

MAC ZONING PLAN

FOR

GENERAL NOTES

1. THE SUBJECT SITE IS LOCATED IN THE TOWN OF VIENNA WITH TAX MAP NO. 03-3-02-0147, AND IS ZONED C-1.
2. NO ENVIRONMENTAL OR HISTORICAL FEATURES EXIST ON SITE.
3. THERE IS NO BUFFER REQUIREMENT FOR THE SUBJECT SITE.
4. EXISTING LANDSCAPING AND TREE AREAS DOES NOT APPLY TO THE SUBJECT SITE.
5. NO EXTERIOR POLE MOUNTED LIGHTS ARE PROPOSED WITH THIS PLAN.
6. STREET TREES ALONG WADE HAMPTON DRIVE SUBJECT TO CHANGES WITH SIGHT DISTANCE REQUIREMENTS.
7. GENERAL STANDARDS FOR ON-SITE EXTERIOR LIGHTING:
 - 7.1. HOURS OF ILLUMINATION: INSTITUTIONAL, USES, COMMERCIAL USES, AND MIXED USES THAT ARE ADJACENT TO EXISTING SINGLE-FAMILY RESIDENTIAL DEVELOPMENT SHALL EXTINGUISH ALL EXTERIOR LIGHTING-EXCEPT LIGHTING NECESSARY FOR SECURITY OR EMERGENCY PURPOSES WITHIN ONE HOUR OF CLOSING. FOR THE PURPOSE OF THIS SUBSECTION, LIGHTING "NECESSARY FOR SECURITY OR EMERGENCY PURPOSES" SHALL BE CONSTRUED TO MEAN THE MINIMUM AMOUNT OF EXTERIOR LIGHTING NECESSARY TO ILLUMINATE POSSIBLE PONTS' OF ENTRY OR EXIT INTO A STRUCTURE, TO ILLUMINATE EXTERIOR WALKWAYS, OR TO ILLUMINATE OUTDOOR STORAGE AREAS.
 - 7.2. SHIELDING: ALL EXTERIOR LUMINAIRES, INCLUDING SECURITY LIGHTING, SHALL BE FULL CUT-OFF FIXTURES AND DIRECTED DOWNWARD. IN NO CASE SHALL LIGHTING BE DIRECTED ABOVE A HORIZONTAL PLANE THROUGH THE LIGHTING FIXTURE.
 - 7.3. MAXIMUM HEIGHT: EXCEPT FOR ATHLETIC FIELDS OR PERFORMANCE AREAS, THE HEIGHT OF OUTDOOR LIGHTING, WHETHER MOUNTED ON POLES, WALLS OR BY OTHER MEANS, SHALL BE NO GREATER THAN 25 FEET ABOVE GROUND.
 - 7.4. MAXIMUM ILLUMINATION: VEHICLE AND OUTDOOR LIGHTING VISIBLE FROM OUTSIDE SHALL BE DESIGNED AND LOCATED SO THAT THE MAXIMUM ILLUMINATION MEASURE IN FOOTCANDELS AT ABOVE LEVEL AT A LOT LINE SHALL NOT EXCEED THE STANDARDS IN TABLE 18-95.15.A, MAXIMUM ILLUMINATION. IN NO INSTANCE SHALL ILLUMINATION LEVELS WITHIN A SITE EXCEED 30 FOOTCANDELS.
8. NO PROFFERS FOR THIS PLAN
9. THE DEVELOPER IS CURRENTLY IN COORDINATION WITH THE DRY UTILITY PROVIDERS TO DETERMINE FEASIBILITY OF UNDERGROUNDING THE OVERHEAD UTILITIES ON MAPLE AVENUE.

ZONING REQUIREMENTS

	MAC Zone Regulations	Proposed
Zoning	C-1(Commercial)	C-1(Commercial)
Lot Area	N/A	35,842 SF/0.84 A.C.
Lot Width	N/A	143.08 ft.
Gross Floor Area	N/A	150,504 sq. ft.
Net Floor Area	N/A	73,702 sq. ft.
Min. Yard, Front (on Maple Ave) ¹	20 ft.	20.03 ft.
Max. Yard, Front (on Maple Ave) ¹	64 ft.	22.11 ft.
Min. Yard, Front (on Side Streets - Wade Hampton Dr.) ¹	11 ft.	15.00 ft.
Max. Yard, Front (on Side Streets - Wade Hampton Dr.) ¹	64 ft.	17.19 ft.
Min. Yard, Front (on Side Streets - Glen Ave.) ¹	11 ft.	21.06 ft.
Max. Yard, Front (on Side Streets - Glen Ave.) ¹	64 ft.	29.91 ft.
Min. Yard, Rear ²	8 ft	8 ft.
Max. Impervious Area	80%	86.71%
Min. Pervious Area	20%	13.29%
Max. Building Height	54 ft.	52.50 ft.
Min. Building Frontage ³	25%	96%
Parking Spaces (Retail)	38	86
Parking Spaces (Residential)	80	74
Max Offstreet Parking ⁴	95	160
Total Parking Spaces	118	160
Min. Open Space	20%	26.18%

