

**Report of the Transportation Advisory Committee
to the
Arlington Board of Selectmen**

5 January 2006

**Appleton Street, Paul Revere Road and
Florence Avenue Intersection**

Date of Citizen Request: 19 May 2005

Date of Board of Selectmen Referral: 6 June 2005

Date Deliberated by TAC: 13 December 2005

TAC Representatives: Elisabeth Carr-Jones and Charles Pappas

Transportation Advisory Committee:

Joseph Cahill, Elisabeth Carr-Jones, Ralph Elwell, Jeffrey Maxtutis, Lt. James McHugh, Kevin O'Brien, Charles Pappas, Michael Rademacher, John Sanchez, Scott Smith and Edward Starr.

Appleton Street, Paul Revere Road and Florence Avenue Intersection

Request

A citizen has reported difficult visibility conditions on the Paul Revere Road approach to Appleton Street, and has suggested that a stop sign or warning sign be installed on the eastbound Appleton Street approach to the intersection.

Situation

This location is an un-signalized four-way intersection with complex geometry and significant traffic volume. There is stop sign control at the Paul Revere Road approach, otherwise the intersection is uncontrolled. The most recent reported crash at this intersection occurred in 2003, a rear-end collision on Florence Avenue in icy daylight conditions with one injury reported.

Appleton Street is classified as a Collector roadway, with an Average Daily Traffic (ADT) of roughly 5,500 vehicles (2002 data). The 85th percentile traffic speed at this location on Appleton was recorded at 30 mph in each direction. Paul Revere Road is a Local roadway with an ADT of roughly 2,300 (1997 data) and Florence Avenue is a Local roadway with less than 2,000 ADT.

Traffic counts indicate that the highest volume on this section of Appleton Street occurs during the PM peak. Turning counts were conducted for the intersection during this time period (see Figure 1). The counts indicate that the primary traffic movement is eastbound on Appleton Street, although Appleton Street westbound and both directions on Paul Revere Road are also significant.

Analysis

Although the recent crash history does not indicate a significant problem, the volume and speed of traffic at this tight curve on Appleton Street is a concern. The center line ends west of the curve and there are no warning signs on the downhill grade from Park Avenue (see Figure 2). Extending the center line and installing a warning sign would increase awareness of the curve and may prevent crashes.

Despite the acute angle, the visibility of eastbound traffic on Appleton Street from the Paul Revere Road approach (see Figure 3) does not warrant stop control on Appleton. However, the stop signs on the Paul Revere approach to the intersection are poorly placed. One is posted on a street sign post and another is posted on a utility pole (see Figure 4). One properly placed sign would be preferable.

Recommendations

The following recommendations were voted unanimously at the TAC's December 13, 2005 meeting (see Figures 5 & 6):

1. Relocate the stop sign on the Paul Revere Road approach to Appleton Street to a more visible location.
2. Continue the yellow center line on Appleton Street through the curve.
3. Install a curve warning sign (MUTCD W1-2R, or similar) on Appleton Street on the eastbound approach to this intersection.

