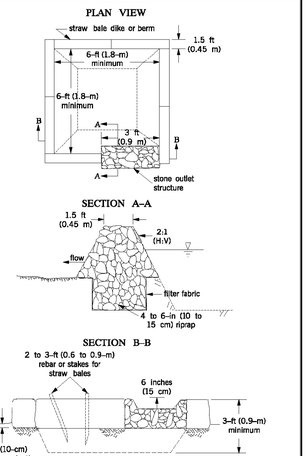
CRITICAL AREA CALCLUATIONS

CRITICAL AREA CALCULATIONS (LOT AREA OR FASTLAND =29,466 S.F.)							
AREA TYPE	EXISTING		ALLOWABLE		PROPOSED		
	AREA	% OF LOT	LOT COVERAGE / FOREST CLEARING		LOT COVERAGE / FOREST CLEARING		
COVERAGE	3,194 s.f.	12.1 %	5,445 s.f.	18.5 % OF LOT	6,824 s.f.	0 % OF LOT	
FOREST	13,461 s.f.	55.9 %	4040.1 s.f.	30 % OF EXIST.	0 s.f.	0 % OF EXIST.	

LOT COVERAGE INSIDE 100' CRITICAL AREA BUFFER				LOT COVERAGE INSIDE EXPANDED CRITICAL AREA BUFFER				PROPOSED PERVIOUS AREA	
AREA TYPE	EXISTING	REMOVED	PROPOSED	AREA TYPE	EXISTING	REMOVED	PROPOSED	AREA TYPE	AREA
HOUSE	874 s.f.	874 s.f.	353 s.f.	HOUSE	1000 s.f.	1000 s.f.	3,028 s.f.	DECK	0 s.f.
PORCH	24 s.f.	24 s.f.	813 s.f.	PORCH	174 s.f.	174 s.f.	111 s.f.	TOTAL	0 s.f.
WALK/PAD	81 s.f.	81 s.f.	85 s.f.	WALK/PAD	182 s.f.	182 s.f.	162 s.f.		
POOL	0 s.f.	0 s.f.	477 s.f.	POOL	0 s.f.	0 s.f.	0 s.f.		
SHED	0 s.f.	0 s.f.	0 s.f.	SHED	528 s.f.	0 s.f.	0 s.f.		
GAZEBO	352 s.f.	0 s.f.	0 s.f.	GARAGE	0 s.f.	0 s.f.	0 s.f.		
DRIVEWAY	0 s.f.	0 s.f.	0 s.f.	DRIVEWAY	569 s.f.	569 s.f.	715 s.f.		
TOTAL	1,336 s.f.	984 s.f.	1,728 s.f.	TOTAL	2,458 s.f.	1,930 s.f.	4,016 s.f.		
DEVELOPED TOTAL =			2,080 s.f.	DEVELOPED TOTAL =			4,544 s.f.		

FORESTED AREA TABULATIONS (OUT)			FORESTED AREA TABULATIONS (INS)		
EXISTING COVER		AREA	EXISTING COVER		AREA
FOREST CANOPY		6748 s.f.	FOREST CANOPY		6664 s.f.
TREE CANOPY		6748 s.f.	TREE CANOPY		6664 s.f.
SHRUBS	@ AT 50 s.f. EACH	0 s.f.	SHRUBS	@ AT 50 s.f. EACH	0 s.f.
TOTAL		0 s.f.	TOTAL		0 s.f.
PROPOSED CLEARING INSIDE C.A. BUFFER		AREA	PROPOSED CLEARING INSIDE C.A. BUFFER		AREA
FOREST CANOPY		0 s.f.	FOREST CANOPY		0 s.f.
TREE CANOPY		0 s.f.	TREE CANOPY		0 s.f.
SHRUBS		0 s.f.	SHRUBS		0 s.f.
TOTAL		0 s.f.	TOTAL		0 s.f.

Maryland's Guidelines To Waterway Construction
DETAIL 1.1: DEWATERING BASINS



TEMPORARY INSTREAM CONSTRUCTION MEASURES | REVISED NOVEMBER 2000 PAGE 1.1 - 8 | MARYLAND DEPARTMENT OF THE ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

BUFFER MANAGEMENT OVERLAY PLANTING PLAN

MITIGATION CALCULATIONS (PLANTING REQUIREMENTS)			
MITIG. TYPE	MITIG. RATIO	NEW IMPERV. AREA	PLANTING REQUIRED
BMO	2:1	5,744 s.f.	11,488 s.f.

PLANTINGS PROVIDED		
SYMBOL	NAME	QTY.
	TREE (6' TALL) 400 S.F. EACH	23
	SHRUB (3 GALLON) 200 S.F. EACH	22
TOTAL TREE AREA = 9,200 s.f.		
TOTAL SHRUB AREA = 2,400 s.f.		
PLANTINGS PROVIDED = 11,600 s.f.		

1. Per CZO Sect. 12.3.5.c.(2), up to 40% of required plantings may be shrubs.
2. The trees and shrubs required shall be approved species from the 'Native Plants for Wildlife Habitat and Conservation Landscaping - Maryland: Costal Plain', published by the U.S. Fish and Wildlife Service, or as approved by the St. Mary's County Department of Land Use & Growth Management.
3. Plantings within 50' of the high tide line or within 100 year floodplains shall be salt tolerant species native to Maryland.

