

STANDARD DRAWING LEGEND FOR ENTIRE PLAN SET

Table with 3 columns: LIMIT OF WORK, LIMIT OF DISTURBANCE, and EXISTING NOTE. It lists various symbols and their corresponding descriptions for site features like utility poles, parking counts, and storm sewers.

STANDARD ABBREVIATIONS FOR ENTIRE PLAN SET

Table with 2 columns: ABBREVIATION and DESCRIPTION. It lists codes for various site elements such as ACRES, ARCHITECTURAL, BOTTOM OF CURB, and CONCRETE.

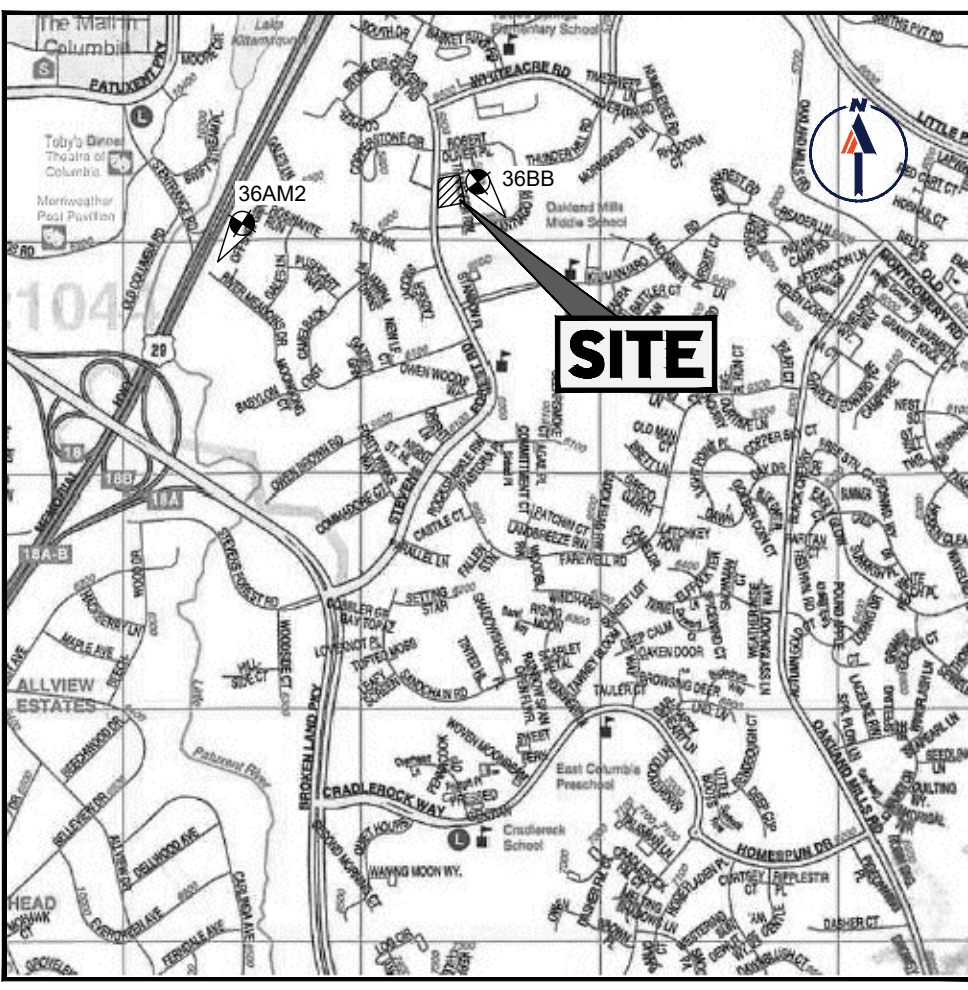
SITE DEVELOPMENT PLAN

FOR CROSSROADS WEST, LLC

7-ELEVEN STEVENS FOREST LOCATION OF SITE 5901 & 5911 STEVENS FOREST ROAD COLUMBIA, MARYLAND TAX MAP 36, GRID 10, PARCEL 300 HOWARD COUNTY 6TH ELECTION DISTRICT ZONE: NT

SHEET INDEX

Table with 2 columns: SHEET TITLE and SHEET NUMBER. It lists various sheets including COVER SHEET, CONSTRUCTION GENERAL NOTES, SITE PLAN, and LANDSCAPE NOTES.



LOCATION MAP

Copyright ADC THE MAP PEOPLE PERMIT USE NO. 20602153-5 SCALE: 1"=2000' ADC MAP COORDINATES 493E-872

PERMIT INFORMATION CHART

Table with 4 columns: SUBDIVISION NAME, SECTION/AREA, LOT/PARCEL NO., and PERMIT TYPE. It provides details for the Village of Oakland Mills Village Center, Section 2, Area 2, Parcel 300.

ISSUED FOR CONSTRUCTION

Signature block for the permit. It includes fields for SIGNATURE, DATE, and PROJECT # (MD202104). It is signed by Michael Davis on 2/27/2024.

APPROVED: FOR PUBLIC WATER & PUBLIC SEWERAGE SYSTEMS

Designed by: Michael Davis DATE: 2/27/2024 COUNTY HEALTH OFFICER HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 2/21/2024 CHIEF, DIVISION OF PLANNING AND ZONING DATE: 2/27/2024 DIRECTOR, DEPARTMENT OF PLANNING & ZONING DATE:

APPROVED: BOARD OF HOWARD COUNTY

PLANNING BOARD OF HOWARD COUNTY DATE: August 11, 2023

PLAN REFERENCES AND CONTACTS

- REFERENCES: BOUNDARY AND TOPOGRAPHIC SURVEY, GEOTECHNICAL REPORT, TRAFFIC IMPACT STUDY, GOVERNING AGENCIES, UTILITY CONTACTS, GAS AND ELECTRIC.

THE ABOVE REFERENCED DOCUMENTS ARE INCORPORATED BY REFERENCE AS PART OF THESE PLANS. HOWEVER, BOHLER DOES NOT CERTIFY THE ACCURACY OF THE WORK REFERENCED OR DERIVED FROM THESE DOCUMENTS, BY OTHERS.

SITE ANALYSIS DATA CHART

Table with 2 columns: A-Z and DATA. It provides detailed site analysis information including total project area, floor area, parking spaces, and lot area.

STORMWATER MANAGEMENT INFORMATION

Table with 4 columns: LOT/PARCEL NUMBER, FACILITY NAME & NUMBER, PRACTICE TYPE (QUALITY), and PUBLIC PRIVATE MISC. It shows details for Bioretention Facility #1.

OWNER: CROSSROADS WEST, LLC DEVELOPER: CROSSROADS WEST, LLC. Includes contact information for both parties.

TAX MAP: 36 GRID: 10 ZONE: NT PARCEL: 300 LOT: 8

SUBDIVISION NAME: VILLAGE OF OAKLAND MILLS VILLAGE CENTER SECTION 2, AREA 2 DEED # 1368500223

PREVIOUS FILE NO. FDP-50-A-1, SDP-07-087, SDP-70-011, SDP-73-118, ECP-22-011, P.B. 15, F. 82, WIP-23-088

FILE NO. SDP-22-027

BOHLER logo and contact information for SITE CIVIL AND CONSULTING ENGINEERING. Includes address, phone, and website.

REVISIONS

Table with 4 columns: REV, DATE, COMMENT, DRAWN BY. It is currently empty.

811 logo with text: Know what's below. Call before you dig. ALWAYS CALL 811. It's fast. It's free. It's the law.

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

PROJECT No.: MD202104 DRAWN BY: RMS DATE: 12/21/23 CHECKED BY: AGS DATE: 1/27/24 CAD ID: CNDS-3

SITE DEVELOPMENT PLAN FOR CROSSROADS WEST, LLC 7-ELEVEN STEVENS FOREST 5901 & 5911 STEVENS FOREST ROAD COLUMBIA, MARYLAND TAX MAP 36, GRID 10, PARCEL 300, LOT 8 HOWARD COUNTY 6TH ELECTION DISTRICT ZONE: NT

BOHLER logo and address: 901 DULANEY VALLEY ROAD, SUITE 801 TOWSON, MARYLAND 21204. Phone: (410) 821-7900.

R.M. STASIOSKI logo and contact information for PROFESSIONAL ENGINEER. Includes license number and expiration date.

COVER SHEET SHEET NUMBER: 1 SHEET TITLE: 1

PREPARED BY BOHLER logo and CONTACT: ERIC R. MCWILLIAMS, PLA

ADDRESS CHART

Table with 3 columns: LOT/PARCEL, BUILDING #, STREET ADDRESS. It lists addresses for 300 and 302.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THIS PROJECT WORK SCOPE PRIOR TO THE BEGINNING OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR APPLICABLE CODES, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER IMMEDIATELY BY E-MAIL AND RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF THE WORK AS DEFINED BY THE DRAWINGS AND ALL CONFORMANCE WITH LOCAL REGULATIONS AND CODES.













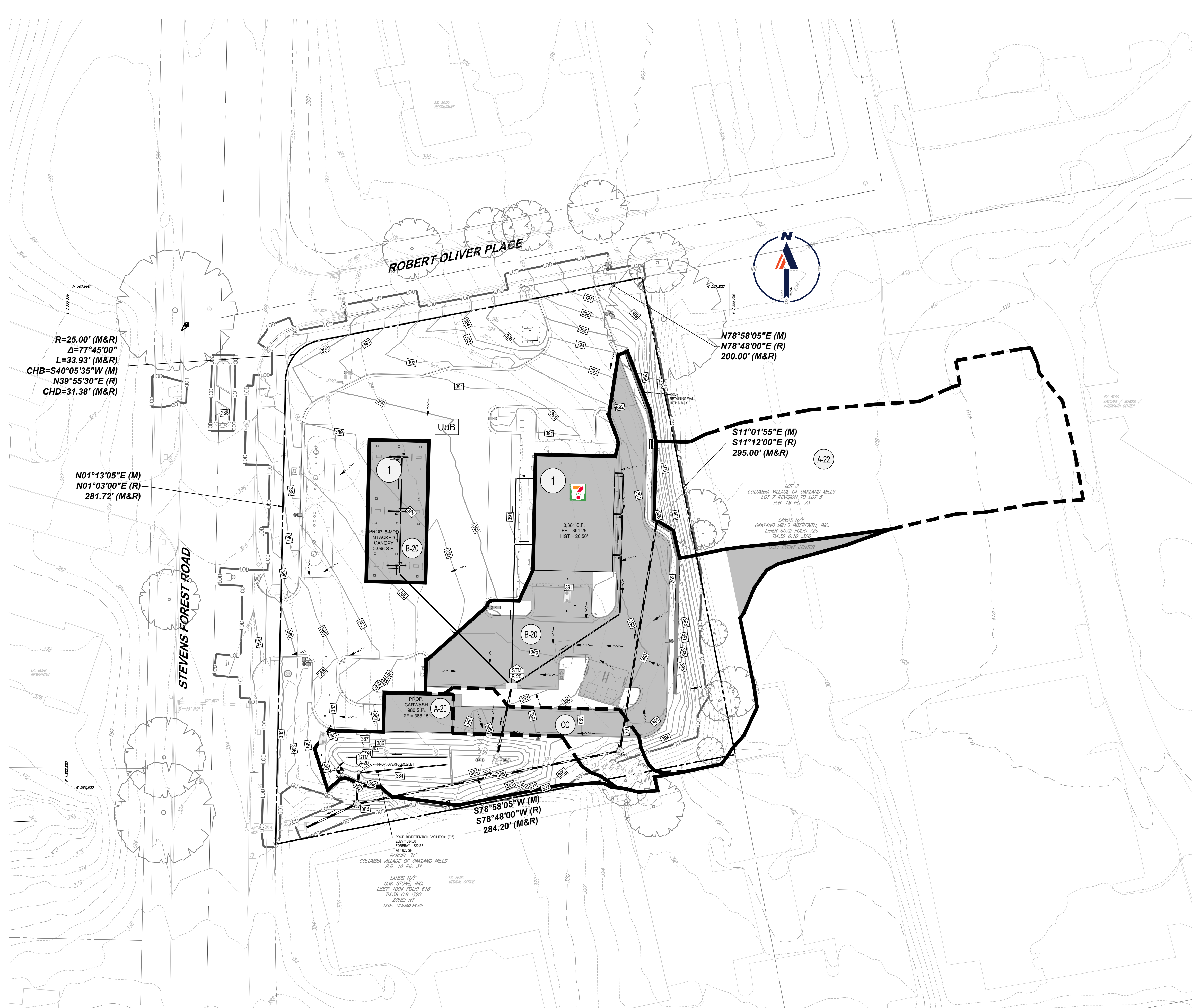












SWM DRAINAGE AREAS		
1	IART	19,166 S.F. OR 0.44 AC.
	IMPERVIOUS	22,216 S.F. OR 0.51 AC.
	PERVIOUS	15,246 S.F. OR 0.35 AC.
	WOODS	0 S.F. OR 0.00 AC.
	TOTAL	37,462 S.F. OR 0.86 AC.
ESDv REQUIRED	1,811 CF	
ESDv PROVIDED	1,980 CF	

**LEGEND**

- ESD DRAINAGE DIVIDE
- STORMDRAIN DRAINAGE DIVIDE
- IMPERVIOUS AREA

STORMDRAIN DRAINAGE AREAS			
AREA	COVERAGE	ACREAGE	C
A-20	IMPERVIOUS	0.51 AC.	0.61
	PERVIOUS	0.35 AC.	
	TOTAL (INCL AREA B-20+CC)	0.86 AC.	
A-22	IMPERVIOUS	0.38 AC.	0.76
	PERVIOUS	0.07 AC.	
	TOTAL	0.45 AC.	
B-20	IMPERVIOUS	0.37 AC.	0.65
	PERVIOUS	0.19 AC.	
	TOTAL	0.56 AC.	
CC	IMPERVIOUS	0.04 AC.	0.55
	PERVIOUS	0.00 AC.	
	TOTAL	0.04 AC.	

**BOHLER**  
 SITE CIVIL AND CONSULTING ENGINEERING  
 PROGRAM MANAGEMENT  
 LANDSCAPE ARCHITECTURE  
 SUSTAINABLE DESIGN  
 PERMITTING SERVICES  
 TRANSPORTATION SERVICES

REVISIONS			
REV	DATE	COMMENT	DRAWN BY

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PROJECT No.:	MD202104
DRAWN BY:	RMS
CHECKED BY:	AGS
DATE:	12/23/23
CAD ID:	DRIN-3

PROJECT:  
**SITE DEVELOPMENT PLAN**  
 FOR  
**CROSSROADS WEST, LLC**  
 7-ELEVEN STEVENS FOREST  
 5901 & 5911 STEVENS FOREST ROAD  
 COLUMBIA, MARYLAND  
 TAX MAP 36, GRID 10, PARCEL 300, LOT 8  
 HOWARD COUNTY  
 6TH ELECTION DISTRICT  
 ZONE: NT

**BOHLER**  
 901 DULANEY VALLEY ROAD, SUITE 801  
 TOWSON, MARYLAND 21204  
 Phone: (410) 821-7900  
 Fax: (410) 821-7987  
 MD@BohlerEng.com

**R.M. STASIOSKI**  
 PROFESSIONAL ENGINEER  
 LICENSE NO. 1211483  
 I, R.M. STASIOSKI, CERTIFY THAT THESE DOCUMENTS WERE PREPARED, REVIEWED AND APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 49425, EXPIRATION DATE: 6/30/2024



ESD SUMMARY TABLE	
"SITE AREA"	1.85 AC.
ESDv	1,569 C.F. (REQUIRED), 1,980 C.F. (PROVIDED)
Rev	NOT REQUIRED
CPv	INCLUDED IN ESDv
QP(10)	NOT REQUIRED
QP(100)	NOT REQUIRED
QP(6)	NOT REQUIRED

SOILS INFORMATION					
SYMBOL	DESCRIPTION	STRUCTURAL LIMITATIONS	HYDROLOGIC GROUP	K FACTOR	HIGHLY ERODIBLE?
UuB	URBAN LAND-UDORTHERTS COMPLEX, 0 TO 8% SLOPES	SOMEWHAT LIMITED	D	NOT RATED	NO

NOTE: ENTIRE SITE AND IMMEDIATE VICINITY IS OF THE SOIL TYPE LISTED ABOVE.

OWNER:	CROSSROADS WEST, LLC 2410 EVERGREEN ROAD, STE. 104 GAMBRILLS, MD 21054 CONTACT: WILLIAM STEFFEY PHONE: 443-332-6383	DEVELOPER:	CROSSROADS WEST, LLC 2568A RIVA ROAD, STE. 300 ANNAPOLIS, MD 21401 CONTACT: WILLIAM STEFFEY PHONE: 443-332-6383
TAX MAP:	36	GRID:	10
PARCEL:	300	ZONED:	NT
LOT:	8		
SUBDIVISION NAME: VILLAGE OF OAKLAND MILLS VILLAGE CENTER SECTION 2, AREA 2 DEED # 13685/00223			
PREVIOUS FILE NO. FDP-50-A1, SDP-07-087, SDP-70-011, SDP-73-118, ECP-22-011, P.B. 15, F. 82, WP-23-088			
<b>FILE NO. SDP-22-027</b>			

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**  
 CHAD EDMONDSON  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 2/21/2024

**APPROVED PLANNING BOARD OF HOWARD COUNTY**  
 August 11, 2023

CHIEF, DIVISION OF PLANNING & ZONING  
 LYNDA EISENBERG  
 DATE: 2/27/2024

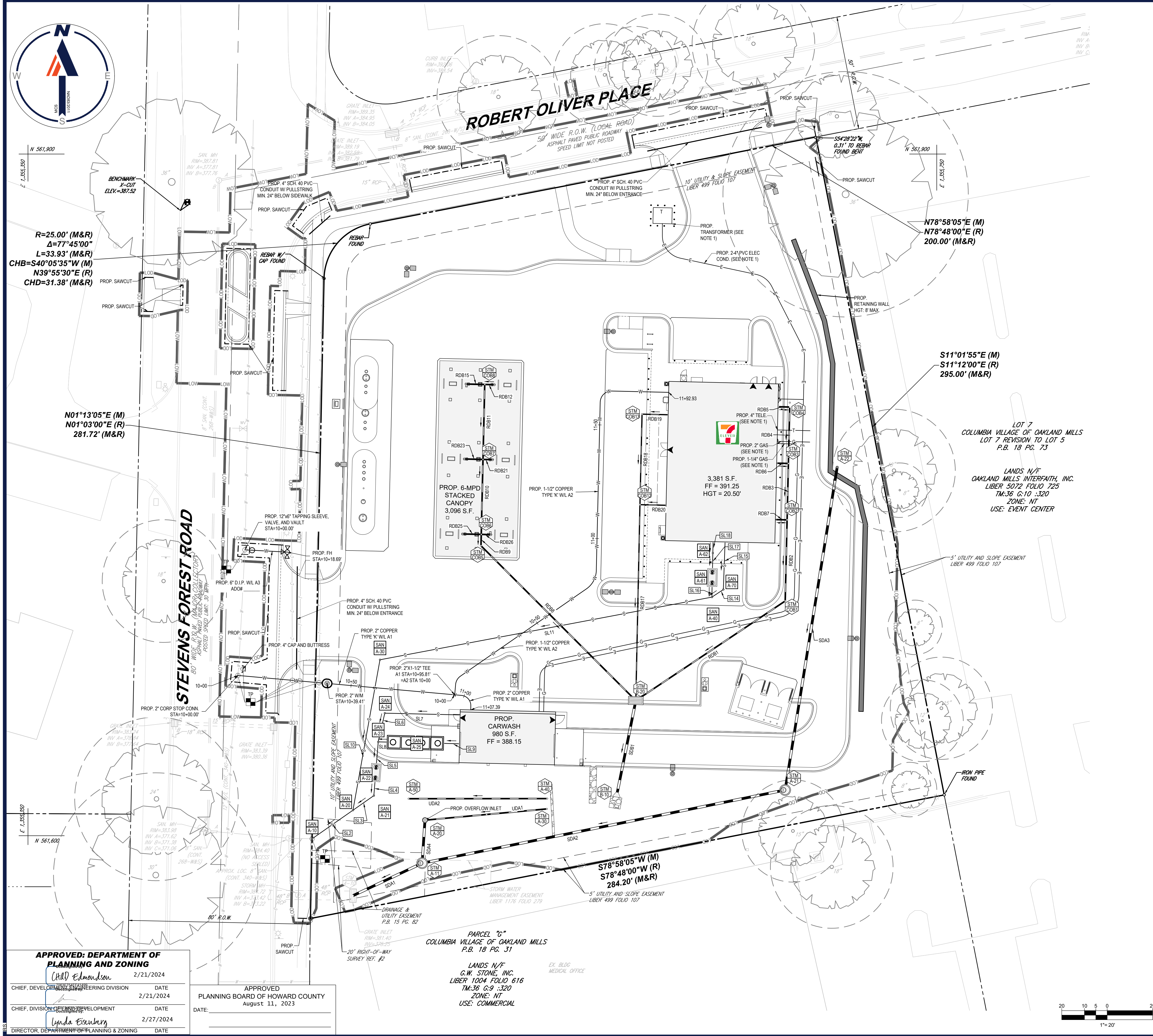












**SANITARY STRUCTURE SCHEDULE**

NAME	TYPE	RIM ELEV. (FT.)	INVERTS
A-10	CLEANOUT	385.09'	INV IN = 381.31' (6") INV OUT = 373.20' (8")
A-20	CLEANOUT	386.71'	INV IN = 381.53' (6") INV OUT = 382.35' (6")
A-21	CLEANOUT	387.06'	INV IN = 382.06' (6") INV OUT = 381.53' (6")
A-22	OIL/WATER SEPARATOR	VARIABLES	INV IN = 382.41' (6") INV OUT = 382.16' (6")
A-23	CLEANOUT	386.87'	INV IN = 383.11' (6") INV OUT = 382.55' (6")
A-24	CLEANOUT	386.77'	INV IN = 382.83' (6") INV OUT = 383.48' (6")
A-25	RECLAIM TANKS	VARIABLES	INV IN = 383.73' (6") INV OUT = 383.48' (6")
A-30	CLEANOUT	385.77'	INV IN = 382.21' (6") INV OUT = 382.21' (6")
A-40	CLEANOUT	380.29'	INV IN = 386.01' (6") INV OUT = 386.03' (6") INV OUT = 384.60' (6")
A-61	GREASE TRAP	VARIABLES	INV IN = 386.49' (6") INV OUT = 386.49' (6")
A-62	CLEANOUT	391.16'	INV IN = 386.94' (6") INV OUT = 386.94' (6")
A-70	CLEANOUT	390.46'	INV IN = 386.55' (6") INV OUT = 386.55' (6")

**REVISIONS**

REV	DATE	COMMENT	DRAWN BY

**SANITARY PIPE SCHEDULE**

FROM	FROM INV	TO	TO INV	PIPE LENGTH	SLOPE (%)	DIAMETER (IN.)	MATERIAL	NO.
A-10	381.31'	A-20	381.53'	21.92'	1.01%	6"	SDR-35 PVC	SL2
A-20	381.95'	A-21	382.06'	11.22'	1.00%	6"	SDR-35 PVC	SL3
A-21	382.06'	A-22	382.16'	6.25'	1.60%	6"	SDR-35 PVC	SL4
A-22	382.41'	A-23	382.55'	9.65'	1.45%	6"	SDR-35 PVC	SL5
A-23	382.55'	A-24	382.83'	12.96'	2.16%	6"	SDR-35 PVC	SL6
A-24	382.83'	CWSH	384.15'	33.18'	3.98%	6"	SDR-35 PVC	SL7
A-23	383.11'	A-25	383.48'	3.95'	9.38%	6"	SDR-35 PVC	SL8
A-20	381.53'	A-30	382.21'	67.28'	1.01%	6"	SDR-35 PVC	SL10
A-30	382.21'	A-40	384.60'	148.69'	1.61%	6"	SDR-35 PVC	SL11
A-40	386.01'	A-70	386.55'	6.03'	8.95%	6"	SDR-35 PVC	SL14
A-70	386.55'	BLDG	387.00'	20.95'	2.15%	6"	SDR-35 PVC	SL15
A-40	386.03'	A-61	386.49'	4.70'	9.79%	6"	SDR-35 PVC	SL16
A-61	386.74'	A-62	386.94'	6.87'	2.91%	6"	SDR-35 PVC	SL17
A-62	386.94'	BLDG	387.00'	5.00'	1.20%	6"	SDR-35 PVC	SL18

**SPECIFIC UTILITY NOTES**

- REFER TO APPROVED PLANS PREPARED BY UTILITY COMPANIES FOR ALL ELECTRIC, GAS, AND TELEPHONE/DATA CONDUIT AND STRUCTURE (MANHOLE, HANDHOLE, TRANSFORMER, ETC.) DESIGNS.
- WATERLINES SHALL NORMALLY HAVE A MINIMUM 4' OF COVER, EXCEPT WHERE CROSSING A UTILITY, WHERE THEY MAY HAVE 3' OF COVER.
- THE PUBLIC FIRE HYDRANT, 6" WATERLINE, AND 2" WATERLINE WITHIN STEVENS FOREST ROAD AS WELL AS THE 2" WATER METER IS TO BE INSTALLED WITH ADD #2848 APPROVED ON 3/29/23.

**TEST PIT NOTE**

CONTRACTOR TO TEST PIT FOR EXACT LOCATION OF EXISTING UTILITY OR 2' BELOW PROPOSED UTILITY AND SUBMIT ANY DISCREPANCIES TO BOHLER ENGINEERING VA, LLC IN WRITING.

OWNER: CROSSROADS WEST, LLC 2410 EVERGREEN ROAD, STE. 104 GAMBRILLS, MD 21054 CONTACT: WILLIAM STEFFEY PHONE: 443-332-6383	DEVELOPER: CROSSROADS WEST, LLC 2568A RIVA ROAD, STE. 300 ANNAPOLIS, MD 21401 CONTACT: WILLIAM STEFFEY PHONE: 443-332-6383	
TAX MAP: 36	GRID: 10	ZONED: NT
6TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND	PARCEL: 300	LOT: 8
SUBDIVISION NAME: VILLAGE OF OAKLAND MILLS VILLAGE CENTER SECTION 2, AREA 2 DEED # 13685/00223		
PREVIOUS FILE NO. FDP-50-A-1, SDP-07-087, SDP-70-011, SDP-73-118, ECP-22-011, P.B. 15, F. 82, WP-23-088		
<b>FILE NO. SDP-22-027</b>		



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DRAWN BY:	RMS
CHECKED BY:	AGS
DATE:	12/23/23
CAD ID:	SITE-3

**SITE DEVELOPMENT PLAN**  
FOR  
**CROSSROADS WEST, LLC**  
7-ELEVEN STEVENS FOREST  
5901 & 5911 STEVENS FOREST ROAD  
COLUMBIA, MARYLAND  
TAX MAP 36, GRID 10, PARCEL 300, LOT 8  
HOWARD COUNTY  
6TH ELECTION DISTRICT  
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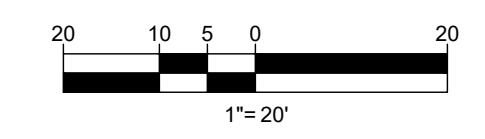
**BOHLER**  
901 DULANEY VALLEY ROAD, SUITE 801  
TOWSON, MARYLAND 21284  
Phone: (410) 821-7900  
Fax: (410) 821-7987  
MD@BohlerEng.com

**R.M. STASIOSKI**  
PROFESSIONAL ENGINEER  
I, R.M. STASIOSKI, CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 49425, EXPIRATION DATE: 6/30/2024

SHEET TITLE:  
**UTILITY PLAN**  
SHEET NUMBER:  
**10**  
ORG. DATE - 12/17/23

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**  
CHAD Edmondson 2/23/2024  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE 2/21/2024  
CHIEF, DIVISION OF PLANNING AND ZONING  
DATE 2/27/2024  
DIRECTOR, DEPARTMENT OF PLANNING & ZONING

**APPROVED PLANNING BOARD OF HOWARD COUNTY**  
August 11, 2023

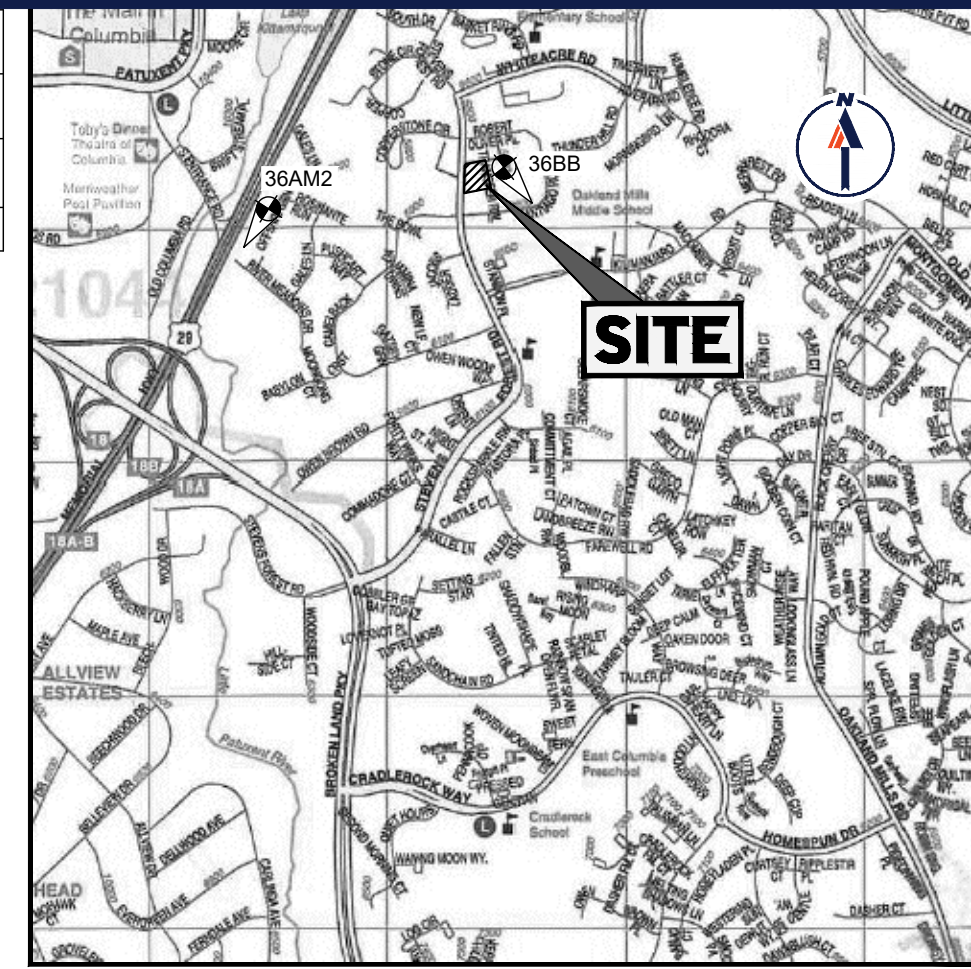




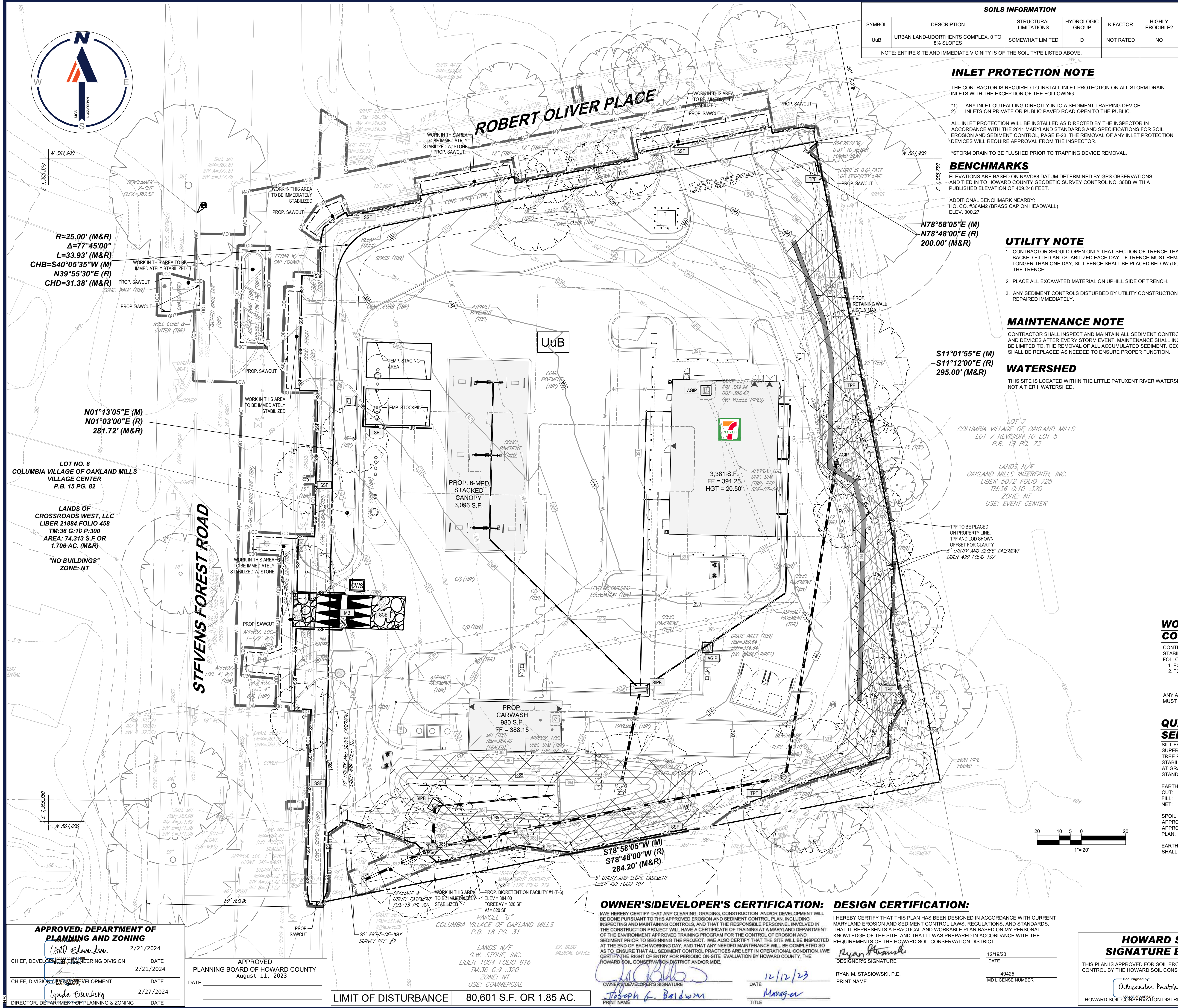


SOILS INFORMATION				
SYMBOL	DESCRIPTION	STRUCTURAL LIMITATIONS	HYDROLOGIC GROUP	HIGHLY ERODIBLE?
UuB	URBAN LAND-UDORHENTIS COMPLEX, 0 TO 8% SLOPES	SOMEWHAT LIMITED	D	NO

NOTE: ENTIRE SITE AND IMMEDIATE VICINITY IS OF THE SOIL TYPE LISTED ABOVE.



**BOHLER**  
SITE CIVIL AND CONSULTING ENGINEERING  
PROGRAM MANAGEMENT  
LANDSCAPE ARCHITECTURE  
SUSTAINABLE DESIGN  
PERMITTING SERVICES  
TRANSPORTATION SERVICES



**INLET PROTECTION NOTE**

THE CONTRACTOR IS REQUIRED TO INSTALL INLET PROTECTION ON ALL STORM DRAIN INLETS WITH THE EXCEPTION OF THE FOLLOWING:  
1) ANY INLET OUTFALLING DIRECTLY INTO A SEDIMENT TRAPPING DEVICE.  
2) INLETS ON PRIVATE OR PUBLIC PAVED ROAD OPEN TO THE PUBLIC.

ALL INLET PROTECTION WILL BE INSTALLED AS DIRECTED BY THE INSPECTOR IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, PAGE E-23. THE REMOVAL OF ANY INLET PROTECTION DEVICES WILL REQUIRE APPROVAL FROM THE INSPECTOR.  
\*STORM DRAIN TO BE FLUSHED PRIOR TO TRAPPING DEVICE REMOVAL.

**BENCHMARKS**

ELEVATIONS ARE BASED ON NAVD88 DATUM DETERMINED BY GPS OBSERVATIONS AND TIED IN TO HOWARD COUNTY GEODETIC SURVEY CONTROL NO. 368B WITH A PUBLISHED ELEVATION OF 409.246 FEET.  
ADDITIONAL BENCHMARK NEARBY:  
NO. CO. #36AM2 (BRASS CAP ON HEADWALL)  
ELEV. 300.27

**UTILITY NOTE**

- CONTRACTOR SHOULD OPEN ONLY THAT SECTION OF TRENCH THAT CAN BE BACKFILLED AND STABILIZED EACH DAY. IF TRENCH MUST REMAIN OPEN LONGER THAN ONE DAY, SILT FENCE SHALL BE PLACED BELOW (DOWNSLOPE OF) THE TRENCH.
- PLACE ALL EXCAVATED MATERIAL ON UPHILL SIDE OF TRENCH.
- ANY SEDIMENT CONTROLS DISTURBED BY UTILITY CONSTRUCTION ARE TO BE REPAIRED IMMEDIATELY.

**MAINTENANCE NOTE**

CONTRACTOR SHALL INSPECT AND MAINTAIN ALL SEDIMENT CONTROL MEASURES AND DEVICES AFTER EVERY STORM EVENT. MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO, THE REMOVAL OF ALL ACCUMULATED SEDIMENT. GEOTEXTILE FABRIC SHALL BE REPLACED AS NEEDED TO ENSURE PROPER FUNCTION.

**WATERSHED**

THIS SITE IS LOCATED WITHIN THE LITTLE PATUXENT RIVER WATERSHED, WHICH IS NOT A TIER II WATERSHED.

**LOCATION MAP**

Copyright ADC THE MAP PEOPLE  
PERMIT USE NO. 20602153-5  
SCALE: 1"=2000'  
ADC MAP COORDINATES 4932-E7

**LEGEND**

AT-GRADE INLET PROTECTION	AGIP
CONCRETE WASHOUT STRUCTURE	CWS
LIMIT OF DISTURBANCE	LD
MOUNTABLE BERM	MB
PERMANENT SOIL STABILIZATION MATTING SLOPE	MS
SILT FENCE	SF
STABILIZED CONSTRUCTION ENTRANCE	MSCE
STANDARD INLET PROTECTION	SIP
SUPER SILT FENCE	SSF
TREE PROTECTION FENCE	TPF

**REVISIONS**

REV	DATE	COMMENT	DRAWN BY

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**SITE DEVELOPMENT PLAN**  
FOR  
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5901 & 5911 STEVENS FOREST ROAD  
COLUMBIA, MARYLAND  
TAX MAP 36, GRID 10, PARCEL 300, LOT 8  
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PROFESSIONAL ENGINEER  
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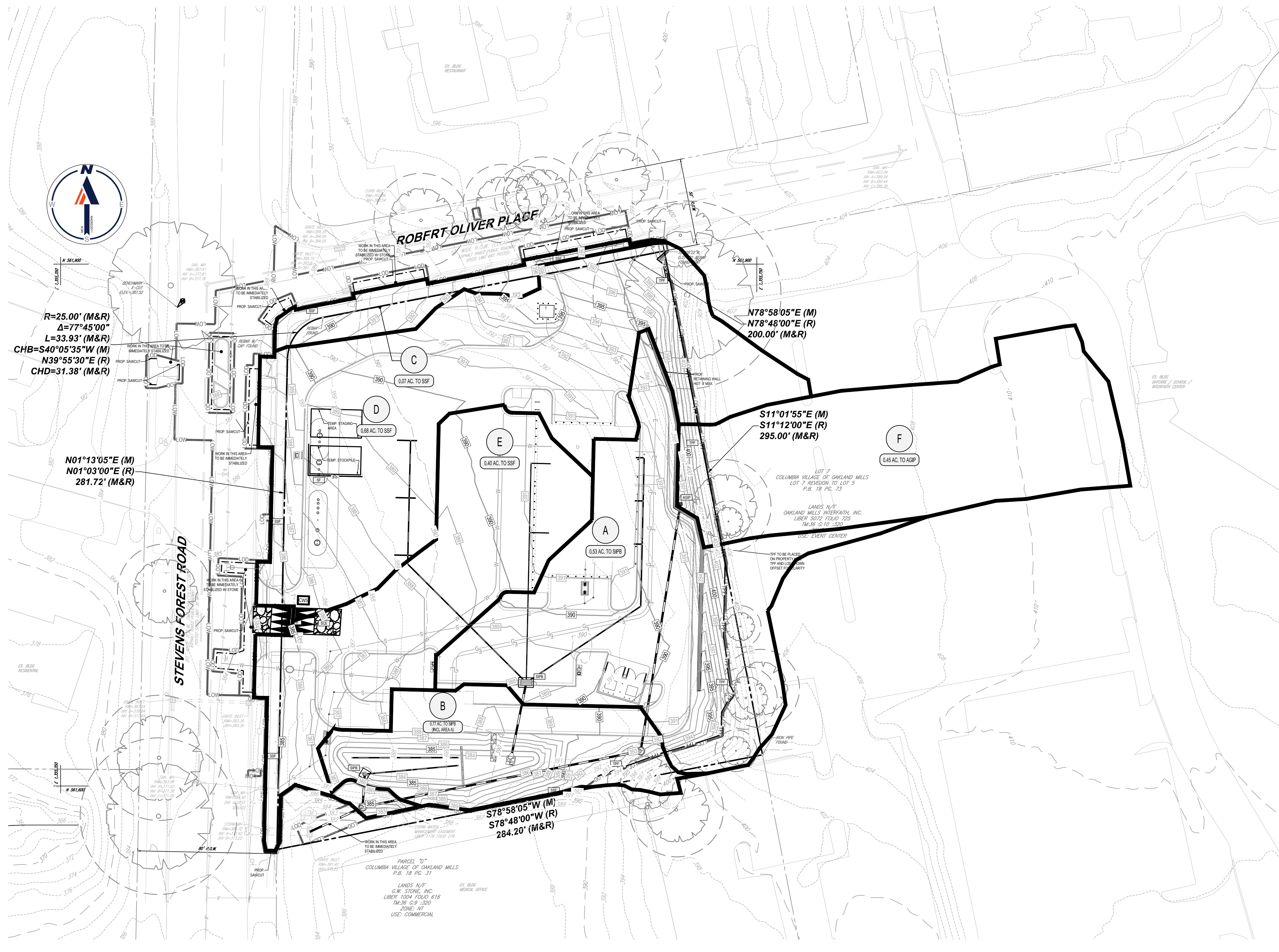
**EROSION AND SEDIMENT CONTROL PLAN**  
SHEET NUMBER: 11  
ORG. DATE - 12/17/23

OWNER: CROSSROADS WEST, LLC 2410 EVERGREEN ROAD, STE. 104 GAMBRILLS, MD 21054 CONTACT: WILLIAM STEFFEY PHONE: 443-332-6383	DEVELOPER: CROSSROADS WEST, LLC 2568A RIVA ROAD, STE. 300 ANNAPOLIS, MD 21401 CONTACT: WILLIAM STEFFEY PHONE: 443-332-6383	
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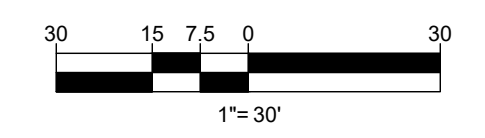
$R=25.00'$  (M&R)  
 $\Delta=77^{\circ}45'00''$   
 $L=33.93'$  (M&R)  
 $CHB=S40^{\circ}05'35''W$  (M)  
 $N39^{\circ}55'30''E$  (R)  
 $CHD=31.38'$  (M&R)

$N01^{\circ}13'05''E$  (M)  
 $N01^{\circ}03'00''E$  (R)  
 $281.72'$  (M&R)

$N78^{\circ}58'05''E$  (M)  
 $N78^{\circ}48'00''E$  (R)  
 $200.00'$  (M&R)

$S11^{\circ}01'55''E$  (M)  
 $S11^{\circ}12'00''E$  (R)  
 $295.00'$  (M&R)

$S78^{\circ}58'05''W$  (M)  
 $S78^{\circ}48'00''W$  (R)  
 $284.20'$  (M&R)



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SITE CIVIL AND CONSULTING ENGINEERING  
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ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

PROJECT NO.: MD202104  
 DRAWN BY: RMS  
 CHECKED BY: AGS  
 DATE: 12/23  
 CAD ID: SITE-3

**SITE DEVELOPMENT PLAN**  
 FOR  
**CROSSROADS WEST, LLC**  
 7-ELEVEN STEVENS FOREST  
 5901 & 5911 STEVENS FOREST ROAD  
 COLUMBIA, MARYLAND  
 TAX MAP 36, GRID 10, PARCEL 300, LOT 8  
 HOWARD COUNTY  
 6TH ELECTION DISTRICT  
 ZONE: NT

**BOHLER** //

901 DULANEY VALLEY ROAD, SUITE 801  
 TOWSON, MARYLAND 21284  
 Phone: (410) 821-7900  
 Fax: (410) 821-7987  
 MD@BohlerEng.com

**R.M. STASIOSKI**

PROFESSIONAL ENGINEER  
 LICENSE NO. 1211483

SHEET TITLE:  
**INTERIM EROSION AND SEDIMENT CONTROL DRAINAGE AREA MAP**

SHEET NUMBER:  
**13**

ORG. DATE - 12/7/23

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

CHIEF DEVELOPER: *CHAD Edmondson* 2/21/2024  
 CHIEF DIVISION: ENGINEERING DIVISION  
 CHIEF DIVISION: DEVELOPMENT  
 DIRECTOR, DEPARTMENT OF PLANNING & ZONING

APPROVED  
 PLANNING BOARD OF HOWARD COUNTY  
 August 11, 2023

**OWNER'S/DEVELOPER'S CERTIFICATION:**  
 I HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I WE ALSO CERTIFY THAT THE SITE WILL BE INSPECTED AT THE END OF EACH WORKING DAY, AND THAT ANY NEEDED MAINTENANCE WILL BE COMPLETED SO AS TO ENSURE THAT ALL SEDIMENT CONTROL PRACTICES ARE LEFT IN OPERATIONAL CONDITION. I WE CERTIFY THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

*Joseph F. Baldwin*  
 OWNER/DEVELOPER'S SIGNATURE  
 DATE: 12/12/23  
 TITLE: Manager

**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.

*Ryan M. Stasiowski*  
 DESIGNER'S SIGNATURE  
 DATE: 12/19/23  
 RYAN M. STASIOSKI, P.E.  
 PRINT NAME  
 49425  
 MD LICENSE NUMBER

**HOWARD SCD SIGNATURE BLOCK**

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

Digitally signed by: *Alexander Bratnie* 2/22/2024  
 HOWARD SOIL CONSERVATION DISTRICT DATE

OWNER: CROSSROADS WEST, LLC  
 2410 EVERGREEN ROAD, STE. 104  
 GAMBRIELLS, MD 21054  
 CONTACT: WILLIAM STEFFEY  
 PHONE: 443-332-6383

