Statewide Non-Motorized Traffic Monitoring Program

Webinar #1
2/19/2019
Section 1 - Webinar Purpose

- Thank you for taking the survey!!!
- Share survey results
- Explain Non-Motorized Program
- Share resources and partnership opportunities
- Gain your feedback
Agenda

1. Welcome
2. Survey Results
3. Why Do We Count?
4. Non-Motorized Program Structure
5. Non-Motorized Statewide Repository - FHWA
6. Non-Motorized Data Samples
7. Next Steps / Questions
The Team

- Ed Hutchinson – Office Manager of Transportation Data and Analytics
- Steve Bentz – Manager of Traffic Monitoring Program
- Joey Gordon – QA/QC Manager
- Eric Griffin – Telemetered Traffic Management Station Manager
- Eric Katz – Non-Motorized Traffic Monitoring Program Coordinator
- Elizabeth “Liz” Stolz – National Expert
What is a Data Wrangler?

- Coordinates with FHWA HQ and Regional Office contacts, States, and supports various agency traffic counting activities in the state
- Provides assistance in scheduling periodic coordination participant meetings
- Develops Non-Motorized Traffic Monitoring Committee
- Supports Data standardization / integration/ conversion data into state and federal databases
Section - 2
Statewide Non-Motorized Survey Results
Survey Request

Bicycle & Pedestrian Data Collection Survey

The Florida Department of Transportation (FDOT) is implementing a non-motorized statewide traffic count program. The first step is to conduct a stakeholder survey which includes a review of current bicycle and pedestrian count activities and recommended future locations. Understanding the baseline equipment and methods for existing bicycle and pedestrian counts occurring in the state of Florida will assist FDOT in creating a statewide database / repository of non-motorized traffic data.

The FDOT Transportation Data and Analytics Office (TDA) is coordinating this effort in partnership with City, County, MPO, District and State representatives to help in gathering, sharing, and supporting the non-motorized data collection efforts. This is a great opportunity for participating in this effort to establish standardized data collection practices, statewide training, and to foster state and local data collection partnerships.

https://www.surveymonkey.com/r/FDOTBikePedDataCollectionSurvey

Please respond to this survey by June 21, 2018. Survey results and program updates will be provided to all respondents. Your participation and responses are extremely valuable to develop this program. Please feel free to share this survey with others. The survey is estimated to take 15 – 20 minutes to complete.

For more information or questions, please contact Eric Katz, Statewide Non-Motorized Data Collection Program Coordinator at phone number: 850-414-4704 or by e-mail at Eric.Katz@dot.state.fl.us.
Survey Findings  Module #3 - FDOT Survey Monkey

- 264 Total Survey Respondents
- 406 Locations recommended
Module #3 - FDOT Survey Monkey

Q24

What is the purpose of collecting data at this location? Please click all that apply

- Safety study
- Design study
- Before and After...
- Economic study
- Transit study
- Bicycle/Pedestrian facility...
- Traffic operations...
- General data collection...
- Other (please specify)
406 Locations in relation to FDOT Districts

Bike/Ped Survey District Count

<table>
<thead>
<tr>
<th>District</th>
<th>Count</th>
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<tr>
<td>DISTRICT 7</td>
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<td>DISTRICT 6</td>
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<td>81</td>
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<td>DISTRICT 1</td>
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</table>
On-Site Visits

Metroplan Orlando

District 7, Tampa DDA

City of Gainesville

Collier County MPO, City of Naples

City of Jacksonville

Madison County
Section - 3

WHY DO WE COUNT?

“Developing Non-Motorized Data Programs”
Why do we Count? Key Reasons to Count!

1. Safety
2. Operations
3. Maintenance
4. Performance Measures
5. Funding
6. Federal Requirements and Customer Service

Image courtesy Institute for Transportation Research and Education
Why do we Count?
Reason #1 – Enhanced Safety

• Need the denominator for…
  • accurate statistics
  • clarity in crash impact studies
  • insight for developing mitigation strategies

• Sometimes, its dangerous not to count…
Durango, Colorado Animas River Trail

Reason #1 – Enhanced Safety

Durango Colorado
Animas River Trail – July 2, 2010 – August 18, 2010
Reason #1 – Enhanced Safety Durango, Colorado
Animas River Trail
Reason #1 – Enhanced Safety Causeway...unsafe Pedestrian behaviors...
Reason #1 – Enhanced Safety Unsafe Pedestrian!
Reason #1 – Enhanced Safety Unsafe Cyclists!
Why do we Count? Reason #2 – More Efficient Operations

- Appropriate signal timing – adequate green time for multi-use pathway crossings
- Construction re-routing
- Event planning

