



**HEALTH**  
 G14000305  
 Anz  
 5/9/19

### Building Permit Application

Howard County Maryland  
 Department of Inspections, Licenses and Permits  
 3430 Court House Drive  
 Permits: 410-313-2455  
 www.howardcountymd.gov

Date Received: 5/9/19

Permit No.: B19001462

Building Address: 12344 Point Ridge Drive  
 City: Highland State: MD Zip Code: 20759  
 Suite/Apt. # \_\_\_\_\_ SDP/WP/BA #: \_\_\_\_\_  
 Census Tract: \_\_\_\_\_ Subdivision: Highland Reserve aka Regan Property  
 Section: \_\_\_\_\_ Area: \_\_\_\_\_ Lot: 4  
 Tax Map: 34 Parcel: 200 Grid: 24  
 Zoning: RR-DEO Map Coordinates: \_\_\_\_\_ Lot Size: 1.243 acres  
 Existing Use: Vacant  
 Proposed Use: Single Family Dwelling  
 Estimated Construction Cost: \$ 425,000  
 Description of Work: Ashbrooke - F Elevation - 3 car garage - 4' rear extension - Rear Sunroom; Areaway In-Law Suite (Guest BR on 1st floor; no kitchen) 10R; 6BR; 5FB; 1HB; fireplace Seeking Silver Level Certification of the NGBS-3rd party verification by Pando Alliance  
 Occupant or Tenant: \_\_\_\_\_  
 Was tenant space previously occupied?  Yes  No  
 Contact Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Email: \_\_\_\_\_

Property Owner's Name: MB Highland Reserve  
 Address: 1686 E. Gude Drive  
 City: Rockville State: MD Zip Code: 20850  
 Phone: 301-762-9511 Fax: 301-610-9564  
 Email: MQuint@mitchellbest.com  
 Applicant's Name & Mailing Address, (if other than stated herein)  
 Applicant's Name: Marc Quint - MB Highland Reserve LLC  
 Address: 1686 E. Gude Drive  
 City: Rockville State: MD Zip Code: 20850  
 Phone: 301-762-9511 Fax: 301-610-9564  
 Email: MQuint@mitchellbest.com  
 Contractor Company: MB Highland Reserve LLC  
 Contact Person: Marc Quint  
 Address: 1686 E. Gude Drive  
 City: Rockville State: MD Zip Code: 20850  
 License No.: 7316  
 Phone: 301-762-9511 ext. 318 Fax: \_\_\_\_\_  
 Email: MQuint@mitchellbest.com  
 Engineer/Architect Company: \_\_\_\_\_  
 Responsible Design Prof.: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Email: \_\_\_\_\_

**RECEIVED**

**MAY 09 2019**

LICENSES & PERMITS  
 DIVISION

Commercial Building Characteristics	Residential Building Characteristics	
Height:	<input checked="" type="checkbox"/> SF Dwelling <input type="checkbox"/> SF Townhouse	
No. of stories:	<b>Depth</b>	<b>Width</b>
Gross area, sq. ft./floor:	1 <sup>st</sup> floor: 54'	62'
	2 <sup>nd</sup> floor: 54'	62'
Area of construction (sq. ft.):	Basement: 54'	62'
Use group:	<input checked="" type="checkbox"/> Finished Basement	
	<input type="checkbox"/> Unfinished Basement	
	<input type="checkbox"/> Crawl Space	
<b>Construction type:</b>	<input type="checkbox"/> Slab on Grade	
<input type="checkbox"/> Reinforced Concrete	No. of Bedrooms: 6	
<input type="checkbox"/> Structural Steel	<b>Multi-family Dwelling</b>	
<input type="checkbox"/> Masonry	No. of efficiency units:	
<input type="checkbox"/> Wood Frame	No. of 1 BR units:	
<input type="checkbox"/> State Certified Modular	No. of 2 BR units:	
	No. of 3 BR units:	
	Other Structure:	
	Dimensions:	
<b>&gt; Roadside Tree Project Permit</b>	Footings:	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Roof:	
<b>Roadside Tree Project Permit #</b>	<input type="checkbox"/> State Certified Modular	
	<input type="checkbox"/> Manufactured Home	

Utilities	
<b>Water Supply</b>	
<input type="checkbox"/> Public	
<input checked="" type="checkbox"/> Private	
<b>Sewage Disposal</b>	
<input type="checkbox"/> Public	
<input checked="" type="checkbox"/> Private	
Electric: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Gas: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Heating System</b>	
<input type="checkbox"/> Electric <input type="checkbox"/> Oil	
<input type="checkbox"/> Natural Gas <input checked="" type="checkbox"/> Propane Gas	
<input type="checkbox"/> Other:	
<b>Sprinkler System:</b>	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Grading Permit Number: <u>G14000305</u>	
Building Shell Permit Number:	

THE UNDERSIGNED HEREBY CERTIFIES AND AGREES AS FOLLOWS: (1) THAT HE/SHE IS AUTHORIZED TO MAKE THIS APPLICATION; (2) THAT THE INFORMATION IS CORRECT; (3) THAT HE/SHE WILL COMPLY WITH ALL REGULATIONS OF HOWARD COUNTY WHICH ARE APPLICABLE THERETO; (4) THAT HE/SHE WILL PERFORM NO WORK ON THE ABOVE REFERENCED PROPERTY NOT SPECIFICALLY DESCRIBED IN THIS APPLICATION; (5) THAT HE/SHE GRANTS COUNTY OFFICIALS THE RIGHT TO ENTER ONTO THIS PROPERTY FOR THE PURPOSE OF INSPECTING THE WORK PERMITTED AND POSTING NOTICES.

MQuint  
 Applicant's Signature  
MQuint@MitchellBest.com  
 Email Address  
Operations Manager  
 Title/Company

Marc Quint  
 Print Name  
5/9/19  
 Date

Checks Payable to: DIRECTOR OF FINANCE OF HOWARD COUNTY  
 \*\*PLEASE WRITE NEATLY & LEGIBLY\*\*  
 -FOR OFFICE USE ONLY-

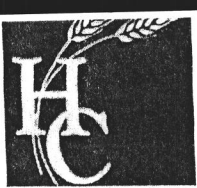
AGENCY	DATE	SIGNATURE OF APPROVAL
State Highways		
Building Officials		
PSZA ( Zoning )		
PSZA ( Engineering )		
Health	<u>5-31-19</u>	<u>DBeungel</u>
Is Sediment Control approval required for issuance? <input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> CONTINGENCY CONSTRUCTION START		

DPZ SETBACK INFORMATION
Front:
Rear:
Side:
Side St.:
All minimum setbacks met? <input type="checkbox"/> Yes <input type="checkbox"/> No
Is Entrance Permit Required? <input type="checkbox"/> Yes <input type="checkbox"/> No
Historic District? <input type="checkbox"/> Yes <input type="checkbox"/> No
Lot Coverage for New Town Zone:
SDP/Red-line approval date:

Filing Fee	\$ <u>100.00</u>
Permit Fee	\$
Tech Fee	\$
Excise Tax	\$
PSFS	\$
Guaranty Fund	\$ <u>50.00</u>
Add'l per Fee	\$
Total Fees	\$
Sub- Total Paid	\$
Balance Due	\$
Check	<u>003814</u>

Distribution of Copies: White: Building Officials Green: PSZA,Zoning Yellow: PSZA,Engineering Pink: Health Gold: SHA

**\*NO WKSHT SUBMITTED\*** rho



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 Tax Map: 34 Parcel: 200 Grid: 24  
 Zoning: RR-DEO Map Coordinates: \_\_\_\_\_ Lot Size: 1.243 acres

Existing Use: Vacant  
 Proposed Use: Install 1000 gallon underground propane tank  
 Estimated Construction Cost: \$ \$3500.00  
 Description of Work: Install 1000 gallon underground propane tank

Occupant or Tenant: \_\_\_\_\_  
 Was tenant space previously occupied?  Yes  No  
 Contact Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
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 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Email: \_\_\_\_\_

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 Phone: 301-762-9511 Fax: 301-610-9564  
 Email: MQuint@mitchellbest.com

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 Address: 1686 E. Gude Drive  
 City: Rockville State: MD Zip Code: 20850  
 Phone: 301-762-9511 Fax: 301-610-9564  
 Email: MQuint@mitchellbest.com

Contractor Company: National Propane Buyers Co-op  
 Contact Person: David Jaray  
 Address: 22318 Clarksburg Rd.  
 City: Boyd's State: MD Zip Code: 20841  
 License No.: 67631  
 Phone: 301-515-0098 Fax: \_\_\_\_\_  
 Email: NPBC@npbcgas.net

Engineer/Architect Company: \_\_\_\_\_  
 Responsible Design Prof.: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
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<input type="checkbox"/> Wood Frame	No. of Bedrooms: <u>6</u>	
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<input checked="" type="checkbox"/> Roadside Tree Project Permit	No. of efficiency units: _____	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	No. of 1 BR units: _____	
Roadside Tree Project Permit # _____	No. of 2 BR units: _____	
	No. of 3 BR units: _____	
	Other Structure: _____	
	Dimensions: _____	
	Footings: _____	
	Roof: _____	
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	<input type="checkbox"/> Manufactured Home	

Utilities	
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<input checked="" type="checkbox"/> Private	
<u>Sewage Disposal</u>	
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Gas: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
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Applicant's Signature: Marc Quint  
 Email Address: MQuint@mitchellbest.com  
 Title/Company: \_\_\_\_\_

Print Name: Marc Quint  
 Date: 8/17/19

Checks Payable to: DIRECTOR OF FINANCE OF HOWARD COUNTY  
 \*\*PLEASE WRITE NEATLY & LEGIBLY\*\*  
 -FOR OFFICE USE ONLY-

AGENCY	DATE	SIGNATURE OF APPROVAL
State Highways		
<input checked="" type="checkbox"/> Building Officials		
<input checked="" type="checkbox"/> PSZA ( Zoning )		
<input checked="" type="checkbox"/> PSZA ( Engineering )		
<input checked="" type="checkbox"/> Health	<u>9/4/19</u>	<u>H.Oswald</u>

DPZ SETBACK INFORMATION

Front: \_\_\_\_\_  
 Rear: \_\_\_\_\_  
 Side: \_\_\_\_\_  
 Side St.: \_\_\_\_\_  
 All minimum setbacks met?  Yes  No  
 Is Entrance Permit Required?  Yes  No  
 Historic District?  Yes  No  
 Lot Coverage for New Town Zone: \_\_\_\_\_  
 SDP/Red-line approval date: \_\_\_\_\_

