

San Antonio's Flashing Yellow Arrow Experience

2012 TexITE Fall Meeting

August 31, 2012



CITY OF SAN ANTONIO
DEPARTMENT OF PUBLIC WORKS
MAINTENANCE AND OPERATIONS DIVISION
TRAFFIC MANAGEMENT CENTER

Leading Phase

- Brief history of left turns in San Antonio
- FYA Pilot Project
- Current FYA Installations and Operations
- Crash Information
- Getting the Word Out
- Flexibility
- Things to Consider



Left Turn Treatments in San Antonio

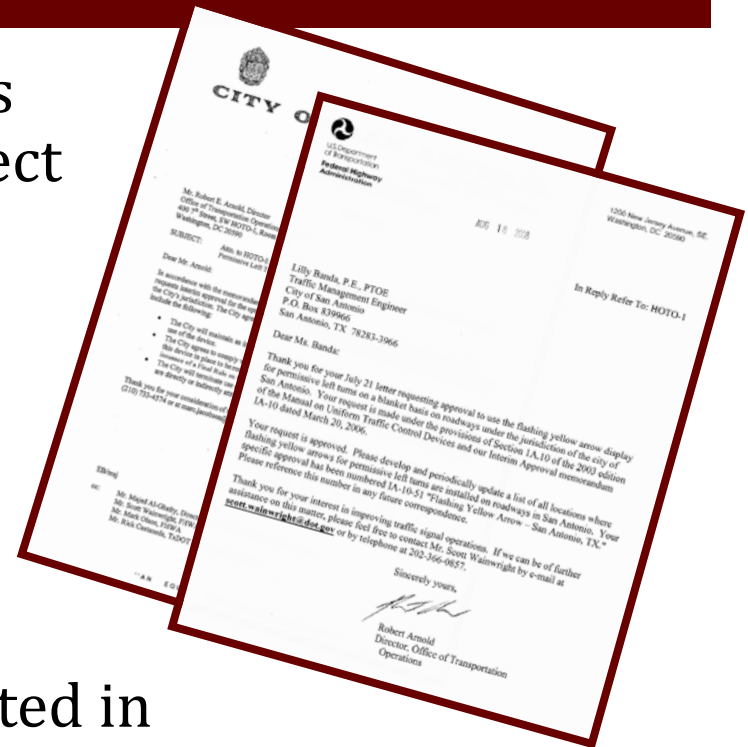
- Protected only for speeds > 40 mph or more than 2 opposing lanes (except when T-intersection)
- Less than 5 locations with Dallas type left turn displays
- Protected-permissive left turns changed to protected only when needed for progression or due to crash problem
- Very few raised median roadways...lots of TWLTLs
- Historical protected only locations



