PUBLIC WATER AND PUBLIC SEWER WILL BE USED WITHIN THIS SITE PREVIOUS HOWARD COUNTY FILE NUMBERS: F- 11-064, BA-17-029V, WP-17-134, WP-20-123; CONTR.

14-4684-D; CONTR. 71-W; CP S-6266; ECP-19-033, SDP-18-052. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED ON THE MARYLAND STATE PLANE COORDINATE SYSTEM, HOWARD COUNTY

THE BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN BOUNDARY SURVEY PREPARED BY HANOVER

THE EXISTING TOPOGRAPHY IS TAKEN FROM A FIELD RUN SURVEY WITH TWO FOOT CONTOUR INTERVALS PREPARED BY HANOVER LAND SERVICES, INC. DATED 08/17/201

THE ALTERNATIVE COMPLIANCE REQUEST APPROVAL FROM THE FINAL SUBDIVISION PLAT REQUIREMENTS IN THIS CASE IS ONLY A MECHANISM FOR DEPARTMENT OF PLANNING AND

A SITE DEVELOPMENT PLAN WILL BE REQUIRED FOR BUILDING A SINGLE-FAMILY DWELLING

ZONING TO RECOGNIZE THE PRESENT PROPERTY CONFIGURATION FOR PARCEL NO. 752, LOT 4

 THE CONTRACTORS SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS

BGE (CONTRACTOR SERVICES) 410.787.9068 BGE (UNDERGROUND DAMAGE CONTROL 800.257.7777 410.795.1390 HOWARD COUNTY, DEPT. OF PUBLIC WORKS, BUREAU OF UTILITIES 410.313.4900 800.252.1133 12. THERE ARE NO CEMETERIES WITHIN THE PROJECT BOUNDARY. 13. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY

14. ANY DAMAGE TO THE COUNTY'S PUBLIC RIGHT-OF-WAYS, PAVING OR EXISTING UTILITIES WILL BE CORRECTED AT THE DEVELOPER'S EXPENSE. 15. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING

REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT. ANY DAMAGE TO THE

HOWARD COUNTY IN ADDITION TO MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.

LITH ITIES AND TO MAINTAIN UNINTERRUPTED SERVICE, ANY DAMAGE INCURRED DUE TO THE

CONTRACTORS OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE DEVELOPER'S EXPENSE 23. IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS. BAY WINDOWS. CHIMNEYS OR EXTERIOR STAIRWAYS NO MORE THAN 16 FEET IN WIDTH, MAY NOT PROJECT MORE THAN 4 FEET INTO ANY SETBACK, PORCH OR DECK, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK.

24. DRIVEWAY(S) SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING REQUIREMENTS AT THE DEVELOPER'S EXPENSE

WIDTH - 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE): 2) SURFACE - SIX (6") INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2"

3) GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND 45-FOOT TURNING RADIUS; STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25-LOADING); 5) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT

DEPTH OVER DRIVEWAY SURFACE: 6) MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE 25. FOR DRIVEWAY ENTRANCE DETAILS REFER TO THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV. STANDARD DETAIL R-6.06. THIS DETAIL CAN BE FOUND ON SHEET 7, SEDIMENT AND EROSION CONTROL

26. STORMWATER MANAGEMENT OBLIGATIONS FOR THIS SITE WILL BE MET BY THREE BIORETENTION FACILITIES (MG) AND THIRTEEN DRYWELLS (M-5). ON LOT FACILITIES SHALL BE DWNED AND

MAINTAINED BY THE LOT OWNER. 27. A PRIVATE RANGE OF ADDRESS SIGN ASSEMBLY SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPER'S/OWNER'S EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410.313.5752 FOR DETAILS AND COST ESTIMATES.

28 PER SECTION 16 1200 OF THE HOWARD COUNTY CODE. THIS PLAN IS SUBJECT TO FOREST CONSERVATION OBLIGATIONS. FOR THIS PROJECT, THE REFORESTATION/AFFORESTATION NET TRACT AREA OBLIGATION IS BASED ON THE HOWARD COUNTY FOREST CONSERVATION WORKSHEET AND WILL BE 0.20 ACRES OR 8.712 SQ FT. THE OBLIGATION HAS BEEN MET BY OFFSITE FOREST RETENTION OUTSIDE THE 12 DIGIT WATERSHED, AS THERE ARE NO BANKS WITHIN THE WATERSHED. THE MILLERS MILL PROPERTY, SDP-18-052 HAS BEEN USED. A REDLINE REQUEST WAS SUBMITTED AND APPORVED FOR

29. PURSUANT TO SECTION 16.1216, THE DIRECTOR OF THE DEPARTMENT OF PLANNING AND ZONING. DIRECTOR OF THE DEPARTMENT OF RECREATION AND PARKS AND THE ADMINISTRATOR OF THE OFFICE OF COMMUNITY SUSTAINABILITY, CONSIDERED AND APPROVED THE REQUEST FOR VARIANCE WITH RESPECT TO SECTION 16 1205(a)(3) OF THE FOREST CONSERVATION REGULATIONS. THE PURPOSE IS TO ALLOW THE REMOVAL OF FOUR (4) SPECIMEN TREES, PURSUANT TO SECTION 16.104, THE DIRECTOR OF THE DEPARTMENT OF PLANNING AND ZONING CONSIDERED AND APPROVED THE REQUEST FOR ALTERNATIVE COMPLIANCE WITH RESPECT TO SECTION 134(a)(1) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. THE PURPOSE IS TO PROVIDE A FEE-IN-LIEU FOR SIDEWALK CONSTRUCTION ALONG ODL FREDERICK ROAD. THE DIRECTORS DELIBERATED AND APPROVED THE APPLICATION IN A MEETING ON JUNE 24, 2021. APPROVAL OF THESE ALTERNATIVE COMPLIANCES IS

SUBJECT TO THE FOLLOWING CONDITIONS COMPLIANCE WITH THE ATTACHED DEVELOPMENT ENGINEERING DIVISION COMMENTS AND SUBJECT TO A FEE-IN-LIEU PAYMENT FOR SIDEWALKS. THE FEE-IN-LIEU WILL BE ASSESSED AND

MUST BE PAID DURING THE SITE DEVELOPMENT PLAN REVIEW PROCESS. THE REMOVAL OF THE FOUR (4) SPECIMEN TREES WILL REQUIRE THE PLANTING OF EIGHT (8) NATIVE SHADE TREES ON SITE. THE TREES SHALL BE A MINIMUM OF 3" DIAMETER AT BREAST HEIGHT AND SHALL BE SHOWN ON THE LANDSCAPING AND FOREST CONSERVATION PLAN SHEETS AS PART OF THE SITE DEVELOPMENT PLANS. THE TREES WILL BE BONDED ALONG WITH THE PERIMETER LANDSCAPING REQUIREMENTS.

30. A FUTURE SIDEWALK PROJECT IS PLANNED FOR THIS SECTION OF ROAD ALONG MARYLAND ROUTE 99. 31. SHC ELEVATIONS SHOWN ARE LOCATED AT THE PROPERTY LINE.

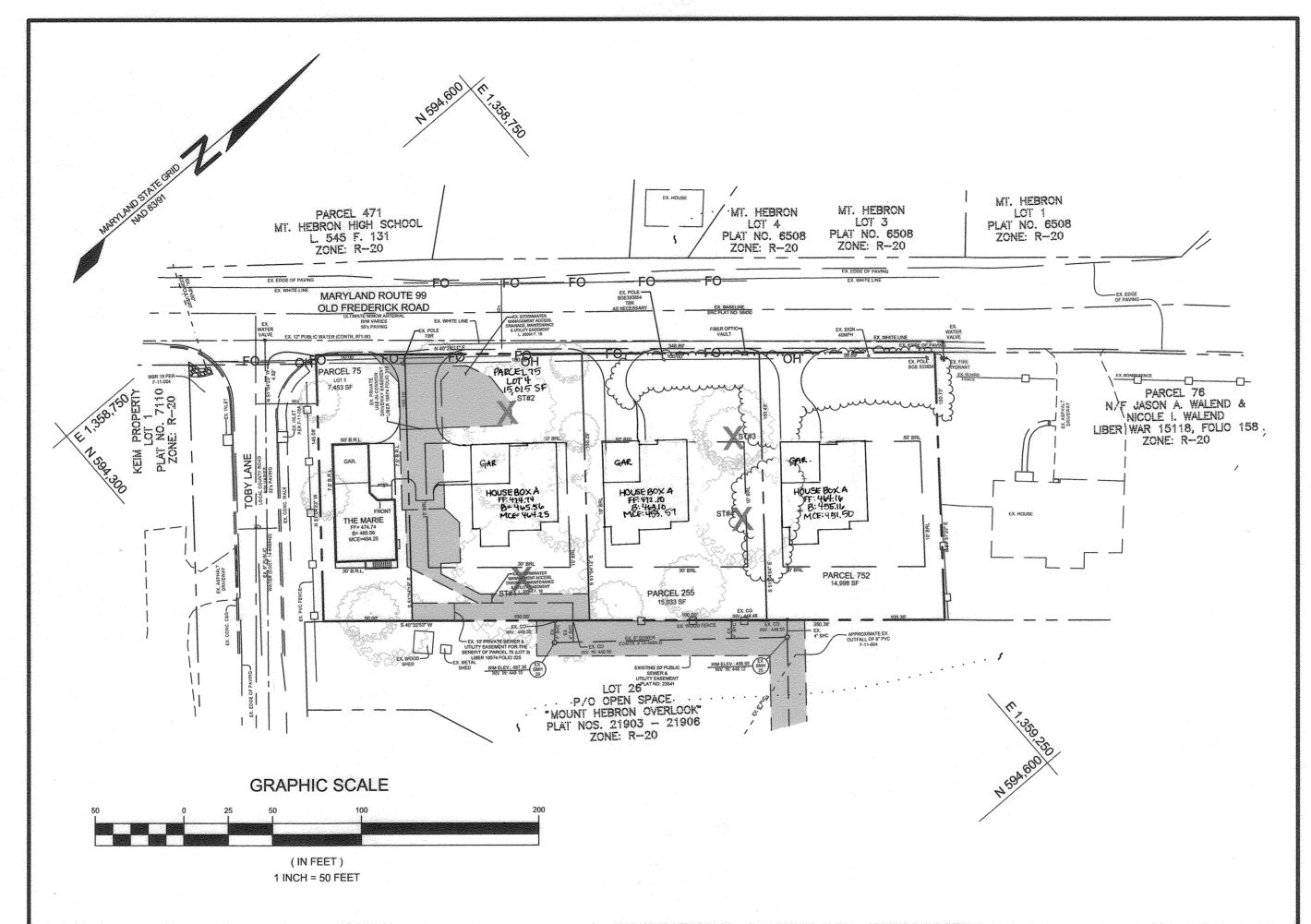
32. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISION OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY WILL BE POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$6,600.00, FOR THE REQUIRED PERIMETER LANDSCAPING TREES, AND FOR THE EIGHT (8) REQUIRED MITIGATION TREES PER WP-20-123, FOR A TOTAL OF FOUR (4) EVERGREEN TREES AND TWENTY (20) SHADE TREES. EVERGREEN TREES AT \$150.00 EACH, 4 X \$150.00 = \$600.00, AND SHADE TREES AT \$300.00 EACH, 20 X \$300.00 = \$6,000.00

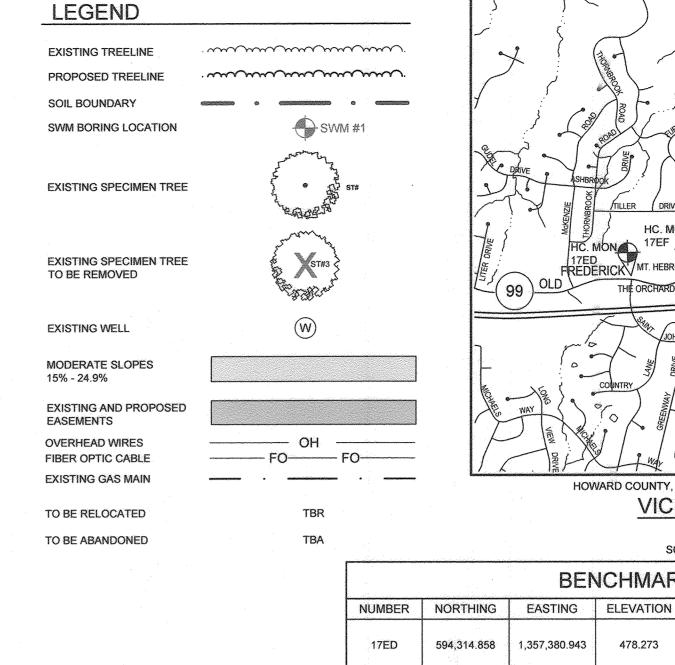
NO.

SITE DEVELOPMENT PLAN

KEIM PROPERTY

HOWARD COUNTY, MARYLAND





ENVIRONMENTAL AREA	SIZE OR USE
TOTAL PROJECT AREA	1.2062 AC ±
ROW TO BE DEDICATED	N/A
PROPOSED PROJECT AREA	1.2910 AC ±
LIMIT OF DISTURBANCE	1.2370 AC ±
GREEN OPEN AREA (LAWN)	0.8875 AC±
PROPOSED IMPERVIOUS AREA	0.3187 AC ±
PROPOSED SITE USES	SINGLE-FAMILY DETACHED DWELLING
WETLANDS	0 AC ±
WETLAND BUFFERS	0 AC ±
FLOODPLAINS	0 AC ±
FLOODPLAIN BUFFERS	0 AC ±
EXISTING FOREST	0 AC ±
SLOPES 15%-24.9%*	0.0989 AC ±
SLOPES GREATER THAN 25%	0.0000 AC ±
HIGHLY ERODIBLE SOILS	0.1240 AC ± (1)

SOIL INFORMATION HAS BEEN TAKEN FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE; WEB SOIL SURVEY

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 TWO (2) PARKING SPACES ARE REQUIRED PER

FINAL SURFACE

HMA SUPERPAVE

INTERMEDIATE SURFACE

HMA SUPERPAVE BASE

GRADED AGGREGATE BASE

OWNER DEVELOPER

BURKARD HOMES, LLC

ARNOLD, MD 21012

DWELLING AND TWO (2) HAVE BEEN PROVIDED

CALIFORNIA BEARING RATIO (CBR) | 3 TO <5 5 TO <7 | ≥7 | 3 TO <5 5 TO <7

PAVEMENT MATERIAL (INCHES) MIN HMA WITH GAB

PAVING SECTIONS

HMA SUPERPAVE FINAL SURFACE 9.5 MM, PG 64-22, LEVEL 1 (ESAL)

HMA SUPERPAVE INTERMEDIATE

19.0 MM, PG 64-22 LEVEL 1 (ESAL)

HEAVY TRUCKS ARE DEFINED AS THOSE WITH SIX (6) WHEELS OR

HMA SUPERPAVE LAYERS SHALL BE PLACED IN APPROPRIATE

COMPACTED LIFT THICKNESS: 19.0 MM BASE (2.0" MIN TO 4.0" MAX).

