
THE LAW OFFICES OF BELLO & MORTON, LLC

184 Main Street Wareham, Massachusetts 02571 · 508-681-2334

August 24, 2021

HAND DELIVERED:

Nazih Elkallassi, Chairman
Zoning Board of Appeals of Wareham
Memorial Town Hall
54 Marion Road
Wareham, Ma 02571

Re: Application for Site Plan Review, Assessors Map 133, Lots 1100A & 1101A

Address: 238 & 240 Sandwich Road Wareham, MA

Dear Mr. Chairman,

Please find enclosed the Site Plan Review Application and Exhibits for the above subjected project "Crossroads Care Center" located at 238 & 240 Sandwich Road, Wareham, MA. I have included in the submission the three checks for the publication in the Wareham Week, the Site Plan Application Fee, and the abutters postage. Should you or other members of the Board need any more information please do not hesitate to reach out to me directly to obtain.

The Exhibits include:

- A. The Site Plan Application completed
- B. The Impact Statement
- C. The Sewer Commissioners letter dated August 13th, 2021

- D. J.C. Engineering's responses to the Peer Review Comments
- E. Architectural Renderings of the project
- F. The Site Plan set for the site.

Very Truly Yours,

A handwritten signature in black ink, appearing to read 'J. Morton', with a long horizontal flourish extending to the right.

JULIAN A. MORTON, ESQ.

Cc. The Chairman of the Wareham Planning Board
Cc: Mr. Charlie Rowley, PE, PLS

PLANNING BOARD
TAX VERIFICATION FORM

This verifies that _____ (name of applicant) is up-to-date on the taxes for the property(ies) he/she owns in Wareham. If the applicant is not the current owner of the property that the application addresses, the current owner _____ (name of property owner) is up-to-date on taxes and on all properties he/she owns in the Town of Wareham.

John Foster, Tax Collector

EXHIBIT A

APPLICATION FOR SITE PLAN REVIEW

Page 1

Applicant: Name: F.C. Mannix

Mailing address: P.O. Box 85, Boston, MA 02113

Telephone: 617-792-5539

Project: Street & Number: 238 & 240 Sandwich Road

Assessor's Map: 133 Lot(s) 1100a & 1101a

Dwelling Units # 86

Parking Spaces # 60

Acres: 1.92 Square Feet Commercial Space: 22,823 S.F.

Briefly describe project: This project involves the construction of a proposed care center with associated parking (surface & garage), utilities, drainage, and grading.

Date: August 13, 2021

Signature of Applicant: _____

*Judith Mannix, as attorney
for the applicant*

SITE PLAN REVIEW CHECKLIST

Plans shall be prepared by a registered architect, landscape architect, or Professional Engineer. 14 complete sets are required with the following information included:

1. GENERAL INFORMATION

- Developer name, address, telephone number
- Property owner name, address, telephone number, legal relationship between developer and property owner
- Date of application
- Statement briefly describing project
- Locus map (1" = 2,000')
- Location of property to surrounding area (this plan shall show at a scale of not less than 1" = 100' the general characteristics of all lands within 200' of the proposed site and shall include structures, parking areas, driveways, pedestrian ways and natural characteristics)
- Zoning district (square feet within each district if more than one district)
- Total area of project in square feet to include wetland and 100 year flood plain (both in square feet)
- All contiguous land owned by the applicant or by the owner of the property. At the discretion of the Planning Board photographs of the site at size 8" x 10"

2. EXISTING FEATURES

Plans shall be accurately drawn to a scale of 1" = 20', 1" = 40', or 1" = 100' where practical and appropriate to the size of the proposal and shall show all existing natural, manmade, and legal features of the site. Such plans are to include but not be limited to the following:

- Tree line of wooded area
- Individual trees 18" dbh or over
- N/A Bogs or agricultural areas

- All wetlands protected under CMR 10.02 (1) (a-d)
- Flood plain (100 years) with base flood elevation data
- Contour lines (2' intervals)
- General soil types

2b. EXISTING MANMADE FEATURES

- Vehicle accommodation areas
- Street, roads, private ways, walkways
- Curbs, gutters, curb cuts, drainage grates
- Storm drainage facilities, including manholes
- Utility lines, including water, sewer, electric, telephone, gas, cable TV
- Fire hydrants and location of dumpsters
- Building, structures, and signs (free standing), including dimensions of each
- Existing light fixtures

2C. EXISTING LEGAL FEATURES

- Zoning of property (district lines)
- Property lines (with dimensions identified)
- Street right of way lines
- Utility or other easement lines
- Monuments

3. THE DEVELOPMENT PLAN

The development plan shall show proposed changes in the (a) existing natural features; (b) existing man made features and (c) existing legal features.

The Development Plan shall include:

- N/A Square feet in every new lot
- ✓ Lot dimensions
- ✓ Location and dimensions of all buildings and free standing signs as well as the distances from all buildings to lot lines, streets, or street right of way
- ✓ Building elevations (side, front, and back for a typical unit) showing building height and any proposed wall signs
- ✓ Location, dimensions, and designated use for all recreation areas
- ✓ Location and dimension of all open space; indicate whether open space is to be dedicated to public use or to remain private
- ✓ Streets (including street names) which conform to the design standards of the Planning Board's Rules and Regulations Governing the Subdivision of Land
- ✓ Curbs and gutters, curb cuts, drainage grates
- ✓ Drainage facilities including manholes, pipes, drainage ditches, and retention ponds
- ✓ Sidewalks and walkways showing widths and materials
- ✓ Outdoor illumination with lighting fixture size and type identified
- ✓ Utilities; water, sewer, electric, telephone, gas, cable TV
- ✓ Fire hydrant location
- ✓ Dumpster (trash collection facilities)
- ✓ New contour lines resulting from earth movement (at 2' intervals) and indications of types of ground cover and other precautions to stabilize slopes
- ✓ Vehicle parking, loading, and circulation areas showing dimensions
- ✓ Proposed new plantings by size and location or construction of other devices to comply with screening and shading requirements

