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Ms. Kathleen Colwell
Planning Division Director
Department of Economic and Community Development
41 Pleasant Street
Methuen, MA 01844

January 12, 2021

Re: 33 Danton Drive, Methuen, MA
Civil Engineering Peer Review

Dear Ms. Colwell and Members of the Planning Board:

On behalf of the City of Methuen, TEC, Inc. reviewed documents as part of the civil engineering peer review for the project proposed at 33 Danton Drive. Nabil Boghos, ("Applicant") submitted the following documents prepared by Design Consultants, Inc. (DCI), which were reviewed by TEC for conformance with the City of Methuen Zoning Ordinance and industry standards and best management practices:

- Response package, prepared by DCI, dated January 5, 2021
- Site Plan Application, not dated.
- Site Plan for 33 Danton Drive, Methuen, MA 01844, dated November 20, 2020.
- Stormwater Management Report, dated November 4, 2020.
- Design Calculations, not dated.
- Traffic Memorandum, dated November 3, 2020.

For consistency, the outstanding original comment numbers have been retained from the TEC review letter dated November 24, 2020. The Applicants response to comments is shown as **bold**; TEC response are shown as *italic.*

Site Plan Review

6. As currently drawn, TEC does not believe that the Site Plans reflect a true limit of work at the rear of the property. Additional topography in the wooded area may be required. The construction detail calls for a retaining wall with maximum height of 13-feet, but TEC can not verify the accuracy of the detail without additional existing topography. In order to construct this wall, a contractor will need to clear and over-excavate behind the wall resulting in clearing/earthwork into the proposed 30-foot landscape buffer.
   DCI response (12/07/2020): See comment response 7 regarding survey. Regarding the wall, the detail is a generic block detail to be used for all heights but has been updated for this particular use. As the wall will be over 4', the contractor's structural engineer will be finally responsible for the design of the wall during the building permit.
   TEC: The closeup detail on sheet C501 provides the required information. Seven (7) trees are marked to be removed in order to construct the wall. Three (3) additional trees are marked "Contractor to preserve trees to extent possible". Approximately 24 existing trees within the buffer are marked to be preserved. TEC recommends the following to properly preserve the 30-foot buffer:
   - *Prior to construction, mark w/ ribbon all trees to be removed, and trees to be preserved*
   - *Marked trees should be inspected and approved by the City or its Agent*

- *Trees to be removed (up to 10 maximum) should be replaced with new tree plantings to enhance the 30-foot buffer*

DCI response (01/05/2021): These recommendations have been included as notes on Detail Sheet C501.
TEC: Comment addressed.

9. TEC believes that the site work on 31 Danton Drive (removal of existing pavement, concrete, fencing, landscaping) should be shown on the proposed Site Plans. These improvements should be considered a condition of this project. Permission from the abutting property owner should be provided.
DCI response (12/07/2020): 31 Danton Drive is not proposed as part of the project. We would advise against the city placing a condition on the project requiring any kind of performance on 31 Danton Drive as the applicant does not have the rights to perform work within 31 Danton Drive, and we are not proposing any design features that would make the project dependent on interactions with 31 Danton Drive. A condition such as the one proposed could potentially lead to a conflict between all parties associated with the project. That said, we understand the property lines creating the project parcel did not follow the area's physical features. Therefore, we have included a small amount of area on 31 Danton Drive in our stormwater calculations (increasing our own onsite mitigation requirements), and we have engaged the property owner to start a dialogue regarding temporary access, removal of pavement for landscaping, etc to allow the project to better blend in with the overall development. However, this process is ongoing, and in its current design, we do not require the participation of 31 Danton Drive ownership to complete the project. After reviewing, the only change we have made to the plans regarding this comment is to provide an additional area drain near the existing swale on our site to ensure the drainage from 31 Danton Drive is still collected as assumed with the drainage design without being forced to overland release onto Danton Drive.
TEC: Response noted. TEC recommends a fence, mid-height shrubs, or some type of physical barrier be installed to block the drive aisle from 31 Danton Drive. The concern is that a truck or patron of 31 Danton Drive attempts to drive between properties which is no longer a safe driving movement. Winter months and snow cover can make it difficult for motorists to discern between paved drive aisles and landscaped areas.
DCI response (01/05/2021): Fencing has been provided to enclose the potential areas of high hazard during winter months.
TEC: Comment addressed.

14. The Applicant should provide a truck turning analysis to prove that adequate access is provided to the rear of the site. The analysis should show the design vehicle accessing the rear of the site, parking in the proposed loading areas, and exiting the site.
DCI response (12/07/2020): Turning analysis provided.
TEC: A WB-40 truck is able to navigate the rear of the building and park within the truck parking area. In TEC's experience, the use of WB-40 trucks is uncommon for industrial uses. The Applicant should confirm that a WB-40 is the correct design vehicle.
DCI response (01/05/2021): DCI would agree with this statement regarding the size of the design vehicle and it was a point of discussion from the beginning of the project. (building size vs. truck access vs residential buffer impact/retaining wall) An analysis was conducted early in the design showing that up to WB-62's will be able

to function on the site, but very likely be unable to maneuver when the truck dock area is utilized at full capacity. This analysis and any restrictions on larger design vehicles were deemed acceptable by the property owner. For the purposes of the zoning approval, unless the city has an ordinance or guidelines requiring a vehicle greater than a WB-40 is provided to the required loading zones, we would ask that the WB-40's (small tractor trailers) be deemed acceptable for use in the city's required access analysis. We would also note that the project provides an excess of loading docks than required by code and the number of loading docks required by code would be able to be utilized by WB-62's. The original WB-62 template has been included for reference of the impacts.

TEC: Comment addressed. The Applicant has shown that the loading area is fully functional when a WB-40 truck is used. WB-62 trucks will only be able to use the loading dock under certain conditions.

Please do not hesitate to contact me directly if you have any questions concerning our comments at 978-794-1792.Thank you for your consideration.

Sincerely,
TEC, Inc.
*"**T**he **E**ngineering **C**orporation"*

Peter F. Ellison, PE
Director of Strategic Land Planning