<table>
<thead>
<tr>
<th>Acceleration</th>
<th>Distance</th>
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<td>Handcycle</td>
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<tr>
<td>Inline Skates</td>
<td>4</td>
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<tr>
<td>Recumbent Bicycle</td>
<td>6</td>
</tr>
<tr>
<td>Scooter / Kick Scooter</td>
<td>8</td>
</tr>
<tr>
<td>Segway</td>
<td>10</td>
</tr>
<tr>
<td>AASHTO Calc 1.5 ft/ sec²</td>
<td>12</td>
</tr>
<tr>
<td>AASHTO Calc 3 ft/ sec²</td>
<td>14</td>
</tr>
</tbody>
</table>

Miami Beach: 5th St. @ Alton Rd.

Floral City, FL: Withlacoochee State Trail  Section#3
Reason #2 – More Efficient Operations Need bicycle volumes to set signal timing for bike lanes at Livingston Street at Magnolia Avenue, Orlando!
Reason #2 – More Efficient Operations
Remember to check on future construction...Altered lane due to construction...Signal timing needs to account for cyclists!!!
Reason #2 – More Efficient Operations
Need bicycle and pedestrian volumes approaching intersections for signal timing purposes!
Reason #2 – More Efficient Operations
Need bicycle and pedestrian volumes approaching intersection for signal timing purposes!
Reason #2 – More Efficient Operations
Need bicycle crossing volumes for signal timing and queuing of traffic!
Why do we Count? Reason #3 – Maintenance

- Path or Bike Lane Sweeping Schedules
- Pathways Snow Plowing Schedules in Colorado
Reason #3 – Maintenance

Bicycle and Pedestrian volumes needed for maintenance reasons!
Reason #3 – Maintenance
Bicycle volumes needed for maintenance reasons!
Reason #3 – Maintenance
Debris on Trail – Too much Debris keeps cyclists away...
Reason #4 - Accurate data for measuring performance

Monday – Friday - Commuter Traffic Pattern
Reason #4 - Accurate data for measuring performance

Saturday – Sunday Recreational Traffic Pattern
Reason #4 - Accurate data for measuring performance Accurate data for decision making...

- Commuter travel day of the week (DOW) travel pattern
- Monday-Friday travel is much higher in the evenings
- Morning, lunchtime, and evening peaks

Weekend travel patterns are recreational
- Total volume ranges are 150 to 300 any day of the week or weekend

Commuter facilities are eligible for federal transportation funding!
Why do we Count?
Reason #5 – New Funding Options

- Transportation Enhancements/Transportation Alternatives (TE/TA), Congestion Mitigation and Air Quality (CMAQ) and Federal Transit Authority (FTA) Funds
- General fund (DOT funding allocations)
- What gets counted, counts!

Commuter facilities are eligible for federal transportation funding!
Why do we Count?
Reason #6 - Future Federal Funding and Customer Service Purposes

• FHWA
  1. Chapter 4 – Traffic Monitoring Guidebook
  2. TMAS accepts bike/ped volume data! OCT, 2018

• FHWA
  1. Requesting Data
  2. Existing Software
  3. TRB’s bike/ped data subcommittee
Final Thoughts...

Build a Non-Motorized Traffic Data Collection Program and reduce the Gap between Transportation Funding, Health, and Environmental Data Needs

Fund Projects with Bike/Pedestrian Counting Equipment
Section - 4
Statewide Non-Motorized Program Structure
FDOT Non-Motorized Traffic Monitoring Program

- **Statewide Continuous Count Program**
  FDOT's goal is to install 1-2 continuous counters per district, per year. Data will be published and publicly accessible.

- **Statewide Short-Term Count Loaner Program**
  FDOT CO is partnering with local agencies by providing short-term equipment and training. Partnering agency will share data with FDOT.

- **Statewide Repository**
  FDOT is currently accepting voluntary bicycle and pedestrian data from any agency or organization. FDOT will analyze the data, and submit valid data to FHWA.