4. IMPACT STATEMENT

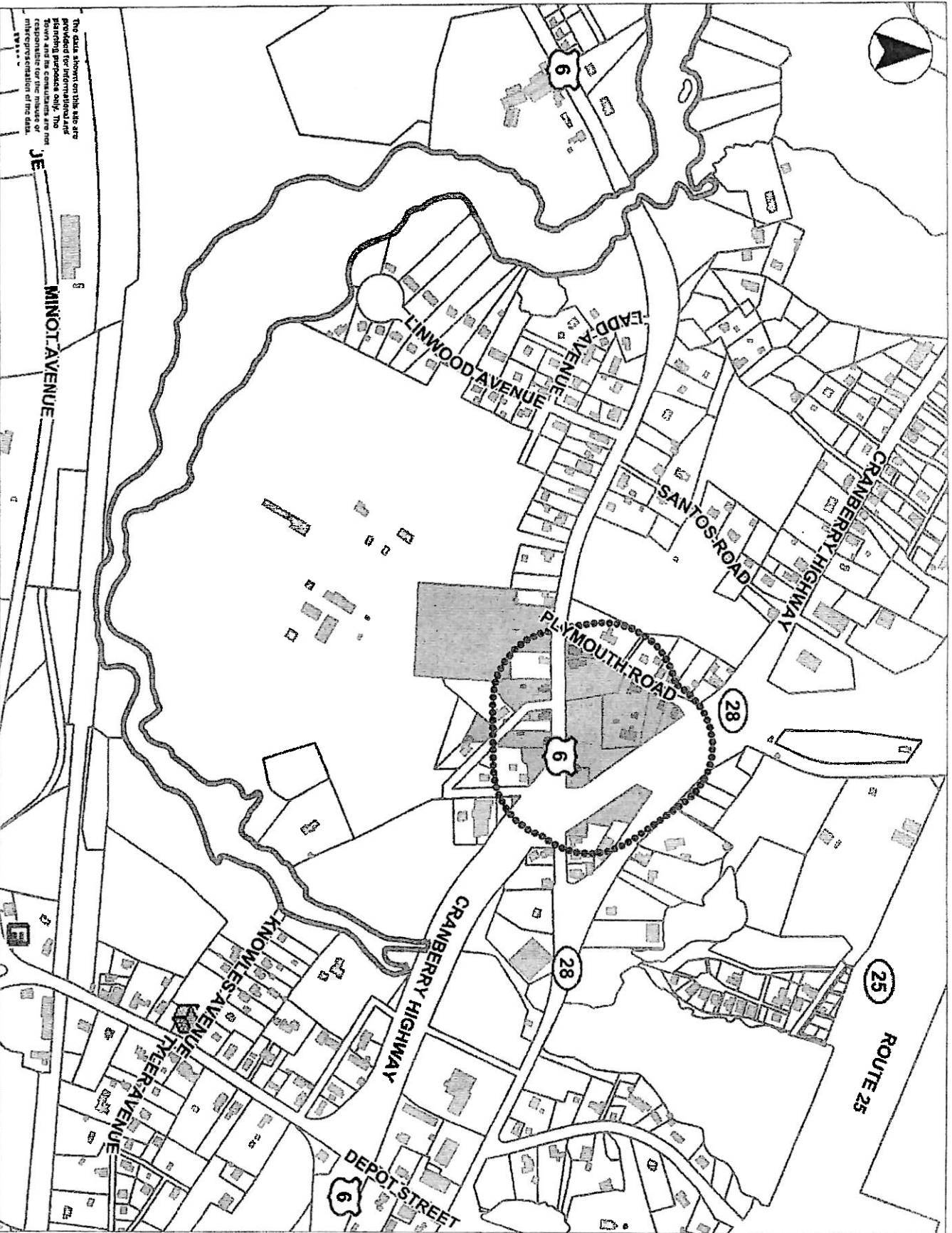
In order to evaluate the impact of the proposed development to Town services and the welfare of the community, there shall be submitted an impact statement in two parts.

- All applicable Town services including but not limited to schools, sewer services, water systems, parks, fire, and police.
- The roads in the immediate vicinity of the proposed development (including an estimate of both peak and average daily counts)
- The ecology of the area within the site and any significant off-site impacts

Part Two shall describe what actions have been taken to mitigate the impacts described in Part One

This application constitutes the applicant's willingness to work under the Town of Wareham's Zoning Bylaws. Any errors or omissions from this checklist or the Zoning Bylaw may result in the application not being placed on a Planning Board Agenda or denial of the Site Plan.

TOWN OF WAREHAM ABUTTERS						
MAP 133 LOT 1100/A 300'						
MANNIX FREDERICK C TRUSTEE						
MAP & LOT	OWNER	CO-OWNER	STREET ADDRESS	TOWN	STATE	ZIP CODE
133-1085/B	AMES WILLIAM D	AMES ANNE M	219 SANDWICH RD	WAREHAM	MA	02571
133-1094	PATEL JAY	PATEL KIRSHNA	2 PLYMOUTH RD	WAREHAM	MA	02571
43-1008	MCI MANAGEMENT LLC		10 WINDSOR DR	WAREHAM	MA	02571
133-1099	WESTGATE LEON ALLEN		1 PLYMOUTH RD	WAREHAM	MA	02571
133-1090	MONTEIRO GREGORY L	MONTEIRO FLORENCE R	PO BOX 97	E WAREHAM	MA	02538
43-1009	MATOS SALVADOR	CABRAL-MATOS PAULA	239 SANDWICH RD	WAREHAM	MA	02571
133-1100/A	MANNIX FREDERICK C TRUSTEE	PJM REALTY TRUST C/O ZAZZARA ASSOC	188 NORTH ST	BOSTON	MA	02113
43-1010	DASILVA LIVIA LIFE ESTATE		PO BOX 226	E WAREHAM	MA	02538
133-1097	DIXON DAVID A	DIXON DEBORAH A	5 PLYMOUTH RD	WAREHAM	MA	02571
133-1096	ANDRASY JAMES D	ENO ALEXIS K	7 PLYMOUTH RD	WAREHAM	MA	02571
43-1012	GOMES ANTONE JR JR	GOMES JULIE A TRUSTEES	PO BOX 327	E WAREHAM	MA	02538
43-1013	DASILVA JOANNA C		PO BOX 226	E WAREHAM	MA	02538
43-1014/A	MORSE JOHN W		ROGERS AVE	E WAREHAM	MA	02538
133-1078	ANGUS NANCY S	ANGUS NANCY C TRUSTEES	PO BOX 270	BUZZARDS BAY	MA	02532
CERTIFIED ABUTTERS						
AS THEY APPEAR ON OUR						
TAX ROLLS AS OF 8/16/2021						
<i>By Ben Adams</i>						
ASSESSORS OFFICE						
REQUESTED BY						
BRIAN J WALLACE E.I.T., C.S.E.						
508 273-0377						
BWALLACE@JCENG.ORG						



The data shown on this site are provided for informational and planning purposes only. The Town and its consultants are not responsible for any misinterpretation of the data.

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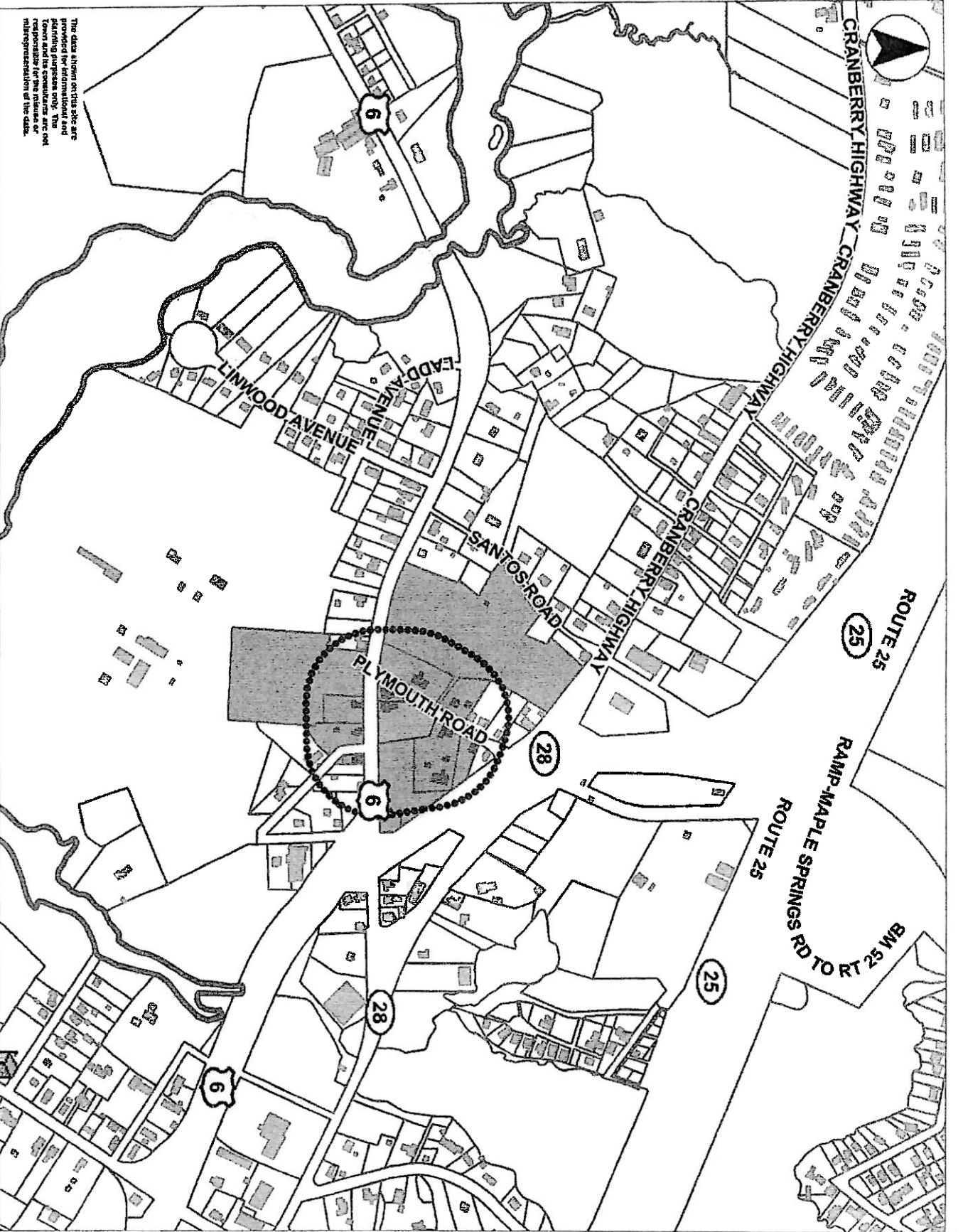
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MapOnline by PeopleGIS

