

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	ENVIRONMENTAL CONCEPT PLAN

LEGEND	
SYMBOL	DESCRIPTION
---492---	EXISTING 2' CONTOURS
---490---	EXISTING 10' CONTOURS
---	PROPOSED CONTOUR
+362.5	SPOT ELEVATION
H.P.	HIGH POINT
---	SOILS LINES AND TYPE
---	TYPE 'C' SOILS
---	EXISTING TREELINE
---	EXISTING TREES & SHRUBS
---	EXISTING TREES & SHRUBS (TO BE REMOVED)
T.B.R.	TO BE REMOVED OR RELOCATED
---	EXISTING FENCE LINE
---	EXISTING PAVING
---	USE-IN-COMMON ACCESS EASEMENT
---	DRAINAGE AND UTILITY EASEMENT
---	LIMITS OF DISTURBANCE
---	DRAINAGE AREA DIVIDE
---	5' SILT FENCE
---	55' SUPER SILT FENCE
---	ECM
---	EROSION CONTROL MATTING

STORMWATER MANAGEMENT PRACTICES						
LOT NO.	DRY WELLS (M-5)	DRAINAGE AREA TO SWM PRACTICE	ESDV REQUIRED (CuFt.)	ESDV PROVIDED (CuFt.)	DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2) Y/N	
1	YES (2)	1A 13' x 8' x 5'	992 5F	126	208 ⁽¹⁾	YES
		1B 13' x 8' x 5'	992 5F	126	208 ⁽¹⁾	
2	YES (2)	2A 13' x 8' x 5'	992 5F	126	208 ⁽¹⁾	YES
		2B 13' x 8' x 5'	992 5F	126	208 ⁽¹⁾	
3	YES (2)	3A 13' x 8' x 5'	984 5F	125	208 ⁽¹⁾	YES
		3B 13' x 8' x 5'	1000 5F	127	208 ⁽¹⁾	
	NO	UC DRIVEWAY FOR THE BENEFIT OF LOTS 1-3	5108 5F	405	405	YES

NOTE: (1) DRYWELLS ARE SIZED TO EXCEED THE REQUIRED ESDV VOLUME TREATING THE ROOF AREA TO PROVIDE ADDITIONAL TREATMENT FOR THE INDIVIDUAL DRIVEWAYS AND UIC DRIVEWAY TO COMPENSATE FOR PE: 0.6" RUNOFF DIFFERENCE BETWEEN THE NON ROOFTOP DISCONNECTION CREDIT PE OF 1.0" AND THE SITE PE OF 1.6".

STORMWATER MANAGEMENT SUMMARY CHART

SITE AREA = 1.01 ACRES
 LOD AREA = 0.94 ACRES
 RCN = 59.7
 TARGET PE = 1.6"

STORMWATER MANAGEMENT DESIGN NARRATIVE

Introduction:
 This report will demonstrate how the criteria set forth in the Maryland Stormwater Design Manual, Volumes I and II (effective October 2000, revised May 2009) will be satisfied on this project. The goal of creating hydrology similar to that of "Woods in Good Condition" will be accomplished through the use of the practices contained within Chapter 5 of said manual. The achievement of this goal will remove the requirement of providing Channel Protection Volume.

General Site Conditions:

Kinder Court is a three (3) lot single family detached subdivision including one existing house to be razed. Property is zoned R-12 and is located on Tax Map 42, Parcel No. 307 of the Howard County, Maryland Tax Map Database System and consists of 1.01 acres of which no acres are encumbered with a Preservation Easement dedicated to Howard County Maryland Agricultural Land Preservation Program. Subdivision will utilize a proposed public water and sewer house connections. The property is located in the Columbia area of Howard County in the watershed of an unnamed tributary of the Middle Patuxent River (02131106). The site fronts on and currently obtains access from Kinder Road, a public road with the intersection of Kinder Road and Single Wheel Path located approximately 30 feet north east of the property. The property is regular in shape and runoff on-site is mainly from north to south with the centrally located existing house creating a drainage divide, diverting a portion of the runoff to an existing drainage channel within a public drainage and utility easement located on adjacent Lot 255, Village of Kings Contrivance. The remaining onsite runoff flows to Kinder Road along the existing driveway.

