

2014 Countywide Safety Report



Space Coast
Transportation Planning Organization

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Agenda

- Goals and Objectives
- Project Methodology
- Crash Data and Trends
- Intersection Analysis
- Corridor Analysis
- Strategic Highway Safety Plan (SHSP) Emphasis Area Analysis
- Next Steps

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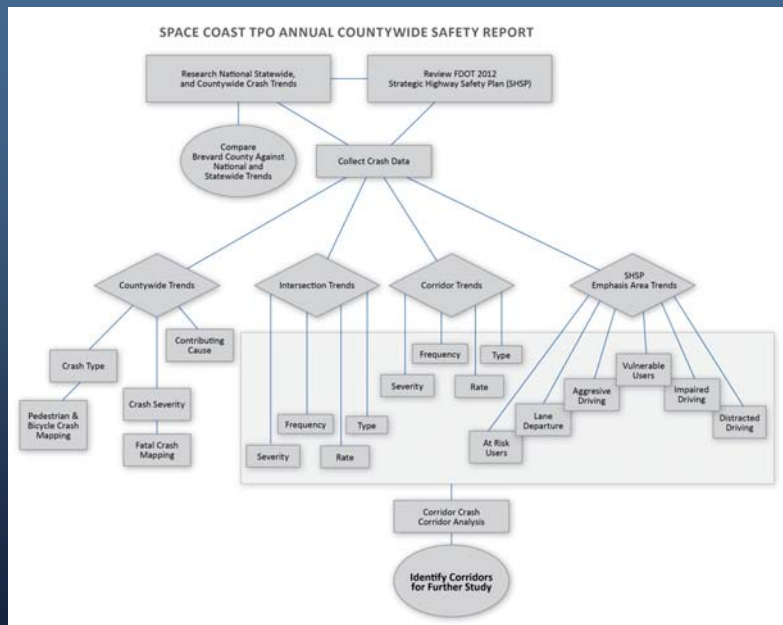
Goals and Objectives

- Report five-year crash trends:
 - Brevard County vs Statewide and National statistics
 - Countywide/planning area statistics
 - Top 25 intersections and corridors
- Report safety metrics consistent with FHWA and tie into SOS
- Identify locations for further investigation
- First step in creating safety program



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Project Methodology



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Crash Data Collection

- Years collected: 2009-2013
- State roadway crashes from the FDOT Crash Analysis Reporting System (CARS)
- County crashes from Signal Four Analytics (S4)
 - Includes state, county, and local roadway crashes
- Duplicates between FDOT and S4 removed
- Not all S4 crashes had geocoding thus not mapped

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Countywide Trends

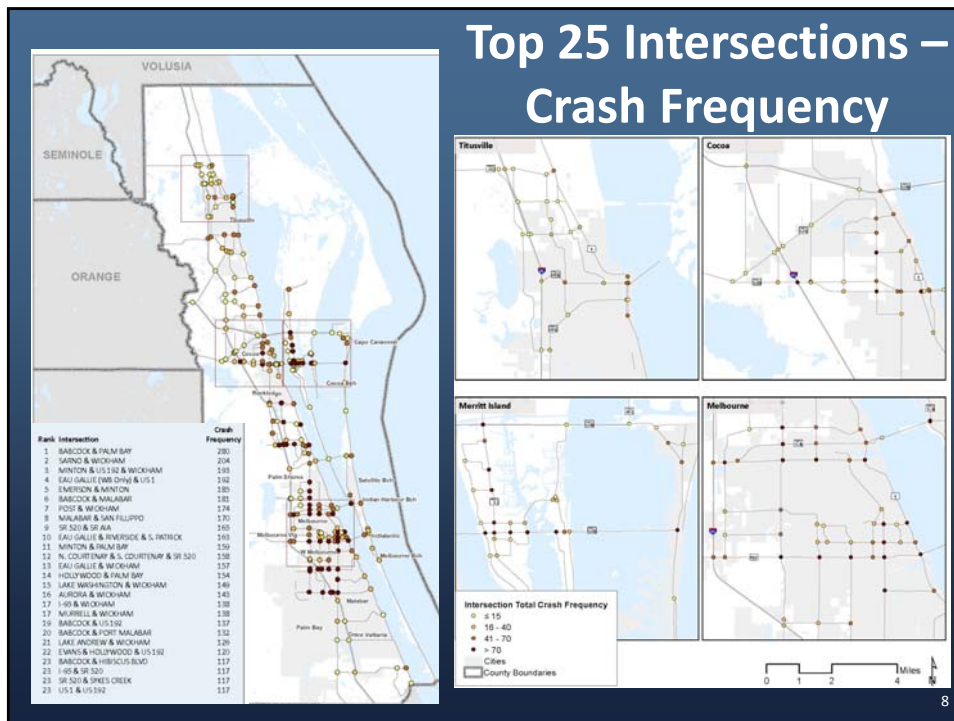
- Crash safety metrics analyzed:
 - Crash severity
 - Fatal crash mapping
 - Crash type
 - Pedestrian/bicycle crash mapping
 - Contributing cause

