

Shadow Study Final Report

899 Maine Avenue SW

Zoning Case 22-06

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TABLE OF CONTENTS

1 Introduction and Overview	3
<i>Figure 1: Area Map</i>	3
<i>Figure 2: PUD Mass view from Maine Ave</i>	4
<i>Figure 3: PUD Mass view from 7th Street</i>	4
2 Proposed Project and height	5
<i>Figure 4: West Elevation on 9th street SW included in the PUD showing G street on the left side (higher level) and Maine Ave SW on the right side (lower level).</i>	5
<i>Figure 5: Tunnel effect on Maine Avenue SW (The Wharf Buildings on the left and Proposed Development on the right)</i>	6
3 Parks, Open Spaces and Private Community that will be affected by shadows in the vicinity	7
4 Shadow Study	9
5 METHODOLOGY AND FINDINGS	15

1. Introduction and Overview

This report describes the results of an analysis conducted by me to identify the shadow effects that would be caused by the proposed construction of a 130 feet height (on Maine Avenue) and 90 feet height on (G street) at 899 Maine Avenue SW (the “PUD” or “Proposed Development”).

I conclude that the project, as proposed, **would result in a significant shadow impact to Jefferson Field across all seasons of the year. Benjamin Banneker Park and the Capitol Square Place at Waterfront townhouses would suffer significant shadow impact during Winter Solstice, with lesser impact during the March/September equinoxes, and no impact during the summer period.**

Accordingly, this report consists of a description of the proposed project, the parks or open spaces in question, and a graphical analysis showing the extents of new shadows relative to Jefferson Field, Capitol Square Place at Waterfront townhouses, Benjamin Banneker Park, and other public open spaces.