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Pilot Project

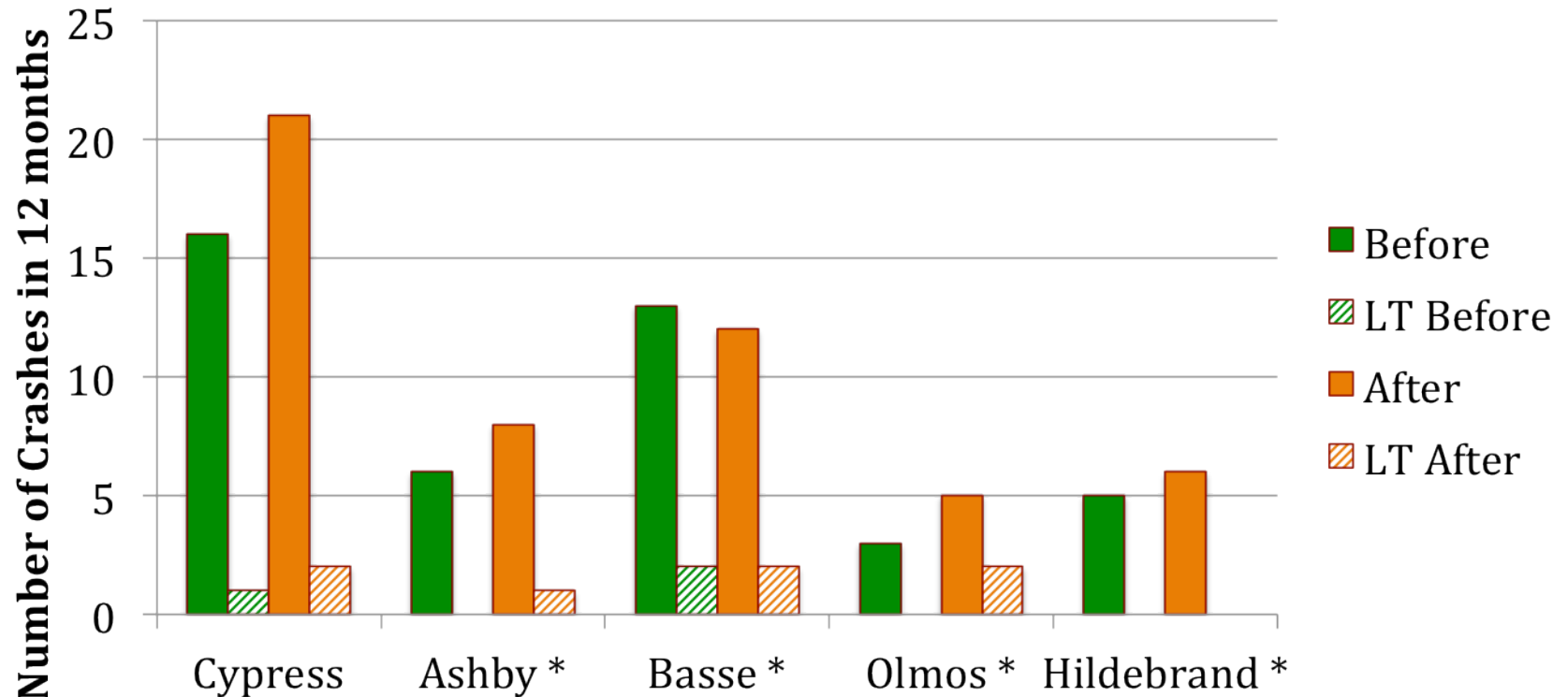
- FYA experimentation requested as part of traffic signal upgrade project
- Pursued for operational reasons, not safety
- Initially installed at 9 locations on San Pedro Ave. and Wurzbach Rd.
- Crashes monitored at 3, 6, and 12 months after installation
- Public relations campaign conducted in November 2008 to announce pilot program
- Stories covered by 3 local news outlets and Express-News newspaper



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Pilot Project Results

Before and After Crash Results for San Pedro Ave. Flashing Yellow Arrow Pilot Project

