GENERAL NOTES

- THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
 THE EXISTING TOPOGRAPHY SHOWN HEREON IS BASED ON A TOPOGRAPHIC SURVEYS PREPARED BY ROBERT H. VOGEL ENGINEERING, INC., DATED MAY, 2015. AND FROM HOWARD COUNTY GIS.
 THE PROJECT BOUNDARY IS BASED ON PRECISION INPUT FROM EXISTING DEEDS BY ROBERT H. VOGEL ENGINEERING, INC.,
- DATED MAY 2015.

 4. THE COORDINATES AND ELEVATIONS SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY CONTROL STATIONS
- 28-FA & 28-FB WERE USED FOR THIS PROJECT.

 5. THE SUBJECT PROPERTY IS ZONED RC-DEO, RURAL CONSERVATION IN ACCORDANCE WITH THE ZONING REGULATIONS EFFECTIVE ON OCT. 06, 2013, AND IS SUBJECT TO SUBDIVISION AND LAND DEVELOPMENT REGULATIONS EFFECTIVE OCT. 07, 2007 PER COUNCIL BILL 47-2007 & 48-2007. DEVELOPMENT OR CONSTRUCTION ON THIS PROPERTY MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE
- DEVELOPMENT PLAN, WAIVER PETITION APPLICATION OR BUILDING/GRADING PERMIT APPLICATIONS.

 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. THIS PROPERTY IS NOT LOCATED WITHIN THE METROPOLITAN DISTRICT.

 WATER FOR THIS PROJECT IS TO BE BY PRIVATE WELLS.
- 9. SEWER FOR THIS PROJECT IS TO BE BY PRIVATE SEPTIC SYSTEMS.

 10. EXISTING UTILITIES LOCATED FROM TOPOGRAPHIC SURVEY AND AS-BUILT DRAWINGS. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE
- EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE.

 11. THERE ARE NO "FLOODPLAIN" AREAS LOCATED WITHIN THE DEVELOPMENT AREA AS PER FEMA DFIRM MAPS APPROVED BY FEMA AND EFFECTIVE FOR COUNTY DEVELOPMENT RESTRICTIONS AS OF MAY 6, 2013.
- 12. THERE ARE 0.10 AC. (NOT CONTIGUOUS) OF MDE STEEP SLOPES (20% OR GREATER) LOCATED WITHIN THE DEVELOPMENT AREA.
- 13. IN ACCORDANCE WITH SECTION 16.1202.(b)(1)(vi)OF THE FOREST CONSERVATION MANUAL, FOREST CONSERVATION WILL NOT BE REQUIRED FOR THIS PROJECT. AGRICULTURAL PRESERVATION SUBDIVISIONS AND ANY AGRICULTURAL ACTIVITY, INCLUDING AGRICULTURAL SUPPORT BUILDINGS AND STRUCTURES BUILT USING ACCEPTED BEST MANAGEMENT PRACTICE UNLESS IT INVOLVES THE CLEARING OF 40,000 SQUARE FEET OR GREATER OF FOREST WITHIN A 1 YEAR PERIOD ARE EXEMPT AND DO NOT REQUIRE A DECLARATION OF INTENT. THIS PROPERTY IS UNDER A RECORDED AGRICULTURAL EASEMENT AND THE SINGLE FAMILY RESIDENTIAL UNITS ARE ALLOWED UNDER THE AGRICULTURAL USE.

 14. THERE ARE 0 S.F. (0.00 AC.) AREA OF WETLANDS PRESENT WITHIN THE DEVELOPMENT AREA PER ECO—SCIENCE
- PROFESSIONALS, INC. C/O MR. JOHN CANOLES, FEBRUARY 23, 2017.

 15. IN ACCORDANCE WITH SECTION 16.121(A)(2) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS,
- THERE IS NO OPEN SPACE REQUIREMENT FOR THIS RC-DEO (RURAL CONSERVATION) PROJECT.

