

Technical Memorandum: Intersection Management Program

1. Overview.

In our continuing efforts to improve the effectiveness and efficiency of the County's transportation network, the PDCTC initiated an Intersection Management Program to evaluate the operations of locally controlled signalized and non-signalized intersections. The goal of the program is to identify low-cost improvements that will improve traffic safety and mobility, while reducing congestion and delays. Such improvements include adjusting traffic signal timings, updating lane markings, or purchasing new traffic control devices. The appeal of these types of improvements rests with the ability of local municipalities to implement them with existing transportation funds. The program reinforces many of the goals set forth in the PDCTC's Long-Range Transportation Plan - *Connections 2025* - which was completed in 2003.

2. Program History.

The program began in 2003, when the PDCTC retained the services of an on-call consultant to complete each intersection evaluation report. Under the scope of work, PDCTC staff provides administrative oversight over the program, while the consultant assesses existing traffic conditions, including turning movement counts, and then provides recommendations for low-cost improvements. When necessary, staffs from the PDCTC and local agencies assist with gathering traffic data. The program initially looked only at locally operated signalized intersections, which in Dutchess County meant signals maintained by the City and Town of Poughkeepsie, the City of Beacon, and Dutchess County itself. Building upon its successful first year, the program was expanded in 2004 to analyze local non-signalized intersections. The PDCTC will continue the program as long as communities and transportation agencies

identify intersections that would benefit from such a study.

3. Selection Process.

Local municipalities nominate intersections through an annual call letter sent out by the PDCTC to its Technical Committee members. The call letter outlines the scope of the program for that year and the process used to nominate and select intersections for study. Once all applications are received, PDCTC staff will evaluate applications for completeness and, if required, obtain additional information from the applicant. The PDCTC will then convene a project meeting with representatives from each nominating agency and review the intersections under consideration. During the review, staff will identify intersections where traffic data already exists or where local agencies can help gather data instead of the consultant, which can significantly reduce costs. This data may include: 15 minute turning movement counts for a.m. and p.m. peak periods, a schematic of the intersection (e.g. type of traffic control, number of lanes, length of turning lanes), and phasing and timing for signals. The list of intersections and supporting documentation is then sent to the consultant for action.



CR 9 (Beekman Rd.)/CR 29 (Carpenter Rd.)/Clove Branch Rd. in the Town of East Fishkill; report completed in 2005.

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4. Intersection Reports.

Over the past two years, the program has resulted in evaluation reports for thirteen intersections. Of these, six received recommendations to retime traffic signals and change their phasing; two were recommended for only signal timing changes; four had no changes recommended; and one non-signalized intersection was recommended to be signalized. The reports also recommended that upgraded signal equipment be installed at two of the intersections.

5. Implementing Recommendations.

The next steps focus on implementing the recommendations from each intersection analysis report. Where feasible, local municipalities have re-timed signals in accordance with the recommendations. However, some localities require additional funding to fully implement the recommendations. The PDCTC identified the Congestion Mitigation and Air Quality program as an excellent source of such funding. Accordingly, staff from the PDCTC, in consultation with NYSDOT Region-8, assisted local officials with completing applications for four projects to be included in the 2006-2010 Transportation Improvement Program (TIP). The funding will cover costs to replace outdated signal controller and associated equipment with modern loop detectors that would actuate signals depending on traffic flows.

Intersections studied under the program.

Jurisdiction	Intersection
City of Beacon	Rt. 52 @ Blackburn Ave.
City of Beacon	Rt. 9D @ South Ave.
City of Poughkeepsie	Cannon St. @ Academy St.
City of Poughkeepsie	Mansion St. @ Washington St.
City of Poughkeepsie	North Clover St. @ Mill St. @ Donegan Pl.
Dutchess County	CR 110 @ CR 77
Dutchess County	CR 75 @ DeLaval Pl. @ Emmott Pl.
Dutchess County	CR 9 @ CR 29 @ Clove Branch Rd.
Dutchess County	CR 94 @ CR 93
NYSDOT/NYSBA	Rt. 199 @ CR 103
Town of Poughkeepsie	DeLaval Pl. @ North Grand Ave.
Town of Poughkeepsie	Lindberg Pl. @ North Grand Ave.
Town of Poughkeepsie	Seitz Terr. @ Van Wagner Rd./Arlington Ave.

6. Contact Information.

For more information on the Intersection Management Program or copies of completed evaluation reports, please contact the PDCTC by phone: (845) 486-3600, or email: pdctc@co.dutchess.ny.us. Please visit the PDCTC website at www.dutchessny.gov/pdctc.htm for updates on this and other programs, plus downloadable copies of other transportation documents produced by the PDCTC.

Recommended Reading:

- *Signalized Intersections: Informational Guide.* Federal Highway Administration (FHWA), Pub. No. FHWA-HRT-04-091, August 2004.

Internet Resources:

- Federal Highway Administration (FHWA): http://ops.fhwa.dot.gov/traffic_sig_timing
- Institute of Transportation Engineers (ITE): <http://www.ite.org/selfassessment/default.asp>

Established in 1982, the Poughkeepsie - Dutchess County Transportation Council (PDCTC) serves as the designated Metropolitan Planning Organization (MPO) for Dutchess County. Federal regulations require that all Urbanized Areas, U.S. Census defined metropolitan areas with over 50,000 people, be represented by a MPO, which is responsible for ensuring that Federal transportation dollars (highway and transit) are committed through a locally driven, comprehensive planning process.