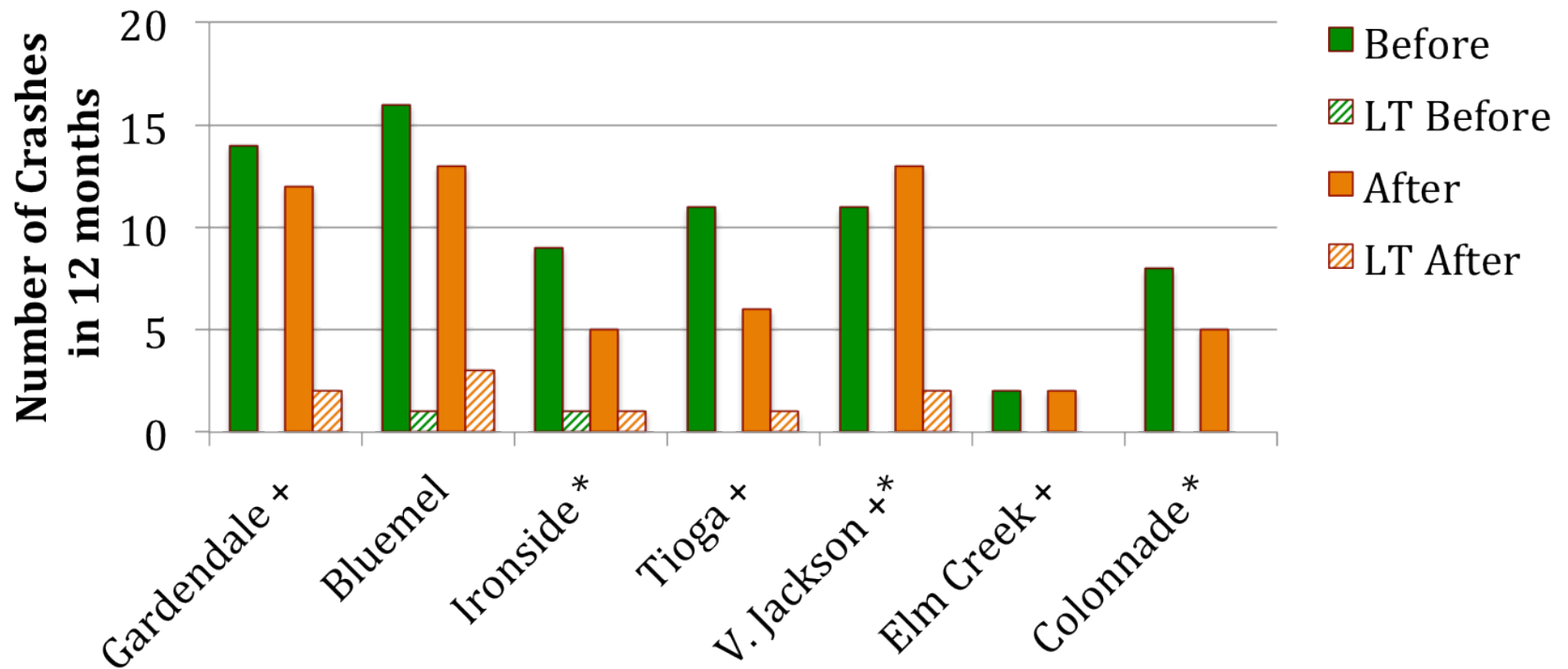


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* FYA added in one direction only

Pilot Project Results

Before and After Crash Results for Wurzbach Rd. Flashing Yellow Arrow Pilot Project



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* FYA added in one direction only
+ Conversion from protected only

Pilot Project Results

- No significant crash patterns observed after 12 months of study
- Not a significant difference between previously protected only and previously protected permitted locations
- Actual “complaint” received through city 311 system on 11/14/2008 regarding Tioga and Wurzbach within a week of installation:

NOT A PROBLEM, BUT A COMPLIMENT. REALLY APPRECIATES THE "NEW" WAY THAT THE LIGHTS ARE TIMED. SAYS BEST INVENTION SINCE SLICED BREAD!



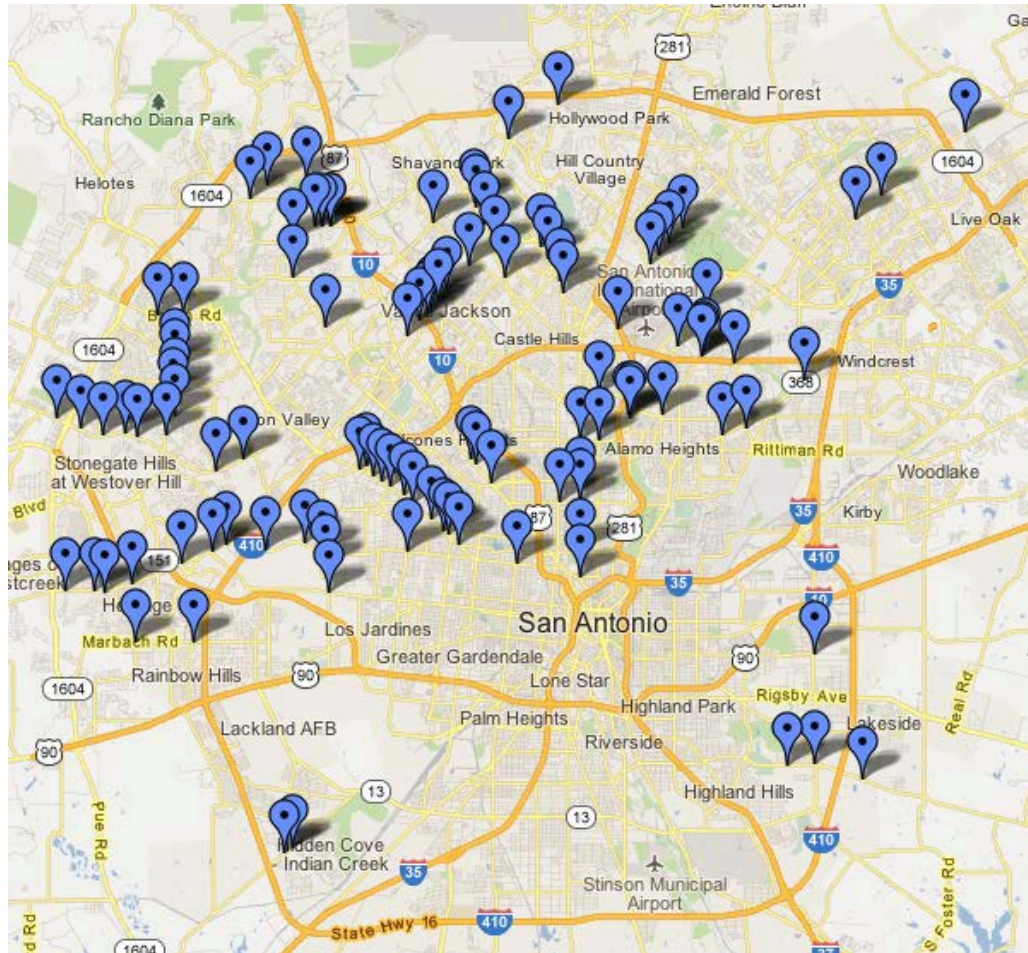
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Current FYA Installations