 16. GEOTECHNICAL INVESTIGATIONS SHALL BE COMPLETED AS PART OF THE FINAL PLAN SUBMISSION.
- 10. GEOLECTRICAL INVESTIGATIONS STALL BE COMPLETED AS PART OF

 17. A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.

 18. THE PROJECT SITE WAS EVALUATED FOR THE PRESENCE OF ENVIR
- 18. THE PROJECT SITE WAS EVALUATED FOR THE PRESENCE OF ENVIRONMENTAL FEATURES AND A LETTER HAS BEEN PREPARED BY ECO—SCIENCE PROFESSIONALS, INC. C/O MR. JOHN CANOLES, FEBRUARY 23, 2017. MR. CANOLES NOTED A SMALL OUTCROPPING OF TREES BUT FOUND IT DID NOT CONSTITUTE A FOREST. NO SPECIMEN TREES OR ANY OTHER REGULATED ENVIRONMENTAL FEATURES WERE FOUND WITHIN THE LIMITS OF THE DEVELOPMENT AREA FOR THIS PROJECT.
- 19. SHEPPARD CROSSING, CHAPEL BELLS WAY AND CHAPEL ESTATES DRIVE ARE ALL CLASSIFIED AS LOCAL ROADS. SITE ACCESS SHALL BE VIA A PRIVATE USE—IN—COMMON DRIVEWAY. INTERSECTION SHALL BE 4—WAY STOP CONDITION,
- THEREFORE, NO SIGHT DISTANCE ANALYSIS IS REQUIRED.

 20. TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL GROUNDS, CEMETERIES, OR HISTORIC STRUCTURES LOCATED WITHIN THE DEVELOPMENT AREA.
- 21. THERE ARE NO EXISTING DWELLINGS OR STRUCTURES WITHIN THE DEVELOPMENT AREA.22. THE PROPOSED BUILDINGS SHALL HAVE AN AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM.
- 23. STORMWATER MANAGEMENT FOR THE PROJECT IS PROVIDED BY THE USE OF NON-STRUCTURAL AND MICRO-SCALE PRACTICES IN ACCORDANCE WITH ENVIRONMENTAL SITE DESIGN CRITERIA. MICRO-SCALE PRACTICES EMPLOYED SHALL BE
- RAIN GARDENS (M-7). THESE FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED.

 24. APPROVAL OF THIS ENVIRONMENTAL CONCEPT PLAN (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 THIS 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 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
- 25. APPROVAL OF THIS ENVIRONMENTAL CONCEPT PLAN (ECP) BY THE HOWARD SOIL CONSERVATION DISTRICT DOES NOT GRANT APPROVAL OF THE PROPOSED SEDIMENT CONTROL SCHEME.
- 26. THERE ARE 0.58 AC. OR HIGHLY EORDIBLE SOILS WITHIN THE DEVELOPMENT AREA. (20,051 S.F CONTIGUOUS / 5,203 S.F NON-CONTIGUOUS)

SITE DATA

TAX MAP 29, BLOCK 13, PARCEL 25

- PRESENT ZONING: RC-DEO-RURAL CONSERVATION TOTAL AREA OF PROPERTY: 162.07 AC.
- DPZ REFERENCES: HO-10-03E, ECP-16-30, ECP-17-050, GP-17-038, SDP-18-004 DEED/PLAT REFERENCES: L.9771/F.214,L.12661/F.466, L.15767/F.420, L.15767/F.426 AREA MANAGED BY ESDV (*THIS PLAN-"DEVELOPMENT AREA"): 164,293 S.F./3.77 AC.
- USE OF PROPOSED STRUCTURES (THIS PLAN): SINGLE FAMILY RESIDENTIAL

 *TOTAL BUILDING COVERAGE WITHIN THE DEVELOPMENT AREA: 9,000 SF (0.21 AC. OR 5.45%)

 *PAVED AREA WITHIN THE DEVELOPMENT AREA: 14,312 SF (0.33 AC. OR 8.67%)

 LIMIT OF DISTURBED AREA (THIS PLAN): 164,293.F./3.77 AC.
- *WETLANDS ON SITE: 0.00 AC.

