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August 18, 2021

Town of Wareham Board of Appeals

Memorial Town Hall

54 Marion Road

Wareham, MA 02571

Re: Special Permit and Site Plan Review

First Hartford Realty Corp, (Reign Car

Wash, 3005/3013 Cranberry Highway

Peer Review No. 2

Attention: Nazih Elkallassi, Chairman

Dear Charman Elkalassi:

The following is a continuation of the peer review for the above referenced project and is presented for your consideration.

Variances Initially Requested

There were six variance requests listed in Building Commissioner David Riquinha’s letter dated June 29, 2021 to Sean Kavanagh. Of those six variances Section 763.3, Design Standards and Section 1062.1 of the Wareham Zoning By-Law appear to be in conformance with the requirements of those two sections.

The sections of the By-Law listed below are in question and should reviewed fully by the Zoning Board for compliance.

1. Section 763.4 Design Standards for a 15’ wide buffer. The applicant should demonstrate why the 15’ buffer was not continued around the curved portion of the state highway layout at the northwest corner of the property. Effectively the lines are boundaries of possible development even though the Commonwealth may have taken easements against the land courted portion of the site.
2. Section 1042 Landscape Buffer: This calls for a landscaped buffer to be either preserved or constructed when the site is adjacent to other commercial properties. A regraded stormwater area does not constitute a 10’ wide buffer as defined in this section. Side and rear 10’ wide setbacks are identified on the plan but are not landscaped as implied by section 1042 and 1050.
3. Section 1061.1 requires in part that the perimeter of the site be landscaped based on one tree for every 40 feet of parcel perimeter. The approximate perimeter of the combined lots 1 and 2 is 1152 feet which would require 28.8 trees. The plan shows 6 new trees proposed along with 8 existing trees that are not necessarily on the project site. This leaves 14 trees that the by-law requires to be incorporated into the landscape plan.

Among the 6 proposed trees are 3 American elms. According to the US Department of Agriculture these trees may be susceptible to Dutch elm disease as well as other fungi. Other sources say it is not recommended for landscape purposes. It is recommended that a suitable substitute species of tree replace the elms.

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1. Section 1062.3 Landscaped Islands: It is questionable as to whether the landscape plan succeeds in meeting this particular requirement within the parking area shown on the plan. The applicant should be prepared to present evidence that shows compliance with this section.
2. Section 1520 Site Plan Review: Whenever a Special Permit Granting Authority is other than the Planning Board, it is required that a copy of the site plan be submitted to the Planning Board (Permitting Authority) under Section 1564 of the Zoning By-Law. It is required to be submitted immediately upon filing the application to the SPGA. The applicant should present proof that this was done.

If the submission was not done in a timely manner, it is recommended that the site plan together with the building plans be submitted to the Planning Board at the next regularly scheduled meeting of the Board and to allow it 35 days in which to respond to the Board of Appeals regarding the project.

Plans

Sheet C3.01, Grading, Drainage, Erosion Control

1. The plan shows a construction entrance directly onto Cranberry Highway. This is unacceptable. The construction entrance could safely be placed at either of the two rear entrances to the site where there would be no interference with heavy traffic on the state highway.
2. The plan indicates that the site is to be graded to match the proposed grades of Cranberry Highway. What are those grades that could be used to compare with the proposed site grades? It was inferred at the last public hearing that the highway grade is to be raised approximately one (1) foot. If proposed highway grading is available, it should be shown.
3. The plan shows the 100-foot wetlands buffer but does not indicate the site as being in Flood Zone AE 14. Section 420 of the Zoning By-Law indicates that all new construction in a flood zone should have the building floor grade set to at least the minimum flood elevation (in this case 14) unless the building is otherwise protected against flooding. The proposed building floor is at elevation 12. Either the floor grade needs to be raised 2 feet or other flood proof prevention measures must be included in the building plan.
4. The plan shows that some off-site stormwater facilities are being used to control stormwater generated from the site. No specific information has been included to indicate that the structures or pipe infrastructure has been investigated to assure proper stormwater controls.

The applicant should present documentation that shows that the transfer of a portion of the OSJ property will include the right to discharge runoff from the project site to the remaining OSJ property and its stormwater system. The proposed grading plan shows that portions of the registered land will also be included in the grading patterns toward OSJ.

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1. The proposed grades at the southwest corner of the site show that off-site drainage could enter the site without separation. A detail of how this separation will be accomplished needs to be shown in detail.
2. At the southeast corner of the property and entrance, grading as well as small amounts of landscape work and curbing will be outside the property limits. Authorization to allow this work should be included in the documents from OSJ. The ZBA should not approve any portion of the project that would be outside the project applicant’s responsibility and control.
3. The narrow 11-foot wide escape path at the west end of the building should be made 13 feet wide and with return radii at each corner. A 10-foot radius should be used on the westerly side.

