | 409,138 | 393,402 | 378,271 | 363,722 | 349,733 | 336,282 | 323,348 | 310,911 | 298,953 | 287,455 | 276,399 | 265,768 |
| | | **NPV** | **4,400,178** | | | | | | | | | | | | | | | | | | |

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# FDOT Long Range Estimating System - Production

## R3: Project Details by Sequence Report

**Project:** 000000-0-10-01 **Letting Date:** 01/2099

**Description:** SR 134 (103rd street) & Jammes rd

**District:** 02 **County:** 72 DUVAL **Market Area:** 05 **Units:** English
**Contract Class:** **Lump Sum Project:** N **Design/Build:** N **Project Length:** 0.083 MI

**Project Manager:**

**Version 5 Project Grand Total** **$542,858.87**
**Description:** SR 134 & SR 21 Alternative 3

**Sequence:** 1 RSU - Resurfacing, Undivided **Net Length:** 0.109 MI
576 LF

**Description:** SR 134 (103rd street) & SR 21 (Blanding)Alt 3

### EARTHWORK COMPONENT

**User Input Data**

| Description | Value |
|---|---|
| Standard Clearing and Grubbing Limits L/R | 0.00 / 0.00 |
| Incidental Clearing and Grubbing Area | 0.00 |

**X-Items**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 110-1-1 | CLEARING & GRUBBING | 0.09 | AC | $62,055.00 | $5,584.95 |
| 110-4-10 | REMOVAL OF EXIST CONC | 183.11 | SY | $30.80 | $5,639.79 |
| | **Earthwork Component Total** | | | | $11,224.74 |

### ROADWAY COMPONENT

**User Input Data**

| Description | Value |
|---|---|
| Number of Lanes | 2 |
| Roadway Pavement Width L/R | 12.00 / 12.00 |
| Structural Spread Rate | 165 |
| Friction Course Spread Rate | 165 |

**X-Items**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 120-1 | REGULAR EXCAVATION | 74.43 | CY | $18.29 | $1,361.32 |
| 160-4 | TYPE B STABILIZATION | 340.81 | SY | $15.40 | $5,248.47 |
| 285-706 | OPTIONAL BASE,BASE GROUP 06 | 315.24 | SY | $33.46 | $10,547.93 |
| 327-70-6 | MILLING EXIST ASPH PAVT,1 1/2" AVG DEPTH | 5,097.01 | SY | $4.94 | $25,179.23 |
| 334-1-53 | SUPERPAVE ASPH CONC, TRAF C, PG76-22 | 34.68 | TN | $162.37 | $5,630.99 |
| 337-7-83 | ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22 | 446.51 | TN | $130.04 | $58,064.16 |

| | | | | |
|---|---|---|---|---|
| 711-11-102 | THERMOPLASTIC, STD, WHITE, SOLID, 8" | 0.03 GM | $7,481.35 | $224.44 |
| 711-11-123 | THERMOPLASTIC, STD, WHITE, SOLID, 12" | 166.51 LF | $3.09 | $514.52 |
| 711-11-124 | THERMOPLASTIC, STD, WHITE, SOLID, 18" | 259.00 LF | $4.09 | $1,059.31 |
| 711-11-125 | THERMOPLASTIC, STD, WHITE, SOLID, 24" | 49.00 LF | $5.08 | $248.92 |
| 711-11-170 | THERMOPLASTIC, STD, WHITE, ARROW | 8.00 EA | $74.10 | $592.80 |
| 711-16-101 | THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6" | 0.19 GM | $4,426.11 | $840.96 |
| 711-16-131 | THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6" | 0.19 GM | $1,374.97 | $261.24 |
| 711-16-201 | THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6" | 0.17 GM | $4,328.97 | $735.92 |

**Pavement Marking Subcomponent**

| Description | Value |
|---|---|
| Include Thermo/Tape/Other | N |
| Pavement Type | Asphalt |
| Solid Stripe No. of Paint Applications | 2 |
| Solid Stripe No. of Stripes | 2 |
| Skip Stripe No. of Paint Applications | 2 |
| Skip Stripe No. of Stripes | 1 |

**Roadway Component Total** $110,510.21

## SHOULDER COMPONENT

**User Input Data**

| Description | Value |
|---|---|
| Total Outside Shoulder Width L/R | 10.00 / 10.00 |
| Total Outside Shoulder Perf. Turf Width L/R | 2.67 / 2.67 |
| Paved Outside Shoulder Width L/R | 5.00 / 5.00 |
| Structural Spread Rate | 110 |
| Friction Course Spread Rate | 80 |
| Total Width (T) / 8" Overlap (O) | T |
| Rumble Strips ï¿½No. of Sides | 0 |

**X-Items**

| Pay item | Description | Quantity Unit | Unit Price | Extended Amount |
|---|---|---|---|---|
| 520-1-10 | CONCRETE CURB & GUTTER, TYPE F | 425.54 LF | $38.73 | $16,481.16 |
| 522-1 | CONCRETE SIDEWALK AND DRIVEWAYS, 4" | 17.16 SY | $59.94 | $1,028.57 |
| 522-2 | CONCRETE SIDEWALK AND DRIVEWAYS, 6" | 72.36 SY | $73.98 | $5,353.19 |
| 570-1-2 | PERFORMANCE TURF, SOD | 203.38 SY | $4.82 | $980.29 |

**Shoulder Component Total** $23,843.21

## DRAINAGE COMPONENT

**X-Items**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 425-1-352 | INLETS, CURB, TYPE P-5, >10' | 1.00 | EA | $7,396.53 | $7,396.53 |
| 425-2-62 | MANHOLES, P-8, >10' | 1.00 | EA | $4,596.55 | $4,596.55 |
| 430-174-130 | PIPE CULV, OPT MATL, ROUND,30"SD | 16.00 | LF | $210.63 | $3,370.08 |
| | **Drainage Component Total** | | | | $15,363.16 |