 *WETLAND BUFFERS ON SITE: 0.00 AC
- **TREAMS AND THEIR BUFFERS ON SITE: 0.00 AC.
- *AREA OF 100 YEAR FLOODPLAIN: 0.00 AC. *AREA OF EXISTING FOREST ON SITE: 0.00 AC.
- *AREA OF EXISTING FOREST ON SITE. 0.00 AC.

 *AREA OF MDE STEEP SLOPES (20% OR GREATER): 0.10 AC. (NOT CONTIGUOUS)

 *AREA OF ERODIBLE SOILS: 0.58 AC. (20,051 S.F CONTIGUOUS / 5,203 S.F NON-CONTIGUOUS)
- *IMPERVIOUS AREA: 23,312 S.F. / 0.54 AC. *GREEN AREA: 140,981 S.F. / 3.24 AC.
- NOTE *WITHIN LIMITS OF DEVELOPMENT AREA ONLY

ENVIRONMENTAL SITE DESIGN NARRATIVE

N ACCORDANCE WITH CHECKLIST ITEM HILL

- 1. THIS ENVIRONMENTAL CONCEPT PLAN PERTAINS ONLY TO THE 3.79 AC. DEVELOPMENT AREA FOR THE PROPOSED 3 LOT MINOR SUBDIVISION INDICATED HEREON.
 AN ENVIRONMENTAL STUDY BY ECO—SCIENCE PROFESSIONALS, INC. DETERMINED THAT THERE ARE NO STREAMS, WETLANDS OR THEIR BUFFERS WITHIN THIS DEVELOPMENT AREA. THE TOPOGRAPHY DOES NOT RESULT IN ANY CONTIGUOUS STEEP SLOPES OVER 25% WITHIN THIS DEVELOPMENT AREA. THERE ARE SOME MDE STEEP SLOPES (>20%) BUT THEY ARE ALL SMALL ISOLATED AREAS AND NOT CONTIGUOUS. ACCORDING TO CURRENT DFIRM APPROVED BY FEMA AND HOWARD COUNTY, THERE IS A 100YR FLOODPLAIN LOCATED WITHIN THE PROPERTY BOUNDARY, HOWEVER NONE EXISTS WITHIN THE DEVELOPMENT AREA FOR THIS PLAN. THE NATURAL RESOURCES WILL REMAIN UNDISTURBED, PROTECTED AND ENHANCED.
- 2. THERE IS A WELL DEFINED RIDGE LINE AT THE SOUTH END OF THE DEVELOPMENT AREA. THE SITE'S TOPOGRAPHY NATURALLY SLOPES FROM THIS RIDGE TO THE NORTHEAST AND RUNOFF IS CONVEYED OVERLAND VIA OPEN SHALLOW SWALE, EVENTUALLY TO A MORE WELL DEFINED CHANNEL, BEFORE CONVERGING WITH THE MIDDLE PATUXENT RIVER. THE SITE HAS BEEN DESIGNED TO MAINTAIN THESE NATURAL FLOW PATTERNS. UNDISTURBED UPLAND AREAS WILL BE EITHER CONVEYED THROUGH THE DEVELOPMENT AREA VIA PIPE, OR AROUND THE DEVELOPMENT AREA VIA SWALE.
- 3. THE CONCEPTUAL REDUCTION IN IMPERVIOUS AREA THROUGH BETTER SITE DESIGN IS ACHIEVED THROUGH THE ENVIRONMENTAL SITE DESIGN (ESD) FOR THE PROJECT TO THE MAXIMUM EXTENT PRACTICABLE (MEP). THE ESD CONCEPT PROPOSES THE USE OF FOUR (4) RAIN GARDENS (M-7) THE OVERFLOW FOR SWM#1 WILL DISCHARGE BY WEIR, THEN OVERLAND TO A GRASSED AREA WHERE IT WILL BE DIRECTED TO A CULVERT UNDER SHEPPARDS CROSSING AND THEN TO AN OFFSITE 4 PIPE, 84" CULVERT AND FLOODPLAIN AREA AND ULTIMATELY THE MIDDLE PATUXENT RIVER TO THE NORTHEAST.
- SWM #2, #3 AND #4 WILL DISCHARGE BY WEIR, THEN OVERLAND TO A NATURAL SHALLOW GRASSED SWALE WHERE IT WILL BE DIRECTED TO A MORE DEFINED CHANNEL AND ULTIMATELY THE MIDDLE PATUXENT RIVER TO THE NORTHEAST. THE SITE HAS BEEN GRADED SO THAT UNDISTURBED UPLAND AREAS ARE DIVERTED EITHER BY PIPE OR BY SWALE AROUND NEW IMPERVIOUS AREAS WHEREVER POSSIBLE.
- 4. SEDIMENT CONTROL FOR THIS SPECIFIC SITE PLAN WILL BE PROVIDED THROUGH THE USE OF PERIMETER CONTROLS (SUPER SILT FENCE), EARTH DIKE AND SEDIMENT TRAP. SEDIMENT CONTROL SHALL BE IN ACCORDANCE WITH THE CURRENT REQUIREMENTS AND SHALL BE APPROVED BY THE HOWARD SOIL CONSERVATION DISTRICT.
- 5. AS STATED IN #3 ABOVE, STORMWATER MANAGEMENT FOR THE PROJECT SHALL BE MET THROUGH THE USE OF FOUR (4) RAIN GARDENS (M-7). THESE FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED.