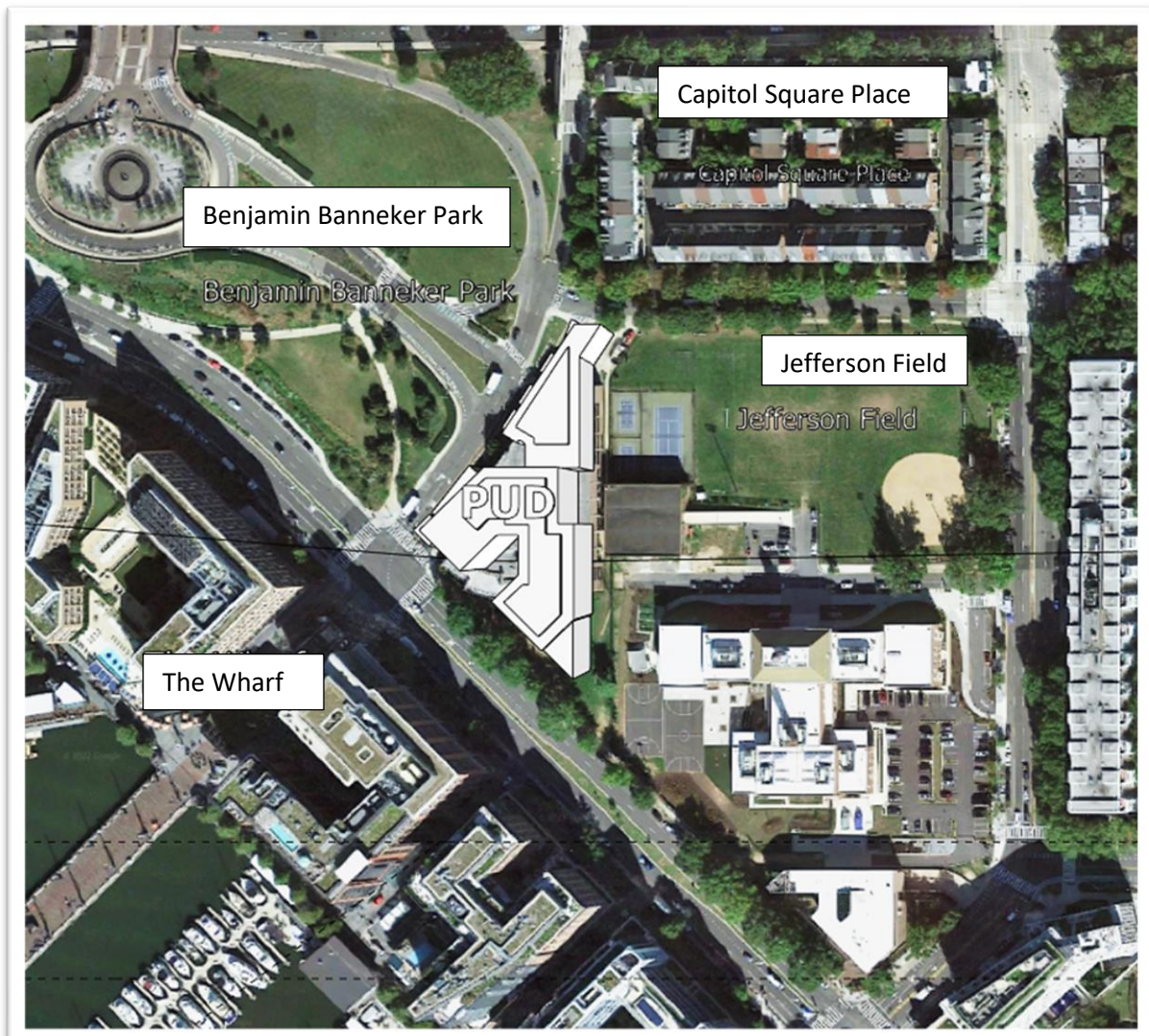


Figure 1: Area Map

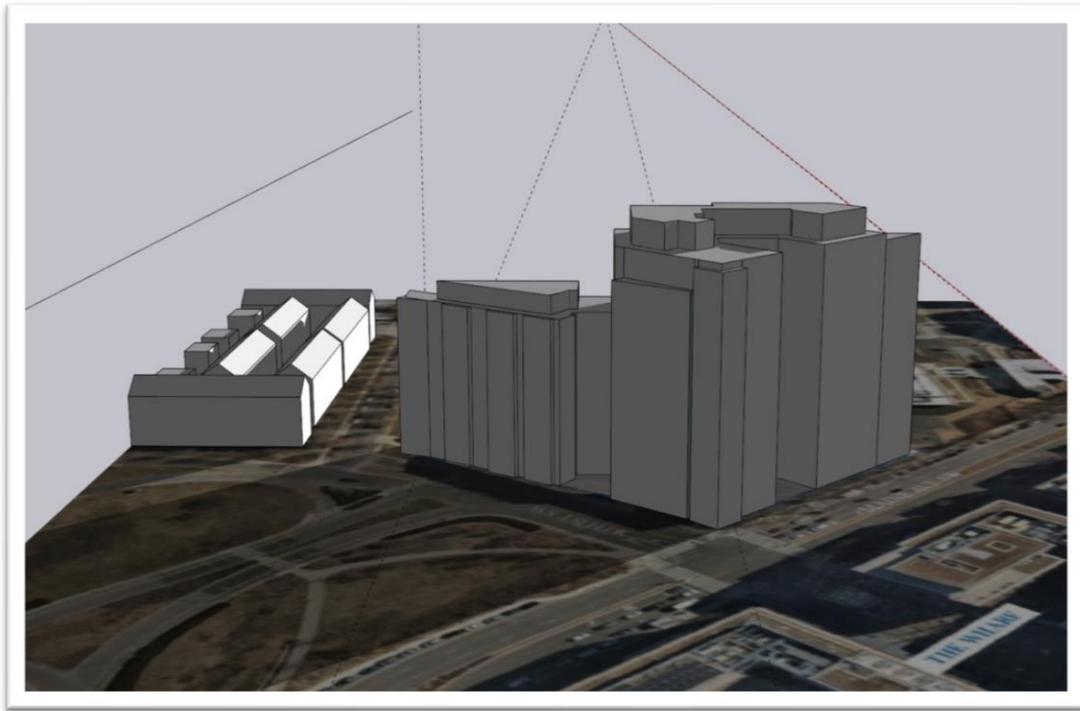


Figure 2: PUD Mass view from Maine Ave

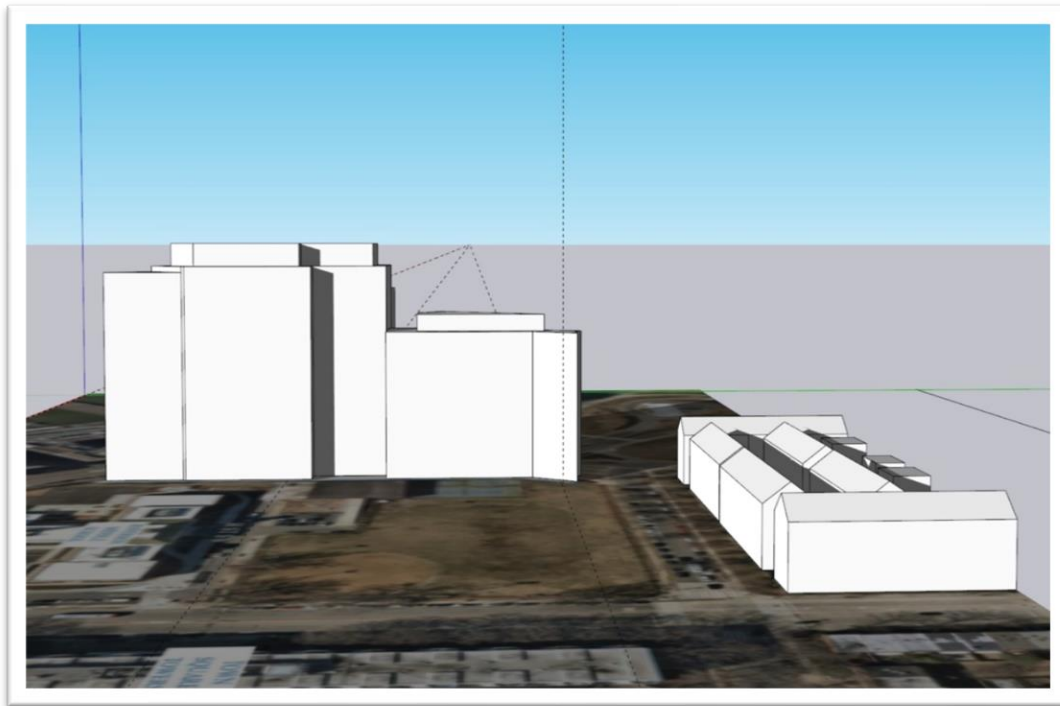


Figure 3: PUD Mass view from 7th Street

2. Proposed Project and height

Jair Lynch mentioned in the PUD materials that the maximum height of the building will be 130 feet, but it is important to note that they are using G St as the measuring point, not Maine Ave. If the building height is measured using Maine Ave as the measuring point, the height will be **140 feet**, excluding penthouses.