- MA Place
- Fire Station
- Police Station
- Town Hall
- Public Library
- School
- Buildings
- Facilities
- Parcels
- Town Boundary
- MA Highway
- Interstate
- US Highway
- Unnumbered Routes
- Streets
- Bathymetry
- 0-5 ft
- 5-10 ft
- 10-15 ft
- 15-20 ft
- 20-30 ft
- 30-40 ft
- 40-50 ft
- 50-60 ft
- 60-70 ft
- 70+ ft
- Abutting Town Labels
- Abutting Towns

TOWN OF WAREHAM ABUTTERS									
MAP 133 LOT 1101/A	300'								
OWNER MANNIX FREDERICK C TRUSTEE									
MAP & LOT	OWNER	CO-OWNER	STREET ADDRESS	TOWN	STATE	ZIP CODE			
133-1099	WESTGATE LEON ALLEN		1 PLYMOUTH RD	WAREHAM	MA	02571			
43-1010	DASILVA LIVIA LIFE ESTATE		PO BOX 226	E WAREHAM	MA	02538			
133-1097	DIXON DAVID A	DIXON DEBORAH A	5 PLYMOUTH RD	WAREHAM	MA	02571			
133-1096	ANDRASJ JAMES D	ENO ALEXIS K	7 PLYMOUTH RD	WAREHAM	MA	02571			
133-1095	PLUDRA CARON J		9 PLYMOUTH RD	WAREHAM	MA	02571			
43-1012	GOMES ANTONE JR JR	GOMES JULIE A TRUSTEES	PO BOX 327	E WAREHAM	MA	02538			
43-1013	DASILVA JOANNA C		PO BOX 226	E WAREHAM	MA	02538			
43-1014/A	MORSE JOHN W		ROGERS AVE	E WAREHAM	MA	02538			
43-1078	CAMPINHA CRYSTAL JOY		9 CAMPINHA WAY	WAREHAM	MA	02571			
133-1101/A	MANNIX FREDERICK C TRUSTEE	PJM REALTY TRUST C/O ZAZZARA ASSOC	188 NORTH ST	BOSTON	MA	02113			
43-1015	BLANCHETTE RICHARD D	BLANCHETTE ELIZABETH	247 SANDWICH RD	WAREHAM	MA	02571			
43-SR4	BLANCHETTE RICHARD	BLANCHETTE ELIZABETH + ANDREW	245 SANDWICH RD	WAREHAM	MA	02571			
133-1078	ANGUS NANCY S	ANGUS NANCY C TRUSTEES	PO BOX 270	BUZZARDS BAY	MA	02532			
43-1021	PEOPLE'S CHURCH OF THE	NAZARENE	6 ROGERS AVE	WAREHAM	MA	02571			
129-1140	GARDEN HOMES ESTATES LLC		PO BOX 606	E WAREHAM	MA	02538			
129-1141	NOLAN ENIS B ET ALS	C/O JUDITH BRUNO	22 WINSLOW LN	WAREHAM	MA	02571			
CERTIFIED ABUTTERS AS THEY									
APPEAR ON OUR TAX ROLLS									
AS OF 8/16/2021									
by <i>Renee Abino</i>									
ASSESSORS OFFICE									
REQUESTED BY									
BRIAN J WALLACE E.I.T., C.S.E.									
508 273-0377									
BWALLACE@JCENG.ORG									



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- MA Places
 - Fire Station
 - Police Station
 - Town Hall
 - Public Library
 - School
- Substrate
- Pavement
- Town Boundary
- MA Highways
 - MA Interstate
 - US Highway
 - Numbered Routes
- Streets
- Submittal
 - 0-5 ft
 - 5-10 ft
 - 10-15 ft
 - 15-20 ft
 - 20-25 ft
 - 25-30 ft
 - 30-35 ft
 - 35-40 ft
 - 40-50 ft
 - 50-60 ft
 - 60-70 ft
 - 70+ ft
- Abutting Town Labels
- Abutting Towns

EXHIBIT B

CROSSROADS CARE CENTER

238-240 SANDWICH ROAD

WAREHAM MA

IMPACT STATEMENT

PART ONE

The proposed project consists of a main building that will contain an Intermediate Care Center with the potential to offer nursing care and congregate care services as determined by community need. The building is designed to accommodate various interior configurations based on facility requirements. The ability to reconfigure interior space has been designed to be accomplished, if the need arises, without exterior changes to the building or any increase to the building dimensions. It is common practice to provide memory care in intermediate care facilities and an alternate interior layout has been shown in the project plans.

The Solarium planned for the facility will be beneficial to the health and wellbeing of the residents and will be used to as an access point to the rooftop exterior deck. The deck will enable residents to take advantage of fresh air and sunshine, above the surrounding roadways, during most of the year due to the southern exposure.

A separate building has been located on the site to accommodate equipment, staff, storage and necessary support services for the facility that will be enclosed, located away from public view, and adjacent to an existing high embankment along Cranberry Highway.

The immediate neighborhood is located along Sandwich Road (Route 6) a well-travelled State Highway and Plymouth Road, an undocumented town accepted way. The parcel is located to the West of the intersection of Route 6 and Route 28.

An existing day care center and a real estate office are located in close proximity.

SCHOOLS

The proposed use will not impact the Wareham School System.

SEWER SERVICE

The project has a reserved allotment of 14,080/day of sewer capacity, based on 128 bedrooms, and will utilize a forced main system. The project will not utilize onsite disposal.

WATER SYSTEM

The site has access to an existing water main on Sandwich Road

GAS

Gas service is provided by an outside utility company and will not impact the Town of Wareham

PARKS

The project will have no impact on Town owned parks.

FIRE

The proposed project is not a high hazard use and will have minimal impact on the capacity of the Wareham Fire Department.

EMS

It is anticipated that there will be an increase in the utilization of EMS due to the proposed use.

POLICE

The proposed use is not anticipated to adversely affect the Police Department.

