

January 30, 2023

Mr. Don Serotta, Chairman
Town of Chester Planning Board
1786 Kings Highway
Chester, NY 10918

Davidson Drive Holdings, LLC
Town of Chester, Orange County, New York
Colliers Engineering & Design Project No. 23002650A

Dear Chairman Serotta and Members of the Planning Board:

As requested, we have completed a preliminary review of the Site Plans prepared by Arden Consulting Engineers, PLLC revision dated January 17, 2023 and Traffic Impact Study prepared by Creighton Manning Engineering, LLP dated September 21, 2021 and revised January 18, 2023 (Revision #1) submission for the proposed Davidson Drive Holdings, LLC development. The proposal calls for the construction of a 166,024 sq. ft. light industrial/warehouse development on Davidson Drive immediately north of Lake Station Road just southwest of Bellevale Road (CR 82). Our review has focused on the methodology utilized, appropriateness of data and analysis results, as well as the adequacy of any recommended mitigation outlined for the project. We have also inspected the site and reviewed any proposed improvements to assist with the completion of our review. The following outlines the various areas reviewed and our preliminary findings and recommendations. Note that any outstanding items or other items that either need to be addressed or for the Board's consideration are identified in **bold type**.

General

Overall, the traffic study was prepared in accordance with the standard procedures and methodology required by NYSDOT, OCDPW and the Institute of Transportation Engineers (ITE) in evaluating and assessing development proposals as related to access and potential traffic impacts. The specific components of the study which we reviewed included each of the following:

Existing Traffic Conditions

Based on the traffic data included in the Traffic Study, including available information from NYSDOT and OCDPW, the time periods and existing peak hours identified appear to be appropriate. In establishing the existing traffic volumes, the manual intersection movement turning counts were also reviewed and copies of the data are included in the study. The study also notes that the 2021 AM Peak Hour traffic volume data was adjusted by a factor 1.10 based on comparison to available NYSDOT traffic volume data to account for pre-COVID traffic volume conditions. Based on a review of the available data, this adjustment appears appropriate. No adjustment was applied to the 2021

PM Peak Hour volume since higher traffic volumes were observed during the 2021 data collection than those indicated by NYSDOT. The study also notes that no volumes were observed entering or exiting Paradise Lane during spot counts of that intersection. As such the traffic study estimates the traffic entering and exiting Paradise Lane based on ITE data for the seven (7) single family homes along the roadway. These estimated volumes are appropriate. Our comments on the existing roadway and traffic volume conditions are provided below.

1. Based on the size of the project and the expected traffic distributions, the evaluation of other intersections including Kings Highway By-Pass at Bellevale Road and Kings Highway at Laroe Road/Leone Lane should also be evaluated together with any others the Board believes should be addressed in more detail. Specifically, the Kind Highway at Laroe Road/Leone Lane intersection has been an intersection of concern for the OCDPW relative to the overall operation and safety of the intersection and OCDPW should also be contacted for coordination.
2. The description of the area roadways covers key factors and identifies the roadway system, but it should be expanded to include a reference to the description of the Kings Highway By-Pass (CR13A) vs. Kings Highway (CR13).
3. The traffic study identifies existing signed 10-ton weight limit restrictions along Kings Highway through the Hamlet of Sugar Loaf. The study also indicates that an Access Highway Designation Request was submitted to NYSDOT on January 19, 2022, and approved by NYSDOT on April 7, 2022, which included a truck routing map. This information has not been provided to our office for review but should at a minimum be provided to the Board for confirmation if it has not already been provided.
4. Some of the 2021 existing traffic volumes were collected in July 2021 when schools were not in session. It is recommended that new spot counts be conducted to confirm the traffic volumes and capture any school bus traffic that may be traveling through the study area intersections.

Future Conditions Without the Proposed Development (No-Build Conditions)

The study accounted for a background growth rate of 1% percent per year based on historical NYSDOT data, to grow the existing 2021 existing traffic volumes to the 2024 design year. Additionally, future traffic conditions also account for several other proposed developments, including those listed in Table 2 of their study to develop a 2024 No-Build without the project.

5. The use of a 2024 design year seems aggressive considering it is already 2023. The adequacy of this analysis design year should be discussed with the Board.
6. It should be verified that there are no other significant developments planned that could affect the background traffic conditions.

