

Before/ After Analysis (Interim Results)
West Maple Road 4-Lane to 3-Lane Conversion

Evaluation Criteria	Before Condition (4-Lanes W. Maple Rd.)	After Condition (3-Lanes W. Maple Rd.)	Difference
Crash Analysis		Crash Average (3 months)	
	11.7	4.0	-7.7
Average Speeds¹		Eastbound 85th Percentile Speed (mph)	
W. Maple Road	41	37	-4
14 Mile Road	38	40	2
Lincoln Street	31	31	n/c
Oak Street	31	31	n/c
Quarton Road	42	44	2
		Westbound 85th Percentile Speed (mph)	
W. Maple Road	45	37	-8
14 Mile Road	39	39	n/c
Lincoln Street	30	31	1
Oak Street	30	31	1
Quarton Road	45	43	-2
Traffic Volumes		Average Daily Traffic Volume (vehicles per day)	
W. Maple Road ²	27,190	22,643	-4,547
14 Mile Road	17,917	16,717	-1,200
Lincoln Street	6,698	6,269	-429
Oak Street	3,047	3,422	375
Quarton Road	19,986	19,528	-458
Cut-Through Traffic		Vehicles Per Hour	
Northbound	157	136	-21
Southbound	232	172	-60
Total	389	308	-81
Level of Service		W. Maple Rd. & Chester Street	
AM Peak Hour	B	B	n/c
PM Peak Hour	C	C	n/c
		W. Maple Rd. & Southfield Road	
AM Peak Hour	B	B	n/c
PM Peak Hour	B	C	B to C³
Travel Time		Average Travel Time (min)	
Eastbound W. Maple Rd.	3.5	3.2	-0.3
Westbound W. Maple Rd.	3.0	3.0	n/c

Key: Decrease No change/Indiscernible Increase

¹ Changes in speed of ± 2 mph are indiscernible.

² Before condition volume is an average of 1999-2002; since these volumes were taken, an overall 20% reduction in traffic volumes occurred, reaching the lowest level in 2008. Volumes are slowly returning to their peak volumes at a growth rate less than 1% annually.

³ Delay increased by 4.7 seconds, which changed the LOS letter grade, however this increase in delay would be indiscernible.

Crash Analysis: The crash rates on the corridor dropped from a three month average of 11.7 crashes to 4.0 crashes. The crashes that occurred during the interim analysis period were all rear-end type crashes.

Average Speeds: The average speeds on W. Maple Road decreased. The 85th percentile speeds now correspond with the posted speed limit on W. Maple Road. In addition, the conversion did not significantly change the 85th percentile speeds on the parallel routes.

Average Daily Traffic: Overall, the average daily traffic volumes decreased. The exception is on Oak Street, which was recently improved and the increase in traffic volumes can be attributed to more vehicles using this roadway now that traffic has normalized through the area.

Cut-Through Traffic: There was a significant reduction in cut-through traffic; most notably on Arlington Street/Shirley Road and Chesterfield Ave.

Level of Service: There was generally no change in the Level of Service (LOS) along the corridor. All intersections continue to operate acceptably. A LOS D is generally considered the lowest acceptable grade.

Travel Times: There was generally no change in travel time along the corridor; there was a moderate decrease for eastbound traffic (18sec) and no change for westbound traffic.