



DEPARTMENT OF PERMITTING SERVICES

Marc Elrich
County Executive

Hadi Mansouri
Acting Director

March 10, 2020

Mr. Jeff Lynch
Dewberry Engineers, Inc.
2101 Gaither Road, Suite 340
Rockville, MD 20850

Re: **COMBINED STORMWATER MANAGEMENT
CONCEPT/SITE DEVELOPMENT
STORMWATER MANAGEMENT PLAN** for
7000 Wisconsin Avenue
Preliminary Plan #: 120200090
Site Plan #: 820200090
SM File #: 285598
Tract Size/Zone: 0.46 Ac. / CR-3.0,C-3.0,R-2.75
Total Concept Area: 0.49 Ac
Lots/Block: 5, 6, 6-A
Parcel(s): P1
Watershed: Little Falls Branch

Dear Mr. Lynch:

Based on a review by the Department of Permitting Services Review Staff, the stormwater management concept for the above-mentioned site is **acceptable**. The stormwater management concept proposes to meet required stormwater management goals via ESD to the MEP using micro-bioretenion planter boxes and green roof. Due to site limitations and existing shallow storm drain, full stormwater treatment is not possible and the request for a partial waiver of stormwater management requirements is hereby granted.

The following items will need to be addressed during the detailed sediment control/stormwater management plan stage:

1. This site is considered as redevelopment.
2. A detailed review of the stormwater management computations will occur at the time of detailed plan review.
3. An engineered sediment control plan must be submitted for this development.
4. All filtration media for manufactured best management practices, whether for new development or redevelopment, must consist of MDE approved material.
5. The parking garage and the loading dock are to drain to WSSC. Provide a copy of the approved riser diagram showing that the garage and loading dock drain to WSSC.
6. The green roof is to be designed by a professional with green roof experience, and must provide a minimum of 3,706 square feet of 8" green roof.



255 Rockville Pike, 2nd Floor, Rockville, Maryland 20850 | 240-777-0311
www.montgomerycountymd.gov/permittingervices

Mr. Jeff Lynch
March 10, 2020
Page 2 of 2

7. At the time of plan submittal try to increase the area of green roof or treatment by micro-bioretenion as much as you can.
8. Use MCDPS latest design criteria at time of plan submittal.
9. Provide easements and covenants for the ESD facilities.

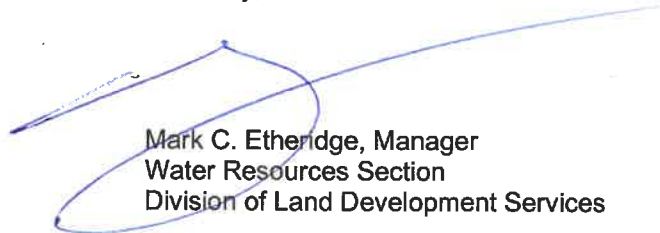
This list may not be all-inclusive and may change based on available information at the time.

Payment of a stormwater management contribution in accordance with Section 2 of the Stormwater Management Regulation 4-90 **is required**.

This letter must appear on the sediment control/stormwater management plan at its initial submittal. The concept approval is based on all stormwater management structures being located outside of the Public Utility Easement, the Public Improvement Easement, and the Public Right of Way unless specifically approved on the concept plan. Any divergence from the information provided to this office; or additional information received during the development process; or a change in an applicable Executive Regulation may constitute grounds to rescind or amend any approval actions taken, and to reevaluate the site for additional or amended stormwater management requirements. If there are subsequent additions or modifications to the development, a separate concept request shall be required.

If you have any questions regarding these actions, please feel free to contact David Kuykendall at 240-777-6332.

Sincerely,



Mark C. Etheridge, Manager
Water Resources Section
Division of Land Development Services

MCE: CN285598 7000 Wisconsin Avenue.DWK

cc: N. Braunstein
SM File # 285598

ESD: Required/Provided 3,380 cf / 1,796 cf
PE: Target/Achieved: 2.00"/1.06"
STRUCTURAL: 0.00 cf
WAIVED: 0.46 ac.