UNIT MIX

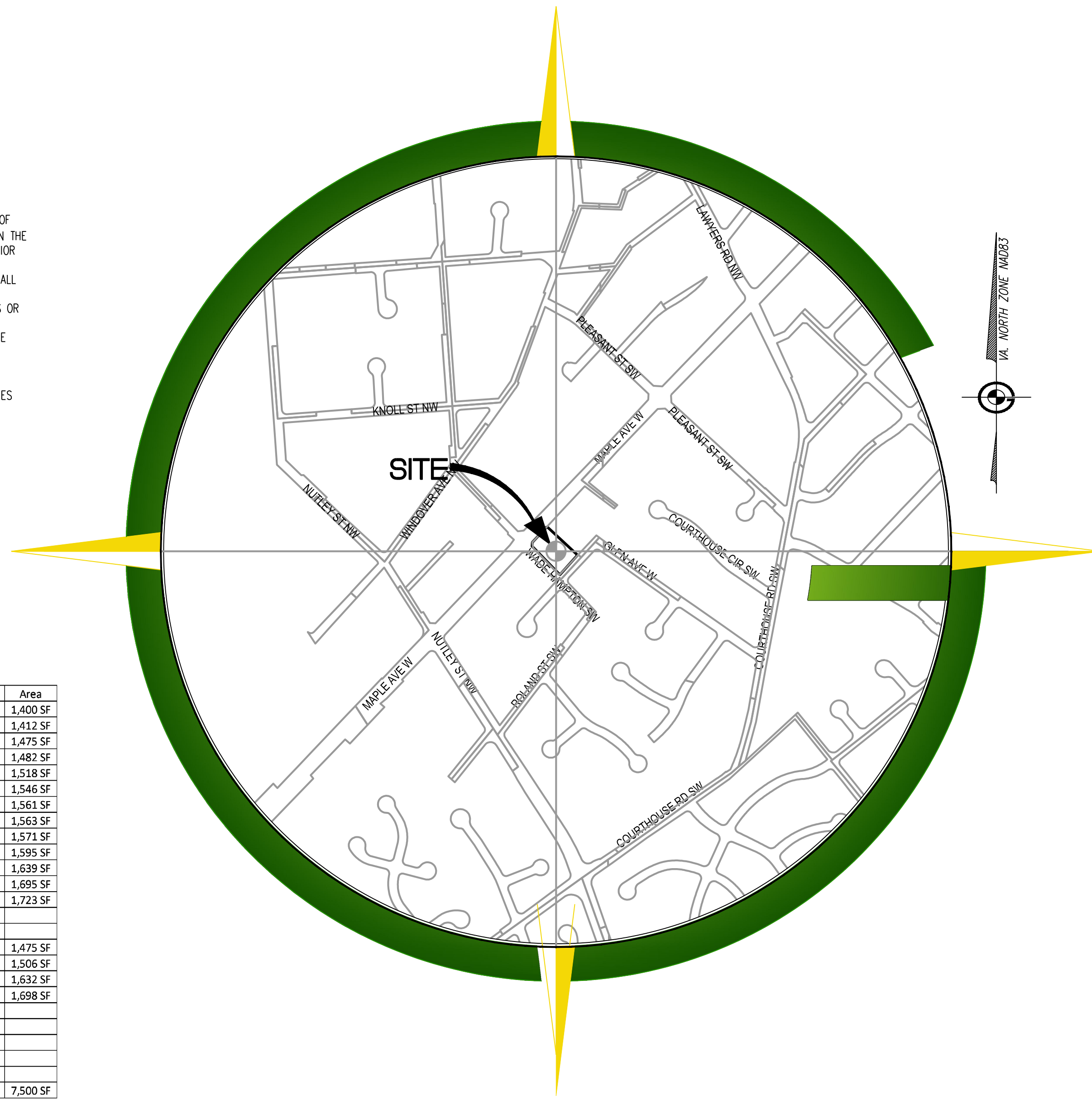
Unit Type	# Units	# Bedrooms	Area
Unit A	3	2	1,400 SF
Unit B	1	2	1,412 SF
Unit C	1	2	1,475 SF
Unit D	3	2	1,482 SF
Unit E	3	2	1,518 SF
Unit F	3	2	1,546 SF
Unit G	3	2	1,561 SF
Unit H	3	2	1,563 SF
Unit I	3	2	1,571 SF
Unit J	2	2	1,595 SF
Unit K	3	2	1,639 SF
Unit L	1	2	1,695 SF
Unit M	2	2	1,723 SF
SUBTOTAL 2 BR UNITS:	31		
Unit N	2	3	1,475 SF
Unit O	3	3	1,506 SF
Unit P	1	3	1,632 SF
Unit Q	3	3	1,698 SF
SUBTOTAL 3 BR UNITS:	9		
TOTAL ALL UNITS	40		
RETAIL SPACE			7,500 SF

