

# TRAFFIC IMPACT STATEMENT

*For*

**InSite Development Partners, LLC  
Proposed Self-Storage Facility**

*Property Located at:*

**US Route 22 & Wilson Avenue  
Block 119.00 – Lot 1.01  
Borough of North Plainfield, Somerset County, NJ**

Prepared by:



1904 Main Street | 245 Main Street, Suite #110  
Lake Como, NJ 07719 | Chester, NJ 07930  
(732) 681-0760

A handwritten signature in black ink, appearing to read 'C M Chase', written over a horizontal line.

**Corey M. Chase, PE  
NJ PE License #47470**

A handwritten signature in black ink, appearing to read 'C W Peregoy', written over a horizontal line.

**Craig W. Peregoy, PE  
NJ PE License #45880**

**October 19, 2021  
*Revised September 2, 2022***

**3041-99-010T**

## INTRODUCTION

InSite Development Partners, LLC is proposing to construction a four-story self-storage facility on a parcel of land located along the northeast corner of the US Route 22 intersection with Wilson Avenue in the Borough of North Plainfield, Somerset County, New Jersey, as illustrated on Figure 1, in the Technical Appendix of this report. This development was previously approved by the Borough of North Plainfield (BA-22-001) for a three-story self-storage facility. The building footprint has not deviated from the previously approved application. The previously approved gross floor area of the site was 89,463 square feet; the revised facility will be 119,116 square feet.

The site is designated as Block 119.00 – Lot 1.01 on the Borough Tax Maps and is currently developed with the former 12,126 SF Best Friends Pet Care facility with primary access provided via one (1) full movement driveway along Wilson Avenue. Additional access to Route 22 westbound is provided via a cross access driveway to the adjacent Capital One Bank. It is proposed to raze the site and construct a 119,116 SF self-storage building with 12 parking spaces (The Project). This is 2 additional parking spaces from the previously approved application. Access to the site will continue to be provided via the existing cross access driveway and a reconstructed full movement driveway along Wilson Avenue.

Dynamic Traffic, LLC has been retained to prepare this study to assess the traffic and parking impact associated with the construction of The Project on the adjacent roadway network. This study documents the methodology, analyses, findings and conclusions of our study and includes:

- A detailed field inspection was conducted to obtain an inventory of existing roadway geometry, traffic control, and location and geometry of existing driveways and intersections.
- Projections of traffic to be generated by The Project were prepared utilizing trip generation data as published by the Institute of Transportation Engineers.
- The proposed site driveways were inspected for adequacy of geometric design, spacing and/or alignment to streets and driveways on the opposite side of the street, relationship to other driveways adjacent to the development, and conformance with accepted design standards.
- The parking layout and supply was assessed based on accepted design standards and demand experienced at similar developments.

## **EXISTING CONDITIONS**

A review of the existing site and roadway conditions near the proposed site was conducted to provide the basis for assessing the traffic impact of the proposed self-storage facility. This included field investigations of the surrounding roadways and intersections.

### **Existing Roadway Conditions**

The following are descriptions of the roadways in the study area:

Route 22 is classified as an urban principal arterial under the jurisdiction of the New Jersey Department of Transportation (NJDOT) with a general east/west orientation. In the vicinity of the site the posted speed limit is 50 MPH and the roadway provides two (2) travel lanes in each direction separated by a raised concrete median. On-street parking is not permitted, and curbing is provided. Route 22 provides a straight horizontal alignment and a relatively flat vertical alignment. The land uses along Route 22 in the vicinity of the site are primarily commercial in nature.

Wilson Avenue is a local roadway under the jurisdiction of the Borough of North Plainfield with a general north/south orientation. In the vicinity of the site, the roadway provides one (1) travel lane in each direction with curbing provided. Wilson Avenue provides a straight horizontal alignment and a climbing vertical alignment as you travel from south to north. The land uses along Wilson Avenue in the vicinity of the site are primarily residential to the north and south of the site. There is an existing Wawa convenience store with gas located on the northwest corner of the intersection with US Route 22 and Howard Krausche Field is located on the southeast corner of the intersection.

## FUTURE CONDITIONS

### Traffic Generation

The proposed self-storage facility has increased by 29,653 square feet from the previously approved application. Therefore, the traffic generated by the development may increase as a result of the increased gross floor area. Projections of future traffic volumes were developed for a 119,116 square foot self-storage facility utilizing data as published in the Institute of Transportation Engineers (ITE) publication *Trip Generation, 11<sup>th</sup> Edition* for Land Use Code (LUC) 151 – Mini-Warehouse. Table I summarizes the projected trips generated by the proposed self-storage building utilizing the ITE data during the critical peak street hours (PSH).