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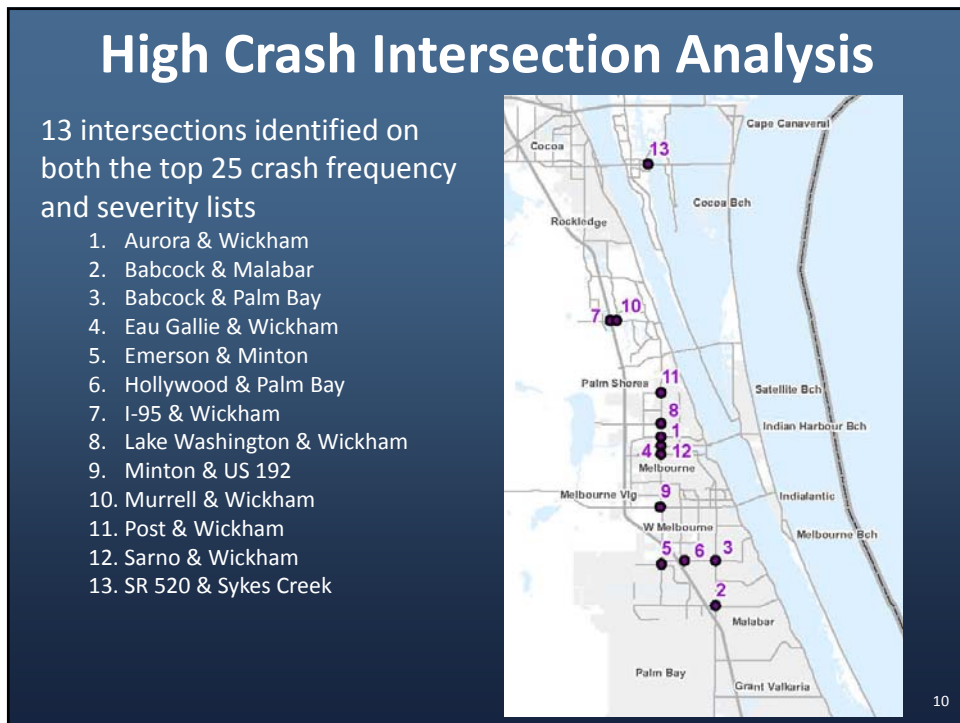
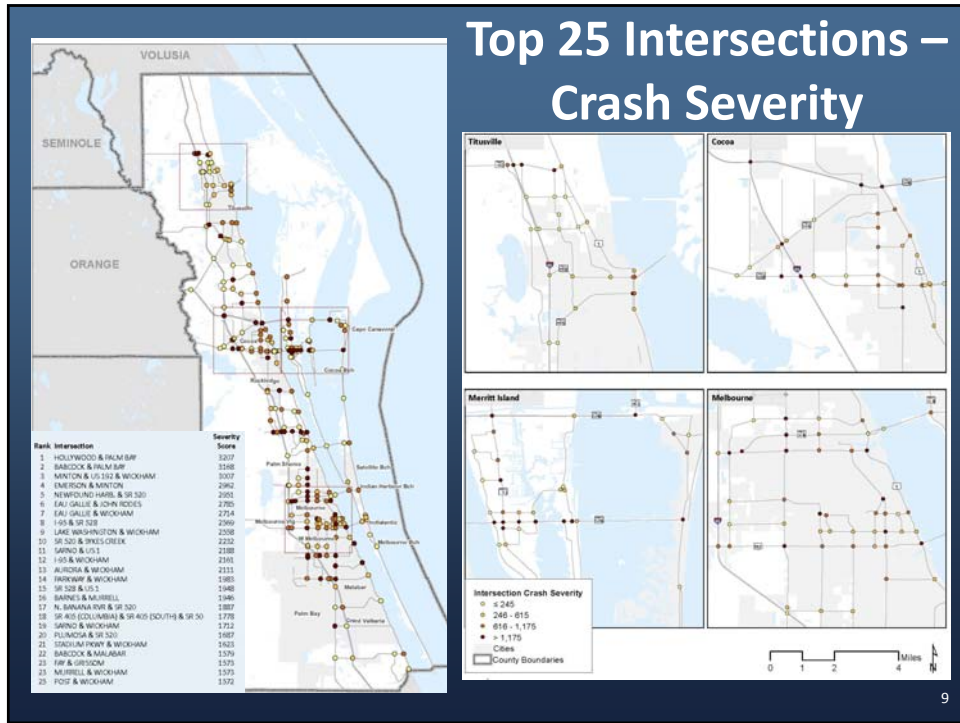
Top 25 Intersections and Non-SIS Segments

