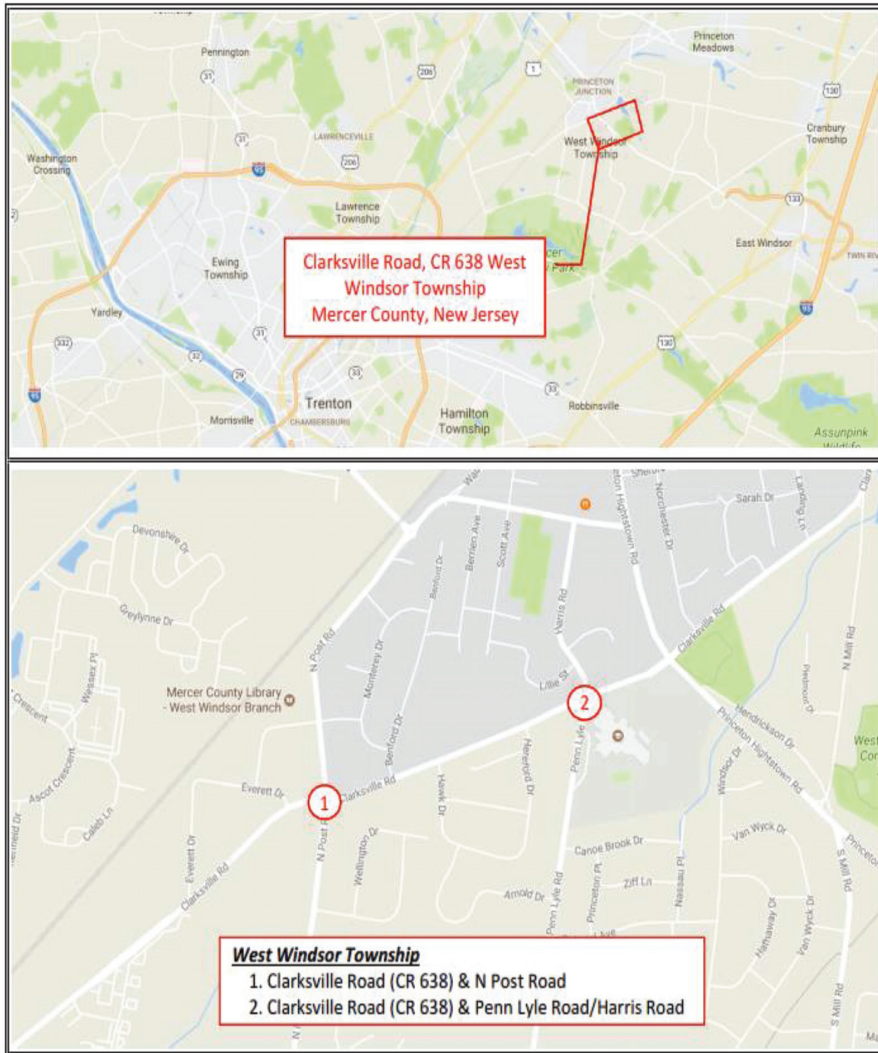


DVRPC NEW JERSEY COUNTY SIGNAL RETIMING INITIATIVE

Route 638, Clarksville Road



Overview

In cooperation with Mercer County and the New Jersey Department of Transportation, the Consultant Project Team has completed traffic signal retiming work at two (2) signalized intersections along County Route 638, Clarksville Road, in West Windsor Township, Mercer County. This work started in May 2018, following the completion of the Phase 1 of the project which established a corridor priority list with the County. In accordance with the process established by DVRPC, updated timing plans, including adjustments to cycle length and splits, were completed by December 15, 2018.

Data Collection/Analysis

The consultant team used ADT counts to determine the number of system programs. Through the use of Synchro/SimTraffic 8.0, as well Tru-Traffic 10.0, the team provided programs necessary to accommodate traffic demands throughout the day.

Implementation

In October 2018, the team implemented the optimized timing plans into each of two field controllers. The implemented timing plans call for the signals to remain uncoordinated. The consultant team verified that each controller maintained a common time standard throughout implementation.

Fine Tuning

The TWT Team observed each new timing plan at each intersection during each programmed time period to ensure each phase split was appropriate for the traffic conditions present. If a movement or intersection was over capacity, split adjustments were made to manage and minimize queue spillback and lane blockage.

Results

The consultant team did improve traffic operations slightly at the two intersections along Clarksville Road at North Post Road and Penn Lyle Road/Harris Road. The intersection of Clarksville Road and Penn Lyle Road/Harris Road needed very little attention. Clearance interval and pedestrian times were updated to the current 2009 MUTCD standard. A decision was made to maintain free controller operation on the corridor for reasons presented earlier in this report. The combined impact of the school zone between the intersections and the transit hub traffic patterns require conflicting needs in different directions limited the ability to achieve dramatic improvements. Total intersection delay during both the commuter AM and PM peak hours were likely reduced, but for the most part the intersection remains subject to significant recurring congestion.