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PVC Holdings, LLC  
c/o M Capital Partners  
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p24-08  
RECEIVED  
APR 10 2017

DEPT. OF PLANNING & ZONING

**Re: Traffic and Parking Analyses  
Princeton Forrestal Village, Proposed Residential, Amended  
Preliminary and Final Site Plan  
Township of Plainsboro, Middlesex County, New Jersey  
Langan Project No.: 130091506**

Dear Navid:

Langan Engineering & Environmental Services has prepared this traffic and parking study for the site plan application for the proposed construction of 394 residential units within the Princeton Forrestal Village, located in the Township of Plainsboro, Middlesex County, New Jersey. Specifically, we performed the following tasks:

- Reviewed the development proposal;
- Reviewed the parking requirements of the PMUD Zone;
- Reviewed Resolution P14-09IVC PFV LLC, October, 2014;
- Estimated the site generated trips for the proposed development program and compared to the prior 2014 approved development program;
- Reviewed and evaluated parking supply needs for Forestall Village.

The project is located within the Princeton Forrestal Village (The Village) generally bounded by U.S. Route 1 to the east, College Road West to the west and north, and the U.S. Route 1 Connector Road to the south. The existing Princeton Forrestal Village is currently developed with a variety of land uses ranging from retail, general office, medical office, restaurants, and recreational uses. In 2014, a portion of the Village was approved for the construction of three residential buildings consisting of 394 residential units supported by underbuilding parking garages. As part of the previous approval Orth Rodger & Associates, Inc., conducted a Traffic Impact Study (TIS), dated 11 April 2014, which summarized the traffic impacts associated with the proposed development and a parking analyses which documented the parking needs for The Village.

## DEVELOPMENT PROPOSAL

PVC Holdings LLC, is seeking Amended Preliminary and Final Site Plan approval to remove approximately 71,869 square feet (sf) of commercial space (commercial building "C") in The Village and expand The Village with construction of four residential buildings in a mixed-use environment consisting of 394 residential units supported by both underbuilding and shared

surface parking lots with a total of 2,166 parking spaces for The Village. The new program is designed to eliminate the residential building parking garages and "banked" parking structure levels over existing surface lots in The Village.

## TRAFFIC IMPACT

Forrestal Village was previously approved for the construction of three residential buildings consisting of 394 residential units in addition to previously approved commercial office, retail and restaurant space. Associated with the previous approval, Orth Rodger & Associates, Inc., prepared a Traffic Impact Study (TIS), dated 11 April 2014. The traffic study documents peak hour trip generation estimates for the 394 residential homes utilizing trip generation rates for Land Use Code 220 (Apartments) as published by the Institute of Transportation Engineers (ITE) as contained in Trip Generation, 9<sup>th</sup> Edition and included a detailed analyses of access to The Village and the surrounding roadway network. Table 1 below summarizes the previously estimated weekday morning and evening peak hours traffic generation as prepared by Orth Rodgers.

**Table 1 – Previously Approved Trip Generation Estimates**

Use	Weekday AM Peak Hour			Weekday PM Peak Hour		
	In	Out	Total	In	Out	Total
394 Residential Units	40	160	200	160	80	240

The Amended Site Plan proposes the construction of 394 residential units in four buildings. Since preparation of the 2014 Traffic Study, the Institute of Transportation Engineers has updated its database for trip generation. Accordingly, we have updated the estimated peak hour trip generation for the new development program utilizing trip rates for Land Use Code 220 (Multifamily Housing (Low-Rise)) as published by the Institute of Transportation Engineers (ITE) as contained in Trip Generation, 11<sup>th</sup> Edition. We have also estimated the peak hour traffic reduction associated with the removal of the existing commercial building "C" currently occupied by a health Club and retail space. Table 2 summarizes the weekday morning and evening peak hour trip generation for the residential development and for the existing commercial building "C" to be removed.

