

# STONEFIELD

June 14, 2022

City of East Orange  
Zoning Board  
44 City Hall Plaza  
East Orange, NJ 07018

**RE: Traffic Impact Memorandum  
Proposed Self-Storage Facility  
Block 722, Lots 5-15  
City of East Orange, Essex County, New Jersey  
SE&D Job NO. S-18125**

Dear Board Members:

Stonefield Engineering and Design, LLC (“Stonefield”) has prepared this memorandum to examine the potential traffic impacts of the proposed self-storage facility on the adjacent roadway network. The subject property is located at the northwest quadrant of the intersection of South Harrison Street and East Highland Avenue in the City of East Orange, Essex County, New Jersey. The subject property site has been previously constructed, and approved as a mixed-use development consisting of residential units and 33,843 square feet of retail space. Under the proposed development program, apportion of the retail space would be redeveloped into a 18,000 square-foot self-storage facility. Access to the subject property is proposed to be maintained via two (2) full-movement driveways along South Harrison Street and one (1) full-movement driveway and one (1) egress-only driveway along East Highland Avenue.

## Trip Generation

Trip generation projections for the proposed self-storage facility were compared to the previously approved retail development to estimate the potential impacts of the of the project on the surrounding roadway network. Trip generation projections for the previously approved development were prepared utilizing the Institute of Transportation Engineers’ (ITE) Trip Generation Manual, 11<sup>th</sup> Edition. Trip generation rates associated with Land Use 822 “Strip Retail Plaza <40K” were cited for the previously approved 33,843 square feet of retail space. It should be noted that the previous trip generation analysis utilized an older version of ITE that would have considered the retail shopping center with a slightly different formula. **Table I** provides the weekday morning, weekday evening and Saturday midday trip generation volumes associated with the previously approved retail development.

**TABLE I – PREVIOUSLY APPRIVED TRIP GENERATION COMPARISON**

Land Use	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Saturday Midday Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
33,843 SF Strip Retail Plaza <40K ITE Land Use 822	48	32	80	111	112	223	111	111	222

As part of the proposed development plan, 18,000 square feet of the retail space will be developed into a self-storage facility. Trip generation projections for the proposed self-storage facility, and the remaining retail

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space were prepared utilizing the Institute of Transportation Engineers’ (ITE) Trip Generation Manual, 11<sup>th</sup> Edition. Trip generation rates associated with Land Use 151 “Mini-Warehouse” were cited for the proposed 18,000-square-foot self-storage facility, and Land Use 822 “Strip Retail Plaza <40K” were cited for the 15,843 square feet of retail space to remain. It should be noted that that proposed retail development will have no impact on the trips generated by the existing residential portion of the site. **Table 2** provides the total weekday morning, weekday evening, and Saturday midday peak hour trip generation volumes associated with the proposed development. **Table 3** provides a comparison of the weekday morning, weekday evening, and Saturday midday peak hour trip generation volumes associated with the previously approved retail portion of the site and the proposed development with self-storage.

**TABLE 2 – PROPOSED TRIP GENERATION**

Land Use	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Saturday Midday Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
18,000 SF Mini-Warehouse <i>ITE Land Use 151</i>	1	1	2	1	2	3	2	1	3
15,843 SF Strip Retail Plaza <40K <i>ITE Land Use 822</i>	22	15	37	52	52	104	52	52	104
<b>Total</b>	<b>23</b>	<b>16</b>	<b>39</b>	<b>53</b>	<b>54</b>	<b>107</b>	<b>54</b>	<b>53</b>	<b>107</b>

**TABLE 3 – TRIP GENERATION COMPARISON**

Land Use	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Saturday Midday Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
<i>Previously Approved</i> 33,843 SF Shopping Center	48	32	80	111	112	223	111	111	222
<i>Proposed</i> 18,000 SF Self-Storage & Retail	23	16	39	53	54	107	54	53	107
<b>Difference</b>	<b>-25</b>	<b>-16</b>	<b>-41</b>	<b>-58</b>	<b>-58</b>	<b>-116</b>	<b>-57</b>	<b>-58</b>	<b>-115</b>

The proposed development with a self-storage facility is expected to generate 41 less trips during the weekday morning peak hour, 116 less trips during the weekday evening peak, and 115 less trips during the Saturday midday peak hour. 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 impact the operations along South Harrison Street or the adjacent roadway network.

**Site Circulation**

A review was conducted of the proposed self-storage facility using the Architectural Plan prepared by Joseph M, Spataro, AIA, dated March 29, 2022. In completing this review, particular attention was focused on the site access, circulation, and parking supply.

Under the proposed development program, the westerly portion of the existing ground floor retail space would be developed into an 18,000-square-foot self-storage facility. Three (3) loading spaces for the proposed

self-storage facility, would be provided along the northwesterly side of the existing building. Access is proposed to be maintained from the previously approved development, via two (2) full-movement driveways along South Harrison Street, and one (1) full-movement driveway and one (1) egress driveway along East Highland Avenue.

## **Conclusions**

This memorandum was prepared to examine the potential traffic impact of the proposed self-storage facility. 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, and would be a reduction of vehicular trips compared to the previously approved development. The site driveways and on-site layout have been designed to provide for effective access to and from the subject property, and the proposed self-storage facility.

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

Best regards,

A handwritten signature in blue ink, appearing to read 'Matthew J. Seckler', with a long horizontal flourish extending to the right.

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