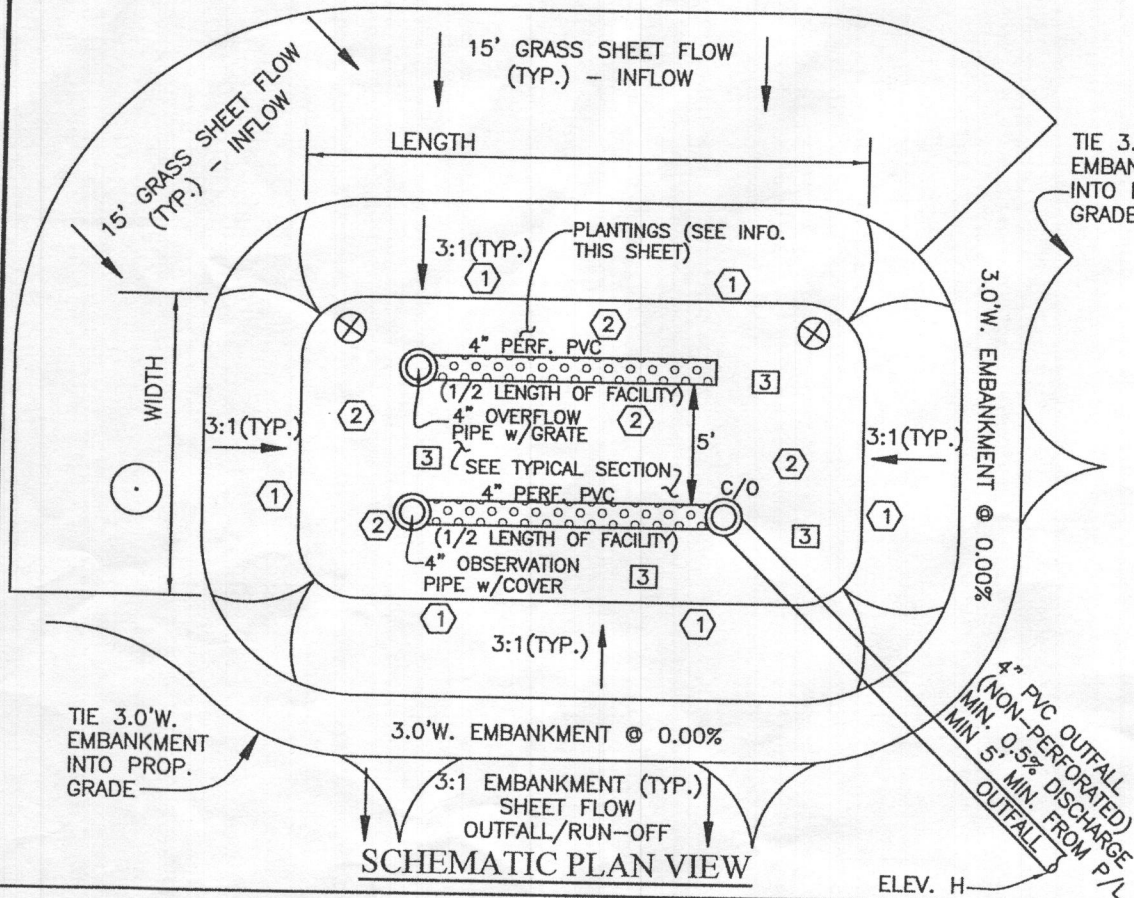
Filing Fee	\$ <u>110.00</u>
Permit Fee	\$
Tech Fee	\$
Excise Tax	\$
PSFS	\$
Guaranty Fund	\$
Add'l per Fee	\$
Total Fees	\$
Sub- Total Paid	\$
Balance Due	\$
Check	# <u>103963</u>

Is Sediment Control approval required for issuance?  Yes  No  
 CONTINGENCY CONSTRUCTION START

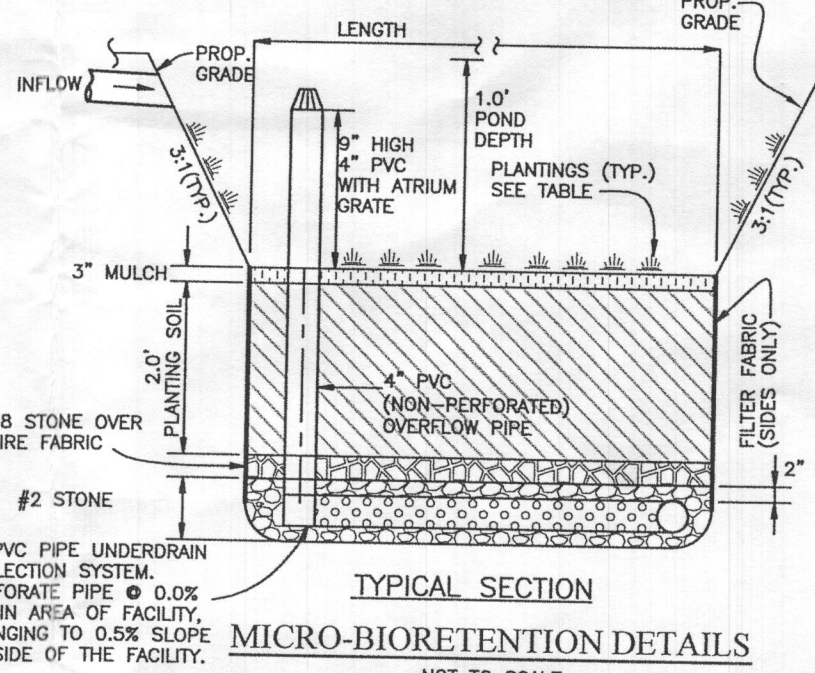
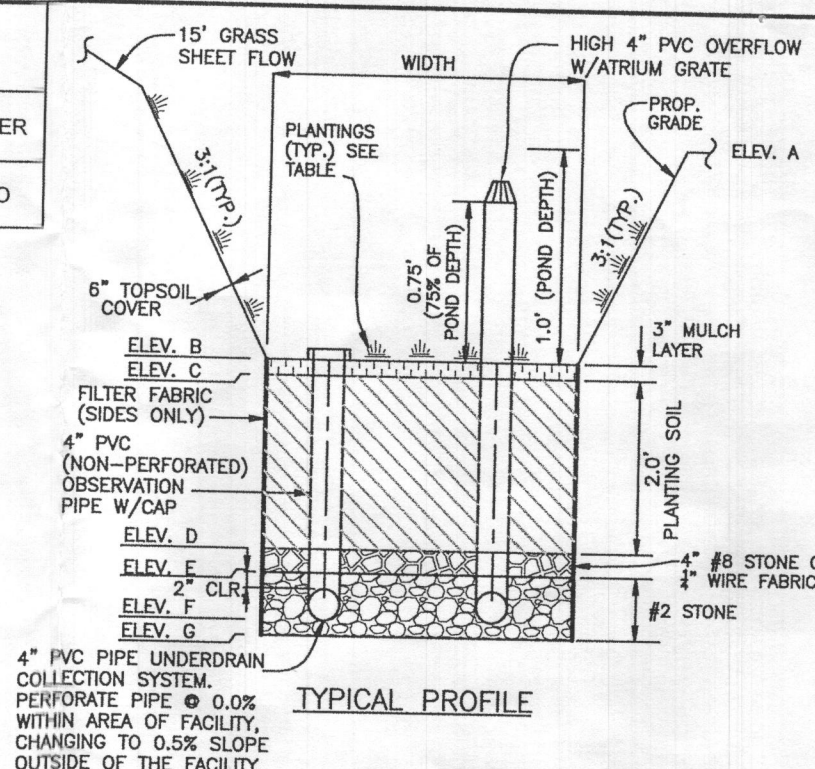


### ON-LOT BIORETENTION DIMENSIONS

FACILITY	A	B	C	D	E	F	G	H	LENGTH	WIDTH	FILTER (Af)	PLANTINGS			LINER
												①	②	③	
MBR-3	409.00	408.00	407.75	405.75	405.42	404.92	403.62	385.00	25.4	18.9	379	84	84	42	NO



NOTE: IMPERMEABLE LINER REQUIRED WHEN FACILITY IS INSTALLED IN THE 100' WELL RADIUS. THIS LINING SHOULD INCLUDE ENTIRE SIDES AND BOTTOM OF THE EXCAVATION AND EXTEND TO TOP OF EMBANKMENT. LINING ON SIDE SLOPES SHALL BE BELOW A MINIMUM OF 6" OF TOP SOIL LINING TO BE CLAY OR 30 MIL POND LINER



- #### OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6)
- THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. 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 VOLUME II, TABLE A.4.1 AND 2.
  - THE OWNER SHALL PERFORM A PLANT INSPECTION IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STAKES AND WIRES.
  - THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
  - THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

- #### OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DISCONNECTION OF ROOFTOP RUNOFF (N-1), DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2)
- MAINTENANCE OF AREAS RECEIVING DISCONNECTED RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE OWNER SHALL ENSURE THE AREAS RECEIVING RUNOFF ARE PROTECTED FROM COMPACTION OR DEVELOPMENT OF IMPERVIOUS AREA. IN COMMERCIAL AREAS, FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.

Professional Certification. I hereby certify that these documents 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. 49577, Expiration Date 06-08-2020.



