

Requests for CT Consultants

13 November, 2023

Pedestrian Scrambles

We frequently hear about near-misses between pedestrians in a crosswalk and drivers turning left or right through the crosswalk that do not yield the right-of-way as required. One way to eliminate these situations would be to implement a Pedestrian Scramble/Barnes Dance period where all vehicular traffic is stopped and pedestrians are free to cross the intersection in any direction. We would like to see the modeling results for instituting a Pedestrian Scramble at each of the signalized downtown intersections (Franklin and Washington, North Main and East Washington, North Main and Bell, and North Main and Orange).

- What is the predicted impact to vehicular traffic?
- How is the predicted impact affected by the length of the pedestrian-only interval?

“Protected-Only” Left-Turn Phasing

An alternative to Pedestrian Scramble that would prevent vehicular traffic from entering the crosswalk when pedestrians have the right-of-way is “Protected-Only” Left-Turn phasing, when left turns are allowed only on a green left arrow signal. We would like to see modeling results for a “Protected-Only” Left-Turn phasing at all downtown signalized intersections.

- Can this be made more functional by increasing the duration of the left turn arrow to clear the lanes?
- Many of the cars in these intersections are exclusively turning. How can we address that and still provide an exclusive protected pedestrian interval? (We already have an LPI.)

Right-on-Red Prohibited

Similarly, we can prevent vehicular traffic from entering the crosswalk when pedestrians have the right-of-way by prohibiting right turns on red, as currently found at the intersection of Bell and Main Streets. We would like to see modeling results for prohibiting Right-on-Red at all other downtown signalized intersections.

- What is the predicted impact to vehicular traffic?

Flashing Yellow Arrow

If we continue to allow “Permissive-Only” Left-Turn phasing and Right-Turns-on-Red, we could make it clearer to drivers that they must yield to pedestrians in the crosswalk by implementing a Flashing Yellow Arrow signal.

- What would it cost to update signaling equipment at all downtown intersections to support a flashing yellow arrow?

Increasing Visibility

We would like to see recommendations for increasing visibility and pedestrian safety at each of the downtown crosswalks, particularly those that are mid-block (North Main at River Street, 17 North Franklin, and 20 North Main).

- Daylighting in advance of a crosswalk makes pedestrians more visible to motorists, and vehicles more visible to pedestrians. In which, if any, crosswalks should the village consider reconfiguring or removing adjacent parking spaces to increase viewing distance?
- Delivery vehicles frequently park in the prohibited zones adjacent to crosswalks or in the crosswalks themselves, blocking drivers' view of pedestrians entering the crosswalk (and vice-versa) or blocking pedestrian access entirely. (See photos below). How can we prevent this from happening without relying on entirely on police enforcement? Should we consider adding one or more loading zones to serve the Central Shopping District?
- Curb extension can increase pedestrian safety at crosswalks by narrowing the roadway, increasing visibility, and shortening the crossing distance. In which, if any, crosswalks do you recommend adding curb extensions?
- Crosswalk striping and other street marking seem to fade quickly. Are there more durable materials or methods available for marking crosswalks? What are the costs associated with other materials or methods?
- The National Association of City Transportation Officials recommends striping all mid-block crosswalks, regardless of the paving pattern or material. Our mid-block crosswalks are brick, and not striped. Do you recommend striping them?
- Stop lines at mid-block crossings can increase the likelihood that a person crossing the street is visible to the driver in the second lane when the driver in the first lane is stopped. Our mid-block crosswalks currently lack stop lines. Do you recommend adding them?
- The crosswalk at North Main and Cottage is not very visible traveling north or south on North Main Street. Can you provide a recommendation to improve the visibility of that crosswalk?

In-Ground Crosswalk Lighting

We would like to know if in-ground lighting systems similar to what's used on airstrips and in other ground applications can be used for mid-block crosswalks in cold climates. These are a popular suggestions, but we are told that they don't work well with plows and cold environments. Our police force also endorses this approach, if viable.

- Can you clarify this for us, and tell us if we should continue to entertain this option?

Crosswalk Signal Timing

At some corners, there is not enough “dead time” between the end of the countdown flashing (convert to solid Don’t Walk) and the start of counter traffic for crosswalks to clear traffic, especially with elderly and small children. The countdown periods vary from 20 seconds at one corner (Orange and Main) to 12 seconds and 15 seconds at most others. Without changing the traffic light cycle time, adjusting three periods of the sequence (Walk, Countdown, “Dead-time” until Counter Traffic enabled) would improve safety.

- Countdowns are too long. Why is more than 5 seconds needed for the countdown between Walk and Don’t Walk?
- Insufficient “dead-time” of signal change. After changing the length of signal countdown to 5 seconds, take the rest of the time and extend the “Dead-time” (defined as Don’t Walk is solid, but counter traffic – turns and straight – not enabled) to ~8-10 seconds. A very casual walk across the streets can be easily accomplished in 8-10 seconds. That way anyone who starts to cross with 1 second in the countdown left – a logically proper decision – can clear the crosswalk. This would not change the overall signal cycle time and therefore there would be no change to traffic flow.

Traffic Signal Coordination

We have observed issues with the timing and coordination of crosswalk and traffic signals. It is our understanding that it has been many years since the entire system was configured, and many piecemeal adjustments to individual intersections have since been made.

- We would like an estimate of the cost to have a comprehensive evaluation of and update to the the downtown signal programming, and recommendations for specialized consultants who have experience with traffic signal programming in historic downtowns like ours.

Updated Signal Equipment

Many of our intersections have crosswalk activation buttons that are separated by several feet and positioned away from the direction of travel, making them counterintuitive and difficult to find. We also believe it has been many years since the crosswalk and traffic signal equipment was installed, and devices with greater capabilities and reliability are now available.

- Council would like an estimate of the cost to review and replace outdated equipment at our signalized downtown intersections, including more intuitive crosswalk button placement and power back-up options that can be integrated into our existing light poles.

Miscellaneous

Council would be interested in any other novel solutions for increasing pedestrian safety at our downtown intersections.

Photos



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