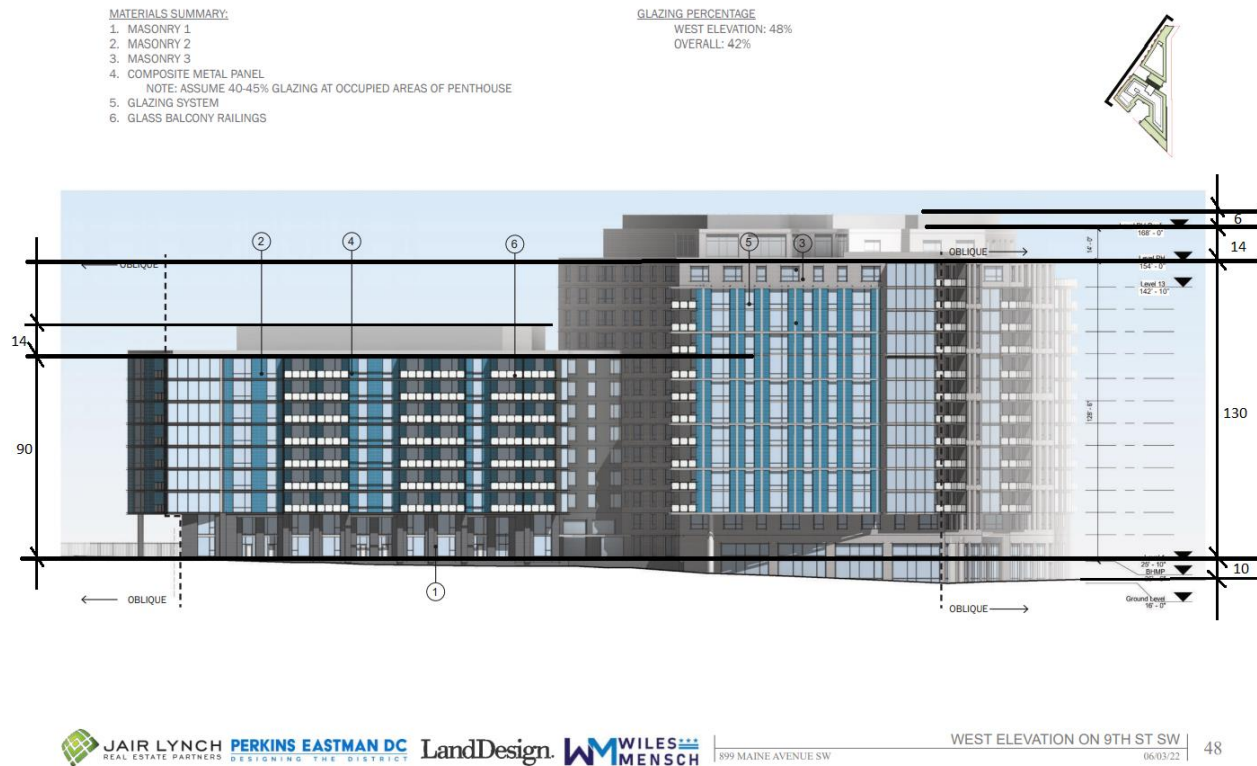


Figure 4: West Elevation on 9th street SW included in the PUD showing G street on the left side (higher level) and Maine Ave SW on the right side (lower level).

The proposed building will be higher than The Wharf Buildings. If we add penthouses the total height will be more than 160 feet on Maine Ave SW. Given the height of about 130 ft of the Wharf buildings across the street, this will effectively create a corridor, or a “tunnel effect”, on Maine Ave, with high rise buildings on both sides of the avenue.

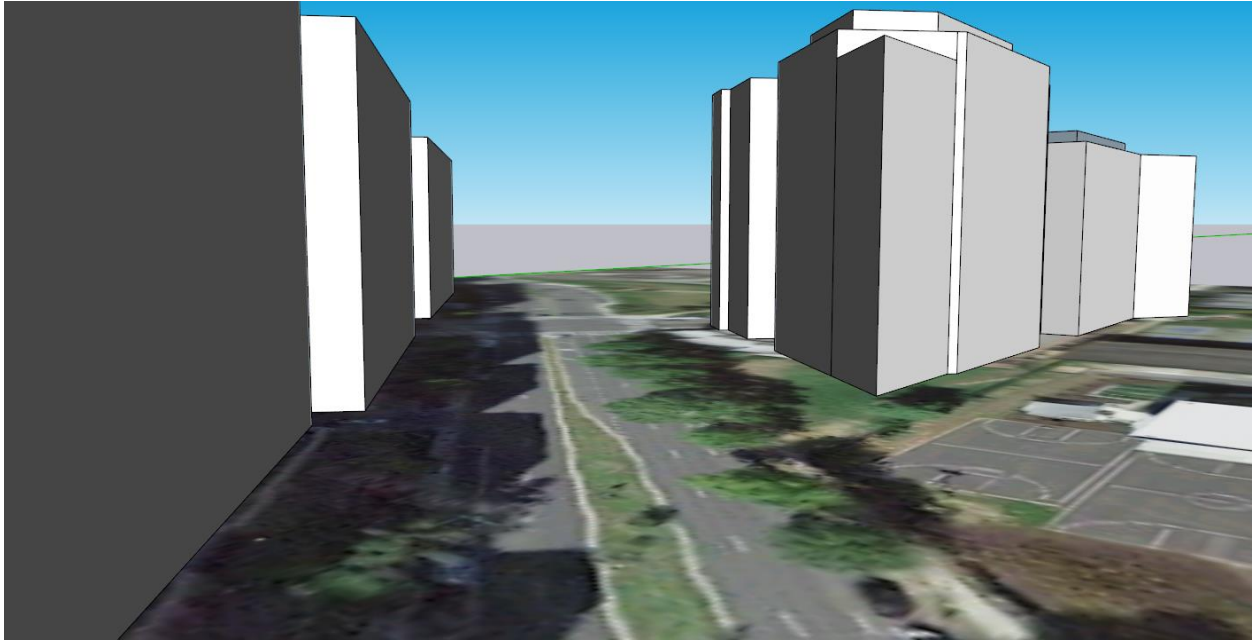


Figure 5: Tunnel effect on Maine Avenue SW (The Wharf Buildings on the left and Proposed Development on the right)

3. Parks, Open Spaces and Private Community that will be affected by shadows in the vicinity

This section presents the open space resources, both green areas and privately owned townhomes (Capitol Square Place at Waterfront), that will be affected in the future with the Proposed Development.



