September 9, 2020

Borough of Dunellen
Planning Board
101 Prospect Avenue
Dunellen, New Jersey 08812

RE: Traffic & Parking Assessment Report
Proposed Mixed-Use Development
440 North Avenue
Block 33, Lot 18
Borough of Dunellen, Middlesex County, New Jersey
SE&D Job No. PRI-200114

Dear Board Members:

Stonefield Engineering and Design, LLC (“Stonefield”) has prepared this analysis to examine the potential traffic and parking impacts of the proposed mixed-use development on the adjacent roadway network. The subject property is located along North Avenue in the Borough of Dunellen, Middlesex County, New Jersey. The subject property is designated as Block 33, Lot 18 as depicted on the Borough of Dunellen Tax Map. The site has approximately 50 feet of frontage along North Avenue. The existing site contains a single-family residence. The existing access is provided via one (1) shared full-movement driveway along North Avenue. Under the proposed development program, the existing structures would be razed, and a three (3)-story mixed-use development consisting of 918 square-feet of retail space and nine (9) residential units would be constructed. The existing shared access point along North Avenue would remain.

Existing Conditions

The subject property is located along North Avenue in the Borough of Dunellen, Middlesex County, New Jersey. The subject property is designated as Block 33, Lot 18 as depicted on the Borough of Dunellen Tax Map. The site has approximately 50 feet of frontage along North Avenue. Land uses in the area are a mix of commercial and residential developments.

North Avenue (a.k.a. NJSH Route 28) is classified as an Urban Principal Arterial roadway with a general east-west orientation and is under the jurisdiction of the New Jersey Department of Transportation (NJDOT). Along the site frontage, the roadway provides one (1) lane of travel in each direction and has a posted speed limit of 35 mph. Curb and sidewalk are provided along both sides of the roadway, shoulders are not provided along either side of the roadway, and on-street metered parking is permitted along both sides of the roadway. North Avenue provides east-west mobility through Dunellen and the surrounding municipalities for a mix of commercial and residential uses along its length and provides access to Interstate 287 to the west.

The subject site is located within 0.2 miles (4-minute walk) from Dunellen Train Station which serves NJ Transit’s Raritan Valley Line and provides direct service to New York Penn Station, Newark Penn Station, and Secaucus Junction as well as transfer service to other lines on the NJ Transit system. Further, the proposed development is located within 0.1 miles (2-minute walk) from bus stops that service two (2) NJ Transit bus routes, with the nearest stop located at the corner of North Avenue and Madison Avenue. NJ Transit Bus Routes 65 and 114 provide service to New York, Newark, and various points of interest throughout Middlesex and Essex County. The non-vehicular transportation modes available in the general vicinity of the subject site are summarized on Table 1.
### TABLE 1: MULTI-MODAL TRANSPORTATION OPTIONS

<table>
<thead>
<tr>
<th>Travel Mode</th>
<th>Proximity to Site</th>
<th>Destination(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dunellen Train Station</td>
<td>0.2 miles</td>
<td>New York Penn Station, Secaucus Junction, Newark Penn Station</td>
</tr>
<tr>
<td>NJ Transit Bus Route 65</td>
<td>0.1 miles</td>
<td>Somerville, Boundbrook, Middlesex, New Market, Plainfield, N. Plainfield, Scotch Plains, Mountainside, Springfield, Union, Hillside, Newark</td>
</tr>
<tr>
<td>NJ Transit Bus Route 114</td>
<td>0.1 miles</td>
<td>Bridgewater, Somerville, Bound Brook, Middlesex, Piscataway, Plainfield, North Plainfield, Watchung, Scotch Plains, Mountainside, Springfield, Union, Hillside, New York</td>
</tr>
<tr>
<td>NJ Transit Bus Route 59</td>
<td>0.3 miles</td>
<td>Plainfield, Scotch Plains, Westfield, Garwood, Cranford, Union County College, Roselle, Elizabeth, Hillside, Newark</td>
</tr>
<tr>
<td>NJ Transit Bus Route 113</td>
<td>0.3 miles</td>
<td>Plainfield, Scotch Plains, Fanwood, Westfield, Garwood, Cranford, Roselle Park, Hillside</td>
</tr>
</tbody>
</table>

### Trip Generation

Trip generation projections for the proposed mixed-use development were prepared utilizing the NJDOT Highway Access Permit System (HAPS) and ITE’s Trip Generation Manual, 10th Edition. Trip generation rates associated with Land Use 221 “Multifamily Housing (Mid-Rise)” and Land Use 820 “Shopping Center” were cited for the nine (9) residential units and 918 square-feet of retail space, respectively. Table 2 provides the weekday morning, weekday evening, and Saturday midday peak hour trip generation volumes associated with the proposed development.