 THE RESULTS OF THE ENVIRONMENTAL SITE DESIGN FOR THIS PROJECT WILL REFLECT "WOODS IN GOOD CONDITION".

TARGET PE = 1.00"
TARGET ESDV = 2,433 CUFT

PROVIDED PE = 1.00° PROVIDED = 2,618 CUFT

4. NO DISTURBANCE IS PROPOSED TO ANY STREAMS, FLOODPLAIN,

WETLANDS OR THEIR BUFFERS.

6. NO DESIGN MANUAL WAIVERS ARE ANTICIPATED TO FULFILL THIS SWM CONCEPT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

7.23./8

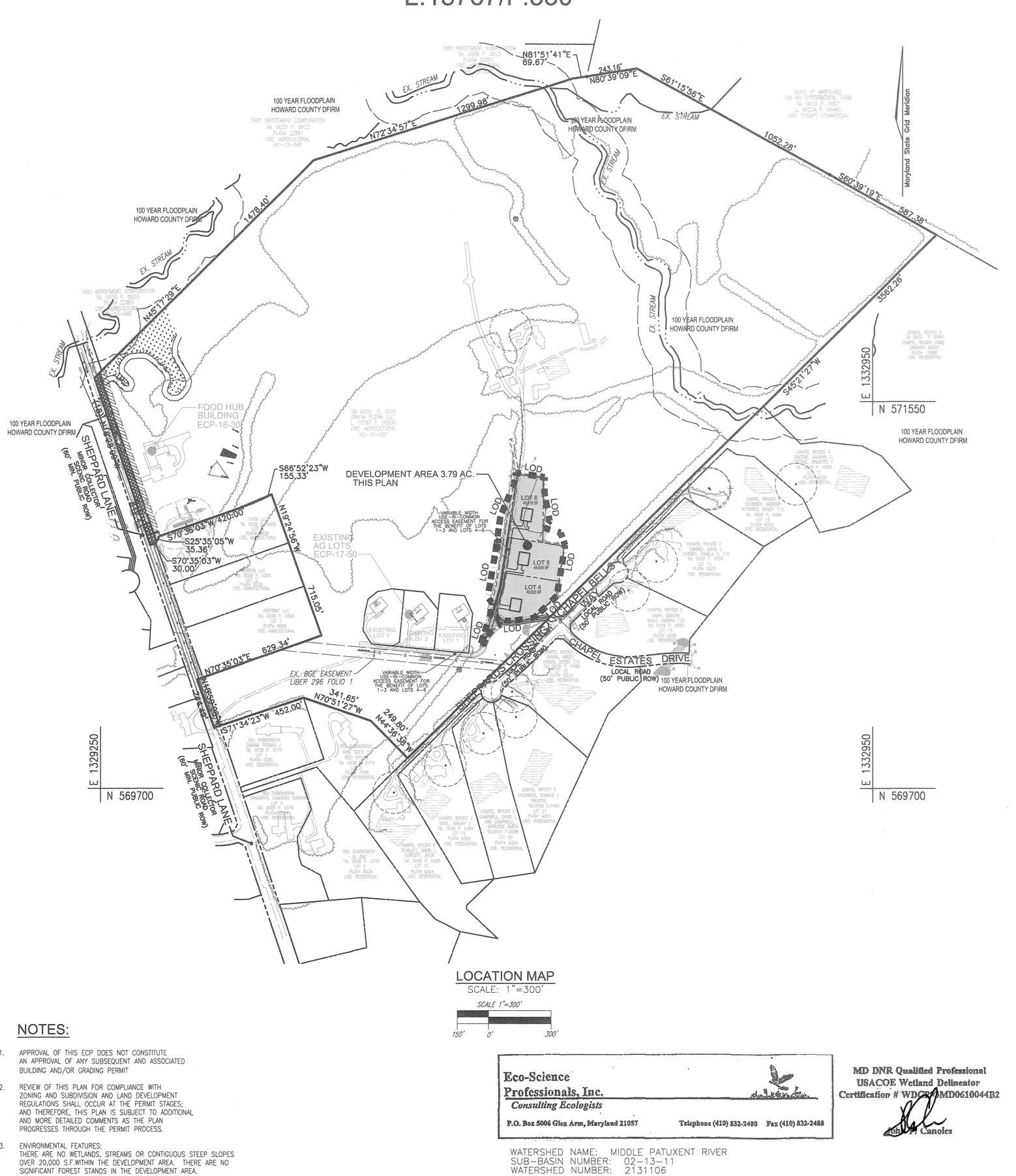
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

CHIEF, DIVISION OF LAND DEVELOPMENT

DATE