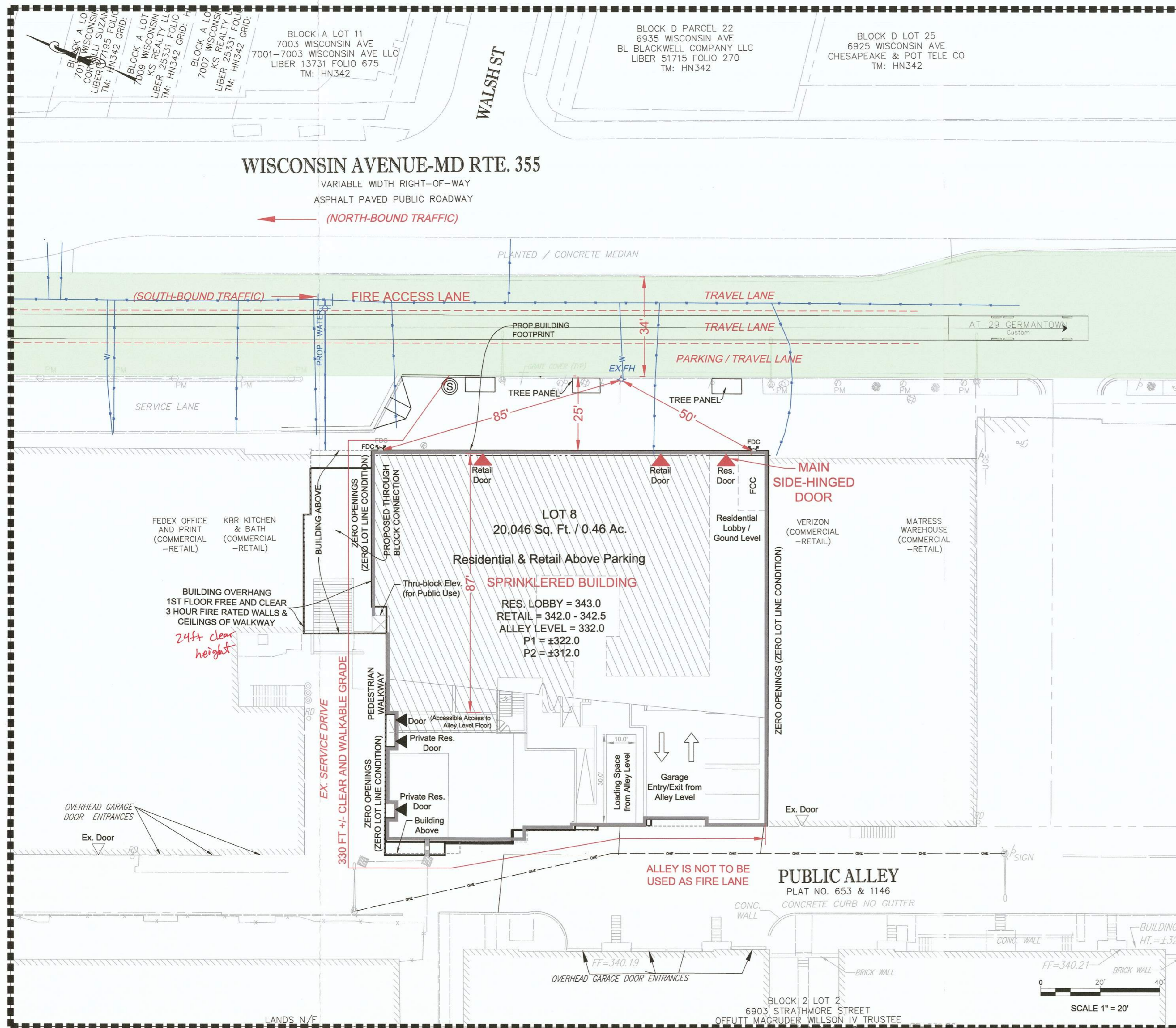
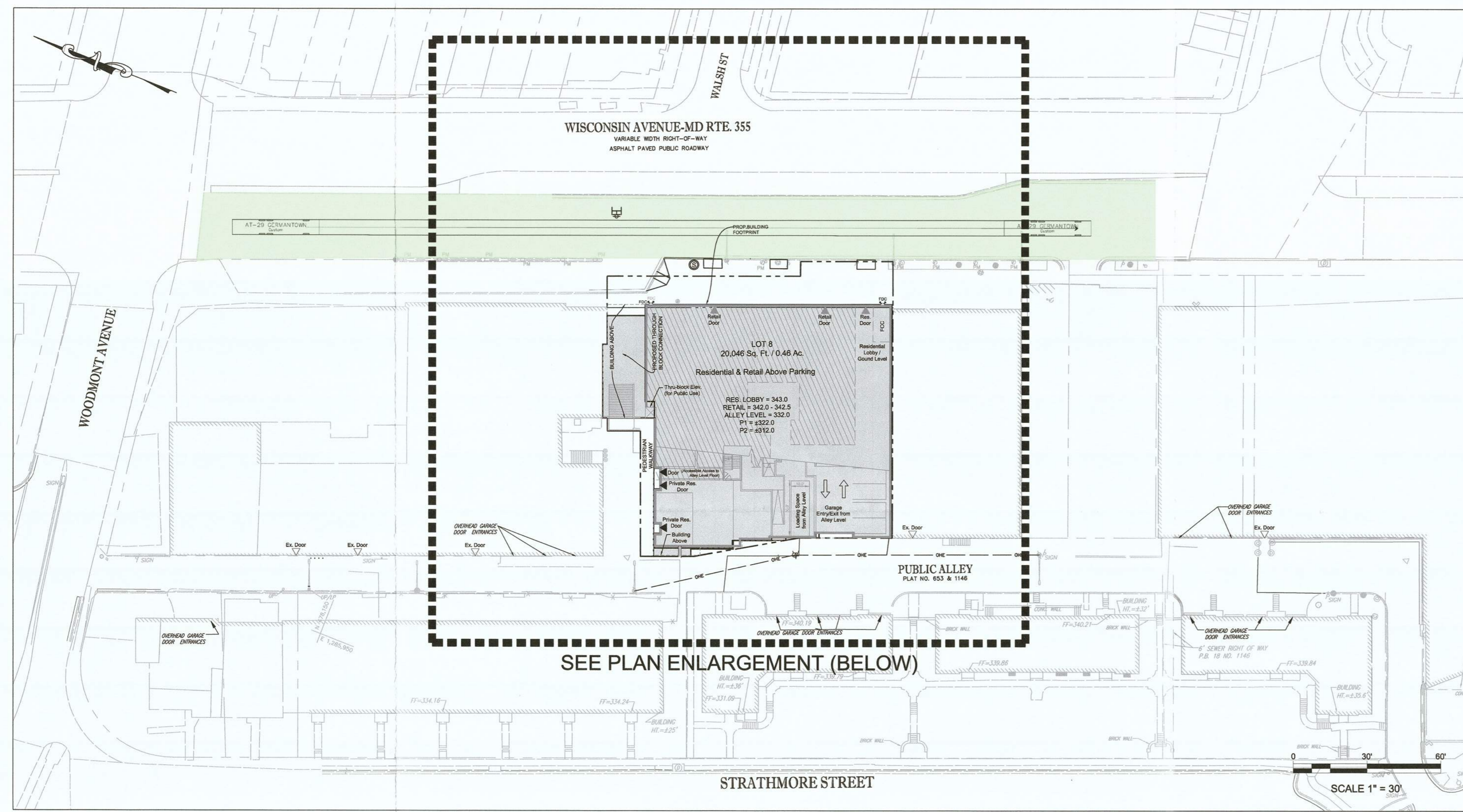
**Department of Permitting Services
Fire Department Access and Water Supply Comments**

DATE: 05-Mar-20
TO: Alan Barney - abarney@dewberry.com
Dewberry
FROM: Marie LaBaw
RE: 7000 Wisconsin Ave
120200090 820200090

PLAN APPROVED

1. Review based only upon information contained on the plan submitted **05-Mar-20**. Review and approval does not cover unsatisfactory installation resulting from errors, omissions, or failure to clearly indicate conditions on this plan.
2. Correction of unsatisfactory installation will be required upon inspection and service of notice of violation to a party responsible for the property.

***** See statement of performance based design: fire rated walls and ceiling at building overhang



LEGEND

- EX.FH. FIRE HYDRANT
- [Green Box] FIRE ACCESS LANE
- [Red Triangle] MAIN SIDE-HINGED DOOR LOCATION
- FDC PR. FIRE DEPARTMENT CONNECTION
- [Red Box] AT-29 GERMANTOWN
- [Hatched Box] MONTGOMERY COUNTY FIRE TRUCK
- [Hatched Box] RETAIL SPACE (10,000 SQFT Ground Level)

MONTGOMERY COUNTY FIRE TRUCK

47.00 ft

7.00 ft 21.75 ft

AT-29 GERMANTOWN

Width : 8.25 ft
Track : 8.25 ft
Lock to Lock Time : 6.0 ft
Steering Angle : 33.2 ft

FIRE CODE ENFORCEMENT

Fire Department Access Review

Review based only upon information contained on this plan. Does not cover unsatisfactory layout resulting from omissions, errors or failure to clearly indicate conditions on this plan. Correction of such unsatisfactory layout to afford required access will be required if found upon inspection after installation.