No Forest exists on-site and forest conservation requirement of 0.15 acres will be met by payment of a surety in the amount of \$4,900.00. Also, according to a field inspection conducted by Eco-Science Professionals (ESP) dated April 2017, no wetlands and stream are present on-site in the general area of the county mapped floodplain. The Web Soil Survey shows soils on the site consist of Glenelg-Urban Land (GUB), Type "B" soils and Glenelg Urban Land-Urthenths Complex (GUB), Type "C" soils exist on the property.

The runoff from the proposed houses on Lots 1 thru 3 will be treated by six (6) M-5 Drywells. The proposed individual driveways and the use in common driveway will be treated through a Disconnection of Non Rooftop Runoff credit (N-2) utilizing a grass filter strip with additional treatment being provided by oversized the proposed On-Lot Drywells.

I. Natural Resource Protection:

This site design will require the removal of three (3) specimen trees due to their location within the proposed building envelopes.

II. Maintenance of Natural Flow Patterns:

This design seeks to keep the original drainage divides with only minor adjustments to the natural flow patterns from the previously mentioned offsite drainage areas.

III. Reduction of impervious areas through better site design, alternative surfaces and Nonstructural Practices:

This site design reduces the potential need for impervious surfaces by providing access by a use-in-common driveway which will minimize the impervious area to the minimum required by the Howard County subdivision regulations where practical. All proposed impervious areas will receive the full ESDV for the required PE.

IV. Integration of Erosion and Sediment Controls into Stormwater Strategy:

This site proposes to use of Silt Fence and Super Silt Fence where required in the area of the conceptual location of the shown improvements.

