

FOUNTAIN VALLEY ANALYTICAL LABORATORY, INC.

1413 Old Taneytown Rd. Westminster, MD (410) 848-1014 (410) 876-4554

REPORT OF ANALYSIS

Laboratory ID #: 148080 Account #: 1045
Reference: CBI/Clover Mill Lot 3 Client: Atlantic Blue Water Services
Location: 3008 Skye Meadow Way Requested By: Mark Mather
West Friendship, MD 21794 Source: Well Water
Date/ Time Collected: 10/15/2021 1015 Site: Powder Room Sink
Date/Time Rec'd: 10/15/2021 1328 Treatment: None
Chlorine ppm: Free: ND Total: ND pH: 5.8
Collected By: M. Mather 0258MM Well #: HO-18-0059

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	<1.0	MPN/ 100 ml	<1.0	SM20 9223B	10/16/2021 / 0900 / TSD
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM20 9223B	10/16/2021 / 0900 / TSD

NOTES:

- 1 MPN/ 100 ml = Most Probable Number [of viable bacteria] per 100 ml of sample.
- 2 pH and Chlorine level tested in lab (pH tested after recommended holding time)
- 3 Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- 4 ND = None Detected
- 5 Sample collected by client, analyzed as received
- 6 Visual well check: Sealed, vented cap

Reason for Test : Use & Occupancy

Building Permit # : B21000388

Date Reported: 10/18/2021

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REPORT OF ANALYSIS

Laboratory ID #: 148005 Account #: 1045
Reference: CBI/Clover Mill Lot 3 Client: Atlantic Blue Water Services
Location: 3008 Skye Meadow Way Requested By: Mark Mather
West Friendship, MD 21794 Source: Well Water
Date/ Time Collected: 10/12/2021 1321 Site: Powder Room Sink
Date/Time Rec'd: 10/12/2021 1617 Treatment: None
Chlorine ppm: Free: ND Total: ND pH: 6.3
Collected By: C. Mike Crouse 1510CC Well #: HO-18-0059

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	2.0	MPN/ 100 ml	<1.0	SM20 9223B	10/13/2021 / 1100 / CRS
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM20 9223B	10/13/2021 / 1100 / CRS

NOTES:

- 1 MPN/ 100 ml = Most Probable Number [of viable bacteria] per 100 ml of sample.
- 2 Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- 3 ND = None Detected
- 4 Sample collected by client, analyzed as received
- 5 pH & Chlorine level tested on site

Reason for Test : Use & Occupancy
Building Permit # : B21000388

Date Reported: 10/13/2021

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1413 Old Taneytown Rd. Westminster, MD (410) 848-1014 (410) 876-4554

REPORT OF ANALYSIS

Laboratory ID #: 147877 Account #: 1045
Reference: Clover Mill Lot 3 Client: Atlantic Blue Water Services
Location: 3008 Skye Meadow Way Requested By: Mark Mather
West Friendship, MD 21794 Source: Well Water
Date/ Time Collected: 10/6/2021 1330 Site: Bathroom Tap
Date/Time Rec'd: 10/6/2021 1553 Treatment: None
Chlorine ppm: Free: ND Total: ND pH: 5.6
Collected By: I. Black 2107IB Well #: N/A

PARAMETERS	RESULTS	UNITS	REFERENCE	METHOD	DATE/TIME/ANALYST
Bacteria, Coliform, Total, MPN	34.4	MPN/ 100 ml	<1.0	SM20 9223B	10/7/2021 / 1030 / TSD
Bacteria, E. coli, MPN	<1.0	MPN/ 100 ml	<1.0	SM20 9223B	10/7/2021 / 1030 / TSD
Nitrate	<0.30	mg/L	10	Hach 10206	10/7/2021 / 1040 / CRS
Turbidity	4.95	NTU	<10	SM20 2130B	10/7/2021 / 0900 / TSD
Sand	ND	mg/L	5	Visual/Gravimetric	10/6/2021 / 1625 / TSD

NOTES:

- 1 mg/L = milligrams per liter (also, parts per million)
- 2 MPN/ 100 ml = Most Probable Number [of viable bacteria] per 100 ml of sample.
- 3 NTU = Nephelometric Turbidity Units
- 4 Results less than or within the reference range are considered satisfactory and within potable water limits at the time of sampling.
- 5 ND = None Detected; N/A: Not Available
- 6 Sample collected by client, analyzed as received
- 7 pH & Chlorine level tested on site