LANDSCAPING SCHEDULE		
APPROXIMATE PLANTING DATES:		Oct. 1st - Nov. 30th
SPECIES	QTY.	SIZE
White oak (Quercus Alba)	8	TREE 6' TALL
Loblolly pine (Pinus Taeda)	8	TREE 6' TALL
Sycamore (Platanus occidentalis)	7	TREE 6' TALL
Arrowwood (Viburnum dentatum)	8	SHRUB 3 GALLON
Bayberry (Myrica pensylvanica)	7	SHRUB 3 GALLON
Wax myrtle (Myrica cerifera)	7	SHRUB 3 GALLON

SITE APPEARS TO LIE IN THE BUFFER MANAGEMENT OVERLAY. PLANTINGS SHALL BE IN ACCORDANCE WITH FOREST AND WOODLAND PROTECTION STANDARDS PER THE MITIGATION REQUIREMENTS IN SECTION 41.7.5 OF CZO 10-2

FOREST CLEARING PLANTING PLAN

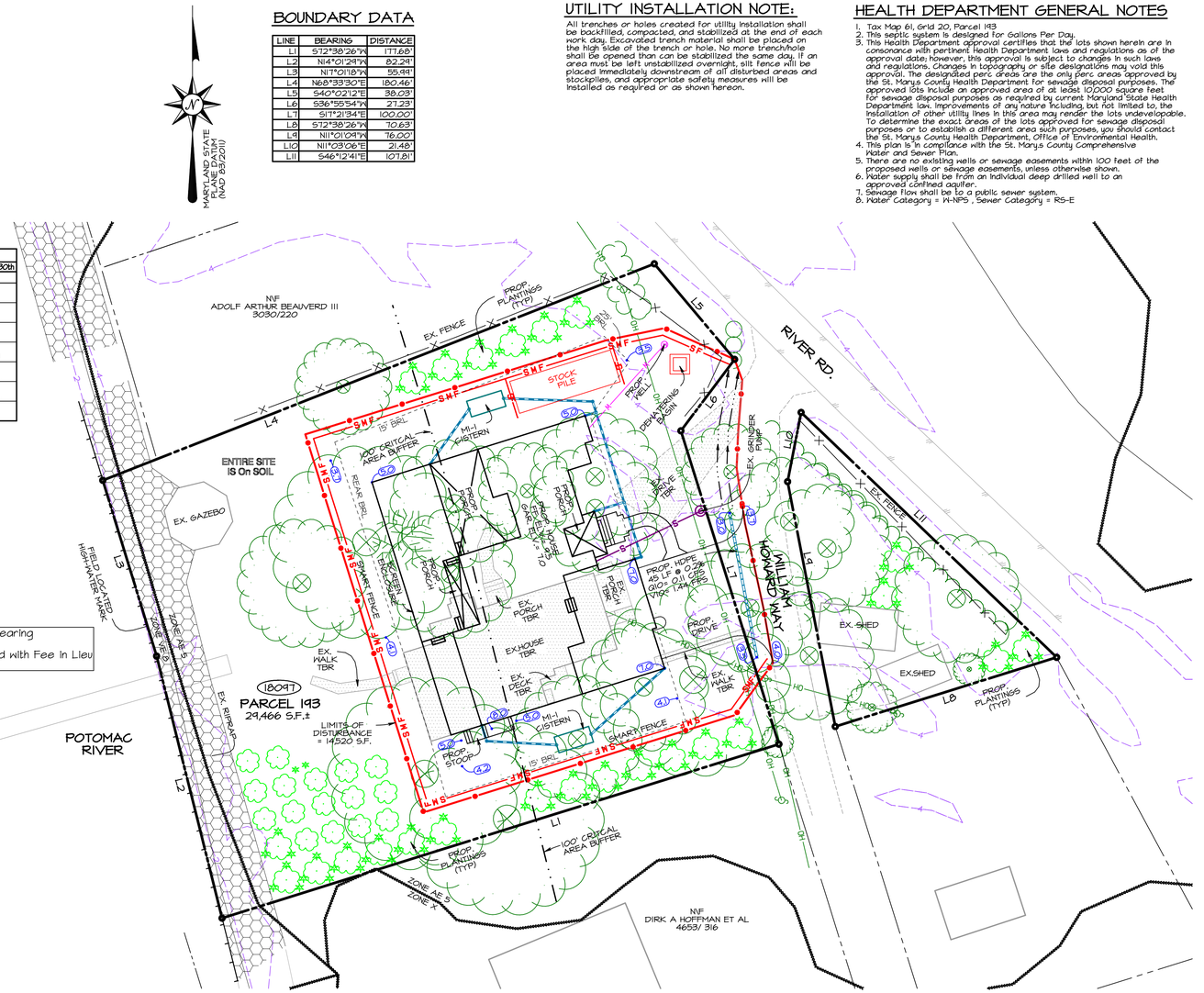
MITIGATION CALCULATIONS (PLANTING REQUIREMENTS)			
MITIG. TYPE	MITIG. RATIO	MITIG. AREA	PLANTING REQUIRED
< 20%	1:1	0 s.f.	0 s.f.
20-30%	1.5:1	0 s.f.	0 s.f.
> 30%	3:1	10,241 s.f.	34,156 s.f.
TOTAL		10,241 s.f.	34,156 s.f.

1. Per CZO Sect. 12.3.5.c.(2), up to 40% of required plantings may be shrubs.
2. The trees and shrubs required shall be approved species from the 'Native Plants for Wildlife Habitat and Conservation Landscaping - Maryland: Costal Plain', published by the U.S. Fish and Wildlife Service, or as approved by the St. Mary's County Department of Land Use & Growth Management.
3. Plantings within 50' of the high tide line or within 100 year floodplains shall be salt tolerant species native to Maryland.