- Crash safety metrics analyzed:
 - Total number of crashes
 - Crash severity
 - Five highest crash types based on Countywide corridor analysis
 - Crash rate

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High Crash Intersection Analysis

Cross-referenced 13 intersections with crash type lists to identify locations for further study

Intersection	Crash Type					At Least 4 Crash Types?
	Angle	Left Turn	Sideswipe	Lane Departure	Rear End	
SARNO & WICKHAM	X	X	X	X	X	Y
BABCOCK & PALM BAY	X		X	X	X	Y
EMERSON & MINTON		X	X	X	X	Y
HOLLYWOOD & PALM BAY		X	X	X	X	Y
POST & WICKHAM		X	X	X	X	Y
BABCOCK & MALABAR			X	X	X	
EAU GALLIE & WICKHAM	X			X	X	
I-95 & WICKHAM		X		X	X	
MINTON & US 192 & WICKHAM	X	X			X	
SR 520 & SYKES CREEK	X		X		X	
AURORA & WICKHAM		X	X			
LAKE WASHINGTON & WICKHAM		X		X		
MURRELL & WICKHAM			X		X	

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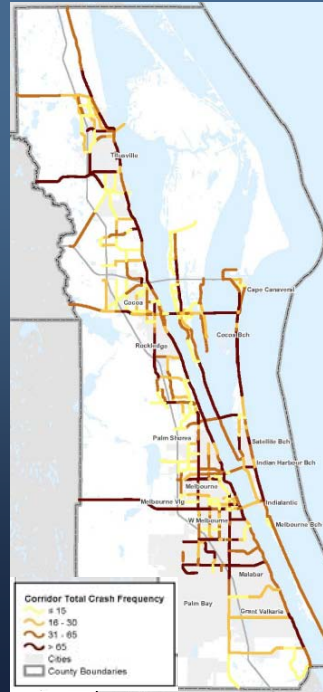
Top 25 Intersection Observations

- Top intersections by crash frequency located in more populated part of County
 - Multiple intersections along US 192, Wickham/Minton Road, SR 520, Babcock Street, and Palm Bay Road
- Top intersections by crash severity more evenly distributed in County
 - 6 adjacent intersections along Wickham Rd.
 - 4 adjacent intersections along SR 520
- Crash type observations
 - Cluster of angle crash locations in Cocoa/Merritt Island (SR 520 and SR 3) and Melbourne
 - 12 of 31 top left turn intersections along Wickham/Minton Rd.

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Top 25 Non-SIS Corridors – Crash Frequency

Rank	Corridor	Crash Frequency
1	MALABAR / BABCOCK-COREY	299
2	N. COURTENAY / NEEDLE-LUCAS	246
3	EAU GALLIE / S PATRICK-SR A1A	215
4	BABCOCK / PALM BAY-EBER	212
5	SR A1A / FISHER DR-ST LUCIE	201
6	SR 520 / I-95-BURNETT	195
7	US 192 / JOHN RODES-WICKHAM	193
8	BABCOCK / PT MALABAR-PALM BAY	190
9	SR 50 / SR 405-BARNA	188
10	PALM BAY / MINTON-CULVER	184
10	WICKHAM / SARNO-EAU GALLIE	184
12	US 1 / SR 528-CANAVERAL GROVES	180
13	BABCOCK / CHARLES-PT MALABAR	176
13	MALABAR / EMERSON-SAN FILLIPPO	176
15	US 1 / POST-PINEDA	168
16	MALABAR / JUPITER-MINTON	163
17	WICKHAM / PINEDA CSWY-JORDAN BLASS	155
18	MALABAR / MINTON-EMERSON	149
19	BABCOCK / EBER-FLORIDA	148
20	US 1 / GARDEN-DAIRY	145
21	PALM BAY / HOLLYWOOD-DAIRY	142
22	SR A1A / S BANANA-FISHER DR	140
23	WICKHAM / MURRELL-I-95	138
24	PALM BAY / KNECT-LIPSCOMB	134
25	SR A1A / OSCEOLA-SHEPARD	132



