



Bob Gambale, Chair  
Zoning Board of Appeals  
Town of Ipswich  
25 Green Street  
Ipswich, MA 01938

September 12, 2018

Attn: Marie Rodgers, ZBA Administrative Assistant

Ref. T0819.00

Re: 25 Pleasant Street Comprehensive Permit  
Independence Village  
Traffic & Civil Engineering Peer Review

Dear Mr. Gambale and ZBA Members:

On behalf of the Town of Ipswich, TEC, Inc. reviewed documents as part of the traffic and civil engineering peer review for the Comprehensive Permit Application for the proposed Independence Village Project to be located at 25 Pleasant Street in Ipswich. The Project consists of constructing 8 apartment units on property on the northwest corner of the intersection of Pleasant Street with Blaisdell Terrace.

The following documents were received as part of our review:

- *Existing Conditions Plan (1 sheet)* – 25 Pleasant Street, prepared by Donohoe Surveying, Inc., dated May 10, 2018;
- *Architectural Building Plans and Elevations (8 sheets)* – 25 Pleasant Street, prepared by Jennifer Sutherby Architect, LLC, dated July 1, 2018;
- *Site Plan (2 Sheets)* – 25 Pleasant Street, prepared by Hancock Associates, dated July 9, 2018;
- *Comprehensive Permit Application*, Independence Village, Ipswich, MA, prepared by the Elder Friendly Housing, LLC
- *Traffic Assessment Memorandum* – 25 Pleasant Street, prepared by Vanasse & Associates, Inc., dated June 7, 2018;

TEC completed a review of these documents for the Town of Ipswich and compiled the following comments during our review:

### **Transportation Impact Evaluation**

1. The Traffic Assessment (TA) presents a study area of the intersection of Pleasant Street / Blaisdell Terrace and Pleasant Street / Site Driveway. TEC concurs with the scope of the

study area and does not find that additional intersections are warranted based upon the documented trip generation levels.

2. Traffic counts utilized within the TA were conducted in April 2018. The TA indicates that a 4% increase was applied to the April 2018 counts to adjust these volumes to the average month conditions. TEC concurs with this adjustment factor based on the criteria found within the Massachusetts Department of Transportation's (MassDOT) *Traffic Impact Analysis (TIA) Guidelines*.

The weekday morning and weekday evening peak commute hours were studied to determine the Project's overall effect on the roadway. TEC concurs that these selected time periods are appropriate for a residential land use as the peak hour of the dwelling units will typically overlap with the peak hours of the adjacent street system.

3. The Applicant utilized an annual traffic volume growth adjustment factor of 1.0 percent per year based on data as provided by MassDOT. TEC concurs with the use of this adjustment factor based on the MassDOT *TIA Guidelines*.
4. The TA presents motor vehicle crash data for the intersection of Pleasant Street / Blaisdell Terrace. The crash data indicates the number, type, and severity of crashes at the study area intersections between 2013 and 2015. Upon review of MassDOT's online crash portal and the data provided, TEC concurs that there appears to be no identifiable crash issue and/or trend at the intersection. Although a specific crash trend does not exist, the Applicant should provide documentation of other traffic safety related issues/deficiencies at the intersection and adjacent roadways, if applicable.
5. The TA uses the standard fitted curve equations published in the ITE publication, *Trip Generation, 10th Edition* for land use code (LUC) 221 – Multifamily Housing (Mid-Rise) to estimate the traffic generated by the eight apartment units. TEC concurs with this methodology as appropriate to project the number of trips to be generated by the Project.
6. The vehicular traffic generated by the Project was distributed onto the adjacent roadway system based upon existing travel patterns along Pleasant Street. TEC concurs with the methodology based upon the documented trip generation levels.
7. TEC generally concurs with the results of the capacity and queue analysis provided as part of the TA utilizing the Highway Capacity Manual 2010 (HCM 2010) methodology.
8. Overall, TEC concurs that the general impact of the Project on the control delay, queue, and level of service along the approaches to the study area intersection is anticipated to be nominal in terms of 'vehicular' traffic.
9. The sight distances reported in Table 2 of the TA are measured in accordance with the American Association of State Highway and Transportation Officials (AASHTO) requirements. There are two types of sight distances required at an intersection: Intersection Sight Distance (ISD), which is the sight distance necessary for vehicles exiting a stop condition to enter the through traffic flow without the through vehicles slowing down significantly; and Stopping Sight Distance (SSD), which is the sight distance necessary for through vehicles to see a vehicle entering the roadway and be able to avoid collision. At the subject site, neither SSD or ISD is met to the west of the Pleasant Street

driveway (toward the terminus of Pleasant Street with Brownville Avenue) or to the south of the Blaisdell Terrace curb opening (toward the intersection of Blaisdell Terrace with Pleasant Street).