* 17,000 s.f. of the required forest clearing has been planted.
The remaining 17,400 s.f. will be paid with Fee in Lieu
17,400 x $1.50 = $26,100.

PLANTINGS PROVIDED		
SYMBOL	NAME	QTY.
	TREE (6' TALL) 400 S.F. EACH	52
	SHRUB (3 GALLON) 200 S.F. EACH	68
TOTAL TREE AREA = 20,800 s.f.		
TOTAL SHRUB AREA = 13,600 s.f.		
PLANTINGS PROVIDED = 34,400 s.f.		

LANDSCAPING SCHEDULE		
APPROXIMATE PLANTING DATES:		Oct. 1st - Nov. 30th
SPECIES	QTY.	SIZE
White oak (Quercus Alba)	18	TREE 6' TALL
Loblolly pine (Pinus Taeda)	17	TREE 6' TALL
Sycamore (Platanus occidentalis)	17	TREE 6' TALL
Arrowwood (Viburnum dentatum)	23	SHRUB 3 GALLON
Bayberry (Myrica pensylvanica)	23	SHRUB 3 GALLON
Wax myrtle (Myrica cerifera)	22	SHRUB 3 GALLON



BOUNDARY DATA

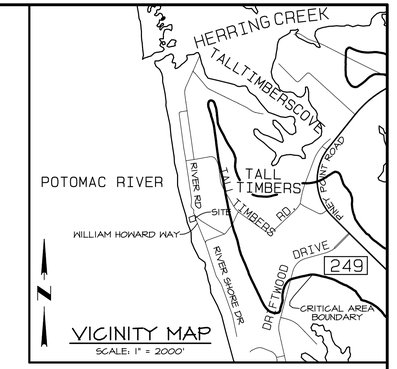
LINE	BEARING	DISTANCE
L1	S72°38'26"W	177.68'
L2	N14°01'29"W	82.24'
L3	N17°01'18"W	55.99'
L4	N68°33'30"E	180.46'
L5	S40°02'12"E	38.03'
L6	S36°55'54"W	21.23'
L7	S17°21'34"E	100.00'
L8	S72°38'26"W	70.63'
L9	N11°01'09"W	76.00'
L10	N11°03'06"E	21.48'
L11	S46°12'41"E	107.81'

UTILITY INSTALLATION NOTE:

All trenches or holes created for utility installation shall be backfilled, compacted, and stabilized at the end of each work day. Excavated trench material shall be placed on the high side of the trench or hole. No more trench/hole shall be opened than can be stabilized the same day. If an area must be left unstabilized overnight, silt fence will be placed immediately downstream of all disturbed areas and stockpiles, and appropriate safety measures will be installed as required or as shown hereon.

HEALTH DEPARTMENT GENERAL NOTES

1. Tax Map 61, Grid 20, Parcel 193
2. This septic system is designed for Gallons Per Day.
3. This Health Department approval certifies that the lots shown herein are in consonance with pertinent Health Department laws and regulations as of the approval date; however, this approval is subject to changes in such laws and regulations. Changes in topography or site designations may void this approval. The designated perc areas are the only perc areas approved by the St. Marys County Health Department for sewage disposal purposes. The approved lots include an approved area of at least 10,000 square feet for sewage disposal purposes as required by current Maryland State Health Department law. Improvements of any nature including, but not limited to, the installation of other utility lines in this area may render the lots undevelopable. To determine the exact areas of the lots approved for sewage disposal purposes or to establish a different area than purposes, you should contact the St. Marys County Health Department, Office of Environmental Health.
4. This plan is in compliance with the St. Marys County Comprehensive Water and Sewer Plan.
5. There are no existing wells or sewage easements within 100 feet of the proposed wells or sewage easements, unless otherwise shown.
6. Water supply shall be from an individual deep drilled well to an approved confined aquifer.
7. Sewage flow shall be to a public sewer system.
8. Water Category = W-NPS , Sewer Category = S-5-E



VICINITY MAP
SCALE: 1" = 2000'

SOIL CONSERVATION GENERAL NOTES

1. The Contractor shall notify M.D.E., Environment Division at telephone number 410-537-3510 at least 48 hours after pre-construction meeting has been held and sediment controls have been installed. The Contractor may mail notice to MDE, Sediment and Stormwater Administration, 1800 Washington Blvd, Suite 440, Baltimore, MD 21230-1708.
2. Approval of the Inspection Agency shall be requested upon completion for installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading.
3. Approval shall be requested upon final stabilization of all sites before removal of sediment controls.
4. Specifications for erosion control practices shall be the "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL" by the Maryland Department of the Environment.
5. Site is exempt from Forest Conservation Requirements per Section 15.2.2.b of the St. Mary's County Comprehensive Zoning Ordinance (CZO) 10-02 (Site is governed by CZO 10-02 Chapter 41 - Critical Area Regulations).
6. Site is subject to the Environmental Site Design (3 step process) for Stormwater Management and Erosion and Sediment Control hereon.

