



**Dennison Crossing Walk Audit
Framingham, MA**

September 13, 2018

*Sponsored by the Massachusetts Executive Office of Public Safety and Security
Planning Initiative for High-Fatality Communities*

On Thursday, September 13, 2018, WalkBoston conducted a walk audit at Dennison Crossing in Framingham as part of the Executive Office of Public Safety and Security's (EOPSS) Pedestrian Safety Planning Initiative for High-Fatality Communities. The EOPSS Pedestrian Safety Planning Initiative builds municipal staff understanding and awareness of the components of a safe walking environment. WalkBoston is working in partnership with EOPSS to address walking safety concerns in Massachusetts communities with high pedestrian crash rates, with the goal of reducing pedestrian fatalities and serious injuries in the Commonwealth.¹ According to data provided to WalkBoston by EOPSS, Framingham has seen 3 pedestrian fatalities and 128 serious pedestrian injury crashes between 2012 – 2017.

Dennison Crossing is a vehicle-dominated landscape with high traffic volumes moving at relatively high speeds. Bishop/Blandin Street is one of only two streets (Concord Street is the other) that crosses the railroad tracks at grade connecting the Framingham neighborhoods on either side of the tracks. This area has a mix of land uses including residential districts, suburban style retail and surface parking lots, social service agencies, a regional transit hub, and light industry, (e.g., Jack's Abby Brewing Company). Two new apartment style housing projects are under construction in the vicinity, which promise to bring more people to the area who will need to move in and around Dennison Crossing.

People walk around Dennison Crossing to reach the retail stores, transit station and social services located here. Recent infrastructure projects have improved traffic flows and the quality of pedestrian elements including upgraded signal equipment, pavement markings, sidewalks, and curb ramps that have made the area more comfortable and safer for people walking. However, the pedestrian WAIT times to move through the area are extremely long. This discourages compliance with pedestrian signals and can encourage people to wait for a gap in traffic and cross without a WALK signal.

Key recommendations:

1. Re-evaluate the traffic signal cycle lengths with the goal of minimizing pedestrian wait times at the major intersections in Dennison Crossing (Bishop/Waverly and Blandin/Beaver).
2. Address sidewalk accessibility and maintenance primarily along Clinton Street (where publicly owned) and Kendall Street.
3. Extend the multi-use path concept near the MetroWest Regional Transit Authority (MWRTA) transit center to provide off-street bike/walking access to other locations in downtown Framingham.