OWNER/BUILDER:  
 MB HIGHLAND RESERVE, LLC  
 1686 EAST GUDE DRIVE  
 ROCKVILLE, MD 20850  
 301-762-9511

**BENCHMARK**  
 ENGINEERS LAND SURVEYORS PLANNERS  
**ENGINEERING, INC.**  
 8480 BALTIMORE NATIONAL PIKE SUITE 315  
 ELLICOTT CITY, MARYLAND 21043  
 (P) 410-465-6105 (F) 410-465-6644  
 WWW.BEI-CVLENGINEERING.COM

### MATERIALS & SPECIFICATIONS FOR MICRO-BIORETENTION

MATERIAL	SPECIFICATION	SIZE	NOTES:
PLANTINGS	SEE APPENDIX A; TABLE A.4	N/A	PLANTINGS ARE SITE SPECIFIC
PLANTING SOIL (2.0' TO 4.0' DEEP)	LOAMY SAND 60-65% COMPOST 35-40% OR SANDY LOAM 30% COARSE SAND 30% & COMPOST 40%	N/A	USDA SOIL TYPES: LOAMY SAND OR SANDY LOAM; CLAY CONTENT <5%
ORGANIC CONTENT	MIN 10% BY DRY WEIGHT ASTM D 2974		
MULCH	SHREDDED HARDWOOD	N/A	AGED 6 MONTHS, MINIMUM, NO PINE OR WOOD CHIPS
GEOTEXTILE (CLASS "C")		N/A	PE TYPE 1 NONWOVEN
GEOTEXTILE (1/4" WIRE MESH)		1/4" WIRE MESH	1/4" WIRE MESH
UNDERDRAIN GRAVEL	AASHTO M-43	NO. 57 OR NO. 6 0.375" TO 0.750"	
UNDERDRAIN PIPING	F758, TYPE PS28 OR AASHTO M-278	4" TO 6" RIGID SCH.40 PVC, SDR35 OR HDPE	3/8" PERF. @ 6" O/C, 4 HOLES PER ROW; MINIMUM OF 3" OF GRAVEL OVER PIPES, NOT NECESSARY UNDERNEATH PIPES. PIPE SHALL BE WRAPPED WITH 1/4-INCH GALVANIZED HARDWARE CLOTH
IMPERVIOUS LINER	ASTM-D-4833 (THICKNESS) ASTM-D-412 (TENSILE STRENGTH 1,100 LB., ELONGATION 200%) ASTM-D-624 (TEAR RESISTANCE - 150 LB./IN) ASTM-D-471 (WATER ADSORPTION: +8 TO -2% MASS)	30 MIL. THICK	LINER TO BE ULTRAVIOLET RESISTANT. A GEOTEXTILE FABRIC SHOULD BE USED TO PROTECT THE LINER FROM PUNCTURE.
GEOTEXTILE (BELOW IMPERV. LINER)	ASTM-D-4833 (PUNCTURE STRENGTH 125LB) ASTM-D-4632 (TENSILE STRENGTH 300 LB.)		

### MICROBIORETENTION PLANTING SCHEDULE

- (PLANTING SPECIES AND DENSITY CAN BE CHANGED OR SUBSTITUTED BY A LANDSCAPE ARCHITECT OR QUALIFIED DESIGNER)
- ① IRIS FULVA (COPPER IRIS) (1 PER SY)
  - ② LOBELIA CARDINALIS (CARDINAL FLOWER) (1 PER SY)
  - ③ RUDBECKIA SUBTOMENTOSA (SWEET CONEFLOWER) (1 PER 2 SY)
  - ⊗ CALLUNA VULGARIS (HEATHER) (1 PER FACILITY)
  - ACER GINNALA (ARMUR MAPLE) (1 PER FACILITY)

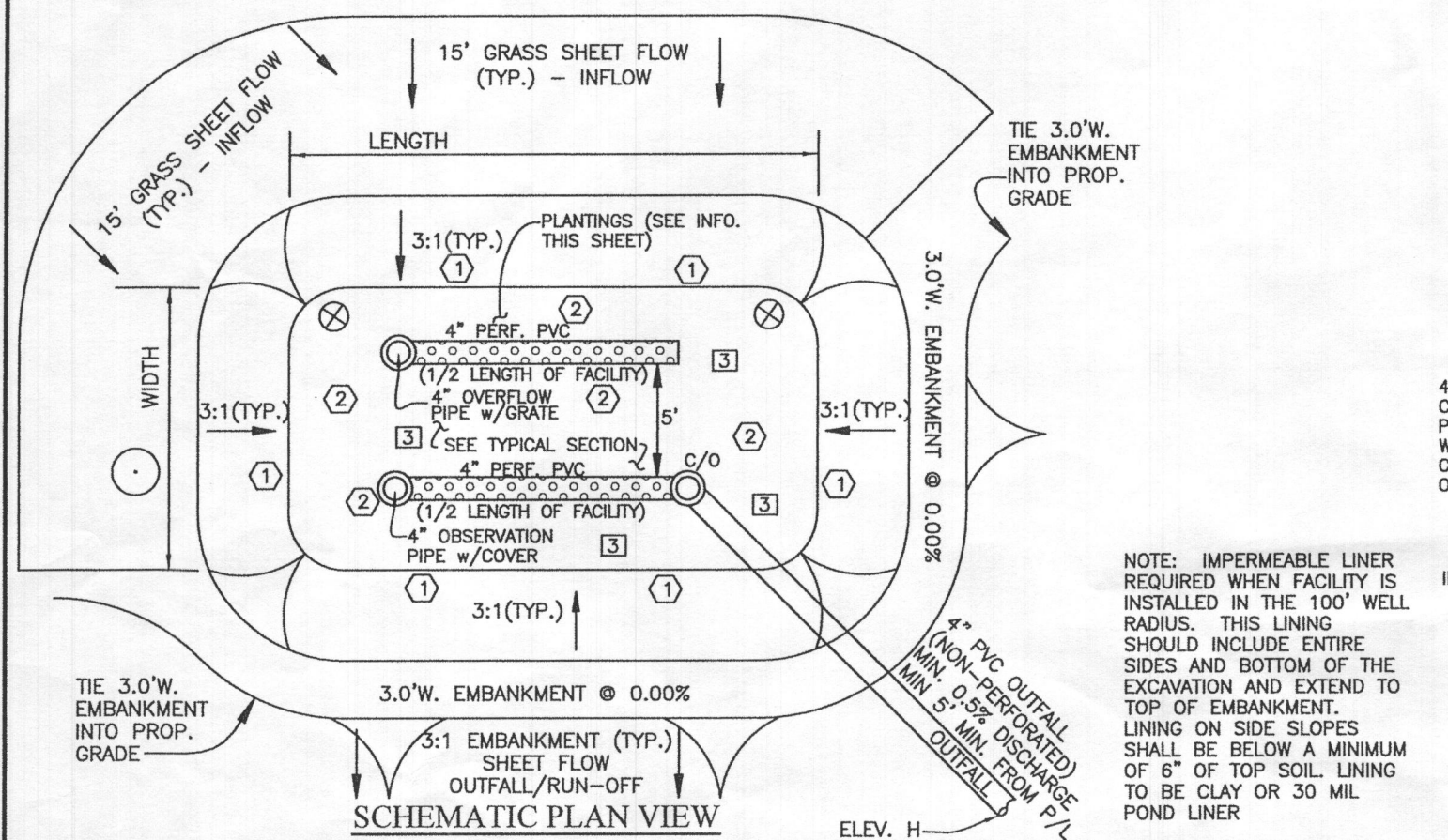
### MICROBIORETENTION PLANTING DATA

- PLANTINGS WITHIN THE PONDING AREA OF THE FACILITY ARE TO BE OF A MEDIUM TO HIGH WATER TOLERANCE
- PLANTINGS ALONG THE PERIMETER (BERM) AREA OF THE FACILITY ARE TO BE OF A LOW TO MEDIUM WATER TOLERANCE
- AVOID PLANTINGS WITH EXCESSIVE ROOT MASS IN POND AREA OF THE RAIN GARDEN NEAR O.B. PIPE AND UNDERDRAIN.

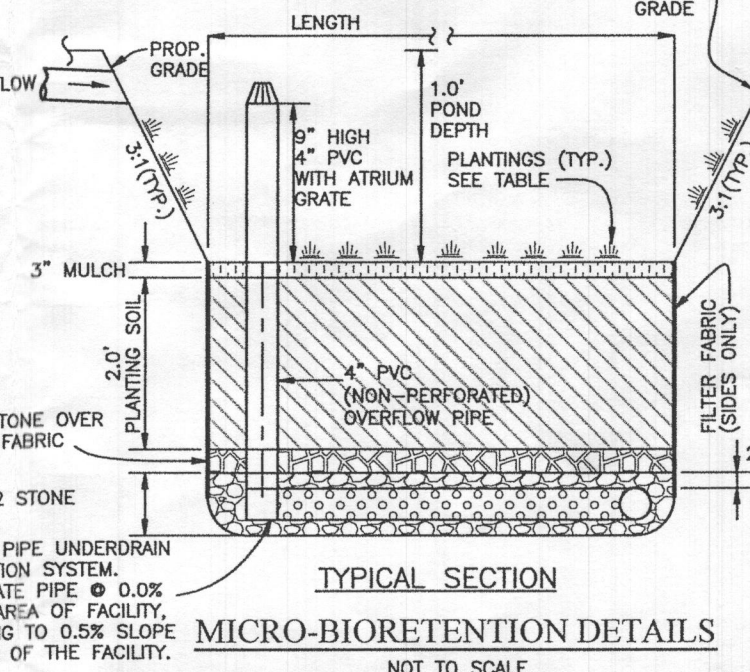
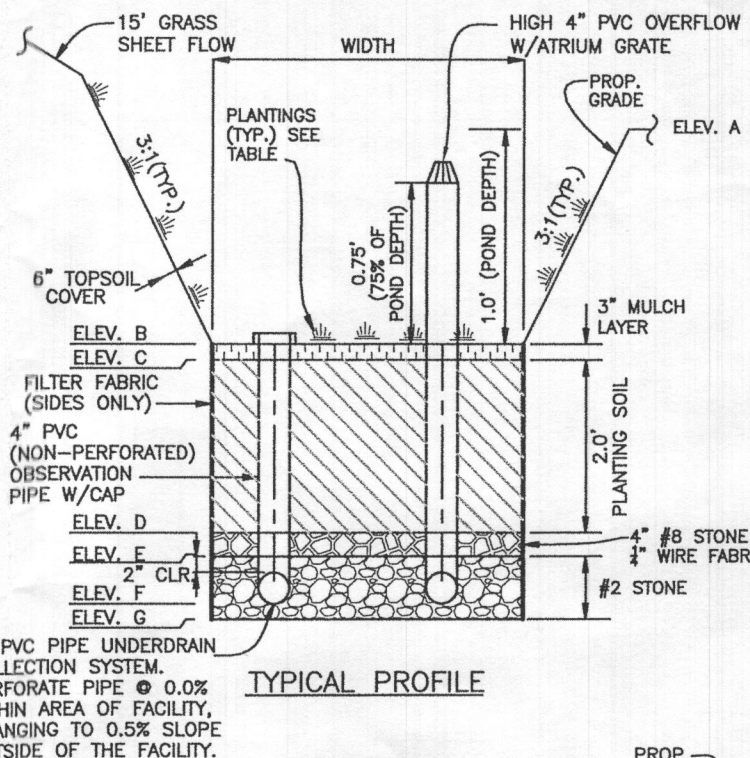
PROJECT:	<b>REGAN PROPERTY</b>	
	LOT 4	
LOCATION:	12344 POINT RIDGE DRIVE HIGHLAND, MD 20777 TAX MAP No. 34 - BLOCK No. 24 - PARCEL No. 200 5TH ELECTION DISTRICT, TAX ID NUMBER: 05 597437	
TITLE:	BUILDING PERMIT & STORMWATER MANAGEMENT NOTES & DETAILS	
HOUSE TYPE:	ASHBROOKE - ELEVATION F	
DATE:	APRIL, 2019	PROJECT NO. 2171
SCALE:	NOT TO SCALE	DRAWING 2 OF 2

ON-LOT BIORETENTION DIMENSIONS

FACILITY	A	B	C	D	E	F	G	H	LENGTH	WIDTH	FILTER (Af)	PLANTINGS			LINER
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MBR-3	409.00	408.00	407.75	405.75	405.42	404.92	403.62	385.00	25.4	18.9	379	84	84	42	NO



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OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6)

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Professional Certification. I hereby certify that these documents 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. 45577, Expiration Date: 06-08-2020.