TRAFFIC:

A traffic study conducted by Howard Stein Hudson concludes that the project will have minimal impact to the surrounding transportation infrastructure

SITE ANALYSIS

The site does not contain any wetlands and is not located in a special flood plain zone. There will be minimal impact on existing conditions.

ENVIRONMENTAL

The proposed use will generate very little noise, if any, from activities within the building and have little impact to the residences in the vicinity of the project.

PART TWO

The proposed project was planned to have minimal impact to the neighborhood and to the Town of Wareham. We feel that the Institutional Use proposed will have the least impact as compared to the many allowed uses in the C S zoning district.

The land itself will remain essentially in its original condition with regard to elevation and contour. The building placement is sited to take advantage of the existing grades to allow for parking inside the building footprint with access available at the East end utilizing the existing slope of the land to allow for an at grade entrance to the parking garage. 80% of the proposed parking will be out of view. The larger than required setback/ planting areas will provide a uniform tree canopy along Sandwich Road, once the trees attain maturity. Existing trees along Sandwich Road will be assessed and remain if possible. The proposed replacement trees were chosen to flourish in urban conditions that exist along Sandwich Road at this location. They will tolerate high heat from the adjacent roadway and air laden with vehicle exhaust from Route 6 and Route 28. The trees will mature to a height of 25 to 35 feet along Sandwich Road. Tree roots from some of the existing trees are damaging the sidewalk along Sandwich Road and their replacement will allow for a currently dangerous condition to be corrected as part of the project scope of work. There will be no cost to the Town or the State for this corrective work. Landscaping proposed along Plymouth Road will enhance the portion of the property that now exists in a formless condition.

In terms of positive impact, it is clear that an Intermediate Care Center located close to Tobey Hospital, with its new state of the art facility expansion, will benefit the residents of the building that require access to Hospital services. The residents of the Crossroads Care Center can also benefit by the close proximity to Wareham Center, shopping, entertainment and beach facilities. Crossroads Care Center will help to fill a growing need in Wareham and surrounding communities for the anticipated surge in the aging population needing assistance and opportunities to maintain Activities of Daily Living.

SCHOOLS

The project shall have no impact on the Wareham schools.

SEWER SERVICE

Provision will be made in the new forced main design to accommodate increased flow from existing properties along Sandwich road that can, at their sole expense, hook up to the municipal system. The existing properties are located in environmentally sensitive portions of Sandwich Road. Elimination of onsite disposal at these properties will benefit the Town and the surrounding community.

A new pump station, conforming to requirements of the Sewer Commission, will be located on site and be privately maintained.

WATER SYSTEM

The water department conducted a flow test on 10/22/20 in order to confirm the proposed water connection sizing for potable water and fire sprinkler service. WFD requested additional fire hydrants to located along Sandwich Road and they have been provided for. There is adequate infrastructure to accommodate the project.

GAS

This project shall have no impact upon gas services in the Town.

PARKS

This project shall have no impact upon the Parks of Wareham.

FIRE

The project has had the input of the Wareham Fire Department since its inception. WFD requests related to access, fire hydrants and equipment maneuverability have been included in the site plan.

EMS

EMS, along with WFD, has been consulted regarding the provision of a dedicated ambulance parking area on the site. Having a dedicated space will increase the efficiency and response time of EMS and non-emergency transport. The requested space has been provided as shown on the site plan.

POLICE

The building will have limited access, be monitored by security systems, and be staffed.

TRAFFIC

The site is located within two miles of Tobey Hospital, one mile of EMS headquarters, and in close proximity to the intersection of Routes 6 and 28. Access to Route 25 is nearby. Primary roads connect the project site to Wareham Center, Medical Facilities, Shopping Districts and Recreational Areas. Direct access to Sandwich Road (Route 6) is planned. Access to Plymouth Road, a short dead end residential road, has been limited to emergency access only.

SITE ANALYSIS

The proposed structures are placed within the existing contours and elevations with minimal grading changes. A new onsite drainage collection and recharge system has been designed, based upon test pit data, to manage runoff from the allowed amount of impervious surface.

Tree roots from some of the existing trees are damaging the sidewalk along Sandwich Road and their replacement will allow for a currently dangerous condition to be corrected as part of the project scope of work. There will be no cost to the Town or the State for this corrective work.

ENVIRONMENTAL

The proposed landscaping will transform the existing overgrown and vacant lot into a finished lot with a strong visible connection to the street and surrounding neighborhood. The proposed streetscape will greatly improve the look along Sandwich Road.

Resident outdoor space is primarily located at the rooftop solarium and deck area along with a “green” area on the East side of the property, that abuts an existing commercial property.

Lighting has been designed to eliminate any light pollution onto adjacent properties or to the sky

SUMMARY

Crossroads Care Center has undergone many hours of Community Input and input from the Town of Wareham and its various departments related to the massing, design, and overall look of the project in order to minimize impact.

Development of this underutilized property will service the anticipated needs, in a new state of the art facility, for current and future residents in the Town of Wareham.

It will bring new tax revenue to the Town of Wareham with minimal impact to the Wareham Public Services budget along with short term construction and long term permanent jobs.

EXHIBIT C



WAREHAM WATER POLLUTION CONTROL FACILITY

6 Tony's Lane
Wareham, MA 02571
Telephone (508) 295-6144
Fax (508) 291-0155
TTY (800)439-2370

August 13, 2021

JC Engineering, Inc.
2854 Cranberry Highway
East Wareham, MA 02538

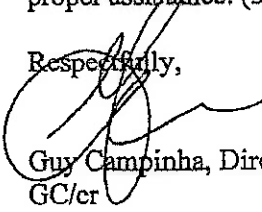
Dear Madam or Sir,

At the August 12, 2021 Board of Sewer Commissioners Meeting the Board voted unanimously to approve the updated connections for the Project at 238 and 240 Sandwich Road- Fred Mannix with the following provisions;

1. That you have reviewed the updated project plans (see attached from my previous email)
2. Reaffirming approval of 14,080 GPD to account for a maximum of 128 beds @ 110 GPD per bed. As currently proposed, the project consists of 96 possible beds in the facility.
3. Our final design will require a draw down test on the existing pump station, and an upgrade of existing infrastructure as needed, with expenses to be borne by the property owner/applicant.
4. The proposed force main will be sited and sized to allow for the sewer connection of homes & businesses along Route 6 (between the proposed project and existing pump station on Linwood Ave).
5. The proposed care center will require a macerator pump, as well as any potential future connections to the proposed force main.
6. Force main installation will require coordination with the Sewer Department and MassDOT.

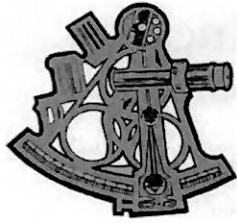
If you have any questions or experience any changes with plans, please contact our office for proper assistance. (508) 295- 6144.

Respectfully,


Guy Campinha, Director
GC/cr

This institution is an equal opportunity provider, and employer.

EXHIBIT D



JC ENGINEERING, Inc.
Civil & Environmental Engineering
2854 Cranberry Highway.
East Wareham, Massachusetts 02538
Ph. 508-273-0377 – Fax 508-273-0367

August 12, 2021

Town of Wareham Board of Appeals
Memorial Town Hall
54 Marion Road
Wareham, MA 02571

RE: J.C. Engineering, Inc. Response to Site Plan Peer Review Report

Dear Members of the Board:

J.C. Engineering, Inc has received Peer Review Report #1, dated June 17th, 2021, prepared by Charles L. Rowley, PE, PLS for the Crossroads Care Center located at 238 & 240 Sandwich Road. We have prepared a revised the plan set based on the comments, dated August 10, 2021, and offer the following in response to those comments (Original comments by CLR are shown in *italic*):

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.*

JCE Response: Crossroads Care Center is the project name of a facility that is to be used as an Intermediate Care Center, an allowed Institutional use in the CS District. Nursing home and Convalescent Care services can be provided depending on the level of care as defined in Article 340.5 of the Zoning By-Law.

