

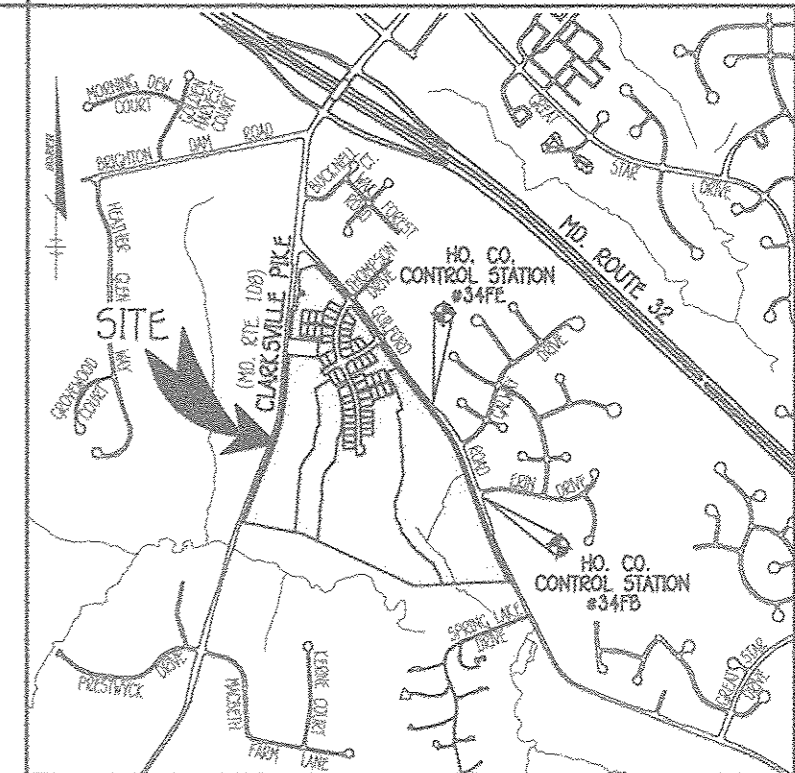
SHEET INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	GENERIC BOXES & HOUSE TYPES
3-6	SITE DEVELOPMENT PLAN SHEETS
7-10	SEDIMENT EROSION CONTROL PLAN SHEETS
11	SEDIMENT EROSION CONTROL NOTES & DETAILS
12	STORMWATER MANAGEMENT PLAN
13	STORMWATER MANAGEMENT NOTES, DETAILS AND DRYWELL CHART

SITE DEVELOPMENT PLAN ENCLAVE AT RIVER HILL PHASE 2

LOTS 55 THRU 74, 82 THRU 124 & PARTS OF OPEN SPACE LOTS 125 THRU 128
R-ED (RESIDENTIAL: ENVIRONMENTAL DEVELOPMENT)
TAX MAP No. 34 GRID No. 18
PARCEL NOS. 88 & 97
HOWARD COUNTY, MARYLAND

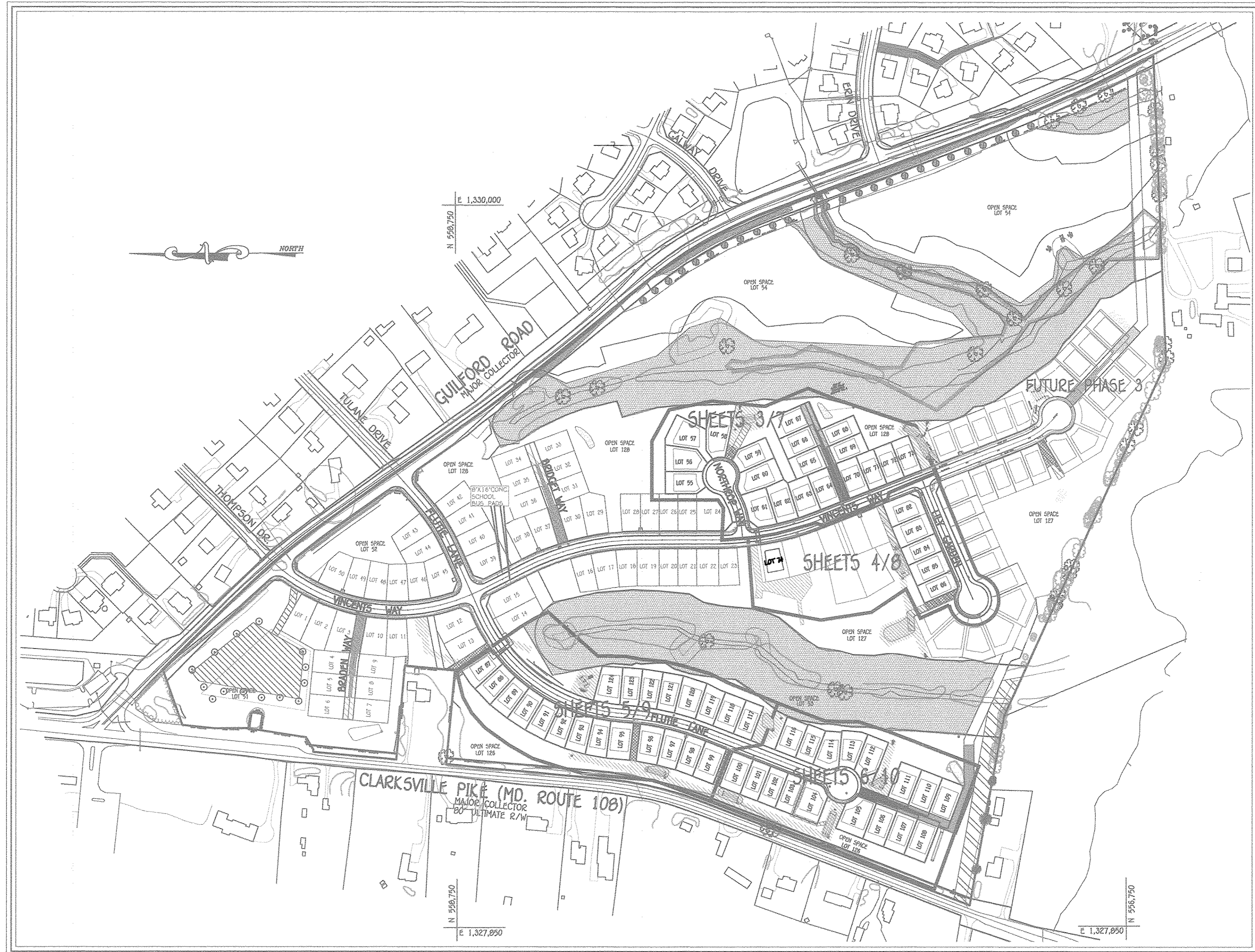
BENCH MARKS
T.P. 34FB ELEV. 406.148
N. 557,439.913
E. 1,330,191.322
LOC. NEAR INTERSECTION OF
QUILFORD ROAD & GALWAY DR.

T.P. 34FE ELEV. 431.110
N. 558,339.601
E. 1,329,709.025
SP-15-006 F-15-110, WP-15-069, WP-16-152, F-17-003, SDP-17-013 & SDP-17-014
LOC. NEAR INTERSECTION OF
QUILFORD ROAD & ERIN DR.



VICINITY MAP
SCALE: 1" = 2000'
HO. CO. ADC MAP 4933, GRID K-9

STORMWATER MANAGEMENT PRACTICES				
LOT NO.	STREET ADDRESS	DRY WELLS M-5 (Y/N)	MICRO BIO-RETENTION M-6 (Y/N)	BIO-RETENTION F-6 (Y/N)
55	6207 NORTHROP WAY	Y(3)		Y (PROVIDED BY F-17-003)
56	6211 NORTHROP WAY	Y(3)		Y (PROVIDED BY F-17-003)
57	6215 NORTHROP WAY	Y(3)		Y (PROVIDED BY F-17-003)
58	6214 NORTHROP WAY	Y(3)		Y (PROVIDED BY F-17-003)
59	6208 NORTHROP WAY	Y(3)		Y (PROVIDED BY F-17-003)
60	6204 NORTHROP WAY	Y(3)		Y (PROVIDED BY F-17-003)
61	12595 VINCENTS WAY	Y(3)		Y (PROVIDED BY F-17-003)
62	12593 VINCENTS WAY	Y(3)		Y (PROVIDED BY F-17-003)
63	12593 VINCENTS WAY	Y(3)		Y (PROVIDED BY F-17-003)
64	12597 VINCENTS WAY	Y(3)		Y (PROVIDED BY F-17-003)
65	6207 DARA WAY	Y(2)	Y (PROVIDED BY M-6(23))	
66	6211 DARA WAY	Y(2)	Y (PROVIDED BY M-6(23))	
67	6215 DARA WAY	Y(2)	Y (PROVIDED BY M-6(23))	
68	6212 DARA WAY	Y(3)	Y (PROVIDED BY M-6(23))	
69	6208 DARA WAY	Y(3)	Y (PROVIDED BY M-6(23))	
70	12615 VINCENTS WAY	Y(3)		Y (PROVIDED BY F-17-003)
71	12619 VINCENTS WAY	Y(3)		Y (PROVIDED BY F-17-003)
72	12623 VINCENTS WAY	Y(3)		Y (PROVIDED BY F-17-003)
73	12627 VINCENTS WAY	Y(3)		Y (PROVIDED BY F-17-003)
82	6102 LILY GARDEN	Y(3)		Y (PROVIDED BY F-17-003)
83	6106 LILY GARDEN	Y(3)		Y (PROVIDED BY F-17-003)
84	6110 LILY GARDEN	Y(3)		Y (PROVIDED BY F-17-003)
85	6114 LILY GARDEN	Y(3)		Y (PROVIDED BY F-17-003)
86	6118 LILY GARDEN	Y(3)		Y (PROVIDED BY F-17-003)
87	6130 FLUTIE LANE	Y(3)		Y (PROVIDED BY F-17-003)
88	6134 FLUTIE LANE	Y(3)	Y (PROVIDED BY F-17-003)	
89	6138 FLUTIE LANE	Y(3)	Y (PROVIDED BY F-17-003)	
90	6142 FLUTIE LANE	Y(3)	Y (PROVIDED BY F-17-003)	
91	6146 FLUTIE LANE	Y(3)	Y (PROVIDED BY F-17-003)	
92	6150 FLUTIE LANE	Y(3)	Y (PROVIDED BY F-17-003)	
93	6154 FLUTIE LANE			Y (PROVIDED BY F-17-003)
94	6158 FLUTIE LANE			Y (PROVIDED BY F-17-003)
95	6162 FLUTIE LANE			Y (PROVIDED BY F-17-003)
96	6166 FLUTIE LANE			Y (PROVIDED BY F-17-003)
97	6170 FLUTIE LANE			Y (PROVIDED BY F-17-003)
98	6174 FLUTIE LANE			Y (PROVIDED BY F-17-003)
99	6178 FLUTIE LANE			Y (PROVIDED BY F-17-003)
100	6182 FLUTIE LANE			Y (PROVIDED BY F-17-003)
101	6186 FLUTIE LANE			Y (PROVIDED BY F-17-003)
102	6190 FLUTIE LANE			Y (PROVIDED BY F-17-003)
103	6194 FLUTIE LANE			Y (PROVIDED BY F-17-003)
104	6198 FLUTIE LANE			Y (PROVIDED BY F-17-003)
105	6202 FLUTIE LANE			Y (PROVIDED BY F-17-003)
106	6206 FLUTIE LANE			Y (PROVIDED BY F-17-003)
107	6210 FLUTIE LANE			Y (PROVIDED BY F-17-003)
108	6214 FLUTIE LANE			Y (PROVIDED BY F-17-003)
109	6218 FLUTIE LANE			Y (PROVIDED BY F-17-003)
110	6222 FLUTIE LANE			Y (PROVIDED BY F-17-003)
111	6226 FLUTIE LANE			Y (PROVIDED BY F-17-003)
112	6230 FLUTIE LANE	Y(3)	Y (PROVIDED BY F-17-003)	
113	6203 FLUTIE LANE	Y(2)	Y (PROVIDED BY F-17-003)	
114	6199 FLUTIE LANE	Y(2)	Y (PROVIDED BY F-17-003)	
115	6195 FLUTIE LANE	Y(3)		Y (PROVIDED BY F-17-003)
116	6191 FLUTIE LANE	Y(3)		Y (PROVIDED BY F-17-003)
117	6187 FLUTIE LANE	Y(3)		Y (PROVIDED BY F-17-003)
118	6183 FLUTIE LANE	Y(3)		Y (PROVIDED BY F-17-003)
119	6179 FLUTIE LANE	Y(3)		Y (PROVIDED BY F-17-003)
120	6175 FLUTIE LANE	Y(3)		Y (PROVIDED BY F-17-003)
121	6171 FLUTIE LANE	Y(3)		Y (PROVIDED BY F-17-003)
122	6167 FLUTIE LANE	Y(3)		Y (PROVIDED BY F-17-003)
123	6163 FLUTIE LANE	Y(3)		Y (PROVIDED BY F-17-003)
124	6159 FLUTIE LANE	Y(3)		Y (PROVIDED BY F-17-003)
74	12586 VINCENTS WAY	Y(3)		Y (PROVIDED BY F-17-003)



GENERAL NOTES

- SUBJECT PROPERTY ZONED R-ED PER THE 10/06/13 COMPREHENSIVE ZONING PLAN.
- THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION INSPECTION DIVISION AT (410)313-1880 AT LEAST (5) FIVE WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- THIS PROJECT IS SUBJECT TO HOWARD COUNTY FILES: ECP-15-005, PB CASE NO. 409, SP-15-006 F-15-110, WP-15-069, WP-16-152, F-17-003, SDP-17-013 & SDP-17-014.
- THIS PLAN IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED ON OR ABOUT FEBRUARY, 2014 BY FISHER, COLLINS & CARTER INC.
- HORIZONTAL AND VERTICAL CONTROL DATUM IS BASED ON NAD 83, MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS. HOWARD COUNTY MONUMENT 34FB N 557,439.913 E 1,330,191.322 HOWARD COUNTY MONUMENT 34FE N 558,339.601 E 1,329,709.025
- ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- THIS PLAN IS FOR HOUSE SITING AND GRADING ONLY. IMPROVEMENTS SHOWN WITHIN THE RIGHTS-OF-WAY OF THIS S.D.P. ARE NOT USED FOR CONSTRUCTION. FOR CONSTRUCTION SEE APPROVED ROAD CONSTRUCTION PLANS F-17-003. FOR APPROVED WATER CONTRACT NO. 34-4888-D AND FOR APPROVED SEWER CONNECTION CONTRACT NO. 34-4992-D.
- CONTRACTOR WILL CHECK SEWER HOUSE CONNECTION ELEVATION AT EASEMENT LINE PRIOR TO CONSTRUCTION.
- STORMWATER MANAGEMENT WILL BE PROVIDED, 118 DRYWELLS (M-5), 2 BIO-RETENTION (F-6) FACILITIES AND 1 MICRO BIO-RETENTION (M-6) FACILITY AND ADDITIONAL DEVICES PREVIOUSLY APPROVED ON THE ROAD CONSTRUCTION DRAWINGS FILED UNDER F-17-003.
- LANDSCAPING OBLIGATIONS FOR THE OVERALL ENCLAVE AT RIVER HILL PROJECT HAVE BEEN PROVIDED UNDER F-15-110. FINANCIAL SURETY FOR THE REQUIRED 4 SHADE TREES AND 4 EVERGREEN TREES SHALL BE POSTED AS PART OF THE GRADING PERMIT IN THE AMOUNT OF \$1,800.00 FOR LANDSCAPING PROVIDED UNDER THIS SITE DEVELOPMENT PLAN.
- FOREST CONSERVATION REQUIREMENTS HAVE BEEN ADDRESSED WITH F-15-110.
- FOR DRIVEWAY ENTRANCE DETAILS REFER TO HO. CODES MANUAL, VOL. IV DETAILS R.6.03 & R.6.05.
- OPEN SPACE REQUIREMENTS FOR THESE LOTS HAVE BEEN PROVIDED UNDER F-17-003.
- THIS SDP IS SUBJECT TO THE 5TH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE ZONING REGULATIONS AS AMENDED BY COUNCIL BILL 50-2001.
- IN ACCORDANCE WITH SECTION 12B OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 16' FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACKS, PORCHES OR DECKS OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACKS. THE 15' MINIMUM DISTANCE BETWEEN STRUCTURES DOES NOT APPLY TO THOSE REFERENCED FEATURES NOR BETWEEN OPEN DECKS AND DWELLING STRUCTURE OR ANOTHER DECK. AS AN ADVISORY, THE 15' DISTANCE DOES APPLY TO THE SECOND STORY OVERHANG.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING (MINIMUM) REQUIREMENTS:
A.) WIDTH - 12' (12' IF SERVING MORE THAN ONE RESIDENCE)
B.) SURFACE - 6" OF COMPACTED CRUSHER RUN BASE W/ TAR AND CHIP COATING (1-1/2" MIN.)
C.) GEOMETRY MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND 45 FOOT TURNING RADIUS
D.) STRUCTURES - (BRIDGES/CULVERTS) CAPABLE OF SUPPORTING 25 GROSS TONS (H25-LOADING)
E.) DRAINAGE ELEMENTS CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.
F.) STRUCTURE CLEARANCES - MINIMUM 12 FEET
G.) MAINTENANCE SUFFICIENT TO INSURE ALL WEATHER USE.
- MODERATE INCOME HOUSING UNITS (M.I.H.U.) REQUIREMENTS FOR PHASE 2 OF THE ENCLAVE AT RIVER HILL HAVE BEEN SATISFIED UNDER F-17-003. THE REQUIRED 7 M.I.H.U. (70 LOTS X 10%) HAVE BEEN SATISFIED BY THE DEVELOPER THROUGH AN ALTERNATIVE COMPLIANCE AND PAYMENT OF A FEE-IN-LIEU TO THE HOWARD COUNTY HOUSING DEPARTMENT. AN EXECUTED M.I.H.U. AGREEMENT WITH THE HOWARD COUNTY HOUSING DEPARTMENT HAS BEEN COMPLETED.
- A PRIVATE RANGE OF ADDRESS SIGN ASSEMBLY SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS/OWNERS EXPENSE FOR ALL THE USE IN COMMON DRIVEWAYS. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-2430 FOR DETAILS AND COST ESTIMATES.
- SUBJECT PROPERTY IS ZONED R-ED AND IS SUBJECT TO COUNCIL BILL NO. 2, "SECTION 12B.D.A.1.] OF THE ZONING REGULATIONS (CB-2-2012) WHICH ALLOWS SUNROOMS AND ROOM EXTENSIONS NOT MORE THAN 10 FEET INTO THE REAR SETBACK. ALONG WITH NOT MORE THAN 60% OF THE REAR FACE OF THE DWELLING ON A LOT WHICH ADJOINS OPEN SPACE ALONG A MAJORITY OF THE REAR LOT LINE FOR R-ED LOTS RECORDED AFTER THE EFFECTIVE DATE OF 5/13/12."