## SIGNING COMPONENT

**Pay Items**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 700-1-50 | SINGLE POST SIGN, RELOCATE | 3.00 | AS | $198.00 | $594.00 |

**X-Items**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 700-5-11 | INTERNAL ILLUM SIGN, F&I GM, UP TO 12 SF | 4.00 | EA | $4,332.62 | $17,330.48 |
| | **Signing Component Total** | | | | $17,924.48 |

## SIGNALIZATIONS COMPONENT

**Signalization 1**

| Description | Value |
|---|---|
| Type | Miscellaneous |
| Multiplier | 1 |
| Description | |

**X-Items**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 630-2-12 | CONDUIT, F& I, DIRECTIONAL BORE | 380.00 | LF | $20.16 | $7,660.80 |
| 632-7-1 | SIGNAL CABLE- NEW OR RECO, FUR & INSTALL | 1.00 | PI | $3,812.33 | $3,812.33 |
| 635-2-11 | PULL & SPLICE BOX, F&I, 13" x 24" | 11.00 | EA | $651.42 | $7,165.62 |
| 639-1-620 | ELECTRICAL POWER SRV,REM UND | 1.00 | AS | $410.53 | $410.53 |
| 639-2-1 | ELECTRICAL SERVICE WIRE, F&I | 180.00 | LF | $4.76 | $856.80 |
| 639-3-11 | ELEC SERV DISCON, F&I, POLE MNT | 1.00 | EA | $875.60 | $875.60 |
| 641-2-12 | PREST CNC POLE,F&I,TYP P-II SRV POLE | 1.00 | EA | $1,183.31 | $1,183.31 |
| 646-1-11 | ALUMINUM SIGNALS POLE, PEDESTAL | 4.00 | EA | $1,216.02 | $4,864.08 |
| 649-21-6 | STEEL MAST ARM ASSEMBLY, F&I, 50' | 1.00 | EA | $36,320.96 | $36,320.96 |
| 649-21-10 | STEEL MAST ARM ASSEMBLY, F&I, 60' | 2.00 | EA | $38,701.87 | $77,403.74 |
| 649-21-15 | STEEL MAST ARM ASSEMBLY, F&I, 70' | 1.00 | EA | $45,153.06 | $45,153.06 |
| 649-26-3 | | 4.00 | EA | $3,415.10 | $13,660.40 |

| | | | | |
|---|---|---|---|---|
| | STEEL MAST ARM ASSEMBLY, REMOVE | | | |
| 650-1-14 | VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W | 12.00 AS | $969.21 | $11,630.52 |
| 650-1-16 | VEH TRAF SIGNAL,F&I ALUMINUM, 4 S 1 W | 4.00 AS | $1,286.84 | $5,147.36 |
| 653-1-12 | PEDESTRIAN SIGNAL, F&I LED COUNT, 2 WAYS | 4.00 AS | $1,197.58 | $4,790.32 |
| 660-1-109 | LOOP DETECTOR INDUCTIVE, F&I, TYPE 9 | 8.00 EA | $256.29 | $2,050.32 |
| 660-2-106 | LOOP ASSEMBLY, F&I, TYPE F | 4.00 AS | $678.32 | $2,713.28 |
| 665-1-11 | PEDESTRIAN DETECTOR, F&I, STANDARD | 8.00 EA | $232.99 | $1,863.92 |
| 670-5-110 | TRAF CNTL ASSEM, F&I, NEMA | 1.00 AS | $26,066.59 | $26,066.59 |
| 670-5-600 | TRAF CNTL ASSEM, REMOVE | 1.00 AS | $454.08 | $454.08 |
| | **Signalizations Component Total** | | | $254,083.62 |

**LIGHTING COMPONENT**

**Conventional Lighting Subcomponent**

| Description | Value |
|---|---|
| Spacing | MAX |

**X-Items**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 715-4-60 | LIGHT POLE COMPLETE, RELOCATE | 1.00 | EA | $2,242.88 | $2,242.88 |
| | **Lighting Component Total** | | | | $2,242.88 |

**Sequence 1 Total** $435,192.30

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# FDOT Long Range Estimating System - Production

## R3: Project Details by Sequence Report

**Project:** 000000-0-10-01 **Letting Date:** 01/2099

**Description:** SR 134 (103rd street) & Jammes rd

**District:** 02 **County:** 72 DUVAL **Market Area:** 05 **Units:** English

**Contract Class:** **Lump Sum Project:** N **Design/Build:** N **Project Length:** 0.083 MI

**Project Manager:**

**Version 5 Project Grand Total** **$542,858.87**

**Description:** SR 134 & SR 21 Alternative 3

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| | | | |
|---|---|---|---|
| **Project Sequences Subtotal** | | | **$435,192.30** |
| 102-1 | Maintenance of Traffic | 10.00 % | $43,519.23 |
| 101-1 | Mobilization | 8.00 % | $38,296.92 |
| **Project Sequences Total** | | | **$517,008.45** |
| Project Unknowns | | 0.00 % | $0.00 |
| Design/Build | | 0.00 % | $0.00 |

**Non-Bid Components:**

| Pay item | Description | Quantity | Unit | Unit Price | Extended Amount |
|---|---|---|---|---|---|
| 999-25 | INITIAL CONTINGENCY AMOUNT (DO NOT BID) | | LS | $25,850.42 | $25,850.42 |
| **Project Non-Bid Subtotal** | | | | | **$25,850.42** |
| **Version 5 Project Grand Total** | | | | | **$542,858.87** |