- (1) Yards are measured from face of curb to the edge of the front building walls.
- (2) Assumes the western building wall to be rear yard. To be modified during Zoning Plan.
- (3) At least 25% of the front building wall shall be built within five feet of the minim front setback.
- (4) Includes 1.25 adjustment for structured parking

APPLICANT/OWNER
RED INVESTMENT LLC
PO BOX 1208
VIENNA, VA 22183

VICINITY MAP

SCALE: 1" = 500



SHEET INDEX

SHEET #	SHEET TITLE
01	COVER
02	EXISTING CONDITIONS
03	CONCEPT PLAN
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05	SWM - PRE DEVELOPMENT DRAINAGE DIVIDES
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TABLE 18-95.15.A.: MAXIMUM ILLUMINATION

TYPE OF USE ABUTTING PROPOSED DEVELOPMENT	MAXIMUM ILLUMINATION LEVEL AT LOT LINE (FOOTCANDLES)
RESIDENTIAL USE OR VACANT LAND ZONED FOR RESIDENTIAL DEVELOPMENT	0.50
INSTITUTIONAL USE	1.00
MIXED USE	2.00
PARKING LOT	2.50

PARKING TABULATIONS

PARKING REQUIRED	
2 SPACES/RESIDENTIAL UNIT	40 UNITS X 2 SPACES = 80 SPACES REQUIRED
1 SPACE/200 SQ FT RETAIL	7,500 SQ FT RETAIL / 200 = 38 SPACES REQUIRED

PARKING PROVIDED*
RESIDENTIAL PARKING PROVIDED 74 SPACES

RETAIL LEVEL	41 SPACES
INTERMEDIATE LEVEL	45 SPACES

*(SEE ARCHITECTURAL DRAWINGS FOR LOWER LEVEL GARAGE PLANS)

BICYCLE PARKING REQUIRED
RESIDENT BIKE STORAGE
SHORT TERM STORAGE - 1 SPACE PER 10 UNITS 40 UNITS / 10 = 4 SPACES

LONG TERM STORAGE - 1 SPACE PER 10 UNITS
RETAIL BIKE STORAGE

1 SPACES / 25,000 SQ FT FOR EMPLOYEES $7,500 \text{ SQ FT} / 25,000 = 1 \text{ SPACE}$

BICYCLE PARKING PROVIDED	
RESIDENTIAL PARKING PROVIDED	24 SPACES
RETAIL PARKING PROVIDED	6 SPACES



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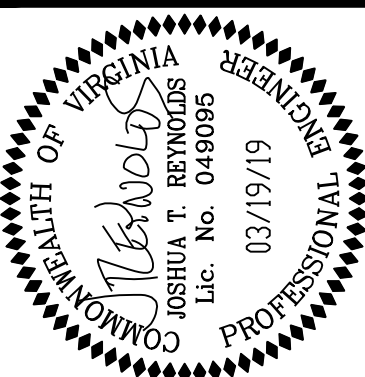
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COVER

380 W MAPLE AVE - OPTION 1

HUNTER MILL TOWN OF VIENNA TRANSPORT
TOWN OF VIENNA, VIRGINIA

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PLAN DATE	03/19/2019
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DATE: FEB 2019

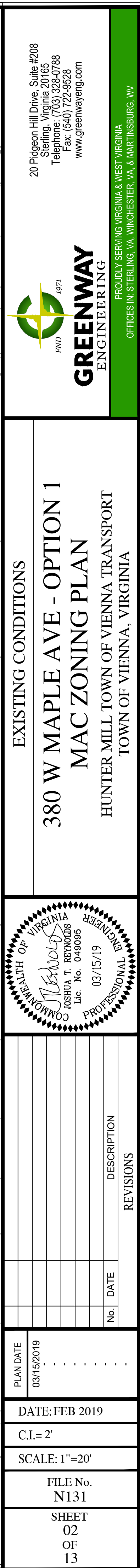
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SCALE: AS NOTED

