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May 30, 2023

RE: Proposed Warehouse Traffic Impact
Study Letter Proposal
SEH No. GREDA 172840 14.00

Rob Mattei
Community Development Director
City of Grand Rapids
420 N Pokegama Ave
Grand Rapids, MN 55744

Dear Mr. Mattei

The following letter proposal encompasses the effort needed to create a traffic impact study for a potential Proposed Warehouse located on the east side of Airport Road and SE 29th Street. The results of this effort will help identify potential roadway and intersection improvements to maintain acceptable levels of service to the surrounding roadway network.

Project Background

A developer is currently proposing a warehouse facility to be located on the east side of Airport Road and SE 29th Street. At this time, the proposed site is currently expected to have several access points onto Airport Road to help support its daily operations. At the year of opening the site is expected to serve approximately 32 heavy vehicles and 90 employees, for a total of 1,220 weekly trips. At full build out of the site, heavy vehicles are expected to increase to 51 trucks with 113 employees working on site.

The following tasks outline the scope of work needed to complete a traffic impact study review of the proposed development.

Task 1 – Project Management

1. General project management including coordination and monthly invoices.
2. Assumes one virtual (1-hour) meeting with the City of Grand Rapids staff to review findings of traffic impact study.

Deliverables: Monthly invoices, meeting agendas and meeting minutes

Task 2 – Data Collection

1. Collect 13-hour video data on a typical weekday (Tuesday – Thursday) at the following intersection:
 - a. Airport Road and SE 29th Street

Deliverables: 13-hour traffic, pedestrian, and bicycle count data

Task 3 – Traffic Forecasting

1. Complete traffic forecasts for a future design year (2028). Growth rates to be determined from historical AADT volumes along the surrounding roadway network. A review of previous studies in the area will also be completed to ensure consistency between forecasting efforts.

Deliverables: 2028 traffic forecasts

Engineers | Architects | Planners | Scientists

Short Elliott Hendrickson Inc., 1390 Highway 15 South, Suite 200, P.O. Box 308, Hutchinson, MN 55350-0308

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Task 4 – Traffic Operational Analysis and Safety Analysis

1. Existing Conditions
 - a. Overall review of surrounding roadways and geometrics
 - b. Complete traffic operations (peak hour) analysis using Synchro/SimTraffic Software
2. Crash Analysis
 - a. Perform a crash analysis of the 5-year crash history at the roadway intersections and surrounding roadway segments along Airport Road from SE 21st Street to SE 33rd Street.
3. Trip Generation
 - a. Use provided development information to develop trip generation estimates for the weekday daily, AM and PM peak hours
4. Trip Distribution and Assignment
 - a. Perform trip distribution and assignment utilizing information generated from Task 2.1 and 4.3.
 - i. This would include the following two scenarios:
 1. Evaluating the most impactful scenario of all traffic traveling to and from the north.
 2. A more realistic distribution of traffic to and from the north and the west.
5. Warrant Analysis
 - a. Conduct warrant analysis for an all-way stop and traffic signal control at the intersection of Airport Road and SE 29th Street for the following scenarios:
 - i. Year of opening
 - ii. Future full build out (2028)
6. Future Conditions Analysis
 - a. Review weekday AM and PM peak hour level of service (LOS), delay, capacity, and maximum estimated queues for the intersection of Airport Road and SE 29th Street and all site access points.
 - b. Operational analysis will be conducted for the following scenarios:
 - i. Future year 2028 No Build conditions
 - ii. Trip Distribution: All traffic to and from the north
 1. Future year 2028 Build conditions (including site development)
 2. Future year 2028 Build conditions with potential mitigations (if needed)
 - a. Mitigation analysis will include analyzing the need for geometric and traffic control improvements to the intersection of SE 29th Street and Airport Road as well as the site driveways
 - iii. Trip Distribution: Normal distribution to and from the site
 1. Future year 2028 Build conditions (including site development)
 2. Future year 2028 Build conditions with potential mitigations (if needed)
 - a. Mitigation analysis will include analyzing the need for geometric and traffic control improvements to the intersection of SE 29th Street and Airport Road as well as the site driveways

Deliverables: Existing and future year (2028) traffic operational summary, warrant analysis summary, crash analysis

Task 5 – Traffic Impact Analysis Memorandum

1. A draft Traffic Impact Study Memorandum will be compiled summarizing study methodologies, analysis results, and improvement recommendations completed in Tasks 1-4. A draft traffic impact study will be submitted electronically to the City of Grand Rapids for review.
2. Upon receiving comments, SEH will prepare a final memorandum that will incorporate all comments received.

Deliverables: Draft and Final Traffic Impact Study Memorandum, traffic operations analysis data, improvement recommendations

Schedule

We are prepared to begin work on this project and upon authorization to proceed we anticipate completing a draft of this study approximately three weeks after notice to proceed.

Fee

The proposed Lump Sum Fee is estimated at \$8,500.

Sincerely,

SHORT ELLIOTT HENDRICKSON INC.

A handwritten signature in black ink, appearing to read 'Chad Jorgenson', with a stylized flourish at the end.

Chad Jorgenson, PE, PTOE
Project Manager

CMJ