

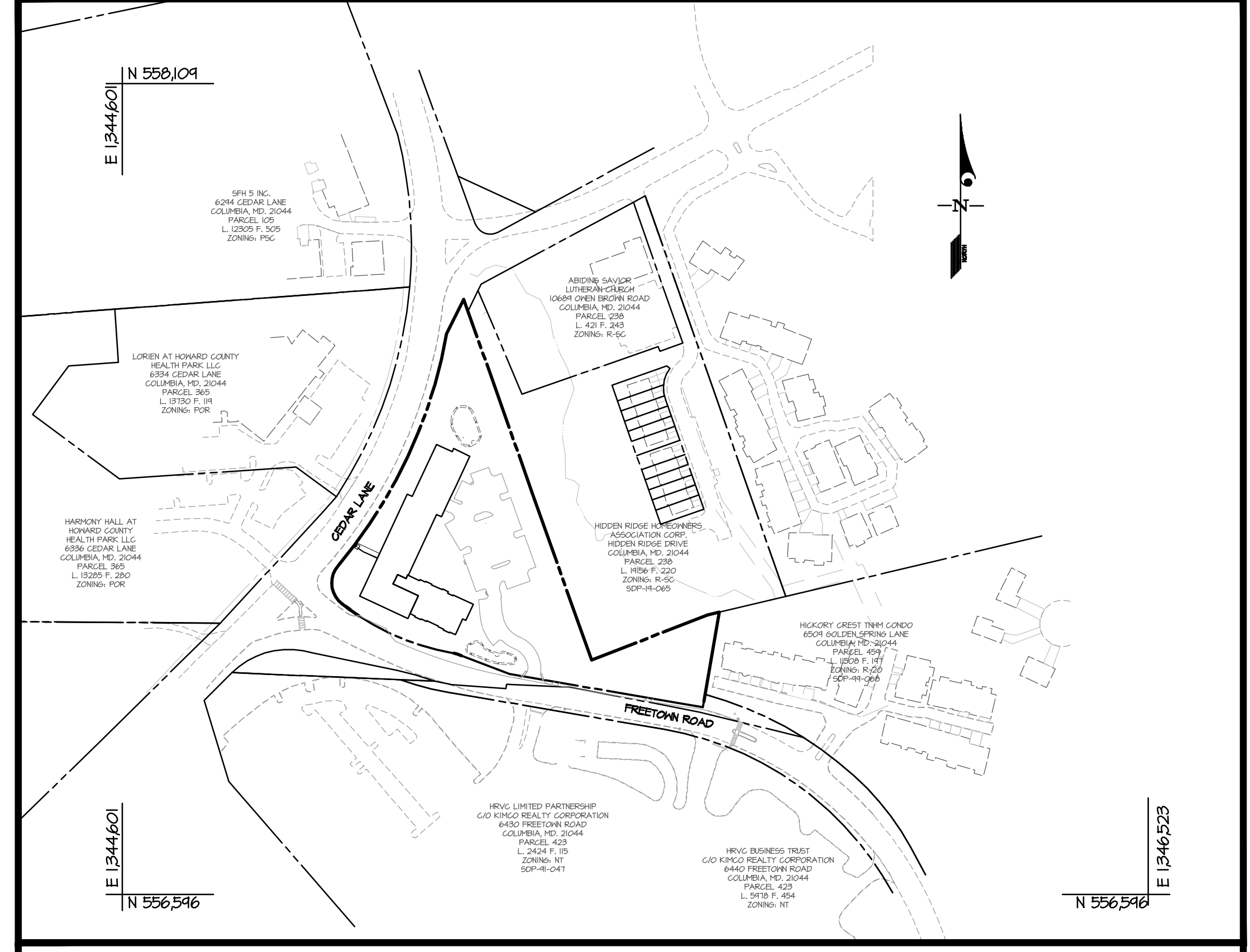
GENERAL NOTES

- 1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS, BUREAU OF ENGINEERING, CONSTRUCTION INSPECTION DIVISION AT (410) 319-1821 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-251-TITTI AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
4. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ASPHALT.
5. PROJECT BACKGROUND: LOCATION, TAX MAP #35, GRID I1 ZONING: POR (PLANNED OFFICE RESEARCH) ELECTION DISTRICT: 571 SEE SITE ANALYSIS BELOW FOR SITE AREA
6. THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, BUREAU OF UTILITIES AT (410) 319-4400 AT LEAST FIVE (5) WORKING DAYS PRIOR TO STARTING ANY EXCAVATION WORK.
7. PROPOSED USE: HOUSING COMMISSION HOUSING DEVELOPMENT-MULTI FAMILY
8. ALL PLAN DIMENSIONS ARE TO FACE OF CURB AND FACE OF BUILDING UNLESS OTHERWISE NOTED. DIMENSIONS ARE MEASURED PERPENDICULAR OR RADIIALLY BETWEEN ITEMS UNLESS OTHERWISE NOTED.
9. EXISTING TOPOGRAPHY IS PER FIELD RUN SURVEY INFORMATION BY GUTSCHICK, LITTLE & WHEEL ENGINEERING, AND FROM GIS TOPOGRAPHY. AND IS 2'-FOOT CONTOUR INTERVALS.
10. COORDINATES AND BEARINGS ARE BASED UPON THE '83 MD STATE COORDINATE SYSTEM (NAD '83) AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 351 & 3511.
11. SITE IS BEING DEVELOPED UNDER FOR REGULATIONS, AND SUPPLEMENTAL REGULATIONS SECTION 128.0.0 FOR HOWARD COUNTY ZONING AND ORDINANCES.
12. THE PREVIOUS DEVELOPMENT OF PLANNING AND ZONING FILE NUMBERS: ECP-22-040, WP-22-088, CONT., DPM CONT 24-5212-D, F-23-044. ALTERNATIVE COMPLIANCE SUBMITTED WITH THE ECP, UNDER WP-22-088.

- 13. THE ALTERNATIVE COMPLIANCE INCLUDES THE FOLLOWING:
1. REMOVAL OF SPECIFIC TREES (SEC. 16.102(a)(3)) AND PROVIDE MINIMUM OF 15% FOREST CONSERVATION OBLIGATION ON SITE. (SEC. 16.102(a)(2))
2. APPROVED FEBRUARY 2, 2023, WITH A CONDITION THAT 12 NATIVE TREES OF 3" DBH ARE PLANTED AS REPLACEMENT TREES AND ALL OTHER TREE CONSERVATION MEASURES ARE COMPLIED WITH.
3. GRADING OF STEEP SLOPES (SEC. 16.101(i)) APPROVED ON FEBRUARY 2, 2023, WITH A CONDITION THAT ALL REMAINING SLOPES ARE REVEGETATED AND STABILIZED.
3. IMPACT OF NON-TIDAL WETLANDS (SEC. 16.106(a)(1)) DEFERRED ON FEBRUARY 2, 2023. APPROVED ON AUGUST 3, 2023. ** SEE FULL CONDITIONS OF WP-22-088 THIS SHEET
13. WATER AND SEWER SERVICE IS PUBLIC PER CONTRACT NO. 24-5212-D.
14. THE MDE PERMIT TRACKING NUMBER IS 22-NT-3282/202261446, APPROVED ON JUNE 30 2023
15. ALL ON-SITE STORM DRAIN SYSTEMS ARE PRIVATE.
16. STORMWATER MANAGEMENT, SATISFYING ENVIRONMENTAL SITE DESIGN (ESD) CRITERIA, PROPOSED BY THESE PLANS INCLUDES 2 MICRO BIO-RETENTION (M-6) FACILITIES, AND PERVIOUS PAVING. THESE STORMWATER MANAGEMENT PRACTICES WILL BE PRIVATELY OWNED AND MAINTAINED. THERE IS ALSO 100-YEAR ATTENUATION WITH A STORMTECH SC740 POLYPROPYLENE CHAMBER SYSTEM ENVELOPED WITH STONE UNDER THE OUTDOOR PARKING LOT.
17. EXISTING UTILITIES ARE BASED ON DESIGN PLANS AND UTILITY COMPANY RECORDS.
18. THERE ARE NO KNOWN CEMETERIES, GRAVE SITES OR HISTORIC STRUCTURES LOCATED ON THE SUBJECT PROPERTY.
19. THERE ARE NO SCENIC ROADS WITHIN OR ADJACENT TO THE SUBJECT PROPERTY.
20. THERE ARE NO FLOODPLAINS WITHIN THE SUBJECT PROPERTY.
21. THE WETLANDS STUDY WAS PREPARED BY WETLANDS STUDIES AND SOLUTIONS, DATED DECEMBER 8 2021.
22. A NOISE STUDY WAS COMPLETED FOR THIS PROJECT, DATED MARCH 23, 2023 BY MILLER BEAM & PAGANELLI, INC., AND APPROVED ON JUNE 15, 2023, WITH THIS SDP.
23. THE STUDY CONCLUDES THAT NOISE ATTENUATION IN THE FORM OF UPGRADED WINDOW MATERIAL WILL BE REQUIRED ALONG THE FACADE THAT FACES CEDAR LANE AND FREETOWN ROAD.
24. THE TRAFFIC STUDY (AFFO) WAS PREPARED BY THE TRAFFIC GROUP, INC., DATED 12/20/2022 AND WAS APPROVED ON JUNE 15, 2023, WITH THIS SDP.
A. THE COUNTS WERE DONE ON MAY 3, 2022
B. SCHOOLS WERE IN SESSION ON THAT DAY.
C. THE REPORT WAS SUBMITTED AS PART OF SDP-23-026
D. THE INTERSECTIONS STUDIED WERE: FREETOWN ROAD AND CEDAR LANE, HARRIET TURMAN LANE AND FREETOWN ROAD, WINDSOR DRIVE AND SERENA DRIVE, MARTIN ROAD AND OWEN BROWN LANE, AND OWEN BROWN ROAD.
E. ALL STUDIED INTERSECTIONS ARE UNDER COUNTY JURISDICTION.
F. THE LEVEL OF SERVICE FOR ALL INTERSECTIONS FOR THE HORIZON YEAR 2025 IS 'A'.
G. NO MITIGATION IS REQUIRED.
25. THE BUILDING SHALL BE EQUIPPED WITH AN AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM W/ AN INSIDE METER.
24. ALL EXTERIOR LIGHT FIXTURES SHALL BE ORIENTED TO DIRECT LIGHT INWARDS AND DOWNWARDS AWAY FROM ALL ADJOINING RESIDENTIAL USE AREAS AND PUBLIC ROADS IN ACCORDANCE WITH SECTION 134.0 OF THE HOWARD COUNTY ZONING REGULATIONS.
25. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING SHALL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT AS NOTED ON SHEET 15. THE LANDSCAPE PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
** 3. MINIMUM PASSIVE RECREATIONAL AND/OR AMENITY OPEN SPACE SEE EXHIBIT ON SHEET 16.
* SECTION 128.0(J)(1)(3), SECTION 128.0(J)(3)

SITE DEVELOPMENT PLAN PATUXENT COMMONS

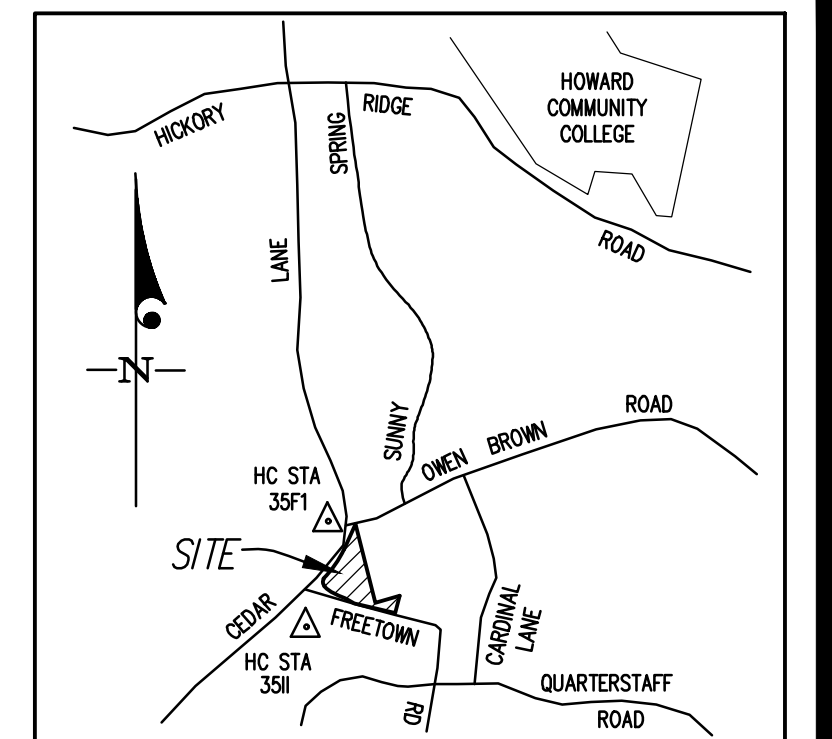
Proposed Lot 1 6441 Freetown Road (76 Units)



LOCATION MAP SCALE: 1" = 200'

UNIVERSAL DESIGN REQUIREMENTS

- 1. FOR MULTI-FAMILY APARTMENT DEVELOPMENTS, AN ACCESSIBLE PATH BETWEEN PARKING, DWELLING UNITS, AND COMMON AREAS THAT MEET ADA STANDARDS.
2. A NO-STEP ACCESS IS PROVIDED AT THE FRONT DOOR ENTRANCE, REAR BUILDING ENTRANCE, AND AT ENTRANCE DOOR FROM COMMON AREAS TO ALL COMMON AREAS AND DWELLING UNITS. (A NO-STEP ENTRANCE IS DESIRABLE, BUT NOT REQUIRED TO OTHER ENTRANCES).
3. 36" WIDE FRONT DOOR WITH EXTERIOR LIGHTING OF ENTRANCE (EXTERIOR DOORS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE EXTERIOR DOOR. THE ILLUMINATION OF THE EXTERIOR LIGHT SHALL BE CONTROLLED FROM INSIDE THE DWELLING UNIT. EXCEPTION: LIGHTS THAT ARE CONTINUOUSLY ILLUMINATED OR AUTOMATICALLY CONTROLLED).
4. ALL INTERIOR DOORWAYS AT LEAST 32" CLEAR WIDTH IN THE OPEN POSITION (2/3 DOORS ARE OR A 30" IS PREFERRED).
5. HALLWAYS AT LEAST 36" WIDE (40"-42" IS PREFERRED). THE MAXIMUM VERTICAL FLOOR LEVEL CHANGE IS 1/4" INCH EXCEPT WHEN A TAPERED THRESHOLD IS USED, THE MAXIMUM HEIGHT IS 1/4" INCH.
6. COMPLETE LIVING AREA INCLUDING PRIMARY BEDROOM AND BATH ON FIRST FLOOR (OR ELEVATOR ACCESS IF THE PROPERTY RENTAL APARTMENTS).
7. LEVER HANDLES ON INTERIOR AND EXTERIOR DOORS.
8. REINFORCED WALLS TO ALLOW FOR THE LATER INSTALLATION OF GRAB BARS AROUND THE TOILET, TUB AND SHOWER STALLS.
9. CLEAR FLOOR SPACE OF 30"x48" CENTERED ON THE APPLIANCE OR FIXTURE SHALL BE PROVIDED AT EACH FIXTURE IN THE KITCHEN. FLOOR SPACES CAN OVERLAP (PARK HOUSING ACT).
10. HANDICAPPED SPACE WITHIN THE BATHROOM TO PERMIT A PERSON USING A MOBILITY AID TO ENTER THE ROOM, CLOSE AND REOPEN THE DOOR WITH A CLEAR FLOOR SPACE OF 30"x48" OUTSIDE OF THE DOOR SWING. IN ADDITION, A CLEAR FLOOR SPACE OF 30"x48" SHOULD BE PROVIDED AT EACH FIXTURE AND CENTERED ON EACH FIXTURE. (THE 30"x48" FLOOR SPACES CAN OVERLAP EACH OTHER (PARK HOUSING)).
11. WALL MOUNTED LIGHT SWITCHES, ELECTRICAL OUTLETS, OR ENVIRONMENTAL CONTROLS SHALL BE MOUNTED FOR A REACH RANGE OF MINIMUM 15" OF THE FLOOR AND MAXIMUM 48" ABOVE THE FLOOR.

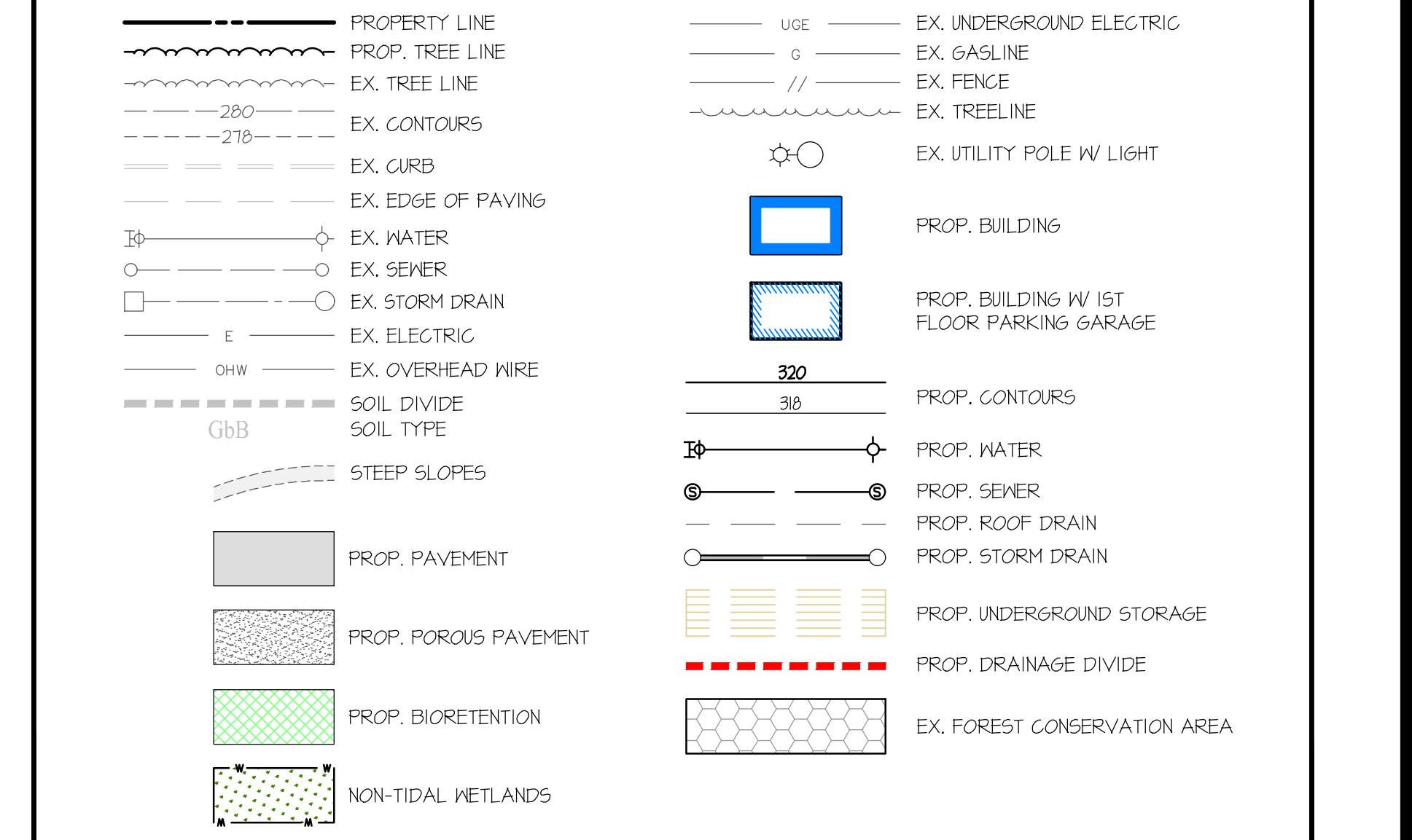


VICINITY MAP SCALE: 1"=2000'

Table with 2 columns: BENCHMARKS and coordinates. Row 1: 35F1 ELEV. 400.452 N = 551181.564 E = 1344215.526. Row 2: 35I1 ELEV. = 400.048 N = 551110.385 E = 1344215.612. Reference: ADC MAP 32 GRID E-6

STORMWATER MANAGEMENT PRACTICES table with columns: LOT NO., ADDRESS, BIORETENTION (F-6), FILTERRA (F-1), POROUS PAVEMENT (A-2), UNDERGROUND STORMWATER MANAGEMENT SYSTEM. Row 1: 1, 6441 FREETOWN RD., 2, 1, 1, 1.

LEGEND



FULL CONDITIONS OF WP-22-088 FROM GENERAL NOTE 12

- 1. GRANTS APPROVAL TO REMOVE 12 SPECIFIC TREES AS SHOWN ON THE AC EXHIBIT (S192, 3, 5, 6, 11, 20). THE REMOVAL OF ANY OTHER TREES ON THE SUBJECT PROPERTY IS NOT PERMITTED UNDER THIS APPROVAL.
2. THE REMOVAL OF 12 SPECIFIC TREES IS PERMITTED AND REQUIRES THE PLANTING OF 12 NATIVE SHADE TREES ON THE SITE PER § 16.102 (a) OF THE REGULATIONS. TREES SHALL BE A MIN OF 3" DBH AND SHALL BE SHOWN ON THE SDP LANDSCAPE AND TO ALL SHEETS. THE TREES MUST BE BONDED ALONG WITH THE DEVELOPER'S REQUIRED LANDSCAPING OR FOREST CONSERVATION EASEMENT.
3. THE APPLICANT MUST SATISFY THE REMAINING REFORESTATION OBLIGATION BY PURCHASING CREDITS FROM A FOREST REGENERATION BANK AND/OR FULFILLING THE OBLIGATION BY PLANTING OR RETAINING EXISTING FOREST AT A SUITABLE OFF-SITE LOCATION PREFERABLY WITHIN A HIGH PROSPECT LOCATION TO BE APPROVED BY THE COUNTY DURING SDP STAGE.
4. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE MDE PERMIT APPROVAL (PERMIT 22-NT-3282/202261446)

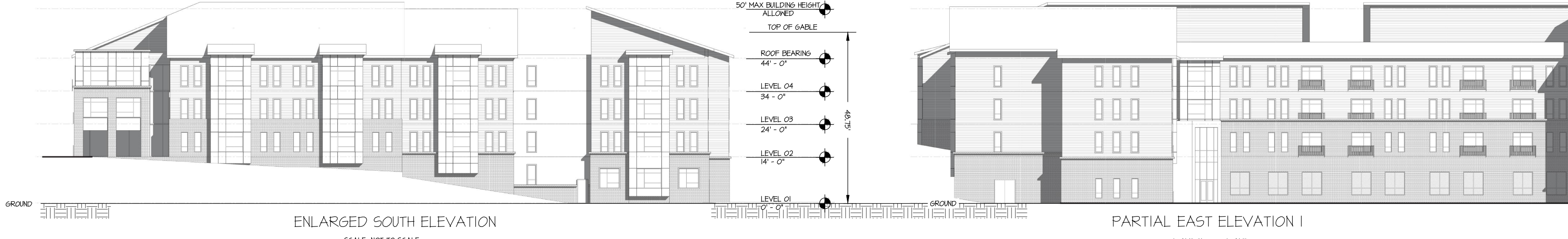
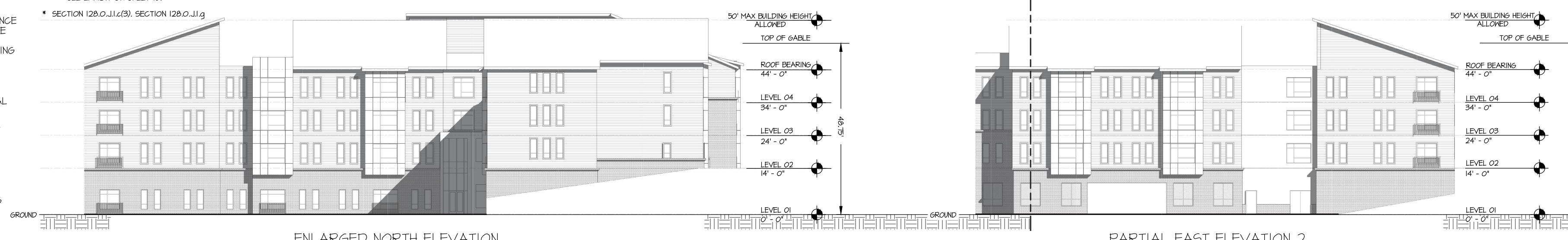
SHEET INDEX table with columns: NO., DESCRIPTION. Rows include: 1. COVER SHEET, 2. EXISTING CONDITIONS PLAN, 3. SITE DEVELOPMENT PLAN, 4. FRONTAGE IMPROVEMENT PLAN, 5. PAVING LAYOUT AND DELINEATION PLAN, 6. SITE DETAILS, 7. SEDIMENT CONTROL PLAN, 8. SEDIMENT CONTROL NOTES AND DETAILS, 9. ESD SWM STORM-DRAIN DRAINAGE AREA MAP, 10. ESD NOTES AND DETAILS, 11. SWM NOTES AND DETAILS, 12. SWM NOTES AND DETAILS, 13. SOIL BORING LOG, 14. UTILITY PROFILES, 15. LANDSCAPE PLAN, 16. LANDSCAPE NOTES AND DETAILS, 17. ON-SITE AND OFF-SITE FOREST CONSERVATION PLAN, 18. ON-SITE AND OFF-SITE FOREST CONSERVATION PLAN, 19. PARKING IN GARAGE LEVEL, 20. MAINTENANCE OF TRAFFIC PLAN - ROAD WIDENING - MOT 1, 21. MAINTENANCE OF TRAFFIC PLAN - SEWER LINE - MOT 2, 22. MAINTENANCE OF TRAFFIC PLAN - SEWER LINE - MOT 3, 23. RETAINING WALL, 24. RETAINING WALL, 25. RETAINING WALL, 26. RETAINING WALL, 27. SITE PHOTOMETRIC PLAN, 28. STRUCTURAL DETAILS FOR SWM STRUCTURE #101, 29. STRUCTURAL DETAILS FOR SWM STRUCTURE #101.

PERMIT INFORMATION CHART

Table with columns: BUILDING ADDRESS, SUBDIVISION NAME, PATUXENT COMMONS, SECTION/AREA, N/A, PARCEL: 108, 109 & 131, PLAT REF., 26636-26637 (F-23-044), ZONE, POR, TAX MAP, 35, GRID, IT, ELEC. DIST., 5, GENUSIS TRACT, 6056.02, WATER CODE, N/A, SEWER CODE, N/A.

COVER SHEET

Table with columns: SCALE, ZONING, G. L. W. FILE NO., AS SHOWN, POR, 20089, DATE, TAX MAP - GRID, SHEET, MAY, 2024, 35-17, 1 OF 29.



APPROVED PLANNING BOARD OF HOWARD COUNTY DATE: OCTOBER 31, 2023

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING On behalf of Lynda D. Eisenberg, AICP Date 6/6/2024. Chief, Division of Planning & Development Date 6/6/2024. Chief, Development Engineering Division Date

GLW PLANNING ENGINEERING SURVEYING logo and contact information: 3889 NATIONAL DRIVE | SUITE 250 | BURTONSVILLE, MD 20896 | GLWP.A.COM. PHONE: 301-421-4024 | BALT. 410-880-1820 | DC/VA: 301-985-2524 | FAX: 301-421-4188

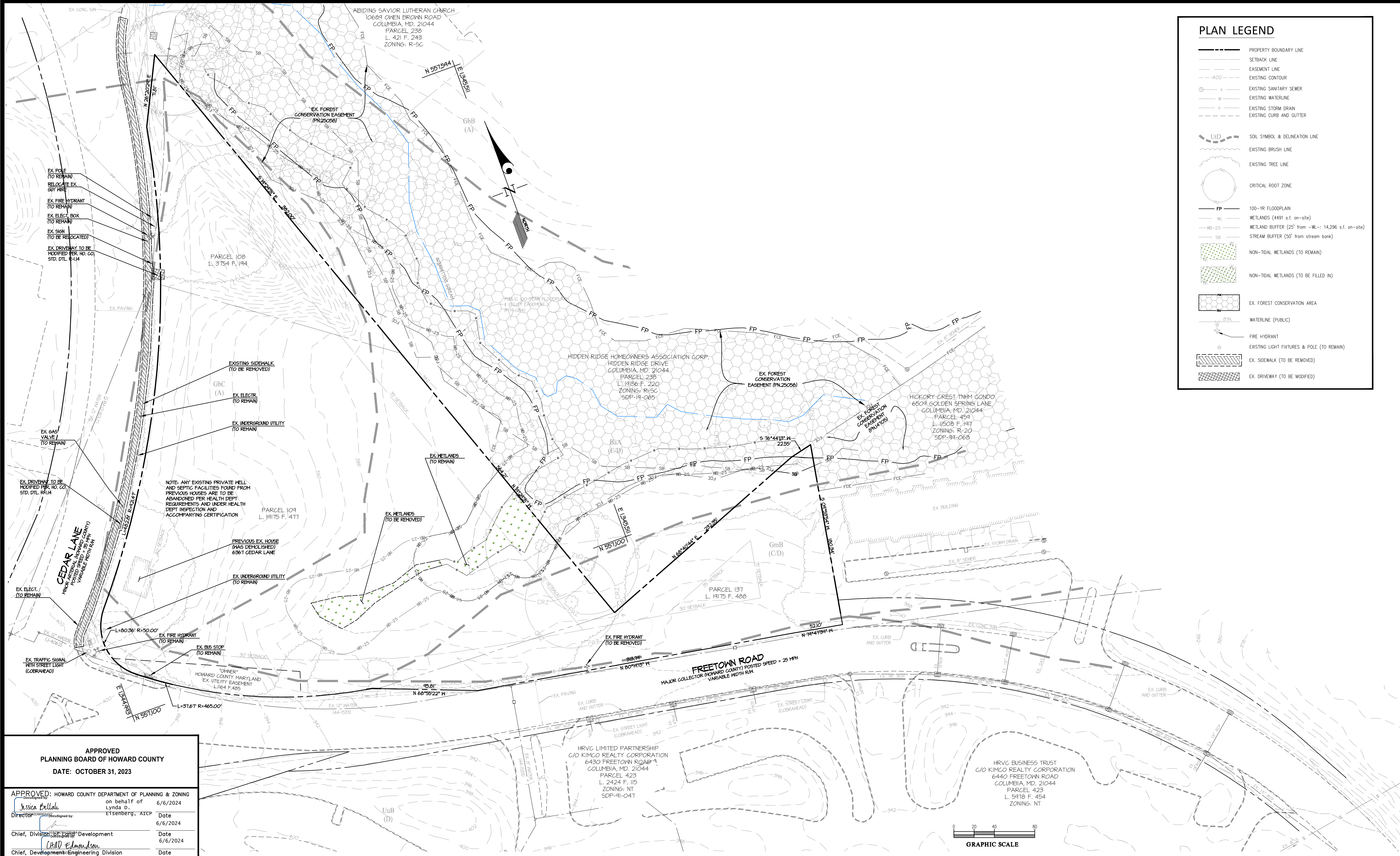
DESIGNED BY: LDD, DRAWN BY: LDD, CHECKED BY: TMR, DATE, REVISION, BY, APPR.

PREPARED FOR/OWNER: PATUXENT OWNER LP 1330 NEW HAMPSHIRE AVE. NW SUITE 116 WASHINGTON, DC 20036 ATTN: ELIZABETH EVERHART (202)-223-3405

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE PLANS 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. 17285, EXPIRATION DATE: 10/31/2025.

DocuSigned by: Todd Redden 02 AB736CDBC8566400... ELECTION DISTRICT No. 5

PATUXENT COMMONS LOT 1 EX. PARCELS 108, 109 & 131 PLATS 26636-26637 HOWARD COUNTY, MARYLAND



PLAN LEGEND

- PROPERTY BOUNDARY LINE
- SETBACK LINE
- EASEMENT LINE
- EXISTING CONTOUR
- EXISTING SANITARY SEWER
- EXISTING WATERLINE
- EXISTING STORM DRAIN
- EXISTING CURB AND GUTTER
- SOIL SYMBOL & DELINEATION LINE
- EXISTING BRUSH LINE
- EXISTING TREE LINE
- CRITICAL ROOT ZONE
- 100-YR FLOODPLAIN
- WETLANDS (4491 s.f. on-site)
- WETLAND BUFFER (25' from -WL-, 14,296 s.f. on-site)
- STREAM BUFFER (50' from stream bank)
- NON-TIDAL WETLANDS (TO REMAIN)
- NON-TIDAL WETLANDS (TO BE FILLED IN)
- EX. FOREST CONSERVATION AREA
- WATERLINE (PUBLIC)
- FIRE HYDRANT
- EXISTING LIGHT FIXTURES & POLE (TO REMAIN)
- EX. SIDEWALK (TO BE REMOVED)
- EX. DRIVEWAY (TO BE MODIFIED)

NOTE: ANY EXISTING PRIVATE WELL AND SEPTIC FACILITIES FOUND FROM PREVIOUS HOUSES ARE TO BE ABANDONED PER HEALTH DEPT REQUIREMENTS AND UNDER HEALTH DEPT INSPECTION AND ACCOMPANYING CERTIFICATION

- EX POLE (TO REMAIN)
- RELOCATE EX. GUY WIRE
- EX FIRE HYDRANT (TO REMAIN)
- EX ELECT. BOX (TO REMAIN)
- EX SIGN (TO BE RELOCATED)
- EX DRIVEWAY TO BE MODIFIED PER HO. CO. STD. DTL. R-114

- EX. DRIVEWAY TO BE MODIFIED PER HO. CO. STD. DTL. R-114
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APPROVED
PLANNING BOARD OF HOWARD COUNTY
 DATE: OCTOBER 31, 2023

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 on behalf of
 Lynda D. Eisenberg, AICP
 Director
 Date: 6/6/2024

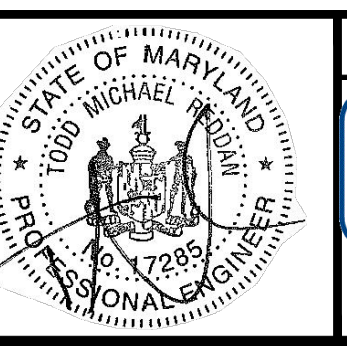
Chief, Division of Land Development
 Date: 6/6/2024

Chief, Development Engineering Division
 Date: 6/6/2024

DESIGNED BY:	DATE	REVISION	BY	APPR.
LDD				
DRAWN BY:				
LDD				
CHECKED BY:				
TMR				

PREPARED FOR/OWNER:
 PATUXENT OWNER LP
 1330 NEW HAMPSHIRE AVE. NW
 SUITE 116
 WASHINGTON, DC 20036
 ATTN: ELIZABETH EVERHART
 (202)-223-3405

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE PLANS 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. 17285, EXPIRATION DATE: MARCH 17, 2025



EXISTING CONDITION AND DEMOLITION PLAN

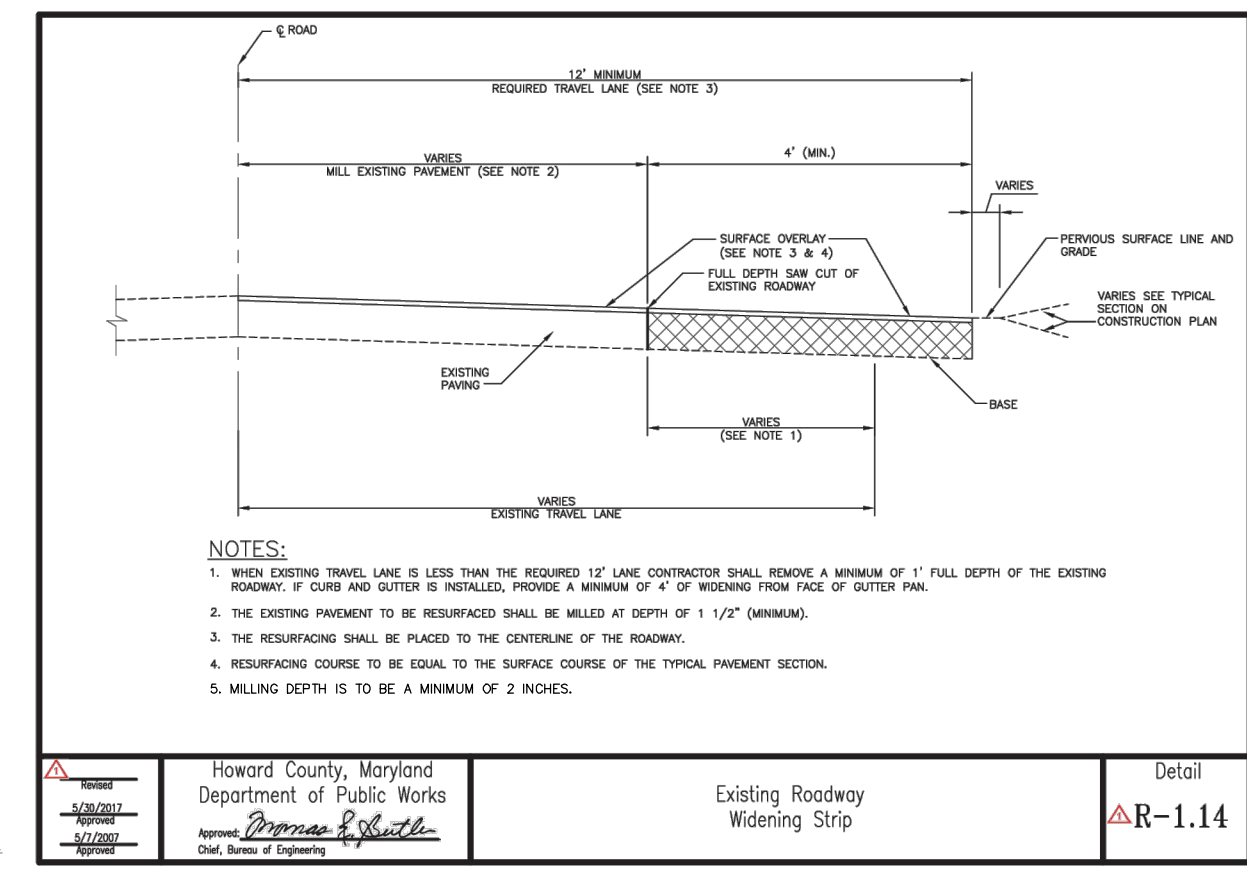
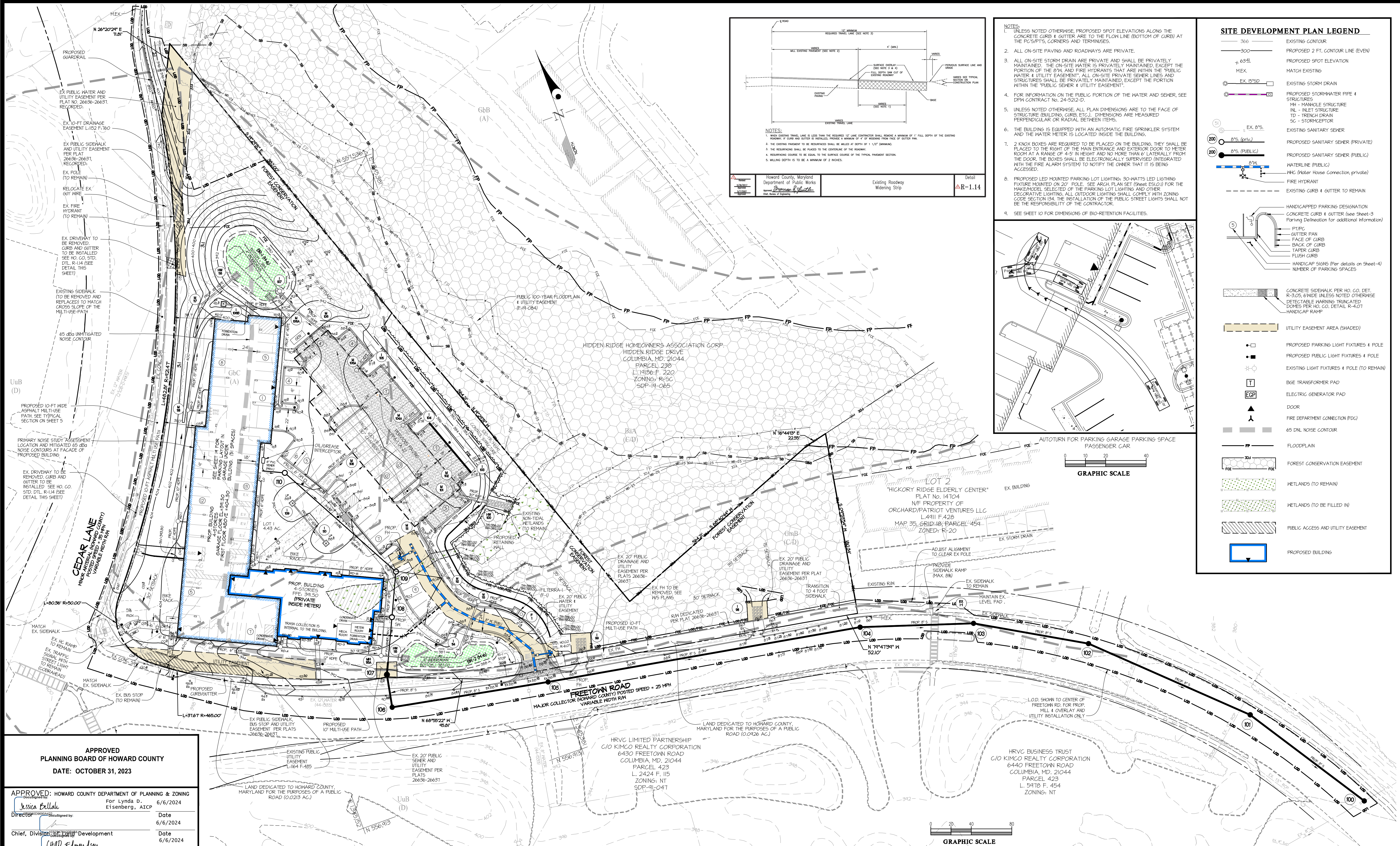
DocuSigned by:
Todd Redden
 AB736CDBC566400...
 05/24/24
 ELECTION DISTRICT No. 5

PATUXENT COMMONS
LOT 1
 EX. PARCELS 108, 109 & 137
 PLATS 26636-26637

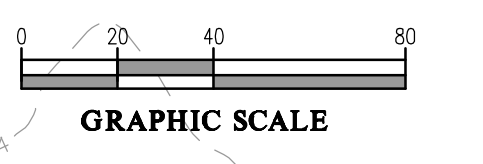
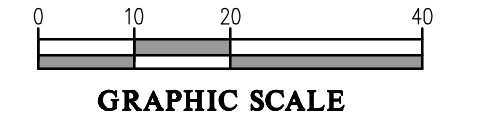
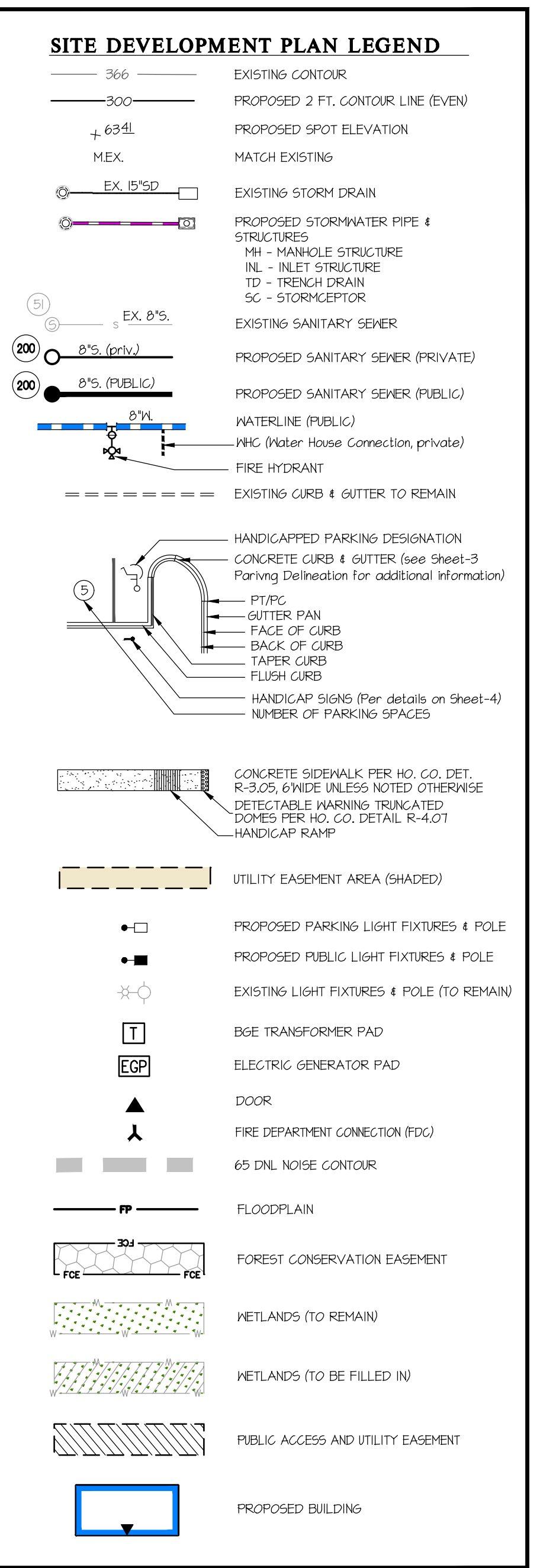
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
1"=40'	POR	20089
DATE	TAX MAP - GRID	SHEET
MAY, 2024	35-17	2 OF 29

L:\CADD\DRAWINGS\20089\PLANS BY GLW\SDP\20089_02_EXISTING CONDITIONS PLAN.dwg, PLOTTED: 5/22/2024, 1:32 PM, LAST SAVED: 5/22/2024, 1:04 PM, PLOTTED BY: TERRY LAYBURN



- NOTES:**
- UNLESS NOTED OTHERWISE, PROPOSED SPOT ELEVATIONS ALONG THE CONCRETE CURB & GUTTER ARE TO THE FLOW LINE (BOTTOM OF CURB) AT THE FC/SPTS, CORNERS AND TERMINUSES.
 - ALL ON-SITE PAVING AND ROADWAYS ARE PRIVATE.
 - ALL ON-SITE STORM DRAIN ARE PRIVATE AND SHALL BE PRIVATELY MAINTAINED. THE ON-SITE WATER IS PRIVATELY MAINTAINED EXCEPT THE PORTION OF THE 8" AND FIRE HYDRANTS THAT ARE WITHIN THE PUBLIC WATER & UTILITY EASEMENT. ALL ON-SITE PRIVATE SEWER LINES AND STRUCTURES SHALL BE PRIVATELY MAINTAINED EXCEPT THE PORTION WITHIN THE PUBLIC SEWER & UTILITY EASEMENT.
 - FOR INFORMATION ON THE PUBLIC PORTION OF THE WATER AND SEWER, SEE DPH CONTRACT NO. 24-5212-D.
 - UNLESS NOTED OTHERWISE, ALL PLAN DIMENSIONS ARE TO THE FACE OF STRUCTURE (BUILDING, CURB, ETC.). DIMENSIONS ARE MEASURED PERPENDICULAR OR RADIAL BETWEEN ITEMS.
 - THE BUILDING IS EQUIPPED WITH AN AUTOMATIC FIRE SPRINKLER SYSTEM AND THE WATER METER IS LOCATED INSIDE THE BUILDING.
 - 2 KNOX BOXES ARE REQUIRED TO BE PLACED ON THE BUILDING. THEY SHALL BE PLACED TO THE RIGHT OF THE MAIN ENTRANCE AND EXTERIOR DOOR TO METER ROOM AT A RANGE OF 4-5' IN HEIGHT AND NO MORE THAN 6' LATERALLY FROM THE DOOR. THE BOXES SHALL BE ELECTRONICALLY SUPERVISED (INTEGRATED WITH THE FIRE ALARM SYSTEM) TO NOTIFY THE OWNER THAT IT IS BEING ACCESSSED.
 - PROPOSED LED MOUNTED PARKING LOT LIGHTING: 30-WATTS LED LISTING FIXTURE MOUNTED ON 20' POLE. SEE ARCH PLAN SET (SHEET E510.1) FOR THE MAKE/MODEL SELECTED OF THE PARKING LOT LIGHTING AND OTHER DECORATIVE LIGHTING. ALL OUTDOOR LIGHTING SHALL COMPLY WITH ZONING CODE SECTION 134. THE INSTALLATION OF THE PUBLIC STREET LIGHTS SHALL NOT BE THE RESPONSIBILITY OF THE CONTRACTOR.
 - SEE SHEET 10 FOR DIMENSIONS OF BIO-RETENTION FACILITIES.