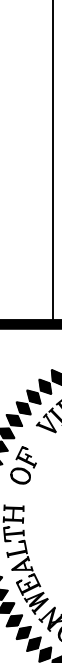
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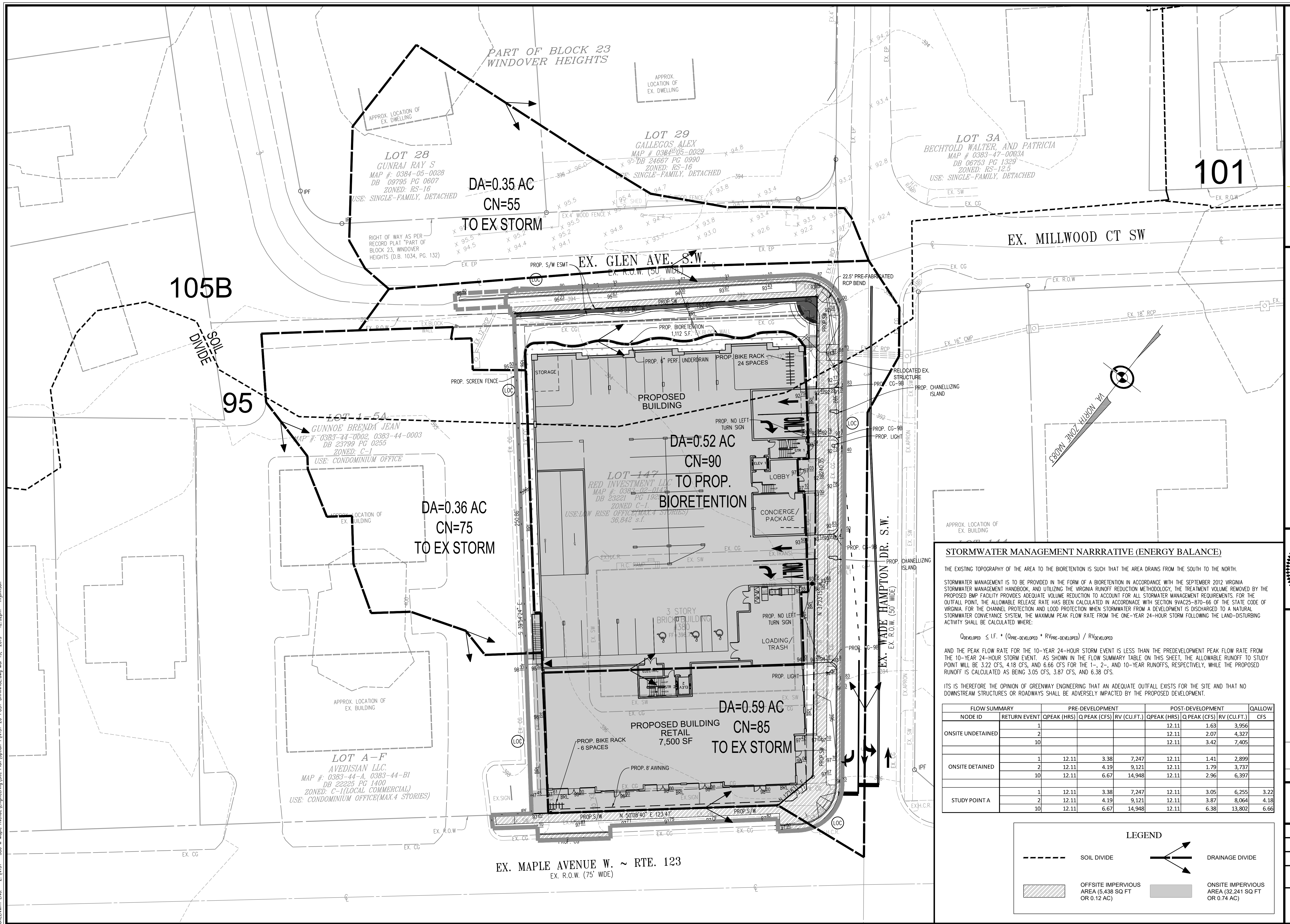
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NOTE: THERE ARE NO EXISTING UTILITY EASEMENTS ON-SITE



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20 Pigeon Hill Drive, Suite #208 Sterling, Virginia 20165 Telephone: (703) 328-0788 Fax: (540) 722-8828 www.greenwayeng.com  GREENWAY ENGINEERING PROUDLY SERVING VIRGINIA & WEST VIRGINIA OFFICES IN STERLING, VA & MARTINSBURG, WV					
CONCEPT PLAN 380 W MAPLE AVE - OPTION 1 MAC ZONING PLAN HUNTER MILL TOWN OF VIENNA TRANSPORT TOWN OF VIENNA, VIRGINIA					
					
		No.	DATE	DESCRIPTION	REVISIONS
PLAN DATE					
03/19/2019					
DATE: FEB 2019					
C.I.= 2'					
SCALE: 1"=20'					
FILE NO. N131					
SHEET 03 OF 13					



Project Title: 380 West Maple
Date: 43537

Total Rainfall (in):	43
Total Disturbed Acreage:	1.01

Pre-ReDevelopment Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.00	0.08	0.08	0.16	16
Impervious Cover (acres)	0.00	0.00	0.16	0.69	0.85	84
					1.01	100

	A soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.00	0.10	0.05	0.15	15
Impervious Cover (acres)	0.00	0.00	0.14	0.72	0.86	85
					1.01	100

	Final Post-Development (Post-ReDevelopment & New Impervious)	Post- ReDevelopment	Post- Development (New Impervious)	Adjusted Pre- ReDevelopment
Site Rv	0.84	0.84	0.95	0.84
Treatment Volume (ft ³)	3,091	3,056	34	3,056
TP Load (lb/yr)	1.94	1.92	0.02	1.92

