

## Other Frequently Asked Questions

### How will Washington County decide where to install flashing arrows?

Washington County will be designing Flashing Yellow Arrow control into most new traffic signals, except in places that do not need any separate left turn signals and in places where yielding left turns cannot be safely accommodated.

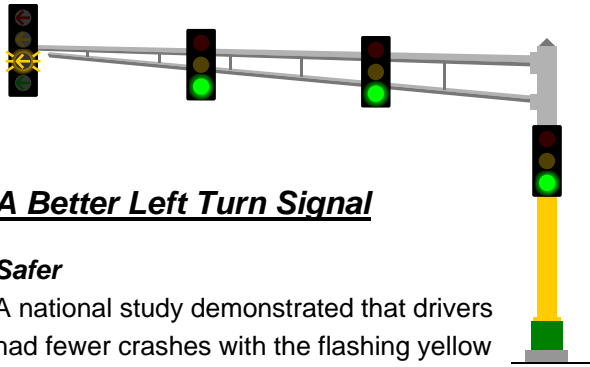
For existing traffic signals, Washington County will be prioritizing locations for installation of Flashing Yellow Arrow Control. Criteria for this prioritization will include traffic volume, lane configuration, and available sight distance.

Converting existing traffic signals to use Flashing Yellow Arrow control requires a significant investment in new hardware and control equipment, and therefore will be subject to available funding and staff resources.

### Will the flashing yellow arrow be used all day, on every light cycle?

An advantage of the flashing yellow arrow display is that it gives traffic engineers the flexibility to use specific indications during different times of day. This means that the flashing yellow arrow or steady green arrow may not be seen every time you approach the intersection. This can reduce your wait times at a signal using this display compared to traditional left turn signals.

Sources: Minnesota Department of Transportation  
Missouri Department of Transportation  
National Cooperative Highway Research Program



### A Better Left Turn Signal

#### **Safer**

A national study demonstrated that drivers had fewer crashes with the flashing yellow left-turn arrow than with the traditional yield-on-green indications.

#### **Less Delay**

You have more opportunities to make a left turn with the flashing yellow left-turn arrow than with the traditional three-arrow indications, which keeps you moving.

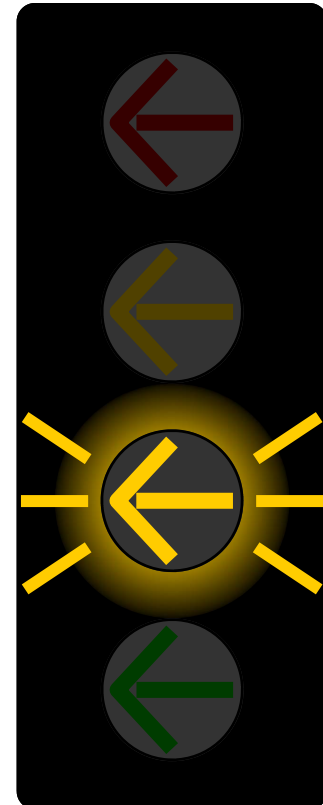
#### **More Flexible**

The new display provides traffic engineers with more options to handle variable traffic volumes.

# Washington County

## FLASHING YELLOW ARROW

### Traffic Signal Control



## Washington County

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## Flashing Yellow Arrow Control

### What does it mean?

A flashing yellow arrow signal has the same meaning it always has: Left turns may proceed with caution after yielding to oncoming traffic.

In the past, flashing yellow arrows in Minnesota were only used when the entire traffic signal was in flash mode. However, use of the flashing yellow arrow as part of normal operation has been shown to have several benefits by reducing delays while enhancing safety by reducing driver errors, and has now been approved for widespread use.

### Why not just use “Left Turn Yield on Green”?

Both types of control allow left turns to proceed after yielding to oncoming traffic. Flashing Yellow Arrow control, however, provides the flexibility to restrict left turns for safety during heavy traffic, while still allowing yielding during the off-peak conditions. “Left Turn Yield on Green” signals do not allow this type of flexibility, because left turns are therefore allowed whenever the adjacent through lanes have a green light. This problem currently prevents the use of Left Turn Yield on Green in many locations, resulting in higher delays.

### Has this ever been tried before?

Absolutely. This system has been used in other parts of the country and has also been successfully tested and implemented at several locations in the Twin Cities area. Research also shows that drivers make fewer mistakes when flashing yellow arrow control is used. For more details on this research, please visit: [trb.org/publications/nchrp/nchrp\\_rpt\\_493.pdf](http://trb.org/publications/nchrp/nchrp_rpt_493.pdf)

## Flashing Yellow Arrow Control

### A Better Left Turn Signal



This type of signal arrangement, with five lights, can provide a green arrow for left turns that otherwise might not have enough gaps to turn in heavy traffic, and still allows drivers to turn left after yielding to oncoming traffic when only the green circle is lit.

However, this arrangement has been shown to have a higher risk of driver mistakes, so it is only used on low-speed roads or where turning traffic is light. It is also not flexible, because left turns cannot be prevented if the adjacent through lanes are being shown a green light.



This type of signal arrangement, with three arrows, allows left turns only when the oncoming traffic is stopped by a red light. It is well understood and allows left turns to be controlled independently, but it also results in high delays. It can be very frustrating to wait for a green arrow when it is obvious that there is no oncoming traffic, or to be stopped so that a single oncoming vehicle can make a left turn.



Flashing Yellow arrow Control allows the best of both worlds. It has been shown to have less probability for driver mistakes, and it can use the most optimal type of control depending on traffic conditions, keeping traffic flow safe during heavy traffic while reducing delay when traffic is light. This flexibility allows it to be used in places where the restrictive three-arrow signal would have otherwise been required.

## Flashing Yellow Arrow Control

### How It Works



#### Solid Green Arrow:

Left Turns have the right of way. Oncoming traffic has a red light.



#### Solid Yellow Arrow:

The left turn signal is about to change to red, and drivers should prepare to stop, or prepare to complete your left turn if you are legally within the intersection and there is no conflicting traffic present.

The solid yellow arrow will always display after the green arrow **AND** after the flashing yellow arrow. A solid yellow arrow will always be followed by a red arrow.



#### Flashing Yellow Arrow:

Drivers are allowed to turn left after yielding to all oncoming traffic and to any pedestrians in the crosswalk. Oncoming traffic has a green light. Drivers must wait for a safe gap in oncoming traffic before turning.



#### Solid Red Arrow:

Drivers intending to turn left must stop and wait. Do not enter an intersection to turn when a solid red arrow is being displayed.