



Florida Department of
TRANSPORTATION



Field, RCI database and GIS Lengths

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Background

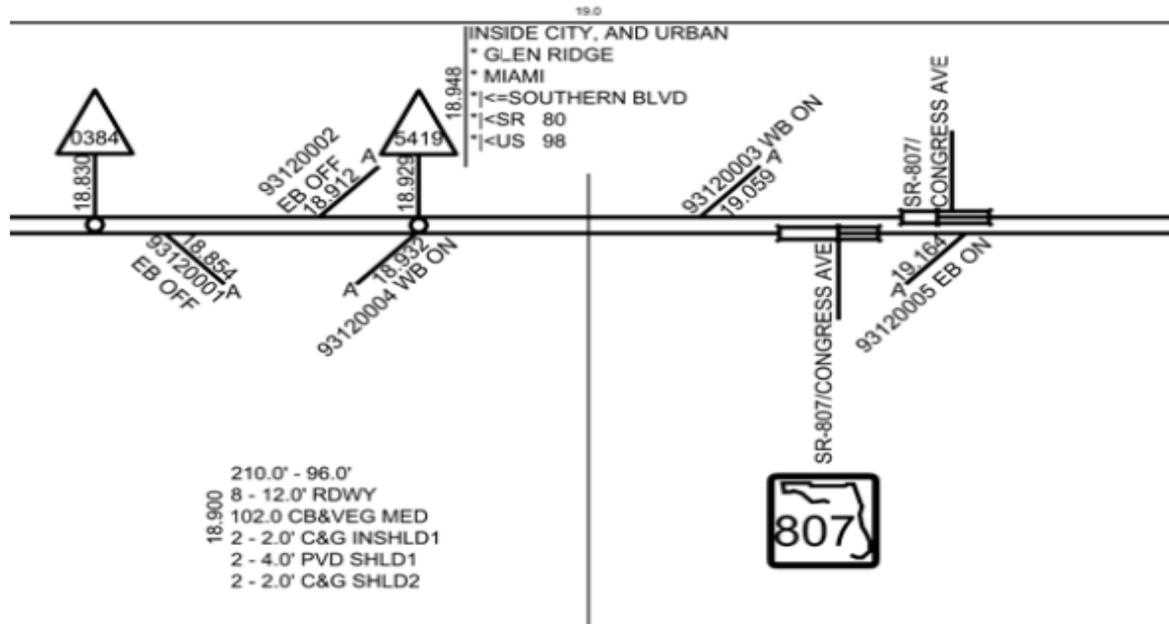
- Inconsistent lengths and tolerances
- D4 observations and examples
- Assessments from practice
- Possible solutions and recommendations

Lengths ... which should be used?

- Lengths from field inventory
- Length is RCI database
- GIS length

RCI Tolerance

- Max tolerance between physical features in RCI milepoints is 0.010 mi in urban areas and 0.050 mi in rural areas



Basemap Package Tolerance

- Less than 5% of the RCI value
- or
- 0.100 miles
- 0.009 for ramps

Available Tools

- Iview
- Google
- GIS
- VideoLog
- And field measurements

Hypothetical Example #1

- RCI length VS. Field length
Field Length

MP 0.000

MP 4.901

RCI length

MP 0.000

MP 5.000

- There is difference of 522 feet
- The opposite can happen as well
- At this point how do you really input your data?

Field Example #2 – 89095000 – using Videolog

- F-251 – 89095020 – NB I-95 TO EB CR-708

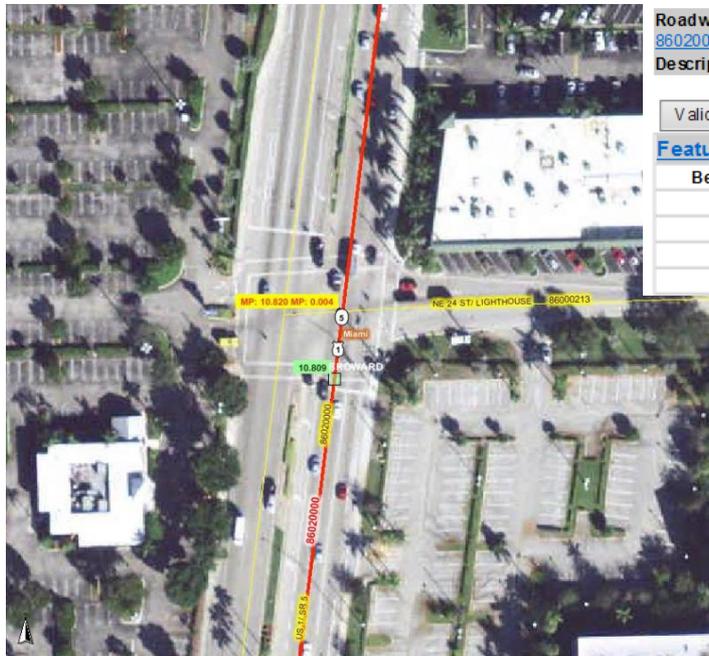
Compact View Roadway ID Direction Mile Point CD Drive
Search Map

Roadway Name	Frame Date	Frame Number
I-95	07/16/2015	1431



Field Example #3-86020000 RCI database VS. GIS

- F-251 – 86020000



Roadway ID: 86020000	Man-Dist: 04	Geo-Dist: 04	County: BROWARD	Beg. MP: 0.000	End. MP: 15.325
Description: US 1/SR5/FEDERAL HWY					

Validate

Show Details

Feature 251 - INTERSECTION			
Beg. MP	End. MP	Characteristic	Value
10.809		90 DEGREES LEFT	MOVIE THEATER
		90 DEGREES RIGHT	NE 24 ST
		INTERSECTION SURFACE TYPE2	A - ASPHALT
		INTERSECTION SURFACE TYPE5	A - ASPHALT

