

September 8, 2021

Jennifer Raitt  
Director of Planning and Community Development  
Town of Arlington  
730 Massachusetts Avenue Annex  
Arlington, MA 02476

**Re: Thorndike Place – Arlington, MA  
Development Changes – Traffic Considerations Review**

Dear Ms. Raitt:

BETA Group, Inc. (BETA) has completed review of the ***Response to Peer Review Comments – Thorndike Place Development Changes*** letter prepared for the revised Thorndike Place Project Plan by Vanasse & Associates, Inc. (VIA). The following provides a summary of BETA's comments dated June 28, 2021; VAI's responses dated August 3, 2021; BETA Comments dated August 10, 2021; VAI Response dated September 2, 2021; and **any further comment.**

**Non-Numbered BETA Review Comments**

**Comment No. 1:** BETA concurs that the proposed Project Plan will represent a reduction in Project trips when compared to the previous Project Plan. It is noted that the Applicant's traffic evaluation conservatively evaluated Land Use Code 252 – Senior Adult Housing – Attached. As per ITE, this land use assumes internal services are not provided with residents typically living a more active independent lifestyle. The discussion presented by the Applicant on June 10, 2021 suggests the facility may function more consistent with LUC 253 – Congregate Care Facility. This land use provides internal services for residents that typically do not drive. As a result, trips are typically generated by employees/staff, visitors, or group transportation. BETA notes that LUC 253 generates fewer trips and less parking demand than Senior Adult Housing – Attached.

*We are encouraged that BETA agrees with our conclusion that the revised project will have a reduction in Project trips when compared with the previous development plan.*

BETA notes that the above response is related to comparisons in ITE Trip Generation assuming no reductions for modal split. The Traffic Analysis presented in the November 2020 Transportation impact Assessment and the updated August 3, 2021 Revised Traffic Analysis both include credits for modal split that reduce the number of estimated vehicle trips. Accounting for modal split generally found the reduction in trips for the new Project to be much smaller or nearly comparable to the previous plan.

*Accounting for mode split shows a decrease in trips of approximately 4-5 trips or 15% during peak hours when compared to the previous Site Plan.*

**No further comment.**

Comment No. 2: The Assessment incorporated Mode Share as reported by the US Census Journey to Work. BETA finds this methodology to be unreasonable for the senior housing land use. That said, discounting the effect of the Mode Share exercise continues to result in a decrease in trip generation when compared with the previous project plan.

*It is not clear how BETA arrives at this conclusion of discounting the use of the Census data for mode share for the development, as no justification was provided for dismissing the use of any mode split data. It is noted that the development is an Independent Living complex, and most residents are expected to be fully mobile and active adults and able to use other forms of transportation including public transit, pedestrian, and bicycles. Other services such as the Arlington Council on Aging transport van and the proposed jitney service are likely to reduce the reliance on personal vehicles. In VAI's updated analysis to the Arlington Zoning Board of Appeals dated August 2, 2021, a mode split adjustment to auto use representing half of the non-auto use mode share from the Census data was utilized. This still represents a conservative treatment of project trips, but one that is expected to be more realistic given the numerous opportunities for transportation in the area.*

BETA generally finds the application of modal split to be reasonable methodology for traffic study but notes that Journey to Work data summarizes the mode split of all working adults to a place of work. This may not be representative of the population of an Independent Living with Services facility, whose residents may not be working and/or may have aged in place such that the respective mode is no longer viable. While the Arlington Council on Aging transport van and jitney service are adequate measures to reduce on-site parking, these services would still generate personal/shared vehicle trips to/from the Site at an on-demand rate that otherwise do not travel through the neighborhood during existing conditions.

Based on the Applicant's Revised August 3, 2021 Analysis, applying 50% of the non-auto use mode share from the Census Data as single occupancy vehicles results in a difference in peak hour trips of approximately 4-5 (15%) when compared to the previous Site Plan. Review of the peak hour level of service results for study area intersections suggests overall operations are not significantly different than the previous Site Plan. This is expected given the number of projected trips is generally comparable. **No further comment.**

*No response required.*

Comment No. 3: BETA evaluated the ITE Parking Generation Manual, 5th Edition, for LUC 252 – Senior Adult Housing – Attached, which estimates a typical demand of approximately 75 parking spaces for 124 units. The Town of Arlington Zoning Bylaw requires a minimum of 50 parking spaces for a 124 unit “Assisted Living Residence.” This suggests the proposed parking supply is adequate.

*WE concur with BETA's conclusion that the proposed parking supply is adequate. ITE notes a demand of 75.68 (76) spaces for the 124 units and the Project will provide 96 spaces, allowing 20 surplus spaces over the ITE methodology. It should be noted that the ITE data includes all users of the development, including residents, visitors, and staff.*

**No response required.**

*No response required.*

**Numbered BETA Review Comments (Generally regarding Site Plans)**

Comment No. (1): Clarify the number of accessible spaces required for the property, noting that the intended use will be Senior Living.

*The garage level will include eight (8) accessible spaces and the surface parking will include two (2) accessible parking spaces, located next to the main entrance door.*

Plans confirm the above mentioned spaces. **No further comment.**

*No response required.*

Comment No. (2): The proposed garage utilizes a parking “pod” of one compact space and two standard spaces between parking garage columns. Clarify whether parking maneuvers and space sizing is adequate noting the intended residents. As residents age in place, they may lack the same range of motion or visibility required to safely maneuver into and out of spaces. See Comment 1.

