

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	SITE DEVELOPMENT PLAN
3	SEDIMENT EROSION & SEDIMENT CONTROL PLAN
4	SEDIMENT EROSION CONTROL NOTES AND DETAILS
5	STORMDRAIN DRAINAGE AREA MAP
6	SWM NOTES, DETAILS & BORING LOGS
7	HANDICAP AND ROAD NOTES AND DETAILS
8	SITE DISTANCE ANALYSIS - DASHY ROAD
9	SITE DISTANCE ANALYSIS - ED WARFIELD ROAD
10	LANDSCAPE PLAN
11	LANDSCAPE DETAILS
12	SEPTIC INSTALL PLAN
13	SEPTIC PROFILE AND DETAIL

SOILS LEGEND			
SOIL	NAME	CLASS	KW
GaA	Glenelg loam, 0 to 3 percent slopes	B	0.37
GaB	Glenelg loam, 3 to 8 percent slopes	B	0.37
GmA	Glenville silt loam, 0 to 3 percent slopes	C	0.49

STORMWATER MANAGEMENT PRACTICES				
AREA ID	DRYWELL (M-5) NUMBER	MICRO-BIO (M-6) NUMBER	N.R.T.D. (N-1) NUMBER	REMARKS
WORKSHOP / OFFICE		1	2	DRIVEWAY DRAINS TO BIO ON OPEN SPACE
FUTURE SHOP	1, 2, 3	1		CORNER OF PROPOSED SHOP DRAINS TO BIO

STORMWATER MANAGEMENT PRACTICES							
AREA ID	LOCATION	DRAINAGE AREA SF.	% IMPERVIOUS	ESDV REQUIRED Cuft.	ESDV PROVIDED Cuft.	DRYWELLS M-5 (Y/N)	NON-ROOFTOP DISCONNECTION N-2 (Y/N)
FUTURE M-2(1)	PARCEL 'A'	1,000	100%	143	154	Y	
FUTURE M-2(2)	PARCEL 'A'	1,000	100%	143	154	Y	
FUTURE M-2(3)	PARCEL 'A'	1,000	100%	143	154	Y	
M-6(1)	PARCEL 'A'	38,724	52%	2,277 (STORAGE)	2,262 (STORAGE)		Y
N-2(1)	PARCEL 'A'	2,056	91%	163	168		Y
N-2(2)	PARCEL 'A'	3,504	42%	117	138		Y

COMMERCIAL PARKING TABULATION	
TOTAL COMMERCIAL PARKING REQUIRED: 11 PARKING SPACES (INCLUDING FUTURE STORAGE BUILDING)	
PROPOSED BUILDING	
OFFICE: 4 SPACES (1,300 SqFt.)	(3.3 SPACES PER 1,000 SqFt.)
STORAGE: 3 SPACES (3,697 SqFt.)	(0.75 SPACES PER 1,000 SqFt.)
FUTURE STORAGE BUILDING: 4 SPACES (4,997 SqFt.)	(0.75 SPACES PER 1,000 SqFt.)
TOTAL COMMERCIAL PARKING PROVIDED: 12 PARKING SPACES	
EXTERIOR SURFACE PARKING: 6 SPACES (5 STANDARD, 1 HANDICAP)	
INTERNAL PARKING: 6 SPACES (INCLUDES FUTURE STORAGE BUILDING)	
(1 SPACE PER BAY OF PROPOSED BUILDING - TOTAL 3)	
(1 SPACE PER BAY OF FUTURE BUILDING - TOTAL 3)	

FOREST CONSERVATION WORKSHEET						
Net Tract Area	A = 1.99					
A. Total (Gross) Tract Area	B = 0.00					
B. Area within 100-year Floodplain	C = 0.00					
C. Other Deductions (Identify)	D = 1.99					
D. Net Tract Area						
Land Use Category						
Insert the number "1" under the appropriate land use (limit to only one entry)						
Rural LD	Rural MD	Rural SD	Inst/ Suburban	Linear	Office	Mixed Use/ PUD
0	0	0	0	0	0	0
E. Afforestation Threshold (Net Tract Area x 15%)	E = 0.30					
F. Reforestation Threshold (Net Tract Area x 15%)	F = 0.30					
Existing Forest Cover						
G. Existing Forest Cover within the Net Tract Area	G = 0.00					
H. Area of Forest above Afforestation Threshold	H = 0.00					
I. Area of Forest above Reforestation Threshold	I = 0.00					
Break Even Point						
J. Break Even Point	J = 0.00					
K. Forest Clearing Permitted without Mitigation	K = 0.00					
Proposed Forest Clearing						
L. Total Area of Forest to be Cleared	L = 0.00					
M. Total Area of Forest to be Retained	M = 0.00					
Planting Requirements Inside Watershed						
N. Reforestation for Clearing above the Reforestation Threshold	N = 0.00					
P. Reforestation for Clearing below the Reforestation Threshold	P = 0.00					
Q. Credit for Retention above the Reforestation Threshold	Q = 0.00					
R. Total Reforestation Required	R = 0.00					
S. Total Afforestation Required	S = 0.30					
T. Total Reforestation and Afforestation Requirement	T = 0.30					
U. 75% of Total Obligation (Retention + Planting)	U = 0.23					
V. Planting Required Onsite to meet 75% Obligation	V = 0.23					
Planting Requirements Outside Watershed						
W. Total Planting within Development Site Watershed	W = 0.00					
X. Total Afforestation Required	X = 0.30					
Y. Remaining Planting within Watershed for Reforestation Credit	Y = 0.00					
Z. Reforestation for Clearing above the Reforestation Threshold	Z = 0.00					
AA. Reforestation for Clearing below the Reforestation Threshold	AA = 0.00					
BB. Credit for Retention above the Reforestation Threshold	BB = 0.00					
CC. Total Reforestation Required	CC = 0.00					
DD. Total Afforestation and Reforestation Requirement	DD = 0.30					

SITE DEVELOPMENT PLAN

MCWHORTER PROPERTY

WARFIELD'S GRANT SECTION 1, AREA 1

PARCEL 'A'