V. Implementation of ESD Planning Techniques and practices to the Maximum Extent Practicable (MEP)

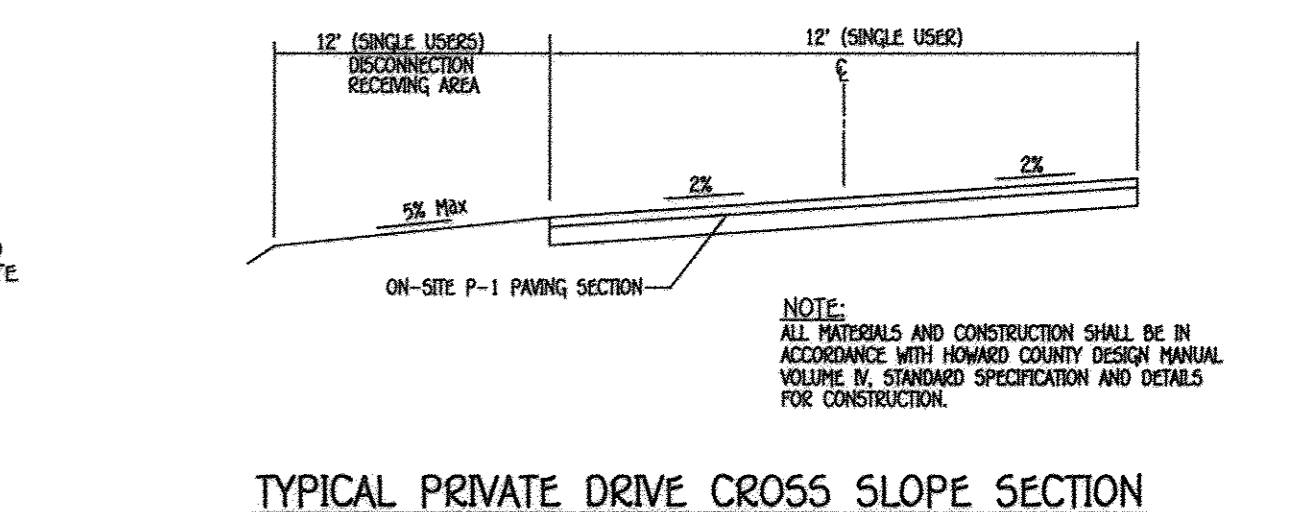
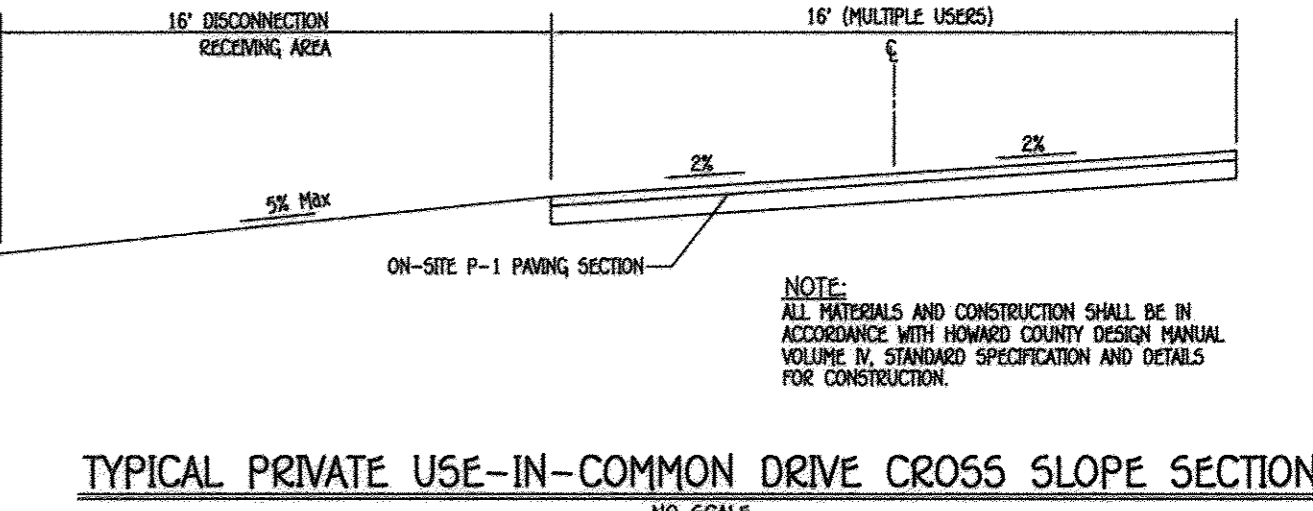
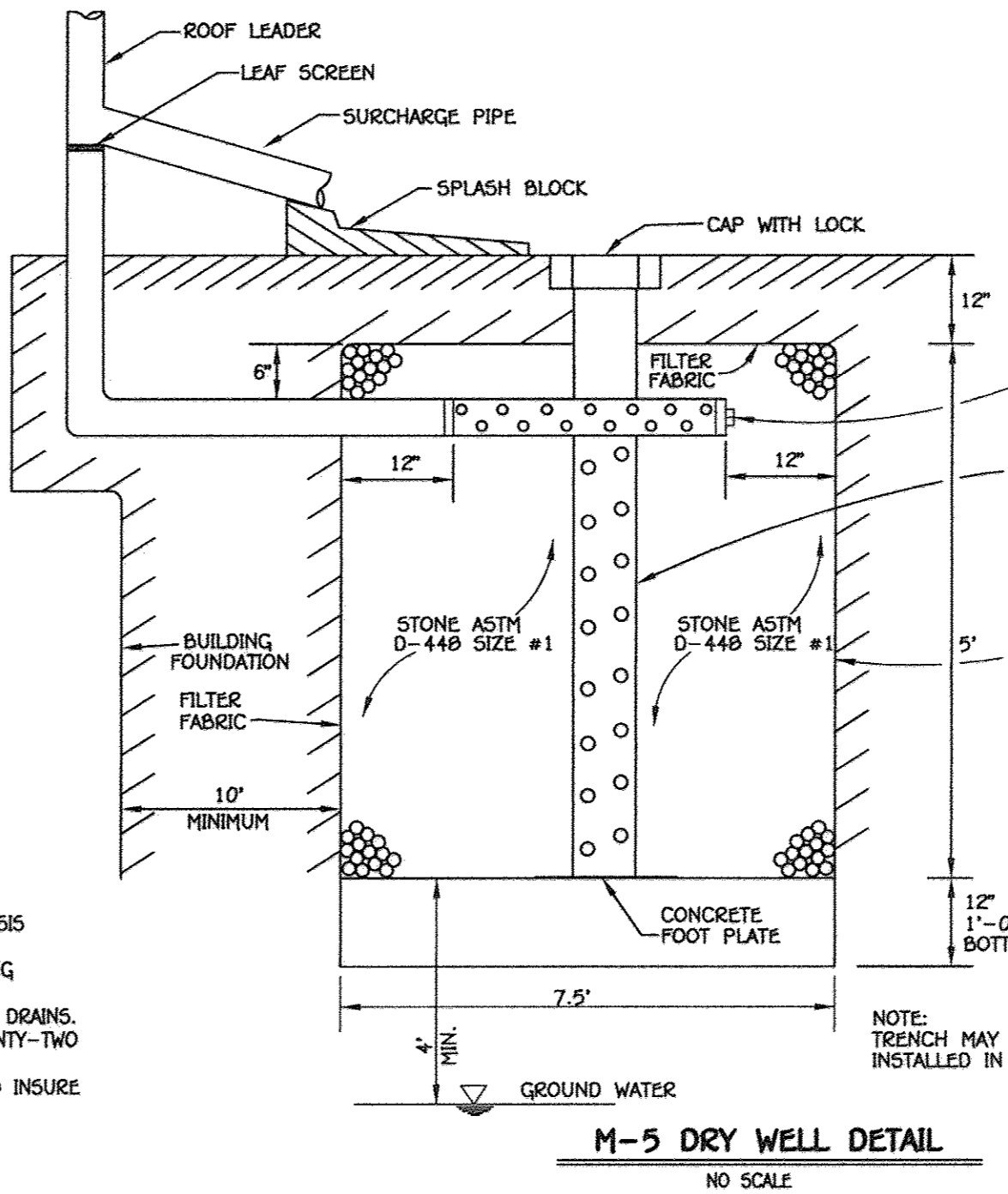