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Top 25 Non-SIS Corridors – Severity of Crashes

Rank	Road Segment	Severity Score
1	US 1 / SR 528-CANAVERAL GROVES	7022
2	SR 520 / EAST MERRITT ISLAND CAUSEWAY	6407
3	US 1 / BROADWAY BLVD-FAY	6121
4	US 192 / JOHN RODES-WICKHAM	5986
5	SR A1A / MAIN GATE-S END ONE WAY	5407
6	SR A1A / US 192-PARADISE	5183
7	WICKHAM / PINEDA CSWY-JORDAN BLASS	5176
8	US 1 / POST-PINEDA	5115
9	HOLDER / DAIRY-SR 46	4629
10	MALABAR / COREY-US 1	4473
11	SR 50 / ORANGE CO-I-95	4208
12	US 1 / PINEDA-SUNTREE BLVD	3946
13	MALABAR / BABCOCK-COREY	3941
14	SR 520 / BRIDGE-N.TROPICAL	3667
15	SR 520 / I-95-BURNETT	3561
16	US 1 / UNIVERSITY-NEW HAVEN	3372
17	SR A1A / MCKINLEY-BUCHANAN	3333
18	EAU GALLIE / S PATRICK-SR A1A	3250
19	BABCOCK / PALM BAY-EBER	3210
20	WICKHAM / MURRELL-I-95	3099
21	S. TROPICAL TR / PINEDA-S COURTENAY	3046
22	SR A1A / FISHER DR-ST LUCIE	2905
23	N. COURTENAY / NEEDLE-LUCAS	2895
24	FISKE / I-95/BARNES-EYSTER	2864
25	US 1 / PALM BAY-RJ CONLAN	2844

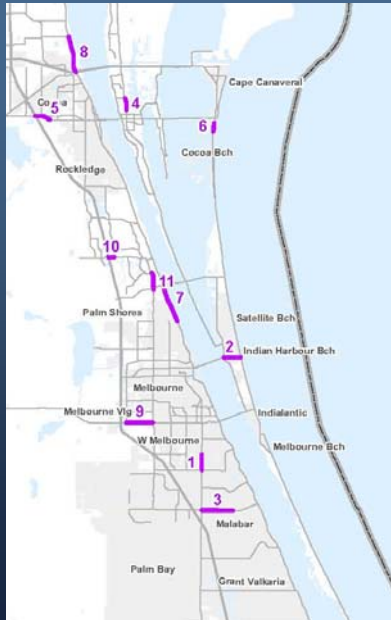


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High Crash Corridor Analysis

11 segments identified on both the top 25 crash frequency and severity lists

1. Babcock / Palm Bay to Eber
2. Eau Gallie / S. Patrick to SR A1A
3. Malabar / Babcock to Corey
4. N. Courtenay / Needle to Lucas
5. SR 520 / I-95 to Burnett
6. SR A1A / Fisher to St. Lucie
7. US 1 / Post to Pineda Cswy.
8. US 1 / SR 528 to Canaveral Groves
9. US 192 / John Rodes to Wickham
10. Wickham / Murrell to I-95
11. Wickham / Pineda Cswy. to Jordan Blass



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High Crash Corridor Analysis

Cross-referenced 11 segments with SHSP emphasis area lists to identify locations for further study

