
December 1, 2021

East Brunswick Zoning Board
1 Jean Walling Civic Center Drive
East Brunswick, NJ 08816

Attn: Zoning Board Members

**Re: Traffic Impact Assessment
Proposed Mixed Use Development
Block 175 – Lot 6.28
East Brunswick, Middlesex County, NJ
DT # 3067-99-001T**

Dear Board Members:

Dynamic Traffic has prepared the following assessment to determine the traffic impact and adequacy of access associated with the proposed redevelopment of an existing restaurant with retail and self-storage. The site is located along Route 18 southbound in East Brunswick Township, Middlesex County, New Jersey. The site is designated as Block 175 – Lot 6.28 on the East Brunswick Township Tax Maps. The property was formerly occupied by a 12,150 square foot restaurant known as “Sunny Palace”. Access to the site is currently provided via a right turn in/right turn out driveway along Route 18 which will remain to serve the redeveloped site. The development proposal includes the removal of the existing restaurant and the construction of 16,589 square feet of retail space and a 61,549 square foot self-storage facility.

Existing Conditions

Route 18 is a divided Urban Principal Arterial roadway under NJDOT jurisdiction with a general north/south alignment and a 45 MPH posted speed limit in the vicinity of the site. The roadway provides three 12 foot travel lanes in each direction separated by 2 foot shoulders and a concrete median. In the vicinity of the site, the roadway alignment has a slight curve and a downgrade from north to south. The land uses along Route 18 within the study area are primarily commercial in nature. The subject property is located between the signalized intersections of Rues Lane and Hillsdale Road.

Site Generated Traffic

Trip generation projections for The Project were made utilizing trip generation research data as published under Land Use Code (LUC) 822 – Strip Retail Plaza (<40K) and under LUC 151 – Mini-

Warehouse in the Institute of Transportation Engineers' (ITE) publication, *Trip Generation, Eleventh Edition*. This publication sets forth trip generation rates based on empirical traffic count data conducted at numerous research sites. Similarly, the trip generation potential of the existing restaurant was projected using LUC 932 – High-Turnover Sit-Down Restaurant. The following table shows the anticipated trip generation for The Project during the critical weekday morning, weekday evening and Saturday midday peak street hours (PSH) and compares the projected traffic volumes to those of the existing restaurant.

Table I
Trip Generation Comparison

Use	AM PSH			PM PSH			Saturday PSH		
	In	Out	Total	In	Out	Total	In	Out	Total
Existing 12,150 SF Restaurant	64	52	116	67	43	110	69	67	136
Proposed 16,589 SF Retail	23	16	39	56	56	112	56	53	109
Proposed 61,549 SF Self-Storage	4	2	6	4	5	9	6	4	10
Proposed Subtotal	27	18	45	60	61	121	62	57	119
Difference	-37	-34	-71	-7	+18	+11	-7	-10	-17

As can be seen above, the proposed site is projected to generate a maximum of 11 additional trips during the weekday evening peak hour and will have a lower traffic generation potential during the weekday morning and Saturday peak hours. It should be noted that the number of new trips falls below the industry accepted standard of a significant increase in traffic of 100 trips. Based on *Transportation Impact Analysis for Site Development*, published by the ITE “it is suggested that a transportation impact study be conducted whenever a proposed development will generate 100 or more added (new) trips during the adjacent roadways’ peak hour or the development’s peak hour.” Additionally, NJDOT has determined that the same 100 vehicle threshold is considered a “significant increase in traffic,” hence, it is not anticipated that the change in use have any perceptible impact on the traffic operation of the adjacent roadway network.

Site Access, Parking and Circulation

As previously noted, access to the site will be provided via the existing driveway along Route 18. The site will be served by aisles of at least 24 feet in width for two-way movements which allows for full site circulation for the anticipated vehicle mix on site and meets generally accepted design standards. The self-storage parking and loading will be located at the rear of the building which will segregate this activity from retail customer parking in the front of the building.

It is proposed to provide a total of 111 parking spaces in support of The Project. The Ordinance sets forth a requirement of 1 parking space per 200 SF for retail uses and 1 parking space per 5,000 SF for the self-storage space. With 16,589 SF of retail, 61,549 SF of self-storage space this equates to a parking requirement of 95 parking spaces. Consequently, the Ordinance parking requirements are met and the proposed parking supply will be more than sufficient to support the anticipated demand of the project. The proposed parking stalls are 9’x18’ which is consistent with accepted engineering design standards. Additionally, a 30’ x 40’ loading area is proposed at the rear of the building which will accommodate larger vehicles (ie. U-haul trucks, etc.) that may visit the self-storage facility.

It is proposed to replace the existing pylon sign along Route 18 with a new sign in approximately the same location as the Sunny Palace sign. As previously mentioned, Route 18 begins to curve away from the site in the southbound direction on a slight downgrade. Additionally, the setback of the building, landscaping along the frontage and the anticipated multiple tenancy of the building make advance signage especially important in this location. The sign location must be adequate such that a motorist:

- First perceives the sign,
- Secondly, recognizes and reads the sign , and
- Thirdly, decides how to react.
- Lastly, maneuvers into the site driveway


This mental reaction phase takes time as the motorist processes the information while in motion. Once the decision is made of how to appropriately react, the motorist then goes through the physical motions of safely decelerating and making the proper maneuver. Studies have shown that these events occur over an 8 second period for two lane roads (no lane changes required), a 10 second period for four lane roads (one lane change required) and an 11 second period for six lane roads (two lane changes required). For the conditions along Route 18 approaching the site, the posted speed limit is 45 miles per hour. This translates to a speed of approximately 66 feet per second. Based on a total reaction time of 8 seconds, a total of approximately 528 feet of clear sight distance is required in order to perceive the proposed sign at a sufficient distance from the right lane. This distance increases to 660 feet from the next lane and 726 feet from the next lane, extending to the Rues Lane intersection. The existing sign is visible from this distance but likely would be obscured by landscaping if set back farther from the right-of-way and by other vehicles if mounted lower than the proposed 8 feet. Therefore, the existing sign location and the proposed sign size is appropriate for the site and necessary for advance motorist notification to allow for vehicles to safely access the site without creating hesitation on the heavily traveled State Highway.

Conclusion

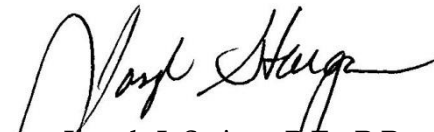
Based upon our Traffic Impact Assessment as detailed in the body of this report, it is the professional opinion of Dynamic Traffic that the adjacent street system of East Brunswick Township and NJDOT will not experience any degradation in operating conditions with the proposed additional pad site. The existing site access points are located to provide safe and efficient access to the adjacent roadway system and will continue to do so. The site plan as proposed provides for good circulation throughout the site and provides adequate parking to accommodate The Project's needs.

If you have any questions on the above, please do not hesitate to contact the undersigned.

Sincerely,
Dynamic Traffic, LLC



Craig W. Peregoy, P.E.
Principal



Joseph J. Staigar, F.E., P.P.
Principal