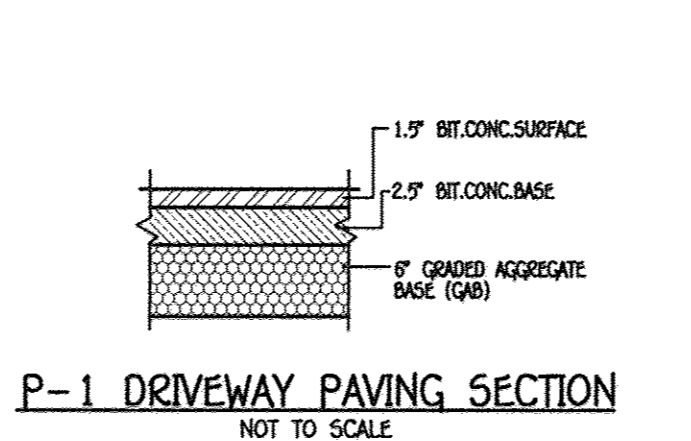
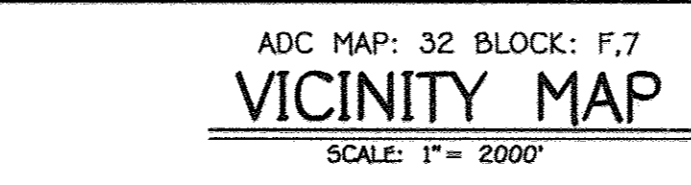
The full ESDV is being provided for all areas requiring treatment. This will be accomplished by the use of six (6) On-Lot M-5 Drywells and a N-2 Non Rooftop Disconnection Credit.