Figure 6: Benjamin Banneker Park



Figure 7: Benjamin Banneker Park



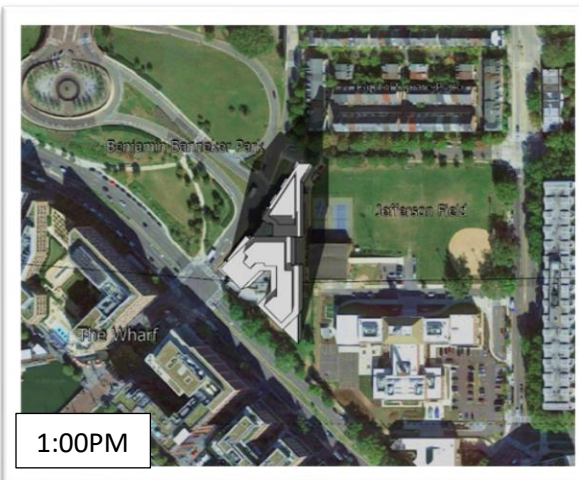
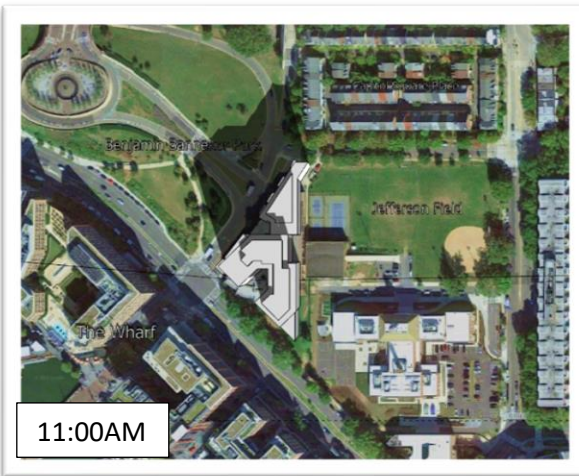
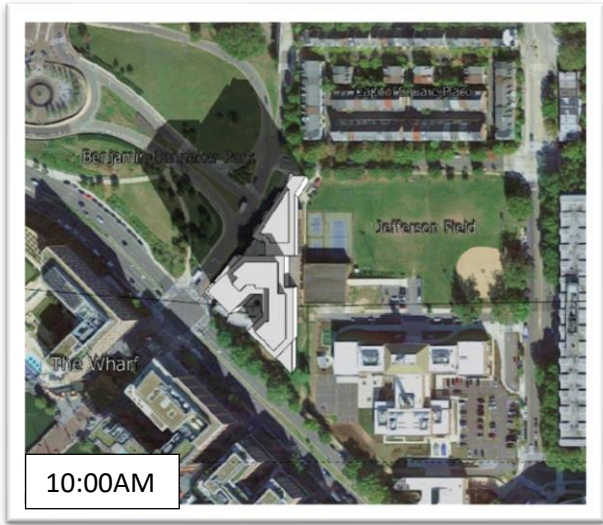
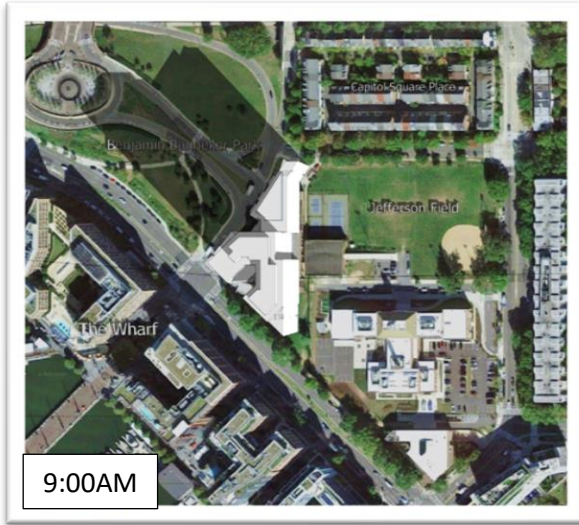
Figure 8: Jefferson Field



