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Technical Memorandum

Date: October 27, 2021
To: Mr. David C. Smith, AICP
Village of Libertyville
From: Brian R. DeSalle, P.E. PTOE
James R. Woods, P.E., PTOE
Civiltech Engineering, Inc.
Re: Proposed Liberty Junction Residential Development
Between Adler Drive and IL Route 137
Review of October 11, 2021 Revised Traffic Impact Study

At the Village's request, we have reviewed the October 11, 2021 Revised *Traffic Impact Study* (TIS) prepared by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for the proposed development of approximately 15 acres of vacant property located between Adler Drive and IL Route 137 to the west of IL Route 21 (Milwaukee Avenue) in the Village of Libertyville. Previously, Civiltech prepared an August 17, 2021 review of a May 10, 2021 *Traffic Impact Study* (TIS) for this development. The proposal went before the Plan Commission on September 27, 2021 and was continued to a future PC meeting.

The revised TIS was issued in response to Civiltech's comments on the previous TIS as well as to address additional Civiltech comments issued on October 7, 2021. These additional comments were issued to address the developer's disposition of Civiltech's comments on the May 10, 2021 TIS as well as questions and concerns presented by the public and Commissioners at the September 27th Plan Commission meeting.

We offer the following comments on the October 11, 2021 revised TIS provided by KLOA, as well as the revised site plan dated October 11, 2021. These should be addressed and a written disposition should be prepared as part of the Village's review and approval process.

Civiltech Comments from August 17, 2021

1. All outstanding comments from the August 17, 2021 review memo have been addressed in the developer's response letter dated September 23, 2021.

Civiltech Comments from October 7, 2021

1. Unless otherwise noted below, the comments in the October 7, 2021 Civiltech comment letter have been addressed in the revised TIS.
2. [Response to 8/17 Comment #13] – While it is understood that Wildberry does not want to shift the northernmost access along IL Route 21, we continue to recommend that the entrance be shifted south to align with the southernmost east-west parking aisle in order to increase the distance

between the intersection of IL Route 21/IL Route 137 and the Wildberry driveway. This change would improve ingress and egress from southbound IL Route 21 for that property.

3. [Additional Comment 2] – As a proactive measure, Civiltech performed a high-level analysis of the Hotel land use as proposed in the 2030 Libertyville Comprehensive Plan for that portion of the site, and found that the additional traffic generated by that land use could be accommodated by the roadway network as proposed in the current development plan. Ultimately, a new traffic study should be prepared for any proposed development on Lot 2 to ensure that the Village’s roadway network can accommodate the proposed land use for that parcel without adverse impacts to the surrounding area.
4. [Additional Comment 4] – Signal warrant analyses were not included in the revised TIS for the IL Route 137/Cass Avenue and the IL Route 21/Adler Drive intersections and therefore this comment has not been addressed. The developer should be prepared to explain why a signal would not be warranted at those locations, as installation of a signal at those intersections was mentioned several times by the public during the September 27 PC meeting.
5. [Additional Comment 5] – Restriction of the north intersection of Wildberry Lane to right-in access only was not considered as part of the revised TIS, and therefore this comment has not been addressed. Such a restriction is not recommended, however, the developer should be prepared to address comments from the public and/or Plan Commission as to what the effects of such a restriction would be if it comes up in testimony.

Comments on October 11, 2021 Revised Traffic Impact Study

1. It is noted that the number of proposed townhome units has been decreased from 90 to 80 in the revised site plan, and therefore, the number of trips generated by the proposed residential development will be lower than estimated in the original May 2021 TIS.
2. For the redistribution of Wildberry Café traffic on Exhibit X – is the traffic traveling south on Wildberry Lane intended to turn left onto Adler Drive, then right onto IL Route 21? The exhibit shows the vehicles turning right onto Adler toward Cass Avenue, but the volume shows up at IL Route 21 instead, and only three vehicles end up at Cass Avenue. Please clarify these movements and revise the exhibit accordingly. It is our conclusion that the heavier Saturday traffic was intended to be destined to the south on IL Route 21 and thus the traffic analyses were reviewed accordingly.
3. We concur that the intersection of IL Route 21 and Adler Drive will experience only small increases in delay compared to 2027 No-Build conditions due to traffic generated by the proposed development and anticipated diversion of some Wildberry Café traffic. Therefore, no intersection improvements are recommended that would be attributable to the proposed development.
4. While the Level of Service for the northbound left turn at the Cass Avenue/IL Route 137 intersection does degrade from a D to an E during the weekday morning and evening peak hours, the approach remains well under capacity and delays and queues are not excessive with the additional traffic anticipated to result from the proposed residential development. Therefore, we concur that the intersection operates acceptably and no intersection improvements are recommended that would be attributable to the proposed development.
5. The intersection of Adler Drive and Wildberry Lane was analyzed under several different conditions in the revised TIS. The conditions included the original proposed design, with Adler Drive being continuous and Wildberry Lane being stop-controlled; the design proposed in the Libertyville 2030 Comprehensive Plan, with Wildberry Lane being the continuous route and Adler Drive being stop-controlled; and a “middle” variation where all approaches are stop-controlled. The TIS concludes that the Adler Drive continuous option is preferred over the others, however, based

on the capacity analysis results, it would seem like the all-way stop control (AWSC) alternative balances the delay the best across all approaches. The AWSC alternative also would be preferable for pedestrian safety given the presence of the new pedestrian crosswalks at the intersection. Therefore, we recommend that the proposed alignment in the 2030 Comprehensive Plan be adhered to with Wildberry Lane as the continuous route. Additionally, all-way stop control should be installed at the Adler Drive/Wildberry Lane intersection to balance traffic delays and provide safer pedestrian crossings.

6. We concur that the traffic impacts of the proposed residential development to the other intersections within the study area remain minimal compared to 2027 No-Build conditions.