12.5 MM SURFACE (1.5" MIN TO 3.0" MAX), AND 9.5 MM SURFACE (1.0"

GRADED AGGREGATE BASE (GAB) TO BE PLACED AND COMPACTED

THE INTERMEDIATE SURFACE COURSE LAYER MUST BE PLACED

REQUIRED PRIOR TO SUBSTANTIAL COMPLETION INSPECTION AND

IN LIEU OF PLACING THE INTERMEDIATE SURFACE COURSE LAYER

FOR COMMERCIAL / INDUSTRIAL ENTRANCE APRONS WITHIN THE

LAYER CAN BE ADDED TO THE REQUIRED THICKNESS OF THE BASE

THE CONSTRUCTION DRAWINGS SHALL SHOW THE PAVING SECTION

WITHIN 2 WEEKS OF PLACEMENT OF BASE COURSE, AND IS

COUNTY RIGHT-OF-WAY WHERE AUXILIARY LANES ARE NOT

REQUIRED. THE THICKNESS OF THE INTERMEDIATE PAVEMENT

ROAD CLASSIFICATION AND CBR VALUE FOR EACH ROADWAY

GRADED AGGREGATE BASE (GAB)

\triangle	
	SHEET INDEX
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	REVISED GRADING PLAN
3	GRADING PLAN
4	REVISED SEDIMENT AND EROSION CONTROL PLAN
5	SEDIMENT AND EROSION CONTROL PLAN
6	SEDIMENT AND EROSION CONTROL NOTES
7	SEDIMENT AND EROSION CONTROL DETAILS
8	REVISED CULVERT DRAINAGE AREA MAP FOR PARCEL 76 AND 752
9	REVISED STORM DRAIN AND STORMWATER MANAGEMENT DRAINAGE AREAM
10	REVISED STORMWATER MANAGEMENT PROFILES
11	REVISED STORMWATER MANAGEMENT PROFILE, NOTES & DETAILS
12	TRENCH DRAIN SCHEDULE AND DETAILS
13	REVISED FOREST CONSERVATION PLAN
14	REVISED LANDSCAPING PLAN

HOWARD COUNTY, MARYLAND ADC MAP 20 GRID E4

VICINITY MAP

SCALE: 1"=2000"

6.3' EAST OF LIGHT POLE IN PARKING WES

OF MT HEBRON HS ENTRANCE, 9.6' SOUTH

F LIGHT POLE IN MEDIAN OPPOSITE OF H

NE SIDE OF ROUTE 99 2..6' FROM ED OF PAVEMENT. 86' NE OF BGE POLE 213287

BENCHMARKS

ADDRESS CHART

STREET ADDRESS

9345 OLD FREDERICK ROAD

9343 OLD FREDERICK ROAD

9339 OLD FREDERICK ROAD

9329 OLD FREDERICK ROAD

1,357,380,943

1,358,578,648

594,243.880

PARCEL

75, LOT 3

75, LOT 4

255 752

STORMWATER MANAGEMENT PRACTICES						
LOT/ PARCEL NUMBER	FACILITY NAME & NUMBER	PRACTICE TYPE	PUBLIC	PRIVATE	PRIVATE, JOINTLY MAINTAINS	
LOT 3, 75	DRYWELL-A	M-5	-	Х	NO	
LOT 3, 75	DRYWELL-B	M-5		X	NO	
LOT 3, 75	DRYWELL-C	M-5	d access	Х	NO	
LOT 4, 75	MICRO-BIORETENTION FACILITY #1	M-6	-	X	YES	
LOT 4, 75	MICRO-BIORETENTION FACILITY #2	M-6	-	Х	YES	
LOT 4, 75	DRYWELL-A	M-5	-	Х	NO	
LOT 4, 75	DRYWELL-B	M-5	-	Х	NO	
LOT 4, 75	DRYWELL-C	M-5	-	Х	NO	
PARCEL 255	MICRO-BIORETENTION FACILITY #3	M-6	-	X	NO	
PARCEL 255	DRYWELL-A	M-5	<u>.</u>	X	NO	
PARCEL 255	DRYWELL-B	M-5	-	X	NO	
PARCEL 255	DRYWELL-C	M-5	J /	Х	NO	
PARCEL 752	DRYWELL-A	M-5		X	NO	
PARCEL 752	DRYWELL-B	M-5		X	NO	
PARCEL 752	DRYWELL-C	M-5	.	X	NO	
PARCEL 752	DRYWELL-D	M-5	No. 30 feet and	X	NO	

HOUSE MODEL TEMPLATES

COVER SHEET

KEIM PROPERTY **ZONED: R-20 SINGLE FAMILY DETACHED**

TAX MAP 17 GRID 16 PARCELS 75 (LOTS 3 & 4), 255 & 752

2ND ELECTION DISTRICT

ENGINEERING Woodbine, Maryland 21797 Phone: 443.325.5076 Fax: 410.696.2022

GROUP, LLC

ICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 32025, EXPIRATION DATE: JUNE 20, 2023

DATE: NOVEMBER 4, 2021 Email: info@sillengineering.com Civil Engineering for Land Development PROFESSIONAL CERTIFICATION: LHEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME. AND THAT LAM A DULY

PROFILE PROFILE THE MARIE THE STACEY HOUSE TEMPLATES STORMWATER MANAGEMENT INFORMATION **FACILITY NAME &** PRACTICE A SEE SHEET FIFTEEN FOR **PARCEL** PUBLIC PRIVATE MAINTAINS TYPE NUMBER NUMBER ADDITIONAL HOUSE TEMPLATES LOT 4, 75 MICRO-BIORETENTION FACILITY #1 LOT 4, 75 MICRO-BIORETENTION FACILITY #2 PARCEL 255 MICRO-BIORETENTION FACILITY #2 M-6 - X NO

STORMWATER MANAGEMENT **NOTES & DESIGN NARRATIVE**

BELOW IS A LIST TO DESCRIBE THE STORMWATER MANAGEMENT REQUIREMENTS AND ACHIEVEMENTS FOR THE SITE PER THE 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUMES I AND II, AS AMENDED BY THE STORMWATER MANAGEMENT ACT OF 2007.

ENVIRONMENTALLY SENSITIVE AREAS HAVE BEEN AVOIDED WHERE POSSIBLE. THE SITE WAS DESIGNED TO DISTURB AREAS OF STEEP SLOPES ONLY WHEN NECESSARY. THE LIMIT OF DISTURBANCE AND ALL DEVELOPMENT ACTIVITY IS OVER 140' AWAY FROM THE 100 YEAR FLOODPLAIN ON-SITE. NO STREAMS OR WETLANDS EXIST ON-SITE AND NO FOREST EXIST WITHIN THE PROJECT AREA

TO THE GREATEST EXTENT PRACTICABLE THE NATURAL FLOW PATTERNS OF THE SITE HAVE BEEN MAINTAINED. IMPERVIOUS AREAS HAVE BEEN REDUCED BY POSITIONING THE BUILDING AS CLOSE TO THE STREET AS THE

4. A STABILIZED CONSTRUCTION ENTRANCE, SILT FENCES, AND SUPER SILT FENCES ARE USED AS SEDIMENT AND FROSION CONTROL MEASURES 5. THE STORMWATER MANAGEMENT OBLIGATIONS FOR THESE PARCELS WILL BE MET BY THE USE OF DRYWALLS

(M-5) AND MICRO-BIORETENTION FACILITIES (M-6). 6. ACCORDING TO THE DEFINITION IN THE HOWARD COUNTY CONSERVATION MANUAL, JUNE 1999, NO FOREST EXISTS ON THIS SITE.

PERMIT INFORMATION CHART KEIM PROPERTY 75 LOT 3, 75 LOT 4, 255, 75 GRID# ZONING TAX MAP # | ELECT. DIS. CENSUS TRACT 602100.00 17888/122 17888/127 SEWER CODE CONTRACT 71-W

1511 RITCHIE HIGHWAY, STE 305 0 0 TIM BURKARD TIMEBURKARDHOMES. LOM 443-325-5417 CONTRACT 4684-D CONTRACT 14-4684-D

ROAD AND STREET

RESIDENTIAL AND

NON-RESIDENTIAL

ARKING DRIVE AISLES NON-RESIDENTIAL

WITH NO MORE

TRUCKS PER DAY

MORE INCLUDING GARBAGE TRUCKS.

IN 6" MAX COMPACTED THICKNESS LAYERS.

THAN 2 HEAVY

MIN TO 2.0" MAX)

BOND REDUCTION.

PARKING BAYS:

CHIEF, DEVELOPMENT ENGINEERING DIVISION CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

02/25/2022 DATE

REVISION TO THE HOUSES, DRYWELLS, GRADING, DRNEWAYSANDSH COWHC

DESCRIPTION

REVISIONS

ONPARCEL 75 LOT 4, PARCEL 255, AND PARCEL 752 REMOVAL OF THE HOUSE

TEMPLATES, REVISION TO THE SITE ANALYSIS DATA CHART AND THE SHEET INDEX AND GENERAL NOTES 23 & 26. REVISE TOTAL SHEET NUMBER

