

**GENERAL NOTES**

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY STANDARDS AND SPECIFICATIONS. ALL WORK AND MATERIALS SHALL COMPLY WITH C.S.S.A. STANDARDS.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING:
  - AT&T 410-802-1133
  - BCE (CONSTRUCTION SERVICES) 410-837-8713
  - BCE (EMERGENCY) 410-885-0123
  - BUREAU OF UTILITIES 410-311-6000
  - COLONIAL PIPELINE CO 410-795-1390
  - MISS UTILITY 1-800-257-7777
  - STATE HIGHWAY ADMINISTRATION 410-321-5533
  - VERIZON 1-800-743-0033
- SITE ANALYSIS:
  - TOTAL PARCEL AREA (GROSS AREA): 97.10 AC.
  - PRESENT ZONING: RC-DEO
  - USE OF STRUCTURE: SOLAR PANEL FARM
  - TOTAL COVERAGE (IMPERVIOUS AREA): 18,110 SF (0.44 AC. OR 0.45% OF GROSS AREA) (1.07% OF SITE AREA)
  - PAVED PARKING LOT/AREA ON SITE: 0 SF (0 AC. OR 0.00% OF GROSS AREA)
  - AREA OF LANDSCAPE ISLAND: 0 SF (0 AC. OR 0.00% OF GROSS AREA)
  - AREA OF WETLAND AND BUFFERS: 528,422.32 SF OR 12.13 AC.
  - AREA OF STREAM AND BUFFERS: 833,994.21 SF OR 19.15 AC.
  - AREA OF EXISTING FOREST: 20.2 AC.
  - AREA OF MODERATE SLOPES (15%-24.99%): 252,863 SF OR 5.80 AC.
  - AREA OF STEEP SLOPES (25% OR GREATER): 53,563 SF OR 1.23 AC.
  - AREA OF ERODIBLE SOILS: 3,366,853.97 SF OR 77.29 AC.
  - AREA OF FLOODPLAIN: 1.64 AC.
  - LIMIT OF DISTURBED AREA: 130,389 SF OR 2.99 AC.
  - CUT: 656 CY FILL: 1,586 CY
- PROJECT BACKGROUND:
  - LOCATION: WEST FRIENDSHIP, MD; TAX MAP 15, BLOCK 10, PARCEL 74 & 258
  - ZONING: RC-DEO
  - SUBDIVISION: N/A
  - SECTION/AREA: N/A
  - SITE AREA: 277.25 AC. (SOLAR FENCE AREA)
  - DEP REFERENCES: L 17387/272, BA CASE NO. 18-030C, ECP-20-035
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
- ANY DAMAGE TO THE STATE OR COUNTY RIGHT-OF-WAY, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- THE SUBJECT PROPERTY IS ZONED "RC-DEO" IN ACCORDANCE WITH THE 10/6/13 ZONING REGULATIONS, AND IS SUBJECT TO THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS EFFECTIVE 10/23/03 PER COUNCIL BILL 75-2003.
- THE PROJECT BOUNDARY SHOWN HEREON IS BASED ON THE SURVEY PERFORMED BY ROBERT H. VOGEL ENGINEERING, INC. ON FEBRUARY, 2019.
- THE EXISTING TOPOGRAPHY SHOWN HEREON IS BASED ON A TOPOGRAPHIC SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING, INC., DATED FEBRUARY 2019, OFFSITE TOPOGRAPHY FROM HOWARD COUNTY GIS.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM, HOWARD COUNTY MONUMENT NOS. 0013 AND 152A WERE USED FOR THIS PROJECT.
- STORMWATER MANAGEMENT PRACTICES ARE PROVIDED BY THE USE OF NON-STRUCTURAL PRACTICES AND MICRO-SCALE PRACTICES IN ACCORDANCE WITH ENVIRONMENTAL SITE DESIGN CRITERIA, NON-STRUCTURAL PRACTICES INCLUDE NON-ROOFTOP DISCONNECT (N-2), MICRO-SCALE PRACTICES INCLUDE MICRO-BIORETENTION (M-6). THESE FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED.
- EXISTING UTILITIES LOCATED FROM ROAD CONSTRUCTION PLANS AND AVAILABLE RECORD DRAWINGS, APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTOR'S INFORMATION. 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.
- THERE ARE NO EXISTING DRAINAGE STRUCTURES LOCATED ON THIS SITE.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
  - A) WIDTH - 12 FEET (16 FEET 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 MINIMUM 45 FOOT TURNING RADIUS
  - D) STRUCTURES (CURBS/BOARDS) - CAPABLE OF SUPPORTING 25 TONS (HQS LOADING)
  - E) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD EVENTS WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.
  - F) MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE.
- FREDERICK ROAD IS CLASSIFIED AS A MINOR ARTERIAL AND A SCENIC ROAD.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAMS OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100 YEAR FLOODPLAIN.
- THIS PROPERTY IS NOT WITHIN THE METROPOLITAN DISTRICT.
- WATER FOR THIS PROJECT IS PRIVATE.
- SEWER FOR THIS PROJECT IS PRIVATE. THE HEALTH DEPARTMENT HAS NOT APPROVED THIS PROPERTY FOR WASTEWATER DISCHARGE.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL GROUNDS OR CEMETRIES LOCATED ON THIS PROPERTY OR THE COUNTY'S CEMETERY SITE MAP.
- WETLANDS AND STREAMS SHOWN ONSITE ARE BASED ON ENVIRONMENTAL REPORT BY ECO-SCIENCE PROFESSIONALS, INC. C/O MR. JOHN CAVOLES, DATED FEBRUARY 19, 2020.
- THE REQUIRED FOREST CONSERVATION SHALL MEET THE INTENT OF SECTION 16.117 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. FOREST CONSERVATION REQUIREMENTS ARE BASED ON COUNCIL BILL CB82-2019, THE REQUIRED FOREST CONSERVATION OBLIGATION FOR THIS PROJECT IS 4.1 ACRES OF AFForestation.
- TOTAL FOREST CONSERVATION OBLIGATION OF THIS PROJECT TO BE FULFILLED BY:
  - 1) THE PURCHASE OF 8.2 ACRES OF RETENTION CREDIT IN THE MILLERS MILL PROPERTY FOREST BANK; SPP-18-052.
- A TRAFFIC STUDY IS NOT REQUIRED.
- A NOISE STUDY IS NOT REQUIRED.
- REFERENCE GEOTECHNICAL REPORT PREPARED BY ECS MID-ATLANTIC, LLC DATED FEBRUARY 22, 2019 FOR SUBSURFACE EXPLORATION TESTING AT BORNES B-1 TO B-6.
- THE PRE-SUBMISSION COMMUNITY MEETING WAS HELD FOR THIS PROJECT ON JUNE 25, 2019 AT THE FRIENDSHIP BAPTIST CHURCH.
- THE ENVIRONMENTAL CONCEPT PLAN (ECP-20-035) WAS APPROVED PER LETTER DATED AUGUST 20, 2020.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- A FINANCIAL SURETY IN THE AMOUNT OF \$11,150 SHALL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT:
  - PERIMETER PLANTINGS IN THE AMOUNT OF \$25,500 FOR THE REQUIRED 95 SHADE TREES, AND \$85,600 FOR THE REQUIRED 571 EVERGREEN TREES.
- THE PROPOSED SUBDIVISION AND RELATED CONSTRUCTION WILL NOT IMPACT ENVIRONMENTAL FEATURES OR BUFFERS.
- SOIL TYPES SHOWN HEREON ARE IN ACCORDANCE WITH THE USDA NRCS WEB SOIL SURVEY.
- FLOODPLANS ARE NOT LOCATED ONSITE.
- STEEP SLOPES OVER 20.00% ARE SHOWN HEREON.
- THIS PROJECT IS SUBJECT TO ZONING AND LAND USE BOARD OF APPEALS CASE BA-18-030C, ON APRIL 14, 2020; THE ZONING AND LAND USE BOARD OF APPEALS GRANTED THE PETITION FOR POWERED ENERGY SOLUTIONS, LLC, PROVIDED THAT THE PETITIONER MEET CERTAIN CONDITIONS. THE PETITIONER IS GRANTED PROVIDED THAT THE PETITIONER MEET THE FOLLOWING CONDITIONS:
  - 1. THE PETITIONER SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND COUNTY LAWS AND REGULATIONS.
  - 2. THE PETITIONER SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND COUNTY LAWS AND REGULATIONS.
  - 3. A LOCK SHALL BE LOCATED AT THE MAIN ENTRANCE.
  - 4. ALL GATES SHALL NOT BE LOCATED CLOSER THAN 30 FT FROM AN INTERSECTION AND SHALL OPEN IN THE DIRECTION OF EMERGENCY VEHICLE TRAVEL.
  - 5. PRIMARY ELECTRICAL DISCONNECT ARE THE SWITCHGEARS. THE SECONDARY DISCONNECT ARE THE TRANSFORMERS.
  - 6. AN ELECTRICAL HAZARD SIGN AND EMERGENCY CONTACT INFORMATION FOR SITE REPRESENTATIVES SHALL BE LOCATED AT THE ENTRANCE.
  - 7. PANEL LISTINGS AND FLAME SPREAD RATINGS SHALL BE LISTED AT THE ENTRANCE.
  - 8. THE DEVELOPER SHALL PROVIDE TRAINING TO THE FIRE DEPARTMENT FOR EVERY SOLAR SITE.
  - 9. THIS SITE IS SUBJECT TO A VEGETATION MANAGEMENT PLAN ON FILE WITH THE OFFICE OF THE FIRE MARSHAL.
  - 10. A COMMERCIAL SOLAR FACILITY THAT IS NO LONGER USED SHALL BE REMOVED FROM THE SITE WITHIN ONE YEAR OF THE DATE THAT THE CASE GRASS.
  - 11. THE AGRICULTURAL LAND PRESERVATION BOARD REVIEWED THIS PROPOSAL ON JUNE 15, 2018, AND RECOMMENDED APPROVAL TO THE HEARING EXAMINER. THE LOCATION OF THE COMMERCIAL SOLAR FACILITY SHOWN IN SDP-21-011 IS CONSISTENT WITH WHAT THE BOARD REVIEWED.
  - 12. THIS PROJECT IS SUBJECT TO A DESIGN MANUAL SUBMITTED FOR HOWARD COUNTY DESIGN MANUAL, VOLUME 16, DETAIL B-610. THE CHIEF OF THE DEVELOPMENT ENGINEERING DIVISION ISSUED AN APPROVAL LETTER DATED JUNE 16, 2021. THE LETTER APPROVED THE REQUEST BASED ON THE FACT THAT:
    - 1. FIRE & RESCUE APPROVED THE DMW WITH COMMENTS. (SOLAR AREA DRIVEWAY MUST BE 18FT)
    - 2. THE FACILITY IS PRIVATELY OWNED AND MAINTAINED.
    - 3. EX. RESIDENCES WHO SHARE THE USE-IN-COMMON DRIVEWAY HAVE NO OBJECTION TO KEEP A 12FT WIDE DRIVEWAY PAVING WIDTH.
    - 4. SOLAR USE IS ONCE PER MONTH.

# SITE DEVELOPMENT PLAN

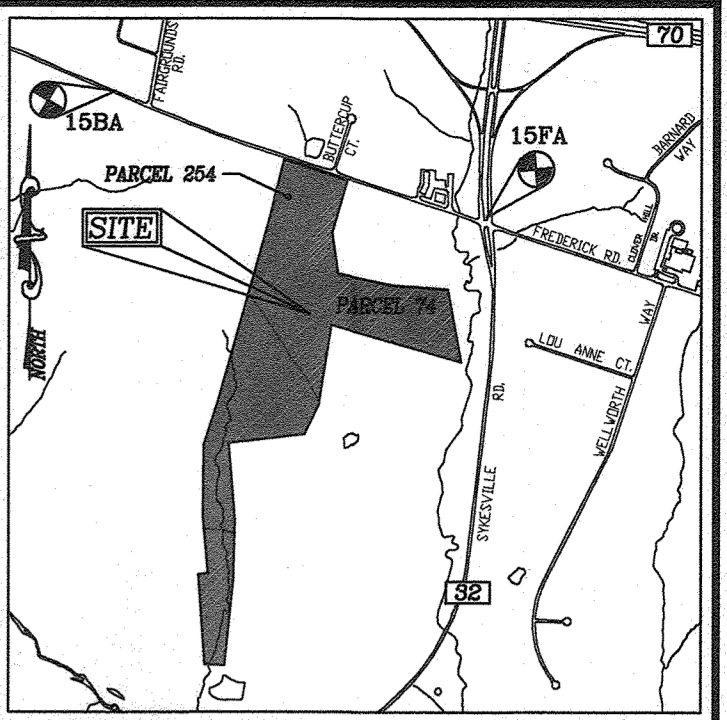
## TRIPLE CREEK SOLAR

12855 FREDERICK ROAD (MD 144), WEST FRIENDSHIP, MD 21794  
LIBER 17387 FOLIO 272  
HOWARD COUNTY, MARYLAND

**BENCHMARKS**

HOWARD COUNTY BENCHMARK 0013  
N 595,906.971 E 1,325,627.748 ELEV. 486.157  
CONCRETE MONUMENT WITH DISC -  
22.8' NORTH OF TRAFFIC POLE  
29' EAST OF MD 32 SOUTHBOUND

HOWARD COUNTY BENCHMARK 152A  
N 597,228.162 E 1,321,719.345 ELEV. 590.196  
CONCRETE MONUMENT WITH DISC -  
375' WEST OF FAIRGROUNDS ROAD  
3' NORTH EDGE OF PAVEMENT  
FREDERICK ROAD (MD 144)



**VICINITY MAP**  
SCALE: 1"=2000'  
ADC MAP COORDINATES: PAGE 18 / GRID B & C 3  
GRID B 4 - B 5

**LEGEND:**

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING PAVING
- CENTERLINE OF EXISTING STREAM
- EXISTING PRESERVATION EASEMENT
- EXISTING FOREST CONSERVATION EASEMENT

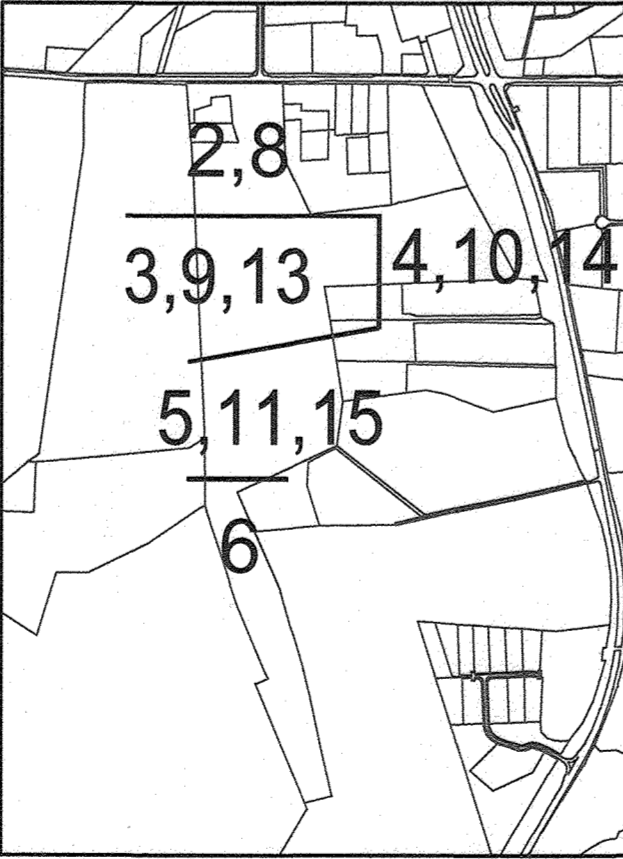


**SHEET INDEX**

DESCRIPTION	SHEET NO.
COVER SHEET	1 OF 21
LAYOUT PLAN	2-6 OF 21
SITE DETAILS	7 OF 21
SOILS MAP, GRADING, EROSION AND SEDIMENT CONTROL PLAN	8-11 OF 21
GRADING, EROSION AND SEDIMENT CONTROL NOTES AND DETAILS	12 OF 21
STORMWATER MANAGEMENT/STORM DRAIN DRAINAGE AREA MAP	13-15 OF 21
STORMWATER MANAGEMENT NOTES AND DETAILS	16 OF 21
STORM DRAIN PROFILES	17 OF 21
FOREST CONSERVATION PLAN	18-19 OF 21
LANDSCAPE PLAN	20 OF 21
LANDSCAPE PLAN, NOTES AND DETAILS	21 OF 21

**DEVELOPER**  
KDC SOLAR MARYLAND, LLC  
1420 US HIGHWAY 206, SUITE 120  
BEDMINSTER, NJ 07921  
PHONE: 908-955-4360

**OWNER**  
TRIPLE CREEK FARM  
PROPERTIES LLC  
12855 ROUTE 144  
WEST FRIENDSHIP, MD 21794  
PHONE:



**LOCATION MAP**

SCALE: 1"=300'  
SCALE: 1"=300'

**SHEET KEY**

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

*[Signature]* R: 12/13/21  
COUNTY HEALTH OFFICER DATE  
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 12-26-21  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
*[Signature]* 11/02/22  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
*[Signature]* 1/30/23  
DIRECTOR DATE

**AS-BUILT CERTIFICATION FOR PSWM**

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLAN AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

*[Signature]* 1/19/23 2-24-23  
P.E. NAME P.E.# DATE

NO AS-BUILT INFORMATION ON THIS SHEET

STORMWATER MANAGEMENT PRACTICES					
PARCEL NO.	STREET ADDRESS	FACILITY TYPE & MDE NO.	PUBLIC	PRIVATE	MAINTENANCE BY
74 & 258	12855 FREDERICK ROAD	NON-ROOFTOP DISCONNECT (N-2), MICRO-BIORETENTION (M-6)		X	OWNER

ADDRESS CHART	
BUILDING NO.	STREET ADDRESS
12855	FREDERICK ROAD

PERMIT INFORMATION CHART			
SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL NUMBER	
TRIPLE CREEK SOLAR		74, 258	
PLAT OR L/F	GRID NO.	ZONING	TAX MAP NO.
L17387/F.272	10	RC-DEO	15
ELECT. DIST.	CENSUS TR.		
3RD	603003		

NO.	REVISION	DATE
1	REVISE TO SHOW MINOR GRADING CHANGE AND REPLACE A PORTION OF SWM INLET SF	6-9-22

**SITE DEVELOPMENT PLAN**

**COVER SHEET**

**TRIPLE CREEK SOLAR**

12855 FREDERICK ROAD (MD 144), WEST FRIENDSHIP, MD 21794  
LIBER 17387 FOLIO 272

TAX MAP 15 BLOCK 10 3RD ELECTION DISTRICT

ZONED RC-DEO PARCELS 74 & 258 HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**

ENGINEERS • SURVEYORS • PLANNERS

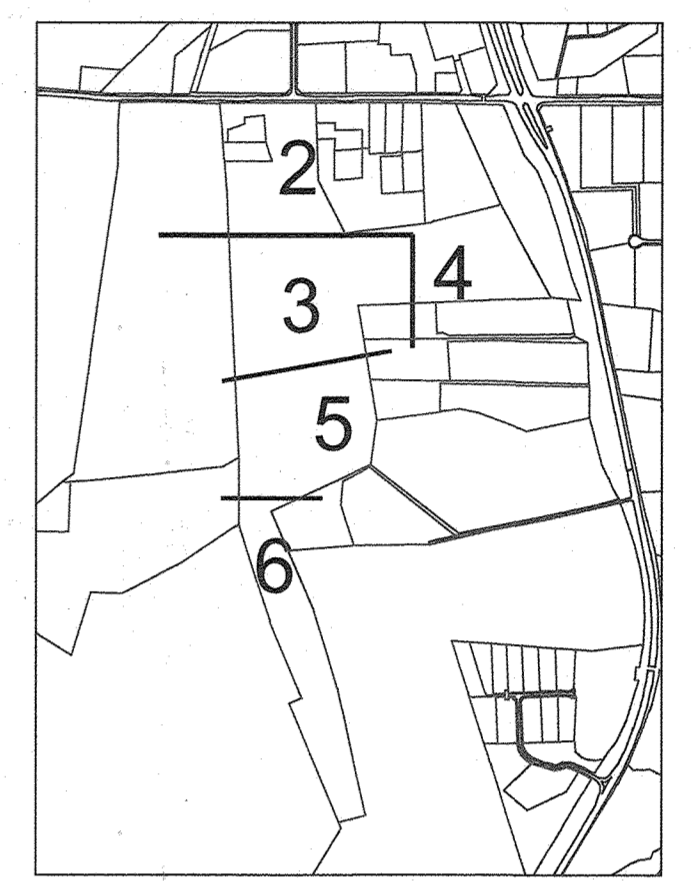
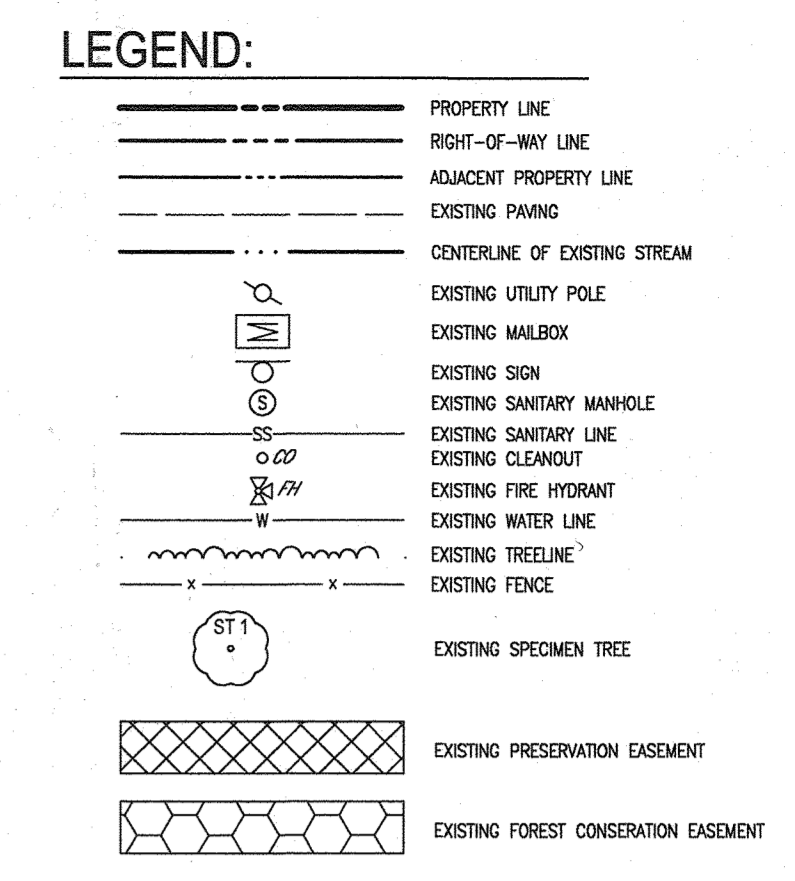
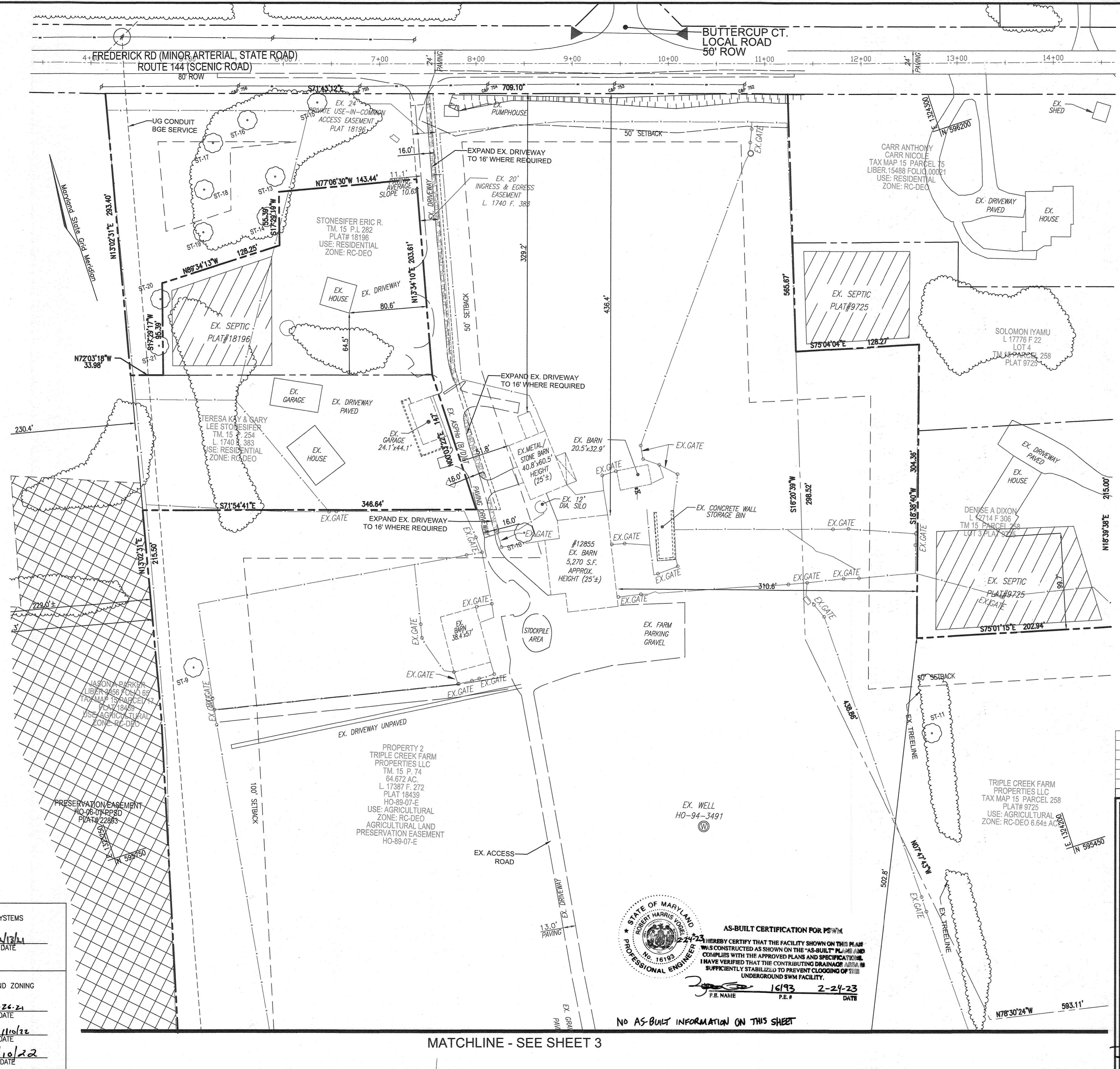
3300 NORTH RIDGE ROAD, SUITE 110 TEL: 410.461.7666  
ELICOTT CITY, MD 21043 FAX: 410.461.8961

DESIGN BY: RHV  
DRAWN BY: KG/MLH  
CHECKED BY: RHV  
DATE: JULY 2021  
SCALE: AS SHOWN  
W.O. NO.: 41657

PROFESSIONAL CERTIFICATE

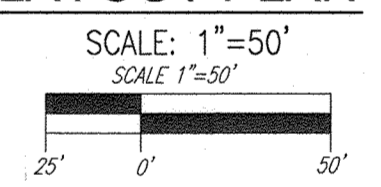
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE 08-27-2022.

