

**VICINITY MAP**  
SCALE: 1" = 2,000'

**BENCHMARKS**

171B	ELEV. 576.282	N = 542194.767	E = 1364004.914
171C	ELEV. = 415.415	N = 541056.916	E = 1363154.621

ADC MAP: 21 GRID: B4

**SOILS**

Map Unit Symbol	Map Unit Name	Type
GtB	Gladstone loam, 3 to 8 percent slopes	B
GgB	Glenelg loam, 3 to 8 percent slopes	B
GgC	Glenelg loam, 8 to 15 percent slopes	B
GmB	Glenville silt loam, 3 to 8 percent slopes	C
GnB	Glenville-Baile silt loams, 0 to 8 percent slopes	D
MaC	Manor loam, 8 to 15 percent slopes	B
MaD	Manor loam, 15 to 25 percent slopes	B

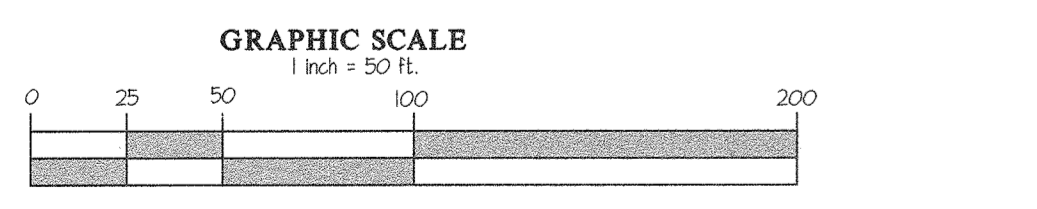
**GENERAL NOTES**

- SITE ANALYSIS DATA SHEET
 

AREA OF THE SITE	25,281 AC.
KETLANDS AND THEIR BUFFER FLOODPLAINS AND THEIR BUFFER FORESTS	1,114 AC.
STEEP SLOPES 15% AND GREATER	16,574 AC.
ERODIBLE SOILS PROJECT AREA	4,301 AC.
LIMIT OF DISTURBANCE AREA	13,051 AC.
PROPOSED SITE USES	14.4 AC.
GREEN OPEN AREA	10.1 AC.
PROPOSED IMPERVIOUS AREA	4.01 AC.
- APPLICABLE DRP FILE REFERENCE: 5P-15-002, WP-15-011

**NOTES**

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- THIS SITE IS SUBJECT TO SECTION 161202 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION MANUAL. FOREST CONSERVATION OBLIGATIONS WILL BE FULFILLED UNDER A FUTURE DEVELOPMENT PLAN.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*Keith Seidel*  
Chief, Division of Land Development  
Date: 12/10/18

*Chad Blum*  
Chief, Development Engineering Division  
Date: 12-13-18

**LEGEND**

- 600 --- EXISTING CONTOUR
- 600 --- PROPOSED CONTOUR
- SBB --- STREAM BANK BUFFER
- STREAM BANK
- STREAM
- LIMIT OF DISTURBANCE
- EXISTING TREELINE
- PROPOSED TREELINE
- FP --- 100 YEAR FLOODPLAIN
- EXISTING BUILDING
- PROPOSED BUILDING
- CURB & GUTTER
- PROP. SEWER LINE
- EX. 8" S. --- EX. SEWER MAIN
- WATER LINE
- EX. 8" M. --- EX. WATER MAIN
- PROP. STORM DRAIN
- EX. STORM DRAIN
- STEEP SLOPES 25%+
- SIDEWALK
- GtA --- SOIL BOUNDARY
- SOIL TYPE
- WETLAND BUFFER
- WB --- LIMIT OF WETLAND
- WETLAND AREA
- BUILDING RESTRICTION LINE
- PROPERTY LINE
- EX. CURB & GUTTER
- EX. EDGE OF PAVEMENT
- EXISTING EASEMENT
- FOREST CONSERVATION EASEMENT

PRELIMINARY STORMWATER MANAGEMENT PROVIDED BY DEVICE

MICRO-BIORETENTION (M-6)	21,308 CU-FT
DRY WELLS (M-5)	6,082 CU-FT
RAIN BARRELS (M-1)	214 CU-FT
SHEETFLOW TO CONSERVATION AREA (N-3)	164 CU-FT
DISCONNECTION OF ROOFTOP RUNOFF (N-1)	1,254 CU-FT
<b>TOTAL:</b>	<b>29,021 CU-FT</b>