DEVELOPER: CROSSROADS WEST, LLC  
 2568A RIVA ROAD, STE. 300  
 ANNAPOLIS, MD 21401  
 CONTACT: WILLIAM STEFFEY  
 PHONE: 443-332-6383

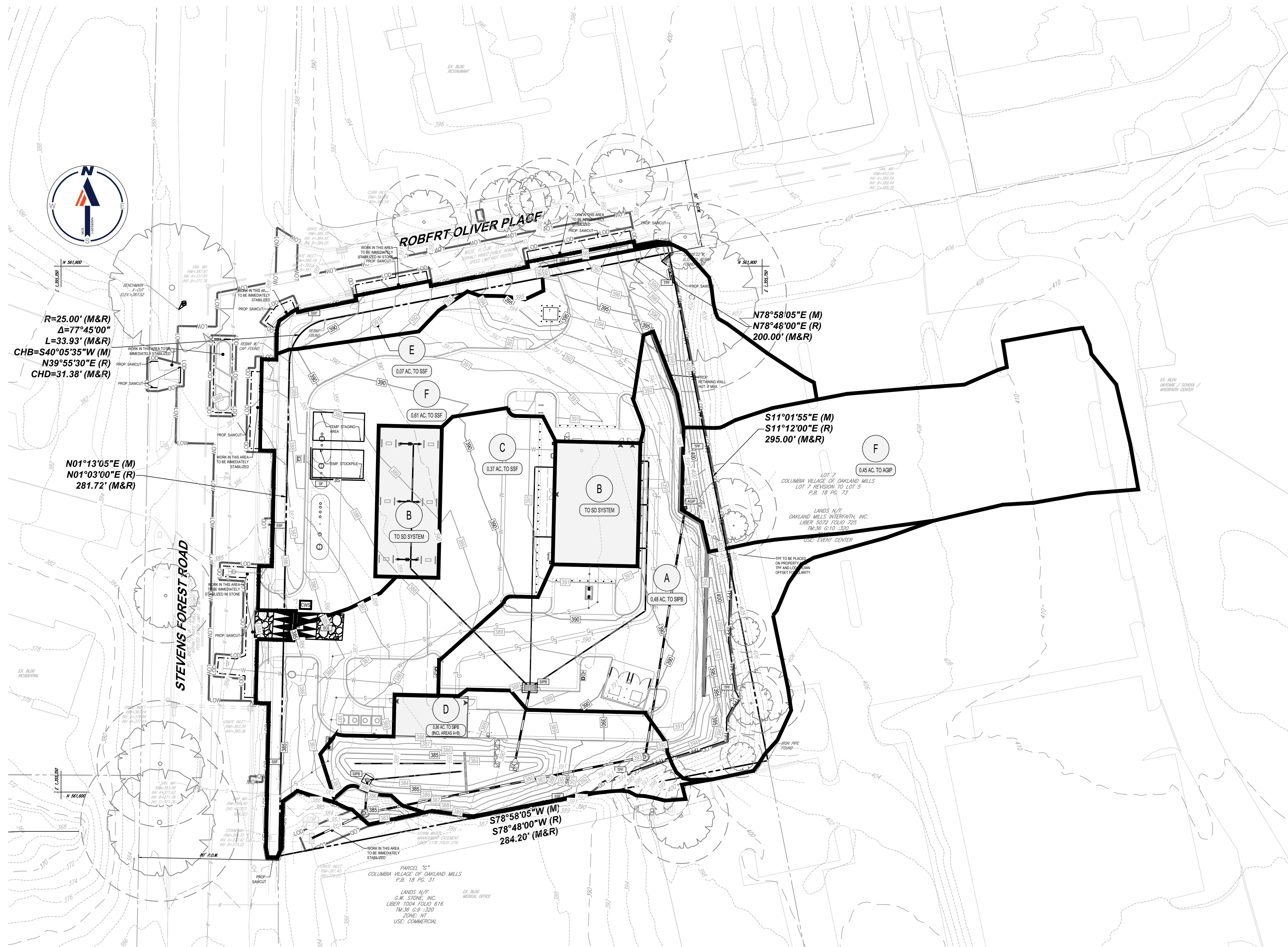
TAX MAP: 36 GRID: 10 ZONED: NT  
 PARCEL: 300 LOT: 8  
 6TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SUBDIVISION NAME: VILLAGE OF OAKLAND MILLS VILLAGE CENTER SECTION 2, AREA 2 DEED # 13685/00223

PREVIOUS FILE NO. FDP-50-A1, SDP-07-687, SDP-70-611, SDP-73-118, ECP-22-011, P.B. 15, F. 82, WP-23-688

**FILE NO. SDP-22-027**





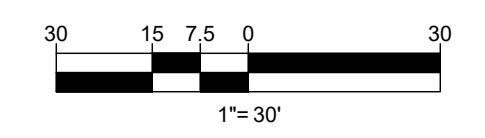
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Δ=77°45'00"  
L=33.93' (M&R)  
CHB=S40°05'35"W (M)  
N39°55'30"E (R)  
CHD=31.38' (M&R)

N01°13'05"E (M)  
N01°03'00"E (R)  
281.72' (M&R)

N78°58'05"E (M)  
N78°48'00"E (R)  
200.00' (M&R)

S11°01'55"E (M)  
S11°12'00"E (R)  
295.00' (M&R)

S78°58'05"W (M)  
S78°48'00"W (R)  
284.20' (M&R)



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THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.: MD202104  
DRAWN BY: RMS  
CHECKED BY: AGS  
DATE: 12/23  
CAD ID: SITE-3

PROJECT: **SITE DEVELOPMENT PLAN** FOR **CROSSROADS WEST, LLC**  
7-ELEVEN STEVENS FOREST  
5901 & 5911 STEVENS FOREST ROAD  
COLUMBIA, MARYLAND  
TAX MAP 36, GRID 10, PARCEL 300, LOT 8  
HOWARD COUNTY  
6TH ELECTION DISTRICT  
ZONE: NT

**BOHLER**  
901 DULANEY VALLEY ROAD, SUITE 801  
TOWSON, MARYLAND 21284  
Phone: (410) 821-7900  
Fax: (410) 821-7987  
MD@BohlerEng.com

**R.M. STASIOSKI**  
PROFESSIONAL ENGINEER  
I, RYAN M. STASIOSKI, CERTIFY THAT THESE DOCUMENTS WERE PREPARED AND APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 49425, EXPIRATION DATE: 6/30/2024

SHEET TITLE: **POSTDEVELOPMENT EROSION AND SEDIMENT CONTROL DRAINAGE AREA MAP**  
SHEET NUMBER: **14**  
ORG. DATE - 12/7/23

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 2/21/2024  
CHIEF, DIVISION OF PLANNING AND ZONING  
DATE: 2/27/2024

APPROVED  
PLANNING BOARD OF HOWARD COUNTY  
August 11, 2023

**OWNER'S/DEVELOPER'S CERTIFICATION:**  
I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I/WE ALSO CERTIFY THAT THE SITE WILL BE INSPECTED AT THE END OF EACH WORKING DAY, AND THAT ANY NEEDED MAINTENANCE WILL BE COMPLETED SO AS TO ENSURE THAT ALL SEDIMENT CONTROL PRACTICES ARE LEFT IN OPERATIONAL CONDITION. I/WE CERTIFY THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

OWNER'S/DEVELOPER'S SIGNATURE: *Joseph F. Baldwin*  
DATE: 12/12/23  
TITLE: Manager

**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.

DESIGNER'S SIGNATURE: *Ryan M. Stasioski*  
DATE: 12/19/23  
RYAN M. STASIOSKI, P.E.  
PRINT NAME: RYAN M. STASIOSKI, P.E.  
MD LICENSE NUMBER: 49425

**HOWARD SCD SIGNATURE BLOCK**  
THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
Designed by: *Alexander Bratkovic* 2/22/2024  
HOWARD SOIL CONSERVATION DISTRICT

OWNER: CROSSROADS WEST, LLC  
2410 EVERGREEN ROAD, STE. 104  
GAMBRILLS, MD 21054  
CONTACT: WILLIAM STEFFEY  
PHONE: 443-332-6383

DEVELOPER: CROSSROADS WEST, LLC  
2568A RIVA ROAD, STE. 300  
ANNAPOLIS, MD 21401  
CONTACT: WILLIAM STEFFEY  
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TAX MAP: 36 GRID: 10 ZONED: NT  
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SUBDIVISION NAME: VILLAGE OF OAKLAND MILLS VILLAGE CENTER SECTION 2, AREA 2 DEED # 13685/00223

PREVIOUS FILE NO. FDP-50-A1, SDP-07-687, SDP-70-611, SDP-73-118, ECP-22-011, P.B. 15, F. 82, WP-23-688

**FILE NO. SDP-22-027**



B-4 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

DEFINITION USING VEGETATION AS COVER TO PROTECT EXPOSED SOIL FROM EROSION. PURPOSE TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL.

- CONDITIONS WHERE PRACTICE APPLIES ON ALL DISTURBED AREAS NOT STABILIZED BY OTHER METHODS. THIS SPECIFICATION IS DIVIDED INTO SECTIONS ON INCREMENTAL STABILIZATION, SOIL PREPARATION, SOIL AMENDMENTS AND TOPSOILING, SEEDING AND MULCHING, TEMPORARY STABILIZATION, AND PERMANENT STABILIZATION. EFFECTS ON WATER QUALITY AND QUANTITY... STABILIZATION PRACTICES ARE USED TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL...

ADEQUATE VEGETATIVE ESTABLISHMENT

- INSPECT SEEDED AREAS FOR VEGETATIVE ESTABLISHMENT AND MAKE NECESSARY REPAIRS, REPLACEMENTS, AND RESEEDINGS WITHIN THE PLANTING SEASON. 1. ADEQUATE VEGETATIVE STABILIZATION REQUIRES 95 PERCENT GROUND COVER...

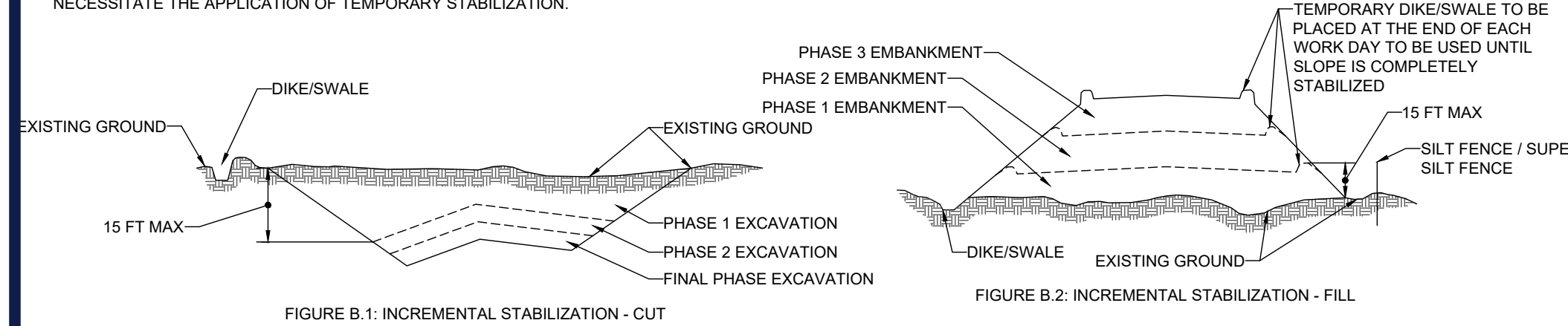
B-4-1 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

DEFINITION ESTABLISHMENT OF VEGETATIVE COVER ON CUT AND FILL SLOPES.

PURPOSE TO PROVIDE TIMELY VEGETATIVE COVER ON CUT AND FILL SLOPES AS WORK PROGRESSES.

- CONDITIONS WHERE PRACTICE APPLIES ANY CUT OR FILL SLOPE GREATER THAN 15 FEET IN HEIGHT. THIS PRACTICE ALSO APPLIES TO STOCKPILES. CRITERIA A. INCREMENTAL STABILIZATION - CUT SLOPES 1. EXCAVATE AND STABILIZE CUT SLOPES IN INCREMENTS NOT TO EXCEED 15 FEET IN HEIGHT...

NOTE: ONCE EXCAVATION HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH...



B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

DEFINITION THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION. PURPOSE 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... 2. PERMANENT STABILIZATION a. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE...

- B. TOPSOILING 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... 2. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS...

APPROVED: DEPARTMENT OF PLANNING AND ZONING. Chief, Development Engineering Division: Chad Edmondson, 2/23/2024. Chief, Division of Planning and Zoning: Linda Eubank, 2/27/2024. Director, Department of Planning and Zoning.

HOWARD SCD SIGNATURE BLOCK. Approved: Planning Board of Howard County, August 11, 2023. Signed by: Alexander Bratovich, 2/22/2024. Howard Soil Conservation District.

- 3. TOPSOIL APPLICATION a. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL. b. UNFORMALLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES... 4. 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...

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

DEFINITION THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

PURPOSE TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

CONDITIONS WHERE PRACTICE APPLIES TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

- CRITERIA A. SEEDING 1. SPECIFICATIONS a. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY... b. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY... 2. APPLICATION a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS... b. MULCHING 1. MULCH MATERIALS (IN ORDER OF PREFERENCE) a. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY...

- b. MULCHING 2. APPLICATION a. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING. b. WHEN STRAW MULCH IS USED, APPLY IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES... 3. ANCHORING a. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER...

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION. PURPOSE 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.

- CRITERIA A. SEED MIXTURES 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... b. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES... 2. TURFGRASS MIXTURES a. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE... b. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW...

Table: PERMANENT SEEDING SUMMARY. Columns: NO., SPECIES, APPLICATION RATE (LB/AC), SEEDING DATES, SEEDING DEPTHS, FERTILIZER RATE (10-20-20) with N, P2O5, K2O, and LIME RATE (2 TONS/AC). Rows include Tall Fescue, Kentucky Bluegrass, Hard Fescue, Switch Grass, Creeping Red Fescue, and Partridge Pea.

NOTE: 1. THE PLANTING DATES LISTED ARE AVERAGES FOR EACH ZONE... 2. IF THE PLANTING DATES LISTED ARE AVERAGES FOR EACH ZONE, THESE DATES MAY REQUIRE ADJUSTMENT TO REFLECT LOCAL CONDITIONS... 3. ADDITIONAL PLANTING DATES FOR THE LOWER COASTAL PLAIN, DEPENDENT ON ANNUAL RAINFALL AND TEMPERATURE TRENDS...

- 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 1/2 INCH PLUS OR MINUS 1/8 INCH... c. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT... 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...

OWNER/SEVELOPER'S CERTIFICATION:

I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROL STRUCTURES... AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM...

OWNER'S DEVELOPER'S SIGNATURE: Joseph G. Baldwin, DATE: 12/12/23. TITLE: Manager.

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.

DESIGNER'S SIGNATURE: RYAN M. STASIOSKI, P.E., DATE: 4/24/25, MD LICENSE NUMBER: [blank].

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

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

PURPOSE 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.

- CRITERIA 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... 2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY...

Owner/Developer information: CROSSROADS WEST, LLC. 2410 EVERGREEN ROAD, STE 104 GAMBRIEL, MD 21054. DEVELOPER: CROSSROADS WEST, LLC. 2568A RIVA ROAD, STE 300 ANNAPOLIS, MD 21403. TAX MAP: 36 GRID 10 ZONED: NT PARCEL: 300 LOT: 8. SHEET NUMBER: 15. FILE NO. SDP-5F-22-02-27

BOHLER logo and text: SITE CIVIL AND CONSULTING ENGINEERING, PROGRAM MANAGEMENT, LANDSCAPE ARCHITECTURE, SUSTAINABLE DESIGN, PERMITTING SERVICES, TRANSPORTATION SERVICES.

Table: REVISIONS. Columns: REV, DATE, COMMENT. Contains one revision entry.

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ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

PROJECT information: PROJECT: CROSSROADS WEST, LLC. 7-ELEVEN STEVENS FOREST. 5901 & 5911 STEVENS FOREST ROAD COLUMBIA, MARYLAND. TAX MAP 36, GRID 10, PARCEL 300, LOT 8. HOWARD COUNTY 6TH ELECTION DISTRICT ZONE: NT.

SITE DEVELOPMENT PLAN FOR CROSSROADS WEST, LLC.

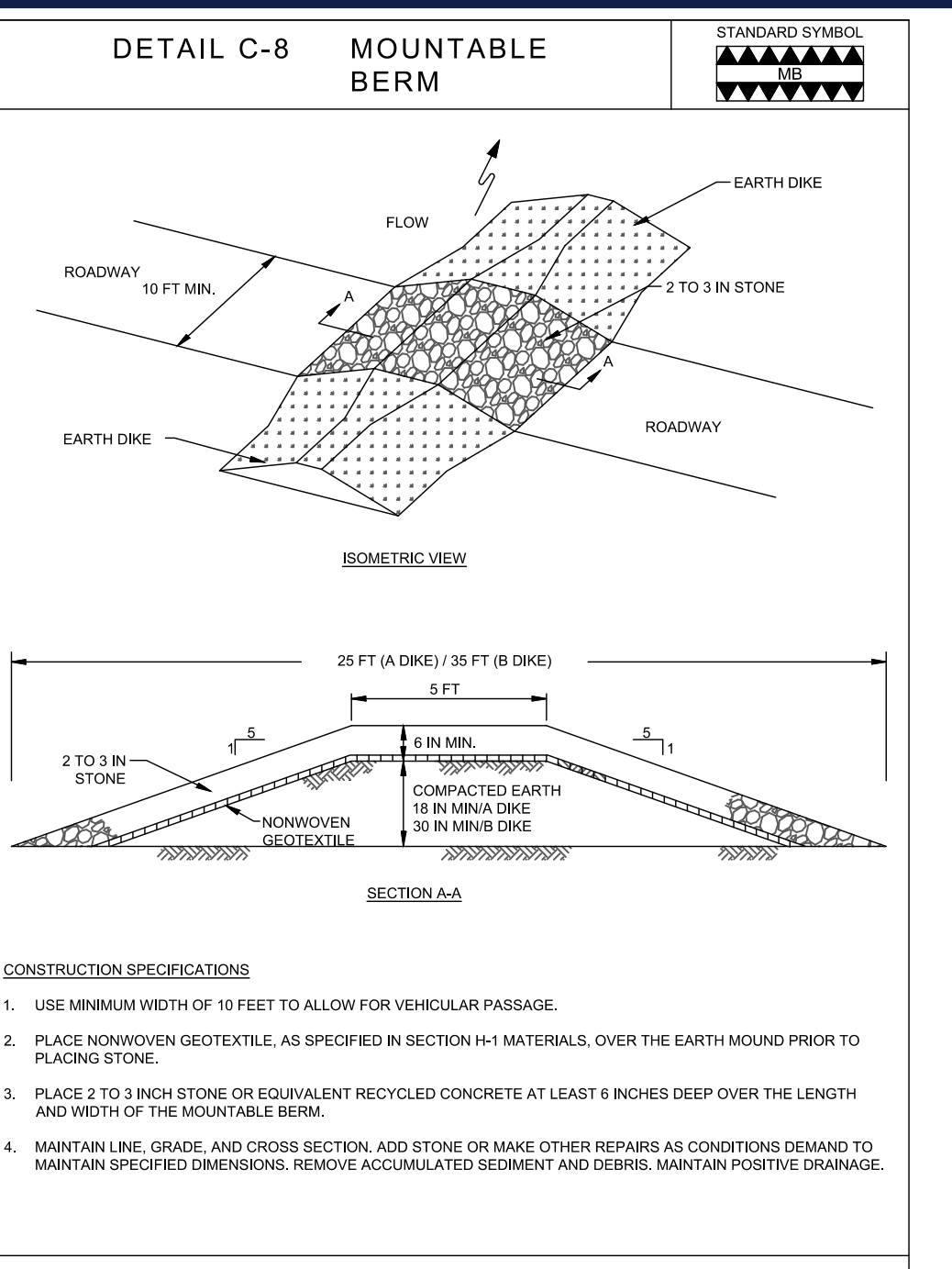
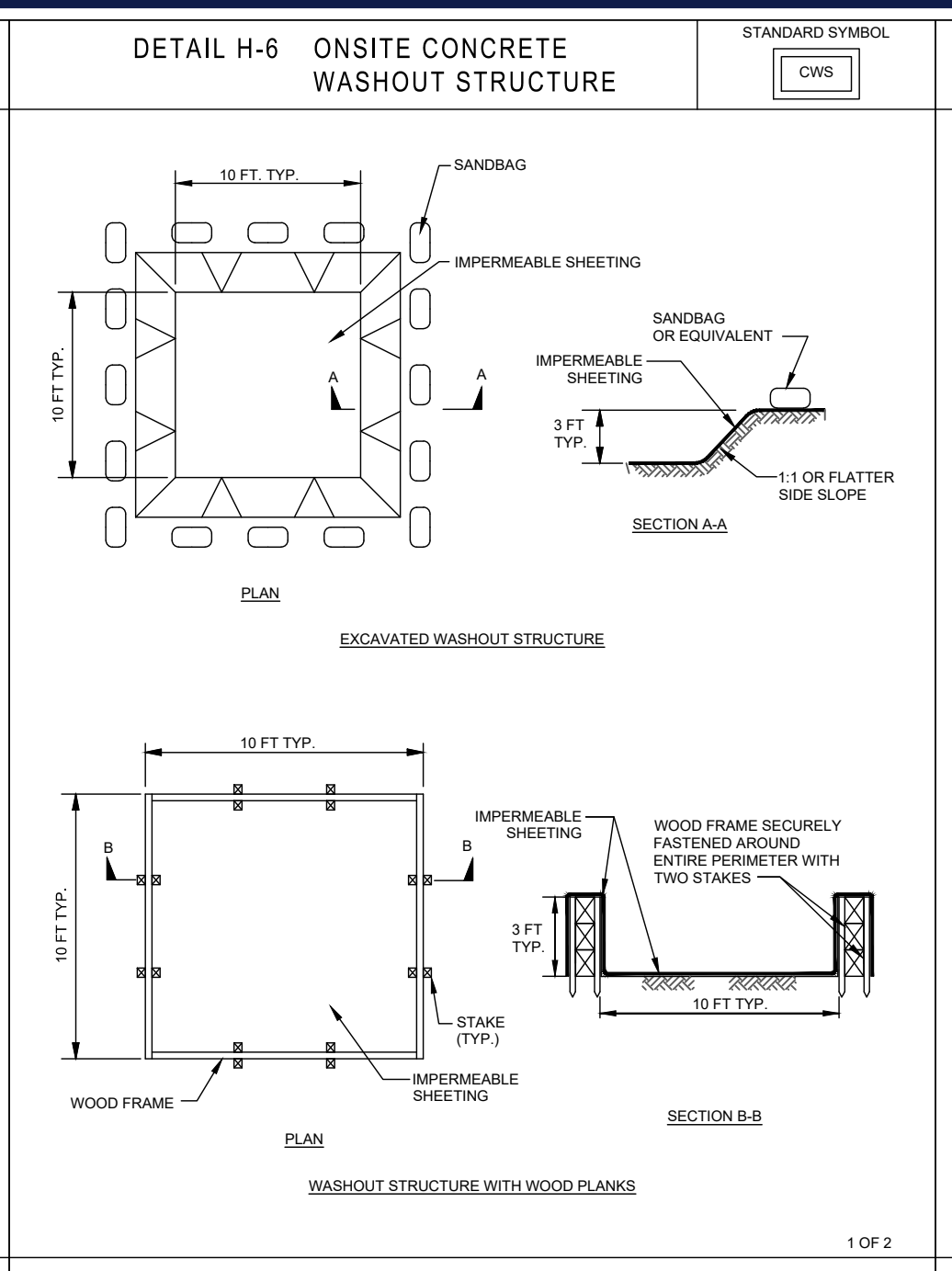
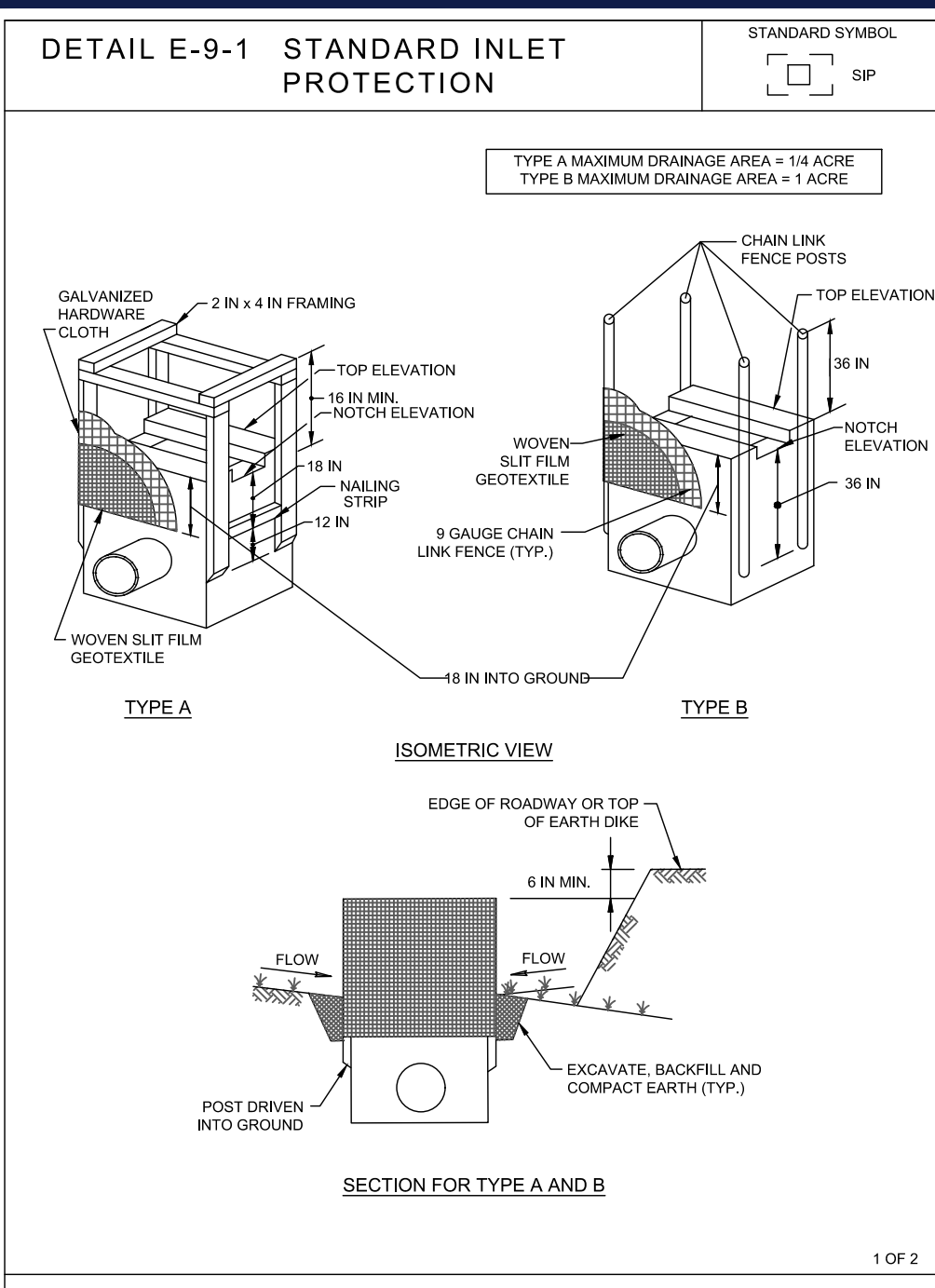
7-ELEVEN STEVENS FOREST. 5901 & 5911 STEVENS FOREST ROAD COLUMBIA, MARYLAND. TAX MAP 36, GRID 10, PARCEL 300, LOT 8. HOWARD COUNTY 6TH ELECTION DISTRICT ZONE: NT.

BOHLER logo and address: 901 DULANEY VALLEY ROAD, SUITE 801 TOWSON, MARYLAND 21204. Phone: (410) 821-7900. Fax: (410) 821-7987. MD@BohlerEng.com.

R.M. STASIOSKI logo and text: PROFESSIONAL ENGINEER, LICENSE # 151413. I, RYAN M. STASIOSKI, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 49425, EXPIRATION DATE: 6/30/2024.

Table: SHEET TITLE. EROSION AND SEDIMENT CONTROL NOTES AND DETAILS. SHEET NUMBER: 15. ORG. DATE: 12/17/23.





### B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

**DEFINITION**  
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 USE.

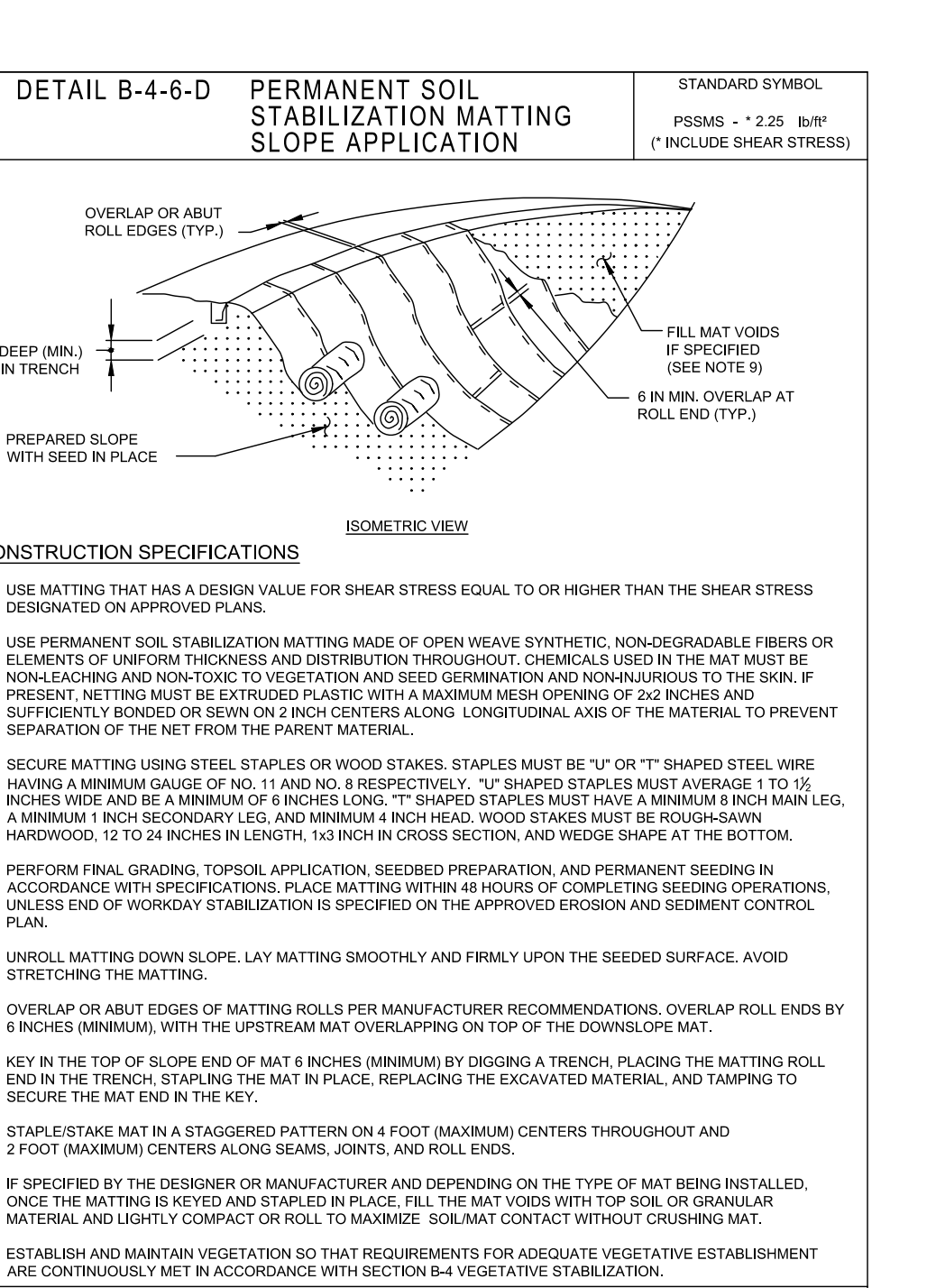
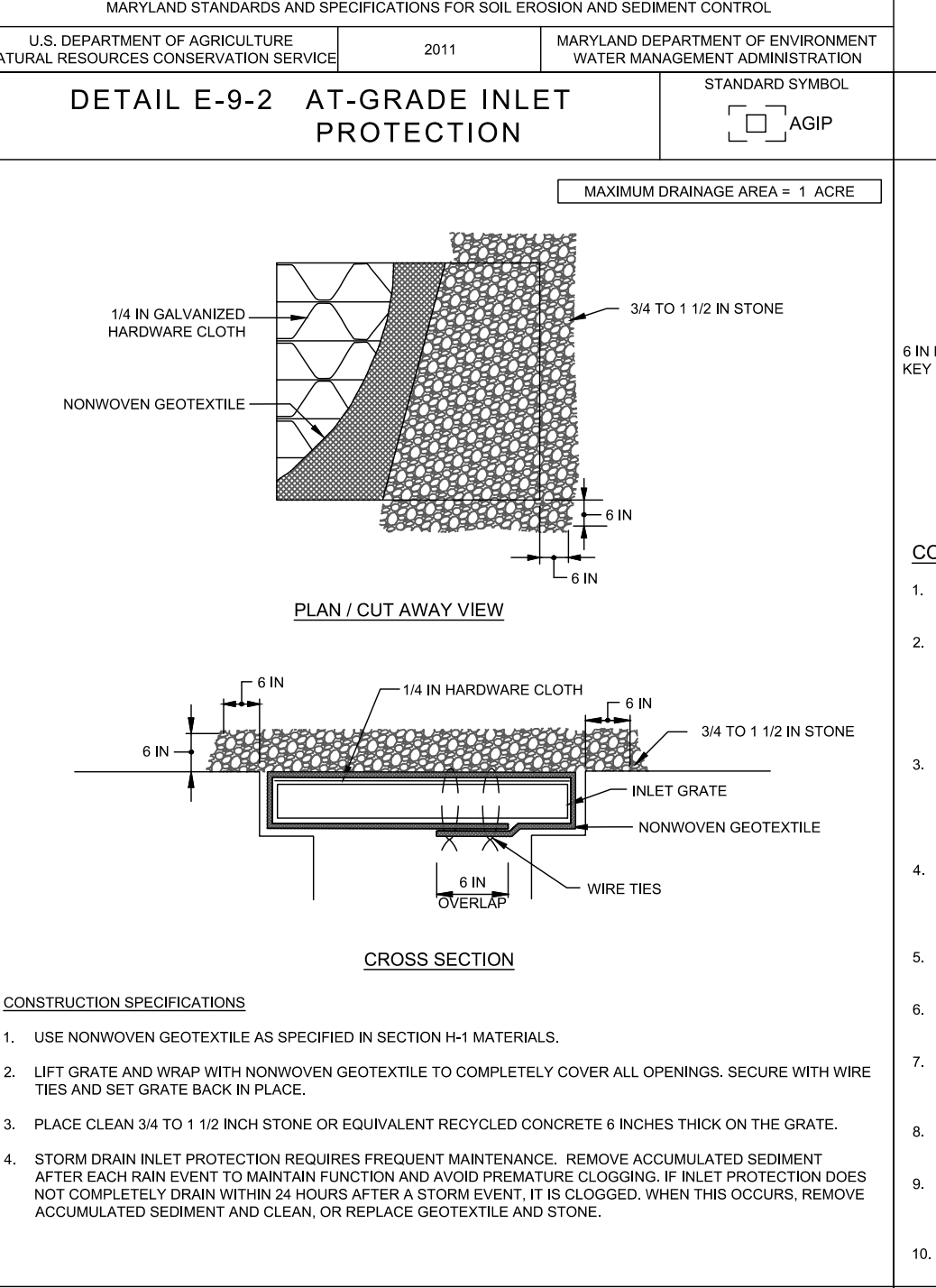
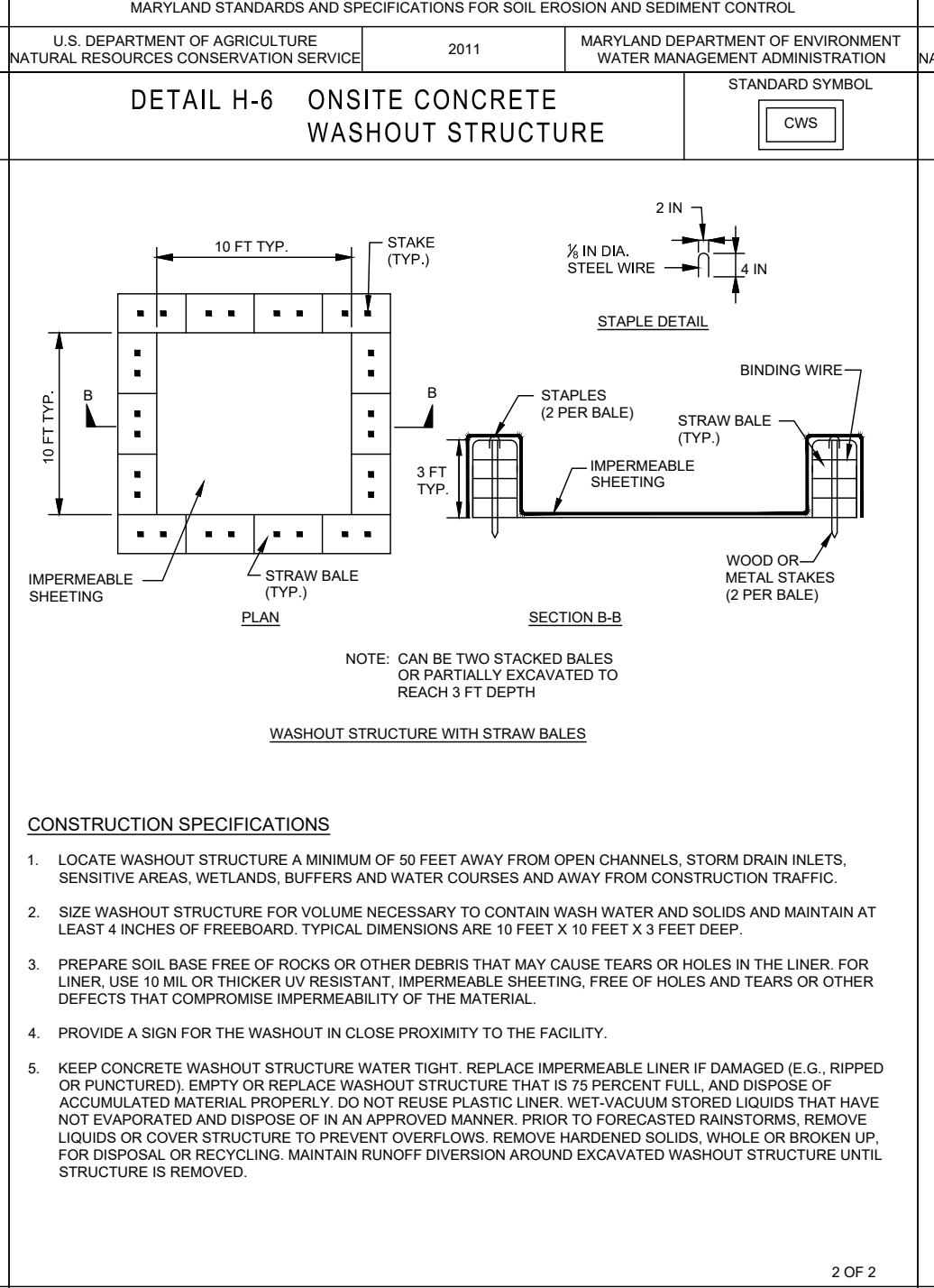
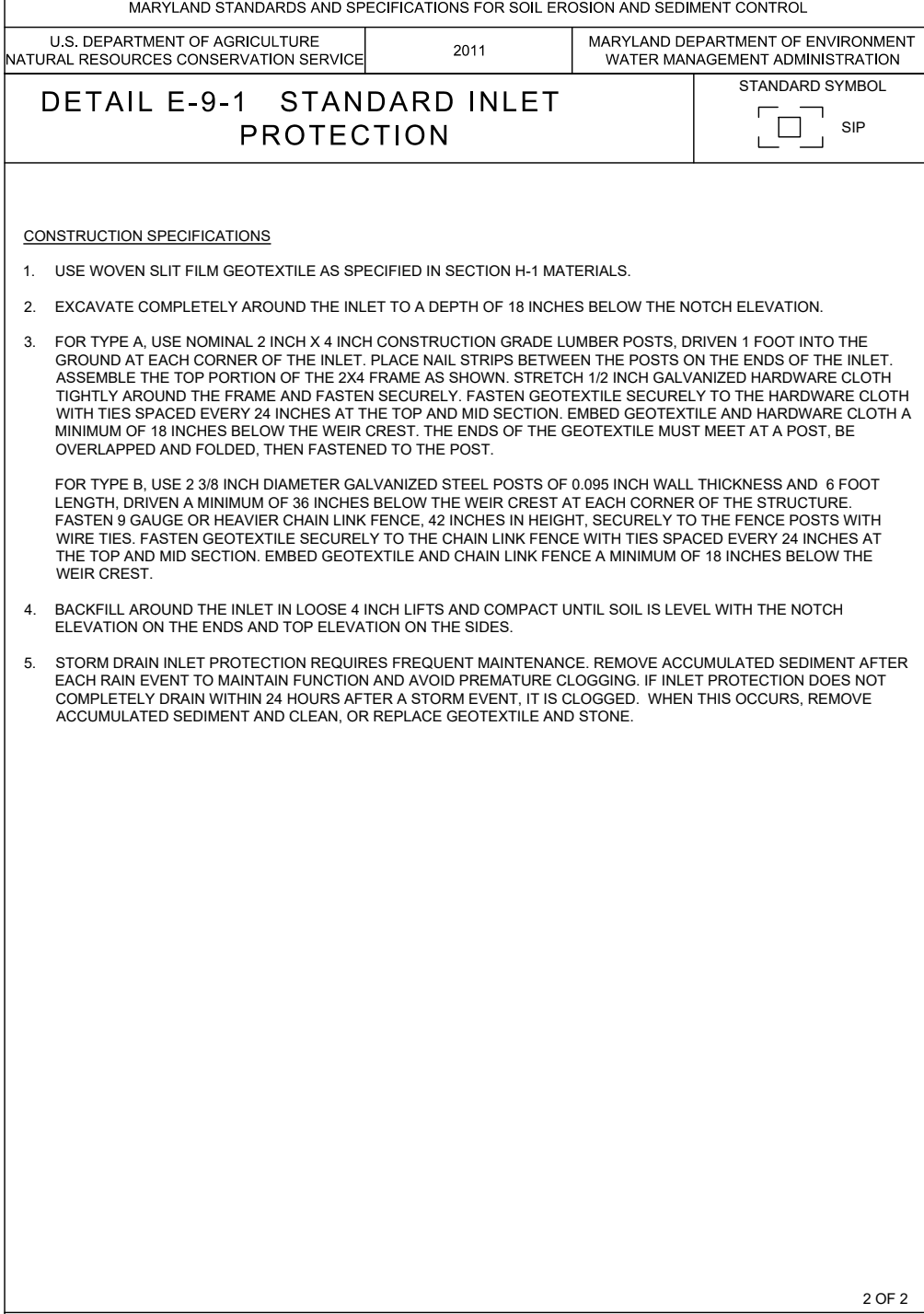
**CRITERIA**

- 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 TO 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 APPROPRIATE 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 B-4-1 INCREMENTAL STABILIZATION AND STANDARD B-4-4 TEMPORARY STABILIZATION.
- 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.

**MAINTENANCE**  
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.

### HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

- A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-315-1855 AFTER THE FUTURE LOD AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD. A MINIMUM OF 48 HOUR NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING STAGES:
  - PRIOR TO THE START OF EARTH DISTURBANCE.
  - UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.
  - PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT.
  - 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.
- ALL VEGETATIVE 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 THERE TO.
- 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.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 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 (SEC. B-4-5) CAN ONLY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES IF THE GROUND IS FROZEN. INCREMENTAL STABILIZATION (SEC. B-4-1) SEDIMENTATION SHALL BE ENFORCED IN AREAS WITH >10' OF CUT AND/OR FILL. STOCKPILES (SEC. B-4-8) IN EXCESS OF 20 FT. MUST BE BENCHED WITH STABLE OUTLET. ALL CONCENTRATED FLOW, STEP SLOPE, OR HIGHLY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. B-4-6).
- 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 THE CID.
  - SITE ANALYSIS:
    - TOTAL AREA OF SITE: 1.71 ACRES
    - AREA DISTURBED: 1.85 ACRES
    - AREA TO BE ROOFED OR PAVED: 1.22 ACRES
    - AREA TO BE VEGETATIVELY STABILIZED: 0.53 ACRES
    - TOTAL CUT: 2,590 CY
    - OFFSITE WASTE/BORROW AREA LOCATION: SITE WITH AN ACTIVE GRADING PERMIT
  - ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- 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 PRECIPITATION)
  - 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 PIPE LENGTHS OR THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.
- 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 ALLOWED BY THE CID PER THE LIST OF HSCD-APPROVED FIELD CHANGES.
- 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 CID. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE HSCD, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME. WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE.
- WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE.
- TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO FINAL GRADE.
- 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.
- STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUSIVE):
  - USE I AND II MARCH 1 - JUNE 15
  - USE III AND IIIIP OCTOBER 1 - APRIL 30
  - USE IV MARCH 1 - MAY 31
- 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.



### DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

**CONSTRUCTION SPECIFICATIONS**

- PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (30 FEET FOR SINGLE RESIDENCE LOT) USE MINIMUM WIDTH OF 10 FEET. PLACE STONE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
- PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE. MAINTAIN POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 3 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
- PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
- PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
- MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE. MOUNTABLE BERM AND SPECIFIED DIMENSIONS IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

### DETAIL E-3 SUPER SILT FENCE

**CONSTRUCTION SPECIFICATIONS**

- INSTALL 2X6 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.895 INCH WALL THICKNESS AND 8X6 FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
- FASTEN A GAUGE OR HEAVY GALVANIZED CHAIN LINK FENCE (2% INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUD RINGS.
- FASTEN WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT A HIGH SPOT. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
- WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
- EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER FENCE.
- PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/GRADING AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

### DETAIL D-3-2 GABION INFLOW PROTECTION

**CONSTRUCTION SPECIFICATIONS**

- PROVIDE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, UNDER THE BOTTOM AND ALONG SIDES OF ALL GABION BASKETS.
- USE BASKETS MADE OF MINIMUM 1 1/2 GAUGE WIRE.
- CONSTRUCT GABION INFLOW PROTECTION BY ARRANGING 9 X 3 X 1 FOOT GABION BASKETS TO FORM A TRIANGULAR SECTION WITH A 3 FOOT BOTTOM WIDTH, 1 FOOT MINIMUM DEPTH, 3 FOOT SIDE WALLS, AND 2:1 OR FASTER SIDE SLOPES. FILL GABION BASKETS WITH 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE WITHOUT REBAR OR WEIR MESH.
- INSTALL ENTRANCE AND EXIT SECTIONS AS SHOWN ON THE PROFILE.
- INSTALL GABIONS IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
- BLEND GABIONS INTO EXISTING GROUND.
- MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. KEEP POINTS OF INFLOW AND OUTFLOW FREE OF EROSION.