**Table 2 – Trip Generation Comparison**

Use	Weekday AM Peak Hour			Weekday PM Peak Hour		
	In	Out	Total	In	Out	Total
394 Residential Units – Prev. Approved (ITE 9 <sup>th</sup> Edition)	40	160	200	160	80	240
394 Residential Units – (ITE 11 <sup>th</sup> Edition)	38	120	158	127	74	201
61,869 sf Health Club and 10,000 sf Retail	41	40	81	104	78	182
<b>Difference</b>	<b>- 43</b>	<b>- 80</b>	<b>- 123</b>	<b>- 137</b>	<b>- 84</b>	<b>- 221</b>

Based on the peak hour traffic projections as documented in the above table, the proposed development plan which includes removal of over 70,000 sf of commercial space, results in less

peak hour traffic generation by The Village than previously projected and analyzed in 2014. Accordingly, the prior analyses findings and conclusions regarding project access and area roadway traffic impacts remain valid and as determined by the 2014 traffic study, the area roadways and intersections will accommodate the change in traffic generation.

## **PARKING**

Langan Engineering and Environmental Services has prepared an analysis of required parking and proposed parking supply associated with the proposed of 394 residential units within Princeton Forrestal Village in Plainsboro, NJ. The residential units will be contained in three buildings and will consist of the following bedroom unit mix.

- 250 one- bedroom/ Studio (Building A – 107, Building B – 107, Building C -36)
- 130 two-bedroom (Building A – 47, Building B – 47, Building C -36)
- 14 three-bedroom (Building A – 6, Building B – 6, Building C -2)

The project is located within the Princeton Forrestal Village (The Village) generally bounded by U.S. Route 1 to the east, College Road West to the west and north, and the U.S. Route 1 Connector Road to the south. The existing Princeton Forrestal Village is currently developed with a variety of land uses ranging from retail, general office, medical office, restaurants, and recreational uses. In 2014, a portion of the Village was approved for the construction of three residential buildings consisting of 394 residential units supported by underbuilding parking garages. As part of the previous approval Orth Rodger & Associates, Inc., CME Associates, and Mike Mueller conducted parking analyses which determined the required parking supply for the existing commercial space to be 1,675 parking spaces.

A total of 1,623 parking spaces are presently available (constructed) at Princeton Forrestal Village (PFV) not including the parking field on the hotel lot (410 parking spaces). Historically, parking at The Village has been and continues to be underutilized. Based on the prior Orth Rodgers Parking analyses and additional independent analyses by the Township of Plainsboro, it has been determined that the current non-residential commercial space requires a parking supply of 1,675 parking spaces. Based on this determination and recommendations/ guidance provided in the June 6, 2023 review memorandum prepared by CME Associates, Langan has prepared this parking calculation associated with the current proposed site plan.

PVC Holdings LLC, is Amended Site Plan approval of a new development program, which proposes to remove approximately 71,869 square feet (sf) of commercial space (commercial building "C") in The Village and expand The Village with construction of three residential buildings in a mixed-use environment consisting of 394 residential units supported by both underbuilding and surface parking lots. The new program is designed to eliminate the residential building parking garages and "banked" parking structure levels over existing surface lots in The Village.

Associated with development of the residential buildings, the parking lots along College Road West will be reconfigured, new under building and surface parking will be constructed for the residential buildings and Electric Vehicle Charging Stations/ Make Ready Stations will be constructed. Based on the prior determined parking supply requirement for the commercial space of 1,675, parking spaces, Residential Site Improvement Standards for the residential

development, and ordinance allowance for installation of EVSE charging stations for up to 10 percent of the required parking supply with a parking space equivalency of each EVSE space satisfying two required parking spaces, the following table summarize the required supply and proposed supply for the project:

**PARKING REQUIRED AND PROPOSED  
 (Buildings A, B and C, Demo Can-Do)**

<b>Existing Parking Spaces Prior To Construction</b>	<b>1,623 Spaces (Not including land banked spaces)</b>
1,675 Parking Spaces Required for Non-Residential per Prior Analyses confirmed per CME Review June 6, 2023	1,675 Spaces required
<b>Remove Existing Building C (- 180 spaces required)</b>	<b>1,495 Spaces required For Commercial Space</b>
Existing Parking Spaces To Be Removed (Residential Project Location) Building A and B footprint	- 305 Spaces removed
<b>Existing Parking Spaces Remaining</b>	<b>1,318 Spaces</b>
Reconfigured expanded surface spaces	+ 252 spaces
Parking for Non-Residential Space	1,570 spaces
Land-banked Parking in Lot F (Salt Creek Grill) (40 spaces)	+40
Total spaces for Non-Residential and Land-banked spaces (36)	<b>1,610 (115 excess available for residential sharing)</b>
<b>Parking required for Building A [1.8/1bed; 2.0/2bed; 2.1/3bed] (10% EVSE Credit)</b>	<b>270 spaces required (rounded up)</b>
Proposed Surface Parking - Building A	+ 85 Spaces
Proposed Garage Parking - Building A	+ 175 Spaces
Total Building A	258 spaces provided
<b>Total spaces for Building A</b>	<b>258 spaces provided Plus 12 shared from adjoining excess commercial spaces = 270 provided</b>
<b>Parking required for Building B [1.8/1bed; 2.0/2bed; 2.1/3bed] (10% EVSE Credit)</b>	<b>270 spaces required (round up)</b>
Proposed Surface Parking - Building B	+ 39 Spaces
Proposed Garage Parking - Building B	+ 175 Spaces
Total Building B	212 spaces provided
<b>Total spaces for Building B</b>	<b>212 spaces provided plus 58 from adjoining excess commercial spaces = 270 provided</b>
<b>Parking required for Building C [1.8/1bed; 2.0/2bed; 2.1/3bed] (10% EVSE Credit)</b>	<b>127 spaces required</b>
Proposed Garage Parking - Building C	+82
Total Building C	82
<b>Total spaces for Building C</b>	<b>82 spaces provided plus 45 from adjoining excess commercial spaces = 127 provided</b>
<b>PARKING SPACES REQUIRED 2,162</b>	<b>2,166 Spaces Provided including 40 land-banked)</b>

Parking Summary

- The existing parking supply at the Village (1,623 spaces) historical is more than adequate to accommodate peak demands of the commercial buildings.

- The 2014 Resolution of Approval documents the conclusion by the Board and its professionals that a reduced parking requirement is appropriate. Based on the projected uses, the Board found that 1,675 parking spaces would be sufficient.
- Removal of commercial building "C" will reduce the parking supply requirement by approximately 180 spaces.
- A Total of 112 EVSE / Make Ready spaces will be provided with the residential buildings with a minimum of 38 EVSE constructed initially, and the remaining Make-Ready Spaces converted to EVCS spaces on three-year increments in accordance with the applicable ordinance/ state law.
- A minimum of 6 (2 per building) EVSE will be accessible for people with disabilities and shall comply with the sizing of accessible parking space requirements in the Uniform Construction Code, N.J.A.C. 5:23 (UCC). These spaces are in addition to the general accessible parking requirements of the UCC.
- The removal of commercial building "C" and construction of the residential buildings will result in a total parking supply of 2,162 spaces. The proposed spaces will accommodate the required 2,162 parking spaces.
- It is no longer proposed to bank additional future spaces for the residential buildings in structured parking levels in The Village. Sufficient surface parking spaces and under residential parking spaces are proposed.

The current plan proposes sufficient constructed parking spaces to support the residential and commercial uses in The Village. Based upon prior parking surveys and the general parking experience at The Village since its initial development, it is expected that the proposed parking supply will be more than adequate to support peak parking demands of The Village with the addition of the residential buildings. The constructed parking supply is supplemented by the prior approvals to bank 40 surface parking spaces near Salt Creek Grill, and the cross-access easements to permit shared parking into the 410 parking spaces provided at the Westin Hotel. Overall, more than adequate parking supply is proposed to support the peak demands of The Village, including the proposed residential buildings.

Should you have any questions or comments concerning these analyses, please do not hesitate to contact our office.

Sincerely,  
**Langan Engineering and Environmental Services, Inc.**



Karl A. Pehnke, P.E.  
Associate Principal