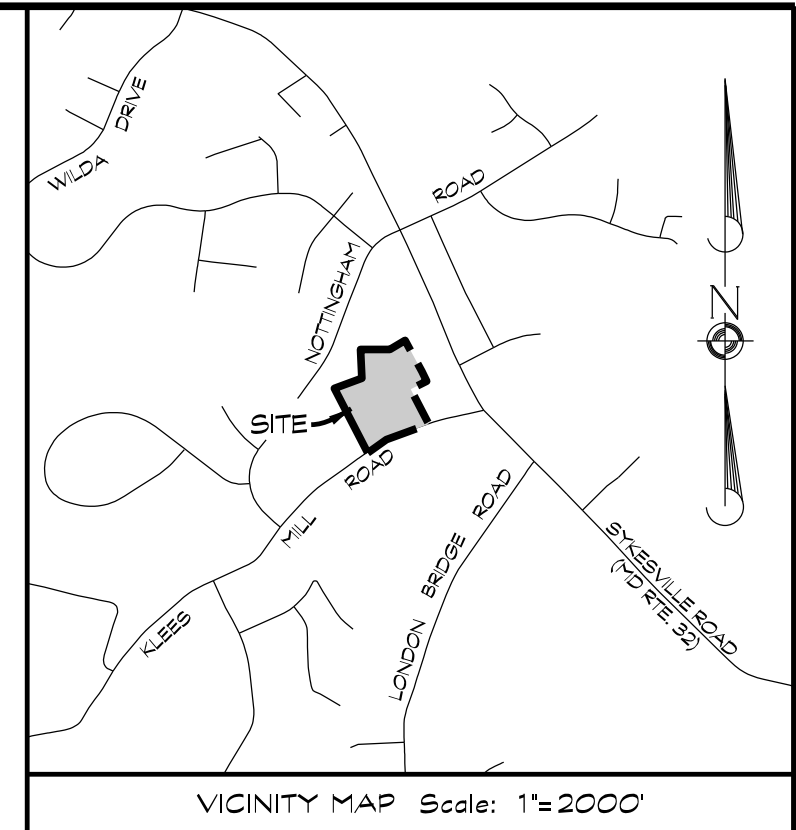


**NOTE:**  
FOR CONSTRUCTION OF A DWELLING (OR OTHER FACILITIES), EXCEEDING A FOUR BEDROOM HOUSE SIZE (600 GPD) IT MUST BE DEMONSTRATED THAT THERE IS ADEQUATE AREA FOR AN INITIAL SEPTIC SYSTEM AND ONE REPLACEMENT SEPTIC SYSTEMS IN ACCORDANCE WITH COMAR 26.04.02.04F (EFFECTIVE 1/1/85)

**NOTE:**  
IF GRAVITY FLOW TO THE SEWAGE DISPOSAL AREA CANNOT BE ENSURED A PUMPED SEWAGE DISPOSAL SYSTEM WILL BE REQUIRED FOR LOTS.

**NOTE:**  
A PERCOLATION TEST IS ONLY ONE OF THE CRITERIA USED IN CONSIDERING A LOT FOR INSTALLATION OF A SEPTIC SYSTEM. ADDITIONAL TESTING CAN BE REQUIRED AND MAY BE SUBJECT TO SCHEDULING DURING THE WET WEATHER PERIOD. THE ENTIRE LOT IS EVALUATED WHEN APPLICATION FOR A SEPTIC PERMIT IS MADE. ADJOINING PROPERTY HISTORY, PERCOLATION TEST METHODOLOGY, ADJOINING WELLS AND SEPTIC SYSTEMS, PROPOSED NUMBER OF BEDROOMS, HISTORY OF FAILING SEPTIC SYSTEMS AND WELLS, DESIGN, SOIL AND GEOLOGICAL CONDITIONS, AND TOPOGRAPHY IN THE IMMEDIATE AREA ARE THEN USED TO DETERMINE IF THE LOT IS SUITABLE FOR THE UNDERGROUND DISPOSAL OF SEWAGE.



**DATA TABULATIONS**

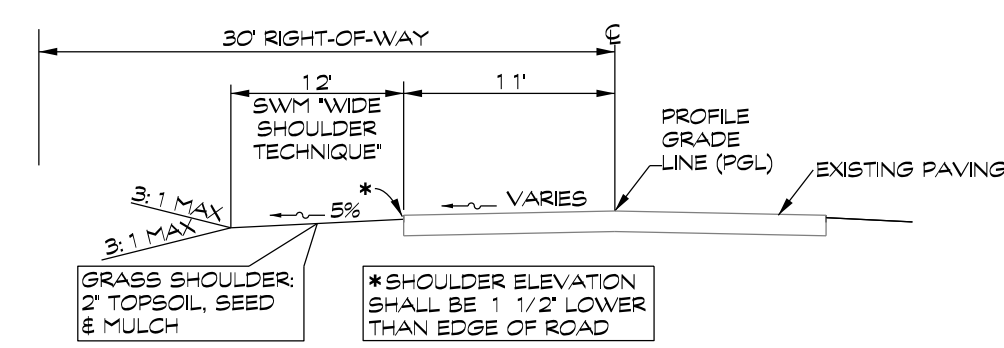
1. ZONING DISTRICT: R-40.000
2. SOIL CLASSIFICATION: NRCS SOIL DATA
3. NUMBER OF LOTS PROPOSED: 7
4. TOTAL AREA OF LOTS: 12.28 AC.
5. AREA OF DEDICATION PARCEL 'A': 0.57 AC.
6. AREA OF PARCEL 'B' (SWM FACILITY): 2.31 AC.
7. TOTAL AREA OF PLAN: 1.13 AC.
8. DWELLING UNITS BY TYPE: SINGLE-FAMILY: 7

**GENERAL NOTES**

1. CURRENT TITLE REFERENCE: OWNER: 3508 SYKESVILLE ROAD, LLC DEED REFERENCE: LIBER 10859, FOLIO 86 DATE: APRIL 18, 2022
2. GRANTOR: THE ESTATE OF JOAN S. BIST
3. THE OUTLINE SHOWN HEREON IS BASED ON A BOUNDARY SURVEY BY CLSI DATED OCT. 17, 2018.
4. THE NEAREST POTABLE WATER SUPPLY IS THE TOWN OF HANOVER.
5. THE LOCATION OF THE NEAREST WATER SUPPLY FOR FIRE PROTECTION IS APPROXIMATELY 0.6 MILES AWAY, AT UPPER BECKLEYVILLE ROAD & BURNSIDE DRIVE.
6. M.B.L. DEVOTES MINIMUM BUILDING SETBACKS.
7. THERE ARE NO WELLS OR SEPTIC SYSTEMS WITHIN 100' OF THE PROPERTY UNLESS SHOWN HEREON.
8. IF GRAVITY FLOW TO SEWAGE DISPOSAL AREA CANNOT BE ENSURED, A PUMPED SEWAGE DISPOSAL SYSTEM WILL BE REQUIRED.
9. FOR CONSTRUCTION OF DWELLINGS EXCEEDING A FOUR BEDROOM HOUSE SIZE (600 GPD), IT MUST BE DEMONSTRATED THAT THERE IS ADEQUATE AREA FOR AN INITIAL AND TWO REPLACEMENT SEPTIC SYSTEMS IN ACCORDANCE WITH COMAR 26.04.02.04F (EFFECTIVE 1/1/85).
10. A PERCOLATION TEST IS ONLY ONE OF THE CRITERIA USED IN CONSIDERING A LOT FOR INSTALLATION OF A SEPTIC SYSTEM. ADDITIONAL TESTING CAN BE REQUIRED AND MAY BE SUBJECT TO SCHEDULING DURING THE WET WEATHER PERIOD. THE ENTIRE LOT IS EVALUATED WHEN APPLICATION FOR A SEPTIC PERMIT IS MADE. ADJOINING PROPERTY HISTORY, PERCOLATION TEST METHODOLOGY, ADJOINING WELLS AND SEPTIC SYSTEMS, PROPOSED NUMBER OF BEDROOMS, HISTORY OF FAILING SEPTIC SYSTEMS AND WELLS, DESIGN, SOIL AND GEOLOGICAL CONDITIONS, AND TOPOGRAPHY IN THE IMMEDIATE AREA ARE THEN USED TO DETERMINE IF THE LOT IS SUITABLE FOR THE UNDERGROUND DISPOSAL OF SEWAGE.
11. ISSUANCE OF A SEPTIC SYSTEM PERMIT CONSTITUTES LOT APPROVAL BY THE HEALTH DEPARTMENT.
12. PARCEL 'A' FOR ROAD DEDICATION IS TO BE CONVEYED TO THE COMMISSIONERS OF CARROLL COUNTY BY DEED TO BE RECORDED SIMULTANEOUSLY WITH THE APPROVED RECORD PLAT.
13. PARCEL 'B' FOR STORMWATER MANAGEMENT IS TO BE CONVEYED TO THE COMMISSIONERS OF CARROLL COUNTY BY DEED TO BE RECORDED SIMULTANEOUSLY WITH THE APPROVED RECORD PLAT.
14. MINIMUM BUILDING SETBACK REQUIREMENTS: FRONT YARD: 40' SIDE YARD: 20' REAR YARD: 50'
15. THE PROPOSED PROJECT IS NOT LOCATED WITHIN A TIER I WATERSHED AS DESIGNATED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.