1 SHEET OF 21



**SHEET KEY**

**LAYOUT PLAN**



**DEVELOPER**  
KDC SOLAR MARYLAND, LLC  
1420 US HIGHWAY 206, SUITE 120  
BEDMINSTER, NJ 07921  
PHONE: 908-955-4360

**OWNER**  
TRIPLE CREEK FARM PROPERTIES LLC  
12855 ROUTE 144  
WEST FRIENDSHIP, MD 21794  
PHONE:

NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN**

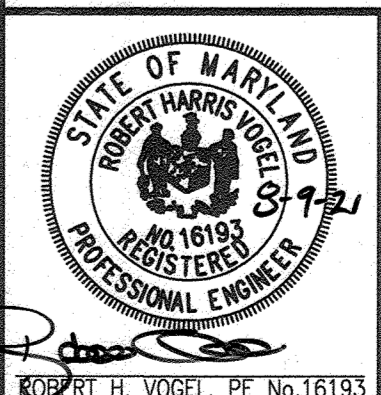
**LAYOUT PLAN**

**TRIPLE CREEK SOLAR**

12855 FREDERICK ROAD (MD 144), WEST FRIENDSHIP, MD 21794  
LIBER 17387 FOLIO 272

TAX MAP 15 BLOCK 10 ZONED RC-DEO  
3RD ELECTION DISTRICT PARCELS 74 & 258  
HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
3300 NORTH RIDGE ROAD, SUITE 110 TEL: 410.461.7666  
ELLCOTT CITY, MD 21043 FAX: 410.461.8961



**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: 09-27-2022

DESIGN BY: RHV  
DRAWN BY: KG/IMH  
CHECKED BY: RHV  
DATE: JULY 2021  
SCALE: AS SHOWN  
W.O. NO.: 41657

2 SHEET OF 21

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS  
*[Signature]* Rv: 11/13/21 DATE  
COUNTY HEALTH OFFICER  
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*[Signature]* 12-26-21 DATE  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
CHIEF, DIVISION OF LAND DEVELOPMENT  
*[Signature]* 11/02/22 DATE  
DIRECTOR

**AS-BUILT CERTIFICATION FOR PWSW**  
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

*[Signature]* 16193 2-24-23  
P.E. NAME P.E.# DATE

NO AS-BUILT INFORMATION ON THIS SHEET

MATCHLINE - SEE SHEET 3

MATCHLINE - SEE SHEET 2

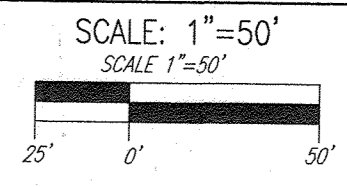


- LEGEND:**
- PROPERTY LINE
  - - - RIGHT-OF-WAY LINE
  - - - ADJACENT PROPERTY LINE
  - EXISTING PAVING
  - CENTERLINE OF EXISTING STREAM
  - EXISTING UTILITY POLE
  - EXISTING MAILBOX
  - EXISTING SIGN
  - EXISTING SANITARY MANHOLE
  - EXISTING SANITARY LINE
  - EXISTING CLEANOUT
  - EXISTING FIRE HYDRANT
  - EXISTING WATER LINE
  - EXISTING TREELINE
  - EXISTING FENCE
  - WETLAND BOUNDARY
  - WETLAND BUFFER
  - PROPOSED FENCE
  - EXISTING SPECIMEN TREE
  - EXISTING PRESERVATION EASEMENT
  - EXISTING FOREST CONSERVATION EASEMENT



SHEET KEY

LAYOUT PLAN



MATCHLINE - SEE SHEET 4

MATCHLINE - SEE SHEET 5

**DEVELOPER**  
 KDC SOLAR MARYLAND, LLC  
 1420 US HIGHWAY 206, SUITE 120  
 BEDMINSTER, NJ 07921  
 PHONE: 908-955-4360

**OWNER**  
 TRIPLE CREEK FARM  
 PROPERTIES LLC  
 12855 ROUTE 144  
 WEST FRIENDSHIP, MD 21794  
 PHONE:

NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN**  
 LAYOUT PLAN  
**TRIPLE CREEK SOLAR**  
 12855 FREDERICK ROAD (MD 144), WEST FRIENDSHIP, MD 21794  
 LIBER 17387 FOLIO 272

TAX MAP 15 BLOCK 10 3RD ELECTION DISTRICT      ZONED RC-DEO  
 PARCELS 74 & 258      HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
 ENGINEERS • SURVEYORS • PLANNERS  
 3300 NORTH RIDGE ROAD, SUITE 110 TEL: 410.461.7666  
 ELLICOTT CITY, MD 211043 FAX: 410.461.8961

**PROFESSIONAL CERTIFICATE**

DESIGN BY: RHY  
 DRAWN BY: KG/IMH  
 CHECKED BY: RHY  
 DATE: JULY 2021  
 SCALE: AS SHOWN  
 W.O. NO.: 41657

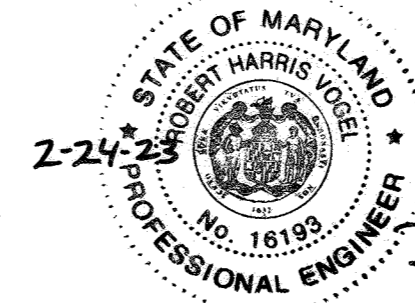
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 06-27-2022

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

12-26-21  
 DATE  
 NY

1/10/22  
 DATE

1/16/22  
 DATE



AS-BUILT CERTIFICATION FOR PSWM

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

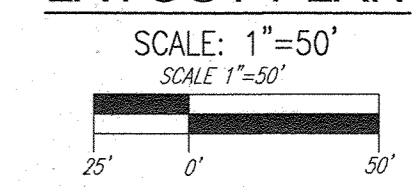
2-24-23  
 16193  
 2-24-23  
 DATE

- LEGEND:**
- PROPERTY LINE
  - RIGHT-OF-WAY LINE
  - ADJACENT PROPERTY LINE
  - EXISTING PAVING
  - CENTERLINE OF EXISTING STREAM
  - EXISTING UTILITY POLE
  - EXISTING MAILBOX
  - EXISTING SIGN
  - EXISTING SANITARY MANHOLE
  - EXISTING SANITARY LINE
  - EXISTING CLEANOUT
  - EXISTING FIRE HYDRANT
  - EXISTING WATER LINE
  - EXISTING TREELINE
  - EXISTING FENCE
  - PROPOSED FENCE
  - EXISTING SPECIMEN TREE



**SHEET KEY**

**LAYOUT PLAN**



**DEVELOPER**  
KDC SOLAR MARYLAND, LLC  
1420 US HIGHWAY 206, SUITE 120  
BEDMINSTER, NJ 07921  
PHONE: 908-955-4360

**OWNER**  
TRIPLE CREEK FARM  
PROPERTIES LLC  
12855 ROUTE 144  
WEST FRIENDSHIP, MD 21794  
PHONE:

NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN**

**LAYOUT PLAN**

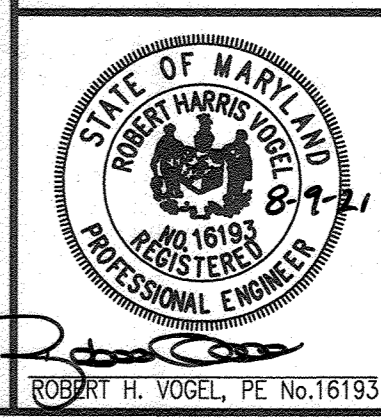
**TRIPLE CREEK SOLAR**

12855 FREDERICK ROAD (MD 144), WEST FRIENDSHIP, MD 21794  
LIBER 17387 FOLIO 272

TAX MAP 15 BLOCK 10 3RD ELECTION DISTRICT

ZONED RC-DEO PARCELS 74 & 258 HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
3300 NORTH RIDGE ROAD, SUITE 110 TEL: 410.461.7666  
ELLICOTT CITY, MD 21043 FAX: 410.461.8961

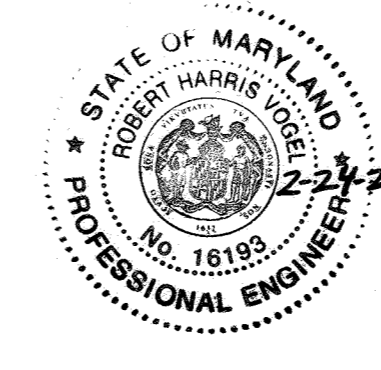


**PROFESSIONAL CERTIFICATE**

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2022

DESIGN BY: RHV  
DRAWN BY: KG/JMH  
CHECKED BY: RHV  
DATE: JULY 2021  
SCALE: AS SHOWN  
W.O. NO.: 41857

4 SHEET OF 21



**AS-BUILT CERTIFICATION FOR PSWM**

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABLE TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

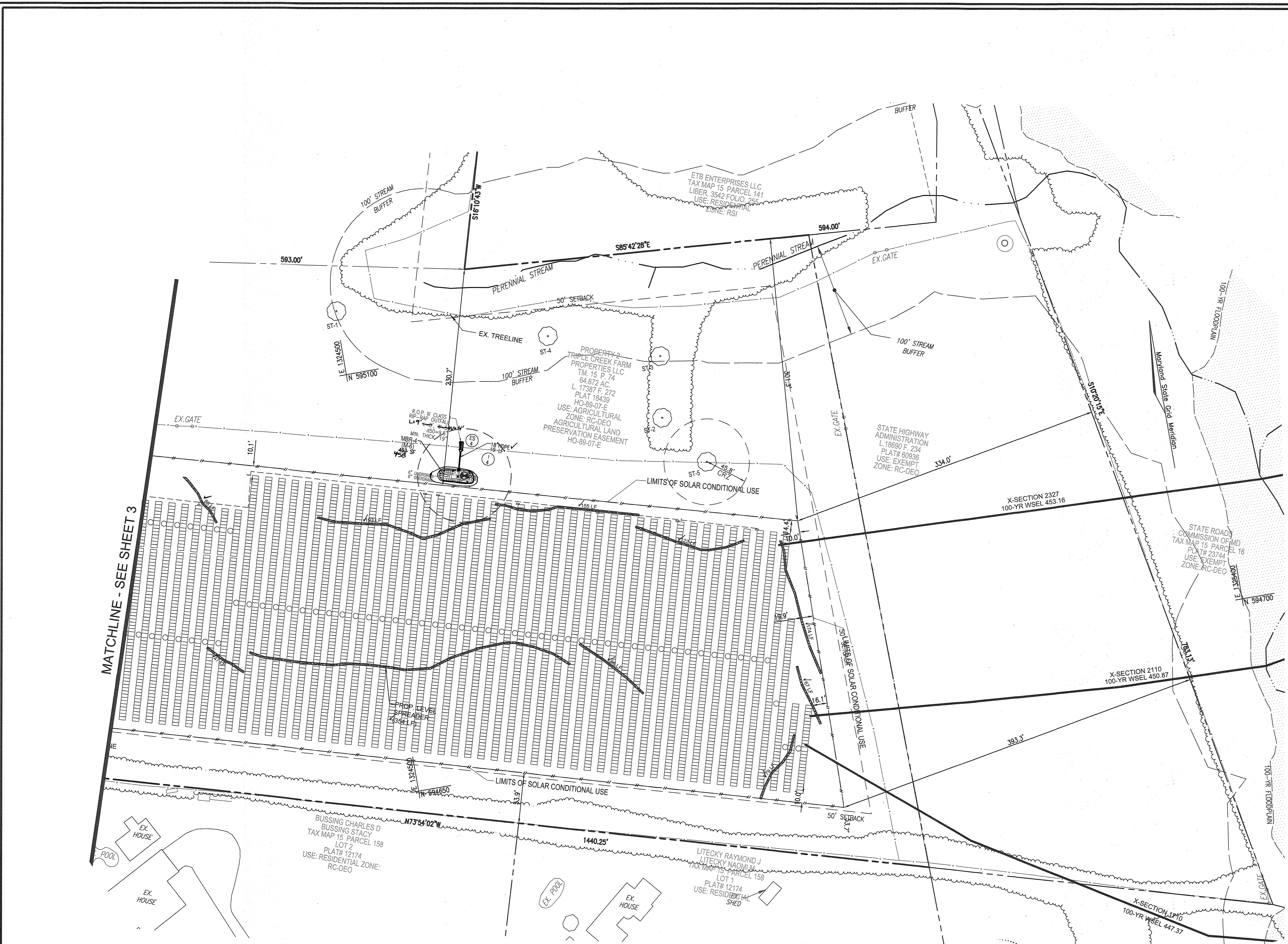
P.E. NAME: R. H. VOGEL P.E. # 16193 DATE: 2-24-23

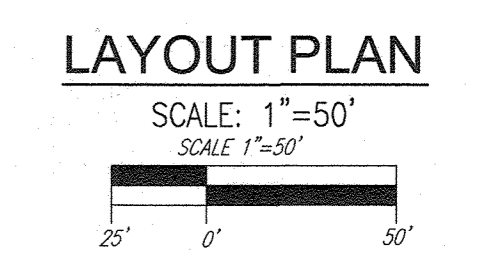
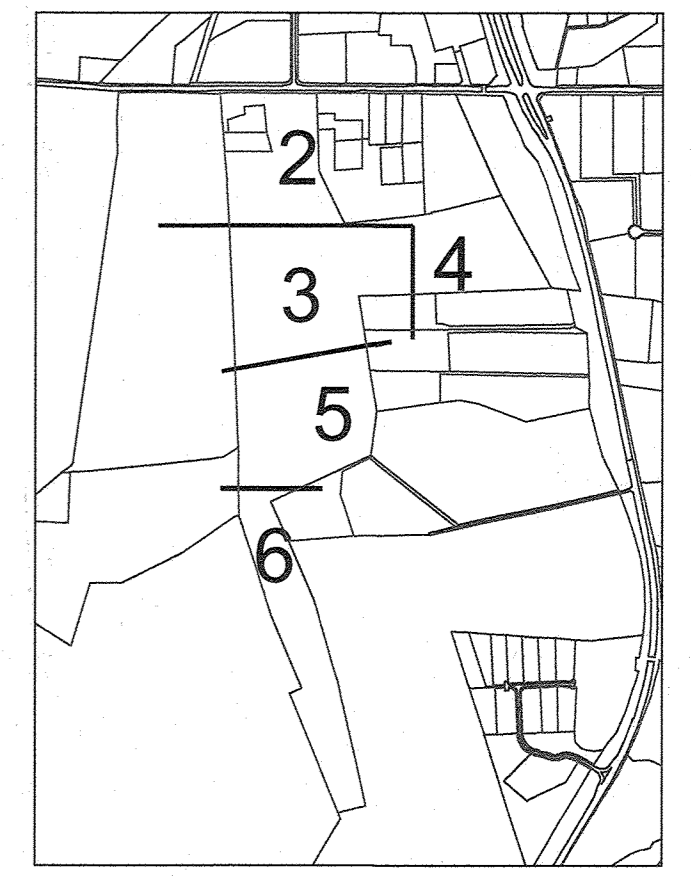
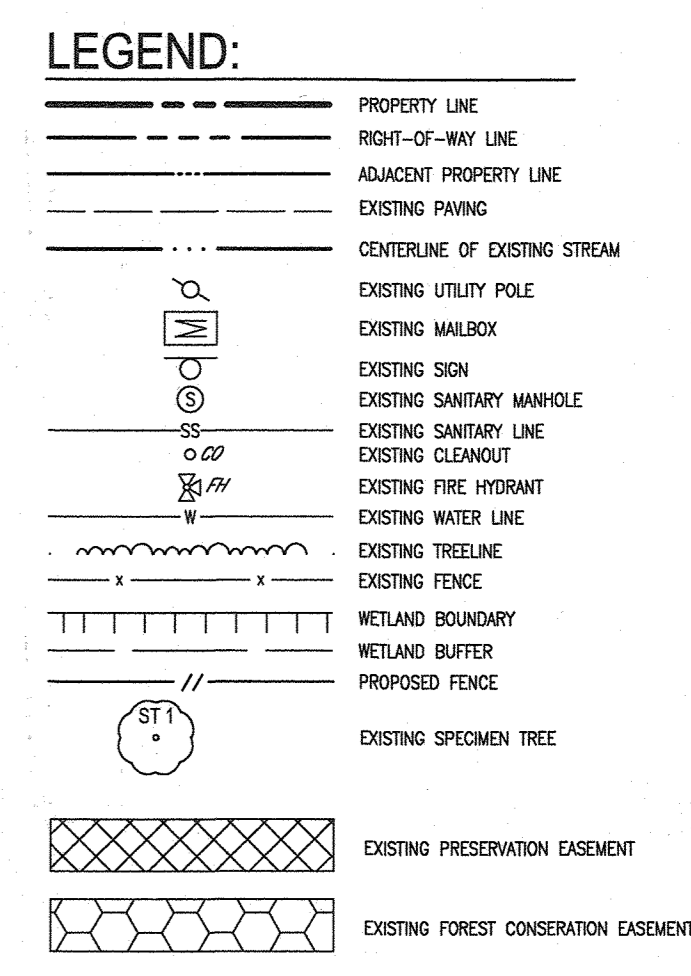
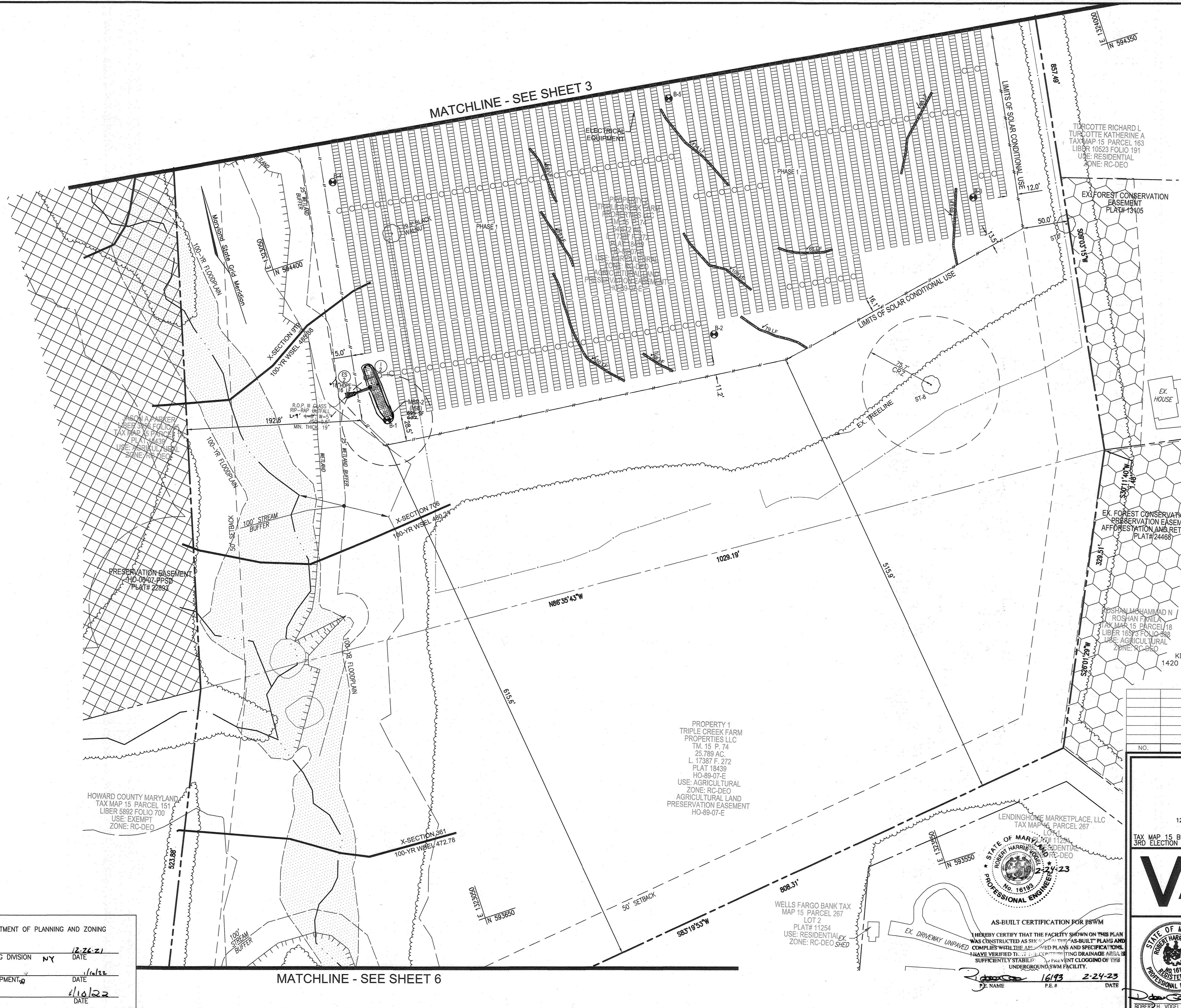
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 12-26-21

CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 1/10/22

DIRECTOR DATE: 1/10/22





**DEVELOPER**  
KDC SOLAR MARYLAND, LLC  
1420 US HIGHWAY 206, SUITE 120  
BEDMINSTER, NJ 07921  
PHONE: 908-955-4360

**OWNER**  
TRIPLE CREEK FARM  
PROPERTIES LLC  
12855 ROUTE 144  
WEST FRIENDSHIP, MD 21794  
PHONE:

NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN**  
**LAYOUT PLAN**  
**TRIPLE CREEK SOLAR**  
12855 FREDERICK ROAD (MD 144), WEST FRIENDSHIP, MD 21794  
LIBER 17387 FOLIO 272  
TAX MAP 15 BLOCK 10  
3RD ELECTION DISTRICT  
ZONED RC-DEO  
PARCELS 74 & 258  
HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
3300 NORTH RIDGE ROAD, SUITE 110 TEL: 410.461.7666  
ELICOTT CITY, MD 21043 FAX: 410.461.8961

**PROFESSIONAL CERTIFICATE**  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2022.

DESIGN BY: RHV  
DRAWN BY: KG/IMH  
CHECKED BY: RHV  
DATE: JULY 2021  
SCALE: AS SHOWN  
W.O. NO.: 41657

16193 2-24-23  
P.E. NAME P.E.# DATE

5 SHEET OF 21

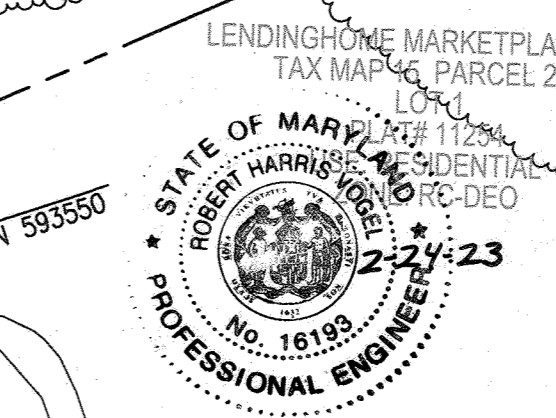
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 12-26-21  
CHIEF, DEVELOPMENT ENGINEERING DIVISION NY DATE

*[Signature]* 1/10/22  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*[Signature]* 1/10/22  
DIRECTOR DATE

PROPERTY 1  
TRIPLE CREEK FARM  
PROPERTIES LLC  
TM: 15 P-74  
25.789 AC.  
L. 17387 F. 272  
PLAT 18439  
HO-89-07-E  
USE: AGRICULTURAL  
ZONE: RC-DEO  
AGRICULTURAL LAND  
PRESERVATION EASEMENT  
HO-89-07-E



AS-BUILT CERTIFICATION FOR B8WM  
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE FACILITY IS OPERATING DRAINAGE AREAS ARE SUFFICIENTLY STABLE, PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

MATCHLINE - SEE SHEET 3

MATCHLINE - SEE SHEET 6

MATCHLINE - 6A - THIS SHEET

MATCHLINE - SEE SHEET 5

MATCHLINE - 6B - THIS SHEET

- LEGEND:**
- PROPERTY LINE
  - RIGHT-OF-WAY LINE
  - ADJACENT PROPERTY LINE
  - - - EXISTING PAVING
  - - - CENTERLINE OF EXISTING STREAM
  - EXISTING UTILITY POLE
  - EXISTING MAILBOX
  - EXISTING SIGN
  - EXISTING SANITARY MANHOLE
  - EXISTING SANITARY LINE
  - EXISTING CLEANOUT
  - EXISTING FIRE HYDRANT
  - EXISTING WATER LINE
  - EXISTING TREETRINE
  - EXISTING FENCE
  - WETLAND BOUNDARY
  - WETLAND BUFFER
  - PROPOSED FENCE
  - EXISTING SPECIMEN TREE
  - ▨ EXISTING PRESERVATION EASEMENT
  - ▨ EXISTING FOREST CONSERVATION EASEMENT

**LAYOUT PLAN**

SCALE: 1"=50'  
SCALE: 1"=50'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

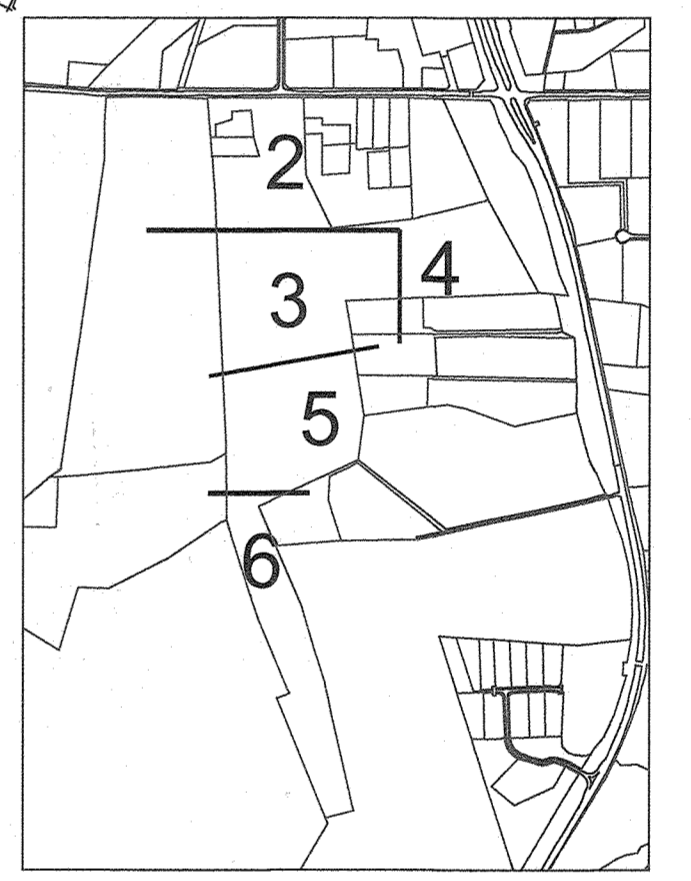
*[Signature]* 1/26/22  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*[Signature]* 1/18/22  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*[Signature]* 1/18/22  
DIRECTOR DATE

MATCHLINE - 6A - THIS SHEET

MATCHLINE - 6B - THIS SHEET



**SHEET KEY**

**DEVELOPER**  
KDC SOLAR MARYLAND, LLC  
1420 US HIGHWAY 206, SUITE 120  
BEDMINSTER, NJ 07921  
PHONE: 908-955-4360

**OWNER**  
TRIPLE CREEK FARM PROPERTIES LLC  
12855 ROUTE 144  
WEST FRIENDSHIP, MD 21794  
PHONE:

NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN**

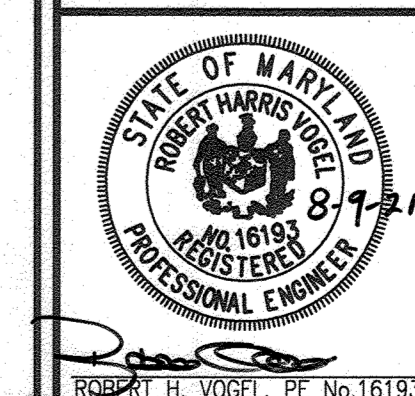
**LAYOUT PLAN**

**TRIPLE CREEK SOLAR**

12855 FREDERICK ROAD (MD 144), WEST FRIENDSHIP, MD 21794  
LIBER 17387 FOLIO 272

TAX MAP 15 BLOCK 10 PARCELS 74 & 258  
3RD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
3300 NORTH RIDGE ROAD, SUITE 110 TEL: 410.461.7666  
ELLCOTT CITY, MD 21103 FAX: 410.461.8961