Some contributing factors of causes to lengths discrepancies

- Beginning milepoints of sections at county boundaries without physical locations, monuments are great help
- Continued used of what is in the system
- Reporting field lengths that do not trigger a basemap package
- Types of DMI being used

Impacted databases features

- Traffic Operations Office:
 - CARS – Crash Analysis Reporting System
- TranStat Office:
 - Functional classification boundaries may not be correctly coded
 - PTMS
 - TTMS
- Maintenance features
 - Location of cross drains
 - Structures

Sections within Tolerance – RCI database and GIS - 88070000

- F-251 – Intersections



93210000
88070000
89095000
89060000

Roadway ID: 88070000	Man-Dist: 04	Geo-Dist: 04	County: INDIAN RIVER	Beg. MP: 0.000	End. MP: 22.665
Description: SR A1A					

Validate

Show Details

Feature 251 - INTERSECTION

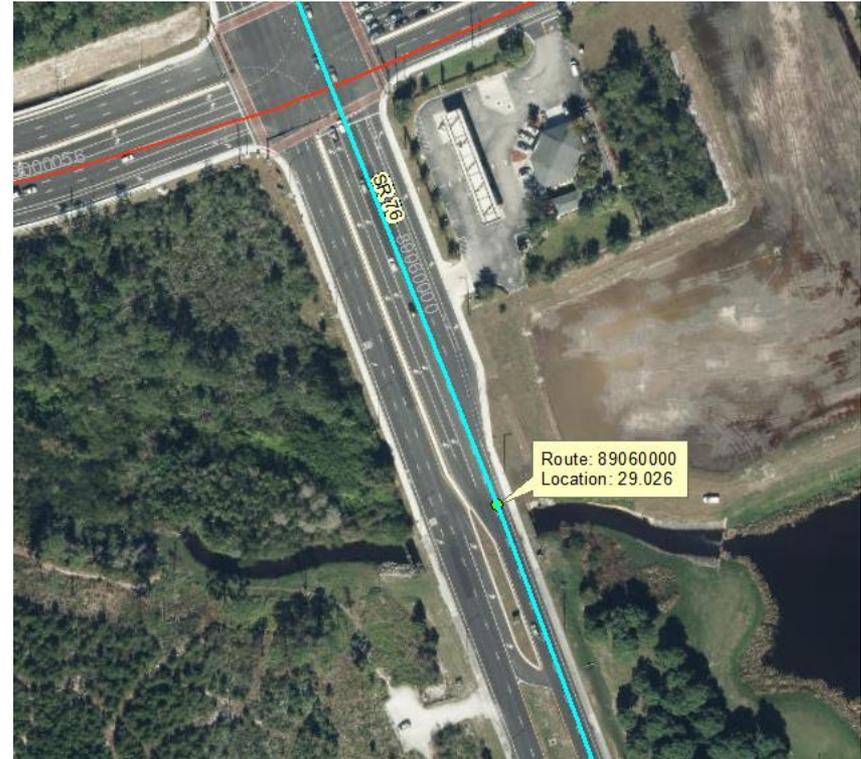
Beg. MP	End. MP	Characteristic	Value
15.000		90 DEGREES LEFT	ISLAND GROVE CIR
		90 DEGREES RIGHT	DISNEY VERO RESORT
		INTERSECTION SURFACE TYPE2	A - ASPHALT
		INTERSECTION SURFACE TYPE5	A - ASPHALT

Sections within Tolerance – RCI database and GIS - 89060000

- F-215 - Medians



24.670	25.948	<u>HIGHWAY MEDIAN WIDTH</u>	23
		<u>HIGHWAY MEDIAN TYPE</u>	17 - CURB & VEGETATION



29.026	29.229	<u>HIGHWAY MEDIAN WIDTH</u>	31
		<u>HIGHWAY MEDIAN TYPE</u>	17 - CURB & VEGETATION

Sections within Tolerance – RCI database and GIS - 93210000

- F-214 - Shoulders

Roadway ID: [93210000](#) Man-Dist: 04 Geo-Dist: 04 County: PALM BEACH Beg. MP: 0.000
 Description: SR-7

Feature 214 - OUTSIDE SHOULDERS

Beg. MP	End. MP	Characteristic	Value
16.392	16.468	HIGHWAY SHOULDER TYPE	2 - PAVED WARN
16.392	16.468	HIGHWAY SHOULDER WIDTH	20
16.392	16.468	HIGHWAY SHOULDER TYPE 2	3 - LAWN
16.392	16.468	HIGHWAY SHOULDER WIDTH 2	12
16.468	18.478	HIGHWAY SHOULDER TYPE	1 - PAVED
16.468	18.478	HIGHWAY SHOULDER WIDTH	5
16.468	18.478	HIGHWAY SHOULDER TYPE 2	3 - LAWN
16.468	18.478	HIGHWAY SHOULDER WIDTH 2	12



Sections within Tolerance – RCI database and GIS - 93210000

Compact View Roadway ID: 93210000 Direction: North Mile Point: 16.390 CD Drive: No

Search Map [Click this button to find Video Log for info above](#)

Roadway Name
SR-7

Frame Date
08/04/2015

Frame Number
3284



District 4 Practice

- D4 practice will like to achieve a tolerance of 0.010 mi regardless of section length
- By having such a close gap between the FIELD, RCI database and GIS lengths, there should be minimum differences between features if any.
- Also, there will be a precision of any reference MP being used and all its attributes related to other offices

QUESTIONS