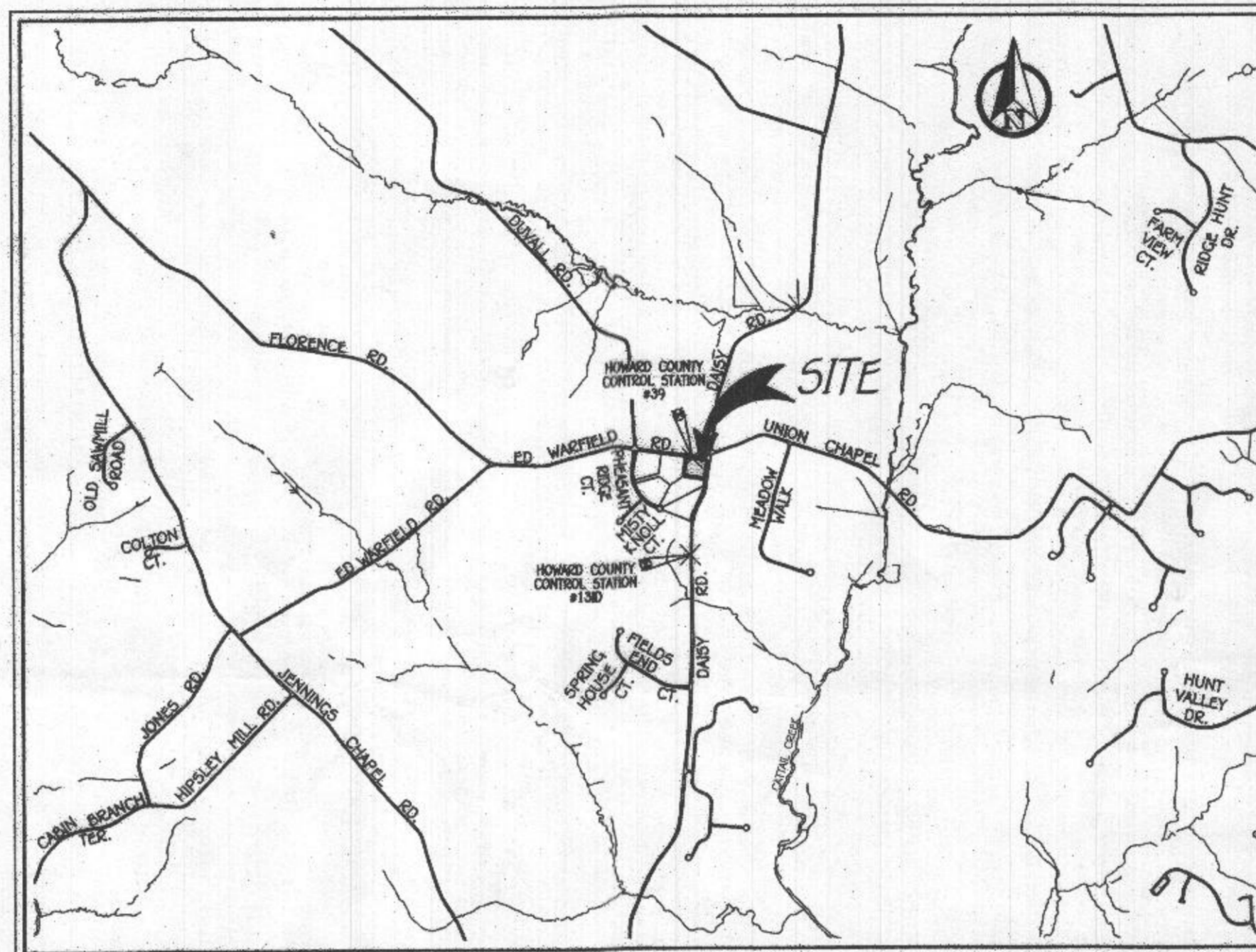
16031 ED WARFIELD ROAD

ZONED: B-2 BUSINESS GENERAL

TAX MAP No. 13 GRID No. 23 PART OF PARCEL NO. 334

FOURTH ELECTION DISTRICT

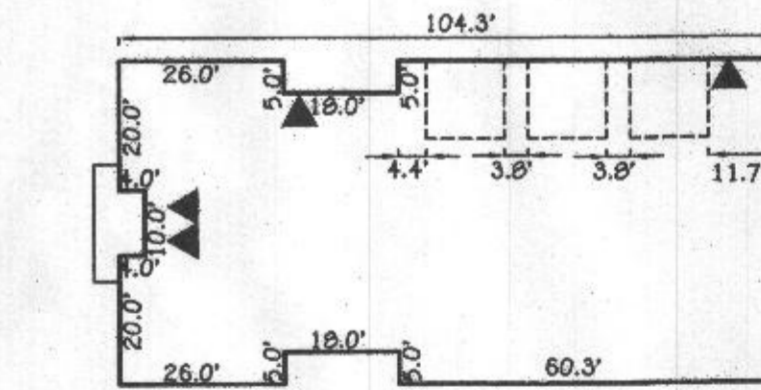
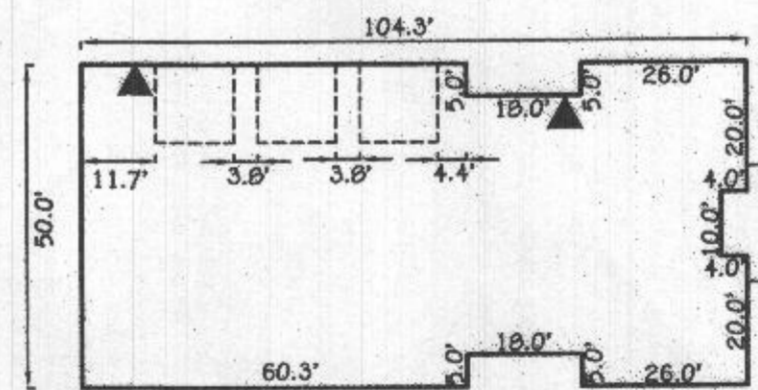
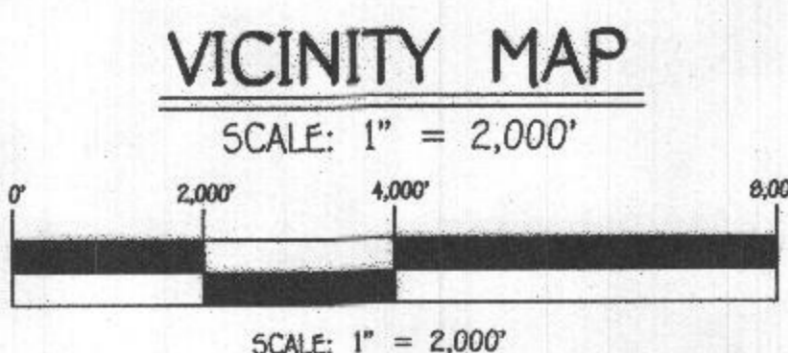
HOWARD COUNTY, MARYLAND



HOWARD COUNTY GEODETIC SURVEY CONTROL NO. 1310
 N 591,125.324' E 1,292,599.242'
 ELEVATION: 533.483'

HOWARD COUNTY GEODETIC SURVEY CONTROL NO. 1310B
 N 592,525.739' E 1,292,640.139'
 ELEVATION: 545.852'

REFER TO HOWARD CO. ADC MAP 4011-J4



SITE ANALYSIS DATA CHART	
A. TOTAL AREA OF THIS SUBMISSION = 1.99 AC.	
B. LIMIT OF DISTURBED AREA = 1.28 AC. (SWM BASED ON LEO)	
C. PRESENT ZONING DESIGNATION = B-2 (PER 10/06/2013 COMPREHENSIVE ZONING PLAN)	
D. PROPOSED USE: BUSINESS GENERAL	
E. PREVIOUS HOWARD COUNTY FILES: F-90-56, ECP-19-082	
F. TOTAL AREA OF FLOODPLAIN LOCATED ON-SITE = 0 AC	
G. TOTAL AREA OF SLOPES IN EXCESS OF 15% = 0 AC	
H. TOTAL AREA OF SLOPES IN EXCESS OF 25% = 0 AC	
I. TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 0 AC	
J. TOTAL AREA OF STREAM (INCLUDING BUFFER) = 0 AC	
K. TOTAL AREA OF EXISTING FOREST = 0 AC	
L. TOTAL AREA OF FOREST TO BE RETAINED = 0 AC	
M. TOTAL AREA OF LOTS / BUILDABLE PARCELS = 1.99 AC	
N. TOTAL IMPERVIOUS AREA = 0.26 AC (WITHIN LEO)	
O. TOTAL AREA OF ERODIBLE SOILS = 1.07 AC	
P. TOTAL AREA OF GREEN OPEN SPACE = 1.43 AC	

ADDRESS CHART	
PARCEL 'A' STREET ADDRESS	
STORAGE BUILDING / OFFICE	2900 DASHY ROAD
FUTURE STORAGE BUILDING	2910 DASHY ROAD

APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS,
 HOWARD COUNTY HEALTH DEPARTMENT.