LEGEND	
---12---	EXISTING CONTOUR 2' INTERVAL
---10---	EXISTING CONTOUR 10' INTERVAL
---12---	PROPOSED CONTOUR 2' INTERVAL
---10---	PROPOSED CONTOUR 10' INTERVAL
X411.27	SPOT ELEVATION
---S---	PROPOSED STORM DRAIN PIPE
---	EXISTING SEWER
---	EXISTING WATER
---	LIMIT OF DISTURBANCE
---	SUPER SILT FENCE
---	3% SLOPE
---	15-24% SLOPES
---	25% OR GREATER SLOPES
---	3' SOIL
---	12' SOIL
---	DRUMMED SOIL
---	WETLAND
---	100 YEAR FLOODPLAIN
---	STREAM BUFFER
---	DRAINAGE DITCH
---	OPENWELL 0'-59" TYPICAL
---	BIO RETENTION FACILITY (F-6) OR (M-6) AS NOTED
---	SPECIMEN TREE (TO BE REMOVED)
---	PUBLIC WATER, SEWER & UTILITY EQUIPMENT
---	RECREATIONAL OPEN SPACE
---	USE IN COMMON ACCESS EASEMENT
---	FOREST CONSERVATION EASEMENT
---	STREET TREES

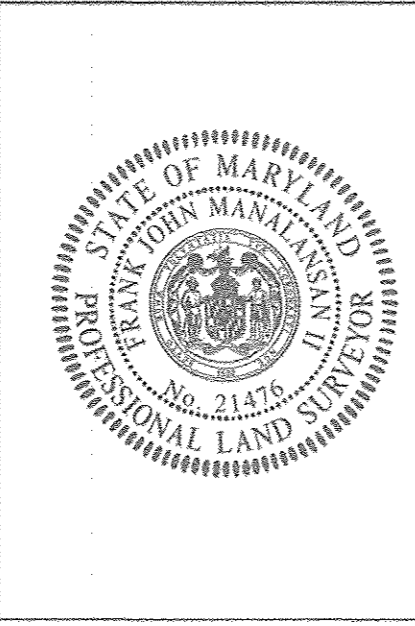
SOILS LEGEND			
SOIL	NAME	CLASS	K/W
G8A	GLADSTONE LOAM	B	0.37
G8B	GLADSTONE LOAM	B	0.37
G8C	GLADSTONE LOAM	B	0.37
G8b	GLENVILLE-BAILE LOAM, 3 TO 8 PERCENT SLOPES	C	0.37

SITE ANALYSIS DATA

- A. TOTAL AREA OF OVERALL ENCLAVE AT RIVER HILL SITE = 88.96 AC.±
- B. TOTAL AREA OF THIS SUBMISSION = 11.06 AC.±
- C. LIMIT OF DISTURBED AREA = 11.12 AC.±
- D. PRESENT ZONING DESIGNATION: R-ED
- E. PROPOSED USE: SINGLE FAMILY DETACHED
- F. FLOOR SPACE ON EACH LEVEL OF BUILDING: N/A
- G. TOTAL NUMBER OF UNITS: 63 UNITS
- H. TOTAL NUMBER OF PARKING SPACES REQUIRED = 126 SPACES
- I. TOTAL NUMBER OF PARKING SPACES PROVIDED: 85 SPACES
- J. OPEN SPACE ON SITE (FOR THIS SUBMISSION): 13.25 ACRES
- K. BUILDING COVERAGE OF SITE: 34%
- L. PREVIOUS HOWARD COUNTY FILES: ECP-15-005, PB CASE NO. 409, SP-15-006 F-15-110, WP-15-069, WP-16-152, F-17-003, SDP-17-013 & SDP-17-014
- M. TOTAL AREA OF FLOODPLAIN: 0.00 AC.±
- N. TOTAL AREA OF SLOPES IN EXCESS OF 25% = 0.00 AC.±
- O. AREA OF WETLANDS = 0.00 AC.±
- P. AREA OF FOREST = 0.00 AC.±
- Q. IMPERVIOUS AREA = 44% AC.±

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CORPORAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
(410) 461-3099

NO.	REVISION	DATE
1	CHANGE TITLE BLOCK & ADD LOT 74 TO ONE PLAN SET	3/14/18



PROFESSIONAL CERTIFICATION
"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, 7/4/19."
Karl John Mandelmann 3/13/18
NAME DATE

SCALE: 1" = 30'

OWNER		OWNER/DEVELOPER	
TIERNEY FARMS-CLARKSVILLE, LP 24151 VENTURA BOULEVARD CALABASAS, CALIFORNIA 91302 818-389-3697		BEAZER HOMES, LLC 8965 GULFORD ROAD COLUMBIA, MD 21046 ATTN: MR. BRIAN KNAUFF 443-539-9249	

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Karl John Mandelmann 4-13-18
Chief, Division of Land Development Date

John J. Pappas 4-16-18
Chief, Development Engineering Division JP Date

Walter J. Pappas 4-16-18
Director - Department of Planning and Zoning Date

PROJECT	PHASE	PARCEL NOS.
ENCLAVE AT RIVER HILL	2	88 & 97

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
24550-58	18	R-ED	34	5	605102

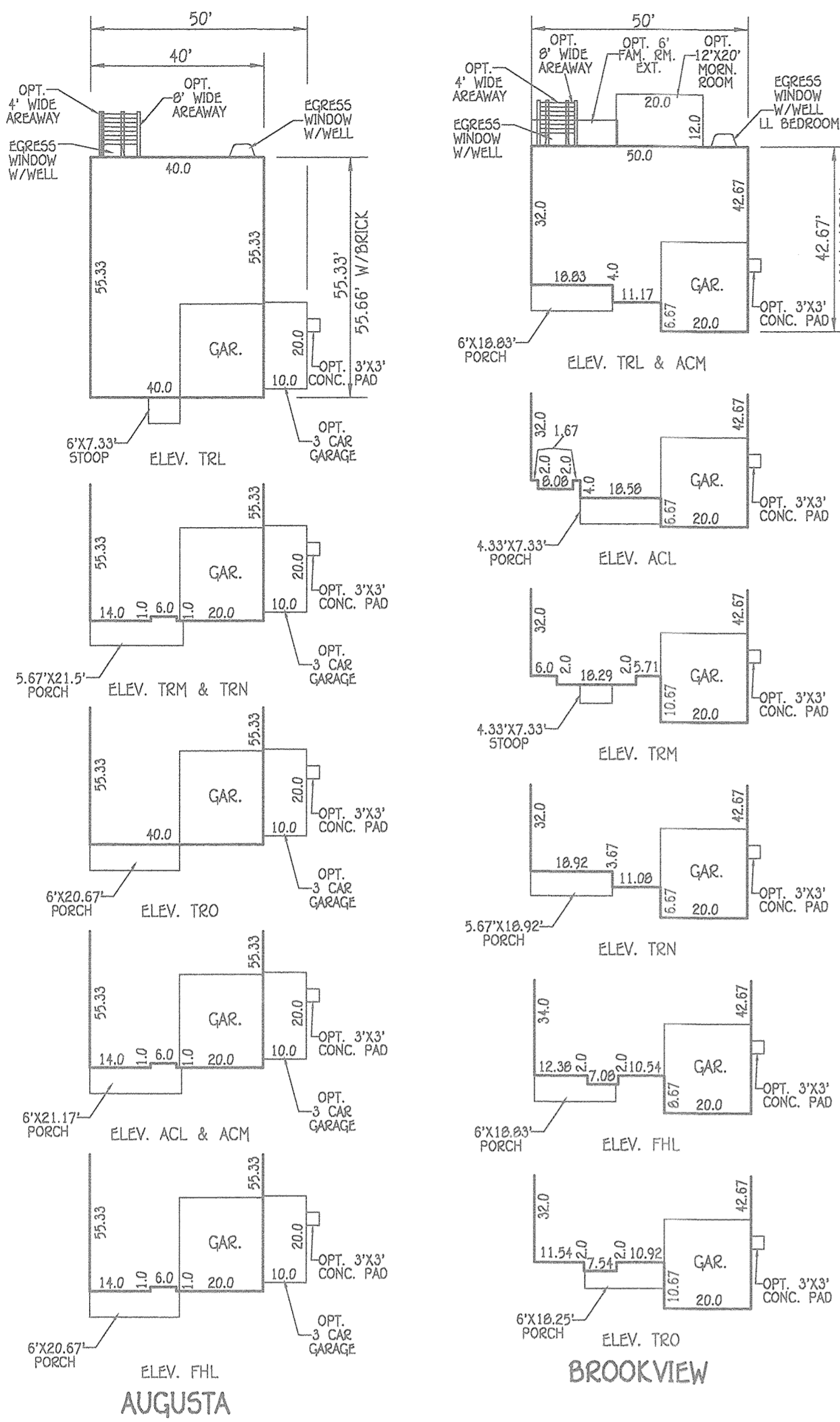
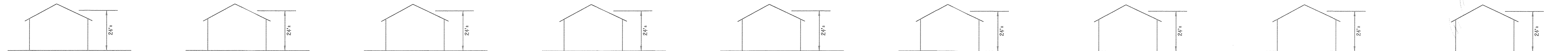
TITLE SHEET

SINGLE FAMILY HOUSES
ENCLAVE AT RIVER HILL
LOTS 55 THRU 74, 82 THRU 124 &
PARTS OF OPEN SPACE LOTS 125 THRU 128
PHASE 2

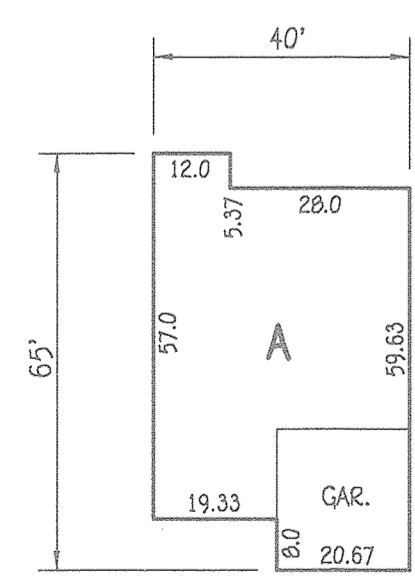
PREVIOUS HOWARD COUNTY FILES:
ECP-15-005, PB CASE NO. 409, SP-15-006, WP-15-069, F-15-110, WP-16-152, F-17-003, SDP-17-013 & SDP-17-014

TAX MAP NO.: 34 PARCEL NOS.: 88 & 97 GRID NO.: 18
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MARCH, 2018
SHEET 1 OF 13

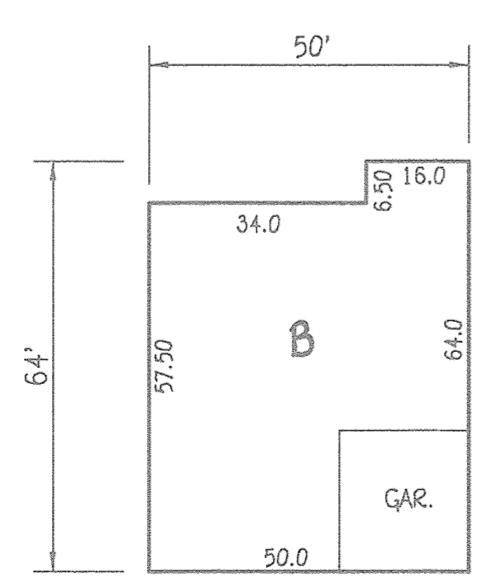
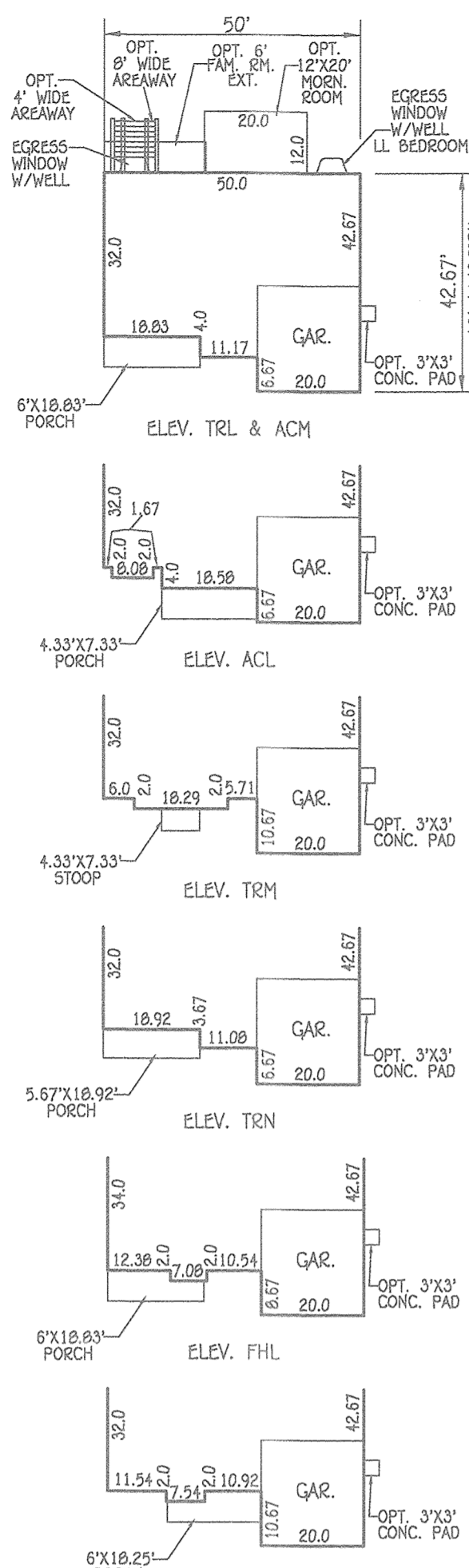
* See Note 18 For M.I.H.U. Requirements



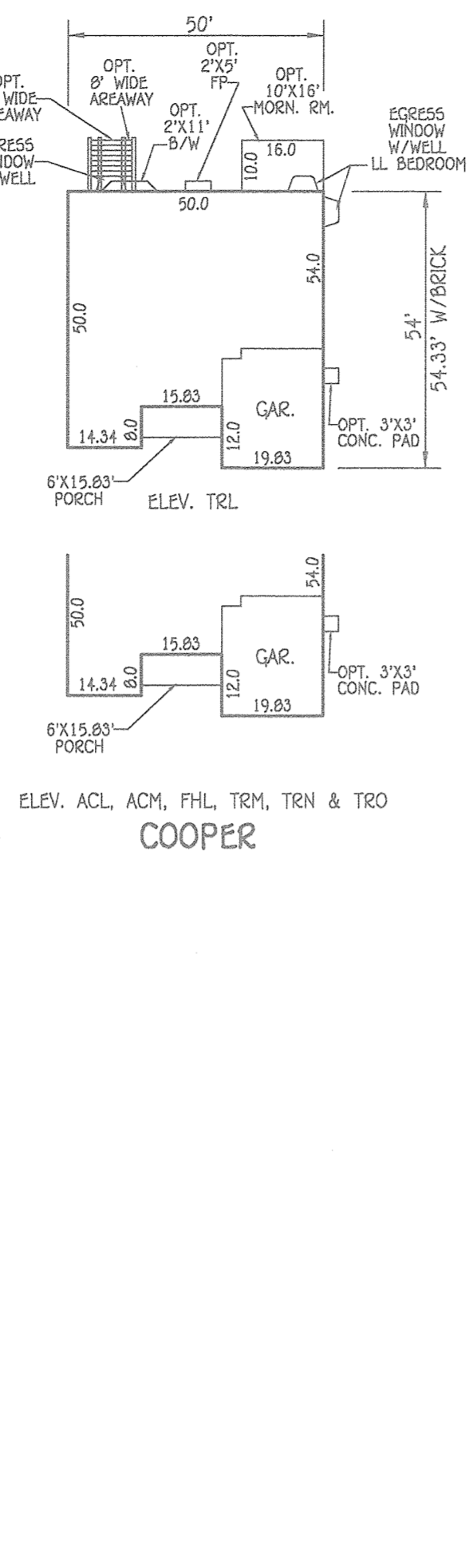
AUGUSTA
NO 3 CAR GAR.
NOTTINGHAM
NO 3 CAR GAR.
OXFORD
NO 3 CAR GAR.
PEMBROOKE
NO 3 CAR GAR.