Reason for Test : Use & Occupancy

Building Permit # : B21000388

Date Reported: 10/7/2021



HOWARD COUNTY HEALTH DEPARTMENT

WS
64848

DATE
4/12/19

Received From

PHONE #

CASH
 CHECK
NO.
012835

For

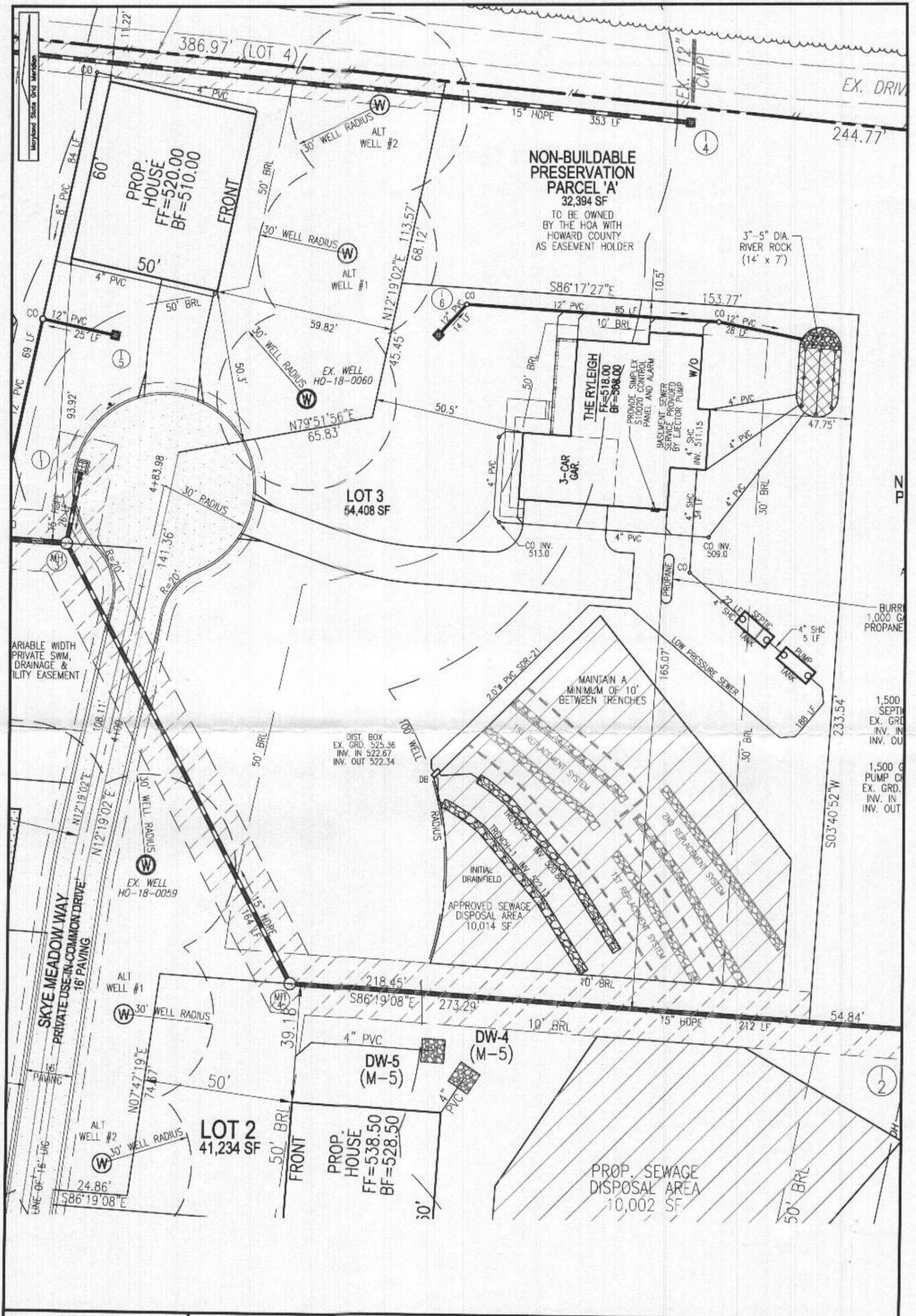
67 Wells
~~12668 Miller Korn~~

\$ 1120.00

Received By

[Signature]

