

# SITE DEVELOPMENT PLAN

## MACALPINE

### LOT 11

#### 2nd ELECTION DISTRICT

#### HOWARD COUNTY, MARYLAND

SOILS CHART - SOIL SURVEY HOWARD COUNTY, MARYLAND					
SYMBOL	HYDROLOGIC GROUP	HYDROLOGIC GROUP	ALTERNATE GROUP	NAME	k-VALUE
LoB	B			LEGORE-MONTALTO-URBAN LAND COMPLEX 0 TO 8 PERCENT SLOPES	0.64

SOILS MAP # 13.

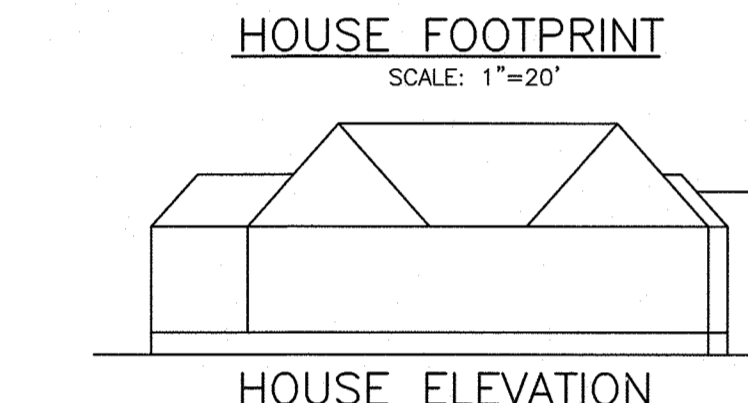
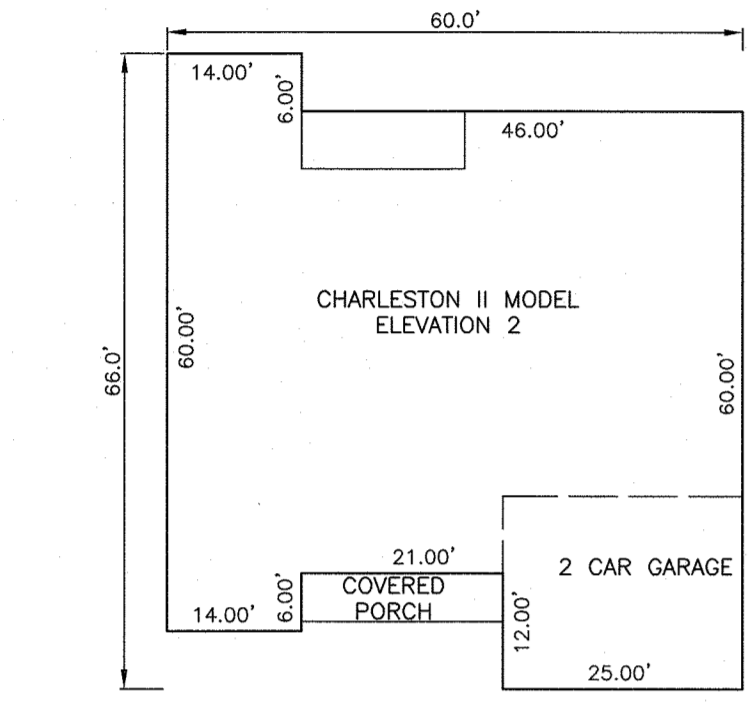
**ESD SWM CHART**

ESD SWM SUMMARY TABLE													
FACILITY	D.A.	MDE Type	Total Da	Imperious Area	Qe	AT 80%		AF Min.	Depth/Gal	Required	ESD (CF)		REV
						Required	Provided				Provided	Pa(Provided)	
SW-1		M-8	1,730	1,730	1.52	277	210	PASS	NA	219	219	1.6	
SW-2		M-8	1,582	1,582	1.52	253	210	PASS	NA	200	200	1.6	
PP-1		A-2	1,750	1,750	1.52	525	1012	PASS	2.00	222	304	2.2	
<b>TOTAL TREATED</b>						<b>6,062</b>	<b>6,062</b>			<b>641</b>	<b>723</b>	<b>1.8</b>	
<b>SITE TOTAL</b>						<b>5,062</b>	<b>5,062</b>						

**10-100 YEAR SWM STORAGE CHART**

FACILITY TYPE	STORM	EXISTING RUNOFF	PROPOSED RUNOFF**	STORAGE REQUIRED	STORAGE PROVIDED
STONE STORAGE CHAMBER	3.5HR/6.6IN.	1.8 cfs	3.3 cfs	1246 cf	1246 cfs @ 446.20
STONE STORAGE CHAMBER	10 YEAR	0.5 cfs	1.21 cfs	2030 cf	2030 cfs @ 447.28
STONE STORAGE CHAMBER	100 YEAR	1.91 cfs	3.04 cfs	3514 cf	3514 cfs @ 449.30

\*\* DEVELOPED RUNOFF BEFORE ROUTING THROUGH FACILITY.  
COMPLETE STORAGE OF THE 100 YEAR IS PROVIDED IN THE STONE CHAMBER. THEREFORE, THE 2016 FLOOD (3.5HR/6.6IN) STORM EVENT HAS BEEN MANAGED.