BROOKVIEW



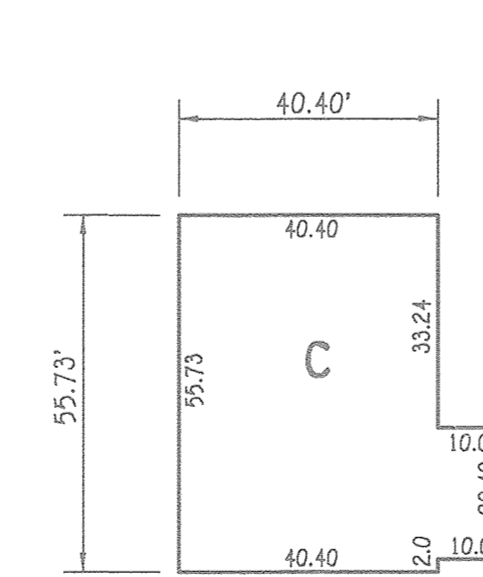
FEDERALSBURG



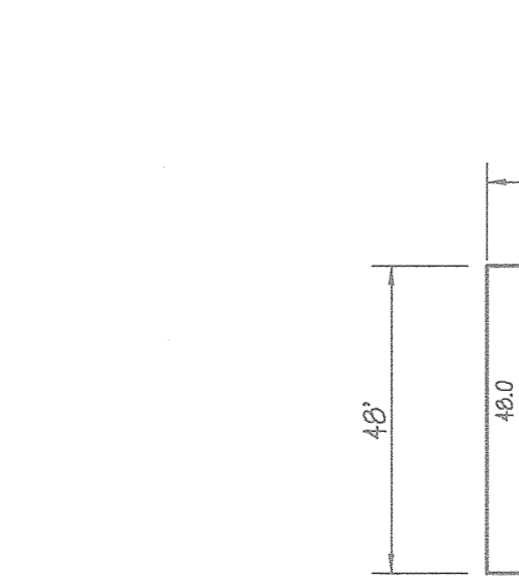
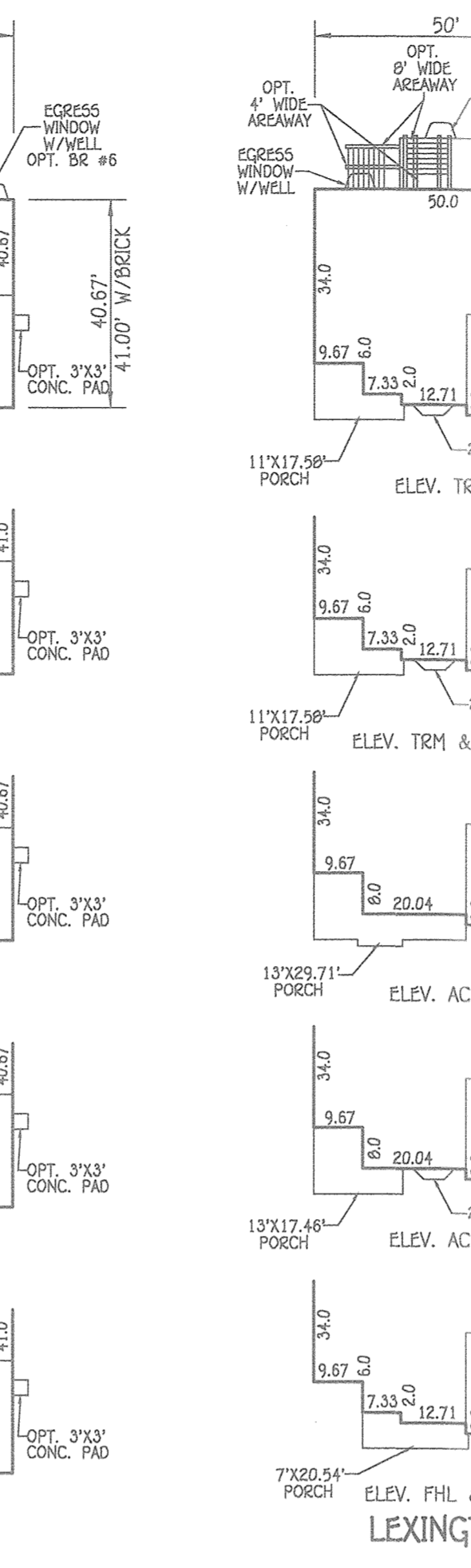
AUGUSTA
W/ALL OPTIONS
BROOKVIEW
W/ALL OPTIONS
COOPER
W/ALL OPTIONS
FEDERALSBURG
W/ALL OPTIONS
KINGSTON
W/ALL OPTIONS
LEXINGTON
W/ALL OPTIONS
NOTTINGHAM
W/ALL OPTIONS
OXFORD
W/ALL OPTIONS
PEMBROOKE
W/ALL OPTIONS



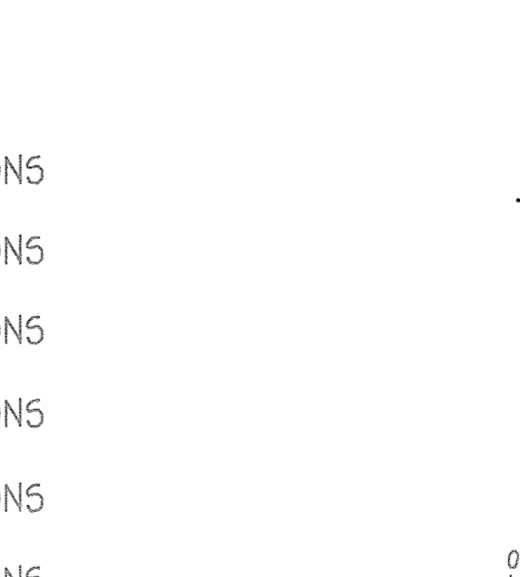
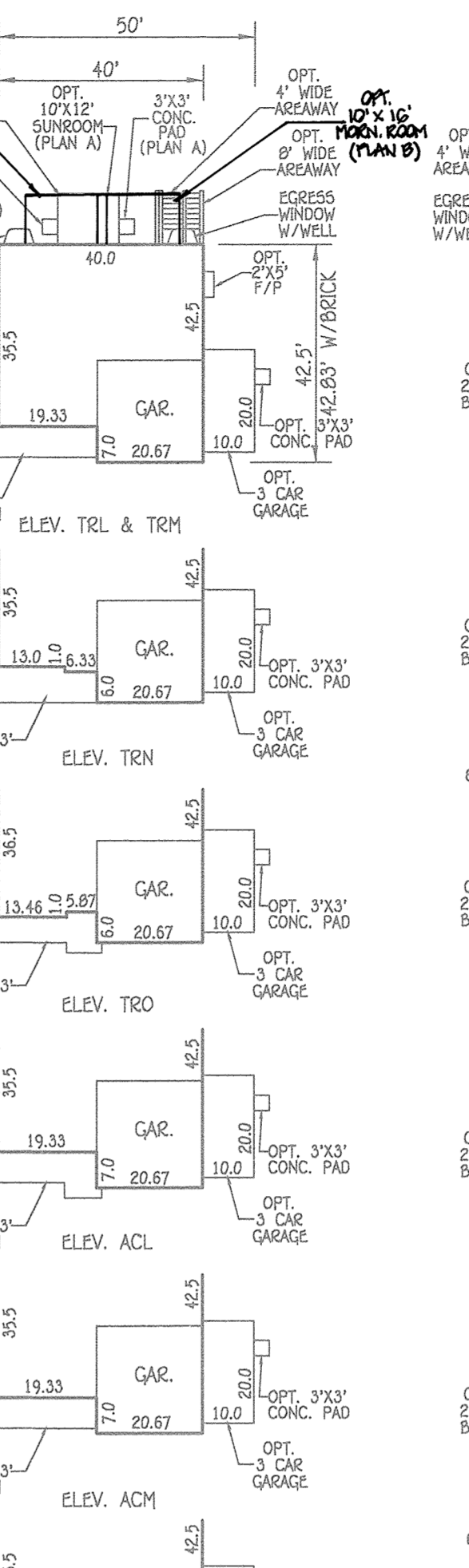
AUGUSTA
W/ALL OPTIONS
NOTTINGHAM
W/ALL OPTIONS
OXFORD
W/ALL OPTIONS
PEMBROOKE
W/ALL OPTIONS



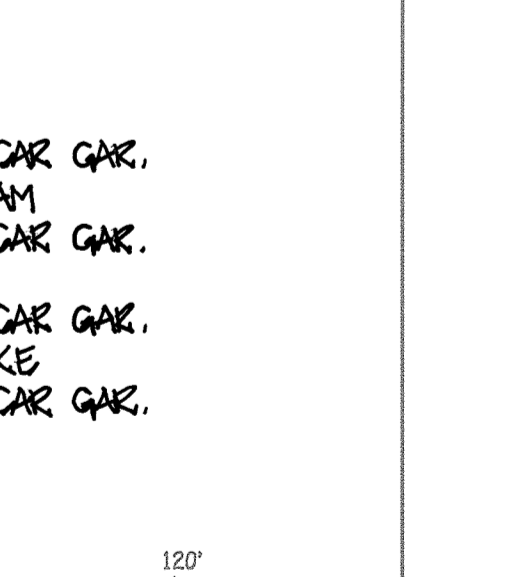
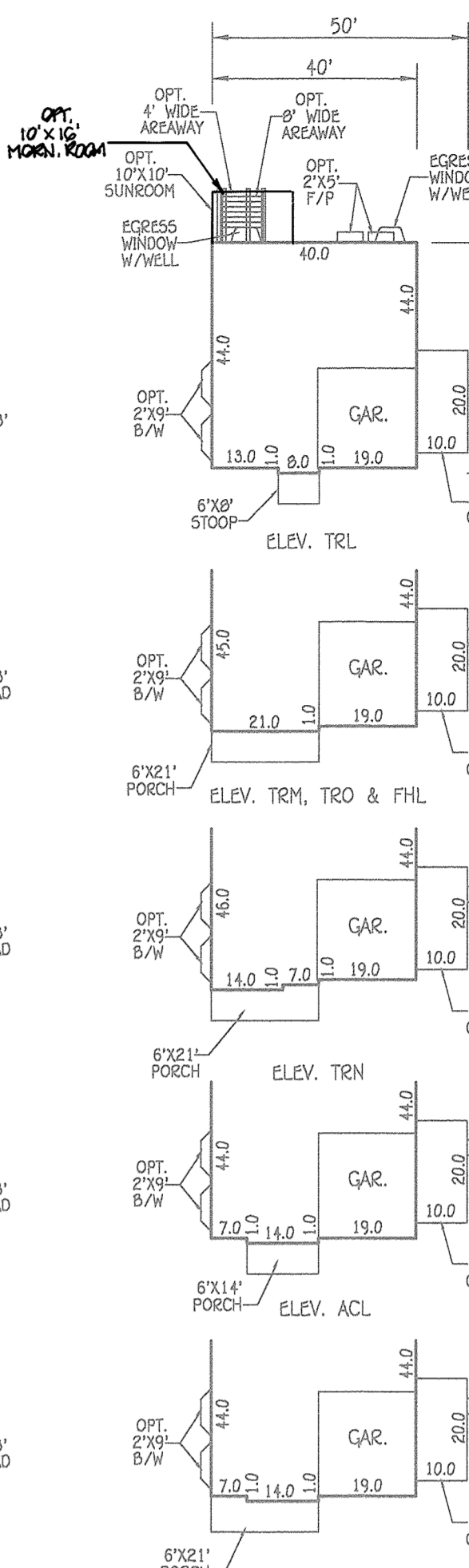
OXFORD



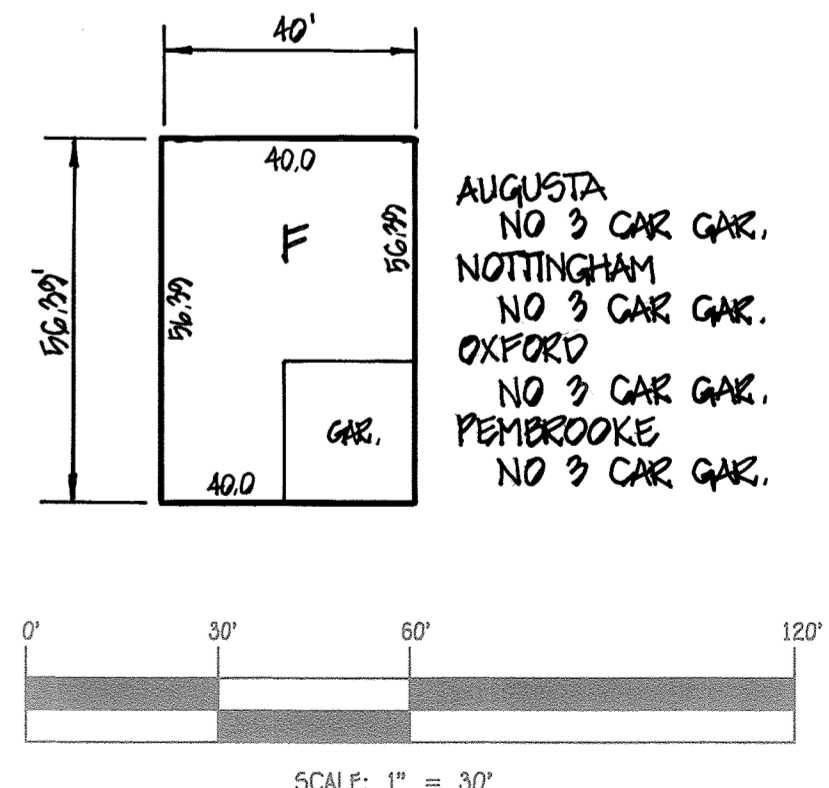
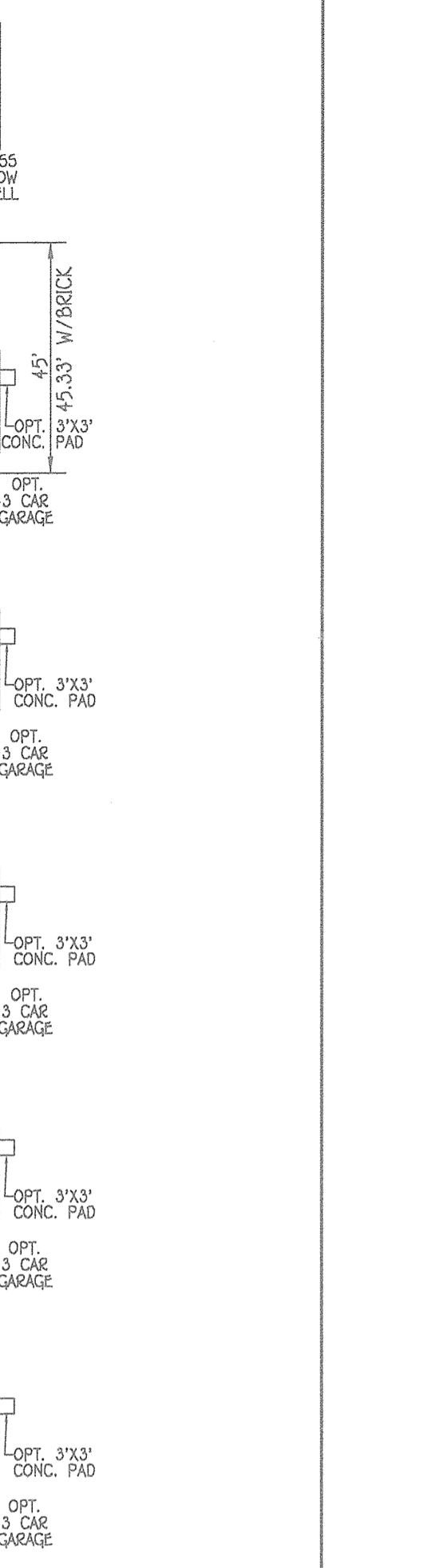
PEMBROOKE



NOTTINGHAM

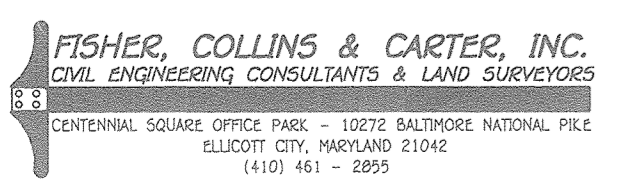


LEXINGTON



SCALE: 1" = 30'

AUGUSTA
NO 3 CAR GAR.
NOTTINGHAM
NO 3 CAR GAR.
OXFORD
NO 3 CAR GAR.
PEMBROOKE
NO 3 CAR GAR.