**SUBDIVISION SITE: 3508 Sykesville Road**

Test #	Test Type	Percolation Rate	Percolation Rate	Comments	Date	Test #	San
1	DT	3 min at 4 ft	11 min at 8 ft	>2 minutes at 12 feet	09/20/22	1	388, JAS
2	TZ	5 min at 4 ft	9 min at 8 ft	>2 minutes at 12 feet	09/20/22	2	388, JAS
3	DT	5 min at 4 ft	9 min at 8 ft	>2 minutes at 12 feet	09/20/22	3	388, JAS
4	TZ	3 min at 4 ft	10 min at 8 ft	>2 minutes at 12 feet	09/20/22	4	388, JAS
5	DT	3 min at 4 ft	10 min at 8 ft	>2 minutes at 12 feet	09/20/22	5	388, JAS
6	DT	6 min at 4 ft	20 min at 8 ft	>2 minutes at 12 feet	09/20/22	6	388, JAS
7	TZ	3 min at 4 ft	3 min at 8 ft	>2 minutes at 12 feet	09/20/22	7	388, JAS
8	DT	3 min at 4 ft	3 min at 8 ft	>2 minutes at 12 feet	09/20/22	8	388, JAS
9	DT	21 min at 5 ft	4 min at 8 ft	>2 minutes at 12 feet	09/20/22	9	388, JAS
10	TZ	30 min at 5 ft	5 min at 8 ft	>2 minutes at 12 feet	09/20/22	10	388, JAS
11	DT	30 min at 5 ft	5 min at 8 ft	>2 minutes at 12 feet	09/20/22	11	388, JAS
12	DT	3 min at 4 ft	6 min at 8 ft	>2 minutes at 12 feet	09/20/22	12	388, JAS
13	TZ	2 min at 4 ft	8 min at 8 ft	>2 minutes at 12 feet	09/20/22	13	388, JAS
14	DT	2 min at 4 ft	8 min at 8 ft	>2 minutes at 12 feet	09/20/22	14	388, JAS
15	DT	3 min at 4 ft	7 min at 8 ft	>2 minutes at 12 feet	09/20/22	15	388, JAS
16	TZ	7 min at 4 ft	3 min at 8 ft	>2 minutes at 13 feet	09/20/22	16	388, JAS
17	DT	2 min at 4 ft	9 min at 8 ft	>2 minutes at 13 feet	09/20/22	17	388, JAS
18	DT	2 min at 4 ft	9 min at 8 ft	>2 minutes at 13 feet	09/20/22	18	388, JAS
19	OH			Satisfactory Soils to 14 feet	09/20/22	19	388, JAS
20	OH			Satisfactory Soils to 10 feet	09/20/22	20	388, JAS
21	OH			Satisfactory Soils to 13 feet	09/20/22	21	388, JAS
22	DT	6 min at 4 ft	12 min at 8 ft	>2 minutes at 14 feet	09/20/22	22	388, JAS
23	DT	3 min at 4 ft	2 min at 8 ft	>2 minutes at 14 feet	09/20/22	23	388, JAS
24	TZ	2 min at 4 ft	10 min at 8 ft	>2 minutes at 14 feet	09/20/22	24	388, JAS
25	DT	2 min at 4 ft	10 min at 8 ft	>2 minutes at 13 feet	09/20/22	25	388, JAS
26	DT	20 min at 3 ft	4 min at 9 ft	>2 minutes at 13 feet	01/18/23	26	JAS
27	TZ	12 min at 4 ft	4 min at 9 ft	>2 minutes at 13 feet	01/18/23	27	JAS
28	DT	12 min at 4 ft	4 min at 9 ft	>2 minutes at 13 feet	01/18/23	28	JAS
29	DT	8 min at 4 ft	13 min at 10 ft	>2 minutes at 14 feet	01/18/23	29	JAS
30	DT	6 min at 4 ft	16 min at 10 ft	>2 minutes at 14 feet	01/18/23	30	JAS
31	TZ			>2 minutes at 14 feet	01/18/23	31	JAS
32	TZ			>2 minutes at 14 feet	01/18/23	32	JAS
33	DT	3 min at 4 ft	15 min at 10 ft	>2 minutes at 14 feet	01/18/23	33	JAS
34	DT	10 min at 4 ft	7 min at 10 ft	>2 minutes at 14 feet	01/18/23	34	JAS
35	TZ			>2 minutes at 12 feet	01/18/23	35	JAS, 388
36	DT	11 min at 3 ft	9 min at 8 ft	>2 minutes at 13 feet	01/18/23	36	JAS, 388
37	DT	9 min at 3 ft	6 min at 8 ft	>2 minutes at 12 feet	01/18/23	37	JAS, 388



**TYPICAL SECTION KLEES MILL ROAD**

**TABLE OF CONTENTS**

1. CONCEPT PLAN
2. SEPTIC CONTROL AND DRIVEWAY NOTES AND DETAILS
3. CONCEPT STORMWATER MANAGEMENT PLAN
4. STORMWATER MANAGEMENT NOTES AND DETAILS
5. SHIMULATED FOREST STAND DELINEATION & FOREST CONSERVATION PLAN
6. PLANTING PLAN

A licensed Maryland Surveyor either personally prepared this Preliminary Plan, or was in responsible charge over its preparation and the surveying work reflected in it, in compliance with the Preliminary Plan Review Process of Carroll County, MD.

THERE ARE NO WELLS OR SEPTIC AREAS WITHIN 100 FEET OF THE PROPERTY UNLESS OTHERWISE SHOWN HEREON.

Javier Morales Roldan  
Professional Land Surveyor No. 21885  
License Expires August 09, 2025

PERC TESTS SHOWN HEREON HAVE BEEN FIELD LOCATED BY CARROLL LAND SERVICES, INC.

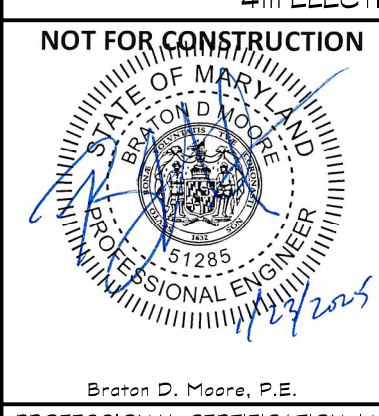
Javier Morales Roldan  
Professional Land Surveyor No. 21885  
License Expires August 09, 2025

THE SAID PERC TESTS WERE OBSERVED BY OF THE CARROLL COUNTY HEALTH DEPARTMENT AND THE RESULTS OF THE SAME ARE SHOWN HEREON.

**OWNER/DEVELOPER**  
3508 SYKESVILLE ROAD, LLC  
RONDA CARPENTER  
6150 EMERALD LANE  
SYKESVILLE, MD 21784  
443-745-0518

**CONCEPT PLAN FOR KLEES MILL CORNER**

TAX MAP: 63 \* BLOCK: 5 \* PARCEL: 165  
4th ELECTION DISTRICT \* CARROLL COUNTY, MD



439 East Main Street Westminster, MD 21157-5539  
(410) 848-1790 FAX (410) 848-1791

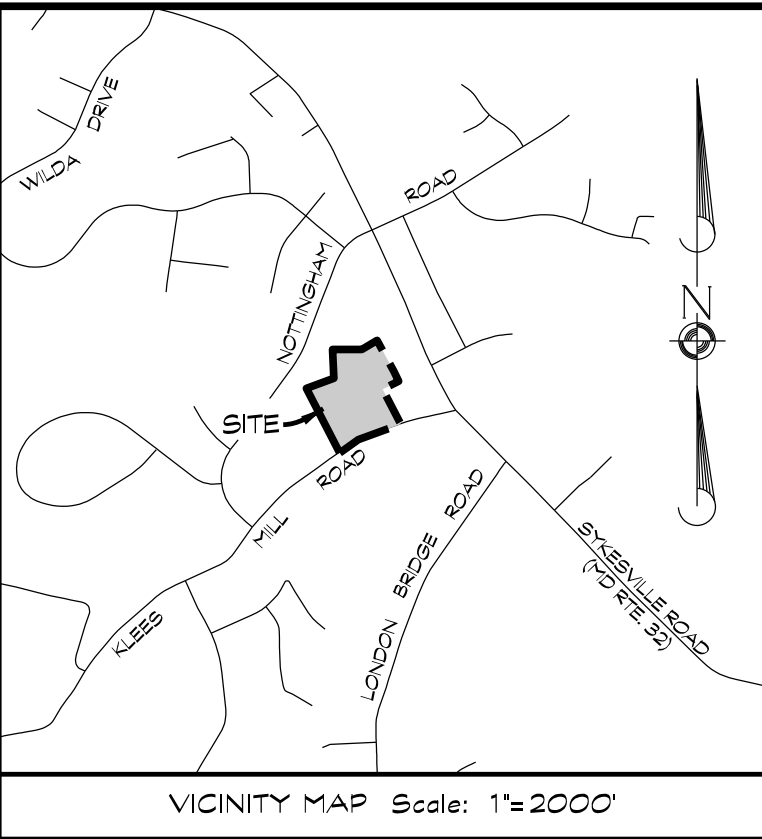
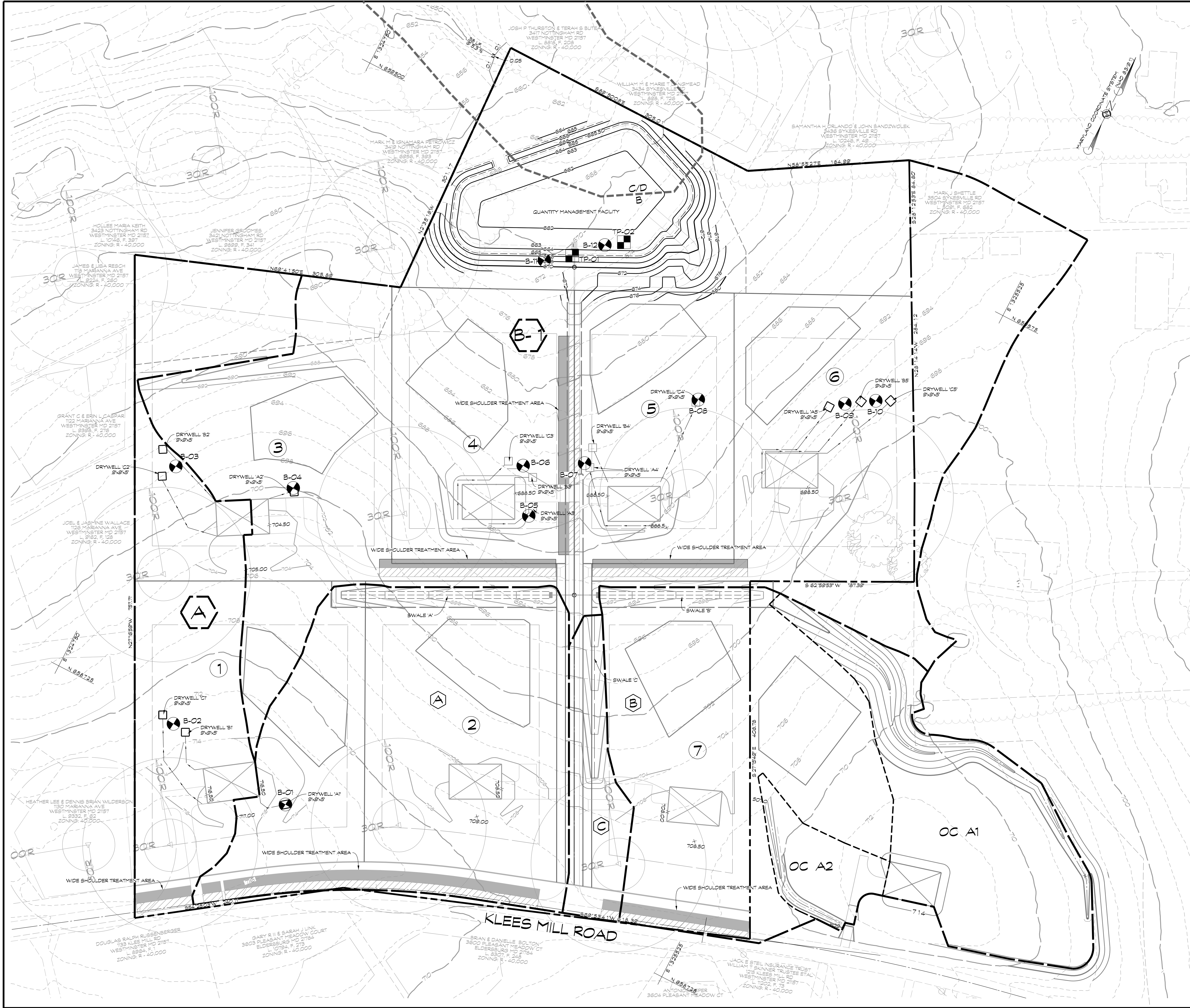
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 52583, EXPIRATION DATE: DECEMBER 7, 2025