BY: *SJC* FM: 43 DATE: 3/12/20

Developer's Certificate

THE UNDERSIGNED AGREES TO EXECUTE ALL THE FEATURES OF THE SITE PLAN APPROVAL NO. 82020090 INCLUDING APPROVAL CONDITIONS, DEVELOPMENT PROGRAM, AND CERTIFIED SITE PLAN.

Developer: Woodfield Development Company, LLC Todd Jacobus
Company Contact Person

Address: 7111 Woodmont Avenue, Suite 915
Bethesda, MD 20815

Phone: 202.297.1089

Signature: _____

Dewberry

DEWBERRY ENGINEERS INC.
2101 GAITHER ROAD SUITE 340
ROCKVILLE, MD 20850
PH: 301.948.8300 FX: 301.258.7607
www.dewberry.com

CONTACT
MEREDITH BYER
2101 Gaither Road, Suite 340
Rockville, MD 20850
PH: 301.337.2857
www.dewberry.com

APPLICANT / DEVELOPER
Woodfield Development Company, LLC
7111 Woodmont Avenue, #915
Bethesda, MD 20815
PH: 202.297.1089
CONTACT: Todd Jacobus



SITE PLAN

7000 Wisconsin Avenue
7000 Wisconsin Ave, Bethesda, MD 20815
Block 2 Lots 5, 6, 6-A and Parcel P-1 L.13199 F.533
George P. Sacks' Subdivision
MONTGOMERY COUNTY, MARYLAND
7th Election District
209NW04, TAX MAP HN342

SEAL

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
License No.: 29891
Expiration Date: 01/14/2022

SCALE
AS SHOWN

REVISIONS

#	DATE	BY	DESCRIPTION
01.			

DRAWN BY: WWB / GRW
APPROVED BY: JMC
CHECKED BY: MLB
DATE: NOVEMBER 2019

TITLE
FIRE DEPARTMENT ACCESS PLAN

PROJECT NO. 5011153
SP-101

SHEET NO. 13-FDA-82020090-101



DEPARTMENT OF TRANSPORTATION

Marc Elrich
County Executive

Christopher R. Conklin
Director

March 10, 2020

Mr. Matthew Folden, Planner Coordinator
Area 1 Planning Division
The Maryland-National Capital
Park & Planning Commission
8787 Georgia Avenue
Silver Spring, Maryland 20910-3760

RE: Preliminary Plan No. 12020090
7000 Wisconsin Avenue

Dear Mr. Folden:

We have completed our review of the preliminary plan uploaded to eplans on February 7, 2020. A previous plan was reviewed by the Development Review Committee at its meeting on January 21, 2020. We recommend approval of the plan subject to the following comments:

All Planning Board Opinions relating to this plan or any subsequent revision, project plans or site plans should be submitted to the Department of Permitting Services in the package for record plats, storm drain, grading or paving plans, or application for access permit. This letter and all other correspondence from this department should be included in the package.

Significant Plan Review Comments

1. Reconstruct the public alley directly adjacent to the property's western frontage. Final details will be determined by DPS at the site plan stage. Prior to issuance of the right-of-way the permit, the applicant should contact Ms. Christina Contreras of MCDPS at christina.contreras@montgomerycountymd.gov for the requirements to reconstruct the existing alley since it is being used as primary access to the subject site. The applicant shall be responsible for reconstructing the existing alley to bring it up to standard per Montgomery County standard MC-201.01 prior to issuance of the first use and occupancy permit.

Office of the Director

101 Monroe Street, 10th Floor, Rockville, MD 20850 · 240-777-7170 · 240-777-7178 Fax
www.montgomerycountymd.gov/mcdot

montgomerycountymd.gov/311



301-251-4850 TTY

2. Transportation Demand Management

a. Applicability of Bill 36-18 Provisions

1. No Traffic Mitigation Agreement will be required.
2. The project is located in the Red Subdivision Staging Policy Area. The project proposes to develop more than 40,000 gross square feet.
3. As a condition of subdivision approval, an owner or applicant for a project located in a Red Policy Area under the Subdivision Staging Policy with more than 40,000 gross square feet must submit a Level 3 TDM Results Plan
4. The Plan must be submitted and approved by MCDOT prior to issuance of any building permit from DPS.

b. Level 3 TDM Results Plan involves:

1. TDM Results Plans include certain required strategies along with optional strategies. Optional strategies will be selected by the owner/applicant with advice from the Department as requested and will be determined by the owner/applicant to be sufficient to achieve the NADMS goals for that project.
2. At the time Executive Regulations are adopted, the Applicant should contact MCDOT for details regarding the process for plan submittal. Level 3 Results Plans requires the following:
 - Appoint a Transportation Coordinator
 - Notify the Department within 30 days of receipt of final U&O certificate
 - Provide space in the project for the promotion of TDM
 - Display TDM-related information in highly visible location(s)
 - Identify specific TDM actions to be implemented in order to achieve 5% above the Bethesda commuter goal of 55% NADMS.
 - Commit funding if the project has not actually achieved the goal within 6 years of final occupancy
 - Provide higher additional funding if the project has not achieved the goal within 8 years of final occupancy
 - Conduct independent monitoring to determine if the project is meeting its goals, until the project's goals are achieved.