ENVIRONMENTAL CONCEPT PLAN CUNNINGHAM PROPERTY - 3 LOT MINOR 4979 SHEPPARD LANE

L.15767/F.530



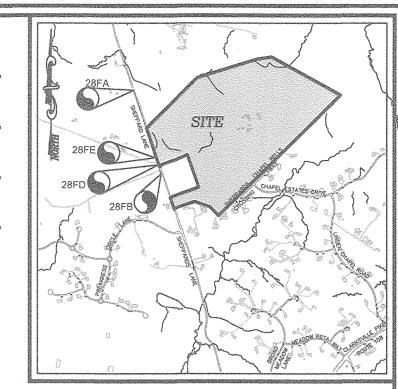
BENCHMARKS

- HOWARD COUNTY BENCHMARK 28FA
 N 572,456.68 E 1,328,957.64 ELEV.: 348.21'
 HOWARD COUNTY MONUMENT
- HOWARD COUNTY BENCHMARK 28FB
 N 570,710.84 E 1,329,524.63 ELEV.: 385.45
- HOWARD COUNTY MONUMENT

 HOWARD COUNTY BENCHMARK 28FD

 N 570,895.88 E 1,329,461.33 ELEV.: 381.91'

 HOWARD COUNTY MONUMENT
- HOWARD COUNTY BENCHMARK 28FE
 N 571,047.81 E 1,329,404.44 ELEV.: 380.85'
 HOWARD COUNTY MONUMENT



