

## Memo

TO: Thomas Forster – Varum LLP  
*Attorney-Client Privilege*

FROM: Timothy J. Likens, PE, PTOE

DATE: January 17, 2024

PROJECT NO.: 230233

SUBJECT: Traffic Impact Study – Field Site  
Alternative Routes (M-59)

Fishbeck has been providing traffic engineering services for the Levy site in Springfield Township, Oakland County, Michigan. To date, Fishbeck has delivered site observation materials and findings, as well as a draft traffic impact study report relative to this fixed haul route. Fishbeck also provided a memorandum dated December 20, 2023 which outlined findings of an operational analysis utilizing Milford Road and Hickory Ridge between the site and M-59.

Subsequent to completion of this work, Fishbeck staff met virtually with Levy on January 10, 2024. During this meeting the team discussed key findings of the alternative route analysis and field investigation. The following summarize those findings, points of discussion, and related information:

1. The study intersections along the alternative routes operate acceptably, resulting in the following conclusions:
  - a. New truck traffic would not adversely impact operations along the alternative routes.
  - b. Material hauling would not be inhibited by existing capacity deficiencies along the alternative routes.
2. Trucks destined for M-59 must make a left-turn from STOP from WB Davisburg Road to SB Milford Road. Operational results indicate that adequate gaps are available on Milford Road to complete this turn; however, there is a horizontal curve on Milford Road to the north. Overhead flashing beacons (amber for Milford Road, red for Davisburg Road) are installed above the intersection to enhance safety.
  - a. Generally, vegetation clearing at intersections to improve sight distance may be desirable to both Levy and Oakland County.
3. South of Clyde Road, considerations for the use of Milford Road versus Hickory Ridge Road include:
  - a. Milford Road is abutted by more densely developed land uses than Hickory Ridge Road.
  - b. Traffic along Milford Road will encounter an additional traffic signal; whereas traffic along Hickory Ridge Road will encounter an additional 4-way STOP.
  - c. 2023 PASER pavement condition ratings indicate fair to good pavement conditions along both alternative routes. Milford Road was resurfaced in 2019 within the limits of Highland Township.

4. The intersections of M-59 with Milford Road and Hickory Ridge Road are controlled by traffic signals and indirect left-turns (crossovers), except as noted below. Turning movements operate acceptably and turn lane storage lengths are adequate to accommodate additional truck volumes.
  - a. The left-turn movement from EB M-59 to NB Milford Road is currently permitted directly at Milford Road, which is atypical of a boulevard with crossovers but functions acceptably.
  - b. Portions of M-59 have recently been resurfaced and traffic signals modernized in this vicinity; therefore, removal of this direct left-turn in the immediate future is not expected.
  - c. Truck traffic on EB M-59 destined for NB Milford Road should continue to utilize the signalized direct left-turn at Milford Road; whereby the EB to WB crossover east of Milford Road is STOP controlled with limited visibility of conflicting WB traffic over a crest vertical curve.
  - d. Although unlikely in the near term, future elimination of this direct left-turn is expected to trigger the need for signalization of the EB to WB crossover on M-59 east of Milford Road.
5. The Road Commission for Oakland County (RCOC) truck operator's map indicates that Milford Road is "Designated" (formerly Class A) between Davisburg Road and M-59. Hickory Ridge Road is "Special Designated" between Clyde Road and M-59; however, Clyde Road is classified "Normal" (formerly Class B) between Milford Road and Hickory Ridge Road (approximately 2.25 miles).
  - a. "Designated" routes carry a 25% weight reduction when Spring restrictions are in force. "Normal" routes carry a 35% reduction when Spring restrictions are in place. "Special Designated" routes do not typically carry a Spring weight restriction.
6. Michigan Department of Transportation (MDOT) Annual Average Daily Traffic (AADT) volume maps indicate the following existing (2022) two-way volumes of total and commercial (heavy vehicle) traffic. These data indicate these roadways carry approximately 3% heavy vehicle traffic. Peak hour data collected by Fishbeck across the study network indicates similar overall percentages.

Study Area AADT/CAADT Volumes (vehicles per day)

Roadway	AADT	CAADT
Ormond Road	3229	93
Davisburg Road	4054	117
Milford Road (N of Clyde)	4857	142
Milford Road (S of Clyde)	11830	343
Clyde Road	3258	95
Hickory Ridge Road	7303	212

By email

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