7. A review of the 2024 No-Build Traffic Volumes indicates some discrepancies from the Existing to No-Build Volumes. Based on spot checks of the 2024 No-Build Traffic Volumes the following intersection movement volumes were found to not sum to the expected numbers.

	2021 Existing Volumes (Figure No. 1)	Other Development Volumes (Figure No. 1)	2024 No-Build Volume (Figure No. 2)	Expected 2024 No-Build Volumes
AM Peak Hour				
Kings Highway NBL at RT 17M	365	13	385	389
Kings Highway NBL at RT 17M	163	4	170	172
PM Peak Hour				
Kings Highway NBL at RT 17M	351	57	418	418
Kings Highway NBL at RT 17M	151	26	180	182
RT 17M WBT at Kings Highway	277	22	277	307
Kings Highway NBT at Lake Station Road	213	26	229	245

Some of these discrepancies may be the result of rounding errors, while others appear to be more significant. These only represent spot checks of some of the traffic volumes, not all volumes have been confirmed. The Applicant's traffic consultant should review and confirm the 2024 No-Build Traffic Volume calculations.

Estimates of Site Generated Traffic

The site traffic generation estimates were computed based on a series of calculations including the standard reference to the ITE's *Trip Generation Handbook*, which outlines the methodology for calculating trip generation for various land uses. The study does appropriately use the latest edition, i.e. 11th Edition, of the *Trip Generation Handbook*, which was published in 2021. The site generated traffic estimates presented in Table No. 1 and 1A of the traffic study are based on ITE Land Use category 110 – General Light Industrial, which is appropriate for the proposed use.

8. There appears to be an anomaly if the ITE data between the AM and PM Peak Hour traffic generation that results in the PM Peak Hour traffic generation being half the AM Peak Hour based on the ITE Equation rates. If the PM Peak Hour traffic generation were calculated based on the ITE Average rate the total estimated traffic generation would be 108 trips, which is more consistent with the ITE AM Peak Hour data. Furthermore, the ITE data indicates the facility traffic generation during the facilities Peak Hour of Generator could be as much as 115 total trips. However, it is possible that the hours of operation of the facility will result in peak hours of generation that do not coincide exactly with the peak hours of

adjacent street traffic. The Applicant should confirm the hours of operate and shift times (if any are anticipated) to better assess the adequacy of the traffic generation estimates.

9. Relative to the hours of operation and shift times, the Traffic Study Project Description indicates the facility will have a single shift from 8:00 AM to 6:00 PM consisting of 45 employees, while the Conclusion indicates, "It is anticipated that the largest shift will consist of 45 Employees." Lastly, the EAF (Section D.2.j) indicates hours of operation between 7:00 AM and 7:00 PM. These should be confirmed and adjusted for consistency.
10. The EAF (Section D.2.j) also indicates "An average of 40 semi-trailer truck trips per day and 40 cars per day per" which is not consistent with the estimates provided in the Traffic Impact Study.
11. Finally, the EAF (Section D.2.j) indicates a total 332 parking spaces are proposed, however the Site Plan indicates 63 proposed passenger car spaces and 13 truck spaces proposed on the Site. These numbers should be confirmed and adjusted for consistency.

Arrival/Departure Distributions & Trip Assignment

The arrival and departure distributions and vehicle trip assignment for the Project are shown on Figures No. 3, 4, 5, and 6. The arrival and departure distributions used to apply the site generated traffic volumes to the roadway network are generally consistent with traffic patterns in the surrounding area and are appropriately categorized by both truck and passenger car distributions.

12. Although not critical to the traffic analysis, the Traffic Study notes that passenger car and truck traffic will be separated on the site with all passenger car parking utilizing the first driveway to Davidson Drive and all truck traffic utilizing the second driveway Davidson Drive. However, the site plan appears to show 13 passenger car parking spaces provided behind the building to be accessed via the second driveway to Davidson Drive. This should be clarified.
13. The truck distributions indicate that all truck traffic will arrive to and from the north on Kings Highway and utilizing Route 17M to the west. However, it would appear that truck traffic to and from the east along Route 17 may be more likely to utilize the Exit 127 ramp intersections to Route 17M and Lehigh Avenue east of Kings Highway. Given the limited amount of truck traffic to be generated by the Site, this should not significantly change the analysis results or conclusions of the traffic study.
14. A review of travel time and distance based on google maps and roadway inspections, taking into account typical traffic conditions indicates that the fast route between the Route 17 Exit 126/Route 94 interchange and the Project site could be to utilize Nucifora Boulevard/Elizabeth Drive/Leone Lane. This should be factored into the anticipated arrival & departure distributions.