Date	Revisions	Drawn By:	BTM
4/8/24	ADDRESS HEALTH DEPARTMENT COMMENTS DATED 4/4/24	Designed By:	BTM
9/25/24	REVISED PER COUNTY COMMENTS	Reviewed By:	JMR
1/22/25	REVISED PER COUNTY COMMENTS	Date:	NOV., 2023
		Scale:	1" = 50'
		Job No.:	2022117
		Sheet:	1 OF 6









- LEGEND**
- SWM DRAINAGE AREA DIVIDE
  - DRAINAGE AREA LABEL
  - HYDROLOGIC SOIL DIVIDE LINE
  - HYDROLOGIC SOIL GROUP
  - WIDE SHOULDER TREATMENT AREA
  - PAVEMENT TREATED BY WIDE SHOULDER
  - BORING LOCATION
  - TEST PIT LOCATION

NOTE:  
DRYWELL DIMENSIONS SHOWN  
ARE FOR STONE VOLUME ONLY.

**OWNER/DEVELOPER**  
3508 SYKESVILLE ROAD, LLC  
RONDA CARPENTER  
6150 EMERALD LANE  
SYKESVILLE, MD 21784  
443-745-0515

**CONCEPT STORMWATER  
MANAGEMENT PLAN  
FOR  
KLEES MILL CORNER**

TAX MAP: 63 \* BLOCK: 5 \* PARCEL: 165  
4th ELECTION DISTRICT \* CARROLL COUNTY, MD

NOT FOR CONSTRUCTION



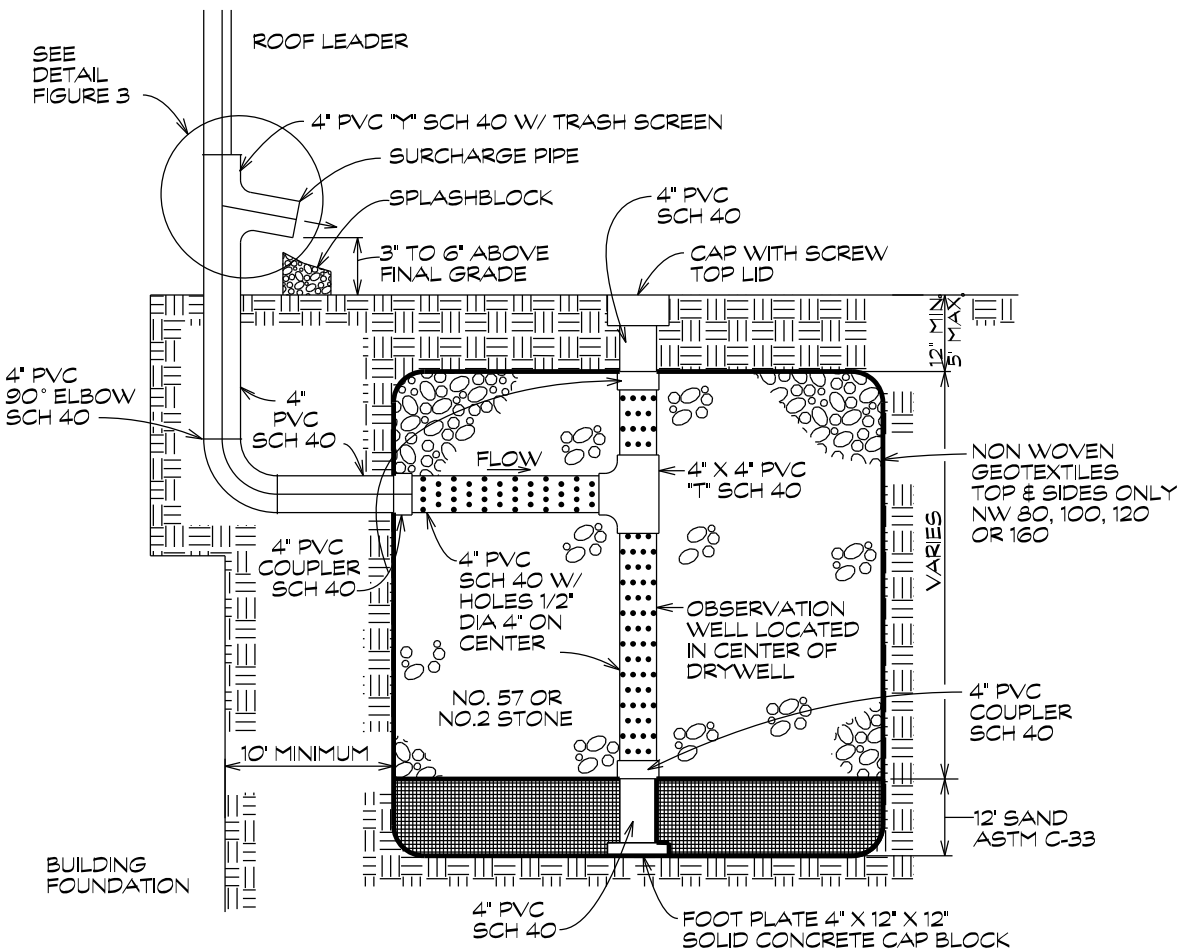
439 East Main Street Westminster, MD 21157-5539  
(410) 848-1790 FAX (410) 848-1791

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 51285, EXPIRATION DATE: DECEMBER 7, 2025

Date	Revisions	Drawn By:	BTM
4/8/24	ADDRESS HEALTH DEPARTMENT COMMENTS DATED 4/4/24	Designed By:	BTM
9/25/24	REVISED PER COUNTY COMMENTS	Reviewed By:	BDM
1/22/25	REVISED PER COUNTY COMMENTS	Date:	NOV., 2023
		Scale:	1"=50'
		Job No.:	2022117
		Sheet:	3 OF 6

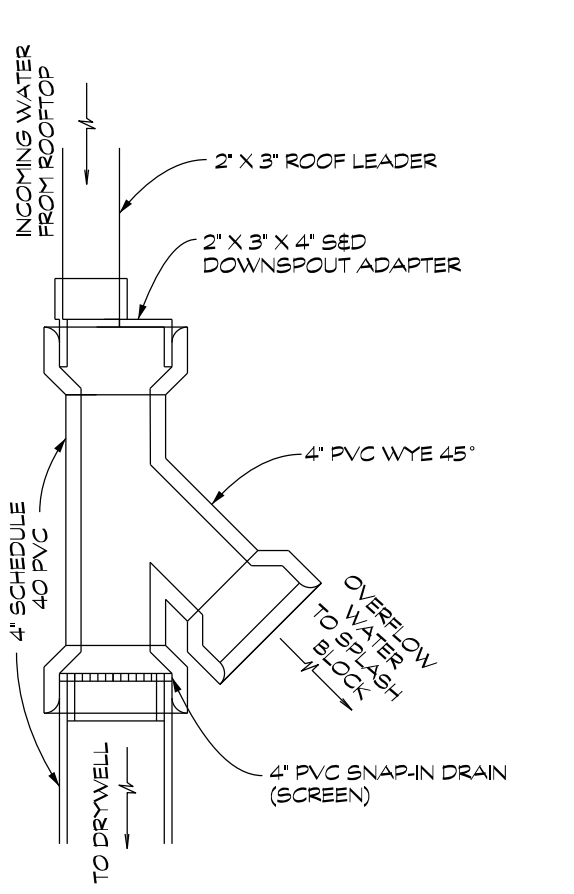


FIGURE 2  
STANDARD DRYWELL



- NOTES:
- IF USING ONE DRYWELL FOR THE ENTIRE HOUSE THE STANDARD DRYWELL IS 8" DIA. WITH AN ADDITIONAL 1/2" OF ASTM C-33 SAND PROVIDED UNDER STONE RESERVOIR. THIS PROVIDES 2.5' OF STORMWATER CONTROL FOR 1,000 S.F. OF ROOFTOP.
  - MINIMUM SETBACKS:  
A. 100 FT FROM WELLS  
B. 25 FT FROM UTILITY AREAS  
C. 10 FT FROM BUILDINGS
  - FROM THE DOWNSPOUT TO THE DRYWELL THE DRAIN PIPE MUST BE AT LEAST 6" BELOW GRADE
  - THE LOCATIONS AND SIZE OF ALL DRYWELLS MUST BE SHOWN ON THE GRADING PLOT PLAN.
  - THESE GEOTEXTILES ARE AVAILABLE IN PINKSBURG @ 8'S & 6' DISTRIBUTORS 2601 BERRY RD, SUITE 8, 866-744-5001, ANY EQUIVALENT GEOTEXTILE IS ACCEPTABLE

FIGURE 3  
STANDARD DRYWELL  
DOWNSPOUT FITTINGS



- NOTES:
- THE SNAP IN SCREEN IS REQUIRED TO PREVENT LOGGING OF THE DRYWELL WITH DEBRIS.
  - SEE FIGURE 3A LIST OF POTENTIAL SUPPLIERS TO ACCOMPANY FIGURE 3 STANDARD DRYWELL DOWNSPOUT FITTINGS FOR INFORMATION ON SOME LOCAL RETAILERS THAT SUPPLY COMPONENTS FOR THIS SYSTEM.