### DETAIL B-4-6-D PERMANENT SOIL STABILIZATION MATTING SLOPE APPLICATION

2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

### HOWARD SCD SIGNATURE BLOCK

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

DocuSigned by:  
**Alexander Eratovic**  
2/22/2024

HOWARD SOIL CONSERVATION DISTRICT DATE

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

**CHAD Edmondson** 2/23/2024  
CHIEF, DEVELOPMENT AND ENGINEERING DIVISION DATE

**Lynda Eisenberg** 2/27/2024  
CHIEF, DIVISION OF PLANNING AND DEVELOPMENT DATE

**APPROVED PLANNING BOARD OF HOWARD COUNTY**  
August 11, 2023

DIRECTOR, DEPARTMENT OF PLANNING & ZONING DATE

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

### OWNER'S/DEVELOPER'S CERTIFICATION:

I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I/WE ALSO CERTIFY THAT THE SITE WILL BE INSPECTED AT THE END OF EACH WORKING DAY, AND THAT ANY NEEDED MAINTENANCE WILL BE COMPLETED SO AS TO ENSURE THAT ALL SEDIMENT CONTROL PRACTICES ARE LEFT IN OPERATIONAL CONDITION. I/WE CERTIFY THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

*Joseph G. Baldwin*  
OWNER'S/DEVELOPER'S SIGNATURE  
12/12/23  
DATE  
Manager  
TITLE

### DESIGN CERTIFICATION:

I/HE/WE 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.

*Ryan M. Stasiowski*  
DESIGNER'S SIGNATURE  
12/19/23  
DATE  
49425  
RYAN M. STASIOWSKI, P.E.  
PRINT NAME  
MD LICENSE NUMBER

OWNER: CROSSROADS WEST, LLC  
2410 EVERGREEN ROAD, STE. 104  
GAMBRILLS, MD 21054  
PHONE: 443-332-6383

DEVELOPER: CROSSROADS WEST, LLC  
2568A RIVA ROAD, STE. 300  
ANNAPOLIS, MD 21401  
PHONE: 443-332-6383

TAX MAP: 36 GRID 10 ZONED: NT  
PARCEL: 300 LOT: 8  
6TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SUBDIVISION NAME: VILLAGE OF OAKLAND MILLS VILLAGE CENTER SECTION 2, AREA 2  
DEED # 13685/00223

PREVIOUS FILE NO. FDP-50-A, SDP-07-087, SDP-70-011, SDP-73-118, ECP-22-011, P.B. 15, F. 82, WP-23-086

**FILE NO. SDP-22-027**

**BOHLER**  
SITE CIVIL AND CONSULTING ENGINEERING  
PROGRAM MANAGEMENT  
LANDSCAPE ARCHITECTURE  
SUSTAINABLE DESIGN  
PERMITTING SERVICES  
TRANSPORTATION SERVICES

### REVISIONS

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PROJECT No.: MD202104  
DRAWN BY: RMS  
CHECKED BY: AGS  
DATE: 12/23  
DESIGNED BY: CNDS-3

PROJECT:  
**SITE DEVELOPMENT PLAN**  
FOR  
CROSSROADS WEST, LLC  
7-ELEVEN STEVENS FOREST

5901 & 5911 STEVENS FOREST ROAD  
COLUMBIA, MARYLAND  
TAX MAP 36, GRID 10, PARCEL 300, LOT 8  
HOWARD COUNTY  
6TH ELECTION DISTRICT  
ZONE: NT

**BOHLER**  
901 DULANEY VALLEY ROAD, SUITE 801  
TOWSON, MARYLAND 21204  
Phone: (410) 821-7900  
Fax: (410) 821-7967  
MD@BohlerEng.com

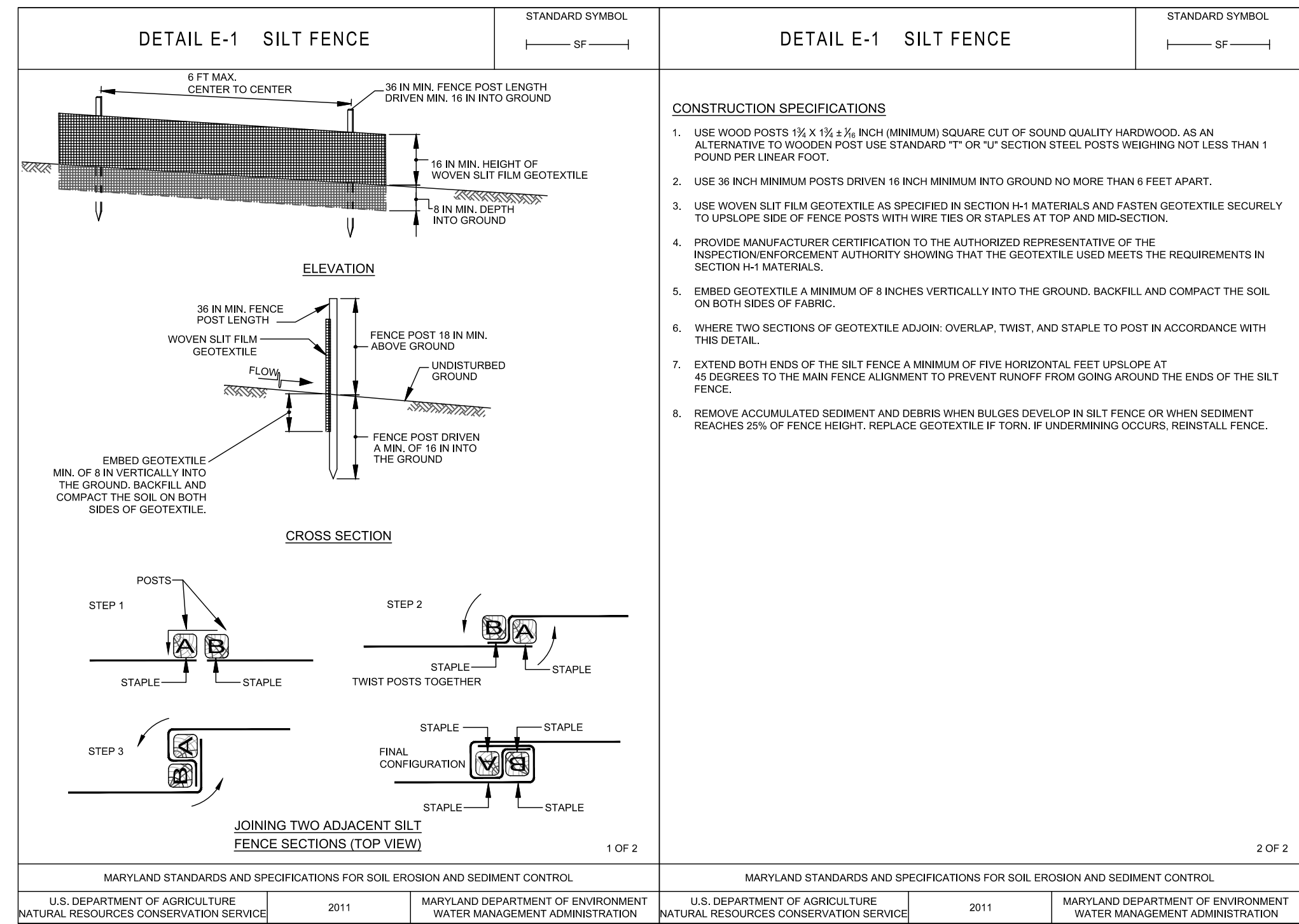
**R.M. STASIOWSKI**  
PROFESSIONAL ENGINEER  
1,174 W. BROADWAY  
ANNAPOLIS, MD 21403  
PHONE: 410-291-1113  
PROFESSIONAL CERTIFICATION  
I HEREBY CERTIFY THAT I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 49425. EXPIRATION DATE: 6/30/24

SHEET TITLE  
**EROSION AND SEDIMENT CONTROL NOTES AND DETAILS**

SHEET NUMBER  
**16**

ORG. DATE - 12/7/23





**B-4-6 STANDARDS AND SPECIFICATIONS FOR SOIL STABILIZATION MATTING**

**DEFINITION**  
MATERIAL USED TO TEMPORARILY OR PERMANENTLY STABILIZE CHANNELS OR STEEP SLOPES UNTIL GROUND COVER IS ESTABLISHED.

**PURPOSE**  
TO PROTECT THE SOILS UNTIL VEGETATION IS ESTABLISHED.

**CONDITIONS WHERE PRACTICE APPLIES**  
ON NEWLY SEEDED SURFACES TO PREVENT THE APPLIED SEED FROM WASHING OUT, IN CHANNELS AND ON STEEP SLOPES WHERE THE FLOW HAS EROSION VELOCITIES OR CONVEYS CLEAR WATER, ON TEMPORARY SWALES, EARTH DIKES, AND PERIMETER DIKE SWALES AS REQUIRED BY THE RESPECTIVE DESIGN STANDARD, AND, ON STREAM BANKS WHERE MOVING WATER IS LIKELY TO WASH OUT NEW VEGETATIVE PLANTINGS.

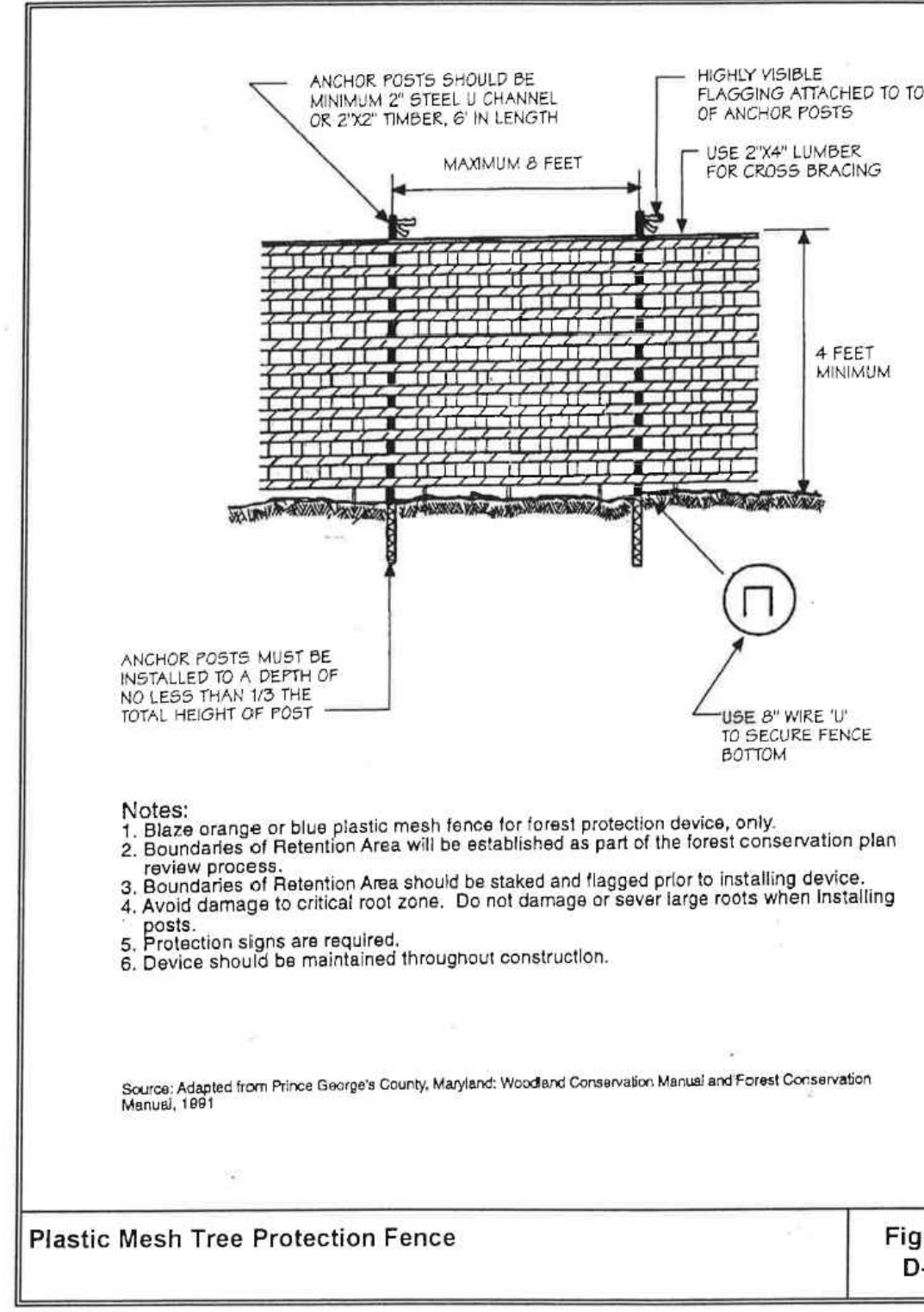
**DESIGN CRITERIA**

- THE SOIL STABILIZATION MATTING THAT IS USED MUST WITHSTAND THE FLOW VELOCITIES AND SHEAR STRESSES DETERMINED FOR THE AREA, BASED ON THE 2-YEAR, 24-HOUR FREQUENCY STORM FOR TEMPORARY APPLICATIONS AND THE 10-YEAR, 24-HOUR FREQUENCY STORM FOR PERMANENT APPLICATIONS. DESIGNATE ON THE PLAN THE TYPE OF SOIL STABILIZATION MATTING USING THE STANDARD SYMBOL AND INCLUDE THE CALCULATED SHEAR STRESS FOR THE RESPECTIVE TREATMENT AREA.
- MATting IS REQUIRED ON PERMANENT CHANNELS WHERE THE RUNOFF VELOCITY EXCEEDS TWO AND HALF FEET PER SECOND (2.5 FPS) OR THE SHEAR STRESS EXCEEDS TWO POUNDS PER SQUARE FOOT (2 LBS/FT<sup>2</sup>). ON TEMPORARY CHANNELS DISCHARGING TO A SEDIMENT TRAPPING PRACTICE, PROVIDE MATting WHERE THE RUNOFF VELOCITY EXCEEDS FOUR FEET PER SECOND (4 FPS).
- TEMPORARY SOIL STABILIZATION MATTING IS MADE WITH DEGRADABLE (LASTS 6 MONTHS MINIMUM), NATURAL OR MANMADE FIBERS OF UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND IS SMOLDER RESISTANT. THE MAXIMUM PERMISSIBLE VELOCITY FOR TEMPORARY MATting IS 6 FEET PER SECOND.
- PERMANENT SOIL STABILIZATION MATting IS AN OPEN WEAVE, SYNTHETIC MATERIAL CONSISTING OF NONDEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION OF WEAVE THROUGHOUT. THE MAXIMUM PERMISSIBLE VELOCITY FOR PERMANENT MATting IS 8.5 FEET PER SECOND.
- CALCULATE CHANNEL VELOCITY AND SHEAR STRESS USING THE PROCEDURE OUTLINED ON PAGE B.36 OF THE MDE MANUAL.
- USE TABLE B.7 ON PAGE B.37 OF THE MDE MANUAL TO ASSIST IN SELECTING THE APPROPRIATE SOIL STABILIZATION MATting FOR SLOPE APPLICATIONS BASED ON THE SLOPE LENGTH, AND THE SOIL-ERODIBILITY K FACTOR.

**MAINTENANCE**  
VEGETATION MUST BE ESTABLISHED AND MAINTAINED SO THAT THE REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

**SEQUENCE OF CONSTRUCTION**

- OBTAIN GRADING PERMIT.
- NOTIFY HOWARD COUNTY'S SEDIMENT CONTROL INSPECTOR AT 410-313-1855 AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION. (1 DAY)
- THE GENERAL CONTRACTOR SHALL NOT COMMENCE ANY LAND DISTURBING ACTIVITIES PRIOR TO OBTAINING A GRADING PERMIT. (1 DAY)
- THE CONTRACTOR SHALL HOLD A PRE-CONSTRUCTION MEETING WITH DEVELOPER'S CONSTRUCTION MANAGER AND THE HOWARD COUNTY EROSION AND SEDIMENT CONTROL INSPECTOR PRIOR TO COMMENCING ANY LAND DISTURBANCE ACTIVITIES. (1 DAY)
- ALL AREAS WHICH ARE TO BE DISTURBED SHALL BE CLEARLY MARKED IN THE FIELD PRIOR TO CONSTRUCTION. DISTURBED AREAS WITHIN THE SITE WHERE CONSTRUCTION ACTIVITY HAS CEASED SHALL BE PERMANENTLY OR TEMPORARILY STABILIZED WITHIN: (2 DAYS)
  - THREE CALENDAR DAYS ON SLOPES GREATER THAN 3:1, ALL WATERWAYS AND TO THE SURFACE OF ALL PERIMETER CONTROLS.
  - SEVEN CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS OF THE PROJECT.
- INSTALL STABILIZED CONSTRUCTION ENTRANCE. ALL HARD SURFACE PUBLIC ROADS SHALL BE CLEANED AT THE END OF EACH WORK DAY. (2 DAYS)
- INSTALL PERIMETER CONTROLS, INCLUDING SUPER SILT FENCE, TREE PROTECTION FENCE AND INLET PROTECTION ON ALL EXISTING INLETS. THIS MUST BE INSPECTED AND APPROVED BY HOWARD COUNTY'S SEDIMENT CONTROL INSPECTOR. NO ADDITIONAL CONSTRUCTION ACTIVITY WILL BE AUTHORIZED WITHOUT APPROVAL. (2 DAYS)
- BEGIN DEMOLITION ACTIVITIES, CLEARING, GRUBBING, AND PRELIMINARY GRADING ACTIVITY, INCLUDING GRADING AND INSTALLATION OF STORMDRAIN PIPES FOR BIORETENTION FACILITY. BEGIN RETAINING WALL CONSTRUCTION (2 WEEKS)
- BEGIN INSTALLATION OF UNDERGROUND FUEL STORAGE TANKS AND REMAINING UTILITIES AS SHOWN, GENERAL CONTRACTOR SHALL COORDINATE WITH THE RESPECTIVE UTILITY COMPANIES. (4 WEEKS)
- BEGIN CONVENIENCE STORE, CAR WASH AND FUEL CANOPY CONSTRUCTION. (6 WEEKS)
- COMPLETE FINAL GRADING ACTIVITIES WITHIN PAVED AREAS. (2 WEEKS)
- BEGIN INSTALLATION OF CURB AND GUTTER AND APPLY BASE STONE FOR ALL PAVED AREAS. (5 WEEKS)
- AS THE LANDSCAPED AREAS ARE BROUGHT TO FINAL GRADE, PERMANENTLY STABILIZE ALL DISTURBED AREAS WITHIN FOURTEEN (14) DAYS. (3 WEEKS)
- FLUSH THE PROPOSED STORM DRAIN SYSTEM TO REMOVE ANY SEDIMENT. THIS MUST BE INSPECTED AND APPROVED BY HOWARD COUNTY'S SEDIMENT CONTROL INSPECTOR. (1 DAY)
- INSTALL BIORETENTION FACILITY MEDIA LAYERS AND ALL PERMANENT LANDSCAPING. THE PROPOSED BIORETENTION FACILITY SHALL BE CONSTRUCTED ONLY UPON PERMANENT STABILIZATION OF THE CONTRIBUTING DRAINAGE AREA AND PERMISSION GRANTED FROM THE SEDIMENT CONTROL INSPECTOR. (2 WEEKS)
- AFTER CONSTRUCTION OPERATIONS HAVE ENDED AND ALL DISTURBED AREAS HAVE BEEN STABILIZED, SEDIMENT CONTROL DEVICES CAN BE REMOVED WITH APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR. (2 DAYS)



**REVISIONS**

REV	DATE	COMMENT	DRAWN BY	CHECKED BY

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ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

PROJECT: CROSSROADS WEST, LLC

7-ELEVEN STEVENS FOREST

5901 & 5911 STEVENS FOREST ROAD COLUMBIA, MARYLAND

TAX MAP 36, GRID 10, PARCEL 300, LOT 8

HOWARD COUNTY 6TH ELECTION DISTRICT ZONE: NT

**SITE DEVELOPMENT PLAN**

CROSSROADS WEST, LLC

7-ELEVEN STEVENS FOREST

5901 & 5911 STEVENS FOREST ROAD COLUMBIA, MARYLAND

TAX MAP 36, GRID 10, PARCEL 300, LOT 8

HOWARD COUNTY 6TH ELECTION DISTRICT ZONE: NT

**BOHLER**

901 DULANEY VALLEY ROAD, SUITE 801 TOWSON, MARYLAND 21204

Phone: (410) 821-7900 Fax: (410) 821-7987 MD@BohlerEng.com

**R.M. STASIOWSKI**

PROFESSIONAL ENGINEER

1. I, RYAN M. STASIOWSKI, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED AND APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 49425. EXPIRATION DATE: 6/30/2024

SHEET TITLE: **EROSION AND SEDIMENT CONTROL NOTES AND DETAILS**

SHEET NUMBER: **17**

ORG. DATE - 12/17/23

**OWNER'S/DEVELOPER'S CERTIFICATION:**

I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I/WE ALSO CERTIFY THAT THE SITE WILL BE INSPECTED AT THE END OF EACH WORKING DAY, AND THAT ANY NEEDED MAINTENANCE WILL BE COMPLETED SO AS TO ENSURE THAT ALL SEDIMENT CONTROL PRACTICES ARE LEFT IN OPERATIONAL CONDITION. I/WE CERTIFY THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

OWNER'S/DEVELOPER'S SIGNATURE: *Joseph G. Baldwin* DATE: 12/12/23  
PRINT NAME: Joseph G. Baldwin TITLE: Manager

**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.

DESIGNER'S SIGNATURE: *Ryan M. Stasiowski* DATE: 12/19/23  
RYAN M. STASIOWSKI, P.E. 49425  
PRINT NAME: RYAN M. STASIOWSKI, P.E. MD LICENSE NUMBER

OWNER: CROSSROADS WEST, LLC 2410 EVERGREEN ROAD, STE. 104 GAMBRIELLS, MD 21054 CONTACT: WILLIAM STEFFEY PHONE: 443-332-6383	DEVELOPER: CROSSROADS WEST, LLC 2568A RIVA ROAD, STE. 300 ANNAPOLIS, MD 21401 CONTACT: WILLIAM STEFFEY PHONE: 443-332-6383	
TAX MAP: 36	GRID: 10	ZONED: NT
6TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND	PARCEL: 300	LOT: 8
SUBDIVISION NAME: VILLAGE OF OAKLAND MILLS VILLAGE CENTER SECTION 2, AREA 2 DEED # 13685/00223		
PREVIOUS FILE NO. FDP-50-A-1, SDP-07-087, SDP-70-011, SDP-73-118, ECP-22-011, P.B. 15, F. 82, WP-23-088		
<b>FILE NO. SDP-22-027</b>		

**HOWARD SCD SIGNATURE BLOCK**

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

Designed by: *Alexander Bratkov* 2/22/2024

HOWARD SOIL CONSERVATION DISTRICT DATE: \_\_\_\_\_

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

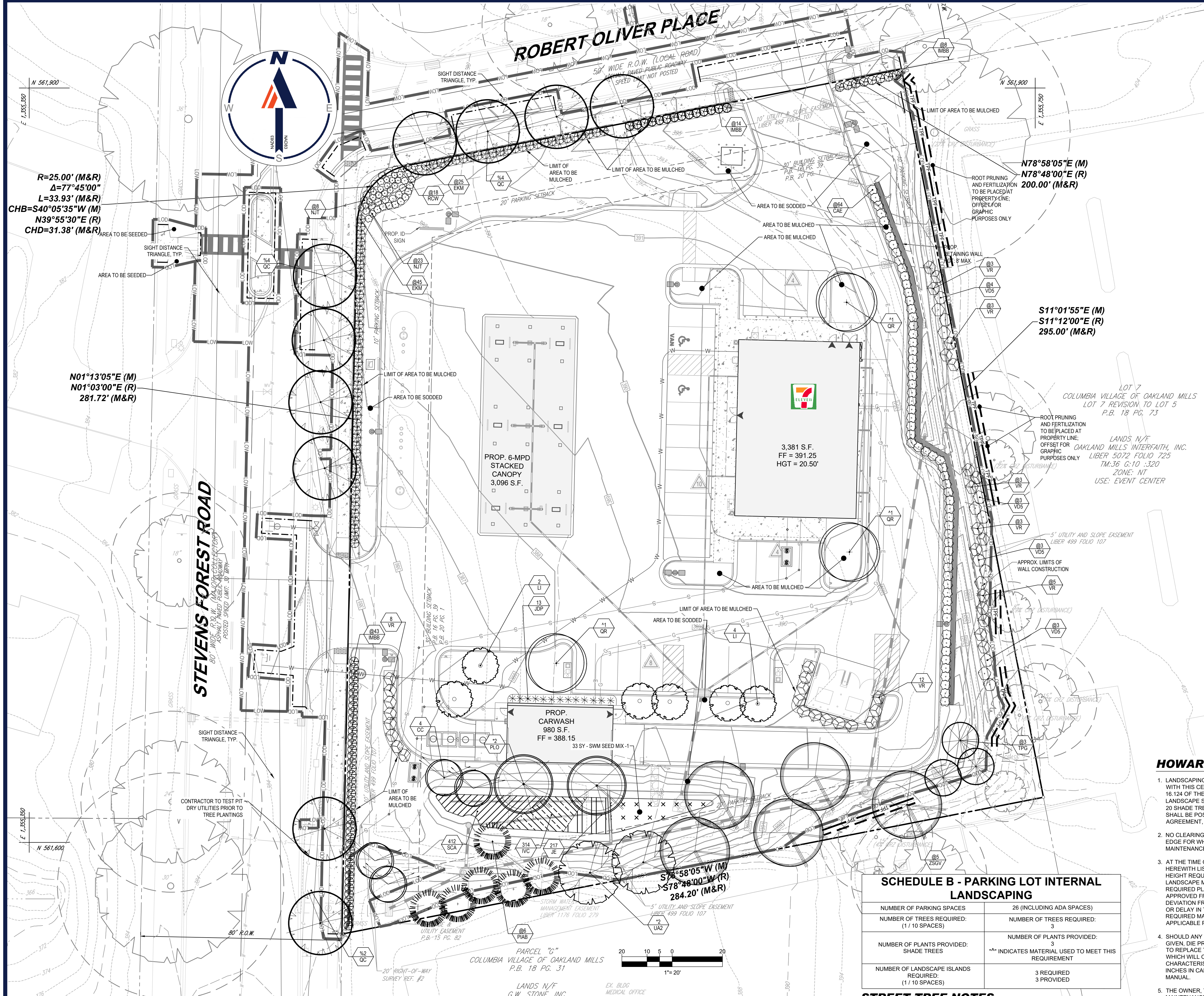
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 2/21/2024  
*CHAD Edmondson*

CHIEF, DIVISION OF PLANNING AND ZONING DATE: 2/27/2024  
*Lynnda Eisenberg*

DIRECTOR, DEPARTMENT OF PLANNING & ZONING DATE: \_\_\_\_\_

APPROVED  
PLANNING BOARD OF HOWARD COUNTY  
August 11, 2023





### LANDSCAPE SCHEDULE

SYM.	KEY	QTY.	BOTANICAL NAME	COMMON NAME	CAL. / HT.	CONT.
<b>SHADE TREES</b>						
PLO	2"	2	PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	3-3 1/2" CAL / 12-14'	B+B
QC	10	10	QUERCUS COCCINEA	SCARLET OAK	2 1/2-3" CAL.	B+B
QR	3	3	QUERCUS RUBRA	RED OAK	2 1/2-3" CAL / 12-14'	B+B
UA2	2"	2	ULMUS AMERICANA 'DELAWARE'	DELAWARE AMERICAN ELM	3" CAL. MIN.	B+B
ZSV	5	5	ZELKOVA SERRATA 'GREEN VASE'	GREEN VASE ZELKOVA	2 1/2-3" CAL / 12-14'	B+B
SUBTOTAL: 22						
<b>ORNAMENTAL TREES</b>						
CC	4	4	CERCIS CANADENSIS	EASTERN REDBUD	2-2 1/2" CAL / 8-10'	B+B
LI	6	6	LAGERSTROEMIA INDICA	COMMON CRAPEMYRTLE	1-1 1/2" CAL / 8-10'	B+B
SUBTOTAL: 10						
<b>EVERGREEN TREES</b>						
PIAB	6	6	PICEA ABIES	NORWAY SPRUCE	6-7 HT.	B+B
TPG	3	3	THUJA PLICATA 'GREEN GIANT'	GREEN GIANT ARBORVITAE	7-8 HT.	B+B
SUBTOTAL: 9						
<b>DECIDUOUS SHRUBS</b>						
CAE	64	64	CORNUS ALBA 'ELEGANTISSIMA'	VARIEGATED RED TWIG DOGWOOD	2-3' HT. & SPREAD	B+B
NJT	31	31	CEANOTHUS AMERICANUS	NEW JERSEY TEA	30-36" HT. & SPREAD	#5 CAN
RCW	18	18	ROSA 'CAREFREE WONDER'	CAREFREE WONDER ROSE	24" HT. & SPREAD	3 GAL.
VDS	13	13	VIBURNUM DENTATUM	ARROWWOOD VIBURNUM	5' HT. & SPREAD	B+B
SUBTOTAL: 126						
<b>EVERGREEN SHRUBS</b>						
EKM	70	70	EUONYMUS KAUTSCHOVICUS 'MANHATTAN'	MANHATTAN SPREADING EUONYMUS	24-30" HT. & SPREAD	#5 CAN
IMB	65	65	ILEX X MESSEYEA 'BLUE BOY'	BLUE BOY HOLLY	24-30" HT. & SPREAD	#5 CAN
JDP	13	13	JUNIPERUS DAURICA 'PARSON'	PARSON JUNIPER	15-18' SPRD.	#3 CAN
VR	37	37	VIBURNUM X RHYTHOPHYLLUM	LEATHERLEAF VIBURNUM	3-4' HT. & SPREAD	B+B
SUBTOTAL: 185						

NOTE: THE SYMBOL \*\*\* REPRESENTS PLANT MATERIAL TO MEET SPECIMEN TREE MITIGATION REQUIREMENT.

### BIORETENTION LANDSCAPE SCHEDULE

SYM.	KEY	QTY.	BOTANICAL NAME	COMMON NAME	CAL.	CONT.
<b>PERENNIALS</b>						
IVC	504	504	IRIS VERSICOLOR	BLUE FLAG IRIS	PLUG	N/A
JE	217	217	JUNCUS EFFUSUS	COMMON RUSH	PLUG	N/A
SCA	314	314	SCRIPUS ACUTUS	HARDSTEMMED BULLRUSH	PLUG	N/A
SUBTOTAL: 1035						

NOTE: IF ANY DISCREPANCIES OCCUR BETWEEN THE AMOUNTS SHOWN IN THE PLAN AND THE PLANT LIST, THE PLAN WILL DICTATE.

### STREET TREE REQUIREMENTS

STREET	LINEAR FEET	SPACING	TREES REQUIRED	TREES PROVIDED
ROBERT OLIVER PLACE	215 LF - 70 LF (ENTRANCES) = 145 LF	40 LF.	4 TREES	4 PROP TREES *% INDICATES MATERIAL USED TO MEET THIS REQUIREMENT
STEVENS FOREST ROAD	298 LF - 70 LF (ENTRANCES) = 228 LF	40 LF.	6 TREES	6 PROP TREES *% INDICATES MATERIAL USED TO MEET THIS REQUIREMENT

### HOWARD COUNTY LANDSCAPE NOTES

- LANDSCAPING FOR THIS SUBDIVISION WILL BE PROVIDED IN ACCORDANCE WITH THIS CERTIFIED LANDSCAPE PLAN AND IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. LANDSCAPE SURETY IN THE AMOUNT OF \$7,500.00 FOR THE INSTALLATION OF 20 SHADE TREES (\$300.00 EACH) AND 10 EVERGREEN TREES (\$150.00 EACH) SHALL BE POSTED BY THE DEVELOPER AS PART OF THE DPW DEVELOPER'S AGREEMENT, SDP-22-027.
- NO CLEARING OF EXISTING VEGETATION IS PERMITTED WITHIN A LANDSCAPE EDGE FOR WHICH CREDIT IS BEING TAKEN; HOWEVER, LANDSCAPE MAINTENANCE IS AUTHORIZED.
- AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THE SITE SHALL BE OF PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS 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 APPLICABLE PLANS AND CERTIFICATIONS.
- SHOULD ANY TREE DESIGNATED FOR PRESERVATION, FOR WHICH CREDIT IS GIVEN, DIE PRIOR TO RELEASE OF BONDS, THE OWNER WILL BE REQUIRED TO REPLACE THE TREE WITH THE EQUIVALENT SPECIES OR PLANT 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 LANDSCAPE MANUAL.
- THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, PLANT MATERIALS, BERRIS, 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 REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
- UNDER WP-23-088, SECTION 16.1205(A),(7) - A REQUEST FOR ALTERNATIVE COMPLIANCE HAS BEEN REQUESTED FROM DPZ FOR THE REMOVAL OF TWO (2) SPECIMEN TREES (85T-01, 03). MITIGATION FOR THE REMOVAL OF THESE TWO (2) SPECIMEN TREES IS TO CONSIST OF TWO (2) 3/4" CALIBER TREES FOR EACH ONE (1) REMOVED SIMILAR OR IDENTICAL SPECIES. THESE FOUR (4) TREES SHALL BE PLACED WITHIN CLOSE PROXIMITY TO THE LOCATION OF THE ORIGINAL SPECIMEN TREE AND WILL BE IN ADDITION TO THE REQUIRED PERIMETER LANDSCAPING. COSTS TO COVER THE INSTALLATION OF THESE TREES SHALL BE INCLUDED IN THE PERIMETER LANDSCAPING ESTIMATE; INSPECTION FEES SHALL BE POSTED WITH THE DPW DEVELOPER'S AGREEMENT AT THE FINAL PLAN STAGE FOR THIS DEVELOPMENT. SURETY WILL BE ADDRESSED WITH THIS PLAN STAGE FOR THIS DEVELOPMENT. THE SYMBOL \*\*\* REPRESENTS PLANT MATERIAL TO MEET SPECIMEN TREE MITIGATION REQUIREMENT.

### SCHEDULE B - PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES	26 (INCLUDING ADA SPACES)
NUMBER OF TREES REQUIRED: (1 / 10 SPACES)	NUMBER OF TREES REQUIRED: 3
NUMBER OF PLANTS PROVIDED: SHADE TREES	NUMBER OF PLANTS PROVIDED: 3
	**% INDICATES MATERIAL USED TO MEET THIS REQUIREMENT
NUMBER OF LANDSCAPE ISLANDS REQUIRED: (1 / 10 SPACES)	3 REQUIRED / 3 PROVIDED

### STREET TREE NOTES

- FINANCIAL SURETY FOR THE REQUIRED 10 LARGE STREET TREES (\$300 EACH) WILL BE POSTED FOR THE AMOUNT OF \$3,000 WITH THE DEVELOPMENT ENGINEERING DIVISION (DED) COST ESTIMATE UNDER THE FINAL PLAN SUBMISSION.
- SHADE TREES MUST BE PLANTED A MINIMUM OF 40 FEET AND ORNAMENTAL TREES MUST BE PLANTED A MINIMUM OF 25 FEET FROM POWER LINES PER B.G.E. PLANTING GUIDE.
- FINAL PLACEMENT OF STREET TREES WILL OCCUR IN THE FIELD AND BE PLACED A MINIMUM OF 30 FEET FROM ALL SIGNS AND INTERSECTIONS WHEN PLANTED BETWEEN SIDEWALK AND CURB, BE LOCATED WITH CONSIDERATION OF UNDERGROUND UTILITIES AND MAINTAIN A MINIMUM OF 5 FEET DISTANCE ON CENTER FROM A DRAIN INLET STRUCTURE, 5 FEET FROM AN OPEN ACCESS STRIP AND 10 FEET FROM A DRIVEWAY.
- A MINIMUM OF 20" SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY STREET TREE.
- ON THE APPROACH SIDE OF A STOP SIGN, NO STREET TREE CAN BE PLANTED WITHIN 30' OF THE STOP SIGN.
- WHERE TREES ARE PLANTED CLOSER THAN 3 FEET TO THE SIDEWALK, A BIOLOGIC ROOT INHIBITOR BARRIER IS REQUIRED.

### SCHEDULE 'A' - PERIMETER LANDSCAPE EDGE

PERIMETER	CATEGORY (P = PROPERTIES, R = ROADWAYS)	LANDSCAPE TYPE	LINEAR FEET OF ROADWAY FRONTAGE/ PERIMETER	CREDIT FOR EX. VEGETATION (YES/NO; LF) (DESCRIBE BELOW IF NEEDED)	CREDIT FOR FENCIBLES/BERRIS (YES/NO; LF) (DESCRIBE BELOW IF NEEDED)	NUMBER OF PLANTS REQUIRED		NUMBER OF PLANTS PROVIDED					
						SHADE TREES	EVERGREEN TREES	SHADE TREES	EVERGREEN TREES	ORNAMENTAL TREES	SHRUBS	MITIGATION TREES	
#1 (ROBERT OLIVER PLACE)	R (SIDE TO ROAD)	B	215 LF - 70 LF (ENTRANCES) = 145 LF	NO	NO (0)	3	4	0	0	0	0	72	0
#2 (EAST)	P	A	294 LF	NO	YES - WALL (136 LF)	3	0	0	0	0	0	0	0
#3 (SOUTH)	P	A	294 LF	NO	NO (0)	5	0	5	9	0	0	0	4
#4 (STEVENS FOREST ROAD)	R (FRONT TO ROAD)	B	298 LF - 70 LF (ENTRANCES) = 228 LF	NO	NO (0)	5	6	0	0	0	0	111	0
THE SYMBOL "Q" REPRESENTS PLANT MATERIAL TO MEET PERIMETER REQUIREMENT.													
THE SYMBOL *** REPRESENTS PLANT MATERIAL TO MEET SPECIMEN TREE MITIGATION REQUIREMENT.													
TOTAL						16	10	5	9	0	0	277	4

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 2/21/2024  
 CHIEF, DIVISION OF PLANNING AND ZONING  
 DATE: 2/27/2024

**APPROVED PLANNING BOARD OF HOWARD COUNTY**  
 August 11, 2023

**BOHLER**  
 SITE CIVIL AND CONSULTING ENGINEERING  
 PROGRAM MANAGEMENT  
 LANDSCAPE ARCHITECTURE  
 SUSTAINABLE DESIGN  
 PERMITTING SERVICES  
 TRANSPORTATION SERVICES

### REVISIONS

REV	DATE	COMMENT	DRAWN BY	CHECKED BY

**811**  
 Know what's below.  
 Call before you dig.  
 ALWAYS CALL 811  
 It's fast. It's free. It's the law.

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

PROJECT No.: MD202104  
 DRAWN BY: RMS  
 CHECKED BY: AGS  
 DATE: 12/23  
 CAD LID: LAND-3

**SITE DEVELOPMENT PLAN**  
 FOR  
**CROSSROADS WEST, LLC**  
 7-ELEVEN STEVENS FOREST  
 5901 & 5911 STEVENS FOREST ROAD  
 COLUMBIA, MARYLAND  
 TAX MAP 36, GRID 10, PARCEL 300, LOT 8  
 HOWARD COUNTY  
 6TH ELECTION DISTRICT  
 ZONE: NT

**BOHLER**  
 901 DULANEY VALLEY ROAD, SUITE 801  
 TOWSON, MARYLAND 21204  
 Phone: (410) 821-7900  
 Fax: (410) 821-7987  
 MD@BohlerEng.com

**E.R. McWILLIAMS**  
 12/21/2023  
 REGISTERED LANDSCAPE ARCHITECT  
 PROFESSIONAL CERTIFICATION  
 I, E.R. McWILLIAMS, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 3997 EXPIRATION DATE: 9/2024

**LANDSCAPE PLAN**  
 SHEET NUMBER: 18  
 FILE NO. SDP-22-027  
 ORG. DATE - 12/7/23







Symbol	Qty	Label	Arrangement	LMF	Lum. Lumens	Lum. Watts	Part Number	BUG Rating
[Symbol]	12	CPY-FLAT-13L	SINGLE	1.000	12825	91	CPY250-B-DM-F-13L-UL-57K-WH-HZ	B3-U0-G1
[Symbol]	4	CPY-FLAT-C	SINGLE	1.000	4520	31	CPY250-B-DM-F-C-UL-57K-BZ-HZ	B2-U0-G1
[Symbol]	3	XSPLG-3ME	SINGLE	1.000	23800	184	XSPLG-D-HT-3ME-24L-57K7-UL-BZ-N	B3-U0-G4
[Symbol]	1	XSPLG-4ME	SINGLE	1.000	23800	184	XSPLG-D-HT-4ME-24L-57K7-UL-BZ-N	B4-U0-G3
[Symbol]	3	XSPLG-4ME-2	2 @ 90°	1.000	23800	184	XSPLG-D-HT-4ME-24L-57K7-UL-BZ-N	B4-U0-G3
[Symbol]	1	XSPLG-4ME-2(180)	2 @ 180°	1.000	23800	184	XSPLG-D-HT-4ME-24L-57K7-UL-BZ-N	B4-U0-G3
[Symbol]	6	XSPW	WALL MOUNT	1.000	4270	31	XSPW-B-WM-3ME-4L-57K-UL-BZ	B1-U0-G1
[Symbol]	3	XSPW-4ME	SINGLE	1.000	4270	31	XSPW-B-WM-4ME-4L-57K-UL-BZ	B1-U0-G1
[Symbol]	6	G2	WALL MOUNT	1.000	4270	31	XSPW-B-WM-3ME-4L-57K-UL-BZ	B1-U0-G1

Calculation Summary (Footcandles calculated using predicted lumen values @ 50K hrs of operation)						
Label	Units	Avg	Max	Min	Avg/Min	Max/Min
CANOPY	Fc	32.63	42	21	1.55	2.00
PAVED AREA	Fc	6.42	15.9	1.1	5.84	14.45
SITE	Fc	1.56	21.1	0.0	N.A.	N.A.

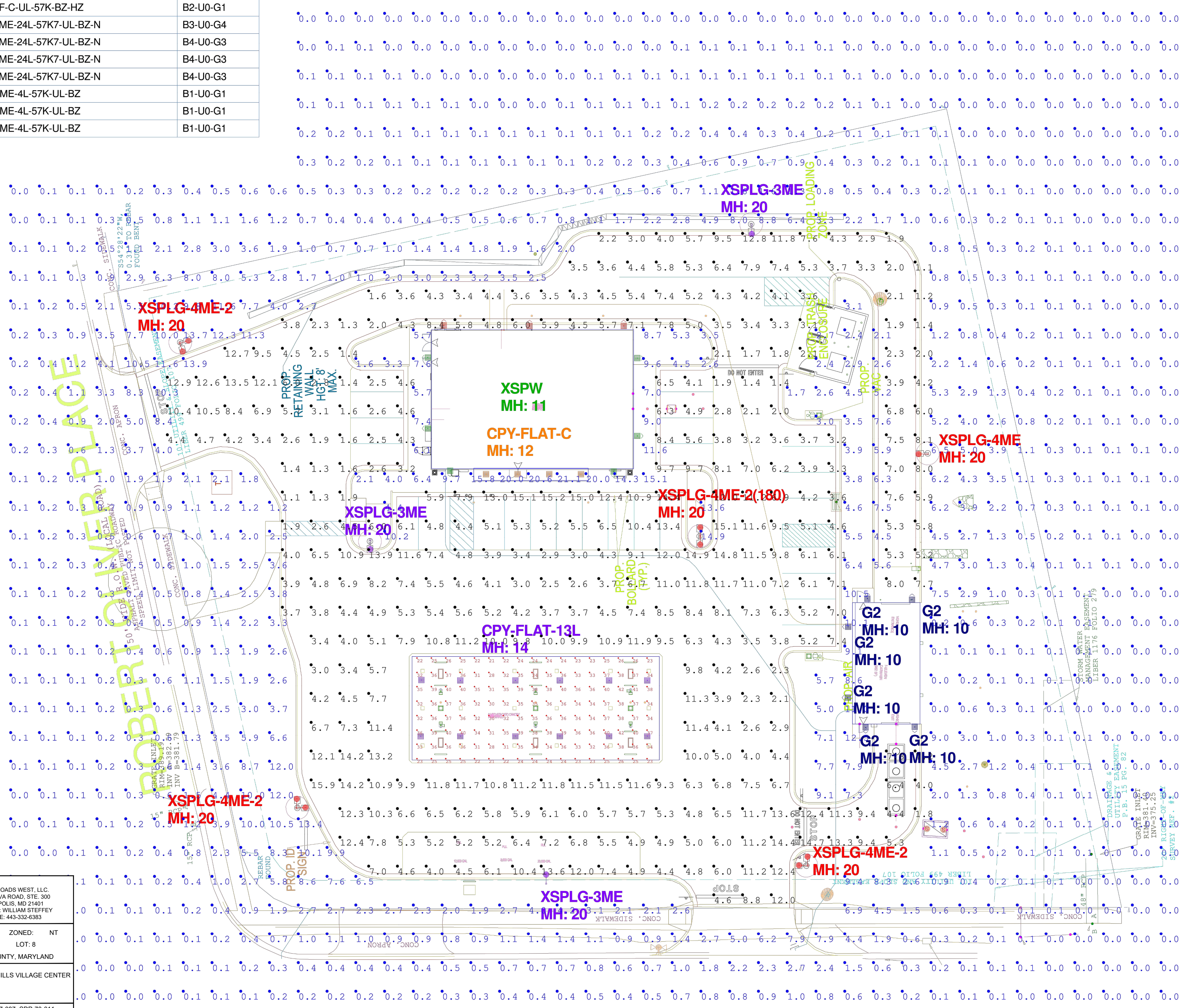
- BOM: Complete Part Description
- 12- CPY-B-DM-F-13L-UL-57K-WH-HZ
  - 4- CPY-B-DM-F-C-UL-57K-BZ-HZ
  - 12- XSPW-B-WM-3ME-4L-57K-UL-BZ
  - 3- XSPW-B-WM-4ME-4L-57K-UL-BZ
  - 3- XSPLG-D-HT-3ME-24L-57K7-UL-BZ-N
  - 9- XSPLG-D-HT-4ME-24L-57K7-UL-BZ-N
  - 8- SSS-4-11-17-CW-BS-OT-N-BZ
  - 4- PD-1H4
  - 3- PD-2H4(90)
  - 1- PD-2H4(180)

FIXTURE MOUNTING HEIGHTS AS SHOWN  
POLES MOUNTED ON 3' BASE

- ADDITIONAL EQUIPMENT REQUIRED:
- (8) SSS-4-11-CW-BS-OT-N-BZ (17" X 4" X 0.125" STEEL SQUARE POLE, TENON MOUNT)
  - (4) PD-1H4 (SINGLE TENON)
  - (3) PD-2H4(90) (DOUBLE TENON 2@90)
  - (1) PD-2H4(180) (DOUBLE TENON 2@180)

PROPOSED POLES MEET 140MPH SUSTAINED WIND LOADS

\*\*\*CUSTOMER TO VERIFY ORDERING INFORMATION AND CATALOGUE NUMBER PRIOR TO PLACING ORDER\*\*\*



**APPROVED: DEPARTMENT OF PLANNING AND ZONING**  
2/21/2024  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
CHIEF, DIVISION OF PLANNING AND ZONING  
DIRECTOR, DEPARTMENT OF PLANNING & ZONING

**APPROVED PLANNING BOARD OF HOWARD COUNTY**  
August 11, 2023  
DATE:

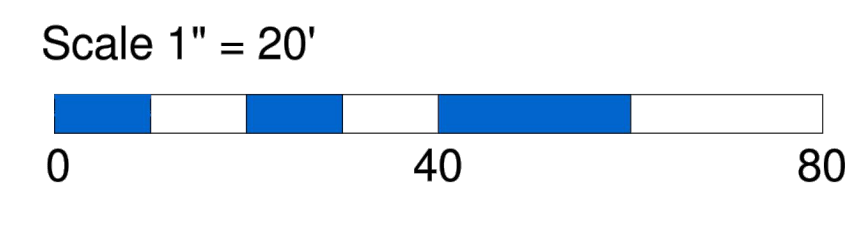
OWNER: CROSSROADS WEST, LLC 2410 EVERGREEN ROAD, STE. 104 GAMBRILLS, MD 21054 CONTACT: WILLIAM STEFFEY PHONE: 443-332-6383	DEVELOPER: CROSSROADS WEST, LLC 2588A RIVA ROAD, STE. 300 ANNAPOLIS, MD 21401 CONTACT: WILLIAM STEFFEY PHONE: 443-332-6383
TAX MAP: 36 GRID: 10 PARCEL: 300	ZONED: NT SECTION 2, AREA 2 LOT: 8
SUBDIVISION NAME: VILLAGE OF OAKLAND MILLS VILLAGE CENTER DEED # 13685/00223	
PREVIOUS FILE No.: FDP-50-A1, SDP-07-087, SDP-70-011, SDP-73-118, ECP-22-011	
<b>SDP-22-027</b>	



Illumination results shown on this lighting design are based on project parameters provided to Cree Lighting used in conjunction with luminaire test procedures conducted under laboratory conditions. Actual project conditions differing from these design parameters may affect field results. The customer is responsible for verifying dimensional accuracy along with compliance with any applicable electrical, lighting or energy code.