APPROVED PLANNING BOARD OF HOWARD COUNTY
 DATE: OCTOBER 31, 2023

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 For Lynda D. Eisenberg, AICP
 Director
 Date: 6/6/2024

Chief, Division of Land Development
 Date: 6/6/2024

Chief, Development Engineering Division
 Date:

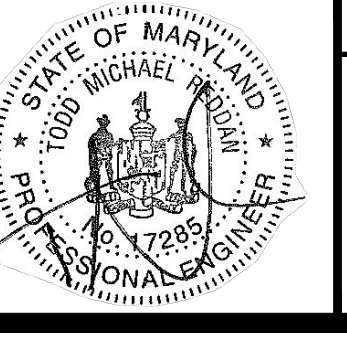
GLW
 PLANNING | ENGINEERING | SURVEYING

3809 NATIONAL DRIVE | SUITE 250 | BURTONTVILLE, MD 20886 | GLWPA.COM
 PHONE: 301-421-4024 | BALT. 410-880-1820 | DC/OVA: 301-989-2524 | FAX: 301-421-4198

DESIGNED BY:	DATE	REVISION	BY	APPR.
LDD				
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TMR				

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SITE DEVELOPMENT PLAN

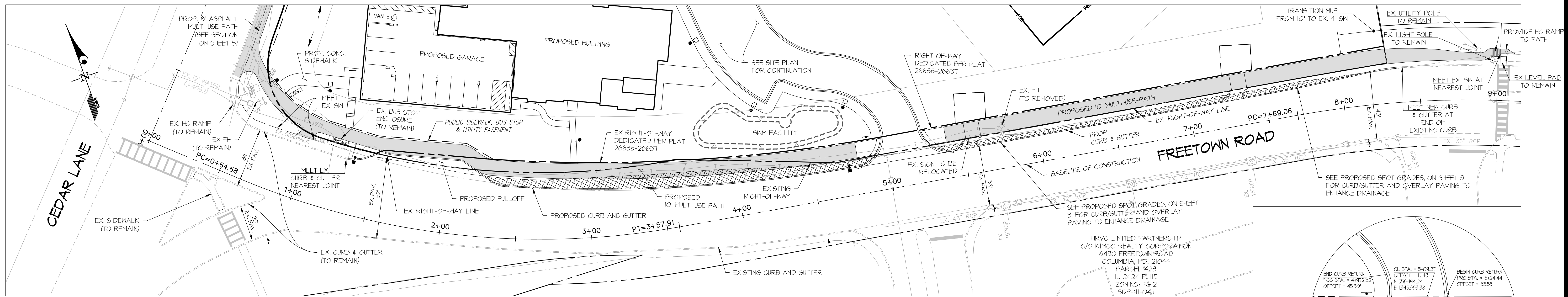
DocuSigned by:
Todd Redden
 06736DCDB566400...
 ELECTION DISTRICT No. 5

PATUXENT COMMONS LOT 1
 EX. PARCELS 108, 109 & 137
 PLATS 26636-26637

HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
1"=40'	POR	20089
DATE	TAX MAP - GRID	SHEET
MAY, 2024	35-17	3 OF 29

SDP-23-026



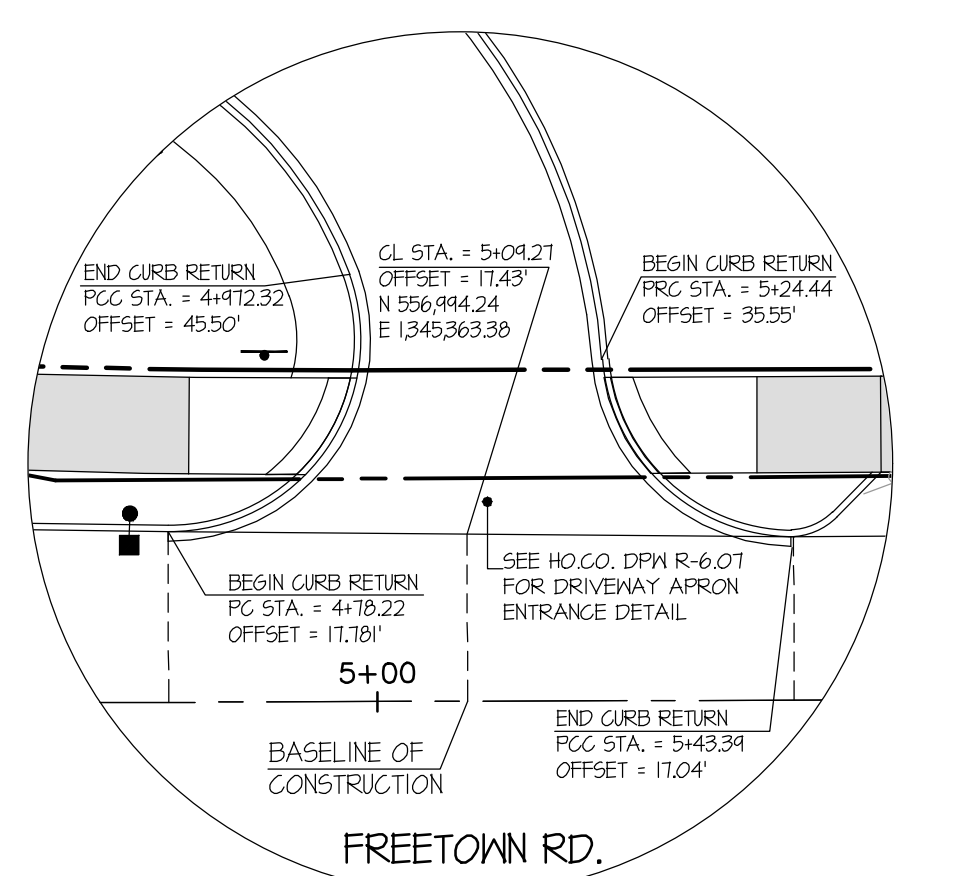
FRONTAGE IMPROVEMENT PLAN

SCALE: 1" = 30'

PAVEMENT MARKING LEGEND

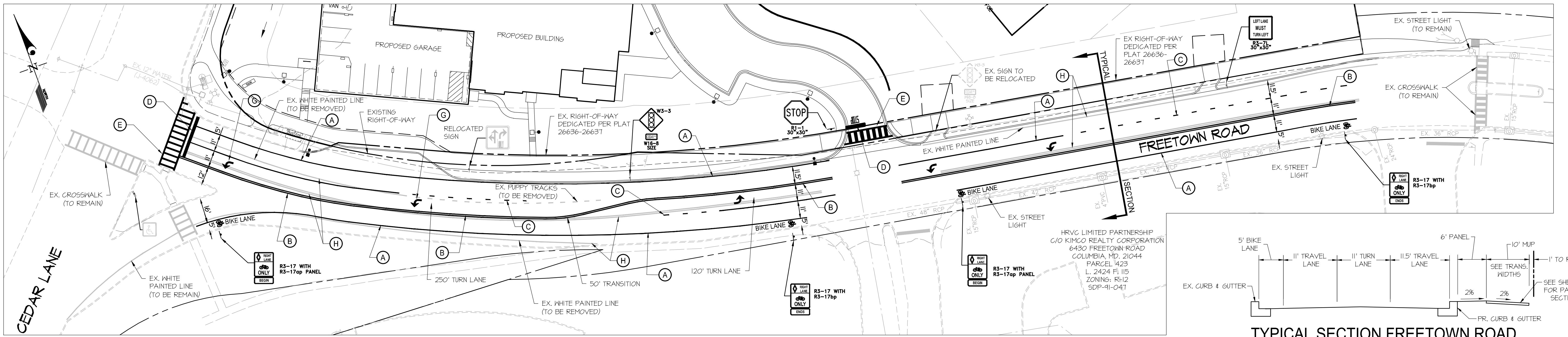
	MULTI-USE-PATH
	EXISTING PAVING (TO BE REMOVED)
	CONCRETE SIDEWALK

STREET LIGHT - LED COBRA MOUNTED ON A 30' BRONZE FIBERGLASS POLE USING A 6' ARM NOT INSTALLED BY CONTRACTOR



ENTRANCE BASELINE STATION EQUATION INSET
SCALE: 1" = 20'

NOTE: CONTACT HOWARD COUNTY TRAFFIC (410-313-5752) PRIOR TO REMOVING AND/OR INSTALLING ANY PAVEMENT MARKINGS.

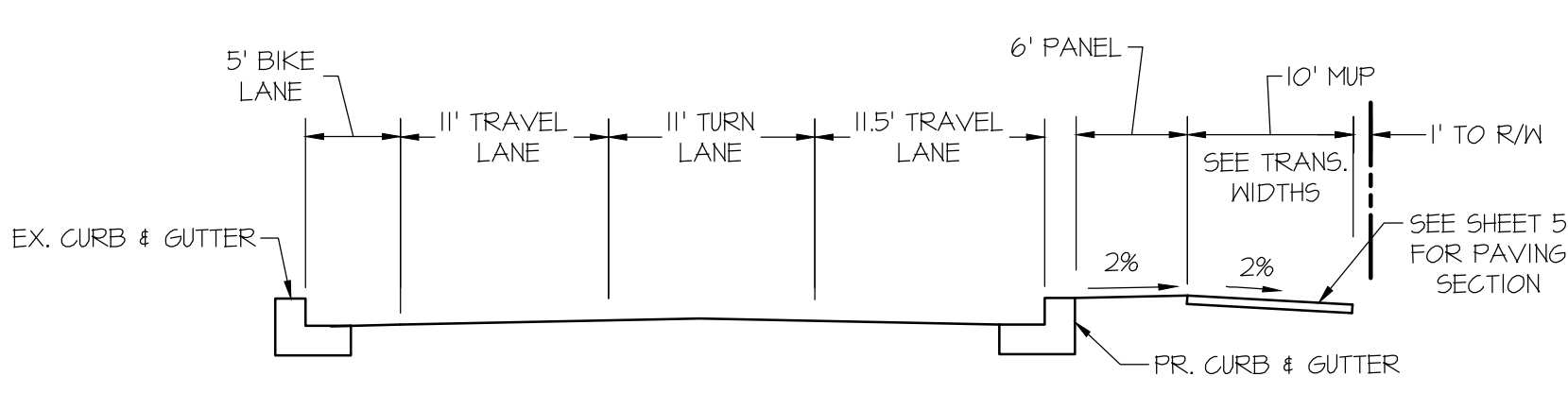


SIGNING AND MARKING PLAN

SCALE: 1" = 30'

TYPICAL SECTION FREETOWN ROAD

N.T.S.



SIGNING AND MARKING GENERAL NOTES

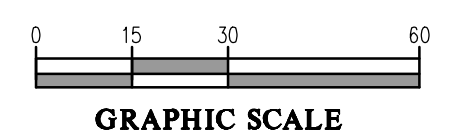
- ALL PROPOSED LONGITUDINAL PAVEMENT MARKINGS SHALL BE LEAD FREE REFLECTIVE THERMOPLASTIC MARKINGS.
- ALL PROPOSED TRANSVERSE LINES AND ARROWS SHALL BE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC MARKINGS.
- EXISTING PAVEMENT MARKINGS WITHIN LIMIT OF MILL AND OVERLAY ARE TO BE REMOVED PER HOWARD COUNTY ACCEPTABLE METHOD OF GRINDING.
- ALL PROPOSED PAVEMENT MARKINGS SHALL TIE INTO EXISTING PAVEMENT MARKINGS.

SIGNING LEGEND

- EXISTING SIGN (TO BE RELOCATED)
- EXISTING SIGN (TO REMAIN)
- PROPOSED SIGN

PAVEMENT MARKING LEGEND

- (A) INSTALL 5" SOLID WHITE THERMOPLASTIC PAVEMENT MARKING FOR LANE LINE OR EDGE LINE
- (B) INSTALL 5" DOUBLE YELLOW THERMOPLASTIC PAVEMENT MARKING FOR CENTER LINE
- (C) INSTALL 5" DOTTED (2 FT. SEGMENT, 6 FT. GAP) TYPE I "PUPPY TRACKS" WHITE THERMOPLASTIC PAVEMENT MARKING
- (D) INSTALL 24" SOLID WHITE THERMOPLASTIC PAVEMENT MARKING FOR STOP BAR
- (E) 12" SOLID WHITE FOR CROSSWALK HOWARD COUNTY STANDARD T-103
- (F) INSTALL 5", DASHED (10 FT SEGMENT, 30 FT GAP) WHITE THERMOPLASTIC PAVEMENT MARKING FOR LANE DIVIDE
- (G) ARROWS
- (H) EXISTING PAVEMENT MARKINGS TO BE REMOVED BY GRINDING



APPROVED PLANNING BOARD OF HOWARD COUNTY
DATE: OCTOBER 31, 2023

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
For Lynda D. Eisenberg, AICP
Date: 6/6/2024

Director: *Jessica Bellah*
Date: 6/6/2024

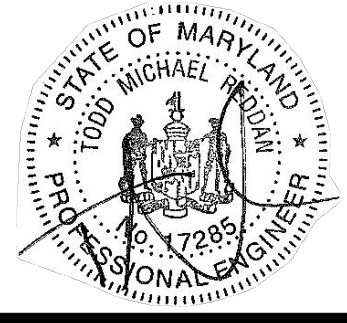
Chief, Division of Land Development: *Chad Edmondson*
Date: 6/6/2024

Chief, Development Engineering Division: _____
Date: _____

DESIGNED BY:	DRAWN BY:	CHECKED BY:	DATE	REVISION	BY	APPR.
LDD	LDD	TMR				

PREPARED FOR/OWNER:
PATUXENT OWNER LP
1330 NEW HAMPSHIRE AVE. NW
SUITE 116
WASHINGTON, DC 20036
ATTN: ELIZABETH EVERHART
(202)-223-3405

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 17295, EXPIRATION DATE: MARCH 17, 2025



FRONTAGE IMPROVEMENT, SIGNING AND MARKING PLAN

PATUXENT COMMONS LOT 1
EX. PARCELS 108, 109 & 137
PLATS 26636-26637

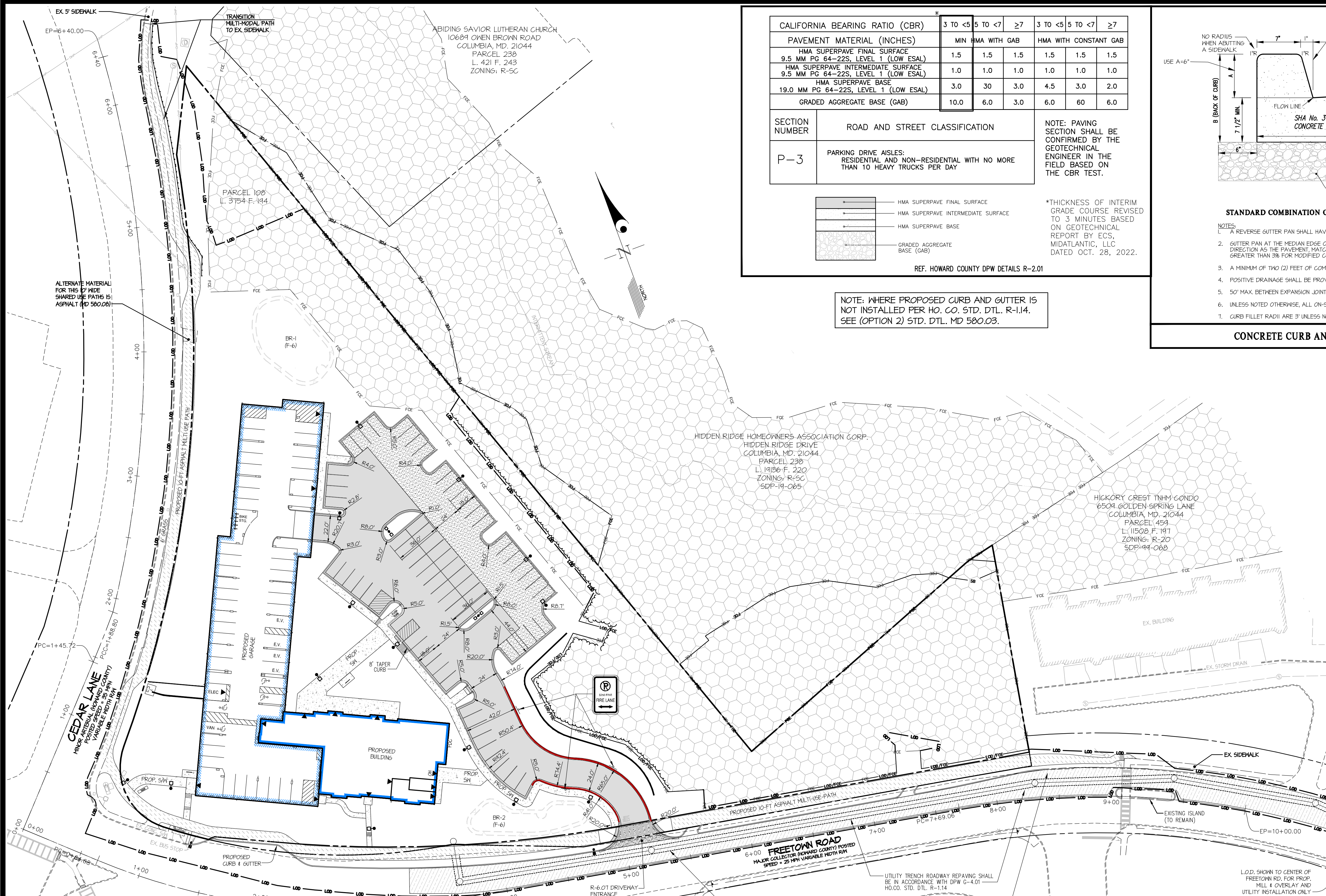
ELECTION DISTRICT No. 5

HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
1"=30'	POR	20089
DATE	TAX MAP - GRID	SHEET
MAY, 2024	35-17	4 OF 29

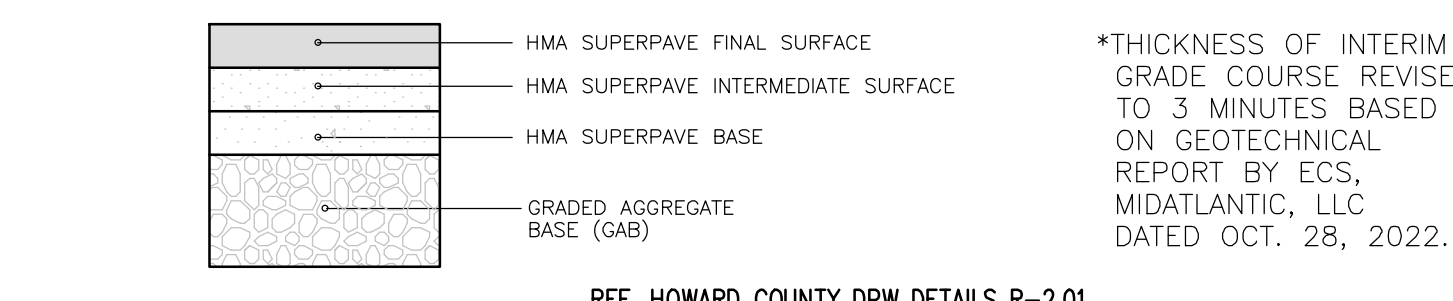
GLW
PLANNING | ENGINEERING | SURVEYING

3909 NATIONAL DRIVE | SUITE 250 | BURTONSVILLE, MD 20886 | GLWPA.COM
PHONE: 301-421-4024 | BALT: 410-880-1820 | DC&VA: 301-989-2524 | FAX: 301-421-4186



CALIFORNIA BEARING RATIO (CBR)	3 TO <5			5 TO <7			≥7		
	MIN	HMA WITH GAB	HMA WITH CONSTANT GAB	MIN	HMA WITH GAB	HMA WITH CONSTANT GAB	MIN	HMA WITH GAB	HMA WITH CONSTANT GAB
HMA SUPERPAVE FINAL SURFACE 9.5 MM PG 64-22S, LEVEL 1 (LOW ESAL)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
HMA SUPERPAVE INTERMEDIATE SURFACE 9.5 MM PG 64-22S, LEVEL 1 (LOW ESAL)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
HMA SUPERPAVE BASE 19.0 MM PG 64-22S, LEVEL 1 (LOW ESAL)	3.0	30	3.0	4.5	3.0	2.0			
GRADED AGGREGATE BASE (GAB)	10.0	6.0	3.0	6.0	60	6.0			

SECTION NUMBER	ROAD AND STREET CLASSIFICATION
P-3	PARKING DRIVE AISLES: RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY

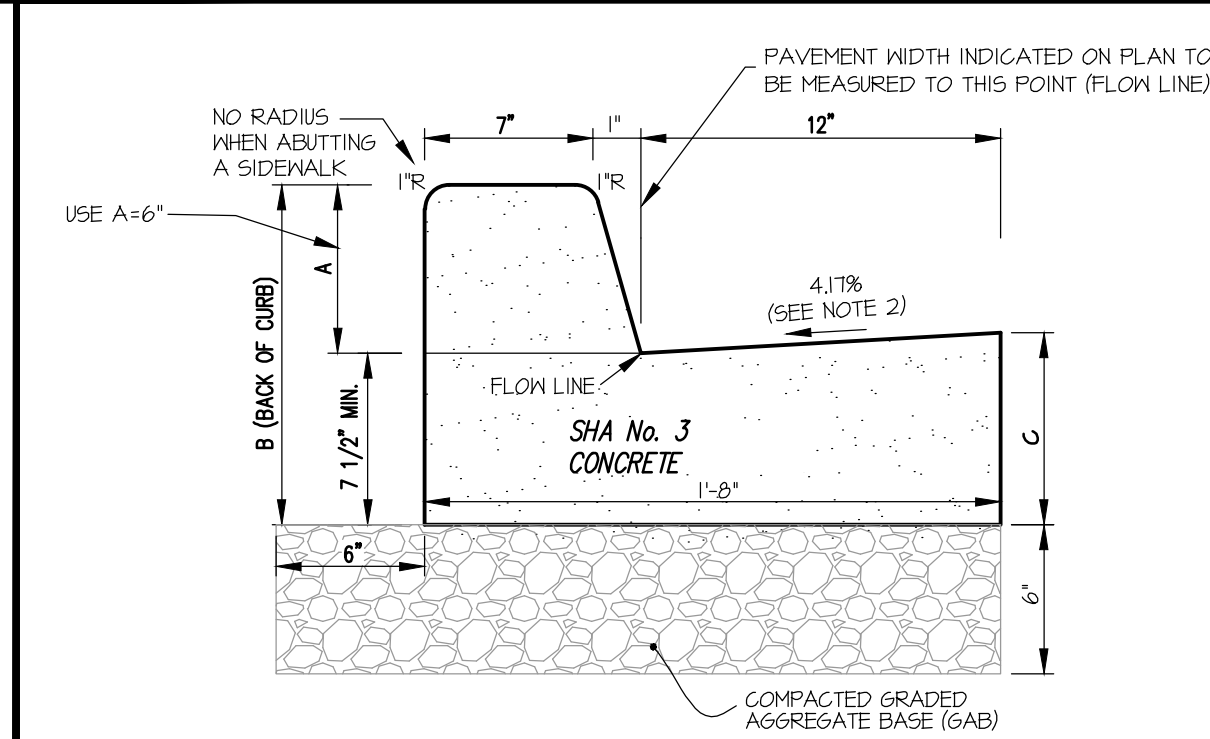


NOTE: PAVING SECTION SHALL BE CONFIRMED BY THE GEOTECHNICAL ENGINEER IN THE FIELD BASED ON THE CBR TEST.

*THICKNESS OF INTERIM GRADE COURSE REVISED TO 3 MINUTES' BASED ON GEOTECHNICAL REPORT BY ECS, MIDATLANTIC, LLC DATED OCT. 28, 2022.

REF. HOWARD COUNTY DPW DETAILS R-201

NOTE: WHERE PROPOSED CURB AND GUTTER IS NOT INSTALLED PER HO. CO. STD. DTL. R-114, SEE (OPTION 2) STD. DTL. MD 580.03.



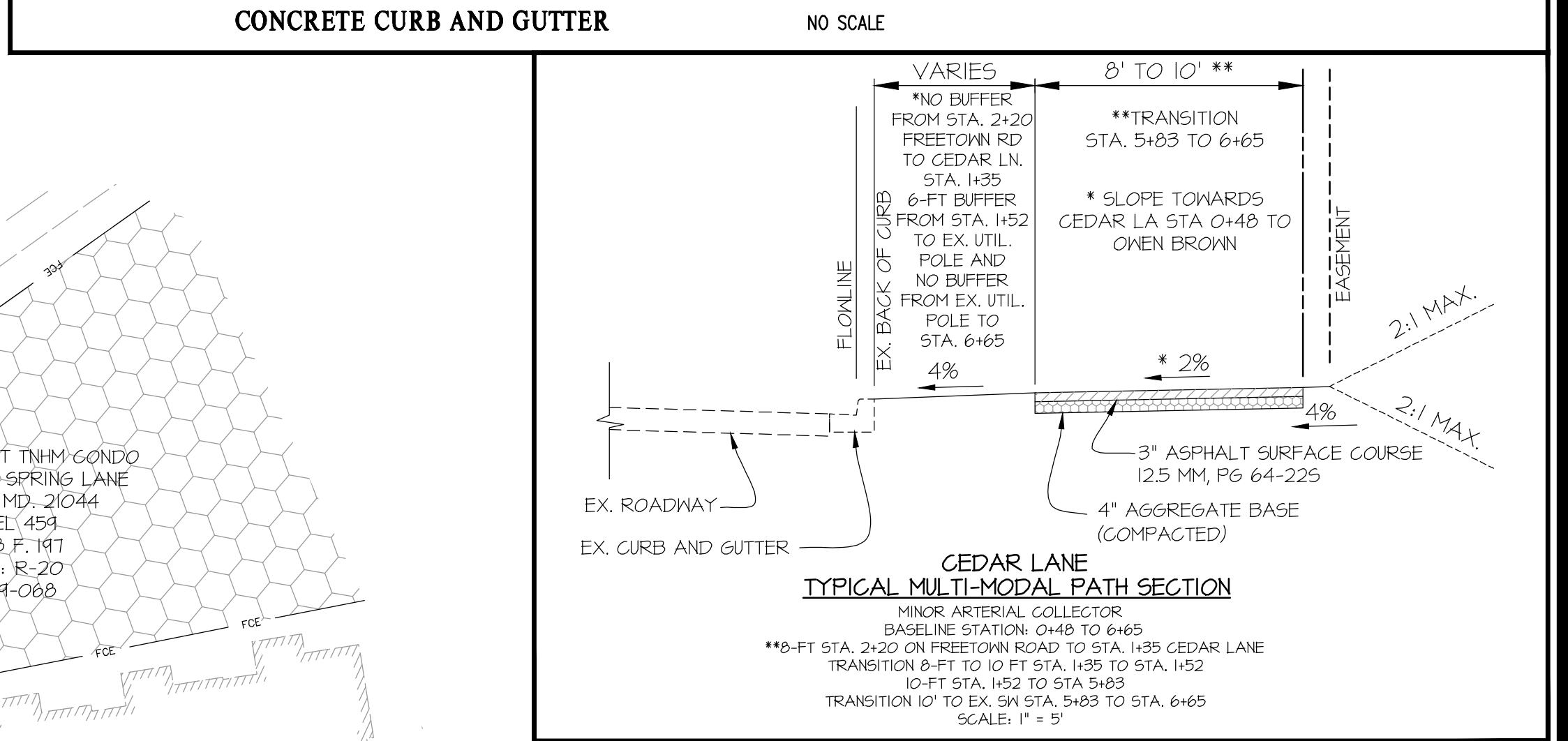
CURB TYPE	A	B	C
6" (R-4.0)	6"	1'-1 1/2"	7"
7" (R-3.0)	7 3/16"	1'-2 11/16"	8"
8"(SHA MD)	8"	16"	8"min.

STANDARD COMBINATION CURB AND GUTTER

NOTES:

- A REVERSE GUTTER PAN SHALL HAVE A GUTTER SLOPE OF 4.17% AWAY FROM THE FLOW LINE, AND SHALL NOT BE USED WHERE THIS CREATES A HAZARDOUS CONDITION.
- GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT, MATCH PAVEMENT CROSS SLOPE WHEN CURB IS LOCATED ON THE LOW SIDE OF SUPERELEVATED SECTION AND THE RATE OF SUPERELEVATION IS GREATER THAN 3% FOR MODIFIED CURB AND GUTTER.
- A MINIMUM OF TWO (2) FEET OF COMPACTED STABILIZED EARTH, OR EQUIVALENT, SHALL SUPPORT THE ENTIRE BACK OF CURB.
- POSITIVE DRAINAGE SHALL BE PROVIDED BOTH BEHIND THE CURB AND ALONG THE GUTTER AND FLOW LINE.
- 50' MAX. BETWEEN EXPANSION JOINTS & 10' MAX. BETWEEN CONTROL JOINTS.
- UNLESS NOTED OTHERWISE, ALL ON-SITE CURB & GUTTER ARE 6" HIGH (CURB & GUTTER IN PUBLIC RIGHT-OF-WAY SHALL BE 7"-TYPE).
- CURB FILLET RADII ARE 3" UNLESS NOTED OTHERWISE.

REF. HOWARD COUNTY DPW DETAILS R-3.01, R-9.01 & SHA MD 620.02



APPROVED PLANNING BOARD OF HOWARD COUNTY
DATE: OCTOBER 31, 2023

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
For Lynda D. Eisenberg, AICP
Date: 6/6/2024

Director: *Jessica Bellal*
Date: 6/6/2024

Chief, Division of Land Development: *David Edmondson*
Date: 6/6/2024

Chief, Development Engineering Division: _____
Date: _____

GLW
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3508 NATIONAL DRIVE | SUITE 250 | BURTONTSVILLE, MD 20896 | GLWPA.COM
PHONE: 301-421-4024 | BALT.: 410-880-1820 | DC&VA: 301-989-2524 | FAX: 301-421-4186

DESIGNED BY	DRAWN BY	CHECKED BY	DATE	REVISION	BY	APPR.
LDD	LDD	TMR				

PREPARED FOR/OWNER:
PATUXENT OWNER LP
1330 NEW HAMPSHIRE AVE. NW
SUITE 116
WASHINGTON, DC 20036
ATTN: ELIZABETH EVERHART
(202)-223-3405

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 17285, EXPIRATION DATE: 10/31/2025

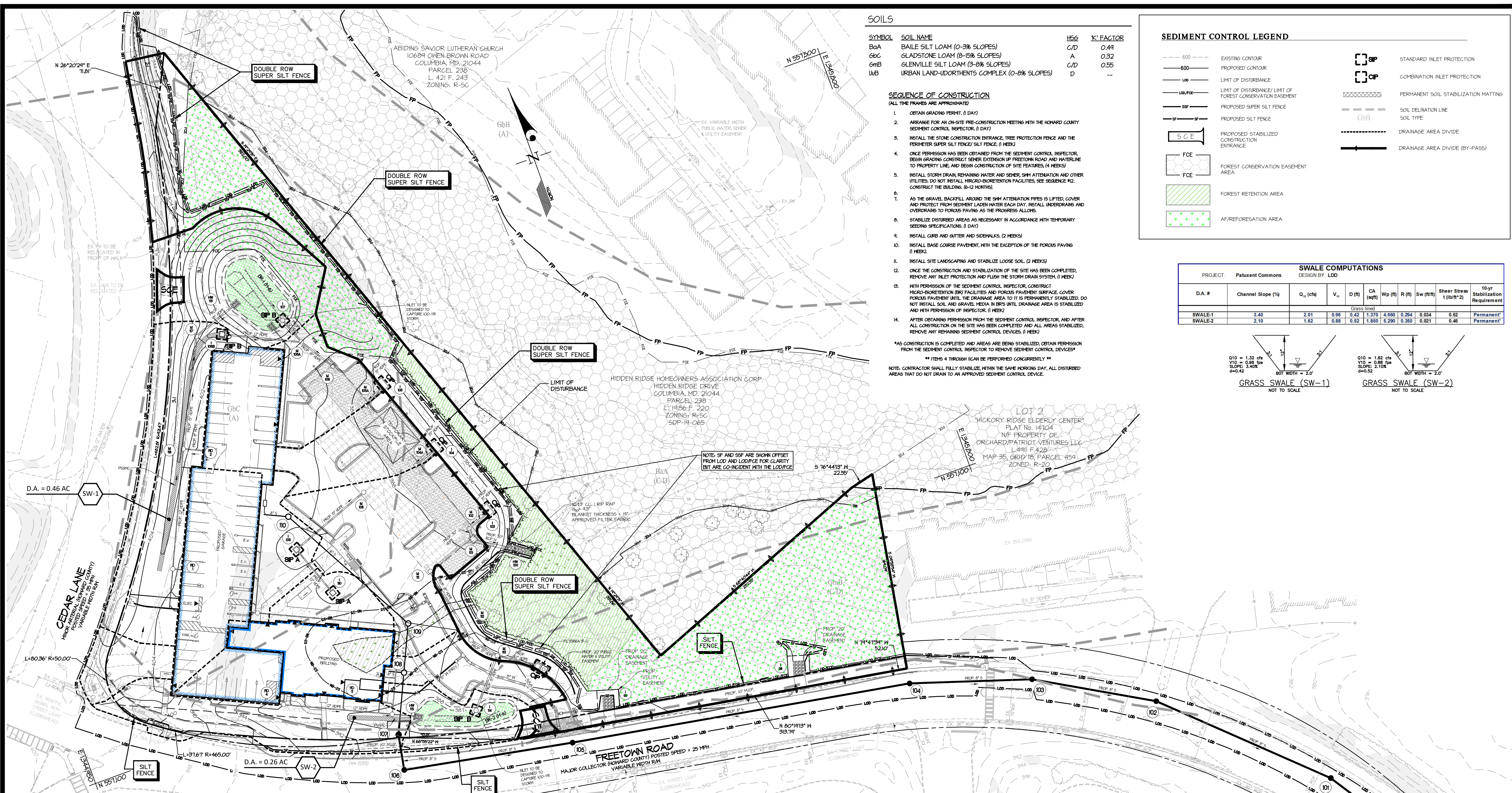
DocuSigned by:
Todd Redden
AB738CDCB566400...
05/24/24

PAVING LAYOUT AND FIRE SIGNAGE AND MARKING DELINEATION PLAN

PATUXENT COMMONS LOT 1
EX. PARCELS 108, 109 & 137
PLATS 26636-26637

ELECTION DISTRICT No. 5

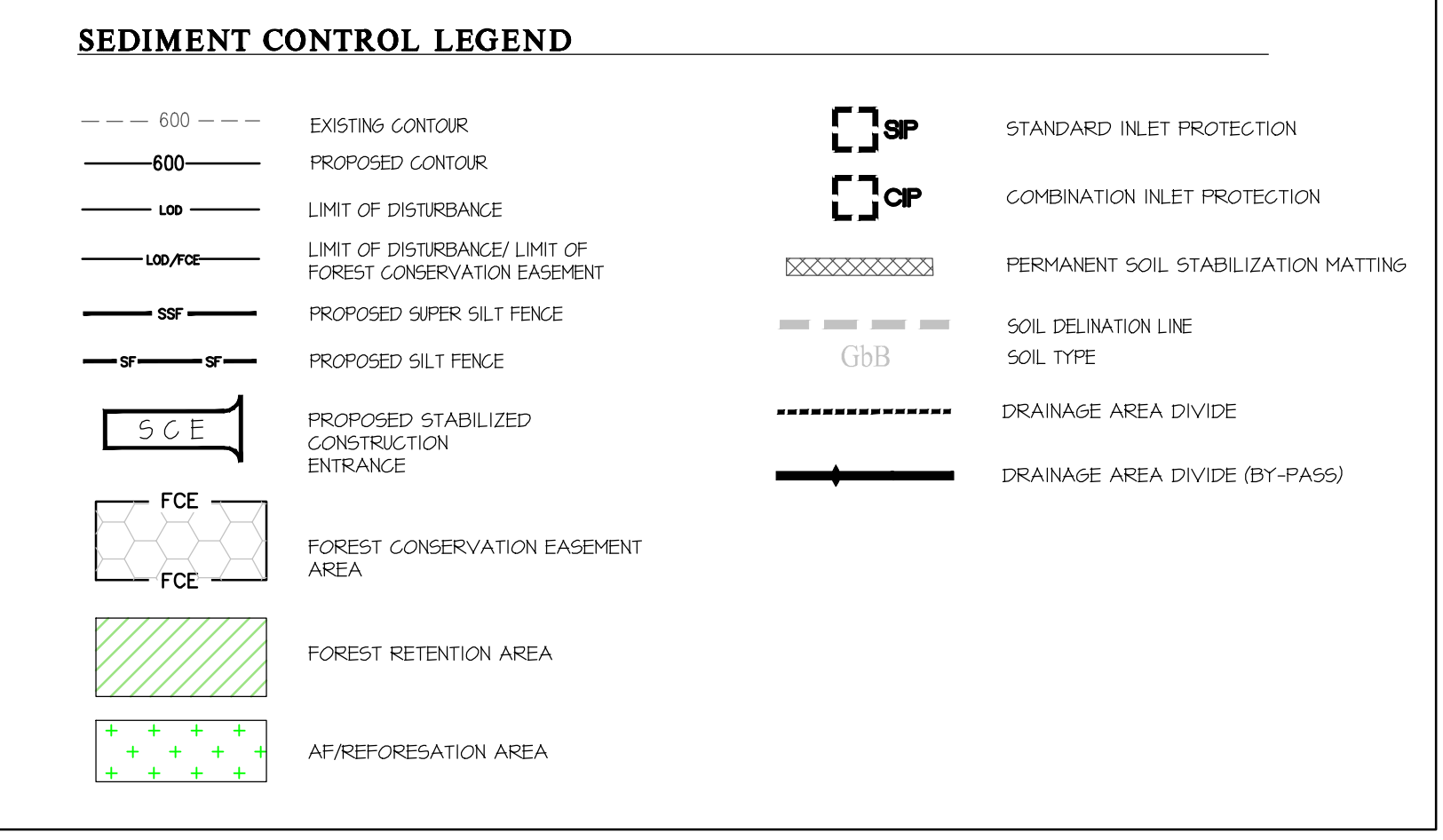
SCALE	ZONING	G. L. W. FILE NO.
1"=40'	POR	20089
DATE	TAX MAP - GRID	SHEET
MAY, 2024	35-17	5 OF 29



SOILS

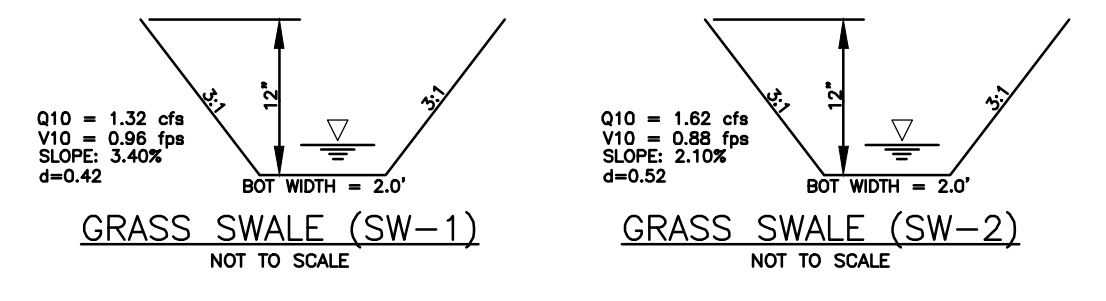
SYMBOL	SOIL NAME	HSG	K ¹ FACTOR
BaA	BAILE SILT LOAM (0-3% SLOPES)	C/D	0.41
GbC	GLADSTONE LOAM (8-15% SLOPES)	A	0.32
GmB	GLENVILLE SILT LOAM (3-8% SLOPES)	C/D	0.55
UB	URBAN LAND-UDORTHERTS COMPLEX (0-8% SLOPES)	D	--

- SEQUENCE OF CONSTRUCTION**
(ALL TIME FRAMES ARE APPROXIMATE)
- OBTAIN GRADING PERMIT (1 DAY)
 - ARRANGE FOR AN ON-SITE PRE-CONSTRUCTION MEETING WITH THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR (1 DAY)
 - INSTALL THE STONE CONSTRUCTION ENTRANCE, TREE PROTECTION FENCE AND THE PERIMETER SUPER SILT FENCE/ SILT FENCE (1 WEEK)
 - ONCE PERMISSION HAS BEEN OBTAINED FROM THE SEDIMENT CONTROL INSPECTOR, BEGIN GRADING CONSTRUCTION SEWER EXTENSION UP FREETOWN ROAD AND WATERLINE TO PROPERTY LINE, AND BEGIN CONSTRUCTION OF SITE FEATURES (4 WEEKS)
 - INSTALL STORM DRAIN, REMAINING WATER AND SEWER, SPM ATTENUATION AND OTHER UTILITIES. DO NOT INSTALL MICRO-BIORETENTION FACILITIES, SEE SEQUENCE #12. CONSTRUCT THE BUILDING (6-12 MONTHS)
 - AS THE GRAVEL BACKFILL AROUND THE SPM ATTENUATION PIPES IS LIFTED, COVER AND PROTECT FROM SEDIMENT LADEN WATER EACH DAY. INSTALL UNDERDRAINS AND OVERDRAINS TO POROUS PAVING AS THE PROCESS ALLOWS.
 - STABILIZE DISTURBED AREAS AS NECESSARY IN ACCORDANCE WITH TEMPORARY SEEDING SPECIFICATIONS (1 DAY)
 - INSTALL CURB AND GUTTER AND SIDEWALKS (2 WEEKS)
 - INSTALL BASE COURSE PAVEMENT, WITH THE EXCEPTION OF THE POROUS PAVING (1 WEEK)
 - INSTALL SITE LANDSCAPING AND STABILIZE LOOSE SOIL (2 WEEKS)
 - ONCE THE CONSTRUCTION AND STABILIZATION OF THE SITE HAS BEEN COMPLETED, REMOVE ANY INLET PROTECTION AND FLUSH THE STORM DRAIN SYSTEM (1 WEEK)
 - WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, CONSTRUCT MICRO-BIORETENTION (BR) FACILITIES AND POROUS PAVEMENT SURFACE. COVER POROUS PAVEMENT UNTIL THE DRAINAGE AREA TO IT IS PERMANENTLY STABILIZED. DO NOT INSTALL SOIL AND GRAVEL MEDIA IN BR'S UNTIL DRAINAGE AREA IS STABILIZED AND WITH PERMISSION OF INSPECTOR (1 WEEK)
 - AFTER OBTAINING PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR, AND AFTER ALL CONSTRUCTION ON THE SITE HAS BEEN COMPLETED AND ALL AREAS STABILIZED, REMOVE ANY REMAINING SEDIMENT CONTROL DEVICES (1 WEEK)
- *AS CONSTRUCTION IS COMPLETED AND AREAS ARE BEING STABILIZED, OBTAIN PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR TO REMOVE SEDIMENT CONTROL DEVICES*
- ** ITEMS 4 THROUGH 11 CAN BE PERFORMED CONCURRENTLY **
- NOTE: CONTRACTOR SHALL FULLY STABILIZE WITHIN THE SAME WORKING DAY, ALL DISTURBED AREAS THAT DO NOT DRAIN TO AN APPROVED SEDIMENT CONTROL DEVICE.