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.*

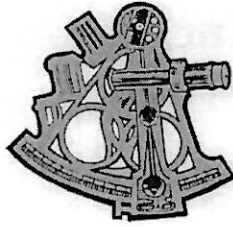
JCE Response: No Response Necessary.

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.*

JCE Response: No Response Necessary.

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*



JC ENGINEERING, Inc.
Civil & Environmental Engineering
2854 Cranberry Highway.
East Wareham, Massachusetts 02538
Ph. 508-273-0377 – Fax 508-273-0367

preservation.

JCE Response: The number of trees to be removed from the site coincide with what is necessary for construction of the building, driveway, parking areas, and associated site grading. In addition, please see the response from the landscape architect below regarding tree preservation.

- 2. The plan denotes Plymouth Road as a private way. Please present evidence that it is not a town way.*

JCE Response: The Street Listing document on file with the Planning Board refers to Plymouth Road as an “undocumented Town Accepted” way, therefore the plan has been revised to show Plymouth Road as the same.

- 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.*

JCE Response: Following local approval permits shall be obtained from MassDOT for the proposed construction & permanent access from the State Highway and all work located within the State Highway Layout.

- 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.*

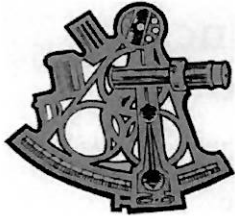
JCE Response: Project site plans will be submitted to MassDOT following local approval.

- 5. 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.*

JCE Response: The limit of work/clearing along Route 6 has been added to the site plan. We would note that the existing sidewalk contains several curb cuts that will be closed as part of the project. The sidewalk will remain open and accessible during construction to the maximum extent practicable.

- 6. 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?*

JCE Response: The section of asphalt will be removed at the time of construction and finished grade shall be equal to the existing remaining asphalt. Any damage to the remaining surface shall be the responsibility of the site contractor to repair. No



JC ENGINEERING, Inc.
Civil & Environmental Engineering
2854 Cranberry Highway.
East Wareham, Massachusetts 02538
Ph. 508-273-0377 – Fax 508-273-0367

long-term stabilization of the remaining asphalt is anticipated.

Plans (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.*

JCE Response: At this time the signs are not proposed to be removed & relocated, however final sign placement will be at the discretion of MassDOT and covered under their permit approval.

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.*

JCE Response: The final relocation of the Utility Pole will be a coordinated effort between the applicant, MassDOT and Eversource. We anticipate the conflict can be resolved without significant changes to the layout of the entrance.

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.*

JCE Response: The applicant will be providing a sound-attenuated enclosure as well as acoustic fence panels facing the building. This will minimize sound disturbance to the residents.

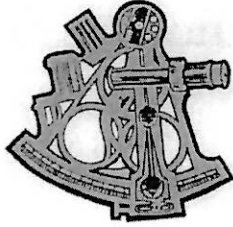
4. *Please explain the 20'x20' crushed stone parking area next to the proposed maintenance building. Why not extend the pavement to reduce overall surface maintenance?*

JCE Response: The Crushed Stone Area has been revised to be an extension of the bituminous asphalt.

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.*

JCE Response: Structural plans to be developed prior to construction will include proper support of the patio areas.

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*



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is not listed in Table 921. Documentation as to how the number of spaces was arrived at should be provided.

JCE Response: The proposed parking spaces for this project are based on the indoor parking capacity of the building, 48 spaces, and 12 outdoor spaces available for surface parking. A traffic study provided by Howard Stein Hudson has determined that there should be a minimum requirement of 32 parking spaces. The proposed amount exceeds that minimum.

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?*

JCE Response: The dumpster will sit atop a 13' by 18' concrete pad, now shown on the plan. The remaining portion of the fenced-in area will be treated with ¾" crushed stone. It is expected one dumpster will be sufficient for the facility.

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.*

JCE Response: The granite curbing will terminate at the front property line. 30-ft radius is typical for a commercial curb cut on a state highway layout. Final design of curb cut is at the discretion of MassDOT.

9. *Is there any edge treatment proposed for the paved fire lane behind the building?*

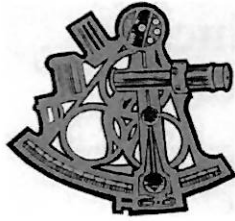
JCE Response: A Cape Cod Berm has been added to the southerly edge of the fire lane for additional stormwater containment. Due to the nature of the proposed grading no berm is necessary on the northerly side.

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.*

JCE Response: The outdoor amenities expected to be accessed by residents are situated to the north of the building, therefore sidewalks are not included to the east or south. Residents will be able to utilize the outdoor patio and lawn areas. The fire lane grading has been adjusted to allow for proper ADA accessible slopes, and a crosswalk has been proposed to the east of the building to further connect lawn areas for the use of residents.

Plans (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.*



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JCE Response: Large specimen trees have been evaluated and preserved to the maximum extent practicable. The construction of the building, driveway, parking areas, and associated site grading require most of the existing trees to be removed. Furthermore, we defer to the landscape architect on the condition and expected maintenance of several trees being removed included in this letter.

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?*

JCE Response: There will be a stairway between the patios that lead to the garage. Structural plans to be developed prior to construction will demonstrate proper support of the patio areas.

3. *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.*

JCE Response: The grading in this area has been revised.

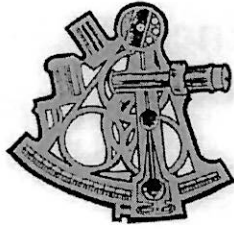
4. *Top and bottom elevations for all curb should be shown at all corners and transition points.*

JCE Response: A new sheet (4) titled Grading & Curb Tie Plan has been incorporated into the plan set to further clarify the grading in several areas as well as the top and bottom of all curbs and walls. We would note that the precast concrete curb detail as shown on sheet 8 specifies a 6" reveal throughout the site.

5. *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.*

JCE Response: Additional spot grades have been added to the plan that clearly demonstrate runoff will not be collected from the state highway. The proposed driveway will feature a 2" high berm at the existing gutter line which will prevent highway runoff from entering CB-2, i.e., the rim elevation of CB-2 is 25.80', the proposed grade directly adjacent to CB-2 is 26.0', and the existing grade on Sandwich Road is 25.8'. This profile of grades is consistent through the entire entrance. Likewise, MassDOT will require that runoff from the new development will not enter the State highway.

6. *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*



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and runoff at each of these locations?

JCE Response: These walls will act as planter boxes and will be structurally connected to the poured building foundation for stabilization. Weep holes will be provided at regular intervals for drainage purposes.

7. *At several locations the bottom elevations of the segmented wall sections are not consistent with the driveway grading.*

JCE Response: Grades have been reviewed and corrected as needed. We would note that a 6" Concrete Curb will be installed between planter walls/building foundation and driveway. Please refer to the Grading and Curb Tie Sheet.

8. *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?*

JCE Response: Exterior door locations are shown on the architectural plans and have now been specified on the plan to demonstrate access from the interior.

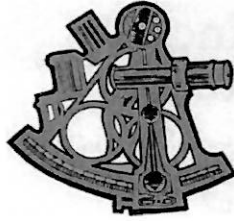
9. *Is the proposed segmented retaining wall near the maintenance building necessary? Could the wall be poured as part of the building foundation so that it is tied together? The segmented wall could easily be dislodged or run over without some protection.*

JCE Response: We agree with including this support wall as part of the foundation wall and have revised the plan accordingly. A wall is necessary to allow for proper drainage of the driveway in front of the maintenance building towards CB-4, and to maintain all earthwork activities on the project property. Structural plans to be developed prior to construction will show an extension of the poured foundation wall.