Detail Sheets C5.01 and C5.02

1. Precast Concrete Curb Detail: The note infers that no stabilizing concrete is set against the curb sections if it is put in place prior to placing asphalt binder. The note should be revised to show that concrete will be placed against the curb sections in all cases regardless of when binder is set down.
2. Vertical Granite Curb Detail: Where is this used on the site? If it is not required, the detail should be removed. There is no detail for Sloped Granite Edging which is proposed for the right turn island at the northeast corner of the site. The detail should be shown.
3. Curb Opening Detail: This should include a profile and cross section detail showing the depth of stone, filter fabric under the stone and how the filter fabric will be secured to the binder of pavement so as to prevent scouring under the asphalt edge. Each section of stone should be dimensioned as they are not all of the same size as noted on Sheet C2.01.
4. All details that specify compacted gravel should reference a particular specification for the gravel content and gradation. Refer to the MassDOT standard specification for gravel or other like material to be used on the project.
5. All structures located within paved areas should receive a ring of cement concrete 12” deep by 12” around the casting and riser to seal the elements of the structure against infiltration of fines. The concrete should be brought to the top of the binder course. Show this typically in the Sewer Manhole Detail but it would be standard for all such structures such as stormwater manholes and/or catch basins.
6. Where is the Traverse Drainage Structure used on the site? Please identify on the grading plan. If not applicable remove the detail reference.
7. No pavement section is shown on the plan. The proposed depth of base material, type and specification as well as the thickness and type of mix to be used for binder and wearing surface should be shown.

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1. No lighting detail is shown on the plan and no illumination plan is included. The plan should show the lighting intensity throughout the site that is based on the proposed light poles as well as any outstanding internal light sources used in the wash bay and other brightly lit portions of the building. Light pole bases should be set 3 feet clear of the edge of pavement.
2. As was mentioned at the public hearing of August 11, there is a concern for flashing lights or strobes within the project. Section 1254.1 of the Zoning By-Law indicates that flashing lights of any kind are prohibited.
3. There are no details for the wash water recycle tanks shown on the plan. If the water is recycled, why does the plan show it connecting to the sanitary line that goes to the sewer manhole at the northeast corner of the site?

Suitable and sufficient evidence should be provided to show that buoyancy of the tanks due to high ground water will not be an issue. At a minimum a buoyancy calculation should be provided to show that the tanks will not float either when first installed empty or if they are pumped out in the future.

Stormwater Calculations

1. Documentation submitted indicates that the project site is subject to coastal storm flowage and as such may not have to comply fully with some of the stormwater standards. Documentation should be presented to show how this coastal connection is made.
2. For Standard #10, when and to whom will the statement regarding illicit discharges be submitted?
3. The calculations have been done for the requisite 2-year, 10-year and 100-year storm events but the infiltration rate of 8.27 inches per hour for permeable soils is based on 2” diameter split spoon sampling and the small soil samples described in the boring logs. The borings are located more as evidence for design of the structure foundation and are not suitable for determination of soil infiltration capacity.

The soil examination for stormwater purposes should be done using standard test pits where the soil profile can be examined in detail and evidence of high ground water levels can be more readily observed. The borings also indicate a ground elevation of approximately 11 at each location which, by reference to the site plan of existing conditions, cannot be the case.

1. The details of the infiltration basins shown on Sheet C5.01 show that they are lined with 6 inches of loam and seed. An infiltration rate of 8.27 inches per hour does not pertain to loam soils but to the underlying permeable sand.

Either subsurface structures need to be incorporated into the design that are in contact with the sand or the infiltration basins need to be designed for a much lower infiltration rate.

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Once the high ground water elevations are determined it may be possible to incorporate subsurface structures to within 2 feet of the high ground water with appropriate pre-treatment as per the stormwater regulations.

1. All of the site runoff in post construction conditions is discharged either into pipes and structures that are off site or toward Cranberry Highway.

The elevation of the outlet pipes for infiltration basins 2 and 3 are set at the base elevation of each system meaning that most runoff collected within the basin will immediately leave the site rather than be infiltrated.

1. Should the Board act to grant a Special Permit for the project it should consider as condition of approval that no discharge of stormwater should be allowed into the state highway layout without written authorization incorporated into the Curb Cut Permit that will be required from Mass DoT. In any event a Curb Cut Permit will be required for the right turn in/right turn out geometry shown on the plan.

General Comment Concerning the Cranberry Highway Entrance/Exit.

Wareham Marketplace at Seth F. Tobey Road has a similar right turn in/right turn out provision of the site plan. It also is located just beyond a controlled road intersection similar to this project. The Wareham Marketplace project has a dedicated a right turn lane as well. This plan does not have one but it would seem appropriate to include one if the traffic counts for the project are to be accepted as presented. The applicant should review with MassDOT the similarities of the sites and whether a right turn lane should be provided.

This concludes the review of the project for the documents that have been provided. Please feel free to contact me if you have any questions.

Very truly yours,

Charles L. Rowley

Charles L. Rowley, PE, PLS

Engineering Consultant to Wareham Board of Appeals

Cc ZBA members

Ken Buckland, Wareham Town Planner

David Riquinha, Building Commissioner

David Pichette, Conservation Agent

Doug Troyer, Moriarty Troyer & Malloy LLC