Dollars

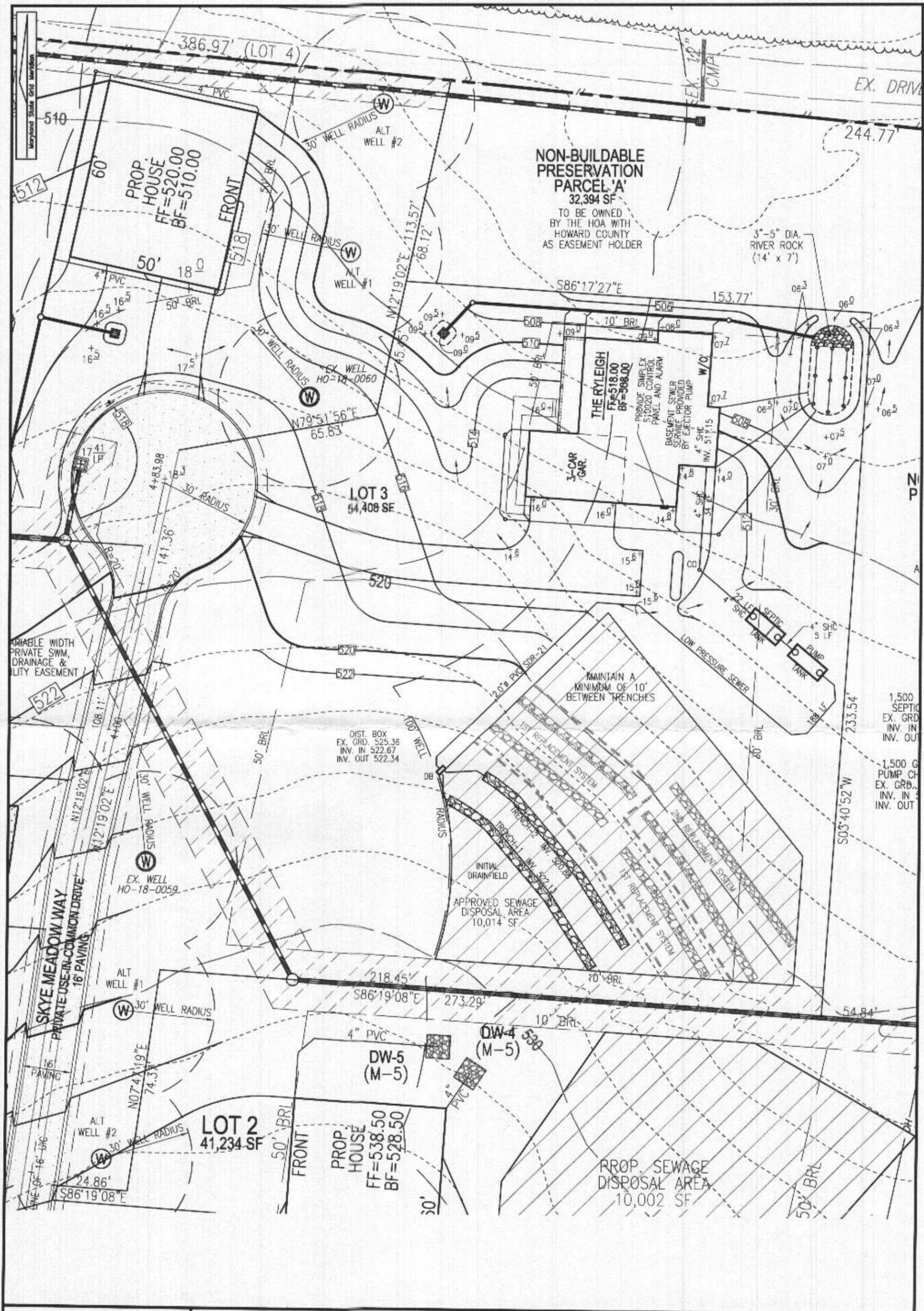


SCALE 1"=30'
 DRAWN BY JMR
 CHECKED BY RHV
 DATE 01/20/21
 W. O. # 15-36
 SHEET# 1 OF 4

PLOT PLAN
ROVER MILL ESTATES
LOT 3
3008 SKYE MEADOW WAY

PARCEL: 169
 TAX MAP: 15 GRID: 14
 3RD ELECTION DISTRICT

REF: F-19-056
 ZONED: RR-DEO
 L. 19082 / F. 490