Total TP Load Reduction Required (lb/yr)	0.40	0.38	0.02
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	Final Post-Development Load (Post-ReDevelopment & New Impervious)	Pre-ReDevelopment
TN Load (lb/yr)	13.89	13.79

Drainage Area A Land Cover (acres)

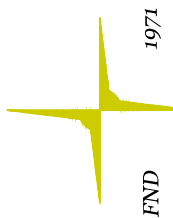
	A Soils	B Soils	C Soils	D Soils	Totals	Land Cover Rv
Forest/Open Space (acres)					0.00	0.00
Managed Turf (acres)			0.03		0.03	0.22
Impervious Cover (acres)			0.10	0.39	0.49	0.95
Total					0.52	

Practice	Runoff Reduction Credit (%)	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	Volume from Upstream Practice (ft³)	Runoff Reduction (ft³)	Remaining Runoff Volume (ft³)	Total BMP Treatment Volume (ft³)	Phosphorus Removal Efficiency (%)	Phosphorus Load from Upstream Practices (lb)	Untreated Phosphorus Load to Practice (lb)	Phosphorus Removed By Practice (lb)	Remaining Phosphorus Load (lb)	Downstream Practice to be Employed
6. Bioretention (RR)													
6.a. Bioretention #1 or Micro-Bioretention #1 or Urban Bioretention (Spec #9)	40	0.03	0.49	0	685	1,028	1,714	25	0.00	1.08	0.59	0.48	

Maximum % Reduction Required Below Pre-ReDevelopment Load	20%
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Total Runoff Volume Reduction (ft ³)	685
Total TP Load Reduction Achieved (lb/yr)	0.59
Total TN Load Reduction Achieved (lb/yr)	4.92
Remaining Post Development TP Load (lb/yr)	1.35
Remaining TP Load Reduction (lb/yr) Required	0.00

**** TARGET TP REDUCTION EXCEEDED BY 0.19 LB/YEAR ****

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BEST MANAGEMENT PRACTICES - COMPUTATIONS