DESIGN BY: RHV  
DRAWN BY: KG/IMH  
CHECKED BY: RHV  
DATE: JULY 2021  
SCALE: AS SHOWN  
W.O. NO.: 41857

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: 09-27-2022

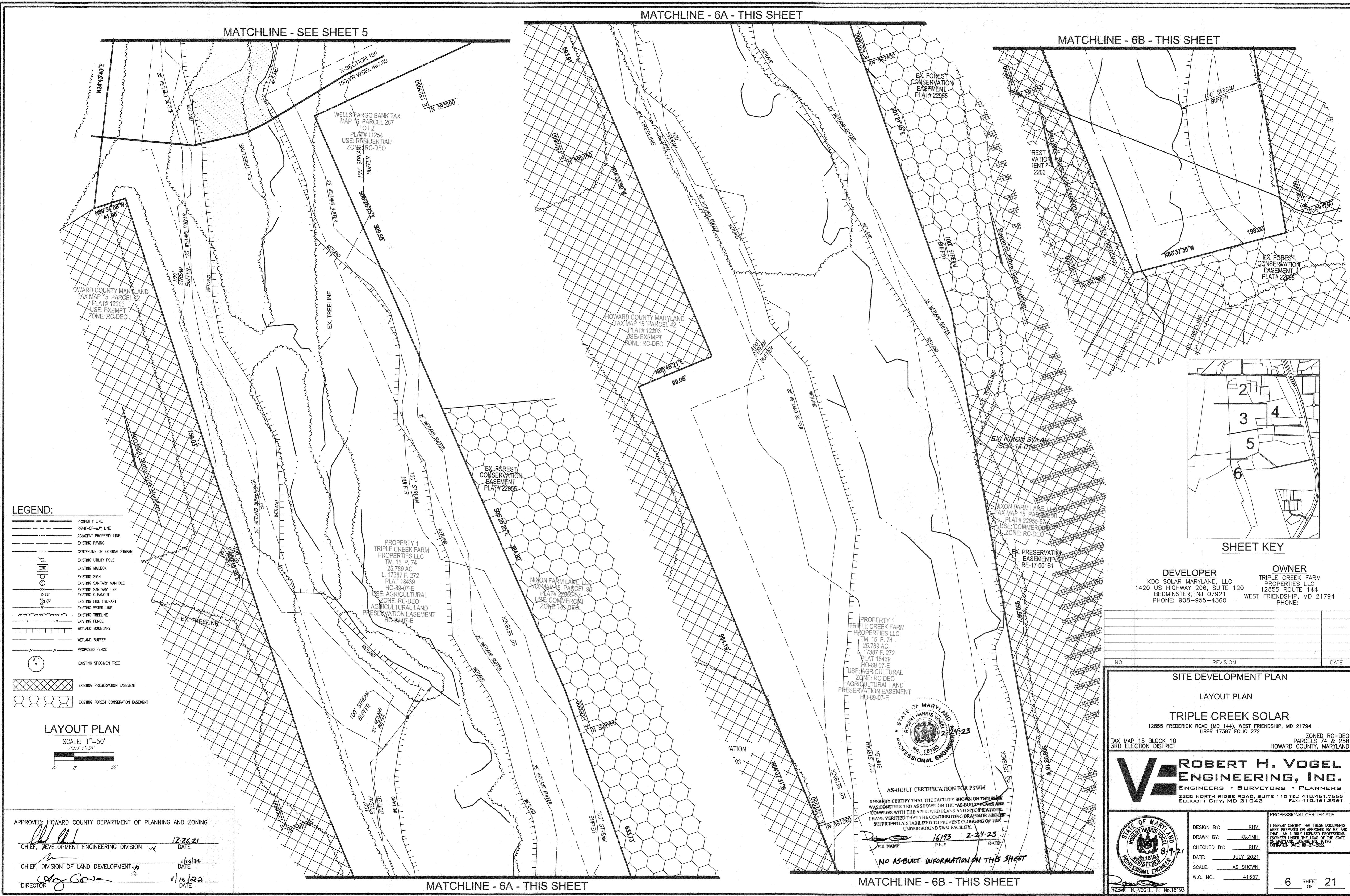
AS-BUILT DECEMBER 2022 SDP-21-011

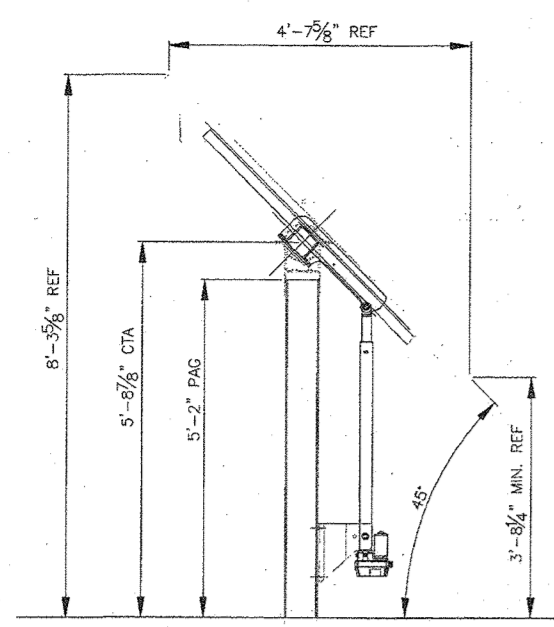


AS-BUILT CERTIFICATION FOR PSWM  
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE AS-BUILT PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREAS ARE SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

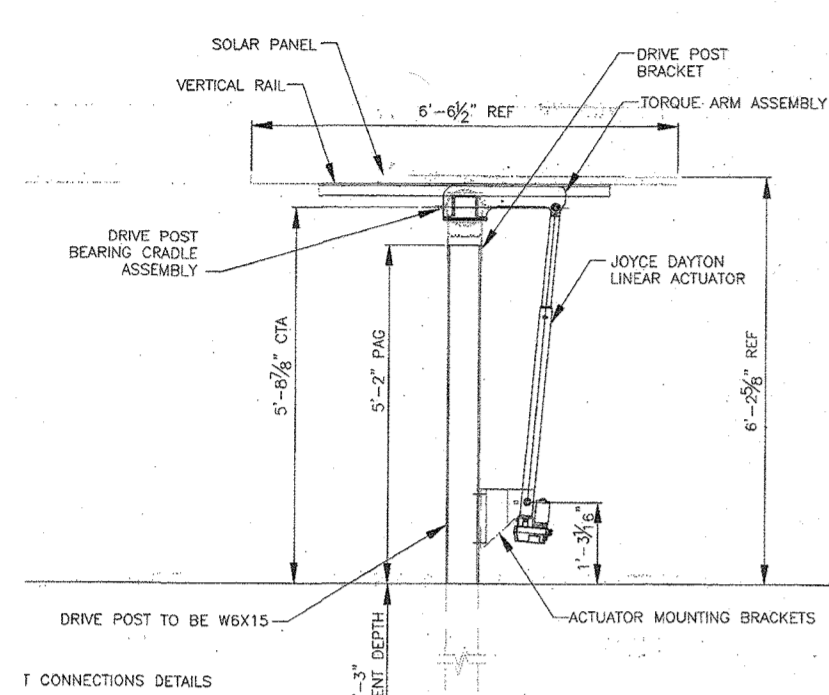
16193 2-24-23  
P.E. NAME P.E.# DATE

**NO AS-BUILT INFORMATION ON THIS SHEET**





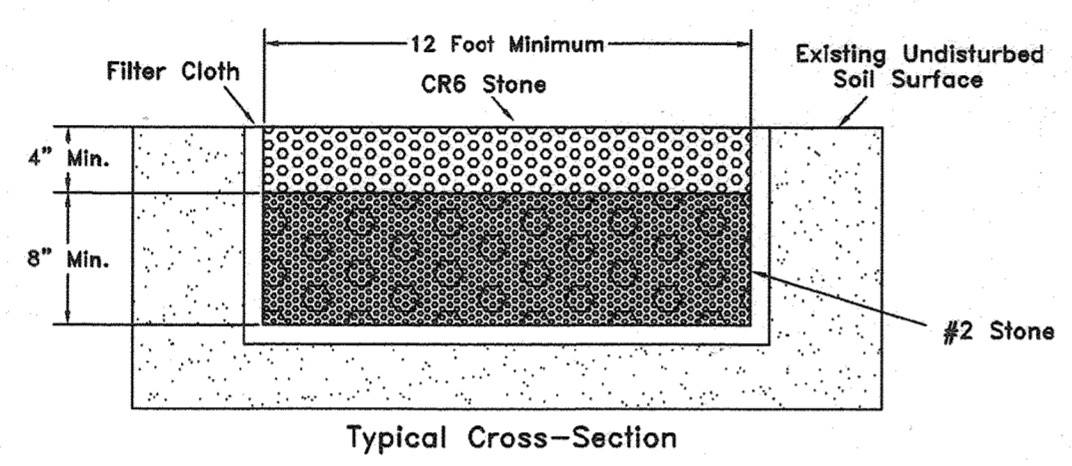
DRIVE POST 45°  
NOT TO SCALE



DRIVE POST 0°  
NOT TO SCALE

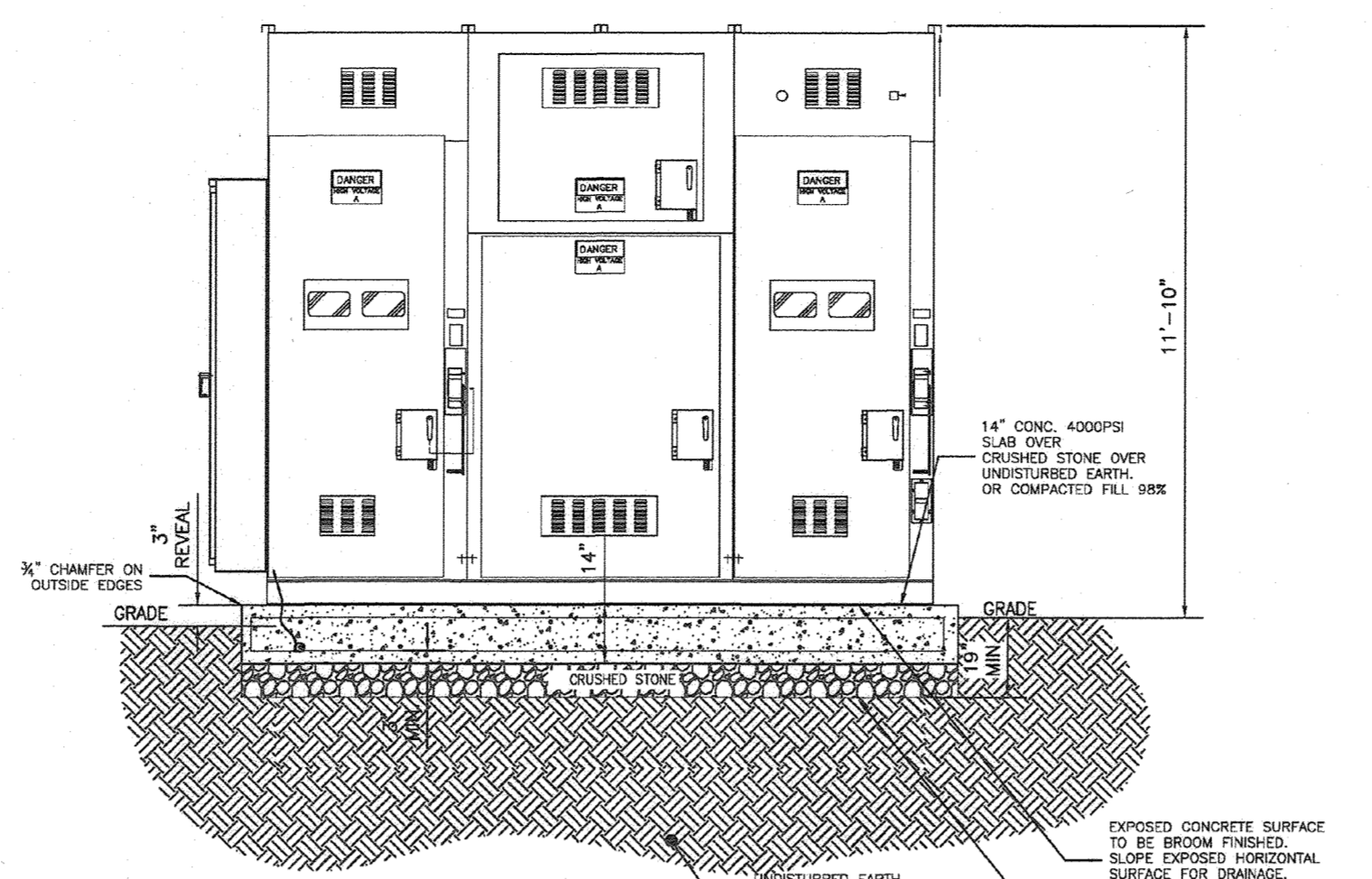
DESIGN CRITERIA FOR BASIC ACCESS ROADS UG 501-17

- An access road is defined to be a stone-base road with entry off of a paved street or highway. It is used to permit construction and maintenance vehicles access to an isolated location of pad-mounted equipment.
- The following guidelines should be used to design such a road.
1. An access road shall be constructed to H-20 highway loading with a maximum of 8% grade. Wherever possible, the access road should be straight without curves, and be a minimum of 12' wide. The location and plans for the access road must be approved by BGE prior to construction.
  2. The access road shall extend a minimum of 20' from the public highway to the pad-mounted equipment, unless separated by guardrails or Jersey walls. This distance allows sufficient length for the vehicle operator to park away from the flow of traffic off the public highway.
  3. At the location of the pad-mounted equipment, the roadway shall widen to allow construction and maintenance trucks an area to turn around when exiting the site. This widened area shall be a minimum of 20' x 20'.
  4. The roadway shall be excavated to a minimum depth of 12" and constructed of two layers of stone. Before the first layer is installed, the bottom and sides of the excavated roadway shall be lined with non-woven filter cloth.
  5. The base layer shall be a minimum of 8" of #2 stone. The top layer shall be a minimum of 4" of CR6 stone. The top layer of the roadway shall be of "grade." These minimum depths may have to be increased depending on the existing soil conditions to obtain the H-20 highway loading.
  6. Curbs and gutters are not required.
  7. Guard rails should be installed when the slope of the road is steeper than a 3:1 ratio.
  8. If the access road is gated, BGE must have Independent 24-hour admittance, i.e. double locks.

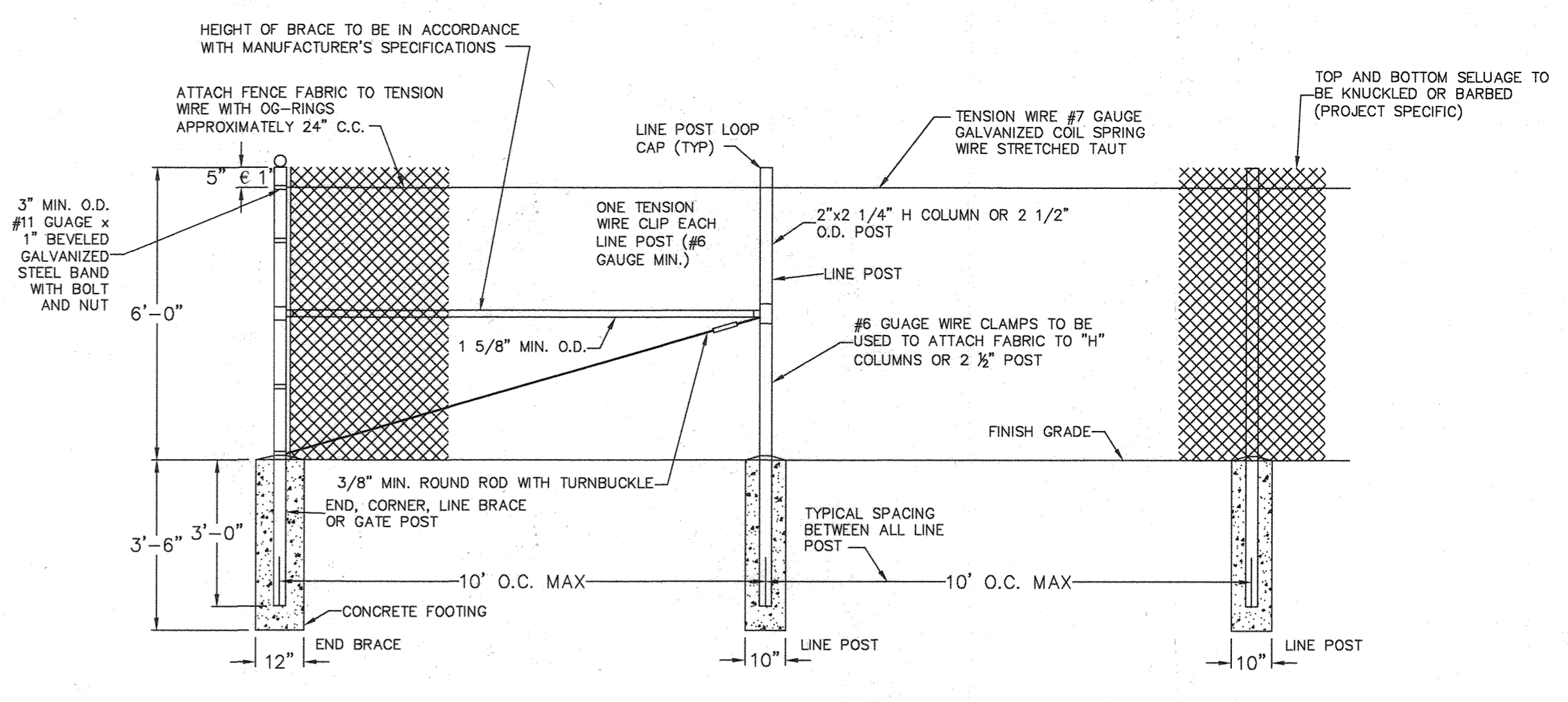


Typical Cross-Section

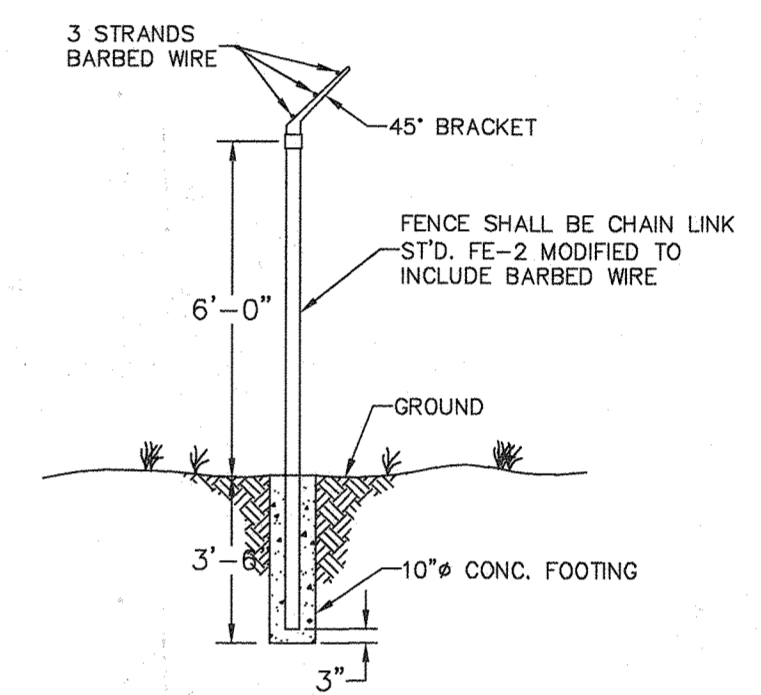
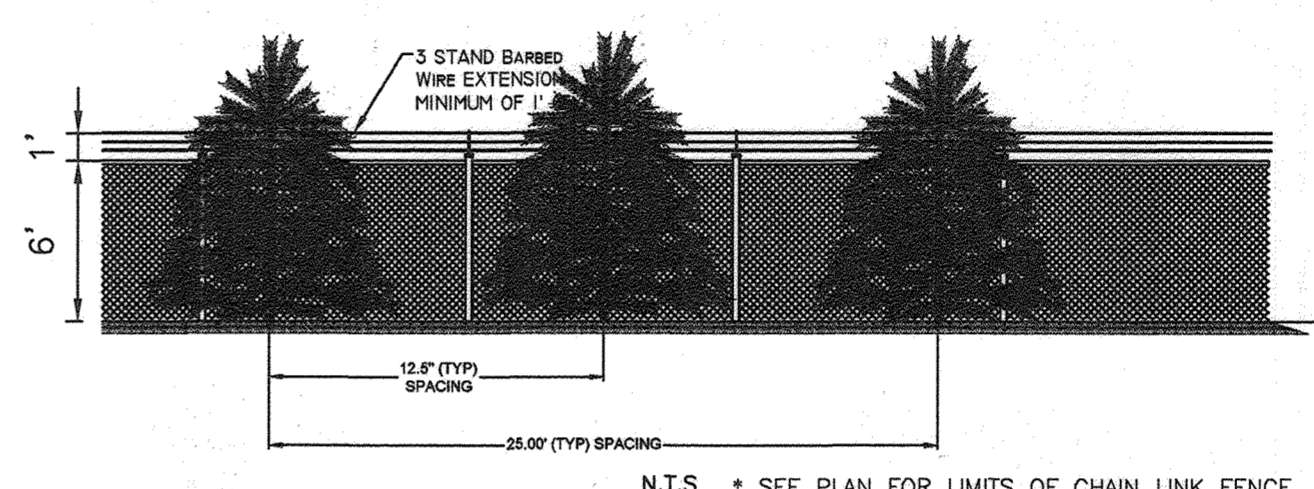
<b>BGE</b>	UNDERGROUND CONSTRUCTION STANDARDS	LATEST REVISION:	NEW STANDARD
		APP. DATE: 12/21/10	APPROVAL: <i>Cm</i>



SWITCHGEAR ELEVATION  
NOT TO SCALE

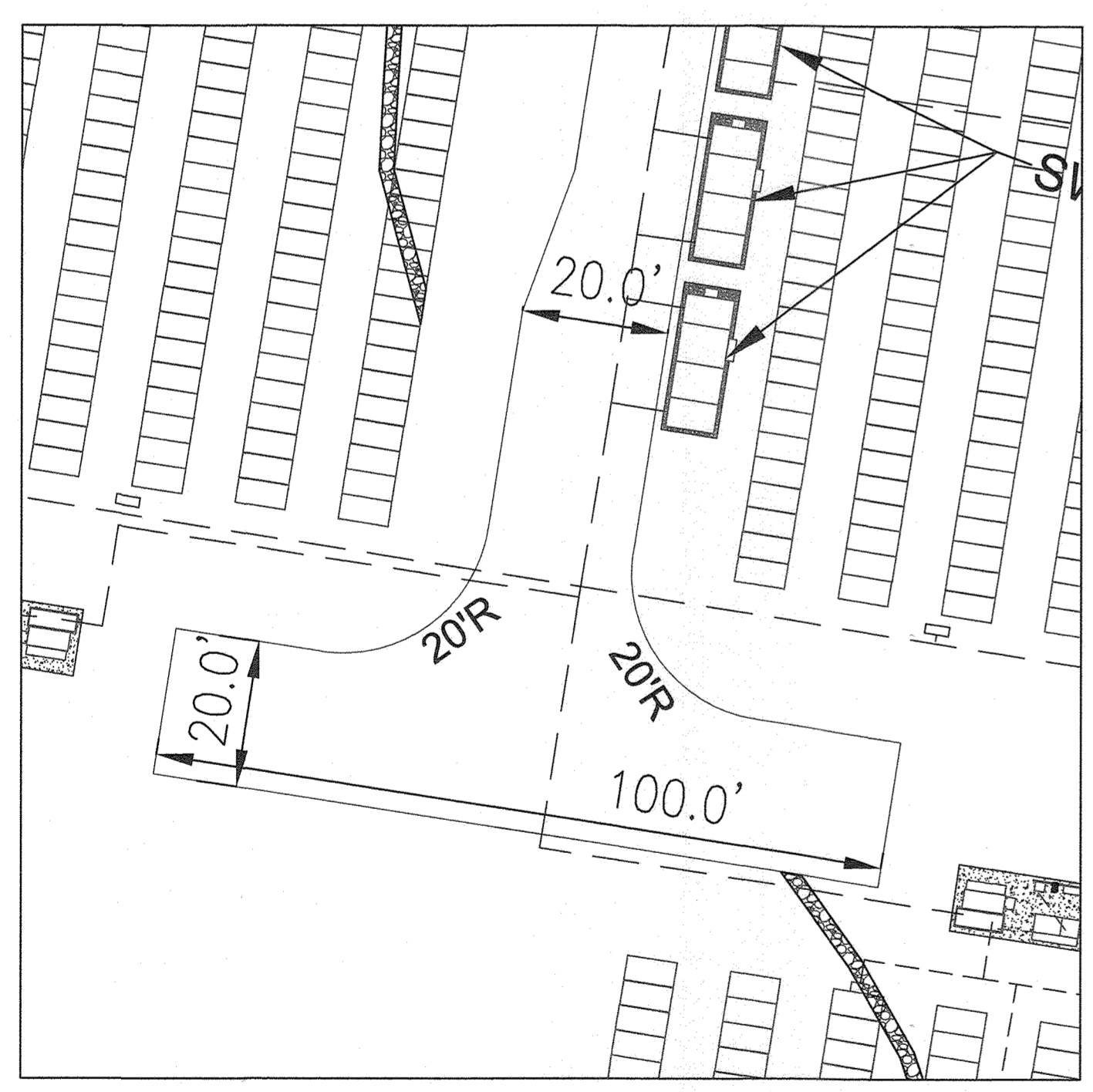


STANDARD 5' CHAIN LINK FENCE  
NO SCALE



STD FENCE DETAIL FE-2A MOD.  
NO SCALE

- NOTES:
1. FENCE SHALL BE CHAIN LINK INSTALLED AT A MAXIMUM OF 6' IN HEIGHT, WITH A 1" TOPPER UTILIZING AT LEAST 3 STRANDS OF BARBED WIRE. PER NEC 110.31.



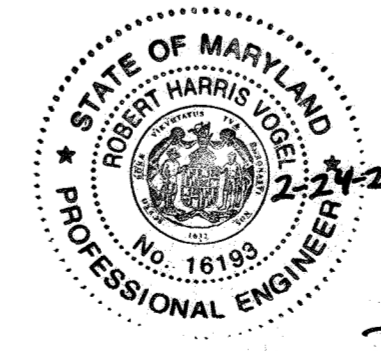
TURN AROUND #1  
SCALE: 1" = 20'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 12-26-21  
CHIEF, DEVELOPMENT ENGINEERING DIVISION N.Y. DATE

*[Signature]* 1/10/22  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*[Signature]* 1/10/22  
DIRECTOR DATE



AS-BUILT CERTIFICATION FOR PSWM

HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

*[Signature]* 16193 2-24-23  
P.E. NAME P.E.# DATE

NO AS-BUILT INFORMATION ON THIS SHEET

DEVELOPER: KDC SOLAR MARYLAND, LLC  
1420 US HIGHWAY 206, SUITE 120  
BEDMINSTER, NJ 07921  
PHONE: 908-955-4360

OWNER: TRIPLE CREEK FARM PROPERTIES, LLC  
12855 ROUTE 144  
WEST FRIENDSHIP, MD 21794  
PHONE:

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN

SITE DETAILS

**TRIPLE CREEK SOLAR**

12855 FREDERICK ROAD (MD 144), WEST FRIENDSHIP, MD 21794  
LIBER 17387 FOLIO 272

TAX MAP 15 BLOCK 10 PARCELS 74 & 258  
3RD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
3300 NORTH RIDGE ROAD, SUITE 110 TEL: 410.461.7666  
ELICOTT CITY, MD 21043 FAX: 410.461.8961

DESIGN BY: RHV  
DRAWN BY: KG/IMH  
CHECKED BY: RHV  
DATE: JULY 2021  
SCALE: AS SHOWN  
W.O. NO.: 41657

PROFESSIONAL CERTIFICATE

HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE 09-27-2022.