- LEGEND**
- EXISTING CONTOURS: 368, 370
  - PROPOSED CONTOURS: 369
  - SOILS DELINEATION: GbC
  - EXISTING FENCE: X-X
  - PROPOSED HOUSE: [House Footprint]
  - SWM BORINGS: [Boring Symbols]
  - GRASS SWALE (M-8): [Swale Symbol]
  - POROUS PAVING (A-2): [Paving Symbol]
  - STONE CHAMBER (10-100YR, 3.5HR/6.6IN STORAGE): [Chamber Symbol]
  - SUPER SILT FENCE: SSF
  - EROSION CONTROL MATTING: ECM
  - LIMIT OF DISTURBANCE: [Line Symbol]
  - STABILIZED CONSTRUCTION ENTRANCE: [Entrance Symbol]
  - DRAINAGE AREA: RD
  - ROOF LEADER LOCATION: [Arrow Symbol]

ENGINEER'S CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*C. Malagan* 8-31-21  
ENGINEER

DEVELOPER'S CERTIFICATE

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

*D. Diniz* 8/31/21  
DEVELOPER

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

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

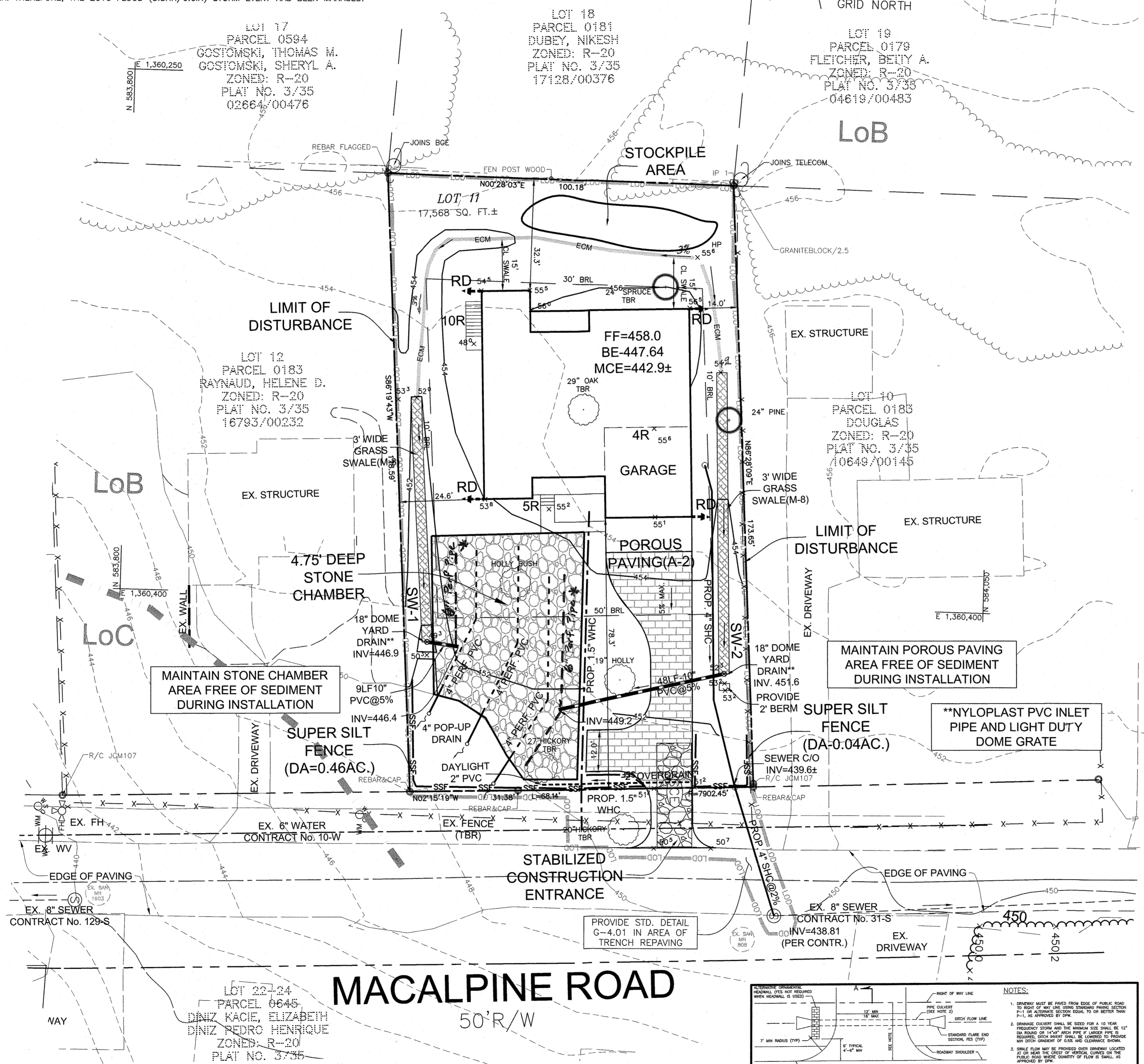
*A. Bratton* 09/09/21  
HOWARD SCD

APPROVED: DEPARTMENT OF PLANNING AND ZONING

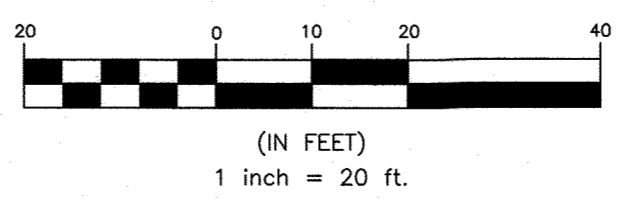
*[Signature]* 10/28/21  
CHIEF, DIVISION OF LAND DEVELOPMENT