Frank Wawulskan
 COUNTY HEALTH OFFICER

DATE: 11/30/20

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21114
 (410) 461-2099

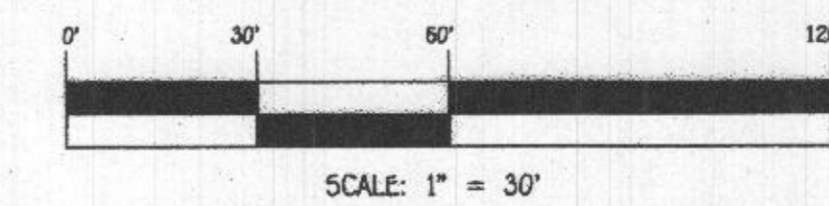


PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/21.

Frank Wawulskan
 FRANK WAWULSKAN L.S.

DATE: 5/21/20



OWNER
 DASHY CROSSROADS LLC
 6851 REDBERRY ROAD
 WOODBINE, MD 21797-7811

DEVELOPER
 RYAN MCWHORTER
 6851 REDBERRY ROAD
 CLARKSVILLE, MD 21029
 (410)-984-5013

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING				
Chief, Division of Land Development	<i>11/30/20</i>	Date		
Chief, Development Engineering Division	<i>9/29/20</i>	Date		
Director - Department of Planning and Zoning	<i>11-30-20</i>	Date		
PROJECT: MCWHORTER PROPERTY	PHASE: N/A	PARCEL NO.: 334		
PLAT: 9800-9802	BLOCK NO.: 23	ZONE: B-2	ELEC. DIST.: 4	CENSUS TR.: 24027604002
PREVIOUS HOWARD COUNTY FILES: ECP-19-082, F-90-56				

TITLE SHEET

MCWHORTER PROPERTY

WARFIELD'S GRANT SECTION 1, AREA 1

PARCEL 'A'

16031 ED WARFIELD ROAD

TAX MAP NO.: 13 GRID NO.: 23 PARCEL NO.: 334

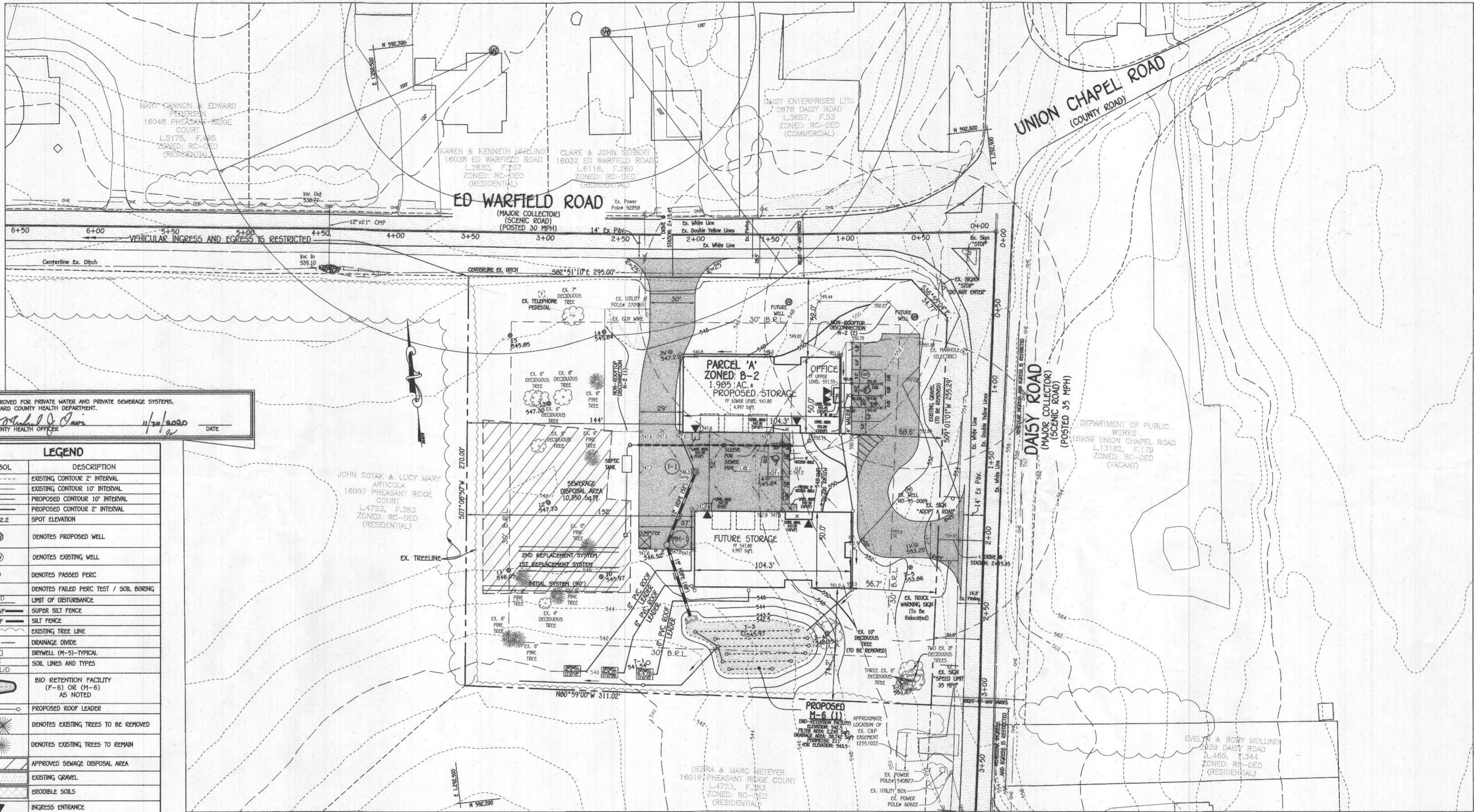
ZONED B-2

FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: APRIL, 2020

SHEET 1 OF 13

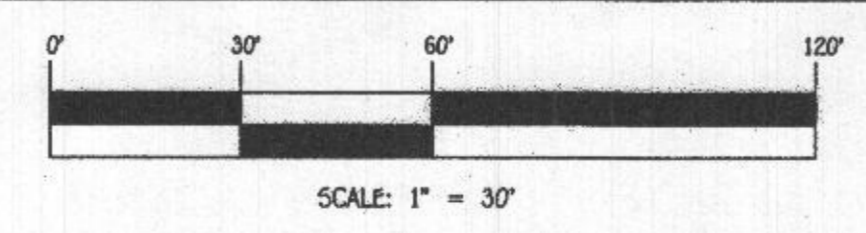
SOP-20-012



APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS,
 HOWARD COUNTY HEALTH DEPARTMENT.
 COUNTY HEALTH OFFICER: *[Signature]* DATE: 11/30/20

LEGEND	
SYMBOL	DESCRIPTION
--- (dashed)	EXISTING CONTOUR 2' INTERVAL
--- (dashed)	EXISTING CONTOUR 10' INTERVAL
--- (dashed)	PROPOSED CONTOUR 10' INTERVAL
--- (dashed)	PROPOSED CONTOUR 2' INTERVAL
x362.2	SPOT ELEVATION
⊙	DENOTES PROPOSED WELL
⊙	DENOTES EXISTING WELL
⊙	DENOTES PASSED PERC
T-1	DENOTES FAILED PERC TEST / SOIL BORING
LOD	LIMIT OF DISTURBANCE
SSF	SUPER SILT FENCE
SF	SILT FENCE
---	EXISTING TREE LINE
---	DRAINAGE DIVIDE
□	DRYWELL (M-5)-TYPICAL
GmC	SOIL LINES AND TYPES
Lrd	BIO RETENTION FACILITY (F-6) OR (M-6) AS NOTED
○	PROPOSED ROOF LEADER
☼	DENOTES EXISTING TREES TO BE REMOVED
☼	DENOTES EXISTING TREES TO REMAIN
▨	APPROVED SEWAGE DISPOSAL AREA
▨	EXISTING GRAVEL
▨	ERODIBLE SOILS
▽	INGRESS ENTRANCE
▽	EGRESS EXIT
▨	DENOTES EXISTING FOREST TO BE REMOVED