Standard Plan Review Comments

3. No steps, stoops or retaining walls for the development are allowed in County right-of-way. No door swings into county ROW.
4. The storm drain analysis was reviewed and is acceptable to MCDOT. No improvements are needed to the downstream public storm drain system for this plan.
5. Prior to approval of the record plat by the Department of Permitting Services, submit a completed, executed and sealed MCDOT Sight Distances Evaluation certification form, for the existing and proposed driveway(s), for DPS review and approval.
6. Construct Bethesda Central Business District streetscaping along Wisconsin Avenue (MD 355) site frontage.
7. The applicant will need to provide a loading management plan for each building prior to issuance of the right-of-way permit. This plan shall include but not be limited to, an on-site liaison, delivery times, trash operations, move-in, move-out and how loading will operate.
8. Underground the utilities along your street frontages, including the alley.
9. Provide on-site handicap access facilities, parking spaces, ramps, etc. in accordance with the Americans with Disabilities Act.
10. In all underground utility installations, install identification tape or other "toning" device approximately 2' above the utility.
11. to DPS approval of the record plat. The deed reference for this document is to be provided on the record plat.
12. If the proposed development will alter any existing street lights, replacement of signing, and/or pavement markings along Wisconsin Avenue (MD 355) or the alley, please contact Mr. Dan Sanayi of our Traffic Engineering Design and Operations Section at (240) 777-2190 for proper executing procedures. All costs associated with such relocations shall be the responsibility of the applicant.
13. If the proposed development will alter or impact any existing County maintained transportation system management component (i.e., traffic signals, signal poles, handboxes, surveillance cameras, etc.) or communication component (i.e., traffic signal interconnect, fiber optic lines, etc.), please contact Mr. Kamal Hamud of our Transportation Systems Engineering Team at (240) 777-2190 for proper executing procedures. All costs associated with such relocations shall be the responsibility of the applicant.
14. At or before the permit stage, please coordinate with Mr. Benjamin Morgan of our Division of Parking Management to coordinate the impacts on public parking facilities in the vicinity of this project. Mr. Morgan may be contacted at 240 777-8704.

15. Posting of a right-of-way permit bond is a prerequisite to DPS approval of the record plat. The right-of-way permit will include, but not necessarily be limited to, the following improvements:
- a. Reconstruction of the alley behind the applicant's property, which may include but not be limited to, street grading, paving, sidewalks, removing utility poles, streetlighting, and storm drainage and appurtenances.
 - b. Permanent monuments and property line markers, as required by Section 50-4.3(G) of the Subdivision Regulations.
 - c. Erosion and sediment control measures as required by Montgomery County Code 19-10(02) and on-site stormwater management where applicable shall be provided by the Developer (at no cost to the County) at such locations deemed necessary by the Department of Permitting Services (DPS) and will comply with their specifications. Erosion and sediment control measures are to be built prior to construction of streets, houses and/or site grading and are to remain in operation (including maintenance) as long as deemed necessary by the DPS.
 - d. Developer shall provide street lights in accordance with the specifications, requirements, and standards prescribed by the MCDOT Division of Traffic Engineering and Operations.

Thank you for the opportunity to review this preliminary plan. If you have any questions or comments regarding this letter, please contact myself for this project at (240) 777-2118 or rebecca.torma@montgomerycountymd.gov.

Sincerely,



Rebecca Torma, Manager
Development Review Team
Office of Transportation Policy

Matthew Folden
Preliminary Plan No. 120200090
March 10, 2020
Page 5

Sharepoint/transportation/development review/Rebecca/developments/bethesda/120200090 7000 Wisconsin Avenue.docx

cc: Plan letters notebook

cc-e: Meredith Byer, Dewberry Engineers Inc.
Robert Dalrymple, Linowes & Blocher
Sam Farhadi, MCDPS RWPR
Vincent Ho, MCDOT DTEO
Benjamin Morgan, MCDOT DPM
Beth Dennard, MCDOT DO

From: [Kwesi Woodroffe](#)
To: [Matthew M. Gordon - Linowes and Blocher LLP](#); [Mencarini, Katherine](#)
Cc: [Folden, Matthew](#); [Sigmond Ajegwu](#)
Subject: RE: 7000 Wisconsin Avenue (120200090)
Date: Friday, March 13, 2020 10:51:16 AM
Attachments: [image008.png](#)
[image009.png](#)
[image010.png](#)
[image011.png](#)
[image012.png](#)
[image013.png](#)
[image014.png](#)
[image015.png](#)
[image016.png](#)
[image017.png](#)
[image018.png](#)
[image019.png](#)
Importance: High

Katie/ Matt:

My apologies for the late response.

MDOT SHA recommends approval of the subject project with the usual condition that new water and sewer will required a District Office (DO) Permit.

Mr. Ajegwu (copied) is coordinating with the Applicant's engineer to issue the DO Permit.

Let me know if there's anything I can help with.

Thanks, Kwesi

Kwesi Woodroffe
Regional Engineer
District 3 Access Management
MDOT State Highway Administration
KWoodroffe@mdot.maryland.gov
301-513-7347 (Direct)
1-888-228-5003 – toll free
9300 Kenilworth Avenue,
Greenbelt, MD 20770
<http://www.roads.maryland.gov>



From: Matthew M. Gordon - Linowes and Blocher LLP <MGordon@linowes-law.com>

Sent: Thursday, March 12, 2020 3:17 PM

To: 'Mencarini, Katherine' <katherine.mencarini@montgomeryplanning.org>; Kwesi Woodroffe <KWoodroffe@mdot.maryland.gov>

Cc: Folden, Matthew <matthew.folden@montgomeryplanning.org>

Subject: RE: 7000 Wisconsin Avenue (120200090)

Hi Kwesi,

Per our conversation yesterday, I am following up. Thanks in advance for your help.

Matt

Matthew M. Gordon | Linowes and Blocher LLP | 301.961.5233

From: Mencarini, Katherine [<mailto:katherine.mencarini@montgomeryplanning.org>]

Sent: Wednesday, March 11, 2020 8:53 AM

To: Kwesi Woodroffe

Cc: Folden, Matthew; Matthew M. Gordon - Linowes and Blocher LLP

Subject: RE: 7000 Wisconsin Avenue (120200090)

Kwesi,

Following up on this earlier email, can you confirm that MCDOT approves the 7000 Wisconsin Avenue preliminary/site plan application? We need your final assessment in writing to keep the project on schedule.

Thanks so much for your help! I'd be happy to answer any questions you have.

Katie



Katie Mencarini
Multimodal Planner Coordinator

Montgomery County Planning Department
8787 Georgia Avenue, Silver Spring, MD 20910
katherine.mencarini@montgomeryplanning.org
o: 301.495.4549



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THRIVEMONTGOMERY.COM

From: Mencarini, Katherine

Sent: Wednesday, March 4, 2020 9:04 AM

To: Kwesi Woodroffe <KWoodroffe@mdot.maryland.gov>

Cc: Folden, Matthew <matthew.folden@montgomeryplanning.org>; Matthew M. Gordon - Linowes and Blocher LLP <MGordon@linowes-law.com>

Subject: 7000 Wisconsin Avenue (120200090)

Kwesi,

I'm finalizing the transportation component of the staff report for 7000 Wisconsin Avenue and we need final approval from MDOT SHA.c

Based on your feedback in Eplans, it looks like MDOT SHA recommends approval (with the usual condition that new water and sewer will required a district office permit).