**Table I  
Trip Generation**

Land Use	AM PSH			PM PSH			SAT PSH		
	In	Out	Total	In	Out	Total	In	Out	Total
119,116 SF Self-Storage Building	6	5	11	8	10	18	12	8	20

When compared to the previously approved application, this is an increase of 2 trips in the AM, 3 trips in the PM, and a decrease of 8 trips during the Saturday peak. (Note, the prior application utilized 10<sup>th</sup> Edition trip generation data which was current at the time.) As mentioned previously, the site is currently developed with approximately 12,126 SF pet care facility. Table II provides a trip generation comparison between the existing and proposed uses utilizing ITE LUC 640 – Animal Hospital/Veterinary Clinic as it is most similar to the existing use.

**Table II  
Trip Generation Comparison**

Land Use	AM PSH			PM PSH			SAT PSH		
	In	Out	Total	In	Out	Total	In	Out	Total
119,116 SF Self-Storage Building	6	5	11	8	10	18	12	8	20
12,126 SF Pet Care Facility	29	15	44	20	31	51	20	31	51
Difference	-23	-10	-33	-12	-21	-33	-8	-23	-31

As shown in Table II, the proposed self-storage facility is projected to generate less traffic than the existing pet care facility during the weekday and Saturday PSHs. Since no appreciable increase in trip generation is projected to be generated by the site, the operational conditions of the surrounding roadway network are not anticipated to change. The delays and queues in the area will remain as existing and it is likely that there will be no perceptible change in the traffic conditions with the construction of the proposed self-storage facility. In fact, both ITE and the NJDOT define a “significant” increase in traffic as 100 or more peak hour trips. As shown in Table I, the subject property will generate 20% of this threshold without consideration of the existing use.

### Site Access, Circulation and Parking

As mentioned previously, primary access to the site will be provided via a reconstructed full movement driveway along Wilson Avenue. Alternative access will continue to be provided via a cross access driveway to the adjacent Capital One Bank which provides access to US Route 22 westbound. A

Letter of No Interest is being requested from NJDOT for the proposed redevelopment confirming no new Access Permitting is required.

The parking lot will be serviced by a parking aisle with a width of 24', which satisfies the Ordinance's requirement. One-way aisle widths of 12' will be provided adjacent to the building with a 10' wide loading zone to allow for clockwise circulation around the building. These dimensions will allow for safe and efficient circulation throughout the parking and loading areas.

The Borough of North Plainfield Ordinance sets forth a requirement of 1 parking space per 200 SF for any general non-residential uses not listed within the off-street parking requirements. This equates to a parking requirement of 596 parking spaces for the proposed 119,116 SF self-storage facility. The site as proposed provides 12 parking spaces and a 10' wide loading zone on the northern, southern and eastern building facades (which will ultimately operate as parking spaces), and as such a variance is required. It should be noted that the Ordinance requirement better represents the parking demand experienced by a general warehouse/distribution use, and the proposed self-storage facility will not operate with a parking demand representative of the Ordinance requirement.

The ITE identifies an average peak parking rate of 0.10 spaces per 1,000 SF of GFA for LUC 151 – Mini-Warehouse in the 5<sup>th</sup> Edition of *Parking Generation*. This equates to a total parking demand for the site of 12 spaces. As such, the 12 spaces proposed in addition to the ample loading zones will be sufficient in support of The Project.

The Ordinance sets forth a minimum parking stall size of 9'x18'. It is proposed to provide parking stalls with dimensions of 9'x18' which meets the Ordinance requirements.