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ORGANIC CONTENT	MIN 10% BY DRY WEIGHT ASTM D 2974		
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GEOTEXTILE (CLASS "C")		N/A	PE TYPE 1 NONWOVEN
GEOTEXTILE (1/4" WIRE MESH)		1/4" WIRE MESH	1/4" WIRE MESH
UNDERDRAIN GRAVEL	AASHTO M-43	NO. 57 OR NO. 6 0.375" TO 0.750"	
UNDERDRAIN PIPING	F758, TYPE PS28 OR AASHTO M-278	4" TO 6" RIGID SCH.40 PVC, SDR35 OR HDPE	3/8" PERF. @ 6" O/C, 4 HOLES PER ROW; MINIMUM OF 3" OF GRAVEL OVER PIPES, NOT NECESSARY UNDERNEATH PIPES. PIPE SHALL BE WRAPPED WITH 1/4-INCH GALVANIZED HARDWARE CLOTH
IMPERVIOUS LINER	ASTM-D-4833 (THICKNESS) ASTM-D-412 (TENSILE STRENGTH 1,100 LB., ELONGATION 200%) ASTM-D-624 (TEAR RESISTANCE - 150 LB./IN) ASTM-D-471 (WATER ADSORPTION: +8 TO -2% MASS)	30 MIL. THICK	LINER TO BE ULTRAVIOLET RESISTANT. A GEOTEXTILE FABRIC SHOULD BE USED TO PROTECT THE LINER FROM PUNCTURE.
GEOTEXTILE (BELOW IMPERV. LINER)	ASTM-D-4833 (PUNCTURE STRENGTH 125LB) ASTM-D-4632 (TENSILE STRENGTH 300 LB.)		

MICROBIORETENTION PLANTING SCHEDULE

- (PLANTING SPECIES AND DENSITY CAN BE CHANGED OR SUBSTITUTED BY A LANDSCAPE ARCHITECT OR QUALIFIED DESIGNER)
- 1 IRIS FULVA (COPPER IRIS) (1 PER SY)
  - 2 LOBELIA CARDINALIS (CARDINAL FLOWER) (1 PER SY)
  - 3 RUDBECKIA SUBTOMENTOSA (SWEET CONEFLOWER) (1 PER 2 SY)
  - ⊗ CALLUNA VULGARIS (HEATHER) (1 PER FACILITY)
  - ACER GINNALA (ARMUR MAPLE) (1 PER FACILITY)

MICROBIORETENTION PLANTING DATA

- PLANTINGS WITHIN THE PONDING AREA OF THE FACILITY ARE TO BE OF A MEDIUM TO HIGH WATER TOLERANCE
- PLANTINGS ALONG THE PERIMETER (BERM) AREA OF THE FACILITY ARE TO BE OF A LOW TO MEDIUM WATER TOLERANCE
- AVOID PLANTINGS WITH EXCESSIVE ROOT MASS IN POND AREA OF THE RAIN GARDEN NEAR O.B. PIPE AND UNDERDRAIN.

OWNER/BUILDER:  
MB HIGHLAND RESERVE, LLC  
1686 EAST GUDE DRIVE  
ROCKVILLE, MD 20850  
301-762-9511

**BENCHMARK**  
ENGINEERS LAND SURVEYORS PLANNERS  
**ENGINEERING, INC.**  
8480 BALTIMORE NATIONAL PIKE SUITE 315  
ELLCOTT CITY, MARYLAND 21043  
(P) 410-465-6105 (F) 410-465-6644  
WWW.BEI-CMLENGINEERING.COM

PROJECT:	REGAN PROPERTY LOT 4	
LOCATION:	12344 POINT RIDGE DRIVE HIGHLAND, MD 20777 TAX MAP No. 34 - BLOCK No. 24 - PARCEL No. 200 5TH ELECTION DISTRICT, TAX ID NUMBER: 05 597437	
TITLE:	BUILDING PERMIT & STORMWATER MANAGEMENT NOTES & DETAILS	
HOUSE TYPE:	ASHBROOKE - ELEVATION F	
DATE:	APRIL, 2019	PROJECT NO. 2171
SCALE:	NOT TO SCALE	DRAWING 2 OF 2

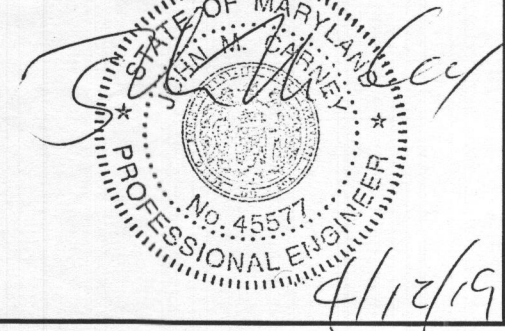
**LEGEND**

- SOILS CLASSIFICATION *ChB2*
- SOILS DELINEATION
- EXISTING CONTOURS
- PROPOSED CONTOURS
- LIMIT OF WETLANDS
- 25' WETLANDS BUFFER
- CENTERLINE OF STREAM
- STREAM BUFFER
- PROPOSED STRUCTURE
- SEPTIC RESERVE AREA

INITIAL SYSTEM - LOT 4		
Number of Bedrooms	6	
Application Rate	1.2	gpd/sf
Effective Area Beginning Depth	3.0	ft
Bottom Max Depth	8.0	ft
Design Flow	900	gpd
Drainage Field square footage	750	sf
Sidewall Reduction Credit	0.36	
Trench width	3	ft
Effective Area Depth	5	ft
Trench Spacing	13	ft
Linear Length of trench Required	89	lf
1st REPLACEMENT SYSTEM		
Number of Bedrooms	6	
Application Rate	1.2	gpd/sf
Effective Area Beginning Depth	3.0	ft
Bottom Max Depth	8.0	ft
Design Flow	900	gpd
Drainage Field square footage	750	sf
Sidewall Reduction Credit	0.36	
Trench width	3	ft
Effective Area Depth	5	ft
Trench Spacing	13	ft
Linear Length of trench Required	89	lf
2nd REPLACEMENT SYSTEM		
Number of Bedrooms	6	
Application Rate	1.2	gpd/sf
Effective Area Beginning Depth	3.0	ft
Bottom Max Depth	8.0	ft
Design Flow	900	gpd
Drainage Field square footage	750	sf
Sidewall Reduction Credit	0.36	
Trench width	3	ft
Effective Area Depth	5	ft
Trench Spacing	13	ft
Linear Length of trench Required	89	lf

SIGNATURE AND SEAL ARE FOR SEPTIC PROFILE AND CALCULATIONS ONLY, TANK AND DETAILS WERE NOT DESIGNED OR REVIEWED BY THE ENGINEER:

Professional Certification. I hereby certify that these documents 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. 45577, Expiration Date: 06-08-2020.



- GENERAL NOTES:**
- THE LOT SHOWN HEREON WAS RECORDED ON THE PLAT FOR REGAN PROPERTY, PLAT Nos. 23063-23074. REFER TO THE PLATS FOR LOT DIMENSIONS, LOT AREAS, ALL EASEMENTS AND CONDITIONS.
  - SEDIMENT AND EROSION CONTROLS WERE APPROVED BY HOWARD COUNTY SEWERAGE DISTRICT UNDER A GRADING PLAN AND MODIFIED FOR THIS SPECIFIC HOUSE.
  - TOPOGRAPHY SHOWN HEREON IS TAKEN FROM THE APPROVED ROAD CONSTRUCTION PLANS AND TOPOGRAPHIC INFORMATION PROVIDED BY BENCHMARK ENGINEERING, INC., ON OR ABOUT JANUARY, 2012.
  - ALL SEDIMENT AND EROSION CONTROL FEATURES USED ON THIS SITE SHALL COMPLY WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
  - ALL DRAINAGE AND STORMWATER MANAGEMENT FEATURES USED ON THIS SITE MUST COMPLY WITH THE APPROVED ROAD CONSTRUCTION PLANS EXCEPT AS WAIVED.
  - THE EXISTING WELL SHOWN ON THIS PLAN, HO-95-2697, HAS BEEN FIELD LOCATED BY BENCHMARK ENGINEERING, INC., AND IS ACCURATELY SHOWN.
  - THERE ARE NO EXISTING WELLS OR SEPTIC SYSTEMS WITHIN 100' OF THIS PROJECT'S BOUNDARY EXCEPT AS NOTED.
  - ANY CHANGES TO A PRIVATE SEWAGE DISPOSAL AREA OR WELL BOX SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
  - STORMWATER MANAGEMENT FOR THIS LOT WAS DESIGNED AND PROVIDED BY ONE MICRO-BIORETENTION FACILITY (MDE M-6), DRY WELL FACILITY (MDE M-5) AND ONE NON-ROOFTOP DISCONNECTION (MDE N-2).
  - MICRO-BIORETENTION SHALL HAVE EITHER A 4" OR 6" ROOF LEADER DEPENDING ON ROOF-TOP AREA.
  - DUE TO THE LANDSCAPE LOCATION OF THE MICRO-BIORETENTION FACILITY ON LOT 5, MBR-6 DOES NOT REQUIRE A LINER PER THE HEALTH DEPARTMENT.

