PRELIMINARY WATER QUALITY COMPUTATIONS:

Site Results (Water Quality Compliance) VRRM 4.1, 2024											
Area Checks	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	AREA CHECK					
FOREST (ac)	0.00	0.00	0.00	0.00	0.00	OK.					
MIXED OPEN (ac)	0.00	0.00	0.00	0.00	0.00	OK.					
MIXED OPEN AREA TREATED(ac)	0.00	0.00	0.00	0.00	0.00	OK.					
MANAGED TURF AREA (ac)	0.31	0.00	0.00	0.00	0.00	OK.					
MANAGED TURF AREA TREATED (ac)	0.00	0.00	0.00	0.00	0.00	OK.					
IMPERVIOUS COVER (ac)	0.12	0.00	0.00	0.00	0.00	OK.					
IMPERVIOUS COVER TREATED (ac)	0.10	0.00	0.00	0.00	0.00	OK.					
AREA CHECK	OK.	OK.	OK.	OK.	OK.						

Site Treatment Volume (ft³)

Runoff Reduction Volume and TP By Drainage Area

action volume and it by blamage Alea						
	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	TOTAL
RUNOFF REDUCTION VOLUME ACHIEVED (ft ³)	166	0	0	0	0	166
TP LOAD AVAILABLE FOR REMOVAL (lb/yr)	0.37	0.00	0.00	0.00	0.00	0.37
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.05	0.00	0.00	0.00	0.00	0.05
TP LOAD REMAINING (lb/yr)	0.32	0.00	0.00	0.00	0.00	0.32

0.00

0.00

Adjusted Rv

0.014 AC-FT Rvpost-developed= 0.027 AC-FT

0.014 AC-FT Rypost-developed= 0.099 AC-FT

Rvpost-developed= 0.043 AC-FT

0.00

0.68

0.00

Total Phosphorus

FINAL POST-DEVELOPMENT TP LOAD (lb/yr)	
TP LOAD REDUCTION REQUIRED (lb/yr)	0.08
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.05
TP LOAD REMAINING (lb/yr):	0.32
REMAINING TP LOAD REDUCTION REQUIRED (lb/yr):	0.03

Total Nitrogen (For Information Purposes)

NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)

7	
POST-DEVELOPMENT LOAD (lb/yr)	4.31
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	0.68
REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr)	3.62

NUTRIENT CREDITS WILL BE USED TO SATISFY THE REMAINING ±0.03 LB/YR OF PHOSPHOROUS REMOVAL REQUIREMENT.

PRELIMINARY WATER QUANTITY COMPUTATIONS:

0.68

PRELIMINARY WATER QUANTITY COMPUTATIONS:
1, 2 & 10 YEAR STORM VOLUME COMPUTATIONS (PRE-DEVELOPED CONDITION)
AREA OF SITE TO OUTFALL = 0.43 AC LAWN AREA OF SITE IN 'B' HYD. SOIL GROUP = 0.00 AC RCN= 61 1 YEAR RAINFALL DEPTH(P) = 2.62 IN LAWN AREA OF SITE IN 'C' HYD. SOIL GROUP = 0.00 AC RCN= 74 2 YEAR RAINFALL DEPTH(P)= 3.17 IN LAWN AREA OF SITE IN 'D' HYD. SOIL GROUP = 0.40 AC RCN= 80 10 YEAR RAINFALL DEPTH(P)= 4.87 IN IMP. AREA OF SITE IN 'B','C' & 'D' HYD. SOIL GROUP = 0.04
0.43 WEIGHTED RCN FOR EXISTING CONDITION = (AREA OF SITE IN 'D' SOIL X RCN) / AREA OF SITE RCN= 82
S = (1000/WT. RCN) - 10 S = 2.17
1 YEAR: RUNOFF Q = $((P - 0.2S)^2)/(P + 0.8S)$ Q = 1.10 IN
Rv = AREA * RUNOFF Q Rvpre-developed= 0.039 AC-FT
2 YEAR: RUNOFF Q = $((P - 0.2S)^2)/(P + 0.8S)$ Q = 1.53 IN
Rv = AREA * RUNOFF Q Rvpre-developed= 0.055 AC-FT
10 YEAR: RUNOFF Q = $((P - 0.2S)^2)/(P + 0.8S)$ Q = 2.98 IN
Rv = AREA * RUNOFF Q Rvpre-developed= 0.107 AC-FT
1, 2 & 10 YEAR STORM VOLUME COMPUTATIONS (DEVELOPED, NEW SINGLE FAMILY DWELLING)
AREA OF SITE TO OUTFALL = 0.43 AC LAWN AREA OF SITE IN 'B' HYD. SOIL GROUP = 0.00 AC RCN= 61 1 YEAR RAINFALL DEPTH(P) = 2.62 IN LAWN AREA OF SITE IN 'C' HYD. SOIL GROUP = 0.00 AC RCN= 74 2 YEAR RAINFALL DEPTH(P)= 3.17 IN LAWN AREA OF SITE IN 'D' HYD. SOIL GROUP = 0.31 AC RCN= 80 10 YEAR RAINFALL DEPTH(P)= 4.87 IN IMP. AREA OF SITE IN 'B','C' & 'D' HYD. SOIL GROUP = 0.43
WEIGHTED RCN FOR DEVELOPMENT = ((AREA OF SITE IN 'B' SOIL X RCN) + (AREA OF SITE IN 'C' SOIL X RCN) + (AREA OF SITE IN "D" SOIL X RCN)) / AREA OF SITE RCN= 83 10 YR RCN= 84 2 YR RCN= 83 ADJUSTED RCN VALUES FROM VRRM WORKSHEET
S = (1000/WT. RCN) - 10 $S = 2.05$ $S = 2.05$ $S = 1.90$
1 YEAR: RUNOFF Q = $((P - 0.2S)^2)/(P + 0.8S)$