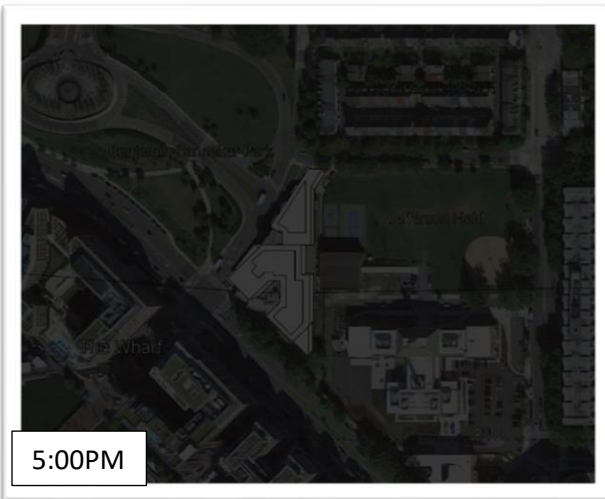
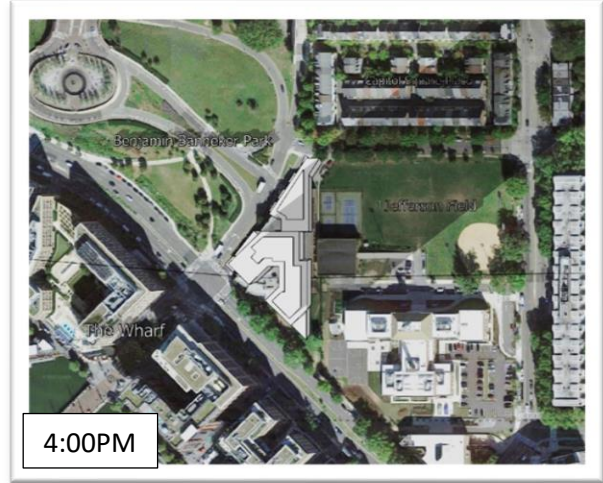
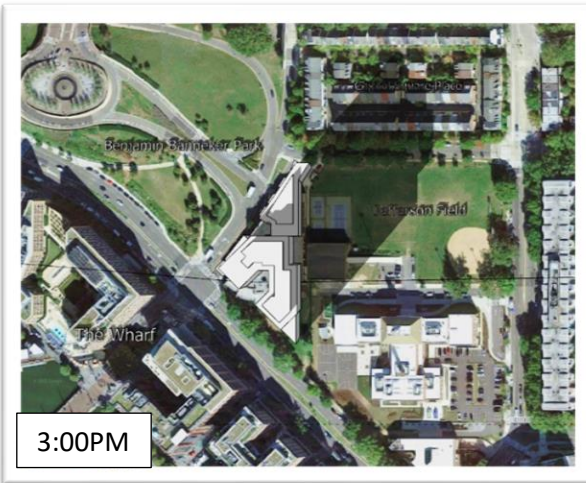
Figure 9: Capitol Square Place at Waterfront townhouses on G Street SW

4. Shadow Study

DECEMBER (WINTER SOLSTICE) – PROPOSED DEVELOPMENT SHADOWS



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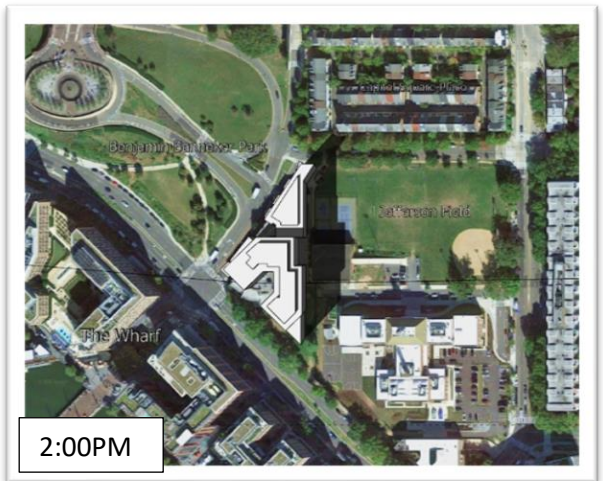
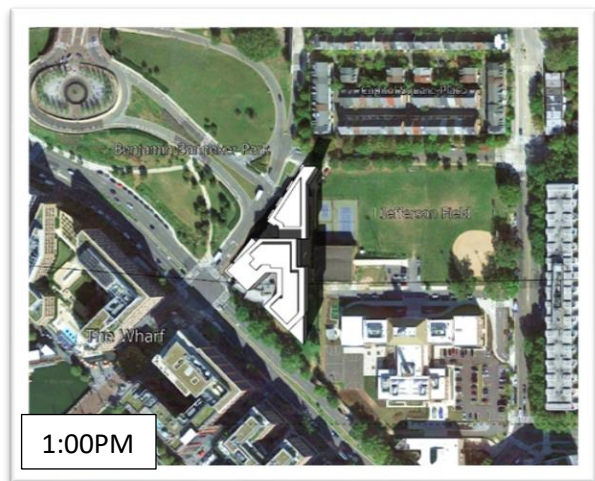
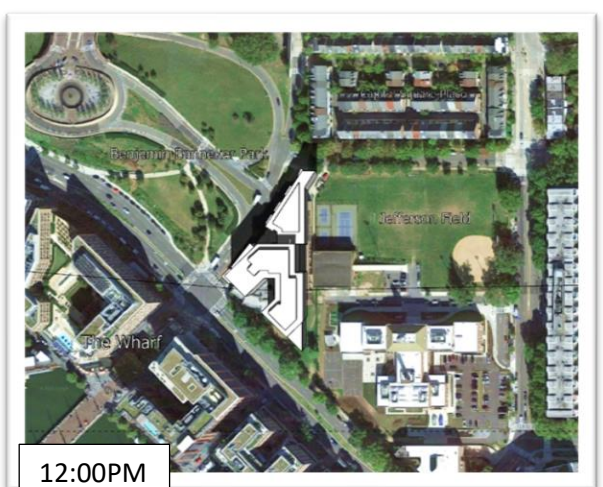
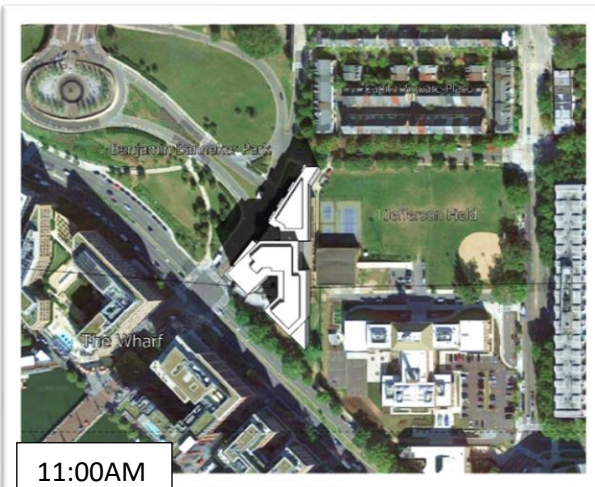
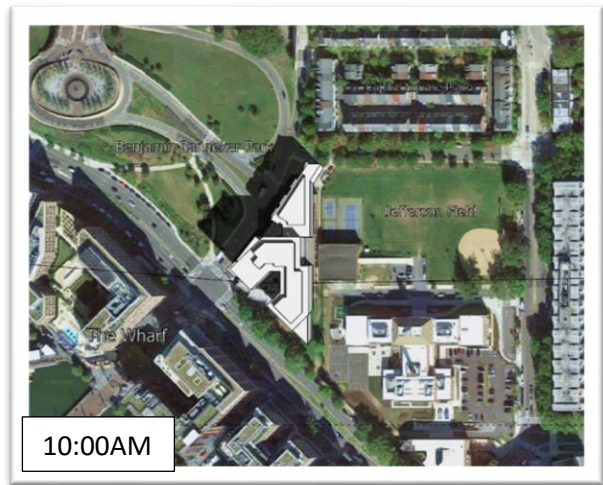
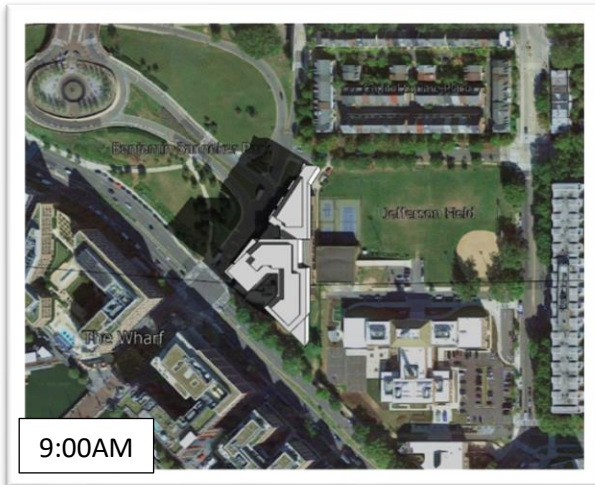
Winter Solstice (December 21st)/ Longer Shadow Durations