*[Signature]* 10/19/21  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

*[Signature]* 11-4-21  
DIRECTOR

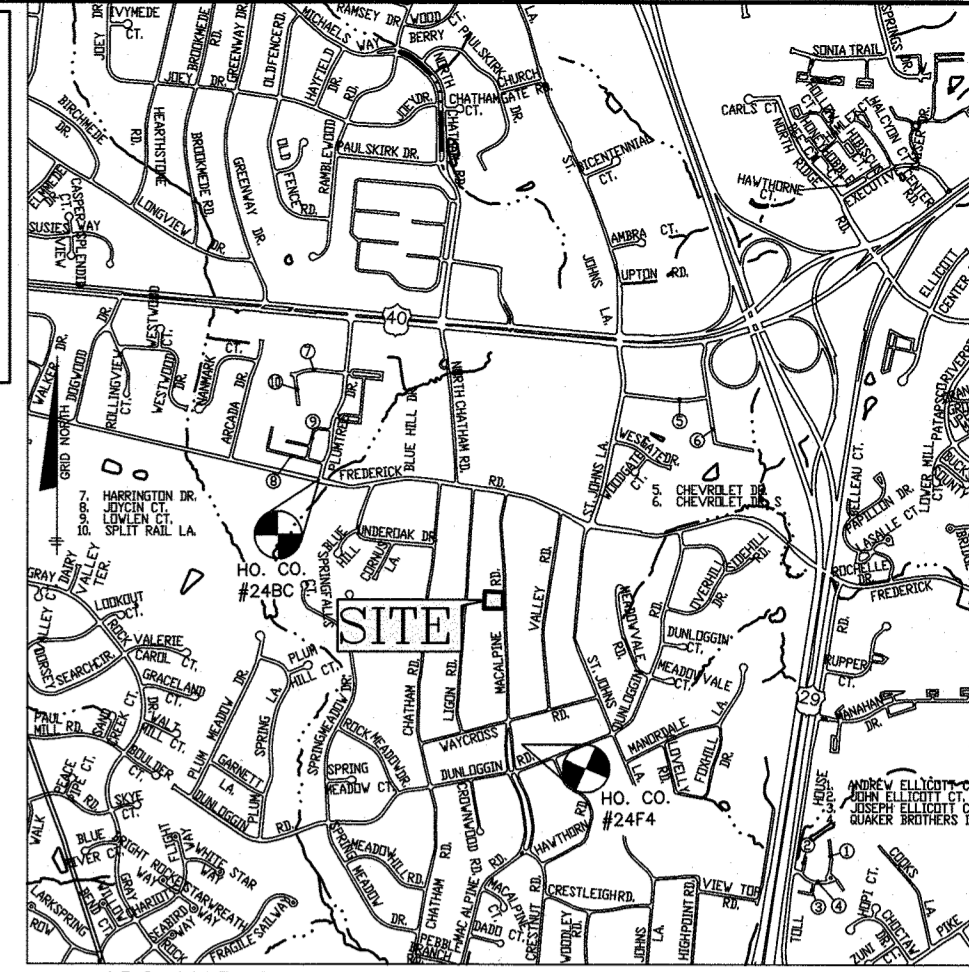


\* Install horizontal and reducers to install 6" per ft pipe to distribute runoff within stone chamber. Cap ends. Pipes should be installed as flat as possible.



**BENCH MARKS NAD '83**

HO. CO. 24F4	ELEV. 386.118
STAMPED DISC ON CONCRETE MONUMENT, AT MACALPINE ROAD SOUTH OF WAYCROSS ROAD	
N 582,298.642	E 1,360,571.016
HO. CO. 24B8	ELEV. 364.798
STAMPED DISC ON CONCRETE MONUMENT, ENTRANCE TO R.C. LIBRARY, FREDERICK ROAD	
N 585,058.416	E 1,358,312.254



**SHEET INDEX**

No.	DESCRIPTION
1	SITE DEVELOPMENT, STORMWATER MANAGEMENT AND GRADING PLAN
2	SEDIMENT CONTROL NOTES AND DETAILS AND STORMWATER MANAGEMENT DETAILS