If I could get an email from you confirming MDOT SHA's approval of the project that would keep us on course and on schedule.

Thanks so much for your help!

Katie



Katie Mencarini
Multimodal Planner Coordinator

Montgomery County Planning Department
8787 Georgia Avenue, Silver Spring, MD 20910
katherine.mencarini@montgomeryplanning.org
o: 301.495.4549



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THRIVEMONTGOMERY.COM MONTGOMERY 2050



DEPARTMENT OF HOUSING AND COMMUNITY AFFAIRS

Marc Elrich
County Executive

Aseem K. Nigam
Director

March 20, 2020

Mr. Matt Folden
Area 1 Division
Montgomery County Planning Department
8787 Georgia Avenue
Silver Spring, Maryland 20910

Re: 7000 Wisconsin Avenue
Site Plan No. 820200090

Dear Mr. Folden:

The Montgomery County Department of Housing and Community Affairs (DHCA) has reviewed the above referenced plans and recommends Approval.

Sincerely,

Lisa Schwartz

Lisa Schwartz, Manager
Affordable Housing Programs Section

cc: Kevin Mack

https://mcgov.sharepoint.com/teams/DHCA/Housing/Affordable/Shared Documents/MPDU/Developments/7000 Wisconsin/7000 Wisconsin DHCA Letter_03-20-2020.docx

Division of Housing

Affordable Housing Common Ownership Communities Landlord-Tenant Affairs Multifamily Housing

1401 Rockville Pike, 4th Floor • Rockville, Maryland 20852 • 240-777-0311 • 240-777-3691 FAX • www.montgomerycountymd.gov/dhca

DPS-ROW CONDITIONS OF APPROVAL

February 10, 2020

820200090 7000 Wisconsin Ave

Contact: Sam Farhadi at 240 777-6333

We have reviewed site plan file:

“07-SITE-820200090-003.pdf V3” uploaded on/ dated **“2/7/2020”**, and

We have no further comments at this point.

From: [Nauman, Mark](#)
To: [Folden, Matthew](#)
Subject: RE: 7000 Wisconsin Avenue Energy Model
Date: Thursday, February 27, 2020 1:30:59 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)

Hi Matt

Yes I looked at the model and it is sufficient for building permit submittal at the 17.5% minimum threshold required for the density credit.

Mark Nauman, LEED AP
Senior Specialist - Energy & Green Building
Department of Permitting Services
255 Rockville Pike, 2nd floor
Rockville, MD 20850
240-777-6270
301-370-3674 (mobile)
240-777-6258 (fax)
www.montgomerycountymd.gov/permittingservices
Local actions have global consequences:

[From] Montgomery County Council Climate Mobilization Resolution 18-974

“Current global warming of approximately 1 degree Celsius has triggered cataclysmic changes to the Earth. These changes include an accelerating collapse of the West Antarctic Ice Sheet, the thawing of the Arctic permafrost, an increase in mega-droughts, heat waves, super-storms, flash flooding, the migration of mosquito-borne diseases, the melting of glaciers, polar ice-sheet collapse, coral bleaching, the mass extinction of species, ocean oxygen loss, and sea level rise.

Climate change will cause an increase in water and food shortages, civil unrest, state failure, civil war and terrorism throughout the world, with no region or nation being immune to these effects, including Montgomery County.

There is a strong consensus among scientists that greenhouse gas emissions must be eliminated in a decade at most -- with a simultaneous global effort to remove excess carbon from the atmosphere -- to stabilize at or near the 1.5 C (2.4 F) threshold believed to provide a reasonable chance for the survival of human civilization and other complex life forms on this planet.”

Have you tried DPS eServices?

<http://permittingservices.montgomerycountymd.gov/DPS/eServices/AboutServices.aspx>

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From: Folden, Matthew <matthew.folden@montgomeryplanning.org>
Sent: Thursday, February 27, 2020 1:29 PM
To: Nauman, Mark <Mark.Nauman@montgomerycountymd.gov>
Subject: 7000 Wisconsin Avenue Engery Model

[EXTERNAL EMAIL]

Hi Mark,

Can you please respond to this email to confirm that the energy model for 7000 Wisconsin Avenue, submitted by SK&I Architects via email on February 17th, is sufficient for your approval?

Thank you,

Matt



Matthew Folden, AICP
Planner Coordinator

Montgomery County Planning Department
8787 Georgia Avenue, Silver Spring, MD 20910
matthew.folden@montgomeryplanning.org
o: 301.495.4539



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<https://www.montgomerycountymd.gov/census/>

Twelve story residential multi-family building - new construction - with amenities and retail
 7000 Wisconsin Avenue, Bethesda, MD 20815
 SSA MEP
 SK+1 Architects
 Woodfield Development Co.
 Conceptual drawings dated Nov 2019

Proposed Design	Baseline Design
Mandatory Sections	Prescriptive directions for baseline per ASHRAE Appendix G
5.4 Envelope	
6.4 HVAC	
7.4 Water heater	
8.4 Elect	
9.4 Lighting	
10.4 Special	

Building residential and amenity spaces will be modeled using Carrier HAP version 5.1.
 Residential loads are developed using REM to provide tenant energy use - input into HAP.
 Special calculations for Garage lighting, garage fans, elevator, etc loads input into HAP as misc. loads that do not affect interior conditions.
 Energy costs used are \$0.10/KWH and \$1/decatherm simple rate basis for both baseline and proposed.
 Thermal blocks are based on corner apartments, unique exposure apartments, and grouped apartments having identical exposures.
 People, thermostat, and equipment use schedules are identical for proposed and baseline.
 Garage is enclosed so it will have CO controlled fans for proposed and continuous for baseline.

Garage lights will be LED and will dim 50% for proposed. Lights will be prescriptive watts/sqft and dim 30% for baseline.
 Apartment energy use (REMRATE) for proposed will be LED and energy star appliances. Baseline will be standard appliances and lighting.