Benjamin Banneker Park would experience new significant incremental shadows resulting from the Proposed Development during the winter period in the morning from **9:00 AM to 11:00 AM**.

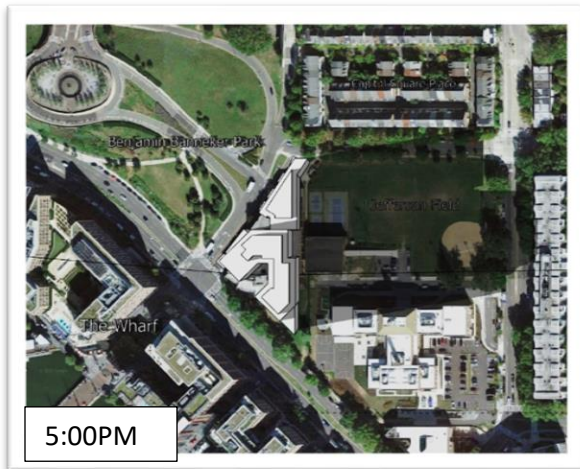
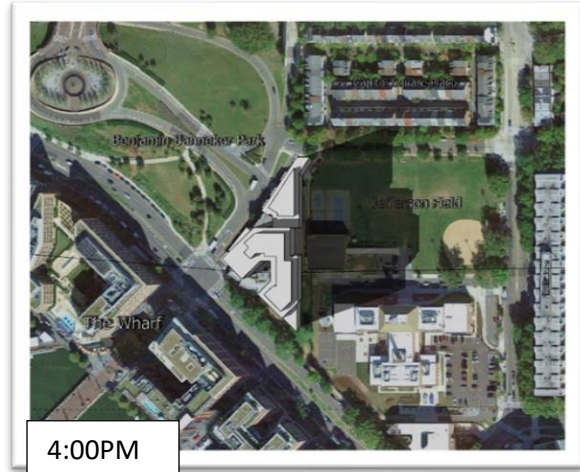
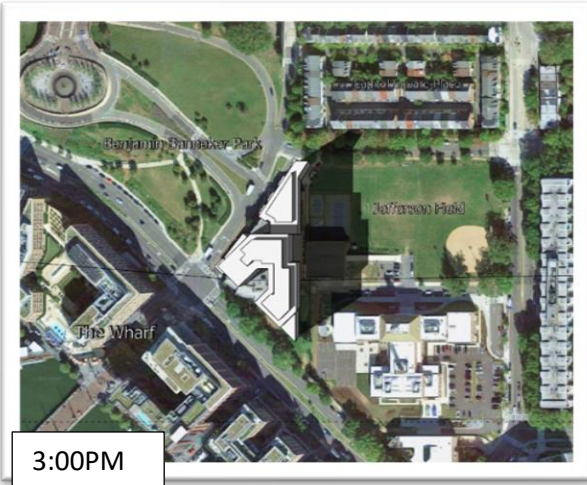
Capitol Square Place at Waterfront townhouses on G street would experience new significant incremental shadows resulting from the Proposed Development during the winter period in the afternoon from **12:00 PM to Sunset**.

