

# ***AMENDED POTABLE WATER ENGINEER'S REPORT***

*For*

***Sharbell Building Company, LLC  
Planned Residential Development – KT Tract***

*Block 28005, Lot 66  
17 Research Road  
Township of Montgomery  
Somerset County, New Jersey*

Prepared by:



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A handwritten signature in black ink, appearing to read 'Jeffrey S. Haberman', is written over a horizontal line.

**Jeffrey S. Haberman, PE, PP  
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## **I) INTRODUCTION**

This report has been prepared to define and analyze the potable water conditions that would occur as a result of the development of Block 28005, Lot 66, as shown on Tax Map Sheet No. 55, in the Township of Montgomery, Somerset County, New Jersey.

The project area consists of Block 28005, Lot 66, in the Township of Montgomery, Somerset County, New Jersey. The subject parcel originally consisted of a vacated office building with associated site improvements and wooded area, and is presently under construction for a residential development previously approved under Montgomery Township Planning Board Case No. PB-01-18. The previously approved project consisted of the new construction of 107 townhome dwellings, a 40-unit condominium building with two bedrooms per unit, roadways, parking areas, recreational open space areas and other associated improvements and amenities as shown on the Site Plan drawings. The 107 townhome dwellings break down to 55 dwellings with three bedrooms and 52 dwellings with four bedrooms.

The Amended Site Plan consists of replacing the 40-unit condominium building (on Block 28009 Lots 1, 2, & 3) with 20-unit stacked townhomes with associated site improvements. In turn, there has been a reduction in total number of units, and therefore a reduction of flow from the previous approval.

The existing conditions of the tract have been verified by the ALTA/NSPS Land Title Survey, prepared by Dynamic Survey, LLC, dated 04/18/2017, last revised 11/29/2017.

## **II) PROPOSED POTABLE WATER DESIGN**

### **a) EXISTING DOMESTIC WATER DEMAND**

The existing site currently contains a 21,248 SF office building which is connected to the public water supply. Pursuant to the average daily demand values set forth by NJAC 7:10-12.6, office buildings have an average daily demand of 0.125 gallons per day/square foot.

Therefore, the existing water demand is:

$$21,248 \text{ sf} \times (0.125 \text{ gpd}) = 2,656 \text{ gpd}$$

There is an existing 8" water main located within Research Road which stems from a 16" water main within Georgetown Franklin Turnpike. The water mains are owned and operated by New

Jersey American Water. An existing 12” non-active water main is located along the northerly property boundary which will be abandoned per New Jersey American Water specifications.

**b) PROPOSED DOMESTIC WATER SYSTEM**

The subject development proposes an 8” cement lined ductile iron pipe (CLDIP) water main loop within Intermediate Loop Road and Hartwick Drive which will connect to the existing 8" water main within Research Road. The proposed 8” water main will provide domestic water service to the 107 townhomes and 40-unit condominium building as well as the proposed hydrants that are located around the site. Each townhome unit will have an individual water service connection which will provide a meter pit in accordance with New Jersey American Water standards and specifications.

**c) PROPOSED FIRE SERVICE**

The subject development proposes the installation of six (6) fire hydrants located throughout the site in accordance with RSIS Standards. The fire hydrants will be serviced by 6” water service laterals which will tie into the 8” water main loop as previously described.

**d) PROPOSED DOMESTIC WATER DEMAND CALCULATION**

Water demand has been determined in accordance with the average daily demand values set forth by Table 5.1 in NJAC 5:21-5.2.

**Previously Approved Demand:**

<b><u>USE</u></b>	<b><u>UNITS</u></b>	<b><u>DESIGN FLOW</u></b>	<b><u>AVERAGE DAILY FLOW (GPD)</u></b>
<i>3 Bedroom Townhomes</i>	<i>55</i>	<i>210 gpd/unit</i>	<i>11,550</i>
<i>4 Bedroom Townhomes</i>	<i>52</i>	<i>275 gpd/unit</i>	<i>14,300</i>
<i>2 Bedroom Condominium</i>	<i>40</i>	<i>175 gpd/unit</i>	<i>7,000</i>
<b><i>Total Previously Approved Anticipated Demand:</i></b>			<b><i>32,850</i></b>
<b><i>Total Originally Existing Demand:</i></b>			<b><i>2,656</i></b>
<b><i>Total Previously Approved Demand (Less Original Demand):</i></b>			<b><i>30,194</i></b>

**Amended Design Demand:**

<b><u>USE</u></b>	<b><u>UNITS</u></b>	<b><u>DESIGN FLOW</u></b>	<b><u>AVERAGE DAILY FLOW (GPD)</u></b>
<i>2 Bedroom Stacked Townhomes</i>	<i>10</i>	<i>140 gpd/unit</i>	<i>1,400</i>
<i>3 Bedroom Stacked Townhomes</i>	<i>10</i>	<i>210 gpd/unit</i>	<i>2,100</i>
<i>3 Bedroom Townhomes</i>	<i>55</i>	<i>210 gpd/unit</i>	<i>11,550</i>
<i>4 Bedroom Townhomes</i>	<i>52</i>	<i>275 gpd/unit</i>	<i>14,300</i>
<b><i>Total Amended Anticipated Demand:</i></b>			<b><i>29,350</i></b>
<i>Total Originally Existing Demand:</i>			<i>2,656</i>
<b><i>Total Amended Demand (Less Original Demand):</i></b>			<b><i>26,694</i></b>

As noted above, this is a decrease in water demand by 3,500 GPD from the prior approval.