SWALE COMPUTATIONS

PROJECT:	Patuxent Commons	DESIGN BY:	LDD							
D.A. #	Channel Slope (%)	Q ₁₀ (cfs)	V ₁₀	D (ft)	CA (sqft)	Wp (ft)	R (ft)	Sw (ft)	Shear Stress t (lb/ft ²)	10-yr Stabilization Requirement
SWALE-1	3.40	2.01	0.98	0.42	1,370	4.680	0.284	0.034	0.62	Permanent
SWALE-2	2.10	1.62	0.88	0.52	1,850	5,290	0.350	0.021	0.46	Permanent



APPROVED PLANNING BOARD OF HOWARD COUNTY
DATE: OCTOBER 31, 2023

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
For Lynda D. Eisenberg, AICP
Director
Date: 6/6/2024

Chief, Division of Land Development
Date: 6/6/2024

DESIGNED BY: **LDD**
DRAWN BY: **LDD**
CHECKED BY: **TMR**

DATE: _____
DATE: _____
DATE: _____

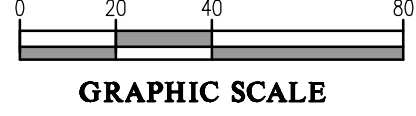
OWNER'S/DEVELOPER'S/BUILDER'S CERTIFICATION

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

DocuSigned by:
Sarah Constant 06/05/24
OWNER'S/DEVELOPER'S/BUILDER'S SIGNATURE
Sarah constant
PRINTED NAME & TITLE

HRVC LIMITED PARTNERSHIP
C/O KIMCO REALTY CORPORATION
6430 FREETOWN ROAD
COLUMBIA, MD, 21044
PARCEL 423
L. 2424 F. 115
ZONING: NT
SDP-41-047

HRVC BUSINESS TRUST
C/O KIMCO REALTY CORPORATION
6440 FREETOWN ROAD
COLUMBIA, MD, 21044
PARCEL 425
L. 5478 F. 454
ZONING: NT



GLW
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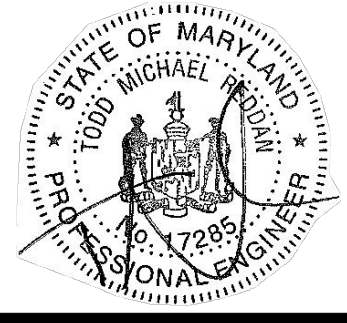
3809 NATIONAL DRIVE | SUITE 250 | BURTONTSVILLE, MD 20866 | GLWPA.COM
PHONE: 301-421-4024 | BALT: 410-880-1820 | DC&VA: 301-989-2524 | FAX: 301-421-4198

DESIGNED BY:	DATE:	REVISION:	BY:	APPR.:
LDD				
LDD				
TMR				

PREPARED FOR/OWNER:
PATUXENT OWNER LP
1330 NEW HAMPSHIRE AVE. NW
SUITE 116
WASHINGTON, DC 20036
ATTN: ELIZABETH EVERHART
(202)-223-3405

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 17285, EXPIRATION DATE: 06/30/17, 2025



SEDIMENT CONTROL PLAN

DocuSigned by:
Todd Reddan
06/05/24
OR AB736CDBC566400...
ELECTION DISTRICT No. 5

PATUXENT COMMONS LOT 1

EX. PARCELS 108, 109 & 137
PLATS 266362637

HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
1"=40'	POR	20089
DATE	TAX MAP - GRID	SHEET
MAY, 2024	35-17	7 OF 29

B-4.2 STANDARD 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.

CRITERIA: WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED. A. SOIL PREPARATION 1. TEMPORARY STABILIZATION

- a. SEEDING PREPARATION CONSISTS OF LOOSING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT... b. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS...

- c. SOIL TESTS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE... d. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL... e. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION...

- B. TOPSOILING 1. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION... 2. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS...

- 3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE: a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH... b. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS...

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

- 5. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION... 3. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS) 1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES...

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.

CRITERIA: TO THE SURFACE OF ALL PERMETER CONTROL, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

- A. SEEDING 1. SPECIFICATIONS a. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW... b. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS...

- 2. APPLICATION a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROPP OR BROADCAST SPREADERS... b. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER)...

- B. MULCHING 1. MULCH MATERIALS (IN ORDER OF PREFERENCE) a. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY... b. WOOD CELLULOSE FIBER MULCH MUST BE MANUFACTURED AND PROCESSED IN SUCH A MANNER...

- 2. APPLICATION a. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING... b. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER...

- 3. ANCHORING a. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER... b. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE...

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.

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

- 1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDNESS ZONE... 2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES...

TEMPORARY SEEDING SUMMARY TABLE with columns: SEED MIXTURE, APPLICATION RATE, SEEDING DATES, SEEDING DEPTHS, FERTILIZER RATE, LIME RATE.

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.

- 1. THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN... 2. THE FOOTPRINT OF THE STOCKPILE MUST BE SIZED TO ACCOMMODATE THE ANTICIPATED VOLUME OF MATERIAL...

STANDARDS AND SPECIFICATIONS FOR DUST CONTROL

DEFINITION: CONTROLLING THE SUSPENSION OF DUST PARTICLES FROM CONSTRUCTION ACTIVITIES. PURPOSE: TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES TO REDUCE ON AND OFF-SITE DAMAGE INCLUDING HEALTH AND TRAFFIC HAZARDS.

- 1. MULCHES: SEE SECTION B-4.2 SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS... 2. VEGETATIVE COVER: SEE SECTION B-4.4 TEMPORARY STABILIZATION... 3. WATER CURTAINS: WATER CURTAINS ARE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING...

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.

CRITERIA: TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

- 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 HARDNESS ZONE... b. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES...

- 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 BASED ON THE SITE CONDITIONS...

- 3. KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MAINTENANCE... 4. KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY...

- 6. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES: WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1... 7. TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION... 8. ADDITIONAL SEDIMENT CONTROL SHALL BE PROVIDED, IF DEEMED NECESSARY BY THE CD, THE SITE AND ALL CONTROLS SHALL BE INSPECTED BY THE PERMITS DIVISION...

PERMANENT SEEDING SUMMARY

PERMANENT SEEDING SUMMARY TABLE with columns: No., SPECIES, APPLICATION RATE, SEEDING DATES, SEEDING DEPTHS, FERTILIZER RATE, LIME RATE.

- B.50: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER). 1. GENERAL SPECIFICATIONS a. CLASS OF TURFGRASS SOU MUST BE MARYLAND STATE CERTIFIED... b. SOU MUST BE MACHINE CUT TO A UNIFORM SOU THICKNESS...

SEDIMENT CONTROL NOTES

- 1. A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID) 410-311-1865... 2. PRIOR TO THE START OF EARTH DISTURBANCE, THE PERMITS DIVISION SHALL BE NOTIFIED BY THE CONTRACTOR...

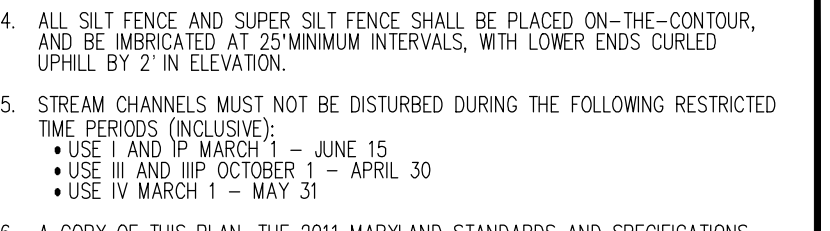
- 3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS... 4. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE... 5. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED THROUGHOUT CONSTRUCTION UNTIL PERMITS DIVISION APPROVES THEIR REMOVAL...

- 6. SITE ANALYSIS: TOTAL AREA OF SITE (LOT 18): 4.434 AC. AREA DISTURBED: 4.20 AC. AREA TO BE REEVED OR PAVED: 1.54 AC. AREA TO BE VEGETATIVELY STABILIZED: 2.66 AC.

- 7. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE... 8. ADDITIONAL SEDIMENT CONTROL SHALL BE PROVIDED, IF DEEMED NECESSARY BY THE CD, THE SITE AND ALL CONTROLS SHALL BE INSPECTED BY THE PERMITS DIVISION...

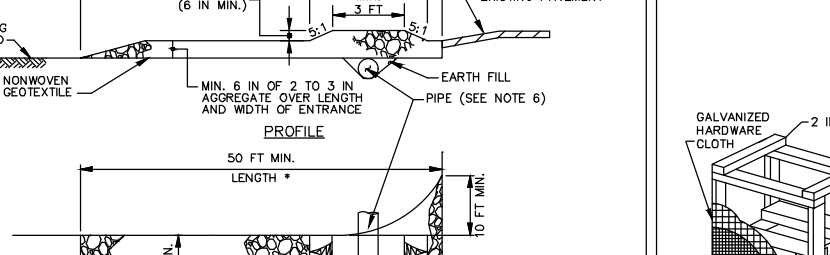
- 16. WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE... 17. TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION UNTIL FINAL GRADE... 18. ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON-THE-CONTOUR, AND BE INSTALLED AT A MINIMUM INTERVALS, WITH LOWER ENDS CURBED UPHILL BY 2' IN ELEVATION...

DETAIL E-1 SILT FENCE



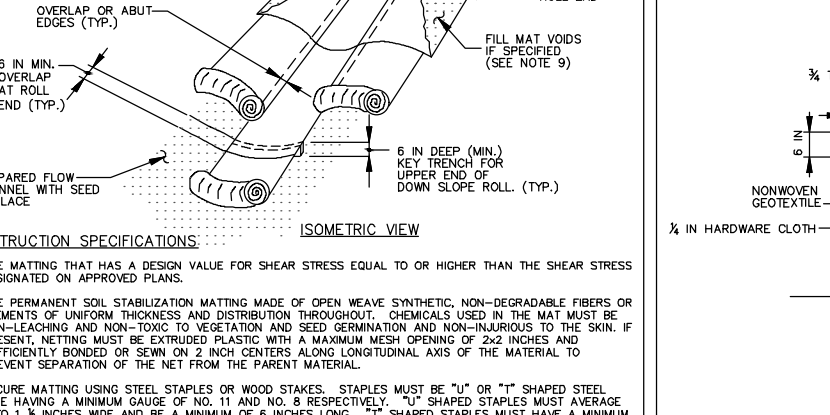
- CONSTRUCTION SPECIFICATIONS 1. INSTALL 24 IN. DIA. CHAIN LINK FENCING WITH 2 IN. DIA. HORIZONTAL AND 36 IN. FOOT VERTICAL BAR SPACING... 2. FASTEN 8 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCING TO NON-MANIPULATED SUBSOIL WITH 2" IN ELEVATION...

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE



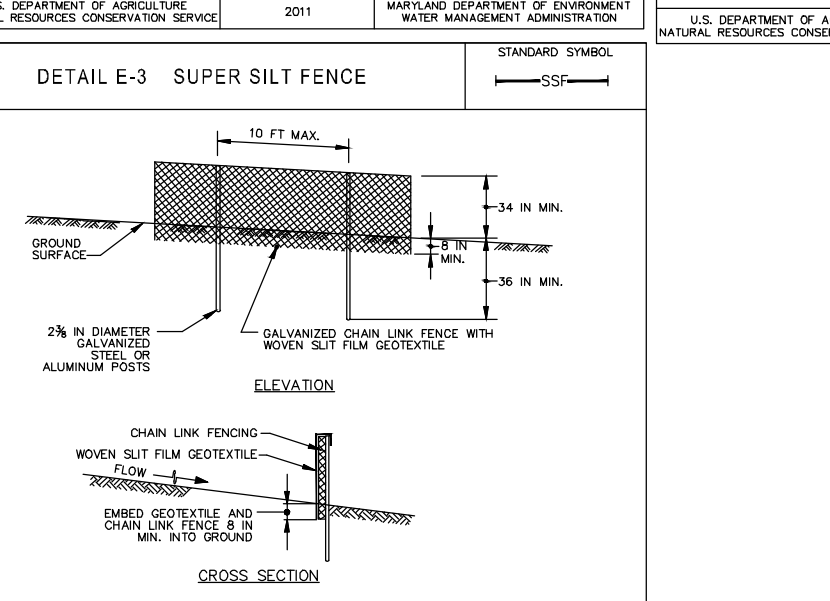
- CONSTRUCTION SPECIFICATIONS 1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED FINAL VEHICLES MUST TRAVEL OVER THE DIRT ROAD LENGTH OF THE USE MINIMUM LENGTH OF 50 FEET... 2. PAVE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SIDE UNDER THE ENTRANCE...

DETAIL B-4-C PERMANENT SOIL STABILIZATION MATTING CHANNEL APPLICATION



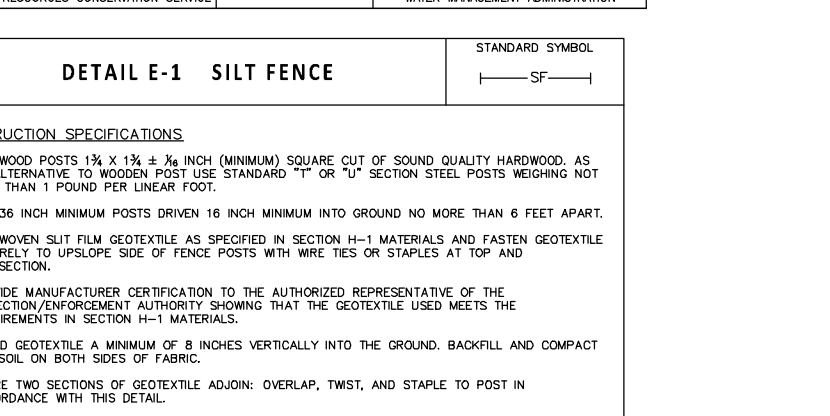
- CONSTRUCTION SPECIFICATIONS 1. USE MATTING THAT HAS A SHEAR STRENGTH OF 200 LB PER LINEAL FOOT... 2. SECURE MATTING OVER SLOPE WITH STAKES OR WOOD STAPLES... 3. PERFORM FINAL GRADING, SPECIAL APPLICATION, SEEDING, REPAIRS, AND PERMITS DIVISION APPROVAL...

DETAIL E-3 SUPER SILT FENCE



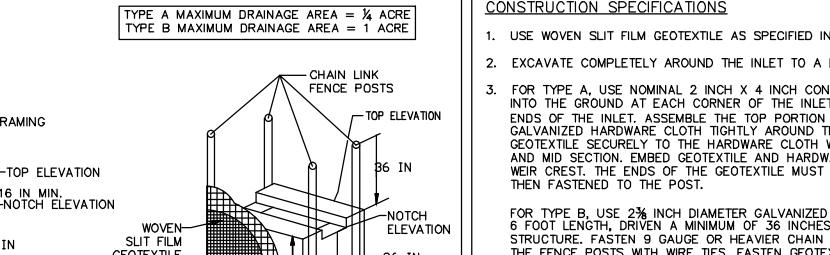
- CONSTRUCTION SPECIFICATIONS 1. INSTALL 24 IN. DIA. CHAIN LINK FENCING WITH 2 IN. DIA. HORIZONTAL AND 36 IN. FOOT VERTICAL BAR SPACING... 2. FASTEN 8 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCING TO NON-MANIPULATED SUBSOIL WITH 2" IN ELEVATION...

DETAIL E-1 SILT FENCE



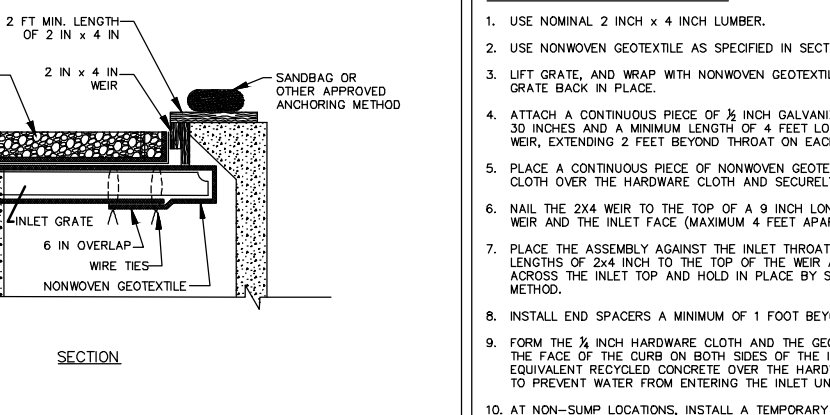
- CONSTRUCTION SPECIFICATIONS 1. INSTALL 24 IN. DIA. CHAIN LINK FENCING WITH 2 IN. DIA. HORIZONTAL AND 36 IN. FOOT VERTICAL BAR SPACING... 2. FASTEN 8 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCING TO NON-MANIPULATED SUBSOIL WITH 2" IN ELEVATION...

DETAIL E-9-1 STANDARD INLET PROTECTION



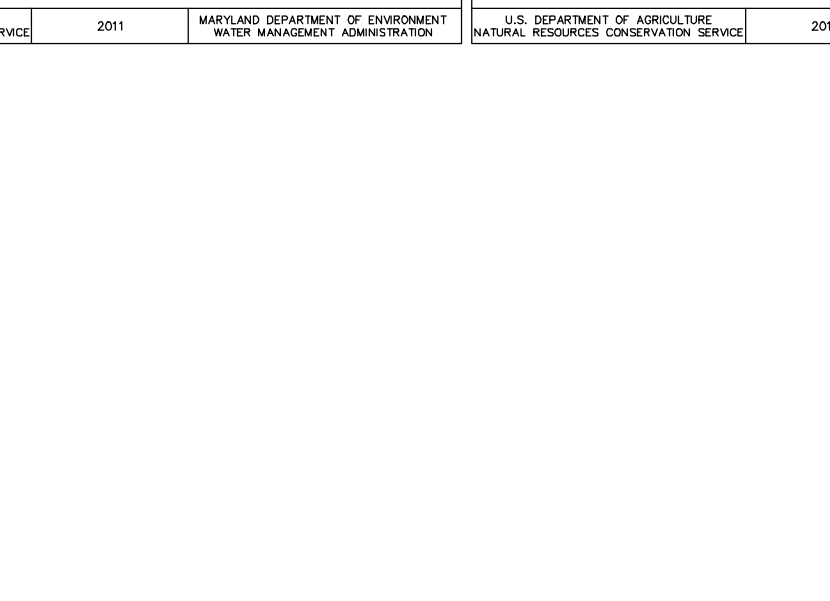
- CONSTRUCTION SPECIFICATIONS 1. LOCATE CURB COMPLETELY ABOVE AS SPECIFIED IN SECTION H-1 MATERIALS... 2. INSTALL CURB FULLY FIRM TO A DEPTH OF 18 INCHES BELOW THE NOTCH ELEVATION... 3. TO THE GRADE AT EACH CORNER OF THE CURB PLACE AND SECURE THE POSTS ON THE EXTERIOR SIDE OF THE CURB...

DETAIL E-9-6 COMBINATION INLET PROTECTION



- CONSTRUCTION SPECIFICATIONS 1. USE MANHOLE COVER AS SPECIFIED IN SECTION H-1 MATERIALS... 2. USE NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL AREAS WHEN THEY SET GRADE BACK... 3. ATTACH A CONTINUOUS PIECE OF 6 INCH GALVANIZED HARBORING CLOTH WITH A MINIMUM WIDTH OF 24 INCH...

DETAIL E-9-6 COMBINATION INLET PROTECTION



- CONSTRUCTION SPECIFICATIONS 1. USE MANHOLE COVER AS SPECIFIED IN SECTION H-1 MATERIALS... 2. USE NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL AREAS WHEN THEY SET GRADE BACK... 3. ATTACH A CONTINUOUS PIECE OF 6 INCH GALVANIZED HARBORING CLOTH WITH A MINIMUM WIDTH OF 24 INCH...

APPROVED PLANNING BOARD OF HOWARD COUNTY DATE: OCTOBER 31, 2023

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING Lynda D. Eisenberg, AICP Director

DESIGNED BY: Olgaerand Bratchie 6/6/2024

ENGINEER'S CERTIFICATE I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS...

OWNER'S/DEVELOPER'S/BUILDER'S CERTIFICATION I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN...

DocuSigned by: Todd Reddan 05/24/24

PREPARED FOR/OWNER: PATUXENT OWNER LP 1330 NEW HAMPSHIRE AVE. NW WASHINGTON, DC 20036

PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY...

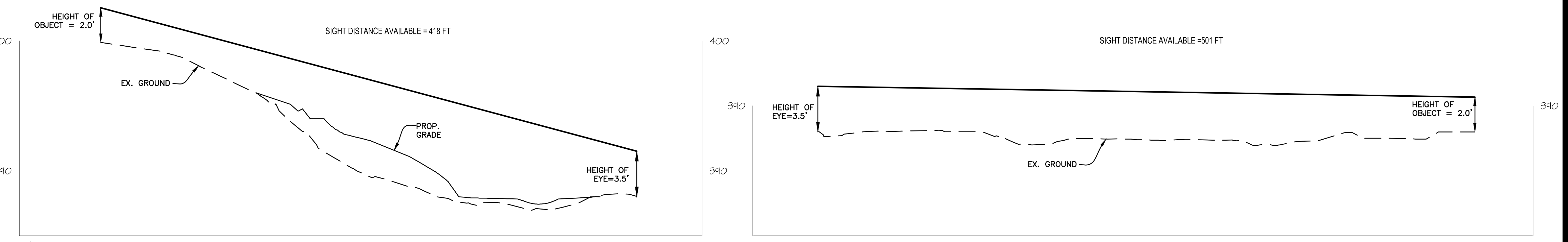
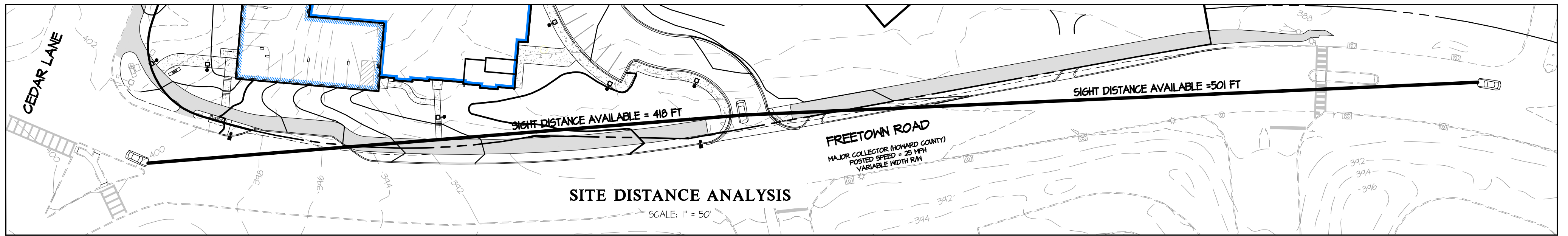
DocuSigned by: Todd Reddan 05/24/24

AB736CDB566400... ELECTION DISTRICT NO. 5

SEDIMENT CONTROL NOTES AND DETAILS SCALE: NONE ZONING: POR G. L. W. FILE NO. 20089

DATE: MAY, 2024 TAX MAP - GRID: 35-17 SHEET: 8 OF 29

TIME OF CONCENTRATION			
PRE DEVELOPED			
A	Tc PATH B	100' SHEET FLOW AT 4.0 % SLOPE	
B	Tc PATH C	350' SHALLOW CONCENTRATED FLOW AT 6.0 % SLOPE	
POST DEVELOPED			
A	Tc PATH B	30' SHEET FLOW AT 33.0 % SLOPE	
B	Tc PATH C	360' SHALLOW CONCENTRATED FLOW AT 2.0 % SLOPE	
C	Tc PATH D	80' PIPE FLOW AT 2.0 % SLOPE	



SIGHT DISTANCE - FREETOWN ROAD DRIVEWAY ENTRANCE

POSTED SPEED LIMIT=25 MPH
DESIGN SPEED=POSTED + 10 MPH=35 MPH
85th PERCENTILE = 32 MPH EASTBOUND, 36 MPH WESTBOUND
PER AASHTO FREETOWN ROAD SIGHT DISTANCE; USING 36 MPH DESIGN SPEED.

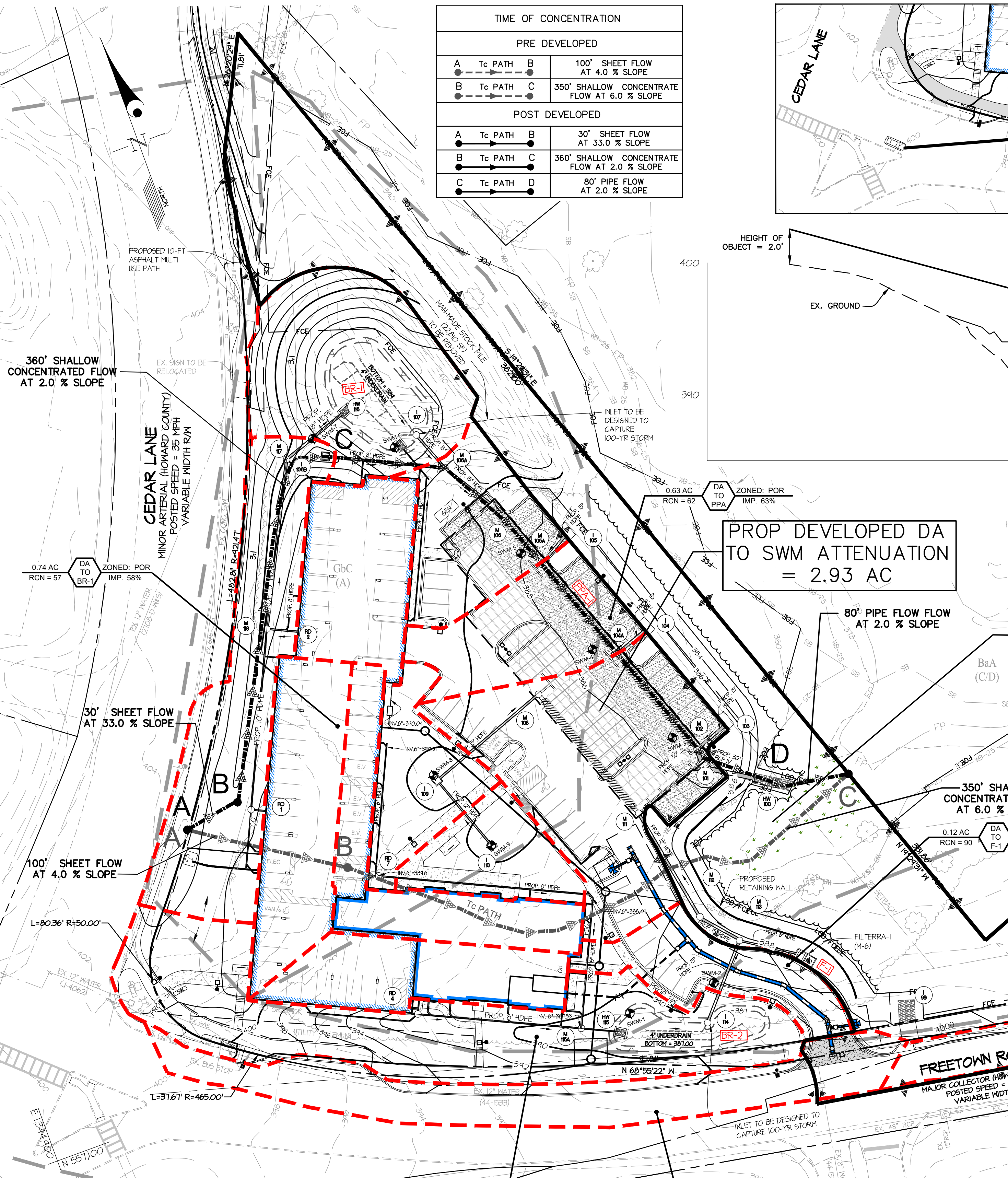
A. REQUIRED SIGHT DISTANCE (AASHTO TABLE 9-7)
FOR A DRIVEWAY FOR A LEFT TURN: 1.4(136 MPH DESIGN SPEED)(1.5 SEC.) = 341 FEET.
FOR A DRIVEWAY FOR A RIGHT TURN: 1.4(136 MPH DESIGN SPEED)(6.5 SEC.) = 344 FEET

B. ACTUAL SIGHT DISTANCE FROM DRIVEWAY
LEFT TURN (LOOKING TO THE RIGHT) = 418 FEET TO CEDAR LANE INTERSECTION
RIGHT TURN (LOOKING TO THE LEFT) = 501 FEET

- LEGEND**
- X-XX AC RCN = XX ZONED: POR IMP. XX% DA TO BR-#
 - DA I-XXX
 - MI XX
 - DRAINAGE AREA DIVIDE TO ESD STORMWATER MANAGEMENT FACILITY
 - DRAINAGE AREA DIVIDE FOR ATTENUATION
 - PRE-DEVELOPED TIME OF CONCENTRATION
 - POST DEVELOPED TIME OF CONCENTRATION

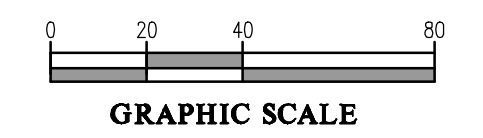
'C' FACTOR COMPUTATIONS

STRUCTURE	AREA (AC)	C'	IMPERVIOUS
EX-1	0.14	0.81	100%
I-48	0.16	0.81	100%
I-49	0.26	0.81	100%
I-103	0.36	0.84	95%
I-104	0.16	0.82	92%
I-105	0.17	0.83	61%
I-106B	0.46	0.24	0%
I-107	0.31	0.24	0%
I-108	0.13	0.32	12%
I-110	0.11	0.46	35%
I-114	0.40	0.35	18%
F-1	0.12	0.84	95%



ESD FACILITY	P _e	TOTAL DRAINAGE AREA (SF)	ESD SURFACE AREA (SF)	Q ₁₀ (CFS)	Q ₁₀₀ (CFS)	MIN. ESDV (Fe=1.00') (CF)	ESDV PROVIDED (CF)	MIN. Rev (Fe=1.00') (CF)	Rev PROVIDED (CF)	BOTTOM ELEVATION	MAXIMUM VOLUME (CF)
BR-1	1.7	32,420	2516	3.8	5.7	1536	3,781	N/A	445	384.0	3,946
BR-2	1.7	31,080	1482	5.3	7.6	2,084	2,431	N/A	608	381.0	3,117
PPA-1	1.7	30,428	8,358	-	-	-	3,400	N/A	3,400	N/A	-
F-1	1.7	5,350	24	1.1	1.7	101	10,282	1,374	5,453	N/A	-
SITE TOTALS											

100 YR ATTENUATION	TOTAL DRAINAGE AREA (AC)	RCN	T _c (Hrs)	Q ₁₀₀ (CFS)
EXISTING	4.98	58	0.125	18.7
PROPOSED TO FACILITY	2.93	88	0.1	-
BYPASS	2.05	71	0.137	15.8 TOTAL



APPROVED PLANNING BOARD OF HOWARD COUNTY
DATE: OCTOBER 31, 2023

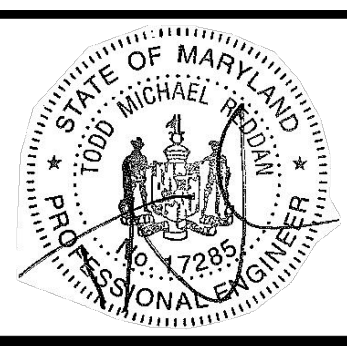
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
For Lynda D. Eisenberg, AICP
6/6/2024
Director
Chief, Division of Land Development
6/6/2024
Chief, Development Engineering Division
6/6/2024

GLW
PLANNING | ENGINEERING | SURVEYING
3808 NATIONAL DRIVE | SUITE 250 | BURTONTVILLE, MD 20866 | GLWPA.COM
PHONE: 301-421-4024 | BALT: 410-880-1820 | DC&VA: 301-989-2524 | FAX: 301-421-4186

DESIGNED BY	DRAWN BY	CHECKED BY	DATE	REVISION	BY	APPR.
LDD	LDD	TMR				

PREPARED FOR/OWNER:
PATUXENT OWNER LP
1330 NEW HAMPSHIRE AVE. NW
SUITE 116
WASHINGTON, DC 20036
ATTN: ELIZABETH EVERHART
(202)-223-3405

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 17285
EXPIRATION DATE: MARCH 17, 2025



DocuSigned by:
Todd Redden
AB736CDCB566400...
05/24/24
ELECTION DISTRICT No. 5

ESD SWM AND STORMDRAIN DRAINAGE AREA MAP
PATUXENT COMMONS LOT 1
EX. PARCELS 108, 109 & 137
PLATS 26636-26637
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
1" = 40'	POR	20089
DATE	TAX MAP - GRID	SHEET
MAY, 2024	35-17	9 OF 29

L:\CADD\DRAWINGS\20089\PLANS BY GLW\SDPA\20089_09_ESD SWM SD DA MAP.dwg, PLOTTED: 5/24/2024, 2:08 PM, LAST SAVED: 5/14/2024, 2:31 PM, PLOTTED BY: Tony Karpovich

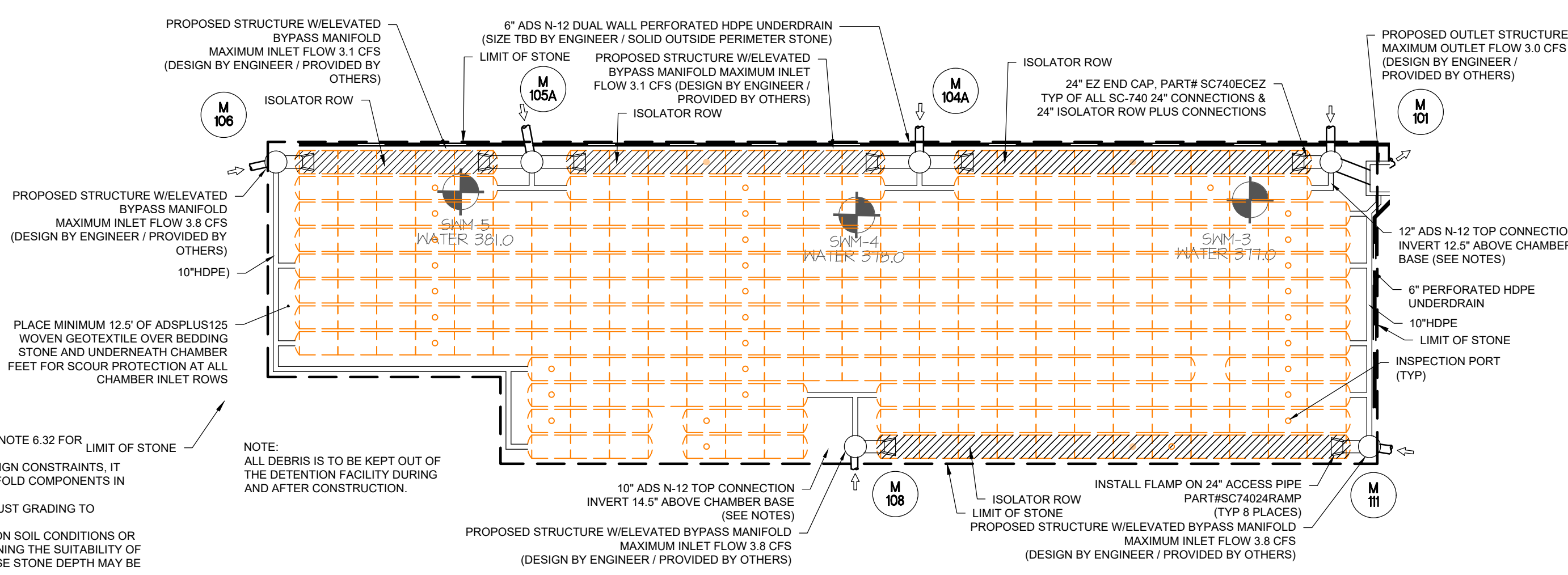
PROPOSED LAYOUT

281	STORMTECH SC-740 CHAMBERS
44	STORMTECH SC-740 END CAPS
6	STONE ABOVE (in)
18	STONE BELOW (in)
40	% STONE VOID
25,922	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED)
	ABOVE ELEVATION 380.00
11359	SYSTEM AREA (sq)
526	SYSTEM PERIMETER (ft)

PROPOSED ELEVATIONS

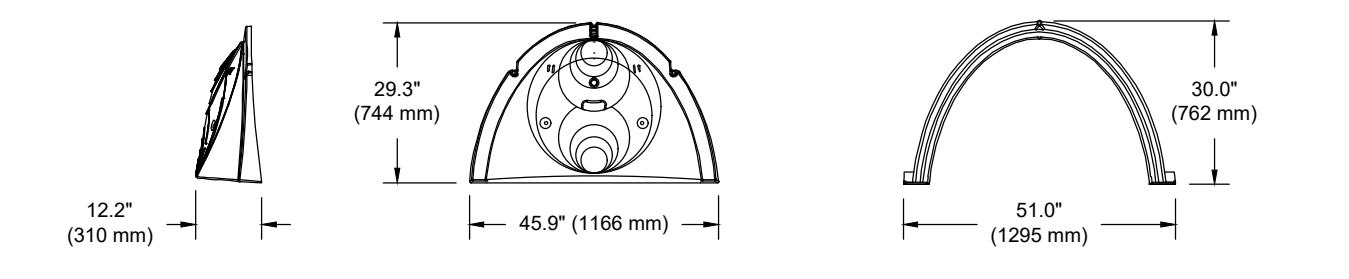
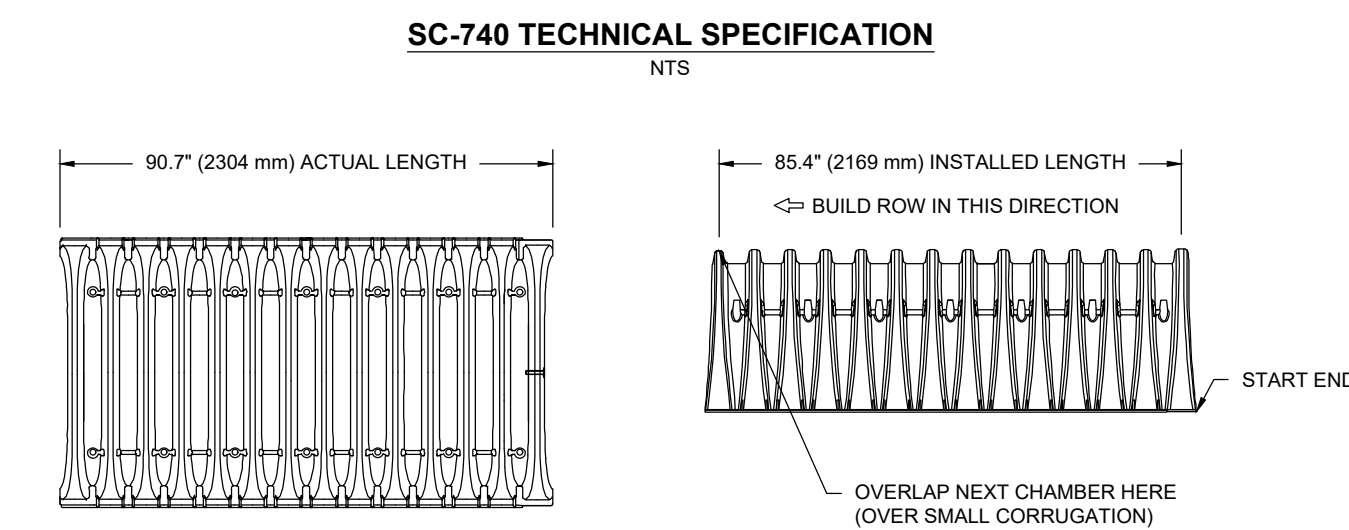
391.50	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED)
385.50	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)
385.00	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC)
385.00	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)
385.00	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT)
384.00	TOP OF STONE
383.50	TOP OF SC-740 CHAMBER
382.21	10" TOP MANIFOLD INVERT
381.42	18" TOP CONNECTION INVERT
381.01	24" ISOLATOR ROW PLUS CONNECTION INVERT
381.00	BOTTOM OF SC-740 CHAMBER
379.50	UNDERDRAIN INVERT
379.50	BOTTOM OF STONE

- NOTES**
- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECHNICAL NOTE 6.32 FOR LIMIT OF STONE MANIFOLD SIZING GUIDANCE.
 - DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
 - THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
 - THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSTALLED SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.
 - NOT FOR CONSTRUCTION:** THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVIDE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.