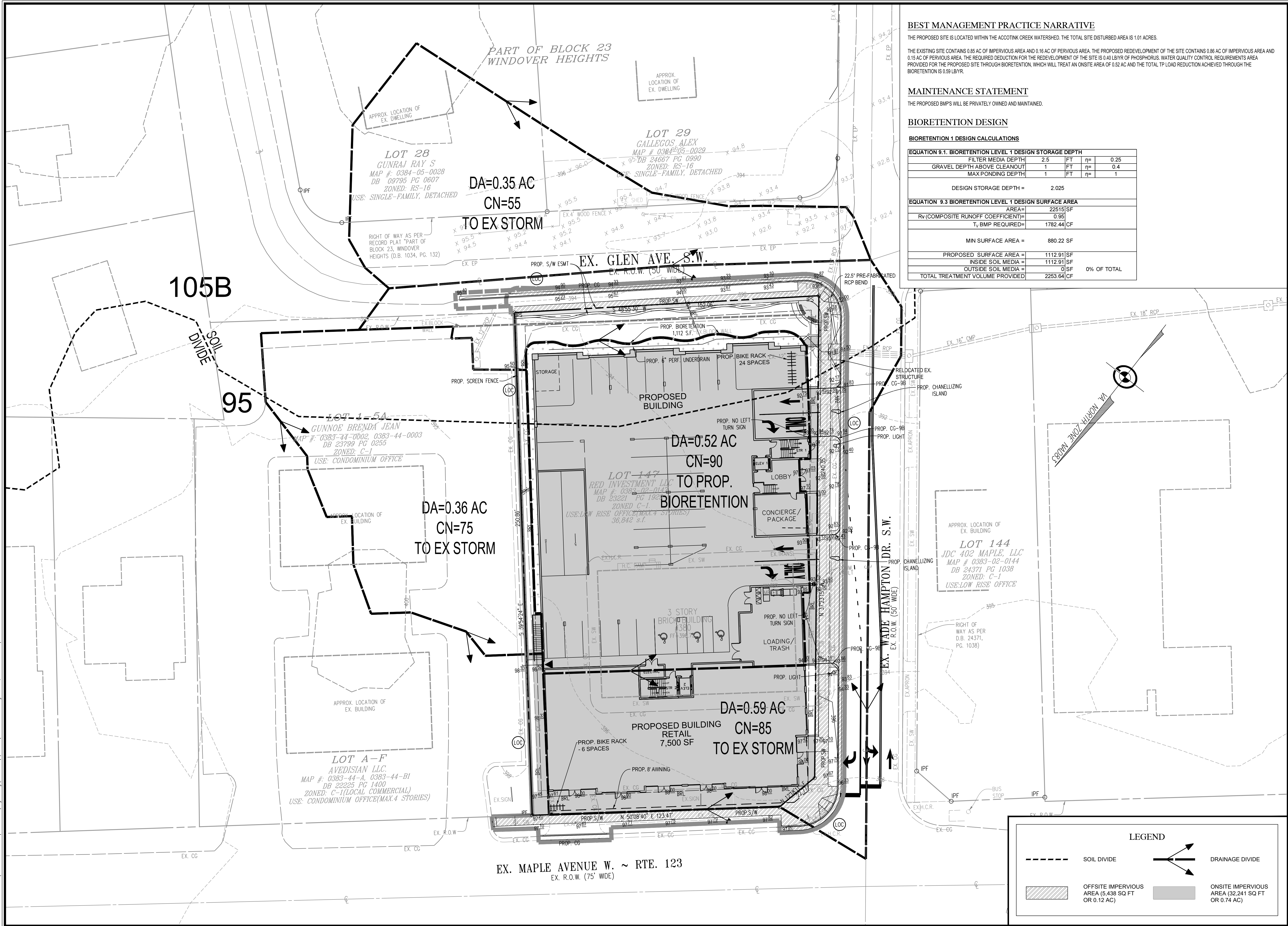
380 W MAPLE AVE - OPTION 1

MAC ZONING PLAN

HUNTER MILL TOWN OF VIENNA TRANSPORT
TOWN OF VIENNA, VIRGINIA

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PLAN DATE	03/19/2019
DATE: FEB 2019	
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BEST MANAGEMENT PRACTICE NARRATIVE

THE PROPOSED SITE IS LOCATED WITHIN THE ACCOTINK CREEK WATERSHED. THE TOTAL SITE DISTURBED AREA IS 1.01 ACRES.

THE EXISTING SITE CONTAINS 0.85 AC OF IMPERVIOUS AREA AND 0.16 AC OF PERVIOUS AREA. THE PROPOSED REDEVELOPMENT OF THE SITE CONTAINS 0.86 AC OF IMPERVIOUS AREA AND 0.15 AC OF PERVIOUS AREA. THE REQUIRED DEDUCTION FOR THE REDEVELOPMENT OF THE SITE IS 0.40 LB/YR OF PHOSPHORUS. WATER QUALITY CONTROL REQUIREMENTS AREA PROVIDED FOR THE PROPOSED SITE THROUGH BIORETENTION, WHICH WILL TREAT AN ONSITE AREA OF 0.52 AC AND THE TOTAL TP LOAD REDUCTION ACHIEVED THROUGH THE BIORETENTION IS 0.59 LB/YR.

MAINTENANCE STATEMENT

THE PROPOSED BMP'S WILL BE PRIVATELY OWNED AND MAINTAINED.

BIORETENTION DESIGN

BIORETENTION 1 DESIGN CALCULATIONS

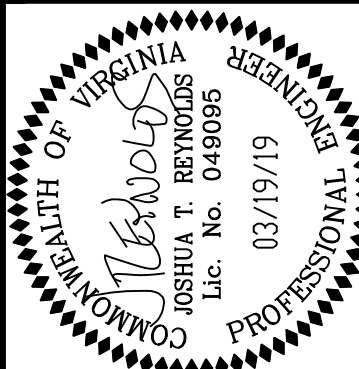
EQUATION 9.1. BIORETENTION LEVEL 1 DESIGN STORAGE DEPTH			
FILTER MEDIA DEPTH	2.5	FT	$\eta = 0.25$
GRAVEL DEPTH ABOVE CLEANOUT	1	FT	$\eta = 0.4$
MAX PONDING DEPTH	1	FT	$\eta = 1$
DESIGN STORAGE DEPTH = 2.025			
EQUATION 9.3 BIORETENTION LEVEL 1 DESIGN SURFACE AREA			
AREA	22516	SF	
Rv (COMPOSITE RUNOFF COEFFICIENT)	0.95		
Tv BMP REQUIRED	1782.44	CF	
MIN SURFACE AREA = 880.22 SF			
PROPOSED SURFACE AREA	1112.91	SF	
INSIDE SOIL MEDIA	1112.91	SF	
OUTSIDE SOIL MEDIA	0	SF	0% OF TOTAL
TOTAL TREATMENT VOLUME PROVIDED	2253.64	CF	

BEST MANAGEMENT PRACTICES - POST DEVELOPMENT

380 W MAPLE AVE - OPTION 1

MAC ZONING PLAN

HUNTER MILL TOWN OF VIENNA TRANSPORT TOWN OF VIENNA, VIRGINIA



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C.I.	2'
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LEGEND

--- SOIL DIVIDE

--- DRAINAGE DIVIDE

OFFSITE IMPERVIOUS AREA (5,438 SQ FT OR 0.12 AC)

ONSITE IMPERVIOUS AREA (32,241 SQ FT OR 0.74 AC)