Envelope:	
Roof R38	Roof R=31.25
Wall R17.86 (due to metal studs)	Wall R=15.625
Doors and fenestration U=.35/SHGC .3	Doors and fenestration U=.5, .4 SHGC
Note: window area as designed - some>40%	Note - windows as designed but max 40% of wall space
Note: some shading not incl at this time.	Note - orientation is fixed due to surrounding buildings
Infiltration - identical proposed and baseline even though DOAS will pressurize the building	

Lighting:	
LED	Table 9.5.1
.2 FOR AMENITIES (Occ sensors)	Corridor 0.66 W/sqft
.2 W/SQFT FOR CORRIDORS AND STAIRS	Lobby 0.59
.04 W/SQFT FOR GARAGE (39,358SQFT)	Garage 0.19 (30% dimming same schedule as proposed)
	Stairs .69
	Fitness .72
	Apartments per REM
Lighting controls per 9.4.1	Lighting controls per 9.4.1

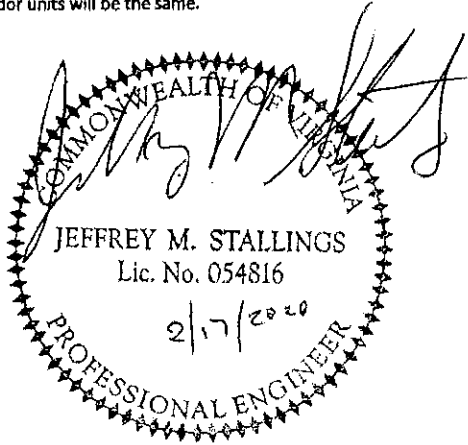
HVAC
 Identical thermal blocks for proposed and baseline
 WSHP with cooling tower and gas boiler
 PTAC units as specified for multi-family - 14SEER
 Gas boiler hydronic 82% as specified for multi-family
 WSHP - 14EER at 85F water
 WSHP - 4.0 COP at 60F water
 Note - DOAS unit with gas and electric DX planned - 100% outside air. However because infiltration must be modeled the same, both baseline and proposed corridor units will be the same.

Water Heating
 Energy Star
 Standard

Receptacle and appliance loads
 identical receptacle
 standard appliances for baseline and energy star for proposed

Garage fans
 Proposed has 3HP fan continuous and adds 8 HP for CO
 Baseline has 11HP and reduces 30% for CO
 CO schedule of course is the same.

Jeffrey M. Stallings, P.E.
 716 Barnsdale Road
 Winston-Salem, N.C. 27106
 2/17/2020
 LEED AP



Annual Cost Summary

7000 Wisconsin 2-13 Base 40% windows east
Stallings Engineering P.C.

02/14/2020
08:18AM

Table 1. Annual Costs

Component	7000 WISCONSIN (\$)
Air System Fans	12,160
Cooling	11,534
Heating	12,668
Pumps	0
Heat Rejection Fans	0
HVAC Sub-Total	36,362
Lights	41,812
Electric Equipment	29,628
Misc. Electric	34,176
Misc. Fuel Use	0
Non-HVAC Sub-Total	105,617
Grand Total	141,978

Table 2. Annual Cost per Unit Floor Area

Component	7000 WISCONSIN (\$/ft ²)
Air System Fans	0.081
Cooling	0.077
Heating	0.084
Pumps	0.000
Heat Rejection Fans	0.000
HVAC Sub-Total	0.242
Lights	0.278
Electric Equipment	0.197
Misc. Electric	0.228
Misc. Fuel Use	0.000
Non-HVAC Sub-Total	0.703
Grand Total	0.945
Gross Floor Area (ft ²)	150205.0
Conditioned Floor Area (ft ²)	150205.0

Note: Values in this table are calculated using the Gross Floor Area.

Table 3. Component Cost as a Percentage of Total Cost

Component	7000 WISCONSIN (%)
Air System Fans	8.6
Cooling	8.1
Heating	8.9
Pumps	0.0
Heat Rejection Fans	0.0
HVAC Sub-Total	25.6
Lights	29.4
Electric Equipment	20.9
Misc. Electric	24.1
Misc. Fuel Use	0.0
Non-HVAC Sub-Total	74.4
Grand Total	100.0

Annual Energy and Emissions Summary

7000 Wisconsin 2-13 Base 40% windows east
Stallings Engineering P.C.

02/14/2020
08:18AM

Table 1. Annual Costs

Component	7000 WISCONSIN (\$)
HVAC Components	
Electric	36,361
Natural Gas	0
Fuel Oil	0
Propane	0
Remote HW	0
Remote Steam	0
Remote CW	0
HVAC Sub-Total	36,361
Non-HVAC Components	
Electric	105,617
Natural Gas	0
Fuel Oil	0
Propane	0
Remote HW	0
Remote Steam	0
Non-HVAC Sub-Total	105,617
Grand Total	141,979

Table 2. Annual Energy Consumption

Component	7000 WISCONSIN
HVAC Components	
Electric (kWh)	466,171
Natural Gas (na)	0
Fuel Oil (na)	0
Propane (na)	0
Remote HW (na)	0
Remote Steam (na)	0
Remote CW (na)	0
Non-HVAC Components	
Electric (kWh)	1,354,068
Natural Gas (na)	0
Fuel Oil (na)	0
Propane (na)	0
Remote HW (na)	0
Remote Steam (na)	0
Totals	
Electric (kWh)	1,820,239
Natural Gas (na)	0
Fuel Oil (na)	0
Propane (na)	0
Remote HW (na)	0
Remote Steam (na)	0
Remote CW (na)	0

Annual Energy and Emissions Summary

7000 Wisconsin 2-13 Base 40% windows east
Stallings Engineering P.C.

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Table 3. Annual Emissions

Component	7000 WISCONSIN
CO2 Equivalent (lb)	0

Table 4. Annual Cost per Unit Floor Area

Component	7000 WISCONSIN (\$/ft ²)
HVAC Components	
Electric	0.242
Natural Gas	0.000
Fuel Oil	0.000
Propane	0.000
Remote HW	0.000
Remote Steam	0.000
Remote CW	0.000
HVAC Sub-Total	0.242
Non-HVAC Components	
Electric	0.703
Natural Gas	0.000
Fuel Oil	0.000
Propane	0.000
Remote HW	0.000
Remote Steam	0.000
Non-HVAC Sub-Total	0.703
Grand Total	0.945
Gross Floor Area (ft ²)	150205.0
Conditioned Floor Area (ft ²)	150205.0

Note: Values in this table are calculated using the Gross Floor Area.

