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June 17, 2021

Town of Wareham Board of Appeals

Memorial Town Hall

54 Marion Road

Wareham, MA 02571

Re: Site Plan Review Report for

238/240 Sandwich Road

Crossroads Care Center

Attention: Nazih Elkallassi, Chairman

Dear Chairman Elkallassi:

I have reviewed the site plans and stormwater calculations for the above referenced project that were prepared by JC Engineering, Inc. dated May 25, 2021 and have the following comments:

General

1. The project was filed with the Town Clerk on August 20, 2020 as a proposed assisted living facility and with a request for a Variance/Special Permit from the Board of Appeals. If the facility use has now changed to a “care center” it is recommended that this term be defined so that the appropriate criteria for review can be applied.
2. No such information has been received to date so the site review is based only on the features shown and what can be reasonably interpreted thereby.
3. Inasmuch as the project is subject to the receipt of a variance for building height, it is recommended that the Board receive information that indicates compliance with Section 1542 of Site Plan Review.

Plans

Sheet 2 of 10

1. There are several trees of significant size shown ranging from 16” to 48” in diameter. The type of tree is indicated but the condition of the trees is not noted. Sections 1543 (Impact Statement) and 1541(Natural Features) requires a response as to ecological impacts and a reduction in the number of trees removed from any specific site. Trees of this size and location should be addressed for potential preservation.
2. The plan denotes Plymouth Road as a private way. Please present evidence that it is not a town way.
3. The plan shows a construction entrance for the project on Route 6, a state highway. Prior to the commencement of any work on the site the applicant should submit a copy of the permit issued by Mass DOT for the location and details of the construction entrance.
4. Two curb inlets within the state highway layout are shown to be fitted with silt sacs for sediment control. As in Item 3 above, it should be demonstrated that approval for this has been granted by Mass DOT.

Re: Site Plan Review Report for

238/240 Sandwich Road

Crossroads Care Center

Page two

1. A notation on the plan indicates that vegetation on the site is to be removed to the lines indicated but the limits of work do not extend to the removal of a stone wall and the trees along Route 6. Limit of work and erosion control should be identified.
2. The plan shows a portion of pavement next to Upper Cape Realty to be removed. Will the removal require any stabilization of the remaining surface?

Sheet 3 of 10

1. The site plan does not show the replacement of three existing highway signs; W11-2, W2-2, R2-1 or M1-4. Removal and replacement needs to be coordinated with Mass DOT and shown on the plan.
2. Construction of the most westerly driveway requires the location of Utility Pole #749. The applicant should confer with Eversource and any other utility involved as soon as possible in case there are constraints on the relocation that would impact the driveway.
3. The proposed generator is located only 10 feet away from the building. It is recommended that an alternative location be selected so that noise from routine generator startup will not impact residents.
4. Please explain the 20’x20’ crushed stone parking area next to the proposed maintenance building. Why not extend the pavement to reduce overall surface maintenance?
5. The plan shows that there are two patio areas at grade on the most northerly end of the proposed building. There needs to be an interior wall that will support the patios above the parking garage area.
6. The parking schedule indicates there are 60 parking spaces. There is no indication as to how many are for staff, how many are for residents or how many are designated for visitor. Section 912 of Article 9, Parking of the Zoning By-Law requires the number of spaces to be determined by the Building Inspector if the use is not listed in Table 921. Documentation as to how the number of spaces was arrived at should be provided.
7. The dumpster is located in an enclosed area. Is there a pad that the dumpster sits on and is there more than one container?
8. Is the transition from granite curb to concrete curb at the street line? Curb radii within the state highway should be confirmed but the 30 foot radius shown may comply.
9. Is there any edge treatment proposed for the paved fire lane behind the building?
10. There appears to be no walking access outside of the building that does not include walking within the driveways or within the underground parking garage. Sidewalks for residents to use for walking and/or exercise would be a good amenity for the project.

Sheet 4 of 10

1. The location of all of the large specimen trees should be shown on this drawing for evaluation and possible incorporation into the landscape features of the site.
2. The proposed patio grades at the northerly end of the building are 9 feet above the garage floor. There needs to be an interior building wall to support the patios. The original building plan also showed a stairway in between the patios leading to the garage. Is that still part of the proposal?