INSPECTION CHART FOR DRYWELL INSTALLATION

STAGE	ENGINEER'S APPROVAL	
	INITIALS	DATE
1. ONCE THE INDIVIDUAL HOUSE HAS BEEN CONSTRUCTED AND FINAL GRADING IS COMPLETE.		
2. PLACEMENT OF SAND		
3. PLACEMENT OF NO. 2 STONE AND PIPE		
4. PLACEMENT OF 4" PVC PIPE		
5. FINE GRADE & STABILIZATION OF AREAS DISTURBED DURING CONSTRUCTION OF DRYWELL		

\* PLEASE NOTIFY CERTIFYING ENGINEER 48 HRS PRIOR TO CONSTRUCTION \*

ENGINEER'S NAME: CLSI  
PHONE NUMBER: 410-848-1790

FIGURE 3A  
LIST OF POTENTIAL SUPPLIERS TO ACCOMPANY FIGURE 3  
STANDARD DRYWELL DOWNSPOUT FITTINGS

2" x 3" x 4" S E D DOWNSPOUT ADAPTER

BT Plumbing Supply, Inc., 486 Lucabaugh Mill Rd., Westminster, MD 21157; 410-876-2118; Part No. PSD0SA234  
Ferguson Enterprises, Inc., 800 Wakefield Valley Rd., New Windsor, MD 21776; 410-635-6652; Part No. PSDANKP

Lowes Home Improvement Warehouse of Westminster, 777 Market St., Westminster, MD 21157; 410-857-7445; Part No. NDS LSP04

The Plumbers Home Center (two locations), 15 North Main Street, Mt. Airy, MD 21777; 301-629-1770 or 410-795-0331 or 418 E. Baltimore St., Taneytown, MD 21787; 410-751-1113; Part No. requires cutting to fit.

4" PVC WYE 45°

BT Plumbing Supply, Inc., 486 Lucabaugh Mill Rd., Westminster, MD 21157; 410-876-2118; Part No. PY4  
Ferguson Enterprises, Inc., 800 Wakefield Valley Rd., New Windsor, MD 21776; 410-635-6652; Part No. PDWVYP

Lowes Home Improvement Warehouse of Westminster, 777 Market St., Westminster, MD 21157; 410-857-7445; Part No. Charlotte CP600 1400

4" PVC Snap-In Drain Screen

BT Plumbing Supply, Inc., 486 Lucabaugh Mill Rd., Westminster, MD 21157; 410-876-2118; Part No. JSD42004  
Jones-Stephens Corp., www.slutbest.com; 800-355-6637; Part No. D42-004

Lowes Home Improvement Warehouse of Westminster, 777 Market St., Westminster, MD 21157; 410-857-7445; Part No. Core 435683

The Plumbers Home Center (two locations), 15 North Main Street, Mt. Airy, MD 21777; 301-629-1770 or 410-795-0331 or 418 E. Baltimore St., Taneytown, MD 21787; 410-751-1113; Part No. requires cutting to fit.

Note: The Carroll County Bureau of Resource Management obtained this part information after sending out a letter to know local plumbing supply companies and after receiving information from each respective company. The suppliers listed above are provided for reference purposes only. Any equivalent schedule 40 PVC fittings from any vendor may be used.

CARROLL COUNTY, HAMPSTEAD,  
WESTMINSTER, MT AIRY, NEW WINDSOR,  
SYKESVILLE, MANCHESTER  
PRIVATE FACILITIES  
CONSTRUCTED BY THE DEVELOPER  
STORMWATER MANAGEMENT MAINTENANCE AGREEMENT  
SCHEDULE

- The Stormwater Management Facility/Facilities shown on these plans shall be constructed and maintained by the owner(s).
- Owner's heirs or assigns shall be responsible for continuing maintenance of the facility/facilities, which shall include such items as moving, cleaning and removing sediment, trees, shrubs and debris. Requirements and schedules for specific types of facilities and practices as listed on the plans are hereby included. The time period for this continuing maintenance shall be on "as-needed" basis but shall not be delayed longer than thirty (30) days.
- Owner, his heirs or assigns shall be responsible for any structural damages or failure which may occur as a result of negligence, accident or misuse. In the event of structural damage, owner shall be responsible to make the necessary repairs as quickly as possible but in any case within thirty (30) days.
- If after notice by the County/Town/City to correct a violation requiring maintenance work, satisfactory corrections are not made by the owner(s) within (30) days the County/Town/City may perform all necessary work to place the facility in proper working condition. The owners of the facility shall be assessed the cost of the work and any penalties. These monies shall be collected from a bond, which the developer is required to post with the County/Town/City to cover such expenses until "completion of the facility". "Completion of the facility" is construed to mean that all contributory drainage areas are paved or supporting a 2" stand of dense grass and that the Carroll County Bureau of Resource Management has inspected construction and a registered professional engineer has certified that the "As-Built" plans meet the plans and specifications for construction. After "completion of the facility" the monies may be collected by placing a lien on the property, or by including the costs and penalties on the property tax bill and collecting them as ordinary taxes by the County/Town/City.
- Owner(s) shall grant right of entry to authorized County/Town/City personnel for purposes of inspection monitoring and/or repair. Site visits for inspection and/or monitoring shall be conducted only during normal County working hours (8:00 a.m. to 5:00 p.m. Monday - Friday).
- This agreement including right-of entry for inspection/maintenance and repair shall be recorded in the Land Records of the County.

SWM SEQUENCE OF CONSTRUCTION AND  
INSPECTION CHART FOR GRASS SWALES

STAGE	ENGINEER'S APPROVAL					
	GRASS SWALE 'A'	GRASS SWALE 'B'	GRASS SWALE 'C'	INITIALS	DATE	INITIALS
1. EXCAVATE CHANNEL TO GRADE AND CROSS SECTION SHOWN ON PLANS.						
2. STABILIZE SWALE WITH SOLID SODDING OR SEED AND MULCH PER TYPICAL						
3. ONCE 2" STAND OF GRASS ESTABLISHED, REMOVE SEDIMENT CONTROL CHECK DAMS, FREQUENTLY STABILIZE AND SLIGHTLY SIGNED AND CERTIFIED "AS-BUILT" TO C.C. BUREAU OF RESOURCE MANAGEMENT.						

\* PLEASE NOTIFY CERTIFYING ENGINEER 48 HOURS PRIOR TO COMMENCING CONSTRUCTION \*

ENGINEER'S NAME: CLSI  
PHONE NUMBER: (410) 848-1790  
ENGINEER'S NAME: \_\_\_\_\_  
PHONE NUMBER: \_\_\_\_\_  
ENGINEER'S NAME: \_\_\_\_\_  
PHONE NUMBER: \_\_\_\_\_

STORMWATER MAINTENANCE SCHEDULE

NON-ROOFTOP DISCONNECTION

"WIDE SHOULDER TECHNIQUE"

MODIFIED TO CORRESPOND TO CARROLL COUNTY DETAILS

MONTHLY INSPECTION		
Inspection Item	Inspection Requirements	Remedial Action
Vegetative Cover and Erosion	Check for vegetation over 4" height. Check disconnection area for channeling and bare spots.	Mow grass/trim trees and shrubs. Re-grade if concentrated flow is causing rills or gullying on surface. Re-seed as necessary.
SEASONAL INSPECTION AND AFTER A MAJOR STORM		
Inspection Item	Inspection Requirements	Remedial Action
Inflow	Ensure sheet flow from pavement to grass shoulder disconnection area.	Remove debris, vegetation, regrade and re-seed as necessary to ensure sheet flow from pavement.
Dewatering	Check for soft areas and/or soil saturated to the surface.	Check slotted pipe, rodent guards and eliminate blockages. If necessary, excavate, remove and replace stone and slotted pipe.
ANNUAL INSPECTION		
Inspection Item	Inspection Requirements	Remedial Action
Overall Function of Disconnection	Check that grass disconnection is operating as designed.	Repair to good condition according to specifications on the approved plans.

SWM SEQUENCE OF CONSTRUCTION AND INSPECTION  
CHART FOR WIDE SHOULDERS - EX. KLEES MILL ROAD

STAGE	CERTIFYING PROFESSIONAL'S APPROVAL		
	INITIALS	DATE	INSPECTING AGENT
1. WIDE SHOULDER(S) GRADED PER PLAN.			CLSI
2. FINE GRADING, TOPSOILING, SEEDING AND MULCHING OF WIDE SHOULDERS AND SUPPORTING SLOPES. FINISH WIDE SHOULDER ELEVATION 2 1/2 INCHES BELOW EDGE OF TRAVEL LANE.			CLSI
3. ALL UTILITIES AND DRIVEWAYS ALONG TRAVEL LANES COMPLETED. ANY DAMAGED AREAS REPAIRED AND 2 INCH STAND OF DENSE GRASS ESTABLISHED OVER ALL DISTURBED AREAS.			CLSI
7. SIGNED AND CERTIFIED "AS-BUILT" SUBMITTED TO C.C. BUREAU OF RESOURCE MANAGEMENT WITHIN 30 DAYS OF STEP 6.			CLSI

\* PLEASE NOTIFY CERTIFYING ENGINEER 48 HOURS PRIOR TO COMMENCING CONSTRUCTION \*

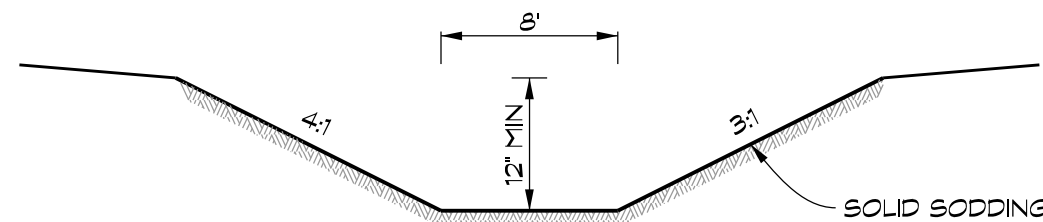
ENGINEER'S NAME: CLSI  
PHONE NUMBER: (410) 848-1790  
ENGINEER'S NAME: \_\_\_\_\_  
PHONE NUMBER: \_\_\_\_\_

SWM SEQUENCE OF CONSTRUCTION AND INSPECTION  
CHART FOR WIDE SHOULDERS - ACCESS ROAD

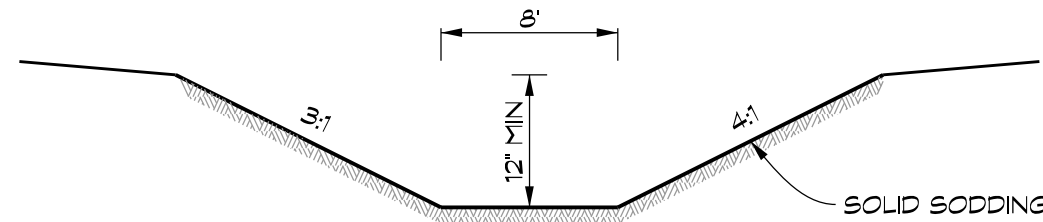
STAGE	CERTIFYING PROFESSIONAL'S APPROVAL		
	INITIALS	DATE	INSPECTING AGENT
1. TRAVEL LANE(S) AND WIDE SHOULDER(S) GRADED PER PLAN.			CLSI
4. TRAVEL LANES CONSTRUCTED			CLSI
5. FINE GRADING, TOPSOILING, SEEDING AND MULCHING OF WIDE SHOULDERS AND SUPPORTING SLOPES. FINISH WIDE SHOULDER ELEVATION 2 1/2 INCHES BELOW EDGE OF TRAVEL LANE.			CLSI
6. ALL UTILITIES AND DRIVEWAYS ALONG TRAVEL LANES COMPLETED. ANY DAMAGED AREAS REPAIRED AND 2 INCH STAND OF DENSE GRASS ESTABLISHED OVER ALL DISTURBED AREAS.			CLSI
7. SIGNED AND CERTIFIED "AS-BUILT" SUBMITTED TO C.C. BUREAU OF RESOURCE MANAGEMENT WITHIN 30 DAYS OF STEP 6.			CLSI