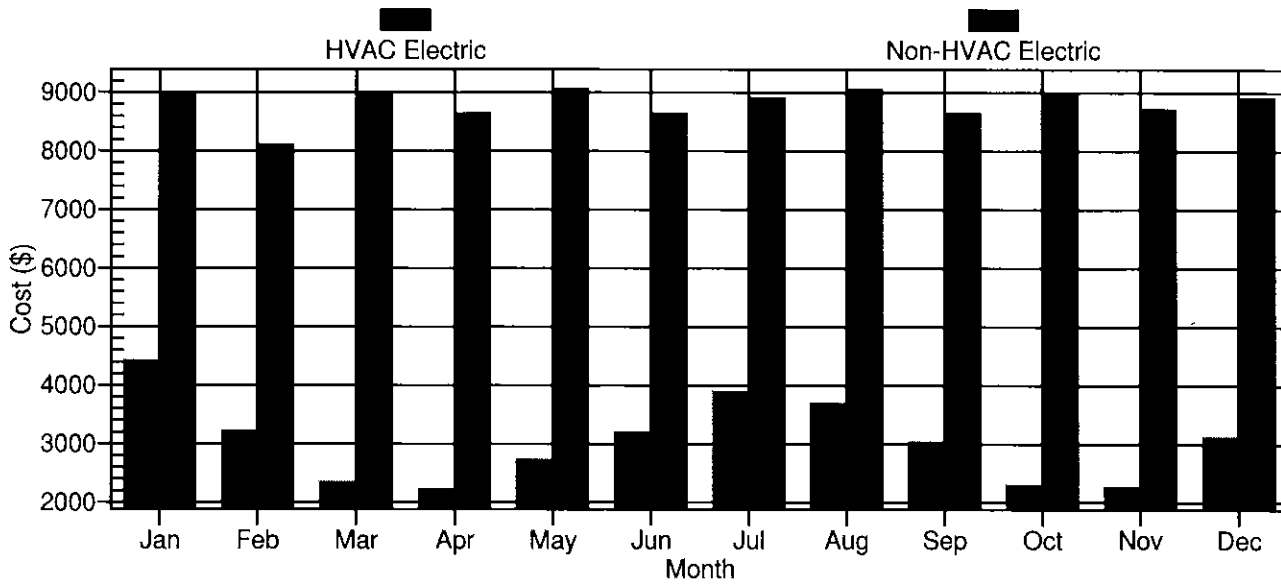
Table 5. Component Cost as a Percentage of Total Cost

Component	7000 WISCONSIN (%)
HVAC Components	
Electric	25.6
Natural Gas	0.0
Fuel Oil	0.0
Propane	0.0
Remote HW	0.0
Remote Steam	0.0
Remote CW	0.0
HVAC Sub-Total	25.6
Non-HVAC Components	
Electric	74.4
Natural Gas	0.0
Fuel Oil	0.0
Propane	0.0
Remote HW	0.0
Remote Steam	0.0
Non-HVAC Sub-Total	74.4
Grand Total	100.0

Monthly Energy Costs - 7000 WISCONSIN

7000 Wisconsin 2-13 Base 40% windows east
Stallings Engineering P.C.

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1. HVAC Costs

Month	Electric (\$)	Natural Gas (\$)	Fuel Oil (\$)	Propane (\$)	Remote Hot Water (\$)	Remote Steam (\$)	Remote Chilled Water (\$)
January	4,412	0	0	0	0	0	0
February	3,215	0	0	0	0	0	0
March	2,340	0	0	0	0	0	0
April	2,222	0	0	0	0	0	0
May	2,725	0	0	0	0	0	0
June	3,189	0	0	0	0	0	0
July	3,885	0	0	0	0	0	0
August	3,689	0	0	0	0	0	0
September	3,029	0	0	0	0	0	0
October	2,287	0	0	0	0	0	0
November	2,253	0	0	0	0	0	0
December	3,114	0	0	0	0	0	0
Total	36,361	0	0	0	0	0	0

2. Non-HVAC Costs

Month	Electric (\$)	Natural Gas (\$)	Fuel Oil (\$)	Propane (\$)	Remote Hot Water (\$)	Remote Steam (\$)
January	8,983	0	0	0	0	0
February	8,104	0	0	0	0	0
March	8,983	0	0	0	0	0
April	8,641	0	0	0	0	0
May	9,056	0	0	0	0	0
June	8,641	0	0	0	0	0
July	8,909	0	0	0	0	0
August	9,056	0	0	0	0	0
September	8,641	0	0	0	0	0
October	8,983	0	0	0	0	0
November	8,714	0	0	0	0	0
December	8,909	0	0	0	0	0
Total	105,617	0	0	0	0	0

Annual Cost Summary

7000 Wisconsin Proposed
Stallings Engineering P.C.

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Table 1. Annual Costs

Component	7000 WISCONSIN (\$)
Air System Fans	1,438
Cooling	15,444
Heating	7,487
Pumps	3,386
Heat Rejection Fans	768
HVAC Sub-Total	28,523
Lights	30,727
Electric Equipment	29,677
Misc. Electric	27,995
Misc. Fuel Use	0
Non-HVAC Sub-Total	88,399
Grand Total	116,922

Table 2. Annual Cost per Unit Floor Area

Component	7000 WISCONSIN (\$/ft ²)
Air System Fans	0.010
Cooling	0.103
Heating	0.050
Pumps	0.023
Heat Rejection Fans	0.005
HVAC Sub-Total	0.190
Lights	0.205
Electric Equipment	0.198
Misc. Electric	0.186
Misc. Fuel Use	0.000
Non-HVAC Sub-Total	0.589
Grand Total	0.778
Gross Floor Area (ft ²)	150205.0
Conditioned Floor Area (ft ²)	150205.0

Note: Values in this table are calculated using the Gross Floor Area.