7 SHEET OF 21

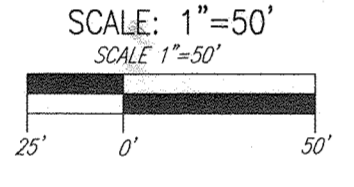
SOILS LEGEND			
SYMBOL	NAME / DESCRIPTION	HYDRO GROUP / K FACTOR	<1% SLOPE % PERCENT SLOPE
MaB	MANOR LOAM, 3 TO 8 PERCENT SLOPES	NO 8 0.28	NO
MaC	MANOR LOAM, 8 TO 15 PERCENT SLOPES	NO 8 0.32	YES
MaD	MANOR LOAM, 15 TO 25 PERCENT SLOPES	NO 8 0.32	YES
GgA	GLENNEL LOAM, 0 TO 3 PERCENT SLOPES	NO 8 0.37	YES
GgB	GLENNEL LOAM, 3 TO 8 PERCENT SLOPES	NO 8 0.37	YES
GgC	GLENNEL LOAM, 8 TO 15 PERCENT SLOPES	NO 8 0.37	YES
GgD	GLENNEL LOAM, 15 TO 25 PERCENT SLOPES	NO 8 0.37	YES
GgE	GLENNEL LOAM, 25 TO 35 PERCENT SLOPES	NO 8 0.37	YES
GgF	GLENNEL LOAM, 35 TO 45 PERCENT SLOPES	NO 8 0.37	YES
GgG	GLENNEL LOAM, 45 TO 60 PERCENT SLOPES	NO 8 0.37	YES
GgH	GLENNEL LOAM, 60 TO 75 PERCENT SLOPES	NO 8 0.37	YES
GgI	GLENNEL LOAM, 75 TO 90 PERCENT SLOPES	NO 8 0.37	YES
GgJ	GLENNEL LOAM, 90 TO 100 PERCENT SLOPES	NO 8 0.37	YES
MaE	MANOR-BROOKLOM COMPLEX, 25 TO 65 PERCENT SLOPES VERY ROCKY	NO 8 0.32	YES

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY  
 K-FACTOR =  $K_e @ 0-4" DEPTH$   
 NOTE:  
 HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT  
 OR THOSE SOILS WITH A SOIL DRAINABILITY FACTOR K GREATER THAN 0.25 AND WITH  
 A SLOPE GREATER THAN 5 PERCENT

NOTE:  
 THE LIMIT OF DISTURBANCE SHOWN ON THIS PLAN  
 INCLUDES THE CONSTRUCTION OF THE SOLAR ARRAYS.  
 THIS PROCESS INVOLVED PILE DRIVING. THE SEDIMENT  
 CONTROLS ADDRESS AREAS OF GRADING ONLY.

NOTE:  
 - SILT FENCE IS TO BE REPLACED WITH  
 SUPER SILT FENCE AT THE DIRECTION OF  
 THE SEDIMENT CONTROL INSPECTOR.  
 - SILT FENCE SHALL BE CURLED UPHILL. NO  
 MORE THAN 35 FEET APART  
 - DOUBLE ROWS OF SUPER SILT FENCE  
 SHALL BE INSTALLED AT THE DIRECTION OF  
 THE SEDIMENT CONTROL INSPECTOR.

SOILS MAP, GRADING, EROSION  
 AND SEDIMENT CONTROL PLAN



THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND  
 SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
*Alanna Brantley* 08/16/21  
 HOWARD S.C.D. DATE

DESIGN CERTIFICATION:  
 I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT  
 MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT  
 REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE  
 OF THE SITE AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF  
 THE HOWARD SOIL CONSERVATION DISTRICT.

*Robert H. Vogel* 8-9-21  
 DESIGNER'S SIGNATURE DATE  
 ROBERT H. VOGEL MD REGISTRATION NO. 16193  
 PRINTED NAME (E), R.L.S., OR R.L.A. (Circle one)

OWNER/DEVELOPER CERTIFICATION:  
 I HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT  
 WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL  
 PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL  
 RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE  
 A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT  
 (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND  
 SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR  
 PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL  
 CONSERVATION DISTRICT AND/OR MDE.

*Teresa Stonesifer RA* 8/19/21  
 OWNER/DEVELOPER SIGNATURE DATE  
 PRINTED NAME & TITLE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS  
 COUNTY HEALTH OFFICER DATE 11/17/21  
 HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 12-26-21  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE 11/11/22  
 DIRECTOR DATE 11/10/22

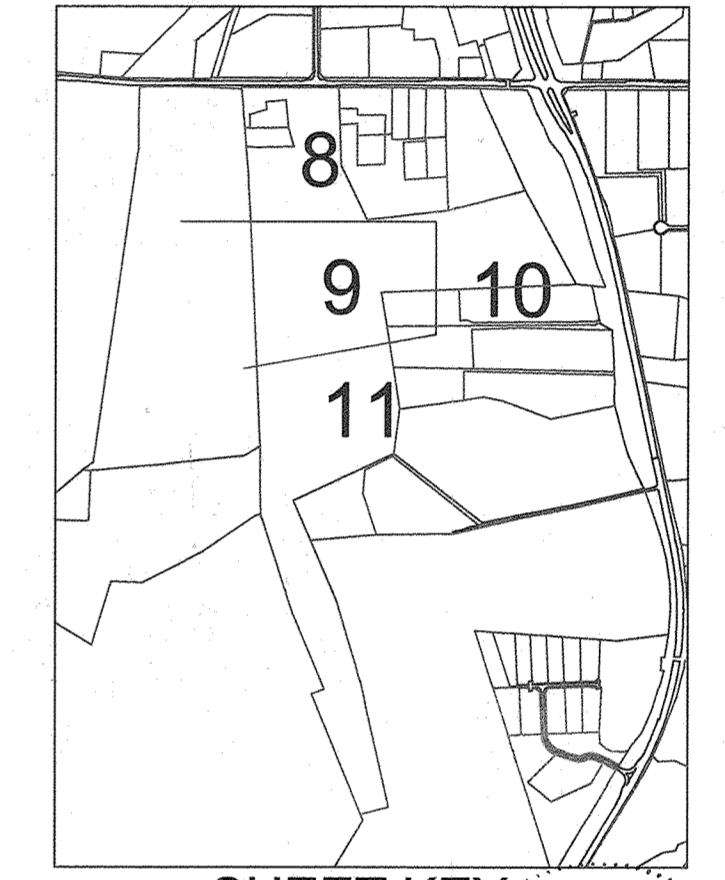


MATCHLINE - SEE SHEET 9

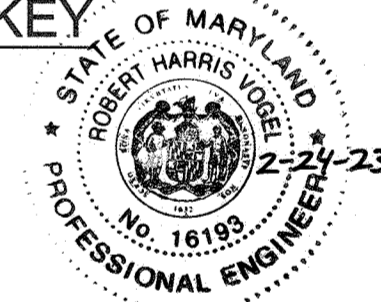
LEGEND:

	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING PAVING
	CENTERLINE OF EXISTING STREAM
	EXISTING CONTOUR
	EXISTING UTILITY POLE
	EXISTING MANHOLE
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	EXISTING TRENCHLINE
	EXISTING FENCE
	EXISTING SPECIMEN TREE
	CRITICAL ROOT ZONE
	SOILS BOUNDARY
	HIGHLY ERODIBLE SOILS
	EXISTING PRESERVATION EASEMENT
	EXISTING FOREST CONSERVATION EASEMENT
	DRAINAGE DIVIDE

NO AS-BUILT INFORMATION ON THIS SHEET



AS-BUILT CERTIFICATION FOR PERMITS  
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN  
 WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND  
 COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I  
 HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS  
 SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE  
 UNDERGROUND SWM FACILITY.  
 P.E. NAME 16193 P.E.# 2-24-23 DATE



DEVELOPER KDC SOLAR MARYLAND, LLC  
 1420 US HIGHWAY 206, SUITE 120  
 BEDMINSTER, NJ 07921  
 PHONE: 908-955-4360

OWNER TRIPLE CREEK FARM  
 PROPERTIES LLC  
 12855 ROUTE 144  
 WEST FRIENDSHIP, MD 21794  
 PHONE:

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN  
 SOILS MAP, GRADING, EROSION AND  
 SEDIMENT CONTROL PLAN  
 TRIPLE CREEK SOLAR  
 12855 FREDERICK ROAD (MD 144), WEST FRIENDSHIP, MD 21794  
 LIBER 17387 FOLIO 272 ZONED RC-DEO  
 TAX MAP 15 BLOCK 10 PARCELS 74 & 258  
 3RD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL, INC.**  
 ENGINEERS • SURVEYORS • PLANNERS  
 3300 NORTH RIDGE ROAD, SUITE 110 TEL: 410.461.7666  
 ELLICOTT CITY, MD 21043 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE  
 DESIGN BY: RHY  
 DRAWN BY: KG/JMH  
 CHECKED BY: RHY  
 DATE: JULY 2021  
 SCALE: AS SHOWN  
 W.O. NO.: 41657

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: 08-27-2022

AS-BUILT DECEMBER 2022



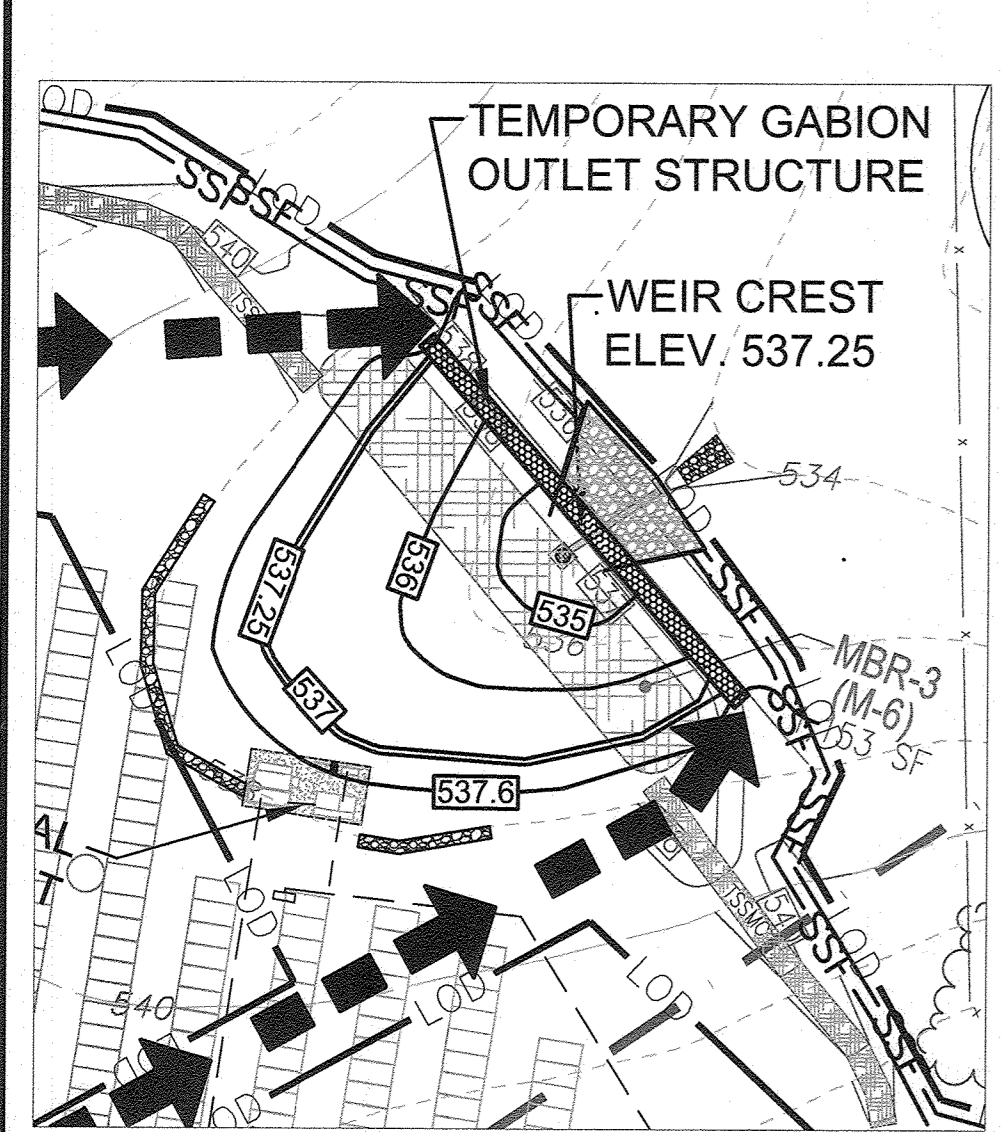
### SOILS LEGEND

HOWARD COUNTY SOILS MAP #24

SYMBOL	NAME / DESCRIPTION	HYDRO GROUP	PERCENT SAND	PERCENT SILT	PERCENT CLAY	PERCENT ORGANIC MATTER	PERCENT ROCK
MbB	MAJOR LOAM, 3 TO 8 PERCENT SLOPES	NO	B	0.28	NO	NO	NO
MbC	MAJOR LOAM, 8 TO 15 PERCENT SLOPES	NO	B	0.32	YES	NO	NO
MbD	MAJOR LOAM, 15 TO 25 PERCENT SLOPES	NO	B	0.32	YES	NO	NO
GgA	GLENNELG LOAM, 0 TO 3 PERCENT SLOPES	NO	B	0.37	YES	NO	NO
GgB	GLENNELG LOAM, 3 TO 8 PERCENT SLOPES	NO	B	0.37	YES	NO	NO
GgC	GLENNELG LOAM, 8 TO 15 PERCENT SLOPES	NO	B	0.37	YES	NO	NO
GgD	GLENNELG LOAM, 15 TO 25 PERCENT SLOPES	NO	B	0.37	YES	NO	NO
CbB	CLAYEY SILT LOAM, 0 TO 3 PERCENT SLOPES	YES	C/D	0.49	YES	NO	NO
CbC	CLAYEY SILT LOAM, 3 TO 8 PERCENT SLOPES	YES	C	0.49	YES	NO	NO
BaA	BALE SILT LOAM, 0 TO 3 PERCENT SLOPES	YES	C/D	0.49	NO	NO	NO
BaB	BALE SILT LOAM, 3 TO 8 PERCENT SLOPES	YES	C/D	0.49	NO	NO	NO
MkF	MAJOR-BROWNLOW COMPLEX, 25 TO 65 PERCENT SLOPES VERY ROCKY	NO	B	0.32	YES	NO	NO

TAKEN FROM: USDA, SCS-WEBSOIL SURVEY, HOWARD COUNTY  
K-FACTOR =  $K_w @ 0-4" \text{ DEPTH}$   
NOTE:  
HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL EROSION FACTOR  $K$  GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.

TEMPORARY GABION OUTLET STRUCTURE  
WEIR CREST ELEV. 537.25



**TEMPORARY GABION OUTLET STRUCTURE**  
- BOTTOM OF STORAGE ELEV.: 535.00  
- WEIR CREST ELEV.: 537.25  
- TOTAL STORAGE: 3,070 C.F.

ELEVATION FT	BIORETENTION AREA S.F.	VOLUME C.F.	CUMULATIVE VOLUME C.F.
535.00	274	665	0.015
537.00	2479	1768	2433
537.25	2617	637	3070

**WEIR OUTFALL "SILT FENCE" PHASING DETAIL**  
INITIAL / PHASE 1 SILT FENCE LOCATION SHALL BE REMOVED AND RELOCATED (PHASE 2) ONCE RIP RAP OUTFALL INSTALLATION IS COMPLETE. AREA STABILIZED, PRIOR TO OUTFALL RECEIVING DISCHARGE AND PERMISSION HAS BEEN OBTAINED BY THE SEDIMENT CONTROL INSPECTOR.

**TEMPORARY GABION OUTLET STRUCTURE**

ELEVATION FT	BIORETENTION AREA S.F.	VOLUME C.F.	CUMULATIVE VOLUME C.F.
535.00	274	665	0.015
537.00	2479	1768	2433
537.25	2617	637	3070

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

**DESIGNER'S SIGNATURE:**  
*Robert H. Vogel* 09/27/21  
HOWARD S.C.D. DATE

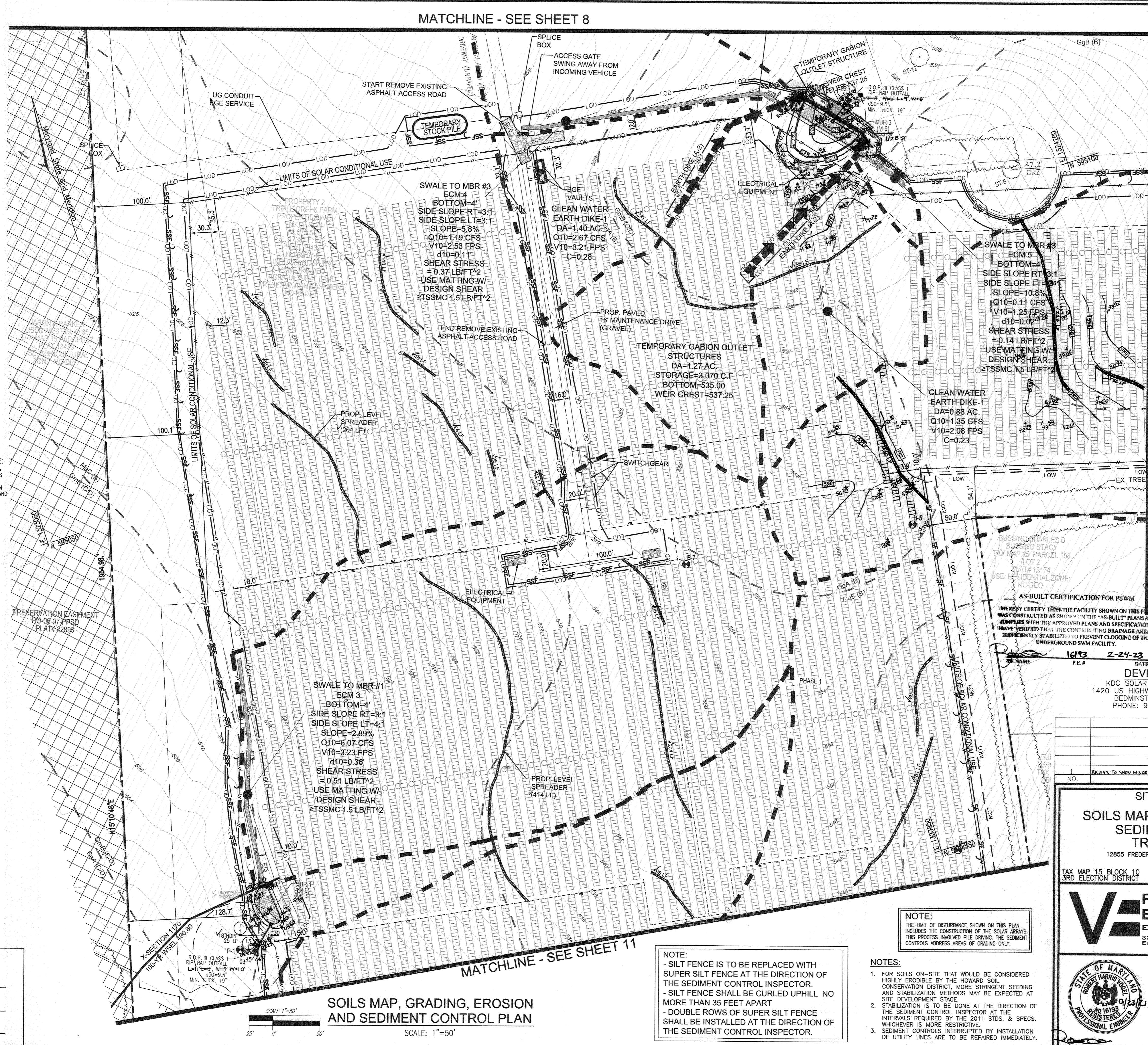
**DESIGN CERTIFICATION:**  
I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

**DESIGNER'S SIGNATURE:**  
*Robert H. Vogel* 09/27/21  
ROBERT H. VOGEL MD REGISTRATION NO. 16193  
PRINTED NAME (C), R.L.S., OR R.L.A. (circle one) DATE

**OWNER/DEVELOPER CERTIFICATION:**  
I/WE CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING RESPECTING AND MAINTAINING CONTROLS, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

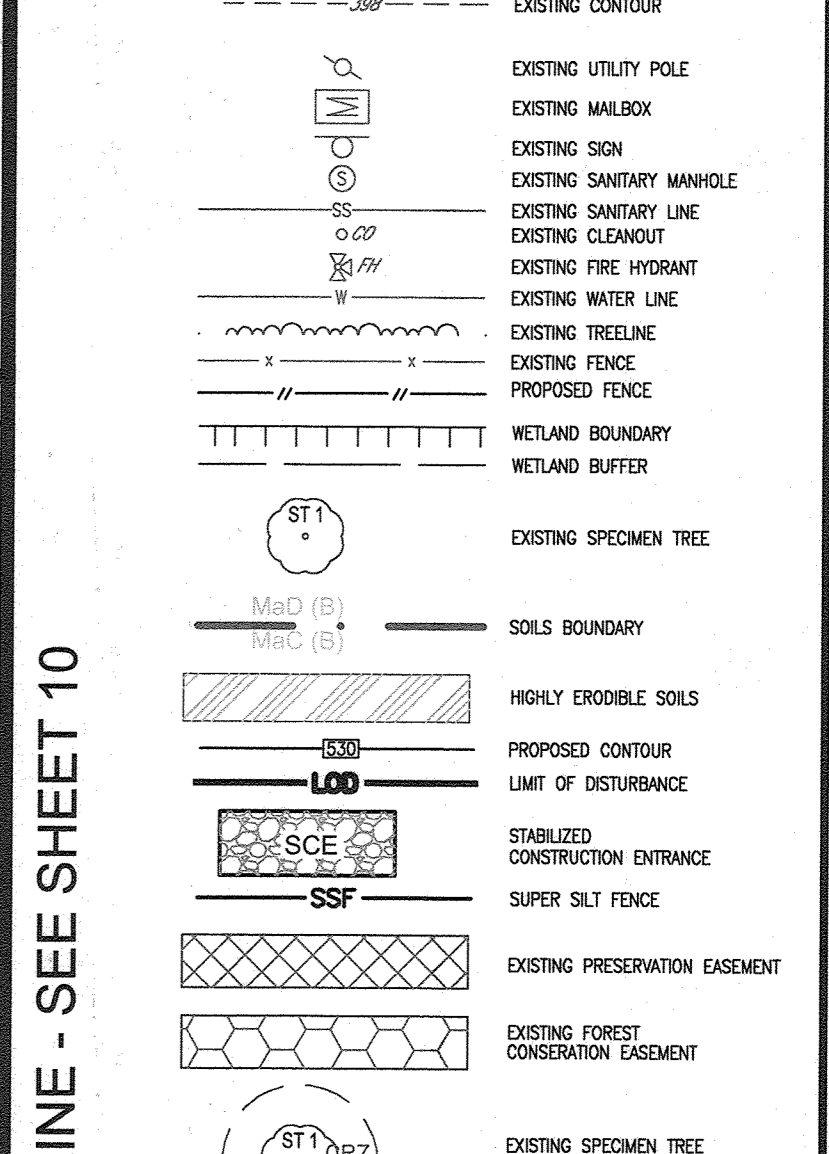
**OWNER/DEVELOPER SIGNATURE:**  
*Erk Minceff* 11/30/21  
PRINTED NAME & TITLE VP of Construction DATE

**APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING**  
CHIEF, DEVELOPMENT ENGINEERING DIVISION 12/26/21  
CHIEF, DIVISION OF LAND DEVELOPMENT 11/16/22  
DIRECTOR 11/16/22



### LEGEND:

---	PROPERTY LINE
- - -	RIGHT-OF-WAY LINE
---	ADJACENT PROPERTY LINE
---	EXISTING PAVING
---	CENTERLINE OF EXISTING STREAM
---	EXISTING CONTOUR
---	EXISTING UTILITY POLE
---	EXISTING MAILBOX
---	EXISTING SIGN
---	EXISTING SANITARY MANHOLE
---	EXISTING SANITARY LINE
---	EXISTING CLEANOUT
---	EXISTING WATER LINE
---	EXISTING TREE LINE
---	EXISTING FENCE
---	PROPOSED FENCE
---	WETLAND BOUNDARY
---	WETLAND BUFFER
---	EXISTING SPECIMEN TREE
---	SOILS BOUNDARY
---	HIGHLY ERODIBLE SOILS
---	PROPOSED CONTOUR
---	LIMIT OF DISTURBANCE
---	STABILIZED CONSTRUCTION ENTRANCE
---	SUPER SILT FENCE
---	EXISTING PRESERVATION EASEMENT
---	EXISTING FOREST CONSERVATION EASEMENT
---	EXISTING SPECIMEN TREE CRITICAL ROOT ZONE
---	DRAINAGE DIVE
---	SILT FENCE



**STATE OF MARYLAND**  
**ROBERT H. VOGEL**  
REGISTERED PROFESSIONAL ENGINEER  
NO. 16193  
DATE 2-24-23

**DEVELOPER**  
KDC SOLAR MARYLAND, LLC  
1420 US HIGHWAY 206, SUITE 120  
BEDMINSTER, NJ 07921  
PHONE: 908-955-4360

**OWNER**  
TRIPLE CREEK FARM PROPERTIES, LLC  
12855 ROUTE 144  
WEST FRIENDSHIP, MD 21794  
PHONE:

NO.	REVISION TO SHOW MINOR GRADING CHANGE AND REPLACE A PORTION OF SSF WITH SF	DATE
1		6-8-22

**SITE DEVELOPMENT PLAN**  
**SOILS MAP, GRADING, EROSION AND SEDIMENT CONTROL PLAN**  
**TRIPLE CREEK SOLAR**  
12855 FREDERICK ROAD (MD 144), WEST FRIENDSHIP, MD 21794  
LIBER 17387 FOLIO 272

TAX MAP 15 BLOCK 10  
3RD ELECTION DISTRICT

ZONED RC-DEO  
PARCELS 74 & 258  
HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
3300 NORTH RIDGE ROAD, SUITE 110 TEL: 410.461.7666  
ELLICOTT CITY, MD 21143 FAX: 410.461.8961

**PROFESSIONAL CERTIFICATE**  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER IN THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2022.

DESIGN BY: RHV  
DRAWN BY: KG/IMH  
CHECKED BY: RHV  
DATE: JULY 2021  
SCALE: AS SHOWN  
W.O. NO.: 41657

9 SHEET OF 21

**NOTE:**  
THE LIMIT OF DISTURBANCE SHOWN ON THIS PLAN INCLUDES THE CONSTRUCTION OF THE SOLAR ARRAYS. THIS PROCESS INVOLVED PILE DRIVING THE SEDIMENT CONTROLS ADDRESS AREAS OF GRADING ONLY.

**NOTE:**  
- SILT FENCE IS TO BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.  
- SILT FENCE SHALL BE CURLED UPHILL NO MORE THAN 35 FEET APART  
- DOUBLE ROWS OF SUPER SILT FENCE SHALL BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

- NOTES:**
- FOR SOILS ON-SITE THAT WOULD BE CONSIDERED HIGHLY ERODIBLE BY THE HOWARD SOIL CONSERVATION DISTRICT, MORE STRINGENT SEDIMENT AND STABILIZATION METHODS MAY BE EXPECTED AT SITE DEVELOPMENT STAGE.
  - STABILIZATION IS TO BE DONE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR AT THE INTERVALS REQUIRED BY THE 2011 STDS. & SPECS. WHICHEVER IS MORE RESTRICTIVE.
  - SEDIMENT CONTROLS INTERRUPTED BY INSTALLATION OF UTILITY LINES ARE TO BE REPAIRED IMMEDIATELY.