CENTRAL SQUARE OFFICE PARK - 10732 BALTIMORE NATIONAL PIKE
ELKLOTT CITY, MARYLAND 21142
(410) 461-2895



PROFESSIONAL CERTIFICATION

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NAME: *Frank P. ...* DATE: 3/13/18

OWNER

TIERNEY FARMS-CLARKSVILLE, LP.
24151 VENTURA BOULEVARD
CALABASAS, CALIFORNIA 91302
818-385-3697

OWNER/DEVELOPER

BEAZER HOMES, LLC
2965 GULLFORD ROAD
COLUMBIA, MD 21046
ATTN: MR. BRIAN KNAUFF
410-539-9249

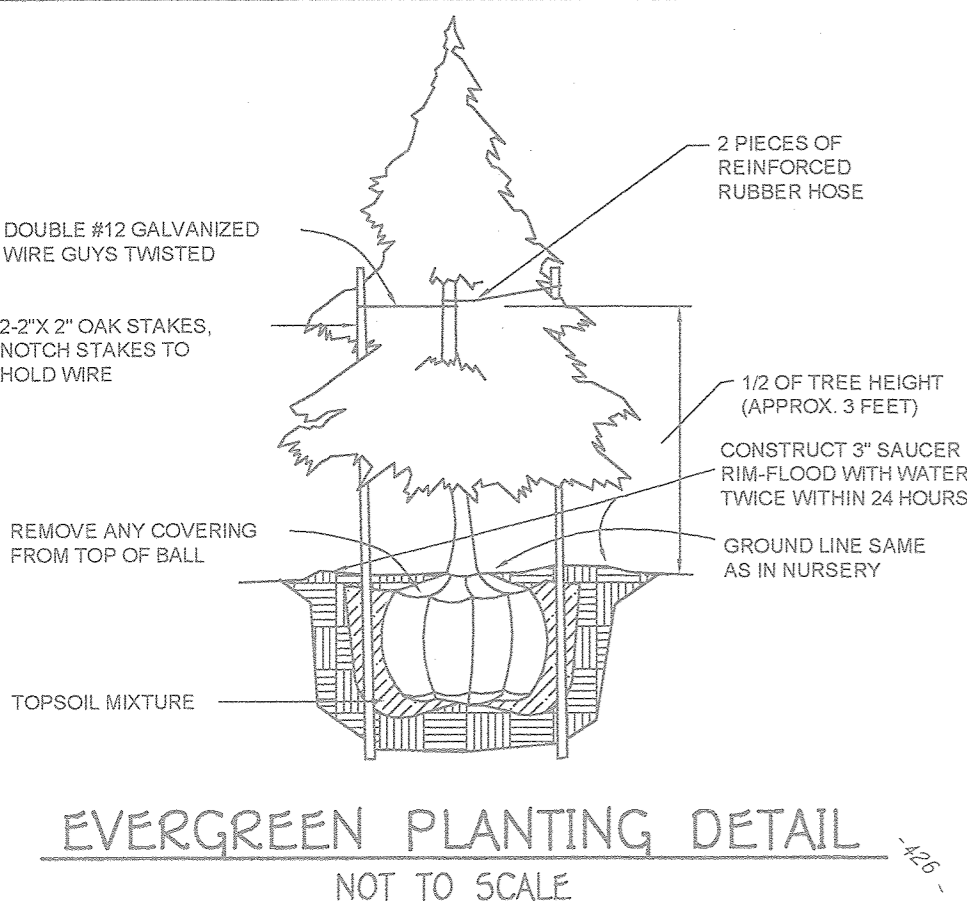
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development: *Kent ...* 4-13-18
Date: 4-13-18
Chief, Development Engineering Division: *...* 4-16-18
Date: 4-16-18
Director: *...*

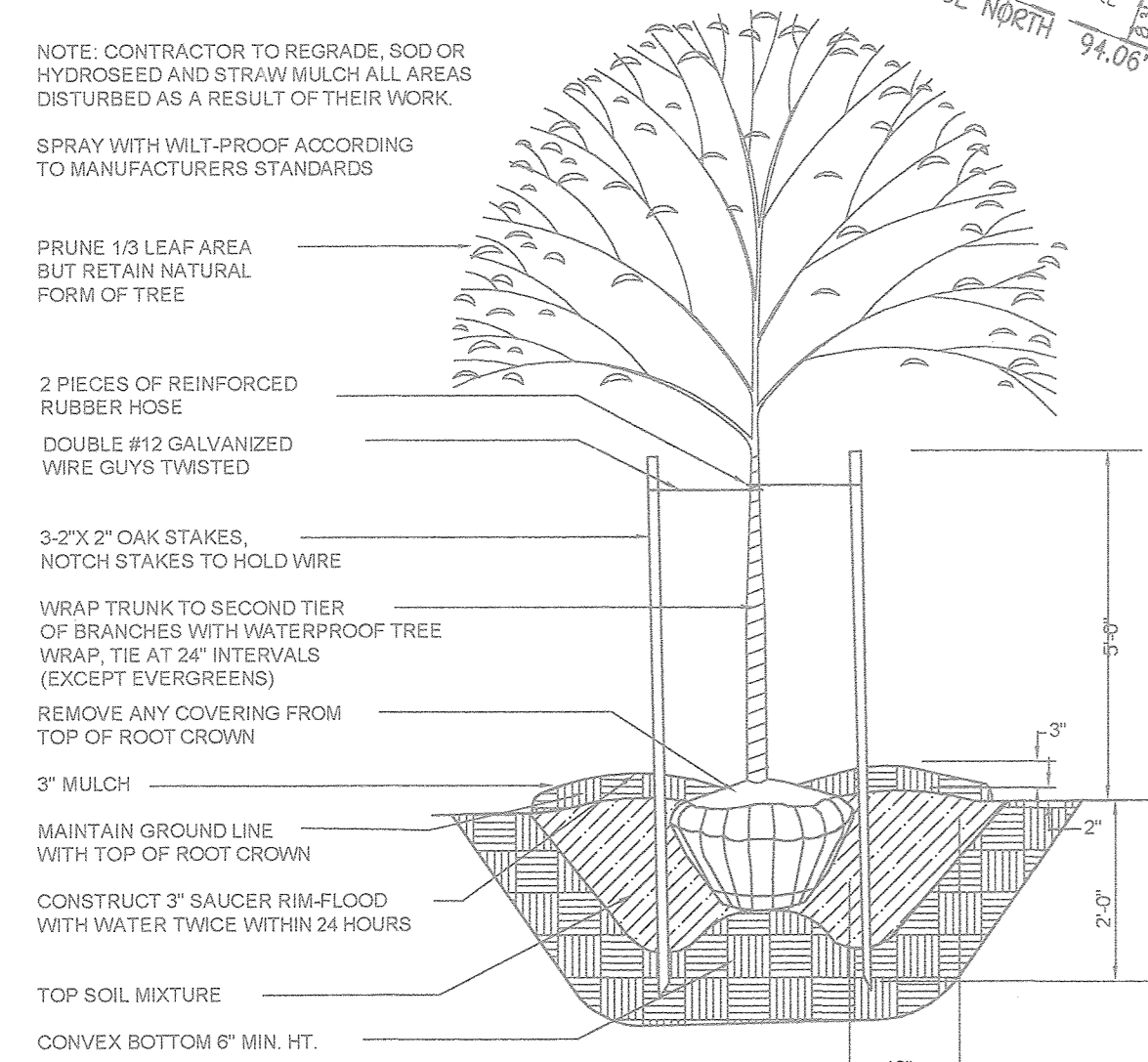
PROJECT	ENCLAVE AT RIVER HILL	PHASE	2	PARCEL NOS.	88 & 97
PLAT	24550-5B	BLOCK NO.	18	ZONE	R-ED
		TAX/ZONE	34	ELEC. DIST.	3
		CENSUS TR.	605102		

GENERIC BOXES AND HOUSE TYPES

SINGLE FAMILY HOUSES
ENCLAVE AT RIVER HILL
LOTS 55 THRU 74, 82 THRU 124 &
PARTS OF OPEN SPACE LOTS 125 THRU 128
PHASE 2
PREVIOUS HOWARD COUNTY FILES:
ECP-15-005, PB CASE NO. 409, SP-15-006, WP-15-069, F-15-110, WP-16-152,
F-17-003, SDP-17-013 & SDP-17-014
ZONED: R-ED
TAX MAP NO.: 34 PARCEL NOS.: 88 & 97 GRID NO.: 18
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MARCH, 2018
SHEET 2 OF 13



EVERGREEN PLANTING DETAIL
NOT TO SCALE



TREE PLANTING DETAIL
NOT TO SCALE

PLANTING SPECIFICATIONS

Plants, related material, and operations shall meet the detailed description as given on the plans and as described herein. All plant material, unless otherwise specified, shall be nursery grown, uniformly branched, have a vigorous root system, and shall conform to the species, size, root and shape shown on the plant list and the American Association of Nurserymen (AAN) standards. Plant material shall be healthy, vigorous, free from defects, decay, disfiguring roots, sun scald injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable infestations. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will not be accepted. All plants shall be freshly dug; no heeled-in plants from cold storage will be accepted. Unless otherwise specified, all general conditions, planting operations, details and planting specifications shall conform to "Landscape Specification Guidelines for Baltimore-Washington Metropolitan Area", (hereinafter "Landscape Guidelines") approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architects, latest edition, including all addenda. Contractor shall be required to guarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section of the Landscape Guidelines. Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and replacement of specified plant material. Contractor shall be responsible for notifying utility companies, utility contractors and "Miss Utility" a minimum of 48 hours prior to beginning any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Change to existing structure and utilities shall be repaired at the expense of the Contractor. Protection of existing vegetation to remain shall be accomplished by the temporary installation of a 4 foot high snow fence or blaze orange safety fence at the drip line. Contractor is responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within the growing season of completion of site construction.

Bid shall be based on actual site conditions. No extra payment shall be made for work arising from site conditions differing from those indicated on drawings and specifications. Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on the plant list, the quantities on the plan take precedence. All shrubs shall be planted in continuous trenches or prepared planting beds and mulched with composted hardwood mulch as details and specified except where noted on plans. Positive drainage shall be maintained in planting beds 2 percent slope. Planting mix shall be as follows: Deciduous Plants - Two parts topsoil, one part well-rotted cow or horse manure. Add 3 lbs. of standard fertilizer per cubic yard of planting mix. Evergreen Plants - two parts topsoil, one part humus or other approved organic material. Add 3 lbs. of evergreen (acidic) fertilizer per cubic yard of planting mix. Topsoil shall conform to the Landscape Guidelines. Weed Control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. Caution: be sure to carefully check the chemical used to assure its adaptability to the specific ground cover to be treated. All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded and seeded. This plan is intended for landscape use only. see other plan sheets for more information on grading, sediment control, layout, etc.

NO.	REVISION	DATE
5	REVISE LOT 72 TO PEMBRIDGE AND MINOR GRADING	1/16/10
4	ADD TURN ARROUND TO USE IN COMMON DRIVEWAY	4/29/09
3	REVISE DRIVEWAYS ON LOTS C8 & D9	10/17/08
2	REV. LOT 59 TO SHOW ABSOLUTE HOUSE (FEDERLSBURG) & ELEVATIONS	9/18/08
1	REVISE PBE & GRD. LOT 58 FROM OWN. BOX 'A' TO BROOKVIEW	6/18/08



PROFESSIONAL CERTIFICATION
"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, 7/4/19."
Frank M. Pambianco 3/13/18
NAME DATE

LANDSCAPE DEVELOPER'S CERTIFICATE
I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a letter of landscape installation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.
TALCO 3/14/18
NAME DATE

OWNER
TIERNEY FARMS-CLARKSVILLE, LP.
24151 VENTURA BOULEVARD
CALABASAS, CALIFORNIA 91302
818-385-3577

OWNER/DEVELOPER
BRAZER HOMES, LLC
8905 GUILFORD ROAD
COLUMBIA, MD 21046
ATTN: MR. BRIAN KNAUFF
443-539-9249

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Kurt Seidman 4-13-18
Chief, Division of Land Development Date

Debra 4-9-18
Chief, Development Engineering Division Date

Walter Joffe 4-16-18
Director, Department of Planning and Zoning Date

PROJECT	PHASE	PARCEL NOs.
ENCLAVE AT RIVER HILL	2	B8 & 97

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
24590-58	18	R-ED	34	5	605102

PREVIOUS HOWARD COUNTY FILES:
ECP-15-005, PB CASE NO. 409, SP-15-006, F-15-110, WP-15-069, WP-16-152, F-17-003, SDP-17-013 & SDP-17-014

SITE DEVELOPMENT PLAN

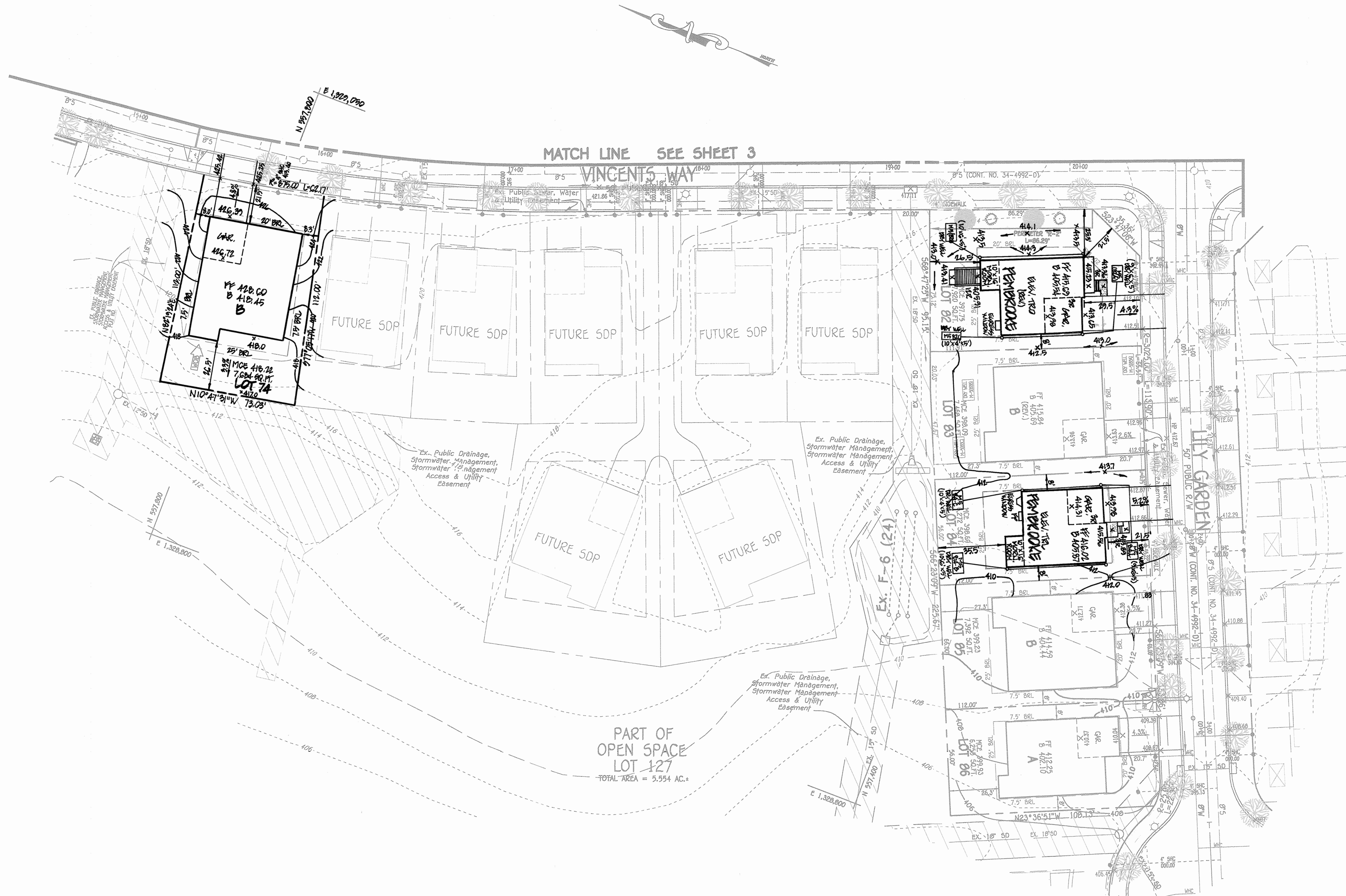
SINGLE FAMILY HOUSES
ENCLAVE AT RIVER HILL
LOTS 55 THRU 74, 82 THRU 124 & PARTS OF OPEN SPACE LOTS 125 THRU 128
PHASE 2

PREVIOUS HOWARD COUNTY FILES:
ECP-15-005, PB CASE NO. 409, SP-15-006, WP-15-069, F-15-110, WP-16-152, F-17-003, SDP-17-013 & SDP-17-014

TAX MAP NO. 34 PARCEL NO'S: B8 & 97 GRID NO: 18
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MARCH, 2010
SHEET 3 OF 13

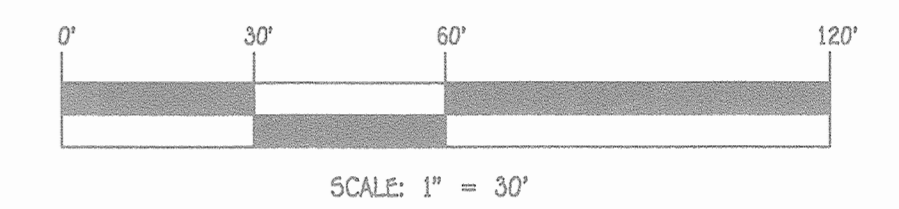
SDP-18-032

L:\2013\13006.dwg Phase 2\Plan Set\13008 SDP Phase 2 GH1815 3, 4, 7 & 8.dwg, SHEET 3, 4



MATCH LINE SEE SHEET 3

PART OF OPEN SPACE LOT 127
TOTAL AREA = 5.954 AC.