TEMPORARY & PERMANENT STABILIZATION

1. Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within:
   I. The (3) calendar days for all perimeter controls, dikes, swales, ditches, perimeter slopes and all slopes greater than 3 horizontal to 1 vertical (3:1) and
   II. Seven (7) days as to all disturbed or graded areas in the project site.
2. Temporary Seeding Schedule:

Species*	Minimum Seeding Rates lbs/acre	lbs/1,000 sf	Planting Depth (in)	2/1- 4/30	5/1- 8/14	8/15- 11/30
Barley	122	2.80	1/4-1/2	X	-	by 10/15
Oats	96	2.21	1/4-1/2	X	-	-
Rye	140	3.22	1/4-1/2	X	-	X
Barley/Rye + Foxtail Millet	150	3.45	1/4-1/2	X	X	X

10-10-10 fertilizer shall be applied at 600 lbs per acre. *
Lime shall be applied at 2 tons per acre or 100 lbs/1,000 SF. * **

3. Permanent Seeding Schedule:

Species*	Minimum Seeding Rates lbs/acre	lbs/1,000 sf	Planting Depth (in)	Recommended application dates
Tall fescue 75%				09/01 - 05/15
Canada bluegrass 10%				08/15 - 11/15
KY bluegrass 10% red top 5%	150	3.40	1/4-1/2	
Weeping lovegrass 11%	4	0.09	1/4-1/2	03/01 - 05/15
Serecia lespedeza 89%	20	0.46		05/16 - 08/14

Fertilizer application rate: 10-20-20: N 90 lbs/ac or 2.0 lbs/1,000 SF. *
P2O5 175 lbs/ac or 4.0 lbs/1,000 SF.
K2O 175 lbs/ac or 4.0 lbs/1,000 SF.

Lime application rate: 2 tons/ac. or 100 lbs/1,000 SF. * **

* Other mixes may be used as recommended by the Soil Conservation District.
** Soil preparation shall comply with Section B-4 of the "2011 MD STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL"

SEQUENCE OF CONSTRUCTION

1. Contractor shall arrange a Pre-Construction Meeting with the St. Mary's Soil Conservation District (301-475-8402, ext. 3) at least 5 days in advance of disturbances of any land on Site. - 1 to 2 days
2. Clear and grub those areas necessary for the installation of the perimeter control devices. Install perimeter control devices concurrently with clearing and grubbing. - 1 to 2 days
3. Request approval of perimeter control devices by MDE prior to other land disturbance or grading. - 2 days +/-
4. Clear, grub and rough grade the remainder of the site. Surround areas to be used for stormwater management structures with blaze orange fence to protect it from machinery during construction.- 2 to 3 days
5. Construct house and appurtenances. For appurtenances outside of perimeter controls, no more area shall be disturbed than can be stabilized the same day (See Utility Installation Note). - 3 to 6 months
6. Final grading, landscaping & permanent stabilization of site with a minimum 4 inches topsoil, seed, and mulch. - 1 to 2 days
7. Install Stormwater Management devices once all contributing areas have been stabilized. - 3 to 5 days
8. Remove sediment control devices upon MDE inspector's approval. - 2 days +/-

SMART FENCE™
SEDIMENT CONTAINMENT PROTECTION

SEDIMENT & PERIMETER CONTROL

SMARTfence™
The Smart, Value-Engineering Alternative
Eliminates the need for wire fence



SMARTfence™ is a heavy-duty, structurally enhanced silt fence that eliminates the need for reinforced wire-fence backing. It is significantly more cost effective than wire-backed fencing. Its tensile strength exceeds tensile strength of chain-link fence. It provides heavy-duty containment of sediment-laden runoff, ensuring a stable and functioning barrier is maintained for sediment-laden.

SMARTfence™ has reinforcing bands positioned at structurally key locations across machine direction of fabric to resist hydrostatic and hydrodynamic forces. Its unique Post-Tensioning system, with tensioning tendons/chords positioned along the machine direction of fence for added tensile strength and modulus.





ADVANTAGES:

- Easy to install
- Easy to remove
- Eliminates the need for wire fence
- Less installation labor time and costs
- Heavy duty composite fence that remains functional in extreme conditions

Ultimate Tensile Strength (lbs/ft)

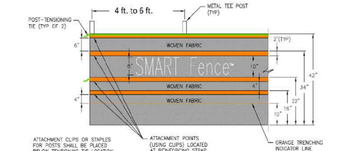
Chain Link Wire Fence Backing		SMARTfence™ Reinforced Tensioning
9 gauge	2,178	>3,500
9 gauge	1,290	>3,500
11 gauge	850	>3,500
11.5 gauge	750	>3,500
12 gauge	650	>3,500
14 gauge	380	>3,500

For more information about Sediment Perimeter Control, contact Inside Sales at 800.448.3636 email at info@acfenv.com

ACF ENVIRONMENTAL

SEDIMENT CONTAINMENT PROTECTION

LET'S GET IT DONE



Material Properties for the SMARTfence™

PROPERTY	TEST METHOD	MINIMUM AVERAGE ROLL VALUE
Wide Width Tensile Strength Composite Fence*	ASTM D4595	3,430 lbs/ft
Grab Tensile Elongation		18.90%
Grab Tensile Black Geotextile	ASTM D4632	332 lbs. (**MD) x 280 lbs. (**TD)
Tensile Strength 3-inch Reinforced Strap with Tensioner	ASTM D5035	>900 lbs per strap/tensioner chord
Mullen Burst Black Geotextile	ASTM D3786	411 lbs./in.2
Trapezoidal Tear Black Geotextile	ASTM D4533	103 lbs. (MD) x 71 lbs. (TD)
Apparent Opening Size Black Geotextile	ASTM D4751	Sieve No. 70
Water Flux/Permittivity Black Geotextile	ASTM D4491	41.9 gpm/ft2 (0.56 sec-1)
UV Stability	ASTM D4355	>90% Strength Retained