PLAN
 SCALE: 1" = 30'



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 10272 BALTIMORE NATIONAL PkE
 ELICOTT CITY, MARYLAND 21042
 (410) 461-2555



PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/21.
 Frank Mawlasan I DATE: 5/21/20

OWNER
 DAISY CROSSROADS LLC
 16125 ED WARFIELD ROAD
 WOODBINE, MD 21797-7911

DEVELOPER
 RYAN MCWHORTER
 6851 REDBERRY ROAD
 CLARKSVILLE, MD 21029
 (410)-984-5813

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development: *[Signature]* Date: 9/21/20
 Chief, Development Engineering Division: *[Signature]* Date: 11-30-20
 Director, Department of Planning and Zoning: *[Signature]* Date: 11-30-20

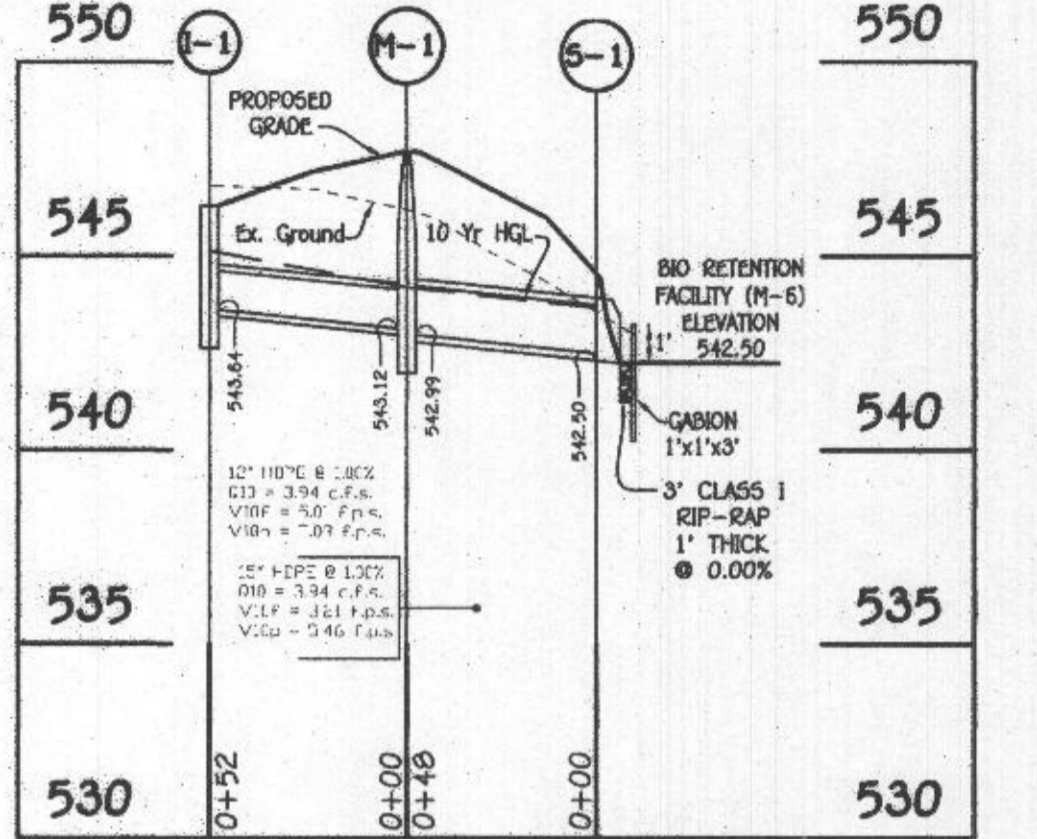
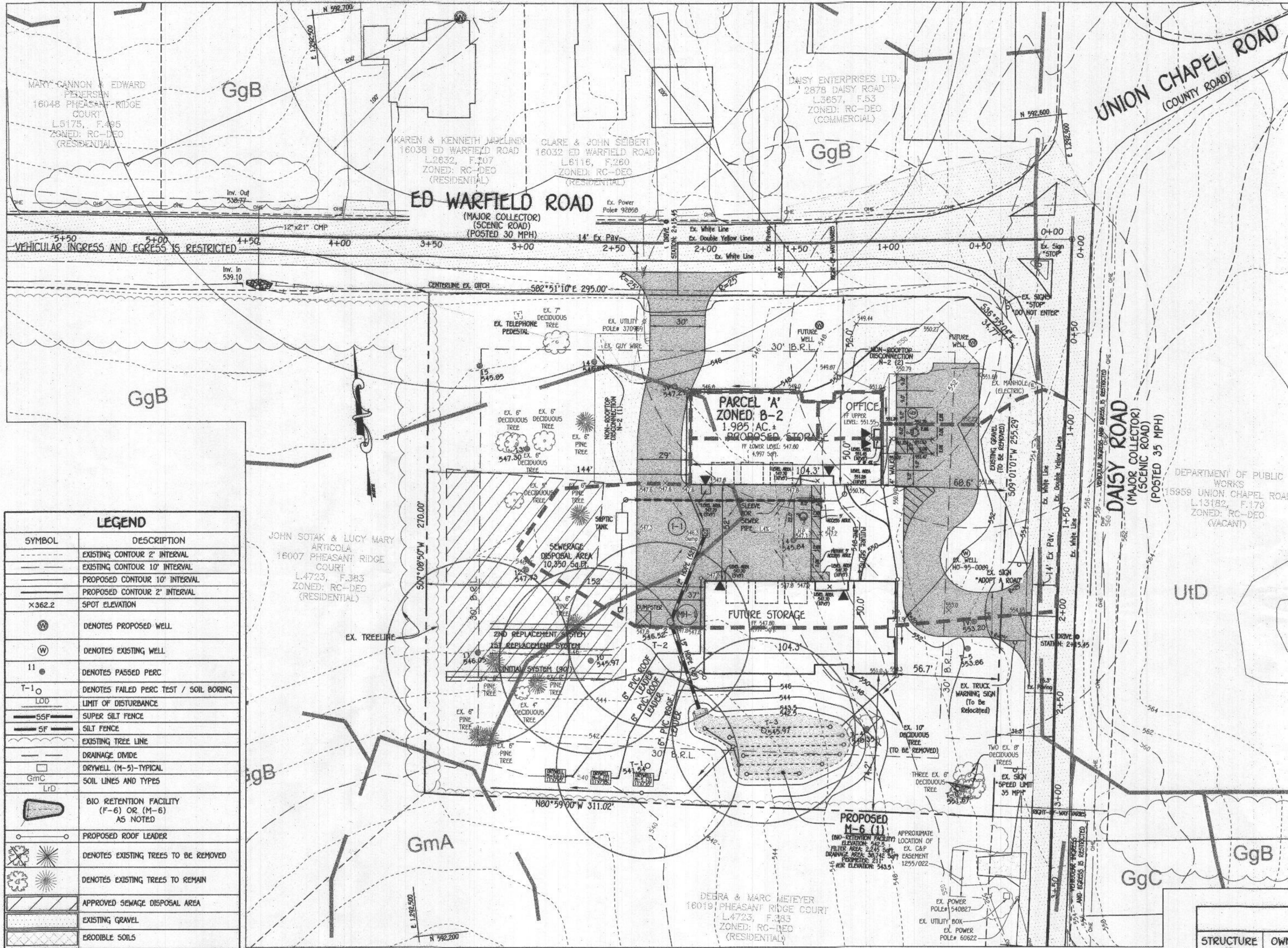
PROJECT	PHASE	PARCEL NO.
MCWHORTER PROPERTY	N/A	334

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
9800-9802	23	B-2	13	4	24027604002