SC-740 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH SC-740.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPED FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS DESCRIBED IN THE AASHTO LRD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 550 LBS/FT². THE ARCH IS DEFINED IN SECTION 6.2.3 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
 - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
 - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD. THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
 - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	CHAMBER STORAGE	MINIMUM INSTALLED STORAGE* WEIGHT
51.0" X 30.0" X 85.4"	45.9 CUBIC FEET (1.30 m ³)	74.9 CUBIC FEET (2.12 m ³)
(1295 mm X 762 mm X 2169 mm)		(33.6 kg)

*ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS

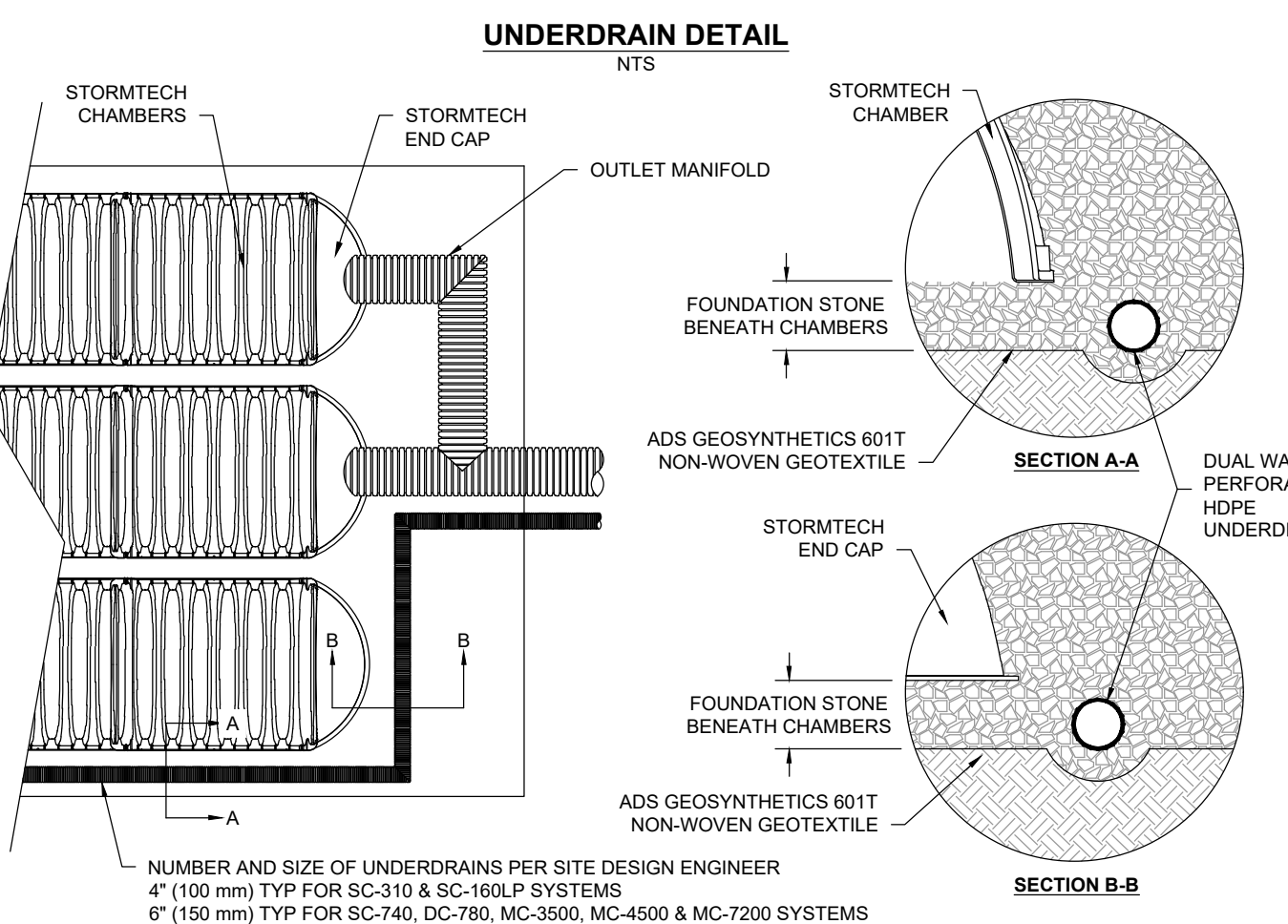
PRE-FAB STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
 PRE-FAB STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
 PRE-CORED END CAPS END WITH "PC"

PART #	STUB	A	B	C
SC740EPE06T / SC740EPE06TPC	6" (150 mm)	10.9" (277 mm)	18.5" (470 mm)	0.5" (13 mm)
SC740EPE08T / SC740EPE08TPC	8" (200 mm)	12.2" (310 mm)	16.5" (419 mm)	0.5" (13 mm)
SC740EPE10T / SC740EPE10TPC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)	0.6" (15 mm)
SC740EPE12T / SC740EPE12TPC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	0.7" (18 mm)
SC740EPE14T / SC740EPE14TPC	14" (350 mm)	15.9" (403 mm)	10.5" (267 mm)	1.2" (30 mm)
SC740EPE15T / SC740EPE15TPC	15" (375 mm)	18.4" (467 mm)	9.0" (229 mm)	---
SC740EPE16T / SC740EPE16TPC	16" (400 mm)	19.7" (500 mm)	5.0" (127 mm)	1.3" (33 mm)
SC740EPE18T / SC740EPE18TPC	18" (450 mm)	19.7" (500 mm)	5.0" (127 mm)	1.6" (41 mm)
SC740EPE18B / SC740EPE18BPC	24" (600 mm)	18.5" (470 mm)	---	0.1" (3 mm)

ALL STUBS, EXCEPT FOR THE SC740EPE18B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

* FOR THE SC740EPE18B (24" (600 mm) STUB) LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm) BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

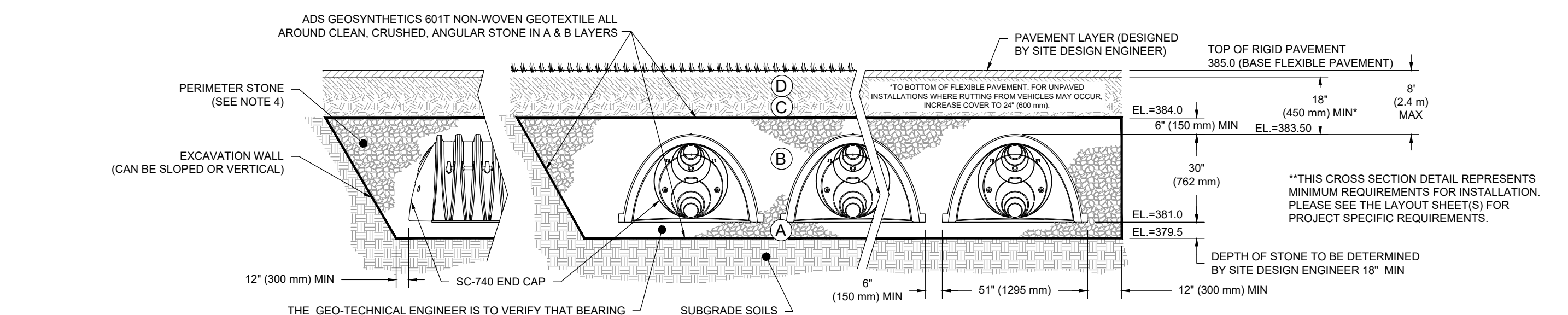
NOTE: ALL DIMENSIONS ARE NOMINAL



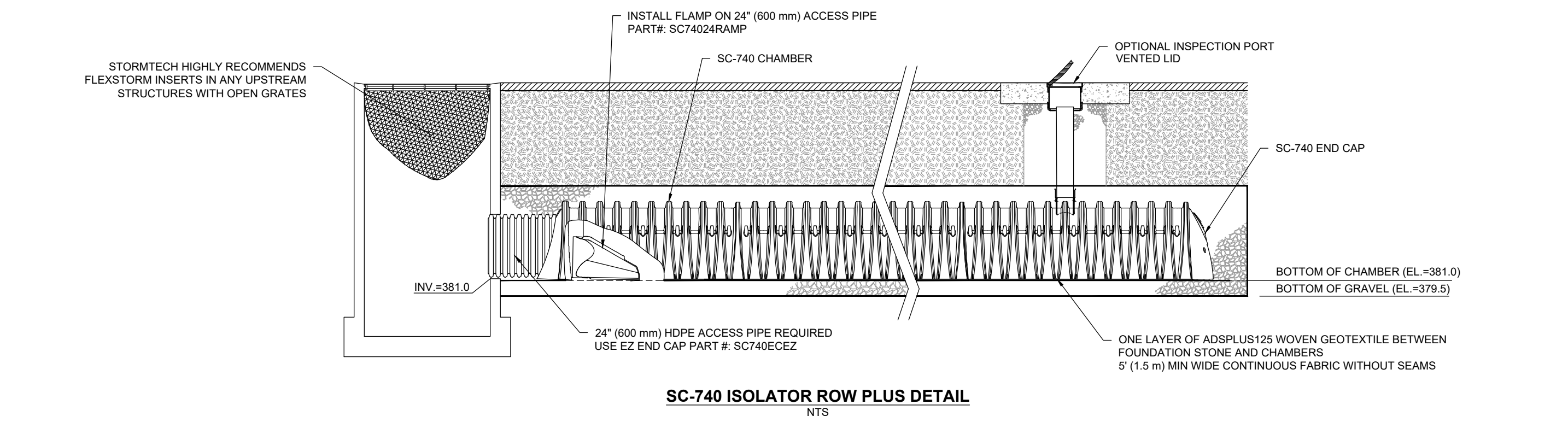
ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE (B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO 18" BELOW (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

- PLEASE NOTE:
- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
 - STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 18" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
 - WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
 - ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



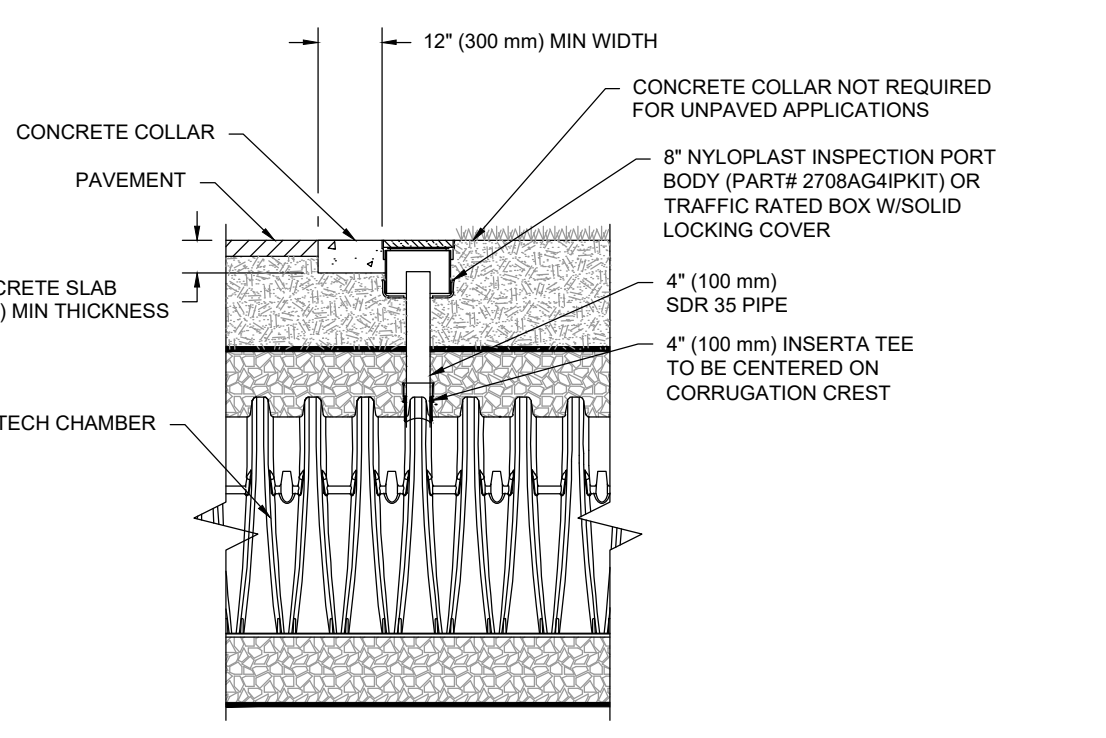
- NOTES:**
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
 - SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
 - THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING CAPACITY (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
 - PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
 - REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/FT². AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.



INSPECTION & MAINTENANCE

- STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
 - REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
 - USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
 - LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
- IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
- REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
 - USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
 - MIRRORS OR POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
 - FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
 - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
 - APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
 - VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS, RECORD OBSERVATIONS AND ACTIONS.
- STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

- NOTES**
- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
 - CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



APPROVED PLANNING BOARD OF HOWARD COUNTY

DATE: OCTOBER 31, 2023

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 For Lynda D. Eisenberg, AICP 6/6/2024
 Director
 Jessica Cellal
 Chief, Division of Land Development 6/6/2024
 Chief, Development Engineering Division 6/6/2024



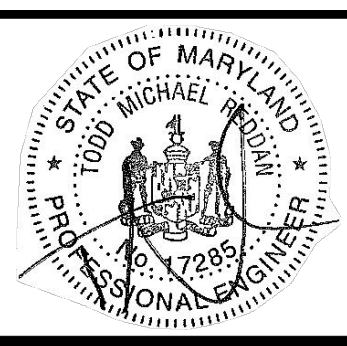
GLW
 PLANNING | ENGINEERING | SURVEYING

3909 NATIONAL DRIVE | SUITE 250 | BURTONSVILLE, MD 20896 | GLWPA.COM
 PHONE: 301-421-4024 | BALT. 410-890-1820 | DC/VA: 301-989-2524 | FAX: 301-421-4198

DESIGNED BY:				
DRAWN BY:				
CHECKED BY:				
DATE	REVISION	BY	APPR.	

PREPARED FOR/OWNER:
 PATUXENT OWNER LP
 1330 NEW HAMPSHIRE AVE. NW
 SUITE 116
 WASHINGTON, DC 20036
 ATTN: ELIZABETH EVERHART
 (202)-223-3405

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE PLANS 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. 17285, EXPIRATION DATE: 10/31/2025



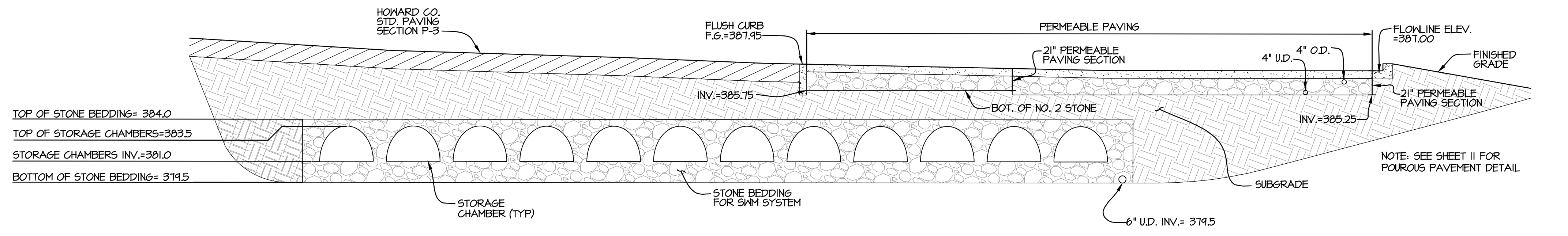
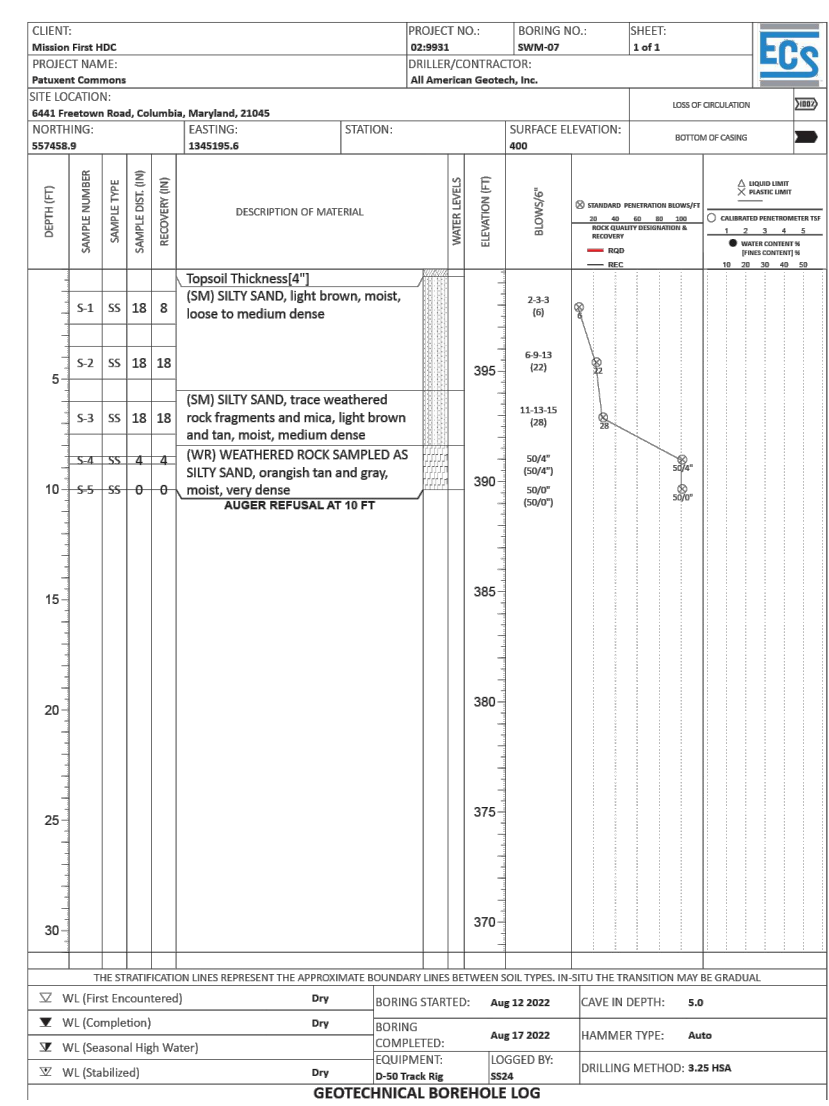
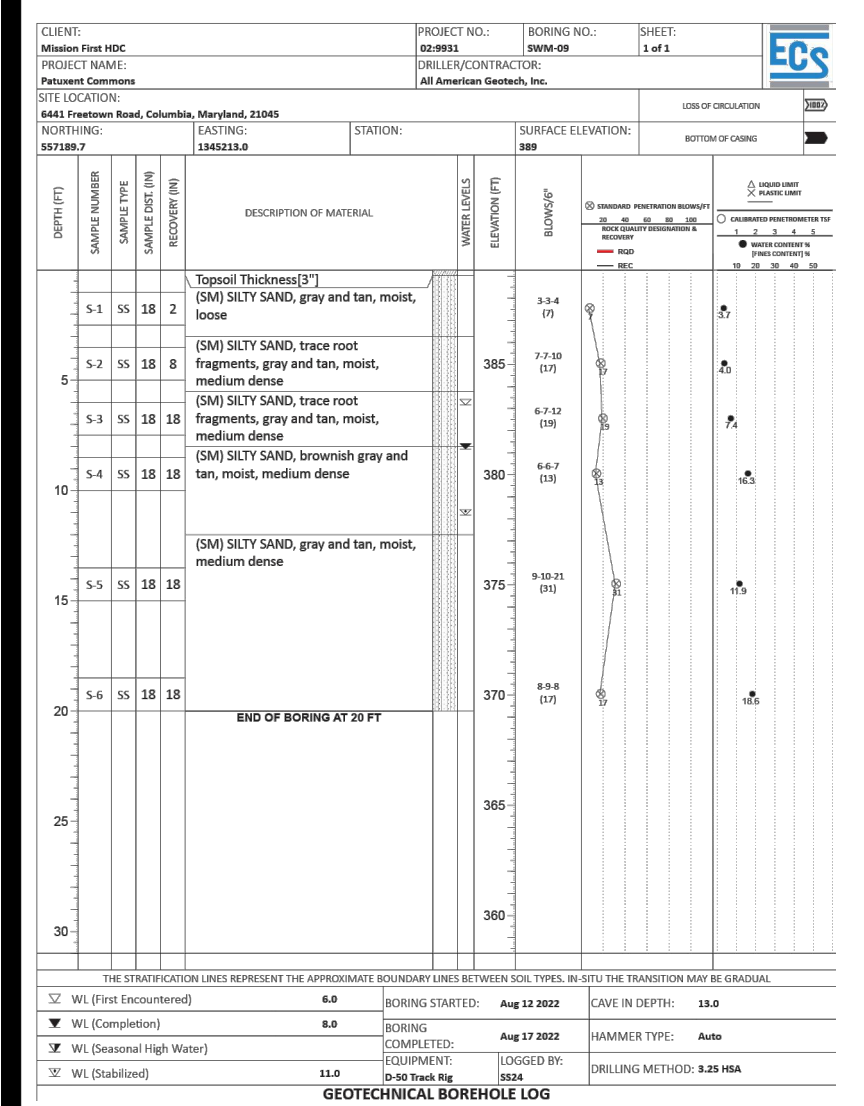
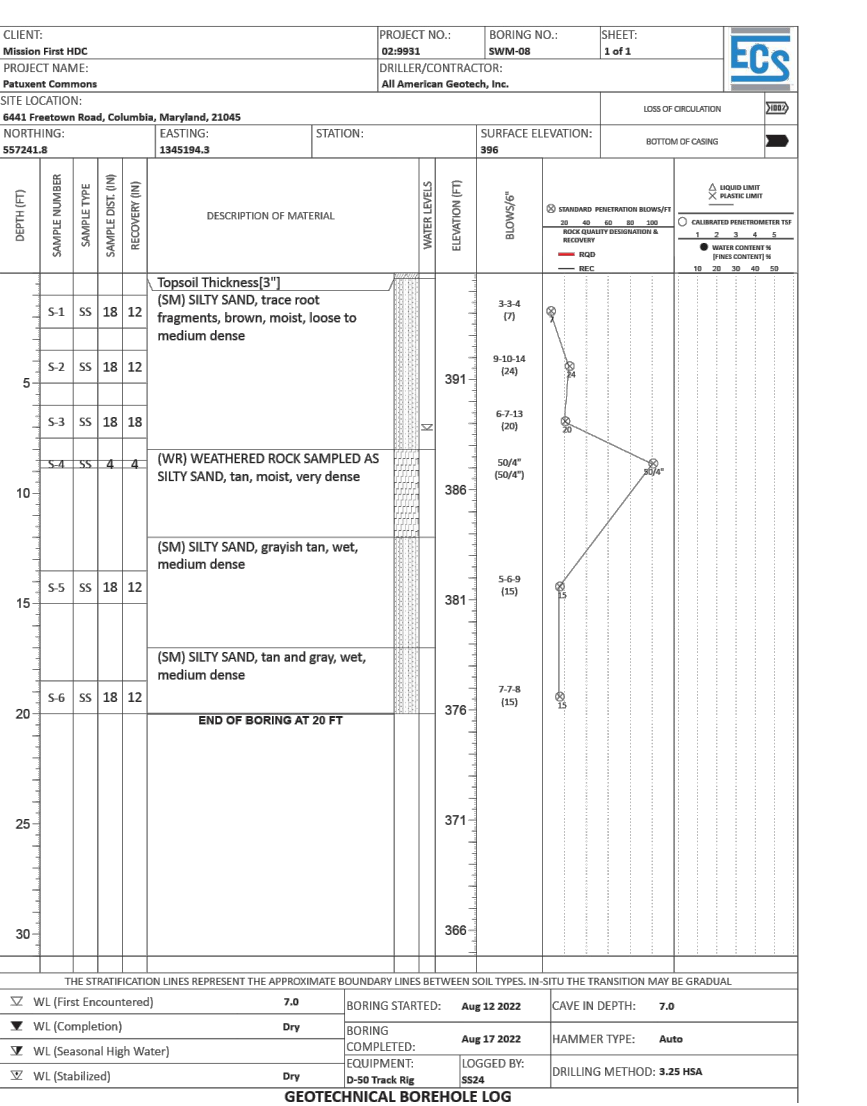
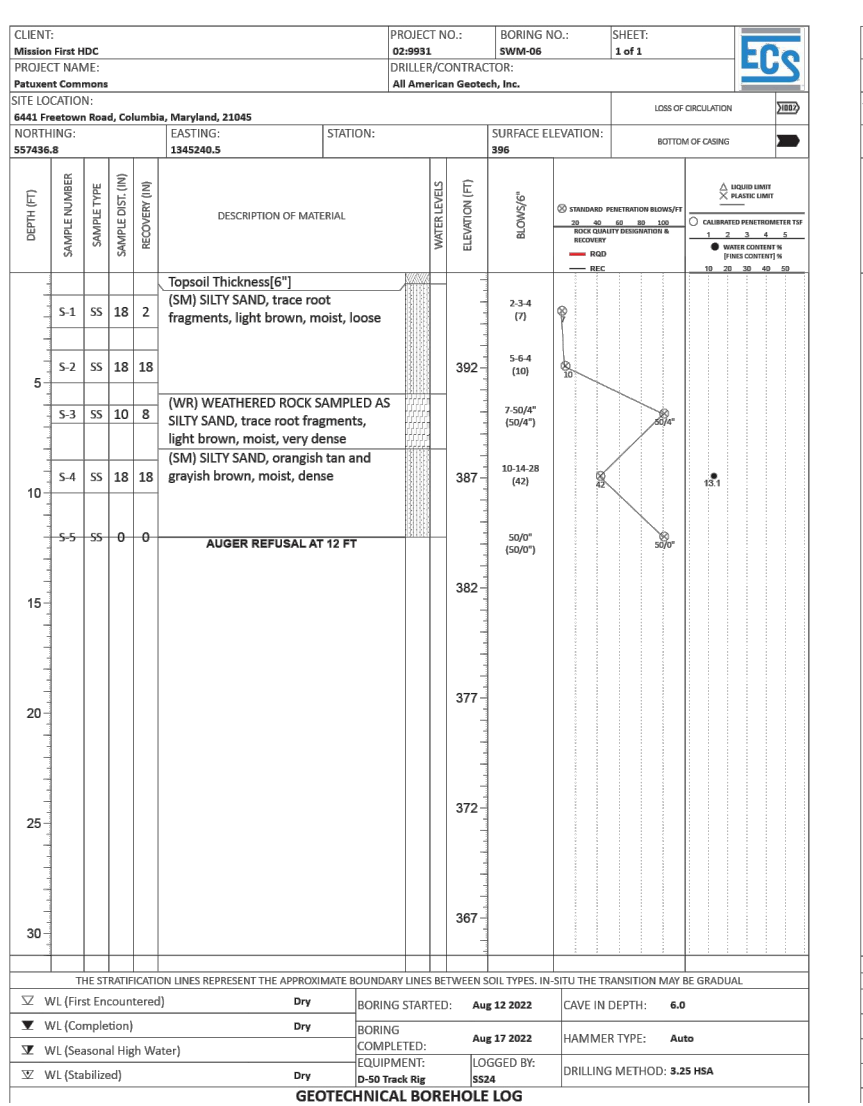
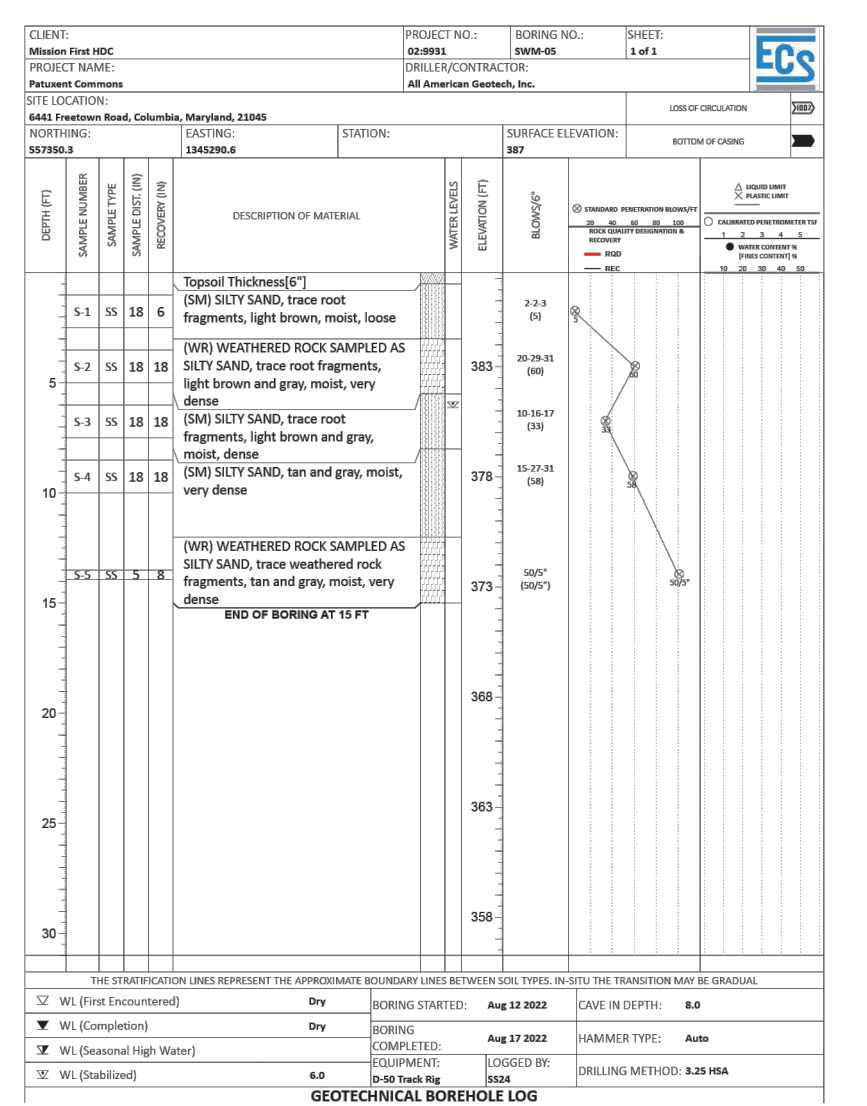
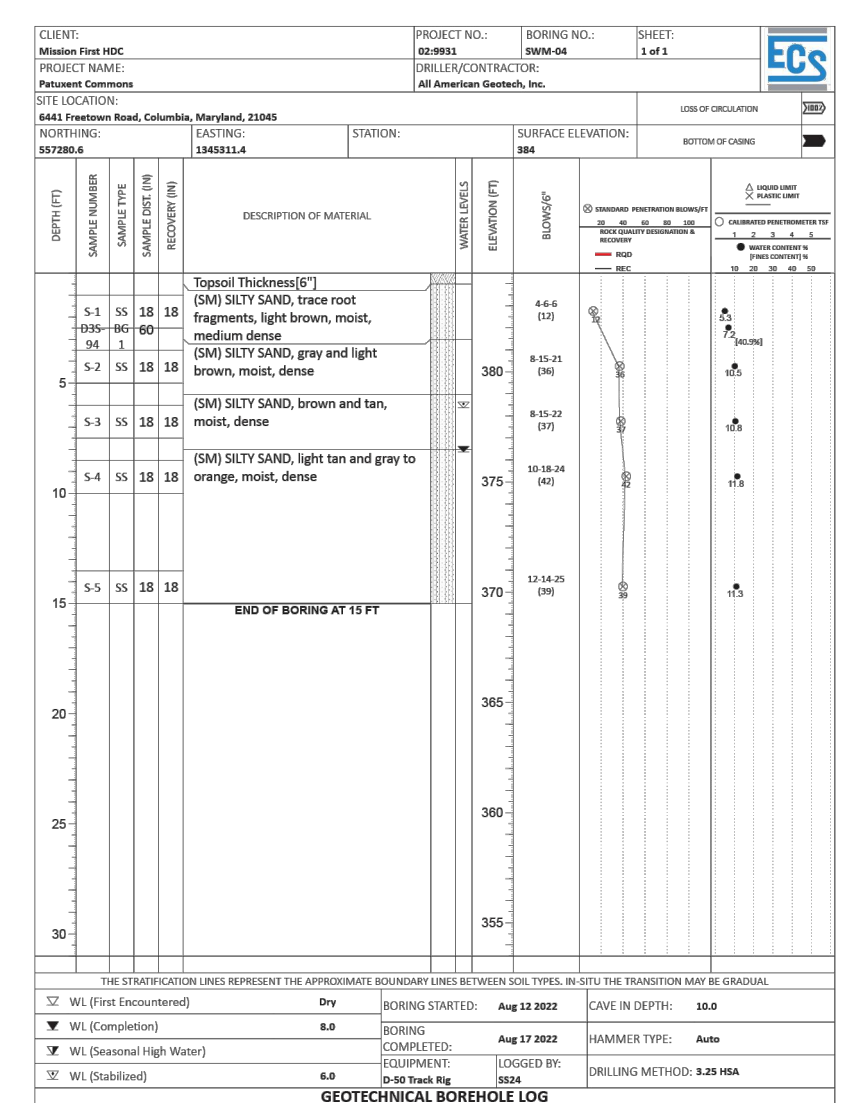
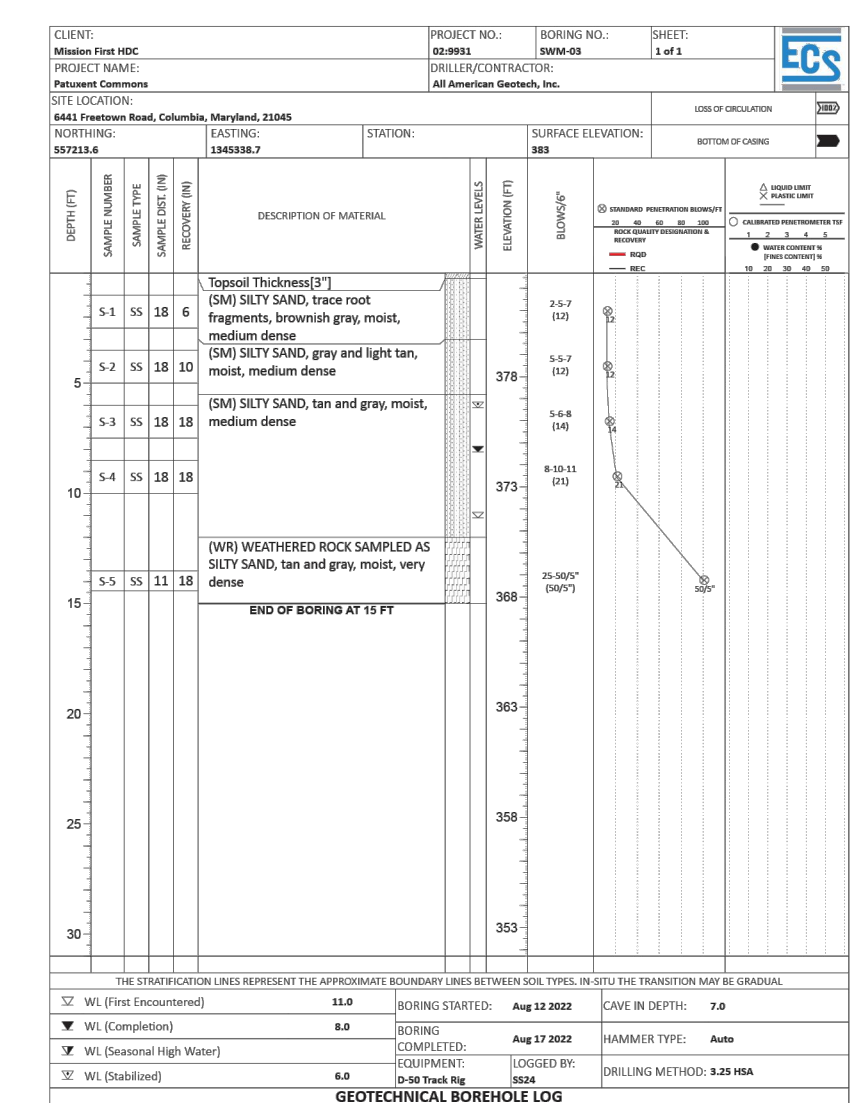
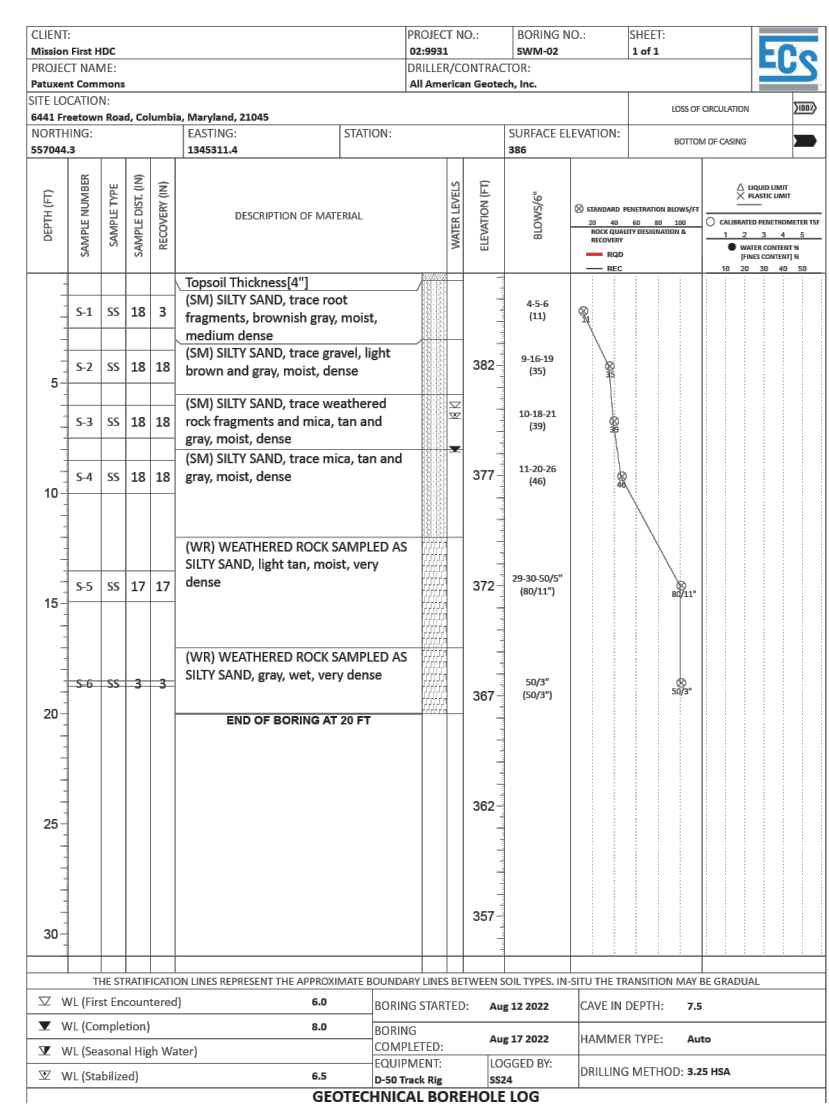
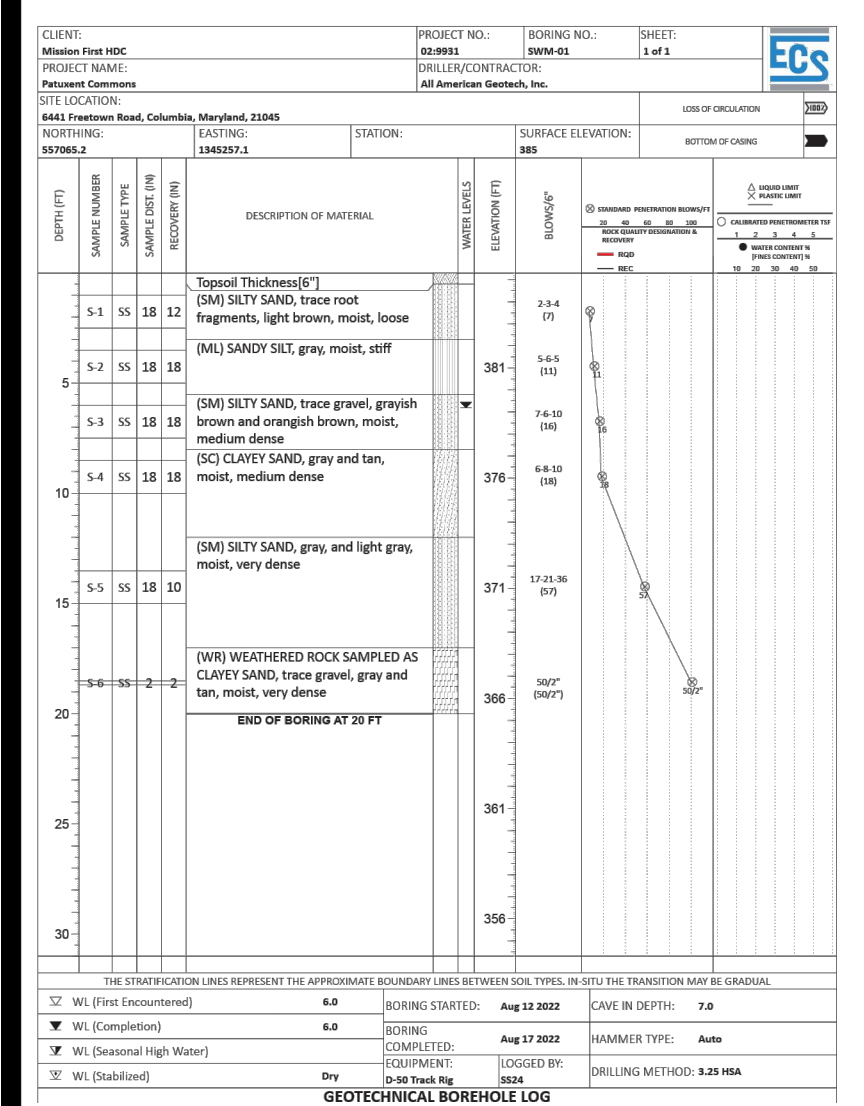
SWM NOTES AND DETAILS

PATUXENT COMMONS LOT 1

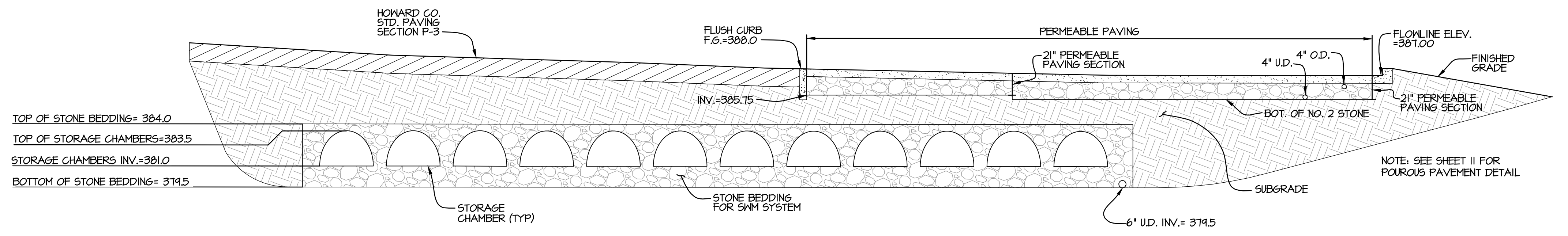
EX. PARCELS 108, 109 & 137
 PLATS 26636-26637

HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
AS SHOWN	POR	20089
DATE	TAX MAP - GRID	SHEET
MAY, 2024	35-17	12 OF 29



SECTION A-A - SWM STORAGE AND PERVIOUS PAVEMENT AT PARKING LOT
SEE PLAN VIEW SHEET 6
SCALE: 1"=5'



SECTION B-B - SWM STORAGE AND PERVIOUS PAVEMENT AT PARKING LOT
SEE PLAN VIEW SHEET 6
SCALE: 1"=5'

APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE: OCTOBER 31, 2023

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
By: *Jessica Bellah*
Director, Planning & Zoning
Date: 6/6/2024

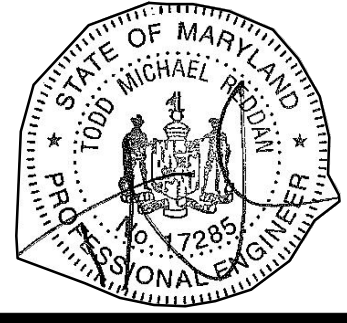
Chief, Division of Land Development
By: *David Edmondson*
Date: 6/6/2024

DocuSigned by:
Todd Reddan
05/24/24
AB736CDB566400...

DESIGNED BY:	LDD				
DRAWN BY:	LDD				
CHECKED BY:	TMR				
DATE		REVISION		BY	APPR.