 HOWARD COUNTY, MARYLAND



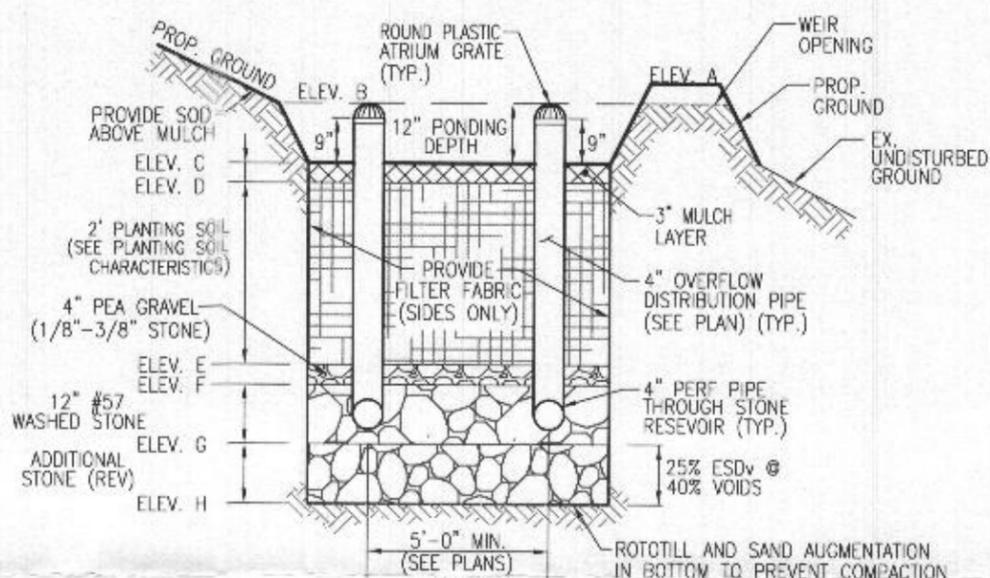
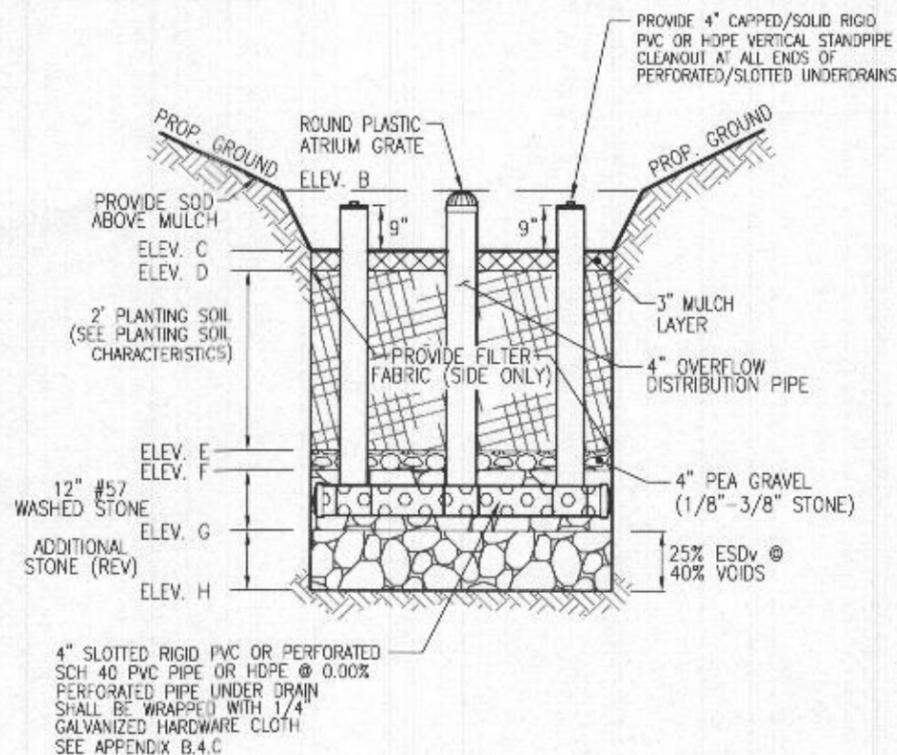
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PARCEL: 169
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**MICRO-BIORETENTION
(MBR-1)
W/ WEIR ONLY
NOT TO SCALE**