Table 3. Component Cost as a Percentage of Total Cost

Component	7000 WISCONSIN (%)
Air System Fans	1.2
Cooling	13.2
Heating	6.4
Pumps	2.9
Heat Rejection Fans	0.7
HVAC Sub-Total	24.4
Lights	26.3
Electric Equipment	25.4
Misc. Electric	23.9
Misc. Fuel Use	0.0
Non-HVAC Sub-Total	75.6
Grand Total	100.0

Annual Energy and Emissions Summary

7000 Wisconsin Proposed
Stallings Engineering P.C.

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Table 1. Annual Costs

Component	7000 WISCONSIN (\$)
HVAC Components	
Electric	26,205
Natural Gas	2,317
Fuel Oil	0
Propane	0
Remote HW	0
Remote Steam	0
Remote CW	0
HVAC Sub-Total	28,522
Non-HVAC Components	
Electric	88,403
Natural Gas	0
Fuel Oil	0
Propane	0
Remote HW	0
Remote Steam	0
Non-HVAC Sub-Total	88,403
Grand Total	116,925

Table 2. Annual Energy Consumption

Component	7000 WISCONSIN
HVAC Components	
Electric (kWh)	335,958
Natural Gas (Therm)	2,317
Fuel Oil (na)	0
Propane (na)	0
Remote HW (na)	0
Remote Steam (na)	0
Remote CW (na)	0
Non-HVAC Components	
Electric (kWh)	1,133,373
Natural Gas (Therm)	0
Fuel Oil (na)	0
Propane (na)	0
Remote HW (na)	0
Remote Steam (na)	0
Totals	
Electric (kWh)	1,469,331
Natural Gas (Therm)	2,317
Fuel Oil (na)	0
Propane (na)	0
Remote HW (na)	0
Remote Steam (na)	0
Remote CW (na)	0

Annual Energy and Emissions Summary

7000 Wisconsin Proposed
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Table 3. Annual Emissions

Component	7000 WISCONSIN
CO2 Equivalent (lb)	0

Table 4. Annual Cost per Unit Floor Area

Component	7000 WISCONSIN (\$/ft ²)
HVAC Components	
Electric	0.175
Natural Gas	0.015
Fuel Oil	0.000
Propane	0.000
Remote HW	0.000
Remote Steam	0.000
Remote CW	0.000
HVAC Sub-Total	0.190
Non-HVAC Components	
Electric	0.589
Natural Gas	0.000
Fuel Oil	0.000
Propane	0.000
Remote HW	0.000
Remote Steam	0.000
Non-HVAC Sub-Total	0.589
Grand Total	0.778
Gross Floor Area (ft ²)	150205.0
Conditioned Floor Area (ft ²)	150205.0

Note: Values in this table are calculated using the Gross Floor Area.

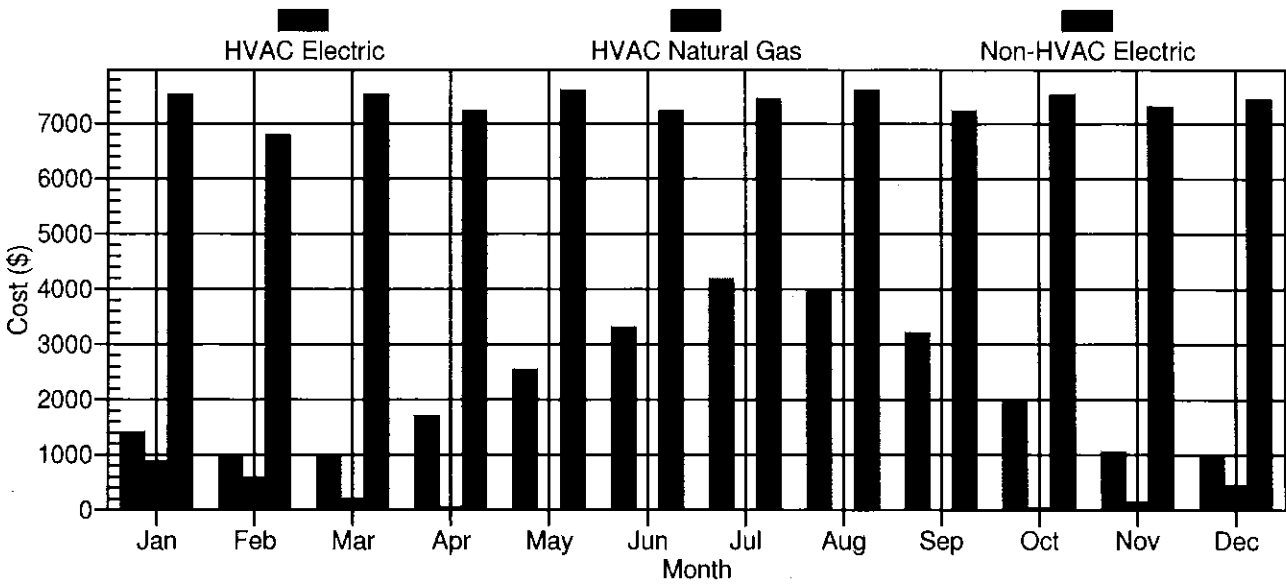
Table 5. Component Cost as a Percentage of Total Cost

Component	7000 WISCONSIN (%)
HVAC Components	
Electric	22.4
Natural Gas	2.0
Fuel Oil	0.0
Propane	0.0
Remote HW	0.0
Remote Steam	0.0
Remote CW	0.0
HVAC Sub-Total	24.4
Non-HVAC Components	
Electric	75.6
Natural Gas	0.0
Fuel Oil	0.0
Propane	0.0
Remote HW	0.0
Remote Steam	0.0
Non-HVAC Sub-Total	75.6
Grand Total	100.0

Monthly Energy Costs - 7000 WISCONSIN

7000 Wisconsin Proposed
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1. HVAC Costs

Month	Electric (\$)	Natural Gas (\$)	Fuel Oil (\$)	Propane (\$)	Remote Hot Water (\$)	Remote Steam (\$)	Remote Chilled Water (\$)
January	1,403	876	0	0	0	0	0
February	991	582	0	0	0	0	0
March	990	195	0	0	0	0	0
April	1,692	45	0	0	0	0	0
May	2,532	5	0	0	0	0	0
June	3,302	0	0	0	0	0	0
July	4,178	0	0	0	0	0	0
August	3,947	0	0	0	0	0	0
September	3,201	0	0	0	0	0	0
October	1,950	30	0	0	0	0	0
November	1,054	137	0	0	0	0	0
December	964	447	0	0	0	0	0
Total	26,205	2,317	0	0	0	0	0

2. Non-HVAC Costs

Month	Electric (\$)	Natural Gas (\$)	Fuel Oil (\$)	Propane (\$)	Remote Hot Water (\$)	Remote Steam (\$)
January	7,520	0	0	0	0	0
February	6,783	0	0	0	0	0
March	7,520	0	0	0	0	0
April	7,226	0	0	0	0	0
May	7,594	0	0	0	0	0
June	7,226	0	0	0	0	0
July	7,447	0	0	0	0	0
August	7,594	0	0	0	0	0
September	7,226	0	0	0	0	0
October	7,520	0	0	0	0	0
November	7,299	0	0	0	0	0
December	7,447	0	0	0	0	0
Total	88,403	0	0	0	0	0