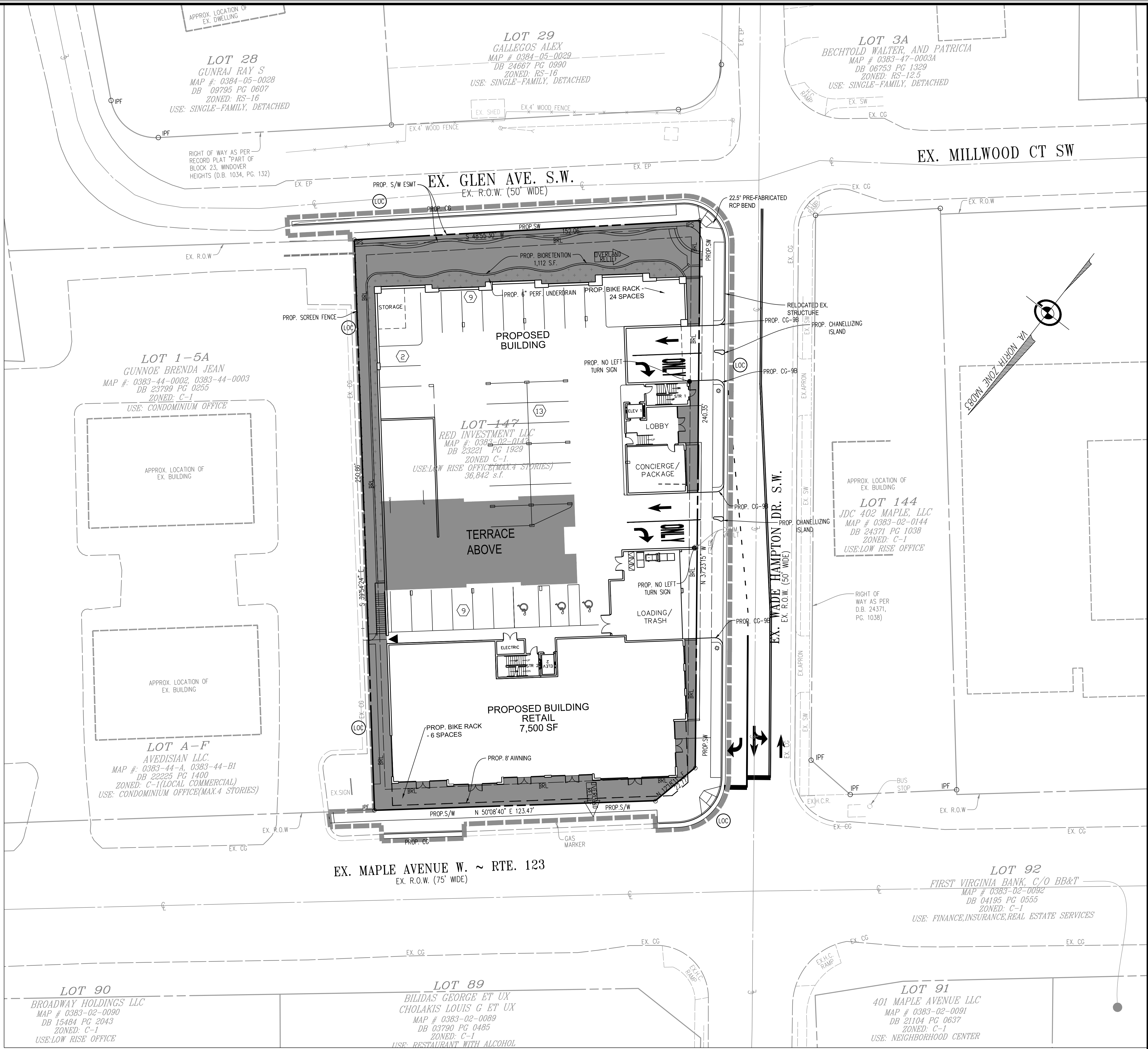
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LEGEND



PROP. OPEN SPACE

PROP. OPEN SPACE = 9,277 SQ FT
/36,842 SQ FT
= 25.18%



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OPEN SPACE EXHIBIT

380 W MAPLE AVE - OPTION 1
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HUNTER MILL TOWN OF VIENNA, TRANSPORT
TOWN OF VIENNA, VIRGINIA