10. The provision of head-in parking from Blaisdell Terrace is unfavorable, although this is observed to be a typical movement for the other residential uses along the roadway and within this neighborhood. Due to the proposed retaining wall restricting sight distances for drivers exiting these spaces, TEC recommends the Applicant recalculate or relocate the retaining wall along the south side of the parking area to not obstruct sight distances toward the intersection of Blaisdell Terrace with Pleasant Street for vehicles reversing out of the spaces. The Applicant shall provide a plan within the set that depicts the sight distance available along Blaisdell Terrace for the vehicles exiting these spaces.
11. The site plans should be revised to show any sight lines along the property frontage along Pleasant Street. The Applicant shall provide a plan within the set that depicts AASHTO minimum sight distance at the new driveway location. The sight line clear areas should be compared against the proposed Landscaping Plans to confirm that the sight lines will remain clear as reported in the traffic study.
12. The Applicant should commit to remove and consistently maintain vegetation along the site frontages to ensure that sight lines remain unobstructed at the site driveway intersection with Pleasant Street and at the curb opening along Blaisdell Terrace in conformance with the recommendations within the TA that all landscaping and building features should not exceed 24 inches in height.
13. The Applicant should consider, if possible, the construction of sidewalk along the Blaisdell Terrace frontage to connect the sidewalk provided on-site with the existing sidewalk network along Pleasant Street. A crosswalk and associated accessible ramps should be provided across the site driveway approach at Pleasant Street. The Applicant should provide further detail on the plan to the location and type of accessible ramps within the site and at the site driveway crossing on Pleasant Street. Details for each ramp configuration type and crosswalk type and material should be added to the Site Plans.
14. The Site Plans should depict any proposed accommodations for a school bus pick-up and drop-off location along the site frontage. This could include some sections of new granite curbing and a cement concrete sidewalk surface to provide a visual difference for the pedestrian space adjacent to internal circulation areas.
15. Currently, on-street parking is permitted along Blaisdell Terrace, which is used by existing residents in the neighborhood. The proposed 65-foot curb opening onto Blaisdell Terrace will remove approximately three on-street parking spaces.
16. The Town of Ipswich Zoning Bylaw requires 1.5 parking spaces per dwelling unit. For the eight apartment units, twelve parking spaces are provided at a ratio of 1.5 spaces per unit. TEC concurs that this bylaw requirement is met. In general, only one accessible parking space is required by ADA standards for parking lots with 25 spaces or less. The Applicant should provide justification for the three accessible parking spaces specified to ensure adequate parking is provided on-site for all residents.

17. TEC concurs that the level of traffic impact from the eight residential units does not warrant any specific physical mitigation at this time. However, the Applicant should coordinate with the Town's DPW Department for a scaled contribution to current or future infrastructure improvements near the Project site to account for the Project's tertiary impacts.

### **Site Plan Characteristics**

TEC developed the following comments based on the Town of Ipswich Protective Zoning Bylaws and engineering industry standards:

1. The Board should note that the Applicant has requested multiple waivers from the Town of Ipswich Protective Zoning Bylaw which have been listed in the Comprehensive Permit Application (Section 9). Applicant should provide a list of the requested waivers on the site development plans.
2. The Applicant should provide a zoning compliance chart on the Site Plan indicating dimensional requirements identified within the Protective Zoning Bylaws. Applicant should also provide the proposed Building Area and Min. Open Space.
3. The Applicant should provide turning templates showing the ability of refuse vehicles to access the proposed dumpster location without leaving the paved surface of Blaisdell Terrace.
4. The Applicant shall provide a dedicated plan for all traffic signage and pavement markings to be installed as part of the Project. A sign summary shall also be included which depicts the sign legend, sign size, and sign lettering dimensions in compliance with the Manual on Uniform Traffic Control Devices (MUTCD).
5. The Applicant should coordinate with the Town of Ipswich Fire Department for preferred locations and sign requirements for fire lanes within the site (if needed). The Applicant should coordinate with the Town of Ipswich Fire Department to determine whether access for an emergency vehicle is required to the rear of the site along the western property frontage.
6. Sheet A100 shows a door entry canopy with posts; however, it is not shown on the site plan. It appears that the posts may be located in the ADA access area.
7. The Applicant should provide a separate Layout and Materials Plan which states the material finishes for the following items:
  - Fence
  - Retaining wall
  - Dumpster pad
  - Curb
  - Walkway
  - Wheelchair ramp to building