*Composite fence testing includes synergistic strength properties of black fabric and reinforced straps w/tensioner chords together
**MD = Machine Direction; TD=Transverse Direction
Testing performed by TRI Environmental, Austin, TX and GeoTesting Express, Boston, MA

ACF ENVIRONMENTAL
LET'S GET IT DONE
800.448.3636
acfenvironmental.com

CRITICAL AREA NOTES

1. *Site meets 15% minimum forest cover requirements.
   *Site does not meet minimum forest cover requirements per section 12.3.1.c.(6) of the St. Mary's County Zoning Ordinance. xx,xxx square feet of plantings will be required for compliance.
2. *Proposed development meets forest clearing limitations.
   *Proposed development of this Site will not meet forest clearing limitations set forth in Section 12.3.1.c.(2) of the St. Mary's County Zoning Ordinance and will require a variance.
3. *Proposed development meets lot coverage limitations.
   *Proposed development of this Site will not meet lot coverage limitations set forth in the St. Mary's County Zoning Ordinance and will require a variance.

GRAPHIC SCALE 1"=20'
20 0 20 40

GENERAL NOTES

1. Subject property appears to lie within the RPD zoning district.
   Subject property also appears to lie within the LDA and BMO overlay district.
2. This plat was prepared without the benefit of a Title Report which may show additional conveyances, easements, covenants, rights-of-way or building restriction lines not shown hereon.
3. Unless otherwise shown, property lines, topography and perc tests were taken from deeds and plats of record and do not represent a survey by this firm.
4. Subject property will be graded so as to drain surface water away from foundation walls. The grade away from foundation walls will fall a minimum of six inches (6") within the first ten feet (10').

SOURCE NOTES

1. Bearings and coordinates shown hereon are referenced to the Maryland State Plane Datum of 1983, 2011 revision (NAD 83/2011). Contours and spot elevations are referenced to the North American Vertical Datum of 1988 (NAVD 1988). Both datums were established by a global positioning system survey performed by LSR, Inc., in JULY of 2021.
2. The subject property shown hereon appears to be located in Flood Hazard Zone(s) VE & AE 5 as delineated on Flood Insurance Rate Maps for St. Mary's County, Maryland, as distributed by the Federal Emergency Management Agency. Community Panel Number 24087C0316F, Effective Date November 19th, 2014.
3. Non-Tidal Wetlands information was derived from the "National Wetlands Inventory" Maps distributed by the U.S. Department of the Interior, and Maryland DNR maps. The wetlands shown hereon were field delineated by LSR, Inc. on MONTH DATE, YEAR, using current industry standards and practices as described in the 1987 Corps of Engineers Wetland Delineation Manual. The delineation of the wetlands shown hereon are the findings of LSR, Inc. and should be confirmed by the U.S. Army Corps of Engineers and/or Maryland Department of the Environment prior to any construction or development in their vicinity.
4. Soils information shown hereon was taken from the "Web Soil Survey" as prepared by the U.S. Department of Agriculture, Natural Resource Conservation Service and may not accurately reflect existing soil conditions. No soils testing has been performed by this firm, LSR, Inc., in conjunction with this plan. Contractor to verify in the field that existing soils are suitable for the purposes shown hereon including, but not limited to, foundation support and stormwater management infiltration practices. If Contractor discovers unsuitable soils on site, Contractor shall notify this firm, LSR Inc., of existing conditions and then discuss the need for implementation of alternative design options.
5. Utility locations shown hereon are based upon visual evidence and may not accurately reflect underground locations or all existing utilities. All utility locations are to be verified by Contractor in the field prior to construction.
6. Topographic information shown hereon was taken from digital maps obtained from the St. Mary's County Government, using photogrametric and laser imaging (LIDAR) methods.

OWNER'S/DEVELOPER'S CERTIFICATION

Any clearing, grading, construction, development, stormwater management construction, or all of these, will be done pursuant to this plan, and that all responsible personnel involved in the construction project will have a "Certificate of Training" from a Maryland Department of the Environment approved training program before beginning the Project.

Owner/Developer Authorized Representative — Date

CONSULTANT'S CERTIFICATION

I hereby certify that the plans have been designed in accordance with approved erosion and sediment control ordinances, regulations, standards, and criteria.

Wayne Paul Hunt — 3/27/2024
Wayne Paul Hunt — Date
Prof. Land Surveyor, MD # 21083
Expires February 13, 2025

STATE OF MARYLAND — WAYNE PAUL HUNT — 21083 — REGISTERED PROFESSIONAL LAND SURVEYOR

SCD INFORMATION	
Lot / Parcel Area: 0.67 Acres	OWNER: DOUGLAS HALLGREN (17581 WHITESTONE DR, TALL TIMBERS MD 20690 PHONE: 301-475-2755
Total Disturbed Area: 0.33 Acres	DEVELOPER: WM DAVIS INC. 23442 PROP. WAY, HOLLYWOOD MD 20636 PHONE: 301-475-2755
Site Impervious Area: 0.13 Acres	APPLICANT: LITTLE SILENCES REST, INC. P.O. BOX 2340 - LEONARDTOWN, MD 20650 PHONE: 301-475-2236
Area to be Vegetatively Stabilized: 0.20 Acres	
Earthwork Quantities: Cut = 450 cy Fill = 450 cy	

LUGM No.: 24-0666

ST. MARY'S COUNTY HEALTH DEPARTMENT APPROVAL BLOCK

LEHS DATE:

DIRECTOR DATE:

REVISIONS

LSR — LAND SURVEYING PLANNING — ENGINEERING * PERMITS ENVIRONMENTAL SERVICES
LITTLE SILENCES REST, INC.
41650 COURT HOUSE DRIVE - SUITE 101 - P.O. BOX 2340
LEONARDTOWN, MD 20650
PHONE: (301) 475-2236 — WWW.LSRCORP.COM

DATE	2/20/2024
JOB#	0048-21
FOLDER	M61B20
SCALE	1" = XXX'
DRAWN	MS
CHECKED	WPH
DATE PLOTTED	3/21/2024

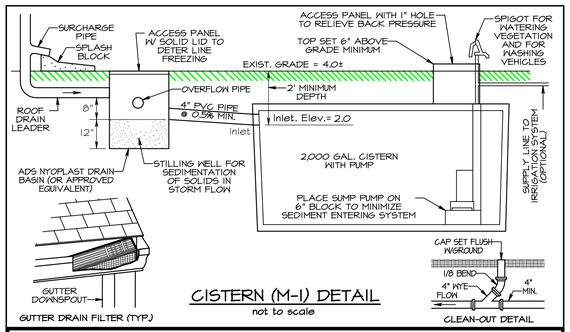
CRITICAL AREA BUILDING PERMIT

PARCEL 193
TAX MAP 61 GRID 20
TALL TIMBERS OFF RIVER ROAD
DEED REF: 6020/422

2nd ELECTION DISTRICT - ST. MARY'S COUNTY, MARYLAND
FOR: DOUGLAS HALLGREN

SHEET: 1 OF 2

F:\PROJECTS\PRO\2021\0048-21 Douglas Hallgren\0048-21.2024.pro



CISTERN (M-1) DETAIL

not to scale

M-1	RAINWATER HARVESTING (RAIN BARREL / CISTERN)					
No.	IMP. AREA	SIZE	Max ESDv	Pe Prov.	ESDv Prov.
M1-1	1,996 s.f.	2,200 gal.	442.45 c.f.	1.86 in.	294.10 c.f.
M1-2	1,272 s.f.	2,200 gal.	281.96 c.f.	2.80 in.	281.96 c.f.

CISTERN DESIGN AND INSTALLATION:

* - Storage tanks shall be watertight, and the top of the tank shall be located beneath the frost line.
* - Gutter screens are required to remove leaves and other debris from runoff for pre-treatment.
* - In line clean-outs shall be installed in roof leaders at twenty-five foot (25') minimum intervals.
* - Storage tanks shall capture at least 0.2 inches of rainfall from the contributing rooftop area.
* - Overflow from storage tanks shall be safely directed to a stable vegetated outfall to down gradient areas.
* - Cistern Access panels/ manholes shall be secured to prevent unauthorized access.
* - Sump pump shall have a vertical float shut-off switch set at 1" minimum above pump inlet elevation, or approved equivalent, to protect pump from running dry.
* - A pressure tank with cut-off switch and backflow preventer, or approved equivalent, shall be provided to protect pump from excessive loads.
* - At a minimum, storage tanks will be inspected prior to operation and certified that the constructed system meets the conditions specified on the approved plans.

CISTERN INSPECTION AND MAINTENANCE:

* - Access shall be provided for cleaning, inspection, and maintenance in cisterns.
* - At a minimum, storage tanks and conveyance systems should be inspected yearly.
* - Underground system connections should be checked for frozen lines and ice blockages during winter.
* - Leaf screens, gutters, and downspouts should be cleaned out to prevent clogging.
* - Any sedimentation deeper than 6" should be cleaned out of the stilling well and storage tank.

CISTERN OPERATION:

* - Storage tanks must be maintained and operated throughout the year when the temperature is above 32° F.
* - As much stored water as possible should be utilized between storm events.
* - Approximately 24 hours after each rain event, at least half of the water stored in the cistern shall be used to irrigate the lawn areas. The balance of the water stored in the cistern will be used to irrigate plant beds and to wash vehicles.

STORMWATER MANAGEMENT NARRATIVE

This Stormwater Management Plan for Parcel 193 consists of the following:

EXISTING CONDITIONS:

* 0.67 acre Site consists of approximately 0.30 acres of forested areas (44% of Site) on predominantly "C" soils.
* The Site does lie within the Chesapeake Bay Critical Area.
* Site has existing features totalling 0.08 acres of impervious area.
* There are hydric but no highly erodible soils on Site per the USDA Web Soil Survey for St. Mary's County, as shown hereon.
* There are slopes greater than 15% on Site.
* There are wetlands on Site as shown on DNR & NWI Wetland Maps.
* There are intermittent or perennial Streams, per USGS quadrangle maps, running through the Site.
* There are 0% annual chance (100 year) flood plains on Site per FEMA Flood Maps.
* Wetlands, springs or seeps were observed in the area propsed to be developed on subject site.

PROPOSED DEVELOPMENT:

* Site is being developed in such a manner as to allow the proper use and enjoyment of the land with minimal impacts to sensitive areas.
* Proposed development will be limited to an envelope of 0.33 acres, which will omit impact to Resource Protection areas.
* Proposed development will include an 3,471 square foot house, with moderate decks and walks, accessed by a 10' driveway (the minimum required) and a turnaround area.
* Total proposed impervious area is 5,744 square feet, or 0.13 acres, which is 24% of the Site area and 19% of the Lot area.
* Proposed house has been located in the proximity of the proposed septic system to minimize clearing.