SCALE: 1"=50'

AS-BUILT DECEMBER 2022

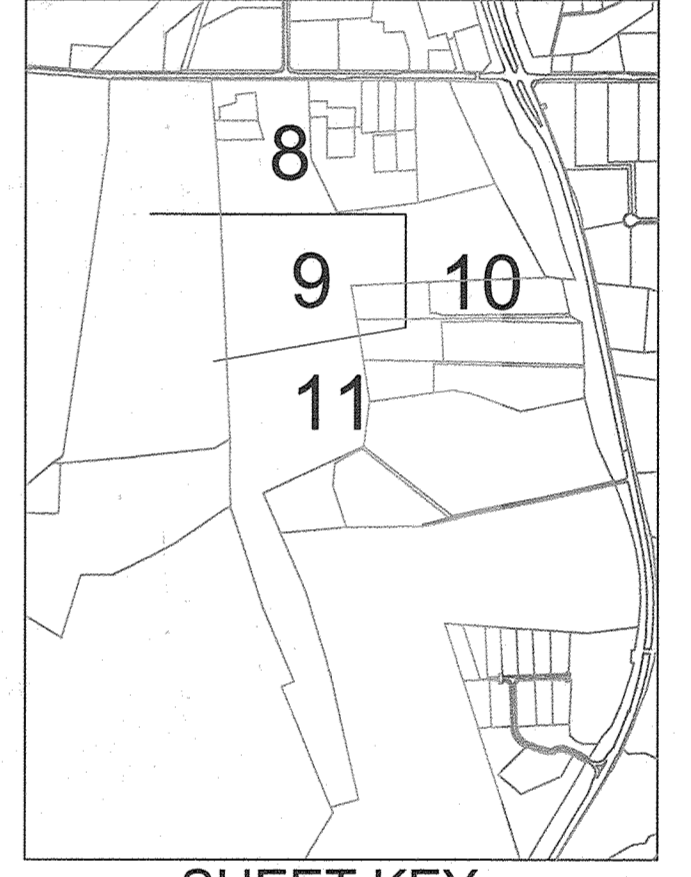
SDP-21-011

SYMBOL	NAME / DESCRIPTION	HYDRO GROUP	K FACTOR	PERCENT EROSION
1 Mac	MAJOR LOAM, 3 TO 8 PERCENT SLOPES	NO	B	0.33
2 Mac	MAJOR LOAM, 8 TO 15 PERCENT SLOPES	NO	B	0.32
3 Mac	MAJOR LOAM, 15 TO 25 PERCENT SLOPES	NO	B	0.32
4 Ga	GLENVIEW LOAM, 0 TO 3 PERCENT SLOPES	NO	B	0.37
5 Ga	GLENVIEW LOAM, 3 TO 8 PERCENT SLOPES	NO	B	0.37
6 Ga	GLENVIEW SILT LOAM, 3 TO 8 PERCENT SLOPES	YES	C/D	0.55
7 Ga	GLENVIEW-BALU SILT LOAMS, 0 TO 8 PERCENT SLOPES	YES	C	0.49
8 Ga	BALU SILT LOAM, 0 TO 3 PERCENT SLOPES	YES	C/D	0.49
9 Mac	MAJOR-BROWLOW COMPLEX, 25 TO 85 PERCENT SLOPES VERY ROCKY	NO	B	0.32

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY  
 K-FACTOR =  $K_e @ 0-4" \text{ DEPTH}$   
 NOTE:  
 HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

NOTE:  
 - SILT FENCE IS TO BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.  
 - SILT FENCE SHALL BE CURLED UPHILL NO MORE THAN 35 FEET APART  
 - DOUBLE ROWS OF SUPER SILT FENCE SHALL BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

LEGEND:	
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING PAVING
	CENTERLINE OF EXISTING STREAM
	EXISTING CONTOUR
	EXISTING UTILITY POLE
	EXISTING MAILBOX
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING FIRE HYDRANT
	EXISTING FIRE LINE
	EXISTING WATER LINE
	EXISTING TREELINE
	EXISTING FENCE
	PROPOSED FENCE
	EXISTING SPECIMEN TREE
	SOILS BOUNDARY
	STEEP SLOPE (>25%)
	HIGHLY ERODIBLE SOILS
	PROPOSED CONTOUR
	LIMIT OF DISTURBANCE
	STABILIZED CONSTRUCTION ENTRANCE
	SUPER SILT FENCE
	EXISTING PRESERVATION EASEMENT
	EXISTING FOREST CONSERVATION EASEMENT
	EXISTING SPECIMEN TREE CRITICAL ROOT ZONE
	DRAINAGE DIVIDE
	SILT FENCE



**DEVELOPER**  
 KDC SOLAR MARYLAND, LLC  
 1420 US HIGHWAY 206, SUITE 120  
 BEDMINSTER, NJ 07921  
 PHONE: 908-955-4360

**OWNER**  
 TRIPLE CREEK FARM PROPERTIES, LLC  
 12855 ROUTE 144  
 WEST FRIENDSHIP, MD 21794  
 PHONE:

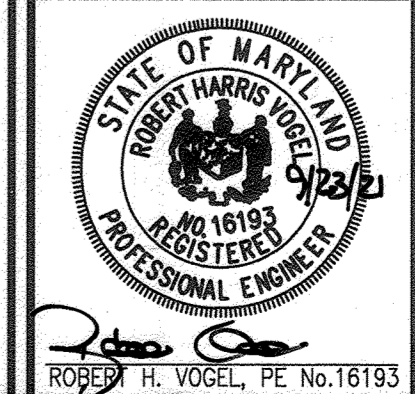
NO.	REVISION	DATE
1	REVISE TO SHOW MINOR GRADING AND REPLACE A PORTION OF SSF WITH SF	6-8-22

**SITE DEVELOPMENT PLAN**  
**SOILS MAP, GRADING, EROSION AND SEDIMENT CONTROL PLAN**  
**TRIPLE CREEK SOLAR**  
 12855 FREDERICK ROAD (MD 144), WEST FRIENDSHIP, MD 21794  
 LIBER 17387 FOLIO 272

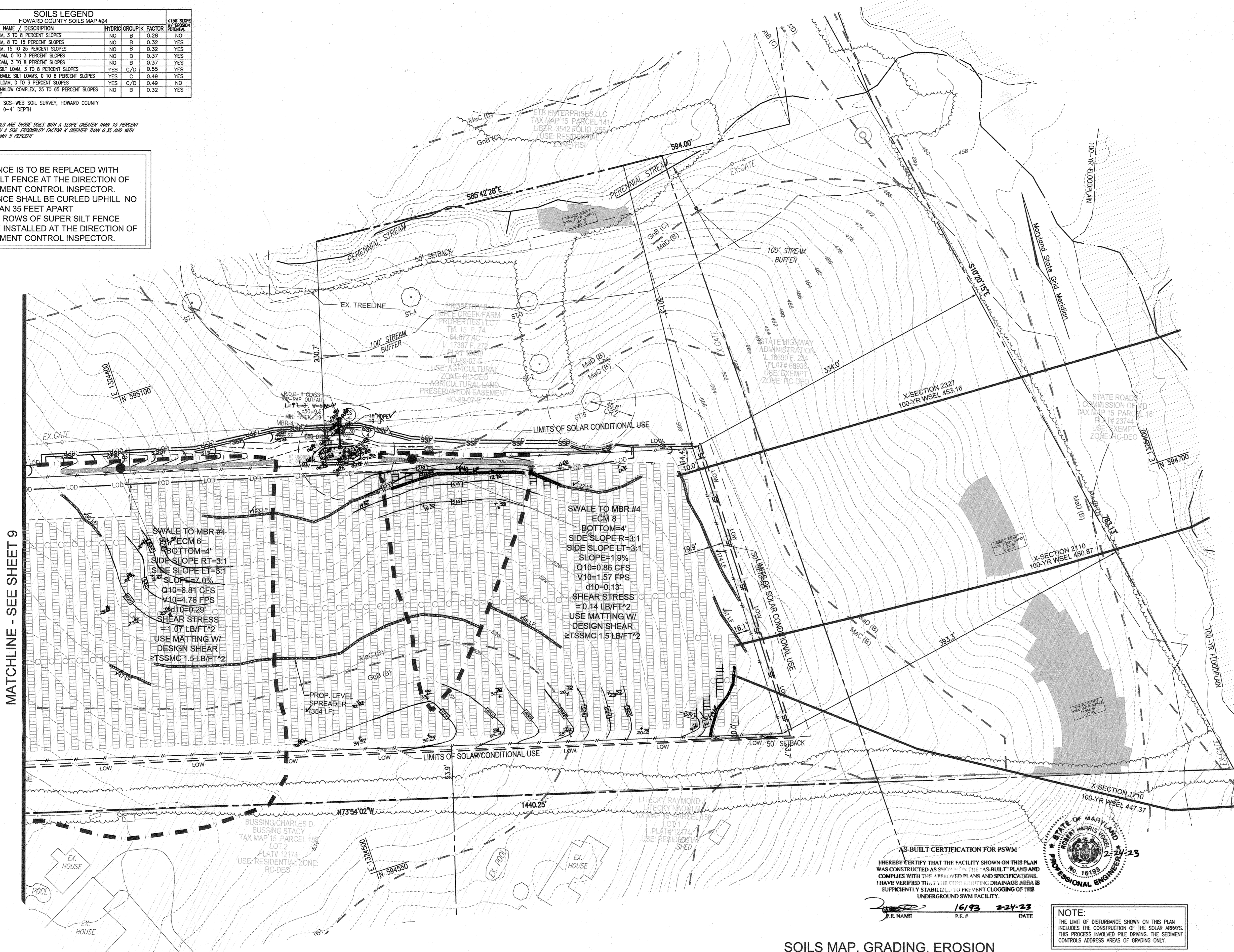
**ROBERT H. VOGEL ENGINEERING, INC.**  
 ENGINEERS • SURVEYORS • PLANNERS  
 3300 NORTH RIDGE ROAD, SUITE 110 TEL: 410-461-7666  
 ELICOTT CITY, MD 21043 FAX: 410-461-8961

**DESIGN BY:** RHV  
**DRAWN BY:** KG/MLH  
**CHECKED BY:** RHV  
**DATE:** JULY 2021  
**SCALE:** AS SHOWN  
**W.O. NO.:** 41657

**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 12-27-2022



10 SHEET OF 21



**AS-BUILT CERTIFICATION FOR PSWM**  
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE AS-BUILT PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

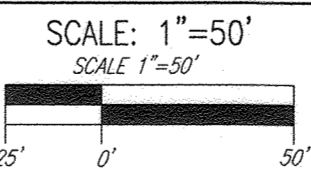
*[Signature]* 16/93 2-24-23  
 P.E. NAME P.E.# DATE



**NOTE:**  
 THE LIMIT OF DISTURBANCE SHOWN ON THIS PLAN INCLUDES THE CONSTRUCTION OF THE SOLAR ARRAYS. THIS PROCESS INVOLVED FILL BRINGING, THE SEDIMENT CONTROLS ADDRESS AREAS OF GRADING ONLY.

- NOTES:**
- FOR SOILS ON-SITE THAT WOULD BE CONSIDERED HIGHLY ERODIBLE BY THE HOWARD SOIL CONSERVATION DISTRICT, MORE STRINGENT SEEDING AND STABILIZATION METHODS MAY BE EXPECTED AT SITE DEVELOPMENT STAGE.
  - STABILIZATION IS TO BE DONE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR AT THE INTERVALS REQUIRED BY THE 2011 STOS. & SPECS. WHICHEVER IS MORE RESTRICTIVE.
  - SEDIMENT CONTROLS INTERRUPTED BY INSTALLATION OF UTILITY LINES ARE TO BE REPAIRED IMMEDIATELY.

**SOILS MAP, GRADING, EROSION AND SEDIMENT CONTROL PLAN**



THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

*[Signature]* 09/27/21  
 HOWARD S.C.D. DATE

**DESIGN CERTIFICATION:**  
 I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*[Signature]* 9/23/21  
 DESIGNER'S SIGNATURE DATE  
 ROBERT H. VOGEL  
 MD REGISTRATION NO. 16193  
 (P.E., R.L.S., OR R.L.A. (circle one))

**OWNER/DEVELOPER CERTIFICATION:**  
 I/WE CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

*[Signature]* 11/30/21  
 OWNER/DEVELOPER SIGNATURE DATE  
 Eric Mercall VP of Construction

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 12-26-21  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*[Signature]* 1/10/22  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*[Signature]* 1/10/22  
 DIRECTOR DATE

AS-BUILT DECEMBER 2022

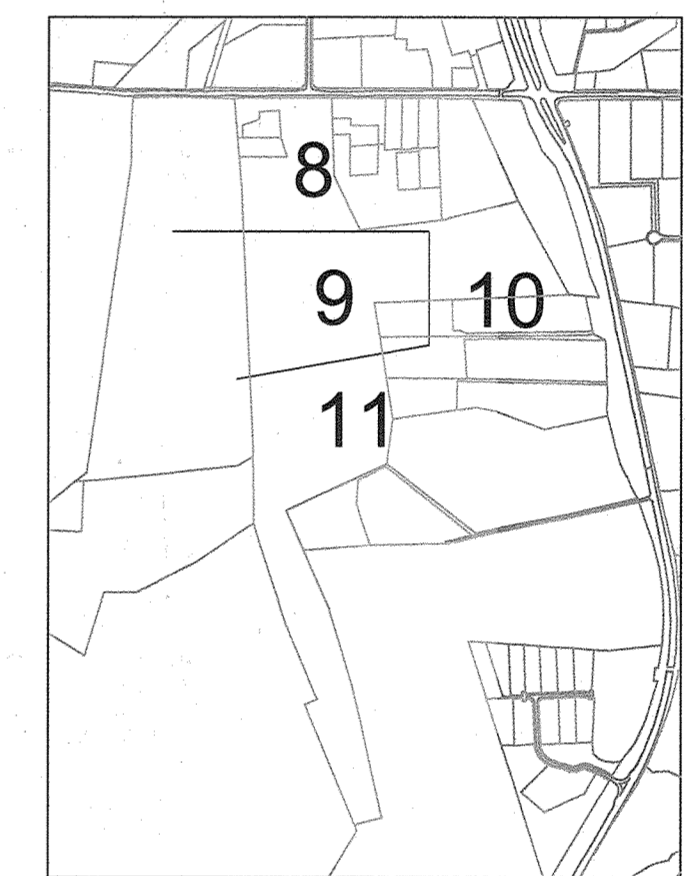
SOILS LEGEND				CROSS SLOPE	
HOWARD COUNTY SOILS MAP #24				BY EROSION	
SYMBOL	NAME / DESCRIPTION	HYDRO GROUP	K FACTOR	NO	YES
MdE	MINOR LOAM, 3 TO 8 PERCENT SLOPES	NO	B	0.28	NO
MdC	MINOR LOAM, 8 TO 15 PERCENT SLOPES	NO	B	0.32	YES
MdD	MINOR LOAM, 15 TO 25 PERCENT SLOPES	NO	B	0.32	YES
GpA	GLENNELG LOAM, 0 TO 3 PERCENT SLOPES	NO	B	0.37	YES
GpB	GLENNELG LOAM, 3 TO 8 PERCENT SLOPES	NO	B	0.37	YES
GmB	GLENNELG SILT LOAM, 3 TO 8 PERCENT SLOPES	YES	C/D	0.55	YES
GpB	GLENNELG-SILT LOAM, 0 TO 8 PERCENT SLOPES	YES	C	0.49	YES
BaA	BALE SILT LOAM, 0 TO 3 PERCENT SLOPES	YES	C/D	0.49	NO
MkF	MINOR-BRONKLOW COMPLEX, 25 TO 65 PERCENT SLOPES VERY ROCKY	NO	B	0.32	YES

**NOTE:**  
THE LIMIT OF DISTURBANCE SHOWN ON THIS PLAN INCLUDES THE CONSTRUCTION OF THE SOLAR ARRAYS. THIS PROCESS INVOLVED PILE DRIVING, THE SEDIMENT CONTROLS ADDRESS AREAS OF GRADING ONLY.

TAKEN FROM: USDA, SC5-WEB SOIL SURVEY, HOWARD COUNTY  
K-FACTOR =  $K_w @ 0-4'$  DEPTH  
NOTE:  
HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A K-FACTOR GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL EROSION FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.

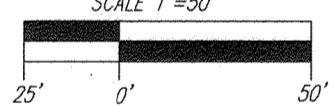
**LEGEND:**

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING PAVING
- CENTERLINE OF EXISTING STREAM
- EXISTING CONTOUR
- EXISTING UTILITY POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING TREELINE
- EXISTING FENCE
- WETLAND BOUNDARY
- WETLAND BUFFER
- PROPOSED FENCE
- EXISTING SPECIMEN TREE
- SOILS BOUNDARY
- HIGHLY ERODIBLE SOILS
- PROPOSED CONTOUR
- LIMIT OF DISTURBANCE
- STABILIZED CONSTRUCTION ENTRANCE
- SUPER SILT FENCE
- EXISTING PRESERVATION EASEMENT
- EXISTING FOREST CONSERVATION EASEMENT
- EXISTING SPECIMEN TREE
- CRITICAL ROOT ZONE
- DRAINAGE DIVE
- SILT FENCE



**SOILS MAP, GRADING, EROSION AND SEDIMENT CONTROL PLAN**

SCALE: 1"=50'



**NOTES:**

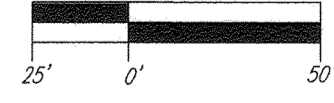
- FOR SOILS ON-SITE THAT WOULD BE CONSIDERED HIGHLY ERODIBLE BY THE HOWARD SOIL CONSERVATION DISTRICT, MORE STRINGENT SEEDING AND STABILIZATION METHODS MAY BE EXPECTED AT SITE DEVELOPMENT STAGE.
- STABILIZATION IS TO BE DONE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR AT THE INTERVALS REQUIRED BY THE 2011 STDS. & SPECS. WHICHEVER IS MORE RESTRICTIVE.
- SEDIMENT CONTROLS INTERRUPTED BY INSTALLATION OF UTILITY LINES ARE TO BE REPAIRED IMMEDIATELY.

**NOTE:**

- SILT FENCE IS TO BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
- SILT FENCE SHALL BE CURLED UPHILL NO MORE THAN 35 FEET APART
- DOUBLE ROWS OF SUPER SILT FENCE SHALL BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

**SOILS MAP, GRADING, EROSION AND SEDIMENT CONTROL PLAN**

SCALE: 1"=50'



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division  
Chief, Division of Land Development  
Director

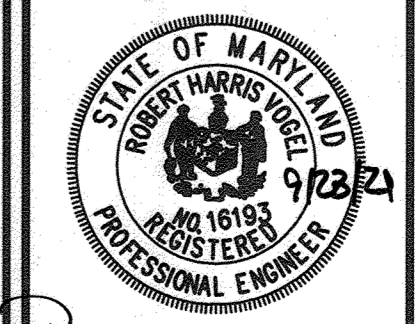
OWNER/DEVELOPER CERTIFICATION:  
I HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

DESIGN CERTIFICATION:  
I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS AND STANDARDS; THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.



AS-BUILT CERTIFICATION FOR PSWM  
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROPRIATE LAWS AND SPECIFICATIONS. I HAVE VERIFIED THAT ALL CONTRIBUTING DRAINAGE AREAS ARE SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.



DESIGN BY: RHV  
DRAWN BY: KG/MH  
CHECKED BY: RHV  
DATE: JULY 2021  
SCALE: AS SHOWN  
W.O. NO.: 41657

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. EXPIRATION DATE: 09-27-2022

REVISION: REVISE TO SHOW MINOR GRADING CHANGE AND REDUCE A PORTION OF S5F WITH SF C-8-22

NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN**  
**SOILS MAP, GRADING, EROSION AND SEDIMENT CONTROL PLAN**  
**TRIPLE CREEK SOLAR**  
12855 FREDERICK ROAD (MD 144), WEST FRIENDSHIP, MD 21794  
LIBER 17387 FOLIO 272  
ZONED RC-DEO  
TAX MAP 15 BLOCK 10 3RD ELECTION DISTRICT  
PARCELS 74 & 258  
HOWARD COUNTY, MARYLAND

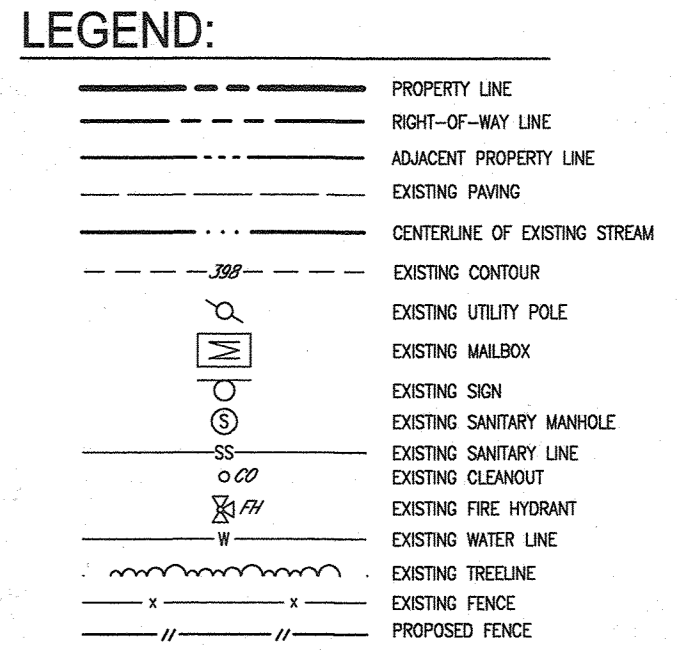
**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
3300 NORTH RIDGE ROAD, SUITE 110 TEL: 410.461.7666  
ELICOTT CITY, MD 21043 FAX: 410.461.8961

11 SHEET OF 21

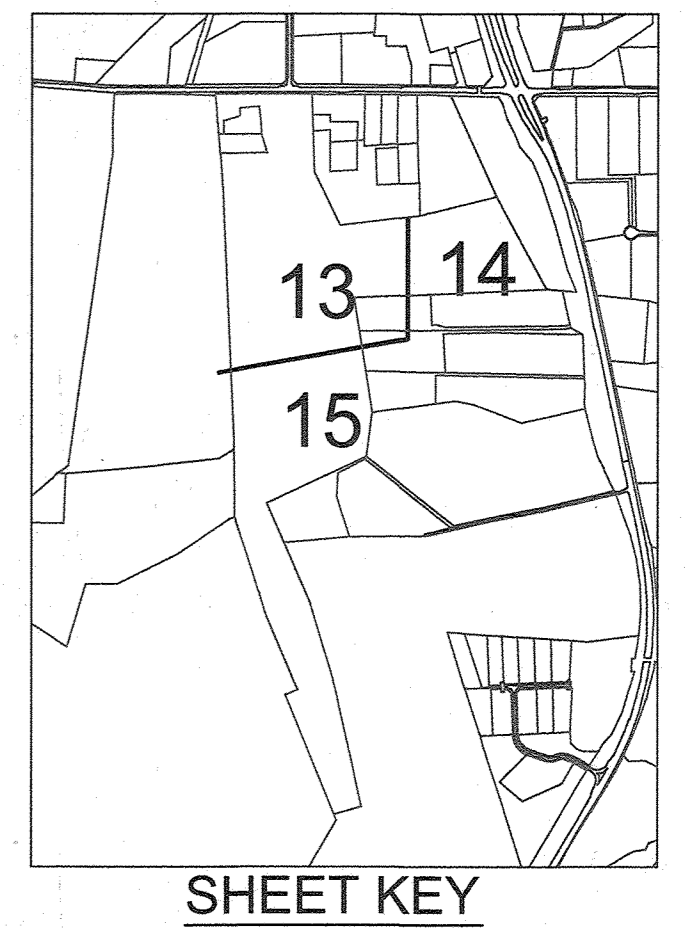
AS-BUILT DECEMBER 2022

SDP-21-011





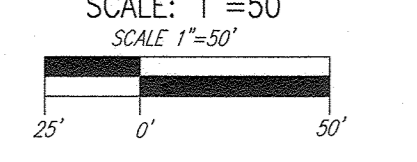
MATCHLINE - SEE SHEET 14



**DEVELOPER**  
KDC SOLAR MARYLAND, LLC  
1420 US HIGHWAY 206, SUITE 120  
BEDMINSTER, NJ 07921  
PHONE: 908-955-4360

**OWNER**  
TRIPLE CREEK FARM PROPERTIES, LLC  
12855 ROUTE 144  
WEST FRIENDSHIP, MD 21794  
PHONE:

**STORMWATER MANAGEMENT/  
STORM DRAIN  
DRAINAGE AREA MAP**



APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS  
  
\_\_\_\_\_  
COUNTY HEALTH OFFICER  
HOWARD COUNTY HEALTH DEPARTMENT  
11/15/21  
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
  
\_\_\_\_\_  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
12-26-21  
DATE  
  
\_\_\_\_\_  
CHIEF, DIVISION OF LAND DEVELOPMENT  
11/12/22  
DATE  
  
\_\_\_\_\_  
DIRECTOR  
11/12/22  
DATE

AS-BUILT CERTIFICATION FOR PSWM

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

**STATE OF MARYLAND**  
**ROBERT HARRIS VOGEL**  
2-21-23  
16193  
P.E. #  
2-21-23  
DATE

NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN**  
**STORMWATER MANAGEMENT/STORM DRAIN**  
**DRAINAGE AREA MAP**  
**TRIPLE CREEK SOLAR**  
12855 FREDERICK ROAD (MD 144), WEST FRIENDSHIP, MD 21794  
LIBER 17387 FOLIO 272  
TAX MAP 15 BLOCK 10  
3RD ELECTION DISTRICT  
ZONED RC-DEO  
PARCELS 74 & 253  
HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL**  
**ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
3300 NORTH RIDGE ROAD, SUITE 110 TEL: 410.461.7666  
ELLIGOTT CITY, MD 21043 FAX: 410.461.8961

**STATE OF MARYLAND**  
**ROBERT HARRIS VOGEL**  
16193  
REGISTERED  
PROFESSIONAL ENGINEER

DESIGN BY: RHV  
DRAWN BY: KG/IMH  
CHECKED BY: RHV  
DATE: JULY 2021  
SCALE: AS SHOWN  
W.O. NO.: 41857

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. EXPIRATION DATE: 09-27-2022