10. *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.*

JCE Response: We have provided a new Catch Basin (3A) at the end of the straight curb of the driveway and have kept CB-3 in the same location (Now known as CB-3B). CB-3B must be kept in that location due to the grades located at the state highway interface with the proposed driveway. CB-3A was added to address this comment, and we have provided an offset paved swale in order to avoid conflicts with the proposed sewer main and force main.

11. *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*



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separated. A change in contouring may be all that is necessary.

JCE Response: We have added additional spot grades to clearly demonstrated that runoff from the state highway will not enter the site. Similar to the westerly driveway, a 2" high berm at the gutter line will prevent highway runoff from entering CB-3. Likewise, MassDOT will require that runoff from the new development will not enter the State highway.

12. *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.*

JCE Response: Curb grades have been reviewed and revised accordingly. Please refer to the Grading and Curb Tie sheet that has been incorporated into the plan set. We would note that the precast concrete curb detail as shown on sheet 8 specifies a 6" reveal throughout the site.

13. *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.*

JCE Response: A protective railing will be included as required by building code. This railing can be mounted directly to the wall, provided that the upper course of the wall are grouted or concreted for the entire length to a 24" depth. A general detail has been provided on sheet 8.

We would note final selection of retaining wall type will be by the applicant/landscape architect/contractor, and the final specifications/design for any walls will be submitted and approved prior to construction.

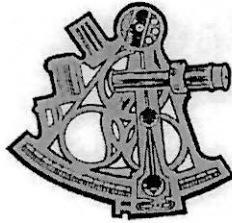
14. *The reference to CB-3 invert going to DMH-4 should be changed to CB-4.*

JCE Response: This has been corrected on the plan.

15. *Show the size and pitch of all pipe in the infiltration systems and all roof drain piping.*

JCE Response: All piping information has been added to the plan. Calculations have been provided to demonstrate a 6" PVC pipe at a 1% minimum slope is sufficient for all roof drain piping.

16. *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*



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site changes.

JCE Response: Test pits have been conducted to confirm presence of groundwater. See Test Pits 3,4 & 5 on detail sheet 9.

17. *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.*

JCE Response: The grades at this driveway location have been reviewed. There is effectively an 8-ft wide level area between the existing state highway gutter line and the initiation of the 8% driveway slope. The cross slope of the driveway (including the state highway layout) is approximately 2.5%, therefore we believe runoff will drain adequately towards CB-2.

18. *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")?*

JCE Response: The Oil/Grit Separator tank has been designed as an offline structure; consequently, the tanks and piping have been sized to handle the 2-year (24-hour) storm event. All larger storm events will by-pass the structure and go directly to the subsurface infiltration system via a pipe set at a higher elevation out of DMH-2 and DMH-4. Supplemental calculations demonstrating the 8" pipe handling up to the 25-year (24-hour) storm event have been provided with this report.

Plans (Sheet 5 of 10)

1. *There needs to be a 1" drop between invert inlets and outlets across the channel inside all sewer manholes.*

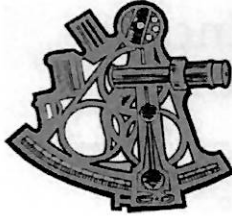
JCE Response: The sewer structure inverts have been revised accordingly.

2. *The rim grade of SMH-1 may be too high based on the grading plan. Also check the rim grade of SMH-2.*

JCE Response: Rim elevations have been reviewed and revised accordingly.

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.*

JCE Response: Fire & domestic line diameters and the corresponding taps & connections are now shown at the existing main. Final service line dimensions are at the discretion of the respective fire & water department.



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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:

a.) Approval from the sewer department that the flow level has been determined and that a connection will be accepted

JCE Response: See attached letter dated November 20, 2017 from Guy Campinha, Director of the Wareham Water Pollution Control Facility (WWPCF), specifying approval of 14,080 GPD for 128 total bedrooms at 110 gpd per bedroom. We have recently met with the Director to confirm the approval as specified will still be honored for the updated project.

b.) Calculations for lift, friction loss and head to determine effective pump size

JCE Response: The design of the sewer pump station and all associated conveyances and discharges will be in accordance with the WWPCF requirements, and will not be completed under this project submittal.

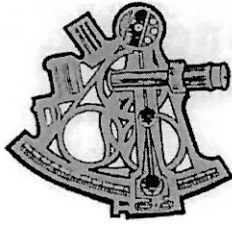
c.) Approval for the location of the force main in Route 6 and Linwood Avenue from both MassDOT and the Town of Wareham due to the numerous utilities already existing.

JCE Response: The applicant will work with MassDOT and WWPCF regarding utility work within the State Highway Layout following local approval of this project submittal. MassDOT requires local approval prior to the project being reviewed.

5. *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.*

JCE Response: Floor drain locations as shown on this plan are for conceptual purposes only and to indicate the connection to the proposed gas trap. Final specifications and details of floor drains and garage slab pitching will be included on structural plans submitted prior to construction.

6. *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.*



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JCE Response: The sewer line has been relocated as advised to avoid existing and proposed trees. Cleanouts will be provided at all bends.

Plans (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.*

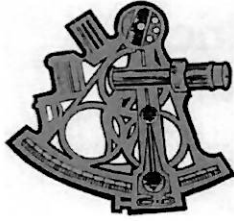
Landscape Architect Response: The tree selection that is the subject of this comment is a Cleveland Select Callery Pear (Chanticleer) which grows to a height of 25–35' and a spread of 16–25' at maturity. The selection was made because the tree is an excellent specimen for urban conditions, will tolerate high heat from the adjacent roadway, will tolerate air laden with automobile exhaust and will tolerate drought conditions if they persist. The Cleveland Select Pear is an excellent ornamental tree with a pyramidal shape and is one of the hardier Callery Pears. It has dark, glossy-green foliage and very odoriferous white flowers. The foliage turns a brilliant red and purple color in the fall. This pear tree does not produce any fruit.

At the request of the Applicant, the Landscape Architect reviewed the condition of a number of existing large trees in the field in February 2021 and concluded that most were either severely diseased, damaged by insects (ants) or exhibited signs of decline such as major dead limbs, exposed roots, insect damaged roots. Some of the trees had large dead areas in the main trunks. Overall, my recommendation was that saving these trees posed a major safety risk to the public and the future residents of the facility and they should be removed. If the Board wishes a second opinion of the condition of the trees, a Massachusetts Certified Arborist should assess the condition of the trees as recommended by Peer Review Engineer.

2. *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.*

Landscape Architect Response: The Applicant has agreed to install a landscape style segmented concrete block retaining wall along the back of the sidewalk as shown on Sheet 4 and in the detail on Sheet 8. The wall will be a product manufactured by Keystone, Belgard, Techo-Bloc or approved equal. The final product will be selected by the Landscape Architect in consultation with the Applicant.

3. *The shrub planting detail shows two vertically hatched symbols but what they represent is not indicated.*



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JCE Response: This detail has been revised accordingly. The hatched area is intended to represent a raised earth berm surrounding the shrub planting root ball.

Plans (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*

JCE Response: The proposed lights at the site entrances have been revised to provide greater lighting/visibility.

Plans (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.*

JCE Response: Further information on specifications have been added to the plan.

2. *The temporary entrance detail needs information as to the paved apron construction.*

JCE Response: Apron construction note has been addressed to meet specification set forth in the Typical Pavement Section detail.