\* PLEASE NOTIFY CERTIFYING ENGINEER 48 HOURS PRIOR TO COMMENCING CONSTRUCTION \*

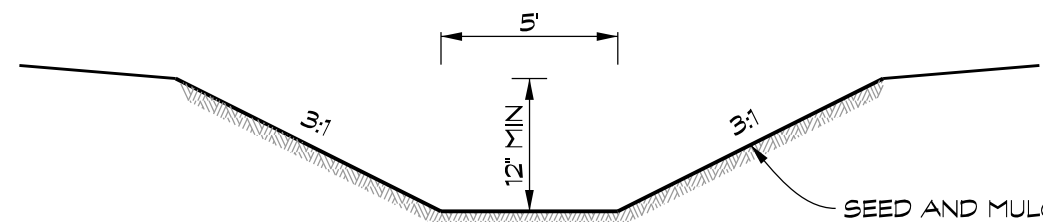
ENGINEER'S NAME: CLSI  
PHONE NUMBER: (410) 848-1790  
ENGINEER'S NAME: \_\_\_\_\_  
PHONE NUMBER: \_\_\_\_\_



TYPICAL SECTION SWALE A  
N.T.S.



TYPICAL SECTION SWALE B  
N.T.S.



TYPICAL SECTION SWALE C  
N.T.S.

SWM SEQUENCE OF CONSTRUCTION AND INSPECTION  
CHART FOR WIDE SHOULDERS - DRIVEWAY LOT 2

STAGE	CERTIFYING PROFESSIONAL'S APPROVAL		
	INITIALS	DATE	INSPECTING AGENT
1. TRAVEL LANE(S) AND WIDE SHOULDER(S) GRADED PER PLAN.			CLSI
4. TRAVEL LANES CONSTRUCTED			CLSI
5. FINE GRADING, TOPSOILING, SEEDING AND MULCHING OF WIDE SHOULDERS AND SUPPORTING SLOPES. FINISH WIDE SHOULDER ELEVATION 2 1/2 INCHES BELOW EDGE OF TRAVEL LANE.			CLSI
6. ALL UTILITIES AND DRIVEWAYS ALONG TRAVEL LANES COMPLETED. ANY DAMAGED AREAS REPAIRED AND 2 INCH STAND OF DENSE GRASS ESTABLISHED OVER ALL DISTURBED AREAS.			CLSI
7. SIGNED AND CERTIFIED "AS-BUILT" SUBMITTED TO C.C. BUREAU OF RESOURCE MANAGEMENT WITHIN 30 DAYS OF STEP 6.			CLSI

\* PLEASE NOTIFY CERTIFYING ENGINEER 48 HOURS PRIOR TO COMMENCING CONSTRUCTION \*

ENGINEER'S NAME: CLSI  
PHONE NUMBER: (410) 848-1790  
ENGINEER'S NAME: \_\_\_\_\_  
PHONE NUMBER: \_\_\_\_\_

SWM SEQUENCE OF CONSTRUCTION AND INSPECTION  
CHART FOR WIDE SHOULDERS - DRIVEWAY LOT 5

STAGE	CERTIFYING PROFESSIONAL'S APPROVAL		
	INITIALS	DATE	INSPECTING AGENT
1. TRAVEL LANE(S) AND WIDE SHOULDER(S) GRADED PER PLAN.			CLSI
4. TRAVEL LANES CONSTRUCTED			CLSI
5. FINE GRADING, TOPSOILING, SEEDING AND MULCHING OF WIDE SHOULDERS AND SUPPORTING SLOPES. FINISH WIDE SHOULDER ELEVATION 2 1/2 INCHES BELOW EDGE OF TRAVEL LANE.			CLSI
6. ALL UTILITIES AND DRIVEWAYS ALONG TRAVEL LANES COMPLETED. ANY DAMAGED AREAS REPAIRED AND 2 INCH STAND OF DENSE GRASS ESTABLISHED OVER ALL DISTURBED AREAS.			CLSI
7. SIGNED AND CERTIFIED "AS-BUILT" SUBMITTED TO C.C. BUREAU OF RESOURCE MANAGEMENT WITHIN 30 DAYS OF STEP 6.			CLSI

\* PLEASE NOTIFY CERTIFYING ENGINEER 48 HOURS PRIOR TO COMMENCING CONSTRUCTION \*

ENGINEER'S NAME: CLSI  
PHONE NUMBER: (410) 848-1790  
ENGINEER'S NAME: \_\_\_\_\_  
PHONE NUMBER: \_\_\_\_\_

SWM SEQUENCE OF CONSTRUCTION AND INSPECTION  
CHART FOR WIDE SHOULDERS - USE-IN-COMMON DRIVE

STAGE	CERTIFYING PROFESSIONAL'S APPROVAL		
	INITIALS	DATE	INSPECTING AGENT
1. TRAVEL LANE(S) AND WIDE SHOULDER(S) GRADED PER PLAN.			CLSI
4. TRAVEL LANES CONSTRUCTED			CLSI
5. FINE GRADING, TOPSOILING, SEEDING AND MULCHING OF WIDE SHOULDERS AND SUPPORTING SLOPES. FINISH WIDE SHOULDER ELEVATION 2 1/2 INCHES BELOW EDGE OF TRAVEL LANE.			CLSI
6. ALL UTILITIES AND DRIVEWAYS ALONG TRAVEL LANES COMPLETED. ANY DAMAGED AREAS REPAIRED AND 2 INCH STAND OF DENSE GRASS ESTABLISHED OVER ALL DISTURBED AREAS.			CLSI
7. SIGNED AND CERTIFIED "AS-BUILT" SUBMITTED TO C.C. BUREAU OF RESOURCE MANAGEMENT WITHIN 30 DAYS OF STEP 6.			CLSI

\* PLEASE NOTIFY CERTIFYING ENGINEER 48 HOURS PRIOR TO COMMENCING CONSTRUCTION \*

ENGINEER'S NAME: CLSI  
PHONE NUMBER: (410) 848-1790  
ENGINEER'S NAME: \_\_\_\_\_  
PHONE NUMBER: \_\_\_\_\_

OWNER/DEVELOPER

3508 SYKESVILLE ROAD, LLC  
RONDA CARPENTER  
6150 EMERALD LANE  
SYKESVILLE, MD 21784  
443-745-0518

STORMWATER MANAGEMENT  
NOTES AND DETAILS  
FOR  
KLEES MILL CORNER

TAX MAP: 63 \* BLOCK: 5 \* PARCEL: 165  
4th ELECTION DISTRICT \* CARROLL COUNTY, MD

NOT FOR CONSTRUCTION



439 East Main Street Westminster, MD 21157-5539  
(410) 848-1790 FAX (410) 848-1791

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 57285, EXPIRATION DATE: DECEMBER 7, 2023

Date	Revisions	Drawn By:
4/8/24	ADDRESS HEALTH DEPARTMENT COMMENTS DATED 4/4/24	BH, BH
9/25/24	REVISED PER COUNTY COMMENTS	Revised By: BDM
1/22/25	REVISED PER COUNTY COMMENTS	Date: NOV., 2023
		Scale: AS SHOWN
		Job No.: 2022117
		Sheet: 4 OF 6



## SPECIMEN TREE CHART

Specimen Tree #	Species (common name)	Species (scientific name)	Size inches (DBH)	Condition	Notes	Retention
#1	Silver Maple	<i>Acer saccharinum</i>	65.0	Poor	Edge habitat	No
#2	Black Walnut	<i>Juglans nigra</i>	43.0	Poor	Edge habitat	No

## SOILS CHART

Symbol	Name	Hydric Rating	Hydrologic Group	K Factor (+>35, <-35)
GcB	Glencel Chamney Loam	Non-hydric	B	+
GdB	Glencel loam	Non-hydric	B	+
GcC	Glencel Chamney loam	Non-hydric	B	+
GhB	Glenville silt loam	Hydric	C/D	-

## ENVIRONMENTAL SITE NOTES

- WATERSHED IDENTIFICATION INFORMATION (COMAR 26.06.02.06) SUB BASIN: 02-13-09 - PATAPSCO RIVER AREA NEAREST WATERWAY: UNNAMED TRIBUTARY TO MORGAN RUN WATERSHED DRAINAGE BASIN: LIBERTY RESERVOIR # 2130907
- NO STREAMS, SPRINGS, PONDS OR NONTIDAL WETLANDS EXIST ON SITE.
- THE SITE IS NOT SITUATED WITHIN ANY WELLHEAD PROTECTION AREAS, CARBONATE ROCK AREAS, OR AQUIFER PROTECTION AREAS.
- SOILS SHOWN ARE FROM CARROLL COUNTY SOIL SURVEY. THIS SITE IS WITHIN THE SURFACE WATERSHED AREA AS SHOWN ON THE WATER RESOURCE MANAGEMENT AREA GUIDANCE MAP FOR CARROLL COUNTY.
- NO RARE, THREATENED OR ENDANGERED PLANT OR ANIMAL SPECIES WERE OBSERVED DURING THE SITE VISIT OR HAVE BEEN RECORDED BY THE NATIONAL WILDLIFE HERITAGE PROGRAM.

## SITE NARRATIVE

A FOREST STAND DELINEATION WAS PERFORMED ON THE SITE NOW AS 3808 SYKESVILLE ROAD, LLC PROPERTY (NOW KNOWN AS KLEES MILL CORNER), LOCATED AT THE CORNER OF SYKESVILLE ROAD AND KLEES MILL ROAD, WESTMINSTER, MARYLAND. THE DELINEATION WAS PERFORMED IN ACCORDANCE WITH THE CARROLL COUNTY FOREST CONSERVATION MANUAL ON JANUARY 30, 2023, BY TRACIE RIPPEON, QUALIFIED PROFESSIONAL OF CLSI. SAMPLING METHODS AND STRATEGIES WERE IN CONFORMANCE WITH THE PROCEDURES OUTLINED IN THE MANUAL MENTIONED ABOVE.