**GENERAL NOTES**

- SUBJECT PROPERTY IS ZONED R-20 PER THE 10-6-2013 COMPREHENSIVE ZONING PLAN.
- THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, DATED OCTOBER 7, 2007.
- PROJECT LIMITS ARE BASED ON A BOUNDARY SURVEY PERFORMED BY BENCHMARK ENGINEERING, INC., ON OR ABOUT DECEMBER 2018.
- EXISTING TOPOGRAPHY IS TAKEN FROM A FIELD RUN SURVEY WITH CONTOUR INTERVAL OF 2' PREPARED BY BENCHMARK ENGINEERING, INC., DATED AUGUST 2020.
- THE COORDINATES SHOWN HEREON ARE BASED UPON HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 24B8 AND 24F4 WERE USED FOR THIS PROJECT.
- THERE ARE NO STEEP SLOPES (25% OR GREATER) IN EXCESS OF 20,000 SF ON THIS SITE.
- THERE ARE NO FLOODPLAINS, STREAMS, WETLANDS OR THEIR BUFFERS OR FORESTS LOCATED ON-SITE.
- TO THE BEST OF OUR KNOWLEDGE THERE ARE NO CEMETERIES OR HISTORIC STRUCTURES LOCATED ON THIS SITE.
- A NOISE STUDY IS NOT REQUIRED FOR THIS SITE.
- THIS SITE IS LOCATED WITHIN THE METROPOLITAN DISTRICT AND THE PLANNED SERVICE AREA. WATER AND SEWER WILL BE PUBLIC.
- THE SITE AREA IS LESS THAN 40,000 SF. THEREFORE, THE SITE SHALL BE EXEMPT FROM THE REQUIREMENTS OF SECTION 16.1202(B)(1)(i) OF THE SUBDIVISION REGULATIONS.
- THIS SUBDIVISION WAS CREATED PRIOR TO THE EFFECTIVE DATE OF THE 1993 EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE ENACTMENT OF THE LANDSCAPE MANUAL AND THESE LOTS ARE CONSIDERED INTERNAL TO THE DEVELOPMENT. LANDSCAPING IS NOT REQUIRED.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
  - WIDTH - 12' (16' SERVING MORE THAN ONE RESIDENCE).
  - SURFACE - 6" OF COMPACT CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MIN.).
  - GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM 45' TURNING RADIUS.
  - STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING).
  - DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOODPLAIN WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY.
  - STRUCTURE CLEARANCES - MINIMUM 12 FEET.
  - MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
- IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS, OR EXTERIOR STAIRWAYS NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACKS. PORCHES OR DECKS, OPEN OR ENCLOSED, MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK.
- IN ACCORDANCE WITH SECTION 16.108.(b)(28.1)(v), A PRE-SUBMISSION COMMUNITY MEETING FOR THIS PROJECT IS NOT REQUIRED, AS THIS PROJECT IS PART OF A RECORDED SUBDIVISION THAT AUTHORIZED AN EQUAL OR GREATER NUMBER OF RESIDENTIAL UNITS THAN PROPOSED ON THIS PLAN.
- 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 THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- EXISTING UTILITIES SHOWN ARE BASED ON A FIELD SURVEY, HOWARD COUNTY GIS, AND INFORMATION OF RECORD.
- ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE BUILDER'S EXPENSE.
- SIC ELEVATIONS SHOWN ARE LOCATED AT THE PROPERTY LINE.
- STORMWATER MANAGEMENT METHODS ARE DESIGNED BASED ON THE 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUMES I AND II. TREATMENT IS PROVIDED USING ENVIRONMENTAL SITE DESIGN METHODS, INCLUDING GRASS SWALES (M-8) AND POROUS PAVING (A-2). THE FACILITIES SHALL BE PRIVATELY OWNED AND MAINTAINED BY THE LOT OWNER. THIS SITE IS ALSO SUBJECT TO COUNCIL BILL CR#123-2019 THAT REQUIRES 10 YEAR & 100 YEAR MANAGEMENT AND MANAGEMENT OF THE 3.5 HOUR 6.6 INCH STORM EVENT. THE SITE PROVIDES THE REQUIRED 10 YEAR, 100 YEAR AND THE 3.5 HOUR 6.6 INCH MANAGEMENT BY THE USE OF RETENTION WITHIN A STONE CHAMBER.
- EXISTING ZONING BUILDING RESTRICTION LINE, OTHER RESTRICTIONS MAY APPLY.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY.
- THE STAKING OF FOUNDATIONS PRIOR TO CONSTRUCTION TO ENSURE COMPLIANCE WITH REGULATORY BUILDING RESTRICTION LINES IS RECOMMENDED.
- TEMPORARY OR PERMANENT SEEDING AND STABILIZATION IS TO BE PERFORMED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR OR AT THE TIMEFRAME PROVIDED WITHIN THE 2011 MD STANDARDS & SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, WHICHEVER IS MORE STRINGENT.
- FOR DRIVEWAY ENTRANCE DETAIL, SEE HOWARD COUNTY STANDARDS DETAIL 6.06.
- IF ANY WELL OR SEPTIC ARE FOUND BEFORE AND OR DURING CONSTRUCTION THEY MUST BE PROPERLY ABANDONED WITH DOCUMENTATION SENT TO THE HEALTH DEPT.
- PREVIOUS HOWARD COUNTY FILE REFERENCE: ECP-21-018, PLAT BOOK 3, FOLIO 35 DATED OCTOBER 9, 1946.
- A GEOTECHNICAL ANALYSIS WAS PREPARED BY GEOLAB, INC. DATED SEPTEMBER 2020.