ENVIRONMENTAL SITE DESIGN:

* Since site discharges directly to tidal waters, Cpv, Qp and Qf are not required. Therefore design Pe is 1.0 inches.
* Rooftop runoff shall be disconnected by directing individual down spouts draining 500 square feet of roof area, or less, through a vegetated area of at least 75 feet with a grade of less than 5%.
* Non rooftop runoff (driveway) shall be disconnected by directing impervious runoff to vegetated areas equal in length to the contributing impervious length and with a grade of less than 5%.
* Disconnects shall be directed away from buildings and shall be located at least 10 feet away from other impervious areas.
* Care shall be taken to limit compaction of soils in vegetated areas to be used for disconnects.
* Areas to be used for disconnection shall be roto-tilled prior to establishing vegetation to increase soil permeability.
* Due to site grade restraints - not all impervious areas can be treated with non-structural practices. Rain garden and micro-bioretention area will be used to meet remaining ESDv requirements.
* During site construction, areas to be used for rain gardens or micro-bioretention shall be field delineated with highly visible stakes set at all corners. Care shall be taken during construction to avoid compaction of these areas with heavy equipment. Upstream runoff to these areas shall be diverted during construction.

OUTFALL CONDITIONS:

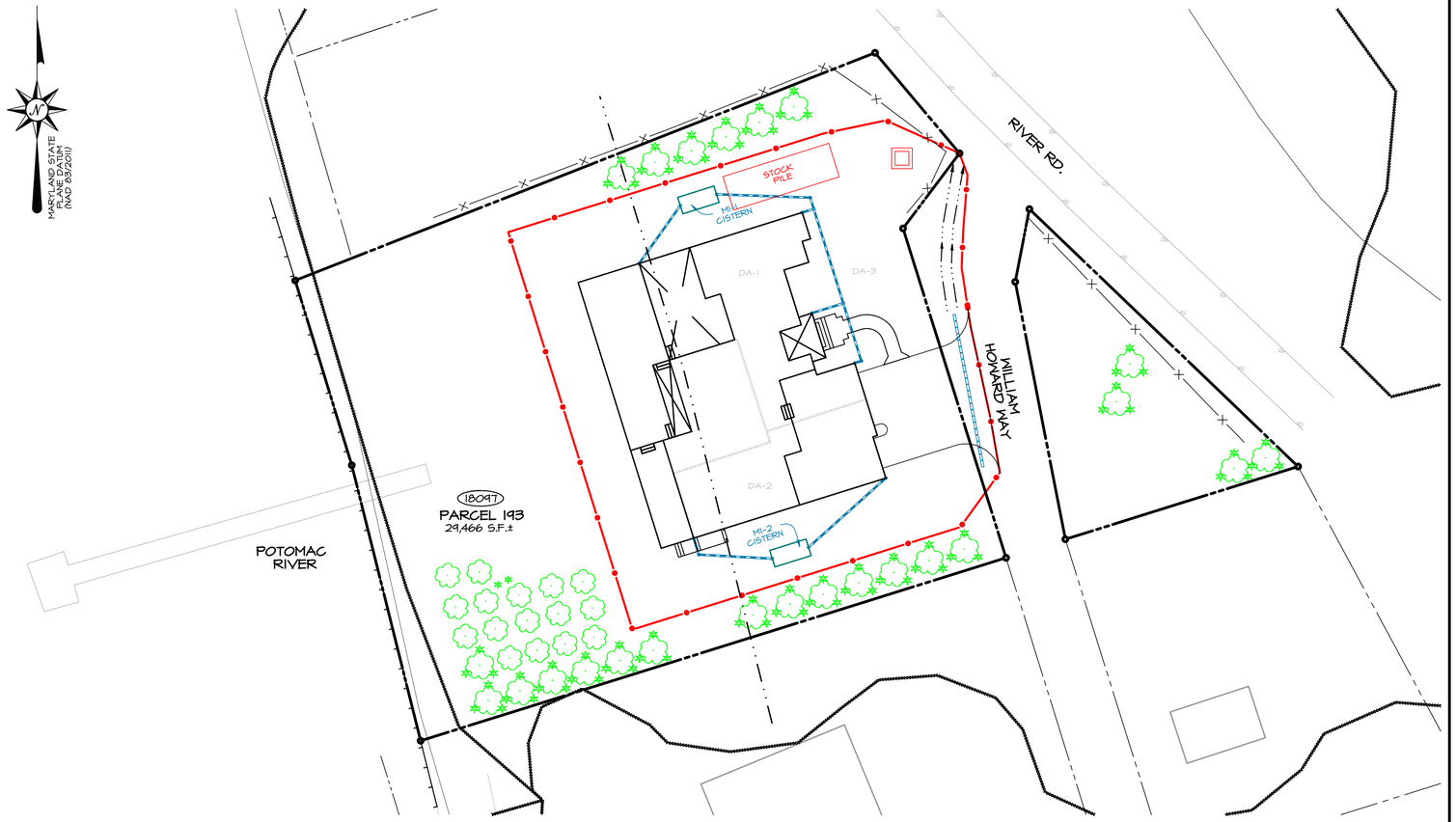
* Site will discharge to an existing channel which appears to be stable and able to withstand anticipated flows from development.

EROSION AND SEDIMENT CONTROL DESIGN:

* Site entrance will require a stabilized construction entrance (with mountable berm)(Detail B-1).
* Site entrance will utilize existing gravel drive as required stabilized construction entrance.
* Existing slopes within disturbed areas range from xx% to XX%.
* Runoff from disturbed areas within non-erosive soil types and on slopes less than 2% grade (and on slopes less than 10% grade which are less than 125 feet long) shall be controlled with Smart Fence (Detail E-1).
* Discharge from outlet structures shall be to stable, vegetated areas.