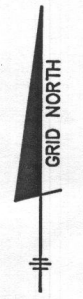
**SEPTIC INVERT CHART - LOT 4**

INV @ HOUSE	408.9
GROUND @ HOUSE	412.9
INV IN TANK	408.2
INV OUT TANK	407.8
TOP OF TANK	409.0
GROUND OVER TANK	412.0
INV IN DIST BOX	394.5
INV OUT DIST BOX	394.4
GROUND AT DIST BOX	396.7

**HEALTH DEPARTMENT SPEC SHEET INFORMATION**

System	Application Rate	Effective Depth	Bottom Depth
Initial	1.2	3.0	8.0
1st Replacement	1.2	3.0	8.0
2nd Replacement	1.2	3.0	8.0

**PLAN VIEW**  
1" = 50'



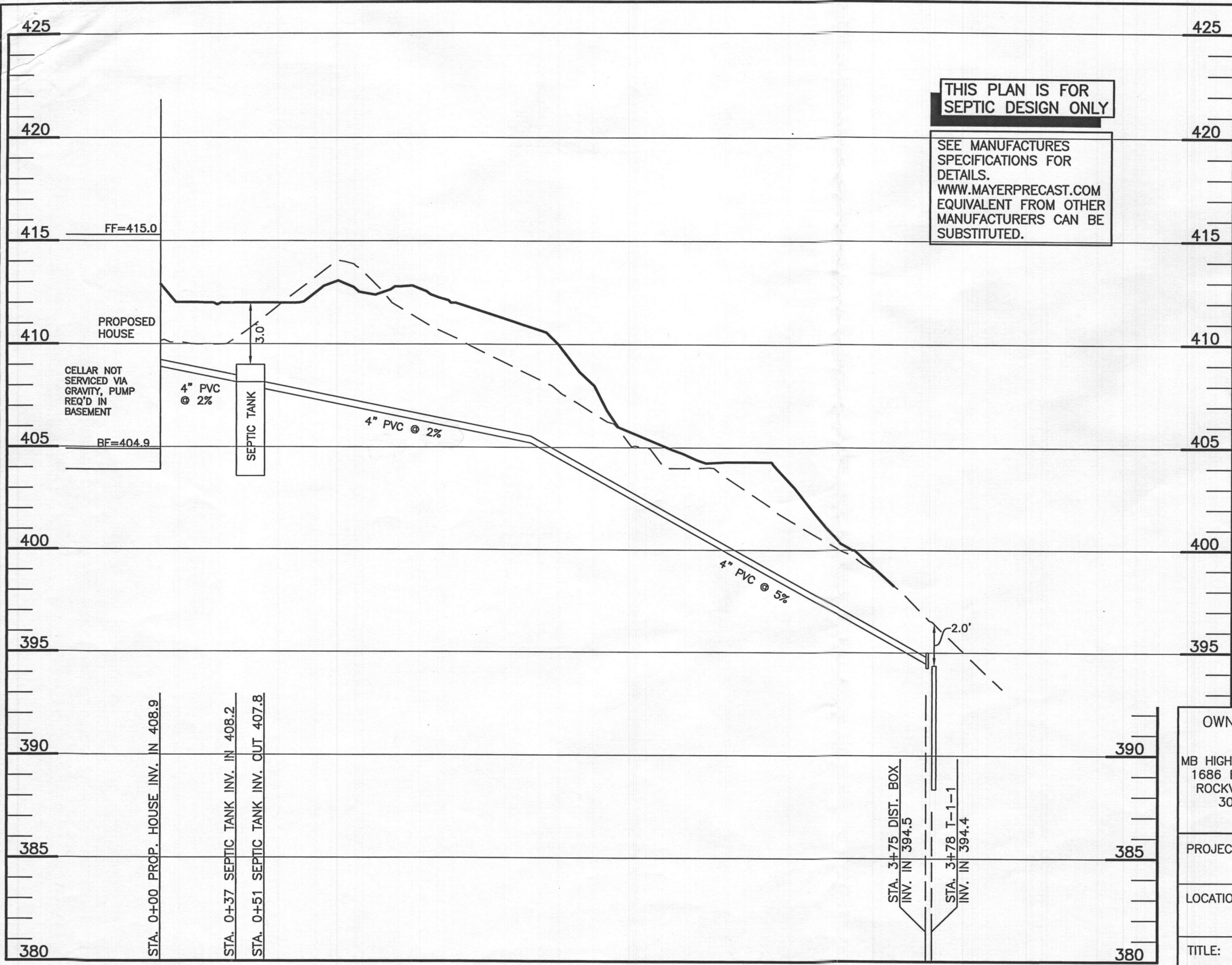
**TRENCH DATA - LOT 4**

INITIAL SYSTEM		FIRST REPLACEMENT		SECOND REPLACEMENT	
<b>TRENCH 1-1</b>	LENGTH 44.7 ft	<b>TRENCH 2-1</b>	LENGTH 44.7 ft	<b>TRENCH 3-1</b>	LENGTH 44.7 ft
GROUND ELEVATION	396.4	GROUND ELEVATION	393.2	GROUND ELEVATION	390.1
INVERT ELEVATION	394.4	INVERT ELEVATION	391.2	INVERT ELEVATION	388.1
MAX BOTTOM ELEVATION	388.4	MAX BOTTOM ELEVATION	385.2	MAX BOTTOM ELEVATION	382.1
<b>TRENCH 1-2</b>	LENGTH 44.7 ft	<b>TRENCH 2-2</b>	LENGTH 44.7 ft	<b>TRENCH 3-2</b>	LENGTH 44.7 ft
GROUND ELEVATION	394.8	GROUND ELEVATION	391.7	GROUND ELEVATION	387.9
INVERT ELEVATION	392.8	INVERT ELEVATION	389.7	INVERT ELEVATION	385.9
MAX BOTTOM ELEVATION	386.8	MAX BOTTOM ELEVATION	383.7	MAX BOTTOM ELEVATION	379.9

**THIS PLAN IS FOR SEPTIC DESIGN ONLY**

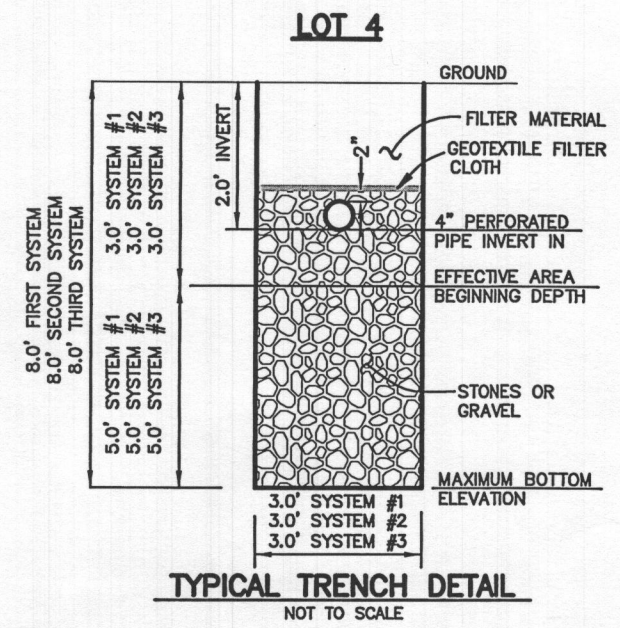
SEE MANUFACTURERS SPECIFICATIONS FOR DETAILS. WWW.MAYERPRECAST.COM EQUIVALENT FROM OTHER MANUFACTURERS CAN BE SUBSTITUTED.

OWNER/BUILDER: MB HIGHLAND RESERVE, LLC 1686 EAST GUDE DRIVE ROCKVILLE, MD 20850 301-762-9511	<b>BENCHMARK</b> ENGINEERS LAND SURVEYORS PLANNERS <b>ENGINEERING, INC.</b> 8480 BALTIMORE NATIONAL PIKE SUITE 315 ELLICOTT CITY, MARYLAND 21043 (P) 410-465-6105 (F) 410-465-6644 WWW.BEI-CIVLENGINEERING.COM
PROJECT: <b>REGAN PROPERTY LOT 4</b>	
LOCATION: 12344 POINT RIDGE DRIVE HIGHLAND, MD 20777 TAX MAP No. 34 - BLOCK No. 24 - PARCEL No. 200 5TH ELECTION DISTRICT, TAX ID NUMBER: 05 597437	
TITLE: <b>ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN</b>	
HOUSE TYPE: <b>ASHBROOKE - ELEVATION F</b>	
DATE: APRIL, 2019	PROJECT NO. 2171
SCALE: AS SHOWN	DRAWING 1 OF 2

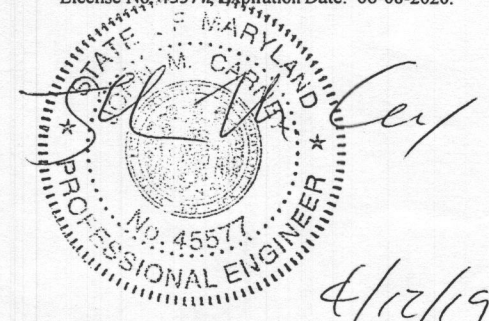


**THIS PLAN IS FOR SEPTIC DESIGN ONLY**

SEE MANUFACTURES SPECIFICATIONS FOR DETAILS.  
 WWW.MAYERPRECAST.COM  
 EQUIVALENT FROM OTHER MANUFACTURERS CAN BE SUBSTITUTED.



Professional Certification. I hereby certify that these documents 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. 45577, Expiration Date: 06-08-2020.