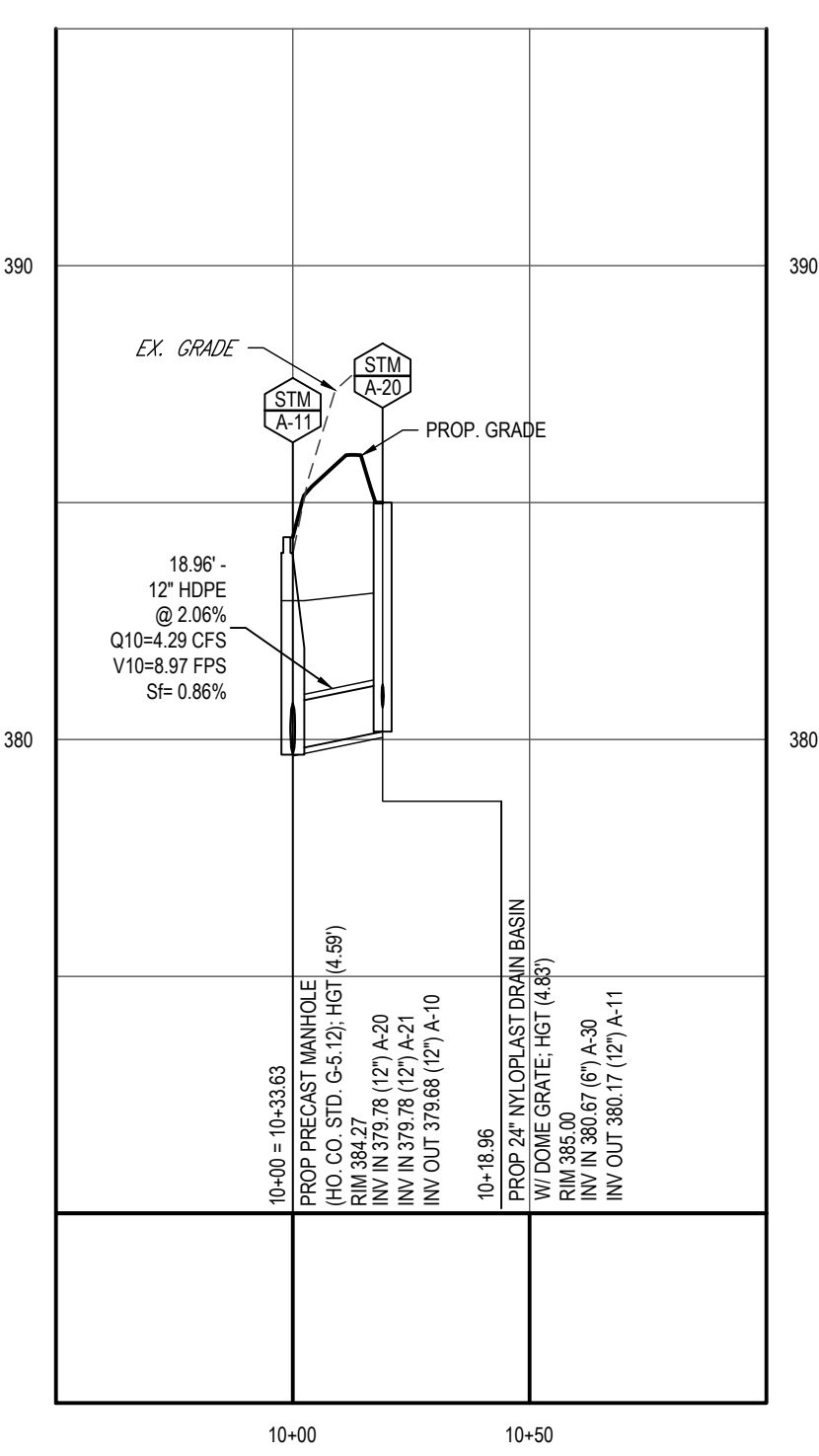
Project Name: 7-Eleven #42063 5901 Stevens Forest Rd Columbia, MD  
SR-35324 || Footcandles calculated at grade || Filename: 711-210407CLMDLJSR.2

Layout By: LINDA SCHALLER  
Date: 10/6/2022

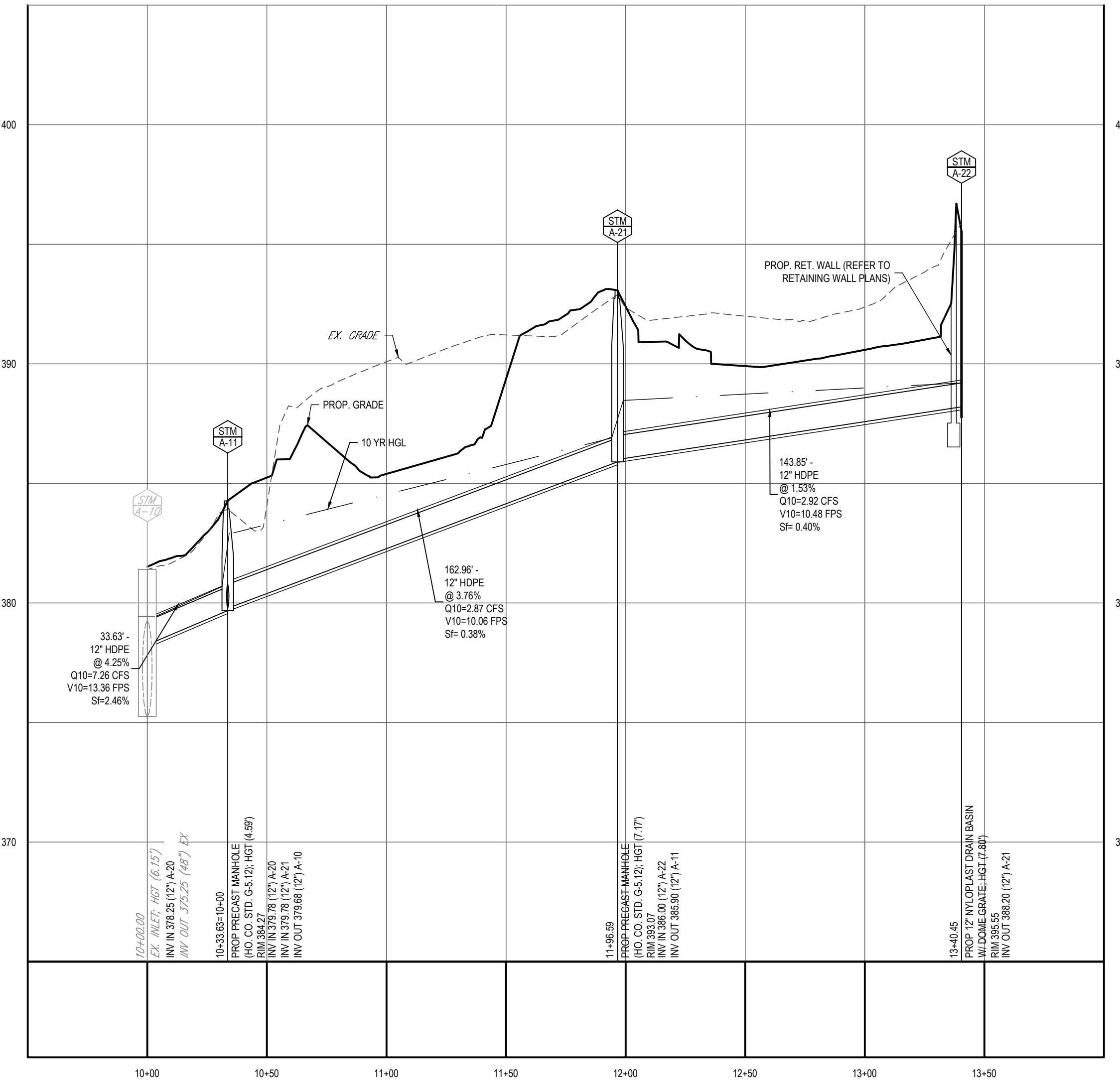


**LIGHTING PLAN SHEET 20**

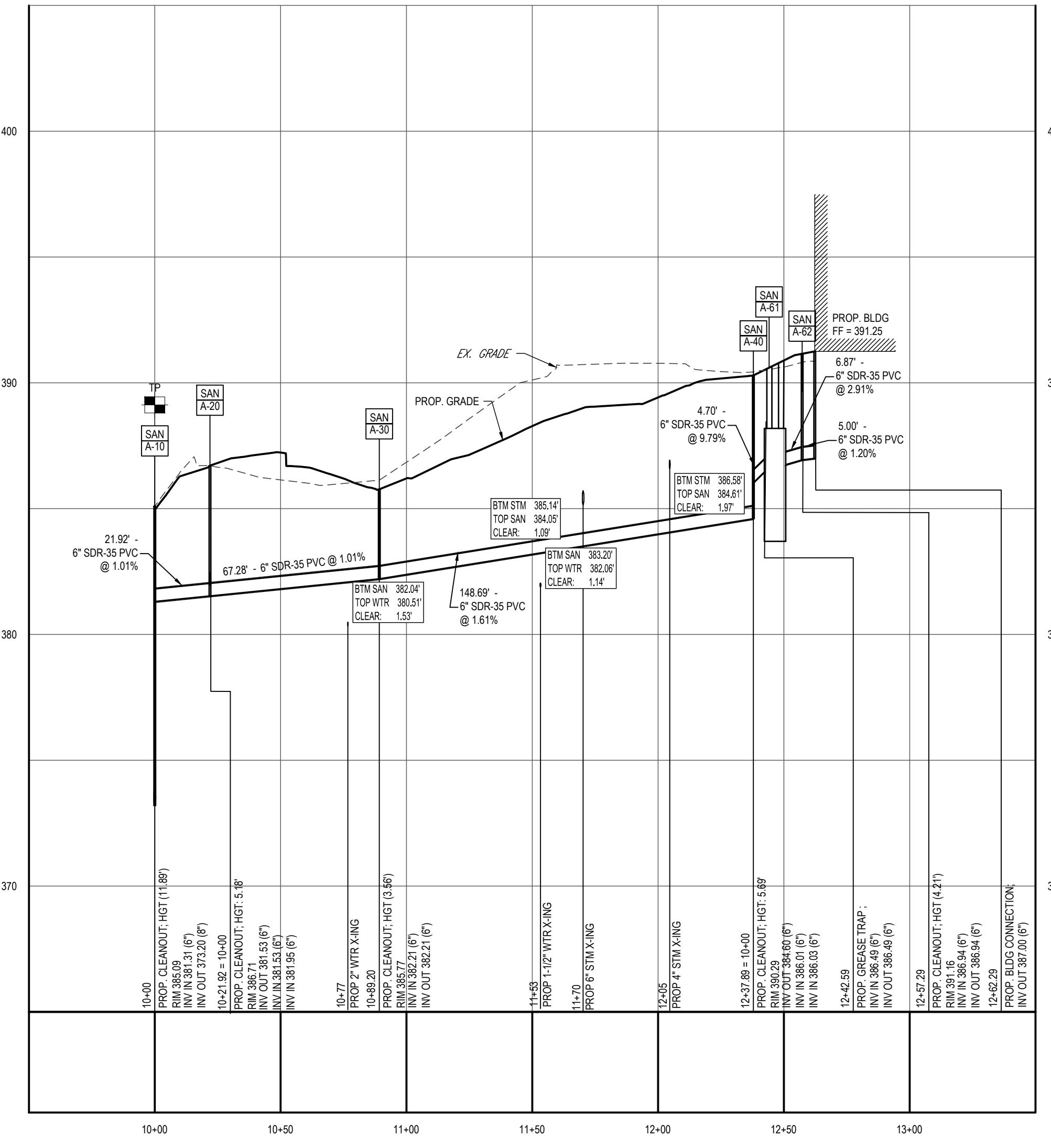




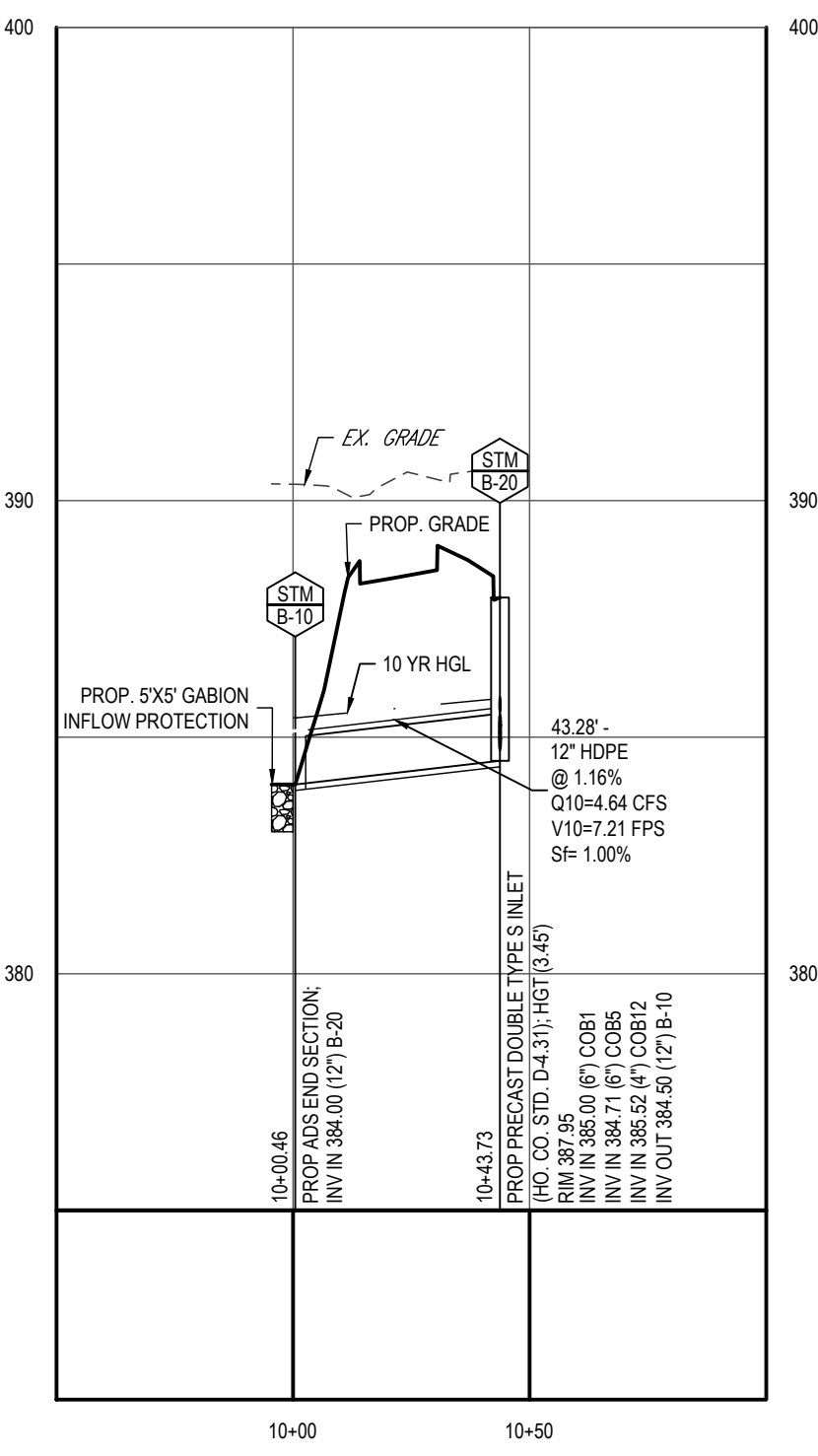
**PROPOSED STORMDRAIN PROFILE - A-11 TO A-20**  
 SCALE: 1"=40' HORIZONTAL  
 1"=4' VERTICAL



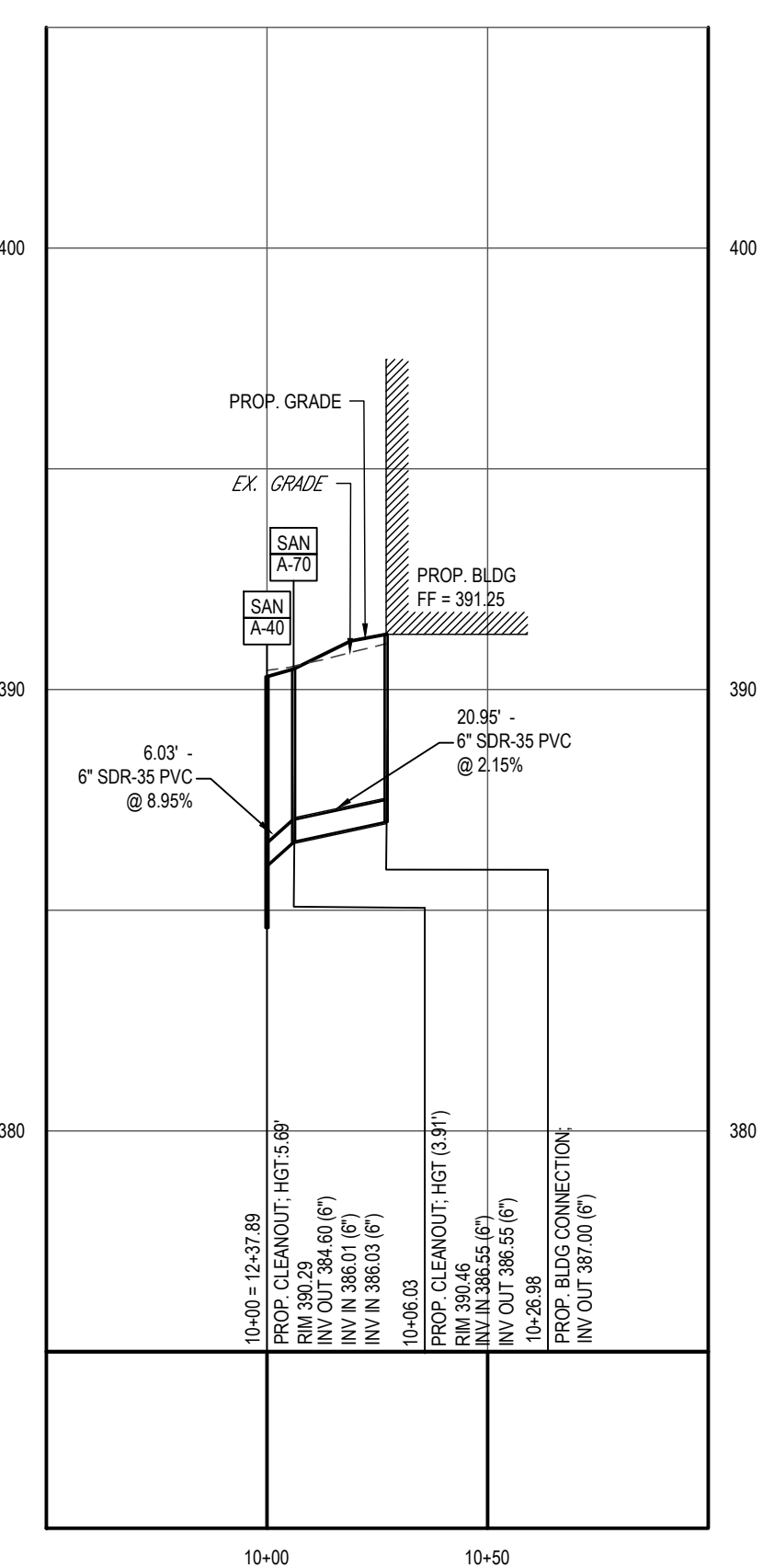
**PROPOSED STORMDRAIN PROFILE - A-10 TO A-22**  
 SCALE: 1"=40' HORIZONTAL  
 1"=4' VERTICAL



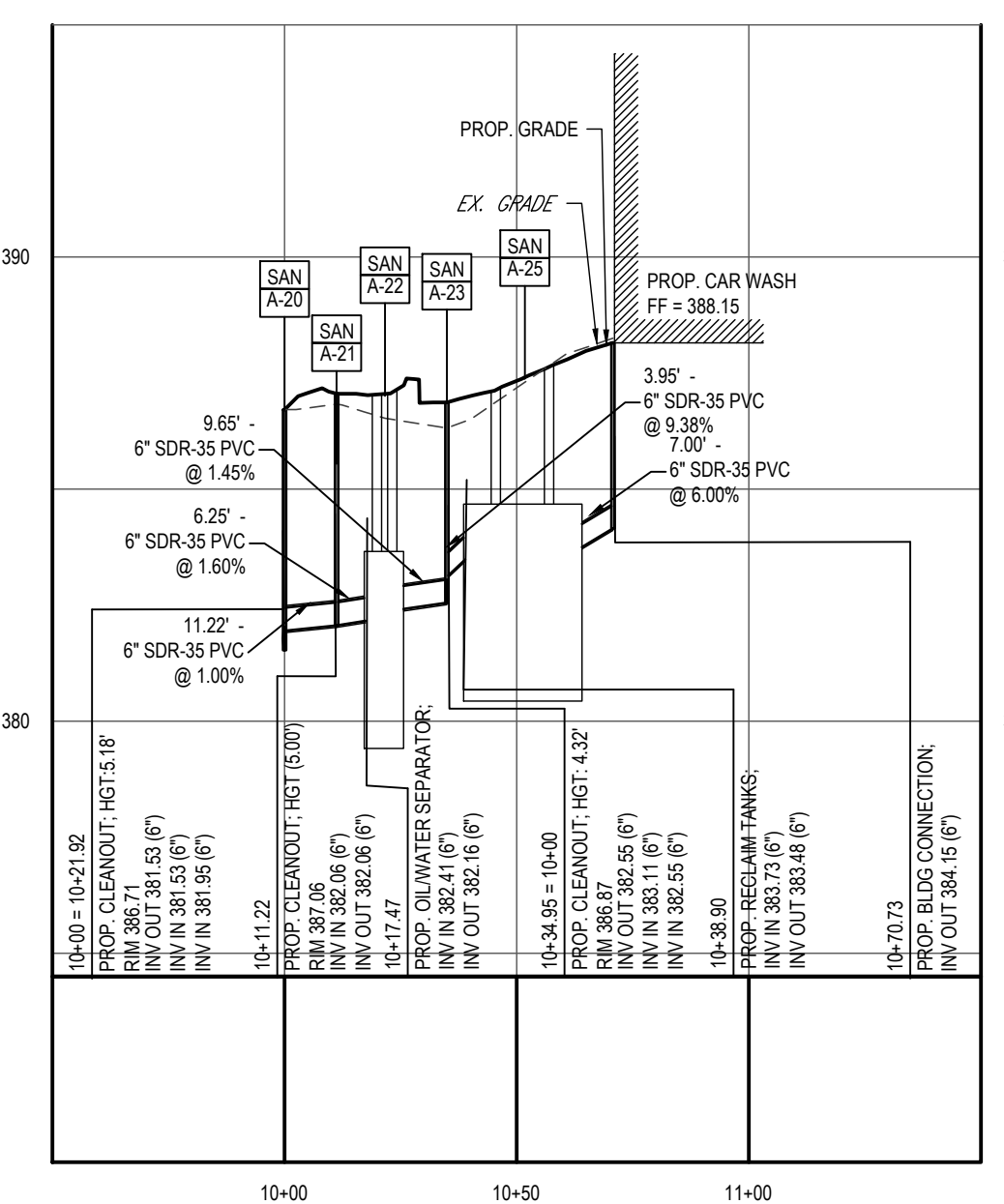
**PROPOSED SANITARY PROFILE - A-10 TO BLDG**  
 SCALE: 1"=40' HORIZONTAL  
 1"=4' VERTICAL



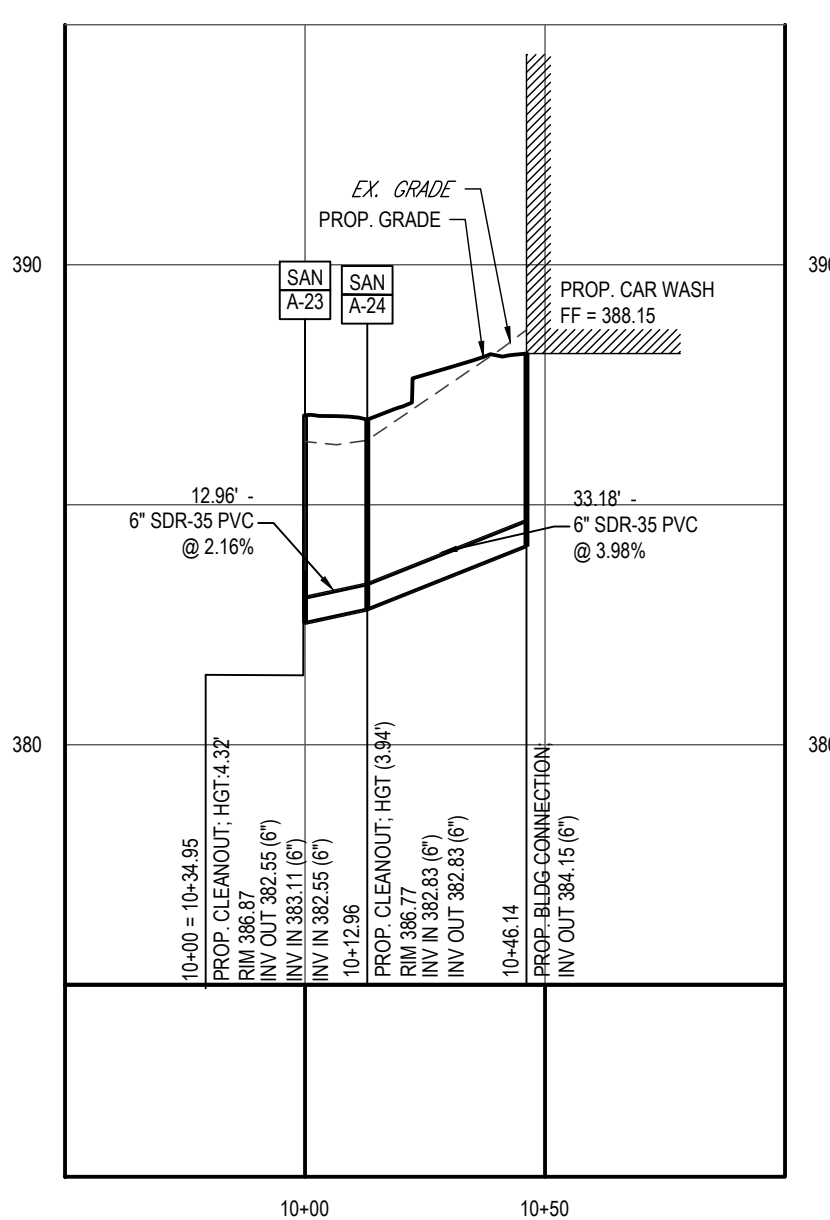
**PROPOSED STORMDRAIN PROFILE - B-10 TO B-20**  
 SCALE: 1"=40' HORIZONTAL  
 1"=4' VERTICAL



**PROPOSED SANITARY PROFILE - A-40 TO BLDG**  
 SCALE: 1"=40' HORIZONTAL  
 1"=4' VERTICAL



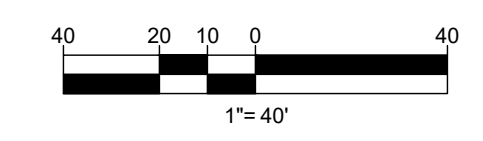
**PROPOSED SANITARY PROFILE - A-20 TO CAR WASH**  
 SCALE: 1"=40' HORIZONTAL  
 1"=4' VERTICAL



**PROPOSED SANITARY PROFILE - A-23 TO CAR WASH**  
 SCALE: 1"=40' HORIZONTAL  
 1"=4' VERTICAL

**TEST PIT NOTE**  
 CONTRACTOR TO TEST PIT FOR EXACT LOCATION OF EXISTING UTILITY OR 2' BELOW PROPOSED UTILITY AND SUBMIT ANY DISCREPANCIES TO BOHLER ENGINEERING VA, LLC IN WRITING.

- SITE SPECIFIC UTILITY NOTES:**
1. WATERLINES SHALL TYPICALLY HAVE AT LEAST 4' MINIMUM COVER, EXCEPT WHERE CROSSING A UTILITY, WHERE THEY MAY HAVE 3' MINIMUM COVER.
  2. CONTRACTOR SHALL VERIFY STRUCTURE SIZES PRIOR TO ORDERING STRUCTURES.
  3. THE PUBLIC FIRE HYDRANT, 6" WATERLINE, AND 2" WATERLINE WITHIN STEVENS FOREST ROAD AS WELL AS THE 2" WATER METER IS TO BE INSTALLED WITH ADD #2848 APPROVED ON 3/29/23.



OWNER: CROSSROADS WEST, LLC 2410 EVERGREEN ROAD, STE. 104 GAMBRILLS, MD 21054 CONTACT: WILLIAM STEFFEY PHONE: 443-332-6383	DEVELOPER: CROSSROADS WEST, LLC 2568A RIVA ROAD, STE. 300 ANNAPOLIS, MD 21401 CONTACT: WILLIAM STEFFEY PHONE: 443-332-6383
TAX MAP: 36 6TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND	GRID: 10 PARCEL: 300 ZONED: NT LOT: 8
SUBDIVISION NAME: VILLAGE OF OAKLAND MILLS VILLAGE CENTER SECTION 2, AREA 2 DEED # 1368500223	
PREVIOUS FILE NO. FDP-50-A-1, SDP-07-087, SDP-70-011, SDP-73-118, ECP-22-011, P.B. 15, F. 82, WP-23-088	
<b>FILE NO. SDP-22-027</b>	

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**  
 2/21/2024

CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 CHIEF, DIVISION OF PLANNING AND ZONING  
 DIRECTOR, DEPARTMENT OF PLANNING & ZONING

DATE: 2/21/2024  
 DATE: 2/27/2024  
 DATE:

APPROVED  
 PLANNING BOARD OF HOWARD COUNTY  
 August 11, 2023

**BOHLER**  
 SITE CIVIL AND CONSULTING ENGINEERING  
 PROGRAM MANAGEMENT  
 LANDSCAPE ARCHITECTURE  
 SUSTAINABLE DESIGN  
 PERMITTING SERVICES  
 TRANSPORTATION SERVICES

**REVISIONS**

REV	DATE	COMMENT	DRAWN BY	CHECKED BY

**811**  
 Know what's below.  
 Call before you dig.  
 ALWAYS CALL 811  
 It's fast. It's free. It's the law.

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

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PROJECT No.:	MD202104
DRAWN BY:	RMS
CHECKED BY:	AGS
DATE:	12/23
CAD ID:	PULT-3

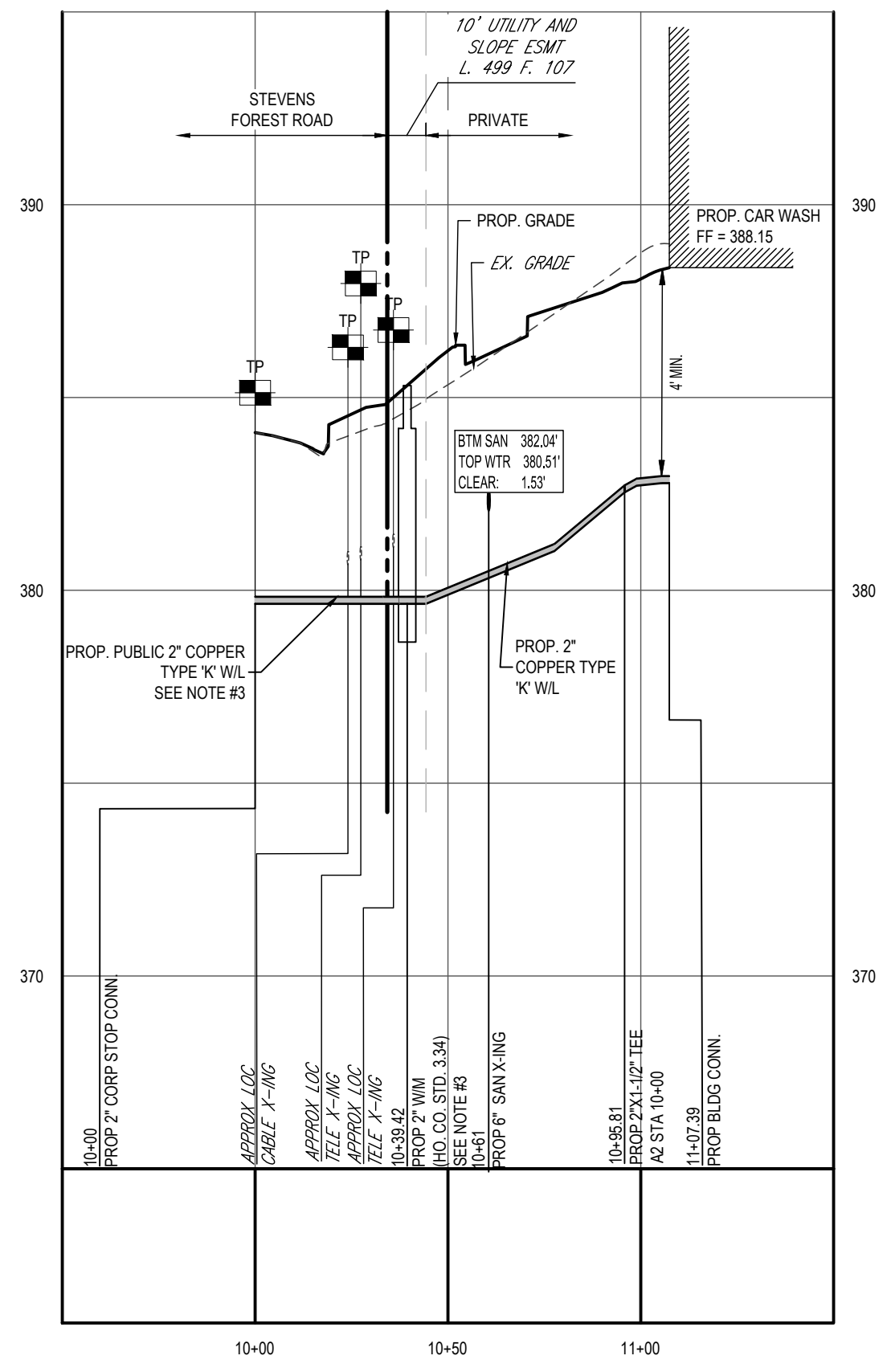
**SITE DEVELOPMENT PLAN**  
 FOR  
**CROSSROADS WEST, LLC**  
 7-ELEVEN STEVENS FOREST  
 5901 & 5911 STEVENS FOREST ROAD  
 COLUMBIA, MARYLAND  
 TAX MAP 36, GRID 10, PARCEL 300, LOT 8  
 HOWARD COUNTY  
 6TH ELECTION DISTRICT  
 ZONE: NT

**BOHLER**  
 901 DULANEY VALLEY ROAD, SUITE 801  
 TOWSON, MARYLAND 21204  
 Phone: (410) 821-7900  
 Fax: (410) 821-7987  
 MD@BohlerEng.com

**R.M. STASIOSKI**  
 PROFESSIONAL ENGINEER  
 LICENSE # 14428  
 I, R.M. STASIOSKI, CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 49425, EXPIRATION DATE: 6/30/24

SHEET TITLE:  
**UTILITY PROFILES**  
 SHEET NUMBER:  
**21**  
 ORG. DATE - 12/7/23

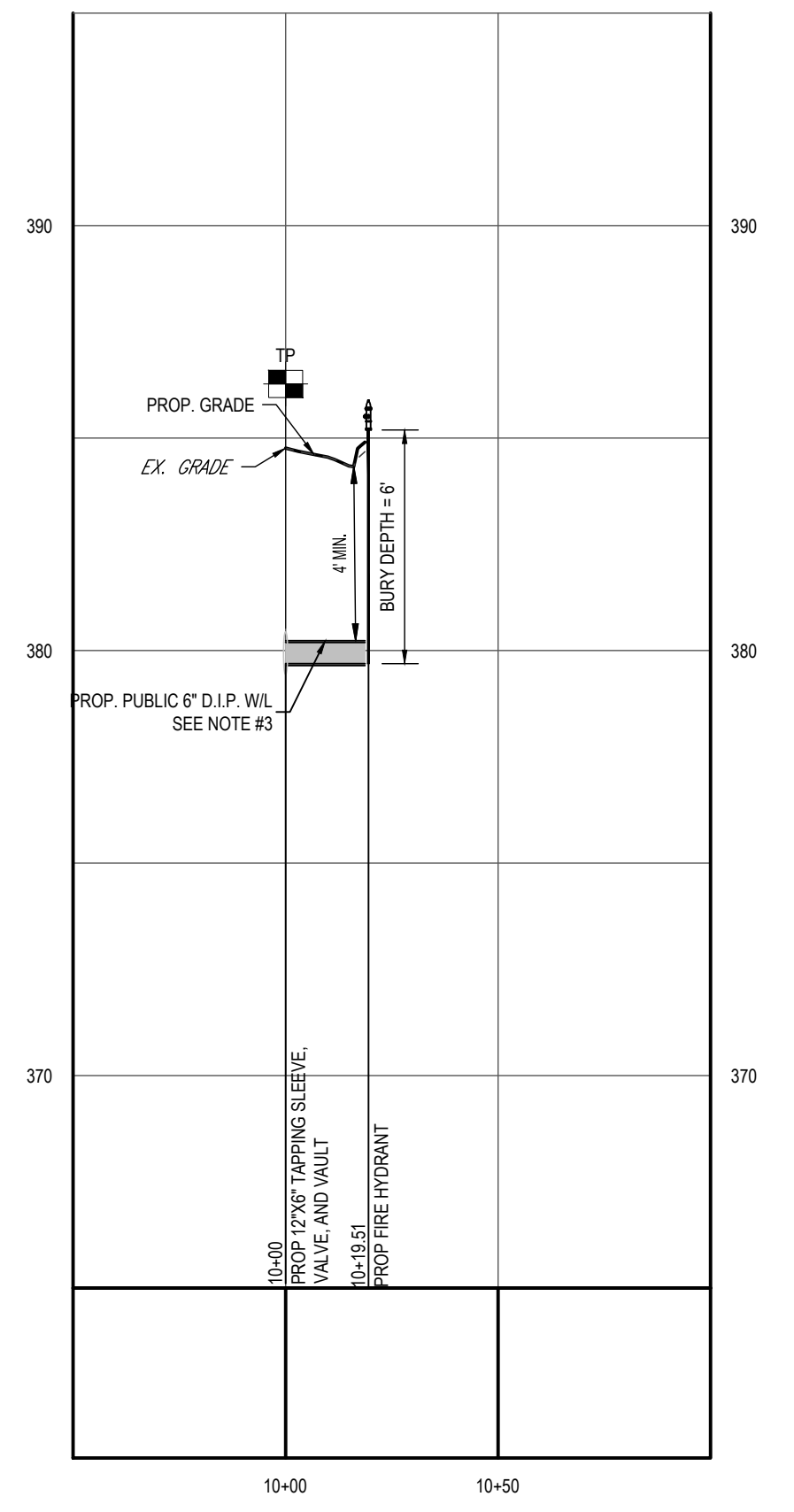




**PROPOSED WATERLINE PROFILE - A1**  
SCALE: 1"= 40' HORIZONTAL  
1"= 4' VERTICAL



**PROPOSED WATERLINE PROFILE - A2**  
SCALE: 1"= 40' HORIZONTAL  
1"= 4' VERTICAL



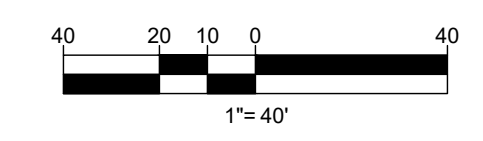
**PROPOSED PUBLIC WATERLINE PROFILE - A3**  
SCALE: 1"= 40' HORIZONTAL  
1"= 4' VERTICAL

**TEST PIT NOTE**

CONTRACTOR TO TEST PIT FOR EXACT LOCATION OF EXISTING UTILITY OR 2' BELOW PROPOSED UTILITY AND SUBMIT ANY DISCREPANCIES TO BOHLER ENGINEERING VA, LLC, IN WRITING.