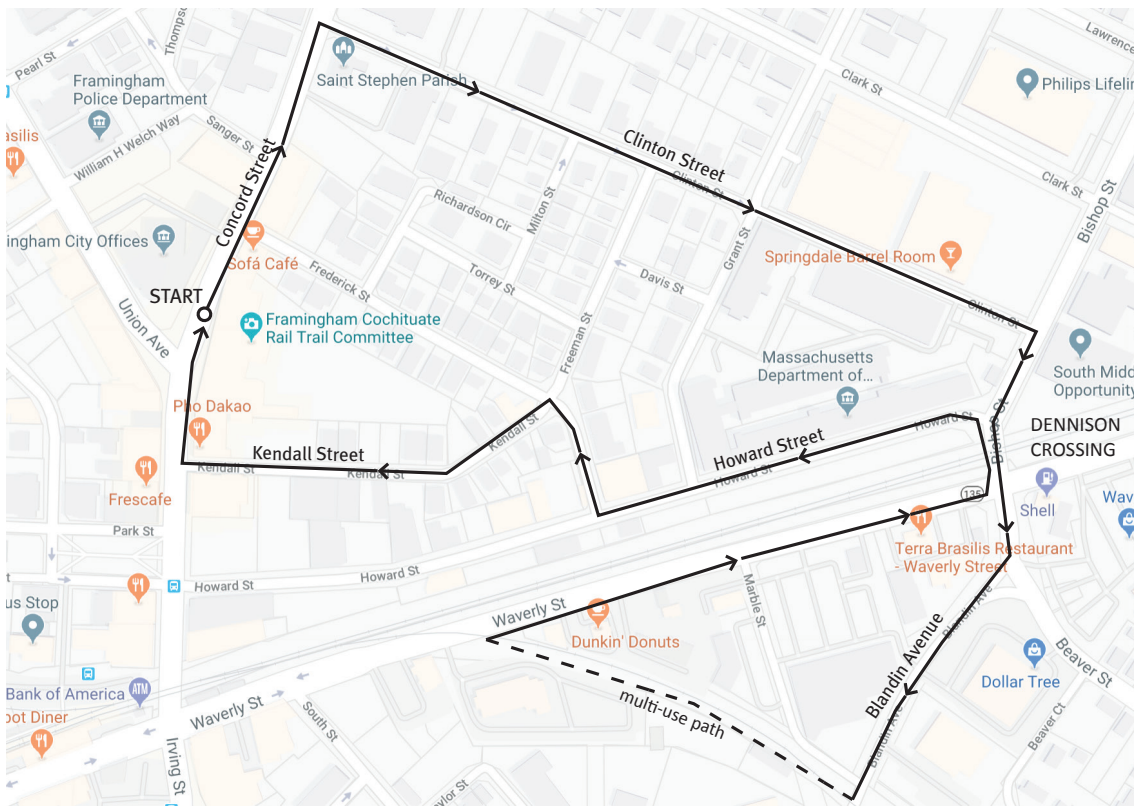
Walk Audit Route

The walk audit route traversed newly redesigned streets in downtown Framingham, to regional arterials along the railroad tracks, to a multi-use path along the MWRTA building, to neighborhood streets where many South Middlesex Opportunity Council (SMOC) properties house those in need, before returning to City Hall. Participants experienced each of these conditions on foot between 2:00 and 3:15 pm on a Thursday afternoon. We spent the majority of our time walking from the intersection of Bishop St/Howard St on the north side of the railroad tracks to the west side of Blandin Avenue on the south side of the railroad tracks.

Dennison Crossing has seen recent infrastructure improvements including enhanced crosswalk pavement markings, new curb ramps and detectable warning strips, new sidewalks, new signal arms and

¹ See the EOPSS factsheet in Appendix A for more information.

traffic signal back plates, and asphalt paving. These investments have helped to make the area safer and more walkable. However, the barrier that remains is the amount of time it takes to walk through the two intersections.



Dennison Crossing - Framingham
Sep 13, 2018



Walk audit participants included staff from the Framingham Departments of Public Works and Community and Economic Development, Downtown Framingham, Inc., MetroWest Regional Transit Authority (MWRTA), the Callahan Center, and the South Middlesex Opportunity Council (SMOC).

Matthew Hayes
Erika Oliver Jerram
Sam Scoppettone
Courtney Thraen
Joy Glynn
Sara Scully
Grace O'Donnell
Charles Bokor

Department of Public Works
Department of Community and Economic Development
Department of Community and Economic Development
Downtown Framingham, Inc
MetroWest Regional Transit Authority
MetroWest Regional Transit Authority
Callahan Center
South Middlesex Opportunity Council

Stacey Beuttell
Brendan Kearney

WalkBoston
WalkBoston

Discussion of Observations and Recommendations

1. Re-evaluate the traffic signal phase lengths with the goal of minimizing pedestrian wait times at the major intersections in Dennison Crossing (Bishop/Waverly and Blandin/Beaver).

Signal cycle lengths impact the quality of the environment for all road users. For pedestrians, long cycle lengths can be frustrating and can discourage people from walking. Street crossings become barriers to destinations rather than pathways leading to them. In the case of Dennison Crossing, the signal cycle lengths as timed on our audit were never less than 60 seconds and, in some cases, lasted longer than 5 minutes. WAIT times varied on a second walk through the intersection, but remained longer than is acceptable. According to the National Association of City Transportation Officials Urban Street Design Guide, “Short cycle lengths of 60–90 seconds are ideal for urban areas.”² Even 60 seconds is a long time to expect a pedestrian to wait.

The table below lists the time walk audit participants waited for (1) the WALK signal once the button was pushed, and (2) the WALK time provided to cross the road.

Intersection	Timing A		Timing B	
Bishop @ Howard Street	Wait time	1 min 15 sec	Wait time	1 min 31 sec
	Walk time	20 sec	Walk time	18 sec
Bishop@ Waverly Street	Wait time	2 min 56 sec	Wait time	1 min
	Walk time	23 sec	Walk time	20 sec
Dollar General Driveway	Wait time	1 min 20 sec	Wait time	2 min 33 sec*
	Walk time	18 sec	Walk time	20 sec
Blandin@ Beaver Street	Wait time	2 min 27 sec	Wait time	1 min 57 sec
	Walk time	17 sec	Walk time	14 sec
Blandin	Wait time	2 min 9 sec	Wait time	6 min 40 sec*
	Walk time	19 sec	Walk time	14 sec
Waverly@ Bishop	Wait time	1 min 45 sec	Wait time	5 min*
	Walk time	22 sec	Walk time	18 sec