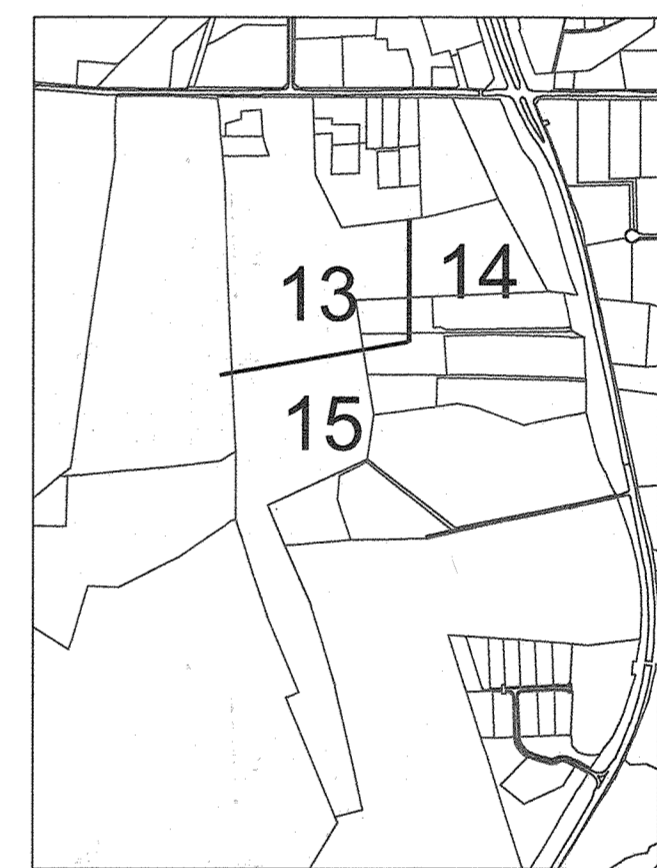
13 SHEET OF 21

AS-BUILT DECEMBER 2022

SDP-21-011

**LEGEND:**

- PROPERTY LINE
- - - RIGHT-OF-WAY LINE
- - - ADJACENT PROPERTY LINE
- - - EXISTING PAVING
- - - CENTERLINE OF EXISTING STREAM
- - - EXISTING CONTOUR
- EXISTING UTILITY POLE
- EXISTING MANHOLE
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING TREETRINE
- EXISTING FENCE
- PROPOSED FENCE
- EXISTING SPECIMEN TREE
- MaD (B)  
MaC (B) — SOILS BOUNDARY
- PROPOSED CONTOUR
- EXISTING PRESERVATION EASEMENT
- EXISTING FOREST CONSERVATION EASEMENT
- STEEP SLOPE (>25%)
- SLOPES (<5%)
- SLOPES (5-10%)
- SLOPES (10-15%)
- DRAINAGE DIVIDE
- 6.30 AC DA RC-DEO  
C=0.16 SD4 0.01% IMP — STORM DRAINAGE DATA
- DATE: MBR #4  
NRD #4  
6.30 AC  
0.00 IMP. AC.  
1,294 IMP. S.F.  
T=4.5 MINUTES — STORMWATER MANAGEMENT DATA



**SHEET KEY**

**DEVELOPER:** KDC SOLAR MARYLAND, LLC  
1420 US HIGHWAY 206, SUITE 120  
BEDMINSTER, NJ 07921  
PHONE: 908-955-4360

**OWNER:** TRIPLE CREEK FARM PROPERTIES, LLC  
12855 ROUTE 144  
WEST FRIENDSHIP, MD 21794  
PHONE:

NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN**  
**STORMWATER MANAGEMENT/STORM DRAIN DRAINAGE AREA MAP**  
**TRIPLE CREEK SOLAR**  
12855 FREDERICK ROAD (MD 144), WEST FRIENDSHIP, MD 21794  
LIBER 17387 FOLIO 272

ZONED RC-DEO  
PARCELS 74 & 258  
HOWARD COUNTY, MARYLAND

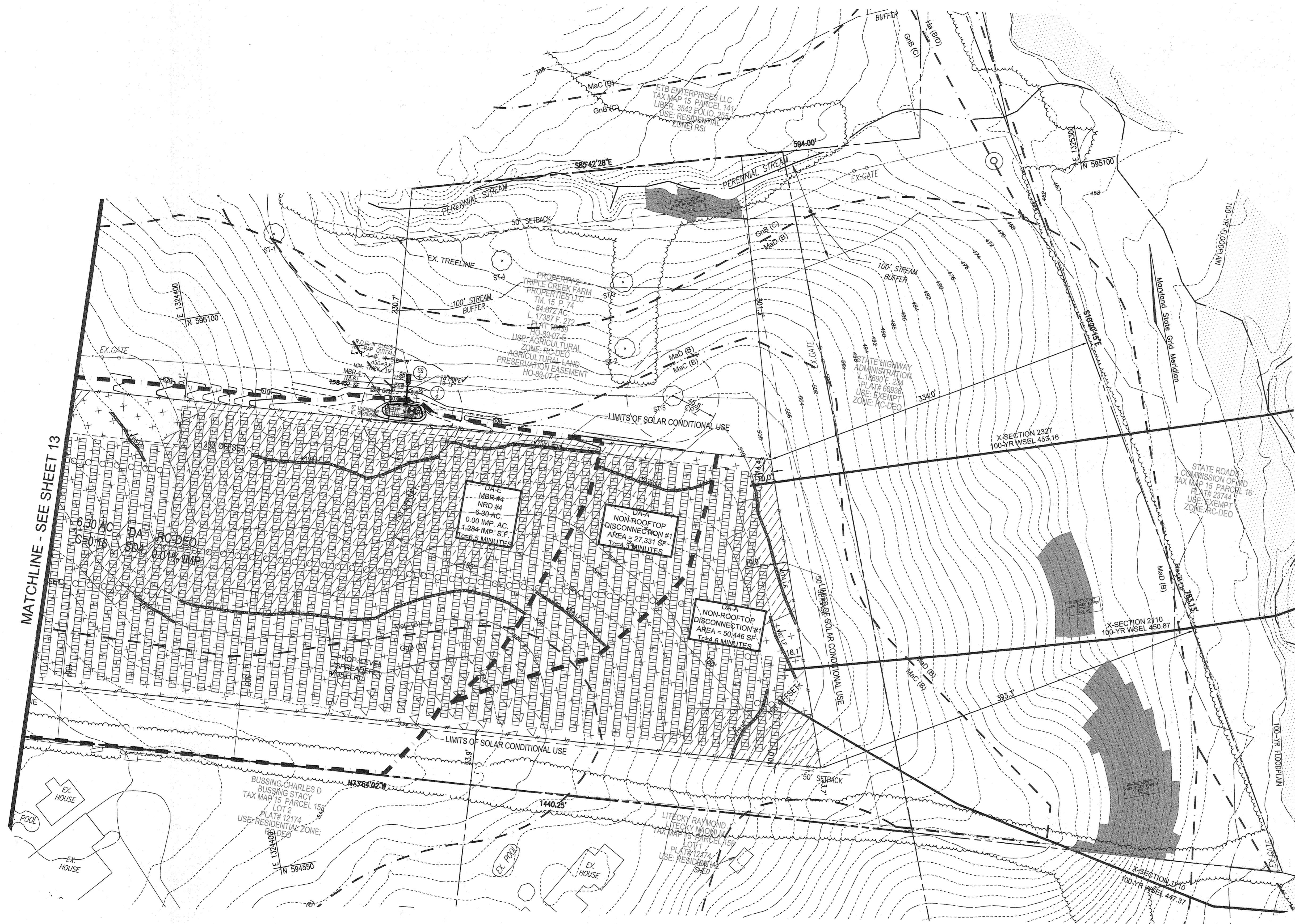
**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
3300 NORTH RIDGE ROAD, SUITE 110 TEL: 410.461.7666  
ELLCOTT CITY, MD 21043 FAX: 410.461.8961

**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: 09-27-2022

DESIGN BY: RHV  
DRAWN BY: KG/IMH  
CHECKED BY: RHV  
DATE: JULY 2021  
SCALE: AS SHOWN  
W.O. NO.: 41857

14 SHEET OF 21



**STORMWATER MANAGEMENT/  
STORM DRAIN  
DRAINAGE AREA MAP**

SCALE: 1"=50'  
SCALE: 1"=50'  
25' 0' 50'



**AS-BUILT CERTIFICATION FOR PSWM**

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

DATE: 12-24-22  
P.E. # 16193

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

12/21/22  
DATE

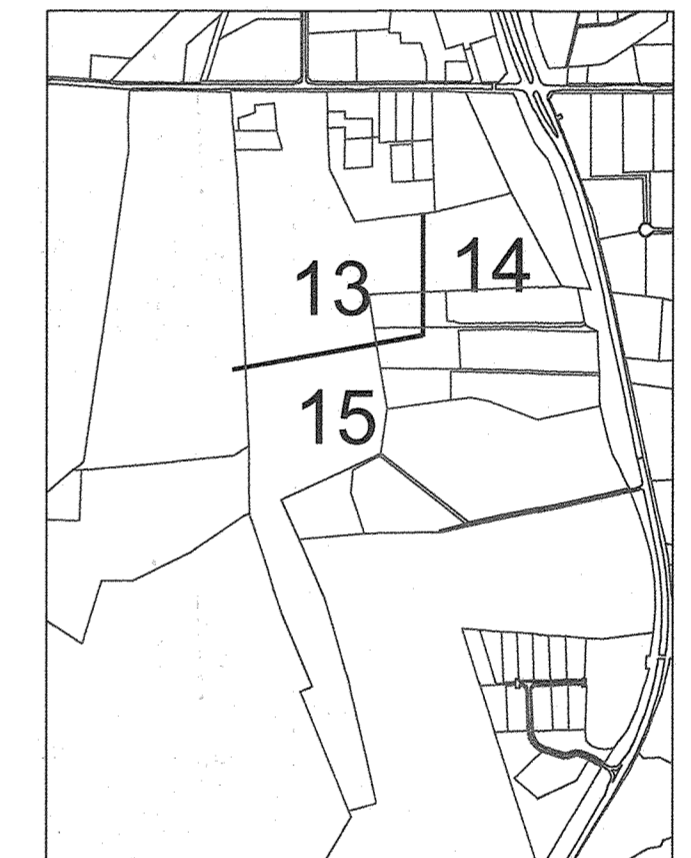
11/01/22  
DATE

11/01/22  
DATE

MATCHLINE - SEE SHEET 14

LEGEND:

- PROPERTY LINE
- - - RIGHT-OF-WAY LINE
- - - ADJACENT PROPERTY LINE
- - - EXISTING PAVING
- - - CENTERLINE OF EXISTING STREAM
- - - EXISTING CONTOUR
- - - EXISTING UTILITY POLE
- - - EXISTING MAILBOX
- - - EXISTING SIGN
- - - EXISTING SANITARY MANHOLE
- - - EXISTING SANITARY LINE
- - - EXISTING CLEARDIRT
- - - EXISTING FIRE HYDRANT
- - - EXISTING WATER LINE
- - - EXISTING TREELINE
- - - EXISTING FENCE
- - - WETLAND BOUNDARY
- - - WETLAND BUFFER
- - - PROPOSED FENCE
- EXISTING SPECIMEN TREE
- MaD (B) SOILS BOUNDARY
- MaC (B) SOILS BOUNDARY
- PROPOSED CONTOUR
- ▨ EXISTING PRESERVATION EASEMENT
- ▩ EXISTING FOREST CONSERVATION EASEMENT
- ▧ STEEP SLOPE (>25%)
- ▦ SLOPES (<-5%)
- ▤ SLOPES (5-10%)
- ▥ SLOPES (>10%)
- ▧ DRAINAGE DIVIDE
- 6.30 AC DA RC-DEO C=0.16 SD4 0.01% IMP STORM DRAINAGE DATA
- DA RC-DEO C=0.16 SD4 0.01% IMP STORMWATER MANAGEMENT DATA



**DEVELOPER**  
KDC SOLAR MARYLAND, LLC  
1420 US HIGHWAY 206, SUITE 120  
BEDMINSTER, NJ 07921  
PHONE: 908-955-4360

**OWNER**  
TRIPLE CREEK FARM PROPERTIES LLC  
12855 ROUTE 144  
WEST FRIENDSHIP, MD 21794  
PHONE:

NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN**  
**STORMWATER MANAGEMENT/STORM DRAIN DRAINAGE AREA MAP**

**TRIPLE CREEK SOLAR**  
12855 FREDERICK ROAD (MD 144), WEST FRIENDSHIP, MD 21794  
LIBER 17387 FOLIO 272

TAX MAP 15 BLOCK 10 ZONED RC-DEO  
3RD ELECTION DISTRICT PARCELS 74 & 253  
HOWARD COUNTY, MARYLAND

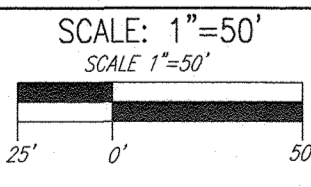
**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
3300 NORTH RIDGE ROAD, SUITE 110 TEL: 410.461.7666  
ELLCOTT CITY, MD 21103 FAX: 410.461.8961

DESIGN BY:	CHKD BY:	DATE:	SCALE:	W.O. NO.:
RHV	RHV	JULY 2021	AS SHOWN	41857

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: 08-27-2022

15 SHEET OF 21

**STORMWATER MANAGEMENT/STORM DRAIN DRAINAGE AREA MAP**

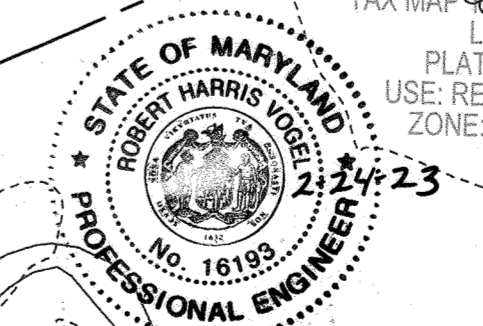


APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 12-24-21  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*[Signature]* 11/16/22  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*[Signature]* 11/16/22  
DIRECTOR DATE



AS-BUILT CERTIFICATION FOR PSWM  
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE AS-BUILT PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE EXISTING DRAINAGE AREA IS SUFFICIENTLY STABLE TO ALLOW PROPER CLOGGING OF THE UNDERGROUND SWM FACILITY.

16193 2-24-23  
P.E. # DATE



AS-BUILT DECEMBER 2022





ADS FLARED END SECTION SPECIFICATION

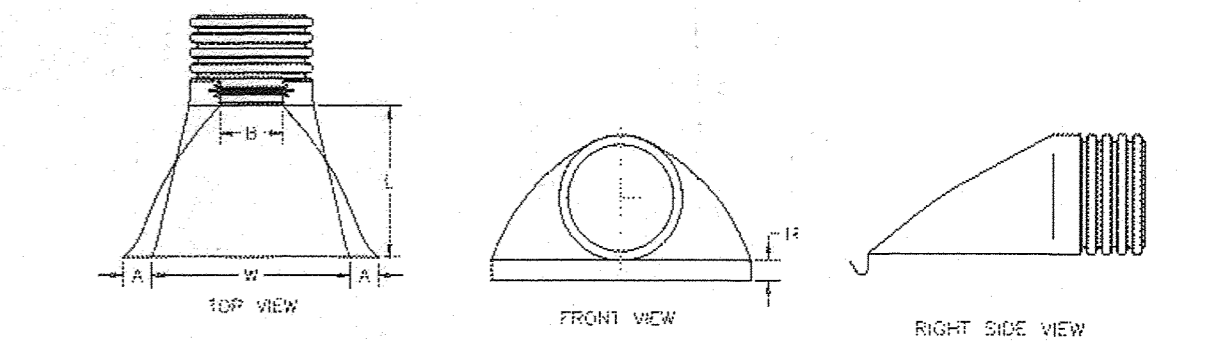
Scope  
This specification describes 12- through 36-inch (300 to 900mm) ADS Flared End Sections for use in culvert and drainage outlet applications.

Requirements  
The ADS Flared End Section shall be high density polyethylene meeting ASTM D3350 minimum cell classification 21320C; contact manufacturer for additional cell classification information. When provided, the metal threaded fastening rod shall be stainless steel.

Installation  
Installation shall be in accordance with ADS installation instructions and with those issued by state or local authorities. Contact your local ADS representative or visit [www.ads-pipe.com](http://www.ads-pipe.com) for the latest installation instructions.

Diameter in (mm)	PIPE DIAMETER, in (mm)					
	12 (300)	15 (375)	18 (450)	24 (600)	30 (750)	36 (900)
A	6.5 (165)	8.5 (215)	7.5 (191)	7.5 (191)	7.5 (191)	7.5 (191)
B	13.0 (330)	15.0 (381)	15.0 (381)	18.0 (457)	22.0 (559)	25.0 (635)
H	6.5 (165)	6.5 (165)	6.5 (165)	6.5 (165)	8.6 (218)	8.6 (218)
L	25.0 (635)	25.0 (635)	32.0 (813)	36.0 (914)	56.0 (1423)	58.0 (1473)
W	25.0 (635)	25.0 (635)	32.0 (813)	36.0 (914)	63.0 (1601)	63.0 (1601)
W	25.0 (635)	25.0 (635)	32.0 (813)	36.0 (914)	63.0 (1601)	63.0 (1601)

\*Product detail may differ slightly from actual product appearance.



**DETAIL D-4-1-C ROCK OUTLET PROTECTION III**

STANDARD SYMBOL: [ROPIII]

DISCHARGE TO AN UNCONFINED CHANNEL OR FLAT AREA

**CONSTRUCTION SPECIFICATIONS**

- RRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.
- USE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION 4-1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE TOGETHER.
- PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (3/4 TO 1 1/2 INCH MINIMUM STONE FOR 6 INCH MINIMUM DEPTH) AND RRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
- EXTEND GEOTEXTILE AT LEAST 8 INCHES BEYOND EDGES OF RRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF RRAP.
- CONSTRUCT RRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIAL. PLACE STONE FOR RRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENEOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE RRAP IN A MANNER TO PREVENT DAMAGE TO THE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
- WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES.
- CONSTRUCT APRON WITH 0% SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.
- MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND RRAP DISLOADED RRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT ADMINISTRATION  
D.22

**PIPE SCHEDULE**

SIZE	PUBLIC/PRIVATE	CLASS	LENGTH
18"	PRIVATE	HDPE	79

**STRUCTURE SCHEDULE**

STR #	TYPE	INV. IN	INV. OUT	TOP OR UPPER/LOWER DETAIL	LOCATION	REMARKS
L-1	D PILET	420.57	420.57	228.83	D-4.10 IN 59456.17 E 1322008.28 (1) PRIVATE	
L-2	D PILET	486.86	486.86	486.86	D-4.10 IN 594242.37 E 1322004.68 (1) PRIVATE	
L-3	D PILET	532.85	532.85	532.85	D-4.10 IN 596228.21 E 1322893.43 (1) PRIVATE	
L-4	D PILET	522.69	522.69	522.69	D-4.10 IN 59498.10 E 1324529.00 (1) PRIVATE	

**STRUCTURE SCHEDULE**

STR #	TYPE	INV. IN	INV. OUT	TOP OR UPPER/LOWER DETAIL	LOCATION	REMARKS
ES-1	18" HDPE	---	503.45	504.96	HDPE IN 59456.84 E 1323105.85 (2) PRIVATE	
ES-2	18" HDPE	---	489.50	491.00	HDPE IN 594242.52 E 1323111.19 (2) PRIVATE	
ES-3	18" HDPE	---	532.85	534.35	HDPE IN 596228.21 E 1323977.08 (2) PRIVATE	
ES-4	18" HDPE	---	501.46	503.45	HDPE IN 594979.64 E 1324601.01 (2) PRIVATE	

(1) Coordinate for Proposed Structure = Centerline of Structure  
(2) Coordinate for End Section = Centerline of Pipe @ Downstream Face

**DEVELOPER**  
KDC SOLAR MARYLAND, LLC  
1420 US HIGHWAY 206, SUITE 120  
BEDMINSTER, NJ 07921  
PHONE: 908-955-4360

**OWNER**  
TRIPLE CREEK FARM PROPERTIES LLC  
12855 ROUTE 144  
WEST FRIENDSHIP, MD 21794  
PHONE:

NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN**  
**STORM DRAIN PROFILES AND SWM DETAILS**  
**TRIPLE CREEK SOLAR**  
12855 FREDERICK ROAD (MD 144), WEST FRIENDSHIP, MD 21794  
LIBER 17387 FOLIO 272  
TAX MAP 15 BLOCK 10 PARCELS 74 & 258  
3RD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

