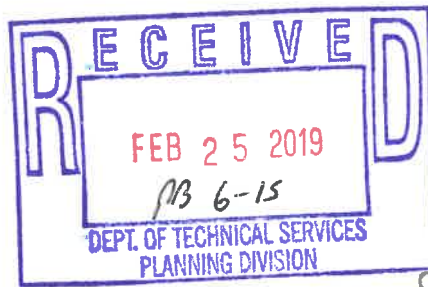


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February 22, 2019

Michael Preziosi, P.E.
Director – Dept. of Technical Services
Town of Cortlandt
1 Heady Street
Cortlandt Manor, NY 10567

RE: Traffic Engineering Re-Review
Hudson Wellness Facility – 79.11-1-18
Town of Cortlandt, New York

Dear Mr. Preziosi:

Provident Design Engineering, PLLC (PDE), a licensed Professional Engineering Firm in the State of New York, has conducted a Traffic Engineering Re-Review on the above-referenced Application. This review considered responses to PDE's June 11, 2018 Review Letter provided by the Applicant in their August 13, 2018 Response Letter. In addition to the August 13, 2018 Response Letter, the following additional information was reviewed:

1. January 19, 2018 JMC Response Letter to October 26, 2017 PDE Letter
2. January 19, 2018 JMC Response Letter to Town Staff Comments
3. January 19, 2018 JMC Response Letter to November 14, 2017 New Castle Letter
4. Site Plans dated January 8, 2018, prepared by Ralph G. Mastromonaco, P.E., P.C.
5. Transportation Management Plan dated February 22, 2018 prepared by JMC
6. Expanded Environmental Assessment Report dated July 20, 2015
7. Expanded Environmental Assessment Report dated October 10, 2016
8. October 20, 2016 letter from JMC to the Town of Cortlandt ZBA
9. April 10, 2017 Addendum to the Expanded Environmental Assessment Report dated October 10, 2016
10. July 10, 2017 2nd Addendum to the Expanded Environmental Assessment Report dated October 10, 2016
11. July 31, 2017 letter from JMC to Town of Cortlandt Planning Board
12. September 8, 2017 letter from JMC to Town of Cortlandt Planning Board
13. Site Plan for Hudson Ridge Wellness Center dated October 5, 2016
14. May 21, 2018 JMC Response Submittal Cover Letter
15. March 22, 2018 JMC Response Letter to Town Professional Staff and Consultant Meeting Comments
16. April 30, 2018 Letter from Scott Cullen to Robert Davis

Copies ⁷ Planning Board
 Town Board
 Zoning Board
 Legal Dept.
 DOTS Director
 C.A.C.
 A.R.C.
 Applicant
 Robert Davis, Esq.
 JMC
 Sent 2/25/19

1 Ralph
Mastromonaco
P.E.

17. May 14, 2018 JMC Letter Addressing Public Facebook Comments
18. May 18, 2018 JMC Response Letter to Mr. Shannon Comments
19. May 18, 2018 JMC Response Letter to March 23, 2018 PDE Letter
20. May 16, 2018 Letter from Ralph G. Mastromonaco to Dan O'Connor
21. May 8, 2018 Email from Ralph G. Mastromonaco to Michael Preziosi
22. Site Plans dated Revised May 16, 2018 prepared by Ralph G. Mastromonaco, PE, PC
23. August 13, 2018 JMC Response Letter to June 11, 2018 PDE Letter
24. Site Plans dated Revised August 8, 2018 prepared by Ralph G. Mastromonaco, PE, PC
25. Survey Plan dated Revised October 18, 2018 prepared by TC Merritts Land Surveyors
26. Revision #1 to August 13, 2018 JMC Response Letter dated revised November 12, 2018
27. Transportation Management Plan dated revised November 12, 2018 prepared by JMC
28. Revision #2 to August 13, 2018 JMC Response Letter dated revised December 17, 2018
29. Site Plans dated Revised December 4, 2018 prepared by Ralph G. Mastromonaco, PE, PC