PREPARED FOR/OWNER:
PATUXENT OWNER LP
1330 NEW HAMPSHIRE AVE. NW
WASHINGTON, DC 20036
ATTN: ELIZABETH EVERHART
(202)-223-3405

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 17295, EXPIRATION DATE: MARCH 17, 2025



SOIL BORING LOG

PATUXENT COMMONS LOT 1

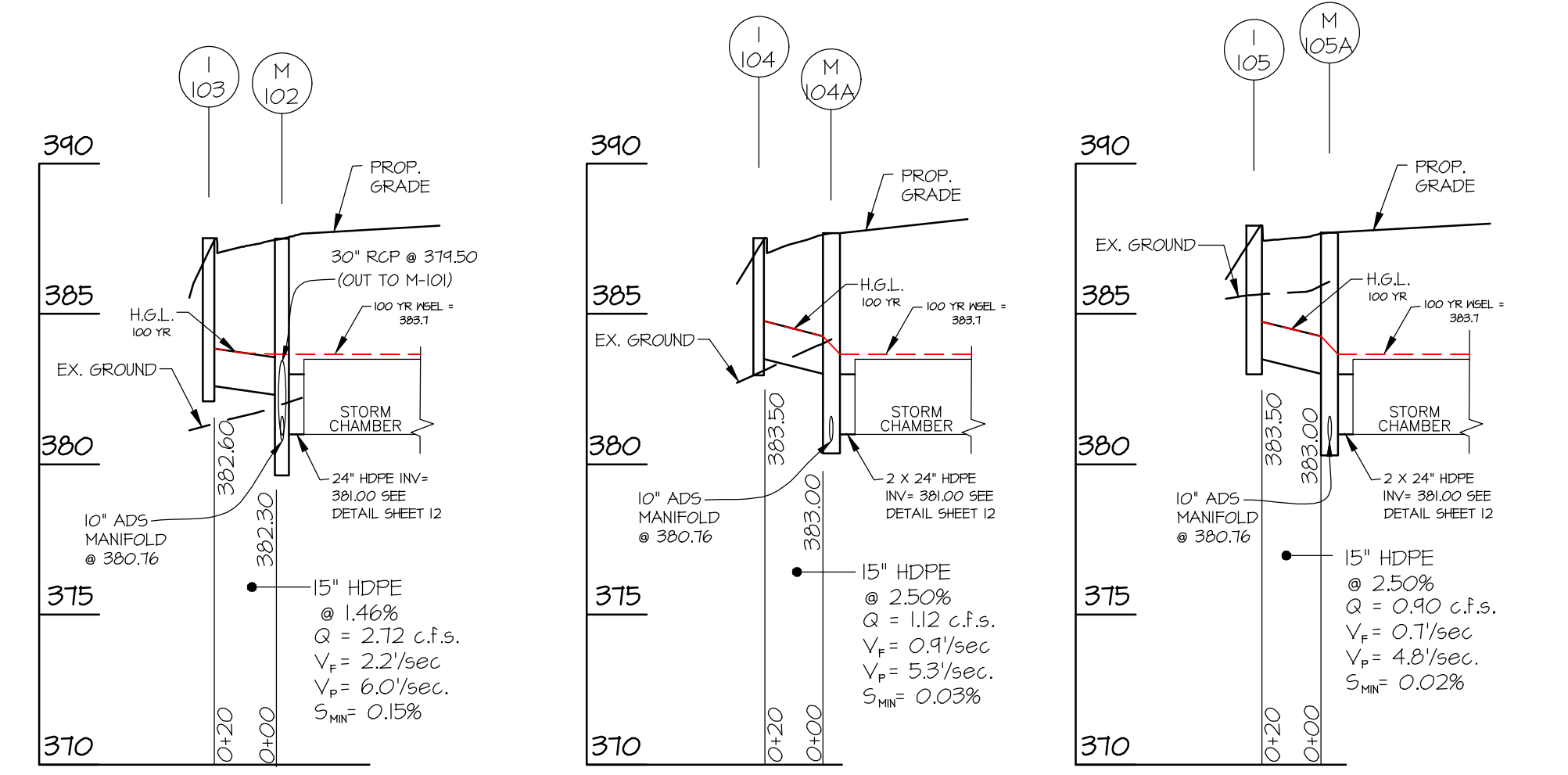
EX. PARCELS 108, 109 & 137
PLATS 26636-26637

ELECTION DISTRICT No. 5

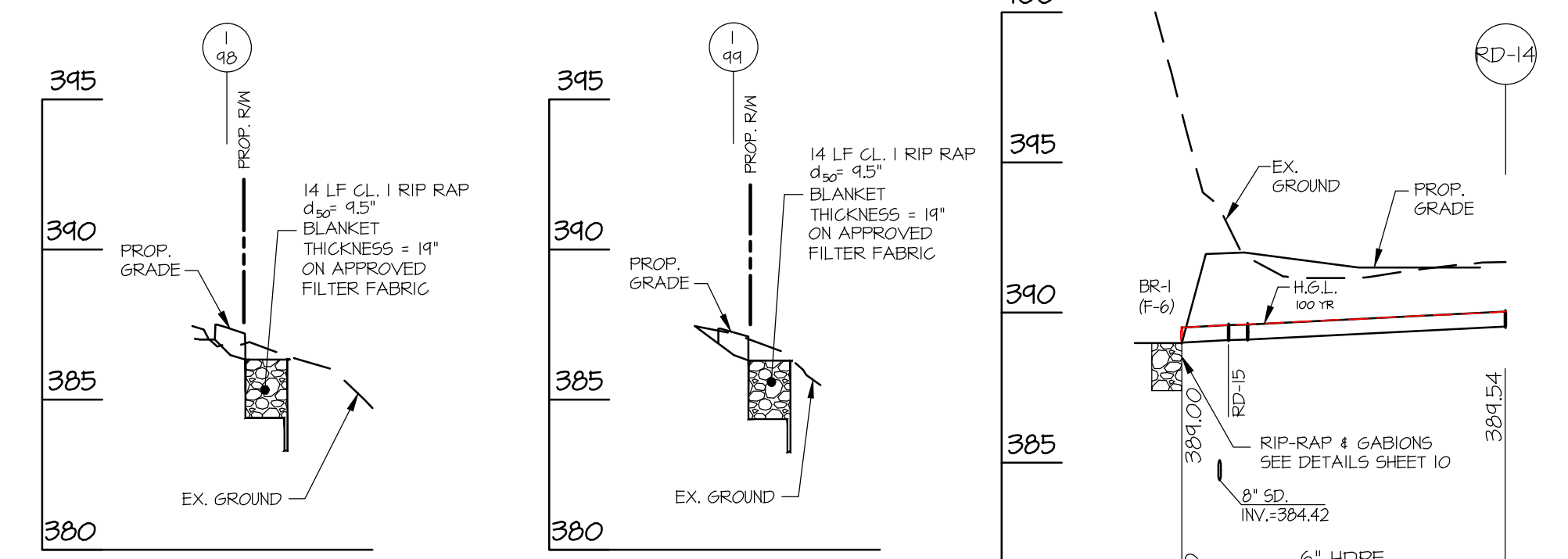
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
AS SHOWN	POR	20089
DATE	TAX MAP - GRID	SHEET
MAY, 2024	35-17	13 OF 29

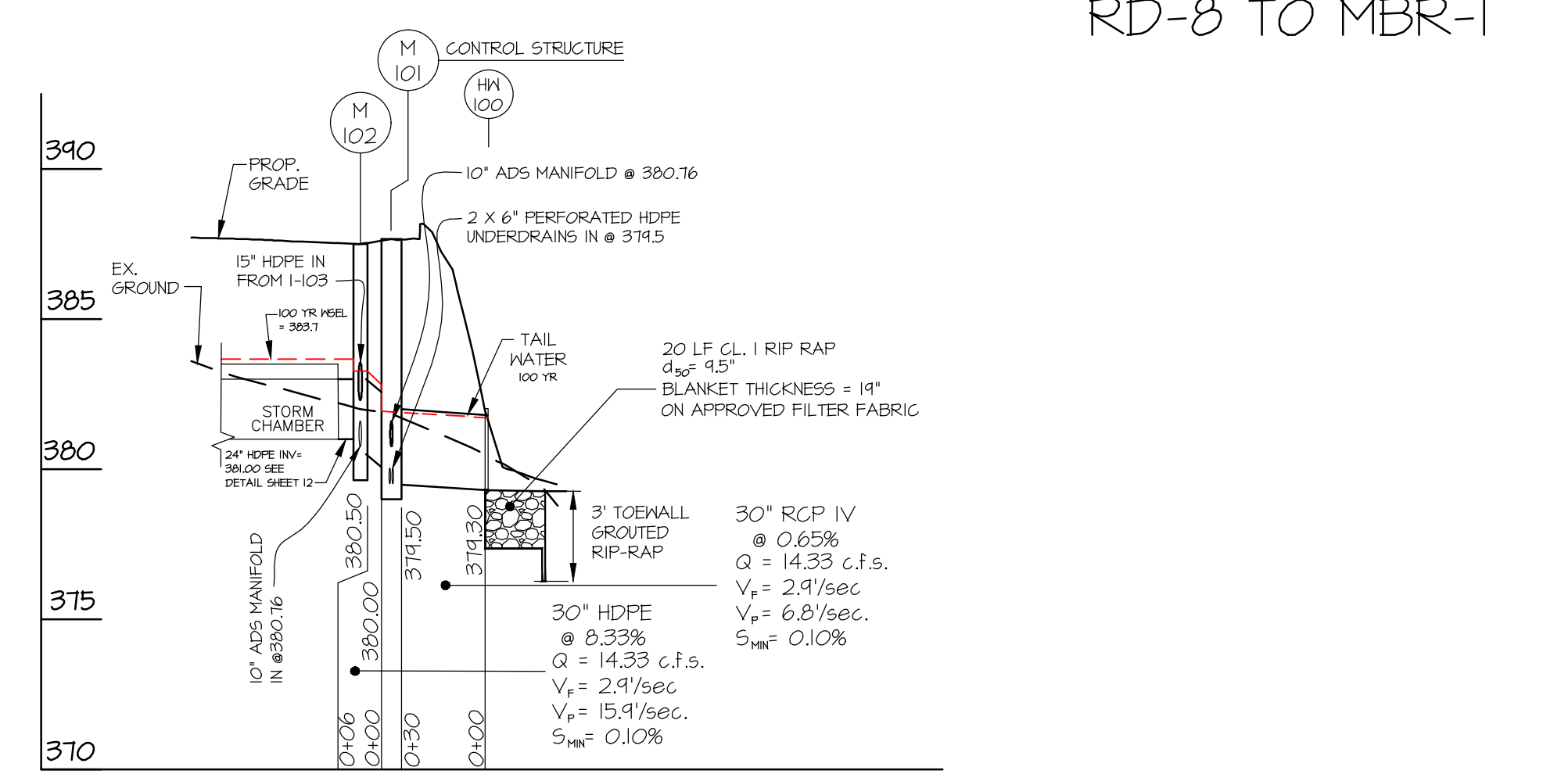
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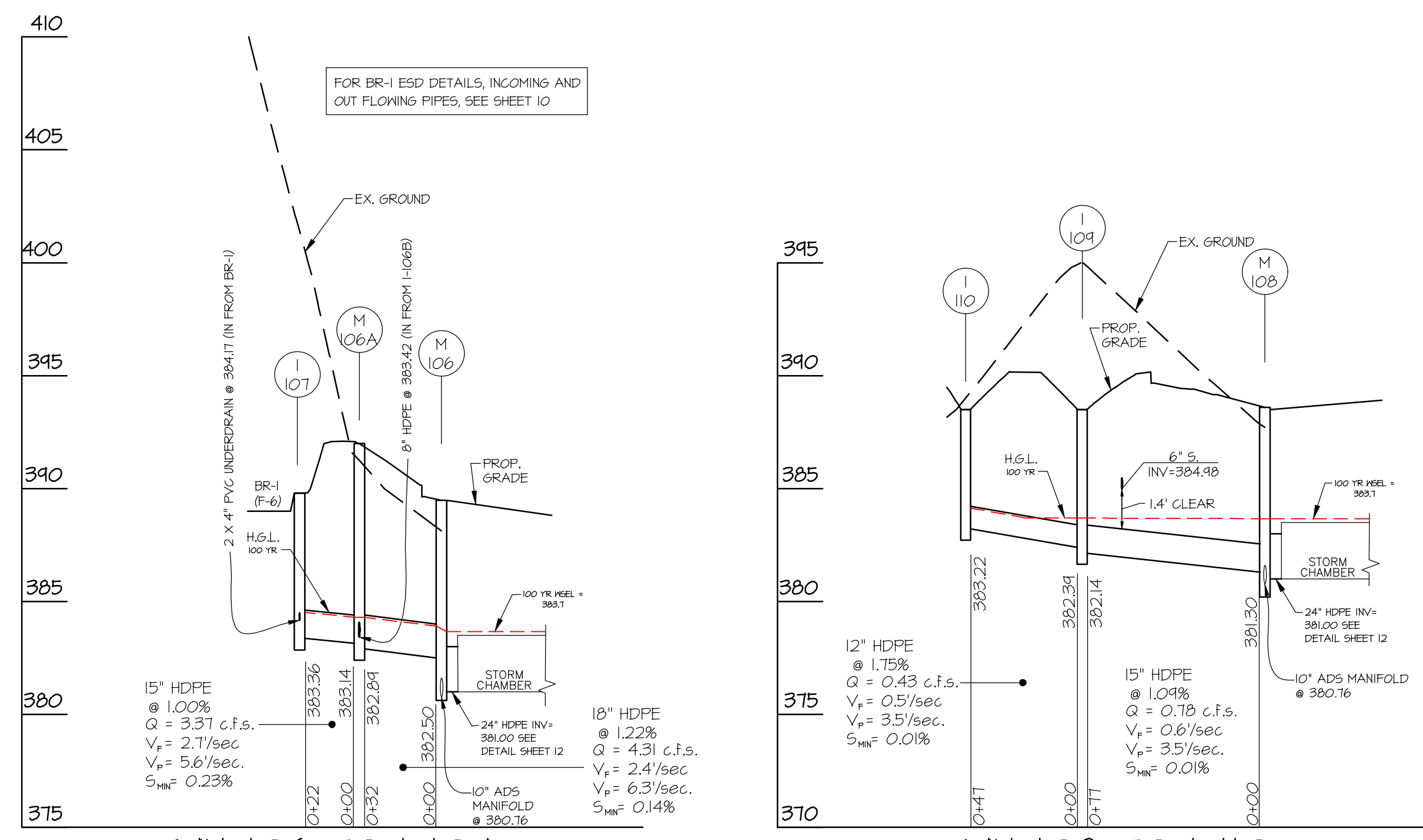
M-102 TO I-103 M-104A TO I-104 M-105A TO I-105



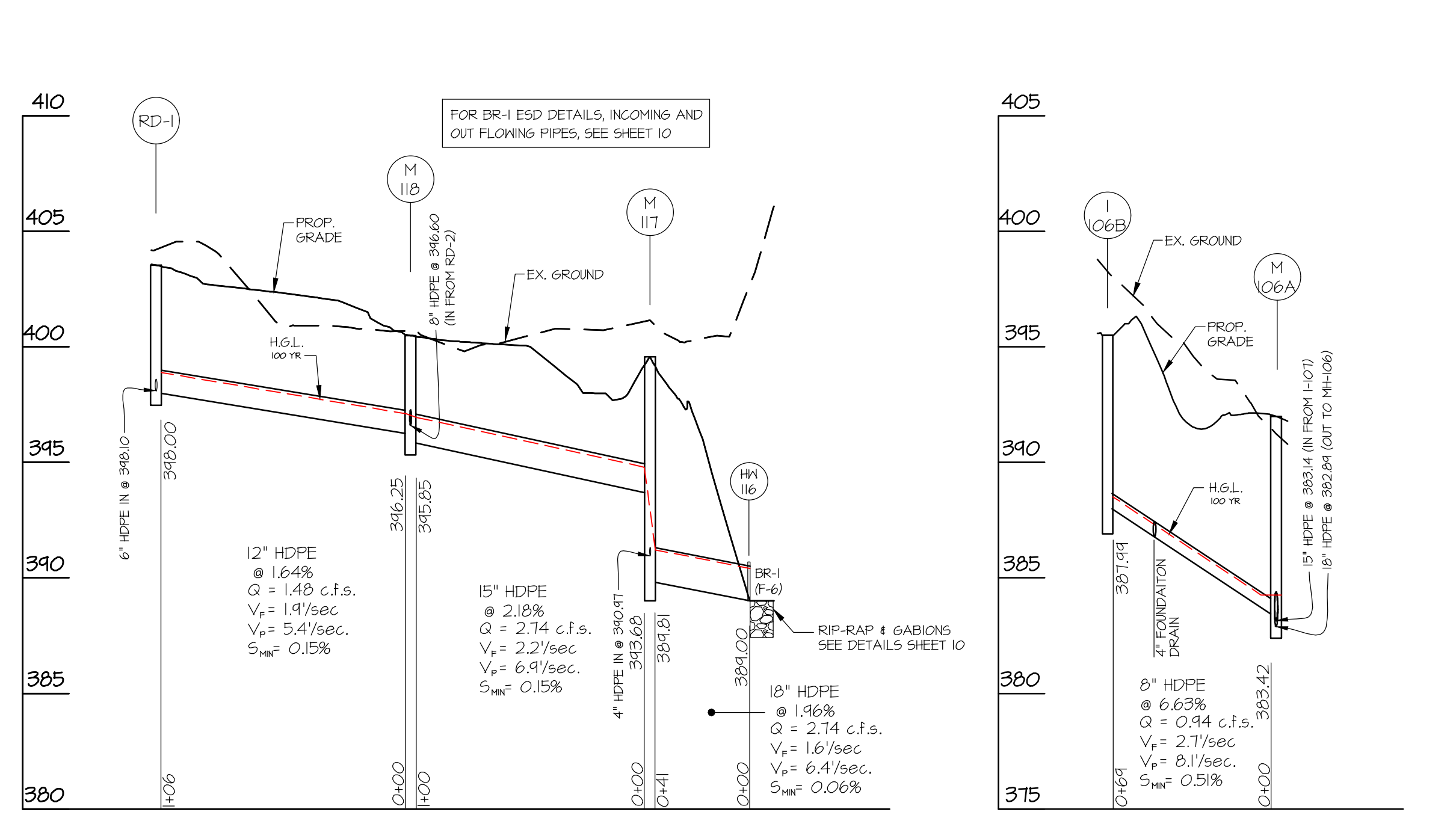
I-98 I-99



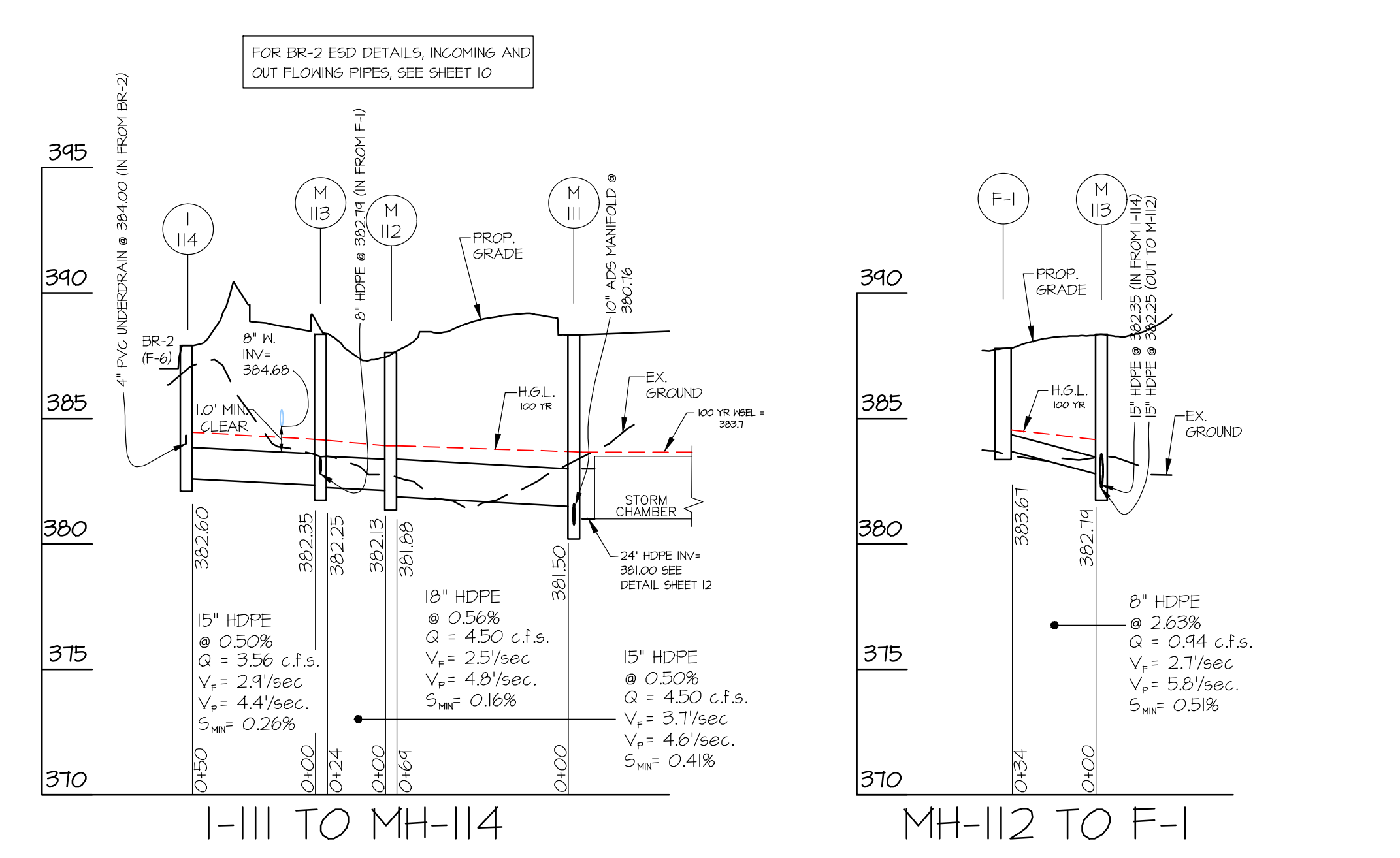
RD-8 TO MBR-1



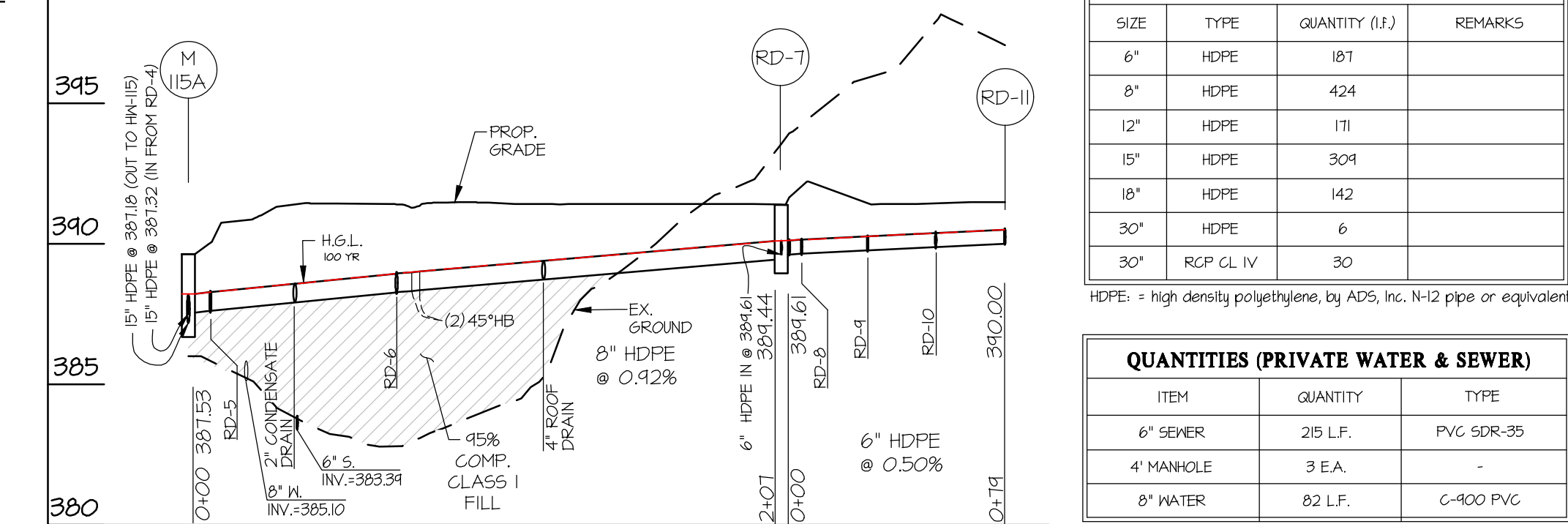
MH-106 TO I-107 MH-108 TO I-110



HW-116 TO RD-1 MH-106A TO I-106B



I-III TO MH-114 MH-112 TO F-1

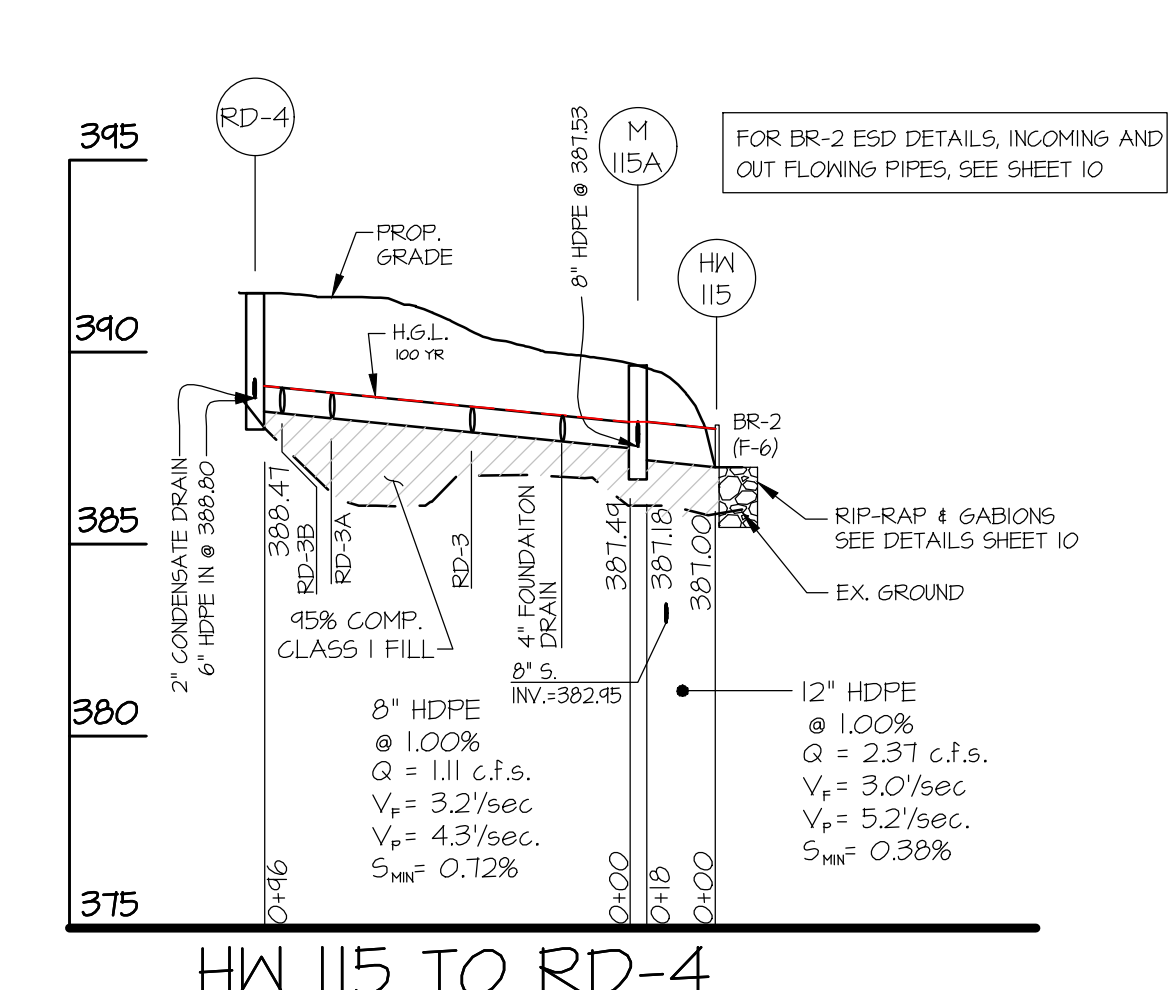
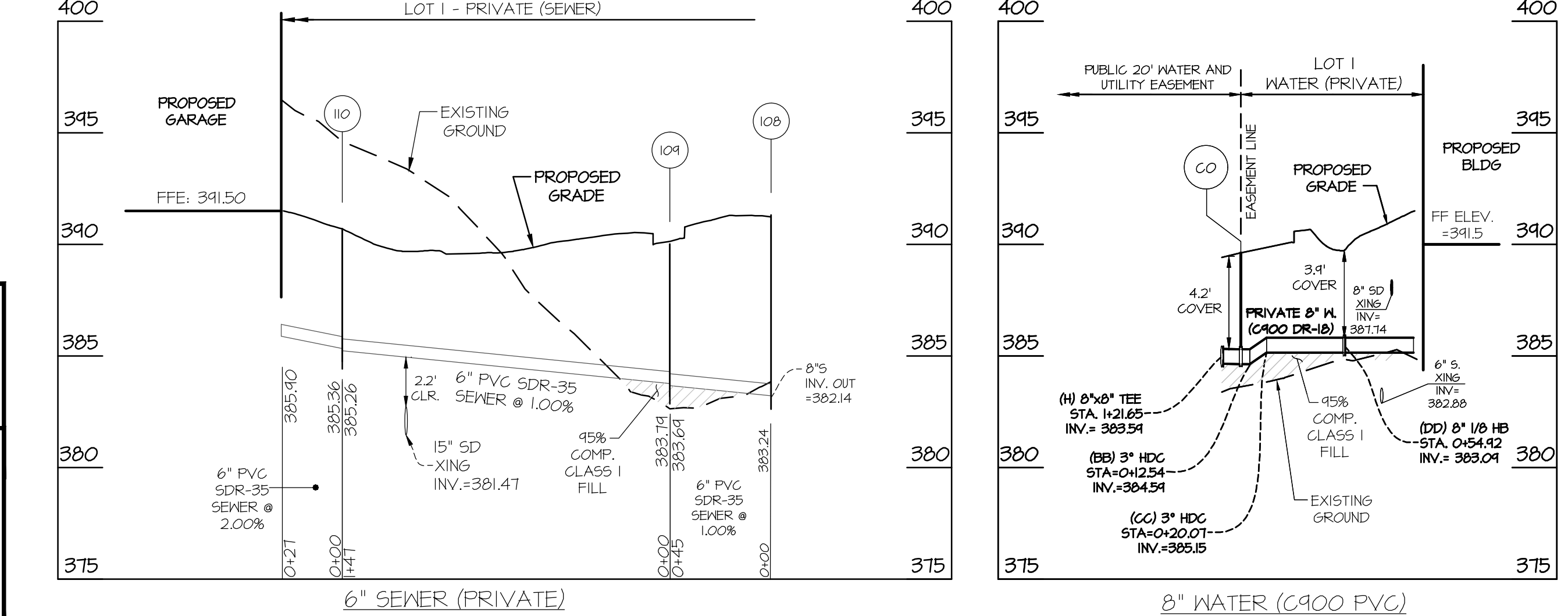
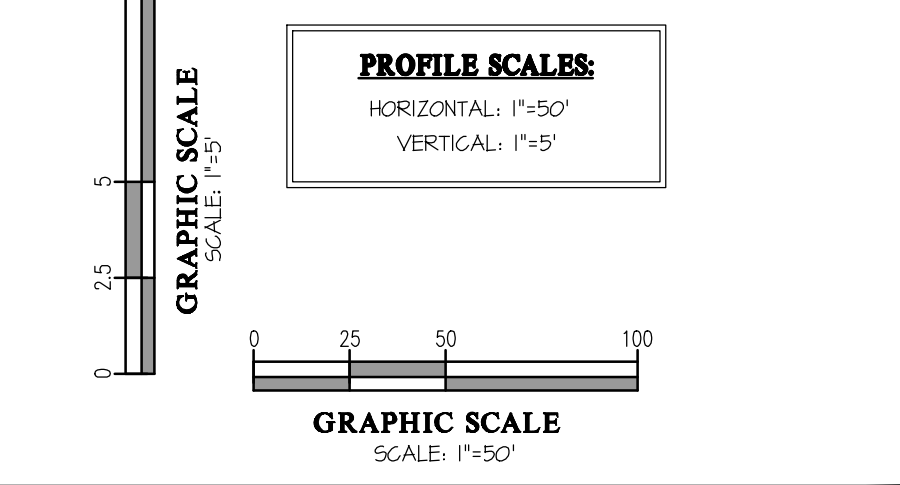


M-115A TO RD-11

PIPE SCHEDULE (STORM DRAIN)			
SIZE	TYPE	QUANTITY (L)	REMARKS
6"	HDPE	187	
8"	HDPE	424	
12"	HDPE	171	
15"	HDPE	304	
18"	HDPE	142	
30"	HDPE	6	
30"	RCP CL IV	30	

HDPE = High density polyethylene, by ADS, Inc. N-12 pipe or equivalent

QUANTITIES (PRIVATE WATER & SEWER)		
ITEM	QUANTITY	TYPE
6" SEWER	215 LF.	PVC SDR-35
4" MANHOLE	3 EA.	
8" WATER	82 LF.	C-900 PVC



HW-115 TO RD-4

STRUCTURE SCHEDULE (STORM DRAIN)									
NO	TYPE	WIDTH (INSIDE)	TOP ELEVATION		INVERT		STD. DETAIL	LOCATIONS	REMARKS
			UPPER	LOWER	UPPER	LOWER			
I-98	FLOW THRU INLET	10'-0"	381.40	---	---	385.30	HO. CO. D-4.35	N 556,968 E 1345,506	
I-99	FLOW THRU INLET	10'-0"	388.50	---	---	386.50	HO. CO. D-4.35	N 556,968 E 1345,969	
I-103	A-10 INLET	2'-6"	381.50	---	---	382.60	HO. CO. D-4.03	N 551,216 E 1345,970	
I-104	A-10 INLET	2'-6"	381.50	---	---	383.50	HO. CO. D-4.03	N 551,284 E 1345,346	
I-105	A-10 INLET	2'-6"	381.80	---	---	383.50	HO. CO. D-4.03	N 551,393 E 1345,321	
I-106B	18" NYLOPLAST DRAIN	1'-6"	385.50	---	---	381.99	NYLOPLAST DRAIN WITH GRATE OR EQUIV.	N 551,446 E 1345,191	
I-107	24" NYLOPLAST DRAIN	2'-0"	384.00	---	---	384.17	PVC DRAIN BASIN. SEE SHEET	N 551,491 E 1345,256	
I-109	18" NYLOPLAST DRAIN	1'-6"	388.50	---	---	382.39	PVC DRAIN BASIN. SEE SHEET	N 551,238 E 1345,195	
I-110	18" NYLOPLAST DRAIN	1'-6"	388.50	---	---	383.22	PVC DRAIN BASIN. SEE SHEET	N 551,184 E 1345,213	
I-114	24" NYLOPLAST DRAIN	2'-0"	388.00	---	---	384.00	PVC DRAIN BASIN. SEE SHEET	N 551,043 E 1345,244	
F-1	FILTERRA	6'-0"	389.00	---	---	383.67	SEE DETAIL ON SHEET 10	N 551,054 E 1345,367	
RD-1	18" NYLOPLAST DRAIN	1'-6"	403.50	---	---	388.10	PVC DRAIN BASIN. SEE SHEET	N 551,260 E 1345,083	
RD-4	18" NYLOPLAST DRAIN	1'-6"	391.20	---	---	388.80	PVC DRAIN BASIN. SEE SHEET	N 551,104 E 1345,136	
RD-7	12" NYLOPLAST DRAIN	1'-0"	391.50	---	---	389.44	PVC DRAIN BASIN. SEE SHEET	N 551,746 E 1345,142	
M-101	CONTROL STRUCTURE	6'-0"	387.60	---	---	389.50	SEE DETAIL SHEET 11	N 551,146 E 1345,352	
M-102	STANDARD MANHOLE	4'-0"	381.50	---	---	382.30	HO. CO. 6-5.12	N 551,202 E 1345,350	
M-104A	STANDARD MANHOLE	4'-0"	381.55	---	---	383.00	HO. CO. 6-5.12	N 551,273 E 1345,324	
M-105A	STANDARD MANHOLE	4'-0"	381.65	---	---	383.00	HO. CO. 6-5.12	N 551,334 E 1345,300	
M-106	STANDARD MANHOLE	4'-0"	384.35	---	---	380.00	HO. CO. 6-5.12	N 551,310 E 1345,288	
M-106A	STANDARD MANHOLE	4'-0"	392.00	---	---	382.84	HO. CO. 6-5.12	N 551,414 E 1345,264	
M-108	STANDARD MANHOLE	4'-0"	384.00	---	---	380.00	HO. CO. 6-5.12	N 551,266 E 1345,211	
M-111	STANDARD MANHOLE	4'-0"	388.35	---	---	388.00	HO. CO. 6-5.12	N 551,771 E 1345,303	
M-112	STANDARD MANHOLE	4'-0"	387.64	---	---	382.13	HO. CO. 6-5.12	N 551,220 E 1345,316	
M-113	STANDARD MANHOLE	4'-0"	388.35	---	---	382.25	HO. CO. 6-5.12	N 551,084 E 1345,375	
M-115A	24" NYLOPLAST DRAIN	2'-0"	384.30	---	---	387.18	PVC DRAIN BASIN. SEE SHEET	N 551,061 E 1345,226	
M-117	24" NYLOPLAST DRAIN	2'-0"	384.58	---	---	389.81	PVC DRAIN BASIN. SEE SHEET	N 551,452 E 1345,116	
M-118	24" NYLOPLAST DRAIN	2'-0"	400.50	---	---	386.60	PVC DRAIN BASIN. SEE SHEET	N 551,351 E 1345,132	
HH-100	TYPE 'C' HEAD WALL	---	---	---	---	374.30	HO. CO. STD. D-5.21	N 551,716 E 1345,376	
HH-15	TYPE 'C' HEAD WALL	---	---	---	---	387.00	HO. CO. STD. D-5.21	N 551,058 E 1345,244	
HH-16	TYPE 'C' HEAD WALL	---	---	---	---	384.00	HO. CO. STD. D-5.21	N 551,475 E 1345,214	

COORDINATE POINT GIVEN IS TO THE CENTERLINE OF THE STRUCTURE AT THE FACE OF CURB FOR INLETS AND TO THE CENTER OF STRUCTURE FOR MANHOLES AND END SECTIONS.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE: OCTOBER 31, 2023

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
For Lynda D. Eisenberg, AICP
Date 6/6/2024

Director: Jessica Cellini
Date 6/6/2024

Chief, Division of Planning & Development: Chad Edmondson
Date 6/6/2024

Chief, Development Engineering Division: [Name]

DESIGNED BY:	DRAWN BY:	CHECKED BY:	DATE	REVISION	BY	APPR.
LDD	LDD	TMR				

PREPARED FOR/OWNER:
PATUXENT OWNER LP
1330 NEW HAMPSHIRE AVE. NW
SUITE 116
WASHINGTON, DC 20036
ATTN: ELIZABETH EVERHART
(202)-223-3405

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 17285
EXPIRATION DATE: 10/31/2025



DocuSigned by:
Todd Redden
AB736CDCB566400...
05/24/24
ELECTION DISTRICT No. 5

UTILITY PROFILES
PATUXENT COMMONS
LOT 1
EX. PARCELS 108, 109 & 137
PLATS 26636-26637
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
AS SHOWN	POR	20089
DATE	TAX MAP - GRID	SHEET
MAY, 2024	35-17	14 OF 29

L:\CADD\DRAWINGS\20089\PLANS BY GJM\SPR20089_14 UTILITY PROFILES.dwg
 PLOTTED: 2/27/2024, 2:14 PM, LAST SAVED: 2/27/2024, 5:00 PM, PLOTTED BY: Tony Lupton

SPECIFICATIONS: PLANT MATERIALS AND PLANTING METHODS

A. PLANT MATERIALS

THE LANDSCAPE CONTRACTOR SHALL FURNISH AND INSTALL AND/OR DIG, BALL, BURLAP AND TRANSPALP ALL OF THE PLANT MATERIALS CALLED FOR ON DRAWINGS AND/OR LISTED IN THE PLANT SCHEDULE.

1. PLANT NAMES

PLANT NAMES USED IN THE PLANT SCHEDULE SHALL CONFORM WITH "STANDARDIZED PLANT NAMES", LATEST EDITION.

2. PLANT STANDARDS

ALL PLANT MATERIAL SHALL BE EQUAL TO OR BETTER THAN THE REQUIREMENTS OF THE "USA STANDARD FOR NURSERY STOCK" LATEST EDITION AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERMEN (HERE, AFTER REFERRED TO AS AAN STANDARDS). ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY, SHALL HAVE A NORMAL HABIT OF GROWTH AND SHALL BE FIRST QUALITY, SOUND, VIGOROUS, WELL-BRANCHED AND WITH HEALTHY, WELL-FURNISHED ROOT SYSTEMS, THEY SHALL BE FREE OF DISEASE, INSECT FEEDS AND MECHANICAL INJURIES.

ALL PLANTS SHALL BE NURSERY GROWN AND SHALL HAVE BEEN GROWN UNDER THE SAME CLIMATE CONDITIONS AS THE LOCATION OF THIS PROJECT FOR AT LEAST TWO YEARS BEFORE PLANTING. NEITHER HELED-IN PLANTS NOR PLANTS FROM COLD STORAGE WILL BE ACCEPTED.

3. PLANT MEASUREMENTS

ALL PLANTS SHALL CONFORM TO THE MEASUREMENTS SPECIFIED IN THE PLANT SCHEDULE AS APPROVED BY THE DESIGN REVIEW COMMITTEE (DRC).

A. CALIPER MEASUREMENTS SHALL BE TAKEN SIX INCHES (6") ABOVE GRADE FOR TREES UNDER FOUR-INCH (4") CALIPER AND TWELVE (12") ABOVE GRADE FOR TREES FOUR INCHES (4") IN CALIPER AND OVER.

B. MINIMUM BRANCHING HEIGHT FOR ALL SHADE TREES SHALL BE SIX FEET (6'), MAXIMUM EIGHT FEET (8').

Table with columns: CALIPER, HEIGHT, SPREAD, SIZE OF BALL. Rows include 3" - 3.5" CAL, 3.5" - 4" CAL, 4" - 4.5" CAL, 4.5" - 5" CAL, 5" - 5.5" CAL, 5.5" - 6" CAL.

ALL PLANT MATERIAL SHALL GENERALLY AVERAGE THE MEDIAN FOR THE SIZE RANGES INDICATED ABOVE AS INDICATED IN THE "AAN STANDARDS".

4. PLANT IDENTIFICATION

LEGIBLE LABELS SHALL BE ATTACHED TO ALL SHADE TREES, MINOR TREES, SPECIMEN SHRUBS AND BUNDLES OR BOXES OF OTHER PLANT MATERIAL, GIVING THE BOTANICAL AND COMMON NAMES, SIZE AND QUANTITY OF EACH. EACH SHIPMENT OF PLANTS SHALL BEAR CERTIFICATES OF INSPECTION AS REQUIRED BY FEDERAL, STATE AND COUNTY AUTHORITIES.

5. PLANT INSPECTION

THE DESIGN REVIEW COMMITTEE MAY, UPON REQUEST BY THE BUILDER OR DEVELOPER, AT LEAST TEN (10) DAYS PRIOR TO THE INSTALLATION OF ANY PROPOSED PLANT MATERIAL, INSPECT ALL PROPOSED PLANT MATERIAL AT THE SOURCE OF ORIGIN.

B. PLANTING METHODS

ALL PROPOSED PLANT MATERIALS THAT MEET THE SPECIFICATIONS IN SECTION A ARE TO BE PLANTED IN ACCORDANCE WITH THE FOLLOWING METHODS DURING THE PROPER PLANTING SEASONS AS DESCRIBED IN THE FOLLOWING:

1. PLANTING SEASONS

THE PLANTING OF DECIDUOUS TREES, SHRUBS AND VINES SHALL BE FROM MARCH 15TH TO JUNE 15TH AND FROM SEPTEMBER 15TH TO DECEMBER 15TH. PLANTING OF DECIDUOUS MATERIAL MAY BE CONTINUED DURING THE WINTER MONTHS PROVIDED THERE IS NO FROST IN THE GROUND AND FROST-FREE TOPSOIL. PLANTING MIXTURES ARE USED.