THE TOTAL SITE IS APPROXIMATELY 21.6 ACRES, CONSISTING ALMOST ENTIRELY OF FARM FIELDS, EXCEPT A SMALL SECTION OF WOODS CONTAINING PRIMARILY INVASIVE SPECIES ON THE NORTHERN SIDE OF THE PROPERTY ABUTTING THE WHITE PINE ACRES SUBDIVISION. THIS AREA, CONTAINING 0.6 ACRES +/- WILL BE INCLUDED AS PART OF THE AFFORESTATION AREA AND WILL BE PLANTED ACCORDING TO THE PLANTING PLAN, AS SHOWN.

NO STATE CHAMPION TREES OR TREES THAT ARE 75% OF THE DBH OF THE STATE CHAMPION TREES WERE LOCATED ON THE PROPERTY. TREES THAT MEASURED 30" DBH OR GREATER WERE FLAGGED, SPECIES RECORDED, CONDITION NOTED AND FIELD LOCATED. THE LOCATION OF THE SPECIMEN TREES HAVE BEEN SHOWN ON THE FOREST STAND DELINEATION PLAN, AS NOTED.

## FOREST CONSERVATION WORKSHEET

ZONING: R 40.000

## INPUT DATA

A. PROPOSED FOREST AREA REMOVED: 0.00 AC  
TOTAL FOREST REMOVED: 0.00 AC.

REQUIRED REFORESTATION = ALL FOREST AREA REMOVED IS TO BE REFORESTED / AFFORESTED AT A RATIO OF ONE ACRE PLANTED FOR EVERY ACRE OF PORTION THEREOF REMOVED.

## AFFORESTATION CALCULATION

B. TOTAL NET TRACT AREA: 15.30 AC.

C. THRESHOLD REQUIRED (20%): 3.06

D. EX FOREST AREA: 0.00 AC.

E. C MINUS D = 3.06 AC.

IF C MINUS D > 0, THIS IS REQUIRED AFFORESTATION.  
IF C MINUS D < 0, NO AFFORESTATION IS REQUIRED.

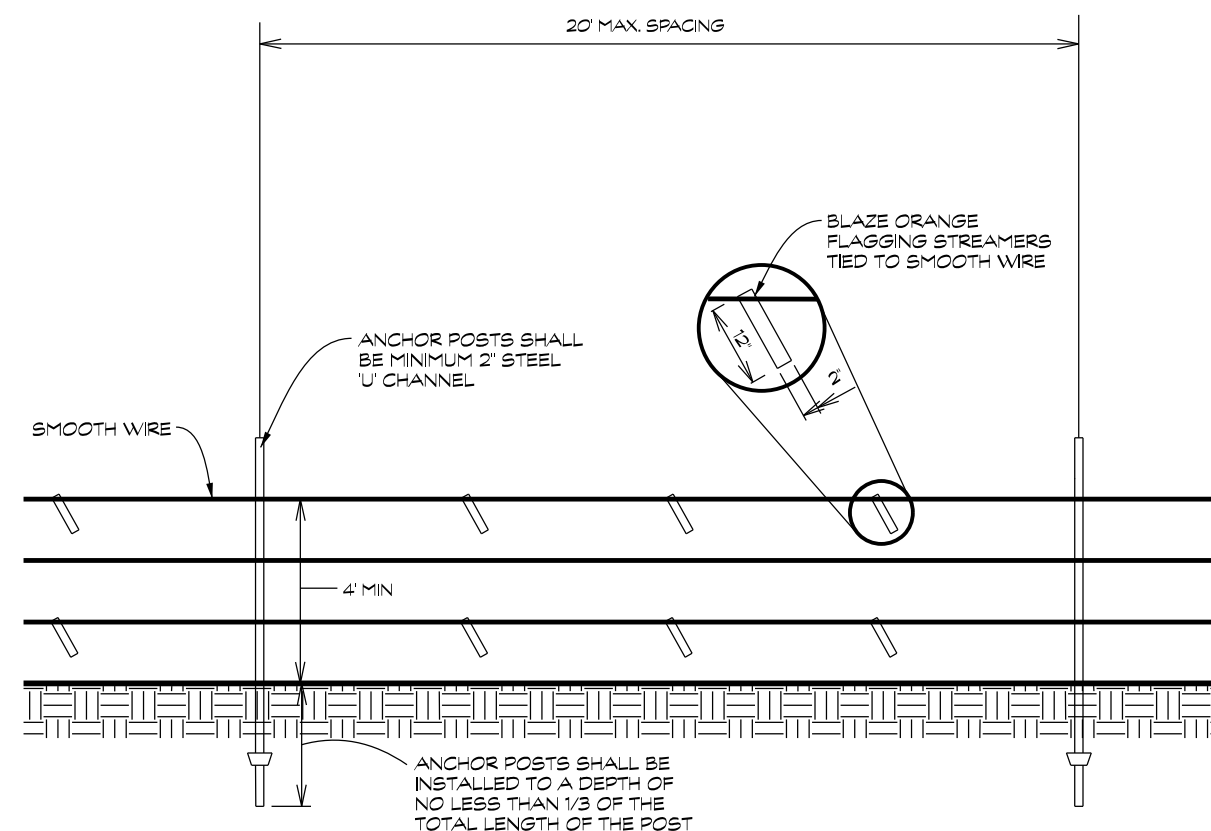
AFFORESTATION REQUIRED: 3.06 AC.  
1.30 AC. OF AFFORESTATION IS PROVIDED ON SITE.  
1.76 AC. WILL BE PROVIDED THROUGH AN OFF-SITE BANK.

## FOREST CONSERVATION NOTES

- ATTACHMENT OF SIGNS OR ANY OTHER OBJECT, TO TREES IS PROHIBITED.
- NO EQUIPMENT, MACHINERY, VEHICLES, MATERIALS OR EXCESSIVE PEDESTRIAN TRAFFIC SHALL BE ALLOWED IN CONSERVATION AREAS.
- ALL CONSERVATION SIGNAGE IS TO BE POSTED AS NOTED ON PLAN SHEET.
- PRE-CONSTRUCTION MEETING: BEFORE ANY DISTURBANCE, THE DEVELOPER, CONTRACTOR OR PROJECT MANAGER AND LOCAL INSPECTOR SHALL ATTEND. TEMPORARY PARKING, STOCKPILE, STAGING, AND FUELING AREA WILL BE SHOWN TO ALL PERSONNEL.
- ANY CHANGES MADE TO THE FOREST CONSERVATION PLAN DUE TO ON-SITE CONDITIONS SHALL BE MADE IN CONSULTATION WITH A REPRESENTATIVE OF THE BUREAU OF RESOURCE MANAGEMENT.
- AFFORESTATION AREAS WILL BE PLACED IN A FOREST CONSERVATION EASEMENT IN PERPETUITY.
- NO BURIAL OF DISCARDED MATERIALS WILL OCCUR ON-SITE WITHIN THE FOREST CONSERVATION AREAS OR PLANTING AREAS.
- NO OPEN BURNING WITHIN 100 FEET OF A WOODED AREA.
- TEMPORARY FENCING AND SIGNS SHALL BE REMOVED AFTER SITE CONSTRUCTION. ALL FENCING ON THIS PLAN IS TEMPORARY.

## FOREST CONSERVATION NARRATIVE

NO STATE CHAMPION TREES OR TREES THAT ARE 75% THE DBH OF THE STATE CHAMPION TREES WERE LOCATED ON THE PROPERTY. TREES THAT MEASURED 30" DBH OR GREATER WERE FLAGGED, SPECIES RECORDED, CONDITION NOTED, AND FIELD LOCATED. THE LOCATION OF THE SPECIMEN TREE HAVE BEEN SHOWN ON THE INCLUDED FOREST STAND DELINEATION PLAN.

FOREST PROTECTION FENCE  
TWO OR THREE STRAND SMOOTH WIRE

## NOTES:

- FOREST PROTECTION DEVICE ONLY
- RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS
- BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
- AVOID ROOT DAMAGE WHEN PLACING ANCHOR POSTS.
- SMOOTH WIRE SHOULD BE SECURELY ATTACHED TO POSTS.
- DEVICE SHOULD BE PROPERLY MAINTAINED DURING CONSTRUCTION.
- PROTECTIVE SIGNS ARE ALSO RECOMMENDED.

## FOREST PROTECTION FENCE &amp; SIGNS

FOREST CONSERVATION PROTECTION FENCE	
Forest Conservation Area Fence:	1,129 L.F.
Retention Area Fence:	0 L.F.
Isolated Specimen Tree Fence:	0 L.F.
Total Fence:	1,129 L.F.

## SIGNS

Forest Conservation Area:	13
Retention Area:	0
Specimen Trees:	0
Total Signs:	13

NOTE: This estimate for bond purposes only. Contractor is responsible to confirm or provide own estimate for bidding purposes.

THERE IS NO FEMA  
FLOOD PLAN ON-SITE

OWNER/DEVELOPER  
3508 SYKESVILLE ROAD, LLC  
RONDA CARPENTER  
6150 EMERALD LANE  
SYKESVILLE, MD 21784  
443-745-0516

SIMPLIFIED FOREST STAND DELINEATION &  
FOREST CONSERVATION PLAN

## KLEES MILL CORNER

TAX MAP: 63 \* BLOCK: 5 \* PARCEL: 165  
4th ELECTION DISTRICT \* CARROLL COUNTY, MD



439 East Main Street Westminster, MD 21157-5539  
(410) 848-1790 FAX (410) 848-1791

Date	Revisions	Drawn By: BMM
4/8/24	ADDRESS HEALTH DEPARTMENT COMMENTS DATED 4/4/24	Designed By:
9/25/24	REVISED PER COUNTY COMMENTS	Reviewed By:
1/22/25	REVISED PER COUNTY COMMENTS	Date: NOV., 2023
		Scale: 1" = 30'
		Job No.: 2022117
		Sheet: 5 OF 6

County File No. P-22-0098



PLANTING PLAN

THE PLANTING CONSISTS OF 2.27 ACRES PLANTING AREA. BARE-ROOT WHIPS, CONTAINER GROWN SEEDLING TUBES (MINIMUM CAVITY WIDTH 1.5') PLANTED AT 438 TREES PER ACRE WILL BE USED FOR A TOTAL OF 990 TREES. HARDWOODS, NO LESS THAN 2.1 INCHES IN HEIGHT AND AVERAGING 2.4" IN HEIGHT WILL BE USED IN RANDOM DISTRIBUTION.

