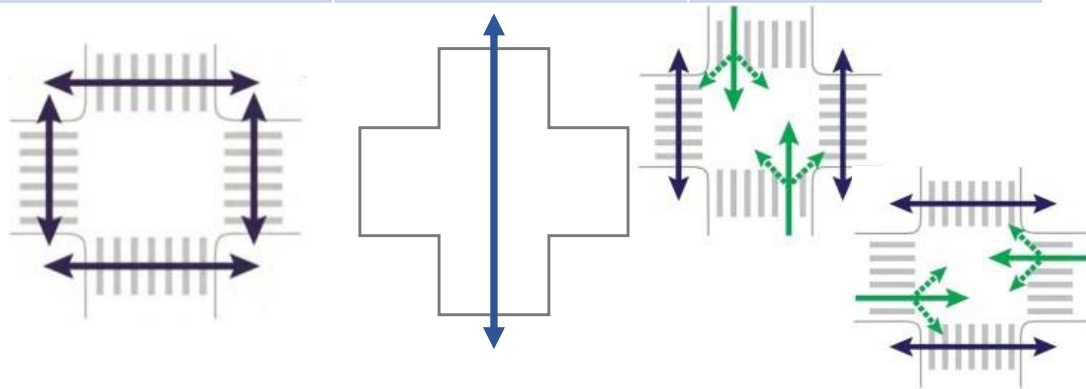


Safety Evaluation of Alternatives for Installing Pedestrian Signals Under Side Street Green

In 2021, the CTDOT Research unit worked with CTDOT Traffic and Dr. John Ivan at the UCONN College of Engineering to develop a project that investigated the safety effects of converting the pedestrian signal operation at several intersections in Connecticut from **side street green** to **concurrent phasing**.

Exclusive Phasing	Side Street Green	Concurrent Phasing
<ul style="list-style-type: none"> • Vehicle traffic stops in all directions • Pedestrians have “exclusive” access to the right of way 	<ul style="list-style-type: none"> • Pedestrians cross a main road during the minor road green • No special pedestrian phasing or signal faces 	<ul style="list-style-type: none"> • Pedestrians cross with the parallel vehicle phase and have special signal • Vehicles may pass through crosswalks after yielding to pedestrians



One challenge to this approach is possible confusion for motorists and pedestrians. Pedestrians expect “**Exclusive**” phasing signals to mean all traffic is stopped, which would not be the case with **concurrent phasing**, while motorists are conditioned to not expect pedestrians to cross when they have a green light.

UConn researchers hypothesized that **concurrent phasing** would have better pedestrian compliance than exclusive phasing and fewer vehicle conflicts than side street green. The project team identified intersections with significant daily pedestrian activity for the study and installed new pedestrian signals at treatment locations (some with additional signage, and some without). They then compared data from before and after this change at all sites.

Results:

After the installation of new concurrent phasing, no pedestrian vehicle conflicts were recorded at any intersections. Additionally, intersections with either concurrent or exclusive phasing were found to decrease the odds of a conflict by over 48% compared to sites with side street green phasing. Side street green and concurrent phasing **with signage** were also found to have significantly higher rates of pedestrian compliance than either exclusive or concurrent phasing without signage. The results of this analysis suggest that **auxiliary signage is needed to increase pedestrian compliance at concurrent phase intersections**.

CONCURRENT PHASING

Concurrent Pedestrian Phasing Signals allow pedestrians to cross the main road while side street (parallel) drivers have a **green light** indication.



SAVE TIME. SAVE LIVES.

Benefits:

- Clarifies to pedestrians & drivers when pedestrians should cross
- **Reduced delay** to both pedestrians and drivers

DRIVERS

Pedestrians will be crossing **at the same time** as vehicle traffic.



Drivers may turn left or right **after yielding** to pedestrians in the crosswalk.



PEDESTRIANS

It's important to use the **push buttons** and wait until you see the **WALK** signal to begin crossing the roadway.



The flashing countdown meter tells you how much **time** you have left to cross the road.



The **solid hand** means it's not safe to cross just yet.



Signals for Parallel Drivers



WALK



Flashing Hand & Countdown



Solid Hand

Signals for Pedestrians