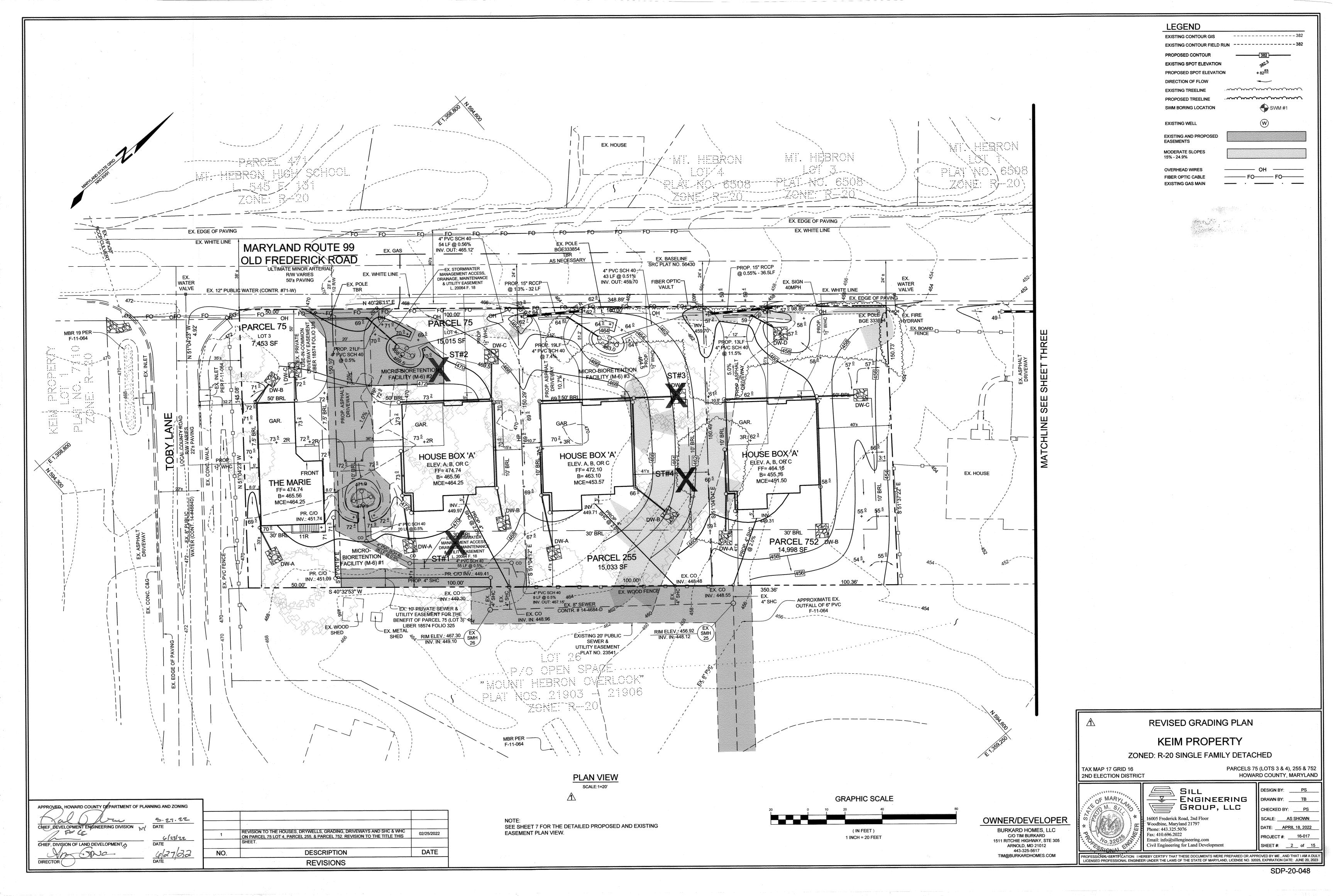
SDP-20-048

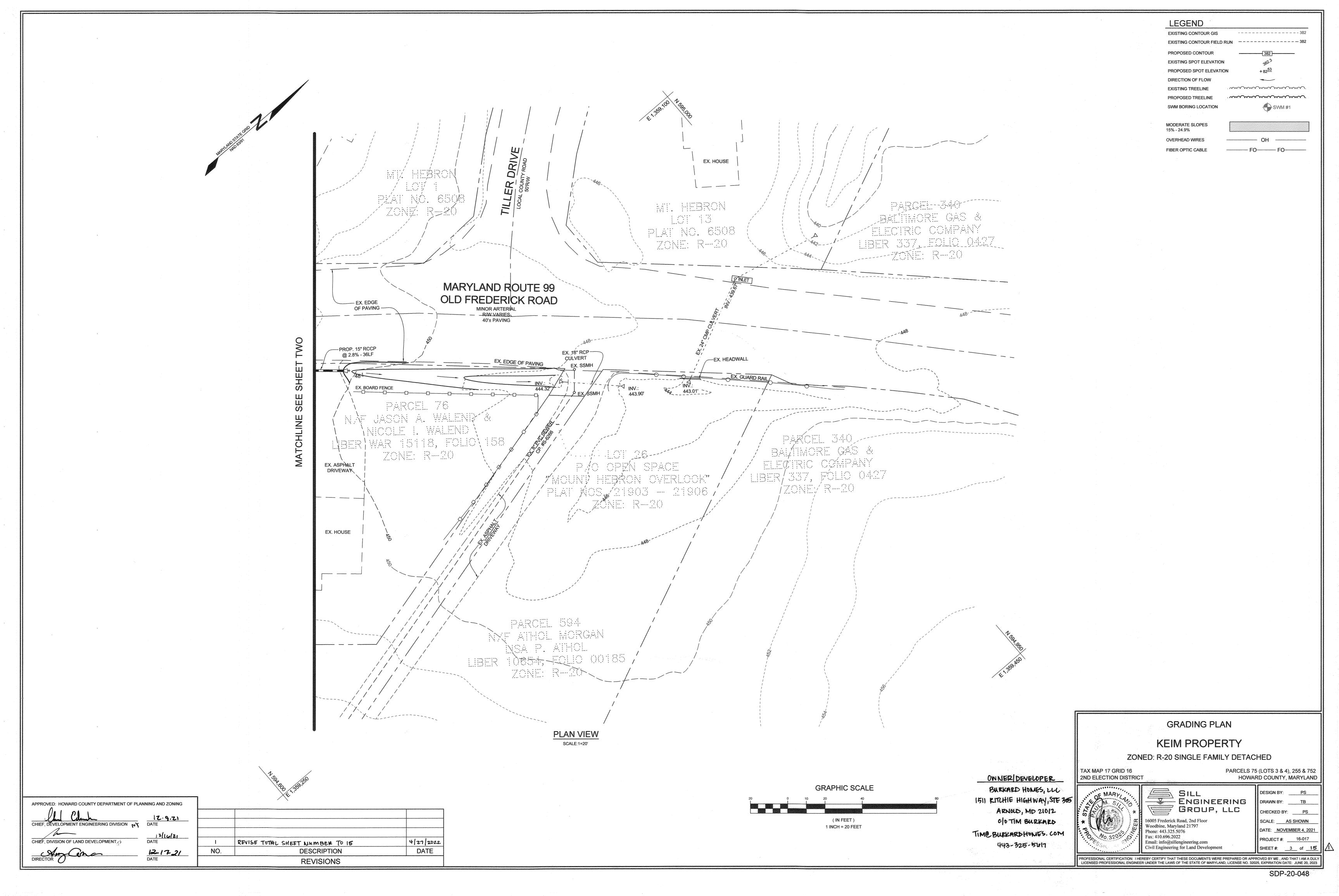
CHECKED BY: PS

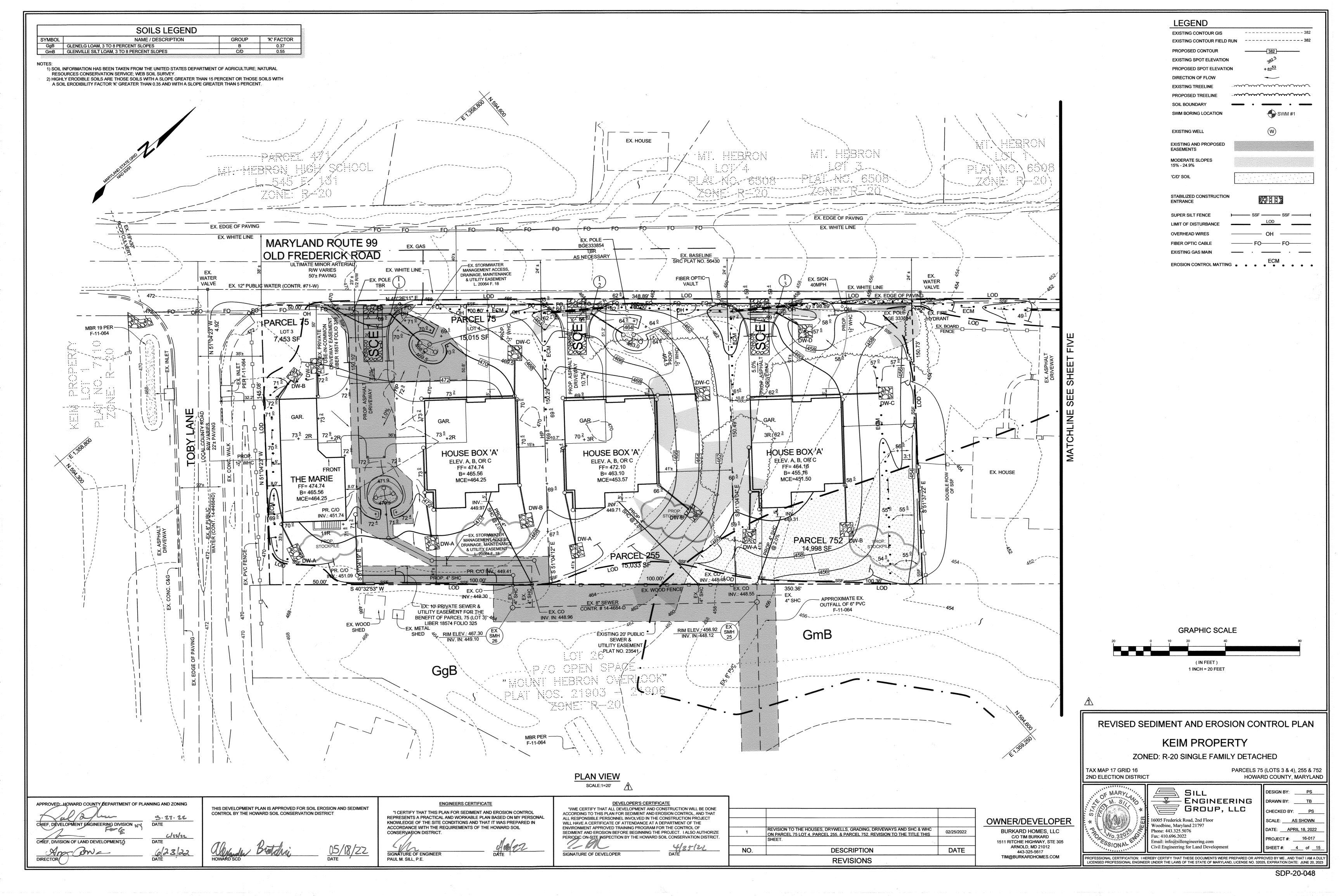
HOWARD COUNTY, MARYLAND

DESIGN BY:

DRAWN BY:







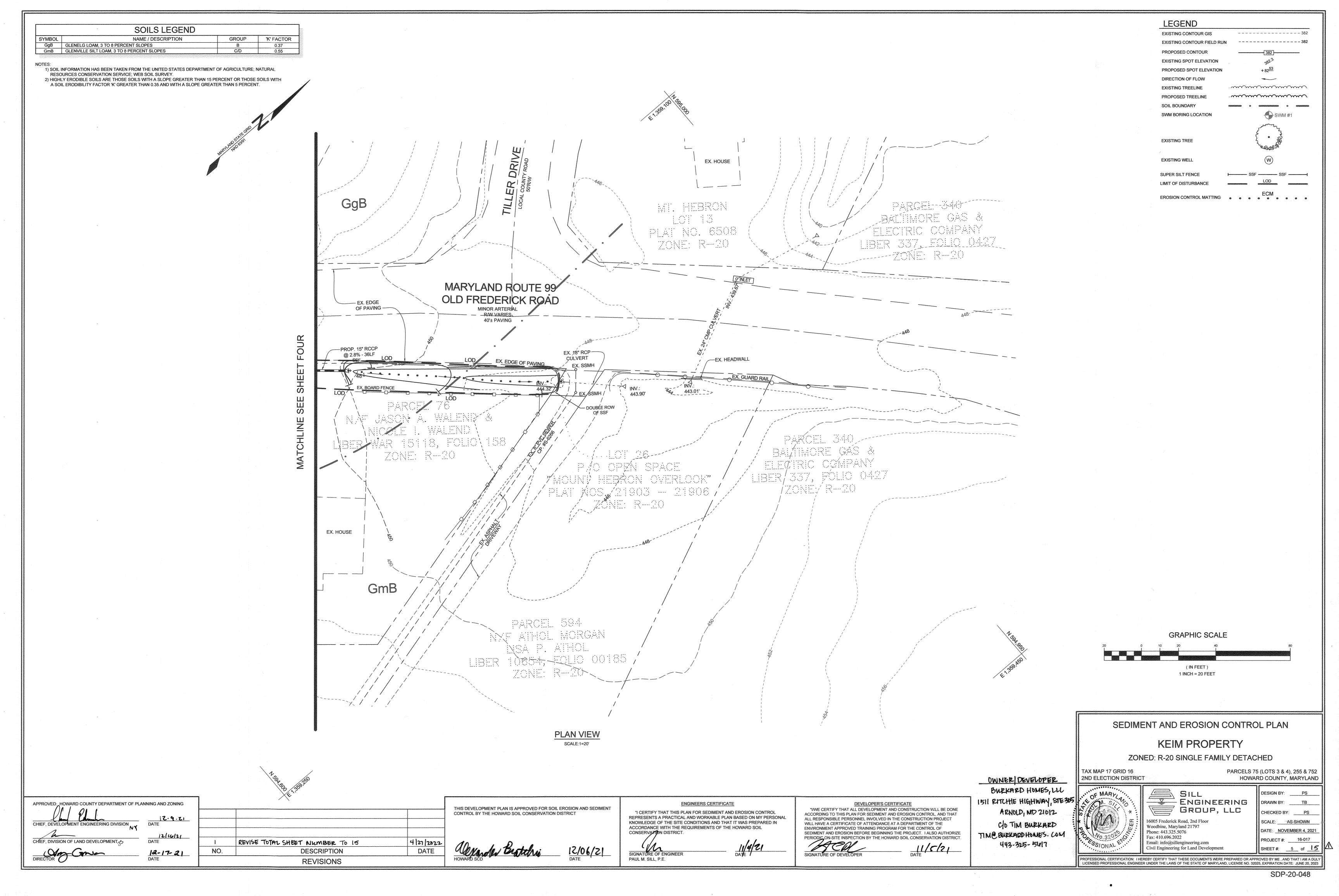


TABLE B.1: TEMPORARY SEEDING FOR SITE STABILIZATION

PLANT SPECIES	SEEDING RATE		SEEDING DEPTH	RECOMMENDED SEEDING DATES BY PLANT HARDINESS ZONE			
PLAINT SPECIES	LB/AC	LB/1000 FT ²	(INCHES)	5b & 6a	6b	7a & 7b	
COOL-SEASON GRASSES							
ANNUAL RYEGRASS (LOLIUM PERENNE SSP. MULTIFLORUM)	40	1.0	0.5	MARCH 15 TO MAY 31; AUG 1 TO SEP 30	MARCH 1 TO MAY 15; AUG 1 TO OCT 15	FEB 15 TO APR 30; AUG 15 TO NOV 30	
BARLEY (HORDEUM VULGARE)	96	2.2	1.0	MARCH 15 TO MAY 31; AUG 1 TO SEP 30	MARCH 1 TO MAY 15; AUG 1 TO OCT 15	FEB 15 TO APR 30; AUG 15 TO NOV 30	
OATS (AVENA SATIVA)	72	1.7	1.0	MARCH 15 TO MAY 31; AUG 1 TO SEP 30	MARCH 1 TO MAY 15; AUG 1 TO OCT 15	FEB 15 TO APR 30; AUG 15 TO NOV 30	
WHEAT (TRITICUM AESTIVUM)	120	2.8	1.0	MARCH 15 TO MAY 31; AUG 1 TO SEP 30	MARCH 1 TO MAY 15; AUG 1 TO OCT 15	FEB 15 TO APR 30; AUG 15 TO NOV 30	
CEREAL RYE (SECALE CEREALE)	112	2.8	1.0	MARCH 15 TO MAY 31; AUG 1 TO OCT 31	MARCH 1 TO MAY 15; AUG 1 TO NOV 15	FEB 15 TO APR 30; AUG 15 TO DEC 15	
WARM-SEASON GRASSES				•	•		
FOXTAIL MILLET (SETARIA ITALICA)	30	0.7	0.5	JUN 1 TO JUL 31	MAY 16 TO JUL 31	MAY 1 TO AUG 14	
PEARL MILLET (PENNISETUM GLAUCUM)	20	0.5	0.5	JUN 1 TO JUL 31	MAY 16 TO JUL 31	MAY 1 TO AUG 14	

FERTILIZER RATE (10-0-20): 436 LB/AC (10LB/1000SF) LIME RATE: 2 TONS/AC (90LB/1000SF)

1. SEEDING RATES FOR THE WARM-SEASON GRASSES ARE IN POUNDS OF PURE LIVE SEED (PLS). ACTUAL PLANTING RATES SHALL BE ADJUSTED TO REFLECT PERCENT SEED GERMINATION AND PURITY, AS TESTED. ADJUSTMENTS ARE USUALLY NOT NEEDED FOR THE COOL-SEASON GRASSES. SEEDING RATES LISTED ABOVE ARE FOR TEMPORARY SEEDINGS, WHEN PLANTED ALONE. WHEN PLANTED AS A NURSE CROP WITH PERMANENT SEED MIXES, USE 1/3 OF THE SEEDING RATE LISTED ABOVE FOR BARLEY, OATS, AND WHEAT. FOR SMALLER-SEEDED GRASSES (ANNUAL RYEGRASS, PEARL MILLET, FOXTAIL MILLET), DO NOT EXCEED MORE THAN 5% (BY WEIGHT) OF THE OVERALL PERMANENT SEEDING MIX. CEREAL RYE GENERALLY SHOULD NOT BE USED AS A NURSE CROP, UNLESS PLANTING WILL OCCUR IN VERY LATE FALL BEYOND THE SEEDING DATES FOR OTHER TEMPORARY SEEDINGS CEREAL RYE HAS ALLELOPATHIC PROPERTIES THAT INHIBIT THE GERMINATION AND GROWTH OF OTHER PLANTS. IF IT MUST BE USED AS A NURSE CROP, SEED AT 1/3 OF THE RATE LISTED ABOVE. OATS ARE THE RECOMMENDED NURSE CROP FOR WARM-SEASON GRASSES. FOR SANDY SOILS, PLANT SEEDS AT TWICE THE DEPTH LISTED ABOVE.

THE PLANTING DATES LISTED ARE AVERAGES FOR EACH ZONE AND MAY REQUIRE ADJUSTMENT TO REFLECT LOCAL CONDITIONS, ESPECIALLY NEAR THE BOUNDARIES OF THE ZONE.