THE PLANTING OF EVERGREEN MATERIAL SHALL BE FROM MARCH 15TH TO JUNE 15TH AND FROM AUGUST 15TH TO DECEMBER 15TH. NO PLANTING SHALL BE DONE WHEN THE GROUND IS FROZEN OR EXCESSIVELY MOIST. NO FROZEN OR WET TOPSOIL SHALL BE USED AT ANY TIME.

2. DIGGING

ALL PLANT MATERIAL SHALL BE DUG, BALLED AND BURLAPPED (BIB) IN ACCORDANCE WITH THE "AAN STANDARDS".

3. EXCAVATION OF PLANT PITS

THE LANDSCAPING CONTRACTOR SHALL EXCAVATE ALL PLANT PITS, VINE PITS, HEDGE TRENCHES AND SHRUB BEDS IN ACCORDANCE WITH THE FOLLOWING SCHEDULES:

A. LOCATIONS OF ALL PROPOSED PLANT MATERIAL SHALL BE STAKED AND APPROVED IN THE FIELD BY THE LANDSCAPE ARCHITECT BEFORE ANY OF THE PROPOSED PLANT MATERIAL IS INSTALLED BY THE LANDSCAPE CONTRACTOR.

B. ALL PITS SHALL BE GENERALLY CIRCULAR IN OUTLINE, VERTICAL SIDES, DEPTH SHALL NOT BE LESS THAN 6" DEEPER THAN THE ROOT BALL, DIAMETER SHALL NOT BE LESS THAN TWO TIMES THE DIAMETER OF THE ROOT BALL AS SET FORTH IN THE FOLLOWING SCHEDULE.

C. IF AREAS ARE DESIGNATED AS SHRUB BEDS OR HEDGE TRENCHES, THEY SHALL BE EXCAVATED TO AT LEAST 18" DEPTH MINIMUM. AREAS DESIGNATED FOR GROUND COVERS AND VINES SHALL BE EXCAVATED TO AT LEAST 12" IN DEPTH MINIMUM.

D. DIAMETER AND DEPTH OF TREE PITS SHALL GENERALLY BE AS FOLLOWS:

Table with columns: PLANT SIZE, ROOT BALL, PIT DIA., PIT DEPTH. Rows include 3" - 3.5" CAL, 3.5" - 4" CAL, 4" - 4.5" CAL, 4.5" - 5" CAL, 5" - 5.5" CAL, 5.5" - 6" CAL.

A 20% COMPACTION FIGURE OF THE SOIL TO BE REMOVED IS REQUIRED AND WILL BE ALLOWED IN CALCULATION OF EXTRA TOPSOIL. THE TABULATED PIT SIZES ARE FOR PURPOSES OF UNIFORM CALCULATION AND SHALL NOT OVERRIDE THE SPECIFIED DEPTHS BELOW THE BOTTOMS OF THE ROOT BALLS.

4. STAKING, GUYING AND WRAPPING

ALL PLANT MATERIAL SHALL BE STAKED OR GUYED, AND WRAPPED IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:

A. STAKES SHALL BE SOUND WOOD 2" X 2" ROUGH SAWN OAK OR SIMILAR DURABLE WOODS, OR LENGTHS MINIMUM 7'-0" FOR MAJOR TREES AND 5'-0" MINIMUM FOR MINOR TREES.

B. WIRE AND CABLE. WIRE SHALL BE #10 GA. GALVANIZED OR BETHANIZED ANNEALED STEEL WIRE. FOR TREES OVER 3" CALIPER, PROVIDE 5/16" TURN BUCKLES, EYE AND EYE WITH 4" TAKE-UP. FOR TREES OVER 5" CALIPER, PROVIDE 3/16" 1 STRAND CABLE GALVANIZED STEEL WITH GALVANIZED "EYE" THIMBLES OF WIRE AND HOSE ON TREES UP TO 3" IN CALIPER.

C. HOSE. SHALL BE NEW, 2 PLY REINFORCED RUBBER HOSE, MINIMUM 1/2" ID. "PLASTIC LOCK TIES" OR "PAUL'S TREES BRACES" MAY BE USED IN PLACE OF WIRE AND HOSE ON TREES UP TO 3" IN CALIPER.

D. ALL TREES UNDER 3" IN CALIPER ARE TO BE PLANTED AND STAKED IN ACCORDANCE WITH THE ATTACHED PLANTING DETAILS.

5. PLANT PRUNING, EDGING AND MULCHING

A. EACH TREE, SHRUB OR VINE SHALL BE PRUNED IN AN APPROPRIATE MANNER TO ITS PARTICULAR REQUIREMENTS, IN ACCORDANCE WITH ACCEPTED STANDARD PRACTICE. BROKEN OR BRUISED BRANCHES SHALL BE REMOVED WITH CLEAN CUTS FLUSH WITH THE ADJACENT TRUNK OR BRANCHES. ALL CUTS OVER 1" IN DIAMETER SHALL BE PLANTED WITH AN APPROVED ANTISEPTIC TREE WOUND DRESSING.

B. ALL TRENCHES AND SHRUB BEDS SHALL BE EDGED AND CULTIVATED TO THE LINES SHOWN ON THE DRAWING. THE AREAS AROUND ISOLATED PLANTS SHALL BE EDGED AND CULTIVATED TO THE FULL DIAMETER OF THE PIT. SOD WHICH HAS BEEN REMOVED AND STACKED SHALL BE USED TO TRIM THE EDGES OF ALL EXCAVATED AREAS TO THE NEAT LINES OF THE PLANT PIT SAUCERS, THE EDGES OF SHRUB AREAS, HEDGE TRENCHES AND VINE POCKETS.

C. AFTER CULTIVATION, ALL PLANT MATERIALS SHALL BE MULCHED WITH A 3" LAYER OF FINE, SHREDDED PINE BARK, PEAT MOSS, OR ANOTHER APPROVED MATERIAL OVER THE ENTIRE AREA OF THE BED OR SAUCER.

6. PLANT INSPECTION AND ACCEPTANCE

THE DESIGN REVIEW COMMITTEE SHALL BE RESPONSIBLE FOR INSPECTING ALL PLANTING PROJECTS ON A PERIODIC BASIS TO ASSURE THAT ALL WORK IS PROCEEDING IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.

7. PLANT GUARANTEE

ALL PLANT MATERIAL SHALL BE GUARANTEED FOR THE DURATION OF ONE FULL GROWING SEASON, AFTER FINAL INSPECTION AND ACCEPTANCE OF THE WORK IN THE PLANTING PROJECT. PLANTS SHALL BE ALIVE AND IN SATISFACTORY GROWING CONDITION AT THE END OF THE GUARANTEE PERIOD.

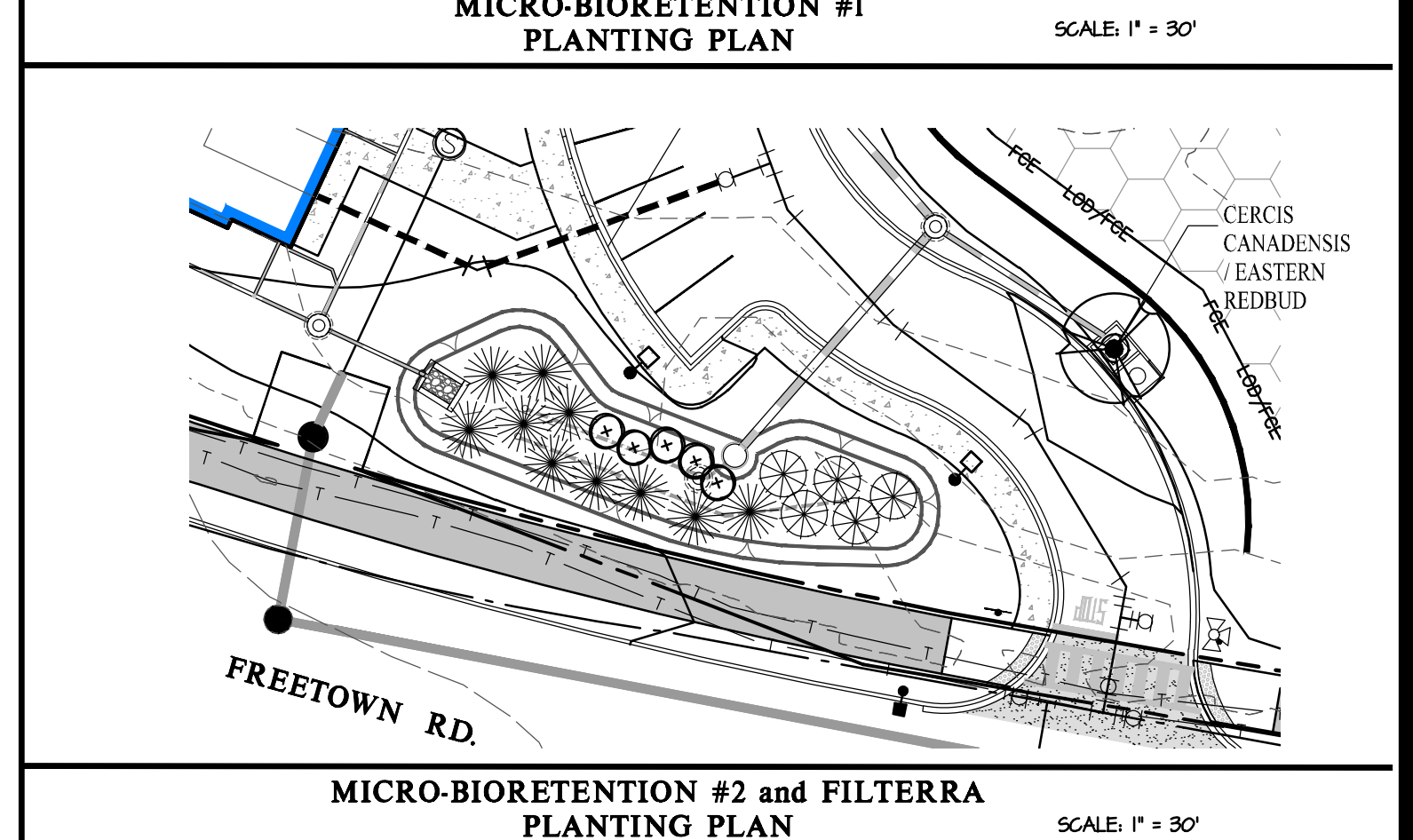
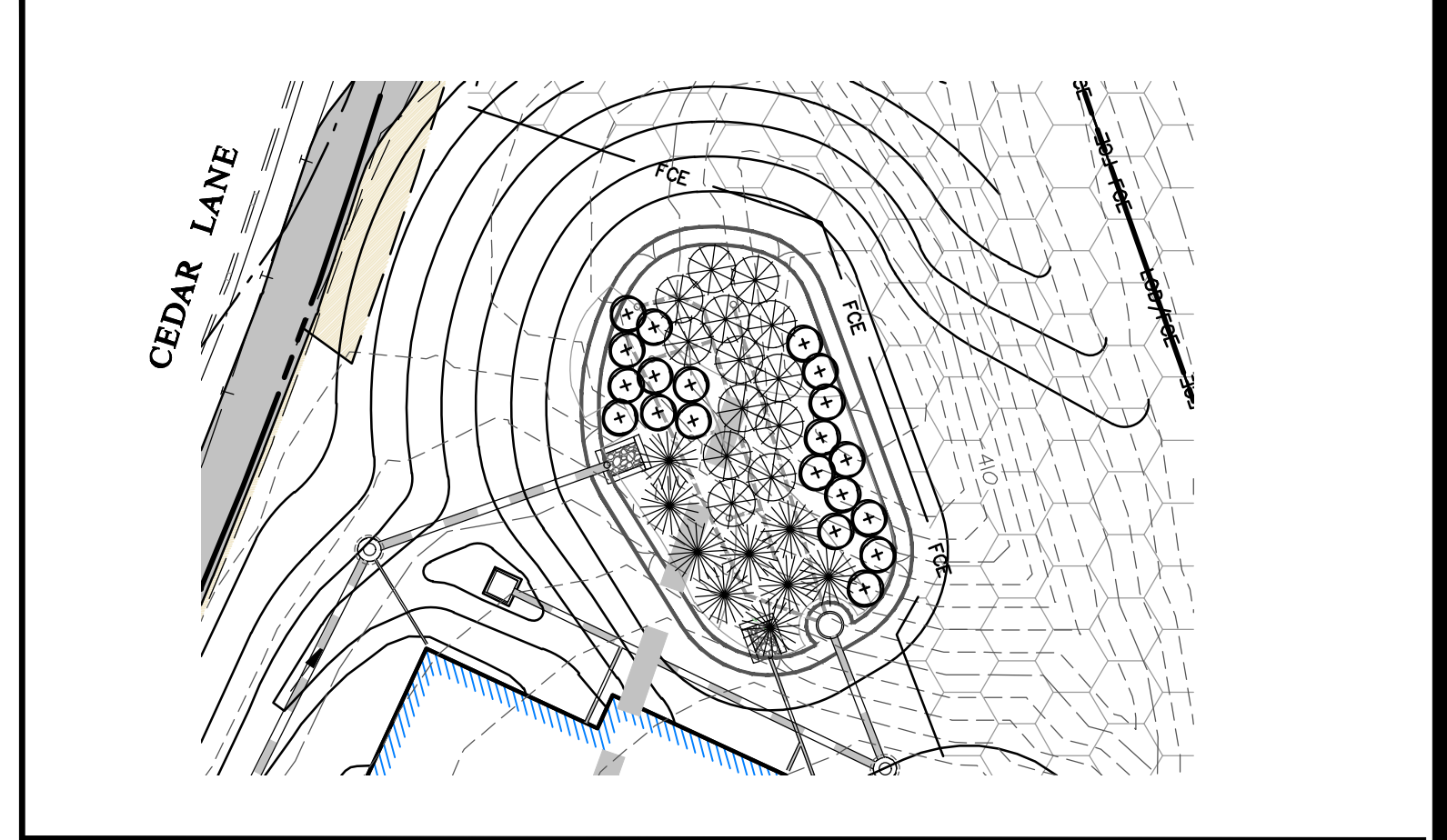
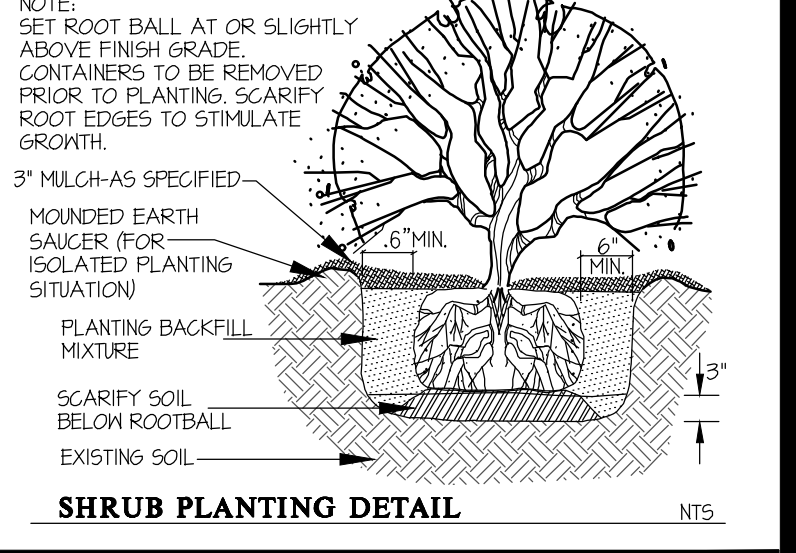
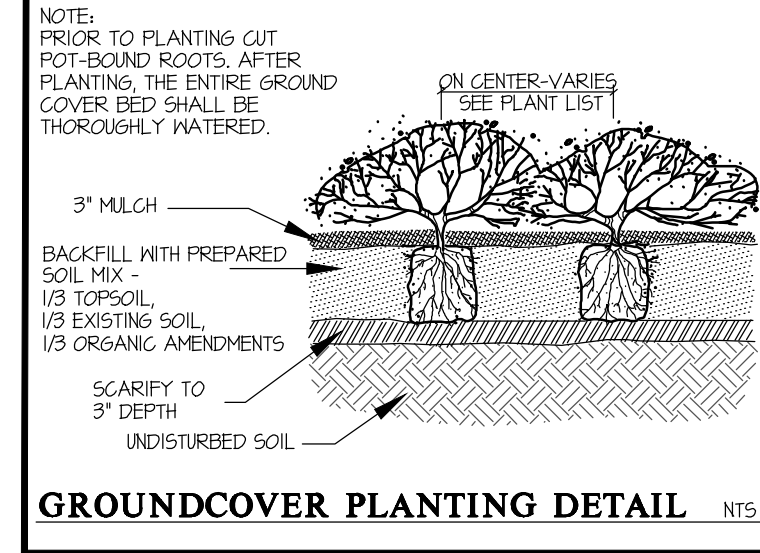
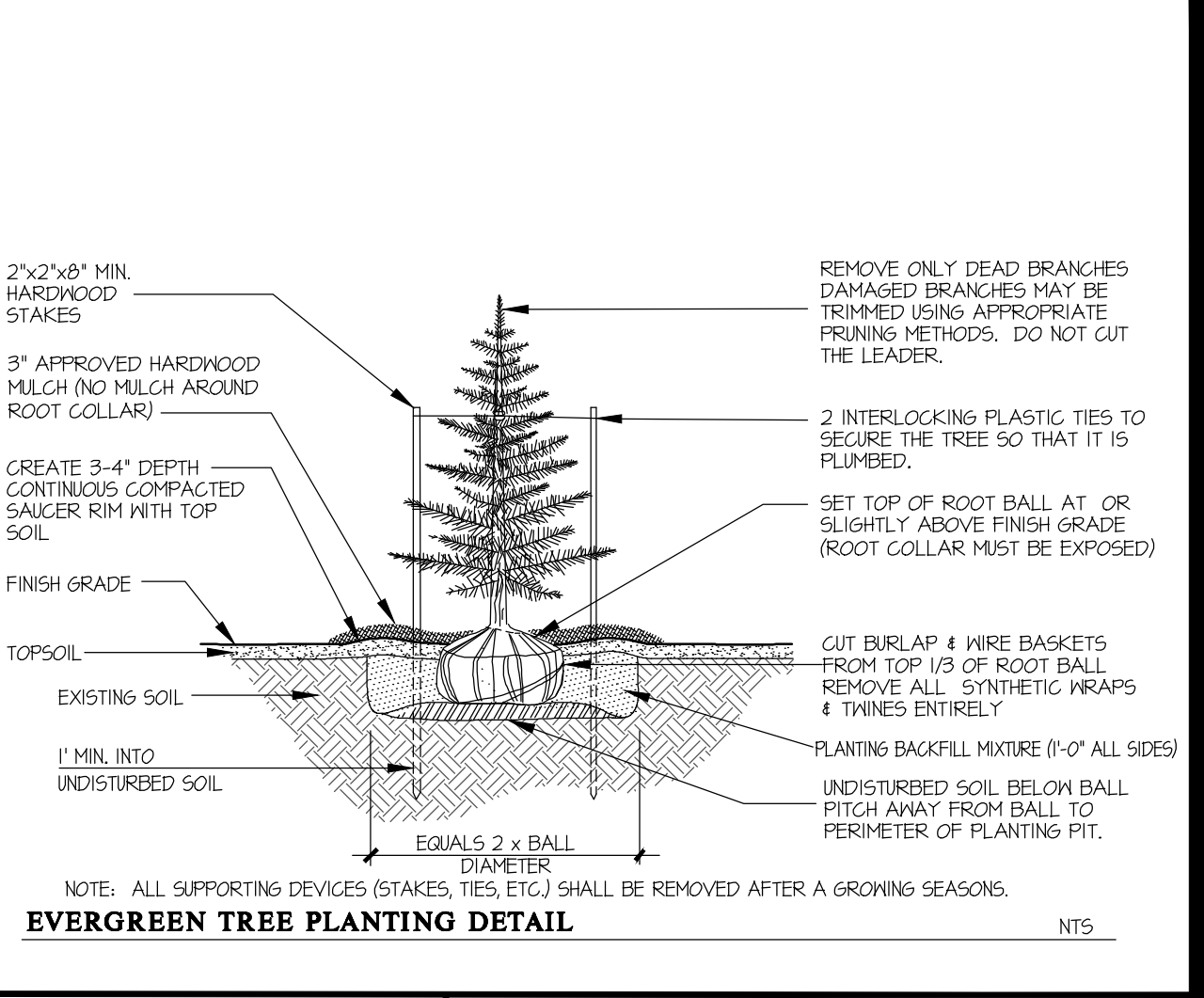
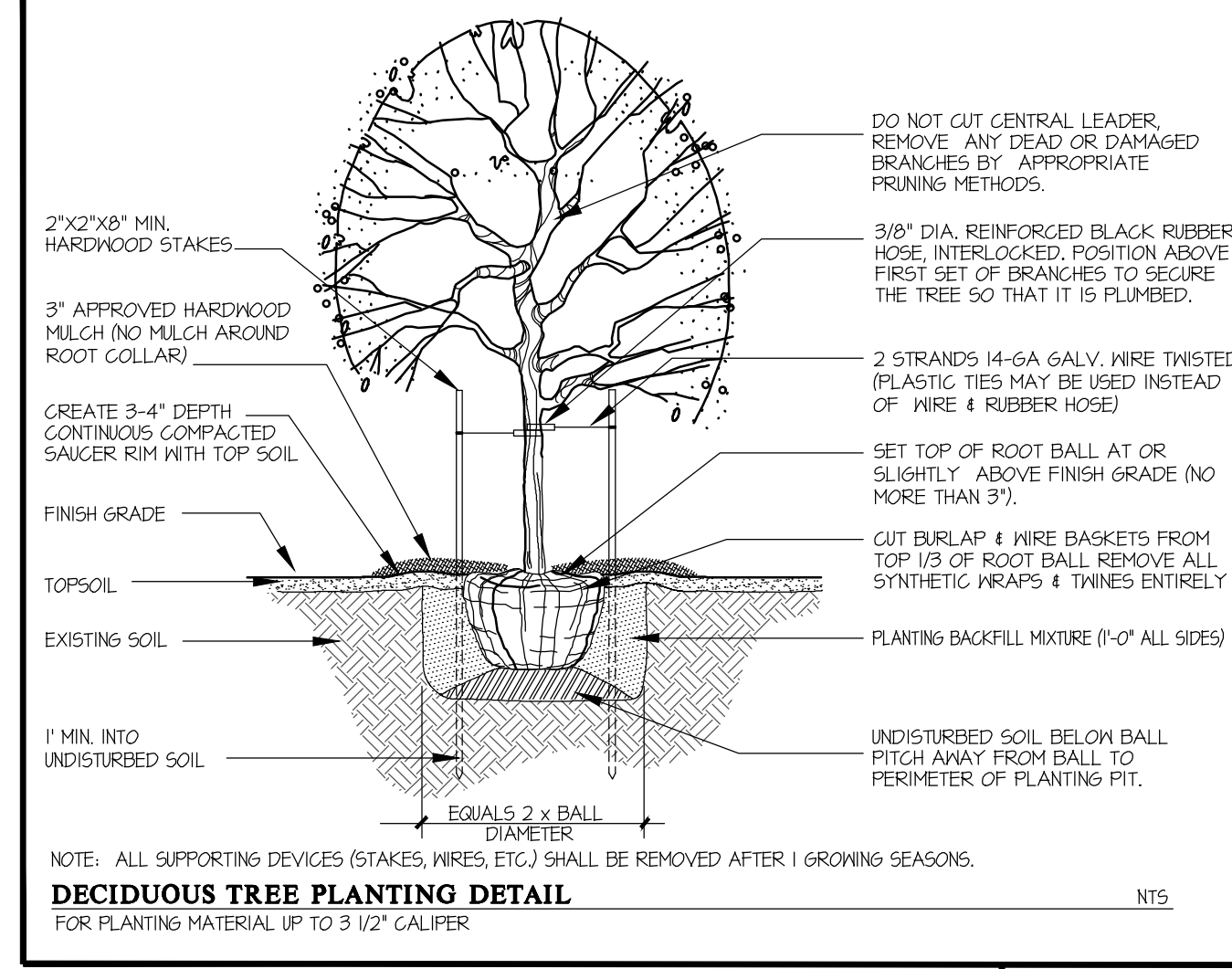
A. FOR THIS PURPOSE, THE "GROWING SEASON" SHALL BE THAT PERIOD BETWEEN THE END OF THE "SPRING" PLANTING SEASON AND THE COMMENCEMENT OF THE "FALL" PLANTING SEASON.

B. GUARANTEE FOR PLANTING PERFORMED AFTER THE SPECIFIED END OF THE "SPRING" PLANTING SEASON, SHALL BE EXTENDED THROUGH THE END OF THE NEXT FOLLOWING "SPRING" PLANTING SEASON.

SODDING

ALL SODS SHALL BE IN ACCORDANCE WITH THE "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS" LATEST EDITION, APPROVED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF METROPOLITAN WASHINGTON AND THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS.

ALL SOD SHALL BE STRONGLY ROOTED SOD, NOT LESS THAN TWO YEARS OLD AND FREE OF WEEDS AND UNDESIRABLE NATIVE GRASSES. PROVIDE ONLY SOD CAPABLE OF GROWTH DEVELOPMENT WHEN PLANTED AND IN STRIPS NOT MORE THAN 18" WIDE X 4' LONG. PROVIDE SOD COMPOSED PRINCIPALLY OF IMPROVED STRAIN KENTUCKY BLUEGRASS, SUCH AS, COLUMBIA, VICTA, OR ESCORT.



PLANT LIST FOR MICRO-BIORETENTION table with columns: SYMBOL, QTY., NAMES (BOTANICAL / SCIENTIFIC), SIZE, ROOT/COMMENTS. Lists plants like CEPHALANTHUS OCCIDENTALIS, ITEA VIRGINICA, and CORNUS SERICEA.

NOTES: 1. THE OWNER, TENANTS AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING INCLUDING BOTH PLANT MATERIALS AND BERRIES, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION AND WHEN NECESSARY, REPAIRED OR REPLACED.

DEVELOPER'S/OWNER'S CERTIFICATE

I HEREBY CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I FURTHER CERTIFY THAT UPON COMPLETION A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

DocuSigned by: [Signature] 05/24/24 DATE 7BC049DBA51B4EA. DATE

APPROVED PLANNING BOARD OF HOWARD COUNTY DATE: OCTOBER 31, 2023

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING For Lynda D. Eisenberg, AICP Date 6/6/2024

Chief, Division of Land Development Date 6/6/2024

Chief, Development Engineering Division Date

GLW PLANNING | ENGINEERING | SURVEYING logo and contact information: 3809 NATIONAL DRIVE | SUITE 250 | BURTONSVILLE, MD 20886 | GLWPA.COM | PHONE: 301-421-4024 | BALT. 410-880-1820 | DC/VA: 301-989-2524 | FAX: 301-421-4188

DESIGNED BY: klp, DRAWN BY: klp, CHECKED BY: TMR, DATE, REVISION, BY, APPR.

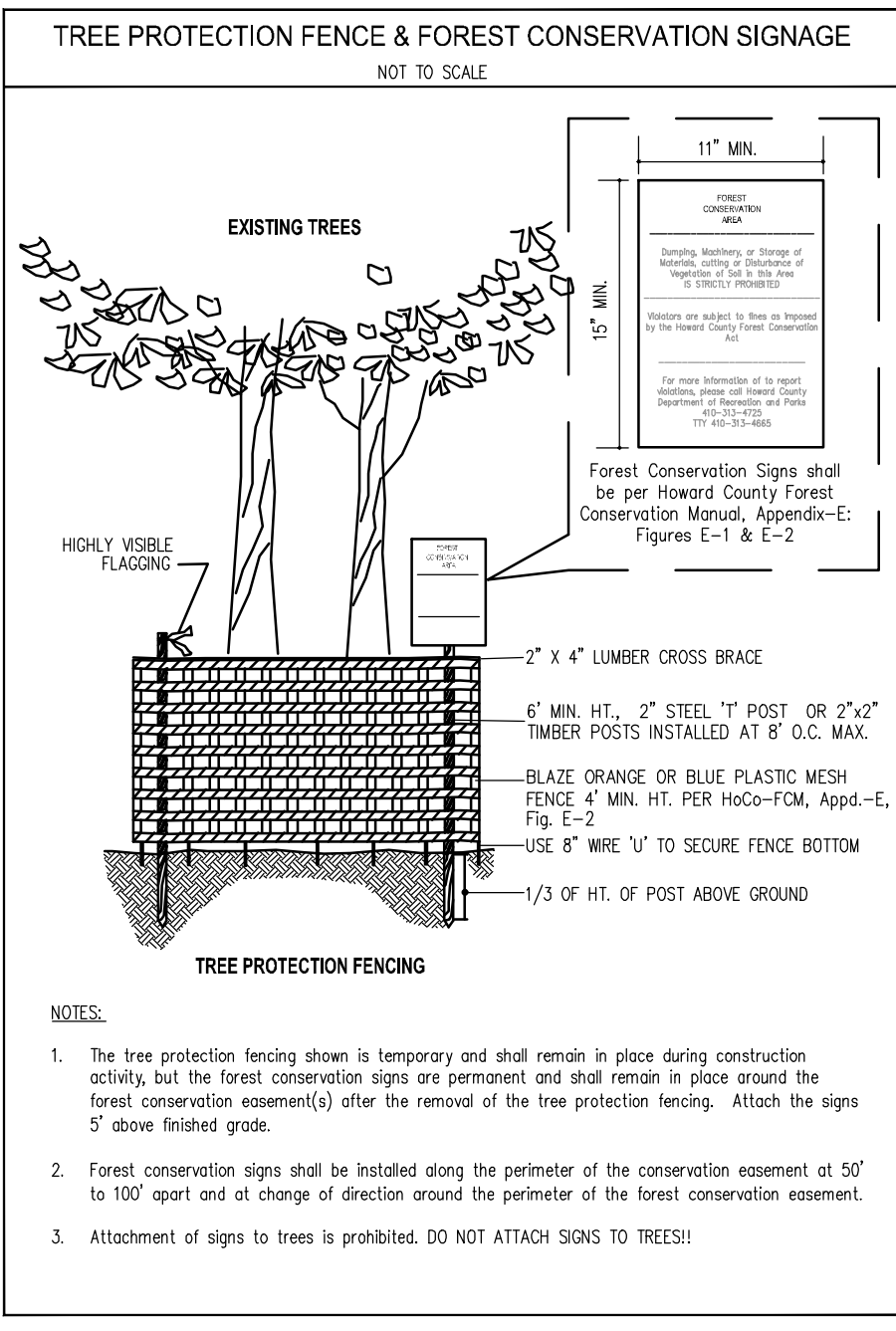
PREPARED FOR/OWNER: PATUXENT OWNER LP 1330 NEW HAMPSHIRE AVE. NW SUITE 116 WASHINGTON, DC 20036 ATTN: ELIZABETH EVERHART (202)-223-3405

DocuSigned by: Kevin Foster 7619C2E291774F9... 05/24/24

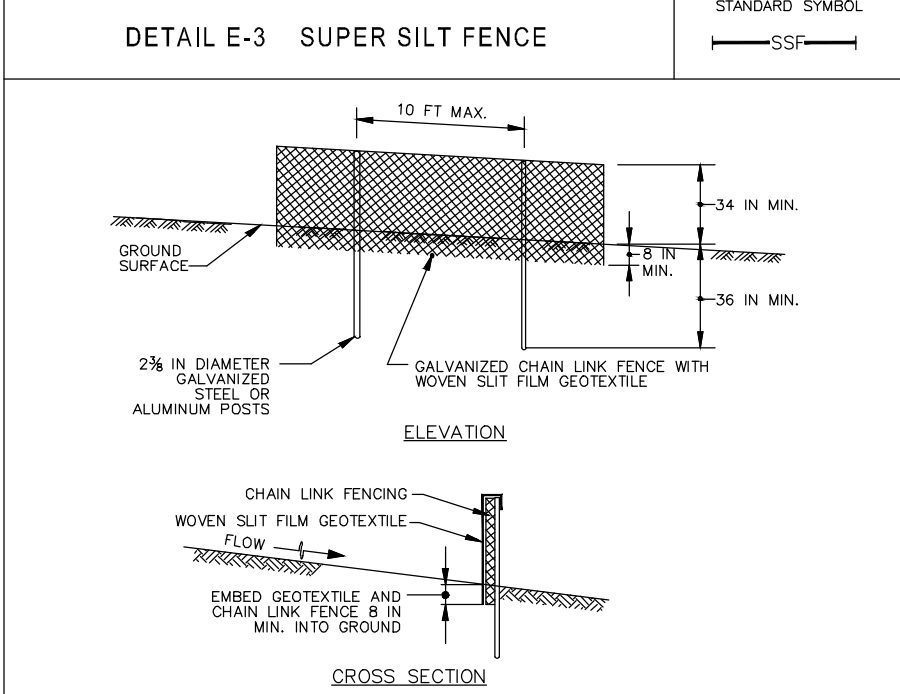
LANDSCAPE NOTES and DETAILS PATUXENT COMMONS LOT 1 EX. PARCELS 108, 109 & 137 PLATS 26636-26637 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN, ZONING POR, G. L. W. FILE No. 20089, DATE MAY, 2024, TAX MAP - GRID 35-17, SHEET 16 OF 29

VERTICAL: L:\CAD\DRAWINGS\20089\PLANS BY GLW\SPR\20089_15-16 LANDSCAPE.dwg, DATE: 5/24/24, 2:16 PM, LAST SAVED: 5/24/2024, 5:08 PM, PLOTTED: EIT, TROY, LANSING



- NOTES:
- The tree protection fencing shown is temporary and shall remain in place during construction activity, but the forest conservation signs are permanent and shall remain in place around the forest conservation easement(s) after the removal of the tree protection fencing. Attach the signs to dense ribbed grass.
 - Forest conservation signs shall be installed along the perimeter of the conservation easement at 50' to 100' apart and at change of direction around the perimeter of the forest conservation easement.
 - Attachment of signs to trees is prohibited. DO NOT ATTACH SIGNS TO TREES!



- #### CONSTRUCTION SPECIFICATIONS
- INSTALL 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
 - FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2 1/2 INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUD RINGS.
 - FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSIDE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 6 INCHES INTO THE GROUND.
 - WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEEDING 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 SILT FENCE.
 - PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT 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.

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

NOTE: As shown on **Sheet-5 (Sediment Control Plan)** of this SOP set, Super Silt Fence must also be installed where the LOD is along the forest retention area which is depicted on the FDP with the "LOD/1-ITP" line type.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
 DATE: OCTOBER 31, 2023

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: *Jessica Bellah* Date: 6/6/2024
 Chief, Division of Land Development: *Chris Edmondson* Date: 6/6/2024
 Chief, Development Engineering Division: _____ Date: _____

GENERAL NOTES

- THESE PLANS ARE PROVIDED IN ACCORDANCE WITH THE REQUIREMENTS OF SUBTITLE 12 "FOREST CONSERVATION" OF THE HOWARD COUNTY CODE. ALSO SEE SHEET No.1 OF THE PLAN SET FOR APPLICABLE GENERAL NOTES FOR THE PROJECT.
- THE OWNER IS RESPONSIBLE FOR A 3-YEAR (MINIMUM) POST-CONSTRUCTION MAINTENANCE PERIOD WHICH INVOLVES ACTIVITIES NECESSARY TO ENSURE SURVIVAL & GROWTH OF THE FOREST CONSERVATION AREA.
- AT THE END OF THE POST-CONSTRUCTION MANAGEMENT AND PROTECTION PERIOD, THE DEPARTMENT OF PLANNING AND ZONING OR ITS DESIGNEE WILL CONDUCT A FINAL INSPECTION FOR RELEASE OF FOREST CONSERVATION OBLIGATION IN ACCORDANCE WITH HOWARD COUNTY FOREST CONSERVATION MANUAL (FCM) SEC.4.5.5.
- THE FOREST CONSERVATION EASEMENT, FOREST CONSERVATION AGREEMENT AND A DEED OF FOREST CONSERVATION EASEMENT SHALL BE RECORDED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FCM (SEC.5.11). NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
- THIS PROPERTY IS IN THE PATUXENT RIVER WATERSHED, THE DNR 12-DIGIT WATERSHED IS 02131050954 (See the Vicinity Map on Sheet-17 delineation).
- WP-22-088 WAS APPROVED ON 2/02/2023. SEE GENERAL NOTE #12 ON SHEET-1 FOR ADDITIONAL DETAILS.

OVERALL FOREST CONSERVATION PROGRAM SEQUENCE

- OBTAIN ALL NECESSARY PLAN PERMITS.
- STAKE THE LIMIT OF DISTURBANCE.
- FIELD MEETING TO REVIEW AND VERIFY LIMIT OF DISTURBANCE ANY NECESSARY ADJUSTMENTS FOR CRZ PRIOR TO SITE GRADING AND CONSTRUCTION.
- INSTALL FOREST PROTECTION DEVICES (SIGNS, TREE PROTECTION FENCES AND SUPER SILT FENCE).
- COMMENCE SITE CONSTRUCTION.
- MAINTENANCE OF THE FOREST RETENTION AREA IN ACCORDANCE WITH THE DEED OF EASEMENT, THE FOREST CONSERVATION MANUAL AND THESE PLANS.
- INSPECTION (BY DPZ OR ITS DESIGNEE) FOR THE RELEASE OF THE CONSTRUCTION PERIOD OBLIGATIONS, START OF POST-CONSTRUCTION MANAGEMENT PERIOD.
- POST-CONSTRUCTION MANAGEMENT FOR A PERIOD OF 3 GROWING SEASONS (MIN.).
- FINAL INSPECTION FOR THE RELEASE OF THE OWNER'S FOREST CONSERVATION OBLIGATION.
- LONG TERM PROTECTION OF THE FOREST CONSERVATION EASEMENT AREA IN ACCORDANCE WITH THE DEED OF FOREST CONSERVATION AGREEMENT AND FCM SEC.4.6

CONSTRUCTION PERIOD FOREST PROTECTION PROGRAM

- FOREST PROTECTION DEVICES AND SIGNS SHALL BE INSTALLED PRIOR TO START OF SITE CONSTRUCTION. THE PROTECTION DEVICES AND SIGNS SHALL BE MAINTAINED DURING THE ENTIRE CONSTRUCTION PERIOD. ALL TRASH AND DEBRIS SHALL BE REMOVED FROM THE FCE. THE TRASH/DEBRIS REMOVAL OPERATION SHALL NOT DAMAGE ANY TREES WITHIN THE FCE.
- ADJOINING PROPERTY OWNERS MUST BE NOTIFIED ABOUT PROTECTION OF THE FOREST CONSERVATION EASEMENT AREA ON THIS PROPERTY.
- EQUIPMENT, VEHICLES, BUILDING MATERIALS OR ANY OTHER CONSTRUCTION ACTIVITIES SHALL NOT BE WITHIN THE PROTECTED FCE AREA. FOREST MAINTENANCE ACTIVITIES INCLUDES I.E. WATERING, FERTILIZING, PRUNING, PLANTING OF SUPPLEMENTAL NATIVE PLANT MATERIAL, REMOVAL OF DEAD AND DISEASED TREES THAT MAY POSE A THREAT TO NEARBY STRUCTURES IF THEY FALL OUTSIDE THE FCE AND CONTROL OF INVASIVE PLANTS) MAY BE PERMITTED WITHIN THE FCE. CLEARING FOR THE PURPOSE OF SOODING OR PLANTING GRASS IS NOT PERMITTED WITHIN THE FOREST CONSERVATION AREA.
- ONE YEAR AFTER THE FOREST CONSERVATION AGREEMENT HAS BEEN SIGNED, DPZ OR ITS DESIGNEE WILL CONDUCT AN INSPECTION TO CONFIRM THAT ALL FOREST RETENTION AREAS WITHIN THE FCE HAVE BEEN PRESERVED. WRITTEN APPROVAL OF THE INSPECTION INITIATES THE START OF THE POST-CONSTRUCTION PROTECTION PERIOD FOR A MINIMUM OF 3 YEARS. NON-COMPLIANCE WOULD REQUIRE A RE-INSPECTION DISCUSSED IN FCM SEC.4.1.4.

MINIMUM 3 GROWING SEASON POST-CONSTRUCTION MANAGEMENT PROGRAM

A POST-CONSTRUCTION MANAGEMENT PROGRAM MUST BE APPROVED AS PART OF THE ORIGINAL FOREST CONSERVATION PLAN AND REMAIN IN EFFECT FOR A MINIMUM OF 3 GROWING SEASONS. A LONGER PERIOD MAY BE REQUIRED FOR SPECIFIC STRATEGIES.

IMPLEMENTATION OF THE POST-CONSTRUCTION MANAGEMENT PROGRAM MUST BE SUPERVISED BY A QUALIFIED PROFESSIONAL WHO SHOULD INSPECT THE STATUS OF ALL FOREST RETENTION, REFORESTATION AND AFFORESTATION AREAS (IF APPLICABLE) AT SPECIFIED TIMES DURING THE LIFE OF THE POST CONSTRUCTION AGREEMENT AND IMPLEMENT APPROPRIATE ACTION TO ENSURE FOREST CONSERVATION AREA IS NOT DEGRADED.

THERE ARE FIVE PRIMARY COMPONENTS OF THE POST-CONSTRUCTION PROGRAM: INSPECTION, MANAGEMENT OF RETAINED OR NEW PLANTINGS, REPLACEMENT OF DEAD OR DAMAGED MATERIAL WHEN NECESSARY, EDUCATION OF NEW OCCUPANTS OR NEIGHBORS AND FINAL INSPECTION AND RELEASE OF DEVELOPER FROM ADDITIONAL RESPONSIBILITIES.

INSPECTION

ROUTINE MONITORING OF THE FOREST RETENTION AND PLANTED AREAS (WHERE APPLICABLE) SHOULD OCCUR AT LEAST 3 TIMES THROUGHOUT THE YEAR TO PINPOINT ANY PROBLEMS AND IMPLEMENT REMEDIAL ACTIONS NEEDED TO CORRECT EXISTING PROBLEMS.

MANAGEMENT OF FOREST CONSERVATION AREAS

POST-CONSTRUCTION MANAGEMENT INCLUDES: MAINTENANCE OF ALL FENCES, SIGNS OR OTHER DEVICES DELINEATING FOREST CONSERVATION AREAS; NEEDED WATERING; REMOVAL OF DEAD OR DAMAGED MATERIAL (WHEN NECESSARY AND IF APPROVED BY THE DEPT. OF RECREATION & PARKS); CONTROL OF UNDESIRABLE COMPETING INVASIVE SPECIES OR NOXIOUS WEEDS; FERTILIZING (IF NECESSARY); AND CONTROL OF PESTS. SPECIFIC PRACTICES WILL DEPEND ON THE WEATHER PREVAILING DURING THE POST CONSTRUCTION PERIOD. IT IS THE RESPONSIBILITY OF THE POST-CONSTRUCTION PLAN SUPERVISOR TO TAKE APPROPRIATE ACTIONS AS NEEDED. THE FCM, THEREFORE, DOES NOT CITE REQUIRED MEASURES. SURVIVAL SUCCESS, NOT FULFILLMENT OF A GIVEN SERIES OF TASKS, WILL BE THE MEASURE OF CONFORMANCE TO THE NEEDS OF THE POST-CONSTRUCTION PROGRAM.

REPLACEMENT OF PLANT MATERIAL (WHERE APPLICABLE)

AN INSPECTION SHALL TAKE PLACE AT THE END OF YEAR ONE OR BEFORE THE SECOND GROWING SEASON TO EVALUATE SURVIVAL RATES WITH REFERENCE TO THE SURVIVAL REQUIRED AT THE END OF THE TWO YEAR PERIOD. THIS IS AN OPPORTUNITY TO AVOID THE PENALTY FOR VIOLATING SURVIVAL RATE STANDARDS. THIS INSPECTION SHOULD ESTIMATE SURVIVAL POTENTIAL BASED ON THE FOLLOWING:

- MIGOR AND THREAT OF COMPETING VEGETATION (I.E. IF SEEDLINGS ARE FREE TO GROW)
- STRUCTURE
- GROWTH RATE
- CROWN DEVELOPMENT
- TRUNK HEALTH

IF, AFTER ONE YEAR, THE POSSIBILITY EXISTS THAT THE ORIGINAL PLANTING WILL NOT MEET SURVIVAL STANDARDS, THE APPLICANT MAY CHOOSE TO ESTABLISH REINFORCEMENT PLANTINGS. IF PLANT MORTALITY OF REFORESTATION OR AFFORESTATION EXCEEDS 10% OF PLANTED MATERIAL AT THE END OF THE FIRST GROWING SEASON, SUCH MATERIAL SHOULD BE REPLACED TO BRING THE TOTAL NUMBER OF TREES TO 50% OF THE ORIGINAL TOTAL. SUCH MATERIAL SHALL BE REPLACED BY THE BEGINNING OF THE SECOND GROWING SEASON. IF AT THE END OF THE SECOND GROWING SEASON, SURVIVAL RATE DROPS BELOW 75% SUCH MATERIAL AS NEEDED TO GUARANTEE AN 75% SURVIVAL RATE BY THE END OF THE THIRD GROWING SEASON SHALL BE INSTALLED.

