

ADDENDUM II

**AMENDMENT
TO
TRAFFIC CIRCULATION PLAN AMENDMENT
ROUTE 206 INTERSECTION
AT
CHERRY VALLEY ROAD AND PRINCETON AVENUE
PREPARED BY McDONOUGH & REA ASSOCIATES
MARCH 8, 2002**



AMENDMENT
TO
TRAFFIC CIRCULATION PLAN ELEMENT
ROUTE 206 INTERSECTION
AT
CHERRY VALLEY ROAD/PRINCETON AVENUE

MONTGOMERY TOWNSHIP

SOMERSET COUNTY

NEW JERSEY

PREPARED BY:

MARCH 8, 2002

MCDONOUGH & REA ASSOCIATES
2517 Highway 35
Building G, Suite 201
Manasquan, New Jersey 08736

TABLE OF CONTENTS

	<u>PAGE</u>
INTRODUCTION.....	1
EXISTING LEVEL OF CONDITIONS.....	1
PROPOSED IMPROVEMENT PLAN	2
FIGURE – PROPOSED ROADS PRINCETON AREA (NEAR RT. 206).....	3
ANALYSIS OF PROPOSED IMPROVEMENT ALTERNATIVES	4
CONCLUSION	5
APPENDIX	

INTRODUCTION

The intersection of Route 206 at Cherry Valley Road/Princeton Avenue is currently operating at unsatisfactory “levels of service” during peak morning and peak afternoon roadway hours. Traffic engineers describe capacity conditions at a particular intersection in terms of levels of service. Levels of service range from “A” to “F” with “A” being the highest or best attainable level of service and “F” being the lowest. In addition to the unsatisfactory levels of service, the geometry of the intersection and lack of left-turn lanes present additional safety problems. In response to these conditions, the Montgomery Township Transportation Advisory Committee (TAC) has investigated means of improving the capacity and safety of this intersection.

EXISTING LEVELS OF SERVICE

Based on the existing configuration of the Route 206 Cherry Valley Road/Princeton Avenue intersection, the overall intersection is operating at level of service “F” during both AM and PM peak street hours. *Figures 1 and 2* illustrate existing AM peak street hour traffic volumes (including Hillside Avenue in Princeton Township) and levels of service for the intersection as a whole and on each of the four approaches to the intersection. *Figures 3 and 4* illustrate existing PM peak street hour traffic volumes and levels of service for the intersection as a whole and on each of the four approaches to the intersection.

PROPOSED IMPROVEMENT PLAN

After evaluating existing peak hour traffic volumes and peak hour levels of service, the TAC investigated numerous ways to improve the intersection. Initially, consideration was given to the type of traditional intersection widening that would be required to accommodate turning lanes at the intersection itself. However, in order to provide for the proper cross sections to accommodate approach and departure lanes on each leg of the intersection, it was concluded that extensive right-of-way takings would be required. The likelihood of obtaining the necessary right-of-way, preparing design plans and implementing those changes within a short time frame was considered unrealistic. Furthermore, due to the angle at which the roadways intersect, even with significant right-of-way takings and widening, certain turning movements at the intersection would remain geometrically difficult.

Based on the foregoing, alternative methods of improving the intersection were explored. A concept was put forward for discussion which included construction of a two-way municipal roadway to be constructed in the northeast quadrant of the intersection (behind the existing Sunoco station) in combination with a similar two-way roadway to be constructed in the southwest quadrant of the intersection within Princeton Township. The conceptual improvement is shown on the following page. The proposed roadways would be under municipal jurisdiction in both Montgomery and Princeton Townships and would enable all left-turns at the intersection to be prohibited and shifted to the new municipal roadways. For example, northbound Route 206 traffic wishing to make a left-turn onto Cherry Valley Road westbound would travel northbound through the intersection, turn right onto the new municipal roadway, turn right at the municipal roadway intersection with Princeton Avenue and then proceed straight through to Cherry Valley Road westbound. Southbound Route 206 traffic would turn left onto Princeton Avenue via a similar series of right-turns on the new Princeton Township roadway in the southwest quadrant of the intersection.

Motorists on Cherry Valley Road and Princeton Avenue wishing to turn left onto Route 206 would travel through the intersection and then make a left-turn at the appropriate municipal roadway. They would then proceed to a right-in/right-out intersection on Route 206 where they would make a right-turn to proceed to their destination.

Meetings have been held with Princeton Township officials and with the New Jersey Department of Transportation (NJDOT) to explore and discuss this concept. Both Montgomery Township and Princeton Township officials have reached a consensus that this intersection improvement scenario is feasible and have decided to work toward its implementation. NJDOT officials have conceptually agreed to the concept subject to further review of detailed plans.

ANALYSIS OF PROPOSED IMPROVEMENT ALTERNATIVES

Figure 5 illustrates existing AM peak street hour traffic volumes redistributed through the intersection and on connecting municipal roadways assuming the alternative improvement plan is in place. *Figure 6* illustrates the overall intersection level of service and level of service on each approach should this improvement alternative be implemented. Similarly, *Figure 7* illustrates PM peak street hour volumes redistributed in accordance with the improvements and *Figure 8* illustrates the overall intersection level of service and level of service by approach, if implemented.

The overall intersection level of service can be improved to level of service “B” during the AM peak street hour and to level of service “C” during the PM peak street hour with the improvements in place. Furthermore, all approaches to the intersection will operate at level of service “E” or better during both peak hours.

CONCLUSION

It is the conclusion of the Montgomery TAC that the Route 206/Cherry Valley Road/Princeton Avenue improvements as outlined in this report offer a viable means of improving intersection capacity and safety. Furthermore, the level of right-of-way acquisition necessary to effectuate this alternate is less intense, thereby decreasing costs and design considerations and dramatically increasing the possibility of implementing a solution within a relatively short time frame. This improvement alternative is therefore being offered as an amendment to the Montgomery Township Traffic Circulation Plan Element.

APPENDIX