Flashing Yellow Arrows
The New Way To Turn Left In Georgia

Alan Davis, PE
State Signal Engineer
Flashing Yellow Arrow is the new way to turn left

Old – Five Section Head

New – Four Section Flashing Yellow Arrow
Why use it?

• Operations
• Safety
• Driver clarity
Why change to Flashing Yellow Arrows?

Safer, Less Delay, More Flexible

This change is the result of a national study conducted for the Federal Highway Administration (FHWA), which demonstrated that Flashing Yellow Arrows:

- help prevent left turn crashes by 35%,
- move more traffic through an intersection, easing traffic congestion,
- reduce vehicle idling and air pollution.

Drivers made fewer mistakes with the new Flashing Yellow Arrows than with traditional left-turn arrow signals.
Implementation
**Flashing Yellow Arrow**

**Policy:** 6785-2- Left Turn Phasing  
**Section:** Traffic Signals  
**Office/Department:** Office of Traffic Operations

**Reports To:** Division of Operations  
**Contact:** 404-635-2800

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**FLASHING YELLOW LEFT TURN ARROWS**

A flashing yellow arrow (FYA) left turn signal head should be installed where protected/permissive left turn operation is warranted. FYA is the preferred alternative over the five-section “dog-house” signal head configuration when new signals are installed or signals are substantially upgraded.

The installing agency should conduct public outreach prior to the installation of FYAs in a new area, which should include media segments (radio and television), pamphlets, mailings addressed to the surround public and/or portable message signs. The regulatory sign shown explains the flashing yellow arrow operation to approaching motorists and should be placed on the mast arm or span wire next to the flashing yellow arrow signal head to coincide with the public outreach. If installed, the sign shall remain for a minimum of one year from implementation.

A five-section (dog-house) left turn signal head should not be used as a protected/permissive left turn treatment at the same intersection that a FYA signal head has been installed. When the intersection is in flash, due to a malfunction, the FYA head shall flash the red arrow. The clearance interval of the FYA signal head should not extend beyond the clearance interval of the opposing through movement in order to limit loss time and provide operational benefits to the intersection.

A FYA left turn signal head may operate intermittently as a protected-only left turn movement based on engineering judgment. Decisions on the use of intermittent protected-only operation will be approved by the State Traffic Engineer and documented on the signal permit. Requests for intermittent protected-only approval should be accompanied by supporting documentation which will address the need for protected-only left turns and the threshold for when the left turning movement will change to protected-only operation based on time-of-day or adaptive traffic volume.
Flashing Yellow Arrow

Signal Design Guidelines (2013):

• Revised for FYA
• Available online
  • [www.dot.ga.gov](http://www.dot.ga.gov)
Flashing Yellow Arrow

GDOT Standard Specifications:

- New wiring configurations
- 4, 7, and 10-conductor wire
- Bi-modal signal displays

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</table>
Bi-modal Head

Only allowed for low clearance
10 Conductor is Bigger
Small Decisions have Big Implications
10 Conductor is Bigger
Flashing Yellow Arrow

Permissive Signal Indications:

• Offset left turn lanes with permissive left turn
• “Flashing Yellow U-Turn”
Flashiing Yellow Arrow

Implementation:

**Goal** - Mainstream acceptance to driving public

- Met through widespread deployment
Flashing Yellow Arrow

Implementation:

- Local Agency Support
  - GDOT supplied equipment
- Large Scale Deployments
  - Statewide implementation though innovative project delivery
- Safety funds
Flashing Yellow Arrow

Implementation:

• Regional Traffic Operations Program
  • 70 intersections upgraded (as of 12/23/2014)
  • Goal of 10 intersections per month

• Statewide Signal Maintenance

• GDOT District Signal Staff
Flashing Yellow Arrow
Operations

- Lead/Lag, Lag/Lag
- Lagging only
- Protected only by time-of-day
- Safety considerations
Installation
Installation of FYA
Display

4 section head
Red
Yellow
Flashing Yellow
Green

Regulatory Sign
1 year minimum if used
Will be unnecessary under HB 774
Cabinet

Auxiliary Output File

332 w/ auxiliary output file on all new installations
Cabinet

Fya requires 2 load switches

Example:

Phase 1 – Green Arrow
Phase 9 – Red, Yellow, Flashing Yellow
Conflict Monitor

Most existing monitors are OK

Dipswitch changes

Remember the unused phases
Gridlock Guy: Some traffic observations from around the metro

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The new light on West Paces Ferry at I-75.

Recently a new light was added to westbound West Paces Ferry at the I-75 southbound ramp. The new light features a flashing yellow turn light that allows motorists to turn onto I-75 if no on-coming traffic is approaching. It is a huge improvement over the previous light which only featured a green-arrow and made drivers sit needlessly when there was no on coming from the other direction. Kudos to whoever made this change.
Questions?

Alan Davis, PE
404.635.2832
aladavis@dot.ga.gov