Pe Provided = 1.80"

PRELIMINARY STORMWATER MANAGEMENT REQUIREMENT

DEVELOPMENT AREA:	14.4 AC.
% IMPERVIOUS:	40%
Pe:	1.8"

**ESD SUMMARY TABLE**

AREA NO.	AREA (SF)	IMPERVIOUS	ESDV (CF)	Pe PROVIDED
MBR 1	14,460	59%	1,397	1.38
MBR 2	13,952	54%	1,250	2.01
MBR 3	38,888	61%	2,847	1.46
MBR 4	58,814	46%	4,604	2.03
MBR 5	62,994	34%	3,572	1.89
MBR 6	20,230	49%	2,066	2.49
MBR 7	63,130	47%	3,893	1.54
MBR 8	32,560	19%	1,472	2.48
MBR 9	42,400	28%	2,122	1.96
MBR 10	27,296	53%	2,727	2.28
DA 50	5,897	38%	230	1.20
DA 51	12,625	32%	552	1.56
DA 52	6,425	35%	302	1.55
DA 53	23,727	38%	176	1.98
DA 54	3,911	42%	159	1.13
DA 55	13,793	53%	618	1.01
DA 56	6,935	29%	179	1.00
DA 57	5,690	35%	238	1.36
DA 58	12,684	44%	622	1.31
<b>TOTAL</b>	<b>446,011</b>	<b>43%</b>	<b>29,027</b>	<b>1.80</b>

**GLWGUTSCHICK LITTLE & WEBER, P.A.**  
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
BURTONSVILLE, MARYLAND 20866  
TEL: 301-421-4024 BALT: 410-860-1820 DC/WA: 301-888-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.

PREPARED FOR/ OWNER:  
**WILLIAM E. SUNELL**  
8643 OLD FREDERICK ROAD  
ELLICOTT CITY, MD 21043  
410-615-7409

**PROFESSIONAL CERTIFICATION**

I HEREBY CERTIFY THAT THESE PLANS 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. 12875  
EXPIRATION DATE: MAY 26, 2020

11/27/18

**ENVIRONMENTAL CONCEPT PLAN**

**SUNELL PROPERTY**  
LOTS 1-39 & OPEN SPACE LOTS 40 thru 47  
PARCEL 25  
L: 217 R: 425

ELECTION DISTRICT No. 2

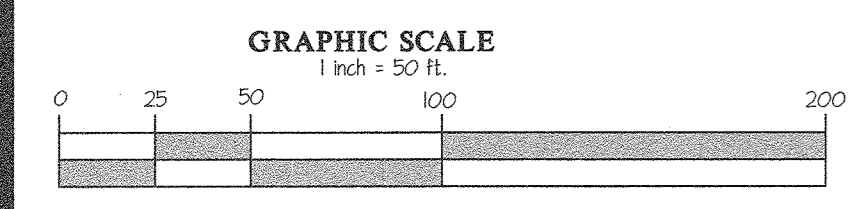
SCALE	ZONING	G. L. W. FILE NO.
1"=50'	R-20	11014
DATE	TAX MAP - GRID	SHEET
NOV., 2018	18 - 13	1 OF 3