**ADDRESS CHART**

PARCEL NUMBER	ADDRESS
182	3640 MACALPINE ROAD

**PROJECT BACKGROUND INFORMATION**

PRESENT ZONING: R-20  
LOCATION: TAX MAP 24 - GRID 11 - PARCEL 182  
APPLICABLE DPZ FILE REFERENCES: ECP-21-018, PB 3-35  
DEED REFERENCES: L 19641 / F 160  
PROPOSED USE OF SITE: SINGLE FAMILY DETACHED  
PROPOSED WATER AND SEWER SYSTEMS: PUBLIC WATER & SEWER

**SITE ANALYSIS DATA CHART**

A) TOTAL PROJECT AREA	0.40 AC.
B) AREA OF THIS PLAN SUBMISSION	0.40 AC.
C) APPROXIMATE LIMIT OF DISTURBANCE	0.39 AC.
D) PRESENT ZONING:	R-20 RESIDENTIAL
E) PROPOSED USE OF SITE:	1 SINGLE FAMILY DETACHED
F) REQUIRE PARKING PER UNIT:	2.5 SPACES/UNIT
G) PROVIDED PARKING PER UNIT:	3 SPACES/UNIT (2 GARAGE, 1 DRIVEWAY)
H) APPLICABLE DPZ FILE REFERENCES:	ECP-21-018, PB 3-35
I) MAXIMUM LOT COVERAGE (BY STRUCTURE)	28%±
J) PROPOSED WATER AND SEWER SYSTEMS:	X PUBLIC ___ PRIVATE

**PERMIT INFORMATION CHART**

SUBDIVISION NAME:	SECTION/AREA:	LOT	PARCEL #
MACALPINE	BLOCK "B"	11	182

PLAT No.	GRID No.	ZONE	TAX MAP	ELECTION DISTRICT	CENSUS TRACT
PB 3 FOLIO 35	11	R-20	24	2ND	6023.06

**BENCHMARK ENGINEERING, INC.**  
ENGINEERS & LAND SURVEYORS & PLANNERS  
8480 BALTIMORE NATIONAL PIKE & SUITE 315 & ELLICOTT CITY, MARYLAND 21043  
(P) 410-465-6105 (F) 410-465-6844  
WWW.BEI-CIVILENGINEERING.COM

Professional Certification. 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. 22290, Expiration Date: 6-30-2023.

*C. Malagan* 8-31-21

OWNER/DEVELOPER: **MACALPINE**  
LOT 11  
TAX MAP: 24 GRID: 11 PARCEL: 182  
3640 MACALPINE ROAD  
ZONED: R-20  
ELECTION DISTRICT NO. 2ND HOWARD COUNTY, MARYLAND