EDUCATION OF NEW OCCUPANTS

THE OCCUPANTS OR NEIGHBORS MUST AVOID ACTIVITIES THAT DESTROY OR DEGRADE PROTECTED FOREST RESOURCES. THE POST-CONSTRUCTION MANAGEMENT PROGRAM MUST THEREFORE INCLUDE STEPS TO EDUCATE THE NEW OCCUPANTS OR NEIGHBORS ABOUT THE PROPER USE OF FOREST CONSERVATION AREAS, ABOUT THE NEED FOR THE DEVELOPER TO CARRY OUT THE POST-CONSTRUCTION MANAGEMENT PROGRAM, THE TIME AND OPERATION OF THE POST-CONSTRUCTION PROTECTION PROGRAM, AND THE EVENTUAL TRANSFER OF LONG-TERM RESPONSIBILITIES TO THE PROPERTY OWNERS. SUCH EDUCATIONAL MATERIAL SHOULD INCLUDE A PLAN LOCATING ALL PROTECTED AREAS ON THE SITE AND A DESCRIPTION OF PERMITTED AND PROHIBITED ACTIVITIES WITHIN OR AFFECTING SUCH AREAS. THE FORMAT AND METHOD OF CONVEYING SUCH INFORMATION IS LEFT TO THE DISCRETION OF THE DEVELOPER.

FINAL INSPECTION AND RELEASE OF OBLIGATIONS

AT THE END OF THE POST-CONSTRUCTION MANAGEMENT AND PROTECTION PERIOD, THE DEPARTMENT OF PLANNING AND ZONING OR ITS DESIGNEE WILL CONDUCT A FINAL INSPECTION IN ACCORDANCE WITH FCM SEC. 4.5.5 FOR THE RELEASE FOREST CONSERVATION OBLIGATIONS.



FOREST CONSERVATION EASEMENT LOCATION DIAGRAM
 FOR CLARITY OTHER SITE FEATURES ARE NOT SHOWN.

FOREST STAND ANALYSIS TABLE

Applicant: **Mission First HDC** Project Name: **Patuxent Commons** Submission No. _____

KEY	COMMUNITY TYPE	COMMUNITY AREA (Ac.)	Soil Types	Typical Forest cover for soil type*	Dominant Species and Approx. %	% Cover	DBH	Successional Stage	Stand Condition	Community Area (Ac.) in Sensitive Environments
FI	Tulip Poplar	Approx. 2.31 Acres	6Bc	Upland Oaks, Yellow Poplar, Hickory	Galanga, Tulip Poplar, Pignut Hickory, Understory, Nutt-Hard Rose, Spicebush, Herbaceous: Miscanthus, Sidaquinny, Ribwort Plantain, Mock strawberry, Yucca, Japanese Honeyuckle, Virginia Creeper, Poison Ivy.	60% 5%	12-20" 12-20"	Mid Successional	Good	0.43 acres of FI is within sensitive environments (stream & wetland buffers).
	BaA			Upland Oaks, Yellow Poplar, Hickory	Galanga, Pin Oak, White Oak	5%				
	6Bb			Mixed Hardwoods		5%	10-18" 12-20"			

* Area measured to the nearest 1/10 acre
 ** Source: Howard County Soil Survey, USDA



December 8, 2021
 Mr. Keith Bennett
 Cheswick, Little & Weber, P.A.
 3909 National Drive
 Suite 250
 Burtonsville, Maryland 20886

RE: **Environmental Review for 6441 Freetown Road, Columbia, Tax Map 35-18, Howard County, Maryland**

Dear Mr. Bennett:
 The Wildlife and Heritage Service has determined that there are no official State or Federal records for listed plant or animal species within the delineated area shown on the map provided. As a result, we have no specific concerns regarding potential impacts or recommendations for protection measures at this time. Please let us know however if the limits of proposed disturbance or overall site boundaries change and we will provide you with an updated evaluation.
 Thank you for allowing us the opportunity to review this project. If you should have any further questions regarding this information, please contact me at lori.byrne@maryland.gov or (410) 260-8473.

Sincerely,
Lori A. Byrne

Lori A. Byrne,
 Environmental Review Coordinator
 Wildlife and Heritage Service
 MD Dept. of Natural Resources

ER# 20211605.1a

Taxes State Office Building - 580 Taylor Avenue - Annapolis, Maryland 21405
 410-360-80NR or toll free in Maryland 877-620-80NR - dnr.maryland.gov - TTY Users Call via the Maryland Relay

3909 NATIONAL DRIVE | SUITE 250 | BURTONSVILLE, MD 20886 | GLW/PA.COM
 PHONE: 301-421-4024 | BALT. 410-880-1820 | DC/OVA: 301-989-2524 | FAX: 301-421-4198

DESIGNED BY:				
DRAWN BY:				
CHECKED BY:				
DATE	REVISION	BY	APPR.	

PREPARED FOR/OWNER:
 PATUXENT OWNER LP
 1330 NEW HAMPSHIRE AVE. NW
 SUITE 116
 WASHINGTON, DC 20036
 ATTN: ELIZABETH EVERHART
 (202)-223-3405



DocuSigned by:
Kevin Foster
 7619C2E291774F9...
 05/24/24

ON-SITE and OFF-SITE FOREST CONSERVATION PLAN

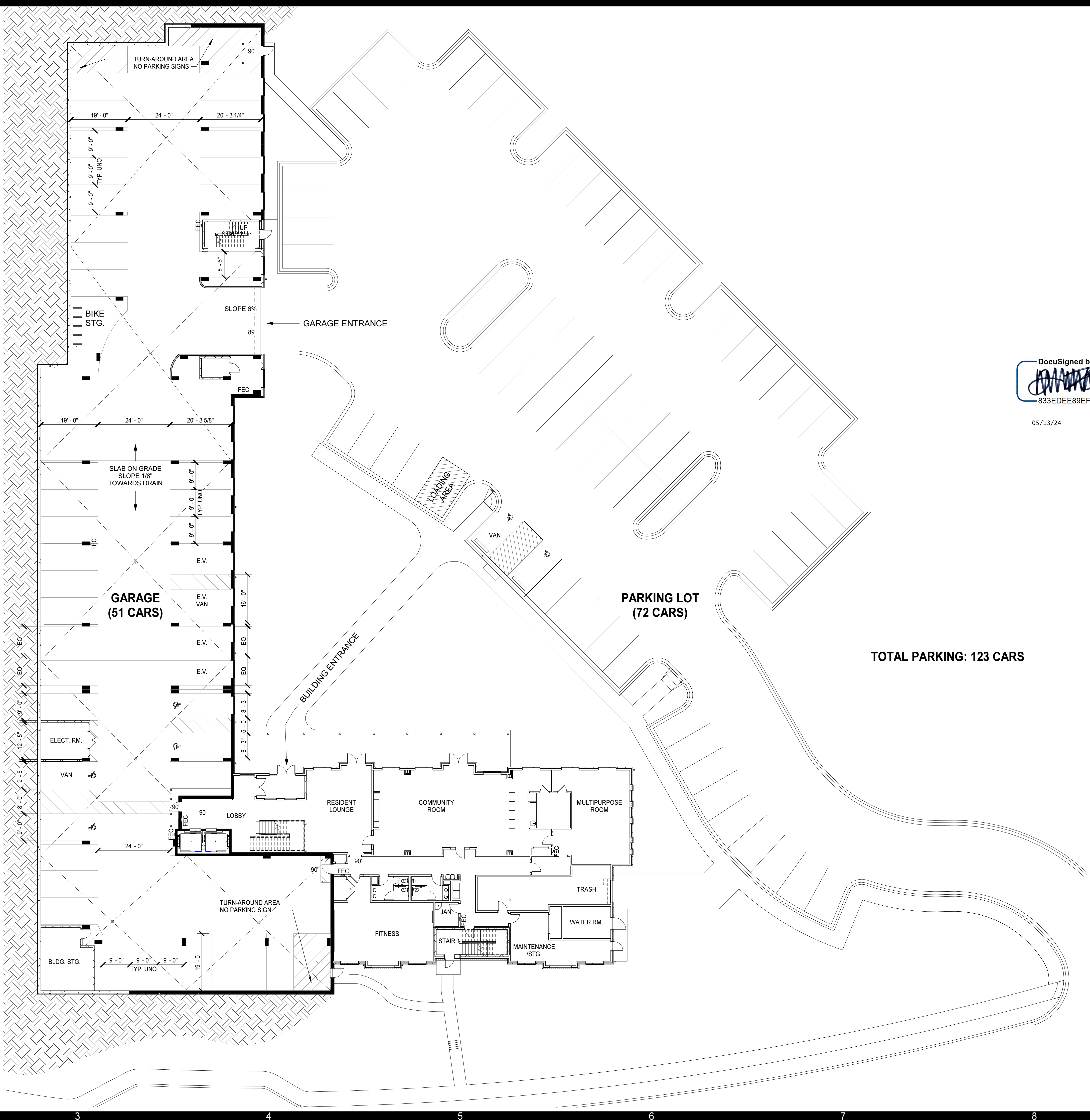
PATUXENT COMMONS LOT 1
 EX. PARCELS 108, 109 & 137
 PLATS 26636-26637

ELECTION DISTRICT No. 5

HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	POR	20089
DATE	TAX MAP - GRID	SHEET
MAY, 2024	35-17	18 OF 29

H
G
F
E
D
C
B
A



TOTAL PARKING: 123 CARS

APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE: OCTOBER 31, 2023

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

DocuSigned by: <i>Jessica Bellah</i> Director	For Lynda D. Eisenberg, AICP	6/6/2024
DocuSigned by: <i>[Signature]</i> Chief, Division of Land Development		6/6/2024
DocuSigned by: <i>[Signature]</i> Chief, Development Engineering Division		6/6/2024

DocuSigned by:
[Signature]
833EDEE89EFA47A...
05/13/24

MOSELEYARCHITECTS

1414 KEY HIGHWAY, SECOND FLOOR, BALTIMORE, MD 21230
PHONE (410) 539-4300 FAX (410) 539-0660
MOSELEYARCHITECTS.COM

PATUXENT COMMONS
581075
MISSION FIRST HDC
6441 Freetown Rd. Columbia, MD. 21044

PROJECT NO:	581075
DATE:	May 15, 2024
REVISIONS	
DATE	DESCRIPTION

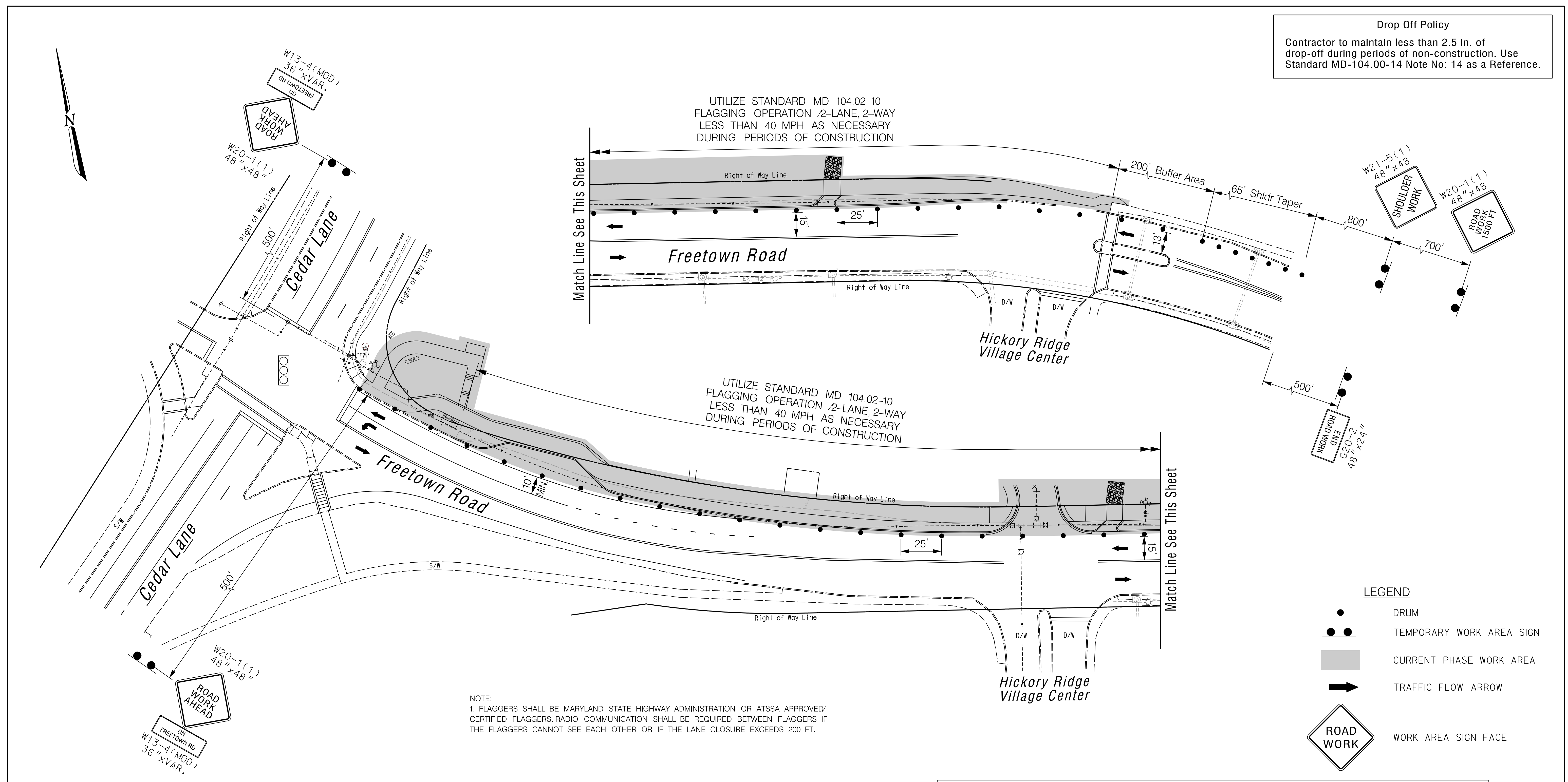
GARAGE LEVEL PLAN

SHEET 19 of 29

5/13/2024 1:52:13 PM

1 2 3 4 5 6 7 8

Drop Off Policy
Contractor to maintain less than 2.5 in. of drop-off during periods of non-construction. Use Standard MD-104.00-14 Note No: 14 as a Reference.



UTILIZE STANDARD MD 104.02-10 FLAGGING OPERATION /2-LANE, 2-WAY LESS THAN 40 MPH AS NECESSARY DURING PERIODS OF CONSTRUCTION

UTILIZE STANDARD MD 104.02-10 FLAGGING OPERATION /2-LANE, 2-WAY LESS THAN 40 MPH AS NECESSARY DURING PERIODS OF CONSTRUCTION

LEGEND

- DRUM
- TEMPORARY WORK AREA SIGN
- CURRENT PHASE WORK AREA
- ➔ TRAFFIC FLOW ARROW
- ⬡ ROAD WORK WORK AREA SIGN FACE

NOTE:
1. FLAGGERS SHALL BE MARYLAND STATE HIGHWAY ADMINISTRATION OR ATSSA APPROVED/ CERTIFIED FLAGGERS. RADIO COMMUNICATION SHALL BE REQUIRED BETWEEN FLAGGERS IF THE FLAGGERS CANNOT SEE EACH OTHER OR IF THE LANE CLOSURE EXCEEDS 200 FT.

SEQUENCE OF OPERATION

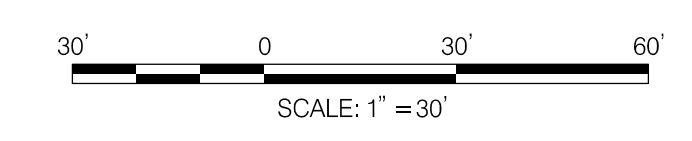
1. INSTALL ADVANCE WARNING SIGNS AND CHANNELIZING DEVICES (DRUMS). THE DESIGN SPEED IS 25 MPH FOR FREETOWN ROAD. TRAFFIC CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL THEY ARE NO LONGER NEEDED.
2. CONSTRUCT ROADWAY IMPROVEMENTS ALONG THE NORTH SIDE OF FREETOWN ROAD PER ROADWAY PLANS AS PREPARED BY GLW.
3. CHANNELIZING DEVICES SHALL REMAIN ADJACENT TO THE WORK AREA DURING PERIODS OF NON-CONSTRUCTION. ALL DRIVEWAYS AND ROADWAY SHALL REMAIN OPEN AND UNOBSTRUCTED BY ANY CHANNELIZING DEVICES.

NOTE:
THE FOLLOWING STANDARDS ARE REQUIRED FOR THIS PROJECT:
MD 104.02-10 FLAGGING OPERATION /2-LANE, 2 WAY LESS THAN 40 MPH
MD 104.02-02 SHOULDER WORK/2-LANE, 2-WAY, EQL/LESS THAN 40 MPH
FOR ALL STANDARDS REFERRED TO ON THE PLANS THE CONTRACTOR MUST GO TO THE BOOK OF STANDARDS WHICH WILL HAVE THE MOST CURRENT VERSION. THE BOOK OF STANDARDS CAN BE ACCESSED AT:
[HTTP://APPS.ROADS.MARYLAND.GOV/BUSINESSWITHSHABIZSTDSSPECDES/STDPUB/PUBLICATIONSONLINE/OHD/BOOKSTD/INDEX.ASP](http://apps.roads.maryland.gov/businesswithshabizstdsspecdesmanualstdpub/publicationsonline/ohd/bookstd/index.asp)
ALL ITEMS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT VERSION OF THE REFERENCED STANDARD AT THE TIME OF CONSTRUCTION.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE: OCTOBER 31, 2023

APPROVED BY: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Designated by: *Jessica Ballala* For Lynda D. Eisenberg, AICP Date: 6/6/2024
 Designated by: *Chad Edmondson* Chief, Development Division Date: 6/6/2024

DocuSigned by:
Ming-Yu Chien
4225993D60F7449...
05/13/24



The Traffic Group, Inc.
Suite H
9900 Franklin Square Drive
Baltimore, Maryland 21236
410-931-6600
1-800-583-8411
Fax 410-931-6601
"Merging Innovation and Excellence"

DESIGNED BY	JES				
DRAWN BY	JES				
CHECKED BY	JDD				
DATE		REVISION		BY	APP R

PREPARED FOR/OWNER:
PATUXENT LLC
1330 NEW HAMPSHIRE AVE. NW
SUITE 116
WASHINGTON, DC 20036
ATTN: ELIZABETH EVERHART
(202)-223-3405

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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.: 33316
EXPIRATION DATE: 7-13-24



MAINTENANCE OF TRAFFIC PLAN – ROAD WIDENING – MOT 1

PATUXENT COMMONS
PROPOSED LOT 1

EX. PARCELS 108, 109 & 137
L. 3754 F. 194, L. 19175 F. 477, & L. 19175 F. 488

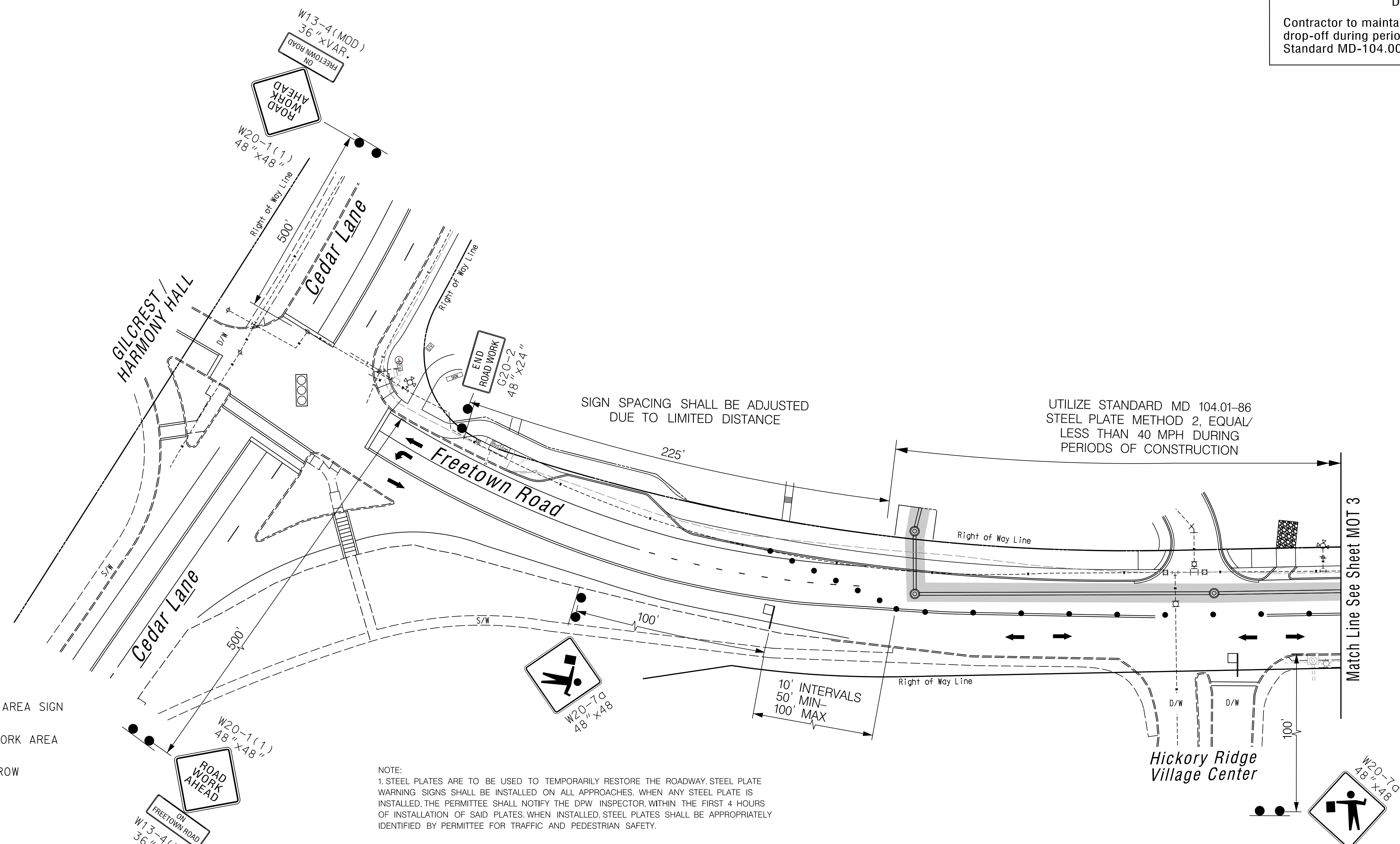
ELECTION DISTRICT No. 6

HOWARD COUNTY, MARYLAND

SCALE	ZONING	TTG FILE No.
1" = 30'	POR	2022-0415
DATE	TAX MAP-GRID	SHEET
MAY, 2024	35-17	20 of 26



Drop Off Policy
 Contractor to maintain less than 2.5 in. of drop-off during periods of non-construction. Use Standard MD-104.00-14 Note No: 14 as a Reference.



LEGEND

- DRUM
- TEMPORARY WORK AREA SIGN
- CURRENT PHASE WORK AREA
- TRAFFIC FLOW ARROW
- FLAGGER
- WORK AREA SIGN FACE

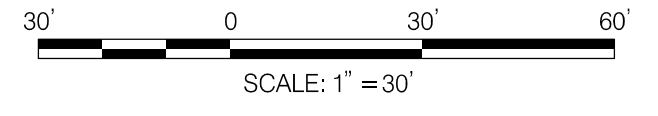
NOTE:
 1. STEEL PLATES ARE TO BE USED TO TEMPORARILY RESTORE THE ROADWAY. STEEL PLATE WARNING SIGNS SHALL BE INSTALLED ON ALL APPROACHES. WHEN ANY STEEL PLATE IS INSTALLED, THE PERMITTEE SHALL NOTIFY THE DPW INSPECTOR, WITHIN THE FIRST 4 HOURS OF INSTALLATION OF SAID PLATES. WHEN INSTALLED, STEEL PLATES SHALL BE APPROPRIATELY IDENTIFIED BY PERMITTEE FOR TRAFFIC AND PEDESTRIAN SAFETY.

SEQUENCE OF OPERATION

1. INSTALL ADVANCE WARNING SIGNS AND CHANNELIZING DEVICES (DRUMS). THE DESIGN SPEED IS 25 MPH FOR FREETOWN ROAD. TRAFFIC CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL THEY ARE NO LONGER NEEDED.
2. CONSTRUCT PROPOSED SEWER LINE ALONG FREETOWN ROAD PER ROADWAY PLANS PREPARED BY GLW.
3. CONTRACTOR TO INSTALL AND SECURE STEEL PLATES AT THE END OF THE WORK DAY. CONTRACTOR'S PROPOSED METHOD OF ANCHORING SHALL BE APPROVED BY THE ENGINEER.
4. CHANNELIZING DEVICES SHALL REMAIN ADJACENT TO THE WORK AREA DURING PERIODS OF NON-CONSTRUCTION. ALL DRIVEWAYS AND ROADWAY SHALL REMAIN OPEN AND UNOBSTRUCTED BY ANY CHANNELIZING DEVICES EXCEPT WHERE NOTED.

NOTE:
 THE FOLLOWING STANDARDS ARE REQUIRED FOR THIS PROJECT:
 MD 104.01-86 STEEL PLATE METHOD 2, EQUAL TO OR LESS THAN 40 MPH
 MD 104.02-10 FLAGGING OPERATION /2-LANE, 2 WAY LESS THAN 40 MPH
 FOR ALL STANDARDS REFERRED TO ON THE PLANS THE CONTRACTOR MUST GO TO THE BOOK OF STANDARDS WHICH WILL HAVE THE MOST CURRENT VERSION. THE BOOK OF STANDARDS CAN BE ACCESSED AT:
[HTTP://APPS.ROADS.MARYLAND.GOV/BUSINESSWITHSHABIZSTDSPESDESMANUALSTD PUB/PUBLICATIONSONLINE/OHD/BOOKSTD/INDEX.ASP](http://apps.roads.maryland.gov/businesswithshabizstdspecsdesmanualstdpubpublicationsonline/ohd/bookstd/index.asp)
 ALL ITEMS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT VERSION OF THE REFERENCED STANDARD AT THE TIME OF CONSTRUCTION.

DocuSigned by:
Ming-Yu Chien
 4225993D60F7449...
 05/13/24



APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE: OCTOBER 31, 2023

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 For Lynda D. Eisenberg, AICP 6/6/2024
 Director
 Jessica Bellah
 Date 6/6/2024

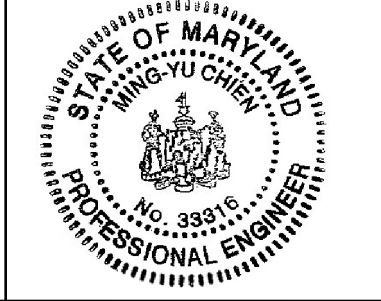
Chief, Development
 Chief, Development Engineering Division
 Date 6/6/2024
 (M) Edmondson

The Traffic Group, Inc.
 Suite H
 9900 Franklin Square Drive
 Baltimore, Maryland 21236
 410-931-6600
 1-800-583-8411
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 "Merging Innovation and Excellence"

DESIGNED BY	DATE	REVISION	BY	APP'R
JES				
DRAWN BY				
JES				
CHECKED BY				
JDD				

PREPARED FOR/OWNER:
PATUXENT LLC
 1330 NEW HAMPSHIRE AVE. NW
 SUITE 116
 WASHINGTON, DC 20036
 ATTN: ELIZABETH EVERHART
 (202)-223-3405

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE PLANS 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.: 33316
 EXPIRATION DATE: 7-13-24



MAINTENANCE OF TRAFFIC PLAN - SEWER LINE - MOT 2

PATUXENT COMMONS
PROPOSED LOT 1

EX. PARCELS 108, 109 & 137
 L. 3754 F. 194, L. 19175 F. 477, & L. 19175 F. 488

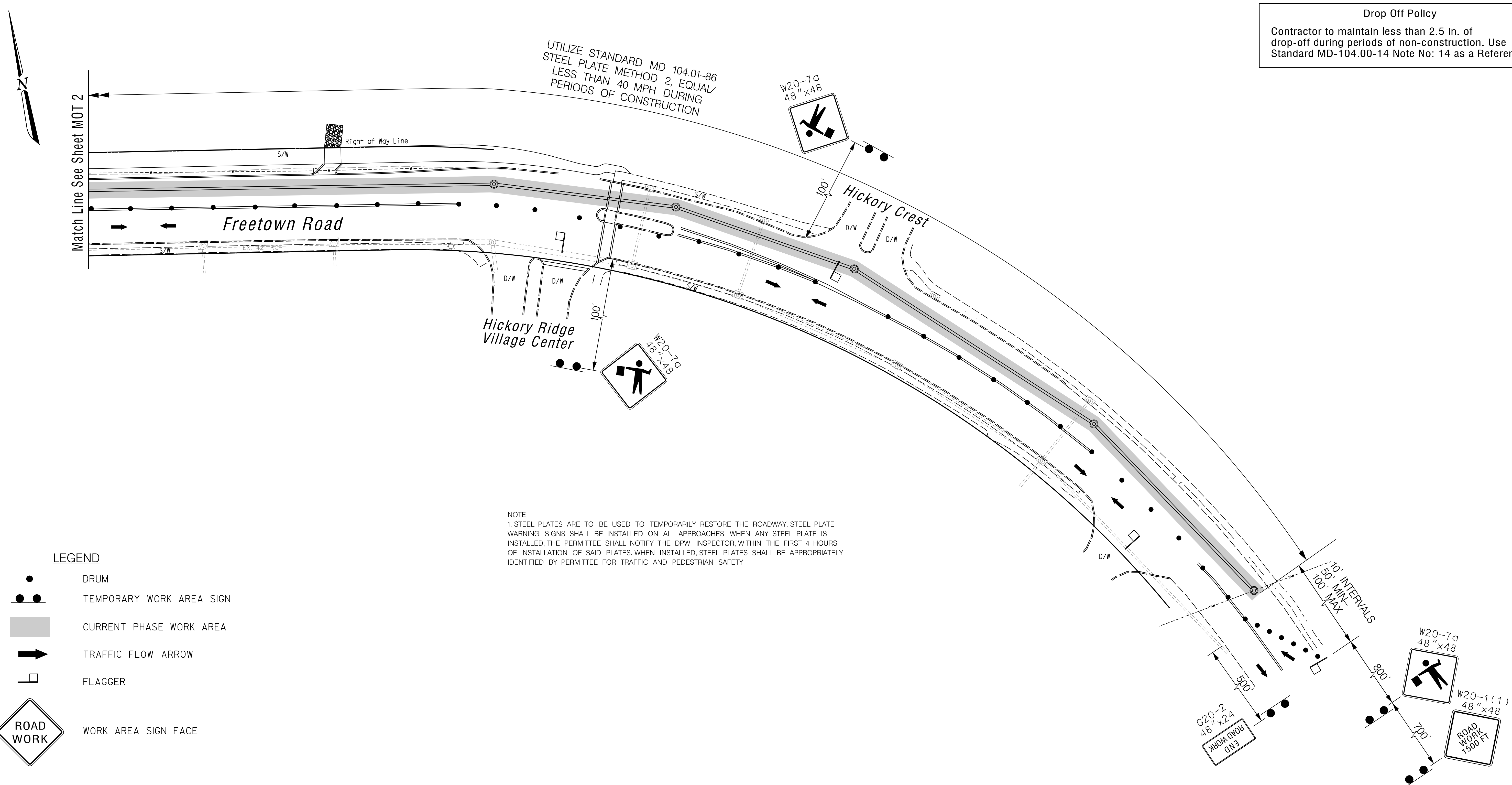
ELECTION DISTRICT No. 6

HOWARD COUNTY, MARYLAND

SCALE	ZONING	TTG FILE No.
1" = 30'	POR	2022-0415
DATE	TAX MAP-GRID	SHEET
MAY, 2024	35-17	21 of 26

Drop Off Policy

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LEGEND

- DRUM
TEMPORARY WORK AREA SIGN
CURRENT PHASE WORK AREA
TRAFFIC FLOW ARROW
FLAGGER
WORK AREA SIGN FACE

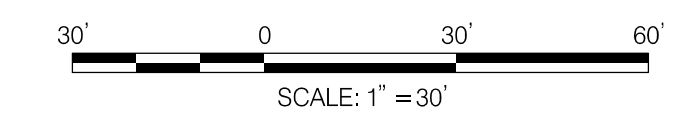
NOTE: 1. STEEL PLATES ARE TO BE USED TO TEMPORARILY RESTORE THE ROADWAY. STEEL PLATE WARNING SIGNS SHALL BE INSTALLED ON ALL APPROACHES...

NOTE: THE FOLLOWING STANDARDS ARE REQUIRED FOR THIS PROJECT: MD 104.01-86 STEEL PLATE METHOD 2, EQUAL TO OR LESS THAN 40 MPH...

SEQUENCE OF OPERATION

- 1. INSTALL ADVANCE WARNING SIGNS AND CHANNELIZING DEVICES (DRUMS). THE DESIGN SPEED IS 25 MPH FOR FREETOWN ROAD. TRAFFIC CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL THEY ARE NO LONGER NEEDED.

DocuSigned by: Ming-Yu Chien



APPROVED PLANNING BOARD OF HOWARD COUNTY DATE: OCTOBER 31, 2023. Includes signatures of Jessica Ballala and Chad Edmondson.

The Traffic Group, Inc. 9900 Franklin Square Drive Baltimore, Maryland 21236. Contact info and logo.

Table with columns: DESIGNED BY, DRAWN BY, CHECKED BY, DATE, REVISION, BY, APPR.

PREPARED FOR/OWNER: PATUXENT LLC 1330 NEW HAMPSHIRE AVE. NW SUITE 116 WASHINGTON, DC 20036

PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.



MAINTENANCE OF TRAFFIC PLAN - SEWER LINE - MOT 3 PATUXENT COMMONS PROPOSED LOT 1 EX. PARCELS 108, 109 & 137 L. 3754 F. 194, L. 19175 F. 477, & L. 19175 F. 488

Table with columns: SCALE, ZONING, TTG FILE No., DATE, TAX MAP-GRID, SHEET.

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 APPLICABLE 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 PATUXENT COMMONS, LOT 1, SITE DETAILS AND SWM PLAN, DATED APRIL OF 2023, PREPARED BY GUTSCHICK, LITTLE & WEBER, P.A. (GLW). SOIL DESIGN PARAMETERS ARE BASED ON LIMITED SUBSURFACE DATA PRESENTED IN PATUXENT COMMONS, GEOTECHNICAL ENGINEERING REPORT, DATED OCTOBER 28, 2022, PREPARED BY EOS MID-ATLANTIC, LLC AND FROM LIMITED SUBSURFACE DATA COLLECTED FROM HAND-AUGER BORINGS, PERFORMED BY GEO-TECHNOLOGY ASSOCIATES, INC. (GTA), PRESENTED ON SHEET RW-3. SOIL DESIGN PARAMETERS SHOULD BE VERIFIED DURING CONSTRUCTION.

1.2 REFERENCE STANDARDS

- A. ASTM C90 - STANDARD SPECIFICATION FOR LOABEARING CONCRETE MASONRY UNITS
B. ASTM C1282 - 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 POLY(VINYL 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 (MDOT 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. GEORIDS 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.

2.2 MATERIALS

A. CONCRETE UNITS

- 1. CONCRETE UNITS SHALL BE KEYSTONE COMPA 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 C1282.
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 CONNECTION 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 CONNECTOR 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 (LTD5) OF 1,999 POUNDS PER FOOT. LTD5 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 ARE NOT AVAILABLE 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 NO.4.5 MANUFACTURED BY HANES GEO COMPONENTS. 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.

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 DETERMINE 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 ALLOWED BEARING PRESSURE FOR NATURAL AND CONTROLLED FILL SOILS SHALL BE AS SPECIFIED IN PART 5.
D. THE EXPOSED FOUNDATION SUBGRADE SHALL BE PROTECTED 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 GRDES 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 CONSTRUCTING 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. LACK 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

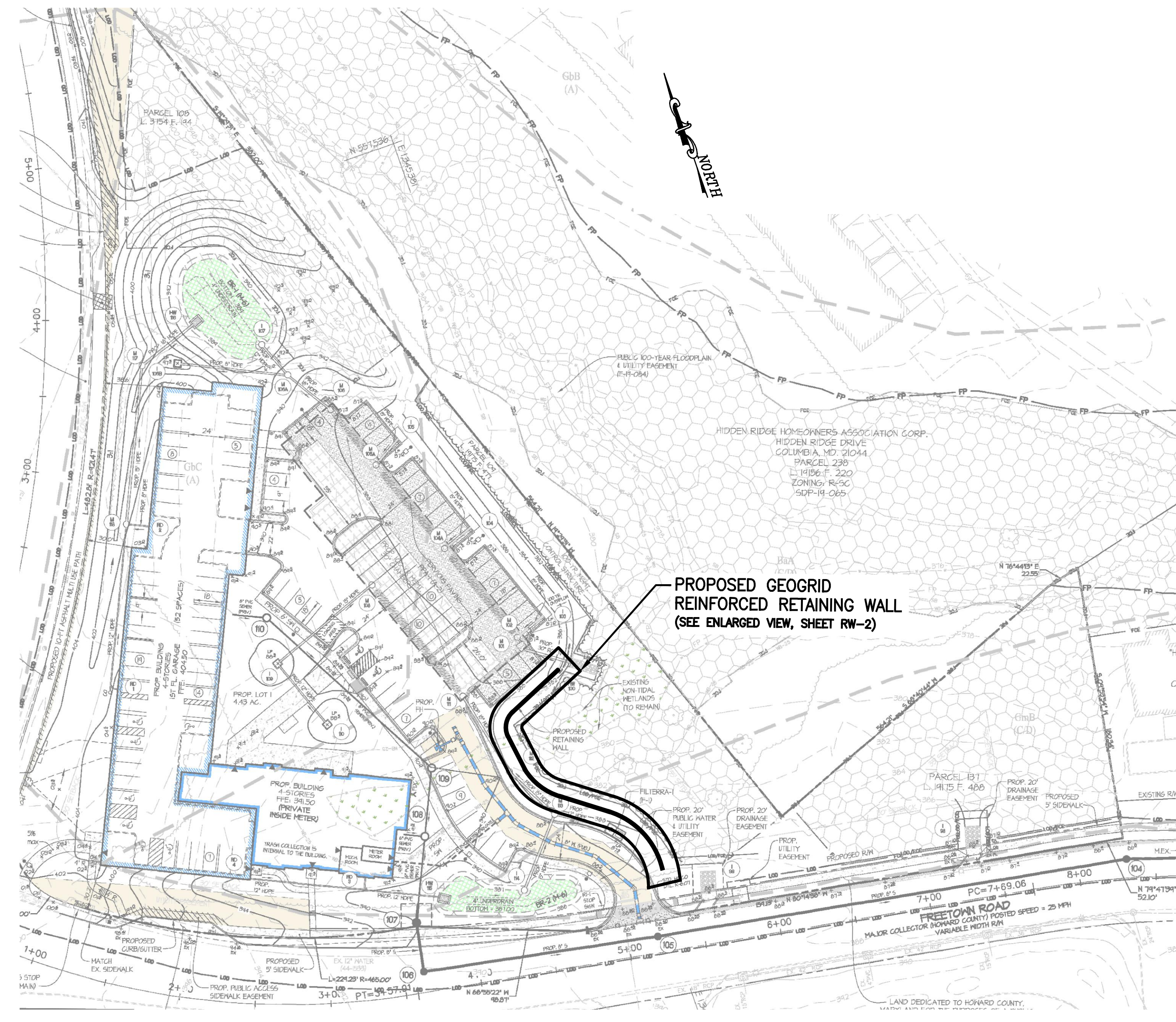
- A. GRAVEL FILL SHALL BE PLACED BEHIND THE CONCRETE UNITS TO THE LIMITS SHOWN. THE GRAVEL FILL SHALL EXTEND MINIMUM 12 INCHES BEHIND THE BACK OF THE CONCRETE UNITS. INCREASED GRAVEL FILL THICKNESS IS REQUIRED IN CURVES AND CORNERS AS SHOWN ON THE TYPICAL DETAILS.
B. PLACE FILTER FABRIC BEHIND THE GRAVEL 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.

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 = 28 DEGREES AND COHESION = 0 PSF.
C. REINFORCED SOIL MOIST UNIT WEIGHT = 120 PCF.
D. FOUNDATION AND RETAINED SOIL INTERNAL FRICTION ANGLE = 28 DEGREES AND COHESION = 0 PSF.
E. FOUNDATION AND RETAINED SOIL MOIST UNIT WEIGHT = 120 PCF.
F. RETAINING WALLS ARE NOT DESIGNED TO RESIST HYDROSTATIC PRESSURE.