- Installed at 110 intersections and counting
- 215 FYA controlled approaches
- Standard on all new signal designs
- Used on roadways with speed limit up to 45 mph, adequate sight distance, and no history of left turn crashes
- Both previously protected-permitted and protected only locations have been changed out
- Upgrades performed on corridor wide basis



Current FYA Installations



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Current FYA Installations



Span wire

Mast arm



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FYA Operation



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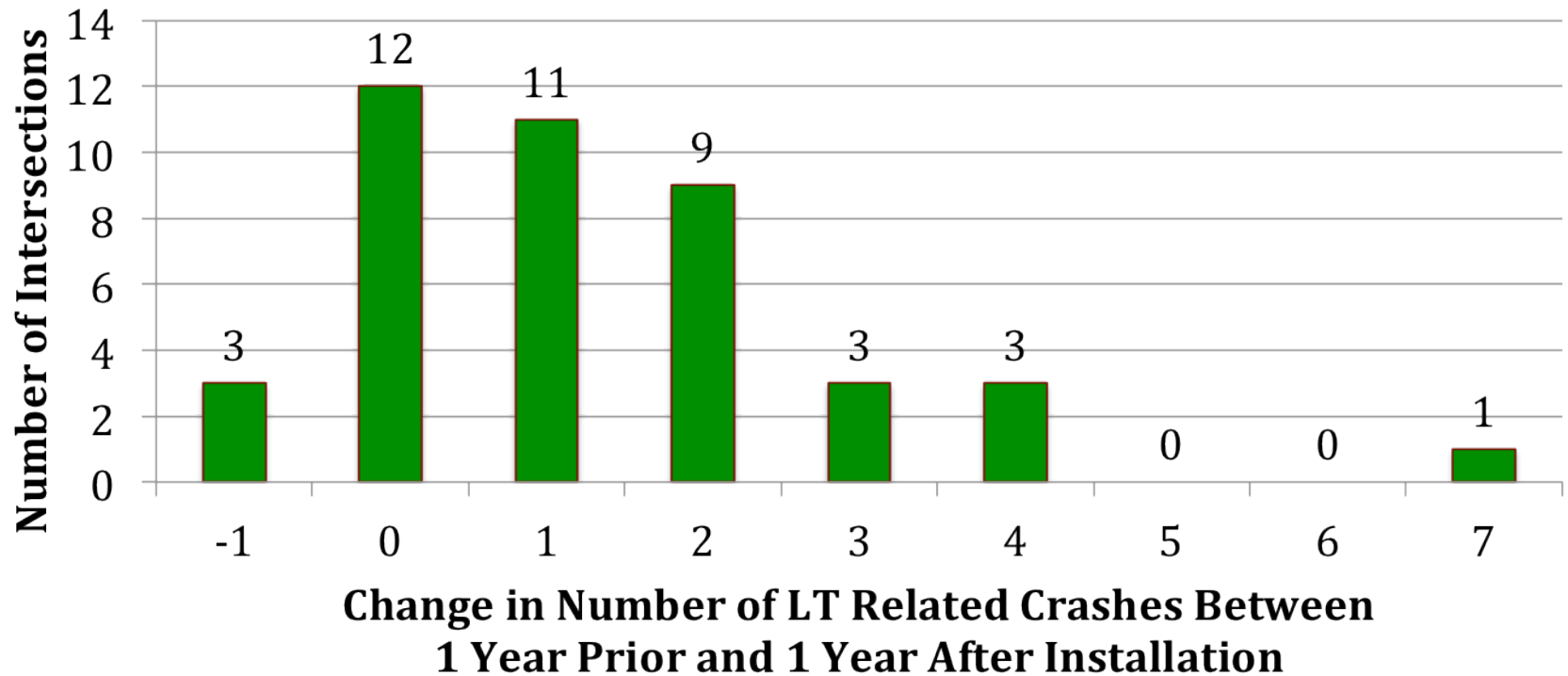
Crash Studies