3. *The striping detail should include a note indicating that the dimensions apply to outside parking areas only.*

JCE Response: Note has been added to detail.

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.*

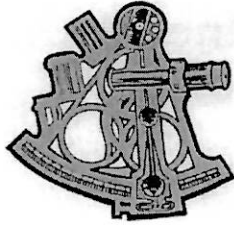
JCE Response: Note has been added to details.

5. *Include a detail for sloped or vertical granite curb to be used on the project.*

JCE Response: Detail has been added to plan. We would note final specification and curb type is subject to approval of MassDOT.

Plans (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.*



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JCE Response: Additional test pits have been conducted to confirm seasonal high groundwater elevations.

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.*

JCE Response: All details have been revised accordingly.

3. *All inlet and outlet pipes should be noted as mortared inside and outside of the structures.*

JCE Response: This note has been added to all applicable 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.*

JCE Response: All details have been addressed 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.*

JCE Response: Detail has been addressed accordingly.

Plans (Sheet 10 of 10)

1. *The Oil/gas separator should be placed on a 6" bed of crushed stone.*

JCE Response: Detail has been addressed accordingly.

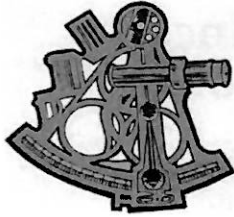
2. *Show the 12" x 12" cement concrete ring for the leach pit detail as described above for the Precast Drain Manhole Detail of Sheet 9.*

JCE Response: Detail has been addressed accordingly.

3. *If leaching pits are to be placed under paved surfaces, filter fabric should be used on all vertical interfaces of soil and stone.*

JCE Response: Detail has been addressed accordingly.

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.*



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JCE Response: Note has been added to detail.

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.*

JCE Response: No response necessary.

2. *Will there be any security provided for the garage parking? Will there be an overhead door?*

JCE Response: Refer to architectural plans for ingress/egress to parking garage.

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.*

JCE Response: Revised architectural plans will be submitted.

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.*

JCE Response: Revised architectural plans will be submitted.

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.*

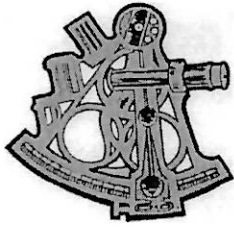
JCE Response: All exterior doors are shown on the revised plans.

6. *Six spaces formerly shown as full size are now shown as compact car spaces and the proposed elevator access has changed.*

JCE Response: No response necessary.

7. *The above changes need to be updated so that the site plan and building plan are consistent with each other.*

JCE Response: Revised architectural plans to be submitted.



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Please feel free to contact our office should you have any questions.

Sincerely,

John L. Churchill Jr., P.E., P.L.S.
President
J.C. Engineering, Inc.

jlc/bjw

cc: Charles L. Rowley, PE, PLS, Frederick Mannix

Attached:
Revised Pipe Sizing Calculations
Letter from WWPCF, dated November 20, 2017
Traffic Study Memorandum, Prepared by Howard Stein Hudson

PIPE SIZING CALCULATIONS

Design for 25 Year Storm

Pipe Coeff. "n" = 0.011

Pipe Desc.	Type of Area	RUNOFF							PIPE		
		Tributary Area		Runoff Coeff. "C"	Time of Flow Tc (min)	Rainfall Intensity I (in/hr)	Discharge Q=CIA		Length (ft.)	Dia. (in.)	Design Slope (ft/ft)
		A Incr. (acres)	A Total (acres)				Q Incr. (cfs)	Total (cfs)			
CB-1	Imp	0.208		0.95							
to DMH-1	Grass A	0.088		0.1							
	Woods A	0.013		0.15							
	Total	0.309		0.674	10	5.7	1.188	1.188	97	7.458	0.010
									<i>Use</i>	12	
CB-2	Imp	0.069		0.95							
to DMH-1	Grass A	0.014		0.1							
	Woods A	0.000		0.15							
	Total	0.083		0.807	10	5.7	0.382	0.382	32	4.872	0.010
									<i>Use</i>	12	
DMH-1	Imp	0.000		0.95							
to DMH-2A	Grass A	0.000		0.1							
	Woods A	0.000		0.15							
	Total	0.000		0	10	5.7	0	1.569	273	7.952	0.012
									<i>Use</i>	12	
CB-3A	Imp	0.120		0.95							
to DMH-2A	Grass A	0.084		0.1							
	Woods A	0.000		0.15							
	Total	0.204		0.6	10	5.7	0.698	0.698	8	5.859	0.013
									<i>Use</i>	12	
DMH-2A	Imp	0.000		0.95							
to DMH-2B	Grass A	0.000		0.1							
	Woods A	0.000		0.15							
	Total	0.000		0	10	5.7	0	2.267	31	9.336	0.011
									<i>Use</i>	12	
CB-3B	Imp	0.060		0.95							
to DMH-2B	Grass A	0.006		0.1							
	Woods A	0.000		0.15							
	Total	0.066		0.873	10	5.7	0.328	0.328	1	3.405	0.050
									<i>Use</i>	12	

Pipe Desc.	Type of Area	RUNOFF							PIPE		
		Tributary Area		Runoff Coeff. "C"	Time of Flow Tc (min)	Rainfall Intensity I (in/hr)	Discharge Q=CIA		Length (ft.)	Dia. (in.)	Design Slope (ft/ft)
		A Incr. (acres)	A Total (acres)				Q Incr. (cfs)	Total (cfs)			
DMH-2B	Imp	0.000		0.95							
to DMH-3	Grass A	0.000		0.1							
	Woods A	0.000		0.15							
	Total	0.000		0	10	5.7	0	2.595	4	9.589	0.013
									<i>Use</i>	12	
DMH-2B	Imp	0.000		0.95							
to OGS-1*	Grass A	0.000		0.1							
	Woods A	0.000		0.15							
	Total	0.000		0	10	5.7	0	2.595	0.8	7.091	0.063
									<i>Use</i>	8*	
OGS-1*	Imp	0.000		0.95							
to DMH-3	Grass A	0.000		0.1							
	Woods A	0.000		0.15							
	Total	0.000		0	10	5.7	0	2.595	0.8	7.091	0.063
									<i>Use</i>	8*	
CB-4	Imp	0.333		0.95							
to DMH-4	Grass A	0.575		0.1							
to DMH-5	Woods A	0.112		0.15							
	Total	1.020		0.383	10	5.7	2.227	2.227	27	9.964	0.0075
									<i>Use</i>	12	
DMH-4	Imp	0.000		0.95							
to OGS-2*	Grass A	0.000		0.1							
	Woods A	0.000		0.15							
	Total	0.000		0	10	5.7	0	2.227	0.55	6.24	0.091
									<i>Use</i>	8*	
OGS-2*	Imp	0.000		0.95							
to DMH-5	Grass A	0.000		0.1							
	Woods A	0.000		0.15							
	Total	0.000		0	10	5.7	0	2.227	0.55	6.24	0.091
									<i>Use</i>	8*	
* As per the MA Stormwater Handbook v2c2, the OGS Tank has been designed to pass the 2-year 24-hour storm without interference and provide a bypass for larger storms to prevent resuspension of solids.											
RD-1	Imp	0.136		0.95							
to SC-740	Grass A	0.000		0.1							
	Woods A	0.000		0.15							
	Total	0.136		0.95	10	5.7	0.736	0.736	217	4.984	0.0330
									<i>Use</i>	6	
RD-2	Imp	0.044		0.95							
to SC-740	Grass A	0.000		0.1							
	Woods A	0.000		0.15							
	Total	0.044		0.95	10	5.7	0.238	0.238	33	2.605	0.1100
									<i>Use</i>	6	