1:2013.13008.dwg phase 2 Plan Set 13008 SDP Phase 2 SHEETS 3, 4, 5 & 6 of 6 Drawing SHEET 4, 11

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CONTINENTAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21042
(410) 461-2895



PROFESSIONAL CERTIFICATION
"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, 7/4/19.
Frank J. Anderson II
NAME DATE 3/13/18

LANDSCAPE DEVELOPER'S CERTIFICATE
I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a letter of landscape installation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.
TACB
NAME DATE 3/14/18
OWNER
TIERNEY FARMS-CLARKSVILLE, LP
24151 VENTURA BOULEVARD
CALABASAS, CALIFORNIA 91302
818-369-3697
OWNER/DEVELOPER
BEAZER HOMES, LLC
8965 GULFORD ROAD
COLUMBIA, MD 21046
ATTN: MR. BRIAN EHAUFF
443-539-9249

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Carl Schuch 4-13-18
Chief, Division of Land Development Date

John Smith 4-9-18
Chief, Engineering Division Date

William Miller 4-16-18
Director, Department of Planning and Zoning Date

PROJECT	PHASE	PARCEL NOS.
ENCLAVE AT RIVER HILL	2	88 & 97

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
24550-58	18	R-ED	34	5	605102

PREVIOUS HOWARD COUNTY FILES:
ECP-15-005, PB CASE NO. 409, SP-15-006, F-15-110, WP-15-069, F-15-110, WP-16-152, F-17-003, SDP-17-013 & SDP-17-014
ZONED: R-ED
TAX MAP NO.: 34 PARCEL NOS.: 88 & 97 GRID NO.: 18
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MARCH, 2018
SHEET 4 OF 13

SITE DEVELOPMENT PLAN

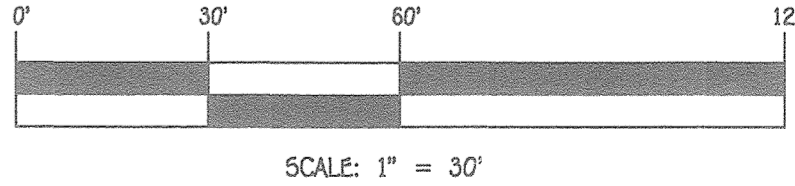
SINGLE FAMILY HOUSES
ENCLAVE AT RIVER HILL
LOTS 55 THRU 74, 82 THRU 124 &
PARTS OF OPEN SPACE LOTS 125 THRU 128
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ZONED: R-ED
TAX MAP NO.: 34 PARCEL NOS.: 88 & 97 GRID NO.: 18
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MARCH, 2018
SHEET 4 OF 13

NO.	REVISION	DATE
2	REMOVE WALK & CURB LOTS 82 & 84 FROM CURB BOX TO PER PERKROCKS	4/25/18
1	REMOVE TITLE BLOCK & ADD LOT 74 TO PLAN	9/24/16

SDP-18-032



NOTE(*): AREA OF POSSIBLE ROOM EXTENSION SUBJECT TO GENERAL NOTE 20



L:\2013\13008.dwg\pdp\phase 2\Sheet 5.1.dwg SHEETS: 3, 4, 5 & 6 of 6 SHEET: 5.1

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (410) 461-2099

NO.	REVISION	DATE
11	REVISE H&E & GRZ LOT 96 FROM H&E BOX 'A' TO PEMBROKE 7/22/20	7/22/20
10	ADDED TO BOUNDARY SET BACK 11/20/19	11/20/19
9	REVISE H&E & GRZ LOT 96 & 99 FROM GEN. BOX 'B' TO FEDERALSBURG 4/30/20	4/30/20
8	REVISE GEN. H&E BOX FROM 'A' TO 'F', LOT 96 11/30/19	11/30/19
7	REVISE H&E & GRZ LOT 96 FROM GEN. BOX 'A' TO BROOKVIEW 11/30/19	11/30/19
6	REVISE H&E & GRZ LOT 96 FROM GEN. BOX 'A' TO NOTTINGHAM 11/30/19	11/30/19
5	REVISE H&E & GRZ LOTS 91, 93 & 94 FROM GEN. BOX 'A' TO PEMBROKE 11/30/19	11/30/19
4	REVISE H&E & GRZ LOT 89 FROM GEN. BOX 'A' TO AUGUSTA 11/30/19	11/30/19
3	REVISE LOTS 88 & 90 TO HOUSE SPECIFIC & GRADING 11/22/20	11/22/20
2	REVISE LOT 71 TO AUGUSTA & MINOR GRADING CHANGES 11/22/20	11/22/20
1	REVISE H&E GRZ LOT 109 FROM GEN. BOX 'A' TO ALVANTA 4/19/19	4/19/19



PROFESSIONAL CERTIFICATION
 "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, 7/4/19.
 Mark J. Marston 3-13-18
 NAME DATE

OWNER
 TIERNEY FARMS-CLARKSVILLE, LP.
 24151 VENTURA BOULEVARD
 CALABASAS, CALIFORNIA 91302
 818-385-3697

OWNER/DEVELOPER
 BEAZER HOMES, LLC
 8965 GUILFORD ROAD
 COLUMBIA, MD 21046
 ATTN: MR. BRIAN KNAUFF
 410-539-9249

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development	Date
<i>[Signature]</i>	4-13-18
Chief, Development Engineering Division	Date
<i>[Signature]</i>	4-9-18
Director - Department of Planning and Zoning	Date
<i>[Signature]</i>	4-16-18

PROJECT	PHASE	PARCEL NOs.
ENCLAVE AT RIVER HILL	2	88 & 97

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
24550-58	18	R-ED	34	5	605102

PREVIOUS HOWARD COUNTY FILES:
 ECP-15-005, PB CASE NO. 409, SP-15-006, F-15-110, WP-15-069, WP-16-152, F-17-003, SGP-17-013 & SGP-17-014

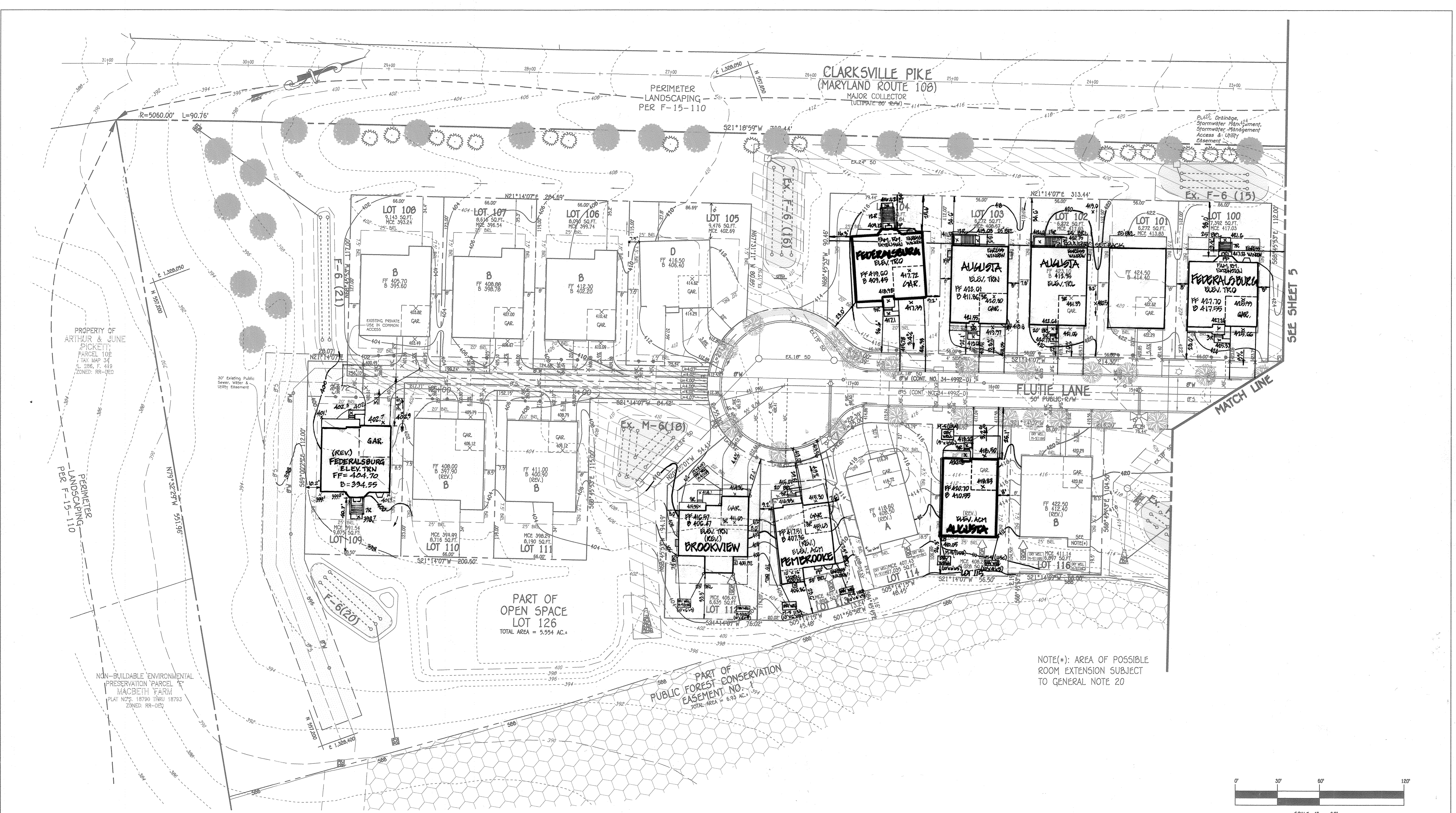
SITE DEVELOPMENT PLAN

SINGLE FAMILY HOUSES
ENCLAVE AT RIVER HILL
 LOTS 55 THRU 74, 82 THRU 124 &
 PARTS OF OPEN SPACE LOTS 125 THRU 128
 PHASE 2

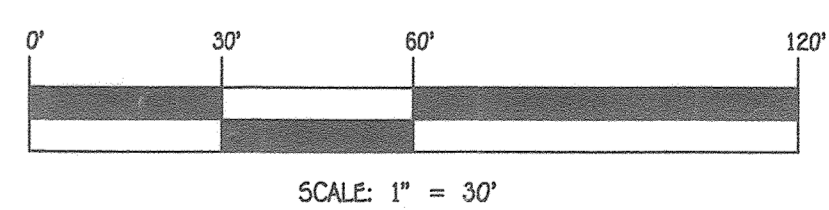
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TAX MAP NO.: 34 PARCEL NO'S.: 88 & 97 GRID NO.: 18
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: MARCH, 2018
 SHEET 5 OF 13

SOP-18-032



SEE SHEET 5



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 NATIONAL SQUARE OFFICE PARK - 1875 BALTIMORE NATIONAL PKWY
 ELICOTT CITY, MARYLAND 21042
 (410) 461-1299

NO.	REVISION	DATE
9	REVISE HSE. & CRD. LOT 109 FROM PEMBROKE TO AUGUSTA	10/16/20
8	REVISE HSE. & CRD. LOT 102 FROM GAR. BOX TO AUGUSTA	10/16/20
7	ADDED TR. BOUNDARY SETBACKS FOR LOTS 100 THRU 104	4/17/20
6	REVISE HSE. & CRD. LOT 103 FROM GAR. BOX 'A' TO PEMBROKE	4/17/20
5	REVISE HSE. & CRD. LOT 100 FROM GAR. BOX 'B' TO PEMBROKE	4/17/20
4	REVISE HSE. & CRD. LOT 109 PER ASSUILT	2/25/20
3	REVISE HSE. & CRD. LOT 115 FROM GAR. BOX 'A' TO PEMBROKE	11/15/19
2	REVISE HSE. & CRD. LOT 104 FROM GAR. BOX 'A' TO PEMBROKE	9/25/19
1	REVISE HSE. & CRD. LOT 107 FROM GAR. BOX 'A' TO PEMBROKE	9/25/19
1	ADD TURN AROUND TO USE IN COMMON DRIVEWAY	4/16/19



PROFESSIONAL CERTIFICATION
 "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, 7/4/19."
 Frank John Threlkoff
 NAME DATE 3-13-18

OWNER
 TIERNEY FARMS-CLARKSVILLE, LP.
 24151 VENTURA BOULEVARD
 CALABASAS, CALIFORNIA 91302
 818-395-3697

OWNER/DEVELOPER
 BEAZER HOMES, LLC.
 9905 GUILFORD ROAD
 COLUMBIA, MD 21046
 ATTN: MR. BRIAN KNAUFF
 443-539-9249

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Kurt Shalovich 4-13-18
 Chief, Division of Land Development Date

John Smith 4-9-18
 Chief, Development Engineering Division Date

Wally Jurek 4-16-18
 Director - Department of Planning and Zoning Date

PROJECT	PHASE	PARCEL NOS.
ENCLAVE AT RIVER HILL	2	88 & 97

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
24550-56	18	R-ED	34	5	605102

PREVIOUS HOWARD COUNTY FILES:
 ECP-15-005, PB CASE NO. 409, SP-15-006, F-15-110, WP-15-069, WP-16-152, F-17-003, SDP-17-013 & SDP-17-014

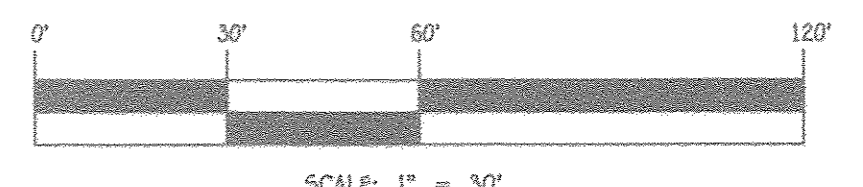
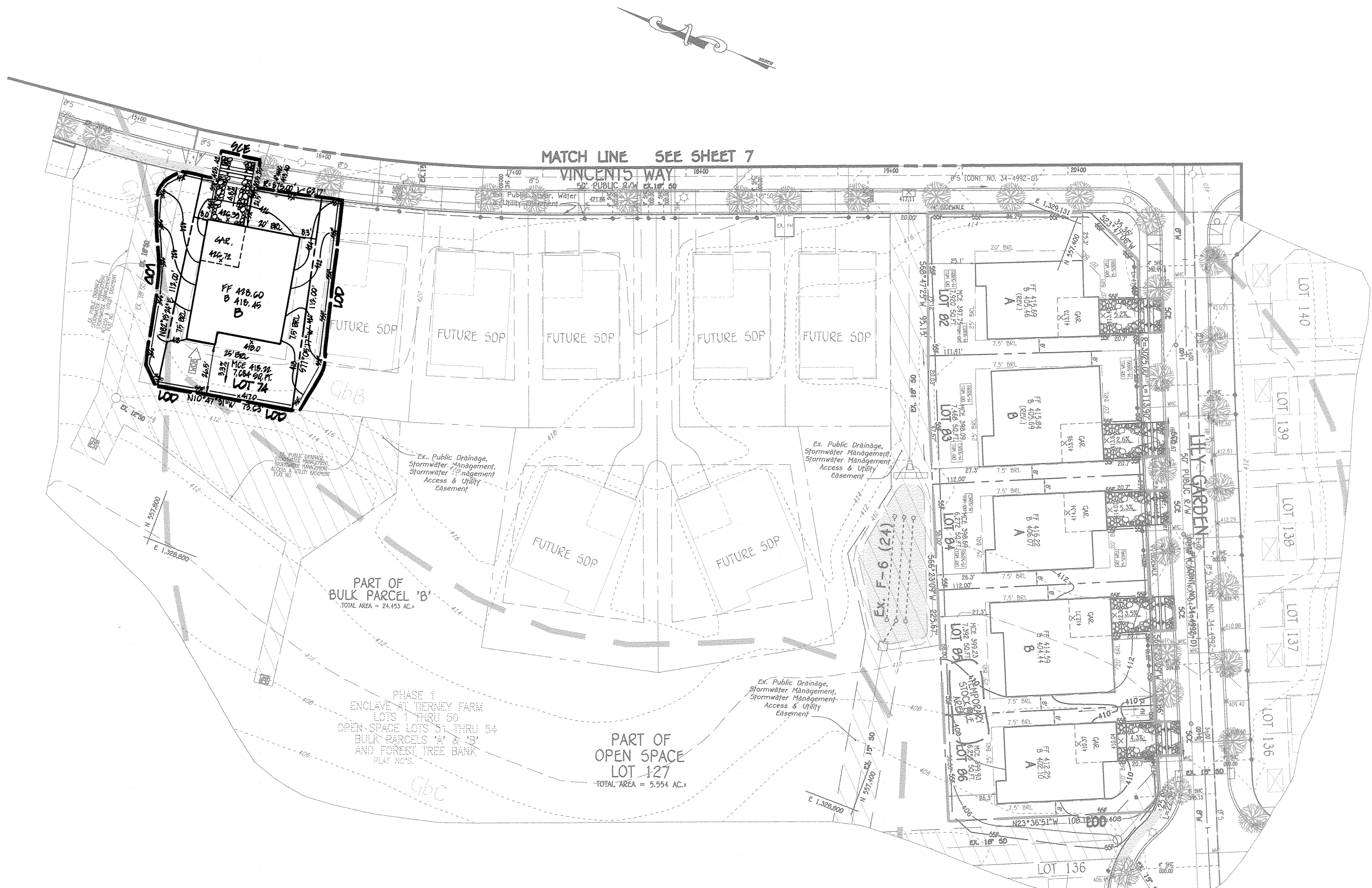
SITE DEVELOPMENT PLAN

SINGLE FAMILY HOUSES
ENCLAVE AT RIVER HILL
 LOTS 55 THRU 74, 82 THRU 124 &
 PARTS OF OPEN SPACE LOTS 125 THRU 126
 PHASE 2

PREVIOUS HOWARD COUNTY FILES:
 ECP-15-005, PB CASE NO. 409, SP-15-006, WP-15-069, F-15-110, WP-16-152, F-17-003, SDP-17-013 & SDP-17-014

TAX MAP NO.: 34 PARCEL NO'S: 88 & 97 GRID NO: 18
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: MARCH, 2018
 SHEET 6 OF 13

SDP-18-032



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (410) 461-1200

NO.	REVISION	DATE
1	CHANGE TITLE BLOCK & ADD LOT 74-10 PLAN	5/24/18



PROFESSIONAL CERTIFICATE
 "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
 Signature of Licensed Professional: *Frank John Malalansan II* DATE: 3/13/18
 SIGNATURE OF LICENSED PROFESSIONAL: FRANK JOHN MALALANSAN II

BUILDER/DEVELOPER'S CERTIFICATE
 "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, FOR SEDIMENT AND EROSION CONTROL AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."
 Signature of Developer: *Brian Knauff* DATE: 3/14/18
 SIGNATURE OF DEVELOPER: BRIAN KNAUFF

APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Signature: *John P. Robertson* DATE: 3/13/18
 HOWARD SOIL CONSERVATION DISTRICT

OWNER
 TIERNEY FARMS-CLARKSVILLE LP.
 24151 VENTURA BOULEVARD
 CALABASAS, CALIFORNIA 91302
 818-385-3697

OWNER/DEVELOPER
 BEAZER HOMES, LLC
 8965 GUILFORD ROAD
 COLUMBIA, MD 21046
 ATTN: MR. BOBAM KNAUFF
 443-539-9249

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Signature: *Karl Shadwick* DATE: 4-13-18
 Chief, Division of Planning and Zoning

Signature: *Valerie J. Jurek* DATE: 4-16-18
 Chief, Development Engineering Division
 Director - Department of Planning and Zoning

PROJECT	PHASE	PARCEL NOS.
ENCLAVE AT RIVER HILL	2	88 & 97

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
24550-58	18	R-ED	34	5	605102

PREVIOUS HOWARD COUNTY FILES:
 ECP-15-005, PB CASE NO. 409, SP-15-006, F-15-110, WP-15-069, WP-16-152, F-17-003, S0P-17-013 & S0P-17-014

SEDIMENT/EROSION CONTROL PLAN

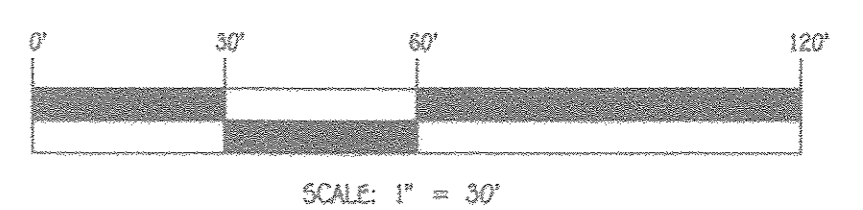
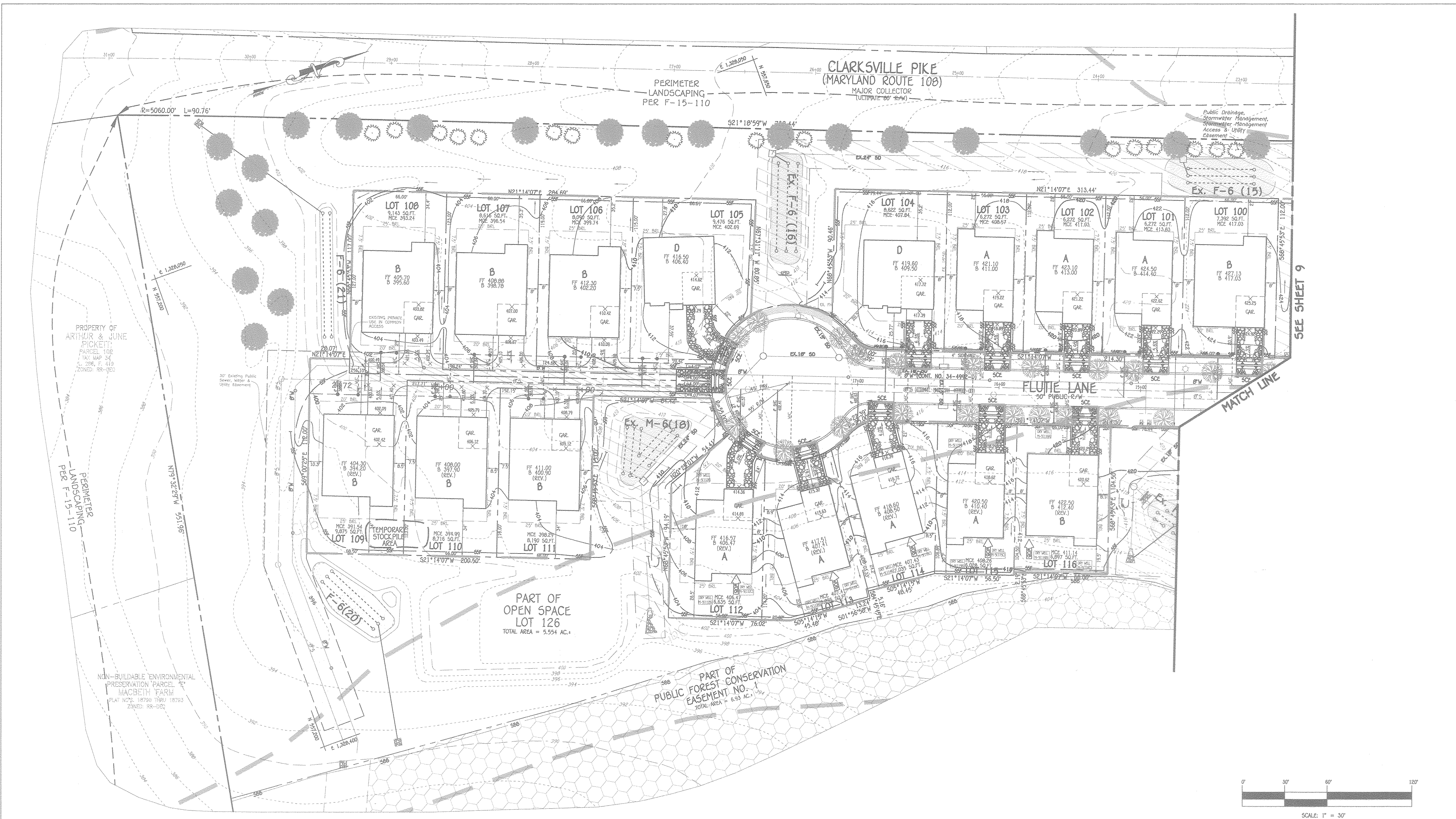
SINGLE FAMILY HOUSES
ENCLAVE AT RIVER HILL
 LOTS 55 THRU 74, 82 THRU 124 &
 PARTS OF OPEN SPACE LOTS 125 THRU 120
 PHASE 2

PREVIOUS HOWARD COUNTY FILES:
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TAX MAP NO.: 34 PARCEL NOS.: 88 & 97 GRID NO.: 18
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: MARCH, 2018
 SHEET 8 OF 13

50P-18-032

I:\2018\18038.dwg, S0P Phase 2\Plan Set\18038 SFC Phase 2\Sheets 7, 8, 9 & 10.dwg, SHEET 8, 11



NO.	REVISION	DATE



PROFESSIONAL CERTIFICATE
 "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
 Frank Manalansan II 3/13/18
 SIGNATURE OF LICENSED PROFESSIONAL FRANK JOHN MANALANSAN II DATE

BUILDER/DEVELOPER'S CERTIFICATE
 "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, FOR SEDIMENT AND EROSION CONTROL AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."
 Brian Knauff 3/14/18
 SIGNATURE OF DEVELOPER BRIAN KNAUFF DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL, EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 John K. Robertson 3/13/18
 SIGNATURE OF APPROVED HOWARD SOIL CONSERVATION DISTRICT DATE

OWNER
 TIERNY FARMS-CLARKSVILLE, LP
 24151 VENTURA BOULEVARD
 CALABAS, CALIFORNIA 91302
 818-395-3697

OWNER/DEVELOPER
 BEAZER HOMES, LLC
 8965 GULFORD ROAD
 COLUMBIA, MD 21046
 ATTN: MR. BRIAN KNAUFF
 443-539-9249

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Karl Schulz 4-13-18
 Chief, Division of Land Development Date

Chris Smith 4-9-18
 Chief, Development Engineering Division Date

Director - Department of Planning and Zoning Date

PROJECT	ENCLAVE AT RIVER HILL	PHASE	2	PARCEL NOS.	88 & 97
PLAT	24950-58	BLOCK NO.	1B	ZONE	R-ED
		TAX/ZONE	34	ELEC. DIST.	5
				CENSUS TR.	605102

PREVIOUS HOWARD COUNTY FILES:
 ECP-15-005, PB CASE NO. 409, SP-15-006, F-15-110, WP-15-069, WP-16-152, F-17-003, SGP-17-013 & SGP-17-014
 ZONED: R-ED
 TAX MAP NO.: 34 PARCEL NO.'S: 88 & 97 GRID NO.: 18
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: MARCH, 2018
 SHEET 10 OF 13

SEDIMENT/EROSION CONTROL PLAN

SINGLE FAMILY HOUSES
ENCLAVE AT RIVER HILL
 LOTS 55 THRU 73, 82 THRU 124 &
 PARTS OF OPEN SPACE LOTS 125 THRU 128
 PHASE 2

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 SCALE: AS SHOWN DATE: MARCH, 2018
 SHEET 10 OF 13

I:\2013\13068.dwg\STIP Phase 2\Plan Set\13068 SEC Phase 2 SHEETS 7, 8, 9 & 10.dwg, SHEET 10, 11



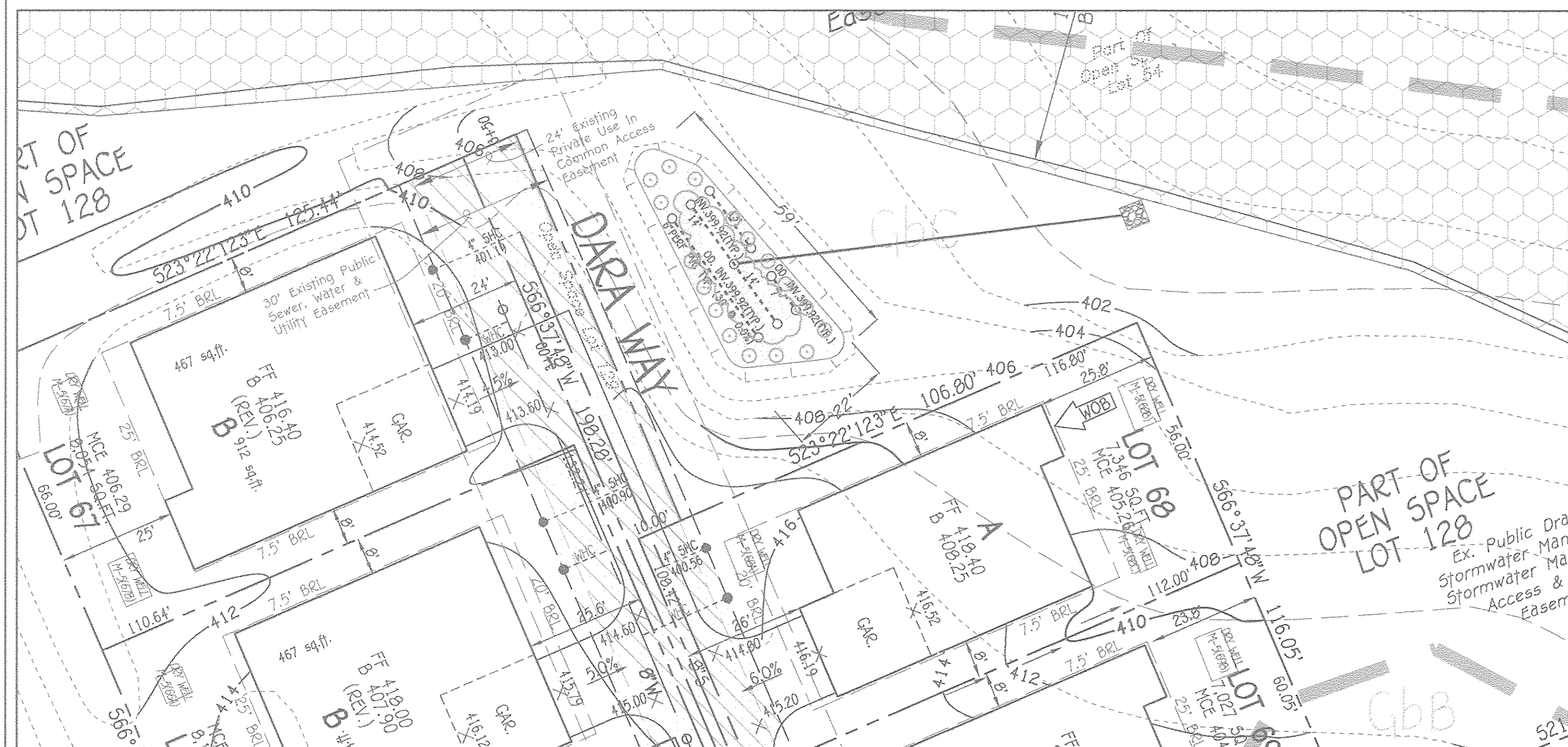
F-6 (20)
 (BIO-RETENTION FACILITY)
 SCALE: 1" = 20'
 DRAINAGE AREA: 48,823 sq. ft.
 FILTER AREA: 1,425 sq. ft.
 ELEVATION 394
 PERIMETER 184'
 WEIR ELEVATION 395

NOTE:
 1) STORMWATER MANAGEMENT FACILITY TO BE OWNED AND MAINTAINED BY HOMEOWNERS ASSOCIATION.



F-6 (21)
 (BIO-RETENTION FACILITY)
 SCALE: 1" = 20'
 DRAINAGE AREA: 39,666 sq. ft.
 FILTER AREA: 896 sq. ft.
 ELEVATION 399
 PERIMETER 218'
 WEIR ELEVATION 400

NOTE:
 1) STORMWATER MANAGEMENT FACILITY TO BE OWNED AND MAINTAINED BY HOMEOWNERS ASSOCIATION.



M-6 (23)
 (BIO-RETENTION FACILITY)
 SCALE: 1" = 20'
 DRAINAGE AREA: 30,547 sq. ft.
 FILTER AREA: 942 sq. ft.
 ELEVATION 403
 PERIMETER 139'
 WEIR ELEVATION 404

NOTE:
 1) STORMWATER MANAGEMENT FACILITY TO BE OWNED AND MAINTAINED BY HOMEOWNERS ASSOCIATION.

SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	EXISTING STORM DRAIN LINE
---	EXISTING SEWER LINE
---	EXISTING WATER LINE
---	WETLAND AREA
---	25' WETLAND BUFFER
---	25' STORM BUFFER
---	PROPOSED CONTOUR 2' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
---	SPOT ELEVATION
---	PROPOSED STORM DRAIN LINE
---	PROPOSED SEWER
---	PROPOSED WATER
---	LIMIT OF DISTURBANCE
---	SUPER SALT FENCE
---	SALT FENCE
---	15-24% SLOPES
---	25% AND GREATER
---	FOREST CONSERVATION EASEMENT
---	SM BORINGS
---	EXISTING TREE
---	EXISTING SPECIEN TREE
---	6" PVC PIPE
---	6" PERFORATED PVC UNDERDRAIN

SPECIFICATIONS FOR MICRO-BIORETENTION, RAIN GARDENS, LANDSCAPE INFILTRATION & INFILTRATION BERMS

1. MATERIAL SPECIFICATIONS
 - THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.
2. FILTERING MEDIA OR PLANTING SOIL
 - THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE MICRO-BIORETENTION PRACTICE THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDERANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERMUDA GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMAR 15.08.02.
 - THE PLANTING SOIL SHALL BE TESTED AND SHALL MEET THE FOLLOWING CRITERIA:
 SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURAL CLASSIFICATION)
 ORGANIC CONTENT - MINIMUM 10% BY DRY WEIGHT (ASTM D 2974). IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (60%-65%) AND COMPOST (35% TO 40%) OR SANDY LOAM (30%), COARSE SAND (30%), AND COMPOST (40%).
 CLAY CONTENT - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 5%.
 PH RANGE - SHOULD BE BETWEEN 5.5 - 7.0. AMENDMENTS (E.G., LIME, IRON SULFATE PLUS SULFUR) MAY BE MIXED INTO THE SOIL TO INCREASE OR DECREASE PH.
 THESE SHALL BE AT LEAST ONE SOIL TEST PER PRACTICE. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH AND ADDITIONAL TESTS OF ORGANIC MATTER AND SOLUBLE SALTS. A TEXTURAL ANALYSIS IS REQUIRED FROM THE SITE STOCKPILED TOPSOIL. IF TOPSOIL IS IMPORTED, THEN A TEXTURE ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS EXCAVATED.
3. COMPACTION
 - IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. IF PRACTICES ARE EXCAVATED USING A LOADER, THE CONTRACTOR SHOULD USE WIDE TRACK OR MASH TRACK EQUIPMENT WITH LIGHT EQUIPMENT WITH TIRE TYPE TIRES. USE OF EQUIPMENT WITH NARROW TRACKS OR NARROW TIRES, RUBBER TIRES WITH LARGE LUGS, OR HIGH-PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.
 - COMPACTION CAN BE ALLEVIATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS A CHISEL PLOW, ROLLER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO RESTRUCTURE THE SOIL PROFILE THROUGH THE 12 INCH COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILLAGE TYPICALLY DOES NOT TILL DEEP ENOUGH TO REMOVE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT.
 - ROTOTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE ORIGINAL SAND LAYER. PUMP ANY EXCESS WATER BEFORE PERFORMING (ROTOTILLING) BASE. WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTOTILL THE SAND/TOPSOIL TO CREATE A GRADATION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINAL GRADE.
 - WHEN BACKFILLING THE BIORETENTION FACILITY, PLACE SOIL IN LIFTS 12" TO 18". DO NOT USE HEAVY EQUIPMENT WITHIN THE BIORETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SURVEY SOILS AND SAND. GRADE BIORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MASH TRACKS.
4. PLANT MATERIAL
 - RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A, SECTION A.2.3.
5. PLANT INSTALLATION
 - COMPOST IS A BETTER ORGANIC MATERIAL SOURCE, IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INSET AND OTHER LOW AREAS. MULCH SHOULD BE PLACED IN SURROUNDING TO A UNIFORM THICKNESS OF 2" TO 3" SHREDDED OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. PINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE.
 - ROOTSTOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED 50 1/8 TH OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIT SHALL BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL. SET AND MAINTAIN THE PLANT STRAIGHT DURING THE ENTIRE PLANTING PROCESS. THOROUGHLY WATER GROUND BED COVER AFTER INSTALLATION.
 - TREES SHALL BE SOAKED USING 2" BY 2" STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES ARE TO BE EQUALLY SPACED ON THE INSIDE OF THE TREE BALL. GRASSES AND LEGUME SEED SHOULD BE BROADCAST INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING SPECIFICATIONS.
 - THE TOPSOIL SPECIFICATIONS PROVIDE ENOUGH ORGANIC MATERIAL TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY, AVOID FERTILIZER DEFICITS, OR AT A MINIMUM, IMPROVE THIS GOAL ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL UREA FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.
6. UNDERDRAINS
 - UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:
 PIPE - SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTM F 756, PIPE PS 28, OR ASTM-H-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED, 4" RIGID PIPE (E.G., PVC OR HDPE).
 PERFORATIONS - IF PERFORATED PIPE IS USED, PERFORATIONS SHOULD BE 3/8" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 1/4" (NO. 4 OR 4X) GALVANIZED HARDWARE CLOTH.
 GRAVEL - THE GRAVEL LAYER (NO. 57 STONE PREFERRED) SHALL BE AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.
 THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.
 A RIGID, NON-PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQUARE FEET) TO PROVIDE A CLEAN-OUT PORT AND MONITOR PERFORMANCE OF THE FILTER.
 A 4" LAYER OF PEA GRAVEL (1/4" TO 3/8" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT Migration OF PEGS INTO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 2".
 THE MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1,000 SQUARE FEET OF SURFACE AREA).
7. MISCELLANEOUS
 - THESE PRACTICES MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