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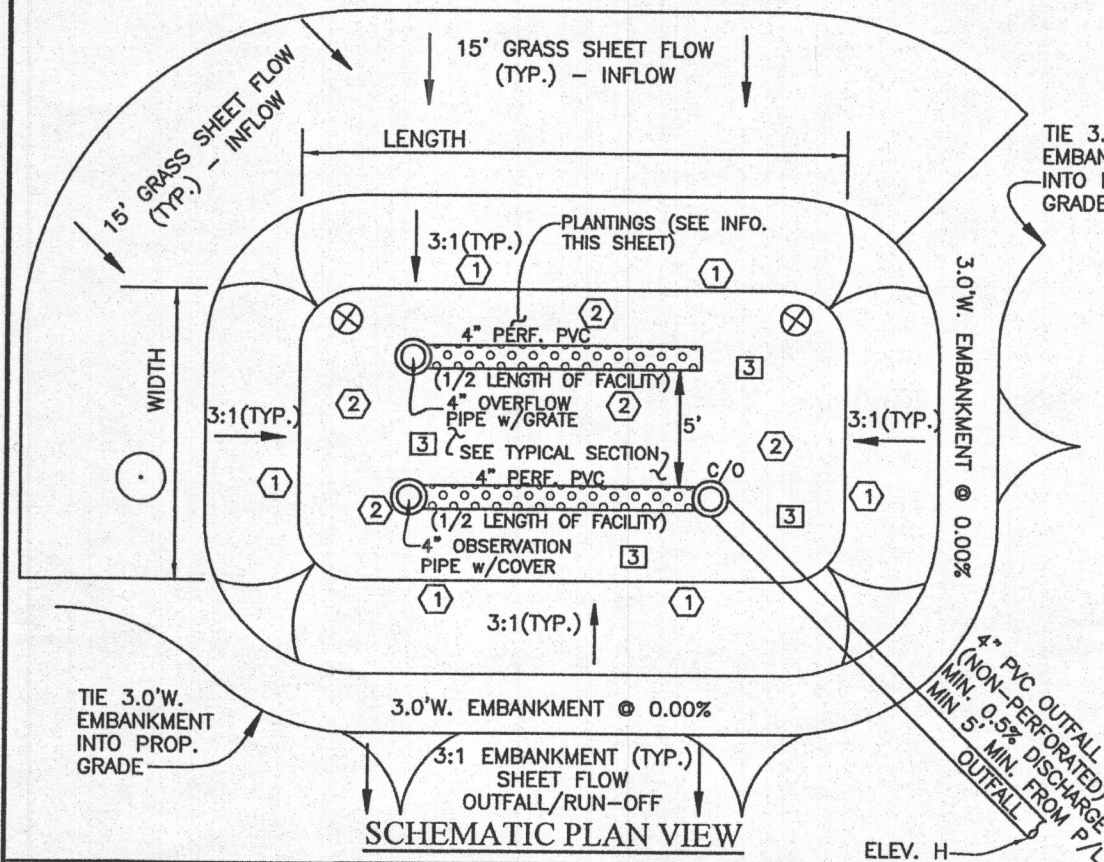
OWNER/BUILDER:		BENCHMARK	
MB HIGHLAND RESERVE, LLC 1686 EAST GUDE DRIVE ROCKVILLE, MD 20850 301-762-9511		ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE ▲ SUITE 315 ELLCOTT CITY, MARYLAND 21043 (P) 410-465-6105 ▲ (F) 410-465-6644 WWW.BEI-CVLENGINEERING.COM	
PROJECT: REGAN PROPERTY LOT 4			
LOCATION: 12344 POINT RIDGE DRIVE HIGHLAND, MD 20777 TAX MAP No. 34 - BLOCK No. 24 - PARCEL No. 200 5TH ELECTION DISTRICT, TAX ID NUMBER: 05 597437			
TITLE: ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN			
HOUSE TYPE: ASHBROOKE - ELEVATION F			
DATE:	APRIL, 2019	PROJECT NO.	2171
SCALE:	AS SHOWN	DRAWING	2 OF 2

**Lot 4 Septic Profile**  
 SCALE: 1"=50' HORIZ., 1"=5' VERT.

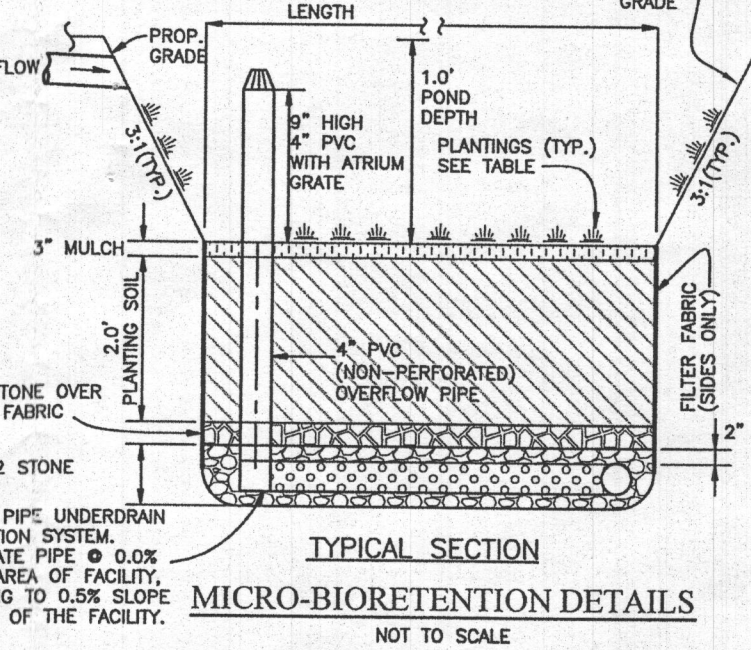
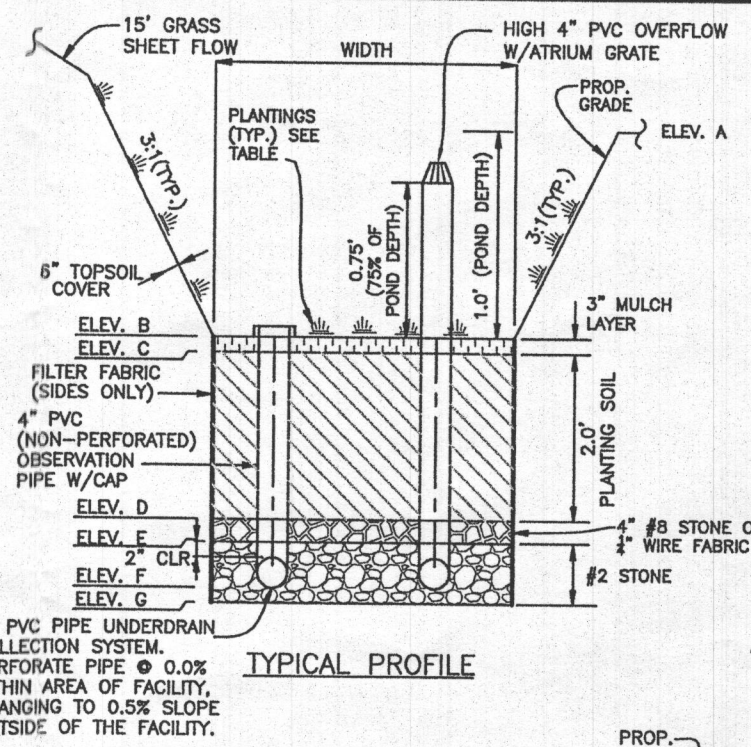


ON-LOT BIORETENTION DIMENSIONS

FACILITY	A	B	C	D	E	F	G	H	LENGTH	WIDTH	FILTER (A <sub>F</sub> )	PLANTINGS			LINER
	1	2	3												
MBR-3	409.00	408.00	407.75	405.75	405.42	404.92	403.62	385.00	25.4	18.9	379	84	84	42	NO



NOTE: IMPERMEABLE LINER REQUIRED WHEN FACILITY IS INSTALLED IN THE 100' WELL RADIUS. THIS LINING SHOULD INCLUDE ENTIRE SIDES AND BOTTOM OF THE EXCAVATION AND EXTEND TO TOP OF EMBANKMENT. LINING ON SIDE SLOPES SHALL BE BELOW A MINIMUM OF 6" OF TOP SOIL. LINING TO BE CLAY OR 30 MIL POND LINER



MICROBIORETENTION PLANTING SCHEDULE

- (PLANTING SPECIES AND DENSITY CAN BE CHANGED OR SUBSTITUTED BY A LANDSCAPE ARCHITECT OR QUALIFIED DESIGNER)
- 1 IRIS FULVA (COPPER IRIS) (1 PER SY)
  - 2 LOBELIA CARDINALIS (CARDINAL FLOWER) (1 PER SY)
  - 3 RUDBECKIA SUBTOMENTOSA (SWEET CONEFLOWER) (1 PER 2 SY)
  - ⊗ CALLUNA VULGARIS (HEATHER) (1 PER FACILITY)
  - ACER GINNALA (ARMUR MAPLE) (1 PER FACILITY)

MICROBIORETENTION PLANTING DATA

- PLANTINGS WITHIN THE PONDING AREA OF THE FACILITY ARE TO BE OF A MEDIUM TO HIGH WATER TOLERANCE
- PLANTINGS ALONG THE PERIMETER (BERM) AREA OF THE FACILITY ARE TO BE OF A LOW TO MEDIUM WATER TOLERANCE
- AVOID PLANTINGS WITH EXCESSIVE ROOT MASS IN POND AREA OF THE RAIN GARDEN NEAR O.B. PIPE AND UNDERDRAIN.

OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6)

- THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. 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 VOLUME II, TABLE A.4.1 AND 2.
  - THE OWNER SHALL PERFORM A PLANT INSPECTION IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STAKES AND WIRES.
  - THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
  - THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.
- OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DISCONNECTION OF ROOFTOP RUNOFF (N-1), DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2)
- MAINTENANCE OF AREAS RECEIVING DISCONNECTED RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE OWNER SHALL ENSURE THE AREAS RECEIVING RUNOFF ARE PROTECTED FROM COMPACTION OR DEVELOPMENT OF IMPERVIOUS AREA. IN COMMERCIAL AREAS, FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.

Professional Certification. I hereby certify that these documents 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. 45577, Expiration Date: 06-08-2020.