PRELIMINARY TRENCH SIZING SUMMARY:

STORAGE REQUIRED: ±609.84 CF (SEE THIS SHEET) LOT 61A STORAGE PROVIDED: (6.0*38.0*4.0)*(0.4)= ±364.80 CF LOT 63A STORAGE PROVIDED: (6.0*30.0*4.0)*(0.4)= ±288.00 CF

TOTAL WATER QUANTITY: ±652.80 CF (PROVIDED) > ±609.84 CF (REQUIRED)

Storage Volume provided

by trench (AC-FT)

RELIMINARY REQUIRED STORAGE

609.84 CF

0.014 AC-FT

STORMWATER MANAGEMENT NARRATIVE

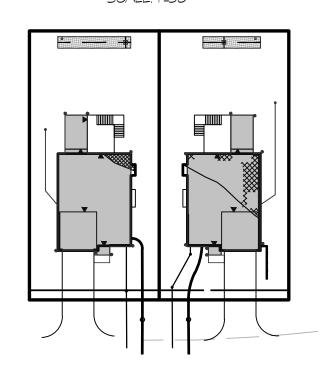
THE STORMWATER MANAGEMENT REQUIREMENTS FOR THE SUBJECT PROPERTY WILL BE SATISFIED VIA THE CONSTRUCTION OF TWO INFILTRATION TRENCHES. A PRELIMINARY INFILTRATION STUDY HAS BEEN CONDUCTED AND HAS DETERMINED THE SOILS WILL SUPPORT AN INFILTRATION TRENCH. THE FACILITIES WILL BE DESIGNED IN ACCORDANCE WITH TOWN OF VIENNA AND VIRGINIA STORMWATER MANAGEMENT HANDBOOK REQUIREMENTS.

THE INFILTRATION TRENCHES WILL BE DESIGNED TO PROVIDE DETENTION FOR THE 1 YEAR STORM EVENT THROUGH ENERGY BALANCE. APPROXIMATELY ±609.84 CF OF STORAGE IS REQUIRED AND APPROXIMATELY ±652.80 CF OF STORAGE WILL BE PROVIDED.

IN ADDITION TO PROVIDING WATER QUANTITY, THE TWO TRENCHES WILL SATISFY THE MAJORITY OF WATER QUALITY REQUIREMENTS. APPROXIMATELY ±0.05 LB/YR OF REQUIRED ±0.08 LBS/YR OF PHOSPHOROUS REMOVAL WILL BE SATISFIED. THE REMAINDER ±0.03 LB/YR OF PHOSPHOROUS REDUCTION WILL BE MET THROUGH THE PURCHASE OF NUTRIENT CREDITS.

PRELIM. TREATMENT PLAN:

SCALE: 1"=50"



NOTES:

1. ALL TREES LOCATED WITHIN THE ROW THAT WILL BE REMOVED FOR CONSTRUCTION MUST BE REPLACED AT THE DISCRETION OF THE URBAN FORESTER OF TOWN ARBORIST WHO WILL HAVE THE AUTHORITY TO DIRECT SPECIES PLANTED AND LOCATIONS. 2. GRADING OF LOTS 61A AND 63A WILL NOT AFFECT

THE APPROVED WILMAR PLACE REBUILD. 3. IT WAS AGREED BETWEEN DEVELOPER AND TOWN OF VIENNA THAT A FORMAL SUBDIVISION PLAN IS NOT REQUIRED. EACH LOT SHALL BE SUBMITTED AND PERMITTED AS AN INFILL LOT. EACH LOT PLAN WILL PROVIDE SUBDIVISION PLAN STANDARDS AND IMPROVEMENTS.

