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October 1, 2018

Township of West Orange
Planning Board
66 Main Street
West Orange, NJ 07052

Re: Traffic Statement for
Site Plan Application
Essex Green Shopping Center
Prospect Avenue and Rooney Circle
Langan Project No. 100621801

Dear Board Members:

Langan Engineering & Environmental Services has prepared this traffic statement as part of the site plan application for the proposed improvements to the Essex Green Shopping Center. Specifically, this traffic statement reviews the traffic-related aspects of the proposed improvements and includes the following discussion topics:

- Existing site conditions,
- Proposed shopping center improvements,
- Trip generation, and
- Site plan review.

Based on this traffic statement, we have concluded the proposed shopping center improvements will not create any significant changes to site access or area traffic operations. Moreover, the site design is consistent with current standards and will provide adequate access, circulation and parking.

EXISTING SITE CONDITIONS

The site fronts Prospect Avenue and Rooney Circle and contains the Essex Green Shopping Center. The shopping center contains several buildings that provide a total gross leasable building area of approximately 333,165 square feet. There are 1,722 parking spaces. Access is provided by several driveways along Prospect Avenue and Rooney Circle.

The main site driveway along Prospect Avenue is controlled by a traffic signal. That driveway is awkwardly configured and forces motorists entering the site to immediately make a right turn upon entry. Moreover, because of the awkward configuration several motorists exiting the site

must drive around a curve, which negatively affects the visibility of the traffic signal heads for exiting traffic.

The intersection of Prospect Avenue and the south leg of Rooney Circle is also controlled by a traffic signal. That signalized intersection provides a second means of controlled access along Prospect Avenue for shopping center patrons.

PROPOSED SHOPPING CENTER IMPROVEMENTS

The applicant proposes to add two outbuildings and expand other buildings for an increase in gross leasable building area of 48,000 square feet. As a result of the proposed building changes, the total shopping center gross leasable building area will increase from 333,165 square feet to 381,165 square feet. Access will continue to be provided by the existing driveways along the frontage roads.

Other proposed site changes include the reconfiguration of existing parking spaces and the construction of new parking spaces. The main site driveway along Prospect Avenue will also be reconfigured to a more typical layout that will improve entry into and out of the site. The proposed parking supply will be reduced to 1,556 parking spaces.

TRIP GENERATION

We estimated site trip generation by using trip rates contained in Trip Generation, 10th edition, published by the Institute of Transportation Engineers (ITE). We specifically used the trip rates for Land Use Code 820 – Shopping Center to estimate trip generation. Table 1 below shows the trip generation estimates for the weekday evening and Saturday midday peak hours for the proposed expanded shopping center and the existing shopping center.

Table 1 - Trip Generation Estimates

Time Period	Expanded Center 381,165 sq ft	Existing Center 333,165 sq ft	Trips Difference
Weekday Evening Peak Hour			
Enter	702	635	67
Exit	761	689	72
Total	1,463	1,324	139
Saturday Midday Peak Hour			
Enter	926	833	93
Exit	855	769	86
Total	1,781	1,602	179

The ITE and the New Jersey Department of Transportation (NJDOT) have identified that a portion of shopping center trips come from the traffic stream already passing by a particular site. Those trips are known as passby trips and do not add traffic to an area. For the weekday evening peak hour 34% of the shopping center trip generation is passby trips and for the for the Saturday midday peak hour 26% of the shopping center trip generation is passby trips.

The ITE and NJDOT have also identified that internal trips are made between retail uses on the same site. Internal trips also do not add traffic to an area. For the weekday evening peak hour 20% of the additional retail trip generation would be internal trips and for the for the Saturday midday peak hour 31% of the additional retail trip generation would be internal trips.

Table 2 shows the trip generation increases broken down into the individual components of passby trips, internal trips and new trips for the weekday evening and Saturday midday peak hours.

Table 2 - Trip Generation Increases

Time Period	Total Trips Increase	Passby Trips	Internal Trips	New Trips
Weekday Evening Peak Hour				
Enter	67	-23	-13	31
Exit	72	-24	-14	34
Total	139	-47	-27	65
Saturday Midday Peak Hour				
Enter	93	-24	-29	40
Exit	86	-22	-27	37
Total	179	-46	-56	77

The trip generation numbers shown in Table 2 represent the single highest peak hours anticipated for a typical weekday evening and Saturday midday. As can be seen, the new trips amount to less than 1 new trip entering and exiting the site every minute during the peak hours. Trip generation for all other "non-peak" hours of operation, will be lower than the peak hour trip generation shown above. Accordingly, we expect the proposed expanded shopping center will not create any perceptible changes to site access or area traffic operations.

SITE PLAN REVIEW

We have reviewed the site plan for the proposed improvements. In particular, we focused on access, circulation and parking supply, which the following items address:

- Access will continue to be provided by the multiple shopping center driveways along the frontage roads. The reconfiguration of the main driveway along Prospect Avenue to a standard design will allow better traffic flow into and out of the site at that signalized intersection.

- The proposed parking will provide parking stalls that are 9-feet wide and 18-feet deep served by 24-feet wide aisles. These parking stall dimensions and aisle width are consistent with current retail design standards and will provide efficient circulation.

- A total of 1,556 parking spaces are proposed, which equates to a parking supply ratio of 4.08 parking spaces per 1,000 sq ft of building area. The Institute of Transportation Engineers has identified actual average peak parking demand ratios for shopping centers of 2.94 vehicles per 1,000 sq ft. Accordingly, we anticipate the proposed parking supply will adequately accommodate site parking demands.

Based on our review, we believe the site will continue to provide convenient access and circulation with sufficient parking.

CONCLUSION

We have concluded that the proposed shopping center improvements will not create any significant traffic impacts. In addition, the site design is in accordance with current standards and will provide adequate access, circulation and parking.

Should you have any questions or comments concerning this traffic statement, please do not hesitate to contact our office.

Very truly yours,

Langan Engineering and Environmental Services, Inc.

Daniel D. Disario, P.E., PTOE
Principal

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