### TABLE 2 – PROPOSED TRIP GENERATION

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Weekday Morning Peak Hour</th>
<th>Weekday Evening Peak Hour</th>
<th>Saturday Midday Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Enter</td>
<td>Exit</td>
<td>Total</td>
</tr>
<tr>
<td>9 Dwelling Units</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>HAPS Land Use 221</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>918 SF Retail</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>HAPS Land Use 820</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>

The proposed development is expected to generate 23 new trips during the critical weekday evening. Based on Transportation Impact Analysis for Site Development published by ITE, a trip increase of less than 100 vehicle trips would likely not change the level of service of the adjacent roadway system or appreciably increase the volume-to-capacity ratio of an intersection approach. As such, the proposed development is not anticipated to significantly impact the operations of the adjacent roadway network. It should be noted that in order to maintain a conservative analysis, no trip credit was taken for the existing development occupying the site.

### Site Circulation/Parking Supply

A review was conducted of the proposed mixed-use development using the Site Plan prepared by Stonefield, dated September 9, 2020. In completing this review, particular attention was focused on the site access, circulation, and parking supply.
Access is proposed via one (1) shared full-movement driveway along North Avenue. The driveway, which is shared with the property to the west is existing and would be unchanged. All parking provided for the westerly building would remain. Residential parking for the proposed development would be provided in the rear of the building. Parking for the retail store will be provided via the existing on-street metered parking along the site frontage.

Regarding the parking requirements for the proposed development, the New Jersey Administrative Code Residential Site Improvements Standards (RSIS) (NJAC 5:21) requires two (2) spaces per two (2)-bedroom unit. For the proposed development with nine (9) two (2)-bedroom units, this equates to 18 required spaces. Additionally, the Borough of Dunellen Ordinance requires one space for the first 200 square-feet of retail space plus one (1) additional space per additional 300 square-feet of retail space. For the proposed development with 918 square-feet of retail space, this equates to three (3) required spaces for the retail portion of the development, and 21 total spaces for the entire development. The site would provide nine (9) total parking spaces, inclusive of one (1) ADA-accessible parking space. The spaces would be nine (9) feet wide by 18 feet deep in accordance with industry standards.

Additionally, Section 5:21-4.14(c) of the RSIS intends for there to be flexibility in the parking requirements. Specifically:

“Alternative standards to those shown in Table 4.4 shall be accepted if the applicant demonstrates these standards better reflect local conditions. Factors affecting minimum number of parking spaces include household characteristics, availability of mass transit, urban versus suburban location, and available off-site parking.”

It is important to consider the urban/suburban setting of the proposed development, the availability of nearby transit options, and the characteristics of the proposed use when assessing the adequacy of parking supply. Based on the ITE Journal article, “Do Land Use, Transit, and Walk Access Affect Residential Parking Demand,” there is a direct correlation between land use (i.e. rural/suburban/urban) and parking utilization, which “suggests that low auto ownership households often self-select locations than can support their transportation needs without a private vehicle.”

The location of the proposed development is particularly suited to provide transit options for its occupants as it is located within an approximate 4-minute walk from Dunellen Train Station which serves NJ Transit’s Raritan Valley Line provides direct service to New York Penn Station, Newark Penn Station, and Secaucus Junction as well as transfer service to other lines on the NJ Transit system. Further, the subject site is located within an approximate 7-minute walk from bus stops serving NJ Transit Bus Routes 59, 65, 113, and 114. These bus routes provide access to New York’s Port Authority and Newark and various points of interest throughout Essex and Middlesex Counties. These available transit options within walking distance of the proposed development would likely reduce vehicular travel by residents to and from the subject property, thus reducing the parking demand of the proposed development.

The parking supply was evaluated with respect to data published within the ITE’s Journal article, “Do Land Use, Transit, and Walk Access Affect Residential Parking Demand.” It was found that residential developments with moderate transit access, such as this site, had a parking demand of 0.95 vehicles per residential unit. For the proposed development with nine (9) units, this equates to an anticipated parking demand of approximately nine (9) spaces for the proposed development.

Based on nearby transit options for the site’s residents, ITE Journal article research, and the existing on-street parking for patrons of the retail portion of the development, the proposed parking supply of nine (9) spaces would be sufficient to support the expected parking demand of the proposed development.
Conclusions

This report was prepared to examine the potential traffic impact of the proposed mixed-use development. The analysis findings, which have been based on industry standard guidelines, indicate that the proposed development would not have a significant impact on the traffic operations of the adjacent roadway network. The site driveways and on-site layout have been designed to provide for effective access to and from the subject property. The site's proximity to NJ Transit bus stops and the Dunellen Train Station would contribute to a reduction in automobile use and reduce the need for automobile ownership by residents. The existing on-street metered parking along the site frontage would provide parking for patrons of the retail portion of the development. Based on industry data and local characteristics of the site and surrounding area, the parking supply would be sufficient to support this project.

Please do not hesitate to contact our office if there are any questions.

Best regards,

Matthew J. Seckler, PE, PP, PTOE
Stonefield Engineering and Design, LLC