

**ENGINEER'S REPORT-  
DRAINAGE, SANITARY SEWER, AND WATER**

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**PRINCETON EXECUTIVE PARK-  
AMENDED FINAL SITE PLAN FOR PHASE 1-  
HOTEL  
PRELIMINARY SITE PLAN FOR PHASE 3-  
RESTAURANT**

**BLOCK 9, LOTS 12.01 AND 12.011**

**TOWNSHIP OF WEST WINDSOR, MERCER COUNTY, NJ**

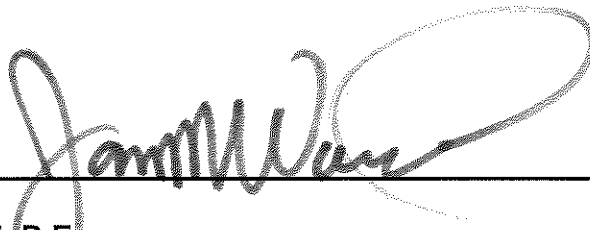
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Dated: September 12, 2022

Prepared by:  
(BCG #080823-02-001)

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## DRAINAGE DESIGN CALCULATIONS

The previous design was approved with 74.3% impervious coverage proposed for the hotel lot. The amended site plan proposes an impervious coverage of 72.1%, providing an overall reduction of 2.2% impervious surfaces. The proposed coverage reduction will have negligible effect on the approved drainage design.

## SANITARY SEWER DESIGN CALCULATIONS – ENGINEER’S ESTIMATED FLOW

The average daily flow has been estimated using the number of each non-residential unit type and the estimated flow as per N.J.A.C. 7:14A-23.3.

### APPROVED PHASE 1 & 3

<u>Type</u>	<u>Units</u>	<u>Design Flow</u>	<u>Average Daily Flow (gpd)</u>
Hotel	130 rooms	75 gpd/room	9,750
Rooftop Bar	210 seats	35 gpd/seat	7,350
Restaurant	250 seats	35 gpd/seat	<u>8,750</u>
<b>Total</b>			<b>25,850 gpd</b>

### AMENDED PHASE 1 & 3

<u>Type</u>	<u>Units</u>	<u>Design Flow</u>	<u>Average Daily Flow (gpd)</u>
Hotel	128 rooms	75 gpd/room	9,600
Restaurant	306 seats	35 gpd/seat	<u>10,710</u>
<b>Total</b>			<b>20,310 gpd</b>

The approved estimated daily flow generated by the above referenced portion of the site is 25,850 gpd. The amended design proposed an estimated daily flow of 20,310 gpd for the same portion of the site. Therefore, the amended plan provides a reduction in 5,540 gpd of anticipated sanitary sewer demand.

## WATER DESIGN CALCULATIONS – ENGINEER’S ESTIMATED FLOW

The average daily flow has been estimated using the number of each non-residential unit type and the estimated flow as per N.J.A.C. 7:10.

**APPROVED PHASE 1 & 3**

<u>Type</u>	<u>Units</u>	<u>Design Flow</u>	<u>Average Daily Flow (gpd)</u>
Hotel	130 rooms	75 gpd/room	9,750
Rooftop Bar	210 seats	35 gpd/seat	7,350
Restaurant	250 seats	35 gpd/seat	<u>8,750</u>
<b>Total</b>			<b>25,850 gpd</b>

**AMENDED PHASE 1 & 3**

<u>Type</u>	<u>Units</u>	<u>Design Flow</u>	<u>Average Daily Flow (gpd)</u>
Hotel	128 rooms	75 gpd/room	9,600
Restaurant	306 seats	35 gpd/seat	<u>10,710</u>
<b>Total</b>			<b>20,310 gpd</b>

The approved estimated daily water flow for referenced portion of site is 25,850 gpd. The amended design proposes an estimated daily flow of 20,310 gpd for the same portion of the site. Therefore, the amended plan provides a reduction in 5,540 gpd of anticipated water demand.