*signal preemption engaged

The location of social services on either side of Waverly Street poses an additional challenge to pedestrian safety in Dennison Crossing. A SMOC staff member who participated in the walk audit commented that many people cross Bishop Street between the SMOC-owned buildings and the social services located at 300 Howard Street. Many clients with substance abuse disorders or other ailments

² <https://nacto.org/publication/urban-street-design-guide/intersection-design-elements/traffic-signals/signal-cycle-lengths/>

that affect their judgment must navigate through the high volumes of fast-moving vehicular traffic and cross these streets. Long waits for WALK signals frustrate all of us, but for those dealing with other issues, it can be too much. While infrastructure can provide opportunities for safer environments, it is impossible to dictate good behavior by people walking, biking or driving. It is prudent, however, knowing that this vulnerable population frequently visits Dennison Crossing to do as much as possible to limit the chances for serious injuries.



Views from Bishop Street looking toward the Howard Street intersection.

Each traffic signal in Dennison Crossing is equipped with signal preemption to allow emergency responders an out-of-cycle green light to proceed quickly through the intersections. The preemption engaged at least three times while we made our way through Dennison Crossing, but we only saw a police car once. Our longest WAIT times happened when the signal preemption engaged. The call for a pedestrian phase seemed to be erased, and when the button was pushed again, we had to wait through the full signal cycle before getting the WALK sign.

The railroad (RR) crossing also adds complexity to programming signal cycle lengths and also has preemption over the typical signal sequence. The train came through the intersection while we walked and lengthened the pedestrian WAIT time. It was unclear whether the RR crossing reset the signal cycle length or just added time to our wait as the train passed.



The commuter train crossing preempted the traffic signal lengthening wait times for everyone.

The pedestrian signals used an exclusive phase rather than a concurrent phase along the walking route. The walk audit participants did not record if vehicular traffic moved within one intersection while they

were walking across another. However, the group shared their experiences and concluded that this does happen given the interconnectedness of the two major intersections in the Dennison Crossing. The many right/left turn lanes and signal arrows may hinder the use of concurrent signals. If there is an opportunity to employ a concurrent signal during some of the phases, then the WALK signal compliance rate may increase, given shorter wait times. It may also be possible to include an automatic walk signal with concurrent phasing so that pedestrians would not be required to push a button to get the WALK.

The pedestrian signals throughout Dennison Crossing are not pedestrian countdown signals (PCSs), i.e., those that display how much time remains before the vehicular traffic signal changes to green. Countdown signals have a better compliance rate and have been shown to reduce pedestrian-related crashes.

Short-term recommendations:

- Complete a comprehensive assessment of actual signal cycle lengths at each intersection in Dennison Crossing to verify the times collected during the walk audit.
- Reprogram traffic signals to minimize pedestrian wait times (less than 90 seconds). Consider an automatic walk signal if concurrent phasing is employed.
- Consider typical walker destinations and program signals so that people can cross to their destination in a single WALK cycle.
- Evaluate the location and safety of crosswalks across Bishop Street at both the Clinton and Howard intersections to better serve the vulnerable populations using this busy corridor.

Long-term recommendations:

- Install accessible pedestrian signals (including countdown clocks) at all traffic signal locations.

2. Address sidewalk accessibility and maintenance primarily along Clinton Street (where publicly owned) and Kendall Street.

The smaller, residential streets on the walk audit route have relatively narrow sidewalks with cracks in concrete panels and tripping hazards. Lovely mature trees interrupt the sidewalk on Clinton Street requiring wheelchair users to choose a different, potentially less safe route. The level of maintenance on Clinton, Frederick, and Kendall Streets is not as high as along some of the major thoroughfares in downtown. (Clinton Street is privately owned between Grant Street and Bishop Street). People with disabilities would have a harder time using these streets because some sidewalks and crosswalks do not have curb ramps or detectable warning panels. Many of the driveways have cross-slopes that are also too steep to move comfortably across in a wheelchair.



There are opportunities to improve sidewalk accessibility and maintenance in the Dennison Crossing area.

Short-term recommendations:

- Determine whether there are low cost, quick fixes to improving sidewalk accessibility (e.g., paving details to accommodate mature trees, replacement of individual concrete panels rather than replacing the entire length of sidewalk).
- Identify funding stream to install accessible sidewalks where they are missing throughout Dennison Crossing.
- Trim trees along south side of Howard Street.

Long-term recommendations:

- Make comprehensive accessibility improvements to sidewalks in the Dennison Crossing residential districts.