**ESD DESIGN NARRATIVE:**  
 THE STORMWATER MANAGEMENT FOR THIS SITE WILL BE PROVIDED BY A COMBINATION OF MICRO-SCALE PRACTICES PER CHAPTER 5 OF THE MDE STORMWATER DESIGN MANUAL. THE DEVELOPMENT AREA OF THE SITE IS 40% IMPERVIOUS WHICH WILL REQUIRE A PE OF 1.0". MOST OF THE ROOFTOP AREA WILL BE INITIALLY TREATED BY DISCONNECTION OF ROOFTOP RUNOFF (M-1). IF THE SOIL TYPE AND FILL AMOUNT IN THE SURROUNDING LOT AREA ALLOW THE ROOFTOP AREA WILL BE SENT TO A DRY WELL (M-5). IN SOME BACKYARDS WHERE DRY WELLS ARE NOT FEASIBLE, 200 GALLON RAIN BARRELS (M-1) WILL BE USED. SHEET FLOW TO CONSERVATION AREA (M-3) WILL BE USED FOR THE LOTS THAT ARE ADJACENT TO OPEN SPACE WHERE NO NOISE WALLS ARE ANTICIPATED. THE PUBLIC ROAD, MOST OF THE LOT AREA NORTH OF THE ROAD, AND THE FRONT YARD AREA FOR THE LOTS SOUTH OF THE ROAD, WILL ALL DRAIN TO SEVERAL MICRO BIORETENTION FACILITIES (M-6) LOCATED THROUGHOUT THE DEVELOPMENT. ALL OF THE OFFSITE AREA WILL BE PIPED AROUND THE STORMWATER FACILITIES. THE MICRO-BIORETENTION FACILITIES (M-6) WILL OUTLET TO OPEN SPACE LOTS AND THE RUNOFF WILL FLOW TO THE THREE STREAMS ON SITE. THESE STREAMS ARE USE 1 STREAMS IN THE PATAPSCO RIVER LOWER NORTH BRANCH WATERSHED. THE MICRO-BIORETENTION FACILITIES (M-6) WILL BE JOINTLY MAINTAINED BY HOWARD COUNTY AND THE HOA. ALL OTHER STORMWATER PRACTICES WILL BE PRIVATELY OWNED AND MAINTAINED. THE PROPOSED STORMWATER DEVICES WILL HAVE NO IMPACT ON EXISTING UTILITIES. THERE ARE NO EXISTING UTILITIES IN THE VICINITY OF THE STORMWATER DEVICES. ALL OF THE PROPOSED UTILITIES HAVE BEEN DESIGNED TO TAKE INTO ACCOUNT THE LOCATION AND ELEVATIONS OF THE PROPOSED STORMWATER DEVICES.

THE PROPOSED DEVELOPMENT HAS BEEN CLUSTERED AS MUCH AS POSSIBLE TO PROTECT NATURAL RESOURCES ON THE SITE AND REDUCE THE AMOUNT OF IMPERVIOUS AREA REQUIRED FOR THE DEVELOPMENT. THE SITE OPEN SPACE REQUIREMENT TO LOT SIZE RATIO HAS BEEN MAXIMIZED TO ALLOW FOR THE SMALLEST LOT SIZE AND THE LARGEST PERCENTAGE OF OPEN SPACE. ALMOST 60% OF THE SITE, ABOUT 14.5 ACRES, WILL BE OPEN SPACE. STREAM BUFFERS AND FOREST CONSERVATION EASEMENTS WILL BE PLACED OVER THE STREAMS AND A MAJORITY OF THE OPEN SPACE ON THE SITE. THERE WILL BE ONE ROAD STREAM CROSSING REQUIRED AS PART OF THIS DEVELOPMENT. THE LOCATION FOR THIS CROSSING HAS BEEN CHOSEN SO THAT NONE OF THE WETLANDS OR THEIR BUFFERS WILL BE DISTURBED. AT THIS TIME, THE ROAD CROSSING IS THE ONLY PROPOSED STREAM DISTURBANCE. 12 OF THE 24 SPECIMEN TREES ON SITE WILL BE SAVED AND FIT INTO A CONSERVATION EASEMENT. THE NATURAL FLOW PATTERNS ON THE SITE WILL BE MAINTAINED. THE DRAINAGE AREA TO EACH OF THE THREE STREAMS WILL REMAIN THE SAME. THE SEDIMENT CONTROLS HAVE BEEN PRELIMINARILY DESIGNED SO THEY DO NOT INCREASE THE LIMIT OF DISTURBANCE.

