Today’s Presenters

Paul Hiers, PE
Manager, Production Support Office

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Innovative Intersection Specialist
Modern Roundabouts

Roundabout Evaluation 3-Step Process (RE)

• Introduced in 2015
• Tools to compare roundabouts to conventional intersections
• Focus on Safety, Operations, and Life Cycle Cost
• Change in FDOT culture
  • 1998 to 2014 – 1 roundabout project per year
  • 2015 to 2019 – 10 roundabout projects per year
Migration to Intersection Control Evaluation (ICE)

- Starting in 2020 Roundabout Evaluation will be replaced by ICE
- ICE similar to RE with focus on Safety, Operations, and Costs
- ICE expands the evaluation including more intersection configurations
Migration to Intersection Control Evaluation (ICE)

• ICE Policy/Process outlined in the FDOT ICE Manual

• Posted on the Traffic Engineering and Operations Office web site:

www.fdot.gov/traffic/TrafficServices/
Central Office Roundabout Review and Approval

- Roundabout Review Submittal will still be required
- Approval by the State Roadway Design Engineer will no longer be required
Thanks to our National Experts

Justin Bansen, P.E.
Kittelson & Associates

Kevin Kuhlow, P.E.
Ayers Associates
Change in FDOT Culture
1998 to 2014 – 1 RAB project per year
2015 to 2019 – 10 RAB projects per year

Construct Good Roundabouts
Individual Training Sessions
Optimized Geometrics
Public Acceptance
Roundabout Training

- June, 2018    Tallahassee
- Aug, 2018     Deland
- Sept, 2018    Tampa
- Sept, 2018    Orlando
- Feb, 2019     Ft. Lauderdale

360 Attendees
Words to Live By

Hunter S. Thompson:

“Anything worth doing, is worth doing right.”

$1.5 M for single lane
$2.8 M for 2-lane

American journalist best known for writing 'Fear and Loathing in Las Vegas'
Why Build Roundabouts?

• Traffic Safety - Reduce injury crashes by 76%
• Traffic Calming - Reduce vehicle speeds
• Pedestrian Safety - Focus on one traffic stream
• Operational Performance - Reduce overall delay
• Operations and Maintenance – Reduce costs
• Approach Roadway Width – Reduce impacts
• Environmental Factors
• Access Management and Land Use
• Aesthetics
• Operate during and after Hurricanes...... (Florida Engineering Society Journal)
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What makes a good roundabout?

• Control Speeds

• Accommodate Truck Movements
What makes a great roundabout?

SAFETY
• Speed Control
• Signing
• Lighting
• Landscaping

OPERATIONS
• Truck Accommodation
• Path Alignment / Overlap
• Build only what is needed

COMFORT
• Simple, Natural, Intuitive
• Alignment Transitions
• Gap Recognition
Alignment of Approaches and Entries

- Approach curves should be gentle, become successively smaller and should be sized based on the design speed and expected speed change.
- Tangents should be used between reverse curves.
- No superelevation of curves on approach.
Chicaning

Don’t do this!

Only what is necessary to create splitter island or create off-set left alignment
Modern Roundabouts

Miccosukee Rd

Off-set Right Approach

1. Gap Recognition
2. Driver Confidence
Bannerman Rd

- Misaligned lanes
- Path Overlap
- Poor deflection
- Too many lanes
- Required Lane Change in Circulatory Roadway (No spiral for left turn)
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Modern Roundabouts

Directional Indicator

50' min to Crosswalk
100' min to Yield Line

Field Cut

Typ 20°
Max 35°

7:1 Taper

Bike Ramp

5' Transition

Type F Curb

Bike Lane

Sidewalk

Directional Indicator

Varies (See note 4)

Varies (1.8 max)

5' Transition

50' Min