**SITE SPECIFIC UTILITY NOTES:**

- WATERLINES SHALL TYPICALLY HAVE AT LEAST 4' MINIMUM COVER, EXCEPT WHERE CROSSING A UTILITY, WHERE THEY MAY HAVE 3' MINIMUM COVER.
- CONTRACTOR SHALL VERIFY STRUCTURE SIZES PRIOR TO ORDERING STRUCTURES.
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OWNER: CROSSROADS WEST, LLC 2410 EVERGREEN ROAD, STE. 104 GAMBRILLS, MD 21054 CONTACT: WILLIAM STEFFEY PHONE: 443-332-6383	DEVELOPER: CROSSROADS WEST, LLC 2568A RIVA ROAD, STE. 300 ANNAPOLIS, MD 21401 CONTACT: WILLIAM STEFFEY PHONE: 443-332-6383
TAX MAP: 36 6TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND	GRID: 10 PARCEL: 300 ZONED: NT LOT: 8
SUBDIVISION NAME: VILLAGE OF OAKLAND MILLS VILLAGE CENTER SECTION 2, AREA 2 DEED # 13685/00223	
PREVIOUS FILE No. FDP-50-A4, SDP-07-687, SDP-70-011, SDP-73-118, ECP-22-011, P.B. 15, F. 02, WP-23-688	
<b>FILE NO. SDP-22-027</b>	

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**  
*CHAD Edmondson* 2/21/2024  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 2/21/2024

CHIEF, DIVISION OF PLANNING & ZONING DEVELOPMENT  
*Lynda Eisenberg* 2/27/2024  
DATE: 2/27/2024

**APPROVED**  
PLANNING BOARD OF HOWARD COUNTY  
DATE: August 11, 2023



**REVISIONS**

REV	DATE	COMMENT	DRAWN BY	CHECKED BY



ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

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PROJECT No.: MD202104  
DRAWN BY: RMS  
CHECKED BY: AGS  
DATE: 12/7/23  
CAD ID: PUTL-3

PROJECT:  
**SITE DEVELOPMENT PLAN**  
FOR  
**CROSSROADS WEST, LLC**  
7-ELEVEN STEVENS FOREST  
5901 & 5911 STEVENS FOREST ROAD  
COLUMBIA, MARYLAND  
TAX MAP 36, GRID 10, PARCEL 300, LOT 8  
HOWARD COUNTY  
6TH ELECTION DISTRICT  
ZONE: NT

**BOHLER**  
901 DULANEY VALLEY ROAD, SUITE 801  
TOWSON, MARYLAND 21204  
Phone: (410) 821-7900  
Fax: (410) 821-7987  
MD@BohlerEng.com

**R.M. STASIOSKI**  
PROFESSIONAL ENGINEER  
1, I, RYAN M. STASIOSKI, CERTIFY THAT THESE DOCUMENTS WERE PREPARED AND APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 49425, EXPIRATION DATE: 6/30/24

SHEET TITLE:  
**UTILITY PROFILES**  
SHEET NUMBER:  
**22**  
ORG. DATE - 12/7/23

















R=25.00' (M&R)  
Δ=77°45'00"  
L=33.93' (M&R)  
CHB=S40°05'35"W (M)  
N39°55'30"E (R)  
CHD=31.38' (M&R)

N01°13'05"E (M)  
N01°03'00"E (R)  
281.72' (M&R)

N78°58'05"E (M)  
N78°48'00"E (R)  
200.00' (M&R)

S11°01'55"E (M)  
S11°12'00"E (R)  
295.00' (M&R)

S78°58'05"W (M)  
S78°48'00"W (R)  
264.20' (M&R)



**BOHLER**  
SITE CIVIL AND CONSULTING ENGINEERING  
PROGRAM MANAGEMENT  
LANDSCAPE ARCHITECTURE  
SUSTAINABLE DESIGN  
PERMITTING SERVICES  
TRANSPORTATION SERVICES

**REVISIONS**

REV	DATE	COMMENT	DRAWN BY	CHECKED BY

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PROJECT No.:	MD202104
DRAWN BY:	RMS
CHECKED BY:	AGS
DATE:	12/27/23
CAD ID:	SITE-3

**SITE DEVELOPMENT PLAN**  
FOR  
**CROSSROADS WEST, LLC**  
7-ELEVEN STEVENS FOREST  
5901 & 5911 STEVENS FOREST ROAD  
COLUMBIA, MARYLAND  
TAX MAP 36, GRID 10, PARCEL 300, LOT 8  
HOWARD COUNTY  
6TH ELECTION DISTRICT  
ZONE: NT

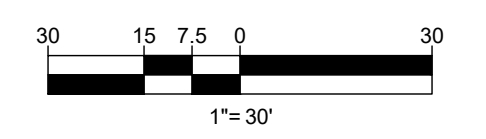
**BOHLER**  
901 DULANEY VALLEY ROAD, SUITE 801  
TOWSON, MARYLAND 21284  
Phone: (410) 821-7900  
Fax: (410) 821-7987  
MD@BohlerEng.com

**R.M. STASIOSKI**  
PROFESSIONAL ENGINEER  
I, R. M. STASIOSKI, CERTIFY THAT THESE DOCUMENTS WERE PREPARED, APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 49425, EXPIRATION DATE: 6/30/24

OWNER: CROSSROADS WEST, LLC 2410 EVERGREEN ROAD, STE. 104 GAMBRILLS, MD 21054 CONTACT: WILLIAM STEFFEY PHONE: 443-332-6383	DEVELOPER: CROSSROADS WEST, LLC 2568A RIVA ROAD, STE. 300 ANNAPOLIS, MD 21401 CONTACT: WILLIAM STEFFEY PHONE: 443-332-6383	
TAX MAP: 36	GRID: 10	ZONED: NT
6TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND		
SUBDIVISION NAME: VILLAGE OF OAKLAND MILLS VILLAGE CENTER SECTION 2, AREA 2 DEED # 13685/00223		
PREVIOUS FILE NO. FDP-50-A1, SDP-07-087, SDP-70-011, SDP-73-118, ECP-22-011, P.B. 15, F. 82, WP-23-088		
<b>FILE NO. SDP-22-027</b>		

SHEET TITLE:  
**OVERALL GRADING PLAN**  
SHEET NUMBER:  
**26**  
ORG. DATE - 12/7/23

THIS PLAN TO BE UTILIZED FOR INFORMATIONAL PURPOSES ONLY



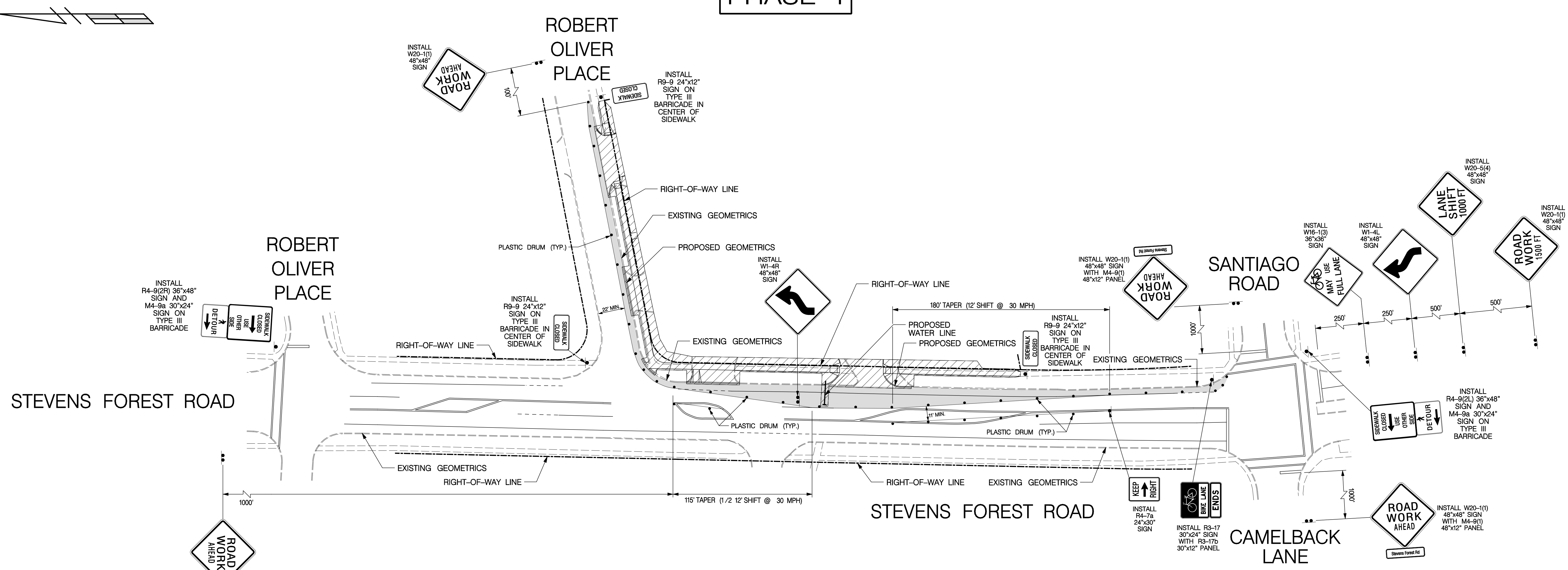
**APPROVED: DEPARTMENT OF PLANNING AND ZONING**  
*CHAD Edmondson* 2/23/2024  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 2/21/2024

CHIEF, DIVISION OF PLANNING & ZONING  
*Lynnda Ewing* 2/27/2024  
DIRECTOR, DEPARTMENT OF PLANNING & ZONING  
DATE:

**APPROVED PLANNING BOARD OF HOWARD COUNTY**  
August 11, 2023

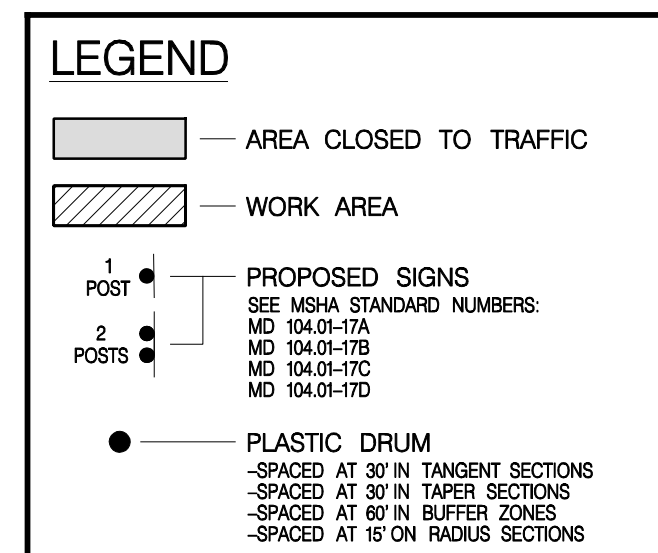


# PHASE 1



**MAINTENANCE OF TRAFFIC NOTES**

- ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MDMUTCD).
- THE CONTRACTOR SHALL ADHERE TO THE LATEST EDITION OF THE MDT SHA BOOK OF STANDARDS.
- THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLAN ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410-319-2430) PRIOR TO THE INSTALLATION OF ANY OF THE TRAFFIC CONTROL DEVICES.
- A MINIMUM OF 11'-0" TRAVEL LANE WIDTH SHALL BE MAINTAINED.
- LANE CLOSURE HOURS SHALL BE LIMITED TO 9:00AM - 3:00PM.
- SIGNS NO LONGER REQUIRED OR APPLICABLE SHALL BE REMOVED, COVERED OR TURNED AWAY.
- SIGNS SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ALL WORK AND REMOVED IMMEDIATELY AFTER COMPLETION OF ACTIVITIES.
- ACCESS TO ALL ROADWAYS & DRIVEWAYS MUST BE MAINTAINED AT ALL TIMES.
- THE CONTRACTOR SHALL INSTALL AND REMOVE TRAFFIC CONTROL DEVICES PER MD STD. 104.02-04.
- THE CONTRACTOR SHALL INSTALL CHANNELIZING DEVICES PER MD STD. 104.01-30B AND 104.01-30D WHILE REFERENCING MD STD. 104.00-09 AND 104.00-10.
- THE R1-1 ("STOP") SIGN AND THE STREET NAME SIGN (SNS) ASSEMBLY FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETED.
- ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED SUPPORT.
- CROSSING GUARDS MUST BE PROVIDED AT BOTH CROSSWALKS CROSSING STEVENS FOREST ROAD TO ASSIST WITH SCHOOL CHILDREN ON ALL DAYS SCHOOLS ARE OPEN.
- EXISTING PAVEMENT MARKINGS AND SIGNS DAMAGED DURING THE CONSTRUCTION PROCESS WILL BE REPLACED IN KIND AFTER CONSTRUCTION HAS CONCLUDED.
- NEITHER PORTABLE NOR PERMANENT SIGN SUPPORTS SHOULD BE LOCATED ON SIDEWALKS, BICYCLE LANES OR AREAS DESIGNATED FOR PEDESTRIAN OR BICYCLE TRAFFIC.
- SIGNS MOUNTED LOWER THAN SEVEN FEET SHOULD NOT PROJECT MORE THAN FOUR INCHES INTO PEDESTRIAN FACILITIES.

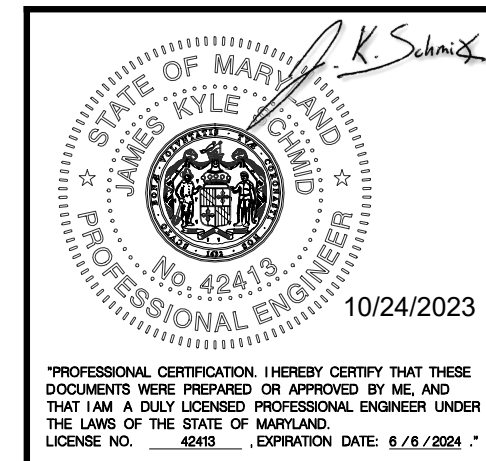


OWNER: OAKLAND FOREST LLC 12820 CLARKSVILLE PIKE CLARKSVILLE, MD 20777 CONTACT: KIRIT PARMAR PHONE: 443-332-6383	DEVELOPER: RELIABLE REAL ESTATE SERVICES, LLC 2410 EVERGREEN ROAD, STE. 200 GAMBRILLS, MD 21054 CONTACT: WILLIAM STEFFEY PHONE: 443-332-6383	
TAX MAP: 36	GRID: 10	ZONED: NT
2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND	PARCEL: 300	LOT: 8
SUBDIVISION NAME: VILLAGE OF OAKLAND MILLS VILLAGE CENTER SECTION 2, AREA 2 DEED# 1388500223		
PREVIOUS FILE No.: FDP-83-A-1, SDP-07-087, SDP-70-011, SDP-73-118, ECP-22-011		
<b>FILE NO. SDP-22-027</b>		

**TRAFFIC CONCEPTS, INC.**  
7525 Connelley Drive  
Suite B  
Hanover, MD 21076  
(410) 760-2911  
EMAIL: TRAFFIC@TRAFFIC-CONCEPTS.COM

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Chad Edmondson* 2/21/2024  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 2/21/2024  
CHIEF, DIVISION OF LAND DEVELOPMENT  
*Linda Eubank* 2/27/2024  
DIRECTOR, DEPARTMENT OF PLANNING & ZONING  
DATE:

APPROVED  
PLANNING BOARD OF HOWARD COUNTY  
August 11, 2023  
DATE:

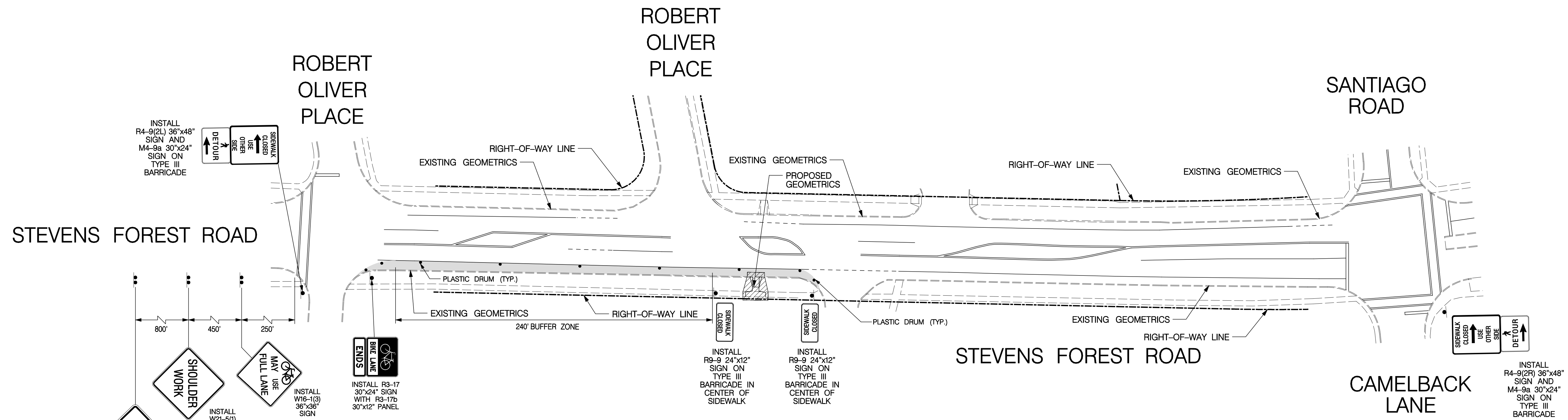
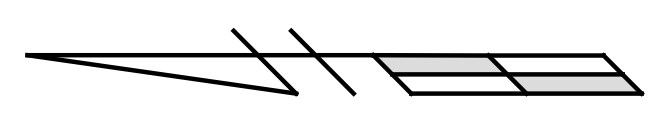


**MAINTENANCE OF TRAFFIC PLAN**  
STEVENS FOREST ROAD AND ROBERT OLIVER PLACE  
HOWARD COUNTY

DRAWN BY: B. SCHMID	DESIGNED BY: B. SCHMID	CHECKED BY: J. K. SCHMID
DATE: 10-24-2023	SHEET NO: 27	SCALE: 1" = 40'

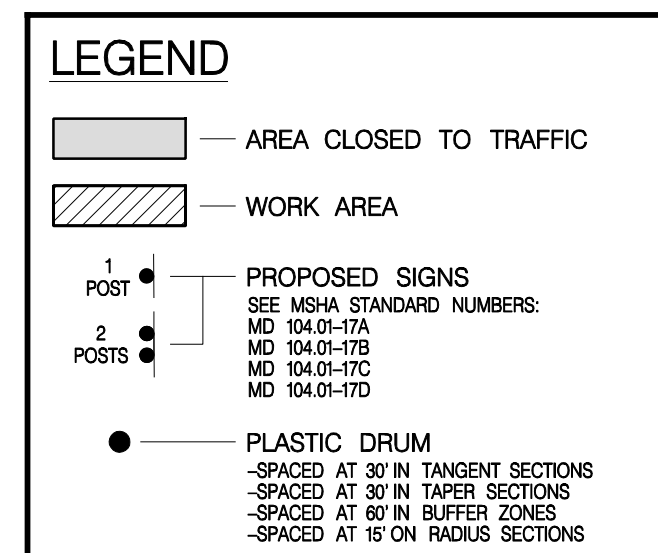


# PHASE 2



**MAINTENANCE OF TRAFFIC NOTES**

1. ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MDMUTCD).
2. THE CONTRACTOR SHALL ADHERE TO THE LATEST EDITION OF THE MDT SHA BOOK OF STANDARDS.
3. THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLAN ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410-313-2430) PRIOR TO THE INSTALLATION OF ANY OF THE TRAFFIC CONTROL DEVICES.
4. A MINIMUM OF 11'-0" TRAVEL LANE WIDTH SHALL BE MAINTAINED.
5. LANE CLOSURE HOURS SHALL BE LIMITED TO 9:00AM - 3:00PM.
6. SIGNS NO LONGER REQUIRED OR APPLICABLE SHALL BE REMOVED, COVERED OR TURNED AWAY.
7. SIGNS SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ALL WORK AND REMOVED IMMEDIATELY AFTER COMPLETION OF ACTIVITIES.
8. ACCESS TO ALL ROADWAYS & DRIVEWAYS MUST BE MAINTAINED AT ALL TIMES.
9. THE CONTRACTOR SHALL INSTALL AND REMOVE TRAFFIC CONTROL DEVICES PER MD STD. 104.02-04.
10. THE CONTRACTOR SHALL INSTALL CHANNELIZING DEVICES PER MD STD. 104.01-30B AND 104.01-30D WHILE REFERENCING MD STD. 104.00-09 AND 104.00-10.
11. THE R1-1 ("STOP") SIGN AND THE STREET NAME SIGN (SNS) ASSEMBLY FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETED.
12. ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED SUPPORT.
13. CROSSING GUARDS MUST BE PROVIDED AT BOTH CROSSWALKS CROSSING STEVENS FOREST ROAD TO ASSIST WITH SCHOOL CHILDREN ON ALL DAYS SCHOOLS ARE OPEN.
14. EXISTING PAVEMENT MARKINGS AND SIGNS DAMAGED DURING THE CONSTRUCTION PROCESS WILL BE REPLACED IN KIND AFTER CONSTRUCTION HAS CONCLUDED.
15. NEITHER PORTABLE NOR PERMANENT SIGN SUPPORTS SHOULD BE LOCATED ON SIDEWALKS, BICYCLE LANES OR AREAS DESIGNATED FOR PEDESTRIAN OR BICYCLE TRAFFIC.
16. SIGNS MOUNTED LOWER THAN SEVEN FEET SHOULD NOT PROJECT MORE THAN FOUR INCHES INTO PEDESTRIAN FACILITIES.

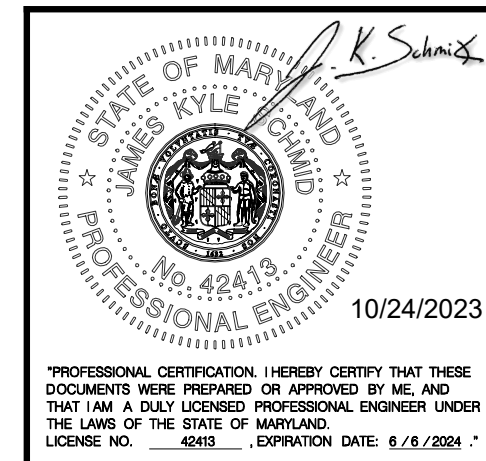


OWNER: OAKLAND FOREST LLC 12820 CLARKSVILLE PIKE CLARKSVILLE, MD 20777 CONTACT: KIRIT PARMAR PHONE: 443-332-6383	DEVELOPER: RELIABLE REAL ESTATE SERVICES, LLC 2410 EVERGREEN ROAD, STE. 200 GAMBRILLS, MD 21054 CONTACT: WILLIAM STEFFEY PHONE: 443-332-6383
TAX MAP: 36	GRID: 10 ZONED: NT
2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND	PARCEL: 300 LOT: 8
SUBDIVISION NAME: VILLAGE OF OAKLAND MILLS VILLAGE CENTER SECTION 2, AREA 2 DEED# 1388500223	
PREVIOUS FILE No.: FDP-63-A-1, SDP-07-087, SDP-70-011 SDP-73-118, ECP-22-011	
FILE NO. SDP-22-027	

**TRAFFIC CONCEPTS, INC.**  
7525 Connelley Drive  
Suite B  
Hanover, MD 21076  
(410) 760-2911  
EMAIL: TRAFFIC@TRAFFIC-CONCEPTS.COM

APPROVED: DEPARTMENT OF  
PLANNING AND ZONING  
*Chad Edmondson* 2/21/2024  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
CHIEF, DIVISION OF LAND DEVELOPMENT  
Discussed by: *Uma Edmondson* 2/27/2024  
DIRECTOR, DEPARTMENT OF PLANNING & ZONING DATE

APPROVED  
PLANNING BOARD OF HOWARD COUNTY  
DATE: August 11, 2023

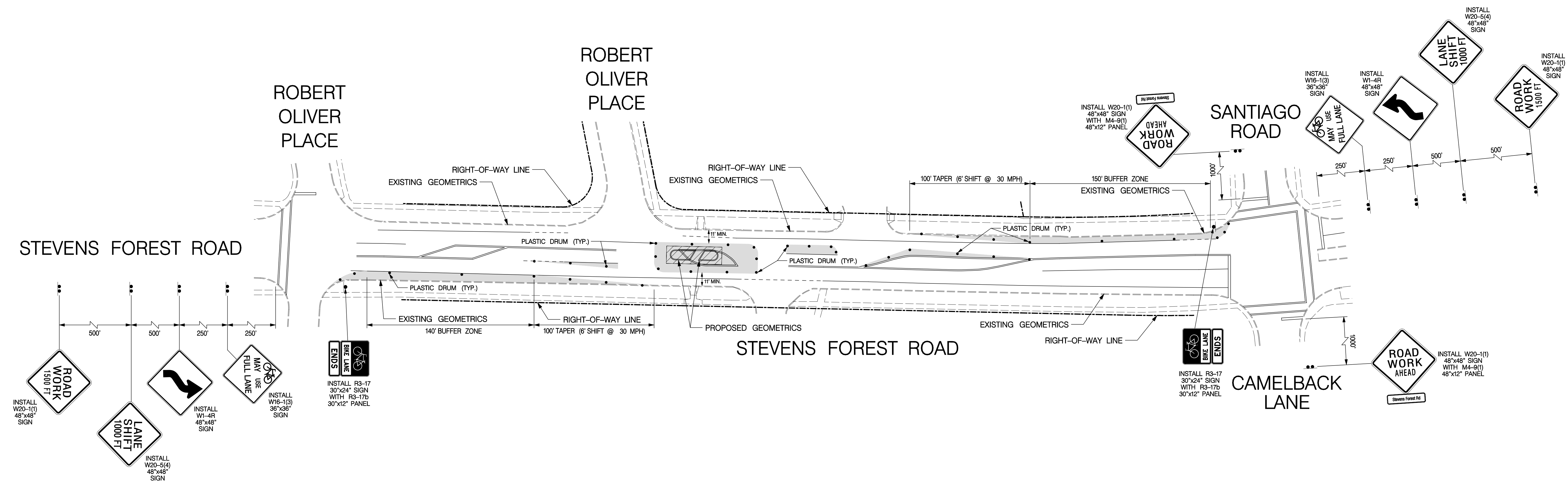
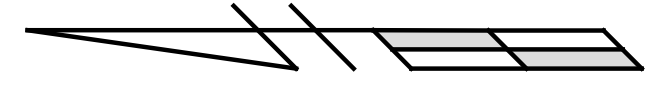


**MAINTENANCE OF TRAFFIC PLAN**  
STEVENS FOREST ROAD AND  
ROBERT OLIVER PLACE  
HOWARD COUNTY

DRAWN BY: B. SCHMID	DESIGNED BY: B. SCHMID	CHECKED BY: J. K. SCHMID
DATE: 10-24-2023	SHEET NO: 28	SCALE: 1" = 40'

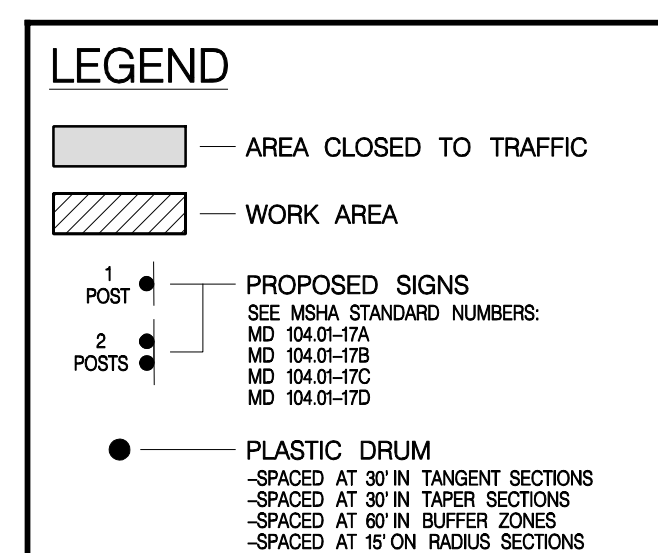


# PHASE 3



**MAINTENANCE OF TRAFFIC NOTES**

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- ACCESS TO ALL ROADWAYS & DRIVEWAYS MUST BE MAINTAINED AT ALL TIMES.
- THE CONTRACTOR SHALL INSTALL AND REMOVE TRAFFIC CONTROL DEVICES PER MD STD. 104.02-04.
- THE CONTRACTOR SHALL INSTALL CHANNELIZING DEVICES PER MD STD. 104.01-30B AND 104.01-30D WHILE REFERENCING MD STD. 104.00-09 AND 104.00-10.
- THE R1-1 ("STOP") SIGN AND THE STREET NAME SIGN (SNS) ASSEMBLY FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETED.
- ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED SUPPORT.
- CROSSING GUARDS MUST BE PROVIDED AT BOTH CROSSWALKS CROSSING STEVENS FOREST ROAD TO ASSIST WITH SCHOOL CHILDREN ON ALL DAYS SCHOOLS ARE OPEN.
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- NEITHER PORTABLE NOR PERMANENT SIGN SUPPORTS SHOULD BE LOCATED ON SIDEWALKS, BICYCLE LANES OR AREAS DESIGNATED FOR PEDESTRIAN OR BICYCLE TRAFFIC.
- SIGNS MOUNTED LOWER THAN SEVEN FEET SHOULD NOT PROJECT MORE THAN FOUR INCHES INTO PEDESTRIAN FACILITIES.

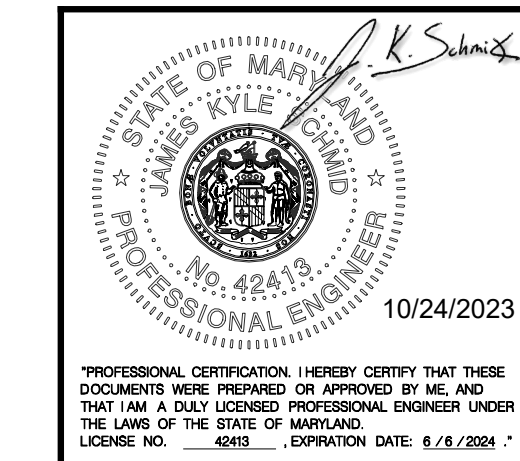


OWNER: OAKLAND FOREST LLC 12820 CLARKSVILLE PIKE CLARKSVILLE, MD 20777 CONTACT: KIRIT PARMAR PHONE: 443-332-6383	DEVELOPER: RELIABLE REAL ESTATE SERVICES, LLC 2410 EVERGREEN ROAD, STE. 200 GAMBRILLS, MD 21054 CONTACT: WILLIAM STEFFEY PHONE: 443-332-6383	
TAX MAP: 36	GRID: 10	ZONED: NT
2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND	PARCEL: 300	LOT: 8
SUBDIVISION NAME: VILLAGE OF OAKLAND MILLS VILLAGE CENTER SECTION 2, AREA 2 DEED# 1388500223		
PREVIOUS FILE No.: FDP-83-A-1, SDP-07-087, SDP-70-011 SDP-73-118, ECP-22-011		
FILE NO. SDP-22-027		

**TRAFFIC CONCEPTS, INC.**  
7525 Connelley Drive  
Suite B  
Hanover, MD 21076  
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EMAIL: TRAFFIC@TRAFFIC-CONCEPTS.COM

APPROVED: DEPARTMENT OF  
PLANNING AND ZONING  
*Will Edmondson* 2/21/2024  
CHIEF, DEVELOPMENT & ENGINEERING DIVISION  
DATE: 2/21/2024  
CHIEF, DIVISION OF COMMUNITY DEVELOPMENT  
*Yvonne Ewing* 2/27/2024  
DIRECTOR, DEPARTMENT OF PLANNING & ZONING  
DATE:

APPROVED  
PLANNING BOARD OF HOWARD COUNTY  
August 11, 2023  
DATE:



**MAINTENANCE OF TRAFFIC PLAN**  
STEVENS FOREST ROAD AND  
ROBERT OLIVER PLACE  
HOWARD COUNTY

DRAWN BY: B. SCHMID  
DESIGNED BY: B. SCHMID  
CHECKED BY: J. K. SCHMID  
DATE: 10-24-2023  
SHEET NO: 29  
SCALE: 1" = 40'



### SEGMENTAL RETAINING WALL SPECIFICATIONS

#### PART 1 - GENERAL

##### 1.1 WORK INCLUDES

FURNISHING AND INSTALLING SEGMENTAL RETAINING WALL UNITS, GEGRID REINFORCEMENT, WALL FILL, AND BACKFILL TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS AND AS SPECIFIED HEREIN. THE CONTRACT ALSO INCLUDES FURNISHING AND INSTALLING ALL APPURTENANT MATERIALS, EQUIPMENT, AND LABOR REQUIRED FOR CONSTRUCTION OF THE GEGRID REINFORCED SEGMENTAL RETAINING WALL. ALL EXISTING AND PROPOSED CONSTRUCTION AND SITE GRADING INFORMATION WAS REFERENCED FROM THE ELECTRONIC VERSION OF THE UNLITLED, UNDATED, SITE PLAN, PREPARED BY BOHLER ENGINEERING, AND ELECTRONICALLY PROVIDED TO GTA ON OCTOBER 18, 2022. SOIL DESIGN PARAMETERS ARE BASED ON LIMITED SUBSURFACE DATA PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT, DATED JUNE 21, 2021, PREPARED BY ECS MID-ATLANTIC, LLC AND SHOULD BE VERIFIED DURING CONSTRUCTION.

##### 1.2 REFERENCE STANDARDS

- A. ASTM C90 - STANDARD SPECIFICATION FOR LOADBEARING CONCRETE MASONRY UNITS
- B. ASTM C1262 - STANDARD TEST METHOD FOR EVALUATING THE FREEZE-THAW DURABILITY OF DRY-CAST SEGMENTAL RETAINING WALL UNITS AND RELATED CONCRETE UNITS
- C. ASTM C1372 - STANDARD SPECIFICATION FOR DRY-CASE SEGMENTAL RETAINING WALL UNITS
- D. ASTM D698 - STANDARD TEST METHODS FOR LABORATORY COMPACTION CHARACTERISTICS OF SOIL USING STANDARD EFFORT
- E. ASTM D2487 - STANDARD PRACTICE FOR CLASSIFICATION OF SOILS FOR ENGINEERING PURPOSES (UNIFIED SOIL CLASSIFICATION SYSTEM)
- F. ASTM D3034 - STANDARD SPECIFICATION FOR TYPE PSM POLYVINYL CHLORIDE (PVC) SEWER PIPE AND FITTINGS
- G. ASTM STP399 - VANE SHEAR AND CONE PENETRATION RESISTANCE TESTING OF IN-SITU SOILS
- H. 2018 INTERNATIONAL BUILDING CODE (IBC)
- I. NATIONAL CONCRETE MASONRY ASSOCIATION - DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS, 3RD EDITION
- J. MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION (MOT SHA) - STANDARD SPECIFICATION FOR CONSTRUCTION AND MATERIALS, JULY 2018

##### 1.3 DELIVERY, STORAGE AND HANDLING

- A. CONTRACTOR SHALL CHECK THE MATERIALS UPON DELIVERY TO ENSURE THAT PROPER MATERIAL HAS BEEN RECEIVED.
- B. CONTRACTOR SHALL PREVENT EXCESSIVE MUD, WET CEMENT, EPOXY, AND LIKE MATERIALS WHICH MAY AFFIX THEMSELVES, FROM COMING IN CONTACT WITH THE MATERIALS.
- C. GEORGRIDS SHALL BE STORED ABOVE -20' F.
- D. CONTRACTOR SHALL PROTECT THE MATERIALS FROM DAMAGE. DAMAGED MATERIAL SHALL NOT BE INCORPORATED INTO THE REINFORCED RETAINING WALL.

##### 1.4 SUBMITTALS/CERTIFICATION

- A. IF REQUESTED BY GTA OR THE OWNER, CONTRACTOR SHALL SUBMIT QUALIFICATIONS AND DOCUMENTATION OF PRIOR EXPERIENCE TO SHOW THE NECESSARY SKILL AND EXPERIENCE. PRIOR EXPERIENCE SHALL INCLUDE RETAINING WALL CONSTRUCTION OF SIMILAR SIZE/TYPE TO THOSE SHOWN ON THIS PLAN (MINIMUM THREE PROJECTS IN THE LAST FIVE YEARS).
- B. CONTRACTOR SHALL SUBMIT MANUFACTURER'S CATALOG FOR THE PROPOSED MATERIALS TO GTA FOR APPROVAL A MINIMUM OF SEVEN DAYS BEFORE START OF CONSTRUCTION.
- C. IF REQUESTED BY GTA OR THE OWNER, CONTRACTOR SHALL SUBMIT SAMPLES OF PROPOSED MATERIALS TO GTA A MINIMUM OF SEVEN DAYS BEFORE START OF CONSTRUCTION.
- D. MATERIALS SHALL BE TRANSPORTED TO THE SITE ONLY AFTER APPROVAL OF THE PROPOSED MATERIAL BY GTA.

#### PART 2 - PRODUCTS

##### 2.1 DEFINITIONS

- A. CONCRETE UNITS ARE DRY-STACKED, CONCRETE MASONRY UNITS THAT FORM THE FACE OF THE RETAINING WALL.
- B. CAP UNITS ARE CONCRETE MASONRY UNITS PLACED ON THE TOP COURSE OF THE CONCRETE UNITS.
- C. LEVELING PAD IS A COMPACTED, AGGREGATE LAYER SUPPORTING THE BOTTOM CONCRETE UNITS.
- D. FIBERGLASS CONNECTION PINS ARE PLACED BETWEEN SUCCESSIVE CONCRETE UNIT COURSES TO CONNECT CONCRETE UNITS AND SECURE GEGRID TO THE CONCRETE UNITS.
- E. GEGRID IS A HIGH-DENSITY POLYETHYLENE, POLYESTER, OR POLYPROPYLENE GRID, SPECIFICALLY FABRICATED FOR USE AS A SOIL REINFORCEMENT.
- F. GRAVEL FILL IS DRAINAGE AGGREGATE THAT IS PLACED WITHIN AND IMMEDIATELY BEHIND THE CONCRETE UNITS.
- G. REINFORCED BACKFILL IS COMPACTED, STRUCTURAL FILL PLACED BEHIND THE CONCRETE UNITS, EXTENDING THE FULL LENGTH OF THE GEGRID ZONE.
- H. CONTROLLED FILL IS COMPACTED, STRUCTURAL FILL PLACED BEHIND THE REINFORCED BACKFILL AND/OR SUPPORTING THE LEVELING PAD AND REINFORCED BACKFILL.
- I. LOW-PERMEABILITY SOIL IS A LAYER OF COMPACTED, LOW-PERMEABILITY SOIL FILL PLANNED AT THE GROUND SURFACE, EXTENDING FROM JUST BEHIND THE CAP UNIT TO THE BACK OF THE REINFORCED BACKFILL ZONE.
- J. DRAINAGE PIPE IS PVC OR HDPE PIPING PLACED BEHIND AND/OR THROUGH THE CONCRETE UNITS TO FACILITATE DRAINAGE OF WATER FROM BEHIND THE RETAINING WALL.
- K. FILTER FABRIC IS A NON-WOVEN, POLYPROPYLENE GEOTEXTILE USED TO PROVIDE SEPARATION BETWEEN GRAVEL FILL AND REINFORCED BACKFILL.
- L. DRAINAGE COMPOSITES ARE POLYETHYLENE NET STRUCTURE WITH NON-WOVEN GEOTEXTILES BONDED TO BOTH SIDES.

##### 2.2 MATERIALS

###### A. CONCRETE UNITS

- 1. CONCRETE UNITS SHALL BE KEYSTONE COMPAC III RETAINING WALL UNITS. SUBSTITUTION OF OTHER CONCRETE UNITS OF SIMILAR SIZE AND WEIGHT MAY BE ALLOWED WITH THE PRIOR APPROVAL OF GTA AND THE OWNER.
- 2. CONCRETE WALL UNITS SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI, IN ACCORDANCE WITH ASTM C90. THE CONCRETE SHALL HAVE ADEQUATE FREEZE/THAW PROTECTION, WITH A MAXIMUM MOISTURE ABSORPTION OF 8 PERCENT.
- 3. CONCRETE UNIT MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C1372.
- 4. CONCRETE UNITS SHALL PASS 100 FREEZE/THAW CYCLES IN WATER WITH LESS THAN 1% WEIGHT LOSS IN ACCORDANCE WITH ASTM C1262.
- 5. CONCRETE UNITS SHALL HAVE ANGLED SIDES AND BE CAPABLE OF ATTAINING THE REQUIRED CONCAVE AND CONVEX ALIGNMENT CURVES.
- 6. EXTERIOR CONCRETE UNIT DIMENSIONS MAY VARY. CONCRETE UNITS SHALL HAVE A MINIMUM OF ONE SQUARE FOOT OF FACE AREA EACH.
- 7. CONCRETE UNITS SHALL BE INTERLOCKED WITH NON-CORROSIVE REINFORCED FIBERGLASS PINS.
- 8. CONCRETE UNITS SHALL BE INTERLOCKED AS TO PROVIDE A NOMINAL 1-1/8"-INCH OF SETBACK PER COURSE.

###### B. CAP UNITS

- 1. CAP UNITS SHALL BE KEYSTONE CAP UNITS. SUBSTITUTION OF OTHER CAP UNITS OF SIMILAR SIZE AND WEIGHT MAY BE ALLOWED WITH THE PRIOR APPROVAL OF GTA.
- 2. CAP UNITS SHALL CONFORM TO THE REQUIREMENTS STATED IN NOTES 2.2.A.2 AND 2.2.A.5.

###### C. LEVELING PAD

- 1. LEVELING PAD MATERIALS SHALL CONSIST OF COMPACTED, FREE-DRAINING, COARSE AGGREGATES MEETING THE REQUIREMENTS OF MARYLAND SHA NO. 57 STONE.
- 2. LEVELING PAD SHALL BE A MINIMUM OF 6 INCHES DEEP AND 24 INCHES WIDE.

###### D. FIBERGLASS CONNECTION PINS

- 1. FIBERGLASS CONNECTING PINS SHALL BE THERMOSET, ISOPHTHALIC, POLYESTER RESIN PULTRUDED, REINFORCEMENT RODS, 1/2" INCH IN DIAMETER.
- 2. PINS SHOULD HAVE A MINIMUM FLEXURAL STRENGTH OF 128,000 PSI AND SHORT BEAM SHEAR OF 6,400 PSI.
- 3. FOR SUBSTITUTE CONCRETE UNITS, USE OF OTHER COMPATIBLE CONNECTION SYSTEMS MAY BE ALLOWED WITH THE PRIOR APPROVAL OF GTA.

###### E. GEGRID

- 1. GEGRID SHALL BE MIRAGRID 3XT MANUFACTURED BY TENCATE GEOSYNTHETICS AMERICAS. EQUIVALENT MATERIALS MAY BE SUBSTITUTED WITH PRIOR APPROVAL OF GTA.
- 2. THE GEGRID SHALL HAVE A MINIMUM LONG TERM DESIGN STRENGTH (LTDS) OF 1,999 POUNDS PER FOOT. LTDS IS DEFINED AS THE ULTIMATE STRENGTH DIVIDED BY REDUCTION FACTORS FOR CREEP, DURABILITY, AND INSTALLATION DAMAGE.

###### F. GRAVEL FILL

- 1. GRAVEL FILL SHALL CONSIST OF CLEAN, 1 INCH MINUS CRUSHED STONE OR CRUSHED GRAVEL WITH 100 PERCENT PASSING THE 1-INCH SIEVE, 75 TO 100 PERCENT PASSING THE 3/4-INCH SIEVE, 0 TO 10 PERCENT PASSING THE NO. 4 SIEVE, AND 0 TO 5 PERCENT PASSING THE NO. 50 SIEVE.

###### G. REINFORCED BACKFILL

- 1. REINFORCED BACKFILL SOILS SHALL BE NON-PLASTIC SOIL MEETING THE REQUIREMENTS OF AASHTO A-2-4 OR MORE GRANULAR. IF ADEQUATE QUANTITIES ON-SITE, MATERIALS MEETING THESE REQUIREMENTS WILL NEED TO BE IMPORTED.
- 2. REINFORCED BACKFILL SHALL BE PLACED IN MAXIMUM 8-INCH LIFTS AND COMPACTED TO 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698.

###### H. CONTROLLED FILL

- 1. CONTROLLED FILLS TO BE PLACED OUTSIDE OF THE REINFORCED BACKFILL ZONE SHALL CONSIST OF ON-SITE OR BORROW SOILS MEETING THE REQUIREMENT OF AASHTO A-4 OR MORE GRANULAR.
- 2. CONTROLLED FILLS SHALL BE PLACED IN MAXIMUM 8-INCH LIFTS AND COMPACTED TO 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698, OR HIGHER IF REQUIRED BY THE GEOTECHNICAL REPORT.

###### I. LOW-PERMEABILITY SOIL

- 1. LOW-PERMEABILITY SOILS TO BE PLACED AT THE TOP OF THE WALL, WHERE SPECIFIED, SHALL CONSIST OF SANDY, SILTY OR CLAYEY SOILS MEETING THE UNIFIED SOILS CLASSIFICATION SYSTEM CRITERIA FOR ML, CL, SM, OR SC, WITH A MINIMUM OF 25% PASSING THE #200 SIEVE.

##### J. DRAINAGE PIPE

- 1. THE DRAINAGE PIPES SHALL BE PERFORATED OR SLOTTED PVC PIPE MANUFACTURED IN ACCORDANCE WITH ASTM D3034.

##### K. FILTER FABRIC

- 1. FILTER FABRIC SHALL BE NON-WOVEN, POLYPROPYLENE GEOTEXTILE MIRAFI 140N MANUFACTURED BY TENCATE GEOSYNTHETICS AMERICAS OR TERRATEX NO4.5 MANUFACTURED BY HANES GEO COMPONENTS. EQUIVALENT MATERIALS MAY BE SUBSTITUTED WITH PRIOR APPROVAL OF GTA.

##### L. DRAINAGE COMPOSITE

- 1. DRAINAGE COMPOSITE SHALL BE TENDRAN 750/2 GEOMPOSITE MANUFACTURED BY TENAX, MIRAFI 6100N MANUFACTURED BY TENCATE GEOSYNTHETICS AMERICAS, OR SITEDRAIN 183-B MANUFACTURED BY AMERICAN WICK DRAIN. EQUIVALENT MATERIALS MAY BE SUBSTITUTED WITH PRIOR APPROVAL OF GTA.

#### PART 3 - EXECUTION

##### 3.1 EXCAVATION

- A. THE CONTRACTOR SHALL EXCAVATE TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS. UNDER NO CIRCUMSTANCES SHALL THE EXCAVATION LINES AND GRADES BE EXCEEDED, EXCEPT WITH OWNER'S APPROVAL. THE CONTRACTOR SHALL PROTECT THE EXCAVATION FROM SLOUGHING BY PLACING A MEMBRANE OVER THE FACE OF THE EXCAVATION.
- B. PRIOR TO RETAINING WALL CONSTRUCTION AND THE PLACEMENT OF FILL, ALL TOPSOIL SHALL BE STRIPPED AND REMOVED FROM THE SITE.
- C. EXCAVATIONS SHALL BE SLOPED OR OTHERWISE SUPPORTED IN ACCORDANCE WITH OCCUPATION SAFETY AND HEALTH ADMINISTRATION (OSHA) AND OTHER STATE AND LOCAL REGULATIONS.
- D. DUE TO THE PROXIMITY OF THE PROPOSED RETAINING WALL ALIGNMENT TO THE ADJACENT PROPERTY, AND THE CUT SLOPE THAT WILL BE REQUIRED TO INSTALL THE GEORGRIDS TO THE REQUIRED LENGTHS, THE LIMIT OF DISTURBANCE (I.E. THE PROPERTY LINE) BEHIND THE WALL WILL BE IMPACTED BY THESE EXCAVATIONS. IF THESE IMPACTS TO THE ADJACENT PROPERTY LINE ARE NOT ACCEPTABLE, SHORING WILL BE REQUIRED TO STABILIZE THE CUT SLOPE BEHIND THE WALL. SHORING SHOULD BE PERFORMED BY THE CONTRACTOR ON A DESIGN-BUILD BASIS, AS REQUIRED.
- E. THE AVAILABLE EXPLORATION LOGS INDICATE THAT VERY DENSE, HIGHLY TO RELATIVELY UNWEATHERED ROCK WAS ENCOUNTERED ABOVE THE PROPOSED GRADES IN THE VICINITY OF THE RETAINING WALL. THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO IMPLEMENT ROCK EXCAVATION METHODS DURING THE CONSTRUCTION OF THE RETAINING WALL AND OTHER IMPROVEMENTS.

##### 3.2 FOUNDATION SUBGRADE PREPARATION

- A. FOUNDATION SOIL SHALL BE EXCAVATED AS REQUIRED FOR INSTALLATION OF THE LEVELING PAD, GEGRID, AND OTHER ELEMENTS AS SHOWN ON THE CONSTRUCTION DRAWINGS.
- B. FOUNDATION SOIL SHALL BE EXAMINED BY THE TESTING AGENCY TO ENSURE THAT THE ACTUAL FOUNDATION SOIL STRENGTH MEETS OR EXCEEDS ASSUMED DESIGN STRENGTH. SOILS NOT MEETING REQUIRED STRENGTH SHALL BE REMOVED AND REPLACED WITH CONTROLLED FILL, MEETING THE MATERIAL AND COMPACTION REQUIREMENTS STATED IN NOTE 2.2H.
- C. THE ALLOWABLE BEARING PRESSURE FOR NATURAL AND CONTROLLED FILL SOILS SHALL BE AS SPECIFIED IN PART 5.
- D. THE EXPOSED FOUNDATION SUBGRADE SHALL BE PROOFEED WITH A LOADED DUMP TRUCK. ANY SOFT OR UNSTABLE AREAS IDENTIFIED DURING THIS EVALUATION SHALL BE OVEREXCAVATED AND BACKFILLED WITH CONTROLLED FILL.
- E. ANY FILLS REQUIRED TO ESTABLISH SLOPING SURFACES IN FRONT OF THE WALLS SHALL CONSIST OF CONTROLLED FILL MEETING THE REQUIREMENTS STATED IN NOTE 2.2H AND SHALL BE TESTED BY THE TESTING AGENCY.

##### 3.3 LEVELING PAD

- A. THE LEVELING PAD SHALL BE PLACED AS SHOWN ON THE CONSTRUCTION DRAWINGS WITH A MINIMUM THICKNESS OF 6 INCHES.
- B. LEVELING PAD MATERIALS SHALL BE PLACED ON A SUBGRADE PREPARED AS DESCRIBED IN SECTION 3.2 AND APPROVED BY THE TESTING AGENCY.
- C. LEVELING PAD SHALL BE PREPARED TO ENSURE COMPLETE CONTACT OF RETAINING WALL UNIT WITH BASE. GAPS SHALL NOT BE ALLOWED.

##### 3.4 UNIT INSTALLATION

- A. FIRST COURSE OF CONCRETE UNITS SHALL BE PLACED ON THE LEVELING PAD. THE CONCRETE UNITS SHALL BE CHECKED FOR LEVEL AND ALIGNMENT. THE FIRST COURSE IS THE MOST IMPORTANT TO PROVIDE ACCURATE AND ACCEPTABLE RESULTS.
- B. ENSURE THAT CONCRETE UNITS ARE IN FULL CONTACT WITH THE LEVELING PAD.
- C. CONCRETE UNITS SHALL BE PLACED SIDE BY SIDE FOR FULL LENGTH OF WALL ALIGNMENT. ALIGNMENT MAY BE DONE BY MEANS OF A STRING LINE OR OFFSET FROM BASE LINE.
- D. INSTALL FIBERGLASS CONNECTING PINS.
- E. AT THE END OF EACH COURSE WHERE THE WALL CHANGES ELEVATION, UNITS SHALL BE TURNED INTO THE BACKFILL. UNITS SHOULD BE LAID AS TO CREATE THE MINIMUM RADIUS POSSIBLE. CONCRETE UNITS SHALL BE EMBEDDED BELOW FINAL BOTTOM-OF-WALL GRADES TO THE MINIMUM EMBEDMENT DEPTHS SHOWN ON THE WALL PROFILES. ONLY THE FRONT FACE OF THE UNITS SHOULD BE VISIBLE FROM THE SIDE OF THE WALL.
- F. LAY UP EACH COURSE OF CONCRETE UNITS. INSERT FIBERGLASS CONNECTING PIN INTO THE REAR SLOT OF THE LOWER CONCRETE UNIT AND INTO THE RECEIVING HOLE OF THE UPPER CONCRETE UNIT. REPEAT PROCEDURE TO THE EXTENT OF WALL HEIGHT.
- G. FILL CONCRETE UNIT VOIDS WITH GRAVEL FILL.
- H. CAP UNITS SHALL BE INSTALLED AND BONDED WITH CONSTRUCTION ADHESIVE OR EPOXY CEMENT AS REQUIRED BY MANUFACTURER.
- I. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE FOR THE BACK OF THE RETAINING WALL DURING CONSTRUCTION.