PREVIOUS HOWARD COUNTY FILES:
 ECP-19-062, F-90-56

SITE DEVELOPMENT PLAN
MCWHORTER PROPERTY
 WARFIELD'S GRANT SECTION 1, AREA 1
 PARCEL 'A'
 16031 ED WARFIELD ROAD
 TAX MAP NO.: 13 GRID NO.: 23 PARCEL NO.: 334
 ZONED B-2
 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: APRIL, 2020
 SHEET 2 OF 13

SOILS LEGEND			
SOIL	NAME	CLASS	KW
GgA	Gleng loam, 0 to 3 percent slopes	B	0.37
GgB	Gleng loam, 3 to 6 percent slopes	B	0.37
GmA	Glenville silt loam, 0 to 3 percent slopes	C	0.49



PROFILE STORMDRAIN
SCALE HORZ. 1" = 50'
VERT. 1" = 5'

LEGEND	
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 2' INTERVAL
x362.2	SPOT ELEVATION
⊕	DENOTES PROPOSED WELL
⊙	DENOTES EXISTING WELL
11	DENOTES PASSED PERC
T-1	DENOTES FAILED PERC TEST / SOIL BORING
LOD	LIMIT OF DISTURBANCE
55F	SUPER SILT FENCE
5F	SILT FENCE
---	EXISTING TREE LINE
---	DRAINAGE DIVIDE
GmC	DRYWELL (M-5)-TYPICAL
LTD	SOIL LINES AND TYPES
---	BIO RETENTION FACILITY (F-6) OR (M-6) AS NOTED
---	PROPOSED ROOF LEADER
⊗	DENOTES EXISTING TREES TO BE REMOVED
⊗	DENOTES EXISTING TREES TO REMAIN
---	APPROVED SEWAGE DISPOSAL AREA
---	EXISTING GRAVEL
---	ERODIBLE SOILS
▼	INGRESS ENTRANCE
▲	EGRESS EXIT
⊗	DENOTES EXISTING FOREST TO BE REMOVED

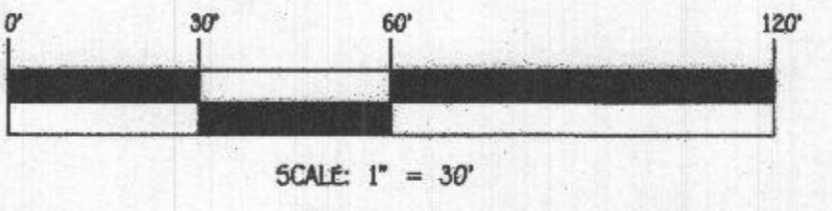
APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT.
[Signature]
COUNTY HEALTH OFFICER
4/30/2020
DATE

PIPE SCHEDULE		
SIZE	CLASS	LENGTH
12"	HOPE	52'
15"	HOPE	40'

DRAINAGE AREA DATA				
DRAINAGE AREA	STRUCTURE NO.	AREA (AC.)	C'	% IMP.
A	I-1	0.67	0.61	57

STRUCTURE SCHEDULE							
STRUCTURE NO.	OWNERSHIP AND MAINTENANCE	TOP ELEVATION	INV IN	INV OUT	COORDINATES	TYPE	REMARKS
I-1	PRIVATE	546.30	-----	543.64 12"	N 592398.50 E 1292680.71	YARD INLET	D-4.14
M-1	PRIVATE	547.70	543.12 (I-1) 12"	542.99 15"	N 592353.01 E 1292656.45	4' DIA. MANHOLE	G-5.12
S-1	PRIVATE	544.50	542.50 (M-1) 15"	-----	N 592310.54 E 1292665.48	15' END SECTION	D-5.51

PLAN
SCALE: 1" = 30'



SCALE: 1" = 30'

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10722 BALDWIN NATIONAL PARK
ELLSWORTH CITY, MARYLAND 21042
(410) 461-2999



PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/21.

[Signature]
FRANK MALANSKI
5/21/20
DATE

OWNER

DAISY CROSSROADS LLC
16135 ED WARFIELD ROAD
WOODBINE, MD 21797-7011

DEVELOPER

RYAN MCWHORTER
6851 CEDARBERRY ROAD
CLARKSVILLE, MD 21029
(410)-984-5013

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

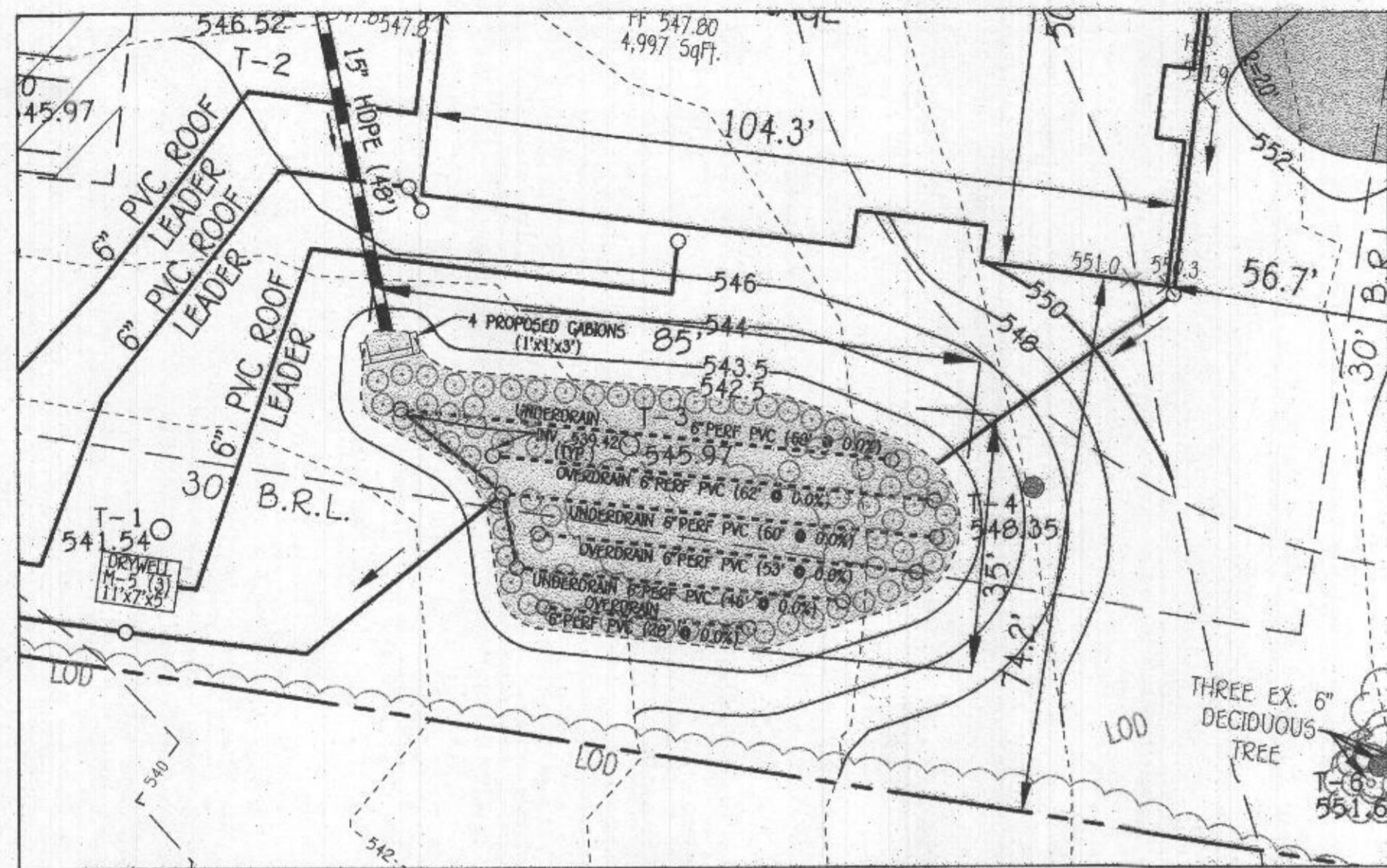
Chief, Division of Land Development
[Signature]
Chief, Development Engineering Division JP
Director - Department of Planning and Zoning
[Signature]