No.	DATE	DESCRIPTION	REVISIONS

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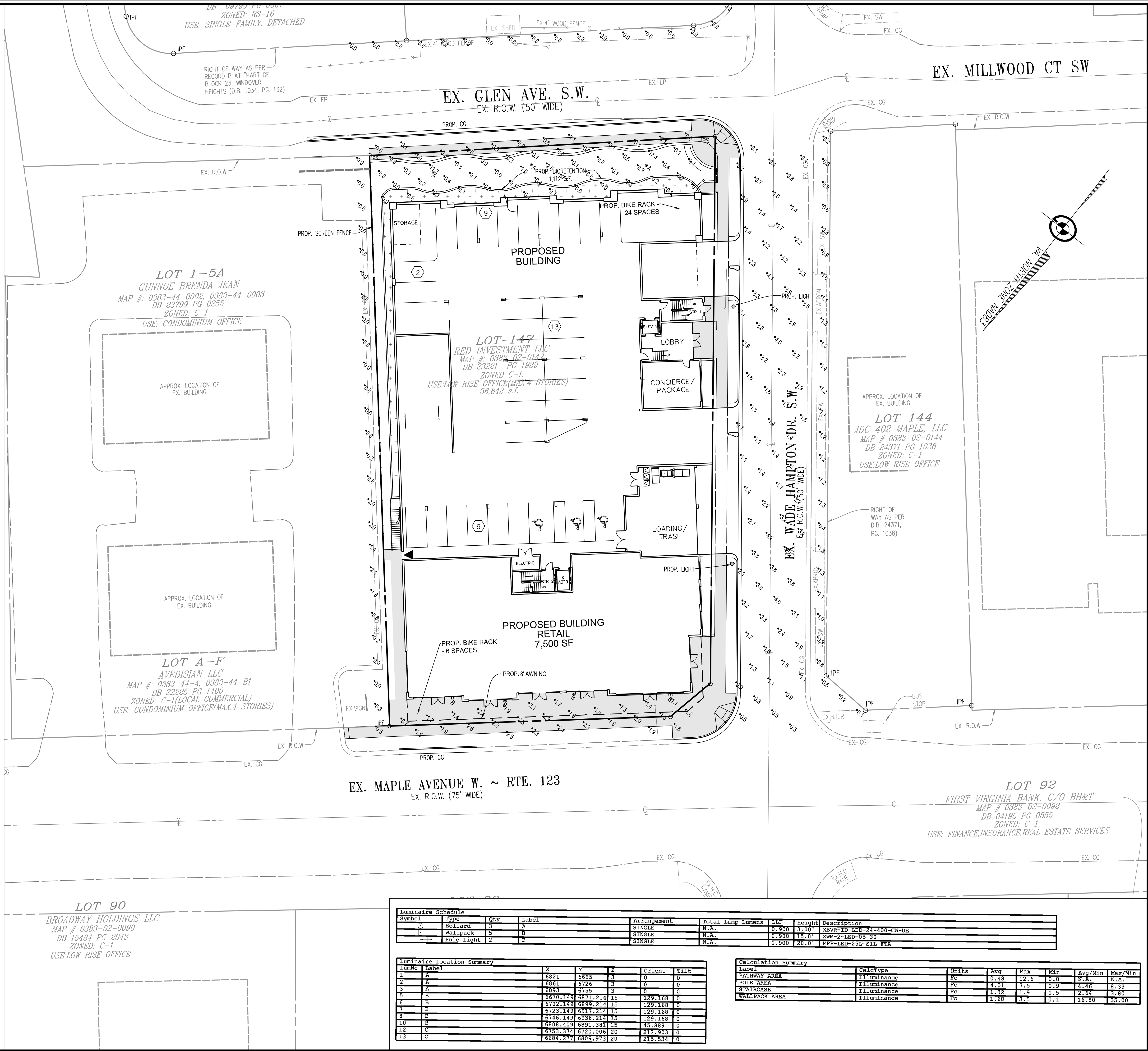
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Luminaire Schedule									
Symbol	Type	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Height	Description	
○	Bollard	3	A	SINGLE	N.A.	0.300	3.00'	XBR-1D-LED-24-400-CW-UE	
□	Wallpack	5	B	SINGLE	N.A.	0.300	15.0'	XBR-2-LED-03-30	
— —	Pole Light	2	C	SINGLE	N.A.	0.900	20.0'	MPP-LED-251-SIL-PTA	

Luminaire Location Summary									
LumNo	Label	X	Y	Z	Orient	Tilt			
1	A	6821	6695	3	0	0			
2	A	6861	6726	3	0	0			
3	A	6893	6755	3	0	0			
4	B	6670.149	6871.214	15	129.168	0			
5	B	6702.149	6899.214	15	129.168	0			
6	B	6723.149	6917.214	15	129.168	0			
7	B	6746.149	6936.214	15	129.168	0			
8	B	6808.409	6891.381	15	45.889	0			
10	C	6793.374	6720.006	20	212.903	0			
12	C	6793.374	6720.006	20	212.903	0			
13	C	6684.271	6808.973	20	213.534	0			

Calculation Summary									
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min		
PATHWAY AREA	Illuminance	Fc	0.48	12.6	0.0	N/A	N/A		
POLE AREA	Illuminance	Fc	4.01	7.5	0.9	4.46	8.33		
STAIRCASE	Illuminance	Fc	1.32	1.9	0.5	2.64	3.80		
WALLPACK AREA	Illuminance	Fc	1.68	3.5	0.1	16.80	35.00		

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DATE: FEB 2019

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SCALE: 1"=20'

FILE No.
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REVISIONS

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380 W MAPLE AVE - OPTION 1
MAC ZONING PLAN

HUNTER MILL TOWN OF VIENNA, TRANSPORT
TOWN OF VIENNA, VIRGINIA

COMMONWEALTH OF VIRGINIA
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03/19/19
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