TABLE B.5: RECOMMENDED PLANTING DATES FOR PERMANENT COVER IN MARYLAND

TVDE OF BLANT MATERIAL	PLANT HARDINESS ZONES				
TYPE OF PLANT MATERIAL	5b & 6a	6b	7a & 7b		
SEEDS- COOL-SEASON GRASSES (INCLUDES MIXES WITH FORBS AND/OR LEGUMES)	MAR 15 TO MAY 31 AUG 1 TO SEP 30	MAR 1 TO MAY 15 AUG 1 TO OCT 15	FEB 15 TO APR 30 AUG 15 TO OCT 31 NOV 1 TO NOV 30+		
SEEDS- WARM-SEASON/ COOL-SEASON GRASS MIXES	MAR 15 TO MAY 31++	MAR 1 TO MAY 15++	FEB 15 TO APR 30++		
(INCLUDES MIXES WITH FORBS AND/OR LEGUMES)	JUN 1 TO JUN 15*	MAY 16 TO JUN 15*	MAY 1 TO MAY 31*		
SOD - COOL-SEASON	MAR 15 TO MAY 31	MAR 1 TO MAY 15	FEB 15 TO APR 30		
	JUN 1 TO AUG 31*	MAY 16 TO SEP 14*	MAY 1 TO SEP 30*		
	SEP 1 TO NOV 1*0	SEP 15 TO NOV 15*	OCT 1 TO DEC 1*a		
UN-ROOTED WOODY MATERIALS; BARE-ROOT PLANTS;	MARCH 15 TO MAY 31	MARCH 1 TO MAY 15	FEB 15 TO APR 30		
BULBS, RHIZOMES, CORMS AND TUBERS ²	JUN 1 TO JUN 30*	MAY 16 TO JUN 30*	MAY 1 TO JUN 30*		
CONTAINERIZED STOCK; BALLED-AND-BURLAPPED STOCK	MAR 15 TO MAY 31	MAR 1 TO MAY 15	FEB 15 TO APR 30		
	JUN 1 TO JUN 30*	MAY 16 TO JUN 30*	MAY 1 TO JUN 30*		
	SEP 1 TO NOV 15*a	SEP 15 TO NOV 30*	OCT 1 TO DEC 15*0		

STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES: EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR

LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED. 1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY

SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.

2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY, SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.

3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING

DEVELOPER'S CERTIFICATE

"I'WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE

ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, A NO THAT

allresponsible personnel involved in the construction project

WILLHAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE

ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF

SEDIMENT ANDEROSION BEFORE BEGINNING THE PROJECT. I ALSO ANTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT	- ,,		
SIGNATURE OF DEVELOPER DATE			
ENGINEERS CERTIFICATE			
"I 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 RECORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."			
IGNATURE OF ENGINEER DATE			
AUL M.SILL, P.E.	<u> </u>		
his development plan is approved for soil erosion and sedimen ontrol by the howard soil conservation district.	n		
Messader Bretchie' 12/06/21 ONARD SCD DATE			
PPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING			ai
HIEF, DEVELOPMENT ENGINEERING DIVISION NY DATE			
12/10/21			
HEF, DIVISION OF LAND DEVELOPMENT DATE	1	REVISE TOTAL SHEET NUMBER TO 15	4/27/2022
Xm Snue 12-17-21 DATE	NO.	DESCRIPTION REVISIONS	DATE

STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION O STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

 TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

1. GENERAL USE A. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE

APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING

SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN. B. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA

C. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL

D. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3 1/2 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SHOWN IN THE PERMANENT SEEDING SUMMARY

2. TURFGRASS MIXTURES A. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND

WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE. B. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR

PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN. I. KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT, IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVATORS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVATORS WITH EACH RANGING

FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT. II. KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE B.22 RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERTIFIED PERENNIAL RYEGRASS CULTIVATORS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE PER 1000 SQUARE FEET, CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS. CULTIVATORS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE

III. TALL RESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN FULL RECOMMENDED MIXTURE INCLUDES; CERTIFIED TALL RESCUE CULTIVATORS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVATORS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVATORS MAY BE

IV. KENTUCKY BLUEGRASS/FINE RESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES; CERTIFIED KENTUCKY BLUEGRASS CULTIVATORS 30 TO 40 PERCENT AND CERTIFIED FINE RESCUE AND 60 TO 70 PERCENT. SEEDING RATE: 11/2 TO 3 POUNDS PER 1000 SQUARE FEET.

NOTES: SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77 "TURFGRASS CULTIVATOR RECOMMENDATIONS FOR MARYLAND" CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVATOR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE C. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES:

WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 5B, 6A) CENTRAL MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 6B) SOUTHERN MD, EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15

D. TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES, LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 11/2 INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY. E. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (½ TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES. B. SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).

1 GENERAL SPECIFICATIONS A. CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE

MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR. B. SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF % INCH, PLUS OR MINUS 1/4 INCH, AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THATCH. BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE

C. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION

D. SOD MUST NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL. E. SOD MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS, SOD NOT TRANSPLANTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL

2. SOD INSTALLATION A. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOD.

SCIENTIST PRIOR TO ITS INSTALLATION.

B. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER, STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH

ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE AIR DRYING OF THE ROOTS. C. WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS ROLL AND TAMP, PEG OR OTHERWISE SECURE THE SOD TO

PREVENT SLIPPAGE ON SLOPES. ENSURE SOLID CONTACT EXISTS BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE. D. WATER THE SOD IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD WITHIN EIGHT

3. SOD MAINTENANCE A. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES.

WATER SOD DURING THE HEAT OF THE DAY TO PREVENT WILTING.

B. AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN

HEIGHT OF AT LEAST 3 INCHES UNLESS OTHERWISE SPECIFIED.

ADEQUATE MOISTURE CONTENT. C. DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED. NO MORE THAN 1/2 OF THE GRASS LEAF MUST BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN A GRASS

1. THE PLANTING DATES LISTED ARE AVERAGES FOR EACH ZONE. THESE DATES MAY REQUIRE ADJUSTMENT TO REFLECT LOCAL CONDITIONS, ESPECIALLY NEAR THE BOUNDARIES OF THE ZONES. WHEN SEEDING TOWARD THE END OF THE LISTED PLANTING DATES, OR WHEN CONDITIONS ARE EXPECTED TO BE LESS THAN OPTIMAL, SELECT AN APPROPRIATE NURSE CROP FROM TABLE B.1 TEMPORARY SEEDING FOR SITE STABILIZATION AND PLANT TOGETHER WITH THE PERMANENT SEEDING MIX.

2. WHEN PLANTED DURING THE GROWING SEASON, MOST OF THESE MATERIALS MUST BE PURCHASED AND KEPT IN A DORMANT CONDITION UNTIL PLANTING, BARE-ROOT GRASSES ARE THE EXCEPTION-THEY MAY BE SUPPLIED AS GROWING (NON-DORMANT) PLANTS

• ADDITIONAL PLANTING DATES FOR THE LOWER COASTAL PLAIN, DEPENDENT ON ANNUAL RAINFALL AND TEMPERATURE TRENDS, RECOMMEND ADDING A NURSE CROP, AS NOTED ABOVE, IF PLANTING DURING THIS

** WARM-SEASON GRASSES NEED A SOIL TEMPERATURE OF AT LEAST 50 DEGREES F IN ORDER TO GERMINATE. IF SOIL TEMPERATURES ARE COLDER THAN 50 DEGREES, OR MOISTURE IS NOT ADEQUATE, THE SEEDS WILL REMAIN DORMANT UNTIL CONDITIONS ARE FAVORABLE, IN GENERAL, PLANTING DURING THE LATTER PORTION OF THIS PERIOD ALLOWS MORE TIME FOR WEED EMERGENCE AND WEED CONTROL PRIOR TO PLANTING. WHEN SELECTING A PLANTING DATE, CONSIDER THE NEED FOR WEED CONTROL VS. THE LIKELIHOOD OF HAVING SUFFICIENT MOISTURE FOR LATER PLANTINGS, ESPECIALLY ON DROUGHT SITES.

ADDITIONAL PLANTING DATES DURING WHICH SUPPLEMENTAL WATERING MAY BE NEEDED TO ENSURE PLANT FREQUENT FREEZING AND THAWING OF WET SOILS MAY RESULT IN FROST-HEAVING OF MATERIALS PLANTED IN LATE FALL, IF PLANTS HAVE NOT SUFFICIENTLY ROOTED IN PLACE. SOD USUALLY NEEDS 4 TO 6 WEEKS TO BECOME SUFFICIENTLY ROOTED. LARGE CONTAINERIZED AND BALLED-AND-BURLAPPED STOCK MAY BE PLANTED

INTO THE WINTER MONTHS AS LONG AS THE GROUND IS NOT FROZEN AND SOIL MOISTURE IS ADEQUATE.

A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-313-1855 AFTER THE FUTURE LOD AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD. A MINIMUM OF 48 HOURS NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING

A: PRIOR TO THE START OF EARTH DISTURBANCE

 B. UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.

. C. PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT. D. PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. OTHER RELATED STATE AND FEDERAL PERMITS SHALL BE REFERENCED, TO ENSURE COORDINATION AND TO AVOID CONFLICTS WITH THIS PLAN.

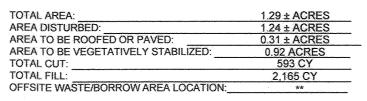
2. ALL VEGETATION AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL; AND REVISIONS THERETO.

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE EXCEPT FOR THOSE AREAS UNDER **ACTIVE GRADING**

4. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED IN ACCORDANCE WITH THE 20 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR TOPSOIL (SEC. B-4-2), PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES IF THE GROUND IS FROZEN. INCREMENTAL STABILIZATION (SEC. B-4-1) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WITH > 15' OF CUT AND/OR FILL. STOCKPILES (SEC. B-4-8) IN EXCESS OF 20 FT. MUST BE BENCHED WITH STABLE OUTLET. ALL CONCENTRATED FLOW, STEEP SLOPE, AND HIGHLY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. B-4-6).

5. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE, AND ARE TO BE MAINTAINED IN OPERATIVE

CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM CID.



7. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST

BE REPAIRED ON THE SAME DAY OF DISTURBANCE. 8. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE CID. THE SITE AND ALL CONTROLS SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY; AND THE NEXT DAY AFTER EACH RAIN EVENT. A WRITTEN REPORT BY THE CONTRACTOR, MADE AVAILABLE UPON REQUEST, IS PART OF EVERY INSPECTION AND SHOULD INCLUDE:

 INSPECTION DATE INSPECTION TYPE (ROUTINE, PRE-STORM EVENT, DURING RAIN EVENT)

 NAME AND TITLE OF INSPECTOR WEATHER INFORMATION (CURRENT CONDITIONS AS WELL AS TIME AND AMOUNT OF LAST RECORDED

BRIEF DESCRIPTION OF PROJECT'S STATUS (E.G., PERCENT COMPLETE) AND/OR CURRENT ACTIVITIES

 EVIDENCE OF SEDIMENT DISCHARGES IDENTIFICATION OF PLAN DEFICIENCIES

IDENTIFICATION OF SEDIMENT CONTROLS THAT REQUIRE MAINTENANCE

 IDENTIFICATION OF MISSING OR IMPROPERLY INSTALLED SEDIMENT CONTROLS COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND STABILIZATION REQUIREMENTS

 PHOTOGRAPHS MONITORING/SAMPLING

 MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED OTHER INSPECTION ITEMS AS REQUIRED BY THE GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES (NPDES, MDE).

TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPES LENGTHS OR THAT WHICH CAN AND SHALL BE BACKFILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.

10. ANY MAJOR CHANGES OR REVISIONS TO THE PLAN OR SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND

APPROVED BY THE HSCD PRIOR TO PROCEEDING WITH CONSTRUCTION. MINOR REVISIONS MAY BE ALLOWED BY THE CID PER THE LIST OF HSCD-APPROVED FIELD CHANGES. 11. DISTURBANCE SHALL NOT OCCUR OUTSIDE THE L.O.D. A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY

PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE

PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE HSCD. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE HSCD, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME. 12. WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE. 13. TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO FINAL GRADE.

14. ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON-THE-CONTOUR, AND BE IMBRICATED AT 25' MINIMUM INTERVALS, WITH LOWER ENDS CURLED UPHILL BY 2' IN ELEVATION.

15. STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUSIVE): USEI ANDIP MARCH 1 - JUNE 15 USEIII AND IIIP OCTOBER 1 - APRIL 30

USEIV MARCH 1 - MAY 31

APPROVED AND ACTIVE GRADING PERMIT.

 A COPY OF THIS PLAN, THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND ASSOCIATED PERMITS SHALL BE ON-SITE AND AVAILABLE WHEN THE SITE IS ACTIVE

EARTHWORK QUANTITIES ARE SOLELY FOR THE PURPOSE OF CALCULATING FEES. CONTRACTOR TO VERIFY ALL ** TO BE DETERMINED BY CONTRACTOR, WITH PRE-APPROVAL OF THE SEDIMENT CONTROL INSPECTOR WITH AN

B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA A MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES.

PURPOSE TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION, SEDIMENTATION, AND CHANGES TO DRAINAGE PATTERNS.

CONDITIONS WHERE PRACTICE APPLIES STOCKPILE AREAS ARE UTILIZED WHEN IT IS NECESSARY TO SALVAGE AND STORE SOIL FOR LATER

THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN. THE FOOTPRINT OF THE STOCKPILE MUST BE SIZED TO ACCOMMODATE THE ANTICIPATED VOLUME OF

MATERIAL AND BASED ON A SIDE SLOPE RATIO NO STEEPER THAN 2:1, BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING. RUNOFF FROM THE STOCKPILE AREA MUST DRAIN TO A SUITABLE SEDIMENT CONTROL PRACTICE. . ACCESS THE STOCKPILE AREA FROM THE UPGRADE SIDE.

CLEAR WATER RUNOFF INTO THE STOCKPILE AREA MUST BE MINIMIZED BY USE OF A DIVERSION DEVICE SUCH AS AN EARTH DIKE, TEMPORARY SWALE OR DIVERSION FENCE. PROVISIONS MUST BE MADE FOR DISCHARGING CONCENTRATED FLOW IN A NON-EROSIVE MANNER

WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL. AN APPROPRIATI EROSION/SEDIMENT CONTROL PRACTICE MUST BE USED TO INTERCEPT THE DISCHARGE. STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITH THE 3/7 DAY STABILIZATION REQUIREMENT

AS WELL AS STANDARD 8-4-1 INCREMENTAL STABILIZATION AND STANDARD 8-4-4 TEMPORARY 8. IF THE STOCKPILE IS LOCATED ON AN IMPERVIOUS SURFACE, A LINER SHOULD BE PROVIDED BELOW THE STOCKPILE TO FACILITATE CLEANUP. STOCKPILES CONTAINING CONTAMINATED MATERIAL MUST

BE COVERED WITH IMPERMEABLE SHEETING.