APPROVED DATE
4/30/20
DATE

PROJECT	MCWHORTER PROPERTY	PHASE	N/A	PARCEL NO.	334
PLAT	9800-9802	BLOCK NO.	23	ZONE	B-2
TAX/ZONE	13	ELEC. DIST.	4	CENSUS TR.	24027604002
PREVIOUS HOWARD COUNTY FILES: ECP-19-082, F-90-56					

STORMDRAIN DRAINAGE AREA MAP

MCWHORTER PROPERTY
WARFIELD'S GRANT SECTION 1, AREA 1
PARCEL 'A'
16031 ED WARFIELD ROAD
TAX MAP NO.: 13 GRID NO.: 23 PARCEL NO.: 334
ZONED B-2
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: APRIL, 2020
SHEET 5 OF 13



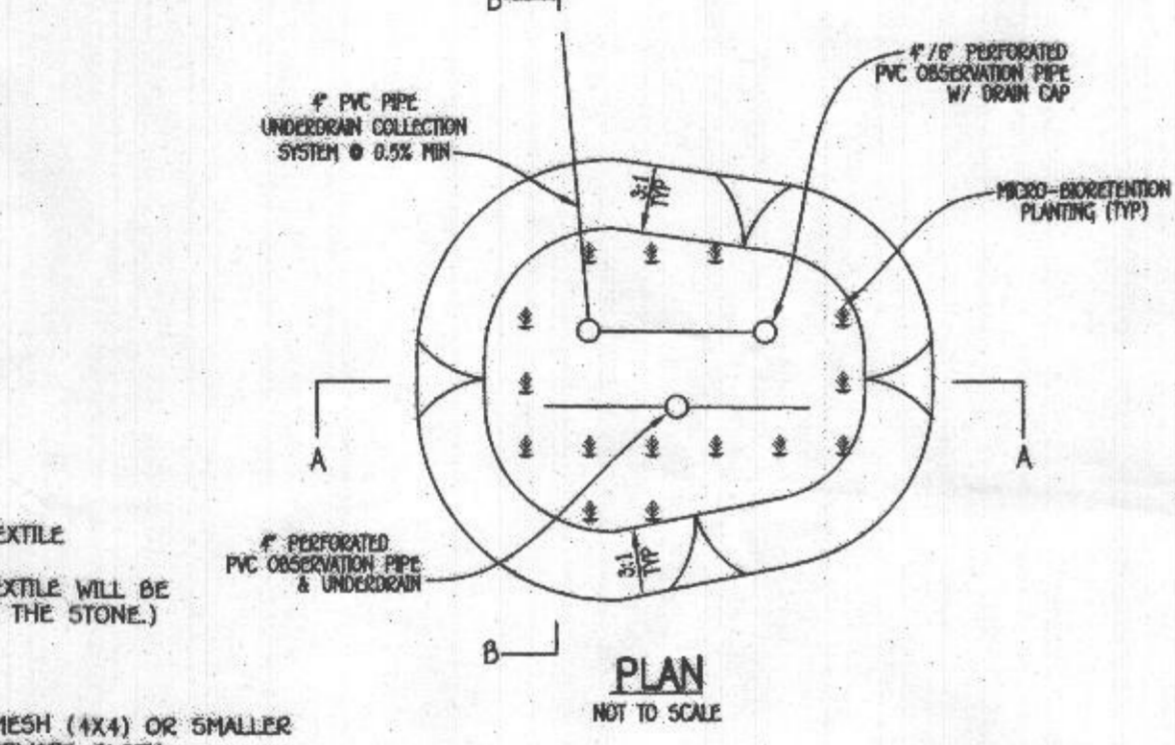
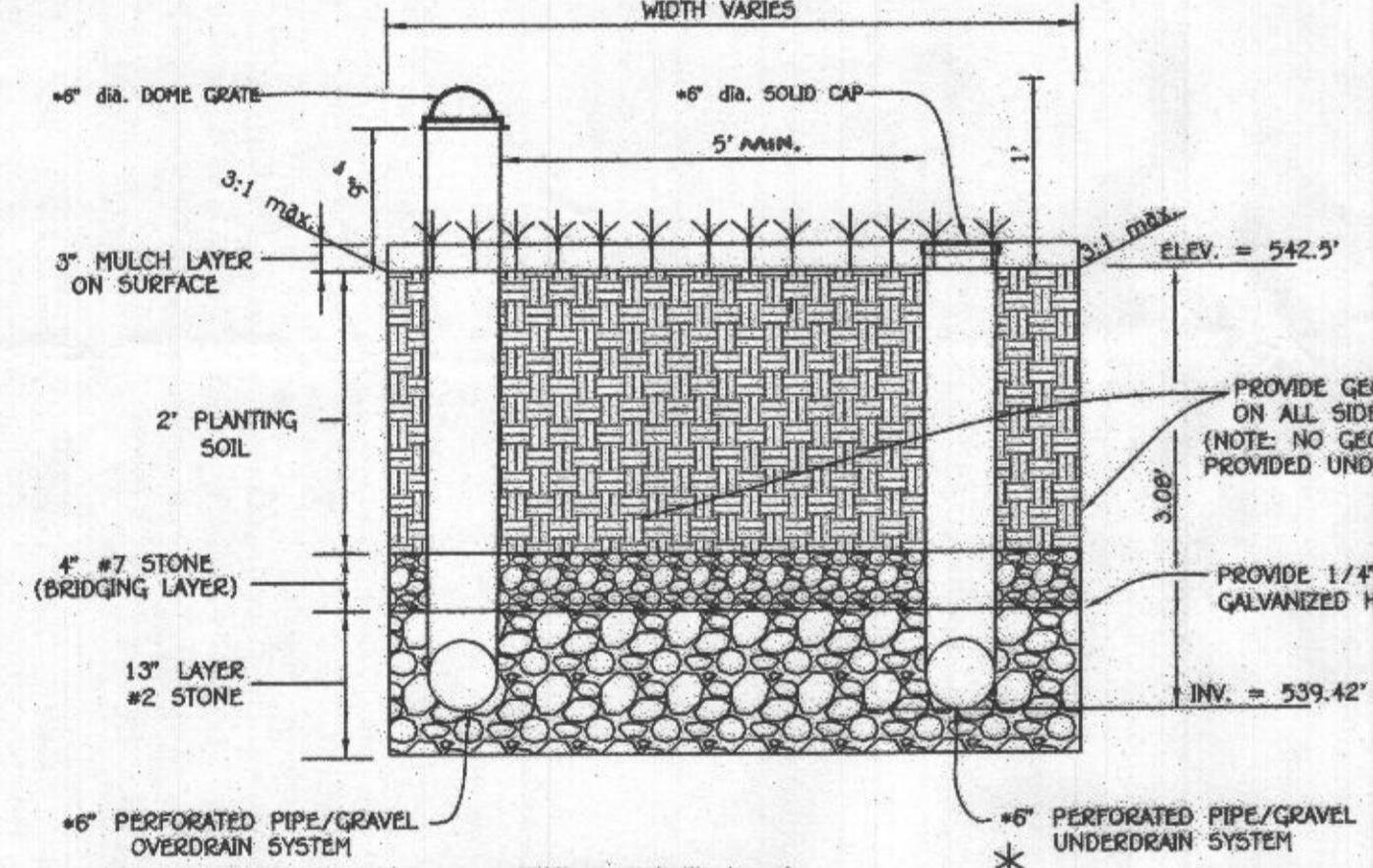
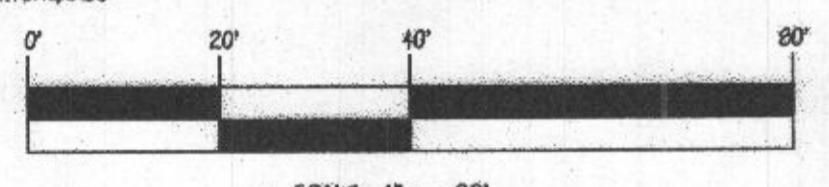
- SHRUBS**
- BARBERRY
 - SPRINGBUSH
 - ARROWWOOD
 - WITCH HAZEL
 - BUTTERNUT
 - BUTTERFLYBUCKLE
 - BUTTERNUT
 - BUTTERFLYBUCKLE
- ANY OF THE SHRUBS LISTED MAY BE USED