PLANTING SITE #1 - 2.27 Ac.  
990 Trees: Spacing 10 x 10 WITH TUBEX SHELTERS

QTY	SPECIES
248	RED OAK - <i>Quercus rubra</i>
165	RED MAPLE - <i>Acer rubrum</i>
164	CHERRY - <i>Prunus serotina</i>
248	WHITE OAK - <i>Quercus alba</i>
165	SUGAR MAPLE - <i>Acer saccharum</i>

MAINTENANCE AND MANAGEMENT PLAN

- A. PLANTING REQUIREMENT: 990
- B. SURVIVAL REQUIREMENT: 75% ± 743 TREES
- C. MAINTENANCE AND MANAGEMENT PERIOD: 36 MONTHS
- D. TREES WILL BE PLANTED AS SPECIFIED BELOW

MAINTENANCE AND MANAGEMENT:  
A. THE LANDOWNER/DEVELOPER WILL ENSURE THE TREE SURVIVAL DURING THE MAINTENANCE AND MANAGEMENT PERIOD. WITHIN THAT PERIOD ANY TREES DYING OR IN A SEVERELY WEAKENED CONDITION WILL BE REPLACED IN THE FIRST AVAILABLE PLANTING WINDOW. THESE PLANTINGS ARE REINFORCEMENT PLANTINGS.  
B. WATERING AND FERTILIZING WILL BE PERFORMED ON AN AS NEEDED BASIS.  
C. CONTROL OF COMPETING VEGETATION WILL BE CARRIED OUT AT LEAST TWICE ANNUALLY, DURING THE MAINTENANCE AGREEMENT. NO MOWING WILL OCCUR BETWEEN APRIL 1 THROUGH JULY 31, DUE TO THE POSSIBILITY OF GROUND NESTING WILDLIFE SPECIES.  
D. PEST, DISEASE, AND MECHANICAL INJURY WILL BE ADDRESSED IN THE FOLLOWING MANNER. MULCHING THE TREES WILL HELP PROTECT THE TREES FROM MECHANICAL DAMAGE AS IT PROVIDES SOME GUIDANCE TO THE PERSON MOWING. PEST AND DISEASE INSPECTIONS WILL BE PERFORMED ANNUALLY THROUGHOUT THE MAINTENANCE AGREEMENT.

INSPECTIONS:  
INSPECTIONS MUST MEET THE REQUIREMENTS OF SECTION 115.12 OF THE CARROLL COUNTY FOREST CONSERVATION ORDINANCE.  
A. WITHIN ONE MONTH OF THE COMPLETED PLANTING, A LANDOWNER REPRESENTATIVE AND A COUNTY REPRESENTATIVE WILL PERFORM AN INITIAL INSPECTION.  
B. AT THE END OF THE FIRST GROWING SEASON, THE LANDOWNER/DEVELOPER WILL MAKE ANOTHER INSPECTION TO CHECK SURVIVAL RATE. IF THE PLANTING SURVIVAL RATE IS BELOW THE SURVIVAL REQUIREMENT, THE LANDOWNER/DEVELOPER WILL RE-INFORCE THE PLANTING (SEE INSPECTION FORM TO COUNTY).  
C. PLANTING INSPECTIONS WILL BE CARRIED OUT FOR THE ENTIRE MAINTENANCE AGREEMENT, DURING EACH GROWING SEASON AND CONTINUE UNTIL THE FINAL INSPECTION, UPON WHICH TIME THE SURVIVAL REQUIREMENT WILL BE ENSURED. THE SAME PROCEDURE FOR NOTIFICATION WILL BE USED TO INFORM THE COUNTY.  
D. AT THE END OF THE 36 MONTH PERIOD, IF THE PLANTING MEETS OR EXCEEDS THE SURVIVAL REQUIREMENT, THE REMAINING AMOUNT OF THE CASH BOND, LETTER OF CREDIT, SURETY BOND, OR OTHER GUARANTEE SHALL BE RETURNED OR RELEASED UPON WRITTEN REQUEST OF THE PERSON REQUIRED TO PROVIDE SAID GUARANTEE.

PLANT SPECIFICATIONS  
PLANTING MATERIAL WILL CONFORM TO THE CURRENT ISSUE OF THE AMERICAN STANDARDS FOR NURSERY STOCK, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERMEN. BARE ROOT PLANTS ARE BEST PLANTED IN EARLY SPRING FROM MARCH 15 TO MAY 15.

PROTECTION DEVICES:  
THE PLANTING SITE SHALL BE PROTECTED WITH APPROPRIATE SIGNS AT APPROXIMATELY EVERY 100' (SEE DETAIL). THIS ACRESAGE WILL ALSO BE PLACED IN A FOREST CONSERVATION EASEMENT IN PERPETUITY.

- SEQUENCE OF EVENTS
1. ORDER PLANT MATERIAL FOR SPRING OR FALL PLANTING.
  2. HAVE CLSI STAKE OUT FOREST CONSERVATION EASEMENT AREA.
  3. PERFORM SITE PREP.
  4. FLAG PLANTING AREA.
  5. INSTALL PLANTS ACCORDING TO PLAN.
  6. INSTALL SIGNS AND FENCE.
  7. CONTACT COUNTY. 410-985-2210 FOR INSPECTION.
  8. MAINTAIN PLANTING PER GUIDELINES.
  9. CALL COUNTY FOR 18 MONTH INSPECTION.
  10. MAINTAIN PLANTING PER PLAN GUIDELINES.
  11. CALL FOR FINAL INSPECTION AT THE END OF THE 3 YEAR MAINTENANCE PERIOD.

MITIGATION MEASURES FOR UNANTICIPATED UNAUTHORIZED INJURY TO TREES

DISTURBANCE WITHIN THE FOREST PROTECTION AREAS IS NOT PROPOSED AT THIS TIME. HOWEVER, IF UNAUTHORIZED IMPACTS WITHIN THE FOREST PROTECTION AREAS WERE TO OCCUR, THE FOLLOWING CORRECTIVE MEASURES WILL BE REQUIRED, AS APPROPRIATE, TO INSURE TREE HEALTH AND SURVIVAL:

ROOT INJURY  
IF AN INCREASE IN GRADE WITHIN AN IDENTIFIED FOREST PROTECTION AREA OCCURS, THIS MAY RESULT IN ROOT INJURY. THE USE OF A POROUS TOPSOIL WILL BE USED TO ALLOW FOR EXCHANGE OF OXYGEN THROUGH THE SOIL. THE OPPOSITE OF THIS, LOWERING IF THE GRADE WITHIN THE PROTECTED AREA, SHALL BE MITIGATED BY COVERING THE ROOTS WITH A FINE WOOD CHIP OR ORGANIC MULCH MATERIAL. THIS WILL HELP RETAIN MOISTURE AND THEREFORE, STIMULATE ROOT RE-GROWTH INTO THE DISTURBED AREA.

SOIL COMPACTION  
SOIL COMPACTION IS A PROBLEM ON MOST CONSTRUCTION SITES; HOWEVER, THE HIGHLY VISIBLE ORANGE BLAZE PLASTIC MESH FENCE SHOULD ELIMINATE THE COMPACTION PROBLEM. IF HEAVY EQUIPMENT DID COME IN CONTACT WITH A CRITICAL ROOT ZONE, A FIBER MAT SHOULD BE Laid DOWN TO INCREASE THE WEIGHT BEARING CAPACITY AND MINIMIZE SOIL COMPACTION.

SOIL PH CHANGE  
SINCE DESIGNATED AREAS HAVE BEEN ESTABLISHED FOR CEMENT TRUCK WASH OUT AND VEHICLE FUELING, LITTLE TO NO CHANGE IN THE SOIL PH SHOULD BE SEEN. CEMENT AND FUEL SPILLS ARE THE TWO MAIN CAUSES OF SOIL PH CHANGE.

TREE WOUNDS  
WOUNDS TO THE TREE TRUNK ARE UNLIKELY TO OCCUR DUE TO THE MESH FENCE PROTECTION DEVICE; HOWEVER, CROWN BRANCHING STRUCTURES MAY BE DAMAGED BY VEHICULAR MOVEMENT. IF THIS SHOULD OCCUR, PROPER PRUNING WILL BE INITIATED, CROWN REDUCTION.

APPLICATIONS OF FERTILIZERS BY INJECTION  
AS MENTIONED ABOVE, TREES INSIDE THE PROTECTION AREA SHALL NOT BE DAMAGED DUE TO THE ESTABLISHMENT OF FOREST PROTECTION DEVICES. IF TREES ARE DAMAGED AND SHOW SIGNS OF STRESS, THEY WILL RECEIVE LIQUID FERTILIZER INJECTIONS. FERTILIZER INJECTIONS WILL IMPROVE THE HEALTH AND VIGOR OF THE DAMAGED TREE AND INCREASE THE SURVIVAL POTENTIAL. FOR RECOMMENDED RATES AND TIME OF APPLICATION, CONTACT A LICENSED TREE EXPERT.

STANDARDS FOR PROTECTING TREES FROM CONSTRUCTION ACTIVITIES

1. THE LIMIT OF DISTURBANCE (LOD) SHALL BE SURVEYED AND CLEARLY MARKED IN THE FIELD, EXTENDING THE LOD BEYOND THE PREAPPROVED LIMITS, WITHOUT OBTAINING PRIOR APPROVAL FROM THE COUNTY, IS A VIOLATION OF CHAPTER 115C.
2. BEFORE THE INITIATION OF ANY DISTURBANCE, IT SHALL BE DEMONSTRATED TO THE COUNTY THAT TREE PROTECTION MEASURES HAVE BEEN INSTALLED IN A MANNER CONSISTENT WITH THE APPROVED PCP AND THE STANDARDS OF THE TECHNICAL MANUAL.
3. ALL INSTALLED PROTECTIVE MEASURES SHALL REMAIN IN PLACE AND BE MAINTAINED IN GOOD CONDITION UNTIL COMPLETION OF CONSTRUCTION. TREE PROTECTION FENCE SHALL ONLY BE REMOVED WHEN REMOVAL OF SEDIMENT CONTROL DEVICES IS APPROVED. FOREST CONSERVATION SIGNS ALONG THE BOUNDARIES OF FOREST CONSERVATION EASEMENT AREAS SHALL REMAIN IN PERPETUITY.
4. DAMAGE OCCURRING TO AREAS OF FOREST OR SPECIFIC TREES IDENTIFIED FOR RETENTION AND PROTECTION DURING CONSTRUCTION DUE TO A LACK OF MAINTENANCE OF PROTECTION MEASURES IS A VIOLATION OF CHAPTER 115C.

PLANTING TIME FRAME

1. ANY PLANTING AREAS PROPOSED OUTSIDE THE APPROVED LIMITS OF DISTURBANCE MAY BE PLANTED UPON APPROVAL OF THE PCP.
2. A PERSON REQUIRED TO CONDUCT AFFORESTATION OR REFORESTATION ON-SITE SHALL ACCOMPLISH IT WITHIN ONE YEAR OF GRADING FINAL APPROVAL.
3. A PERSON REQUIRED TO CONDUCT AFFORESTATION OR REFORESTATION OFF SITE SHALL ACCOMPLISH IT WITHIN ONE YEAR OF THE ISSUANCE OF THE GRADING OR BUILDING PERMIT.