##### 3.5 GEGRID INSTALLATION

- A. ALL UTILITIES IN THE VICINITY OF ANY RETAINING WALL OR GEGRID SHALL BE INSTALLED AND PROPERLY BACKFILLED PRIOR TO PLACING THE GEGRID OR CONSTRUCTION OF THE WALL.
- B. THE GEGRID SHALL BE LAID HORIZONTALLY ON COMPACTED REINFORCED BACKFILL, CONNECTED TO THE CONCRETE UNITS. HOOK GEGRID OVER THE FIBERGLASS CONNECTING PIN, PULL TAUT, AND ANCHOR BEFORE REINFORCED BACKFILL IS PLACED ON THE GEGRID.
- C. SLACK IN THE GEGRID AT THE WALL UNIT CONNECTIONS SHALL BE REMOVED IN A MANNER, AND TO SUCH A DEGREE, AS APPROVED BY THE TESTING AGENCY.
- D. GEGRID SHALL BE LAID AT THE PROPER ELEVATION AND ORIENTATION AS SHOWN ON THE CONSTRUCTION DRAWINGS OR AS DIRECTED BY THE TESTING AGENCY.
- E. ADDITIONAL GEGRID IS REQUIRED IN WALL CURVES OR BENDS AS SHOWN ON THE TYPICAL DETAILS.
- F. CORRECT ORIENTATION (ROLL DIRECTION) OF THE GEGRID SHALL BE VERIFIED BY THE CONTRACTOR.
- G. GEGRID SHALL BE SECURED IN PLACE WITH STAPLES, PINS, SAND BAGS, OR BACKFILL AS REQUIRED BY FILL PROPERTIES, FILL PLACEMENT PROCEDURES, OR WEATHER CONDITIONS, OR AS DIRECTED BY THE TESTING AGENCY.
- H. OVERLAPS:
  - 1. UNIAXIAL GEGRID DOES NOT NEED TO BE OVERLAPPED IN THE ACROSS THE ROLL DIRECTION, EXCEPT TO CONTAIN THE FILL AT THE SLOPE FACE WHEN WRAP-AROUND FACING IS USED. UNIAXIAL GRID SHOULD BE OVERLAPPED 48" IN THE ROLLED DIRECTION.
  - 2. LAYER OF SOIL A MINIMUM OF 4 INCHES IN THICKNESS SHOULD BE SPREAD BETWEEN UNIAXIAL GEGRID LAYERS IN THE AREA TO BE OVERLAPPED, OR AS DIRECTED.

##### 3.6 FILL PLACEMENT

- A. REINFORCED BACKFILL AND CONTROLLED FILL SHALL BE PLACED AND COMPACTED AS DESCRIBED IN SECTION 2.2 AND IN ACCORDANCE WITH APPLICABLE COUNTY REQUIREMENTS.
- B. REINFORCED BACKFILL SHALL BE PLACED, SPREAD, AND COMPACTED IN SUCH A MANNER THAT MINIMIZES THE DEVELOPMENT OF WRINKLES IN AND/OR MOVEMENT OF THE GEGRID.
- C. ONLY HAND-OPERATED COMPACTION EQUIPMENT SHALL BE ALLOWED WITHIN 4 FEET OF THE WALL FACE.
- D. REINFORCED BACKFILL SHALL BE PLACED FROM THE WALL OUTWARD TO ENSURE THAT THE GEGRID REMAINS TAUT.
- E. TRACKED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED BEHIND OR ABOVE THE WALL.
- F. RUBBER-TIRED EQUIPMENT MAY PASS OVER THE GEGRID REINFORCEMENT AT SLOW SPEEDS, LESS THAN 10 MPH. SUDDEN BRAKING AND SHARP TURNING SHALL BE AVOIDED.
- G. PLACE FILTER FABRIC BETWEEN THE GRAVEL FILL AND THE REINFORCED BACKFILL AS SHOWN ON PLANS. THE FILTER FABRIC SHALL BE EMBEDDED A MINIMUM OF TWO FEET INTO THE REINFORCED FILL.

##### 3.7 DRAINAGE

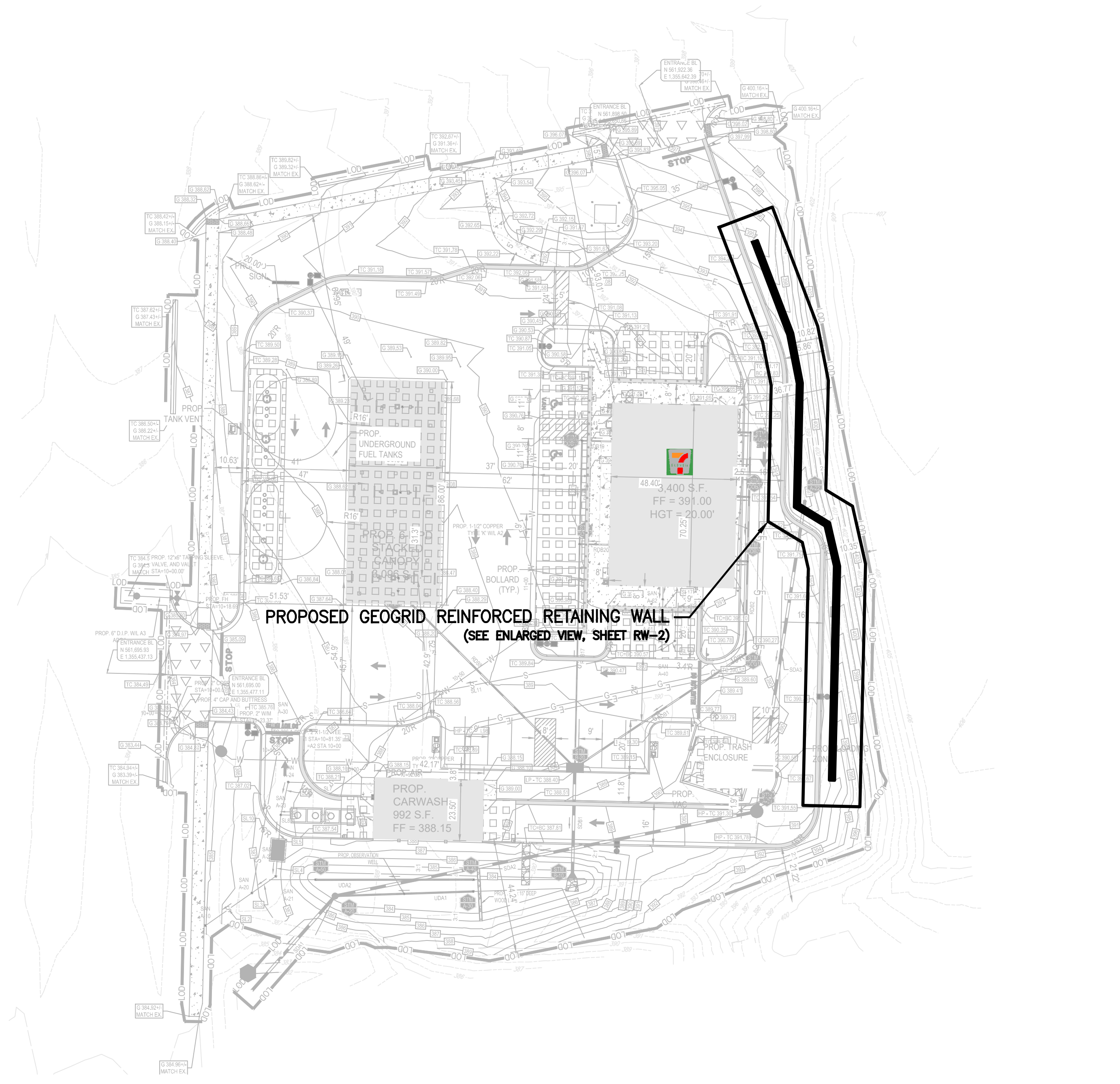
- A. GRAVEL FILL SHALL BE PLACED BEHIND THE CONCRETE UNITS TO THE LIMITS SHOWN. THE GRAVEL FILL SHALL EXTEND MINIMUM 12 INCHES BEHIND THE BACK OF THE CONCRETE UNITS. INCREASED GRAVEL FILL THICKNESS IS REQUIRED IN CURVES AND CORNERS AS SHOWN ON THE TYPICAL DETAILS.
- B. PLACE FILTER FABRIC BEHIND THE GRAVEL FILL AS DESCRIBED IN SECTION 3.6.
- C. POSITIVE DRAINAGE SHALL BE MAINTAINED DURING AND AFTER CONSTRUCTION. REINFORCED BACKFILL THAT BECOME WET DURING CONSTRUCTION SHALL BE DRIED AND RECOMPACTED, OR REMOVED AND REPLACED WITH NEW REINFORCED BACKFILL.
- D. INSTALL THE PERFORATED DRAINAGE PIPES AND LATERAL DRAINAGE PIPES INCREMENTALLY ALONG WITH THE INSTALLATION OF CONCRETE UNITS AND PLACEMENT OF REINFORCED BACKFILL.
- E. INSTALL THE DRAINAGE GEOMPOSITE AT THE BACK OF THE REINFORCED BACKFILL ZONE AS SHOWN ON THE TYPICAL SECTION. DRAINAGE GEOMPOSITE AND LATERAL DRAINAGE PIPES SHALL BE ORIENTED TO PROVIDE DRAINAGE THROUGH THE FRONT OF THE WALL.

#### PART 4 - CONSTRUCTION OBSERVATION AND TESTING

- A. THE RETAINING WALLS SHALL ONLY BE CONSTRUCTED UNDER THE OBSERVATION OF GTA TO CONFIRM THAT THE SOILS AND MATERIALS USED DURING CONSTRUCTION MEET THE REQUIREMENTS SPECIFIED HEREIN. IF GTA IS NOT CONTRACTED TO PROVIDE CONSTRUCTION OBSERVATION AND TESTING SERVICES DURING WALL CONSTRUCTION, GTA IS RELIEVED OF ALL RESPONSIBILITY FOR THE PERFORMANCE OF THE WALLS.
- B. THE REQUIRED BEARING PRESSURE BENEATH THE FOOTING OF THE WALL SHALL BE VERIFIED IN THE FIELD BY A CERTIFIED SOILS TECHNICIAN. TESTING DOCUMENTATION MUST BE PROVIDED TO GTA PRIOR TO THE START OF WALL CONSTRUCTION. THE REQUIRED TEST PROCEDURE SHALL BE THE DYNAMIC CONE PENETROMETER (DCP) TEST ASTM STP399.
- C. THE SUITABILITY OF FILL MATERIAL SHALL BE CONFIRMED BY THE ON-SITE TESTING AGENCY REPRESENTATIVE.

#### PART 5 - DESIGN CRITERIA

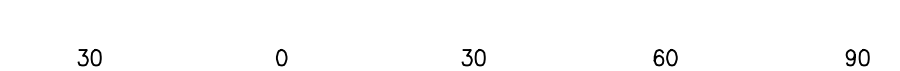
- A. REQUIRED MINIMUM ALLOWABLE FOUNDATION BEARING PRESSURE IS 2,500 PSF.
- B. REINFORCED SOIL INTERNAL FRICTION ANGLE = 30 DEGREES AND COHESION = 0 PSF.
- C. REINFORCED SOIL MOIST UNIT WEIGHT = 120 PCF.
- D. FOUNDATION SOIL INTERNAL FRICTION ANGLE = 34 DEGREES AND COHESION = 0 PSF.
- E. FOUNDATION SOIL MOIST UNIT WEIGHT = 120 PCF.
- F. RETAINED SOIL INTERNAL FRICTION ANGLE = 30 DEGREES AND COHESION = 0 PSF.
- G. RETAINED SOIL MOIST UNIT WEIGHT = 120 PCF.
- H. RETAINING WALLS ARE NOT DESIGNED TO RESIST HYDROSTATIC PRESSURE.



### RETAINING WALL LOCATION PLAN

SCALE: 1" = 30'

BASE IMAGE WAS ADAPTED FROM THE ELECTRONIC VERSION OF THE UNLITLED, UNDATED SITE PLAN, PREPARED BY BOHLER ENGINEERING, AND ELECTRONICALLY PROVIDED TO GTA ON OCTOBER 18, 2022.



SCALE 1" = 30'



**RW-1**

OWNER: CROSSROADS WEST, LLC. 2410 EVERGREEN ROAD, STE. 104 GAMBRILLS, MD 21054 CONTACT: WILLIAM STEFFEY PHONE: 443-332-6383	DEVELOPER: CROSSROADS WEST, LLC. 2568A RIVA ROAD, STE. 300 ANNAPOLIS, MD 21401 CONTACT: WILLIAM STEFFEY PHONE: 443-332-6383	  	<b>GEO-TECHNOLOGY ASSOCIATES, INC.</b> GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS 14280 PARK CENTER DRIVE, SUITE A LAUREL, MARYLAND 20707 (410) 792-9446 or (301) 470-4470 WWW.GTAENG.COM  ©GEO-TECHNOLOGY ASSOCIATES, INC.																								
TAX MAP: 36	GRID: 10		ZONED: NT	STEPHENS FOREST 7-ELEVEN RETAINING WALL  LOCATION PLAN AND GENERAL NOTES  HOWARD COUNTY, MARYLAND																							
SUBDIVISION NAME: VILLAGE OF OAKLAND MILLS VILLAGE CENTER SECTION 2, AREA 2 DEED # 13685/00223		MD 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. 29184, EXPIRATION DATE: 06/16/2025.	<table border="1"> <thead> <tr> <th>DATE</th> <th>REVISIONS</th> <th>JOB NO.:</th> </tr> </thead> <tbody> <tr> <td>10/21/2022</td> <td>UPDATED SITE PLAN</td> <td>31221395</td> </tr> <tr> <td>01/17/2023</td> <td>REVISED TO SHOW CONCEPTUAL SHORING</td> <td>SCALE: AS SHOWN</td> </tr> <tr> <td>12/14/2023</td> <td>UPDATED TITLE BLOCK</td> <td>DATE: 10/13/2022</td> </tr> <tr> <td></td> <td></td> <td>DRAWN BY: CAAF</td> </tr> <tr> <td></td> <td></td> <td>DESIGN BY: ADM</td> </tr> <tr> <td></td> <td></td> <td>REVIEW BY: BTD</td> </tr> <tr> <td></td> <td></td> <td>SHEET: 30 OF 37</td> </tr> </tbody> </table>	DATE	REVISIONS	JOB NO.:	10/21/2022	UPDATED SITE PLAN	31221395	01/17/2023	REVISED TO SHOW CONCEPTUAL SHORING	SCALE: AS SHOWN	12/14/2023	UPDATED TITLE BLOCK	DATE: 10/13/2022			DRAWN BY: CAAF			DESIGN BY: ADM			REVIEW BY: BTD			SHEET: 30 OF 37
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		SHEET: 30 OF 37																									

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

DocuSigned by:  
*CHAD Edmondson*  
2/21/2024

CHEIF, DEVELOPMENT ENGINEERING DIVISION DATE

DocuSigned by:  
*2/21/2024*  
2/21/2024

CHEIF, DIVISION OF LAND DEVELOPMENT DATE

DocuSigned by:  
*Lynnda Eisenberg*  
2/27/2024

DIRECTOR, DEPARTMENT OF PLANNING AND ZONNING DATE

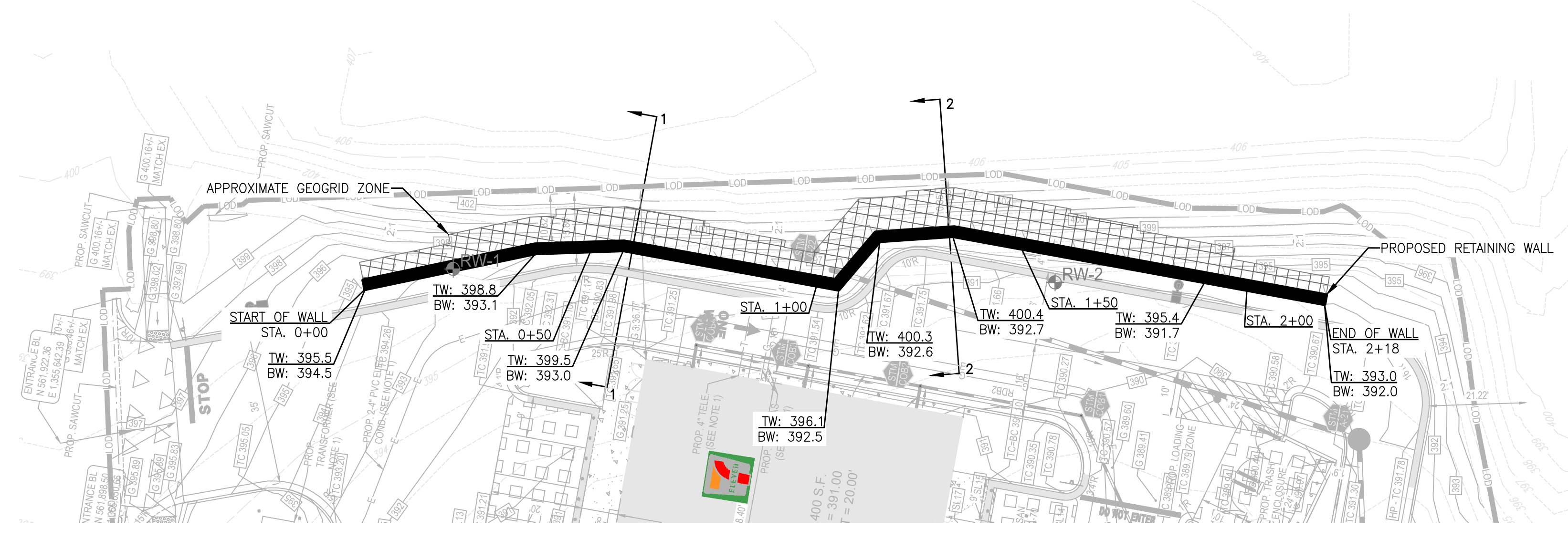
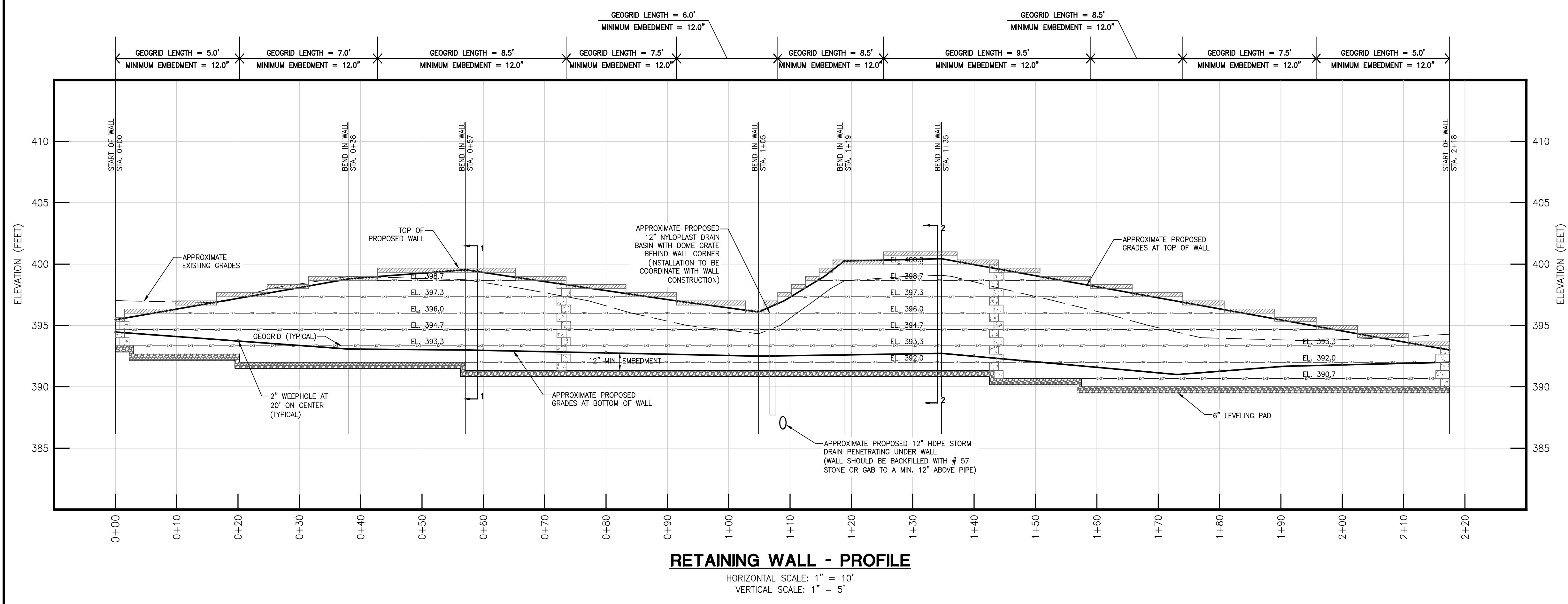
APPROVED  
PLANNING BOARD OF HOWARD COUNTY

August 11, 2023

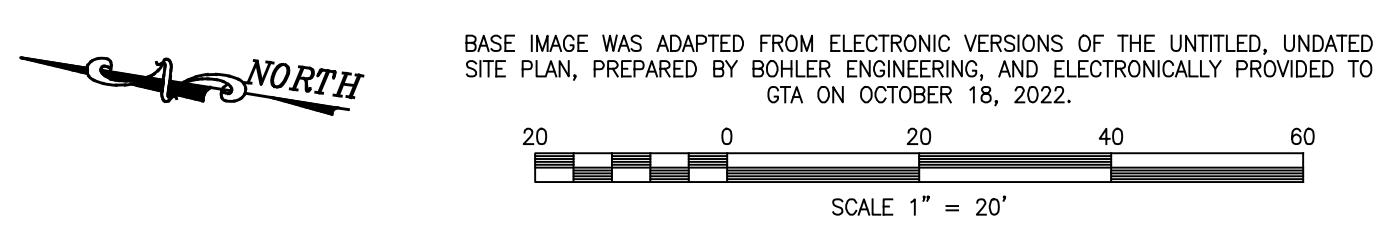
DATE: \_\_\_\_\_

**FILE NO. SDP-22-027**





RETAINING WALL PLAN VIEW



**LEGEND**  
 RW-1 IDENTIFICATION AND APPROXIMATE LOCATION OF STANDARD PENETRATION TEST (SPT) BORING, PERFORMED BY ECS MID-ATLANTIC, LLC IN APRIL OF 2021.  
**NOTES**  
 1. BORING LOCATIONS WERE REFERENCED FROM THE GEOTECHNICAL ENGINEERING REPORT, DATED JUNE 21, 2021, PREPARED BY ECS MID-ATLANTIC, LLC.

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

DocuSigned by: *Chad Edmondson* 2/21/2024  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

DocuSigned by: *Lynda Eschberg* 2/21/2024  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE


DocuSigned by: *Lynda Eschberg* 2/27/2024  
 DIRECTOR, DEPARTMENT OF PLANNING AND ZONING DATE

**APPROVED**  
 PLANNING BOARD OF HOWARD COUNTY

DATE: August 11, 2023


OWNER: CROSSROADS WEST, LLC. 2410 EVERGREEN ROAD, STE. 104 GAMBRILLS, MD 21054 CONTACT: WILLIAM STEFFEY PHONE: 443-332-6383	DEVELOPER: CROSSROADS WEST, LLC. 2568A RIVA ROAD, STE. 300 ANNAPOLIS, MD 21401 CONTACT: WILLIAM STEFFEY PHONE: 443-332-6383
TAX MAP: 36	GRID: 10 ZONED: NT PARCEL: 300 LOT: 8
6TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND	
SUBDIVISION NAME: VILLAGE OF OAKLAND MILLS VILLAGE CENTER SECTION 2, AREA 2 DEED # 13685/00223	
PREVIOUS FILE No.: FDP-50-A-1, SDP-07-087, SPD-70-011, SDP-73-118 ECP-22-011, P.B. 15, F. 82, WP-23-088	
<b>FILE NO. SDP-22-027</b>	

RW-2



**GEO-TECHNOLOGY ASSOCIATES, INC.**  
 GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS  
 14280 PARK CENTER DRIVE, SUITE A  
 LAUREL, MARYLAND 20707  
 (410) 792-9446 or (301) 470-4470  
 WWW.GTAENG.COM

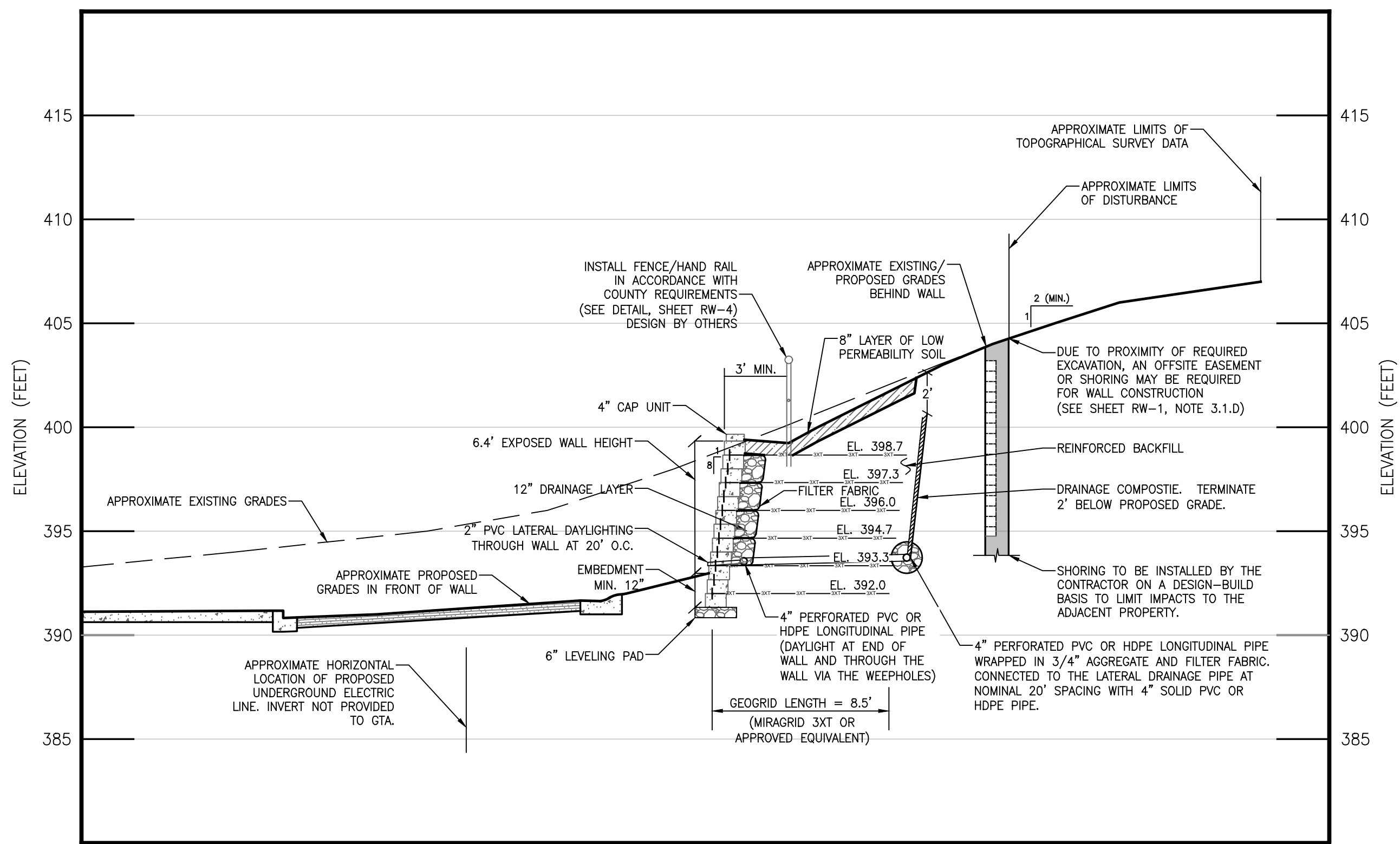
©GEO-TECHNOLOGY ASSOCIATES, INC.



WILLIAM STEFFEY  
 PROFESSIONAL ENGINEER  
 LICENSE NO. 29184  
 EXPIRATION DATE: 06/16/2025

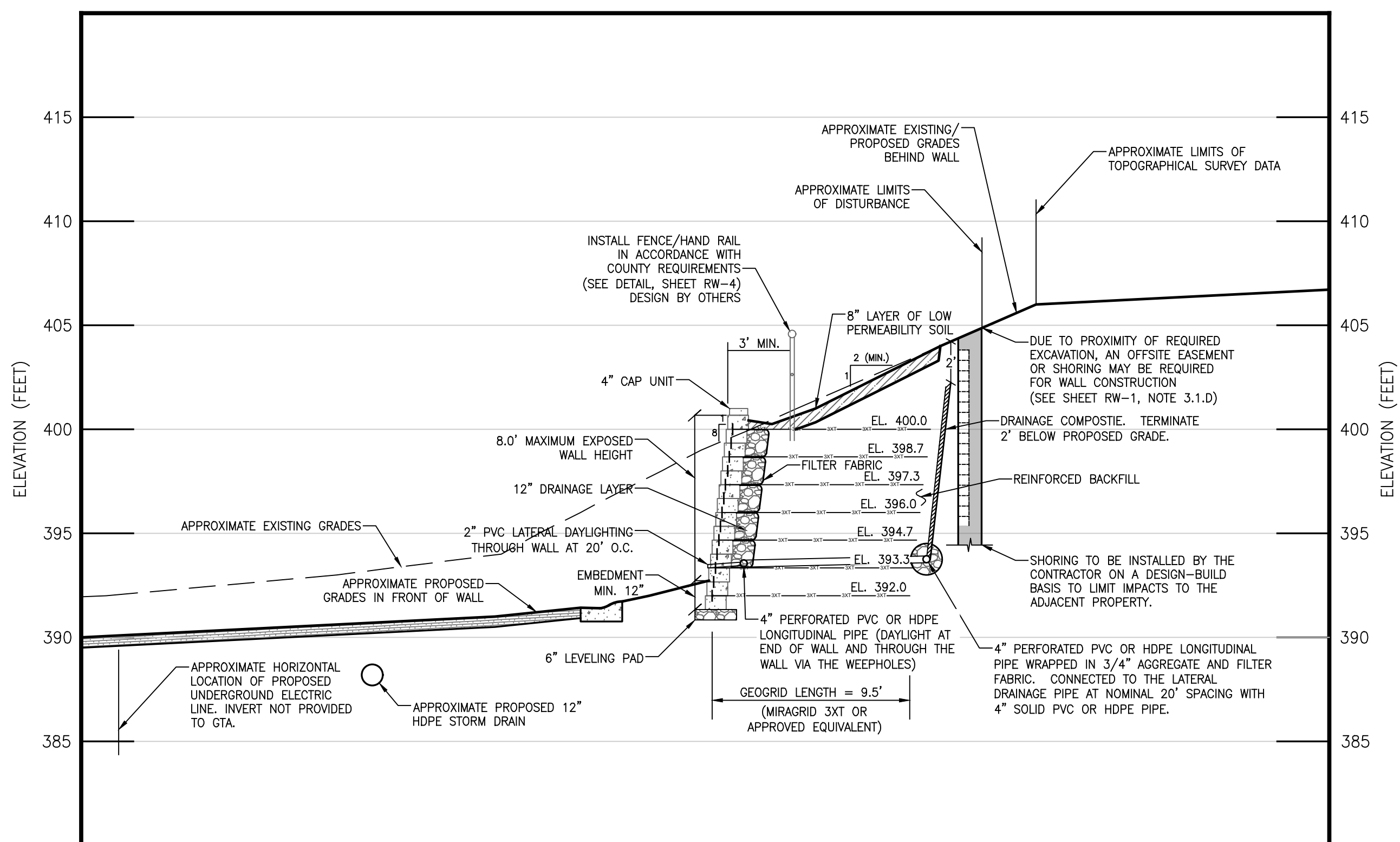
STEVEN'S FOREST 7-ELEVEN RETAINING WALL		
PLAN VIEW AND PROFILE		
HOWARD COUNTY, MARYLAND		
DATE	REVISIONS	JOB NO.: 31221395
10/21/2022	UPDATED SITE PLAN, REVISED GRADING	SCALE: AS SHOWN
01/17/2023	REVISED TO SHOW CONCEPTUAL SHORING	DATE: 10/13/2022
12/14/2023	UPDATED TITLE BLOCK	DRAWN BY: CAAF
		DESIGN BY: ADM
		REVIEW BY: BTD
		SHEET: 31 OF 37





**RETAINING WALL - SECTION 1 (APPROXIMATE STATION 0+59)**

SCALE: 1" = 5'



**RETAINING WALL - SECTION 2 (APPROXIMATE STATION 1+34)**

SCALE: 1" = 5'

CLIENT: Reliable Real Estate Services, LLC		PROJECT NO.: 02-9489	BORING NO.: RW-1	SHEET: 1 of 1				
PROJECT NAME: 7 Eleven - Stevens Forest Road		DRILLER/CONTRACTOR: D And S Drilling, Inc.						
SITE LOCATION: 5901 Stevens Forest Road, Columbia, Maryland 21045								
NORTHING: 561813.7	EASTING: 13355693.4	STATION:	SURFACE ELEVATION: 399	BOTTOM OF CASING:				
DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE SIZE (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/5'
0-1	SS	18	18		Topsoil Thickness[4"] (SM) SILTY SAND, light brown, moist, medium dense to dense	4-7.6 (13)		
1-2	SS	18	18		(SM) SILTY SAND, light brown, moist, medium dense	11-14.17 (13)		
2-3	SS	18	18			10-12.13 (25)		
3-4	SS	3	3			50/3" (50/3")		
4-5	SS	5	5		(WR) WEATHERED ROCK SAMPLED AS SILTY SAND, tan, moist, very dense [Weathered]	50/3" (50/3")		
5-6	SS	5	5		(WR) WEATHERED ROCK SAMPLED AS SILTY SAND, white, moist, very dense [Weathered]	50/3" (50/3")		
AUGER AND SPT REFUSAL AT 13.9 FT								

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.			
▽ WL (First Encountered)	DRY	BORING STARTED: Apr 29 2021	CAVE IN DEPTH: 9.3
▼ WL (Completion)	DRY	BORING COMPLETED: Apr 29 2021	HAMMER TYPE: Auto
▾ WL (Seasonal High Water)		EQUIPMENT: GIC	LOGGED BY: GIC
⊠ WL (Stabilized)	DRY	ATV	DRILLING METHOD: HSA

**GEOTECHNICAL BOREHOLE LOG**

CLIENT: Reliable Real Estate Services, LLC		PROJECT NO.: 02-9489	BORING NO.: RW-2	SHEET: 1 of 1				
PROJECT NAME: 7 Eleven - Stevens Forest Road		DRILLER/CONTRACTOR: D And S Drilling, Inc.						
SITE LOCATION: 5901 Stevens Forest Road, Columbia, Maryland 21045								
NORTHING: 561713.5	EASTING: 13355711.1	STATION:	SURFACE ELEVATION: 402	BOTTOM OF CASING:				
DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE SIZE (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/5'
0-1	SS	5	5		Asphalt Thickness[2"] Gravel Thickness[5"] (WR) WEATHERED ROCK SAMPLED AS SILTY SAND, gray, moist, very dense [Weathered ROCK]	50/3" (50/3")		
1-2	SS	1	1		AUGER AND SPT REFUSAL AT 3.5 FT	50/3" (50/3")		
2-3	SS					50/3" (50/3")		

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.			
▽ WL (First Encountered)	DRY	BORING STARTED: Apr 29 2021	CAVE IN DEPTH: 1.8
▼ WL (Completion)	DRY	BORING COMPLETED: Apr 29 2021	HAMMER TYPE: Auto
▾ WL (Seasonal High Water)		EQUIPMENT: GIC	LOGGED BY: GIC
⊠ WL (Stabilized)	DRY	ATV	DRILLING METHOD: HSA

**GEOTECHNICAL BOREHOLE LOG**

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

DocuSigned by: *CHAD Edmondson* 2/21/2024  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

DocuSigned by: *[Signature]* 2/21/2024  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DocuSigned by: *Lynnda Eisenberg* 2/27/2024  
 DIRECTOR, DEPARTMENT OF PLANNING AND ZONING DATE

**APPROVED  
PLANNING BOARD OF HOWARD COUNTY**

August 11, 2023  
 DATE: \_\_\_\_\_

OWNER: CROSSROADS WEST, LLC.  
 2410 EVERGREEN ROAD, STE. 104  
 GAMBRIILLS, MD 21054  
 CONTACT: WILLIAM STEFFEY  
 PHONE: 443-332-6383

DEVELOPER: CROSSROADS WEST, LLC.  
 2568A RIVA ROAD, STE. 300  
 ANNAPOLIS, MD 21401  
 CONTACT: WILLIAM STEFFEY  
 PHONE: 443-332-6383

TAX MAP: 36 GRID: 10 ZONED: NT  
 PARCEL: 300 LOT: 8  
 6TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SUBDIVISION NAME: VILLAGE OF OAKLAND MILLS VILLAGE CENTER  
 SECTION 2, AREA 2  
 DEED # 13685/00223

PREVIOUS FILE No.: FDP-50-A-1, SDP-07-087, SPD-70-011, SDP-73-118  
 ECP-22-011, P.B. 15, F. 82, WP-23-088

**FILE NO. SDP-22-027**

**RW-3**

**GEO-TECHNOLOGY ASSOCIATES, INC.**  
 GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS  
 14280 PARK CENTER DRIVE, SUITE A  
 LAUREL, MARYLAND 20707  
 (410) 782-9446 or (301) 470-4470  
 WWW.GTAEANG.COM

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**STEVENS FOREST 7-ELEVEN  
RETAINING WALL**

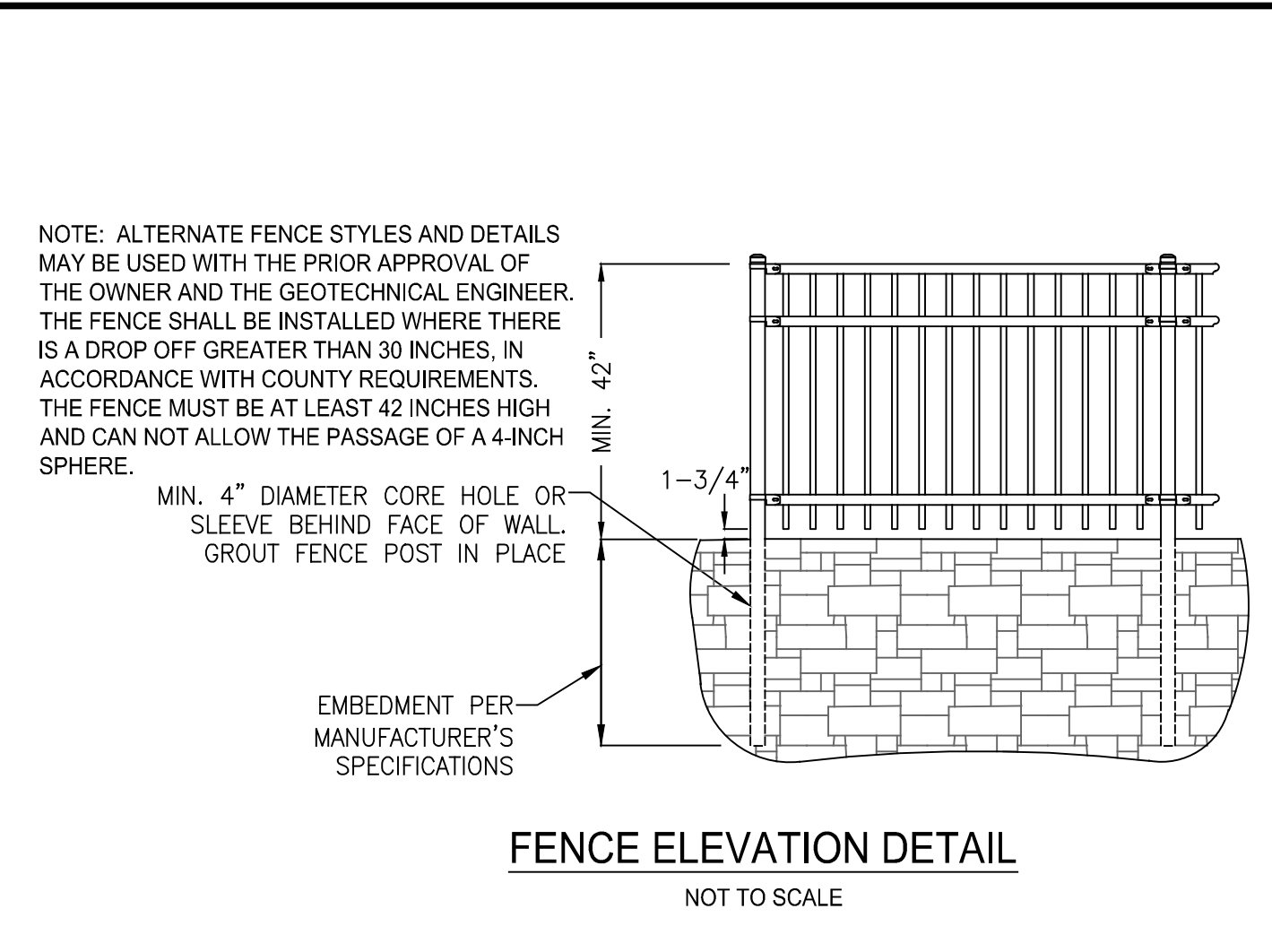
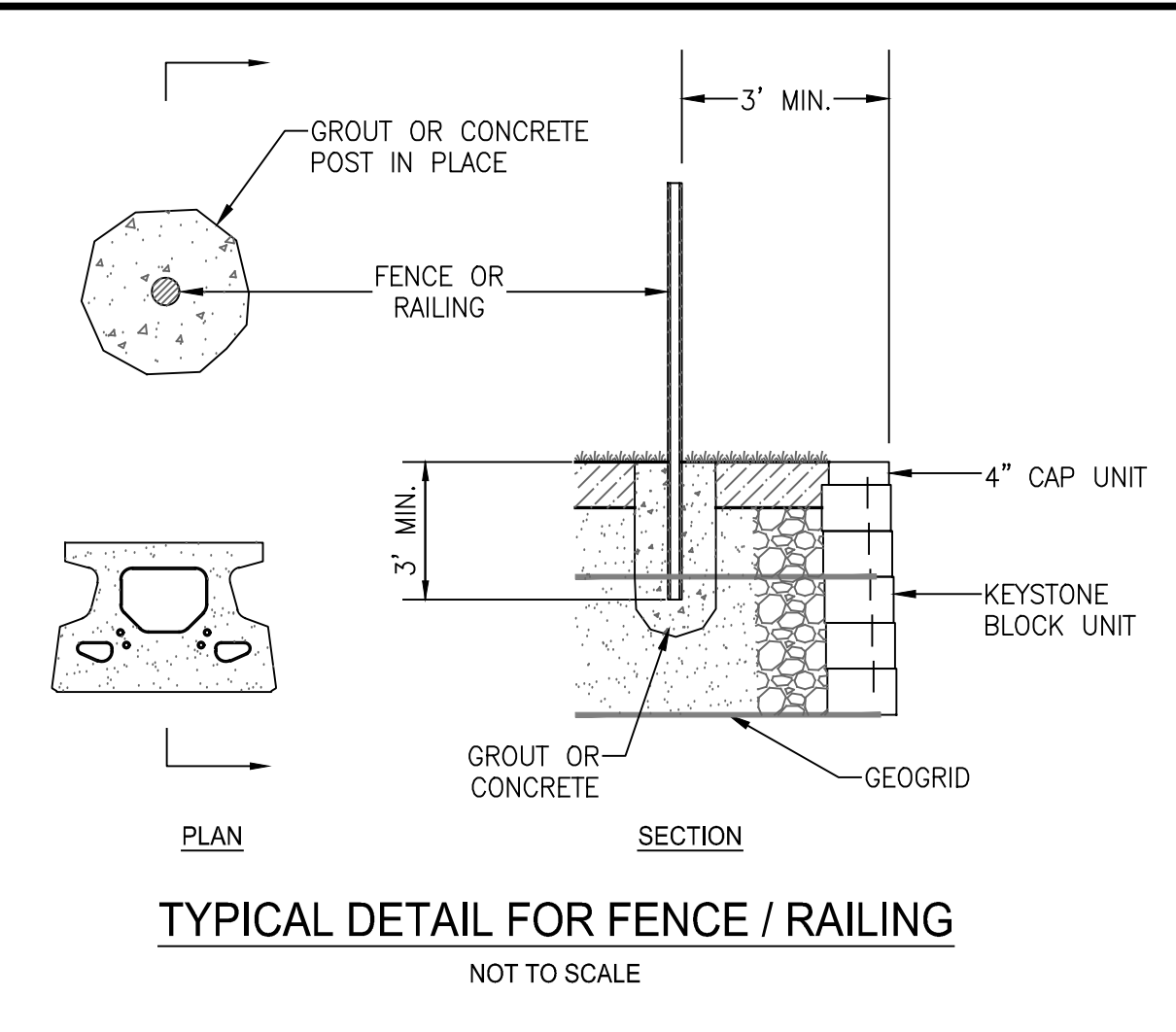
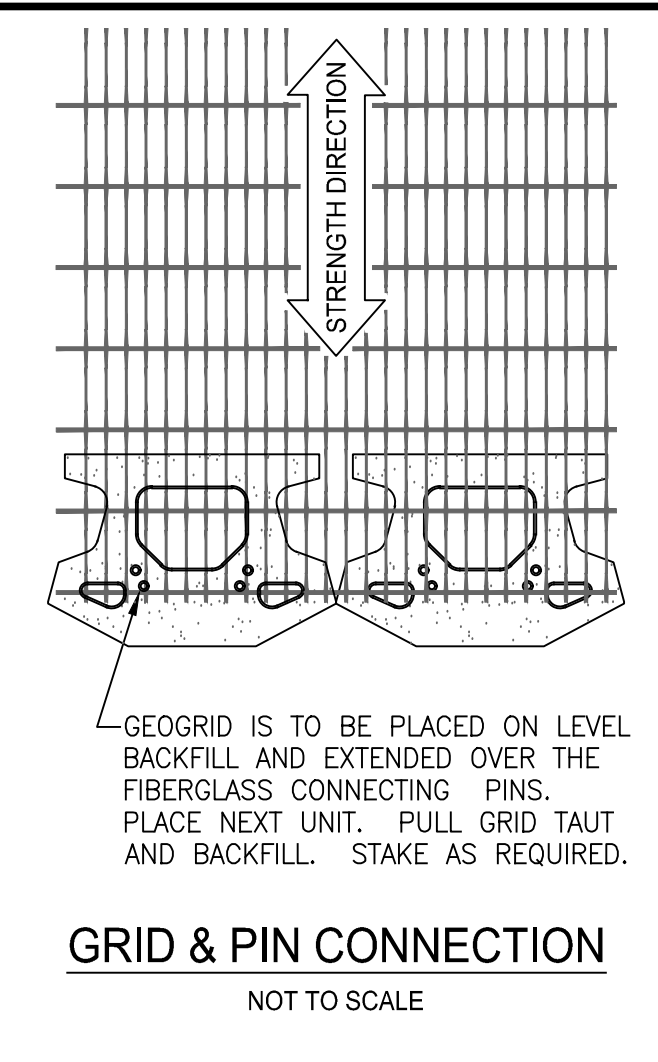
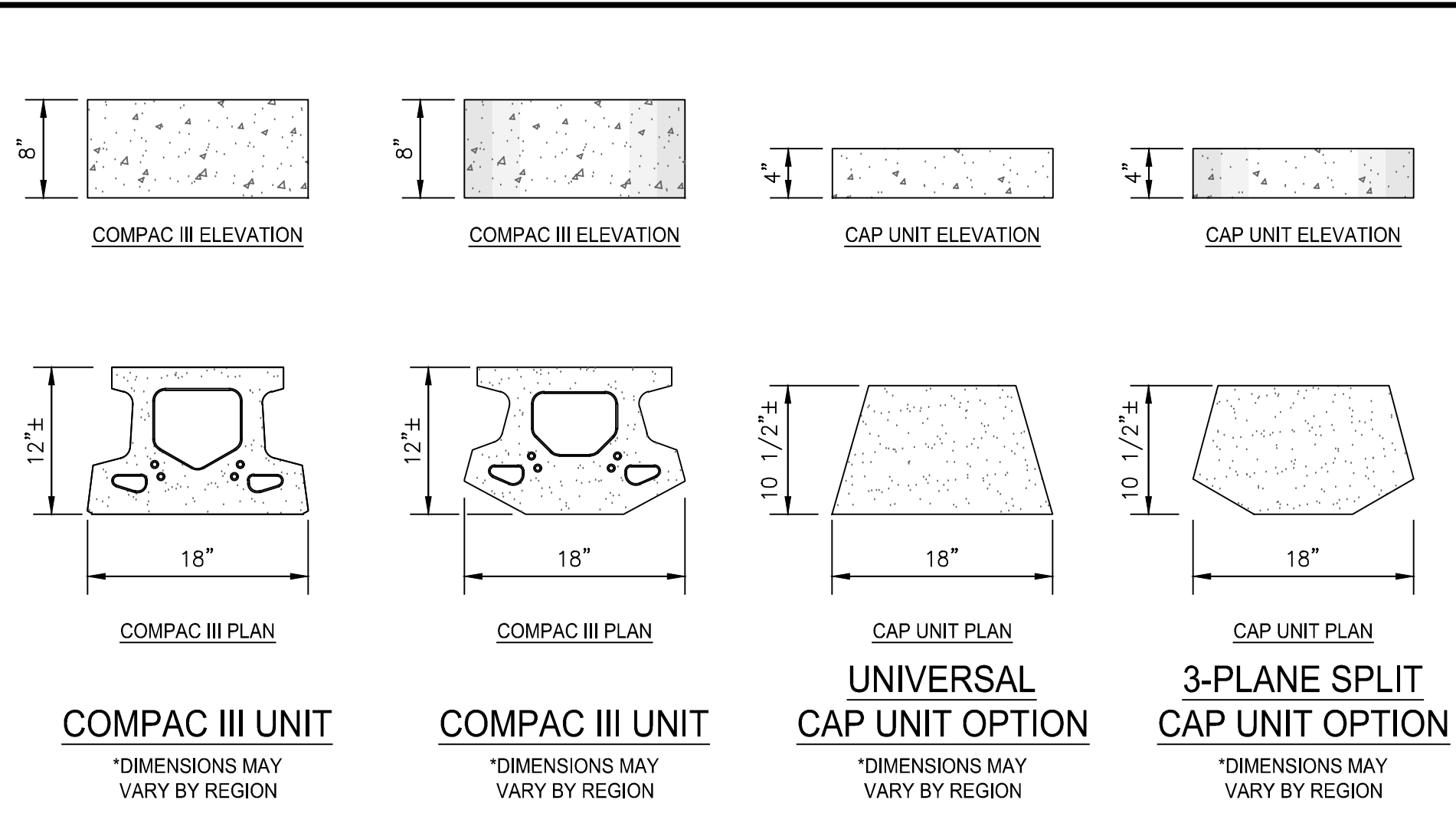
TYPICAL SECTIONS AND BORING LOGS

HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.: 31221395
10/21/2022	REVISED GRADING AND GRID LENGTHS	SCALE: AS SHOWN
01/17/2023	REVISED TO SHOW CONCEPTUAL SHORING	DATE: 10/13/2022
12/14/2023	UPDATED TITLE BLOCK	DRAWN BY: CAAF
		DESIGN BY: ADM
		REVIEW BY: BITD
		SHEET: 32 OF 37

MD 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. 29184, EXPIRATION DATE: 06/16/2025.