3. Extend the multi-use path concept near the MetroWest Regional Transit Authority (MWRTA) transit center to provide off-street bike/walking access to other locations in downtown Framingham.

MWRTA has a multi-modal plan to better connect their riders to other transit options once disembarking at their transit center along Blandin Avenue. The completion of the multi-use trail connecting Blandin Avenue with Waverly Street provides a faster, off-street connection to downtown Framingham. Wayfinding signs indicate the trail destinations. The signs, however, do not indicate that the pathway is public, and some may assume that it is for MWRTA personnel only given the MWRTA logo affixed to the signs. The signs would be more effective for non-English speakers if they also used a pedestrian graphic. Furthermore, the signs are mounted high on the poles and not at eye level for many people walking.

MWRTA recently installed lights and security cameras to improve trail safety and maintains the trail with regular trash pick-up and vegetation maintenance. As more people ride transit and move to the neighborhood, additional opportunities to make safe, off-road connections to downtown and other services should be pursued.



Multi-use trail along the RR tracks leading from Blandin Avenue to Waverly Street.

Short-term recommendations:

- Improve wayfinding signs to better identify the trail as a public, safe, enjoyable alternative to walking along Blandin Avenue and Waverly Street

Long-term recommendations:

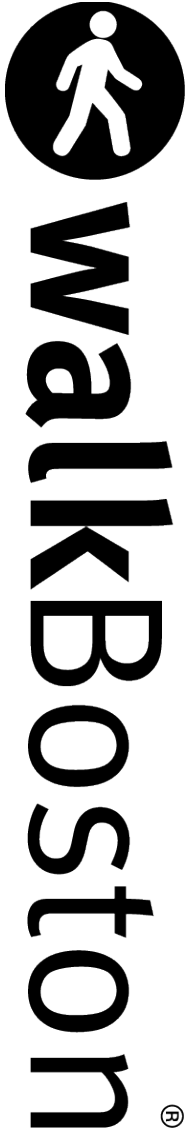
- Link this pathway to others to form a network of safe walking and biking connections through downtown Framingham
- Consider the multi-use pathway as an opportunity to display public art to improve the aesthetics of the industrial setting and fence-line. A relevant example is the “May This Never End” art piece formerly on the Rose Kennedy Greenway and now in Allston, MA.



May This Never End – Matthew Hoffman
Currently installed in Allston



Art along Decatur Way in Lowell, MA



Appendix A.

Executive Office of Public Safety and Security (EOPSS) Pedestrian Safety Planning Initiative for High-Fatality Communities

The EOPSS Pedestrian Safety Planning Initiative builds municipal staff understanding and awareness of the components of a safe built environment for pedestrians. WalkBoston is working in partnership with EOPSS to address walking safety concerns in Massachusetts communities with high pedestrian crash rates, with the goal of reducing pedestrian fatalities and serious injuries in the Commonwealth. WalkBoston is a pedestrian advocacy organization that works to make walking safer and easier in Massachusetts to encourage better health, a cleaner environment and more vibrant communities.

Cities and towns participating in the Pedestrian Safety Planning Initiative have used the results to prioritize pedestrian improvements, negotiate infrastructure fixes into development approvals, and apply for funding sources, such as from the Complete Streets Funding Program.

As part of the Initiative, WalkBoston will conduct a walk audit focused on high pedestrian crash locations in **Framingham**. A walk audit provides on-street, tangible learning opportunities for diverse groups of municipal staff, including police, as well as residents and other community-based groups. During the audit, we will assess pedestrian infrastructure conditions and recommend built environment improvements that promote safety. Walk audits are also an effective means to build local constituencies for pedestrian safety efforts that include increased education and awareness opportunities for all road users, and greater attention to safety in local roadway design and maintenance efforts.

Participation in this EOPSS/WalkBoston Initiative has increased the awareness and readiness of municipal staff to adopt and implement complete streets policies and designs that will reduce fatal and injury crashes for all road users (including pedestrians, motorists and bicyclists) as called for under MassDOT's Complete Streets Funding Program.

To capture the ideas discussed during the walk audit, WalkBoston will provide a written report that includes short- and long-term recommendations for improving pedestrian safety. The report can be shared with the public and elected officials to strengthen local safety efforts.

Proposed Schedule:

1. Hold preliminary meeting with municipal staff, police, regional planning agency staff, and local residents and community groups to determine audit area
2. Conduct site visit to gather baseline information about pedestrian conditions
3. Schedule and conduct the walk audit
4. Prepare walk audit report detailing existing conditions and recommendations for improved pedestrian infrastructure