Re: Site Plan Review Report for

238/240 Sandwich Road

Crossroads Care Center

Page three

1. It is preferable not to have a dip in the pavement grade next to the building on the west side. There is room to make the grade flat but pitching away from the building entirely toward catch basin CB-1 at the curb.
2. Top and bottom elevations for all curb should be shown at all corners and transition points.
3. It is not clear that CB-2 will not collect runoff from the state highway based on the contours shown. A clear separation of grade should be shown in a larger detail to show how the transition will occur.
4. The plan shows segmented retaining walls along the inside edge of the proposed driveway. The walls are not continuous but appear to stop at each window projection. How are these walls stabilized and what will prevent seepage of soil and runoff at each of these locations?
5. At several locations the bottom elevations of the segmented wall sections are not consistent with the driveway grading.
6. The plan shows two patios at the rear of the building near the paved fire access. Is there any access to these patios from the interior of the building?
7. Is the proposed segmented retaining wall near the maintenance building necessary? Could the wall be poured as part of the building foundation so that it is tied together? The segmented wall could easily be dislodged or run over without some protection.
8. Catch Basin CB-3 should be relocated to the end of the straight curb of the driveway near contour 22. This would intercept the greater portion of runoff from the driveway and eliminate large amount of runoff from crossing the driveway.
9. It is recommended that the grading of the easterly driveway entrance be shown in greater detail to ensure that highway runoff and site runoff are clearly separated. A change in contouring may be all that is necessary.
10. Curb grades at and near the garage entrance area do not work. This area needs to have the grading refined for top and bottom of curb.
11. If the stamped concrete area on the northerly side of the building is considered to be drivable, there needs to be protective railing surrounding the retaining wall. It should also be to prevent pedestrians from falls. If the wall is segmented the railing would have to be independent of it. If the wall was reinforced concrete the railing could be incorporated into it to save space.
12. The reference to CB-3 invert going to DMH-4 should be changed to CB-4.
13. Show the size and pitch of all pipe in the infiltration systems and all roof drain piping.
14. The Grading and Drainage Note 3 indicates that additional tests pits will be dug prior to construction in the proposed infiltration areas. This is unacceptable practice. The tests should be done immediately in case unforeseen conditions are found that require an adjustment of grades or other site changes.
15. The grade of the westerly driveway is 8% with no leveling area prior to the connection to the Route 6 pavement. This is a potentially unsafe condition during winter months because runoff in this area is directed entirely across the driving surface to the single catch basin, CB-2.

Re: Site Plan Review Report for

238/240 Sandwich Road

Crossroads Care Center

Page four

1. All pipe sizes leading to the two manholes DMH-2 and DMH-4 are noted as 12” diameter. In order for the oil/gas/grit separators not to overflow shouldn’t the piping through them be of at least the same size (12”)?

Sheet 5 of 10

1. There needs to be a 1” drop between invert inlets and outlets across the channel inside all sewer manholes.
2. The rim grade of SMH-1 may be too high based on the grading plan. Also check the rim grade of SMH-2.
3. Denote the size of the fire main and domestic water services for the project. Show the taps and connections required at the existing main.
4. The plan shows the location of a sewer pump station to be designed at a later date and is to be connected by force main to Linwood Avenue. Much of the force main will be within the layout of Route 6 with the Linwood Avenue location approximately 1400 feet away. There needs to be an explanation as to why the details of the pump station design, main size and connection are not part of the project submittal. There are numerous issues that need clarification.
5. Approval from the sewer department that the flow level has been determined and that a connection will be accepted,
6. Calculations for lift, friction loss and head to determine effective pump size,
7. Approval for the location of the force main in Route 6 and Linwood Avenue from both MassDOT and the Town of Wareham due to the numerous utilities already existing.
8. Is there a detail for the type of floor drains to be used in the parking garage? There is no pitch indicated for the floor between drains suggesting that water might not drain fully from the surface.
9. It is recommended that the sewer line from the Maintenance Building to the lift station be relocated so as not to disturb the root structure of the two large trees that are shown to remain on the site.

Sheet 6 of 10

1. The landscape plan shows numerous plantings but are clustered in such a way that the scale of the proposed building is not hidden at all. Trees in front of the building along the Route 6 area are ornamental trees that will not grow to predominance. There are several large existing trees on the site. It is recommended that an arborist assess the condition of these trees and to determine if they could be incorporated into the overall landscape of the site.
2. The tree planting areas each have a wood mulch bed associated with them. How are the mulch beds to be contained along the Route 6 area where the beds are on a 3:1 slope? There is no containment proposed.
3. The shrub planting detail shows two vertically hatched symbols but what they represent is not indicated.

