



TOWN OF ARLINGTON
DEPARTMENT OF PLANNING and
COMMUNITY DEVELOPMENT

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MEMORANDUM

To: Adam Chapdelaine, Town Manager

From: Daniel Amstutz, Senior Transportation Planner

CC: Jennifer Raitt, Director, Department of Planning and Community Development

Date: January 2, 2020

RE: Crosswalk request for Prospect Ave and Wachusett Avenue/Oakland Avenue

At its October 7, 2019 meeting, the Select Board referred correspondence from Cheryl Mastrogiovanni, 44 Prospect Avenue, to the Town Manager's Office. The Town Manager forwarded the correspondence to the Department of Planning and Community Development (DPCD) for review.

In her correspondence, Ms. Mastrogiovanni requests a crosswalk at Prospect Ave and Wachusett Ave/Oakland Ave, on one of the legs that do not have crosswalks. Mastrogiovanni cited concerns about children walking to Dallin Elementary from Prospect Ave. There are already two crosswalks at this intersection, one at northwest side of the intersection crossing Wachusett Ave, and one on the southwest side of the intersection crossing Oakland Ave. Crosswalks are not currently installed at the southeast side of the intersection crossing Wachusett Ave or the north side of the intersection crossing Prospect Ave/Oakland Ave. A map is provided with this memo showing the project location and existing pavement markings.

Location Context, Crash Data, and Staff Observations

Wachusett Ave, Oakland Ave, and Prospect Ave converge into a 5-way intersection in Arlington Heights. Wachusett Ave and Oakland Ave meet in generally a 90-degree angle while Prospect Ave enters the intersection at a 45-degree angle to the other two streets. Wachusett Ave and Oakland Ave are public ways while Prospect Ave at this location is a private way. The portion of the intersection where Oakland Ave and Prospect Ave meet creates an expansive stretch of road pavement and a very long street crossing from curb to curb on the northeast side of Wachusett Ave. This intersection is approximately 1,500 feet, or a 5-10 minute walk from Dallin Elementary (measured by the street network). MBTA Bus Routes #78 and #84 run down Wachusett Ave, and there is one inbound bus stop and one outbound bus stop at this intersection.



Figure 1 - Wachusett Ave at Oakland Ave, looking southeast.

Available MassDOT crash data shows that there were five motor vehicle crashes at this intersection from 2010-2016. One was a single vehicle crash while the other four involved two vehicles. Four out of the five crashes did not involve an injury, and the four two-vehicle crashes were all angle crashes with the two vehicles turning or moving perpendicular to each other.

On the morning of Thursday, October 31, 2019, DPCD staff met Ms. Mastrogiovanni's husband at the intersection and did observations for about an hour (7:50-8:50 a.m.). This time was chosen as the likely peak period for pedestrian crossings due to morning school traffic. Staff also interacted with a few other neighbors that walked by at the time. Staff counted pedestrians crossing at the different intersection legs and also made anecdotal observations about general traffic volume, particularly in relation to real or perceived difficulty in crossing Wachusett Ave.

The following observations were made:

- Over the course of the hour a total of about 26 people walked through the intersection. 12 people used the existing marked crosswalks, and 14 crossed on the legs without crosswalks (Oakland/Prospect side and the one leg of Wachusett without

a crosswalk). Of this group, 7 children were counted (three in the crosswalk legs and four outside of crosswalks).

- Dallin starts school at 8:10, so most of the children and parents observed walking were in the first 30 minutes of the observation period. There were very few pedestrians observed in the remaining 30 minutes.
- About a half dozen people got on the Route 84 bus going towards Park Ave. There were no crossings observed to get from the inbound bus stop to the outbound bus stop.
- The most amount of traffic was in the first 30 minutes of observations, and most traffic was on Wachusett Ave. Sometimes drivers on Wachusett Ave would appear to drive fast from a pedestrian's perspective. However, observed traffic volumes were not considered to be high and it was not difficult to find gaps in traffic for pedestrians to cross. This was also the case for Oakland Ave. Prospect Ave had very little traffic at this time; only a few vehicles were observed entering or exiting Prospect Ave at this intersection.
- Wachusett Ave is about 35' wide and it took staff walking at an average walking pace (3.5 feet per second) about 10 seconds to cross. The crossing on the northeast side of the intersection in front of Prospect Ave and Oakland Ave is almost 100 feet long and it took staff about 25 seconds to walk from curb to curb.

Analysis

Crosswalk guidelines utilized by the Transportation Advisory Committee, and recently updated and approved in January 2019, note that “a higher priority [for crosswalks] should be given to locations having a minimum of 20 pedestrian crossings per peak hour (or 15 elderly and/or children).” Street width and vehicular traffic should also be considered, and whether an adequate number of gaps in traffic exist to enable pedestrians to cross without the aid of a marked crosswalk.

Staff did not observe that there were any significant visibility restrictions along the street for seeing pedestrians crossing at the legs of the intersection.

Crash data shows that there have been several crashes over the years, none of them involving a pedestrian. It is not clear that a crosswalk would be an effective countermeasure for addressing these crashes.

Based on staff observations and pedestrian data collected, the locations at this intersection without crosswalks currently do not warrant the installation of new crosswalks. The number of pedestrians crossing is below the threshold (both the higher and lower thresholds) and traffic volume was not high enough to cause undue delay for pedestrians waiting for a gap in traffic.

In addition, there are maintenance and engineering challenges to crosswalk installation in both locations that currently have no crosswalks:

- Putting a crosswalk across Wachusett Ave on the southeast side of the intersection could be a hurdle because there is a driveway directly across Wachusett Ave from the

location of the ramp on the Wachusett/Prospect side. Two new curb ramps would need to be constructed as well.

- Putting a crosswalk on the Prospect/Oakland side of the intersection -- the longest side at almost 100' crossing distance -- without any further geometric improvements, could provide pedestrians a false sense of security and would require significant maintenance due to its length.
- This end of Prospect Ave (from Wachusett Ave to Hillside Ave) is a private way. This could create some legal or jurisdictional problems for the Town to make any geometric improvements on the southeast (Prospect Ave) side of the intersection.

DPCD staff shared the above observations and challenges with the Department of Public Works and the Arlington Police Department. DPW and APD concurred with DPCD's analysis of the information collected. DPW also noted that the existing crosswalks were upgraded 4-5 years ago, and the challenges with the other two legs of the intersection prevented them from making further improvements at that time as well.

Conclusion

DPCD does not recommend crosswalks at the sides of the intersection that do not have them currently. This position is supported by staff at DPW and APD. Geometric and infrastructure challenges would need to be overcome to make these crosswalks safe and accessible, but the low crossing numbers do not make this location a higher priority than other locations in the town.

This information was shared with Ms. Mastrogiovanni, along with a recommendation to avoid crossing as a pedestrian directly in the middle of the intersection where exposure is greatest. Crossing at Wachusett Ave at the bus stop or further up Oakland Ave by Prospect Ave is a much shorter crossing for pedestrians.

I am available if needed for further questions or information on this subject.