OWNER/BUILDER:  
MB HIGHLAND RESERVE, LLC  
1686 EAST GUDE DRIVE  
ROCKVILLE, MD 20850  
301-762-9511

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WWW.BEI-CIVILENGINEERING.COM

MATERIALS & SPECIFICATIONS FOR MICRO-BIORETENTION

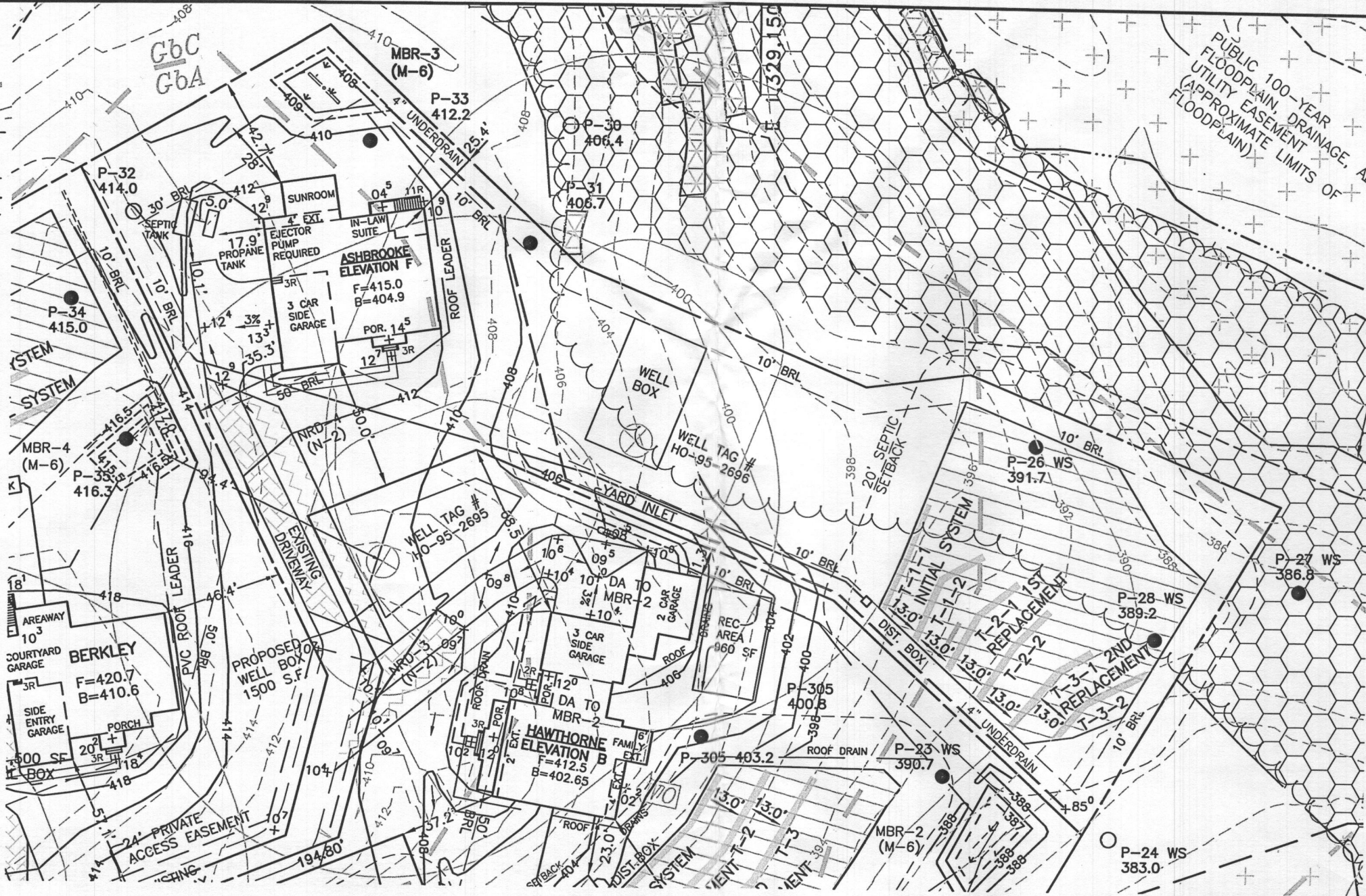
MATERIAL	SPECIFICATION	SIZE	NOTES:
PLANTINGS	SEE APPENDIX A; TABLE A.4	N/A	PLANTINGS ARE SITE SPECIFIC
PLANTING SOIL (2.0' TO 4.0' DEEP)	LOAMY SAND 60-65% COMPOST 35-40% OR SANDY LOAM 30% COARSE SAND 30% & COMPOST 40%	N/A	USDA SOIL TYPES: LOAMY SAND OR SANDY LOAM; CLAY CONTENT <5%
ORGANIC CONTENT	MIN 10% BY DRY WEIGHT ASTM D 2974		
MULCH	SHREDDED HARDWOOD	N/A	AGED 6 MONTHS, MINIMUM, NO PINE OR WOOD CHIPS
GEOTEXTILE (CLASS "C")		N/A	PE TYPE 1 NONWOVEN
GEOTEXTILE (1/4" WIRE MESH)		1/4" WIRE MESH	1/4" WIRE MESH
UNDERDRAIN GRAVEL	AASHTO M-43	NO. 57 OR NO. 6 0.375" TO 0.750"	
UNDERDRAIN PIPING	F758, TYPE-PS28 OR AASHTO M-278	4" TO 6" RIGID SCH.40 PVC, SDR35 OR HDPE	3/8" PERF. @ 6" O/C, 4 HOLES PER ROW; MINIMUM OF 3" OF GRAVEL OVER PIPES, NOT NECESSARY UNDERNEATH PIPES. PIPE SHALL BE WRAPPED WITH 1/4-INCH GALVANIZED HARDWARE CLOTH
IMPERVIOUS LINER	ASTM-D-4833 (THICKNESS) ASTM-D-412 (TENSILE STRENGTH 1,100 LB., ELONGATION 200%) ASTM-D-624 (TEAR RESISTANCE - 150 LB./IN) ASTM-D-471 (WATER ADSORPTION: +8 TO -2% MASS)	30 MIL. THICK	LINER TO BE ULTRAVIOLET RESISTANT. A GEOTEXTILE FABRIC SHOULD BE USED TO PROTECT THE LINER FROM PUNCTURE.
GEOTEXTILE (BELOW IMPERV. LINER)	ASTM-D-4833 (PUNCTURE STRENGTH 125LB) ASTM-D-4632 (TENSILE STRENGTH 300 LB.)		

PROJECT:	REGAN PROPERTY LOT 4	
LOCATION:	12344 POINT RIDGE DRIVE HIGHLAND, MD 20777 TAX MAP No. 34 - BLOCK No. 24 - PARCEL No. 200 5TH ELECTION DISTRICT, TAX ID NUMBER: 05 597437	
TITLE:	BUILDING PERMIT & STORMWATER MANAGEMENT NOTES & DETAILS	
HOUSE TYPE:	ASHBROOKE - ELEVATION F	
DATE:	APRIL, 2019	PROJECT NO. 2171
SCALE:	NOT TO SCALE	DRAWING 2 OF 2

**LEGEND**

- SOILS CLASSIFICATION *ChB2*
- SOILS DELINEATION
- EXISTING CONTOURS
- PROPOSED CONTOURS
- LIMIT OF WETLANDS
- 25' WETLANDS BUFFER
- CENTERLINE OF STREAM
- STREAM BUFFER
- PROPOSED STRUCTURE
- SEPTIC RESERVE AREA

INITIAL SYSTEM - LOT 4		
Number of Bedrooms	6	
Application Rate	1.2	gpd/sf
Effective Area Beginning Depth	3.0	ft
Bottom Max Depth	8.0	ft
Design Flow	900	gpd
Drainage Field square footage	750	sf
Sidewall Reduction Credit	0.36	
Trench width	3	ft
Effective Area Depth	5	ft
Trench Spacing	13	ft
Linear Length of trench Required	89	lf
1st REPLACEMENT SYSTEM		
Number of Bedrooms	6	
Application Rate	1.2	gpd/sf
Effective Area Beginning Depth	3.0	ft
Bottom Max Depth	8.0	ft
Design Flow	900	gpd
Drainage Field square footage	750	sf
Sidewall Reduction Credit	0.36	
Trench width	3	ft
Effective Area Depth	5	ft
Trench Spacing	13	ft
Linear Length of trench Required	89	lf
2nd REPLACEMENT SYSTEM		
Number of Bedrooms	6	
Application Rate	1.2	gpd/sf
Effective Area Beginning Depth	3.0	ft
Bottom Max Depth	8.0	ft
Design Flow	900	gpd
Drainage Field square footage	750	sf
Sidewall Reduction Credit	0.36	
Trench width	3	ft
Effective Area Depth	5	ft
Trench Spacing	13	ft
Linear Length of trench Required	89	lf



**GENERAL NOTES:**

1. THE LOT SHOWN HEREON WAS RECORDED ON THE PLAT FOR REGAN PROPERTY, PLAT Nos. 23063-23074. REFER TO THE PLATS FOR LOT DIMENSIONS, LOT AREAS, ALL EASEMENTS AND CONDITIONS.
2. SEDIMENT AND EROSION CONTROLS WERE APPROVED BY HOWARD SOIL CONSERVATION DISTRICT UNDER A GRADING PLAN AND MODIFIED FOR THIS SPECIFIC HOUSE.
3. TOPOGRAPHY SHOWN HEREON IS TAKEN FROM THE APPROVED ROAD CONSTRUCTION PLANS AND TOPOGRAPHIC INFORMATION PROVIDED BY BENCHMARK ENGINEERING, INC., ON OR ABOUT JANUARY, 2012.
4. ALL SEDIMENT AND EROSION CONTROL FEATURES USED ON THIS SITE SHALL COMPLY WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
5. ALL DRAINAGE AND STORMWATER MANAGEMENT FEATURES USED ON THIS SITE MUST COMPLY WITH THE APPROVED ROAD CONSTRUCTION PLANS EXCEPT AS WAIVED.
6. THE EXISTING WELL SHOWN ON THIS PLAN, HO-95-2697, HAS BEEN FIELD LOCATED BY BENCHMARK ENGINEERING, INC., AND IS ACCURATELY SHOWN.
7. THERE ARE NO EXISTING WELLS OR SEPTIC SYSTEMS WITHIN 100' OF THIS PROJECT'S BOUNDARY EXCEPT AS NOTED.
8. ANY CHANGES TO A PRIVATE SEWAGE DISPOSAL AREA OR WELL BOX SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
9. STORMWATER MANAGEMENT FOR THIS LOT WAS DESIGNED AND PROVIDED BY ONE MICRO-BIORETENTION FACILITY (MDE M-6), DRY WELL FACILITY (MDE M-5) AND ONE NON-ROOFTOP DISCONNECTION (MDE N-2).
10. MICRO-BIORETENTION SHALL HAVE EITHER A 4" OR 6" ROOF LEADER DEPENDING ON ROOF-TOP AREA.
11. DUE TO THE LANDSCAPE LOCATION OF THE MICRO-BIORETENTION FACILITY ON LOT 5, MBR-6 DOES NOT REQUIRE A LINER PER THE HEALTH DEPARTMENT.