Based upon a review of the responses and additional information provided, there are items that still need to be further addressed by the Applicant. The following provides a summary of comments on the Applicant's responses in the order in which they appeared in the Revision #2 to the August 13, 2018 Response Letter, dated revised December 17, 2018 (the two revisions to the August 13, 2018 Response Letter were the result of two Town Staff/Consultant meeting held with the Applicant):

1. The Applicant is proposing to provide a gravel path between the employee parking area and main building. The accessibility of the gravel path must conform to the American with Disabilities Act (ADA) Standards for Design, as applicable. ADA accessible paths should be clearly depicted on the Site Plan. Appropriate details can be submitted on construction improvement drawings to the satisfaction of the Director of Technical Services.

It should be noted that a portion of the land-banked parking identified on the Site Plans will encompass a portion of the gravel path. This will need to be addressed, if and when the land-banked parking is necessary in this area.

2. The Applicant indicates that the driveway is not required to meet the New York State International Fire Code for a Fire Apparatus Access Road and can remain as a driveway. The Applicant is now providing a 13% Maximum Grade on the Site Driveway (downgrade as it approaches Quaker Ridge Road) with a softening of this vertical curvature to 5% within the immediate vicinity of Quaker Ridge Road. PDE maintains that the 13% downgrade approaching Quaker Ridge Road is greater than desirable. As noted previously, Table 2 of the New York State Department of Transportation (NYSDOT) Residential and Minor Commercial Driveways Design Standards identifies a Maximum Slope of 10% and 6% for Rural and Urban areas, respectively. The Applicant opines that this driveway criteria only applies to the public right-of-way section of the driveway. Section 5A.4.4.2 of the NYSDOT Highway Design Manual indicates that this criterion is for driveway profiles beyond the highway edge of pavement. Section 5A.4.4.2 further states the following:

“Minimum vertical curve to accommodate the design vehicle. Whenever the driveway grade changes, the profile should be rounded by connecting the two different grades with a smooth vertical curve. Abrupt changes in driveway grade near the highway may cause operational and safety problems. Driveway profiles should prevent vehicle undercarriage damage and facilitate entering and exiting maneuvers. Refer to the driveway profiles found in the Residential and Minor Commercial Driveways Standard Sheets 608-03.”

The Applicant should confirm whether their current design meets the criteria set forth in the NYSDOT Highway Design Manual, especially with respect to the grade change in the vicinity of Quaker Ridge Road and that this will not cause any ‘operational or safety problems’. The driveway should conform to engineering standards to the maximum extent practicable (i.e. 5% approach grades and 10% maximum grades). The Applicant should clearly identify what constraints, if any, prevent these grades from being achieved.

3. The Applicant indicates the proposed driveway improvements do not impact the historic nature of the road. PDE defers to the Town on this matter.
4. No additional response necessary.
5. The Applicant has provided an alternative calculation that identifies the potential for up to 120 daily trips; however, they indicate this is a conservative estimate and would likely be closer to the original estimate of 110 daily trips. PDE finds the alternative calculation to be appropriate; however, the actual daily trips can be confirmed with the traffic monitoring study to be performed by the Applicant as part of the Transportation Management Plan. The finalized version of the Transportation Management Plan should be a condition of Site Plan Approval that will need to be deemed acceptable by the Director of Technical Services.
6. No additional response necessary.
7. The updated daily trip estimate provided by the Applicant would not have a significant impact to the daily trips identified at each of the ATR locations. PDE finds this response to be acceptable.
8. The Applicant has provided surveyed roadway widths of Quaker Ridge Road at 50-foot intervals along the Project Site frontage. The plan indicates that the portion of Quaker Ridge Road, immediately north of the Site Driveway is slightly less than 20 feet wide. The Site Plan states this portion of Quaker Ridge Road ‘shall be exposed to at least 20 feet in width and this strip shall be repaired or replaced as necessary’. The Applicant will need to provide a Construction Plan to formally identify how the 20-foot width will be achieved in this area and to what extent the pavement will need to be replaced and/or repaired. This Plan should be prepared as part of the Site Plan Approval Process to confirm whether there would be any impact or modification to the historic characteristics of the roadway.