STORMWATER MANAGEMENT SUMMARY TABLE

No.	AREA	IMPERV. AREA	PERVIOUS AREA	% IMPRV.	% OF SITE	TARGET ESDv	MAXIMUM ESDv	ACTUAL ESDv	ACTUAL Pe	ACTUAL Rev (% AREA)	STRUCT-URE No.	PRACTICE DESCRIPTION
DA-1	1,995 s.f.	1,996 s.f.	0 s.f.	100%	13.7%	294.4 c.f.	442.4 c.f.	294.1 c.f.	1.86	1,996 s.f.	M1-1	2200 GAL RAIN BARREL
DA-2	1,272 s.f.	1,272 s.f.	0 s.f.	100%	8.8%	181.3 c.f.	282.0 c.f.	282.0 c.f.	2.80	1,272 s.f.	M1-2	2200 GAL RAIN BARREL
SUB	3,268 s.f.	3,268 s.f.	s.f.	100%	22.5%	465.7 c.f.	724.4 c.f.	576.1 c.f.	2.23	3,268 s.f.	-	-
DA-3	11,252 s.f.	3,184 s.f.	8,068 s.f.	28%	77.5%	683.9 c.f.	1063.8 c.f.	0.0 c.f.	0.00	0 s.f.	-	UNTREATED
TOTAL	14,520 s.f.	6,452 s.f.	8,068 s.f.	44%	100.0%	979.9 c.f.	1524.3 c.f.	576.1 c.f.	1.06	3,268 s.f.	-	-



SITE DATA:

SOIL TYPE		A	B	C	D	TOTALS
Drainage Area (A)	=	s.f.	s.f.	s.f.	14,520 s.f.	14,520 s.f.
Impervious Area	=	s.f.	s.f.	s.f.	6,452 s.f.	6,452 s.f.
Pervious Area	=	0 s.f.	0 s.f.	0 s.f.	8,068 s.f.	8,068 s.f.
% Impervious (I)	=					45 %
Pre-Devel. RCN	=	38	55	70	77	77
Target Pe	=	0	0	0	1.80	1.80

DEVELOPMENT CRITERIA:

Direct Tidal Discharge?		YES	If YES, Pe = 1.0
Redevelopment Project?		NO	If YES, Pe = 1.0 for impervious areas
Proposed Impervious Area	=	6,452 s.f.	& I = 100%
Existing Impervious Area	=	0 s.f.	
Existing Impervious TBR	=	0 s.f.	
Exist. Imp. to be treated with ESD	=	0 s.f.	* 50% = 0 s.f.

DESIGN REQUIREMENTS:

			PROPOSED DEVELOPMENT		RE- DEVELOPMENT
Rv	=	0.05 + 0.009 * I	= 0.45	=	0.00
Qe	=	Pe * Rv	= 0.45 in.	=	0.00 in.
ESDv	=	(Pe * Rv * A) / 12	= **544 c.f.**	=	**0 c.f.**
WQv	=	(1" * Rv * A) / 12	= 544 c.f.	=	0 c.f.
S	=	Weighted Recharge Factor	= 0.07	=	0.00
Rev	=	(S * Rv * A) / 12	= 0.0009 ac.ft.	=	0.0000 ac.ft.
(% Volume)	=		= 38 c.f.	=	0 c.f.
Rev	=	(S * A)	= 0.0104 ac.	=	0.0000 ac.
(%Area)	=		= 452 s.f.	=	0 s.f.

DESIGN PROVISIONS:

ESDv Required	=	**544 c.f.**	**WQv Provided**	=	**576 c.f.**
			WQv Untreated	= ✓	-31.7 c.f.
		(12"ESDv/Rv"A)	Pe Provided	=	1.06
Rev Required	=	452 s.f. (% Area)	Rev Provided	=	3,268 s.f.
			Rev Untreated	= ✓	-2,816 s.f.

DETAIL E-1 SILT FENCE

STANDARD SYMBOL — SF

ELEVATION

CROSS SECTION

JOINING TWO ADJACENT SILT FENCE SECTIONS (TOP VIEW)

1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



Wayne Paul Hunt
Prof. Land Surveyor, MD # 21083
Expires February 13, 2025

LSR LITTLE SILENCES REST, INC.
LAND SURVEYING PLANNING
ENGINEERING * PERMITS
ENVIRONMENTAL SERVICES
41650 COURT HOUSE DRIVE - SUITE 101 - P.O. BOX 2340
LEONARDTOWN, MD 20650
PHONE: (301) 475-2236 ~ WWW.LSRCORP.COM

DATE 2/20/2024
JOB# 0048-21
FOLDER M61B20
SCALE 1" = XXX'
DRAWN MS
CHECKED WPH
DATE PLOTTED 3/27/2024

LUGM No.: 24-0666

CRITICAL AREA BUILDING PERMIT

PARCEL 193

TAX MAP 61 GRID 20
TALL TIMBERS OFF RIVER ROAD
DEED REF: 6020/422
2nd ELECTION DISTRICT - ST. MARY'S COUNTY, MARYLAND
FOR: DOUGLAS HALLGREN

SHEET: 1 OF 2

F:\PROJECTS\PRO\2021\0048-21 Douglas Hallgren\0048-21.2024.pro