VI. Request for Design Manual Waiver:

No design manual waivers are anticipated at this time.

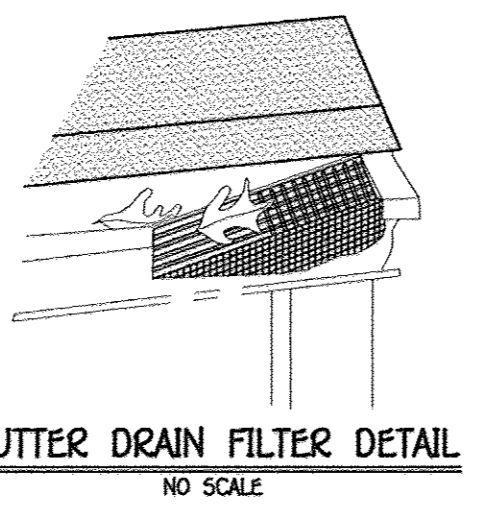
SITE ANALYSIS DATA CHART

- A. TOTAL AREA OF THIS SUBMISSION = 1.01 AC. +
- B. LIMIT OF DISTURBED AREA = 0.937 AC. +
- C. PRESENT ZONING DESIGNATION: R-12 (PER 10/06/2015 COMPREHENSIVE ZONING PLAN)
- D. PROPOSED USE: RESIDENTIAL
- E. PREVIOUS HOWARD COUNTY FILES: N/A
- F. TOTAL AREA OF FLOODPLAIN LOCATED ON SITE = 0.00 AC.
- G. TOTAL AREA OF SLOPES IN EXCESS OF 15% = 0.00 AC.
- H. TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 0.00 AC.
- I. TOTAL AREA OF EXISTING FOREST = 0.00 AC. +
- J. TOTAL GREEN OPEN AREA = 0.632 AC. +
- K. TOTAL IMPERVIOUS AREA = 0.313 AC. +
- L. AREA OF ERODIBLE SOILS = 0.00 AC. +
- M. AREA OF ROAD DEDICATION = 0.065 AC. +
- N. DENSITY PERMITTED = 3 DWELLING UNITS PER NET ACRE = 1.01 AC/1.00 x 3
- O. PROPOSED NUMBER OF LOTS = 3 LOTS
- P. OPEN SPACE REQUIRED = 1.01 AC. x 0.08 AC. (total)
- Q. OPEN SPACE PROVIDED = 0.08 AC. (credited) 0.08 AC. (non-credited)

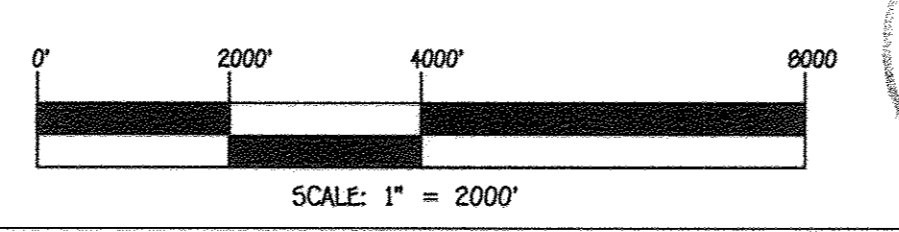


OPERATION & MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DRY WELLS (M-5)

- A. THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
- B. THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO ENSURE TRENCH DEBRIDGE.
- C. THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
- D. 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.
- E. THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.



SOILS LEGEND		
SOIL	NAME	CLASS
GUB	Glenelg-Urban land complex, 0 to 8 percent slopes	B
GUB	Glenelg-Urban land-Urthenths complex, 0 to 8 percent slopes	C



PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED 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: 7/14/19.
 Frank M. Anderson
 12476
 DATE: 4/20/18