GENERAL GUIDANCE FOR MAINTENANCE OF PLANTED AREAS

A. WATERING: A WATERING PLAN SHOULD ONLY BE IMPLEMENTED TO COMPENSATE FOR DEFICIENT RAINFALL PATTERNS. TREES CAN DIE FROM TOO MUCH WATER AS WELL AS TOO LITTLE. NEWLY PLANTED TREES MAY NEED WATER AS MUCH AS ONCE A WEEK FOR THE ENTIRE FIRST GROWING SEASON. THE NEXT TWO YEARS, IN CONTRAST, MAY REQUIRE WATERING ONLY A FEW TIMES A YEAR (ONCE A MONTH DURING JULY AND AUGUST). AFTER THAT, TREES SHOULD ONLY NEED WATER IN SEVERE DROUGHTS. BARE ROOT TRANSPLANTS, IF SUFFICIENTLY WATERED DURING PLANTING, MAY NOT NEED WATER FOR ALMOST 2-4 WEEKS AFTER GROWTH BEGINS. BALLED AND BURLAP MATERIAL MAY REQUIRE MORE FREQUENT WATERING.

SOIL AND WATERING: SOIL TEXTURE INFLUENCES THE DOWNWARD FLOW OF WATER. SOILS WITH MORE CLAY TEND TO RETAIN MORE WATER AND CAN BE WATERED LESS OFTEN. SOILS WITH MORE SAND DRAIN MORE QUICKLY AND NEED TO BE WATERED MORE OFTEN. FOR EXAMPLES OF ON-SITE EVALUATION RECOMMENDATIONS, IF THE SOIL WAS WELL PREPARED BEFORE PLANTING THERE SHOULD BE FEW DRAINAGE PROBLEMS. RESTRICTED DOWNWARD PENETRATION INDICATES THE SOIL MAY HAVE BEEN COMPACTED DURING CONSTRUCTION AND NOT AERATED BEFORE PLANTING, OR THERE MAY BE A CLAY HARDPAN.

HOW TO WATER: THE BEST WAY TO WATER IS DEEPLY AND SLOWLY USING A REGULAR HOSE, A SOWER HOSE, OR DRIP IRRIGATION. FOR LARGER TREES, START BY WATERING THE ROOT BALL THOROUGHLY. THE WATERED AREA SHALL BE ENLARGED TO INCLUDE THE WHOLE ROOT ZONE AS THE TREE BECOMES MORE ESTABLISHED. MULCHING AROUND THE BASE OF NEWLY TRANS-PLANTED TREES PREVENTS ROOTS FROM DRYING TOO QUICKLY WHILE PROVIDING AIR MOVEMENT TO THE ROOTS.

B. FERTILIZING: FERTILIZING IS THE CHEMICAL MODIFICATION OF SOILS TO CORRECT FOR A SPECIFIC NUTRIENT DEFICIENCY. THESE DEFICIENCIES ARE MOST EFFECTIVELY IDENTIFIED IN A LABORATORY SOIL ANALYSIS. NOTHING SHOULD BE ADDED TO THE SOIL WITHOUT FIRST TESTING TO DETERMINE ANY NUTRIENT NEEDS.

WHAT NUTRIENTS TO APPLY: TREES DEPEND ON THREE MAJOR NUTRIENTS, NITROGEN, PHOSPHOROUS AND POTASSIUM AND A HOST OF OTHER MINOR ONES (OR MICRONUTRIENTS) SUCH AS CALCIUM, MAGNESIUM AND IRON. IN MOST SOILS, MOST OF THE MICRONUTRIENTS ARE AVAILABLE IN ABUNDANCE. OF THE MAJOR NUTRIENTS, NITROGEN IS USUALLY THE LIMITING ONE.

WHEN TO FERTILIZE: EVEN WHEN SOILS ARE DEFICIENT IN NITROGEN, FERTILIZING WITHIN THE FIRST GROWING SEASON AFTER PLANTING IS RECOMMENDED. TOO MUCH NITROGEN MAY CAUSE A BURST OF CANOPY GROWTH WHICH THE ROOTS CANNOT SUPPORT. IT IS THEREFORE BEST TO WAIT UNTIL AFTER THE END OF THE FIRST GROWING SEASON, EITHER IN THE LATE FALL OR EARLY SPRING.

WHAT TYPE OF FERTILIZER: ORGANIC FERTILIZERS ARE PREFERRED TO SYNTHETIC FERTILIZERS. BONE MEAL OR BEANWEEED BASED PRODUCTS ARE AVAILABLE COMMERCIALY. ORGANIC FERTILIZERS HAVE A SLOW-RELEASE EFFECT THAT CAN SUPPLY NUTRIENTS TO THE PLANT AS NEEDED WHILE MINIMIZING THE RISK OF EXCESSIVE NUTRIENTS ENTERING THE FOREST SYSTEM AND WATER SUPPLY.

C. CONTROL OF COMPETING VEGETATION: UNFORTUNATELY, GOOD SITES FOR REFORESTATION AND AFFORESTATION ARE GENERALLY GOOD SITES FOR UNWANTED VEGETATION AS WELL. UNWANTED VEGETATION GROWING NEAR NEWLY PLANTED TREES CAN TAKE OVER THE SITE. THE NEED TO CONTROL THIS PROBLEM DEPENDS ON THE ABILITY OF THE PLANT MATERIAL TO WITHSTAND THE INTRUSION. SMALLER TREES MAY NEED MORE CARE, ALTHOUGH SOME SEEDLINGS SURVIVE WITH THE OVERGROWTH AND WILL SHADE IT OUT AS THE TREES GROW AS A PREVENTATIVE MEASURE, CONSIDER THE POTENTIAL FOR GROWTH OF INVASIVE SPECIES.

MULCH IS ONE OF THE BEST WEED DETERRENTS. SPREAD A 2-4 INCH LAYER OF MULCH OVER THE ROOT AREA OF A NEWLY PLANTED TREE AVOIDING DIRECT CONTACT WITH THE TRUNK, A PRIME SPOT FOR FUNGAL GROWTH. MULCH ALSO HELPS MAINTAIN THE SOIL MOISTURE LEVEL, AND MAY PROVIDE A BUFFER FOR ANY EQUIPMENT THAT MAY BE USED TO MAINTAIN THE AREA.

D. PROTECTION: PESTS, DISEASE AND MECHANICAL INJURY. INTEGRATED PEST MANAGEMENT (IPM) IS ONE OF THE MOST EFFECTIVE AND SAFEST APPROACHES FOR MAINTAINING A HEALTHY FOREST. IPM BACKS INCLUDE PROPER SPECIE SELECTION FOR THE SITE, GOOD PRUNING, MULCHING AND FERTILIZING PRACTICES, REGULAR MONITORING, AND PROPER TIMING OF NECESSARY SPRAYS. GOOD CULTURAL PRACTICES WILL MINIMIZE THE AMOUNT OF SPRAYING. PROFESSIONAL IPM PROGRAMS HAVE REDUCED PESTICIDE USE BY 90%. SOME ASPECTS OF A FULL IPM PROGRAM INCLUDE:

- 1) ELIMINATION OF SOME LOW VEGETATION BEFORE PLANTING TO HELP CONTROL THE RODENT POPULATION WHICH THRIVES IN BRUSHY ENVIRONMENT.
- 2) USE OF TREE SHELTERS TO PROTECT THE TRUNKS OF SEEDLINGS OR WHIPS FROM ANIMAL DAMAGE. THE SHELTERS ACT AS MINI GREENHOUSES TO SPEED GROWTH. THESE TREES NEED MORE WATER THAN THOSE PLANTED WITHOUT TREE SHELTERS.
- 3) MULCHING AROUND THE TREES TO MINIMIZE TRUNK DAMAGE FROM MOWERS. WOUNDS PROVIDE AN ENTRYWAY FOR PESTS.
- 4) PRUNING DEAD AND DISEASE BRANCHES TO PREVENT ESTABLISHMENT OR SPREADING OF DISEASE.

PLANTING INSPECTIONS

1. ONCE THE PLANTING OCCURS, THE COUNTY SHALL PERFORM AN INITIAL INSPECTION. IF THE PLANTING IS EXECUTED IN ACCORDANCE WITH THE APPROVED PCP AND THE TECHNICAL MANUAL, THE INSPECTION SHALL BE APPROVED AND THE INSPECTION PERIOD SHALL BEGIN.
2. AFTER TWO YEARS, IF THE PLANTING ASSOCIATED WITH THE AFFORESTATION OR REFORESTATION MEETS OR EXCEEDS THE STANDARDS OF THE TECHNICAL MANUAL, A PERCENTAGE OF THE GUARANTY MAY BE RELEASED.
3. AFTER FIVE YEARS, IF THE PLANTING ASSOCIATED WITH THE AFFORESTATION OR REFORESTATION MEETS OR EXCEEDS THE STANDARDS OF THE TECHNICAL MANUAL, FINAL INSPECTION APPROVAL SHALL BE GRANTED, THE INSPECTION PERIOD SHALL CONCLUDE, AND THE REMAINING AMOUNT OF THE GUARANTY SHALL BE RELEASED.
4. IF AT THE END OF THE SIX MONTH INSPECTION OR THE FIVE YEAR INSPECTION, SURVIVAL RATES DO NOT MEET THE STANDARDS OF THE TECHNICAL MANUAL, THE AFFORESTATION OR REFORESTATION AREA SHALL BE REPLANTED TO THE FULL STOCKING LEVEL, AND A FIVE YEAR EXTENSION OF THE MAINTENANCE AGREEMENT AND BOND SHALL BE REQUIRED.

OWNER/DEVELOPER

3508 SYKESVILLE ROAD, LLC  
RONDA CARPENTER  
6150 EMERALD LANE  
SYKESVILLE, MD 21784  
443-745-0516

PLANTING PLAN FOR KLEES MILL CORNER

TAX MAP: 63 \* BLOCK: 5 \* PARCEL: 165  
4th ELECTION DISTRICT \* CARROLL COUNTY, MD



439 East Main Street Westminster, MD 21157-5539  
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Date	Revisions	Drawn By:
4/8/24	ADDRESS HEALTH DEPARTMENT COMMENTS DATED 4/4/24	Designed By:
9/25/24	REVISED PER COUNTY COMMENTS	Reviewed By:
1/22/25	REVISED PER COUNTY COMMENTS	Date: NOV., 2023
		Scale: AS SHOWN
		Job No.: 2022117
		Sheet: 6 OF 6