Beyond the RRFB

Pedestrian Refuge Islands for Uncontrolled Crosswalks

ITE Joint Western & Texas District Meeting
June 2018
Crossing Safety
Crossing Demand

• Latent demand
• One of more frequent citizen requests
• Frequent crossings link neighborhoods and improve walkability
Crossing Options

• Full Signal
• Pedestrian Hybrids Beacons (PHBs)
• Rapid Rectangular Flashing Beacons (RRFBs)
• Uncontrolled crosswalks
Full Signal

- $100k to 250k
- MUTCD warrants
- Drivers are most familiar with
- Vehicular traffic
- Turning movement conflicts
Pedestrian Hybrid Beacon

- $100k
- Austin has 63 with more on the way
- Very good driver compliance
- Very popular
- Easier warrants to meet
- Austin reserves for multilane roads
Rapid Rectangular Flashing Beacons

• First FHWA interim approval in July 2008
• TTI study in Austin
• December of 2017 - Revocation of approval
• New interim Approval in March 2018
• Texas Approval May 2018
Uncontrolled crosswalks

• Inexpensive
• Not an improvement in safety
• Texas Crosswalk Laws
• Frequent source of citizen complaints
• Austin generally does not install
Pedestrian Refuge Islands

- Two-stage crossing
- Reduces pedestrian exposure
- $20k for a concrete island
“Temporary” Delineator Islands

- $1k
- Very quick to install
- Originally intended to be temporary
- Now permanent on lower volume roads
Lakeshore Boulevard

Before

After
Rosewood – Before & After
Yielding rates

- Anecdotally good yielding
- Center for Transportation Research study underway
- Michigan gateway study
Parameters

- Min 6’ width
- Min 10’ Lane width
- Adjacency to intersection (left turn issue)
- Visibility
- Horizontal deflection

Lee was okay with 25 mph transitions but have revised to 30 mph to accommodate Cap Metro

\[ l = \frac{ws^2}{60} \]
\[ w = 4' \]
\[ s = 30 \text{ mph} \]
\[ l = 60' \]

\[ l = \frac{ws^2}{60} \]
\[ w = 7' \]
\[ s = 30 \text{ mph} \]
\[ l = 105' \]
Signage and Striping

- Ped Crossing signs
- High visibility crosswalks
- Delineators
- Yield to Ped in Roadway
- Type 1 or 3 Object Marker
- Double yellow around island
- Yield triangles?
Benefits

- Improved crossings
- Good yielding results
- Inexpensive and quick to install
- Traffic calming side benefit
Questions?

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