DEVELOPER
 METROVENTURES
 9520 BECKER ROAD
 SUITE 212
 COLUMBIA, MARYLAND 21045
 410-381-8008

OWNERS
 MOHAMMED M. YAHYA
 AND TAKEEN H. SAIED
 4000 DUSTIN ROAD
 BURTONSVILLE, MARYLAND 20866

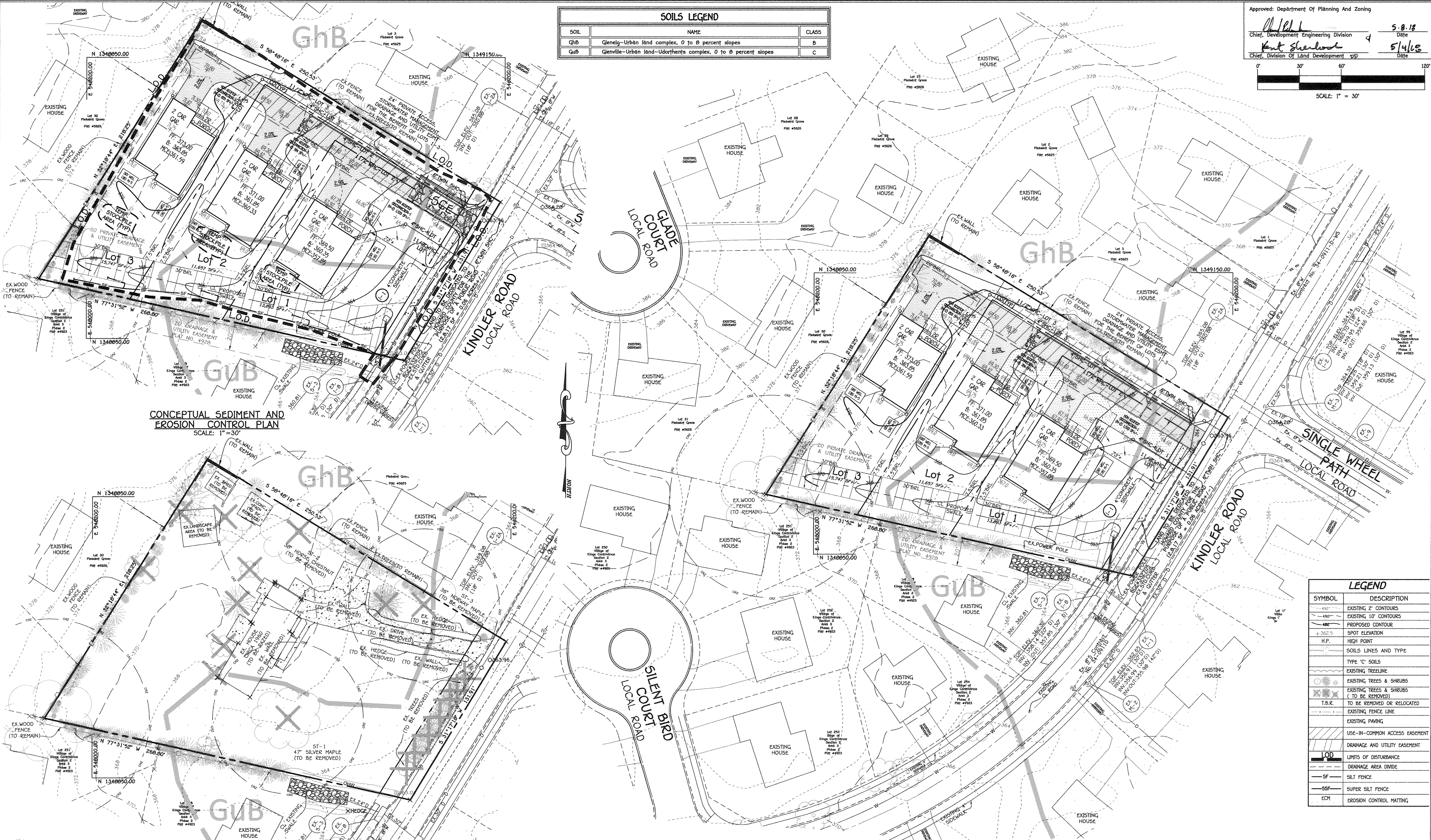
GENERAL NOTES

1. PROPERTY ZONED R-12 PER 10/6/13 COMPREHENSIVE ZONING PLAN.
2. AREA TABULATION:
 A. TOTAL TRACT AREA = 1.01 AC.
 B. AREA OF PROPOSED ROAD R/W = 0.065 AC.
 C. AREA OF PROPOSED BUILDABLE LOTS = 0.94 AC.
 D. AREA OF PROPOSED OPEN SPACE LOTS = 0.00 AC.
3. NUMBER OF LOTS/PARCELS PROPOSED
 A. BUILDABLE LOTS = 3
 B. OPEN SPACE LOTS = 0
 C. MODERATE INCOME HOUSING UNITS REQUIRED = 0.7 MHU
 (3 UNITS x 10K = 0.3 MHU)
4. DPZ FILE NO.: EPC 18-015.
5. SOILS INFORMATION TAKEN FROM NRCS WEB SOIL SURVEY.
6. FOREST STAND & WETLANDS DELINEATION REPORT DATED SEPTEMBER, 2017 WAS PREPARED BY ECO-SCIENCE PROFESSIONAL, INC.
7. THERE ARE NO STEEP SLOPES OF 25% OR GREATER ON SITE.
8. NO CEMETERIES EXIST ON SITE BY VISUAL OBSERVATION OR LISTED IN AVAILABLE HOWARD COUNTY CEMETERY INVENTORY MAP.
9. THERE IS AN EXISTING HOUSE LOCATED ON THE PROPERTY THAT WILL BE RAZED. ALTHOUGH THIS HOUSE DATES BACK TO 1960, IT IS NOT SUBJECT TO HISTORIC PRESERVATION REVIEW OR COMMENTS, PER THE DPZ HISTORIC PRESERVATION PLANNER.
10. ALL LOTS AREAS ARE MORE OR LESS.
11. DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
 A) WIDTH - 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE);
 B) SURFACE - SIX (6) INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1 - 1/2" MINIMUM);
 C) GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 100% GRADE CHANGE AND 45-FOOT TURNING RADIUS;
 D) STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (4025 LBS/LOADING);
 E) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER SURFACE;
 F) STRUCTURE CLEARANCES - MINIMUM 12 FEET;
 G) MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE.
12. FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM AND ROAD RIGHT-OF-WAY LINE AND NOT TO THE PIPESTEM LOT DRIVEWAY.
13. ARTICLES OF INCORPORATION FOR THE HOMEOWNERS ASSOCIATION, INC. WILL BE FILED WITH THE STATE DEPARTMENT OF ASSESSMENTS AND TAXATION PRIOR TO RECORDATION OF THE FINAL PLAN.
14. THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
15. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAM(S), OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION EASEMENT AREAS.
16. BOUNDARY OUTLINE BASED ON A FIELD RUN SURVEY PERFORMED BY FISHER, COLLINS & CARTER, INC. DATED ON OR ABOUT OCTOBER, 2017.