Pipe Desc.	Type of Area	RUNOFF							PIPE		
		Tributary Area		Runoff Coeff. "C"	Time of Flow Tc (min)	Rainfall Intensity I (in/hr)	Discharge Q=CI ^A		Length (ft.)	Dia. (in.)	Design Slope (ft/ft)
		A Incr. (acres)	A Total (acres)				Q Incr. (cfs)	Q Total (cfs)			
RD-3	Imp	0.072		0.95							
to (7) LP	Grass A	0.000		0.1							
	Woods A	0.000		0.15							
	Total	0.072		0.95	10	5.7	0.39	0.39	34	4.611	0.0140
									<i>Use</i>	6	
RD-4a	Imp	0.073		0.95							
to RD-4c	Grass A	0.000		0.1							
	Woods A	0.000		0.15							
	Total	0.073		0.95	10	5.7	0.395	0.395	27	4.377	0.0190
									<i>Use</i>	6	
RD-4b	Imp	0.049		0.95							
to RD-4c	Grass A	0.000		0.1							
	Woods A	0.000		0.15							
	Total	0.049		0.95	10	5.7	0.265	0.265	64	3.637	0.0230
									<i>Use</i>	6	
RD-5	Imp	0.051		0.95							
to (5) LP	Grass A	0.000		0.1							
	Woods A	0.000		0.15							
	Total	0.051		0.95	10	5.7	0.276	0.276	23	3.723	0.0220
									<i>Use</i>	6	
RD-6	Imp	0.103		0.95							
to (5) LP	Grass A	0.000		0.1							
	Woods A	0.000		0.15							
	Total	0.103		0.95	10	5.7	0.558	0.558	62	5.518	0.0110
									<i>Use</i>	6	



WAREHAM WATER POLLUTION CONTROL FACILITY

6 Tony's Lane
Wareham, MA 02571
Telephone (508) 295-6144
Fax (508) 291-0155
TTY 1-800-439-2370

Guy Campinha, Director

November 20, 2017

JC Engineering, Inc.
2854 Cranberry Hwy.
East Wareham, MA 02571

RE: Request for capacity for Assisted Living facility
238 & 240 Sandwich Rd.
Map 133, Lots 1100A & 1101A

Attention: Michael Pimental

Dear Mr. Pimental:

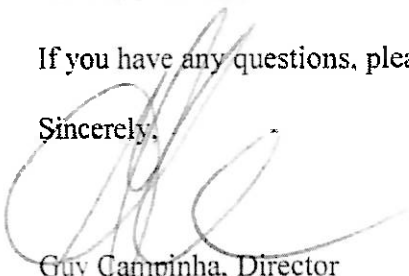
At the Board of Sewer Commissioners meeting on October 26, 2017, the Board voted unanimously to grant approval of the proposed project subject to contingencies:

- a sewer feasibility study to be conducted plus a draw down test on the existing pump station
- upgrade of existing pump station, if necessary, at the owner's expense
- Any additional expenses to be borne by the property owner.

A proposed septic flow of 14,080 gpd for the 108 unit assisted living facility to be connected to a sewer force main from a proposed pump station on the property to the existing manhole on Linwood Avenue.

If you have any questions, please contact our office.

Sincerely,



Guy Campinha, Director

GC/rbf

cc: Town Collector/Treasurer
Board of Sewer Commissioners
File



TO:	Fred Mannix, FC Mannix	DATE:	June 30, 2021
FROM:	Brian Beisel Melissa Restrepo	HSH PROJECT NO.:	2021040.00
SUBJECT:	Project Impact Analysis 240 Sandwich Road, Wareham		

Introduction

This technical memorandum, prepared by *Howard Stein Hudson (HSH)*, summarizes the project impacts related to the development of 240 Sandwich Road (Route 6) in Wareham, Massachusetts. The existing site, currently vacant, consists of approximately 83,601 square feet (sf) of land with various existing foundations to be demolished.

The proposed Project will consist of an Intermediate Care Facility with approximately 85 units and approximately 60 parking spaces, including 48 spaces in the building's parking garage and 12 at-grade spaces for visitors. The study team calculated the trip generation, vehicle trip distribution, and parking demand for the proposed project.

Project Impact Analysis

Trip Generation Methodology

Trip generation is a complex, multi-step process that produces an estimate of vehicle trips associated with a proposed development and a specific land use program. A project's location and proximity to different travel modes determine how people will travel to and from a project site.

As is standard practice, new trip generation is based on rates published in the Institute of Transportation Engineers (ITE) *Trip Generation* (10th edition, 2017). The ITE rates, available for a variety of land uses, produce "unadjusted" vehicle trip estimates, which are converted to person trips based on vehicle occupancy. To estimate the number of trips expected to be generated by the proposed Project, the following ITE land use code was used:

- **Land Use Code 253** – Congregate Care Facility is an independent living development that provides centralized amenities such as dining, housekeeping, communal transportation, and organized social/recreational activities. Each individual dwelling unit often has a kitchenette, rather than a full kitchen. Limited medical services may or may not be provided.



ITE provides data to estimate the total number of “unadjusted” vehicle trips associated with the Project. In urban settings, trips are often “adjusted” to reflect alternative travel modes, such as transit and walking. For this Project site, however, most trips are expected to be completed by vehicle and, therefore, no adjustment were made.

Project Trip Generation

Table 1 presents the vehicle trip generation for the proposed Project.

Table 1. Vehicle Trip Generation

Land Use	Vehicle Trip Generation								
	Daily			a.m. Peak Hour			p.m. Peak Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
Congregate Care Facility <i>LUC 253–85 units</i>	86	86	172	4	2	6	8	7	15

The Project is expected to generate approximately 172 daily vehicle trips with six vehicle trips (4 entering and 2 exiting) during the weekday a.m. peak hour and 15 vehicle trips (13 entering and 13 exiting) during the weekday p.m. peak hour.

Vehicle Trip Distribution

A vehicle trip distribution pattern identifies the various travel paths for vehicles arriving at the destination and the corresponding departure travel paths. Vehicle trips generated to the Project Site will include residents, employees, and visitors. The trip distribution for Project was determined based off previously conducted Wareham traffic studies in the vicinity of the site. The distribution of the trips is expected to be approximately 65% along Blue Star Memorial Highway (Route 25), approximately 35% along Sandwich Road (Route 6) and Cranberry Highway (Route 28).

Project Parking Demand

Parking demand for the proposed development was determine based upon data in the ITE publication *Parking Generation*, 4th edition. The average parking demand for an 85-unit Congregate Care Facility is summarized in Table 2 below and compared with the Project’s proposed parking supply.



Table 2. Parking Demand and Supply

Land Use	Average Peak Period ITE Parking Demand ¹	Proposed Parking Supply
Congregate Care Facility <i>LUC 253–85 units</i>	26	60

1. Average peak period parking demand is based on a weekday (Monday – Friday).

Resident vehicle ownership is typically low at a congregate care facility. Site employees and visitors generate the majority of the parked vehicles at the facility. Based on a review of the average peak period parking demand, adequate parking supply will be provided by the proposed Project.

In addition to the ITE data, the Town of Wareham Zoning Regulations also includes a minimum number of 1 parking space per 4 bedrooms. Based on the expected number of bedrooms, 128, this would result in the requirement of a minimum of 32 spaces.

Conclusion

As detailed in this memorandum, the proposed Project is not expected to generate a substantial number of new vehicle trips during both the morning and evening peak hours. With the Project's proximity and access to the regional highway system, combined with the low number of new vehicle trips, the proposed Project is expected to have minimal impact on the surrounding transportation infrastructure.