## **FINDINGS & CONCLUSIONS**

### **Findings**

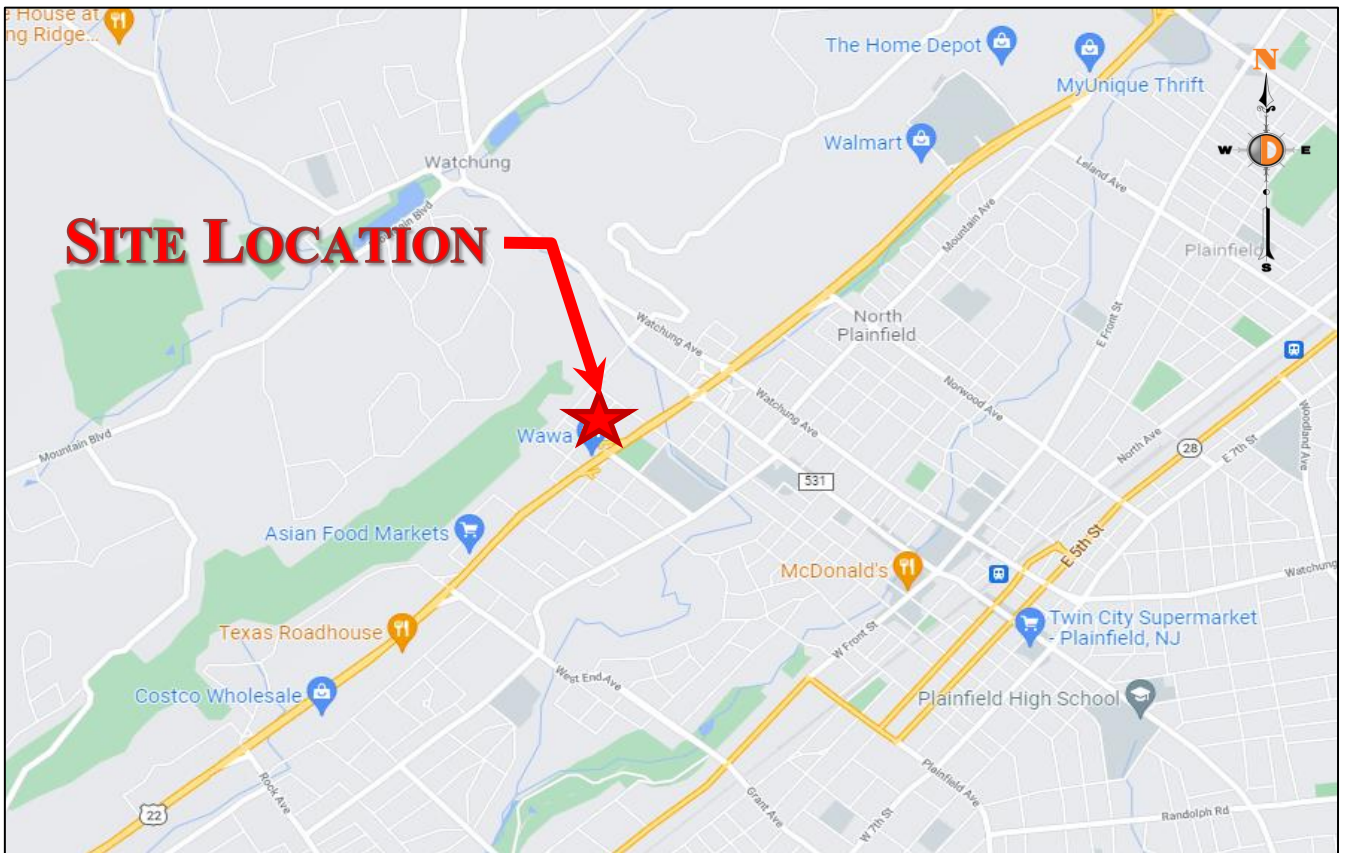
Based upon the detailed analyses as documented herein, the following findings are noted:

- The proposed 119,116 SF self-storage building will generate a maximum of 6 entering trips and 5 exiting trips during the morning peak hour, 8 entering trips and 10 exiting trips during the evening peak hour, and 12 entering and 8 exiting trips during the Saturday midday peak hour. This equates to 20% of the threshold for a significant increase in traffic without consideration of the existing pet care facility.
- Access to the site will continue to be provided via reconstructed full movement driveway along Wilson Avenue and a cross access driveway to the adjacent Capital One Bank which accesses US Route 22 westbound.
- As proposed, The Project's site driveway and internal circulation have been designed to provide for safe and efficient movement of vehicles.
- The proposed parking and loading supply and design is sufficient to support the projected demand and satisfies the parking demand set forth by ITE and similar facilities.

### **Conclusions**

Based upon our Traffic Impact Statement as detailed in the body of this report, it is the professional opinion of Dynamic Traffic, LLC that the adjacent street system of the Borough of North Plainfield and NJDOT will not experience any significant degradation in operating conditions with the construction of The Project as a significant increase in traffic will not result. The site driveways are located to provide safe and efficient access to the adjacent roadway system. The site plan as proposed provides for good circulation throughout the site and provides adequate parking to accommodate The Project's needs.