17. THE EXISTING TOPOGRAPHY INFORMATION SHOWN IS BASED ON FIELD RUN TOPOGRAPHIC SURVEY PERFORMED ON OR ABOUT OCTOBER, 2017 BY FISHER, COLLINS & CARTER, INC. AND SUPPLEMENTED WITH HOWARD COUNTY AERIAL CONTOURS.
18. NO STREAM, WETLANDS, THEIR BUFFERS, STEEP SLOPES, AND FLOODPLAIN EXIST ON-SITE.
19. THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
20. COORDINATES BASED ON NAD83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 42R1 AND NO. 42R2
 HOWARD COUNTY MONUMENT NO. 42R1 - N 547,820.227 E 1,351,171.629 ELEV. (NAVD83) = 375.806
 HOWARD COUNTY MONUMENT NO. 42R2 - N 546,946.793 E 1,352,118.601 ELEV. (NAVD83) = 331.466
21. THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
22. STORM WATER MANAGEMENT IS IN ACCORDANCE WITH THE M.D.E. STORM WATER DESIGN MANUAL, VOLUMES 1 & II, REVISED 2009. STORMWATER MANAGEMENT IS BEING PROVIDED BY THE USE OF SIX (6) M-5 DRYWELLS AND A N-2 NON ROOFTOP DISCONNECTION CREDIT TO MEET AND EXCEED THE REQUIRED ESDV VOLUME. FINAL SIZING OF THE STORMWATER MANAGEMENT DEVICES WILL BE DETERMINED AT THE SITE DEVELOPMENT PLAN STAGE.
23. STORMWATER MANAGEMENT DEVICES LOCATED ON INDIVIDUAL LOTS WILL BE OWNED AND MAINTAINED BY THAT PARTICULAR LOT OWNER AND SUBJECT TO THE REQUIREMENTS OF A RECORDED DECLARATION OF COVENANT. SWM DEVICES LOCATED WITHIN THE PUBLIC R/W WILL BE PRIVATELY OWNED AND JOINTLY MAINTAINED, AND SWM DEVICES LOCATED ON PARCELS WILL BE OWNED AND MAINTAINED BY THE H.O.A., SWM FACILITIES SERVING PUBLIC ROADS, BUT LOCATED ON PRIVATE LOTS WILL BE PRIVATELY OWNED AND JOINTLY MAINTAINED.
24. A NOISE STUDY WAS NOT REQUIRED.
25. APPROVAL OF THIS ECP DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED SUBDIVISION PLAN/PLAT AND/OR SITE DEVELOPMENT PLAN AND/OR RED-LINE REVISION PLAN. REVIEW OF ANY PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE HOWARD COUNTY ZONING REGULATIONS SHALL OCCUR AT THE SUBDIVISION PLAN/PLAT AND/OR SITE DEVELOPMENT PLAN STAGES AND/OR RED-LINE REVISION PROCESS. THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED REVIEW COMMENTS (INCLUDING COMMENTS THAT MAY ALTER THE OVERALL SITE DESIGN) AS THIS PROJECT PROGRESSES THROUGH THE PLAN REVIEW PROCESS.
26. OPEN SPACE OBLIGATION WILL BE MET BY PAYMENT OF A FEE IN LIEU OF \$3,000.
27. SOIL BORINGS REQUIRED FOR STORMWATER MANAGEMENT WILL BE PROVIDED AT THE FINAL PLAN STAGE.
28. FOREST CONSERVATION REQUIREMENTS FOR THIS PROPOSED RESUBDIVISION WILL BE PROVIDED AT THE FINAL PLAN STAGE OF THIS PROJECT IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION ACT. IT IS ANTICIPATED THAT A FEE-IN LIEU OF AFFORESTATION WILL BE REQUESTED.