Corridor	From	To	Emphasis Area						At Least 4 Emphasis Areas?
			Aggressive	At Risk	Vulnerable	Lane Departure	Impaired	Distracted	
Eau Gallie	S. Patrick	SR A1A	X	X	X	X	X		Y
US 1	Post	Pineda Cswy.	X	X	X	X	X		Y
US 1	SR 528	Canaveral Groves	X	X	X	X	X		Y
Malabar	Babcock	Corey		X	X	X		X	Y
N. Courtenay	Needle	Lucas	X	X	X			X	Y
SR 520	I-95	Burnett	X	X			X	X	Y
US 192	John Rodes	Wickham	X	X	X		X		Y
Babcock	Palm Bay	Eber	X	X		X			
SR A1A	Fisher	St. Lucie		X	X	X			
Wickham	Pineda Cswy.	Jordan Blass					X	X	
Wickham	Murrell	I-95						X	

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Top 25 Non-SIS Corridor Observations

- 11 of top 25 highest crash frequency corridors along Malabar Road, Babcock Street, and Palm Bay Road
- Higher speed corridors majority of top severity list
 - Corridors along SR 520, US 1, SR A1A, SR 50, and Malabar Road
- Top 10 left turn crash locations along corridors that are:
 - 4-lane divided with multiple full median openings; or
 - 5-lane with a center two-way left-turn lane
- 12 of top 28 head on crash corridors in Cocoa Beach

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FL SHSP Emphasis Areas

1. Aggressive Driving
2. Intersection Crashes
3. Vulnerable Road Users (pedestrians, bicyclists, and motorcyclists)
4. Lane Departure Crashes
5. Impaired Driving
6. At-Risk Drivers (aging road users and teens)
7. Distracted Driving
8. Traffic Records (not a metric assessed in project)

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Vulnerable Road User Crash Mapping

Brevard appeared on FDOT's 2015 Pedestrian and Bicycle Top 15 High Priority Counties

Rank	Road Segment	Crash Frequency
1	SR A1A / US 192-PARADISE	22
1	US 192 / JOHN RODES-WICKHAM	22
3	EALU GALLIE / S PATRICK-SR A1A	16
3	SR A1A / PARADISE-EALU GALLIE	16
3	SR A1A / MCKINLEY-BUCHANAN	16
6	N. COURTENAY / NEEDLE-LUCAS	15
6	US 1 / BROADWAY BLVD-FAY	15
8	US 1 / POST-PINEDA	14
8	US 1 / AURANTIA-VOLUSIA CO.	14
8	SR 50 / BARNA-SISSON	14
8	SR A1A / FISHER DR-ST LUCIE	14
8	US 1 / SR 528-CANAVERAL GROVES	14
13	SR 520 / BRIDGE-N TROPICAL	13
13	BABCOCK / EBER-FLORIDA	13
13	SR 50 / SR 405-BARNA	13
16	CLEARLAKE / ROSETINE-MICHIGAN	12
17	FISKE / SR 520-DIXON	11
17	MALABAR / EMERSON-SAN FILLIPPO	11
17	MALABAR / BABCOCK-COREY	11
17	PALM BAY / KNECT-LIPSCOMB	11
17	SR A1A / SHEPARD-MCKINLEY	11
22	MALABAR / JUPITER-MINTON	10
22	OCEAN BEACH / VOLUSIA LN-YOUNG	10
22	SR 520 / EAST MERRITT ISLAND CAUSEWAY	10
22	SR A1A / MAIN GATE-SEND ONE WAY	10
22	US 1 / PALM BAY-RJ CONLAN	10
22	US 1 / GARDEN-DAIRY	10



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SHSP Emphasis Area Observations

- 19 of top 27 aggressive driving crash corridors along N. Courtenay Pkwy., SR A1A, US 1, and Babcock Street
- SR A1A had 8 of the top 27 vulnerable road user crash corridors
- 23 of the top 42 impaired driving crash corridors along US 1, SR A1A, or the causeways between US 1 and SR A1A
- 15 of the top 26 distracted driving crash corridors occurred in southern portion of County

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Next Steps

- Develop Pedestrian/Bicycle Safety Action Program
 - Review high pedestrian/bicycle crash corridors
 - Develop near term (1-4 years), mid term (5-9), and long term (10+) improvements for each specific location
 - Identify funding sources for improvements
 - Analyze location specific improvements for Countywide applicability
 - Establish goals and performance measures to track reduction in fatal and serious injury pedestrian/bicycle crashes
 - Perform yearly/bi-yearly reviews of program to adjust goals, performance measures, and safety improvements, if necessary

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To download the report for more
information, please visit

<http://spacecoasttpo.com/data-maps/>

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