RESIDENTIAL SITE DEVELOPMENT PLAN, STORMWATER MANAGEMENT AND GRADING PLAN

DATE: AUGUST 2021 BEI PROJECT NO. 2944  
SCALE: AS SHOWN SHEET 1 OF 2

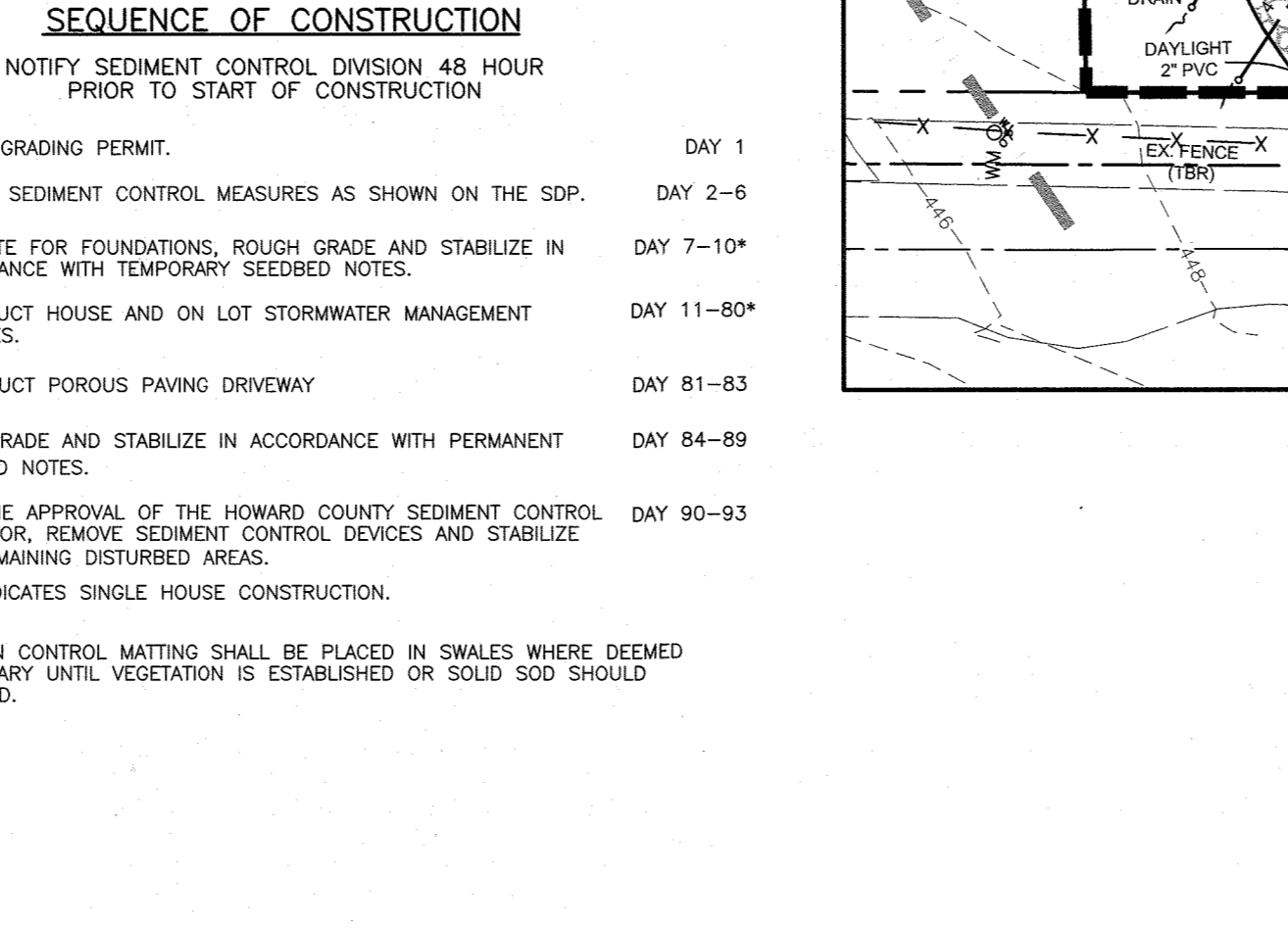
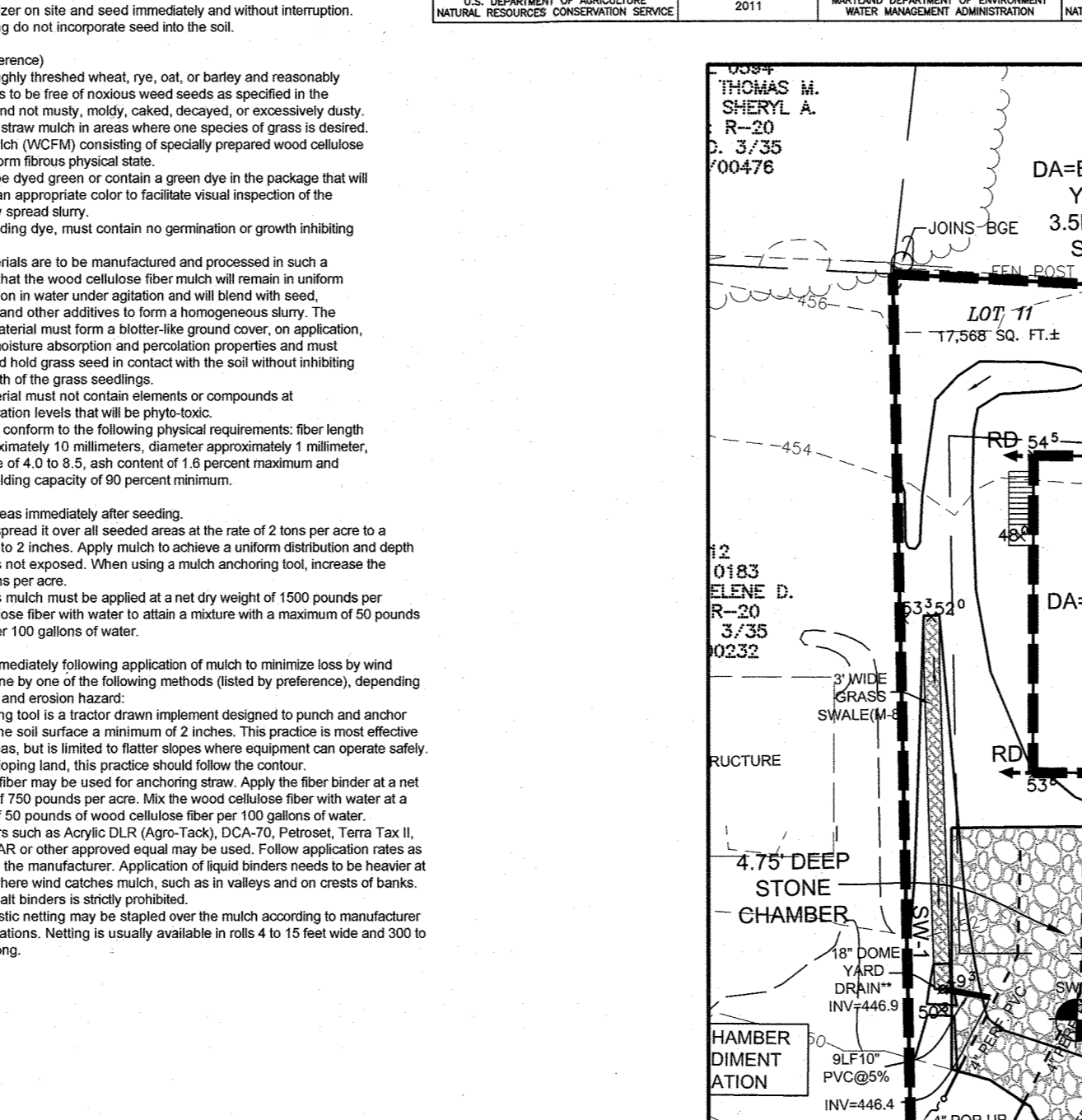
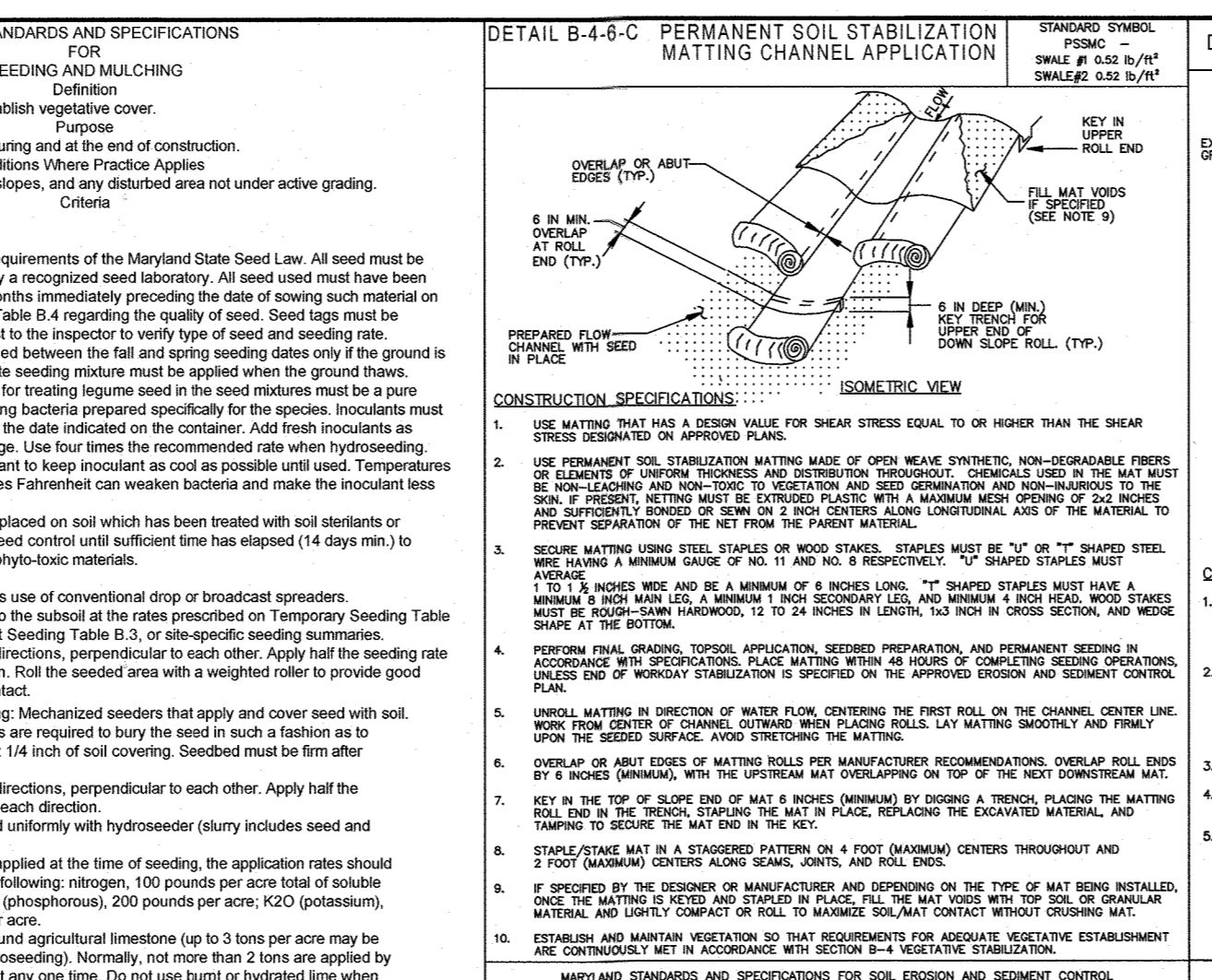
DESIGN: JCO DRAFT: JCO