Review of Capacity Analysis

The capacity analyses were completed utilizing the Synchro analysis software and take into account appropriate roadway characteristics, geometry and traffic volumes as indicated in the report. All information inputted into the Synchro files such as peak hour factors and heavy vehicle percentages aligns with the data collected in the field.

As shown on the Level of Service Summary table contained on Page 7 of the Traffic Impact Study the Project is not expected to result in any significant impacts on the operation of area intersections from the No-Build to Build conditions.

15. It appears the Level of Service Summary Table contained on Page 7 of the Traffic Impact Study should be labeled as Table No. 3 not Table No. 2 as indicated in the report.
16. It is unclear how the intersection of NYS Rout 17M/Lehigh Avenue/Kings Highway was conducted. Based on the analysis reports it appears that this intersection was analyzed as two separate intersections rather than a clustered intersection as would be anticipated for this location. However, the Level of Service Summary Table does indicate the fact that this is a clustered intersection. This should be clarified. It would be beneficial for the Synchro analysis files to be provided to our office for review of this item.

Site Access

17. Traffic Impact Study Section 4 – Site Access, Circulation & Parking indicates that the proposed portion of Davidson Drive to be built as part of the Project will connect to the existing portion of Davidson Drive to the north of the site. However, the Site Plan (Sheet No. 4 of 21) dated 3/11/22 does not appear to show any connection to Davidson Drive. It should be clarified whether the Project will have a connection to the existing portion of Davidson Drive and if so, whether this connection will be a full connection or emergency access only connection.
18. Traffic Impact Study Section 4 – Site Access contradicts with Section 1 – Project Description. Section 4 indicates the northerly site driveway to Davidson Drive will be used by trucks and passenger cars, which is consistent with the Site Plans. Section 1 indicates one of the driveways will be dedicated for truck use. Please clarify.
19. Additional information should be provided relative to sight distance at the Site Access intersection. While it appears sufficient sight distance will be provided, sight distance triangle should be provided on the plans to identify any areas of required clearing east and west of the driveway and also the areas of maintenance of any proposed landscaping in order to maintain the required sight distances.

Recommended Mitigation Measures

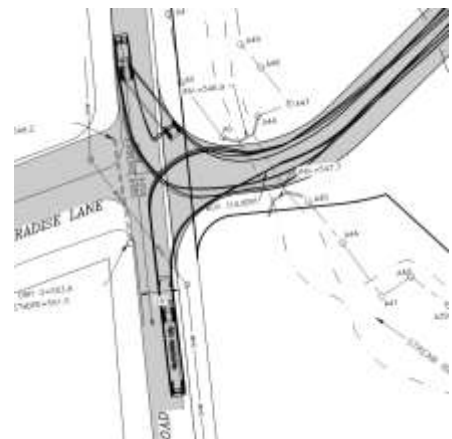
The Traffic Impact Study recommends the installation of modified warning signs along Kings Highway in the vicinity of Wickham Drive and Lake Station Road, which includes replacing the existing intersection ahead warning sign with a new offset intersection warning sign. No other offsite improvements are recommended as part of the Project.