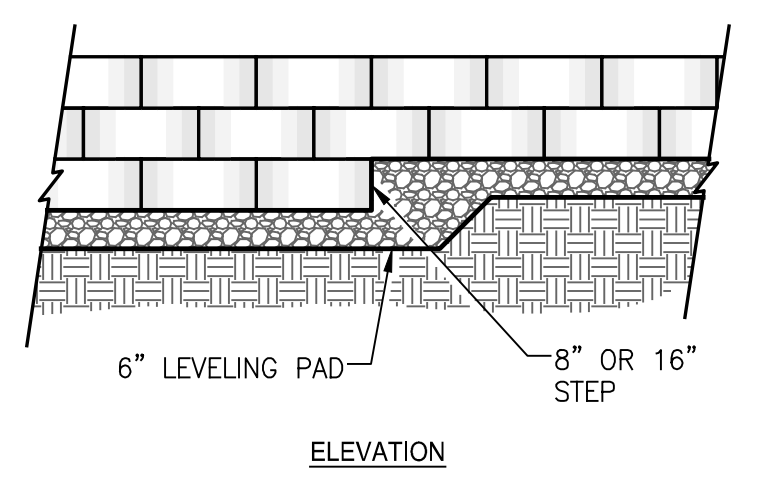
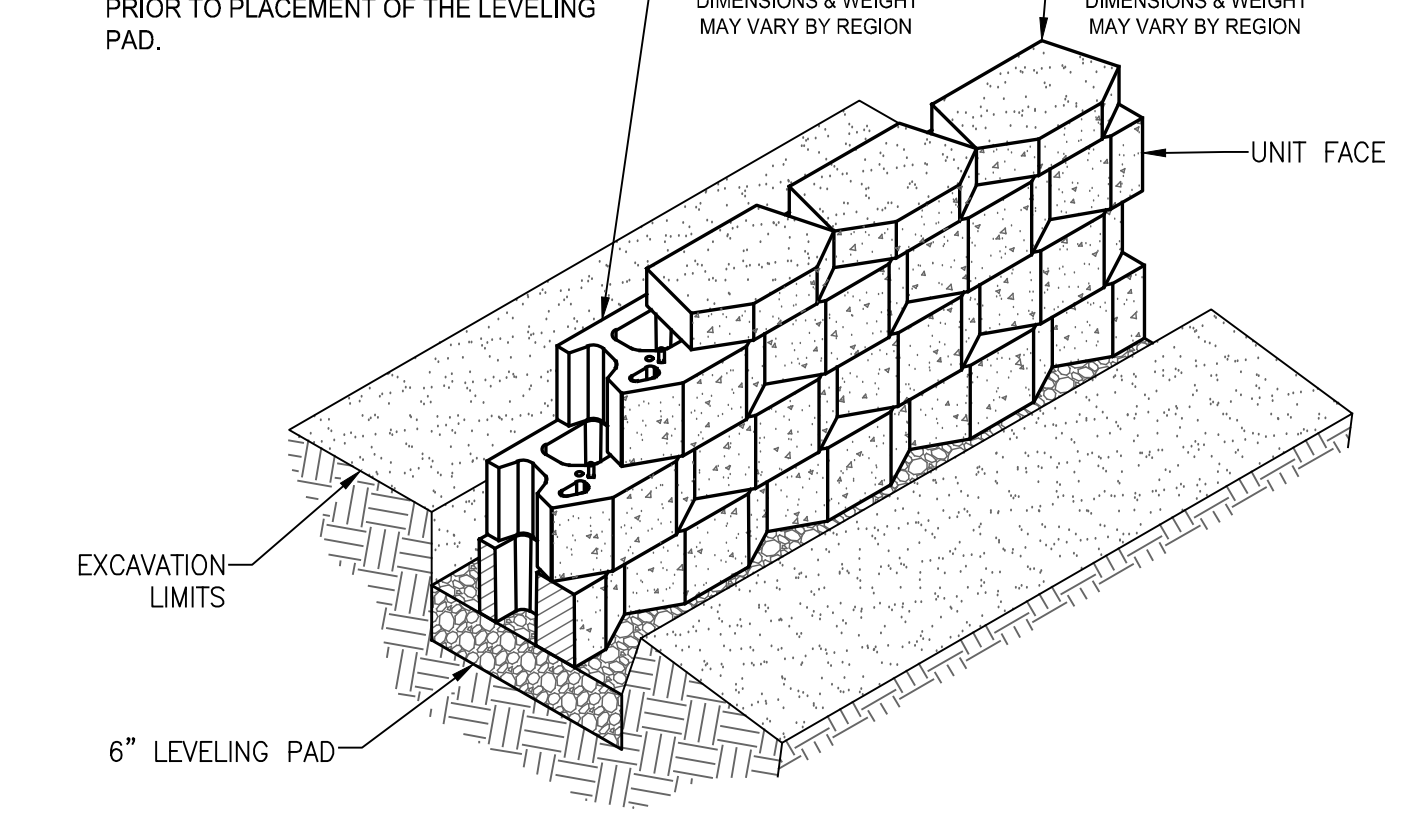


**BASE LEVELING PAD NOTES:**

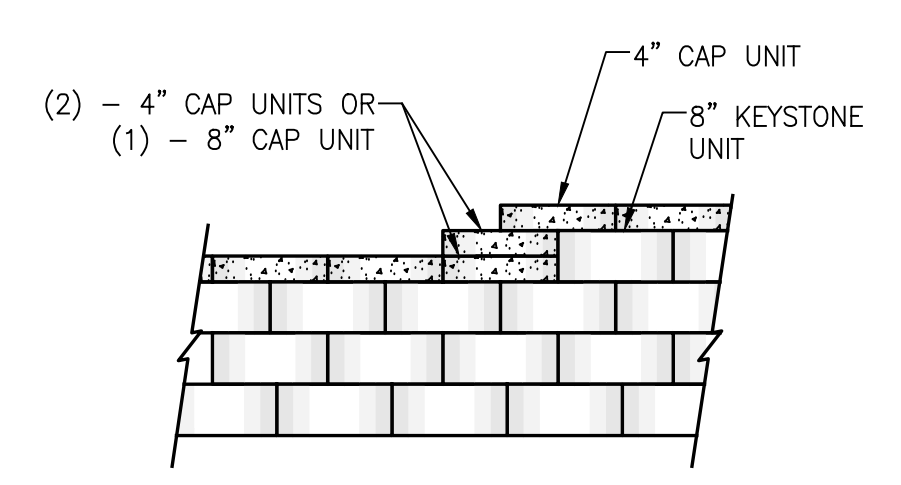
1. THE LEVELING PAD IS TO BE CONSTRUCTED USING THE MATERIALS AND METHODS SPECIFIED ON THESE PLANS.
2. THE BASE FOUNDATION IS TO BE APPROVED BY THE SITE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF THE LEVELING PAD.

COMPAC III UNIT	CAP UNIT
WIDTH: 18"	WIDTH: 18"
DEPTH: 12"	DEPTH: 10 1/2"
HEIGHT: 8"	HEIGHT: 4"
WEIGHT: 71 lbs	WEIGHT: 45 lbs

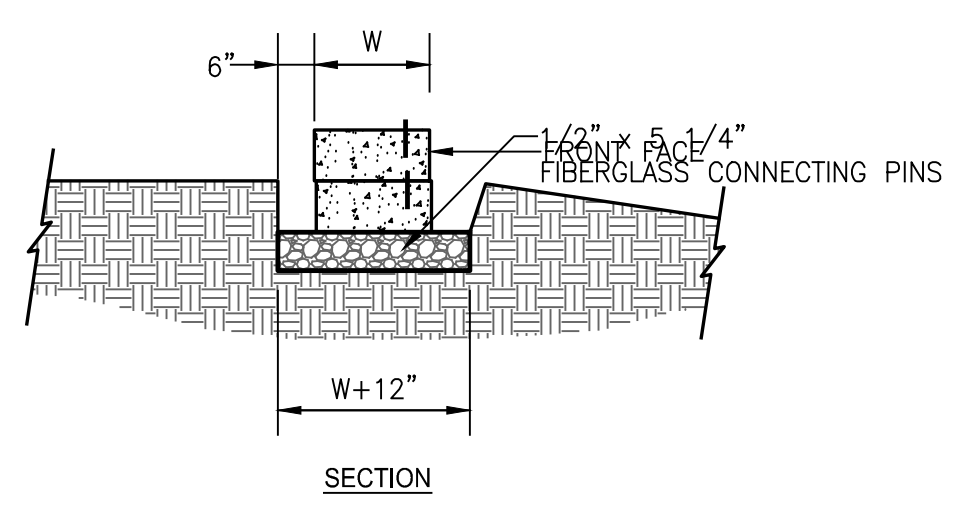
\*DIMENSIONS & WEIGHT MAY VARY BY REGION



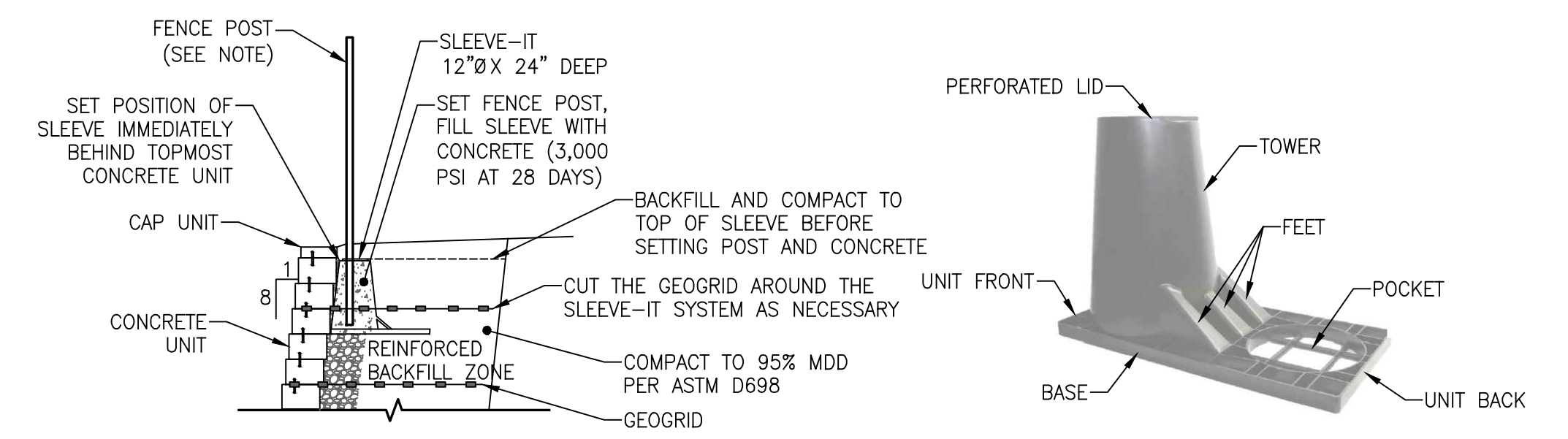
NOTE:  
1. THE LEVELING PAD IS TO BE CONSTRUCTED USING THE MATERIALS AND METHODS SPECIFIED ON THESE PLANS.



NOTE:  
1. SECURE ALL CAP UNITS WITH KEYSTONE KAPSEAL OR EQUIVALENT.

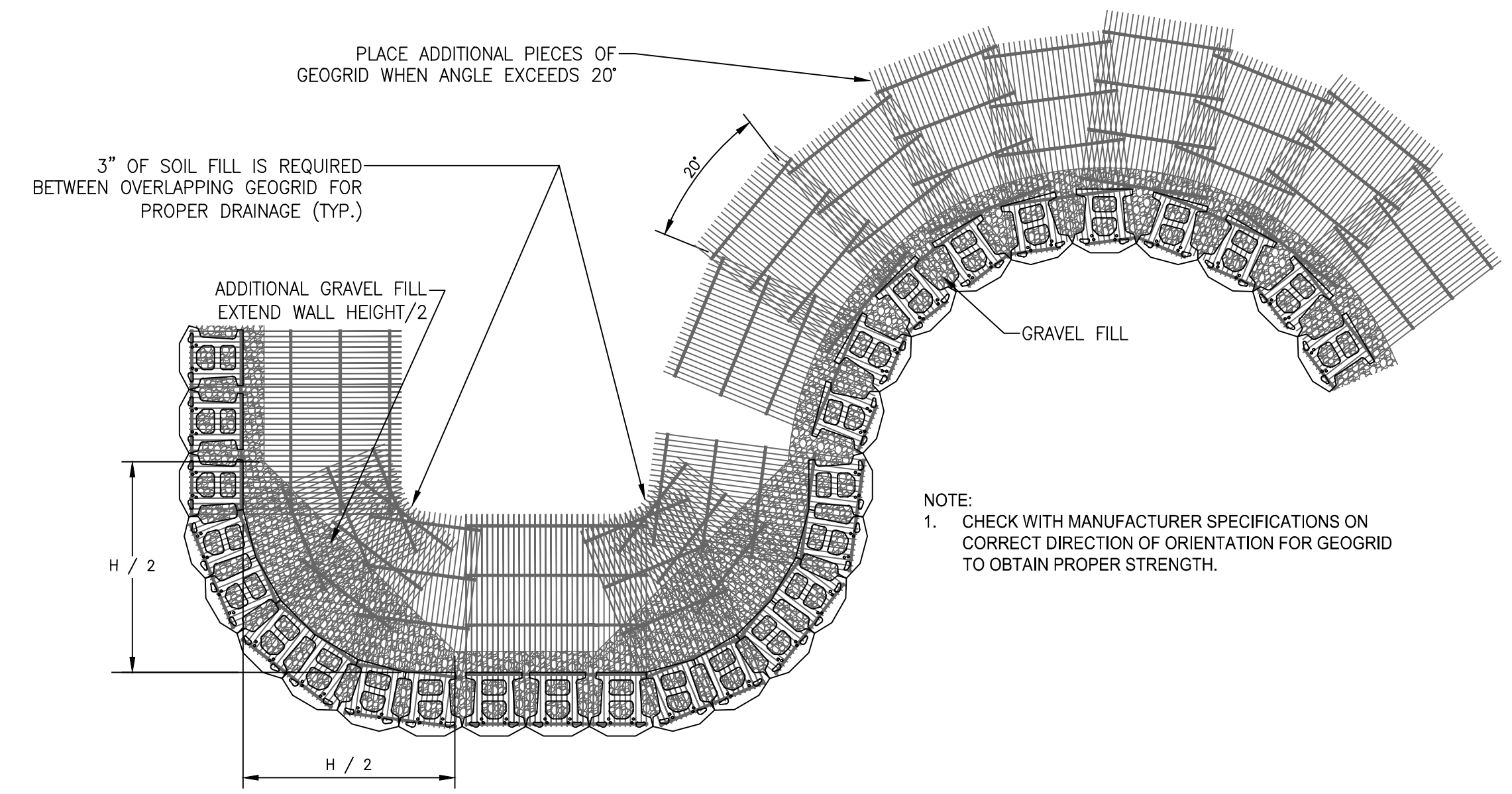


**LEVELING PAD DETAIL**  
NOT TO SCALE

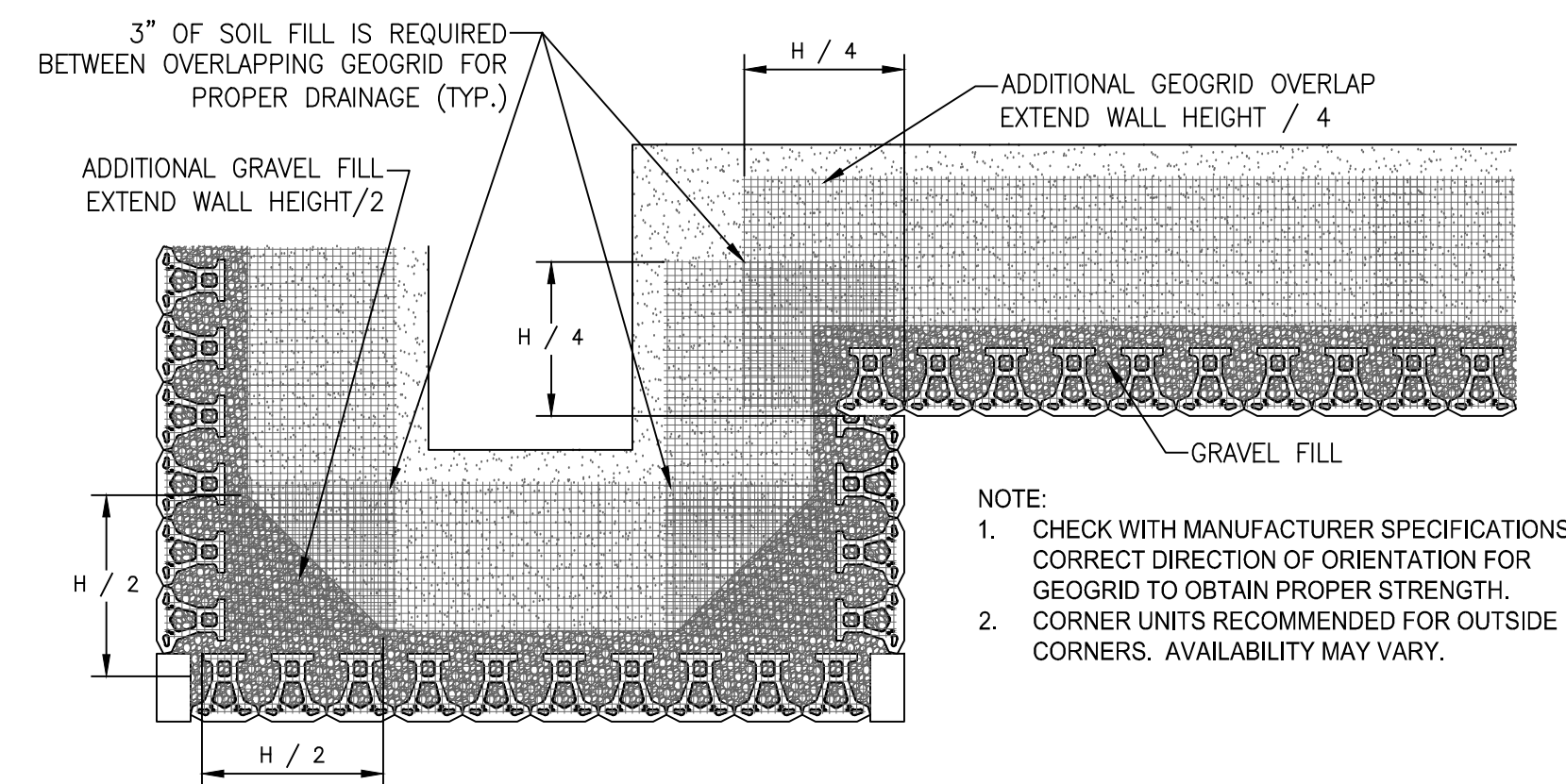


NOTE:  
1. SLEEVE-IT SYSTEM IS LIMITED TO THE FOLLOWING FENCING APPLICATIONS WITHOUT CONSIDERATION OF WIND LOAD:  
 • 8-FOOT HIGH AND UNDER CHAIN LINK FENCES  
 • 6-FOOT HIGH AND UNDER WOOD FENCE WITH GAPS BETWEEN BOARDS  
 • 6-FOOT HIGH AND UNDER BALLUSTRADED PVC, STEEL, ALUMINUM OR WROUGHT IRON FENCES

**FENCE POST DETAIL USING SLEEVE-IT SD 1**  
NOT TO SCALE



NOTE:  
1. CHECK WITH MANUFACTURER SPECIFICATIONS ON CORRECT DIRECTION OF ORIENTATION FOR GEOGRID TO OBTAIN PROPER STRENGTH.



NOTE:  
1. CHECK WITH MANUFACTURER SPECIFICATIONS ON CORRECT DIRECTION OF ORIENTATION FOR GEOGRID TO OBTAIN PROPER STRENGTH.  
2. CORNER UNITS RECOMMENDED FOR OUTSIDE CORNERS. AVAILABILITY MAY VARY.

**GEOGRID INSTALLATION AT CORNERS**  
NOT TO SCALE

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

DocuSigned by: *Chad Edmondson* 2/21/2024  
161875478A225868A  
CHEIF, DEVELOPMENT ENGINEERING DIVISION DATE

DocuSigned by: *Linda Eisenberg* 2/21/2024  
161875478A225868A  
CHEIF, DIVISION OF LAND DEVELOPMENT DATE

DocuSigned by: *Linda Eisenberg* 2/27/2024  
122069538093942E  
DIRECTOR, DEPARTMENT OF PLANNING AND ZONING DATE

**APPROVED PLANNING BOARD OF HOWARD COUNTY**

August 11, 2023  
DATE: \_\_\_\_\_

**OWNER:** CROSSROADS WEST, LLC. 2410 EVERGREEN ROAD, STE. 104 GAMBRIILLS, MD 21054 CONTACT: WILLIAM STEFFEY PHONE: 443-332-6383

**DEVELOPER:** CROSSROADS WEST, LLC. 2568A RIVA ROAD, STE. 300 ANNAPOLIS, MD 21401 CONTACT: WILLIAM STEFFEY PHONE: 443-332-6383

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14280 PARK CENTER DRIVE, SUITE A LAUREL, MARYLAND 20707 (410) 792-9446 or (301) 470-4470 WWW.GTAENG.COM

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**STEVENS FOREST 7-ELEVEN RETAINING WALL**  
TYPICAL DETAILS  
HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.:
10/21/2022	REMOVED YARD DRAIN DETAILS	31221395
01/17/2023	REVISED TO SHOW CONCEPTUAL SHORING	SCALE: AS SHOWN
12/14/2023	UPDATED TITLE BLOCK	DATE: 10/13/2022
		DRAWN BY: CAAF
		DESIGN BY: ADM
		REVIEW BY: BTD
		SHEET: 33 OF 37

MD 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. 29184, EXPIRATION DATE: 06/16/2025.

**RW-4**







**SAND-OIL INTERCEPTOR SCHEDULE**

MODEL NO.	CAPACITY USGAL	OIL CAP. WT (LBS)	EMPTY LENGTH L1	WIDTH W	HEIGHT H	INLET FL1	OUTLET FL2
SOOMP-500	500	750	9,500	7'-10"	4'-4"	4'-6"	3'-3"
SOOMP-750	750	375	9,900	7'-10"	4'-4"	6'-0"	4'-5"
SOOMP-1000	1,000	500	13,350	8'-8"	5'-0"	8'-0"	4'-9"
SOOMP-1500	1,500	750	16,050	9'-2"	5'-8"	7'-0"	5'-9"
SOOMP-2000	2,000	1,000	21,250	9'-2"	5'-8"	8'-0"	6'-11"

**APPLICATIONS**

- MAINTENANCE WAREHOUSE & GARAGES
- COOL COURSES
- EQUIPMENT & TRANSPORTATION WAREHOUSE FACILITIES
- CARWASHES
- STORMWATER RUNOFF
- SERVICE STATION FUEL DEPOSITS
- MANUFACTURING FACILITY EFFLUENT WATER
- RECREATION WATER CLEANING
- GENERAL INDUSTRY

**GUARANTEED PERFORMANCE**

A certified performance analysis utilizing a proprietary computer program will accurately model systems to ensure that their effluent qualities meet the required discharge criteria (EPA and Local Codes).

Influent oily water contains oil droplets of many different sizes. These droplets rise at different rates. Park utilizes a statistical program that divides the droplets into ranges of sizes and calculates the rise rates of each range. This calculation determines which droplets the separator can capture.

Contact our Engineering Dept. @ 888-611-7275 for a free performance evaluation.

**Oil Trooper**

© Park, 2013

**SPECIFICATIONS**

CONCRETE: CLASS I/II CONCRETE WITH DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. UNIT IS OF MONOLITHIC CONSTRUCTION AT FLOOR AND FIRST STAGE OF WALL WITH SECTIONAL RISER TO REQUIRED DEPTH.

REINFORCEMENT: GRADE 60 REINFORCED WITH STEEL REBAR CONFORMING TO ASTM A615 ON REQUIRED CENTERS OR EQUAL.

MATERIALS: ACCESS FRAME & COVER SHALL BE FABRICATED WITH MIN. 1/4" THICK NONSKID FLOOR PLATE, BOLT/DOWN, & LIFTING HANDLES. ALL MATERIALS TO BE CORROSION RESISTANT.

**ENGINEERING DATA**

INTERCEPTOR IS STRUCTURALLY AND HYDRAULICALLY ENGINEERED. NOMINAL TOTAL LIQUID CAPACITY AND OIL HOLDING CAPACITY AS INDICATED. RECOMMENDED FOR FLOW RATES OF 5 TO 200 GPM (CONSULT PARK FOR PROPER SIZING). MANUFACTURER SHALL SUBMIT PERFORMANCE CALCULATIONS FOR OIL & WATER SEPARATION CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER UPON REQUEST. FIELD EXCAVATION AND PREPARATION SHALL BE COMPLETED PRIOR TO DELIVERY OF INTERCEPTOR.

**PARK**

www.parkusa.com 888-611-7275

SAND/OIL INTERCEPTOR SOOMP

MODEL SOOMP 500 THRU 2000 GAL

DATE: SOOMP-1

**GREASE TRAP SCHEDULE**

MODEL NO.	CAPACITY USGAL	GREASE CAP. (LBS)	EMPTY LENGTH L	WIDTH W	HEIGHT H	INLET FL1	OUTLET FL2
GT-500	500	1,200	8,900	7'-10"	4'-4"	4'-4"	3'-3"
GT-750	750	1,700	9,900	7'-10"	4'-4"	6'-0"	4'-5"
GT-1000	1,000	2,300	13,350	8'-8"	5'-0"	8'-0"	4'-9"
GT-1250	1,250	2,900	14,650	8'-8"	5'-0"	8'-0"	4'-9"
GT-1500	1,500	3,500	16,050	9'-2"	5'-8"	7'-0"	5'-9"
GT-2000	2,000	4,600	21,250	9'-2"	5'-8"	8'-0"	6'-6"
GT-2500	2,500	5,700	27,050	13'-0"	7'-0"	7'-0"	5'-9"
GT-3000	3,000	6,900	33,150	13'-0"	7'-0"	8'-0"	6'-6"
GT-3500	3,500	8,000	38,950	13'-0"	7'-0"	8'-0"	7'-0"
GT-4000	4,000	9,300	38,100	16'-0"	8'-4"	7'-0"	5'-9"

**Engineering Data**

The grease interceptor is structurally & hydraulically engineered to conform to UPC/IPC and regional plumbing codes recommended in most cities. Consult with local authorities for specific application requirements.

Shop drawings shall include complete structural & buoyancy calculations certified by a licensed professional engineer upon request.

Consult with Park Equipment Company for exact excavation dimensions & shipping information.

**PARK**

www.parkusa.com 888-611-7275

GREASE INTERCEPTOR SERIES GT

500 THRU 4000 GALLON CAPACITY

SCALE: NONE DWG. NO. GT-1

DATE: 03/13 REV. A

**2 TANK CONFIGURATION FOR 5 MICRON PUR-WATER RECOVERY SYSTEMS**

THIS IS THE SUGGESTED IDEAL CONFIGURATION FOR A 30 GPM LOW VOLUME 5 MICRON PUR-WATER SYSTEM. PUR-WATER RECOGNIZES THE FACT THAT SEPTIC TANKS ARE A LOCAL BUSINESS AND NOT ALL AREAS WILL HAVE THESE CONFIGURATIONS. THIS DRAWING IS OFFERED AS A GUIDELINE ONLY. IF YOU HAVE ANY QUESTIONS ABOUT A SIZE OR CONFIGURATION OF TANKS IN YOUR AREA, PLEASE CONTACT PUR-WATER AT 800-882-8854

**NOTES:**

DRAWING IS FOR REFERENCE ONLY AND IS TO BE USED FOR PLUMBING REFERENCE. CONSULT WITH TANK MANUFACTURER FOR TANK LOADS. CONSULT WITH CIVIL ENGINEER FOR SOIL PREPARATION AND TANK PLACEMENT. SEAL ALL TANK PENETRATIONS TO PROVIDE WATER TIGHT SEAL TO PREVENT TANK LEAKAGE INTO SOIL. LINE TO SEWER TO HAVE BACK FLOW PREVENTION. CONSULT WITH LOCAL AUTHORITIES ON WHETHER FURTHER TREATMENT (I.E. OIL/WATER SEPARATOR IS REQUIRED TO MEET DISCHARGE PERMIT).

APPROX. TANK VOLUME IS 1500 GALLONS PER TANK. EACH TANK IS DIVIDED BY INTERNAL BAFFLE. TOTAL WATER STORAGE IS APPROX. 3000 GALLONS.

**REVISIONS**

REV	DATE	COMMENT	DRAWN BY

**BOHLER**

SITE CIVIL AND CONSULTING ENGINEERING  
PROGRAM MANAGEMENT  
LANDSCAPE ARCHITECTURE  
SUSTAINABLE DESIGN  
PERMITTING SERVICES  
TRANSPORTATION SERVICES

**REVISIONS**

REV	DATE	COMMENT	DRAWN BY

**811**

Know what's below.  
Call before you dig.  
ALWAYS CALL 811  
It's fast. It's free. It's the law.

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.: MD202104  
DRAWN BY: RMS  
CHECKED BY: AGS  
DATE: 12/23  
CAD ID: CND5-3

**SITE DEVELOPMENT PLAN**

FOR

CROSSROADS WEST, LLC

7-ELEVEN STEVENS FOREST

5901 & 5911 STEVENS FOREST ROAD  
COLUMBIA, MARYLAND  
TAX MAP 36, GRID 10, PARCEL 300, LOT 8  
HOWARD COUNTY  
6TH ELECTION DISTRICT  
ZONE: NT

**BOHLER**

901 DULANEY VALLEY ROAD, SUITE 801  
TOWSON, MARYLAND 21204  
Phone: (410) 821-7900  
Fax: (410) 821-7987  
MD@BohlerEng.com

**R.M. STASIOSKI**

PROFESSIONAL ENGINEER

I, R.M. STASIOSKI, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED AND APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 49425, EXPIRATION DATE: 6/30/2024

SHEET TITLE:

**DETAILS**

SHEET NUMBER:

**35**

ORG. DATE - 12/7/23

OWNER: CROSSROADS WEST, LLC 2410 EVERGREEN ROAD, STE. 104 GAMBRILLS, MD 21054 CONTACT: WILLIAM STEFFEY PHONE: 443-332-6383	DEVELOPER: CROSSROADS WEST, LLC 2568A RIVA ROAD, STE. 300 ANNAPOLIS, MD 21401 CONTACT: WILLIAM STEFFEY PHONE: 443-332-6383
TAX MAP: 36 GRID: 10 6TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND	ZONED: NT LOT: 8 PARCEL: 300
SUBDIVISION NAME: VILLAGE OF OAKLAND MILLS VILLAGE CENTER SECTION 2, AREA 2 DEED # 13685/00223	
PREVIOUS FILE NO. FDP-50-A1, SDP-07-687, SDP-70-611, SDP-73-118, ECP-22-011, P.B. 15, F. 82, WP-23-686	
<b>FILE NO. SDP-22-027</b>	

ALL DETAILS ON THIS SHEET WERE PROVIDED BY 7-ELEVEN AND ARE FOR INFORMATIONAL PURPOSES ONLY. BOHLER SHALL BE HELD HARMLESS IN THE EVENT OF ERRONEOUS INFORMATION CONTAINED WITHIN THESE DETAILS AND/OR STRUCTURAL FAILURE.

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

CHAD Edmondson 2/23/2024

CHIEF, DEVELOPMENT ENGINEERING DIVISION

DATE: 2/21/2024

CHIEF, DIVISION OF PLANNING AND ZONING

DATE: 2/27/2024

Lynda Eisenberg

DIRECTOR, DEPARTMENT OF PLANNING & ZONING

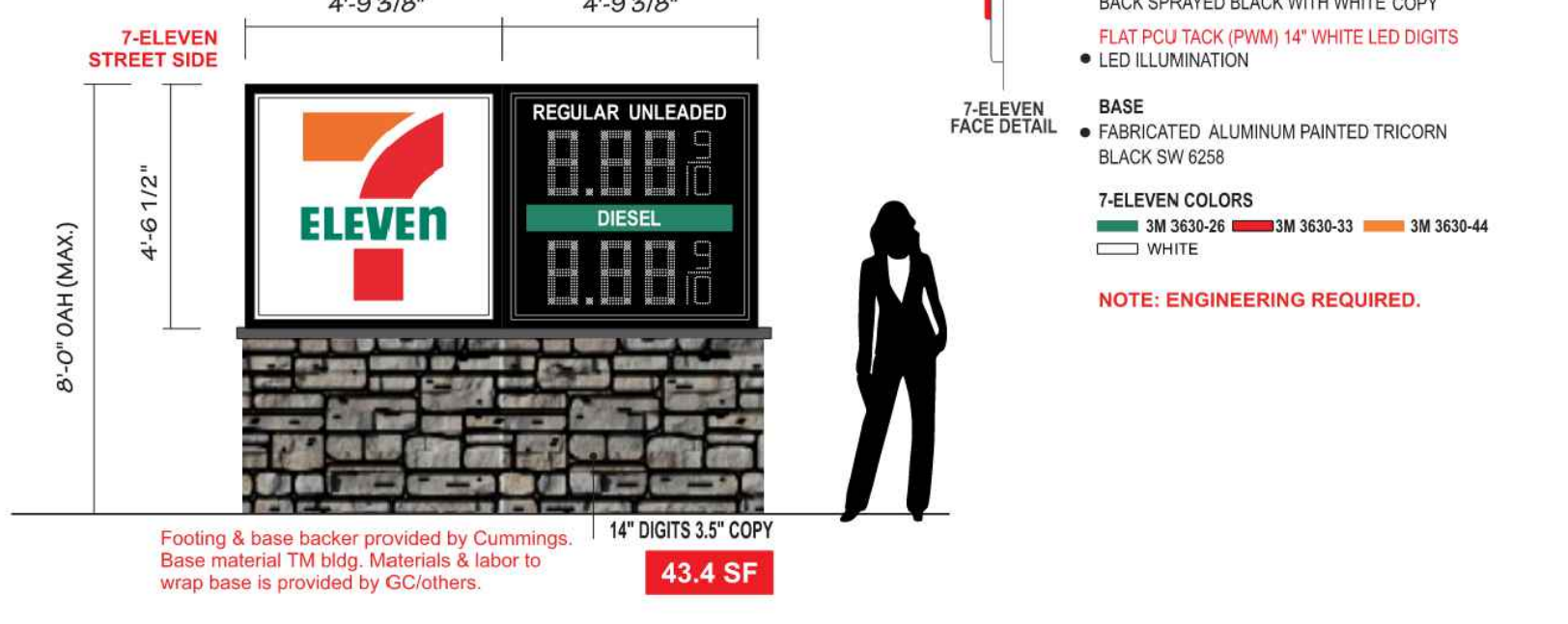
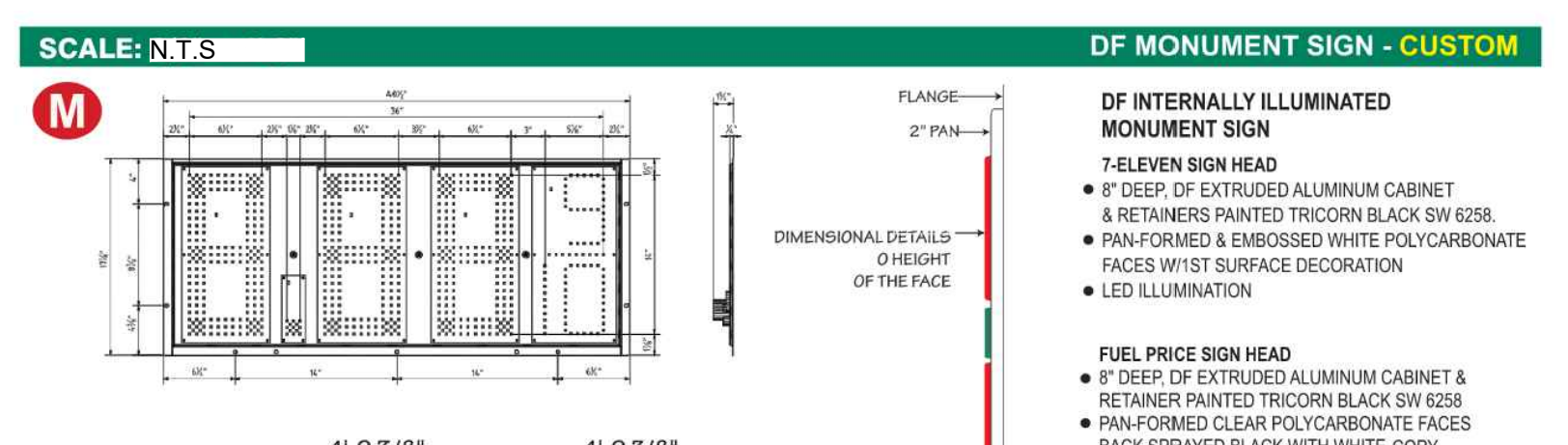
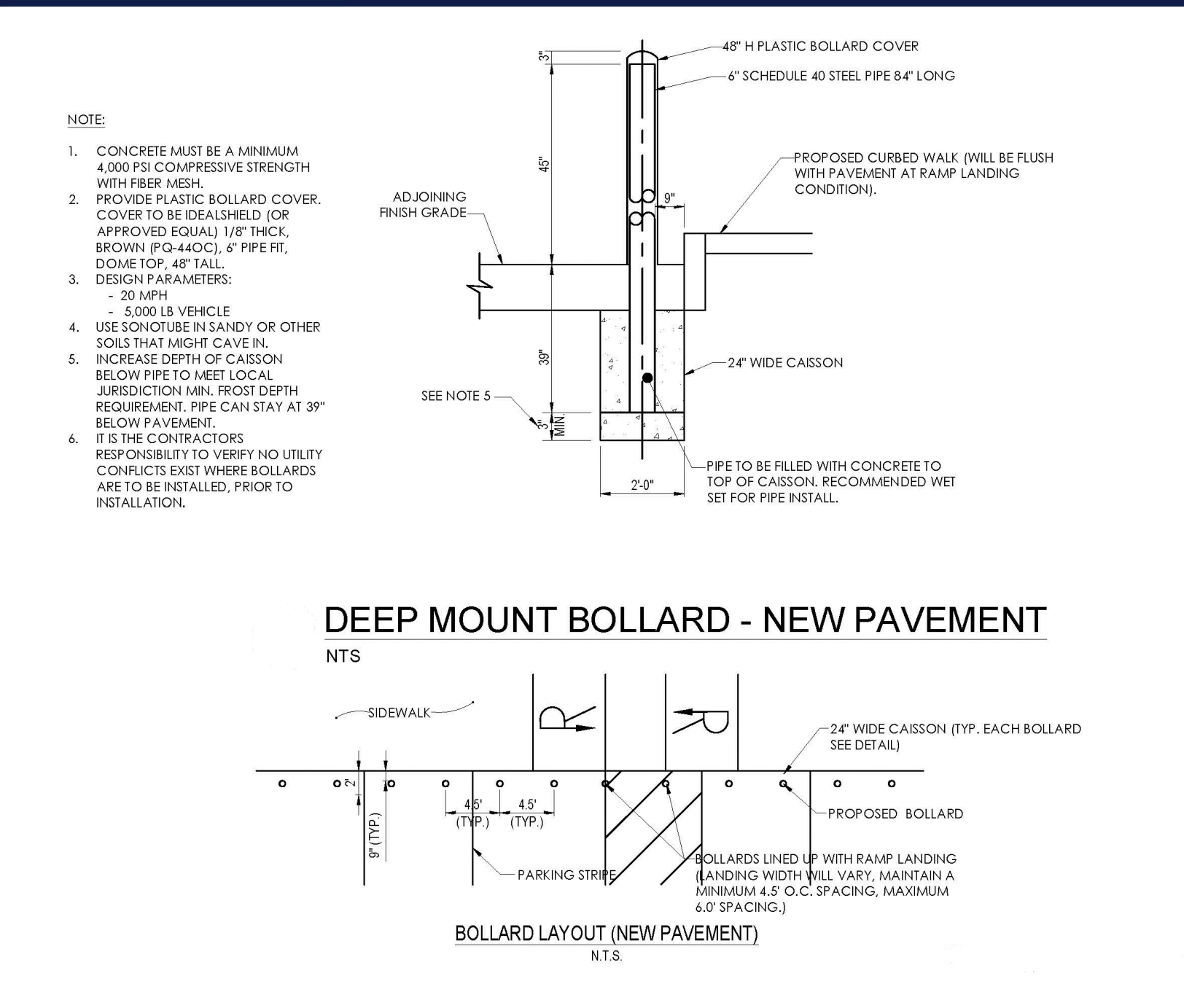
DATE:

**APPROVED**

PLANNING BOARD OF HOWARD COUNTY

August 11, 2023





Job Location: 42063-1040453  
5901 Stevens Forest Rd., Columbia, MD 21045  
Date: August 14, 2023

D-ORDER# 99775.13 JMA  
Project Mgr.: Michelle Hoffman  
michelle.hoffman@cummingsigns.com  
Page: 15 of 17

ALL DETAILS IN THIS FRAME WERE PROVIDED BY 7-ELEVEN AND ARE FOR INFORMATIONAL PURPOSES ONLY. BOHLER SHALL BE HELD HARMLESS IN THE EVENT OF ERRONEOUS INFORMATION CONTAINED WITHIN THESE DETAILS AND/OR STRUCTURAL FAILURE.