Approved: Department Of Planning And Zoning
 Chief, Development Engineering Division 5.8.18 Date
 Chief, Division Of Land Development 5/4/18 Date

TITLE SHEET
KINDLER COURT
 LOTS 1 THRU 3
 7290 Kinder Road, Columbia MD 21046
 ZONED: R-12 TAX MAP NO.: 42 GRID NO.: 7
 PARCEL NO.: 307
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: APRIL, 2018
 SHEET 1 OF 2 ECP-18-015

SOIL	NAME	CLASS
GhB	Glenelg-Urban land complex, 0 to 8 percent slopes	B
GuB	Glenville-Urban land-Udorthents complex, 0 to 8 percent slopes	C



CONCEPTUAL SEDIMENT AND EROSION CONTROL PLAN
 SCALE: 1" = 30'

SYMBOL	DESCRIPTION
(dashed line)	EXISTING 2' CONTOURS
(dashed line)	EXISTING 10' CONTOURS
(solid line)	PROPOSED CONTOUR
(circle with number)	SPOT ELEVATION
(circle with H.P.)	HIGH POINT
(circle with letters)	SOILS LINES AND TYPE
(dotted pattern)	TYPE 'C' SOILS
(dotted pattern)	EXISTING TREELINE
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(dotted pattern)	LIMITS OF DISTURBANCE
(dotted pattern)	DRAINAGE AREA DIVIDE
(dotted pattern)	SILT FENCE
(dotted pattern)	SUPER SILT FENCE
(dotted pattern)	ECM EROSION CONTROL MATTING

TAG #	COMMON NAME	SCIENTIFIC NAME	SIZE	CONDITION
ST-1	SILVER MAPLE	Acer saccharinum	47'	GOOD (1)
ST-2	HORSE CHESTNUT	Aesculus hippocastanum	38'	GOOD (1)
ST-3	NORWAY MAPLE	Acer platanoides	36'	POOR, TRUNK ROT & LIMB DIEBACK (1)

NOTE: (1) SPECIMEN TREE TO BE REMOVED
 (2) CRITICAL ROOT ZONE (CRZ) = DBH X 1.5'



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 Frank Mawlan, II
 DATE: 4/30/18

DEVELOPER
 METROVENTURES
 9920 BERGER ROAD, SUITE 212
 COLUMBIA, MARYLAND 21045
 443-381-8008

OWNERS
 MOHAMMED H. YAHYA
 AND TAZEN N. SAIED
 4000 DUSTIN ROAD
 BURTONSVILLE, MARYLAND 20866

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 SHEET 2 OF 2 ECP-18-015