Jefferson Field would experience new incremental shadows resulting from the Proposed Development during the winter period in the afternoon from **1:00 PM to Sunset**.

MARCH/ SEPTEMBER (EQUINOXES) – PROPOSED DEVELOPMENT SHADOWS



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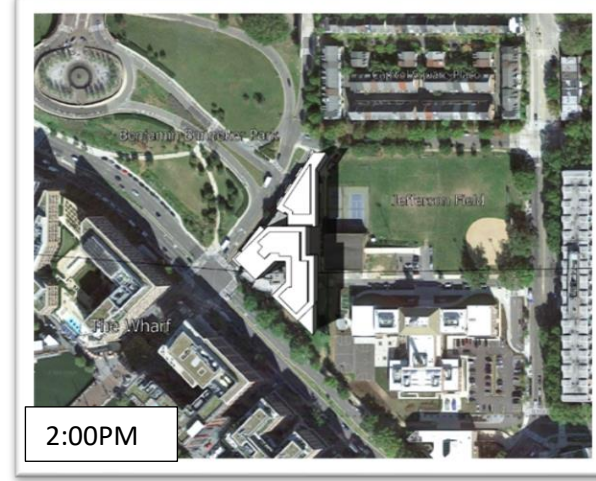
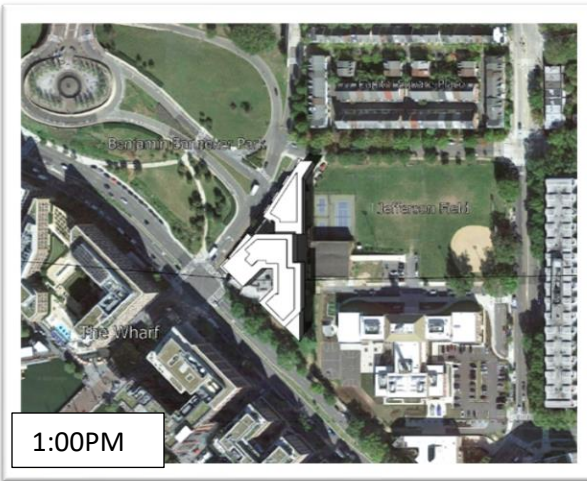
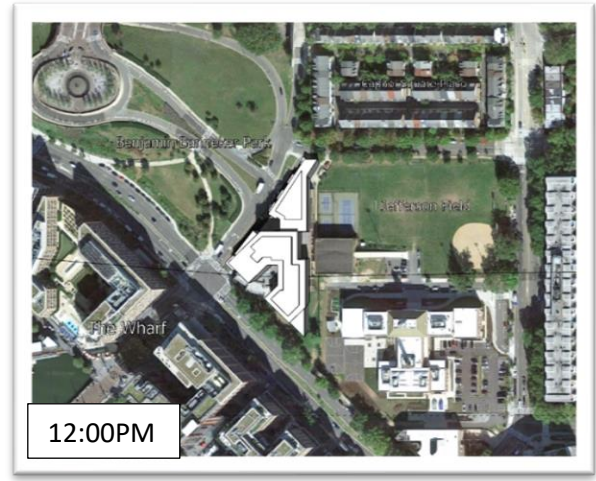
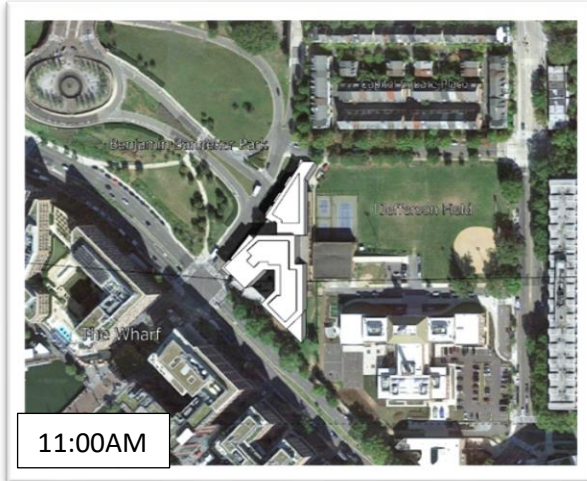
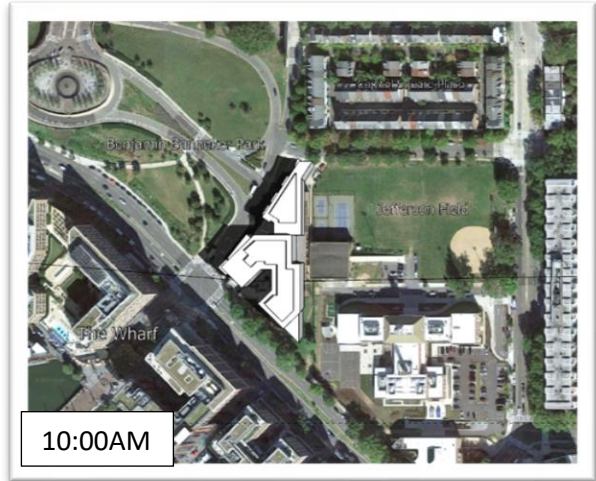
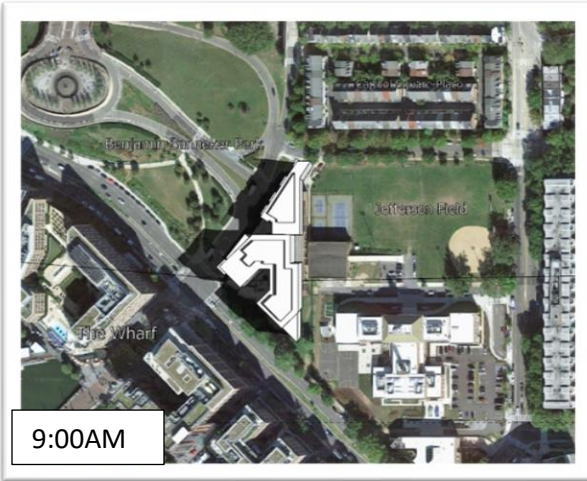