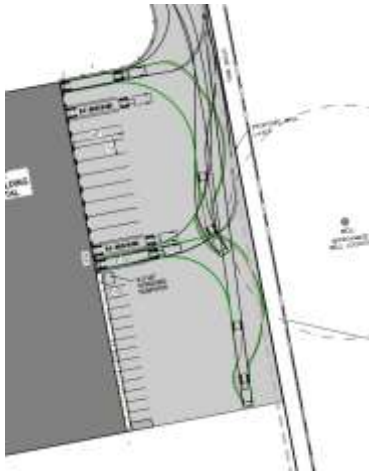
20. The recommended signing changes are appropriate. Input should be provided by the OCDPW since Kings Highway is a County Road and the modification will require their review and approval.
21. Considering the anticipated additional traffic at the intersection of Kings Highway & Lake Station Road as a result of the Project, the installation of stop bar and double yellow centerline striping along Lake Station Road should be considered.
22. The installation of a stop bar along Lake Station Road at Bellevale Road should also be considered.
23. The pavement structure and physical condition of Town roadways should be addressed by the Applicant's engineers with the Highway Superintendent.
24. Input should be sought from both OCDPW and NYSDOT on this Project. Input from OCDPW is especially important given that primarily County roadways will be utilized for local access to the Project.

Truck Circulation

The Truck Turning Diagram plans (Sheet No. 15, 16 and 17 of 21) of the Site Plan set provide truck maneuvers for a WB-67 design vehicle within the site, at the site access connection to Lake Station Road, at the Lake Station Road/Bellevale Road intersection and at the Lake Station Road/Kings Highway intersection.

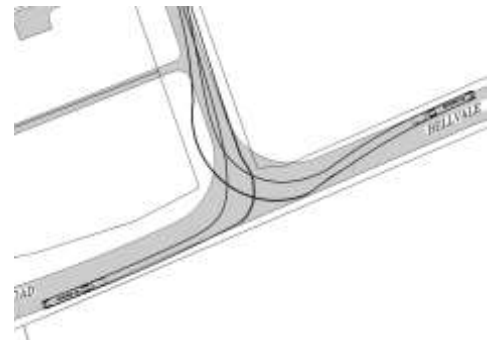
25. Plan Sheet 15 of 21 shows the WB-67 vehicle making a right turn out of the Site. The Traffic Study indicates all trucks will make a left turn out of the Site. This should be clarified.
26. The truck maneuvers at the Site access intersection (Sheet No. 15 of 21) appear to show that a truck turning into the site will not be able to make this maneuver at the same time that another vehicle is also exiting the site. Potential improvements should be identified by the Applicant's engineers and this should be reviewed further by the Board.





27. The truck turning maneuvers for trucks at the back of the building (Sheet No. 15 of 21) appear to indicate that trucks would be unable to back into or pull out of the truck spaces if a truck is already parked in the immediately adjacent spaces. This needs to be reviewed further as it may require some modifications to the building or paved area in this vicinity.

28. The truck turning maneuvers for trucks at the intersection of Bellvale Road and Lake Station Road (Sheet No. 16 of 21) appear to show trucks using significantly more than the available roadway width to make a right turn from Bellvale Road southbound onto Lake Station Road. The limits of available pavement and the turning maneuvers at this intersection should be clarified. It also appears that maneuvers at this intersection would not be possible at the same time as a vehicle stopped waiting to exit Lake Station Road.



29. The truck turning maneuvers for trucks at the intersection of Bellvale Road and Lake Station Road (Sheet No. 16 of 21) also show trucks turning left onto Lake Station Road from Bellvale Road northbound. The traffic study indicates all trucks will be traveling to and from the north. This should be clarified.
30. Plan Sheet No. 17 of 21 shows truck turning maneuvers at the intersection of Kings Highway and Lake Station Road. The traffic study indicates that there will be no trucks from the Site utilizing this intersection. This should be clarified.
31. If trucks are anticipated to utilize the intersection of Kings Highway and Lake Station Road Plan Sheet No. 17 of 21 should be clarified to identify the roadway pavement limits at this intersection. It appears only GIS parcel data is utilized to show the truck turning movements at this intersection.

Accident Evaluation

Accident data was not obtained and evaluated in the Traffic Study relative to the surrounding intersections. Accident data for the latest 5 years should be obtained and summarized in tabular form for the key roadways. If any high accident locations or specific patterns are identified, then these should be compared to State-wide averages and accident diagrams may also be necessary.

Overall, we generally agree that the Creighton Manning studies were conducted in accordance with the standard procedures and methodology required by the NYSDOT, OCDPW, and the Institute of Transportation Engineers (ITE). However, additional information as described above should be provided by the Applicant and their consultants for further review by the Board and our office.

Sincerely,

Colliers Engineering & Design CT, P.C.



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