STORMWATER MANAGEMENT NOTES

1. STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH CHAPTER 5, "ENVIRONMENTAL SITE DESIGN" OF THE 2007 MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL, EFFECTIVE MAY 4, 2010.
2. MAXIMUM CONTRIBUTING ROOF TOP AREA TO EACH DOWNSPOUT SHALL BE 1,000 SQ. FT. OR LESS.
3. DRYWELLS SHALL BE PROVIDED AT LOCATIONS WHERE THE LENGTH OF DISCONNECTION IS LESS THAN 75' AT 5%. THE SIZE AND CONSTRUCTION OF THE DRYWELL SHALL BE IN ACCORDANCE WITH THE DETAIL SHOWN ON THIS SHEET.
4. FINAL GRADING IS SHOWN ON THIS SITE DEVELOPMENT PLAN.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 18772 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21114
 (410) 461-2899

NO.	REVISION	DATE

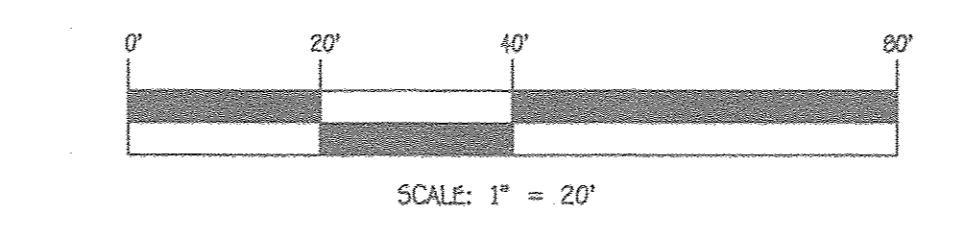


PROFESSIONAL CERTIFICATION
 "PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE, 7/4/19.

Frank H. ... 3-13-18
 NAME DATE

OWNER
 TERNEY FARMS-CLARKSVILLE, LP.
 24151 VENTURA BOULEVARD
 CALADGAS, CALIFORNIA 91302
 818-395-3697

OWNER/DEVELOPER
 BEAZER HOMES, LLC
 8955 GUILFORD ROAD
 COLUMBIA, MD 21045
 ATTN: MR. BRIAN KNAUFF
 443-539-9249



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Walt ... 4-13-18
 Chief, Division of Land Development Date

... 4-9-18
 Chief, Development Engineering Division Date

... 4-16-18
 Director - Department of Planning and Zoning Date

PROJECT	PHASE	PARCEL NO.
ENCLAVE AT RIVER HILL	2	88 & 97

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
24596-98	1B	R-ED	34	5	605102

PREVIOUS HOWARD COUNTY FILES:
 ECP-15-005, PB CASE NO. 409, SP-15-006, F-15-110, WP-15-089, WP-16-152, F-17-003, SDP-17-013 & SDP-17-014
 ZONED: R-ED
 TAX MAP NO.: 34 PARCEL NO.'S: 88 & 97 GRID NO.: 10
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: MARCH, 2018
 SHEET 12 OF 13

STORMWATER MANAGEMENT PLAN, NOTES & DETAILS

SINGLE FAMILY HOUSES
ENCLAVE AT RIVER HILL
 LOTS 55 THRU 73, 82 THRU 124 &
 PARTS OF OPEN SPACE LOTS 125 THRU 128
 PHASE 2

PREVIOUS HOWARD COUNTY FILES:
 ECP-15-005, PB CASE NO. 409, SP-15-006, WP-15-089, F-15-110, WP-16-152, F-17-003, SDP-17-013 & SDP-17-014
 ZONED: R-ED
 TAX MAP NO.: 34 PARCEL NO.'S: 88 & 97 GRID NO.: 10
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: MARCH, 2018
 SHEET 12 OF 13

INFILTRATION AND FILTER SYSTEM CONSTRUCTION SPECIFICATIONS

INFILTRATION AND FILTER SYSTEMS EITHER TAKE ADVANTAGE OF EXISTING PERMEABLE SOILS OR CREATE A PERMEABLE MEDIUM SUCH AS SAND FOR (VC), AND RE V. IN SOME INSTANCES WHERE PERMEABILITY IS GREAT, THESE FACILITIES MAY BE USED FOR GP AS WELL. THE MOST COMMON SYSTEMS INCLUDE INFILTRATION TRENCHES, INFILTRATION BASINS, SAND FILTERS, AND ORGANIC FILTERS.

WHEN PROPERLY PLANTED, VEGETATION WILL THRIVE AND ENHANCE THE FUNCTIONING OF THESE SYSTEMS. FOR EXAMPLE, PRE-TREATMENT BUFFERS WILL TRAP SEDIMENTS THAT OFTEN ARE BOUND WITH PHOSPHOROUS AND METALS. VEGETATION PLANTED IN THE FACILITY WILL AID IN NUTRIENT UPTAKE, AND WATER STORAGE. ADDITIONALLY, PLANT ROOTS WILL PROVIDE ARTERIES FOR STORMWATER TO PERMEATE SOIL. FOR GROUNDWATER RECHARGE, SUCCESSFUL PLANTINGS PROVIDE AESTHETIC VALUE AND WILDLIFE HABITAT MAKING THESE FACILITIES MORE DESIRABLE TO THE PUBLIC.

DESIGN CONSTRAINTS:

- > PLANTING BUFFER STRIPS OF AT LEAST 20 FEET WILL CAUSE SEDIMENTS TO SETTLE OUT BEFORE REACHING THE FACILITY, THEREBY REDUCING THE POSSIBILITY OF CLOGGING.
- > DRAINAGE AREAS THAT WILL BE SATURATED WITH WATER AND WATER TABLE DEPTH SO THAT APPROPRIATE PLANTS MAY BE SELECTED (HYDROLOGY WILL BE SIMILAR TO BIORETENTION FACILITIES. SEE FIGURE A.5 AND TABLE A.4 FOR PLANTING MATERIAL GUIDANCE).
- > PLANTS KNOWN TO SEND DOWN DEEP TAPROOTS SHOULD BE AVOIDED IN SYSTEMS WHERE FILTER FABRIC IS USED AS PART OF FACILITY DESIGN.
- > TEST SOIL CONDITIONS TO DETERMINE IF SOIL AMENDMENTS ARE NECESSARY.
- > ACCESS SHALL BE LOCATED SO THAT IT IS POSSIBLE FOR STRUCTURE MAINTENANCE.
- > STABILIZE HEAVY FLOW AREAS WITH EROSION CONTROL MATS OR SOD.
- > TEMPORARILY DIVERT FLOWS FROM SEEDING AREAS UNTIL VEGETATION IS ESTABLISHED.
- > SEE TABLE A.5 FOR ADDITIONAL DESIGN CONSIDERATIONS.

BIO-RETENTION

THE CHARACTERISTICS OF THE SOIL FOR THE BIORETENTION FACILITY ARE PERHAPS AS IMPORTANT AS THE FACILITY LOCATION, SIZE, AND TREATMENT VOLUME. THE SOIL MUST BE PERMEABLE ENOUGH TO ALLOW RUNOFF TO FILTER THROUGH THE MEDIA, WHILE MAINTAINING CHARACTERISTICS SUITABLE TO PROMOTE AND SUSTAIN A ROBUST VEGETATIVE COVER. IN ADDITION, MUCH OF THE NUTRIENT POLLUTANT UPTAKE (NITROGEN AND PHOSPHORUS) IS ACCOMPLISHED THROUGH ABSORPTION AND MICROBIAL ACTIVITY WITHIN THE SOIL PROFILE. THEREFORE, SOILS MUST BALANCE THEIR CHEMICAL AND PHYSICAL PROPERTIES TO SUPPORT BIOTIC COMMUNITIES ABOVE AND BELOW GROUND.

THE PLANTING SOIL SHOULD BE A SANDY LOAM, LOAMY SAND, LOAM (USDA), OR A LOAM/SAND MIX (SHOULD CONTAIN A MINIMUM 35 TO 60% SAND, BY VOLUME). THE CLAY CONTENT FOR THESE SOILS SHOULD BE LESS THAN 25% BY VOLUME (ENVIRONMENTAL QUALITY RESOURCES (EQR), 1996; ENGINEERING TECHNOLOGY INC. AND BIOHABITATS, INC. (ETA/B), 1993). SOILS SHOULD FALL WITHIN THE SM, ML, SC CLASSIFICATIONS OR THE UNIFIED SOIL CLASSIFICATION SYSTEM (USCS). A PERMEABILITY OF AT LEAST 1.0 FEET PER DAY (0.5"/HR) IS REQUIRED (A CONSERVATIVE VALUE OF 0.5 FEET PER DAY IS USED FOR DESIGN). THE SOIL SHOULD BE FREE OF STONES, STUMPS, ROOTS, OR OTHER WOODY MATERIAL OVER 1" IN DIAMETER. BRUSH OR SEEDS FROM NOXIOUS WEEDS (E.G., JOHNSON GRASS, MILKWEED, NUTSEDGE, AND CANADA THISTLE OR OTHER NOXIOUS WEEDS AS LISTED UNDER CODES 15.08.01.05.) SHOULD NOT BE PRESENT IN THE SOIL. THE MEDIA OF THE PLANTING SOIL SHOULD BE IN 12 TO 18 LIFTS THAT ARE LOOSELY COMPACTED (TAMPED LIGHTLY WITH A BACKHOE BUCKET OR TRAVELLED BY DOZER TRACKS). THE SPECIFIC CHARACTERISTICS ARE PRESENTED IN TABLE A.3.

TABLE A.3 PLANTING SOIL CHARACTERISTICS

PARAMETER	VALUE
PH RANGE	5.2 TO 7.00
ORGANIC MATTER	1.5 TO 4.0% (BY WEIGHT)
MAGNESIUM	35 LBS. PER ACRE, MINIMUM
PHOSPHORUS (PHOSPHATE - P2O5)	75 LBS. PER ACRE, MINIMUM
POTASSIUM (POTASH - K2O)	85 LBS. PER ACRE, MINIMUM
SOLUBLE SALTS	500 PPM
CLAY	10 TO 25 %
SILT	30 TO 55 %
SAND	35 TO 60%

MULCH LAYER

THE MULCH LAYER PLAYS AN IMPORTANT ROLE IN THE PERFORMANCE OF THE BIORETENTION SYSTEM. THE MULCH LAYER HELPS MAINTAIN SOIL MOISTURE AND AVOIDS SURFACE SEALING, WHICH REDUCES PERMEABILITY. MULCH HELPS PREVENT EROSION, AND PROVIDES A MICROENVIRONMENT SUITABLE FOR SOIL BIOTA AT THE MULCH/SOIL INTERFACE. IT ALSO SERVES AS A PRETREATMENT LAYER, TRAPPING THE FINER SEDIMENTS, WHICH REMAIN SUSPENDED AFTER THE PRIMARY PRETREATMENT.

THE MULCH LAYER SHOULD BE STANDARD LANDSCAPE STYLE, SINGLE OR DOUBLE SHREDDED HARDWOOD MULCH OR CHIPS. THE MULCH LAYER SHOULD BE WELL AGED (STOCKPILED OR STORED FOR AT LEAST 12 MONTHS), UNIFORM IN COLOR, AND FREE OF OTHER MATERIALS, SUCH AS WEED SEEDS, SOIL, ROOTS, ETC. THE MULCH SHOULD BE APPLIED TO A MAXIMUM DEPTH OF THREE INCHES. GRASS CLIPPINGS SHOULD NOT BE USED AS A MULCH MATERIAL.

PLANTING GUIDANCE

PLANT MATERIAL SELECTION SHOULD BE BASED ON THE GOAL OF SIMULATING A TERRESTRIAL, FORESTED COMMUNITY OF NATIVE SPECIES. BIORETENTION SIMULATES AN UPLAND-SPECIES ECOSYSTEM. THE COMMUNITY SHOULD BE DOMINATED BY TREES, BUT HAVE A DISTINCT COMMUNITY OF UNDERSTORY TREES, SHRUBS AND HERBACEOUS MATERIALS. BY CREATING A DIVERSE, DENSE PLANT COVER, A BIORETENTION FACILITY WILL BE ABLE TO TREAT STORMWATER RUNOFF AND WITHSTAND URBAN STRESSES FROM INSECTS, DISEASE, DROUGHT, TEMPERATURE, WIND, AND EXPOSURE. THE PROPER SELECTION AND INSTALLATION OF PLANT MATERIALS IS KEY TO A SUCCESSFUL SYSTEM. THERE ARE ESSENTIALLY THREE ZONES WITHIN A BIORETENTION FACILITY (FIGURE A.5). THE LOWEST ELEVATION SUPPORTS PLANT SPECIES ADAPTED TO STANDING AND FLUCTUATING WATER LEVELS. THE MIDDLE ELEVATION SUPPORTS PLANTS THAT LIKE DRIER SOIL CONDITIONS, BUT CAN STILL TOLERATE OCCASIONAL INUNDATION BY WATER. THE OUTER EDGE IS THE HIGHEST ELEVATION AND GENERALLY SUPPORTS PLANTS ADAPTED TO DRIER CONDITIONS. A SAMPLE OF APPROPRIATE PLANT MATERIALS FOR BIORETENTION FACILITIES ARE INCLUDED IN TABLE A.4. THE LAYOUT OF PLANT MATERIAL SHOULD BE FLEXIBLE, BUT SHOULD FOLLOW THE GENERAL PRINCIPALS DESCRIBED IN TABLE A.5. THE OBJECTIVE IS TO HAVE A SYSTEM, WHICH RESEMBLES A RANDOM, AND NATURAL PLANT LAYOUT, WHILE MAINTAINING OPTIMAL CONDITIONS FOR PLANT ESTABLISHMENT AND GROWTH. FOR A MORE EXTENSIVE BIORETENTION PLAN, CONSULT ETAB, 1993 OR CLAYTON AND SCHUELER, 1997.

OPERATION AND MAINTENANCE SCHEDULE FOR BIO-RETENTION AREAS (M-6) AND (F-6)

- 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.
- SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDER 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.

CONSTRUCTION CRITERIA:

THE FOLLOWING ITEMS SHOULD BE ADDRESSED DURING CONSTRUCTION OF PROJECTS WITH DRY WELLS:

EROSION AND SEDIMENT CONTROL: FINAL GRADING FOR PROPOSED DRY WELLS SHOULD NOT TAKE PLACE UNTIL THE SURROUNDING SITE IS COMPLETELY STABILIZED. IF THIS CANNOT BE ACCOMPLISHED, RUNOFF FROM DISTURBED AREAS SHALL BE DIVERTED.