THE STOCKPILE AREA MUST CONTINUOUSLY MEET THE REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. SIDE SLOPES MUST BE MAINTAINED AT NO STEEPER THAN A 2:1 RATIO. THE STOCKPILE AREA MUST BE KEPT FREE OF EROSION. IF THE VERTICAL HEIGHT OF A STOCKPILE EXCEEDS 20 FEET FOR 2:1 SLOPES, 30 FEET FOR 3:1 SLOPES, OR 40 FEET FOR 4:1 SLOPES, BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING

STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING,

AND SOIL AMENDMENTS

THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.

• TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. CONDITIONS WHERE PRACTICE APPLIES

• WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

CRITERIA

A. SOIL PREPARATION

1. TEMPORARY STABILIZATION a. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.

b. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS. c. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR

OTHER SUITABLE MEANS. 2. PERMANENT STABILIZATION

a. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:

I SOIL PH BETWEEN 6.0 AND 7.0 II. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).

III. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE

ACCEPTABLE. IV. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT. V. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.

APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS. c. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE

APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5

d. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY

THE RESULTS OF A SOIL TEST. e. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION, TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRIABLE. SEEDBED

LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS. 1. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW

PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION. 2. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE

SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS. 3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO

PRODUCE VEGETATIVE GROWTH. b. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT

THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH. d. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE. 4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.

5. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING a. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN

5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 11/2 INCHES IN DIAMETER. b. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS

c. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.

6. TOPSOIL APPLICATION a. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING

b. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A MANNER PREPARATION AND TILLAGE, ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.

c. TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS) 1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR

CHEMICAL ANALYSES. 2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT, MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTY

OF THE PRODUCER. 3. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE), LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100

PERCENT WILL PASS THROUGH A #20 MESH SIEVE. 4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. 5. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD

GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

SEQUENCE OF CONSTRUCTION

OBTAIN GRADING PERMIT

Owner/developer

BURKARD HOMES, LLL

1511 PITCHIE HIGHWAY, STE, 305

ARNOUD, MD 21012

CIO TIM BURKARD

TIME BURKARDHOMES. COM

443.325-57e17

NOTIFY HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSE AND PERMITS, SEDIMENT CONTROL DIVISION, (410) 313-1855, AT LEAST 48 HOURS BEFORE STARTING WORK.

INSTALL STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE AND SUPER SILT FENCE. (2 DAYS) INSTALL ROADSIDE SWALE ALONG MD ROUTE 99. INSTALL DRIVEWAY CULVERTS. AND STABILIZE IMMEDIATELY. ALL DISTURBANCES TO BE STABILIZED WITH SOD AT THE END OF EACH DAY. (1 WEEK) ROUGH GRADE LOTS AND BEGIN BUILDING CONSTRUCTION. (1 WEEK)

FINISH BUILDING CONSTRUCTION, PAVE DRIVEWAYS, AND INSTALL DRYWELLS. FULLY STABILIZE LOTS BEFORE ALLOWING DRAINAGE TO DRYWELLS. (4 MONTHS) WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, CONSTRUCT BIO FACILITIES 1, 2, & 3,

ENSURING NO SEDIMENT LADEN RUNOFF ENTERS THE FACILITIES. (3 WEEKS) UPON STABILIZATION OF ALL DISTURBED AREAS AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL MEASURES AND STABILIZE ANY REMAINING DISTURBED AREAS. (1 WEEK)

> SEDIMENT AND EROSION CONTROL NOTES KEIM PROPERTY

ZONED: R-20 SINGLE FAMILY DETACHED

2ND ELECTION DISTRICT

TAX MAP 17 GRID 16

SILL 16005 Frederick Road, 2nd Floor Woodbine, Maryland 21797 Phone: 443.325.5076 Fax: 410.696,2022 Email: info@sillengineering.com

¥ ENGINEERING GROUP, LLC Civil Engineering for Land Development

SCALE: AS SHOWN DATE: NOVEMBER 4, 2021 PROJECT#: 16-017 SHEET#: 6 of 15 PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME. AND THAT I AM A DUL ICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 32025, EXPIRATION DATE: JUNE 20, 2023

PARCELS 75 (LOTS 3 & 4), 255 & 752

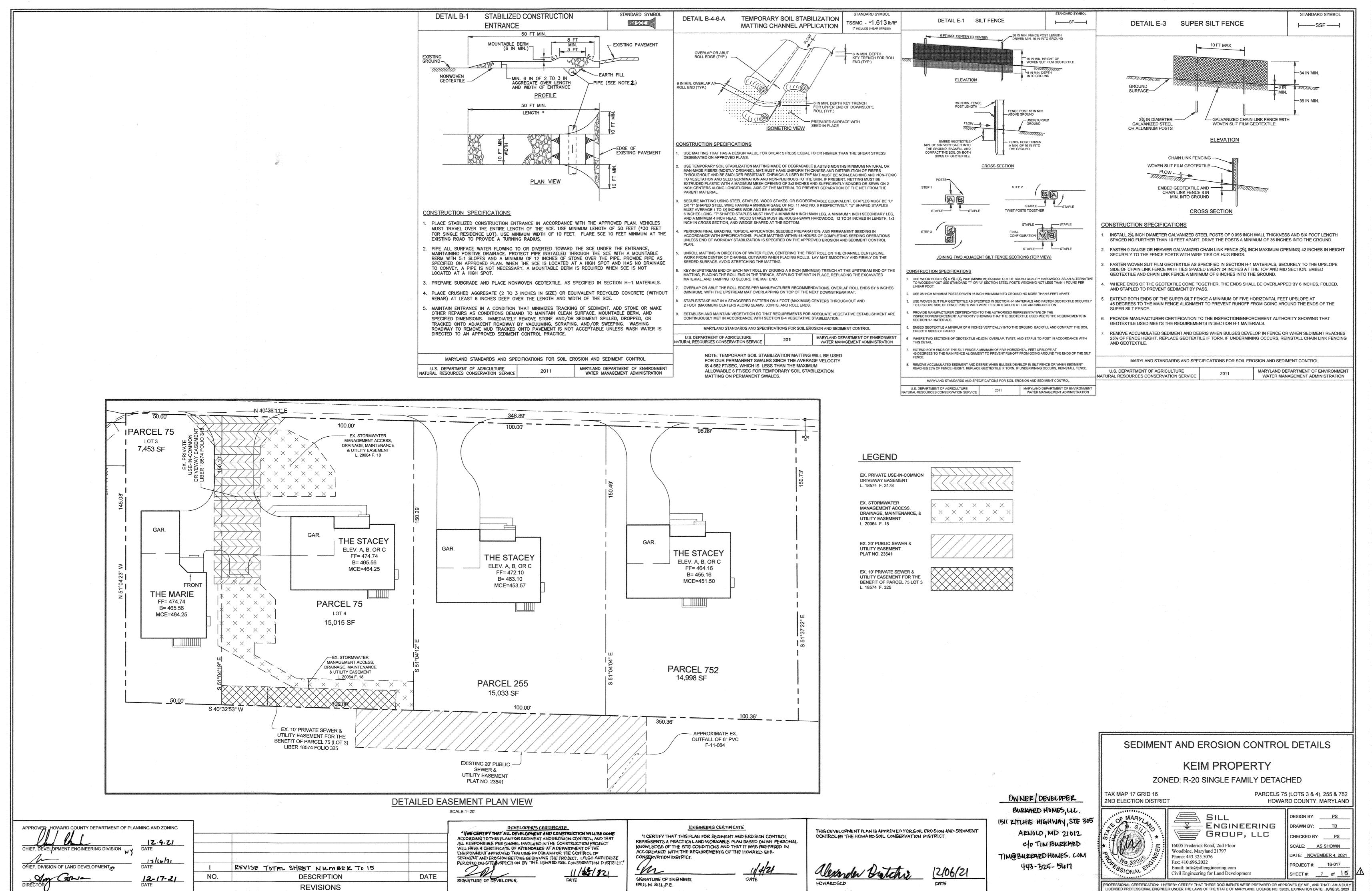
DESIGN BY:

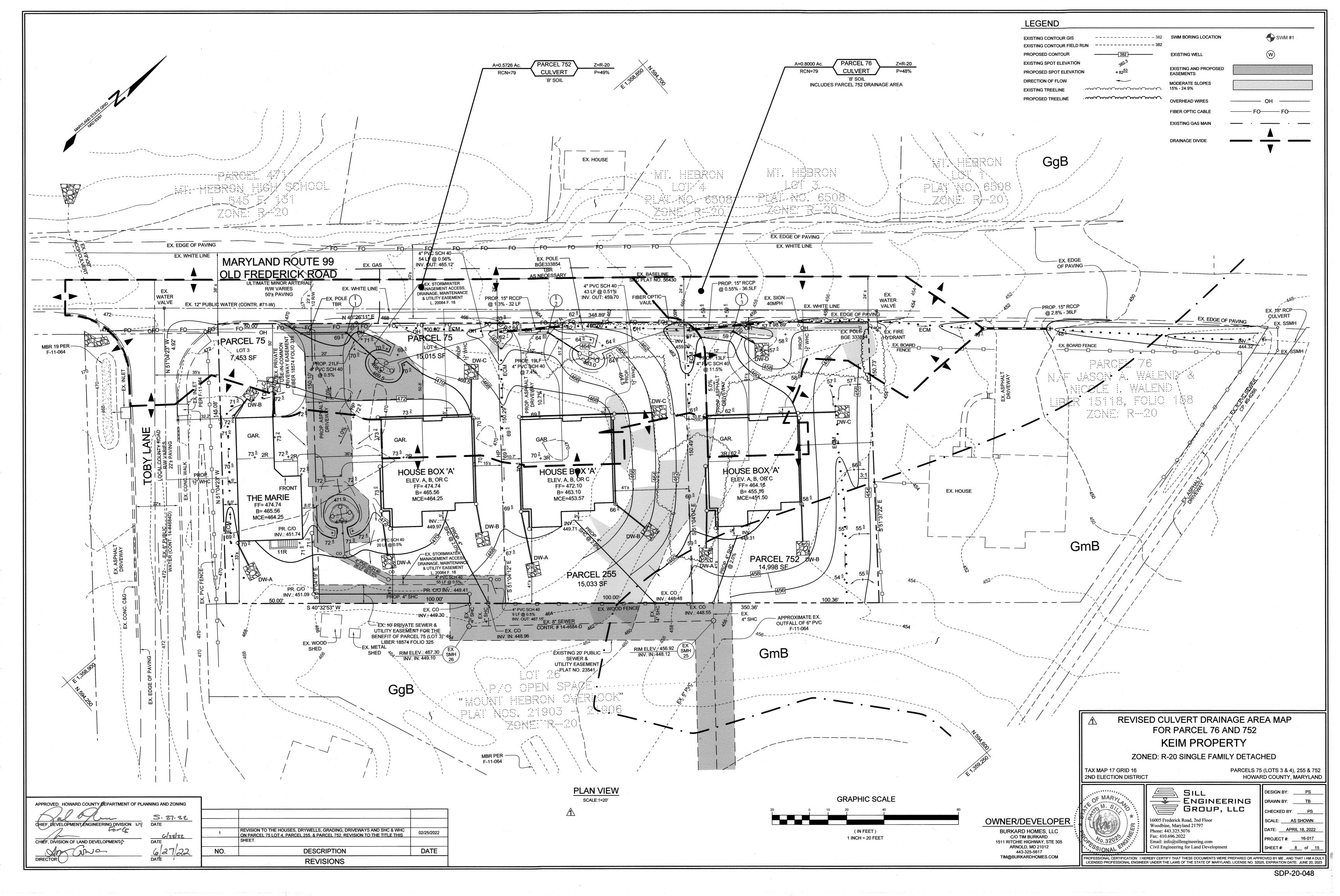
DRAWN BY:

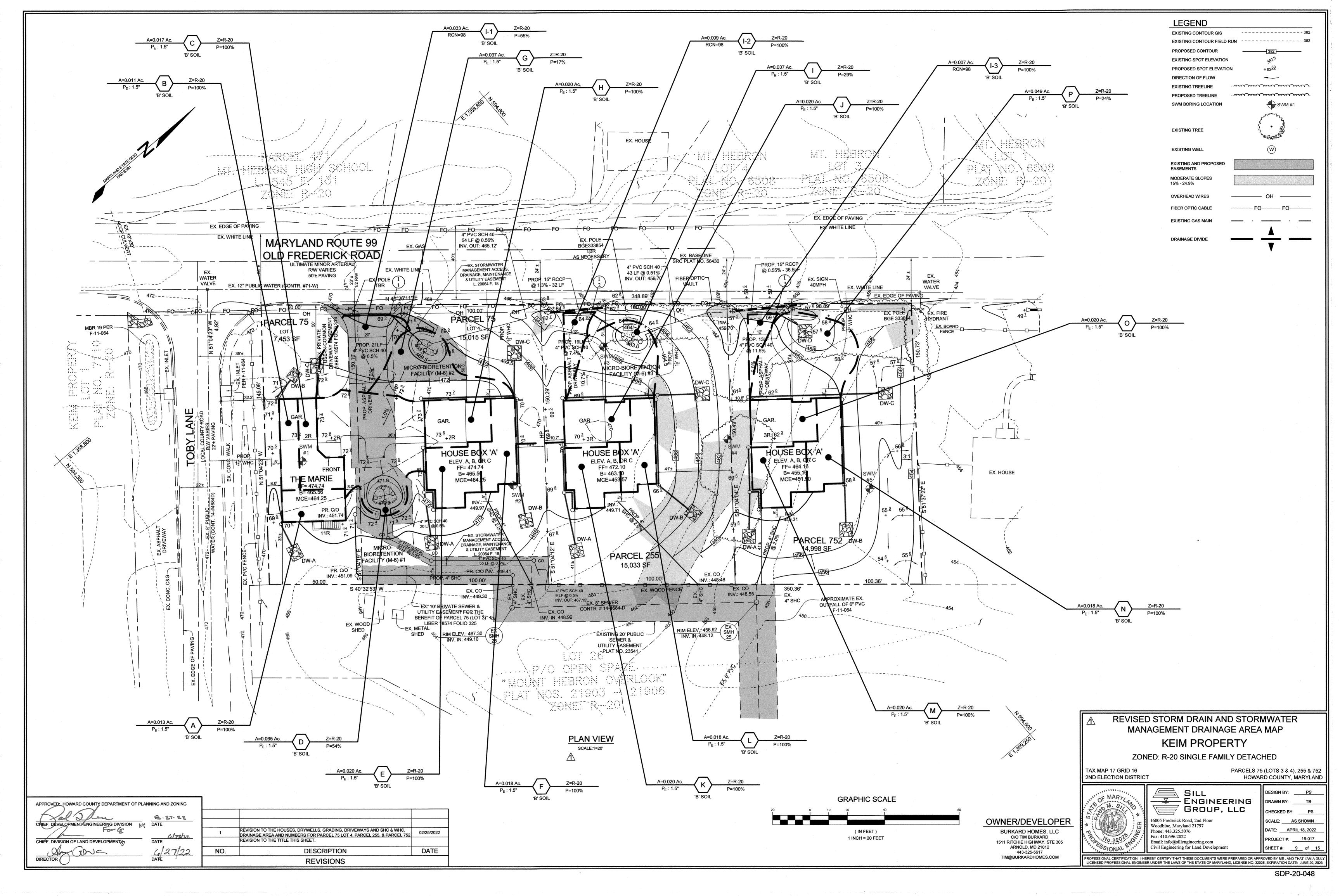
HOWARD COUNTY, MARYLAND

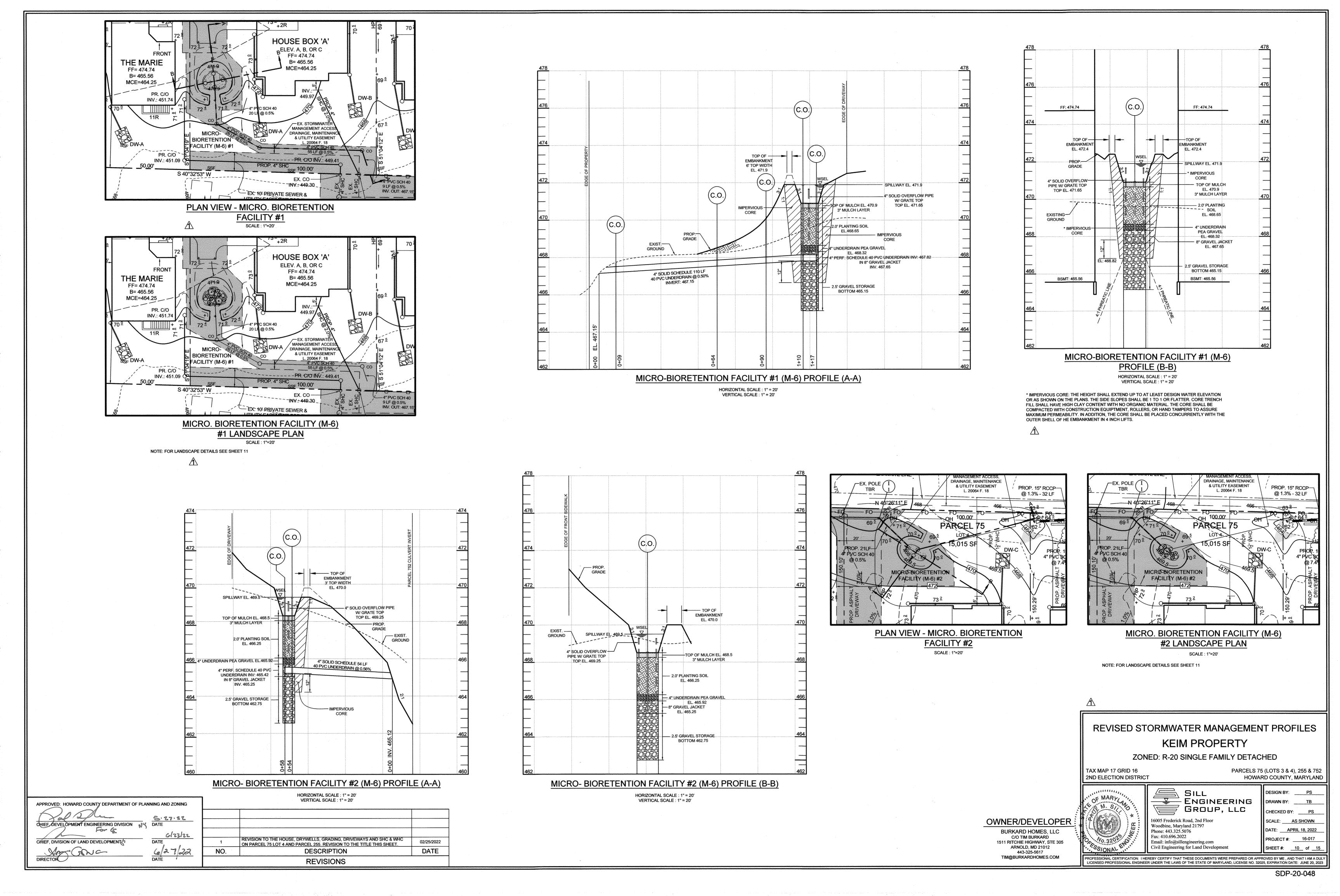
SDP-20-048

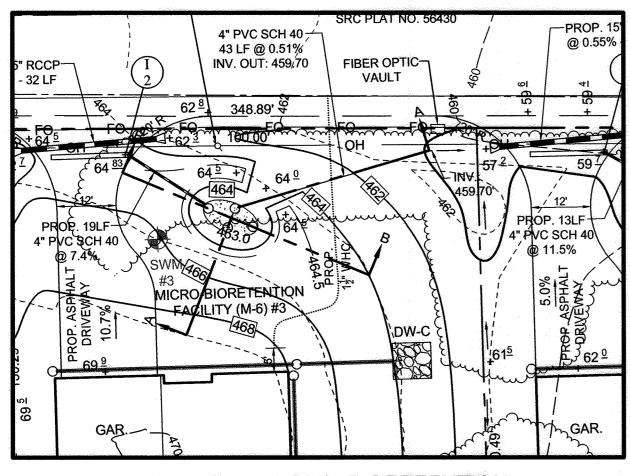
CHECKED BY: PS







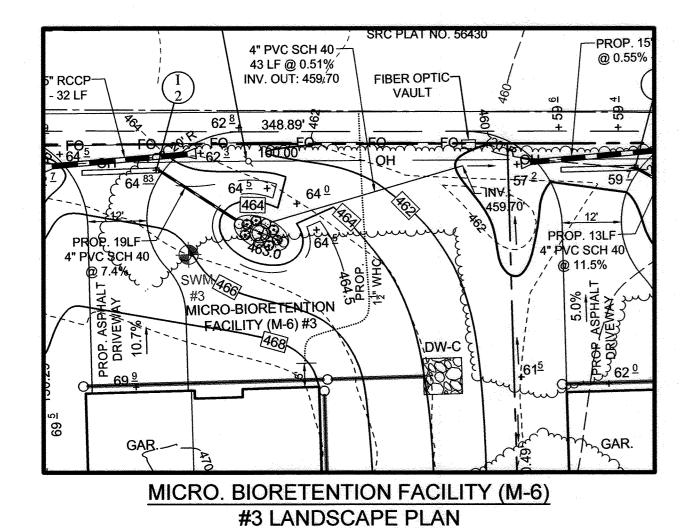




PLAN VIEW - MICRO. BIORETENTION

FACILITY #3

SCALE: 1"=20"

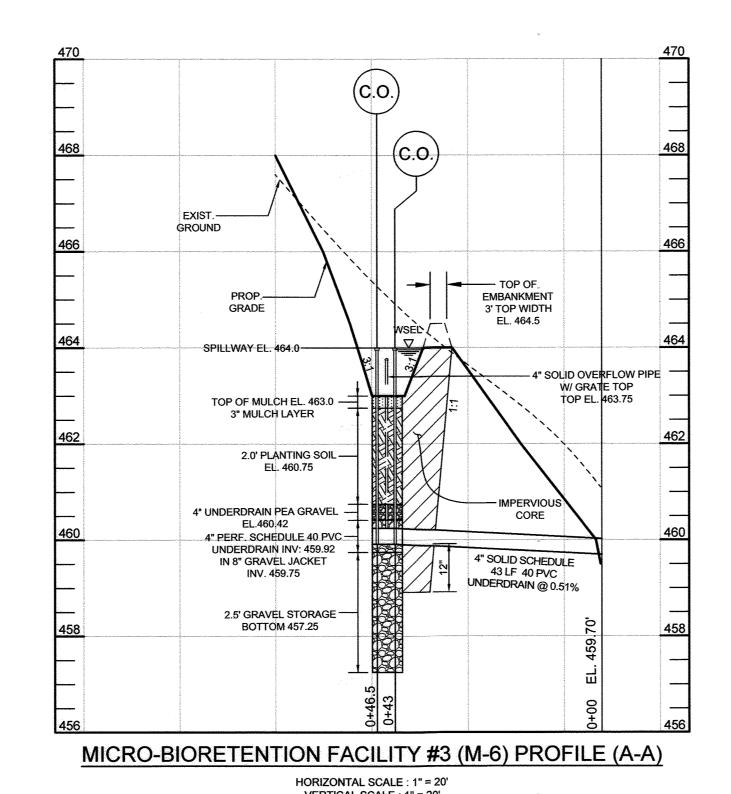


SCALE: 1"=20"

 \triangle

· · · · · · · · · · · · · · · · · · ·	T appropriate from	Lage	La companya da la com
PLANTINGS	SPECIFICATION SEE PLANT LIST THIS SHEET	N/A	NOTES PLANTINGS ARE SITE-SPECIFIC, SEE PLANT LIST THIS SHEET
PLANTING SOIL [2'-4' TO 4' DEEP]	LOAMY SAND (60% - 65%) & COMPOST (35%-40%) OR SANDY LOAM (30%), COARSE SAND (30%) & COMPOST (40%)	N/A	USDA SOIL TYPES LOAMY SAND OR SANDY LOAM; CLAY CONTENT < 5%
ORGANIC CONTENT	MIN. 10% BY DRY WEIGHT (ASTM-D-2974)		
	SHREDDED HARDWOOD		AGED 6 MONTHS, MINIMUM; NO PINE OR WOOD CHIPS
PEA GRAVEL DIAPHRAGM	PEA GRAVEL: ASTM-D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")	
CURTAIN DRAIN (IF REQUIRED)	ORNAMENTAL STONE: WASHED COBBLES	STONE: 2" TO 5"	
GEOTEXTILE		N/A	PE TYPE 1 NONWOVEN
UNDERDRAIN GRAVEL	AASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (3/8" TO 3/4")	
UNDERDRAIN PIPING	F 758, TYPE PS 28 OR AASHTO M-278	4" TO 6" RIGID SCHEDULE 40 PVC OR SDR35	SLOTTED OR PERFORATED PIPE, 3/8" PERF. @ 6" ON CENTER, 4 HOLES PER ROW; MINIMUM OF 3" OF GRAVE OVER PIPES; NOT NECESSARY UNDERNEATH PIPES. PERFORATED PIPE SHALL BE WRAPPED WITH 1/4" GALVANIZED HARDWARE CLOTH.
POURED IN PLACE CONCRETE (IF REQUIRED)	MSHA MX NO.3; F'c= 3500 PSI @ 28 DAYS, NORMAL WEIGHT, AIR-ENTRAINED; REINFORCING TO MEET ASTM-615-60	N/A	ON-SITE TESTING OF POURED-IN-PLACE CONCRETE REQUIRED: 28 DAY STRENGTH AND SLUMP TEST; ALL CONCRETE DESIGN (CAST-IN-PLACE OR PRE-CAST) NOT USING PREVIOUSLY APPROVED STATE OR LOCAL STANDARDS REQUIRES DESIGN DRAWINGS SEALED AND APPROVED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF MARYLAND-DESIGN TO INCLUDE MEETING ACI CODE 350.R/89; VERTICAL LOADING [H-10 OR H-20]; ALLOWABLE HORIZONTAL LOADING (BASED ON SOIL PRESSURES); AND ANALYSIS OF POTENTIAL CRACKING.
SAND	AASHTO-M-6 OR ASTM-C-33	0.02" TO 0.04"	SAND SUBSTITUTIONS SUCH AS DIABASE AND GRAYSTONE (AASHTO) #10 ARE NOT ACCEPTABLE. NO CALCIUM CARBONATED OR DOLOMITIC SAND SUBSTITUTIONS ARE ACCEPTABLE. NO "ROCK DUST" CAN BE USED FOR SAND.

		<u> </u>	CAN BE USED FOR SAND.	
	<u> </u>			
OVED: HOWARD COUNTY DEPARTMENT OF PLA	NNING AND ZONING			
	· ·			1
Jul 3 Scan	5. 27. 22			
F, DEVELOPMENT ENGINEERING DIVISION	DATE			
A For G			REVISION TO THE HOUSE, DRYWELLS, GRADING, DRIVEWAYS AND SHC & WHC	00/07/0000
	6/28/22	1	ON PARCEL 752. REVISION TO THE DRYWELL DESIGN CHART. REVISION TO THE	02/25/2022
F, DIVISION OF LAND DEVELOPMENT	DATE		TITLE THIS SHEET.	
	. 10-1-	NO	DECODIDATION	DATE
W/WW-	6/27/22	NO.	DESCRIPTION	DATE
CTOR (DATĚ		REVISIONS	ľ
	and the second s	to an amount or a second or a		



BIORETENTION PLANT LIST

SHRUBS AND PERENNIALS

LEGEND A COUNTY AND STEEL STRUCKS OFF. AND STY. AND ST

NOTE: PLANT MATERIAL MUST COVER 50% OF THE MULCH AREA AT MATURE GROWTH

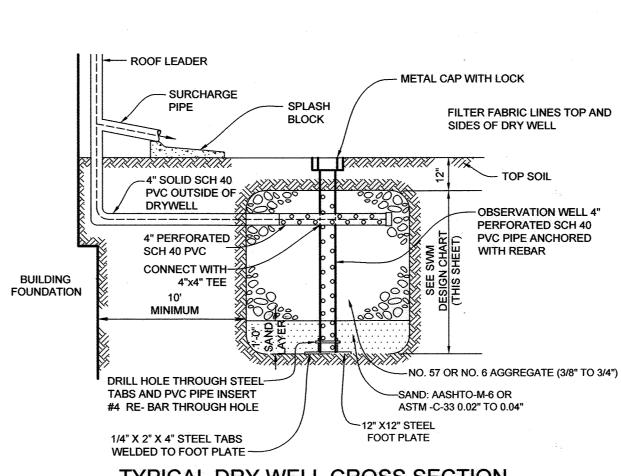
OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED MICRO-BIORETENTION FACILITIES (M-6)

- 1. THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY.
 MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT.
 ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR
 DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING.
 ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND
 STORMWATER DESIGN MANUAL, VOLUME II, TABLE A.4.1 AND 2.
- THE OWNER SHALL PERFORM A PLANT INSPECTION IN THE SPRING AND IN THE FALL OF EACH YEAR.
 DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD OR DISEASED VEGETATION CONSIDERED
 BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT
- MATERIAL, TREAT DISEASED TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STAKES AND WIRES.

 THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS
- APPLIED.

 4. THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

	DRYWELL (M-5) DESIGN CHART						
PARCEL/ LOT	DRYWELL#	VOLUME REQUIRED	VOLUME PROVIDED	WELL SIZE			
PARCEL 75 LOT 3	DW A	64 CF	104 CF	8.0' X 6.5' X 5.0' DEEP			
PARCEL 75 LOT 3	DW B	53 CF	78 CF	6.0' X 6.5' X 5.0' DEEP			
PARCEL 75 LOT 3	DW C	96 CF	112 CF	8.0' X 7.0' X 5.0' DEEP			
		DW A-C TOTAL: 213 CF	DW A-C TOTAL: 294 CF				
PARCEL 75 LOT 4	DW A	100 CF	105 CF	7.5' X 7.0' X 5.0' DEEP			
PARCEL 75 LOT 4	DW B	91 CF	105 CF	7.5' X 7.0' X 5.0' DEEP			
PARCEL 75 LOT 4	DW C	100 CF	120 CF	8.0' X 7.5' X 5.0' DEEP			
	·	DW A-C TOTAL: 291 CF	DW A-C TOTAL: 330 CF				
PARCEL 255	DW A	100 CF	105 CF	7.5' X 7.0' X 5.0' DEEP			
PARCEL 255	DW B	91 CF	105 CF	7.5' X 7.0' X 5.0' DEEP			
PARCEL 255 DW C		100 CF	120 CF	8.0' X 7.5' X 5.0' DEEP			
		DW A-C TOTAL: 291 CF	DW A-C TOTAL: 330 CF				
PARCEL 752	DW A	83 CF	105 CF	7.5' X 7.0' X 5.0' DEEP			
PARCEL 752	DW B	74 CF	105 CF	7.5' X 7.0' X 5.0' DEEP			
PARCEL 752	DW C	91 CF	97.5 CF	7.5' X 6.5' X 5.0' DEEP			
PARCEL 752	DW D	105 CF	105 CF	7.5' X 7.0' X 5.0' DEEP			
	·	DW A-D TOTAL: 353 CF	DW A-D TOTAL: 412.5 CF				



GROUND

-TOP OF MULCH EL. 463

- 2.0 PLANTING SOIL

EL. 460.75

— 8" GRAVEL JACKET _ EL. 459.75

MICRO-BIORETENTION FACILITY #3 (M-6) PROFILE (B-B)

HORIZONTAL SCALE: 1" = 20' VERTICAL SCALE: 1" = 20'

- 4" UNDERDRAIN PEA GRAVEL

EL. 460.42

2.5 GRAVEL STORAGE

BOTTOM 457.25

BIO 1 - BIORETENTION AREA = 88 S.F. OR 0.0020 AC.

BIO 2 - BIORETENTION AREA = 54 S.F. OR 0.0012 AC. PROVIDED: 1 SHRUB AND 5 PERENNIALS

BIO 3 - BIORETENTION AREA = 60 S.F. OR 0.0013 AC.

PROVIDED: 2 SHRUBS AND 7 PERENNIALS

3" MULCH LAYER

EMBANKMENT

GRADE

4" SOLID OVERFLOW -

PIPE W/ GRATE TOP

TOP EL. 463.75

TYPICAL DRY WELL CROSS SECTION

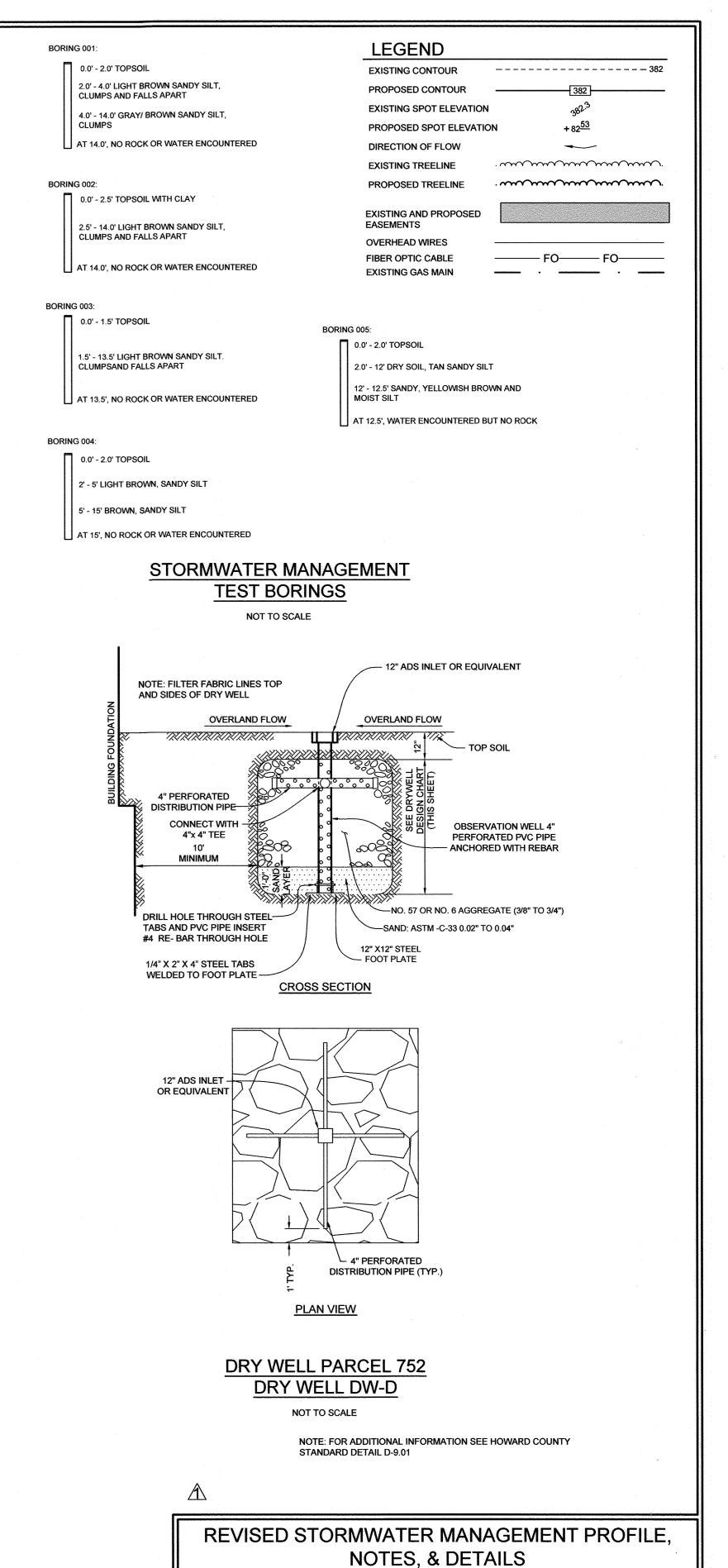
NOT TO SCALE

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

- THE MONITORING WELLS AND STRUCTURES SHALL BE INSPECTED ON A QUARTERLY BASIS AND AFTER EVERY LARGE STORM EVENT.
- 2. WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS SHALL BE RECORDED OVER A PERIOD OF SEVERAL DAYS TO INSURE TRENCH DRAINAGE.
- A LOG BOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
 WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN THE 72 HOURS

TIME PERIOD. CORRECTIVE ACTION SHALL BE TAKEN.

- THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
- ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.



KEIM PROPERTY

ZONED: R-20 SINGLE FAMILY DETACHED

ENGINEERING

GROUP, LLC

ROFESSIONAL CERTIFICATION: THEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME , AND THAT I AM A DULY

SILL

16005 Frederick Road, 2nd Floor

Email: info@sillengineering.com

Civil Engineering for Land Development

Woodbine, Maryland 21797

Phone: 443.325.5076

Fax: 410.696.2022

TAX MAP 17 GRID 16

OWNER/DEVELOPER

BURKARD HOMES, LLC

C/O TIM BURKARD

1511 RITCHIE HIGHWAY, STE 305

ARNOLD, MD 21012

443-325-5617 TIM@BURKARDHOMES.COM 2ND ELECTION DISTRICT

SHEET#: <u>11</u> of <u>15</u>

PARCELS 75 (LOTS 3 & 4), 255 & 752

HOWARD COUNTY, MARYLAND

DESIGN BY: PS_

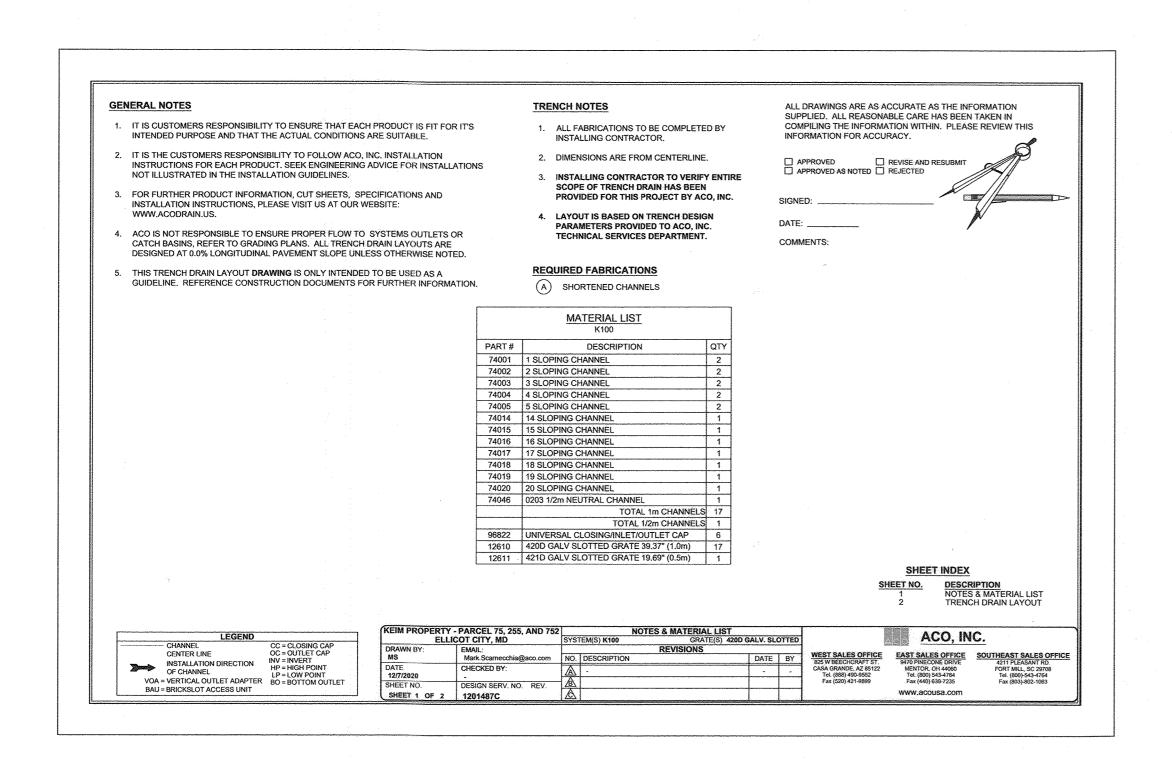
DRAWN BY: TB

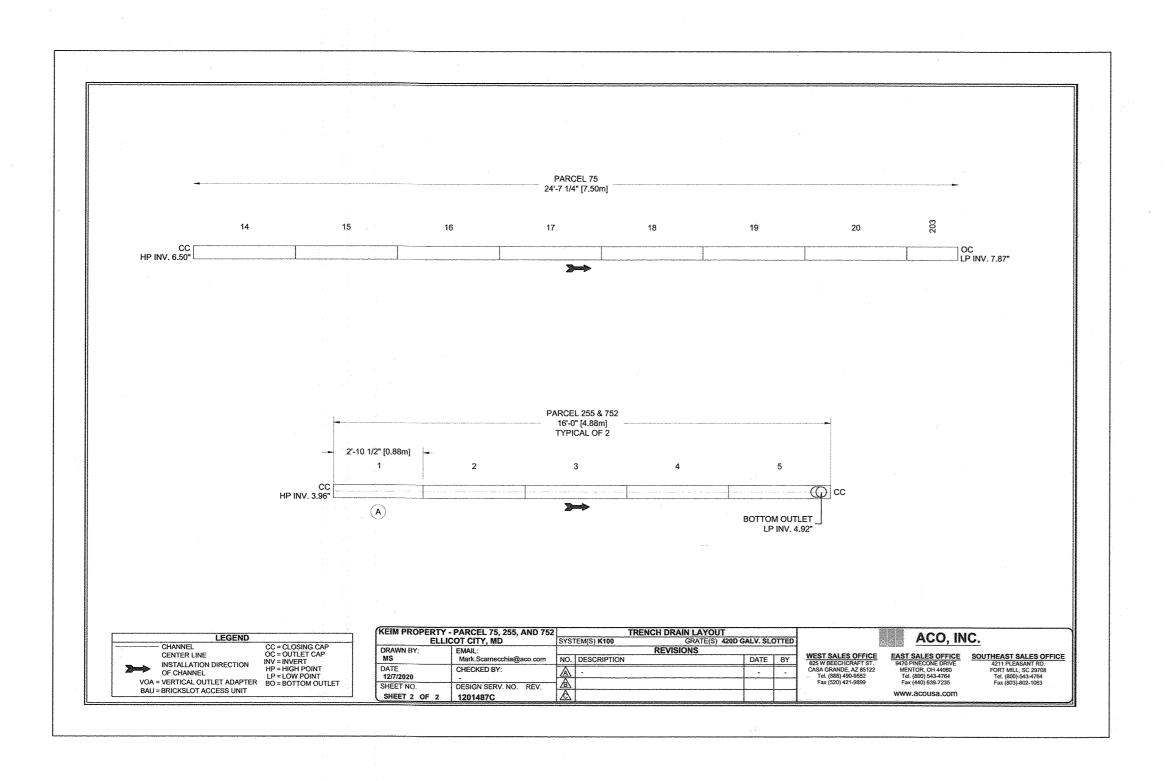
SCALE: AS SHOWN

DATE: <u>APRIL 18, 2022</u>

PROJECT#: 16-017

CHECKED BY: PS





DATE

		STRUCTURE SCH	EDULE			
NO.	TYPE & OWNERSHIP	LOCATION	TOP ELEV.	INV. IN	INV. OUT	REMARKS
I-1	KLASSIK DRAIN - K100	N 594,485.88 E 1,358,855.53	469.50	-	468.84	SEE DETAIL THIS SHEET
1-2	KLASSIK DRAIN - K100	N 594,567.63 E 1,331,342.08	464.83	-	464.42	SEE DETAIL THIS SHEET
1-3	KLASSIK DRAIN - K100	N 594,643.70 E 1,358,990.01	459.70	-	459.30	SEE DETAIL THIS SHEET