- **Statewide Outreach**
  Marketing program to statewide agencies. FDOT will support agencies currently collecting or wants to collect bicycle and pedestrian data in their jurisdiction. Annual meeting and periodic webinars.
Continuous Count Program
Florida Traffic Online

- Destination of all FDOT Continuous and Short Term Counters Statewide
- Demonstration
Short Term Counter Loaner Program
Short-term count program

- Devices will be placed in proposed locations for 2-week periods
- Device can be moved to other locations
- Program will start with local Tallahassee agencies
  - City of Tallahassee
  - Capital Region TPA
Field pics visiting potential count sites

Lafayette Greenway

St. Marks Trail
Statewide Outreach

- On-going technical assistance and support to districts and local agencies
- Updates to Florida Traffic Monitoring Handbook
- Periodic Webinars
- Annual Statewide Training focused on best practices and lessons learned
FDOT Statewide Traffic Monitoring Handbook

• Describes non-motorized data collection methodologies and technologies to consider when developing (or modifying an existing data collection program)

• Handbook will be updated as program matures and becomes more “Florida-centric”
Section - 5
FHWA and the FDOT Statewide Data Repository
Statewide Repository - DATA ANALYZED:

- Overseas Heritage Trail, Key West, FL (13 Sites)
- St Mark’s Trail, Tallahassee, FL
- Capital Circle test-site, Tallahassee, FL
- Vizcaya Metrorail Station, Miami, FL
- Flagler Drive @ Okeechobee Road Trinity PI, Miami FL
- Atlantic Greenway, Miami Beach, FL
- Oleta River State Park, Miami, FL
- Rickenbacker and Toll Booth, Miami, FL
- Grand Avenue, SW 37th Avenue North, Miami, FL
- Broward Boulevard, Fort Lauderdale, FL
- US27 & I-75, Fort Lauderdale, FL

- Okeechobee Road and Palmetto
- Forward Pinellas, Pinellas County, FL (8 Sites)
- Flagler and A1A, West Palm Beach, FL
- More coming soon…
  - Miami-Dade TPO
  - District 5 MPOs
  - City of Tallahassee/FDOT Short-term counts
Statewide Repository

- Currently gathering data
- In the future - Loading Data into FDOT’s next generation data repository

This Photo by Unknown Author is licensed under CC BY-SA
Why do we Count?  
Reason #6 - Future Federal Funding and Customer Service Purposes

- FHWA  
  1. Chapter 4 – Traffic Monitoring Guidebook  
  2. TMAS accepts bike/ped volume data! OCT, 2018

- FHWA  
  1. Requesting Data  
  2. Existing Software  
  3. TRB’s bike/ped data subcommittee
Traffic Monitoring Analysis System Version 2.8
Now includes the ability to upload Nonmotorized Data...

1. October 22, 2018 “GO LIVE” date
2. FHWA wants data
3. FDOT is the first agency to successfully have a Station Record accepted by the TMAS system
Why follow Motorized Traffic Data Existing Programs?

- Motorized programs are a model
- Methods are already established
- Leverage existing investments in technology
- To establish a funding stream
Current State of the Practice DATA In-Efficiency?

Local Agency X

- Continuous Count Program Data
- Year-end Statistics?

Local Agency Y

- Reporting?

Local Agency Z

- Short Duration Count Program Data

System Integration

State Bike/Ped Volume Data

Local Non-motorized Program Data

MPO Non-Motorized Data
Integrated Data Collection System Efficiency packed with Functionality / Accessibility?
239 Total Fields…Critical Fields versus Options Fields…
239 Total Fields....Traffic Monitoring Guide Station Record File Format...

- FHWA TMG Coding Guidebook
- Automated TMG format
- Recommend adding TMG format to required specifications for station record and data record file formats
Section - 6
Data Samples
St. Marks Data Sample
Statewide Repository – St. Marks Sample

Saint Mark’s Trail
Wednesday, May 2, 2018

Saint Mark’s Trail
Saturday, May 5, 2018
Data Findings and Review Meeting Purpose (Raw Data Analyzed)

1. To communicate with the Data Source
2. To verify validity of data set
3. To further evaluate data for uploading into statewide data repository
4. To request agency approval/acceptance of using data for statewide and national (FHWA) data uses/data dissemination
Standardizing Questions during Data Review and Findings Meeting...

- Tell us about your Data?
- How accurate is the data?
- What is the data used for?
- Does Agency approve of data to load into the statewide repository?
- Etc…
Cherry Creek Trail, Colorado
(September, 2009 - April, 2010)

Every Monday for a Year
Every Sundays for a Year

Cherry Creek Trail, Colorado

Sundays
Data analyses for – 2 hour counts...

Cherry Creek Trail, Colorado
2-hour Duration
(September, 2009 - April, 2010)

Time of Day

Total Volume
Review

- Continuous Counting Preferred
- 14 Day Short-term counting Recommended
- Analyze Raw Count Data
- Partner/Share data with FDOT for Analyses/Statewide Distribution

Courtesy Python Pandas
Section - 7
Next Steps / Questions
Next Steps

• Continuous Count research continues
• Short-term count loaner program will begin locally in Tallahassee, then extend statewide
• FDOT ready to accept existing non-motorized data now
• Stay tuned for future webinars
• Plan on one statewide meeting per year
Poll Questions
Questions/Comments

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