M-6 (1)
 SCALE: 1" = 20'
 DRAINAGE AREA: 39,953 sqft.
 FILTER AREA: 2,245 sqft.
 ELEVATION: 542.5'
 PERIMETER: 211'
 WEIR ELEVATION: 543.5'

PLANT MATERIAL - BIO-RETENTION F-6 (12)

QUANTITY	NAME	MAXIMUM SPACING (FT.)
187 (561 #4#)	GRASSES	36" o.c.
80	SHRUBS	36"-40" o.c.

- GRASS**
- SWITCHGRASS
 - HEAVY METAL SWITCHGRASS
- ANY OF THE GRASS LISTED MAY BE USED



NOTE: THE BOTTOM OF EACH BIO-RETENTION FACILITY (M-6) SHALL BE ROTOTILLED PRIOR TO STONE INSTALLATION.

* CONTRACTOR MAY SUBSTITUTE 6" DIAMETER SLOTTED HOPE PIPE CLASS II PER AASHTO SPECIFICATION M252 (AASHTO N-12 5T 1B PIPE OR EQUIVALENT)

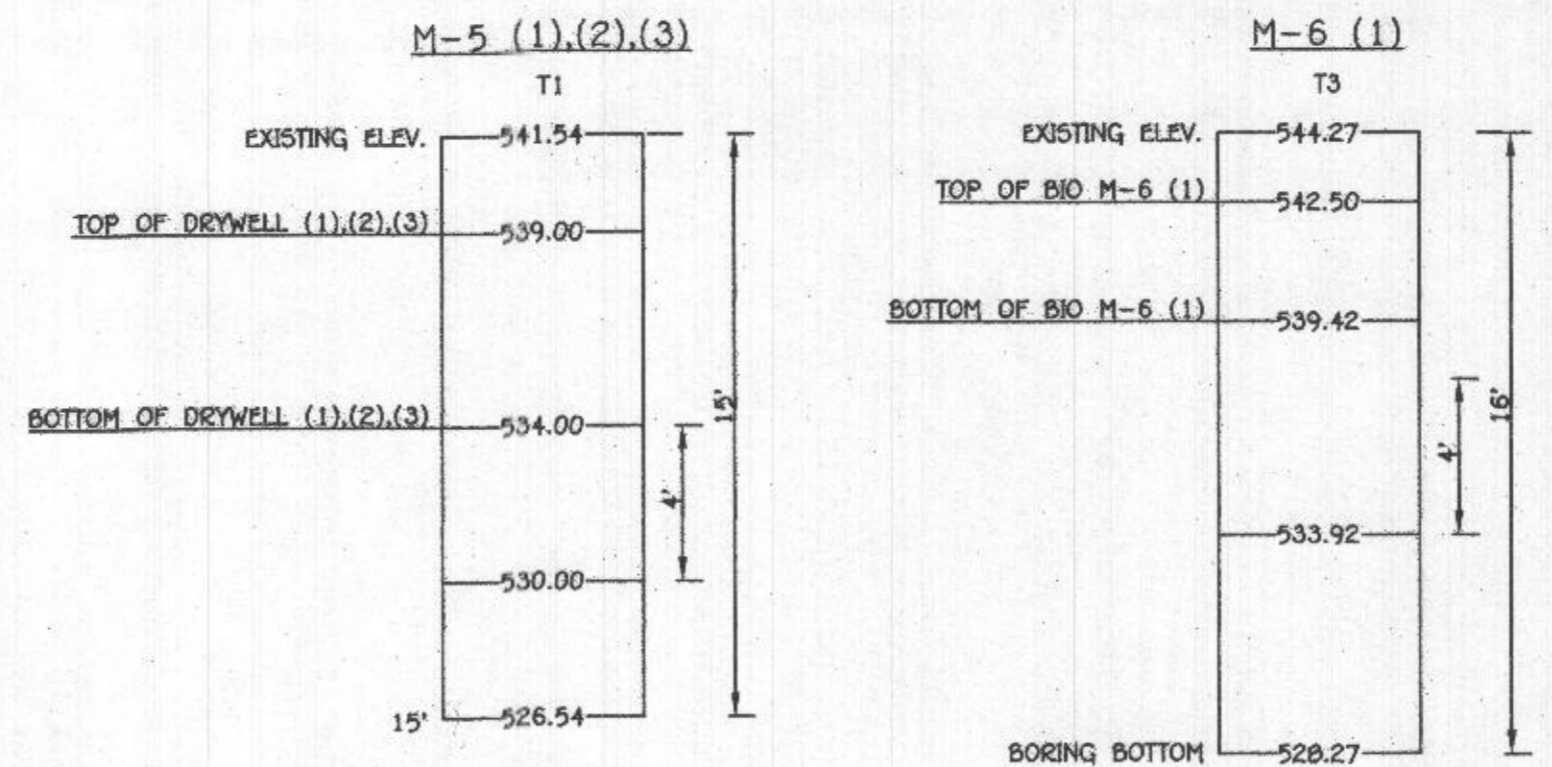
TYPICAL SECTION - BIO-RETENTION FACILITY (F-6)

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

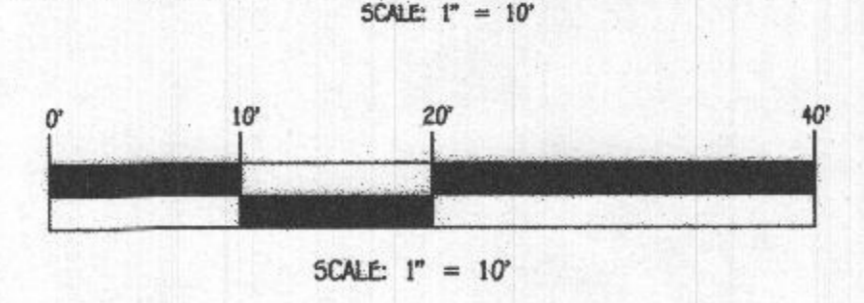
- THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A.6.1 AND 2.
- THE OWNER SHALL PERFORM A PLANT 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 NON-ROOFTOP (N-2)

- MAINTENANCE OF AREAS RECEIVING DISCONNECTION RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE AREAS RECEIVING RUNOFF SHOULD BE PROTECTED FROM FUTURE COMPACTION OR DEVELOPMENT OF IMPERVIOUS AREA. IN COMMERCIAL AREAS FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.