OWNER DEVELOPER BURKARD HOMES, LLC. 1511 RITCHIE HIGHWAY, STE 305 ARNOUD, MD 21012 CO TIM BURKARD TIM@BURKARDHOMES. COM 443.325.5617

TRENCH DRAIN SCHEDULE AND DETAILS

KEIM PROPERTY

ZONED: R-20 SINGLE FAMILY DETACHED

2ND ELECTION DISTRICT

TAX MAP 17 GRID 16

SILL ENGINEERING GROUP, LLC 16005 Frederick Road, 2nd Floor Woodbine, Maryland 21797 Phone: 443.325.5076 Fax: 410.696.2022 Email: info@sillengineering.com Civil Engineering for Land Development

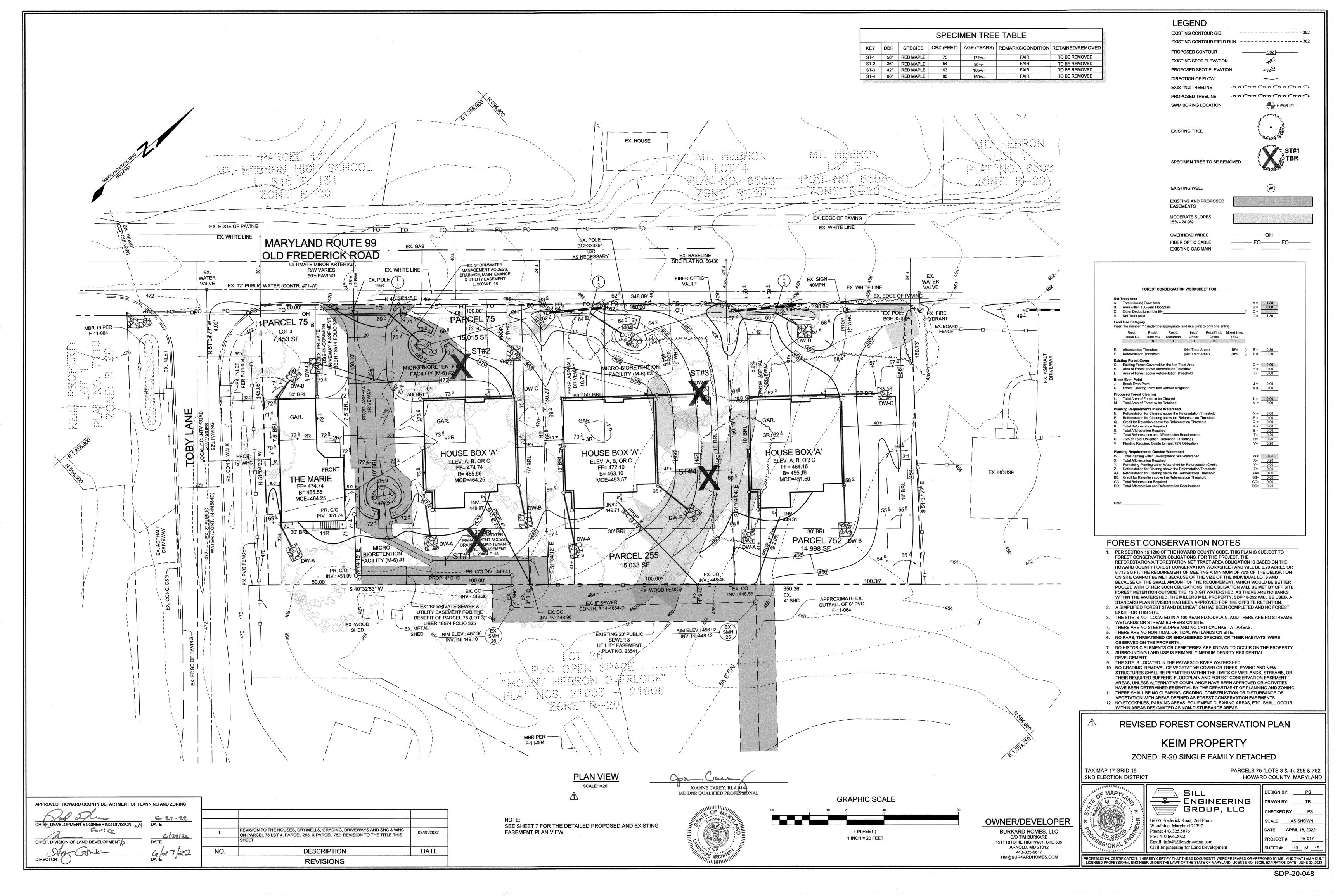
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME , AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 32025, EXPIRATION DATE: JUNE 20, 2023

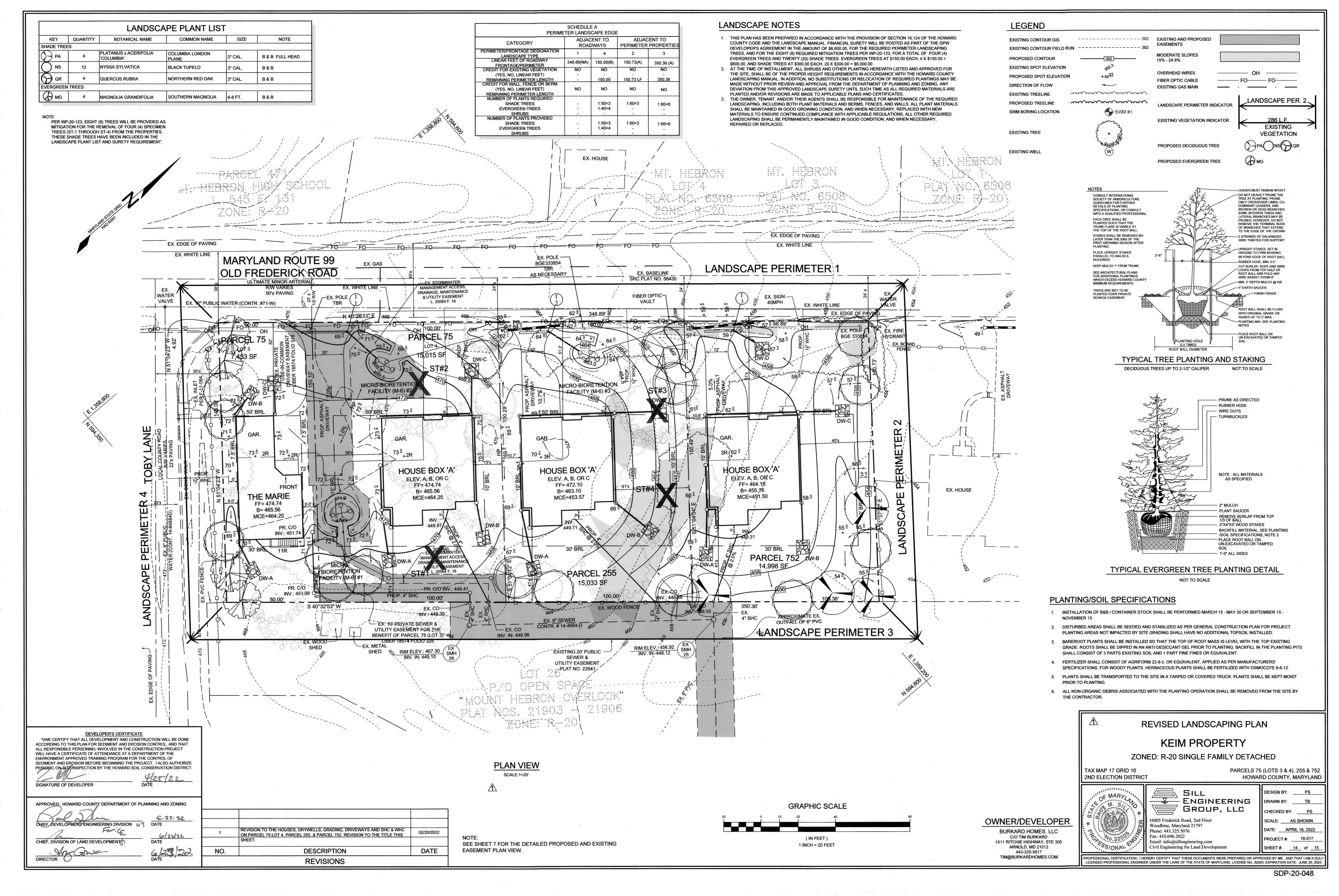
CHECKED BY: PS SCALE: AS SHOWN DATE: NOVEMBER 4, 2021 PROJECT#: 16-017 SHEET#: 12 of 15

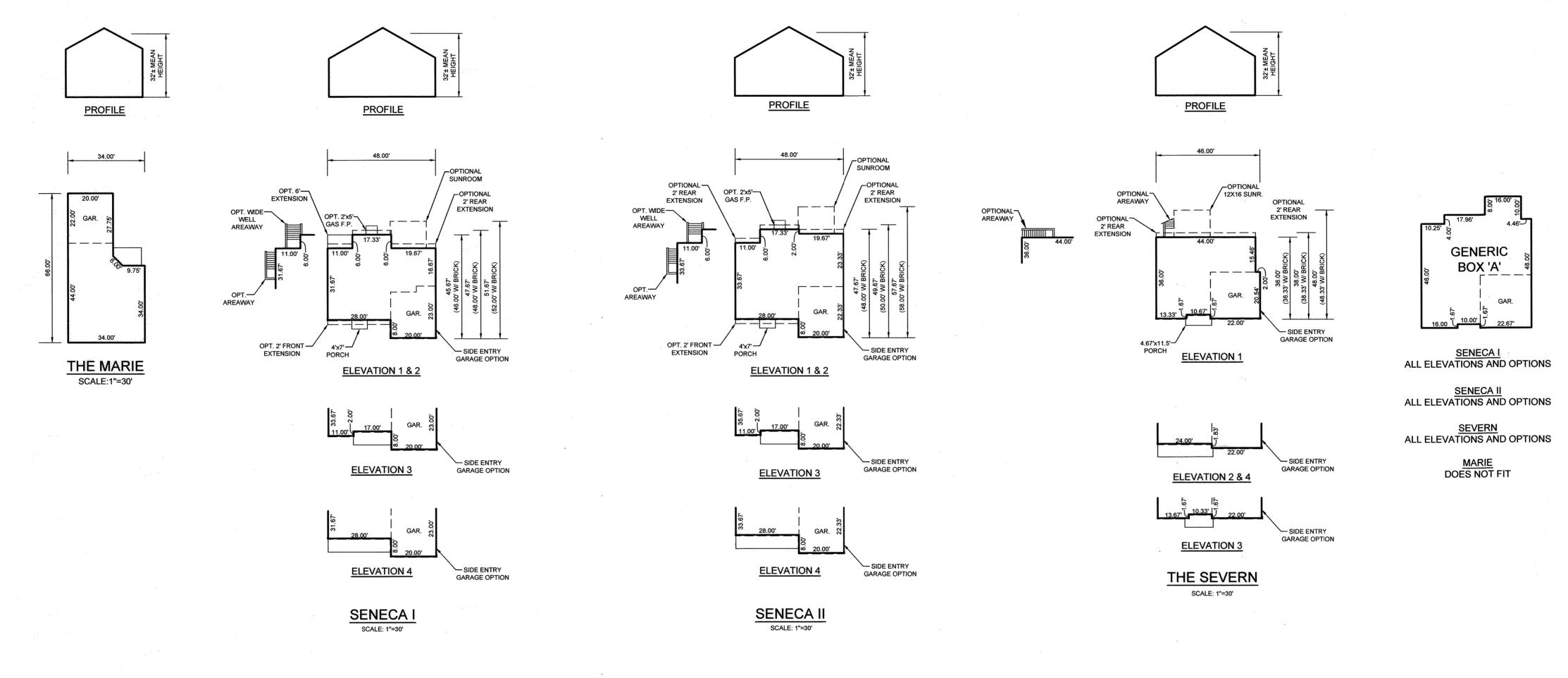
PARCELS 75 (LOTS 3 & 4), 255 & 752 HOWARD COUNTY, MARYLAND

CHIEF, DEVELOPMENT ENGINEERING DIVISION NY DATE DATE CHIEF, DIVISION OF LAND DEVELOPMENT REVISE TOTAL SHEET NUMBER TO 15 NO. DESCRIPTION 12-17-21 DATE REVISIONS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING







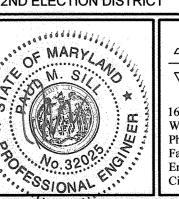
GENERIC HOUSE MODEL BOXES SCALE:1"=30'

> THE PURPOSE OF THIS SHEET IS TO ADD THE GENERIC HOUSE MODEL BOXES



TAX MAP 17 GRID 16 2ND ELECTION DISTRICT

PARCELS 75 (LOTS 3 & 4), 255 & 752 HOWARD COUNTY, MARYLAND



SILL ENGINEERING GROUP, LLC

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. 32025, EXPIRATION DATE: JUNE 20, 2023

16005 Frederick Road, 2nd Floor Woodbine, Maryland 21797 Phone: 443.325.5076 Fax: 410.696.2022 Email: info@sillengineering.com
Civil Engineering for Land Development

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING CHIEF DEVELOPMENT ENGINEERING DIVISION DATE DATE DESCRIPTION NO. REVISIONS

OWNER/DEVELOPER BURKARD HOMES, LLC C/O TIM BURKARD 1511 RITCHIE HIGHWAY, STE 305 ARNOLD, MD 21012 443-325-5617 TIM@BURKARDHOMES.COM 1 INCH = 30 FEET

GRAPHIC SCALE

CHECKED BY: PS

SCALE: AS SHOWN

DATE: APRIL 18, 2022

PROJECT #: 16-017

SHEET#: <u>15</u> of <u>15</u>