

TECHNICAL MEMORANDUM

TRIP GENERATION – VAN BUREN WEST DEVELOPMENT

To: Hikmat Kassem, P.E. (Wayne County DPS) **MEMO WAS NOT SENT TO WAYNE COUNTY**
From: Kristopher D. Ball, P.E., PTOE (The Mannik & Smith Group)
CC: Kevin Lund, P.E. (The Mannik & Smith Group); Alan Ko, P.E. (Wayne County DPS); Eric Lentz, P.E. (Wayne County DPS); Pete Milenkovich, P.E. (Wayne County DPS)
Date: March 19, 2025

Project #: 2401193
Re: Trip Generation – Van Buren West Development

The purpose of this technical memorandum is to summarize trip generation for a proposed industrial land use located in the southeast quadrant of the US-12 (Michigan Avenue) & Ecorse Road interchange in Van Buren Township, Michigan (see Figure 1). The industrial land use will include 100,000 square feet of manufacturing space with 85 projected employees and one (1) unsignalized access location along Ecorse Road (see Figure 2). Trip generation for the proposed site was estimated using the Institute of Transportation Engineers' (ITE's) *Trip Generation Manual, 11th Edition*. The manual provides equations to estimate trips for various land use codes (e.g., 110 – General Light Industrial, 210 – Single-Family Detached Housing, etc.) based on independent variables that quantify the land use size (e.g, gross square feet, total employees, number of units, etc.). For this technical memorandum, total trips and truck trips for the proposed land use will be estimated using ITE land use code 110 – General Light Industrial and an independent variable of total employees (85). Total trips and truck trips for the proposed industrial facility are summarized in Table 1.



Figure 1 – Project Location



Figure 2 – Site Plan

Table 1 – Trip Generation Estimates: Van Buren West Development									
ITE Land Use Code (Size)	AM Peak Hour			PM Peak Hour			Weekday Total		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
Truck Trips 140–Manufacturing (85 Employees)	0	1	1	2	1	3	14	15	29
Total Trips 140–Manufacturing (85 Employees)	48	10	58	19	30	49	140	140	280

As summarized in Table 1, the proposed development is projected to generate 280 total weekday trips (140 inbound, 140 outbound), 58 total AM peak hour trips (48 inbound, 10 outbound), and 49 total PM peak hour trips (19 inbound, 30 outbound). The proposed development is projected to generate 29 total weekday truck trips (14 inbound, 15 outbound), one (1) AM peak hour truck trip (zero inbound, one outbound), and three (3) PM peak hour truck trips (two inbound, one outbound).

The Michigan Department of Transportation (MDOT) Geometric Design Guidance states that a traffic impact study is required for any development that generates over 100 peak hour directional trips. As this development is only projected to generate at most 48 directional peak hour trips, a traffic impact study is not required by MDOT. Additionally, the MDOT Geometric Design Guidance states that a traffic impact assessment is required for any proposed development that is expected to generate between 50 and 99 directional peak hour trips. As this development is only projected to generate at most 48 directional peak hour trips, a traffic impact assessment is not required by MDOT.