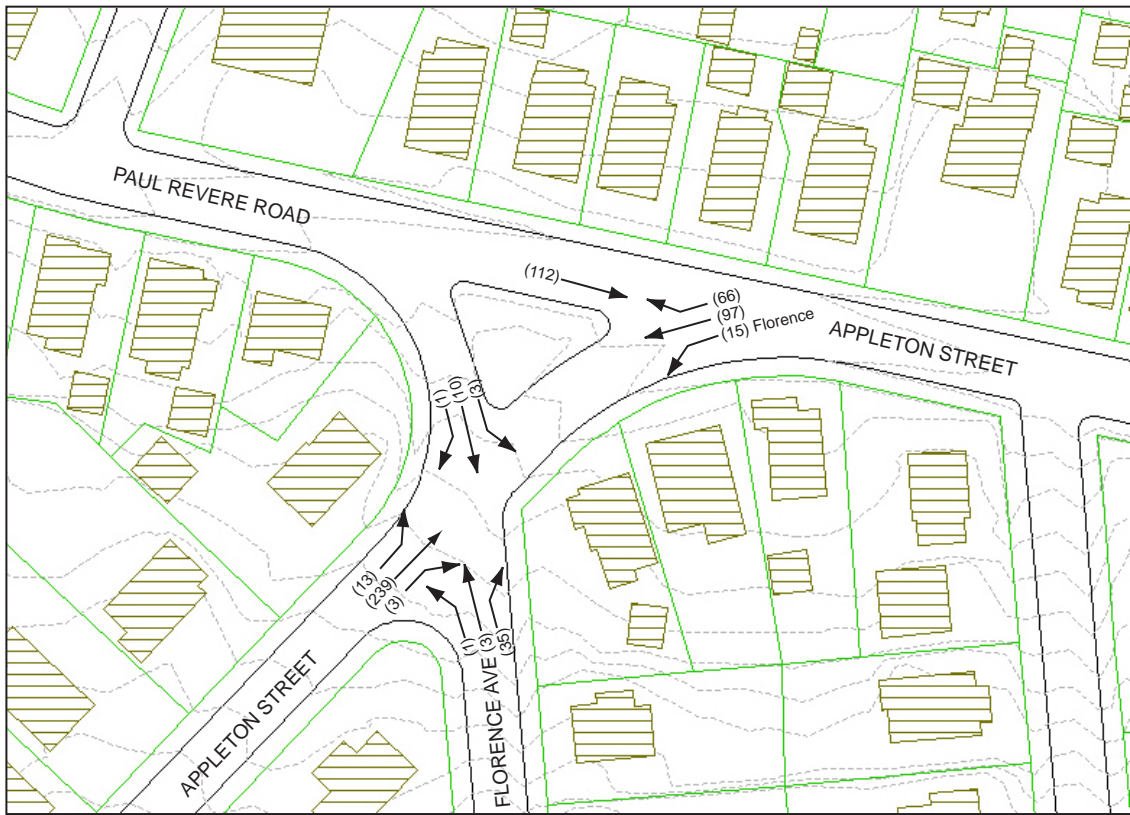


Figure 1 Traffic Turning Counts for Weekday Evening Peak Hour
(Conducted 9/27/05, 5:30 - 6:30 PM)



Figure 2 View from Appleton Street Eastbound (from Park Ave)



Figure 3 View from Paul Revere Road Stop toward Park Ave



Figure 4 View of Stop Signs on Paul Revere Road

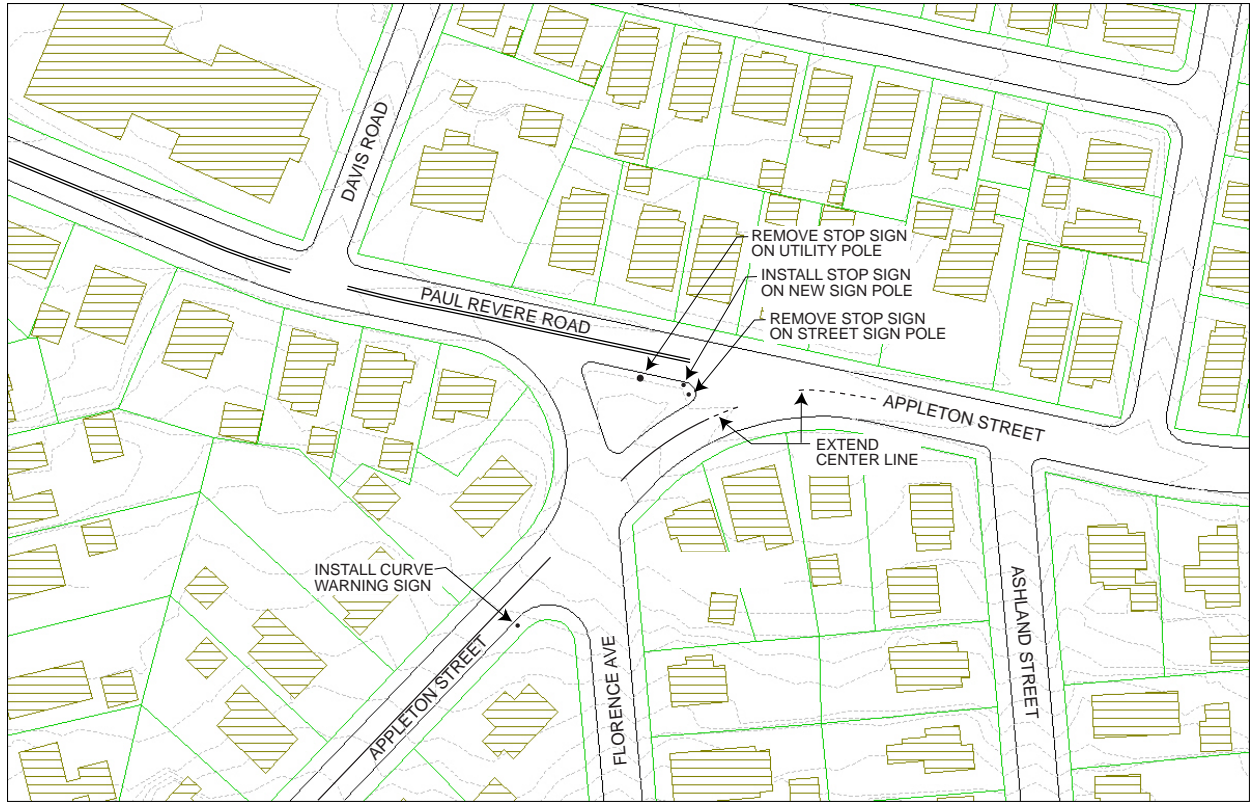


Figure 5 Recommendations for Appleton, Paul Revere and Florence Intersection



Figure 6 MUTCD W1-2R Sign (Yellow Background)