A portion Quaker Ridge Road immediately to the south of the Site Driveway, is slightly less than 20 feet wide (identified as 19.8 feet wide on the Site Plan). The width north and south of this location is greater than 20 feet. The narrowing of the roadway in this area appears to be due to an existing utility pole located on the eastern side of Quaker Ridge Road, just before the Site Driveway taper. The Applicant should investigate whether any widening could occur on the western side of Quaker Ridge Road at this location to provide the 20-foot pavement width and greater horizontal clearance between the edge of travel way and the utility pole. This would lessen the potential of vehicular conflicts with the utility pole, especially as they approach on Quaker Ridge Road northbound preparing to make a right-turn into the Site Driveway.

9. The Applicant has further indicated that no delivery vehicles will be arriving/departing via Quaker Ridge Road to the north and thus has not provided a turning template for these maneuvers. PDE maintains that delivery vehicles that make multiple stops (i.e. FedEx or UPS) may likely arrive or depart the site via Quaker Ridge Road to the north. These travel routes would not be under the control of the Applicant. The Applicant should provide a turning template for these maneuvers.

The Applicant has provided additional information with respect to the overhang areas for the fire truck. PDE finds the additional information to be acceptable; however, the Construction Plans will need to confirm that these areas will be kept clear of any vertical obstructions.

The Applicant has provided truck turning templates for the intersections of Glendale Road/Spring Valley Road and Hawkes Avenue/Kitchawan Road. The turning templates demonstrate that an SU-40 Design Vehicle can adequately maneuver these locations.

10. No additional response necessary.
11. The Site Plan has been revised to correctly identify 52 employee parking spaces and 13 visitor parking spaces. The Applicant indicates that the 52 employee parking spaces will be sufficient to support their anticipated operations.

The Applicant indicated that they are no longer proposing land-banked parking and simply requesting a waiver for a 50% reduction in the parking required by zoning. The Applicant cites Town Code Section 307-34.1(C)(5), which pertains to the provision of land-banked parking. It is unclear why this is being cited if land-banked parking is no longer being proposed. If a waiver is being requested without any provision for land-banked parking, then PDE recommends the Town require the preparation of a detailed parking demand study in accordance with Town Code Section 307-34.1(C)(3). The parking demand study may be a compilation of information provided to date with respect to parking, if the Applicant feels that this information adequately addresses the anticipated peak parking demand. The parking demand study could also form the framework of the parking monitoring study to be performed by the Applicant as indicated

in the Transportation Management Plan. If land-banked parking is being proposed, then PDE maintains that land-banked parking is only effective if it is engineered to a level that proves it can be implemented. The finalized version of the Transportation Management Plan should be a condition of Site Plan Approval that will need to be deemed acceptable by the Director of Technical Services.

It should also be noted that the provision of 13 visitor spaces appears contradictory to the daily vehicular trip estimates, since those estimates only account for a maximum of two visitors per day. The use of the visitor spaces should be clearly identified in the parking demand study. Anticipated usage by day of week and time of day. If these spaces are going to be underutilized during peak parking demand periods, then they may be made available to employees during these peak periods. This could also be confirmed as part of the parking monitoring study.

12. No additional response necessary.
13. The Applicant has provided specifications for a 15-person passenger van that demonstrates the height of the vehicle will be below the main entrance clearance height. PDE finds this response to be acceptable.
14. The Applicant has confirmed with the Department of State, that the Uniform Code does not apply to the existing buildings.

Should you have any questions or comments concerning the review letter, please feel free to contact me at 914.367.0204 or via email at cholt@pderesults.com.

Very truly yours,

Provident Design Engineering, PLLC

Carlito Holt

Carlito Holt, P.E., PTOE
Partner/Senior Project Manager