- Collected crash data for 12 months prior to installation (when available) and for each 12 month period after installation
- 42 intersections currently have available crash data for 12 months prior and 12 months after installation
- No significant change in left turn crashes at most intersections



Crash Study Results

Change in Number of Left Turn Related Crashes Before and After Installation of FYA

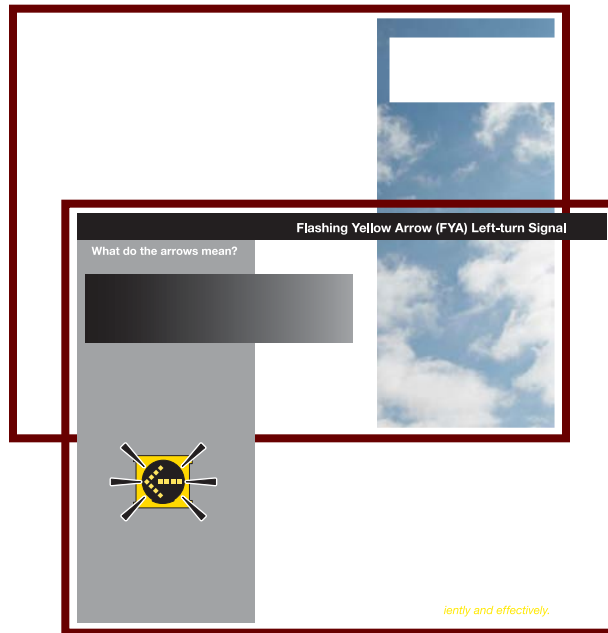


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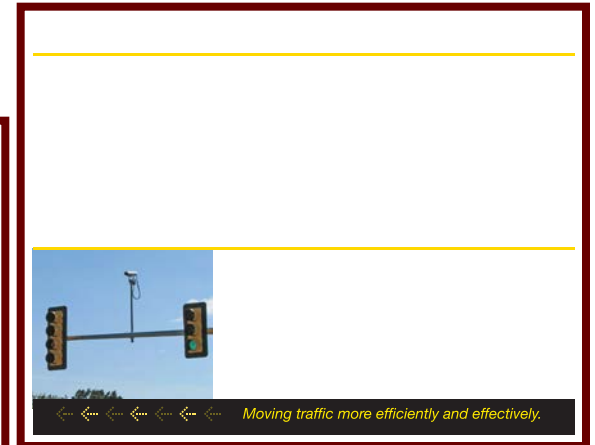
Getting the Word Out



Website



Trifold Brochure



Fact Sheet

www.sanantonio.gov/publicworks/flashingyellowarrow.aspx
tinyurl.com/cosafya



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To Sign or Not To Sign



- No signs were used from November 2008 – November 2011
- Request was made by the PW Director to add signs in 2011
- Custom word sign used at first
- Now R10-17T is used (36x30 size)



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Flexibility – The Path to Not “No”

- Permissive left turns across crosswalks
- Left turn signals that are not “warranted”
- Dual lagging left turns on side streets with long delay on detector
- Permissive lefts by time of day
 - Soon to be implemented in San Antonio



Things to Consider



- Controller
- Conflict Monitor
- Cabling
- Number of output channels
- Mast arm length
- Number of 3-section signal heads



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Lighting the way

Hooray for the yellow, blinking left-turn arrows on some traffic signals now! The genius who invented that deserves a Nobel Prize of some sort (they seem to be easy to win).

With skyrocketing gas prices, this smart but simple invention lets you turn left carefully when the yellow arrow is blinking, reducing wasteful time idling and waiting to turn left.

Frequently after the first onrush of traffic, it slows down a lot, allowing careful left turns, and this new blinking arrow accomplishes that very well.

Thanks to the city of San Antonio for getting these wonderful traffic signal improvements.

Everybody wins with this light!

Jerry Fulenwider

***San Antonio Express-News* – “Your Turn” – April 3, 2012**



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Lagging Phase

- The City of San Antonio began installing FYA signals 5 years ago to maximize efficiency and improve progression
- FYA signals have been very well received by the public
- Crash studies do not reveal a significant impact thus far (positive or negative) of FYA signals



Questions?



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