LOT 61A TREE COVER CALCULATIONS:

SITE AREA: 9,450 SF

20% TREE COVER REQUIRED: 1,890 SF

PRESERVED CANOPY: O SF PLANTED CANOPY: 1,950 SF TOTAL: 1,950 SF

1,950 SF (20.6% PROVIDED) > 1,890 SF (20% REQUIRED)

LOT 63A TREE COVER CALCULATIONS:

SITE AREA: 9,450 SF 20% TREE COVER REQUIRED: 1,890 SF

PRESERVED CANOPY: O SF PLANTED CANOPY: 1,950 SF

Acer rubrum

Crataegus spp.

1,950 SF (20.6% PROVIDED) > 1,890 SF (20% REQUIRED)

LOT 61A TREE COVER CALCULATIONS:

E: 11,833,495.29 _ LIMITS OF CLEARING CHRISTIAN -388 AND GRADING CAMACHO TOP.=386.5-36 (D.B. 24440 PG. 917) INV.=386.0' CADASTRAL MAP #*0384-03-0059* ZONE : RS-10 USE : SFD POP UP EMITTER LOT 59 TOP. \$394.07 9'790'/9'/8' LOFT WALLS PROP. BF ELEVATION IS HIGHER THAN EXISTING GRADES. PROP. 4"/SCH. 40 PVC BF= 397.51 CONTROLLED FILL AND/OR GRAVITY FOUNDATION BRICK/STONE FRONT TO ADDITIONAL #57 STONE MAY DRAIN TO DAYLIGHT FNDN. W/SIDING ABOVE FNDN. W/SIDING ABOVI BE REQUIRED __ 51.3'@D1% L HUNG SEWER HUNG SEWER BELOW PROPOSED FOOTPRIN EJECTOR PUMP REQ'D EXTEND FOOTER PROP. 4" SCH. 40 PVS-TO FROST DEPTH GRAVITY FOUNDATION DRAIN TO DAYLIGHT MOD. PORCH 2-CAR -2-CAR PRÓP. BF ELEVATION IS HIGHER THAN EXISTING 42.0 @2.4% 4 O EXTEND FOOTER T GARAGE (6'-8" WIDE) GARAGE GRADES. CONTROLLED FILL AND/OR FROST DEPTH ADDITIONAL #57 STONE MAY BE REQUIRED BELOW PROPOSED FOOTPRINT. PROP. RET. WALL N: 7,013,949.41 TOP OF WALL FLUSH WITH FIN. GRADE E: 11,833,487.17 (HEIGHT: 4.0' (PROP) = 4.0' (MAX) EX. ELECTRIC METER (TO SEPARATE PERMIT REQUIRED BE RELOCATED, IF NECESSARY) CONSTRUCTION PROP. 4" SAN. LAT. — OLD WELL -EASEMENT (TO BE ABANDONED UNDER HEALTH DEPARTMENT PERMIT, IF ACTIVE) 36.22' TO M.H. 8" DIP 8" DIP 55.18 @ 1.04% ENTRANCE NO C&G/ ×402.5

L REQ.D

TPIT REQ.D

INV. @ MAIN = 399.39 + LAT. INV = 400.14'

PRELIM. INFILTRATION TRENCH

(6'x38') BTM. SAND.=378.3

GRAPHICAL SCALE

1" = 20'

+ N43°38'58'E 67.50' - (6330') BTH SAND 378.3

PRELIMINARY SITE ANALYSIS-LOT 61A

PROP. MODIFIED STD. (50' R/W)

TOV ENTRANCE NO C&G

N/A

EX. OVERHEAD UTILITY (TO BE

BURIED UNDERGROUND)

ZONE : C-1B USE : CONVERTED RESIDENTIAL OFFICE (EX. DWELLING)

CLEARING & GRADING

LOTS 59 \$ 60

N: 7,013,816.59

_E: 11,833,553.96

PRELIMINARY	SITE ANALYSIS-LOT 63A

DESCRIPTION	REQUIRED/ALLOWED	PROVIDED/EXISTING	DESCRIPTION
ZONE	RS-10	RS-10	ZONE
LOT AREA MAX.	10,000 SF	9,450 SF	LOT AREA MA
LOT COVERAGE	25%	24.85%	LOT COVERA
SETBACK			SETBACK
FRONT	25 FT	25.33 FT	FRONT
SIDE1/SIDE2	12 FT	14.83' / 12.33'	SIDE1/SIDE2
REAR	35 FT	63.83' FT	REAR
LOT WIDTH	45/60/75	67.5'/67.5'/67.5'	LOT WIDTH
BUILDING HEIGHT	35 FT	34.10 FT	BUILDING HEK
DECK COVERAGE £ OUTDOOR LIVING	5% OF LOT AREA	4.97%	DECK COVERA & OUTDOOR LIV