VICINITY MAP

SCALE: 1"=2000'

ADC MAP COORDINATES: 25-D5

SHEET INDEX

DESCRIPTION

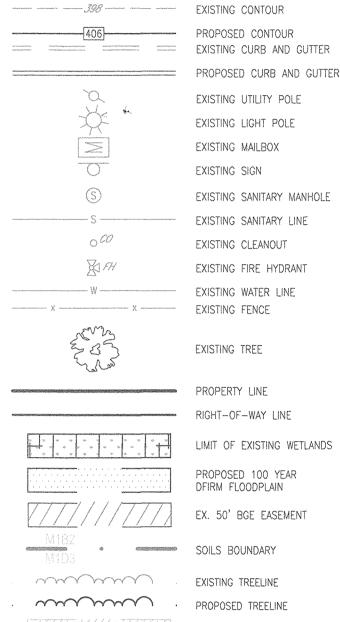
COVER SHEET

1 OF 3

LAYOUT, GRADING, EROSION AND SEDIMENT CONTROL PLAN

STORMWATER MANAGEMENT DRAINAGE AREA MAP, NOTES AND DETAILS

LEGEND



PLEASE NOTE:

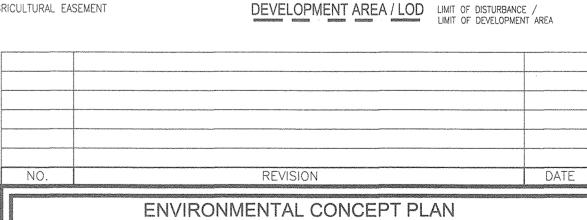
OWNER/DEVELOPER:

11140 HOMEWOOD ROAD

ELLICOTT CITY, MD 21042 PHONE: 443-677-4612

GRATIA PLENA, LLC.

THE PURPOSE OF THIS MINOR SUBDIVISION IS TO CREATE THREE (3) — ONE (1) ACRE LOTS TO REPLACE THE THREE (3) — THREE (3) ACRE LOTS ALONG SHEPPARD LANE WHICH WILL BE MERGED INTO PARCEL 25 AND SUBJECTED TO THE AGRICUTURAL EASEMENTS. THE AGRICULTURAL EASEMENT WILL NET 0.6 ACRES ±.



1000070 X300000

NVIRONMENTAL CONCEPT PLAN COVER SHEET

CUNNINGHAM PROPERTY
3 LOT MINOR SUBDIVISION
4979 SHEPPARDS LANE

TAX MAP: 29 GRID:13 PARCEL:25

ZONED: RC-DEO-RURAL CONSERVATION HOWARD COUNTY, MARYLAND

SEPTIC EASEMENT

EXISTING PRIVATE WELL

PROPOSED PRIVATE WELL



ROBERT H. VOGEL
ENGINEERING, INC.

ENGINEERS • SURVEYORS • PLANNERS
8407 Main Street
ELLIGOTT CITY, MD 21043 FAX: 410.461.7666

DESIGN BY: RHV/GAH

DRAWN BY: GAH

OF MARINERS OF THE PARTY OF THE

DESIGN BY: RHV/GAH

DRAWN BY: GAH

CHECKED BY: RHV

DATE: JUNE 2018

SCALE: AS SHOWN

W.O. NO.: 14-62

PROFESSIONAL CERTIFICATE

I HEREBY CERTIFY THAT THESE DOCUMENTS
WERE PREPARED OR APPROVED BY ME, AND
THAT I AM A DULY LICENSED PROFESSIONAL
ENGINEER UNDER THE LAWS OF THE STATE
OF MARYLAND, LICENSE NO. 16193
EXPIRATION DATE: 09-27-2018

SHOWN

SCALE: AS SHOWN

W.O. NO.: 14-62

1 SHEET 3