B-4 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION	
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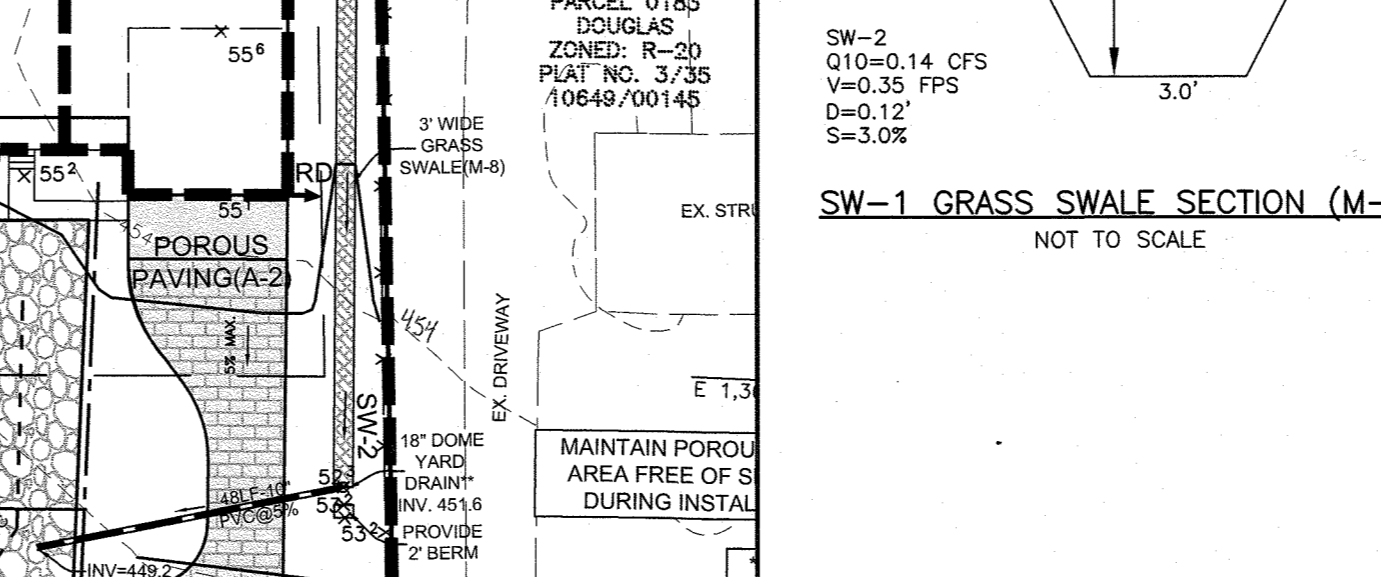
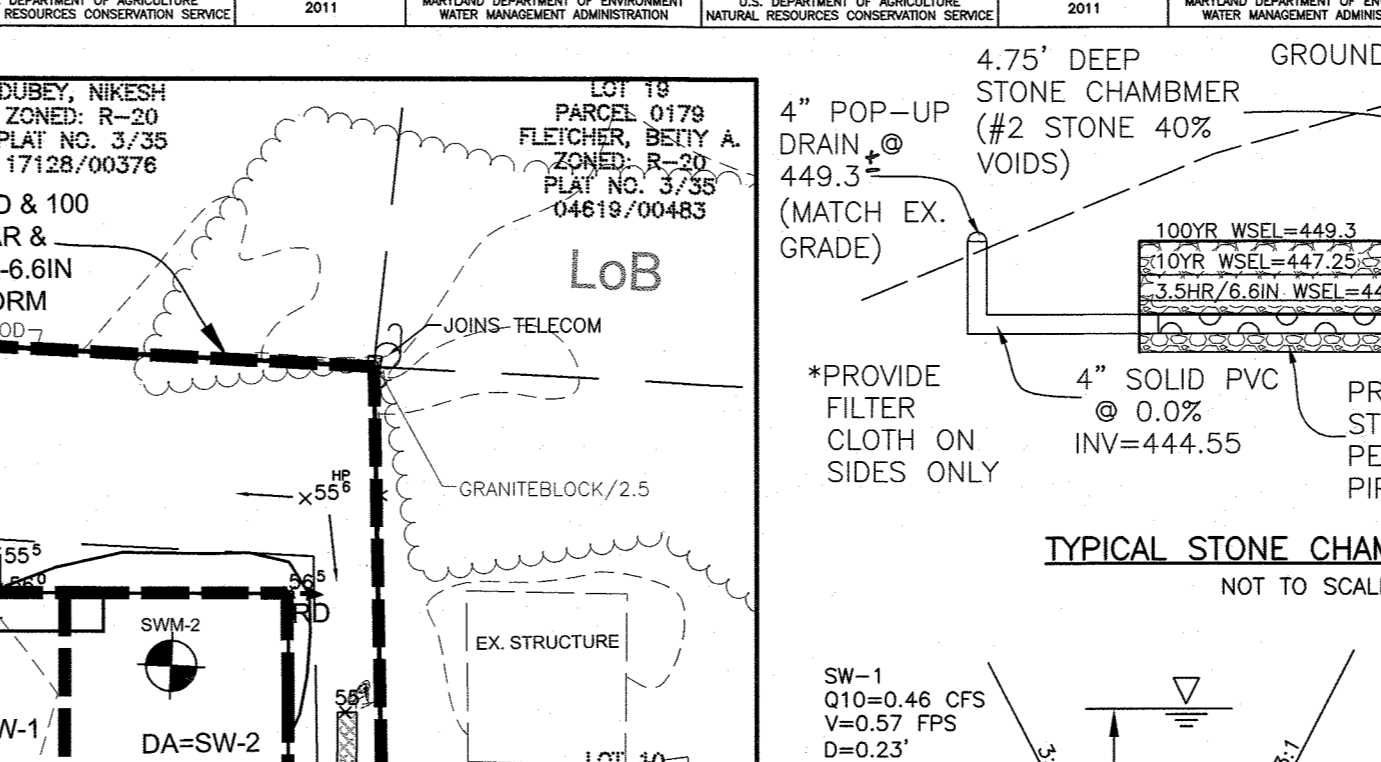
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