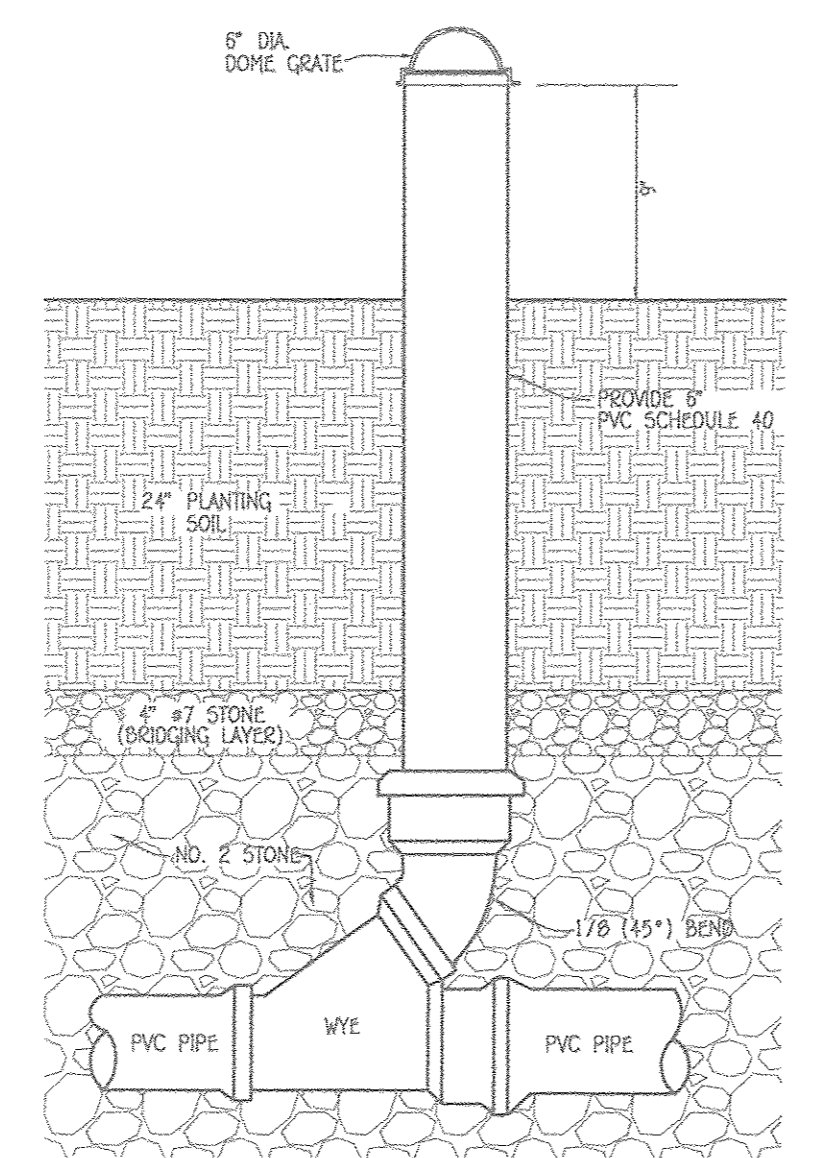
SOIL COMPACTION: EXCAVATION SHOULD BE CONDUCTED IN DRY CONDITIONS WITH EQUIPMENT LOCATED OUTSIDE OF THE PRACTICE TO MINIMIZE BOTTOM AND SIDEWALL COMPACTION. CONSTRUCTION OF A DRY WELL SHALL BE PERFORMED WITH LIGHTWEIGHT, WIDE-TRACKED EQUIPMENT TO MINIMIZE DISTURBANCE AND COMPACTION. EXCAVATED MATERIALS SHALL BE PLACED IN A CONTAINED AREA.

UNDERGROUND CHAMBER: A SUBSURFACE PREFABRICATED CHAMBER MAY BE USED.

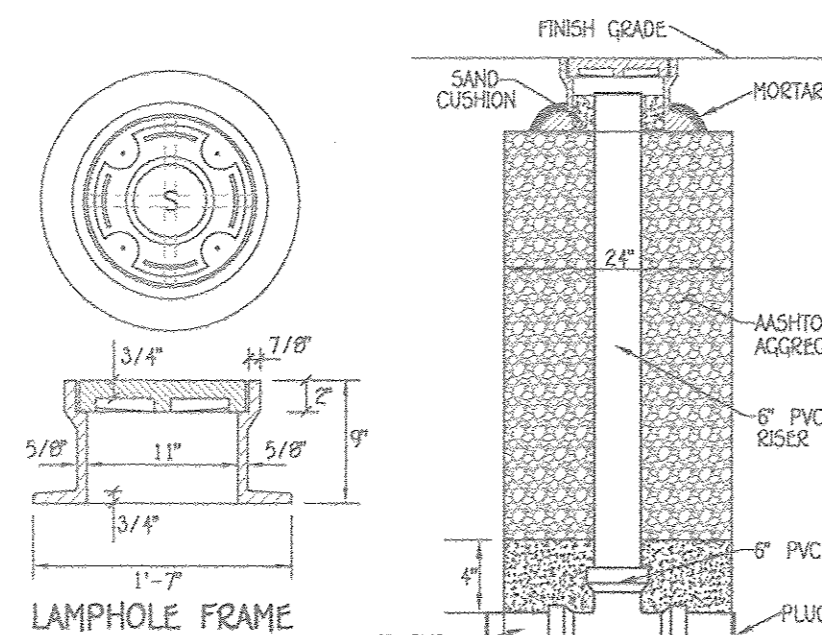
DRY WELL BOTTOM: THE BOTTOM SHALL BE AS LEVEL AS POSSIBLE TO MINIMIZE POOLED WATER IN SMALL AREAS THAT MAY REDUCE OVERALL INFILTRATION AND LONGEVITY.

FILTER CLOTH: FILTER CLOTH SHALL NOT BE INSTALLED ON THE BOTTOM OF THE WELL. NON-WOVEN FILTER CLOTH SHOULD BE USED TO LINE THE TOP AND SIDES OF THE DRY WELL TO PREVENT THE PORE SPACE BETWEEN THE STONES FROM BEING BLOCKED BY THE SURROUNDING NATIVE MATERIAL.

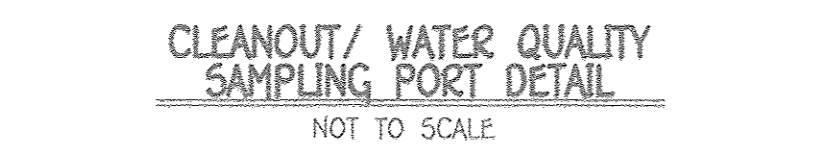
GRAVEL MEDIA: THE AGGREGATE SHALL BE COMPOSED OF AN 18 TO 48-INCH LAYER OF CLEAN WASHED, OPEN GRADED MATERIAL WITH 40% POROSITY (E.G., ASTM D448 4, 5, OR 6 STONE OR EQUAL).



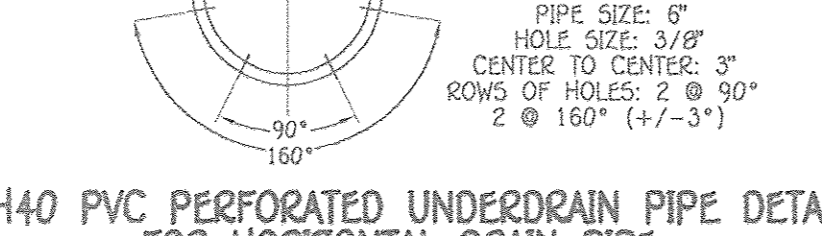
TYPICAL CLEAN-OUT DETAIL
NO TO SCALE



LAMPFRAME & COVER
NO TO SCALE



CLEANOUT/WATER QUALITY SAMPLING PORT DETAIL
NO TO SCALE



SCH40 PVC PERFORATED UNDERDRAIN PIPE DETAIL FOR HORIZONTAL DRAIN PIPE
NO TO SCALE

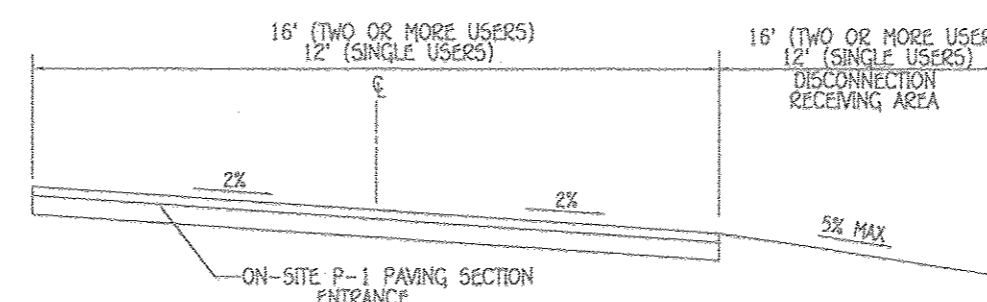
FACILITY NO.	A	B
F-6 (20)	394.00	390.92
F-6 (21)	398.00	394.92
F-6 (23)	403.00	400.17

DRY WELL CHART

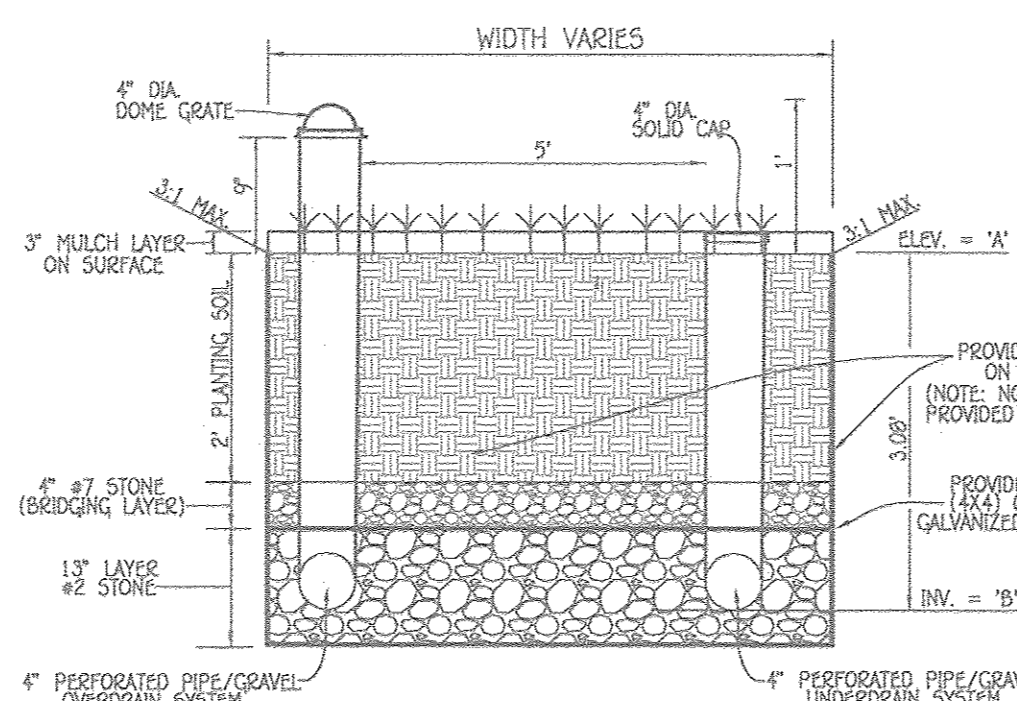
LOT NO.	DRYWELL NUMBER	NO. OF DOWNSPOUTS	AREA OF ROOF	VOLUME REQUIRED	VOLUME PROVIDED	AREA OF STORAGE	AREA OF TREATMENT	NO. OF DRYWELLS	DIMENSIONS OF DRYWELLS
55	M-5 (95A)	2	990 SqFt	126 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
55	M-5 (95B)	2	991 SqFt	126 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
55	M-5 (95C)	1	998 SqFt	127 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
55	M-5 (95A)	2	991 SqFt	126 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
56	M-5 (96A)	1	998 SqFt	127 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
57	M-5 (97A)	2	990 SqFt	126 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
57	M-5 (97B)	2	991 SqFt	126 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
57	M-5 (97C)	1	998 SqFt	127 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
58	M-5 (98A)	2	820 SqFt	104 CuFt	108 CuFt	100%	100%	1	9' X 6' X 5'
58	M-5 (98B)	2	879 SqFt	112 CuFt	120 CuFt	100%	100%	1	10' X 6' X 5'
58	M-5 (98C)	1	998 SqFt	127 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
59	M-5 (99A)	2	990 SqFt	126 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
59	M-5 (99B)	2	991 SqFt	126 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
59	M-5 (99C)	1	998 SqFt	127 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
60	M-5 (60A)	2	990 SqFt	126 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
60	M-5 (60B)	2	991 SqFt	126 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
60	M-5 (60C)	1	998 SqFt	127 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
61	M-5 (61A)	2	820 SqFt	104 CuFt	108 CuFt	100%	100%	1	9' X 6' X 5'
61	M-5 (61B)	2	879 SqFt	112 CuFt	120 CuFt	100%	100%	1	10' X 6' X 5'
61	M-5 (61C)	1	998 SqFt	127 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
62	M-5 (62A)	2	990 SqFt	126 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
62	M-5 (62B)	2	991 SqFt	126 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
62	M-5 (62C)	1	998 SqFt	127 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
63	M-5 (63A)	2	990 SqFt	126 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
63	M-5 (63B)	2	991 SqFt	126 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
63	M-5 (63C)	1	998 SqFt	127 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
64	M-5 (64A)	2	990 SqFt	126 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
64	M-5 (64B)	2	991 SqFt	126 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
64	M-5 (64C)	1	998 SqFt	127 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
65	M-5 (65A)	1	633 SqFt	81 CuFt	90 CuFt	100%	100%	1	9' X 5' X 5'
65	M-5 (65B)	1	991 SqFt	126 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
65	M-5 (65A)	1	487 SqFt	60 CuFt	60 CuFt	100%	100%	1	8' X 5' X 5'
65	M-5 (65B)	1	912 SqFt	116 CuFt	120 CuFt	100%	100%	1	10' X 6' X 5'
67	M-5 (67A)	1	467 SqFt	60 CuFt	60 CuFt	100%	100%	1	8' X 5' X 5'
67	M-5 (67B)	1	912 SqFt	116 CuFt	120 CuFt	100%	100%	1	10' X 6' X 5'
68	M-5 (68A)	2	820 SqFt	104 CuFt	108 CuFt	100%	100%	1	9' X 6' X 5'
68	M-5 (68B)	2	879 SqFt	112 CuFt	120 CuFt	100%	100%	1	10' X 6' X 5'
68	M-5 (68C)	1	998 SqFt	127 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
69	M-5 (69A)	2	820 SqFt	104 CuFt	108 CuFt	100%	100%	1	9' X 6' X 5'
69	M-5 (69B)	2	879 SqFt	112 CuFt	120 CuFt	100%	100%	1	10' X 6' X 5'
69	M-5 (69C)	1	998 SqFt	127 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
70	M-5 (70A)	2	990 SqFt	126 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
70	M-5 (70B)	2	991 SqFt	126 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
70	M-5 (70C)	1	998 SqFt	127 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
71	M-5 (71A)	2	820 SqFt	104 CuFt	108 CuFt	100%	100%	1	9' X 6' X 5'
71	M-5 (71B)	2	879 SqFt	112 CuFt	120 CuFt	100%	100%	1	10' X 6' X 5'
71	M-5 (71C)	1	998 SqFt	127 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
72	M-5 (72A)	2	820 SqFt	104 CuFt	108 CuFt	100%	100%	1	9' X 6' X 5'
72	M-5 (72B)	2	879 SqFt	112 CuFt	120 CuFt	100%	100%	1	10' X 6' X 5'
72	M-5 (72C)	1	998 SqFt	127 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'
73	M-5 (73A)	2	820 SqFt	104 CuFt	108 CuFt	100%	100%	1	9' X 6' X 5'
73	M-5 (73B)	2	879 SqFt	112 CuFt	120 CuFt	100%	100%	1	10' X 6' X 5'
73	M-5 (73C)	1	998 SqFt	127 CuFt	132 CuFt	100%	100%	1	11' X 6' X 5'

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

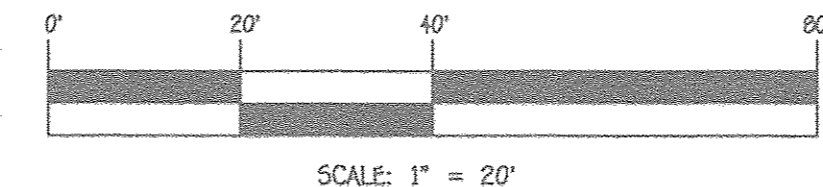
- THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
- THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO ENSURE TRENCH DRAINAGE.
- THE OWNER SHALL MAINTAIN A LOG BOOK 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.



TYPICAL PRIVATE DRIVE CROSS SLOPE SECTION
NOT TO SCALE



TYPICAL SECTION BIO-RETENTION FACILITY (F-6)
NO NOT SCALE



OWNER DEVELOPER

OWNER: TIERNEY FARMS-CLARESVILLE, LP.
24151 VENTURA BOULEVARD
COLUMBIA, MD 21046
818-395-3697

OWNER/DEVELOPER: BEAZER HOMES, LLC.
8965 GULLFORD ROAD
COLUMBIA, MD 21046
ATTN: MR. BRIAN CHAUFF
443-539-9249

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Kent Soliman
Chief, Division of Land Development
Date: 4-13-18

John D. Smith
Chief, Development Engineering Division
Date: 4-9-18

William J. Papp
Director - Department of Planning and Zoning
Date: 4-16-18

PROJECT	PHASE	PARCEL			
ENCLAVE AT RIVER HILL	2	88 & 97			
PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2460-08	18	R-ED	34	5	605102

PREVIOUS HOWARD COUNTY FILES:
ECP-15-005, PB CASE NO. 409, SP-15-006, F-15-110, WP-15-069, WP-16-152, F-17-003, SDP-17-013 & SDP-17-014

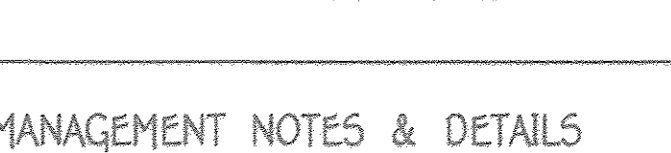
STORMWATER MANAGEMENT NOTES & DETAILS

SINGLE FAMILY HOUSES
ENCLAVE AT RIVER HILL
LOTS 55 THRU 73, 82 THRU 124 &
PARTS OF OPEN SPACE LOTS 125 THRU 128
PHASE 2

PREVIOUS HOWARD COUNTY FILES:
ECP-15-005, PB CASE NO. 409, SP-15-006, F-15-110, WP-15-069, WP-16-152, F-17-003, SDP-17-013 & SDP-17-014

ZONED: R-ED
TAX MAP NO.: 34 PARCEL NO'S.: 88 & 97 GRID NO.: 18
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MARCH, 2018
SHEET 13 OF 13

GUTTER DRAIN FILTER DETAIL



GUTTER DRAIN FILTER DETAIL
NOT TO SCALE



DRY WELL DETAIL
NOT TO SCALE