MICRO-BIORETENTION FACILITY ELEVATIONS (M-6)											
FACILITY	A	B	C	D	E	F	G	H	WEIR ELEV.	UNDERDRAIN INVERT	FACILITY SIZE
MBR-1	506.30	506.00	505.00	504.75	502.75	502.42	501.42	500.59	506.00	501.75	371 SF

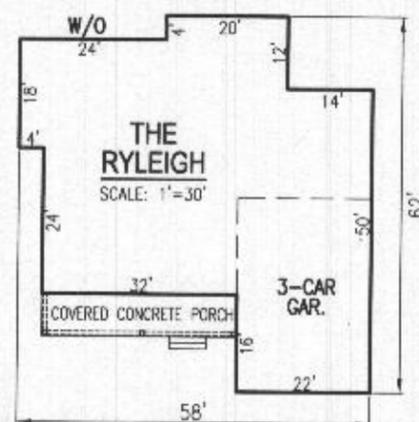
OPERATION AND MAINTENANCE SCHEDULE FOR (M-6) MICROBIORETENTION AREAS

- ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL VOL. II, TABLE A.4.1 AND 2.
- SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.
- MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
- SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

MICROBIORETENTION NOTES:

- ONLY THE SIDES OF MICROBIORETENTION ARE TO BE WRAPPED IN FILTER FABRIC. FILTER FABRIC BETWEEN LAYER OR AT THE BOTTOM OF THE MICROBIORETENTION WILL CAUSE THE MBR TO FAIL, AND THEREFORE SHALL NOT BE INSTALLED.
- WRAP THE PERFORATED MBR UNDERDRAIN PIPE WITH 1/4" MESH (4x4) OR SMALLER GALVANIZED HARDWARE CLOTH.
- PROVIDE 5' MINIMUM SPACING BETWEEN UNDER DRAIN AND PERFORATED PIPE THROUGH STONE RESERVOIR OR SPACE PIPE EQUALLY ACROSS BOTTOM FOR SMALL BIOS. (SEE PLANS)

MBR-1
 D.A.=20,589 SF IMP=5,145 I=25
 $R_v=0.05+(0.009)(25)=.28$
 $ESD_v=(20,589)(1.0)(0.28)/12=480$ CF (MIN.)
 AREA ABOVE MULCH=(480 CF)(0.75)=360 SF (MIN.)
 AREA PROVIDED 371 SF
 ESD_v PROVIDED 371 SF/.75 = 495 CF



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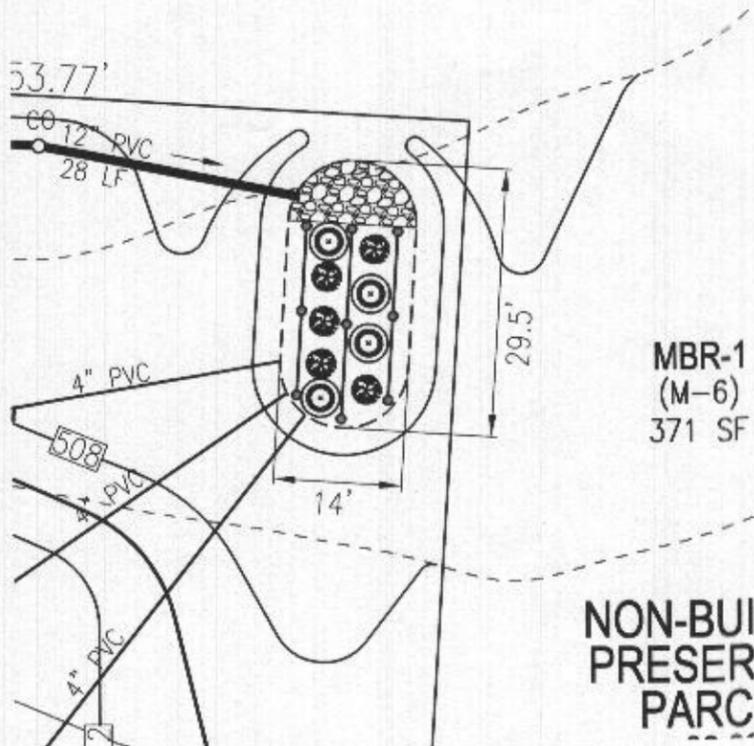
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"MICRO-BIORETENTION" PLANTING SCHEDULE NOTES:

1. ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAS SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HOWARD COUNTY PLANTING SPECIFICATIONS.
2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
3. FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
4. CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.
5. MICROBIORETENTION AREAS ARE TO BE PLANTED BASED ON A MINIMUM DENSITY OF 1000 STEMS PER PLANTED ACRE (.0229 STEMS PER SQUARE FOOT). ABOVE PLANTING RATIOS ARE TO BE APPLIED TO THE AREAS PROVIDED IN THE ESDv SUMMARY.
6. FILTER AREA SHALL BE 50% COVERED BY PLANTINGS AT FULL GROWTH

1. TABLE A.4 IS TAKEN FROM THE "2000 MARYLAND STORMWATER MANUAL, VOLUME II - APPENDIX A.
2. CONTRACTOR SHALL BE FAMILIAR WITH APPENDIX B.4.C "CONSTRUCTION SPECIFICATIONS", AND TABLE B.4.1 "MATERIAL SPECIFICATIONS". IN ADDITION, THE "2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUME II - APPENDIX A, OFFERS ADDITIONAL HELPFUL INFORMATION.
3. NO TREES SHALL BE PLANTED WITHIN A MICRO-BIORETENTION FACILITY. USE ONLY SHRUB OR HERBACEOUS SPECIES.
4. ABOVE TABLE A.4 IS FOR INFORMATIONAL PURPOSES ONLY. LANDSCAPE CONTRACTOR SHALL INSTALL PLANTINGS SPECIFIED IN THE PLANTING SCHEDULES SHOWN HEREON. CHOOSE FROM THE ABOVE TABLE, OR USE APPROVED EQUAL SPECIES WHICH ARE TOLERANT TO FLUCTUATING WATER LEVELS. IF SUBSTITUTIONS ARE CHOSEN, APPROVAL FROM THE ENGINEER IS REQUIRED.
5. PLANTINGS SHOWN HEREON ARE THE RESPONSIBILITY OF THE DEVELOPER TO INSTALL DURING THE CONSTRUCTION OF THIS FINAL PLAN.



MBR-1 PLANTING DETAIL (371 SF)

SCALE: 1"=20'

MICRO-BIORETENTION PLANTING SCHEDULE (MBR-1)				
	QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
	4	LINDERA BENZOIN SPICEBUSH	3 GALLON	CONT
	5	ILEX GLABRA INKBERRY	3 GALLON	CONT

1. SF x 0.0229 STEMS PER SQUARE FOOT = PLANTS REQUIRED
 2. PLANTINGS REQUIRED: 8

Table A.4 Commonly Used Species for Bioretention Areas

Trees	Shrubs	Herbaceous Species
<i>Acer rubrum</i> Red Maple	<i>Aesculus parviflora</i> Bottlebrush Buckeye	<i>Andropogon virginicus</i> Broomsedge
<i>Betula nigra</i> River Birch	<i>Cephalanthus occidentalis</i> Buttonbush	<i>Eupatorium purpurea</i> Joe Pye Weed
<i>Juniperus virginiana</i> Eastern Red Cedar	<i>Hamamelis virginiana</i> Witch Hazel	<i>Scirpus pungens</i> Three Square Bulrush
<i>Chionanthus virginicus</i> Fringe-tree	<i>Vaccinium corymbosum</i> Highbush Blueberry	<i>Iris versicolor</i> Blue Flag
<i>Nyssa sylvatica</i> Black Gum	<i>Ilex glabra</i> Inkberry	<i>Lobelia cardinalis</i> Cardinal Flower
<i>Diospyros virginiana</i> Persimmon	<i>Ilex verticillata</i> Winterberry	<i>Panicum virgatum</i> Switchgrass
<i>Platanus occidentalis</i> Sycamore	<i>Viburnum dentatum</i> Arrowwood	<i>Dichanthelium scoparium</i> Broom Panic Grass
<i>Quercus palustris</i> Pin Oak	<i>Lindera benzoin</i> Spicebush	<i>Rudbeckia laciniata</i> Tall Coneflower
<i>Quercus phellos</i> Willow Oak	<i>Myrica pennsylvanica</i> Bayberry	<i>Scirpus cyperinus</i> Woolgrass
<i>Salix nigra</i> Black willow		<i>Vernonia noveboracensis</i> New York Ironweed

Note 1: For more options on plant selection for bioretention, consult Bioretention Manual (ETAB, 1993) or the Design of Stormwater Filtering Systems (Claytor and Schueler, 1997).

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