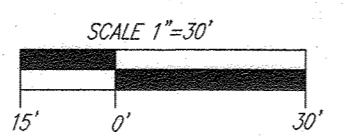
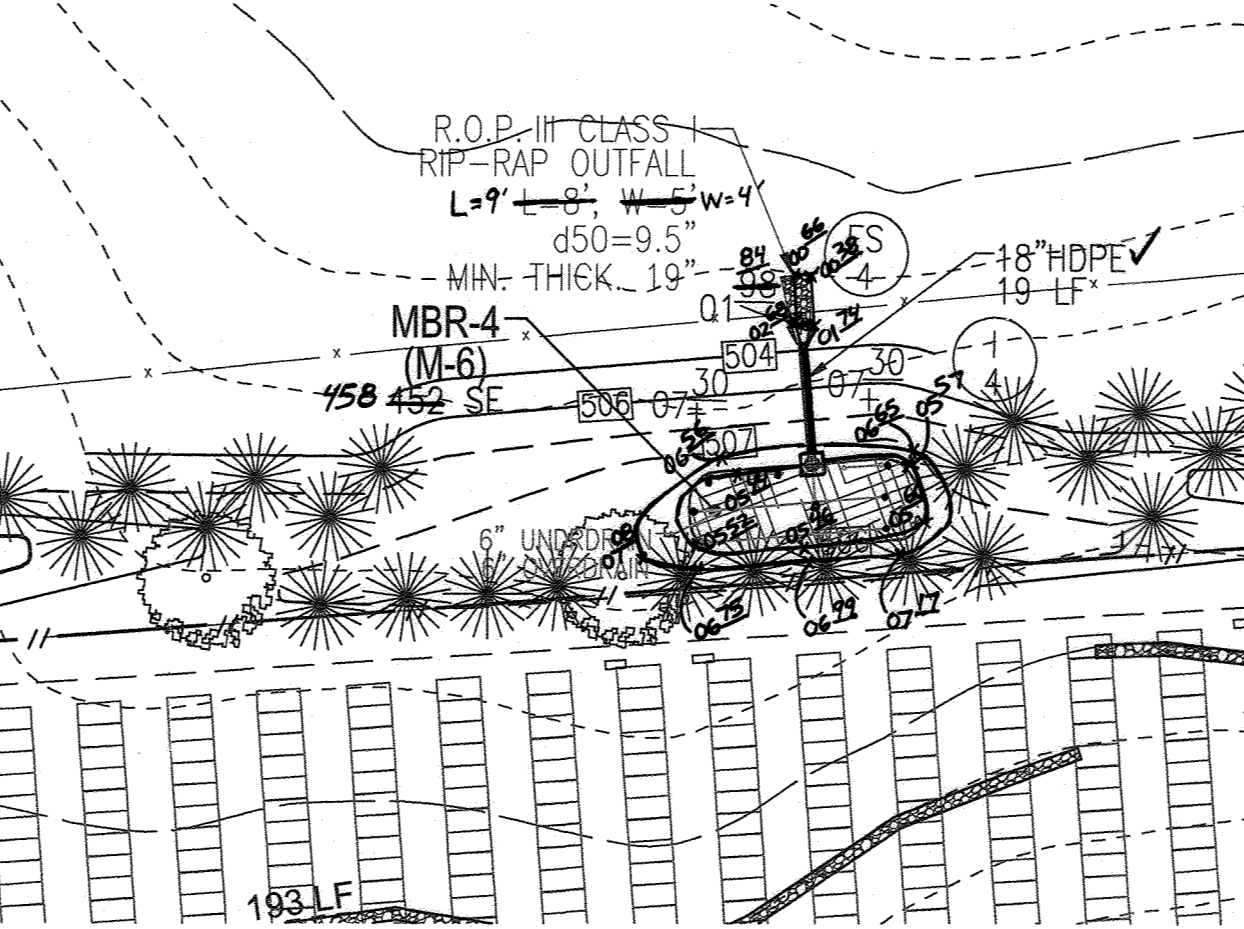
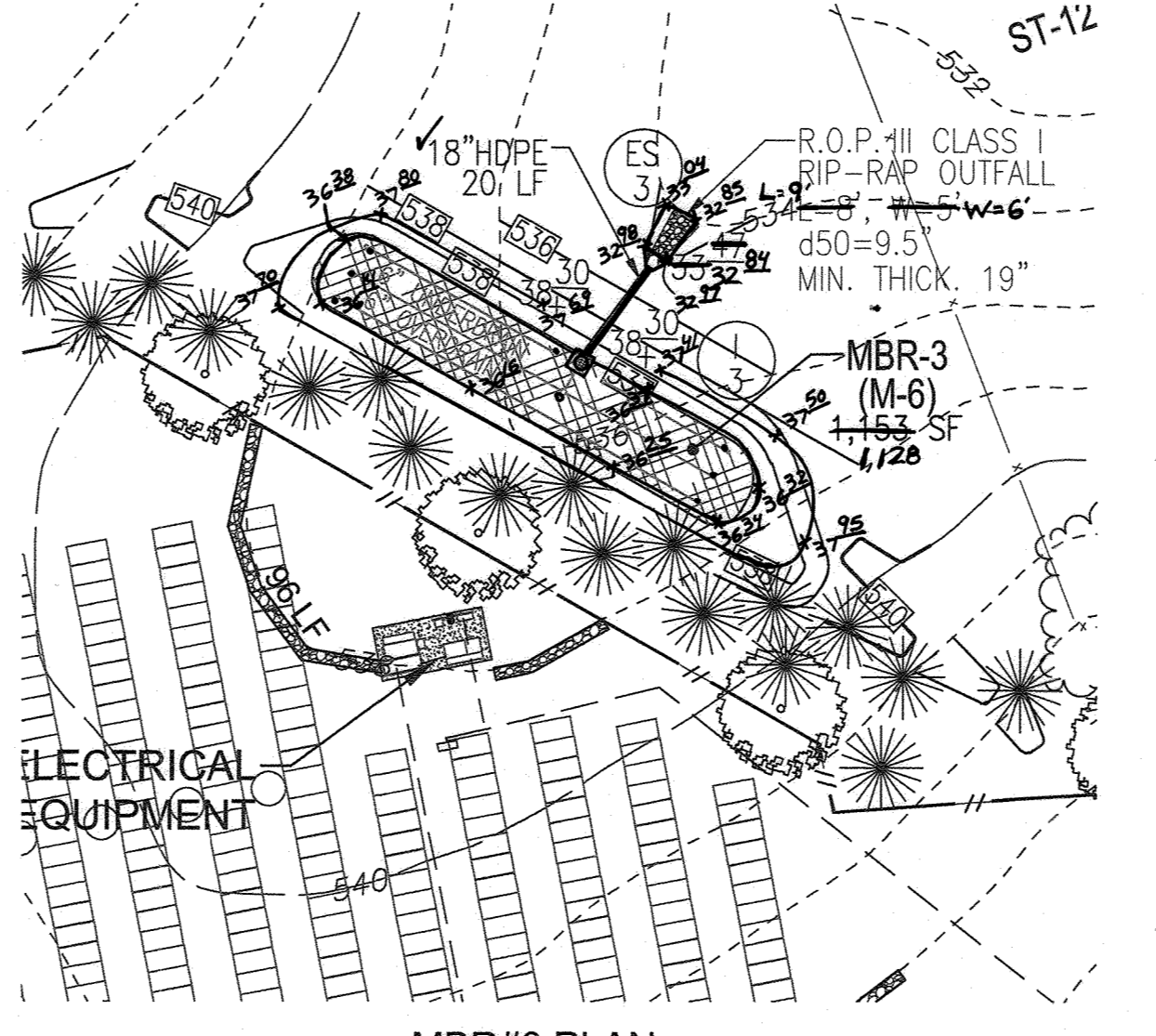
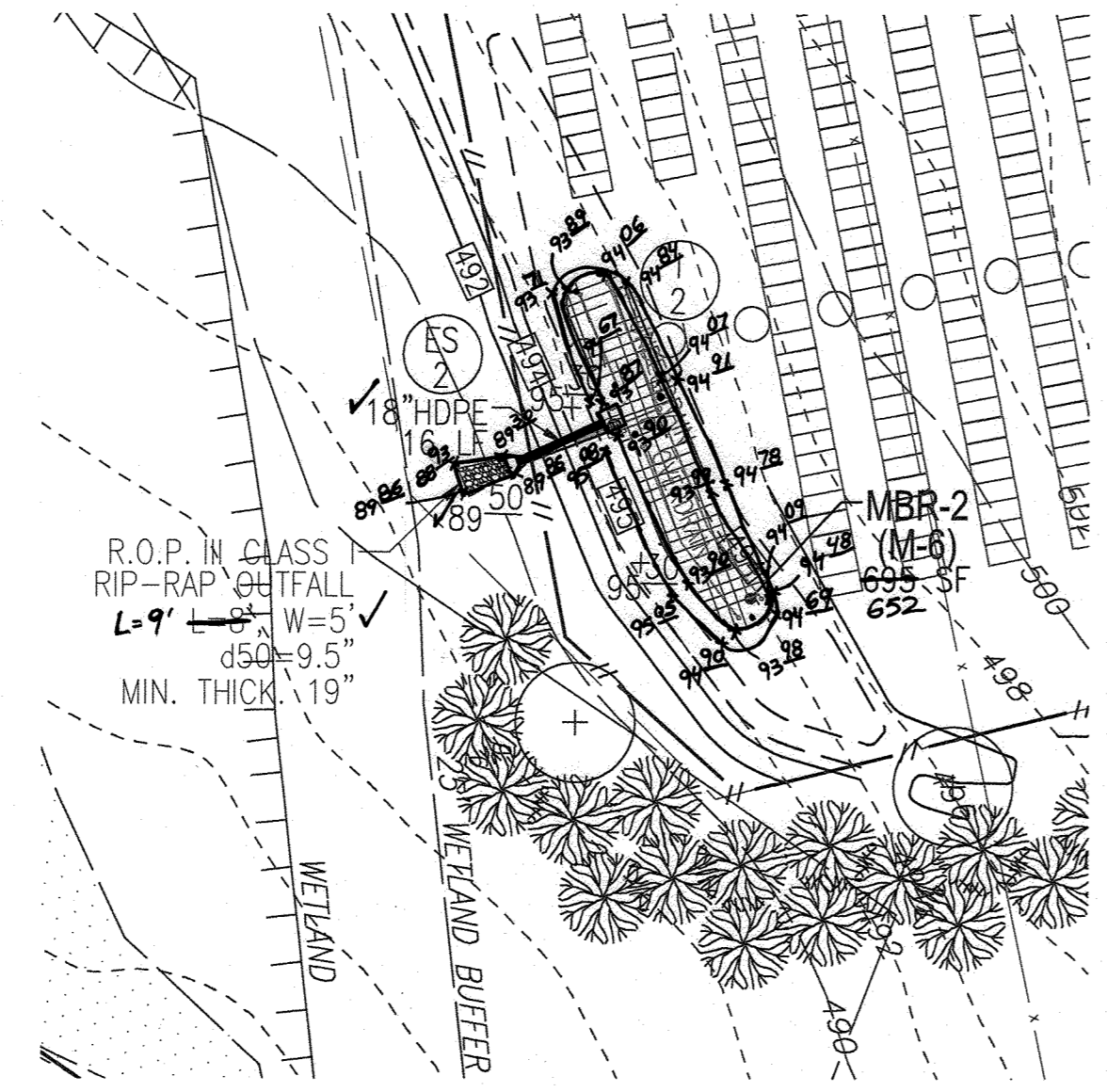
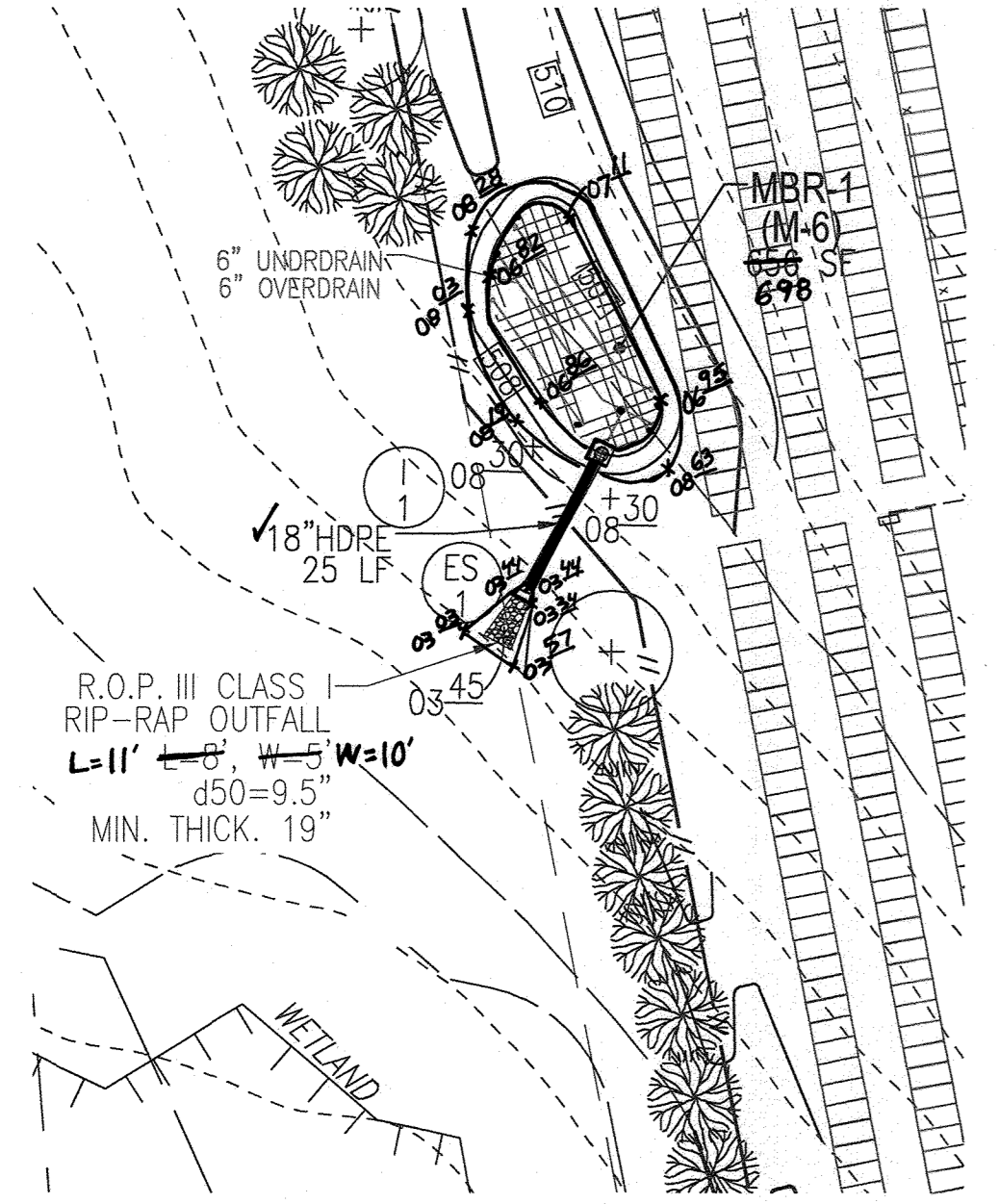
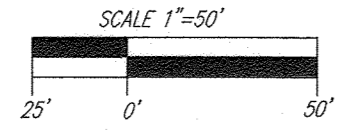
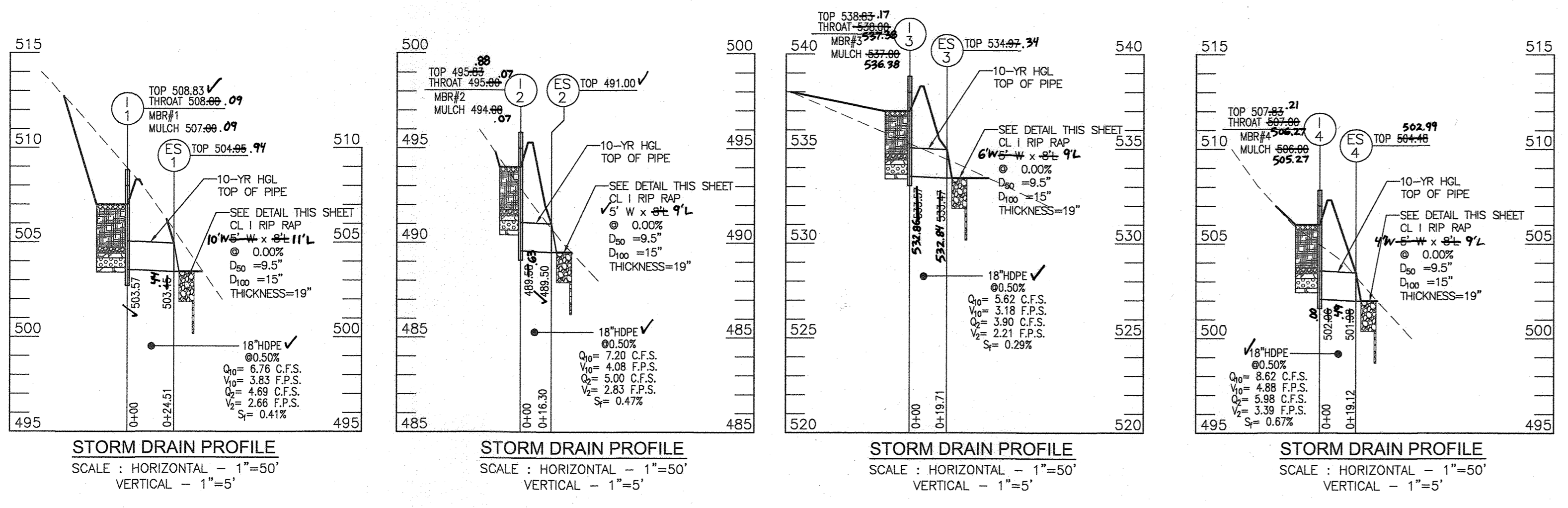
**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
3300 NORTH RIDGE ROAD, SUITE 110 TEL: 410.461.7666  
ELLCOTT CITY, MD 21143

**PROFESSIONAL CERTIFICATE**

DESIGN BY: RHV  
DRAWN BY: KG/IMH  
CHECKED BY: RHV  
DATE: JULY 2021  
SCALE: AS SHOWN  
W.O. NO.: 41657

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: 09-27-2022

17 SHEET OF 21



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

\_\_\_\_\_  
CHIEF, DEVELOPMENT ENGINEERING DIVISION NY DATE 12-26-21

\_\_\_\_\_  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE 1/10/22

\_\_\_\_\_  
DIRECTOR DATE 1/10/22

AS-BUILT CERTIFICATION FOR PSWM

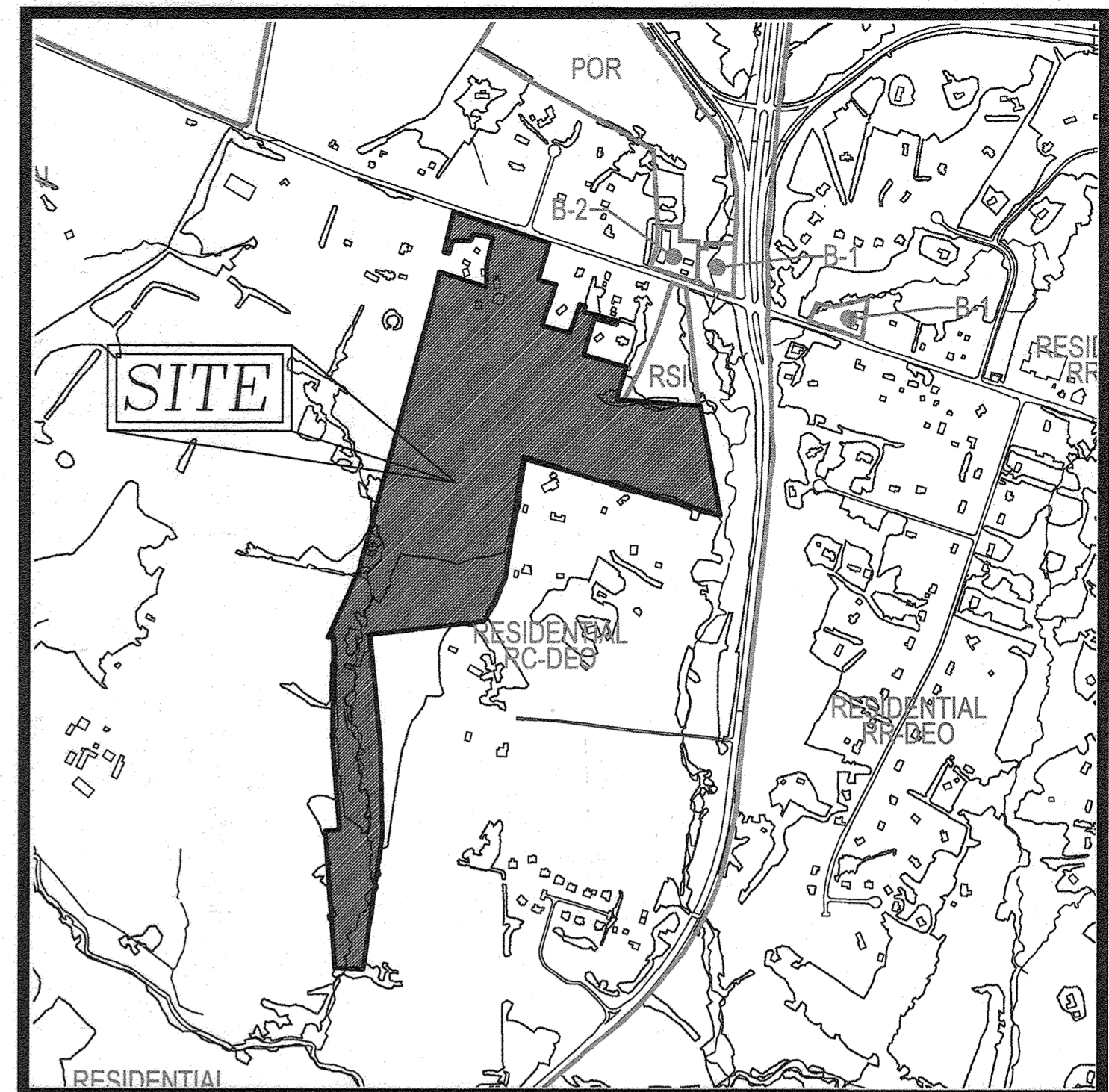
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

\_\_\_\_\_  
P.E. NAME 16193 2-24-23  
DATE

STATE OF MARYLAND  
ROBERT HARRIS VOGEL  
REGISTERED PROFESSIONAL ENGINEER  
No. 16193  
EXPIRES 09-27-2022



SPECIMEN TREE CHART				
KEY	SPECIES	SIZE (IN DBH)	CRZ (FT RADIUS)	COMMENTS
ST-1	BLACK CHERRY	37	55.5	GOOD
ST-2	RED MAPLE	33	49.5	GOOD
ST-3	RED MAPLE	34.5	51.75	GOOD
ST-4	RED MAPLE	33	49.5	POOR CONDITION, TRUNK ROT, ROOT COLLAR DAMAGE
ST-5	RED MAPLE	30.5	45.75	FAIR, MULTI-STEMMED WITH WEAK CONNECTIONS, SOME DIEBACK IN CANOPY
ST-6	BLACK CHERRY	31.5	47.25	FAIR, DIEBACK IN CANOPY
ST-7	BLACK CHERRY	42.5	63.75	POOR, MAJOR DIEBACK AND ROT
ST-8	33" POPLAR	50.5	75.75	GOOD
ST-9	RED OAK	30	45	POOR, SIGNIFICANT ROT
ST-10	BLACK WALNUT	46	69	GOOD IVY COVERED
ST-11	MULBERRY	36	54	POOR, MULTIPLE TRUNKS COMBINED TO FORM TRUNK, NOTABLE DIEBACK, POOR SHAPE
ST-12	BLACK CHERRY	31	46.5	FAIR CONDITION, SOME DIEBACK NOTED
ST-13	NORWAY MAPLE	33	49.5	POOR, MAJOR DIEBACK
ST-14	SILVER MAPLE	33	49.5	FAIR, SOME DIEBACK NOTED
ST-15	BLACK WALNUT	32	48	GOOD, CRZ IMPACTED BY ROAD
ST-16	NORWAY MAPLE	36	54	GOOD - NOT NATIVE
ST-17	RED MAPLE	31	46.5	GOOD
ST-18	SILVER MAPLE	38	57	POOR, TRUNK ROT, LIMB DIEBACK
ST-19	SILVER MAPLE	46	69	POOR, TRUNK ROT, LIMB DIEBACK
ST-20	BLACK CHERRY	32	48	POOR, STORM DAMAGE
ST-21	RED MAPLE	46	69	POOR, TRUNK WOUND



**VICINITY MAP**  
SCALE: 1"=1,000'  
ADC MAP COORDINATE: MAP 28, GRID 5C

**BENCHMARKS**  
HOWARD COUNTY BENCHMARK 0013  
N 595,906.971 E 1,325,627.746 ELEV. 486.157  
CONCRETE MONUMENT WITH DISC  
22.8' NORTH OF TRAFFIC POLE  
29' EAST OF MD 32 SOUTHBOUND

HOWARD COUNTY BENCHMARK 158A  
N 597,228.162 E 1,321,719.345 ELEV. 590.196  
CONCRETE MONUMENT WITH DISC  
37.5' WEST OF FAIRGROUNDS ROAD  
3' NORTH OF EDGE OF PAVEMENT  
FREDERICK ROAD (MD 144)

**LEGEND:**

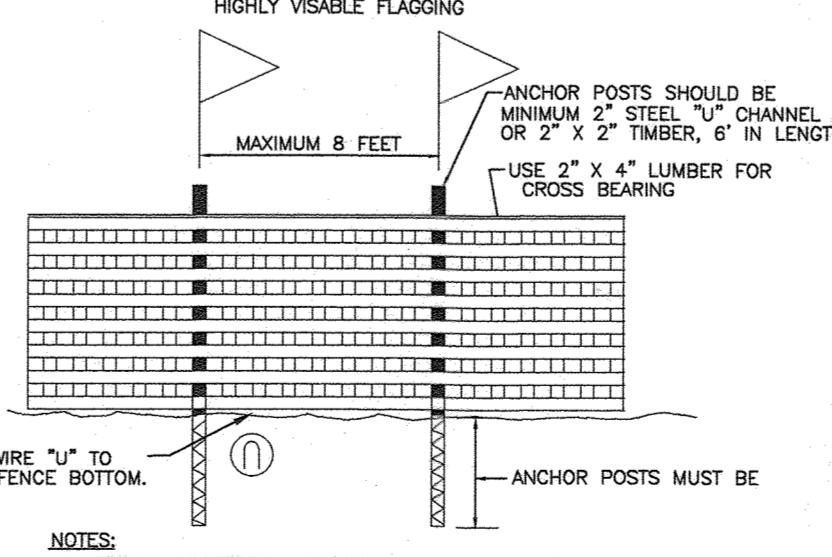
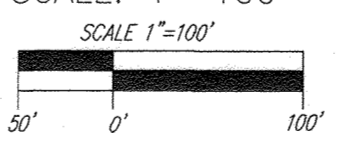
	EXISTING CONTOUR		EXISTING OVER HEAD LINE
	EXISTING CURB AND GUTTER		EXISTING TREELINE
	EXISTING UTILITY POLE		EXISTING FENCE
	EXISTING LIGHT POLE		PROPERTY LINE
	EXISTING MAILBOX		RIGHT-OF-WAY LINE
	EXISTING SIGN		SOILS BOUNDARY
	EXISTING SANITARY MANHOLE		WETLAND BOUNDARY
	EXISTING SANITARY LINE		25' WETLAND BUFFER
	EXISTING CLEANOUT		100' STREAM BUFFER
	EXISTING SPECIMEN TREE CRITICAL ROOT ZONE		LIMIT OF DISTURBANCE
	EXISTING FIRE HYDRANT		TREE PROTECTION FENCE
	EXISTING WATER LINE		MICRO BIORETENTION
			100-YR FLOODPLAIN

**OWNER**  
TRIPLE CREEK FARM PROPERTIES LLC  
12855 ROUTE 144 WEST FRIENDSHIP, MD 21794  
PHONE: 908-955-4360

**DEVELOPER**  
KDC SOLAR MARYLAND, LLC  
1420 US HIGHWAY 206, SUITE 120 BEDMINSTER, NJ 07921  
PHONE: 908-955-4360

MATCHLINE - SEE SHEET 19

**FOREST CONSERVATION PLAN**  
SCALE: 1"=100'



NOTES:  
1. FOREST PROTECTION DEVICE ONLY.  
2. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.  
3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.  
4. ROOF DAMAGE SHOULD BE AVOIDED.

BLAZE ORANGE PLASTIC MESH  
TYPICAL TREE PROTECTION FENCE DETAIL

**SOILS LEGEND**  
HOWARD COUNTY SOILS MAP #24

SYMBOL	NAME / DESCRIPTION	HYDRIC GROUP	K FACTOR	C10% SLOPE	W. DRUM	PERCENT
MbB	MANOR LOAM, 3 TO 8 PERCENT SLOPES	NO	B	0.28	NO	YES
McD	MANOR LOAM, 8 TO 15 PERCENT SLOPES	NO	B	0.32	NO	YES
MoD	MANOR LOAM, 15 TO 25 PERCENT SLOPES	NO	B	0.32	YES	NO
GgA	GLENGLE LOAM, 0 TO 3 PERCENT SLOPES	NO	B	0.37	YES	NO
GgB	GLENGLE LOAM, 3 TO 8 PERCENT SLOPES	NO	B	0.37	YES	NO
GmB	GLENGLE SILT LOAM, 3 TO 8 PERCENT SLOPES	YES	C/D	0.55	YES	YES
GnB	GLENGLE-SILT LOAM, 0 TO 8 PERCENT SLOPES	YES	C	0.49	YES	YES
BnA	BALF SILT LOAM, 0 TO 3 PERCENT SLOPES	YES	C/D	0.49	NO	NO
MkF	MANOR-BRONKOW COMPLEX, 25 TO 35 PERCENT SLOPES, VERY ROCKY	NO	B	0.32	YES	YES

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY  
K-FACTOR =  $K_w @ 0-4" \text{ DEPTH}$

NOTE:  
HEAVILY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 12-26-21  
CHIEF, DEVELOPMENT ENGINEERING DIVISION NY DATE

*[Signature]* 11/01/22  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*[Signature]* 11/01/22  
DIRECTOR DATE



**SITE DEVELOPMENT PLAN**  
**FOREST CONSERVATION PLAN**  
**TRIPLE CREEK SOLAR**  
12855 FREDERICK ROAD (MD 144), WEST FRIENDSHIP, MD 21794  
LIBER 17387 FOLIO 272

TAX MAP 15 BLOCK 10  
3RD ELECTION DISTRICT  
ZONED RC-DEO  
PARCELS 74 & 258  
HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL**  
**ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
3300 NORTH RIDGE ROAD, SUITE 110 TEL: 410.461.7666  
ELICOTT CITY, MD 21043 FAX: 410.461.8961

DESIGN BY: RHV  
DRAWN BY: KG/IMH  
CHECKED BY:  
DATE: JULY 2021  
SCALE: AS SHOWN  
W.O. NO.: 41657

18 SHEET OF 21

MATCHLINE - SEE SHEET 18

MATCHLINE - SEE THIS SHEET

\*\*FOREST CONSERVATION WORKSHEET  
BASED ON COUNCIL BILL CB62-2019\*\*  
FOREST CONSERVATION WORKSHEET FOR

SOILS LEGEND				HYDRO GROUP/K FACTOR		CLIFF SLOPE	
SYMBOL	NAME	DESCRIPTION	NO	B	0.28	NO	NO
MaB	MANOR LOAM	3 TO 8 PERCENT SLOPES	NO	B	0.32	YES	NO
MdC	MANOR LOAM	8 TO 15 PERCENT SLOPES	NO	B	0.32	YES	YES
MdD	MANOR LOAM	15 TO 25 PERCENT SLOPES	NO	B	0.32	YES	YES
GaB	GLENELE LOAM	0 TO 3 PERCENT SLOPES	NO	B	0.37	YES	NO
GaD	GLENELE LOAM	3 TO 8 PERCENT SLOPES	NO	B	0.37	YES	YES
GmB	GLENELE SILT LOAM	3 TO 8 PERCENT SLOPES	YES	C/D	0.55	YES	YES
GmD	GLENELE-SILT LOAM	8 TO 15 PERCENT SLOPES	YES	C	0.49	YES	YES
BaA	BALE SILT LOAM	0 TO 3 PERCENT SLOPES	YES	C/D	0.49	NO	NO
MdF	MANOR-BROWNLOW COMPLEX	25 TO 65 PERCENT SLOPES	NO	B	0.32	YES	YES

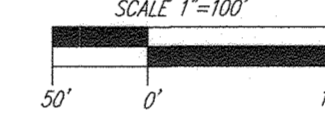
TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY  
K-FACTOR =  $K = 0.04 \cdot D^2$  DEPTH  
NOTE:  
HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT  
OR THOSE SOILS WITH A SOIL CROSSLIGHT FACTOR K GREATER THAN 0.35 AND WITH  
A SLOPE GREATER THAN 5 PERCENT

GENERAL NOTES

- WATERSHED NAME: MIDDLE PATUXENT RIVER  
WATERSHED NUMBER: 02131106
- GROSS SITE AREA: 27.23 AC. (BA-18-030C)
  - NET SITE AREA: 27.23 AC.
  - AREA OF 100-YEAR FLOODPLAIN: 0.00 AC. DFIRM
  - AREA OF WETLANDS AND BUFFERS(ONSITE): 12.13 AC.
  - AREA OF STREAM AND BUFFERS(ONSITE): 19.15 AC.
  - AREA OF > 25% STEEP SLOPES: 1.23 AC.
  - EXISTING FOREST: 0.00 AC.
  - ZONED: RC-DEO
  - EXISTING USE: AGRICULTURE
  - PROPOSED USE: SOLAR PANEL FARM
- NO RARE, THREATENED OR ENDANGERED SPECIES OR THEIR HABITAT WERE OBSERVED ON THE PROPERTY
  - SURROUNDING LAND USE PRIMARILY FARMLAND, RURAL RESIDENTIAL DEVELOPMENT, AND FOREST.
  - NO AREAS ONSITE ARE LARGE ENOUGH TO BE CONSIDERED FOREST.
  - THE STREAM CHANNEL THAT FLOWS TO THE SOUTH OF THE PROJECT SITE IS THE LITTLE PATUXENT RIVER WHICH IS CLASSIFIED AS A USE IV-P STREAM. WATERSHED NUMBER 02-13-11.
  - THE WETLANDS WILL REQUIRE A 25 FOOT BUFFER. THE STREAM CHANNEL REQUIRES A 100 FOOT BUFFER.
  - NO 100 YEAR FLOODPLAIN IS PRESENT ON THE PROPERTY.
  - NO STEEP SLOPES (15%-24.99%) ON THE SUBJECT PROPERTY.
  - THERE ARE NO HISTORIC STRUCTURES OR CEMETRIES ON THIS PROPERTY.
  - THERE ARE SPECIMEN TREES ON THE PROPERTY. NO SPECIMEN TREE WILL BE REMOVED.