ON LOT MICRO-SCALE PRACTICES							
LOT NO.	(M-1)	(M-3)	(M-4)	(M-5)	(M-6)	(M-7)	(M-8)
Lot 1	X				X		
Lot 2	X				X		
Lot 3					X		
Lot 4					X		
Lot 5					X		
Lot 6					X		
Lot 7					X		
Lot 8					X		
Lot 9					X		
Lot 10					X		
Lot 11					X		
Lot 12					X		
Lot 13					X		
Lot 14					X		
Lot 15					X		
Lot 16					X		
Lot 17					X		
Lot 18					X		
Lot 19					X		
Lot 20					X		
Lot 21					X		
Lot 22					X		
Lot 23					X		
Lot 24					X		
Lot 25		X					
Lot 26		X					
Lot 27					X		
Lot 28					X		
Lot 29					X		
Lot 30					X		
Lot 31					X		
Lot 32					X		
Lot 33					X		
Lot 34					X		
Lot 35					X		
Lot 36					X		
Lot 37					X		
Lot 38					X		
Lot 39					X		

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APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*W. E. Sunell* 12/10/18  
 Chief, Division of Land Development Date  
*Chad Chamberlain* 12-13-18  
 Chief, Development Engineering Division Date

**GLWGUTSCHICK LITTLE & WEBER, P.A.**  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
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DATE	REVISION	BY	APPR.



PREPARED FOR/ OWNER:  
**WILLIAM E. SUNELL**  
 8643 OLD FREDERICK ROAD  
 ELLICOTT CITY MD 21043  
 410-615-7409

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 EXPIRATION DATE: MAY 26, 2020  
*W. E. Sunell*



**ENVIRONMENTAL CONCEPT PLAN**  
**SUNELL PROPERTY**  
 LOTS 1-39 & OPEN SPACE LOTS 40 thru 47  
 PARCEL 25  
 L: 217 F: 425  
 HOWARD COUNTY, MARYLAND

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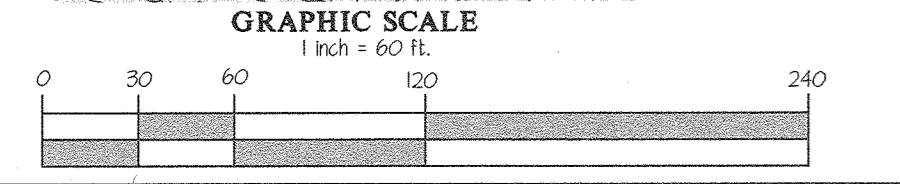


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- LEGEND**
- LIMIT OF DISTURBANCE
  - SCE STABILIZED CONSTRUCTION ENTRANCE
  - SSF PROPOSED SUPER SILT FENCE
  - EARTH DIKE
  - Proposed Stockpile Area PROPOSED TEMPORARY STOCKPILE AREA
  - EXISTING TREELINE
  - Highly Erodible Soil HIGHLY ERODIBLE SOIL
  - MGWC 13 CULVERT PIPE WITH ACCESS ROAD PER MARYLAND'S GUIDELINES TO WATERWAY CONSTRUCTION DETAIL 13. NOTE: STREAM IS A USE 1 STREAM. NO DISTURBANCE TO STREAM CHANNEL IS ALLOWED BETWEEN MARCH 1 - JUNE 15

**SOILS**

Map Unit Symbol	Map Unit Name	Type
GbB	Gladesboro loam, 3 to 8 percent slopes	B
GgC	Glennville loam, 3 to 8 percent slopes	B
GmC	Glennville silt loam, 8 to 15 percent slopes	B
GnB	Glennville silt loam, 3 to 8 percent slopes	C
MaD	Glennville-Belle silt loam, 0 to 8 percent slopes	D
MaD	Major loam, 8 to 15 percent slopes	B
MaD	Major loam, 15 to 25 percent slopes	B



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*Valerie...* 12-10-18  
 Chief, Division of Land Development Date

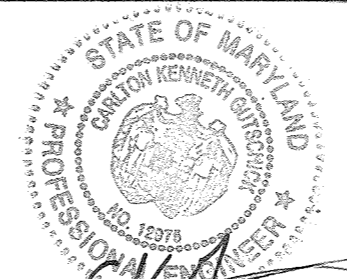
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**PRELIMINARY SEDIMENT CONTROL PLAN**

**SUNELL PROPERTY**  
 LOTS 1-39 & OPEN SPACE LOTS 40 thru 47  
 PARCEL 25  
 L: 217 F:425

HOWARD COUNTY, MARYLAND  
 ELECTION DISTRICT No. 2

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