Sheet 7 of 10

1. The lighting plan indicates that there will be very little lighting for each of the two driveways onto Route 6. These areas need to be well lit for safety purposes.

Re: Site Plan Review Report for

238/240 Sandwich Road

Crossroads Care Center

Page five

Sheet 8 of 10

1. Any materials to be used other than dense graded material with the MassDOT specification noted should be identified by specification as being approved equal or would be subject to testing prior to use on the site.
2. The temporary entrance detail needs information as to the paved apron construction.
3. The striping detail should include a note indicating that the dimensions apply to outside parking areas only.
4. Handicap signs and light pedestals should be located at least 3 feet behind the edge of parking stall limits. A notation should be placed on the plan.
5. Include a detail for sloped or vertical granite curb to be used on the project.

Sheet 9 of 10

1. Test pit data was collected in 2003. The depth to seasonal high ground water needs to be determined with confirmation that no changes in the infiltration requirements will be required. This should be done as part of the approval process.
2. Precast Drain Manhole Detail: Show a cement concrete collar surrounding the riser and casting to a depth of 12” and surrounding the riser and casting to a width of 12” with the surface of the collar brought even with the surface of pavement binder. This detail should be shown for all structures and the drawing details should be adjusted accordingly.
3. All inlet and outlet pipes should be noted as mortared inside and outside of the structures.
4. All structures should be placed on a 6” thick layout of crushed stone. Make this detail consistent for all structures to be used on the project and adjust details accordingly.
5. Gas/oil separators noted for use in catch basins should extend to a depth of 12” below the invert of the outlet pipes.

Sheet 10 of 10

1. The Oil/gas separator should be placed on a 6” bed of crushed stone.
2. Show the 12” x 12” cement concrete ring for the leach pit detail as described above for the Precast Drain Manhole Detail of Sheet 9.
3. If leaching pits are to be placed under paved surfaces, filter fabric should be used on all vertical interfaces of soil and stone.
4. The Sewer Manhole Detail should include a cross section to indicate the slope of the channel with a 1” differential between inlet and outlet.

Stormwater Calculations

1. The stormwater calculations submitted have been done in conformity with accepted practice and show that there is no adverse impact to off site receiving areas. However, this statement is subject to the receipt of test pit data obtained from on-site testing done in the vicinity of the large infiltration area at the east end of the site. In addition, results would need to show that no adverse conditions were found that would impact the size or design of the stormwater system.

Re: Site Plan Review Report for

238/240 Sandwich Road

Crossroads Care Center

Page six

Garage Parking

1. Although the details of how safe levels of breathing air will be maintained inside the underground parking area are left to the Inspections Department to approve, they are subject to the International Mechanical Code for enclosed garage space. The Code would be reviewed along with the plans by the Wareham Fire Department according to Capt. Chris Smith of the Inspections Division of WFD. This space would also require a sprinkler system. Whether the system is a wet system or dry system may depend on whether the garage space is heated or unheated.
2. Will there be any security provided for the garage parking? Will there be an overhead door?
3. The original floor plans of the proposed building showed that the garage area has details that may or may not apply to the revised use. Updated floor plans should be provided for review.
4. The architectural plans dated March 19, 2020 showed three stairwells leading to the garage. These stairwells do not show in the plan of May 25, 2021 by JC Engineering. One stairwell has been changed to a parking stall.
5. The current site plan does not show a pedestrian door at garage level on the easterly end of the building as did the plan of 2020.
6. Six spaces formerly shown as full size are now shown as compact car spaces and the proposed elevator access has changed.
7. The above changes need to be updated so that the site plan and building plan are consistent with each other.

This concludes the initial site plan review for the information received to date. If further information such as an Impact Statement as required by Section 1534 of the Zoning By-Law is received it will be reviewed separately.

Please feel free to contact me if you have any questions.

Very truly yours,

Charles L. Rowley

Charles L. Rowley, PE, PLS

Cc Board Members

Ken Buckland, Town Planner

Jilian Morton, Esq.

John Churchill, PE, PLS JC Engineering, Inc.

Alan Slavin, BOS Liaison to ZBA

Capt. Chris Smith, Wareham Fire Dept.