FOREST CONSERVATION PLAN

SCALE: 1"=100'



LEGEND:

	EXISTING CONTOUR		EXISTING OVER HEAD LINE
	EXISTING CURB AND GUTTER		EXISTING TREELINE
	EXISTING UTILITY POLE		EXISTING FENCE
	EXISTING LIGHT POLE		PROPERTY LINE
	EXISTING MAILBOX		RIGHT-OF-WAY LINE
	EXISTING SIGN		SOILS BOUNDARY
	EXISTING SANITARY MANHOLE		WETLAND BOUNDARY
	EXISTING SANITARY LINE		25' WETLAND BUFFER
	EXISTING CLEANOUT		100' STREAM BUFFER
	EXISTING SPECIMEN TREE CRITICAL ROOT ZONE		LIMIT OF DISTURBANCE
	EXISTING FIRE HYDRANT		TREE PROTECTION FENCE
	EXISTING WATER LINE		MICRO BIORETENTION
			100-YR FLOODPLAIN

DEVELOPER

KDC SOLAR MARYLAND, LLC  
1420 US HIGHWAY 206, SUITE 120  
BEDMINSTER, NJ 07921  
PHONE: 908-955-4360

OWNER

TRIPLE CREEK FARM PROPERTIES LLC  
12855 ROUTE 144  
WEST FRIENDSHIP, MD 21794  
PHONE:

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN

FOREST CONSERVATION PLAN

TRIPLE CREEK SOLAR

12855 FREDERICK ROAD (MD 144), WEST FRIENDSHIP, MD 21794  
LIBER 17387 FOLIO 272

TAX MAP 15 BLOCK 10 ZONED RC-DEO  
3RD ELECTION DISTRICT PARCELS 74 & 258  
HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
3300 NORTH RIDGE ROAD, SUITE 110 TEL: 410.461.7666  
ELIGOTT CITY, MD 21043 FAX: 410.461.8961

DESIGN BY: RHY	DATE: JULY 2021	19 SHEET OF 21
DRAWN BY: KG/IMH	SCALE: AS SHOWN	
CHECKED BY: [Signature]	W.O. NO.: 41657	

SDP-21-011



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
[Signature] 1/27/21  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
[Signature] 1/16/22  
CHIEF, DIVISION OF LAND DEVELOPMENT  
[Signature] 1/16/22  
DIRECTOR

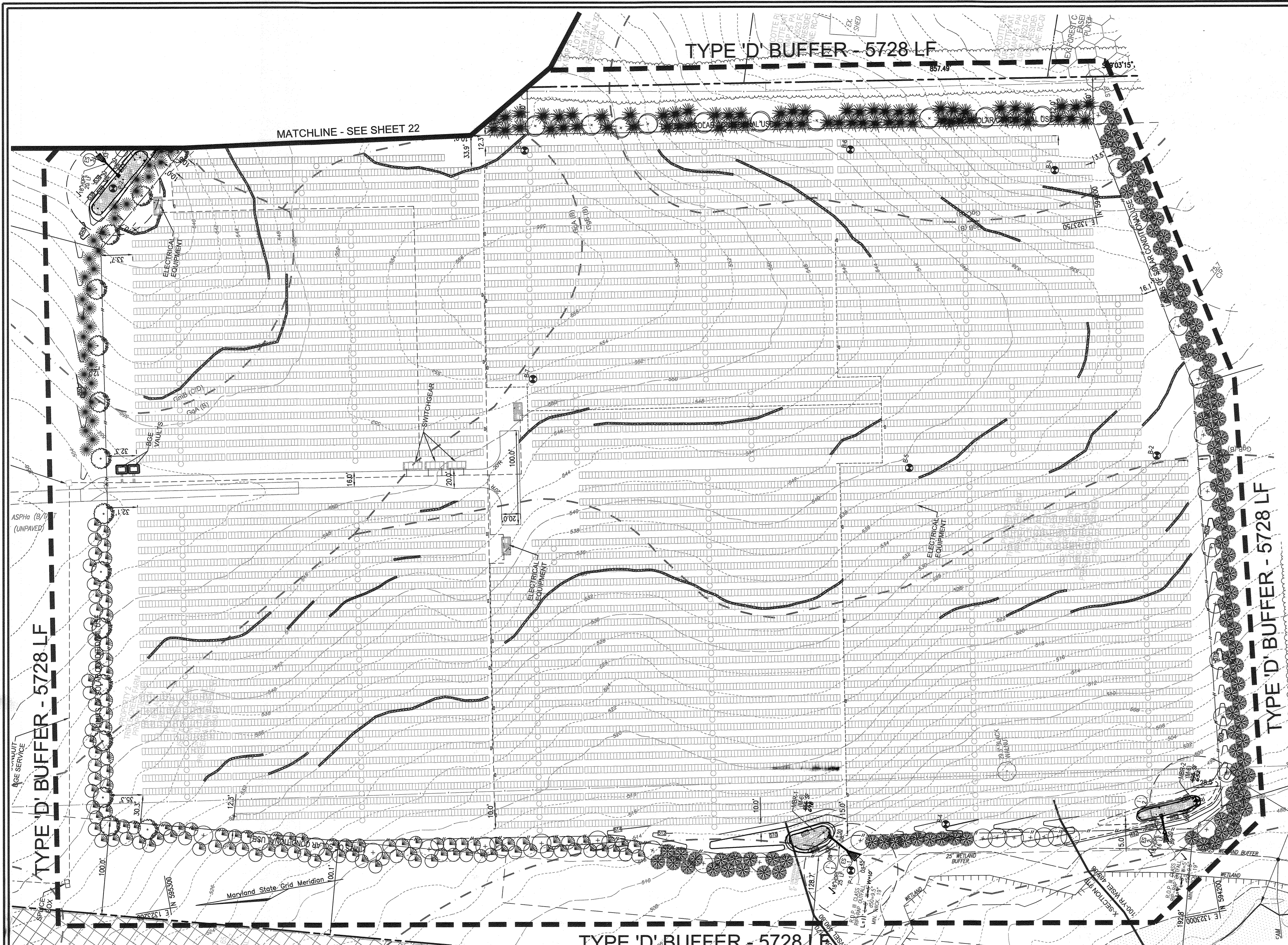
MATCHLINE - SEE THIS SHEET

AS-BUILT CERTIFICATION FOR PSWM  
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.  
[Signature] 1/19/23 2-24-23  
NAME P.E. DATE

Eco-Science Professionals, Inc.  
CONSULTING ECOLOGISTS  
300 W. 10TH AVE. SUITE 100  
DENVER, CO 80202

PLAN PREPARED BY:  
[Signature] 1/19/23  
SOILS ANALYST  
MD DNR FCA QUALIFIED PROFESSIONAL

AS-BUILT DECEMBER 2022



**LEGEND:**

	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING PAVING
	CENTERLINE OF EXISTING STREAM
	EXISTING UTILITY POLE
	EXISTING MAILBOX
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	EXISTING TREELINE
	EXISTING FENCE
	PROPOSED WOOD FENCE
	PROPOSED CHAIN LINK FENCE
	PROPOSED TREELINE
	EXISTING SPECIMEN TREE
	PROPOSED MICRO-BORETENTION
	EXISTING WETLANDS
	EXISTING WETLAND BUFFER
	PERMETER TREE PLANTING OBLIGATION

STATE OF MARYLAND  
 ROBERT H. VOGEL, INC.  
 REGISTERED PROFESSIONAL ENGINEER  
 NO. 16193  
 2-24-23 AS-BUILT CERTIFICATION FOR PSWM  
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.  
 P.E. # 16193 2-24-23 DATE

**DEVELOPER**  
 KDC SOLAR MARYLAND, LLC  
 1420 US HIGHWAY 206, SUITE 120  
 BEDMINSTER, NJ 07921  
 PHONE: 908-955-4360

**OWNER**  
 TRIPLE CREEK FARM PROPERTIES LLC  
 12855 ROUTE 144  
 WEST FRIENDSHIP, MD 21794  
 PHONE:

NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN**  
**LANDSCAPE PLAN**  
**TRIPLE CREEK SOLAR**  
 12855 FREDERICK ROAD (MD 144), WEST FRIENDSHIP, MD 21794  
 LIBER 17387 FOLIO 272

TAX MAP 15 BLOCK 10 3RD ELECTION DISTRICT  
 ZONED RC-DEO PARCELS 74 & 258  
 HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
 ENGINEERS • SURVEYORS • PLANNERS  
 3300 NORTH RIDGE ROAD, SUITE 110 TEL: 410.461.7666  
 ELLICOTT CITY, MD 21043 FAX: 410.461.8961

STATE OF MARYLAND  
 ROBERT H. VOGEL, INC.  
 REGISTERED PROFESSIONAL ENGINEER  
 NO. 16193  
 DESIGN BY: RHY  
 DRAWN BY: KG/JMH  
 CHECKED BY: RHY  
 DATE: JULY 2021  
 SCALE: AS SHOWN  
 W.O. NO.: 41657

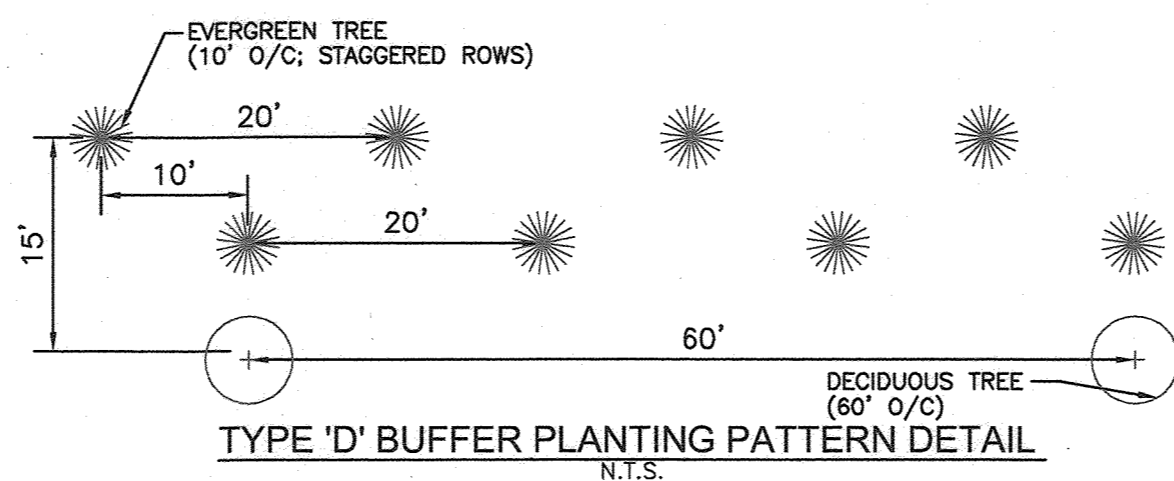
PROFESSIONAL CERTIFICATE  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE 08-27-2022.

20 SHEET OF 21

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION NY 12-26-21 DATE  
 CHIEF, DIVISION OF LAND DEVELOPMENT-2 DATE 11/19/22  
 DIRECTOR DATE 11/19/22

DEVELOPER'S/BUILDER'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 CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.  
 SIGNATURE OF DEVELOPER: *Janessa Stonerife* DATE: 8/19/21

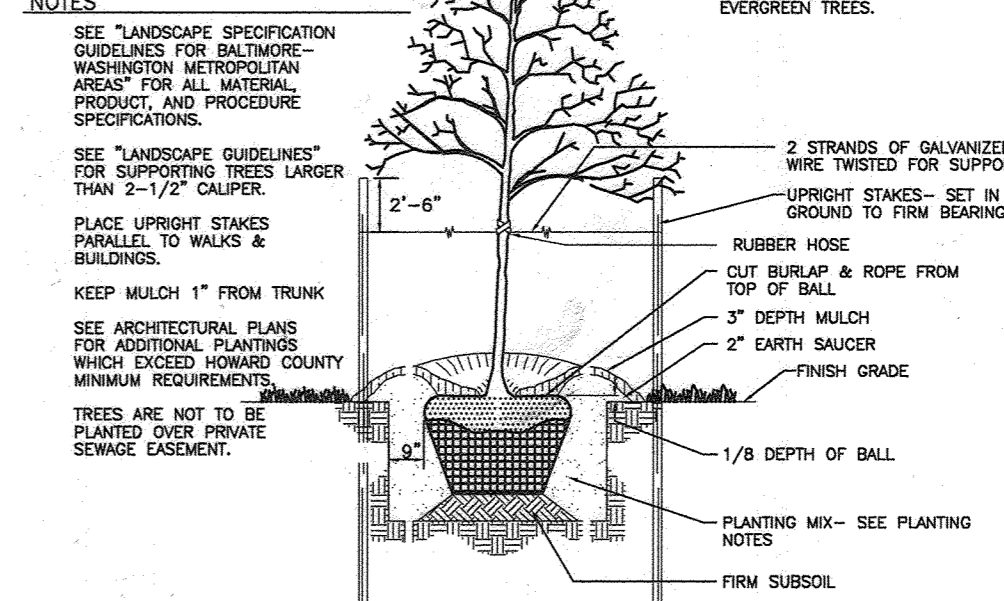
LANDSCAPE PLAN  
 SCALE: 1"=50'  
 SCALE 1"=50'  
 25' 0' 50'



**GENERAL NOTES**

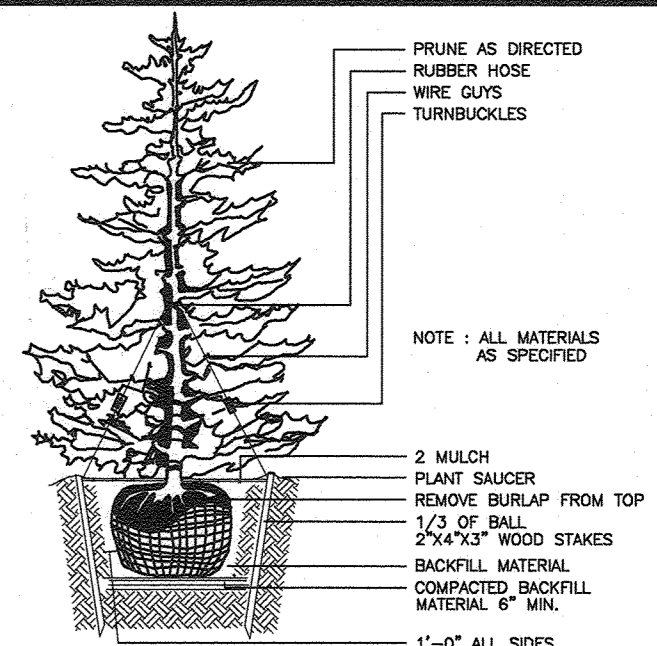
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY IN THE AMOUNT OF \$11,150 FOR THE REQUIRED LANDSCAPING (REQUIRED 95 SHADE TREES \$20,900 AND 571 EVERGREEN TREES \$85,650) SHALL BE POSTED WITH THE FINAL DEVELOPERS AGREEMENT.
- IN A LETTER AND PLAN PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED FEBRUARY 19, 2019 MR. JOHN CANOLES IDENTIFIED THE ONSITE FOREST, WETLANDS AND STREAMS.
  - MR. CANOLES IDENTIFIED TWENTY ONE (21) SPECIMEN TREES. NO SPECIMEN TREES SHALL BE DISTURBED.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE WETLANDS, STREAM(S) OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100-YEAR FLOODPLAIN.
- TYPE 'D' BUFFER TREES SHALL CONSIST OF A DOUBLE ROW OF OFFSET EVERGREEN TREES PLANTED AT INTERVALS OF 10' ON CENTER, ROWS OFFSET 15'; AND DECIDUOUS TREES PLANTED AT 60' ON CENTER.

**NOTES**



**TREE PLANTING AND STAKING**  
DECIDUOUS TREES UP TO 2-1/2" CALIPER NOT TO SCALE

NOTE: PLANTING SHALL BE IN ACCORDANCE WITH THE LATEST STANDARD FROM THE LANDSCAPE CONTRACTORS ASSOCIATION OF MD, DC AND VA.



**TYPICAL EVERGREEN TREE PLANTING DETAIL**  
NOT TO SCALE

**LANDSCAPE NOTES**

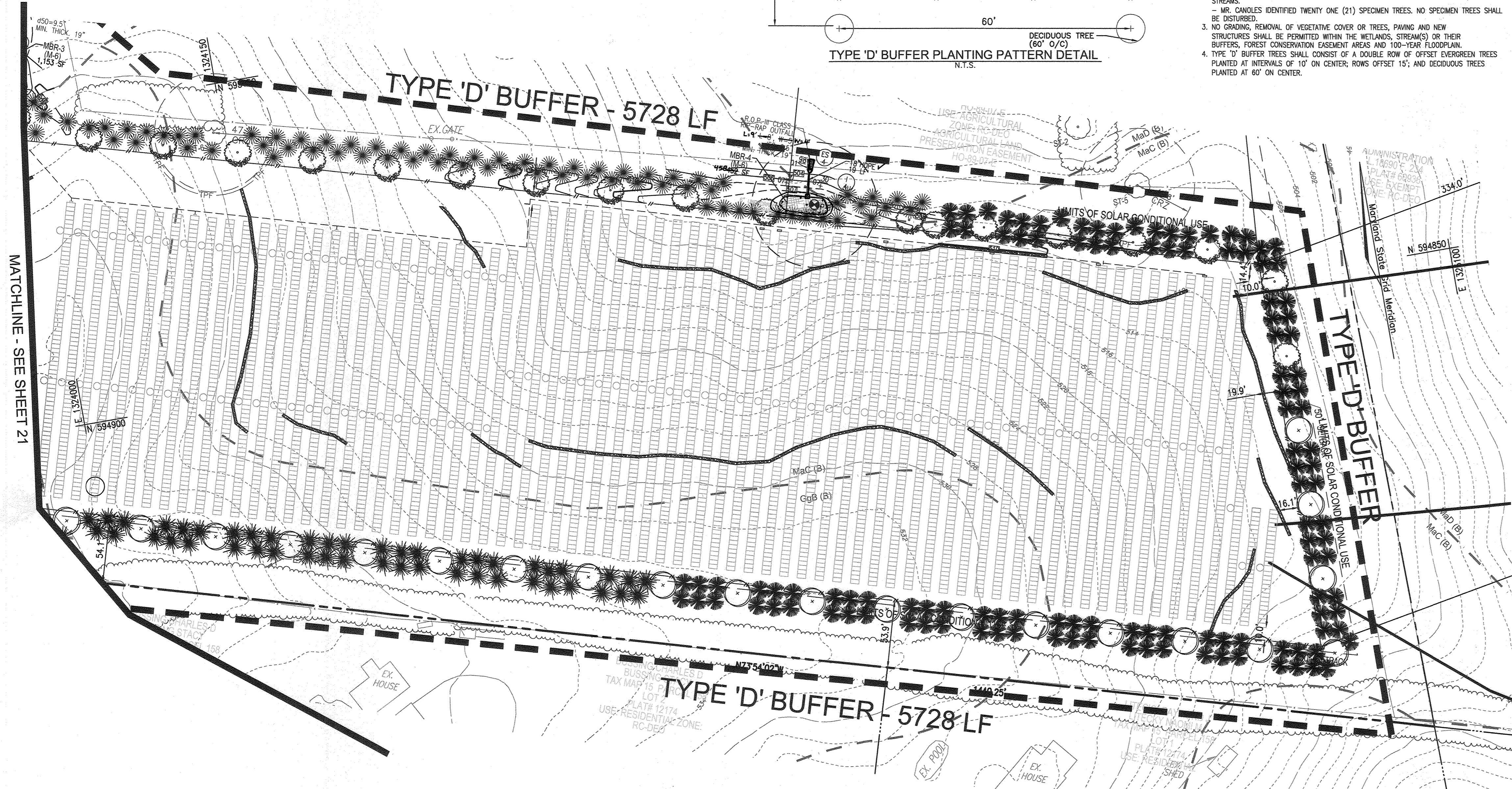
- AT THE TIME OF PLANT INSTALLATION, ALL SHRUBS AND TREES LISTED AND APPROVED ON THE LANDSCAPE PLAN, SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATIONS OF THE REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THE APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL, OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO THE APPLICABLE PLANS.
- THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING INCLUDING BOTH PLANT MATERIALS AND BERRNS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
- SHOULD ANY TREE DESIGNATED FOR PRESERVATION FOR WHICH LANDSCAPING CREDIT IS GIVEN, DIE PRIOR TO RELEASE OF BONDS, THE OWNER WILL BE REQUIRED TO REPLACE THE TREE WITH THE EQUIVALENT SPECIES OR WITH A TREE WHICH WILL OBTAIN THE SAME HEIGHT, SPREAD, AND GROWTH CHARACTERISTICS. THE REPLACEMENT TREE MUST BE A MINIMUM OF 3 INCHES IN CALIPER AND INSTALLED AS REQUIRED IN THE HOWARD COUNTY LANDSCAPE MANUAL.
- PLANTINGS SHOWN HEREON ARE THE RESPONSIBILITY OF THE DEVELOPER TO INSTALL DURING THE CONSTRUCTION OF THE FINAL PLAN.
- SURETY FOR THE PROPOSED LANDSCAPING SHALL BE BASED ON THE NUMBER OF PLANTINGS REQUIRED.

SCHEDULE A PERIMETER LANDSCAPE EDGE		
CATEGORY	ADJACENT TO ROADWAYS AND PERIMETER PROPERTIES	TOTAL
PERIMETER FRONTAGE DESIGNATION	D	
LANDSCAPE TYPE	D	
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	5728	
CREDIT FOR EXISTING VEGETATION (YES/NO LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	
CREDIT FOR WALL, FENCE OR BERM (YES/NO LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	
NUMBER OF PLANTS REQUIRED		
SHADE TREES	1:50 = 95	95
EVERGREEN TREES	1:10 = 571	571
NUMBER OF PLANTS PROVIDED		
SHADE TREES	95	95
EVERGREEN TREES	571	571
OTHER TREES (2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION) EX. SPECIMEN TREES TO REMAIN DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED		

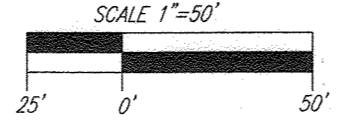
**LANDSCAPE SCHEDULE NOTES:**

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAS SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH AAS PLANTING SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
- CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

MATCHLINE - SEE SHEET 21



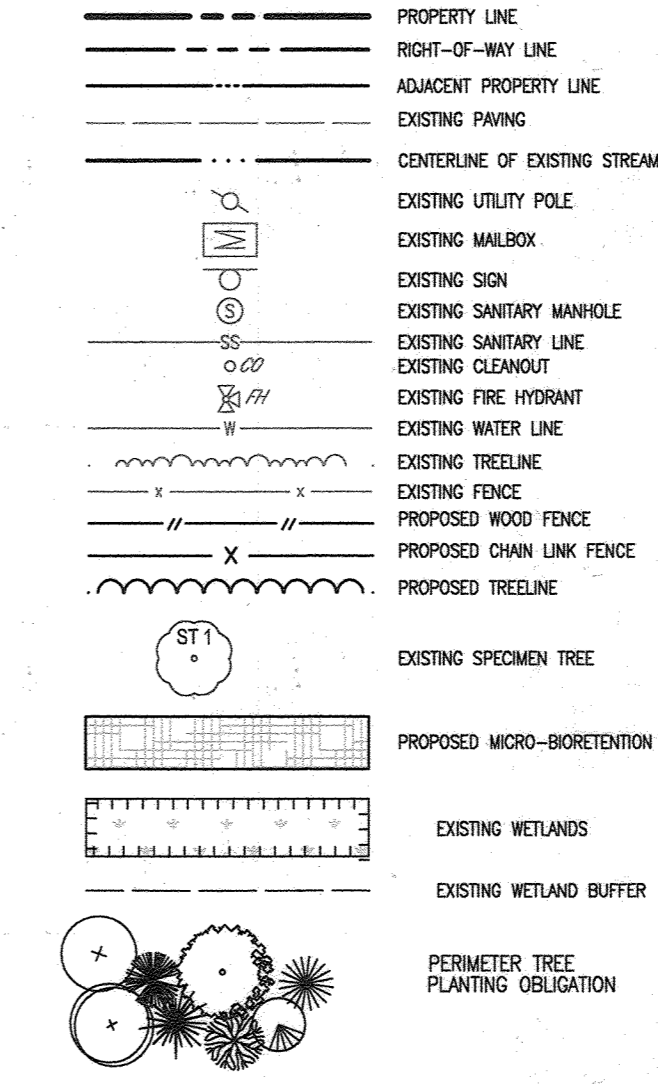
**LANDSCAPE PLAN**  
SCALE: 1"=50'



PERIMETER LANDSCAPE EDGE LANDSCAPE SCHEDULE				
KEY	QUAN.	BOTANICAL NAME	SIZE	REM.
<b>SHADE</b>				
AR	32	ACER RUBRUM 'OCTOBER GLORY' / OCTOBER GLORY RED MAPLE	2 1/2"-3" CAL.	B & B
AG	32	ACER GINNALA / AMUR MAPLE	2 1/2"-3" CAL.	B & B
BN	31	BETULA NIGRA HERITAGE / HERITAGE CLUMP BIRCH	2 1/2"-3" CAL.	B & B
<b>EVERGREEN</b>				
PS	115	PINUS STROBUS / EASTERN WHITE PINE	6"-8" HGT.	B & B
IO	114	ILEX OPECA / AMERICAN HOLLY	5"-6" HGT.	B & B
CL	114	CUPRESSOCYPARIS LEYLANDI / LEYLAND CYPRESS	5"-6" HGT.	B & B
CD	114	CEDRUS DEODARA / DEODAR CEDAR	6"-8" HGT.	B & B
PA	114	PICEA ABIES / NORWAY SPRUCE	6"-8" HGT.	B & B

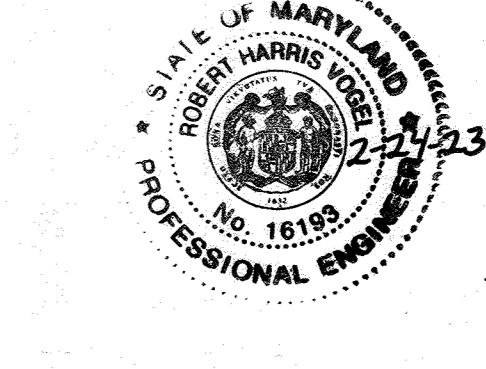
NOTE: WITH PERMISSION FROM HOWARD COUNTY, PLANTINGS SPECIFIED HEREON MAY BE SUBSTITUTED WITH APPROVED SPECIES LISTED IN APPENDIX B & C OF THE HOWARD COUNTY LANDSCAPE MANUAL.

**LEGEND:**



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 Chief, Development Engineering Division  
 Chief, Division of Land Development  
 Director

**DEVELOPER'S/BUILDER'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 CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.  
 Signature of Developer: *Brian Schaefer*  
 Date: 8/19/21



**AS-BUILT CERTIFICATION FOR PSWM**  
 I HEREBY CERTIFY THAT THE PLAN SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREAS ARE SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWIM FACILITY.  
 P.E. NAME: *Robert H. Vogel* P.E. # 16193 DATE: 2-24-23

**DEVELOPER**  
 KDC SOLAR MARYLAND, LLC  
 1420 US HIGHWAY 206, SUITE 120  
 BEDMINSTER, NJ 07921  
 PHONE: 908-955-4360

**OWNER**  
 TRIPLE CREEK FARM PROPERTIES LLC  
 12855 ROUTE 144  
 WEST FRIENDSHIP, MD 21794  
 PHONE:

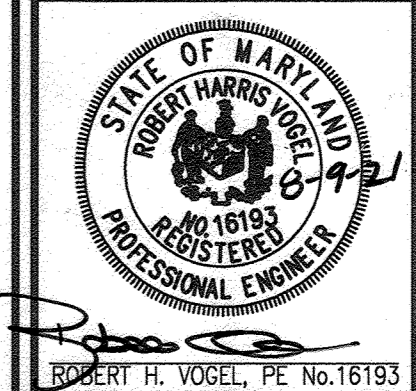
NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN**  
**LANDSCAPE PLAN, NOTES AND DETAILS**  
**TRIPLE CREEK SOLAR**  
 12855 FREDERICK ROAD (MD 144), WEST FRIENDSHIP, MD 21794  
 LIBER 17387 FOLIO 272

TAX MAP 15 BLOCK 10  
 3RD ELECTION DISTRICT

ZONED RC-DEO  
 PARCELS 74 & 258  
 HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
 ENGINEERS • SURVEYORS • PLANNERS  
 3300 NORTH RIDGE ROAD, SUITE 110 TEL: 410.461.7666  
 ELLICOTT CITY, MD 21043 FAX: 410.461.8961



**PROFESSIONAL CERTIFICATE**  
 DESIGN BY: RHV  
 DRAWN BY: KG/IMH  
 CHECKED BY: RHV  
 DATE: JULY 2021  
 SCALE: AS SHOWN  
 W.O. NO.: 41657

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
 EXPIRATION DATE: 09-27-2022

21 SHEET OF 21

AS-BUILT DECEMBER 2022