DESCRIPTION	REQUIRED/ALLOWED	PROVIDED/EXISTING
ZONE	RS-10	RS-10
LOT AREA MAX.	10,000 SF	9,450 SF
LOT COVERAGE	25%	24.85%
SETBACK		
FRONT	25 FT	25.33 FT
SIDE1/SIDE2	12 FT	14.83' / 12.33'
REAR	35 FT	63.83' FT
LOT WIDTH	45/60/75	67.5'/67.5'/67.5'
BUILDING HEIGHT	35 FT	34.00 FT
DECK COVERAGE \$ OUTDOOR LIVING	5% OF LOT AREA	4.97%

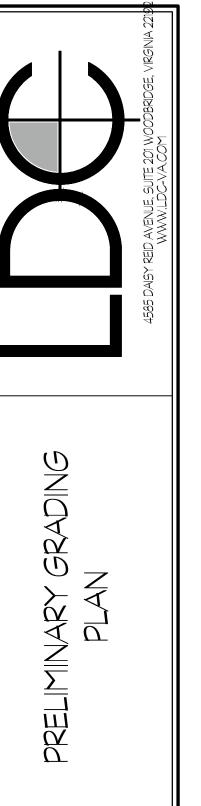
Project Address and/ or Munis#:	TBD WILMAF	RPLACE, N.W.	See town approve	d tree list for CCA and Multiplie	's	Total Units=	5	Instructions:	Delete values	from multiper	credit cells th	at tree does no	t qualify for.	Total CCA=	1,950
Scientific Name	Common Name	Variety/Cultivar	Notation on Plan	Notes	Caliper or Height	B&Bor Container		Base 20 Year CCA	AirQuality (1.5)	WaterQuality (1.25)	Native Tree (Local Ecotype) (1.5)	Wildlife Benefit (1.5)	Improved Cultivars and Varities (1.25)	aitei	Total CCAfor all units
Template Row	Template Row	Template Row	(eg: "TR")	Do not use or modify this row.	2" or 6'	BB or C	0 0	0	0	0	0	0	0	0	0
Betula nigra	River Birch		RB	N/A	2"	B&B	2 3	300			0	150		450	900
							2 3	300			0	150		450	900

LOT 63A TREE COVER CAI CHI ATIONIC

Red Maple

Hawthorn

_01 63A TREE CO			T-		T			1							
Project Address and/ or Munis#: TBD WLMAR PLACE, N.W.			• •	ee town approved tree list for CCA and Multipliers Total Units= 5 Instructions: Delete values from multiper credit cells that tree does not qualify for.							Total CCA	Total CCA= 1,950			
Scientific Name	Common Name	Variety/Cultivar	Notation on Plan	Notes	Caliper or Height	B&Bor Container	Quanitity (Units)	Base 20 Year CCA	Air Quality (1.5)	WaterQuality (1.25)	Native Tree (Local Ecotype) (1.5)	Wildlife Benefit (1.5)	Improved Cultivars and Varities (1.25)	after	Total CCAfo all units
Template Row	Template Row	Template Row	(eg: "TR")	Do not use or modify this row.	2" or 6'	BB or C	0	0	0	0	0	0	0	0	0
Betula nigra	River Birch		RB	N/A	2"	B&B	2	300			0	150		450	900
Acer rubrum	Red Maple		RM	N/A	2"	B&B	2	300			0	150		450	900
Crataegus spp.	Hawthorn		НТ	N/A	2"	B&B	1	100			0	50		150	150



Attachment 08

N: 7,013,755.09

#

HEREBY CERTIFY THAT

OTHER THAN THE REVISION SHOWN HEREON, NO OTHER CHANGES HAVE BEEN MADE

2/14/2025 DATE

SCALE: 1"=20'

OF FEBRUARY, 2025 DRAFT:

RMAJCM FILE NUMBER: 24091-1-0

Rv = AREA * RUNOFF Q

Rv = AREA * RUNOFF Q

Rv = AREA * RUNOFF Q

RUNOFF Q = $((P - 0.2S)^2)/(P + 0.8S)$

RUNOFF Q = $((P - 0.2S)^2)/(P + 0.8S)$

Rvpost-developed= 0.041 AC-FT

Rvpost-developed= 0.057 AC-FT

Rvpost-developed= 0.113 AC-FT