STORMWATER MANAGEMENT BORING LOGS

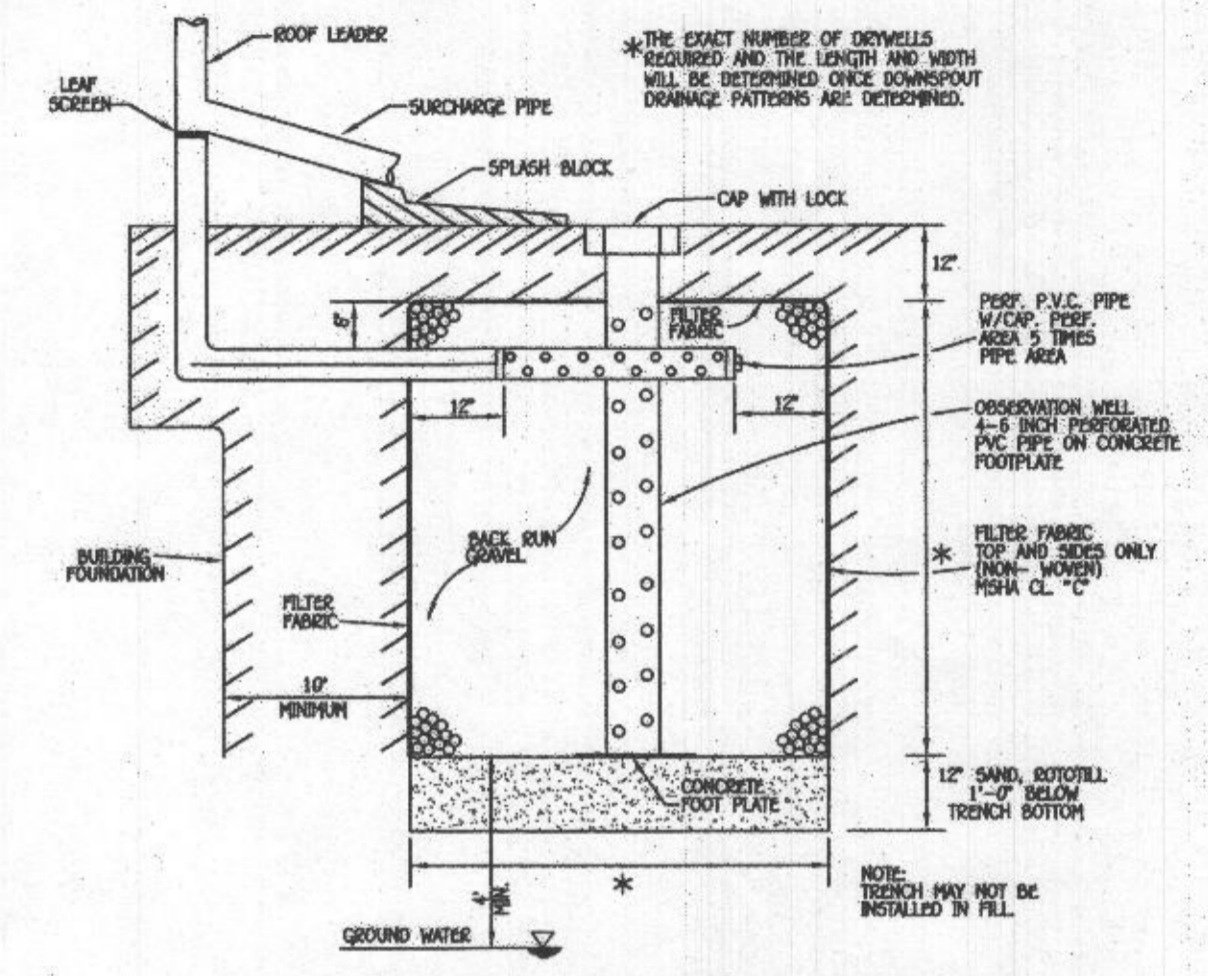


FUTURE OPERATION & MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DRY WELLS (M-5)

- THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
- THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO ENSURE TRENCH DRAINAGE.
- THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
- WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN A SEVENTY-TWO (72) HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
- THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
- ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

FUTURE DRY WELL CHART

DRYWELL No.	AREA OF ROOF PER DRYWELL	VOLUME REQUIRED	VOLUME PROVIDED	L W D
1	1000 SQ.FT.	143 CU.FT.	154 CU.FT.	11' x 7' x 5'
2	1000 SQ.FT.	143 CU.FT.	154 CU.FT.	11' x 7' x 5'
3	1000 SQ.FT.	143 CU.FT.	154 CU.FT.	11' x 7' x 5'



DRY WELL DETAIL (M-5)

NOT TO SCALE
 FUTURE

Table B.4. Materials Specifications for Micro-Bioretenion, Rain Gardens & Landscape Infiltration

Material	Specification	Size	Notes
Planting soil	see Appendix A, Table A.4	n/a	plantings are site-specific
Filtering soil (2' to 4' deep)	loamy sand 60-65% coarse sand 35-40% or sandy loam 50% coarse sand 50% compost 40%		USDA soil types loamy sand or sandy loam; clay content <5%
Organic Content	Yes, 10% by dry weight (ASTM D 2974)		
Mulch	chipped hardwood		aged 6 months, minimum
Ped gravel disphragm	ped gravel: ASTM-D-448	No. 8 or No. 9 (1/2" to 3/8")	
Curbin drain	environmental stone: washed cubbles	stone: 2" to 3"	
Geotextile		n/a	PE Type I nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M-63	No. 57 or No. Aggregate (3/8" to 3/4")	
Underdrain piping	F 750, Type P5 2B or AASHTO M-278	4" to 6" rigid schedule 40 PVC or 50835	Slotted or perforated pipe; 3/8" perft. @ 6" on center, 4 holes per row; minimum of 2" of gravel over pipe; not necessarily underdrain pipes. Perforated pipe shall be wrapped with 1/4 inch galvanized hardware cloth
Poured in place concrete (if required)	NSCA Mix No. 3, 1 = 3500 psi at 28 days, normal weight, air-entrained; reinforcing to meet ASTM-615-80	n/a	on-site testing of poured-in-place concrete required; 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved state or local standards requires design, drainage tested and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 309.2(b), vertical loading 0.1-1.0 or H-202, allowable horizontal loading (based on soil pressure); and analysis of potential cracking
Sand	AASHTO M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Dribble and Greytone (ASTM) #12 are not acceptable. No calcium carbide or olefinic sand substitutions are acceptable. No "rock dust" can be used for sand.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10072 BALTIMORE NATIONAL PIKE
 ELKROTT CITY, MARYLAND 21046
 (410) 481-2000



PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/11/21.

Frank Tawman Jr.
 FRANK TAWMAN JR.
 5/11/20
 DATE

OWNER
 DAISY CROSSROADS LLC
 16135 ED WARFIELD ROAD
 WOODBINE, MD 21797-7911

DEVELOPER
 RYAN MCWHORTER
 6091 REDBERRY ROAD
 CLARKSVILLE, MD 21029
 (410)-984-5913

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development
[Signature]
 Date: 4/23/20
 Chief, Development Engineering Division
[Signature]
 Date: 4-23-20
 Director - Department of Planning and Zoning
[Signature]
 Date: 4-30-20

PROJECT	PHASE	PARCEL NO.
MCWHORTER PROPERTY	N/A	334
PLAT	BLOCK NO.	ZONE
19000-9802	23	B-2
TAX/ZONE	ELIC. DIST.	CENSUS TR.
13	4	24027604002

PREVIOUS HOWARD COUNTY FILES:
 HCP-19-062, F-90-56

SWM NOTES, DETAILS & BORING LOGS

MCWHORTER PROPERTY
 WARFIELD'S GRANT SECTION 1, AREA 1
 PARCEL 'A'
 16031 ED WARFIELD ROAD
 TAX MAP NO.: 13 GRID NO.: 23 PARCEL NO.: 334
 ZONED B-2
 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: APRIL, 2020
 SHEET 6 OF 13