8. The Site Plans should be revised to clearly display the property setback lines along all sides of the property.
9. The Applicant should provide dimensions of the proposed parking spaces on the Site Plan.
10. The Applicant should provide a parking summary table that displays the number of required/proposed parking spaces, and the number of required/proposed accessible spaces on the Site Plan.
11. The Applicant should provide an estimate for water usage and sewer flows so the Town can determine if there will be any implications to downstream infrastructure.
12. The Applicant should coordinate with the Town of Ipswich Utilities Department to determine if the existing water service needs to be cut and capped at the main located in Pleasant Street.
13. The Applicant should indicate what type of pipe material is proposed for all utility pipes.
14. The Applicant should provide invert elevations for the proposed sewer line.
15. The Applicant should provide top and bottom elevations at key points along the proposed retaining walls.
16. It should be noted that the Applicant requests a waiver for providing a minimum of 20' vegetative screening along the western side (abutting Lot 44). Applicant states that the proximity of the building and retaining wall limits the use of screening along the western property line.
17. The Town may benefit from a third-party review by a Registered Landscape Architect to determine if the proposed plantings are adequate for screening and meet the intent of the Ipswich Zoning ByLaw.
18. The Town may benefit from a third-party review by a Registered Architect to determine if the scale and massing of the proposed buildings is appropriate in comparison to the current neighborhood.
19. The Applicant should show anticipated snow storage locations on the Site Plan and add notes to detail proposed snow storage operations.
20. The Applicant should provide an Erosion Control Plan for proposed construction per Section X.C.7 of the Ipswich Protective Zoning Bylaws.

21. The Erosion Control Plan should show proposed locations of stockpiles and silt sacks in all existing catch basins that will receive stormwater runoff from the project site.
22. The Applicant may want to consider providing bollards or concrete wheel stops at the four parking stalls located north of the proposed building. Passenger cars may encroach and block the proposed walkway if no structural barrier is proposed.
23. The Applicant should indicate on the Site Plan where the electrical line enters the building.
24. The Applicant should provide ADA parking signage at all ADA parking stalls and include in Details & Notes Sheet.
25. The Applicant should provide spot grades at all corners of the proposed ADA parking stalls and access aisle to confirm that a maximum of 2% slope is proposed in all directions.
26. The Applicant should clarify the top/bottom of curb elevations at the proposed catch basin located near the northeast corner of the building.
27. The Applicant should revise project plans to provide the following construction details:
  - Tree protection
  - Soil stockpile
  - Erosion control barrier
  - Stabilized construction exit
  - Dumpster enclosure
  - ADA ramp
  - ADA parking stall
  - Curb
  - Cleanout
  - Sewer connection
28. The Applicant seeks a waiver for providing an off-street loading area. The Applicant states that the "parking lot is fairly large enough (22'x45'±) to substantially accommodate the loading zone requirements (off street) but will block parked vehicles during loading." A 12'x60' loading area is required per Protective Zoning Bylaw.

### **Stormwater Review Comments**

TEC developed the following comments based on the Massachusetts Stormwater Management Handbook, published by the Massachusetts Department of Environmental Protection (MassDEP):

1. Applicant should provide a Stormwater Report. The Stormwater Management Standards shall apply to the maximum extent practicable for multi-family housing development projects with five to nine units.
2. The Applicant should provide an Operations and Maintenance (O&M) Plan.
3. The Applicant should provide pre- and post-development peak discharge rates for the project site.
4. The proposed roof drain and proposed catch basin should be routed to a drain manhole prior to flowing into the proposed infiltration basin.
5. The Applicant should clarify the pipe size, invert elevation, and slope of roof drain to show adequate cover is provided over pipe.
6. The site plan indicates that a 12" drain pipe from the proposed catch basin to the infiltration basin; however, the 'stormtech chambers – manifold' detail indicates that this pipe is 6".
7. The 'stormtech chambers-section view' detail indicates loam and seed be placed over infiltration basin; however, the basin is proposed to be below pavement.

If you have any questions regarding the peer review, please do not hesitate to contact us at (978) 794-1792. Thank you for your consideration.

Sincerely,  
TEC, Inc.  
*"The **E**ngineering **C**orporation"*



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