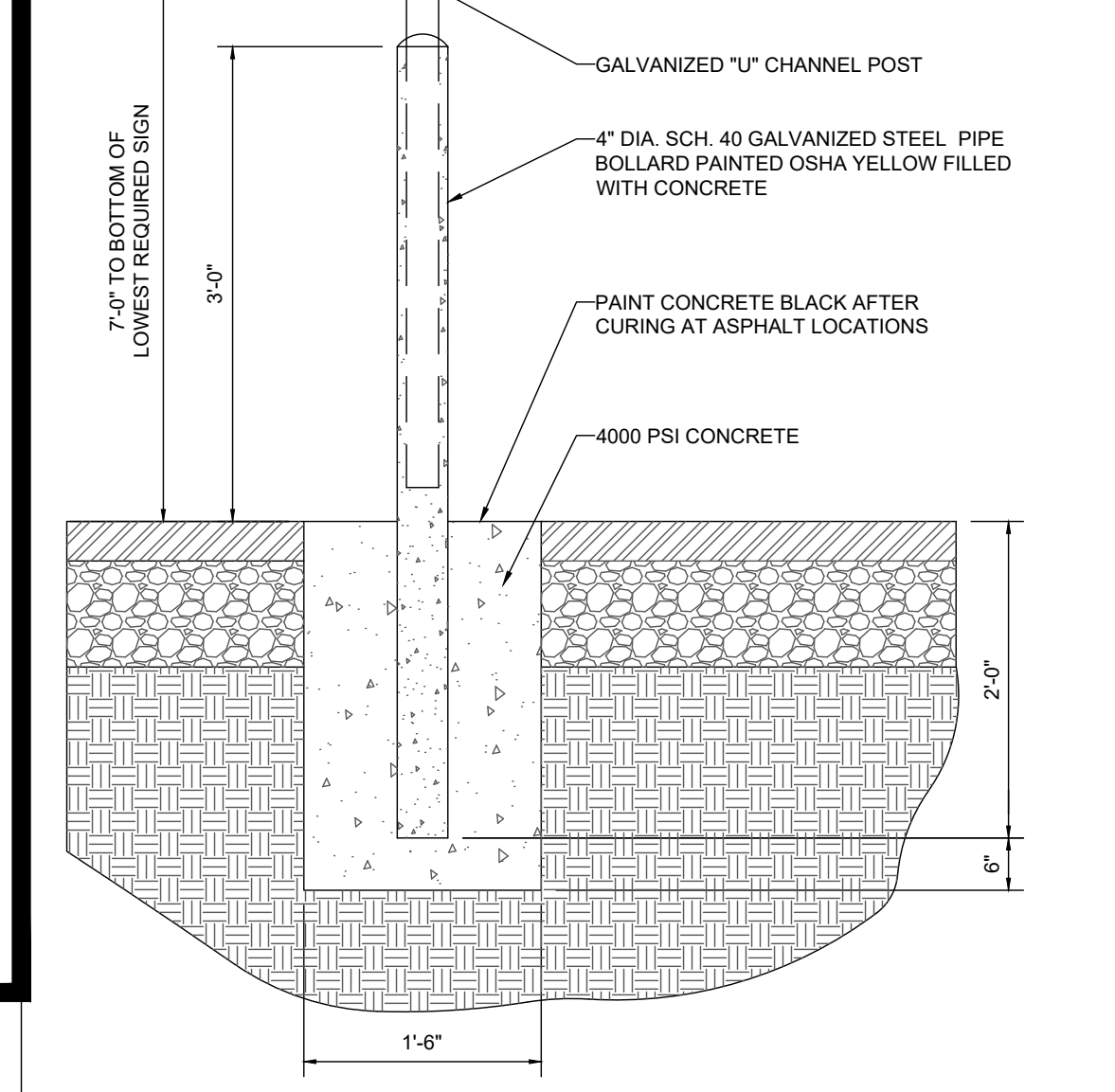
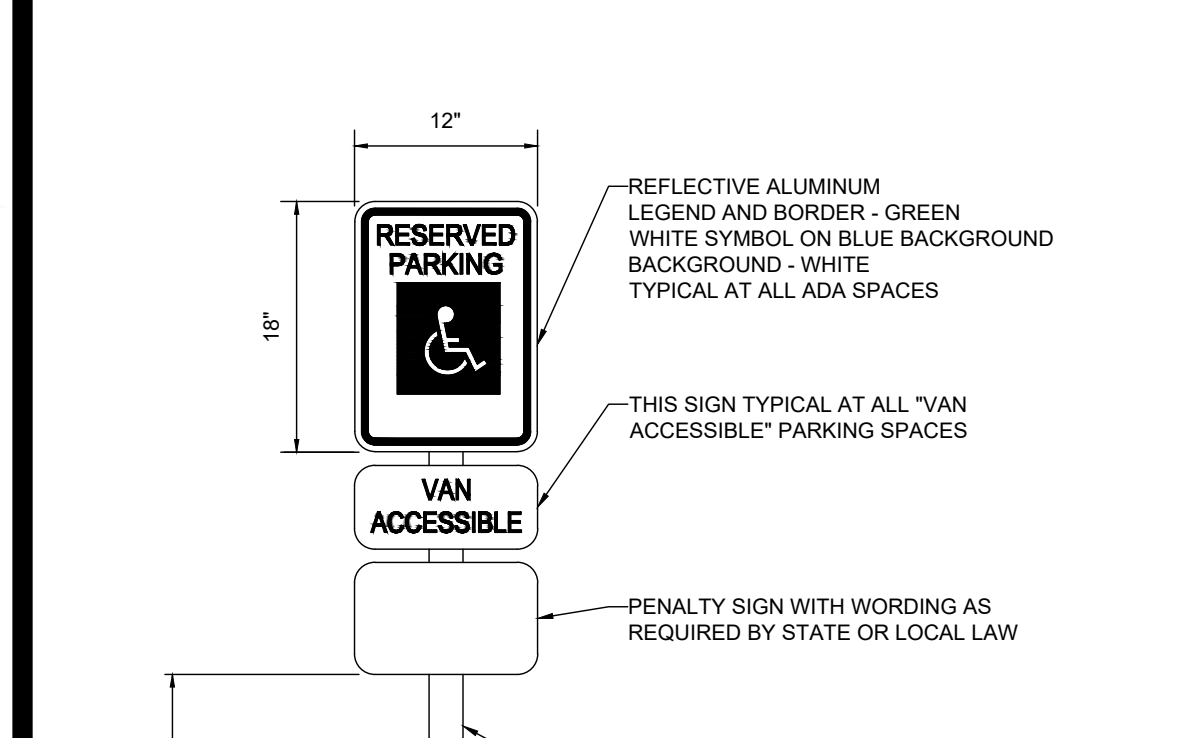


**Loop**  
• Loop bike rack is a simple, sweeping circle with a twist.  
• Both functional and sculptural.  
• Cycles can loop and lock one or two bikes around its shape-shifting cast aluminum ribbon frame.  
• The aluminum casting, finished with Pangard 888 powdercoat, is offered in a selection of colors. Must be enclosed to a concrete surface.  
• Refer to install guide for spacing guidelines.  
• Meets APSP guidelines.  
• Call for standard color chart.

**Recycled Content**  
• Loop has a recycled content of 97%, and is 100% recyclable.

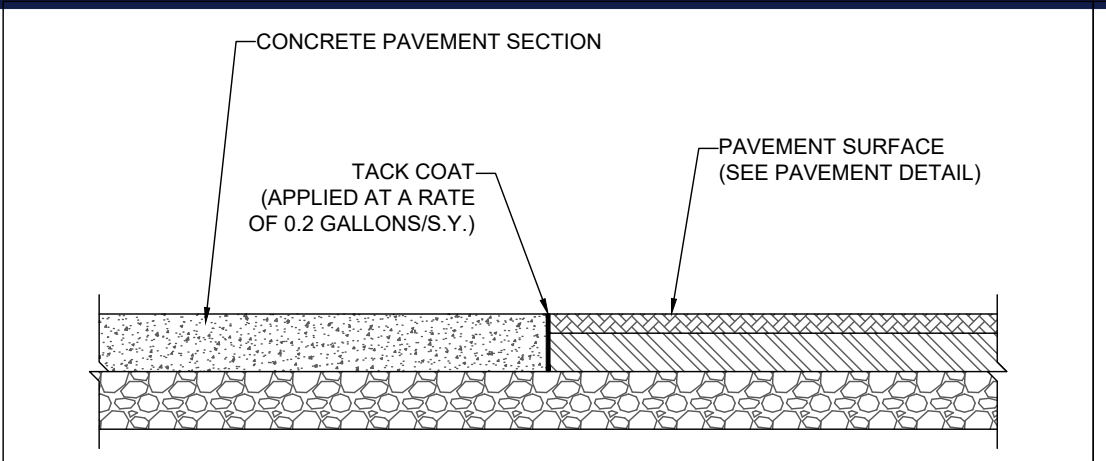
**To Specify**  
• Specify collection name and product name.  
• Loop design is protected by U.S. Patent No. D754,032

**DF INTERNALLY ILLUMINATED MONUMENT SIGN**  
• 7-ELEVEN SIGN HEAD  
• 8\"/>

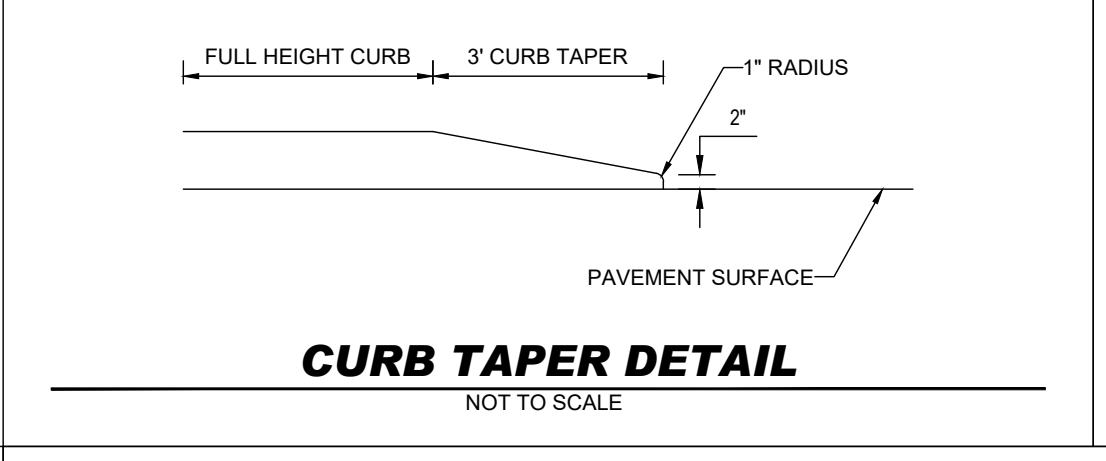


**NOTE:**  
ONE AT EACH ADA SPACE, WHERE ADA SPACES FACE EACH OTHER WITHOUT WALKWAY, THERE SHALL BE ONE POST WITH SIGNS MOUNTED BOTH SIDES

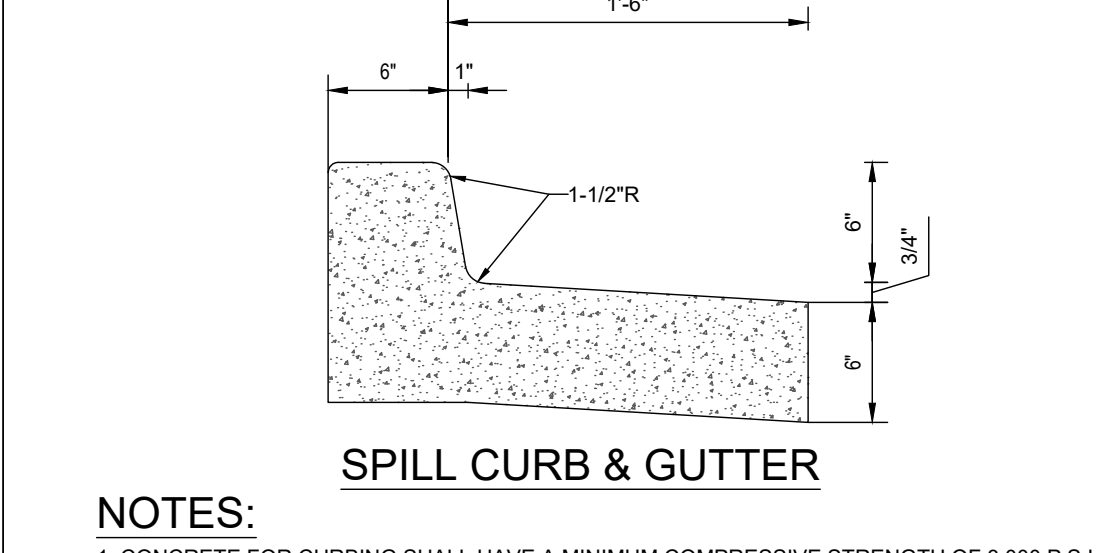
**BOLLARD MOUNTED ADA PARKING SIGN DETAIL**  
NOT TO SCALE



**CONCRETE-TO-ASPHALT DETAIL**  
NOT TO SCALE

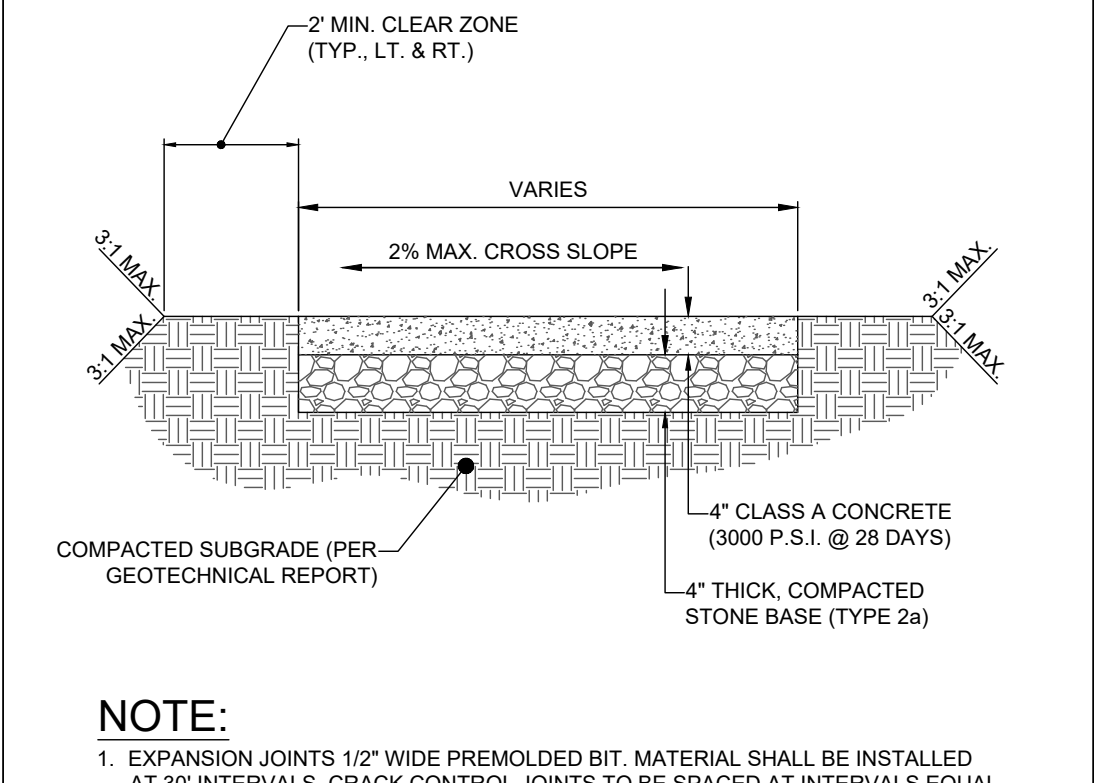


**CURB TAPER DETAIL**  
NOT TO SCALE

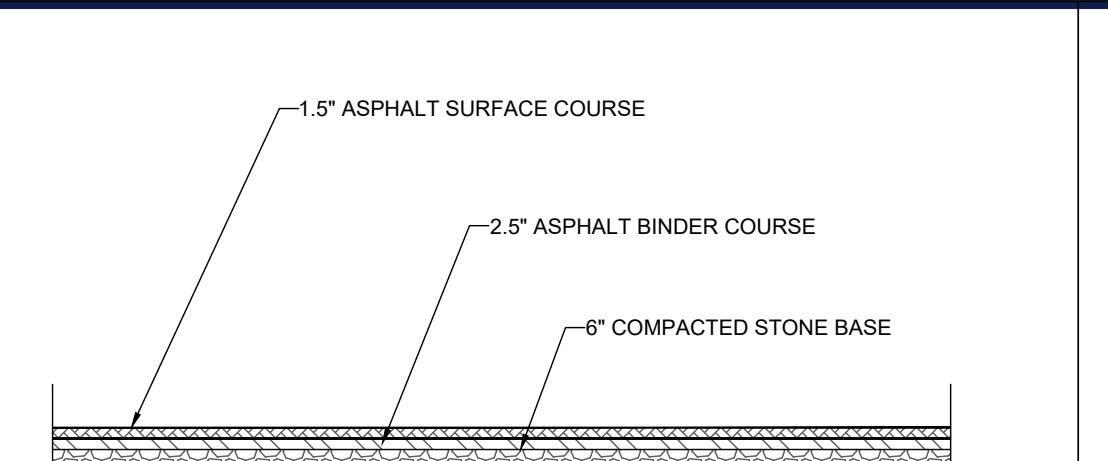


**NOTES:**  
1. CONCRETE FOR CURBING SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 P.S.I. @ 28 DAYS.  
2. CONSTRUCTION STAKING FOR CURB INSTALLATION SHALL BE REFERENCED (CUT OR FILL) TO THE TOP OF CURB.  
3. AT CONTRACTOR'S OPTION, THE GUTTER THICKNESS MAY BE INCREASED AT THE EDGE OF PAVEMENT TO MAKE BOTTOM OF GUTTER CONTIGUOUS WITH BOTTOM OF ASPHALT PAVEMENT.  
4. CONTRACTION JOINTS SHALL BE PLACED @ 10'-0\"/>

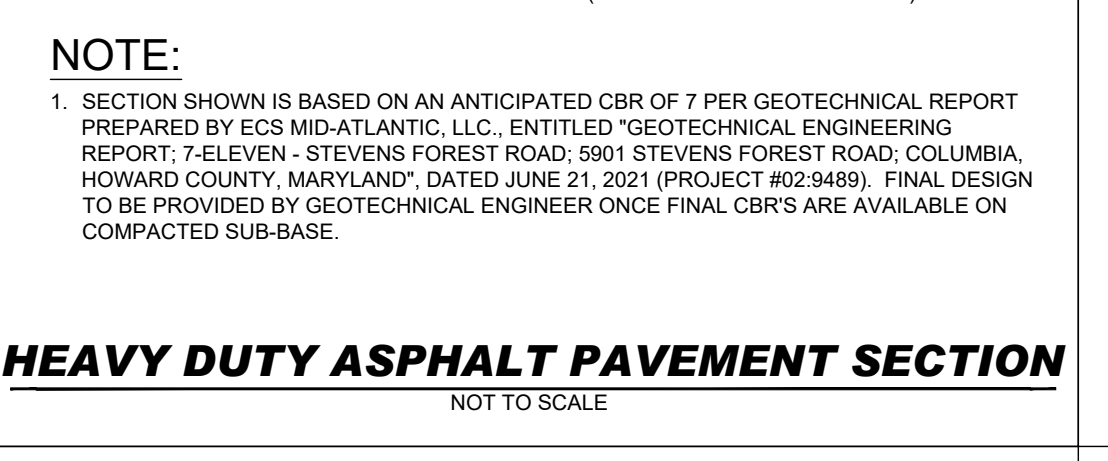
**CONCRETE CURB & GUTTER DETAIL**  
NOT TO SCALE



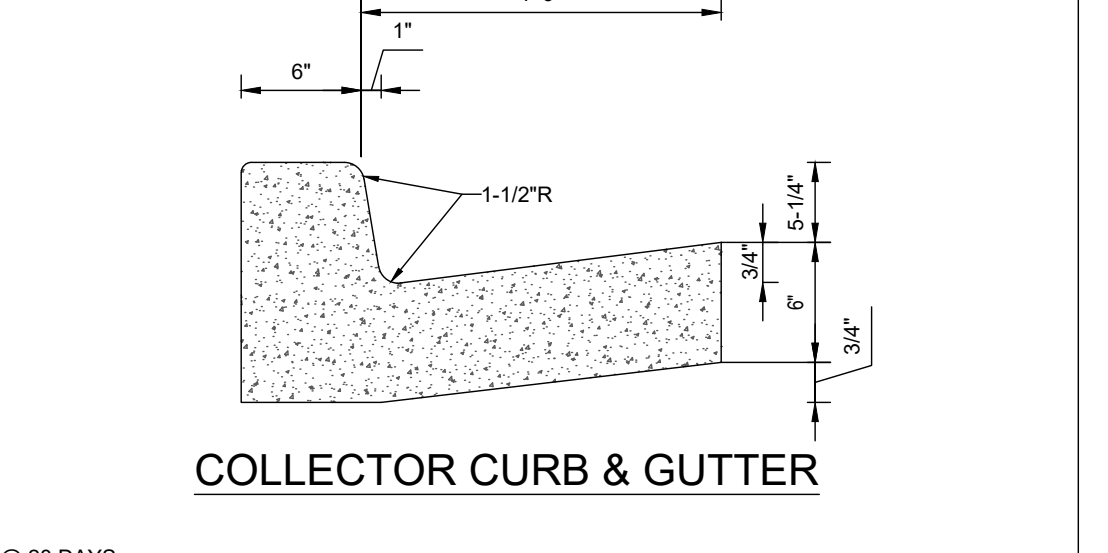
**CONCRETE SIDEWALK DETAIL**  
NOT TO SCALE



**HEAVY DUTY ASPHALT PAVEMENT SECTION**  
NOT TO SCALE

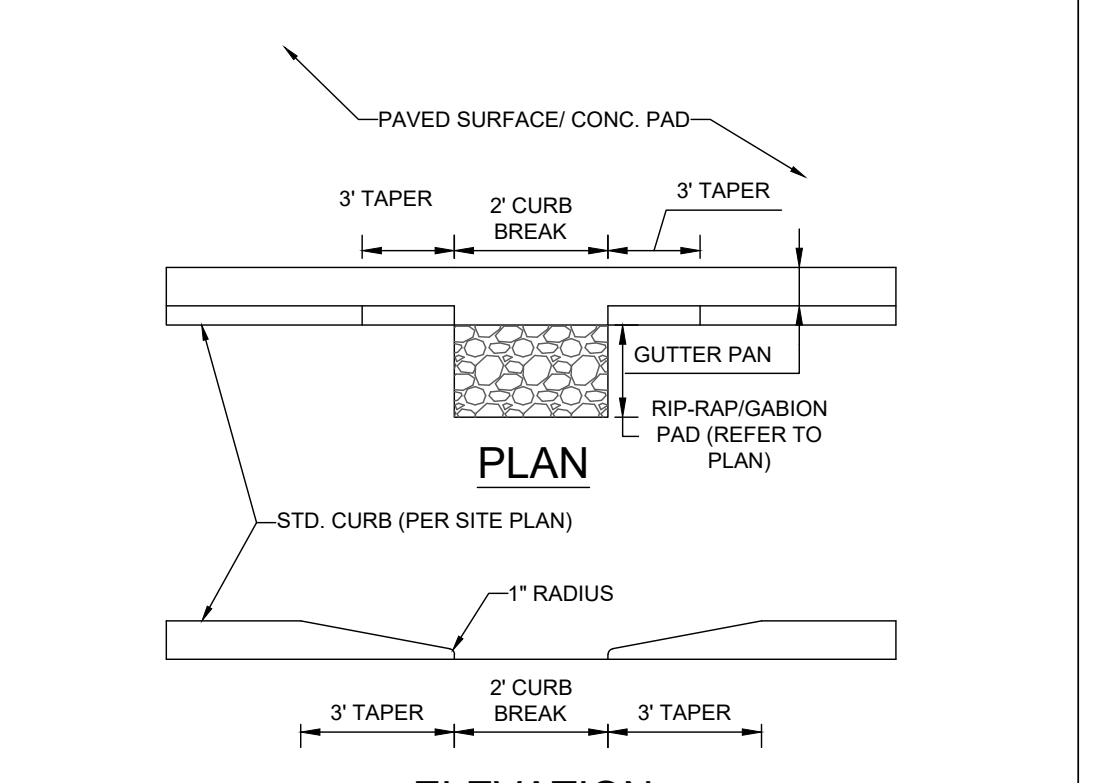


**CURB BREAK DETAIL**  
NOT TO SCALE

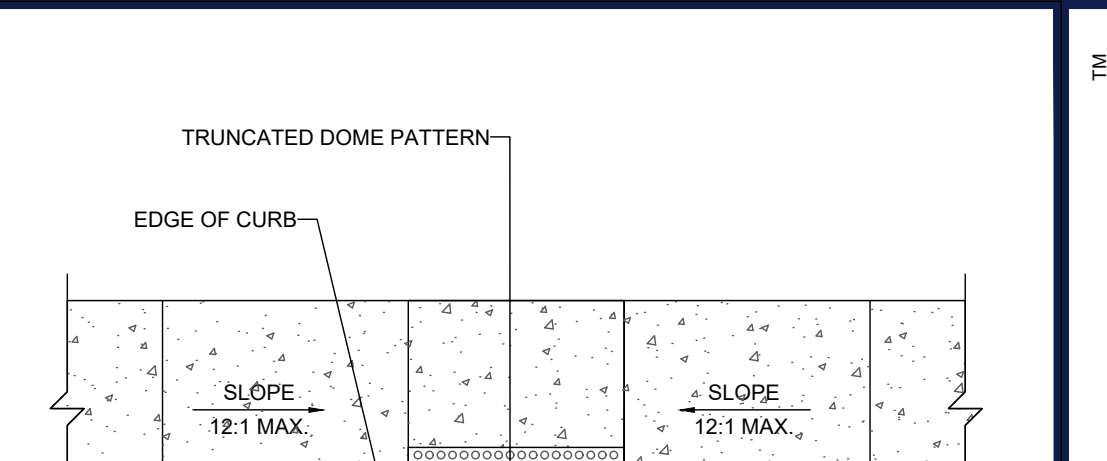


**COLLECTOR CURB & GUTTER**  
NOT TO SCALE

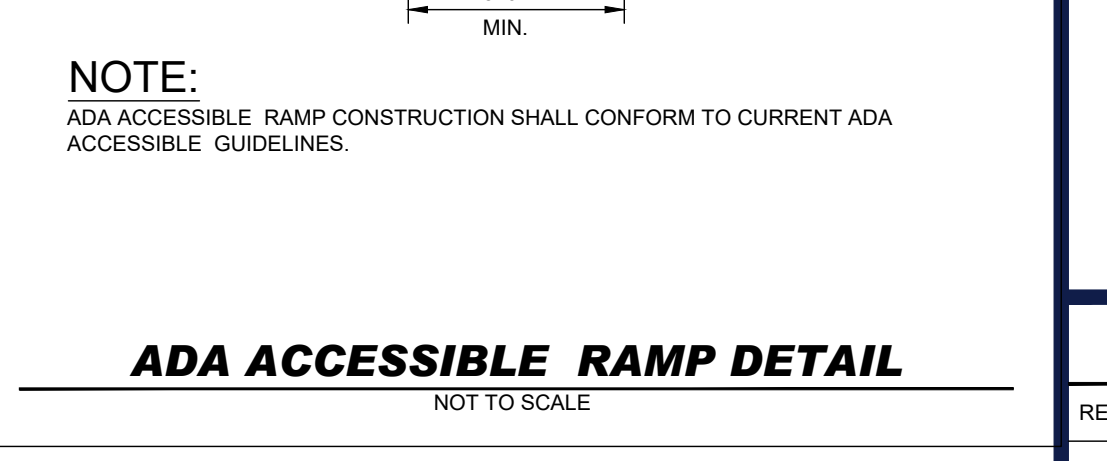
**CONCRETE CURB & GUTTER DETAIL**  
NOT TO SCALE



**CURB BREAK DETAIL**  
NOT TO SCALE



**ADA ACCESSIBLE RAMP DETAIL**  
NOT TO SCALE

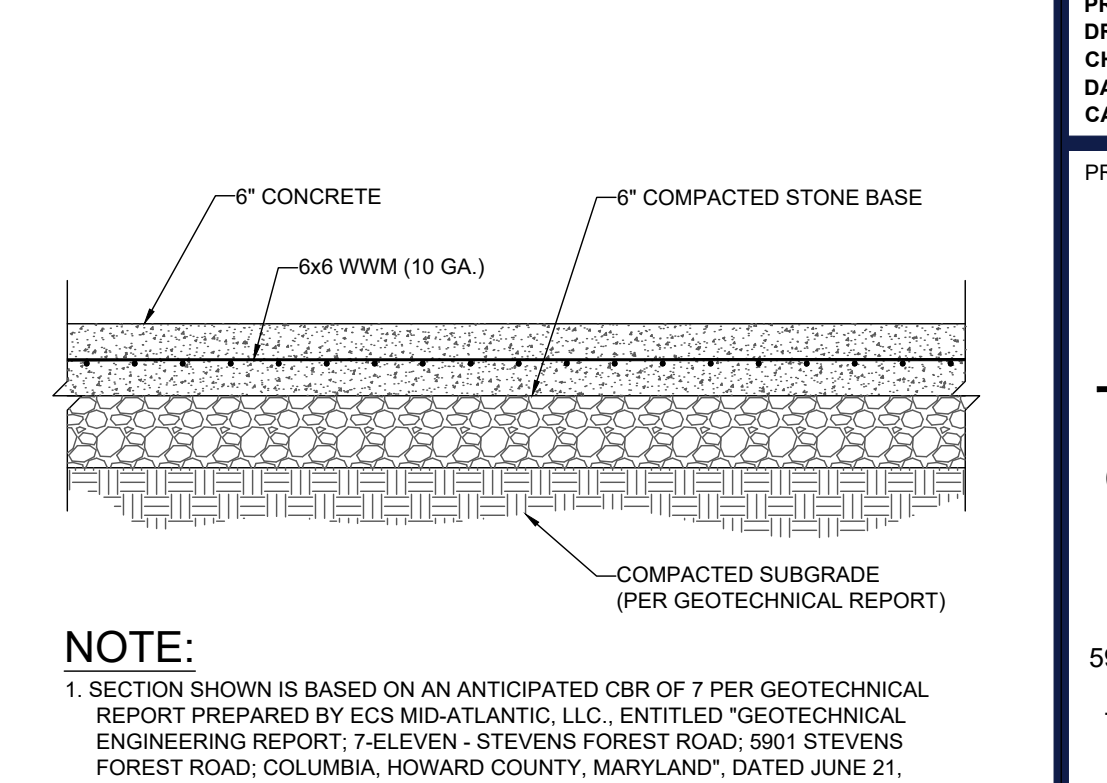


**HEAVY DUTY CONCRETE SECTION**  
NOT TO SCALE



**CONCRETE SIDEWALK DETAIL**  
NOT TO SCALE

**CONCRETE CURB & GUTTER DETAIL**  
NOT TO SCALE



**CURB BREAK DETAIL**  
NOT TO SCALE

**HEAVY DUTY CONCRETE SECTION**  
NOT TO SCALE

**HOWARD COUNTY STANDARD DETAILS NOTE**

THE FOLLOWING HOWARD COUNTY DETAILS ARE REQUIRED FOR THIS PROJECT:

G-4.01 - UTILITY TRENCH ROADWAY REPAVING  
W-1.11 - FIRE HYDRANT SETTINGS  
W-3.34 - WATER METER 1 1/2\"/>

FOR ALL HOWARD COUNTY DETAILS REFERRED TO ON THE PLANS THE CONTRACTOR MUST GO TO THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV WHICH WILL HAVE THE MOST CURRENT VERSION. THE DESIGN MANUAL CAN BE ACCESSED AT:  
[HTTPS://WWW.HOWARDCOUNTYMD.GOV/SITES/DEFAULT/FILES/MEDIA/2018-01/DESIGN%20MANUAL%20VOL%20IV%2020217.PDF](https://www.howardcountymd.gov/sites/default/files/media/2018-01/DESIGN%20MANUAL%20VOL%20IV%2020217.PDF)

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	PAVEMENT MATERIAL (INCHES)	CALIFORNIA BEARING RATIO (CBR)							
			3 TO <5	5 TO <7	7	3 TO <5	5 TO <7	>7		
P-1	PARKING BAYS: RESIDENTIAL AND NON-RESIDENTIAL PARKING DRIVE ASILES RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	SUPERPAVE ASPHALT MIX FINAL SURFACE 1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
		SUPERPAVE ASPHALT MIX INTERMEDIATE SURFACE 2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
		SUPERPAVE ASPHALT MIX BASE 8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	
P-2	PARKING DRIVE ASILES: RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY LOCAL ROAD ACCESS PLACE, ACCESS STREET CUL-DE-SAC ACCESS STREET RESIDENTIAL	SUPERPAVE ASPHALT MIX FINAL SURFACE 1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
		SUPERPAVE ASPHALT MIX INTERMEDIATE SURFACE 2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
		SUPERPAVE ASPHALT MIX BASE 8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	
P-3	PARKING DRIVE ASILES: RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY LOCAL ROAD ACCESS PLACE, ACCESS STREET CUL-DE-SAC ACCESS STREET NON-RESIDENTIAL MINOR COLLECTORS: RESIDENTIAL	SUPERPAVE ASPHALT MIX FINAL SURFACE 1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
		SUPERPAVE ASPHALT MIX INTERMEDIATE SURFACE 2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
		SUPERPAVE ASPHALT MIX BASE 8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	
P-4	MINOR COLLECTORS: NON-RESIDENTIAL MAJOR COLLECTORS	SUPERPAVE ASPHALT MIX FINAL SURFACE 2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
		SUPERPAVE ASPHALT MIX INTERMEDIATE SURFACE 2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
		SUPERPAVE ASPHALT MIX BASE 8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	

**NOTES**  
1. HEAVY TRUCKS ARE DEFINED AS THOSE WITH SIX (6) WHEELS OR MORE INCLUDING GARBAGE TRUCKS.  
2. SUPERPAVE ASPHALT MIX LAYERS SHALL BE PLACED IN APPROPRIATE COMPACTED LIFT THICKNESS: 19.0 MM BASE (2.0\"/>

**BOHLER**  
SITE CIVIL AND CONSULTING ENGINEERING  
PROGRAM MANAGEMENT  
LANDSCAPE ARCHITECTURE  
SUSTAINABLE DESIGN  
PERMITTING SERVICES  
TRANSPORTATION SERVICES

**REVISIONS**

REV	DATE	COMMENT	DRAWN BY

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ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

PROJECT No.: MD202104  
DRAWN BY: RMS  
CHECKED BY: AGS  
DATE: 12/23  
CAD ID: CND5-3

**SITE DEVELOPMENT PLAN**  
FOR  
**CROSSROADS WEST, LLC**  
7-ELEVEN STEVENS FOREST  
5901 & 5911 STEVENS FOREST ROAD  
COLUMBIA, MARYLAND  
TAX MAP 36, GRID 10, PARCEL 300, LOT 8  
HOWARD COUNTY  
6TH ELECTION DISTRICT  
ZONE: NT

**BOHLER**  
901 DULANEY VALLEY ROAD, SUITE 801  
TOWSON, MARYLAND 21204  
Phone: (410) 821-7900  
Fax: (410) 821-7987  
MD@BohlerEng.com

**R.M. STASIOSKI**  
PROFESSIONAL ENGINEER  
11 RYAN DRIVE, ANNAPOLIS, MD 21401  
I, RYAN STASIOSKI, CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 49425, EXPIRATION DATE: 6/30/2024

**SITE DETAILS**  
TAX MAP: 36 GRID: 10 ZONE: NT  
PARCEL: 300 LOT: 8  
6TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
SUBDIVISION NAME: VILLAGE OF OAKLAND MILLS VILLAGE CENTER SECTION 2, AREA 2 DEED # 13685/00223  
SHEET NUMBER: 36  
PREVIOUS FILE NO. FDP-50-A1, SDP-07-087, SDP-70-011, SDP-73-118, ECP-22-011, P.B. 15, F. 82, WP-23-088  
**FILE NO. SDP-22-027**  
SHEET TITLE:  
ORG. DATE - 12/7/23

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 2/21/2024

**APPROVED PLANNING BOARD OF HOWARD COUNTY**  
DATE: August 11, 2023





SPECIMEN TREE IMPACT CALCULATION CHART

Key (X#)	Species	Size (in.dbh)	CRZ (feet radius)	Comments	CRZ Area (SF)	CRZ Impact (SF)	Percent CRZ Impact	To Be Retained (Y/N)	Mitigation Requirement (# replacement 3" trees)
1	American Sycamore	31	46.5	Good, Slightly weighted toward apartments	6789	6789	100	N	2
3	American Elm	37.5	56.25	Good/Fair, Major lead broke off possible storm damage, roots stop at pavement	9935	9935	100	N	2
Mitigation Requirement									4

LEGEND

- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- SURFACE MILL AND OVERLAY

FOREST CONSERVATION WORKSHEET FOR 5911 STEVENS FOREST ROAD

Net Tract Area	Value
A. Total (Gross) Tract Area	A+ = 1.7
B. Area within 100-year Floodplain	B+ = 0.0
C. Other Disturbances (Sewer, Impervious Surface)	C+ = 1.4
D. Net Tract Area	D+ = 0.3

Land Use Category	Value
Resid. Rural LD	R+ = 0.0
Resid. Rural MD	MD+ = 0.0
Resid. Suburban	S+ = 0.0
Inst./Office	I+ = 0.0
Retail/Office	RO+ = 0.0
Mixed Use	MU+ = 0.0
PUD	PUD+ = 0.0

Existing Forest Cover	Value
G. Existing Forest Cover within the Net Tract Area	G+ = 0.0
H. Area of Forest above Afforestation Threshold	H+ = 0.0
I. Area of Forest above Reforestation Threshold	I+ = 0.0

Proposed Forest Clearing	Value
L. Total Area of Forest to be Cleared	L+ = 0.0
M. Total Area of Forest to be Retained	M+ = 0.0

Planting Requirements Inside Watershed	Value
N. Reforestation for Clearing above the Reforestation Threshold	N+ = 0.0
P. Reforestation for Clearing below the Reforestation Threshold	P+ = 0.0
Q. Credit for Retention above the Reforestation Threshold	Q+ = 0.0
R. Total Reforestation Required	R+ = 0.0
S. Total Afforestation Required	S+ = 0.0
T. Total Reforestation and Afforestation Requirement	T+ = 0.0
U. 75% of Total Obligation (Retention + Planting)	U+ = 0.0
V. Planting Required (Credit to meet 75% Obligation)	V+ = 0.0

Planting Requirements Outside Watershed	Value
W. Total Planting within Development Site Watershed	W+ = 0.0
X. Total Afforestation Required	X+ = 0.0
Y. Remaining Planting within Watershed for Reforestation Credit	Y+ = 0.0
Z. Reforestation for Clearing above the Reforestation Threshold	Z+ = 0.0
AA. Reforestation for Clearing below the Reforestation Threshold	AA+ = 0.0
BB. Credit for Retention above the Reforestation Threshold	BB+ = 0.0
CC. Total Reforestation Required	CC+ = 0.0
DD. Total Afforestation and Reforestation Requirement	DD+ = 0.0

REVISIONS

REV	DATE	COMMENT	DESIGNED BY



ALWAYS CALL 811  
It's fast. It's free. It's the law.

APPROVED FOR CONSTRUCTION

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.: MD202104  
 DRAWN BY: RMS  
 CHECKED BY: AGS  
 DATE: 8/29/23  
 CAD ID: SITE-3

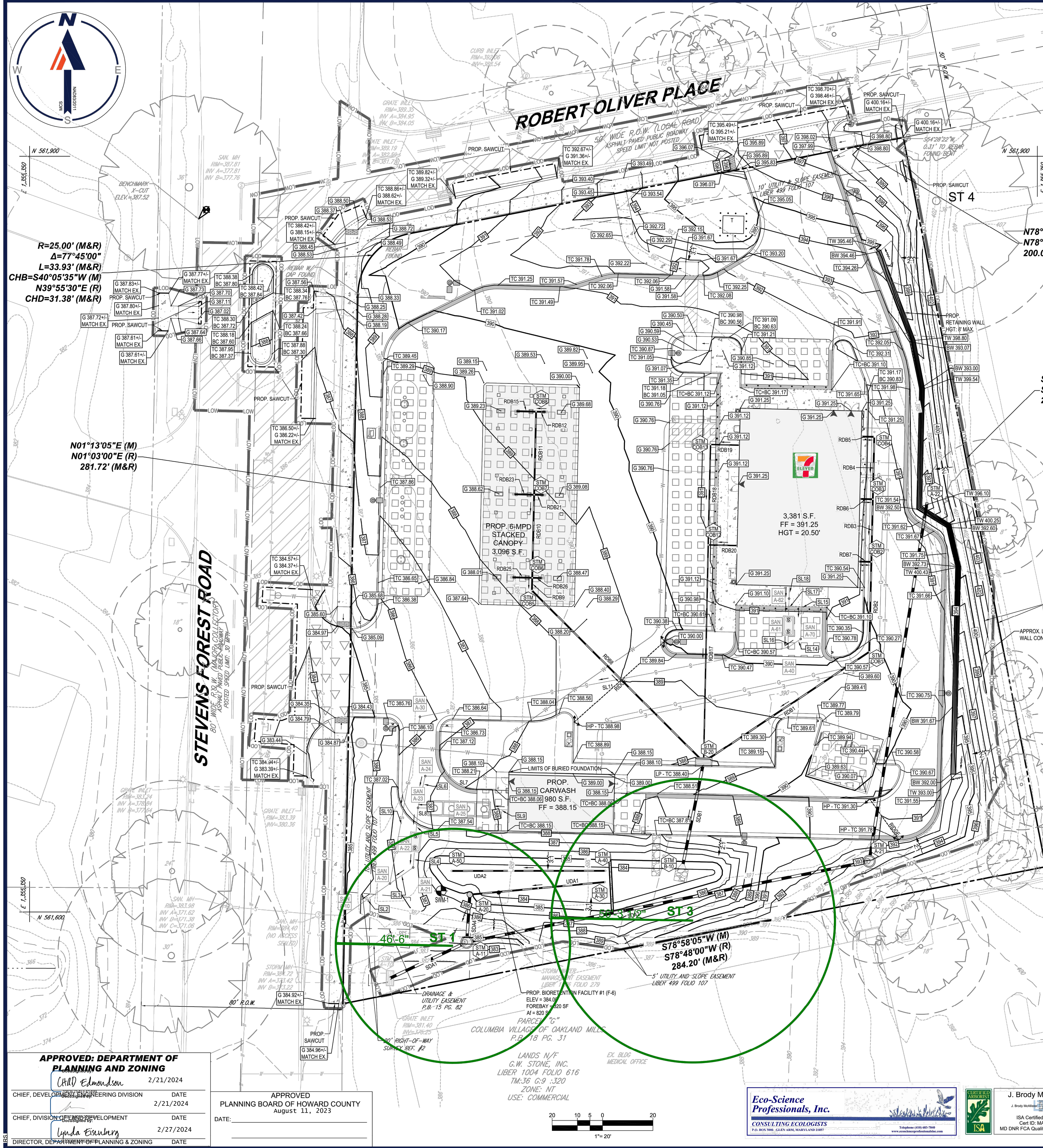
PROJECT: SITE DEVELOPMENT PLAN FOR

**SITE DEVELOPMENT PLAN**  
 FOR  
**CROSSROADS WEST, LLC.**  
 7-ELEVEN STEVENS FOREST  
 5901 & 5911 STEVENS FOREST ROAD  
 COLUMBIA, MARYLAND  
 TAX MAP 36, GRID 10, PARCEL 300,  
 LOT 8  
 HOWARD COUNTY  
 6TH ELECTION DISTRICT  
 ZONE: NT

**BOHLER**  
 901 DULANEY VALLEY ROAD, SUITE 801  
 TOWSON, MARYLAND 21204  
 Phone: (410) 821-7900  
 Fax: (410) 821-7987  
 MD@BohlerEng.com

SHEET TITLE:  
**FOREST CONSERVATION PLAN**  
 SHEET NUMBER:  
**37**

ORG. DATE - 8/29/23



N78°58'05"E (M)  
 N78°48'00"E (R)  
 200.00' (M&R)

S11°01'55"E (M)  
 S11°12'00"E (R)  
 295.00' (M&R)

LOT 7  
 COLUMBIA VILLAGE OF OAKLAND MILLS  
 LOT 7 REVISION TO LOT 5  
 P.B. 18 PG. 73

LANDS N/V  
 OAKLAND MILLS INTERFAITH, INC.  
 LIBER 5072 FOLIO 725  
 TM:36 C:10 :320  
 ZONE: NT  
 USE: EVENT CENTER

FOREST CONSERVATION PLAN NOTES

- There are no afforestation, reforestation or retention requirements for this project as the net tract area of the site is reduced by the existing impervious. No forest is present on the site and the afforestation/conservation thresholds are both zero for this project.
- Alternative Compliance has been granted to allow for the removal of two specimen trees onsite (WP-23-088). These trees will be removed by the proposed site grading. Mitigation of four 3" caliber landscaping trees will be provided onsite. These trees are shown on the landscape plans.

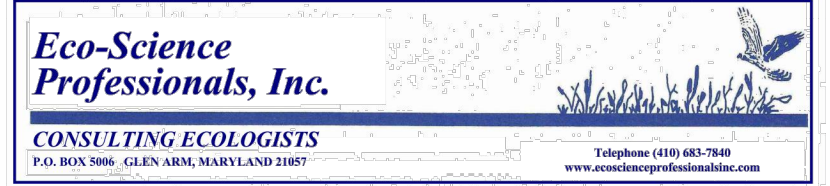
SOILS INFORMATION

SYMBOL	DESCRIPTION	STRUCTURAL LIMITATIONS	HYDROLOGIC GROUP	K FACTOR	HIGHLY ERODIBLE?
U <sub>6</sub>	URBAN LAND-UDORTMENTS COMPLEX, 0 TO 8% SLOPES	SOMEWHAT LIMITED	D	NOT RATED	NO

NOTE: ENTIRE SITE AND IMMEDIATE VICINITY IS OF THE SOIL TYPE LISTED ABOVE.

NOTES:

- SPOT ELEVATIONS NOTED AS I HAVE BEEN INTERPOLATED FROM EXISTING TOPOGRAPHY. CONTRACTOR IS TO VERIFY THESE SPOT ELEVATIONS PRIOR TO CONSTRUCTION, AND TO NOTIFY BOHLER IN WRITING IF THE ACTUAL ELEVATIONS DIFFER.
- CONTRACTOR TO ENSURE TOP OF GABION INFLOW PROTECTIONS TO BE FLUSH WITH TOP OF PAVEMENT AT CURB CUTS.



**APPROVED: DEPARTMENT OF PLANNING AND ZONING**  
 CHAD Edmondson 2/21/2024  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 2/21/2024

**APPROVED BOARD OF HOWARD COUNTY**  
 August 11, 2023  
 DATE: 2/27/2024  
 DIRECTOR, DEPARTMENT OF PLANNING & ZONING

LANDS N/V  
 G.W. STONE, INC.  
 LIBER 1004 FOLIO 616  
 TM:36 C:9 :320  
 ZONE: NT  
 USE: COMMERCIAL