March 21st / September 21st (Equinoxes) / Shadow Durations

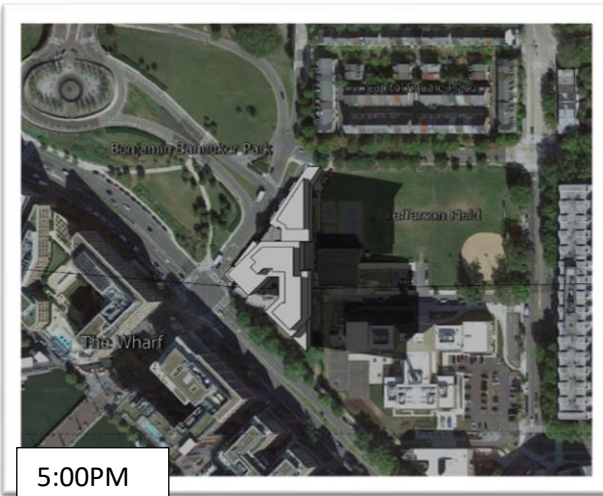
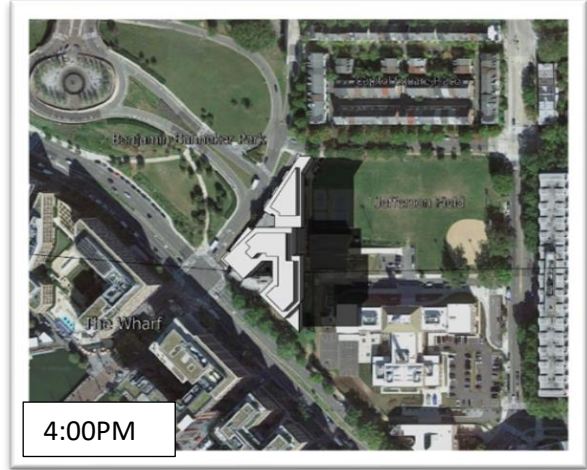
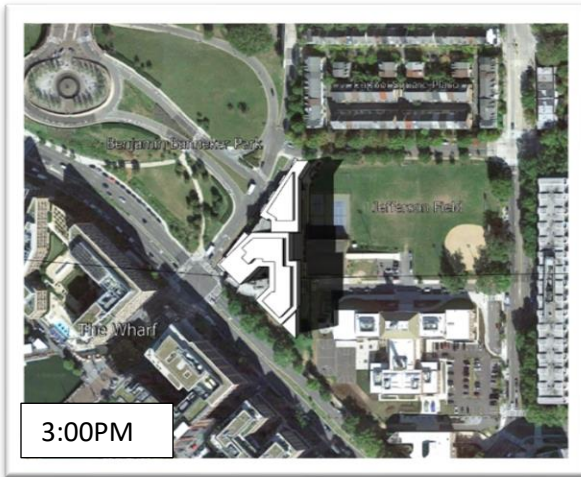
Jefferson Field would experience new significant incremental shadows resulting from the Proposed Development during the fall/spring period during the afternoon from **1:00 PM to Sunset**.

Benjamin Banneker Park would experience new minor incremental shadows resulting from the Proposed Development during the fall/spring period in the morning from **9:00 AM to 10:00 AM**. The shadow impact on the Capitol Square Place at Waterfront townhouses would be negligible.

JUNE (SUMMER SOLSTICE) – PROPOSED DEVELOPMENT SHADOWS



JUNE (SUMMER SOLSTICE) – PROPOSED DEVELOPMENT SHADOWS



Summer Solstice (June 21st)/ Shorter Shadow Durations

Jefferson Field would experience new incremental shadows resulting from the Proposed Development during the summer period in the afternoon from **2:00 PM till sunset**.

Benjamin Banneker Park and Capitol Square Place at Waterfront townhouses would not suffer any significant shadow impact during summer Solstice.

5. METHODOLOGY AND FINDINGS

The detailed shadow analysis used SketchUp 3D modeling software in combination with other data sources, based on the Washington D.C SW geographic location.

The Proposed Development would result in a significant shadow impact to Jefferson Field across all seasons of the year. Benjamin Banneker Park and the Capitol Square Place at Waterfront townhouses would suffer significant shadow impact during Winter Solstice, with lesser impact during the March/September equinoxes, and no impact during the summer period. The incremental shadow duration on the above-mentioned areas of concern is detailed in the table below:

	Area	December 21st	March 21st/ September 21st	June 21st
		Winter Solstice	Equinoxes	Summer Solstice
1	<i>Benjamin Banneker</i>			
	Shadow Enter-Exit Time	9:00AM - 11:00AM	9:00PM - 10:00PM	no shadows
2	<i>Capitol Square at Waterfront Townhouses</i>			
	Shadow Enter-Exit Time	12:00PM - Sunset	no shadows	no shadows
3	<i>Jefferson Field</i>			
	Shadow Enter-Exit Time	1:00PM - Sunset	1:00PM - Sunset	2:00PM - Sunset