SEPTIC INVERT CHART - LOT 4	
INV @ HOUSE	408.9
GROUND @ HOUSE	412.9
INV IN TANK	408.2
INV OUT TANK	407.8
TOP OF TANK	409.0
GROUND OVER TANK	412.0
INV IN DIST BOX	394.7
INV OUT DIST BOX	394.6
GROUND AT DIST BOX	396.7

HEALTH DEPARTMENT SPEC SHEET INFORMATION			
System	Application Rate	Effective Depth	Bottom Depth
Initial	1.2	3.0	8.0
1st Replacement	1.2	3.0	8.0
2nd Replacement	1.2	3.0	8.0

**PLAN VIEW**  
1" = 50'



**SIGNATURE AND SEAL ARE FOR SEPTIC PROFILE AND CALCULATIONS ONLY, TANK AND DETAILS WERE NOT DESIGNED OR REVIEWED BY THE ENGINEER:**

Professional Certification. I hereby certify that these documents 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. 45577, Expiration Date, 06-08-2020.

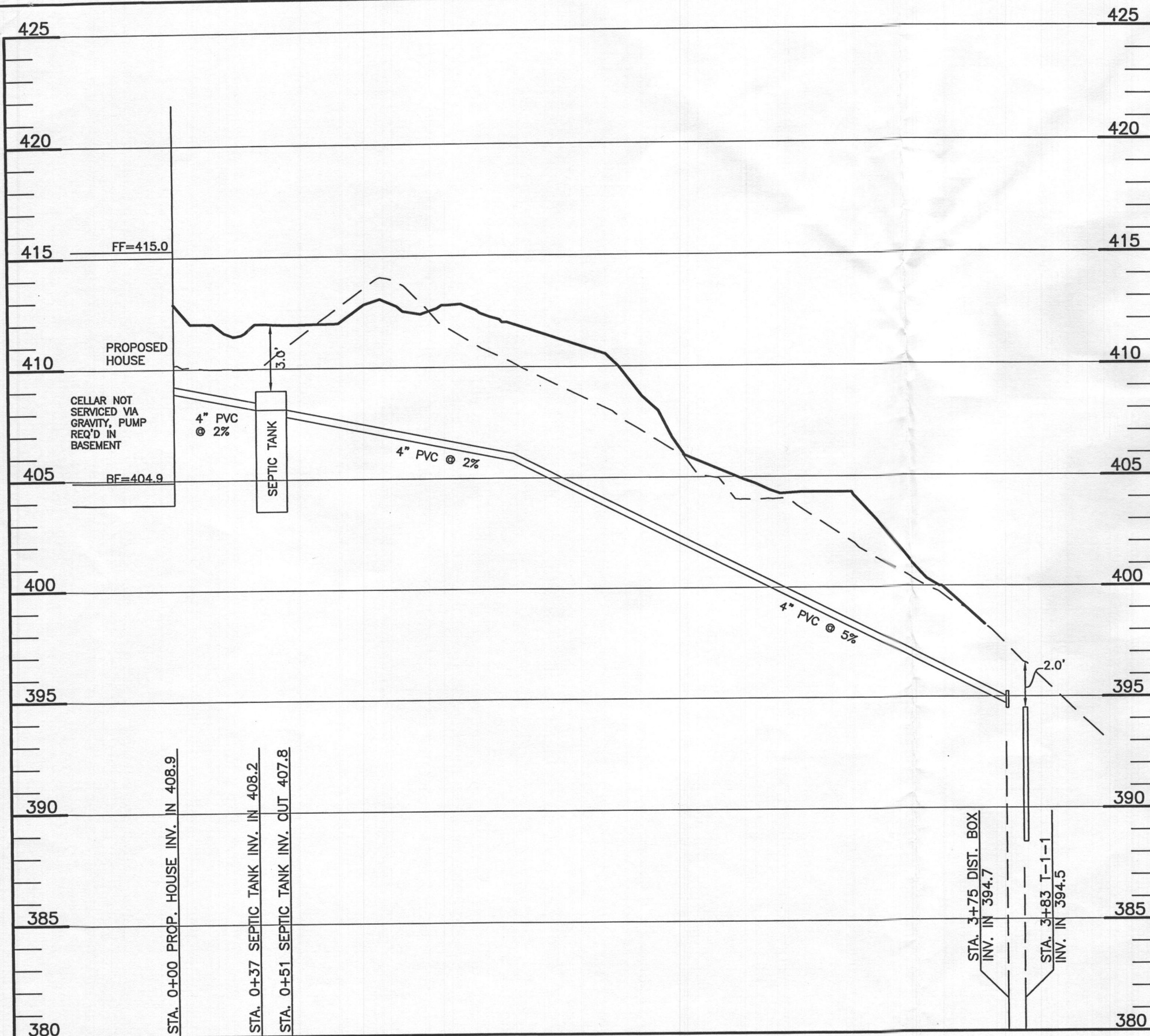


TRENCH DATA - LOT 4					
INITIAL SYSTEM		FIRST REPLACEMENT		SECOND REPLACEMENT	
TRENCH 1-1	LENGTH 44.7 ft	TRENCH 2-1	LENGTH 44.7 ft	TRENCH 3-1	LENGTH 44.7 ft
	GROUND ELEVATION 396.4		GROUND ELEVATION 393.2		GROUND ELEVATION 390.1
	INVERT ELEVATION 394.4		INVERT ELEVATION 391.2		INVERT ELEVATION 388.1
	MAX BOTTOM ELEVATION 388.4		MAX BOTTOM ELEVATION 385.2		MAX BOTTOM ELEVATION 382.1
TRENCH 1-2	LENGTH 44.7 ft	TRENCH 2-2	LENGTH 44.7 ft	TRENCH 3-2	LENGTH 44.7 ft
	GROUND ELEVATION 394.8		GROUND ELEVATION 391.7		GROUND ELEVATION 387.9
	INVERT ELEVATION 392.8		INVERT ELEVATION 389.7		INVERT ELEVATION 385.9
	MAX BOTTOM ELEVATION 386.8		MAX BOTTOM ELEVATION 383.7		MAX BOTTOM ELEVATION 379.9

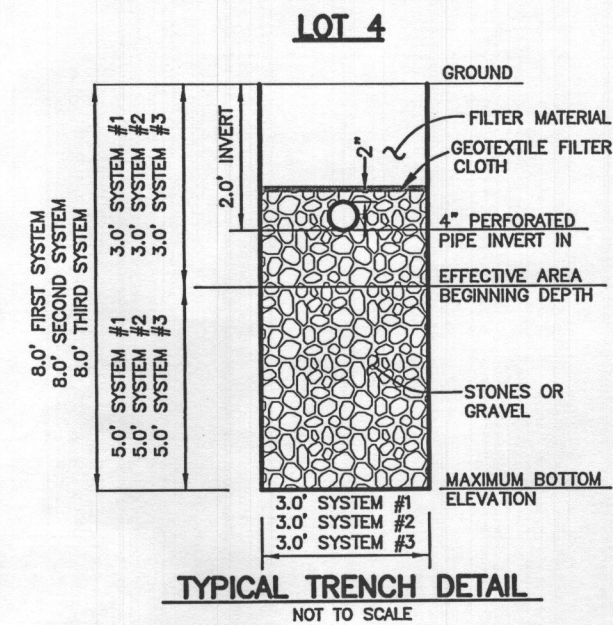
**THIS PLAN IS FOR SEPTIC DESIGN ONLY**

SEE MANUFACTURERS SPECIFICATIONS FOR DETAILS.  
WWW.MAYERPRECAST.COM  
EQUIVALENT FROM OTHER MANUFACTURERS CAN BE SUBSTITUTED.

OWNER/BUILDER: MB HIGHLAND RESERVE, LLC 1686 EAST GUDE DRIVE ROCKVILLE, MD 20850 301-762-9511	BENCHMARK ENGINEERS LAND SURVEYORS PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE SUITE 315 ELLCOTT CITY, MARYLAND 21043 (P) 410-465-6105 (F) 410-465-6644 WWW.BEI-CMLENGINEERING.COM
PROJECT: <b>REGAN PROPERTY LOT 4</b>	
LOCATION: 12344 POINT RIDGE DRIVE HIGHLAND, MD 20777 TAX MAP No. 34 - BLOCK No. 24 - PARCEL No. 200 5TH ELECTION DISTRICT, TAX ID NUMBER: 05 597437	
TITLE: <b>ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN</b>	
HOUSE TYPE: <b>ASHBROOKE - ELEVATION F</b>	
DATE: JUNE, 2019	PROJECT NO. 2171
SCALE: AS SHOWN	DRAWING 1 OF 3



**Lot 4 Septic Profile**  
**SCALE: 1"=50' HORIZ., 1"=5' VERT.**

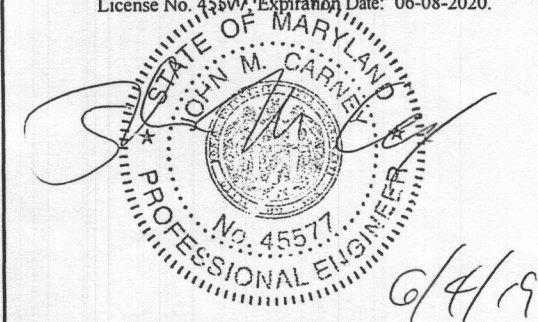


**THIS PLAN IS FOR SEPTIC DESIGN ONLY**

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SIGNATURE AND SEAL ARE FOR SEPTIC PROFILE AND CALCULATIONS ONLY, TANK AND DETAILS WERE NOT DESIGNED OR REVIEWED BY THE ENGINEER:

Professional Certification. I hereby certify that these documents 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. 45577, Expiration Date: 06-08-2020.



OWNER/BUILDER:		BENCHMARK ENGINEERS LAND SURVEYORS PLANNERS	
MB HIGHLAND RESERVE, LLC 1686 EAST GUDE DRIVE ROCKVILLE, MD 20850 301-762-9511		ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE & SUITE 315 ELLCOTT CITY, MARYLAND 21043 (P) 410-465-6105 ▲ (F) 410-465-6644 WWW.BEI-CMLENGINEERING.COM	
PROJECT:		REGAN PROPERTY LOT 4	
LOCATION:		12344 POINT RIDGE DRIVE HIGHLAND, MD 20777 TAX MAP No. 34 - BLOCK No. 24 - PARCEL No. 200 5TH ELECTION DISTRICT, TAX ID NUMBER: 05 597437	
TITLE:		ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN	
HOUSE TYPE:		ASHBROOKE - ELEVATION F	
DATE:	JUNE, 2019	PROJECT NO.	2171
SCALE:	AS SHOWN	DRAWING	2 OF 3