*It should be noted that there is no standard for adequacy of parking spaces for senior residents. However, the garage has been designed with a wider than standard drive aisle of 24’8” and compact spaces are 8’x18’ rather than the typical 8’x16’ dimensions. Lighting in the garage will be high visibility LED lighting to improve visual acuity for residents.*

**BETA defers further comment to the Board.**

*No response required.*

Comment No. (3): Clarify aisle and parking widths on the east side of the parking garage.

*As identified on plans prepared by the Project Architect, the aisle widths throughout the parking garage are 24’8”, which is slightly in excess of the required aisle width under the zoning bylaw (24’). The parking “pod” layout design likewise is carried out through the parking garage, with 24 compact spaces (8’x18’), 52 standard (8.5’x18’), and 8 handicap access spaces, within the garage.*

Information provided. **BETA defers further comment to the Board.**

*No response required.*

Comment No. (4): The Applicant expects organized senior transportation. Clarify that the senior transportation vehicle can adequately circulate around the parking area.

*The Applicant anticipates residents will make use of both senior transportation as well as the on-site jitney service. See AutoTurn analysis conducted by BSC for these vehicles, shown on plans labeled SK-01 through Sheet SK-04.*

The provided plans show circulation for a fire truck, garbage truck, and an ambulance. No plan is provided for a bus/van. Coordinate with senior transit services to ensure their vehicle can circulate around the entry circle such that pickup can be obtained at the front door. Or, specify a location on the plan where residents will be picked up and dropped off.

*See AutoTurn analysis conducted by BSC for the Senior Shuttle Bus, shown on plan labeled Sheet SK-04.*

**Sheet SK-04 shows the bus/van is required to cross onto the opposing travel direction within the parking facility to circulate turns and around the entry circle. Operations would be fully obstructed should any other vehicles be parked or otherwise standing within the front area. Responses from Smolak & Vaughan LLP dated September 2, 2021 state the operator of the Senior Living Residence will own or lease the jitney vehicle, rather than contracting with a service provider. Since the facility will operate its own vehicle, it is expected the property operator will schedule and ensure adequate clearance of the front parking area when required for bus pickup and emergency services.**

- Comment No. (5): Senior housing typically generates more emergency response calls than traditional housing. Clarify that emergency vehicles can circulate around the parking area.

*See AutoTurn analysis conducted by BSC for these vehicles, shown on plans labeled Sheet SK-01, through Sheet SK-04.*

The provided plans show circulation for a fire truck and ambulance. The ambulance is shown to circulate around the entry circle without issue. Fire trucks are shown traveling around the backside of the building but not entering the circle in front of the building. Should a fire truck need access to the front door, it is expected that it will need to reverse to exit the site. Travel around the rear of the building requires the fire truck to traverse grass as the pathway is not wide enough to support the entire truck. This is most evident on the southeast corner of the building. BETA defers further comment to the Fire Chief.

*No Response Required.*

**BETA reviewed responses from Smolak & Vaughan LLP dated September 2, 2021 which states the rear pathway will be constructed of a 6-foot wide porous lane with 7-foot wide reinforced grass on each side. BETA defers further comment to the Fire Chief.**

- Comment No. (6): Parallel parking on the west side of the main driveway will be required to circulate in front of the main entry or make a maneuver within the garage area to exit the site. Clarify that adequate maneuverability is provided within the circle at the main entry.

*The parallel parking has been revised to be 90 degree (head-in) parking. The revised design allows for a vehicle to enter and exit the Property without navigating around the main entry circle, reducing internal traffic.*

**No further comment.**

*No response required.*

- Comment No. (7): Interior (middle) duplex units will share a common driveway that can provide two parking spaces per unit (tandem). It is expected that one vehicle could be parked in the carport and one vehicle can be parked in the driveway. Outside units provide one parking space behind the structure, accessible by either the paved emergency access drive (east side) or primary access drive (west side). Ensure that resident parking does not restrict either access driveway.

*The parking spaces (2) behind the westernmost duplex unit is off the access drive. The driveway to this unit has been designed to allow for vehicles to enter and exit from the main access drive. The easternmost duplex unit will have one parking space, located off the emergency access drive. Entry and exit into the parking area is provided from the emergency drive. While the emergency access drive is 20 feet wide, it will not be used by other vehicles other than the unit owner of the eastern duplex and, in the event of a fire in which access to the rear of the building is required by a fire truck. "No Parking" markings have been provided on the Layout Plan Sheet C-103 prepared by BSC.*

Recommend the future tenant is aware that their unit only has one parking space. Additional visitors may need to find on-street parking. Consider implications where overnight on-street parking is prohibited in the Winter months.

*It is not uncommon for condos to have only one dedicated parking space. Purchasers of the unit will be made aware that they only have one dedicated parking space, and the price of the unit will reflect that fact.*

**No further comment.**

If we can be of any further assistance regarding this matter, please contact us at our office.

Very truly yours,  
BETA Group, Inc.



Tyler de Ruiter, PE, PTOE  
Senior Project Engineer