## **Technical Appendix**



Proposed Self-Storage Facility  
Traffic Impact Statement  
3041-99-010T

Figure 1

Site Location Map



**Trip Generation Worksheet, ITE Trip Generation 11<sup>th</sup> Edition**



Land Use Code: 151 Mini-Warehouse  
 Setting: General Urban/Suburban  
 Size: 119.116 KSF  
 Prepared By: SWJ  
 Date: 8/31/2022  
 Job #: 3041-99-010

ITE Study Information

Peak Hour	# Studies	Avg. Variable	Distribution	
			In	Out
Weekday	16	55	50%	50%
AM Peak Street Hour	13	70	59%	41%
PM Peak Street Hour	18	59	47%	53%
AM Generator	11	66	51%	49%
PM Generator	16	56	51%	49%
Saturday	6	43	50%	50%
Saturday Generator	3	90	62%	38%
Sunday	5	40	50%	50%
Sunday Generator	2	79	45%	55%

Trip Generation using ITE Average Rates

Peak Hour	Rate				Trip Generation			
	Min.	Avg.	Max.	S.D.	In	Out	Total	
Weekday	0.38	1.45	3.25	0.92	87	86	173	x
AM Peak Street Hour	0.04	0.09	0.17	0.05	6	5	11	x
PM Peak Street Hour	0.02	0.15	0.64	0.14	8	10	18	x
AM Generator	0.07	0.18	0.79	0.16	11	10	21	x
PM Generator	0.06	0.18	1.05	0.14	11	10	21	x
Saturday	1.21	1.77	3.29	0.76	106	105	211	x
Saturday Generator	0.04	0.17	0.31	0.14	12	8	20	x
Sunday	0.69	1.50	3.70	1.01	90	89	179	x
Sunday Generator	0.16	0.20	0.23		11	13	24	x

Trip Generation using ITE Equations

Peak Hour	Equation	R <sup>2</sup> value	Effective Rate	Trip Generation		
				In	Out	Total
Weekday	Not Given		-	-	-	-
AM Peak Street Hour	Not Given		-	-	-	-
PM Peak Street Hour	Not Given		-	-	-	-
AM Generator	Not Given		-	-	-	-
PM Generator	Not Given		-	-	-	-
Saturday	T = 1.00(X) + 33.19	0.57	1.28	76	76	152
Saturday Generator	Not Given		-	-	-	-
Sunday	Not Given		-	-	-	-
Sunday Generator	Not Given		-	-	-	-

**ITE Land Use Subcategory Description and/or DTraffic Comments:**

**Trip Generation Worksheet, ITE Trip Generation 11<sup>th</sup> Edition**



Land Use Code: 640 Animal Hospital/Veterinary Clinic  
 Setting: General Urban/Suburban  
 Size: 12.126 KSF  
 Prepared By: SWJ  
 Date: 8/31/2022  
 Job #: 3041-99-010

ITE Study Information

Peak Hour	# Studies	Avg. Variable	Distribution	
			In	Out
Weekday	6	3	50%	50%
AM Peak Street Hour	8	6	67%	33%
PM Peak Street Hour	8	6	40%	60%
AM Generator	6	3	53%	47%
PM Generator	6	3	52%	48%
Saturday	0			
Saturday Generator	0			
Sunday	0			
Sunday Generator	0			

Trip Generation using ITE Average Rates

Peak Hour	Rate				Trip Generation			
	Min.	Avg.	Max.	S.D.	In	Out	Total	
Weekday	5.25	21.50	46.25	16.50	131	130	261	x
AM Peak Street Hour	0.79	3.64	6.56	1.78	29	15	44	x
PM Peak Street Hour	0.53	3.53	4.90	1.80	17	26	43	
AM Generator	1.31	3.73	7.19	2.31	24	21	45	x
PM Generator	0.92	3.83	7.50	2.76	24	22	46	x
Saturday					-	-	-	x
Saturday Generator					-	-	-	x
Sunday					-	-	-	x
Sunday Generator					-	-	-	x

Trip Generation using ITE Equations

Peak Hour	Equation	R <sup>2</sup> value	Effective Rate	Trip Generation			
				In	Out	Total	
Weekday	Not Given		-	-	-	-	
AM Peak Street Hour	T = 4.07(X) - 2.48	0.74	3.88	31	16	47	
PM Peak Street Hour	T = 4.75(X) - 6.96	0.82	4.21	20	31	51	x
AM Generator	Not Given		-	-	-	-	
PM Generator	Not Given		-	-	-	-	
Saturday	Not Given		-	-	-	-	
Saturday Generator	Not Given		-	-	-	-	
Sunday	Not Given		-	-	-	-	
Sunday Generator	Not Given		-	-	-	-	

**ITE Land Use Subcategory Description and/or DTraffic Comments:**