RETAINING WALL LOCATION PLAN

BASE IMAGE WAS ADAPTED FROM THE PATUXENT COMMONS, PROPOSED LOT 1, SITE DEVELOPMENT PLAN, DATED FEBRUARY OF 2023, PREPARED BY GLW (ORIGINAL SCALE: 1"=20'). SCALE 1" = 50'

RW-1

GTA logo and 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

PATUXENT COMMONS RETAINING WALL LOCATION PLAN AND GENERAL NOTES HOWARD COUNTY, MARYLAND

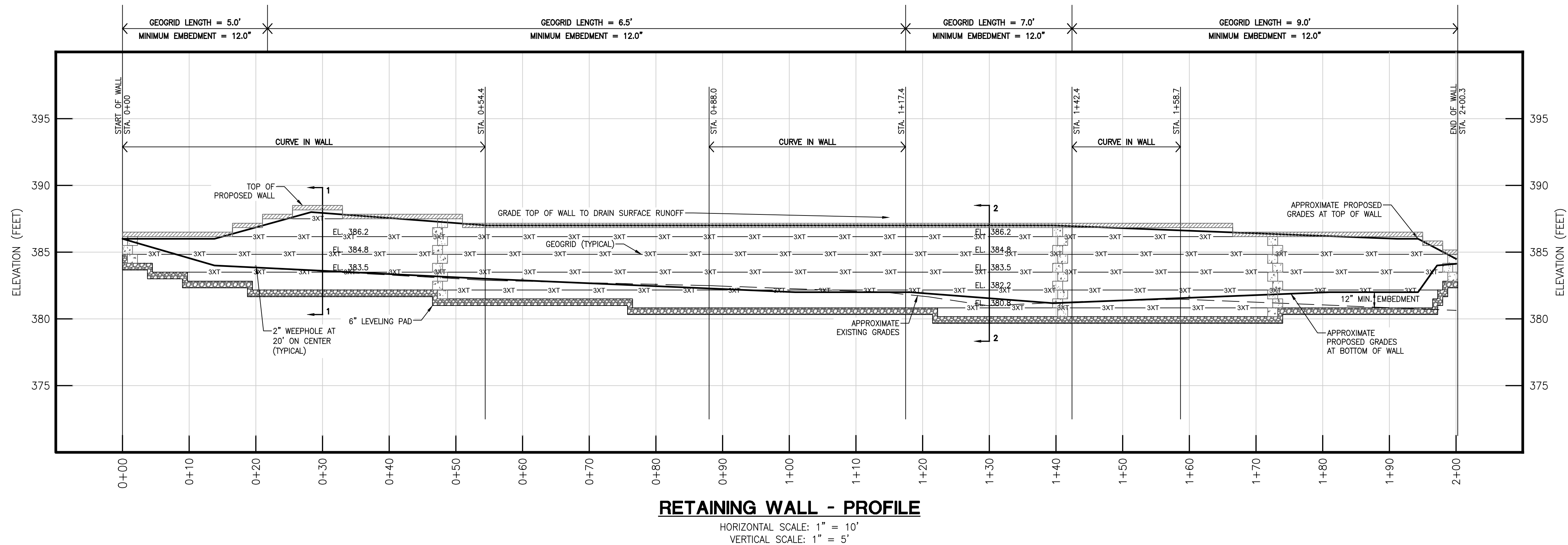
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Table with columns: SCALE (1"=50'), ZONING (POR), G. L. W. FILE NO. (20089), DATE (APRIL 2024), TAX MAP - GRID (35-17), SHEET (23 OF 29)

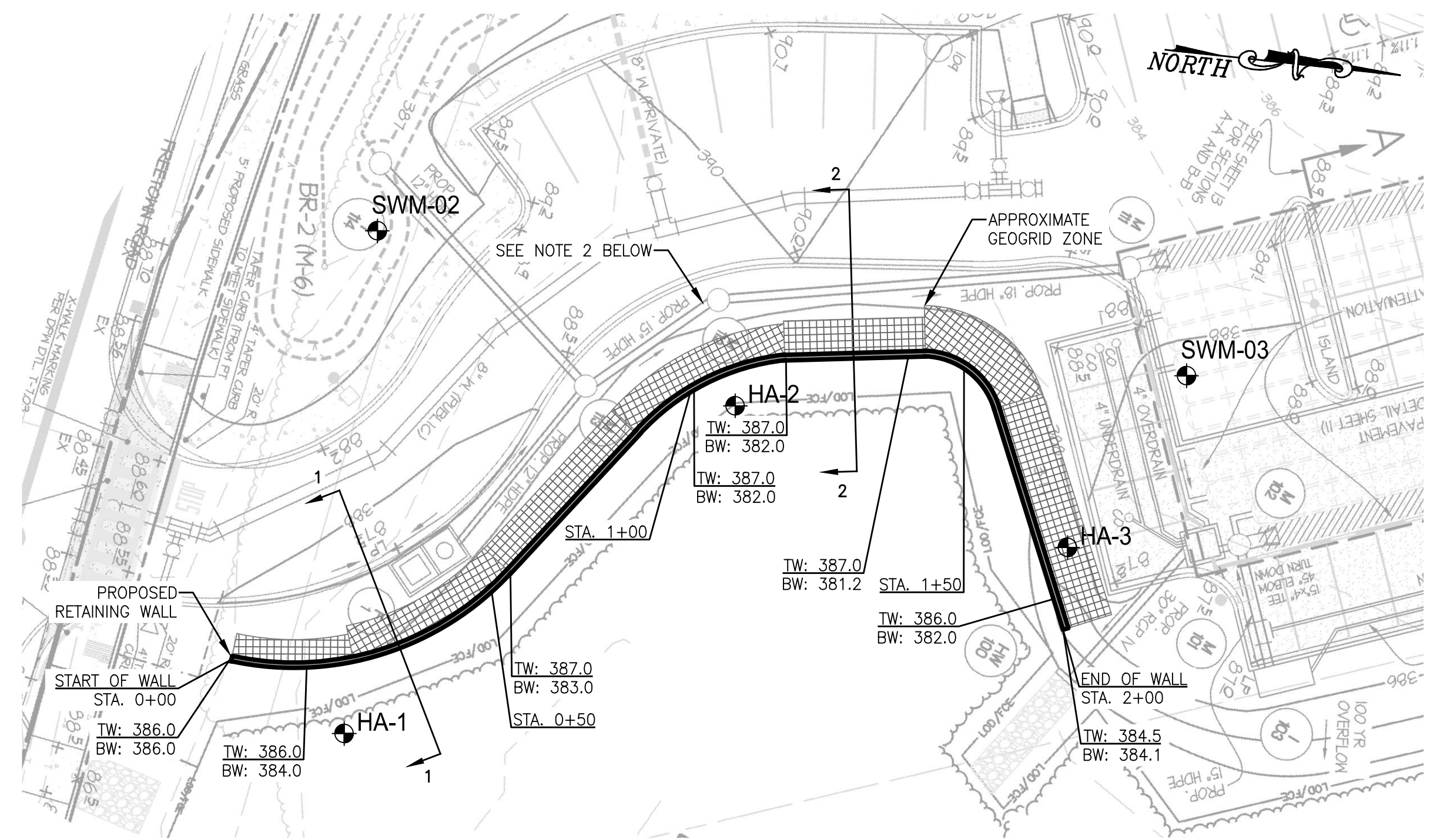
APPROVED PLANNING BOARD OF HOWARD COUNTY DATE: OCTOBER 31, 2023. APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING For Lynda D. Eisenberg, AICP. Director: Jessica Ballala. Chief, Division of Land Development: Chad Edmondson. Chief, Development-Engineering Division: [Signature]

PREPARED FOR/OWNER: PATUXENT OWNER LP 1330 NEW HAMPSHIRE AVE. NW SUITE 116 WASHINGTON, DC 20036 ATTN: ELIZABETH EVERHART (202)-223-3405

PATUXENT COMMONS PROPOSED LOT 1 EX. PARCELS 108, 109 & 137 ELECTION DISTRICT No. 5 HOWARD COUNTY, MARYLAND



RETAINING WALL - PROFILE
 HORIZONTAL SCALE: 1" = 10'
 VERTICAL SCALE: 1" = 5'



RETAINING WALL PLAN VIEW
 BASE IMAGE WAS ADAPTED FROM THE PATUXENT COMMONS LOT 1 SITE DETAILS AND SWM PLAN, DATED APRIL OF 2023, PREPARED BY GLW (ORIGINAL SCALE: 1"=20').
 SCALE 1" = 20'

- LEGEND**
- HA-1 IDENTIFICATION AND APPROXIMATE LOCATION OF HAND AUGER PERFORMED BY GTA IN MARCH OF 2023.
 - SWM-02 IDENTIFICATION AND APPROXIMATE LOCATION OF STANDARD PENETRATION TEST (SPT) BORING PERFORMED BY ESC MID-ATLANTIC, LLC (ESC) IN AUGUST OF 2022.
- NOTES**
1. THE HAND AUGER LOCATIONS WERE SELECTED AND STAKED IN THE FIELD BY GTA USING A GLOBAL POSITIONING SYSTEM (GPS UNIT). THE SPT BORING LOCATIONS WERE REFERENCED FROM THE PATUXENT COMMONS GEOTECHNICAL ENGINEERING REPORT, DATED OCTOBER 28, 2022, PREPARED BY ECS. EXPLORATION LOCATIONS SHOULD ONLY BE CONSIDERED ACCURATE TO THE DEGREE IMPLIED BY THE METHOD USED.
 2. INSTALLATION OF STORM DRAIN TO BE COORDINATED WITH THE WALL CONSTRUCTION. INSTALLATION SHOULD BE PERFORMED AS TO NOT COMPROMISE OR UNDERMINE THE GEOGRIDS.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE: OCTOBER 31, 2023

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 For Lynda D. Eisenberg, AICP
 Director
 Date: 6/6/2024


Chief, Division of Land Development
 Date: 6/6/2024

Chief, Development Engineering Division
 Date: 6/6/2024

PREPARED FOR/OWNER:
 PATUXENT OWNER LP
 1330 NEW HAMPSHIRE AVE. NW
 SUITE 116
 WASHINGTON, DC 20036
 ATTN: ELIZABETH EVERHART
 (202)-223-3405

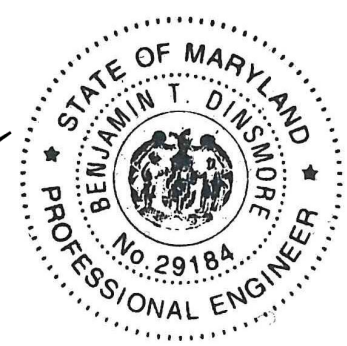
PATUXENT COMMONS
PROPOSED LOT 1
 EX. PARCELS 108, 109 & 137
 ELECTION DISTRICT No. 5
 HOWARD COUNTY, MARYLAND

RW-2



GEO-TECHNOLOGY ASSOCIATES, INC.
 GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
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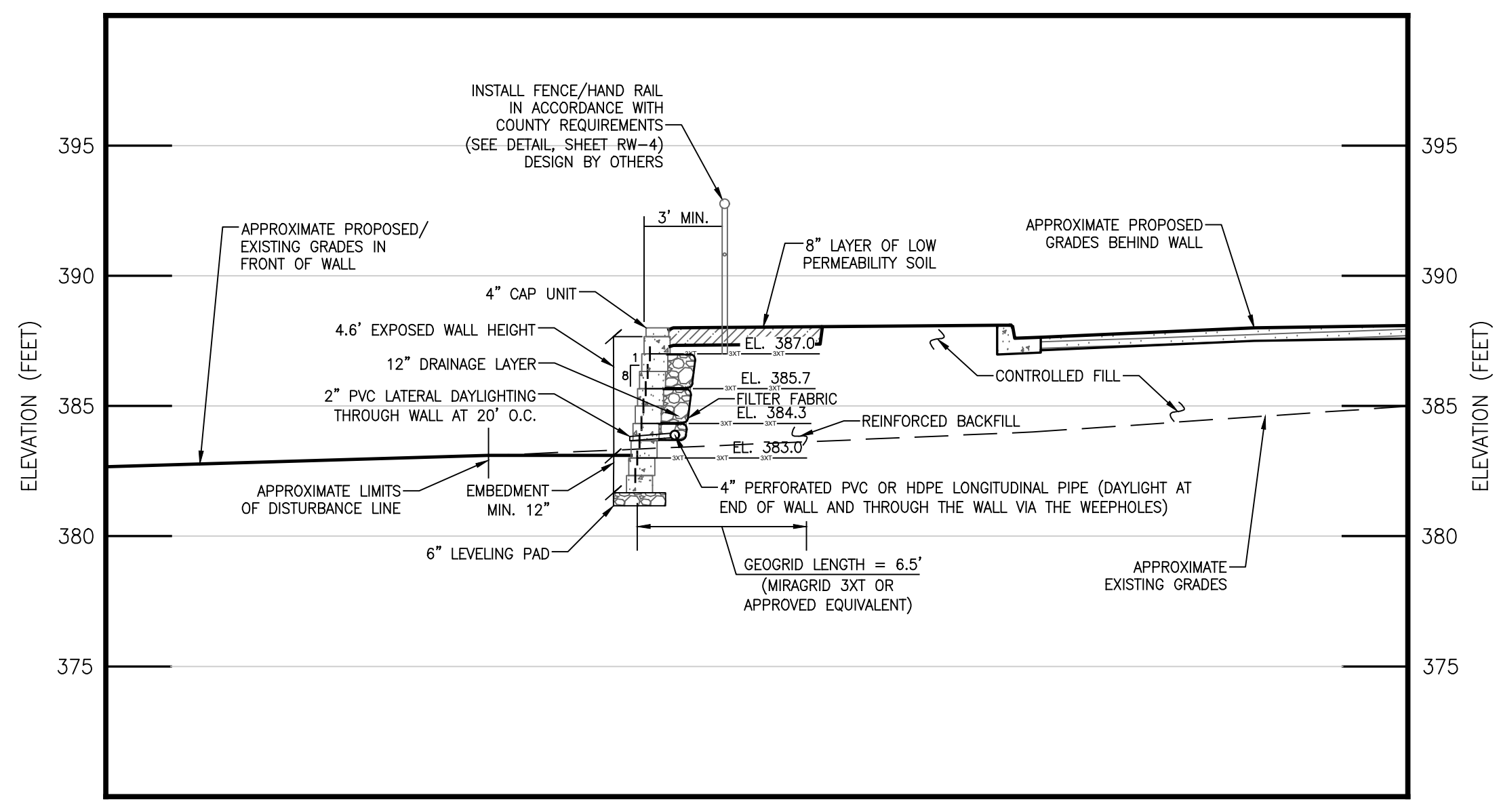
MD PROFESSIONAL CERTIFICATION:
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 29184, EXPIRATION DATE: 06/16/2025.

PATUXENT COMMONS
RETAINING WALL
PLAN VIEW AND PROFILE

HOWARD COUNTY, MARYLAND

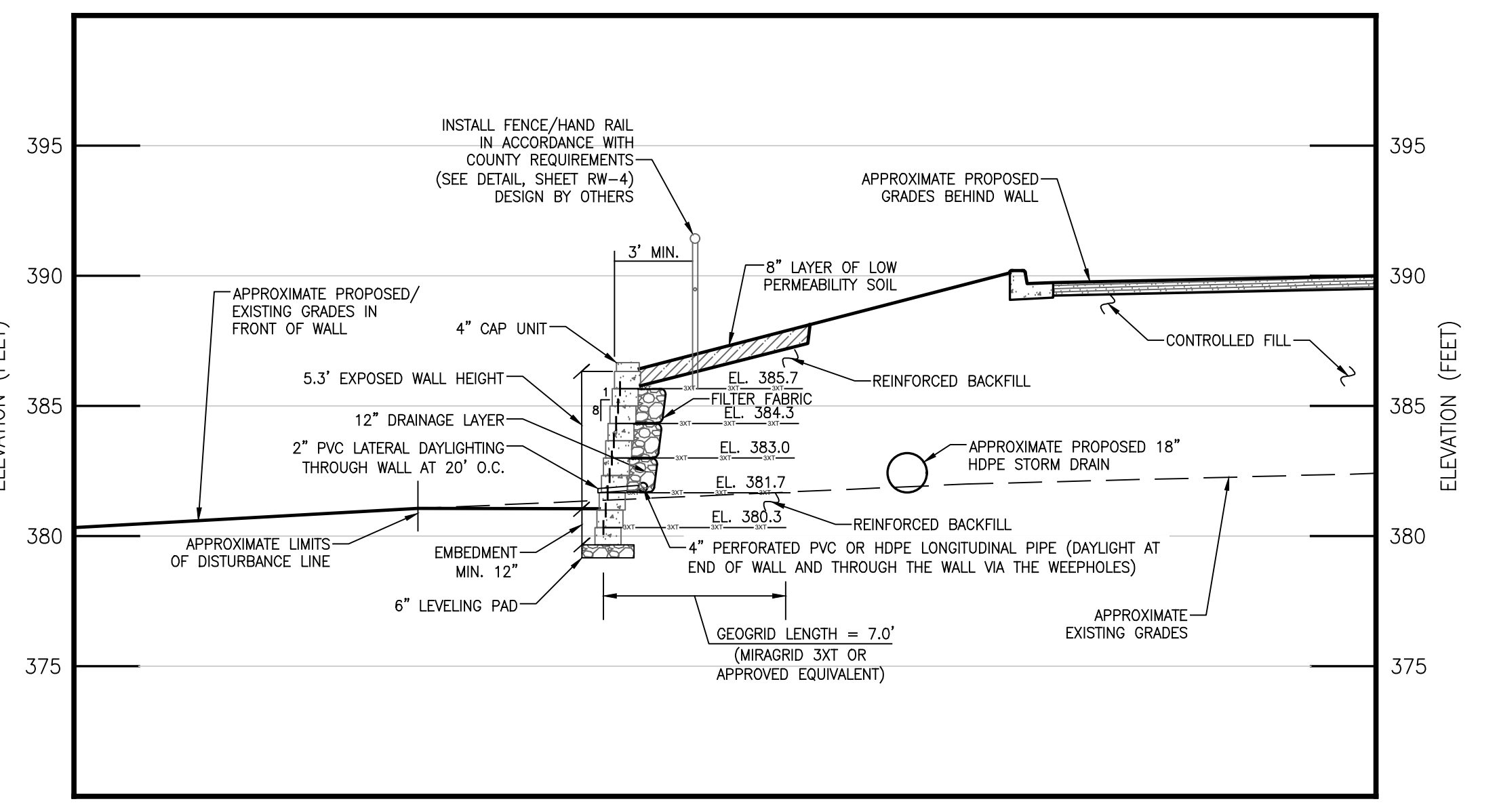
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		DATE: 04/15/2024
		DRAWN BY: CAAF
		DESIGN BY: CAAF
		REVIEW BY: BTD
		SHEET: 24 OF 29

SCALE	ZONING	G. L. W. FILE NO.
AS SHOWN	POR	20089
DATE	TAX MAP - GRID	SHEET
APRIL 2024	35-17	24 OF 29



RETAINING WALL - SECTION 1 (APPROXIMATE STATION 0+30)

SCALE: 1" = 5'



RETAINING WALL - SECTION 2 (APPROXIMATE STATION 1+30)

SCALE: 1" = 5'

LOG OF HAND AUGER NO. HA-1 Sheet 1 of 1

PROJECT: Patuxent Commons
 CLIENT: Howard County, Maryland
 DATE STARTED: 03/15/2023
 DATE COMPLETED: 03/15/2023
 CONTRACTOR: Geo-Technology Associates, Inc.
 EQUIPMENT: Hand Auger

PROJECT NO.: 31230531
 GROUNDWATER ENCOUNTERED: 5.5
 GROUND SURFACE ELEVATION: 384
 DATUM: Topo
 LOGGED BY: CAAF
 CHECKED BY: ADM

ELEVATION (FT)	DEPTH (FT)	USCS	UNIFIED SYMBOL	DESCRIPTION	REMARKS
384.0	0	SM		Brown, moist, Silty SAND	
383.0	1	SM		Same, Brown and Gray	
382.0	2	SM		Same, Gray	
381.0	3	SM		Same, wet	
380.0	4	SM		Hand auger terminated at 8 feet.	Increased excavation effort at 8 feet.

NOTES:
 GEO-TECHNOLOGY ASSOCIATES, INC.
 14280 Park Center Drive, Suite A
 Laurel, MD 20707

LOG OF HAND AUGER NO. HA-1
 Sheet 1 of 1

LOG OF HAND AUGER NO. HA-2 Sheet 1 of 1

PROJECT: Patuxent Commons
 CLIENT: Howard County, Maryland
 DATE STARTED: 03/15/2023
 DATE COMPLETED: 03/15/2023
 CONTRACTOR: Geo-Technology Associates, Inc.
 EQUIPMENT: Hand Auger

PROJECT NO.: 31230531
 GROUNDWATER ENCOUNTERED: 5
 GROUND SURFACE ELEVATION: 382
 DATUM: Topo
 LOGGED BY: CAAF
 CHECKED BY: ADM

ELEVATION (FT)	DEPTH (FT)	USCS	UNIFIED SYMBOL	DESCRIPTION	REMARKS
382.0	0	SM		Brown, moist, SILTY, trace Sand.	
381.0	1	SM		Gray, moist, Silty SAND.	
379.0	3	ML		Gray, moist, Sandy SILT.	
378.0	4	SM		Brown and Gray, moist, Silty SAND.	
377.5	5	SM		Same, wet	Hand auger terminated at 8.5 feet.

NOTES:
 GEO-TECHNOLOGY ASSOCIATES, INC.
 14280 Park Center Drive, Suite A
 Laurel, MD 20707

LOG OF HAND AUGER NO. HA-2
 Sheet 1 of 1

LOG OF HAND AUGER NO. HA-3 Sheet 1 of 1

PROJECT: Patuxent Commons
 CLIENT: Howard County, Maryland
 DATE STARTED: 03/15/2023
 DATE COMPLETED: 03/15/2023
 CONTRACTOR: Geo-Technology Associates, Inc.
 EQUIPMENT: Hand Auger

PROJECT NO.: 31230531
 GROUNDWATER ENCOUNTERED: 5
 GROUND SURFACE ELEVATION: 381
 DATUM: Topo
 LOGGED BY: CAAF
 CHECKED BY: ADM

ELEVATION (FT)	DEPTH (FT)	USCS	UNIFIED SYMBOL	DESCRIPTION	REMARKS
380.0	0	CL		Brown, moist, Lean CLAY, trace Sand.	
379.0	1	ML		Gray, moist, Silty SILT.	
378.0	2	CL		Gray, moist, Lean CLAY, trace Sand.	
377.0	3	ML		Same, Sandy	
376.0	4	SM		Brown, moist, Silty SAND.	
374.5	5	SM		Same, wet	Hand auger terminated at 8.5 feet due to wet covering sands.

NOTES:
 GEO-TECHNOLOGY ASSOCIATES, INC.
 14280 Park Center Drive, Suite A
 Laurel, MD 20707

LOG OF HAND AUGER NO. HA-3
 Sheet 1 of 1

CLIENT: Mission First HDC
 PROJECT NAME: Patuxent Commons
 SITE LOCATION: 6445 Freeman Road, Columbia, Maryland, 21045

PROJECT NO.: 02-2993
 DRILLER/CONTRACTOR: AT American Geotech, Inc.

BORING NO.: 0606402
 SHEET: 1 of 1

NO. OF BORING: 1
 SURFACE ELEVATION: 386
 BOTTOM OF CASING: 383

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	DESCRIPTION OF MATERIAL	ELEVATION (FT)	REMARKS
0-0.6	S-1	SS 18 3	Topsoil Thickness 4"	385.4	
0.6-1.0	S-1	SS 18 3	(SM) SILTY SAND, trace root fragments, brownish gray, moist, medium dense	385.0	
1.0-1.5	S-2	SS 18 18	(SM) SILTY SAND, trace gravel, light brown and gray, moist, dense	384.5	
1.5-1.8	S-3	SS 18 18	(SM) SILTY SAND, trace weathered rock fragments and mica, tan and gray, moist, dense	384.2	
1.8-2.0	S-3	SS 18 18	(SM) SILTY SAND, trace mica, tan and gray, moist, dense	384.0	
2.0-2.4	S-4	SS 18 18	(SM) SILTY SAND, trace mica, tan and gray, moist, dense	383.6	
2.4-2.5	S-5	SS 17 17	(WR) WEATHERED ROCK SAMPLED AS SILTY SAND, light tan, moist, very dense	383.2	
2.5-2.6	S-5	SS 17 17	(WR) WEATHERED ROCK SAMPLED AS SILTY SAND, gray, wet, very dense	383.1	

END OF BORING AT 2.6 FT

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN SITU THE TRANSITION MAY BE GRADUAL.

LOGGED BY: CAAF
 CHECKED BY: ADM

GEO-TECHNOLOGY ASSOCIATES, INC.
 14280 Park Center Drive, Suite A
 Laurel, MD 20707

CLIENT: Mission First HDC
 PROJECT NAME: Patuxent Commons
 SITE LOCATION: 6445 Freeman Road, Columbia, Maryland, 21045

PROJECT NO.: 02-2993
 DRILLER/CONTRACTOR: AT American Geotech, Inc.

BORING NO.: 0606403
 SHEET: 1 of 1

NO. OF BORING: 1
 SURFACE ELEVATION: 383
 BOTTOM OF CASING: 383

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	DESCRIPTION OF MATERIAL	ELEVATION (FT)	REMARKS
0-0.7	S-1	SS 18 6	Topsoil Thickness 7"	382.3	
0.7-1.0	S-1	SS 18 6	(SM) SILTY SAND, trace root fragments, brownish gray, moist, medium dense	382.0	
1.0-1.5	S-2	SS 18 10	(SM) SILTY SAND, gray and light tan, moist, medium dense	381.5	
1.5-1.8	S-3	SS 18 18	(SM) SILTY SAND, tan and gray, moist, medium dense	381.2	
1.8-2.0	S-3	SS 18 18	(SM) SILTY SAND, tan and gray, moist, medium dense	381.0	
2.0-2.4	S-4	SS 18 18	(SM) SILTY SAND, tan and gray, moist, medium dense	380.6	
2.4-2.5	S-5	SS 11 18	(WR) WEATHERED ROCK SAMPLED AS SILTY SAND, tan and gray, moist, very dense	380.2	

END OF BORING AT 2.5 FT

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN SITU THE TRANSITION MAY BE GRADUAL.

LOGGED BY: CAAF
 CHECKED BY: ADM

GEO-TECHNOLOGY ASSOCIATES, INC.
 14280 Park Center Drive, Suite A
 Laurel, MD 20707

APPROVED
 PLANNING BOARD OF HOWARD COUNTY
 DATE: OCTOBER 31, 2023

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Documented by: Lynda D. Eisenberg, AICP
 Date: 6/6/2024

Chief, Division of Land Development
 Date: 6/6/2024

Chief, Development Engineering Division
 Date: 6/6/2024

PREPARED FOR/OWNER:
 PATUXENT OWNER LP
 1330 NEW HAMPSHIRE AVE. NW
 SUITE 116
 WASHINGTON, DC 20036
 ATTN: ELIZABETH EVERHART
 (202)-223-3405

PATUXENT COMMONS
 PROPOSED LOT 1
 EX. PARCELS 108, 109 & 137

ELECTION DISTRICT No. 5

SCALE: 1"=5'
 ZONING: POR
 DATE: APRIL 2024
 TAX MAP - GRID: 35-17
 SHEET: 25 OF 29

HOWARD COUNTY, MARYLAND

RW-3

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

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PATUXENT COMMONS
 RETAINING WALL
 SECTIONS AND EXPLORATION LOGS

HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.:
		31230531

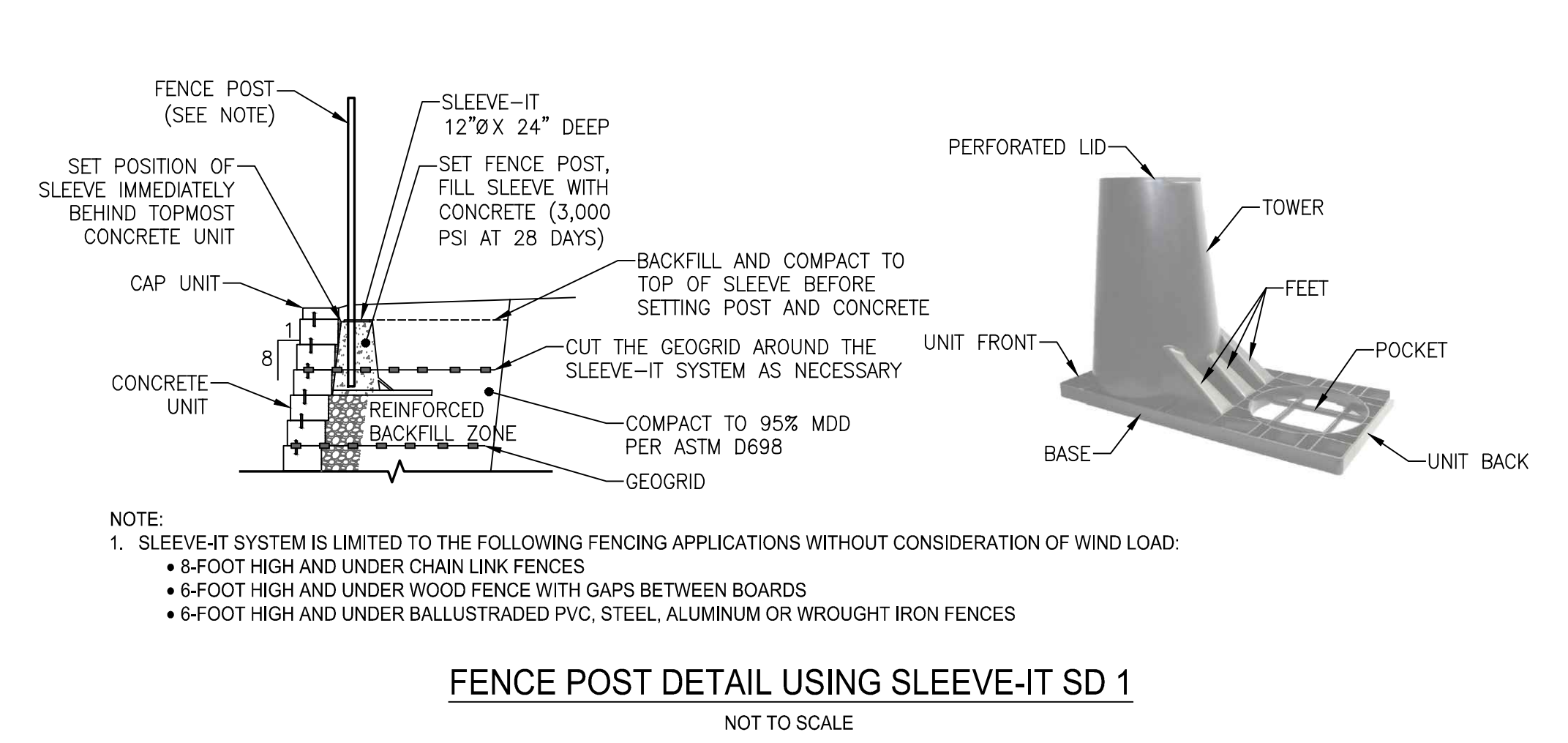
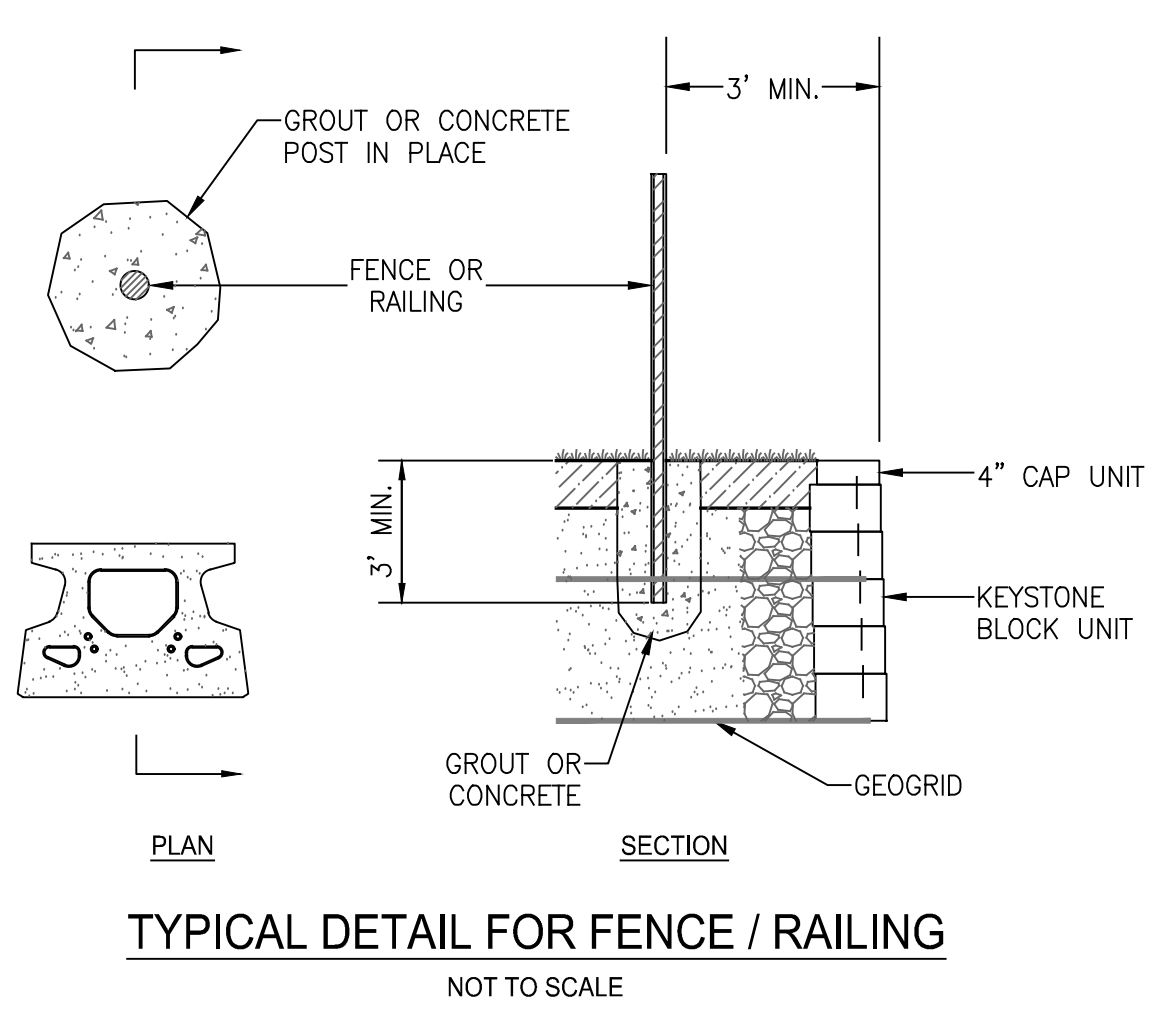
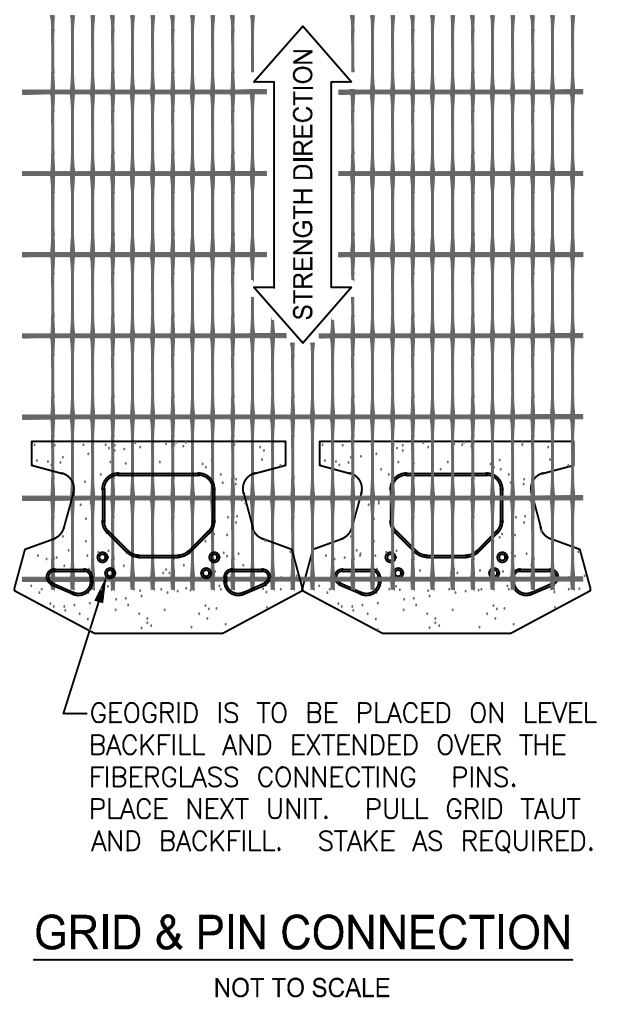
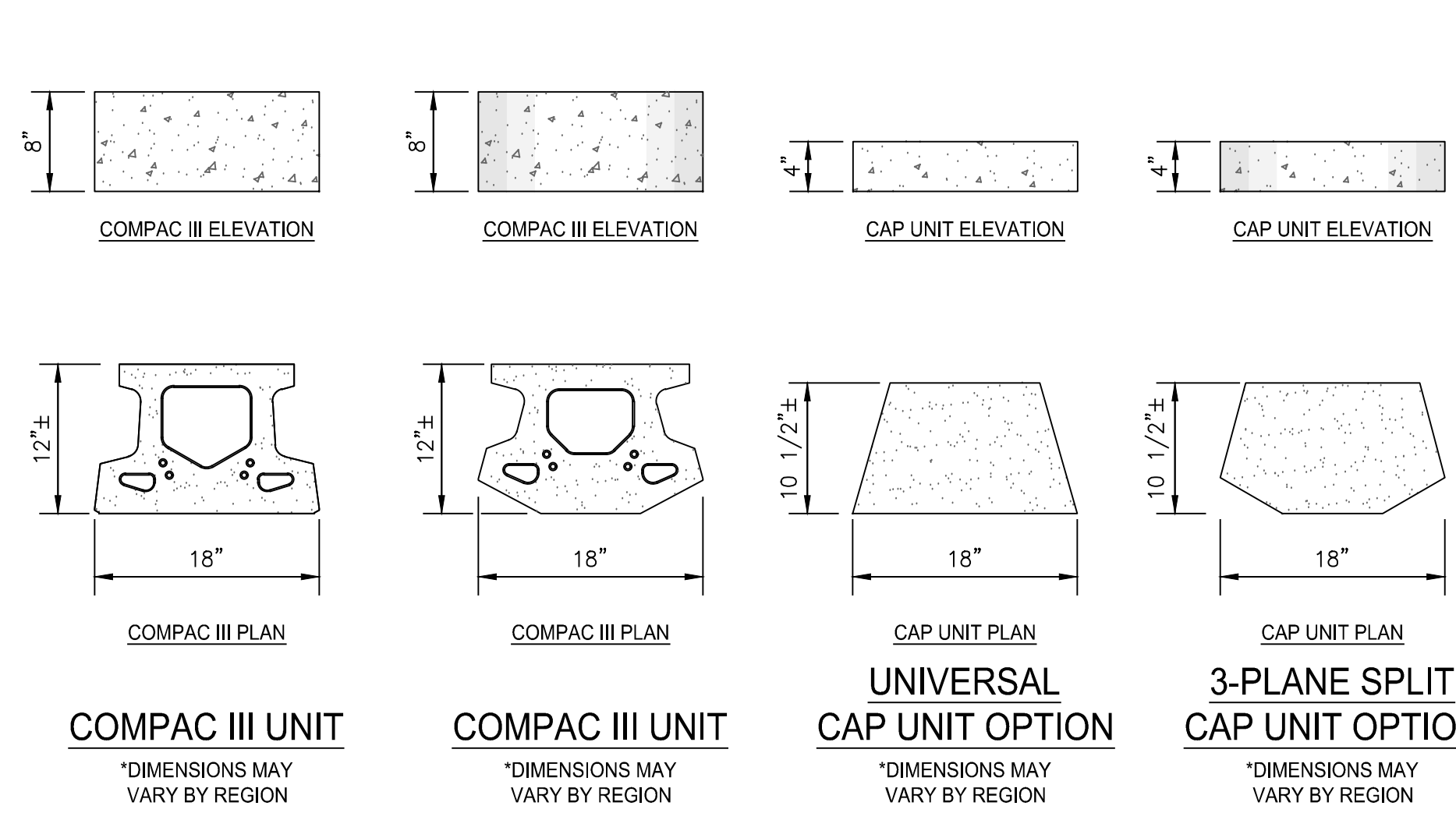
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 29184, EXPIRATION DATE: 06/16/2025.

MD PROFESSIONAL CERTIFICATION:
 STATE OF MARYLAND
 BENJAMIN T. DINSMORE
 PROFESSIONAL ENGINEER
 NO. 29184

DATE: APRIL 2024
 SHEET: 25 OF 29

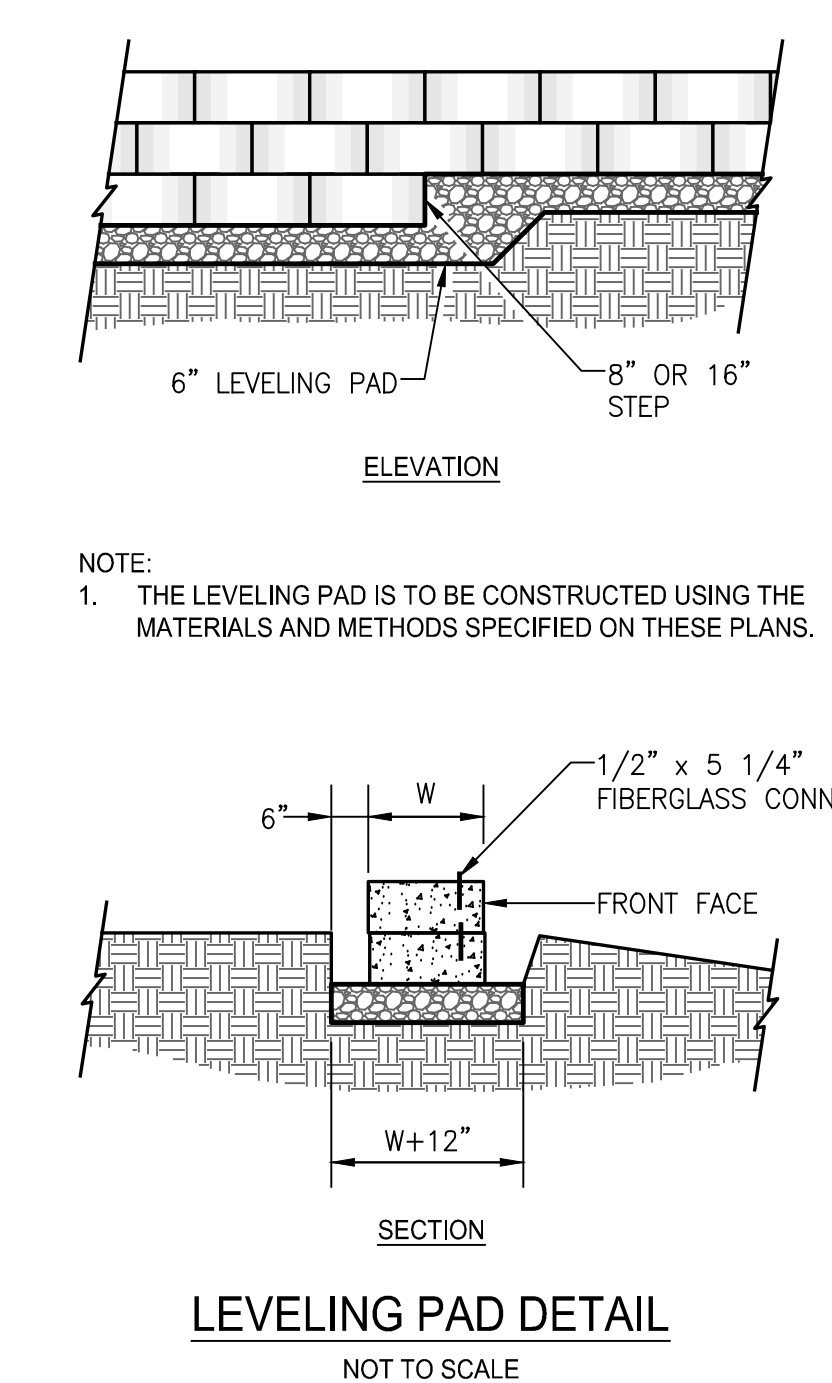
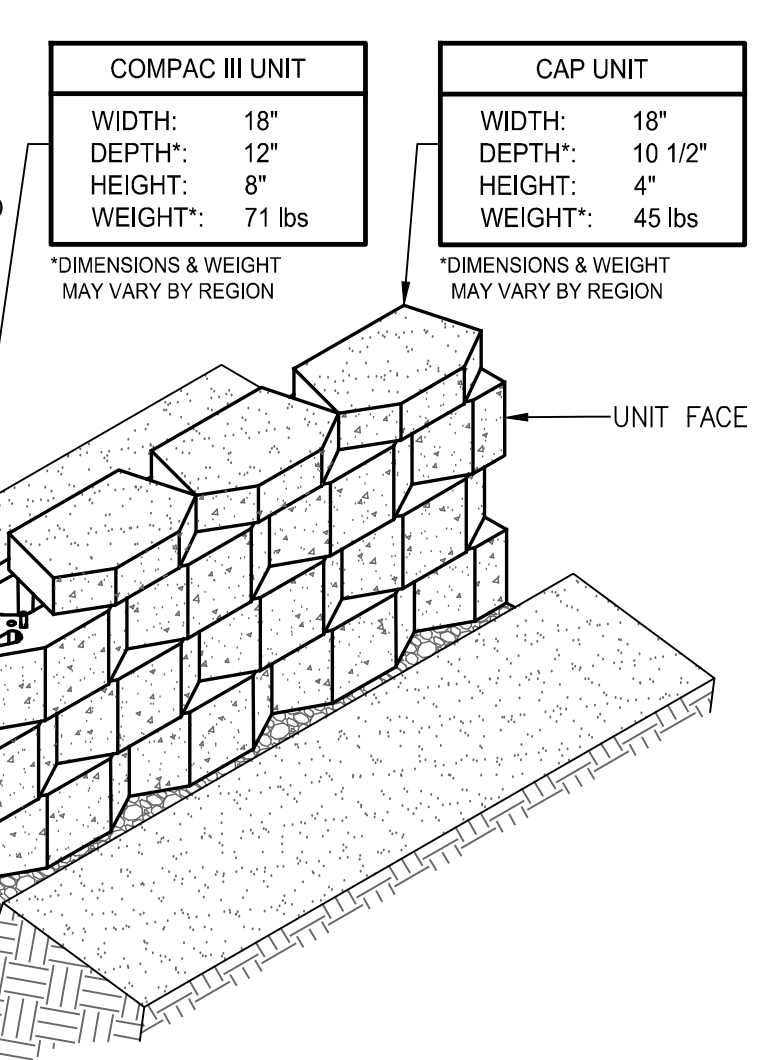
G. L. W. FILE NO. 20089

DocuSigned by:
 Benjamin Dinsmore
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 05/24/24

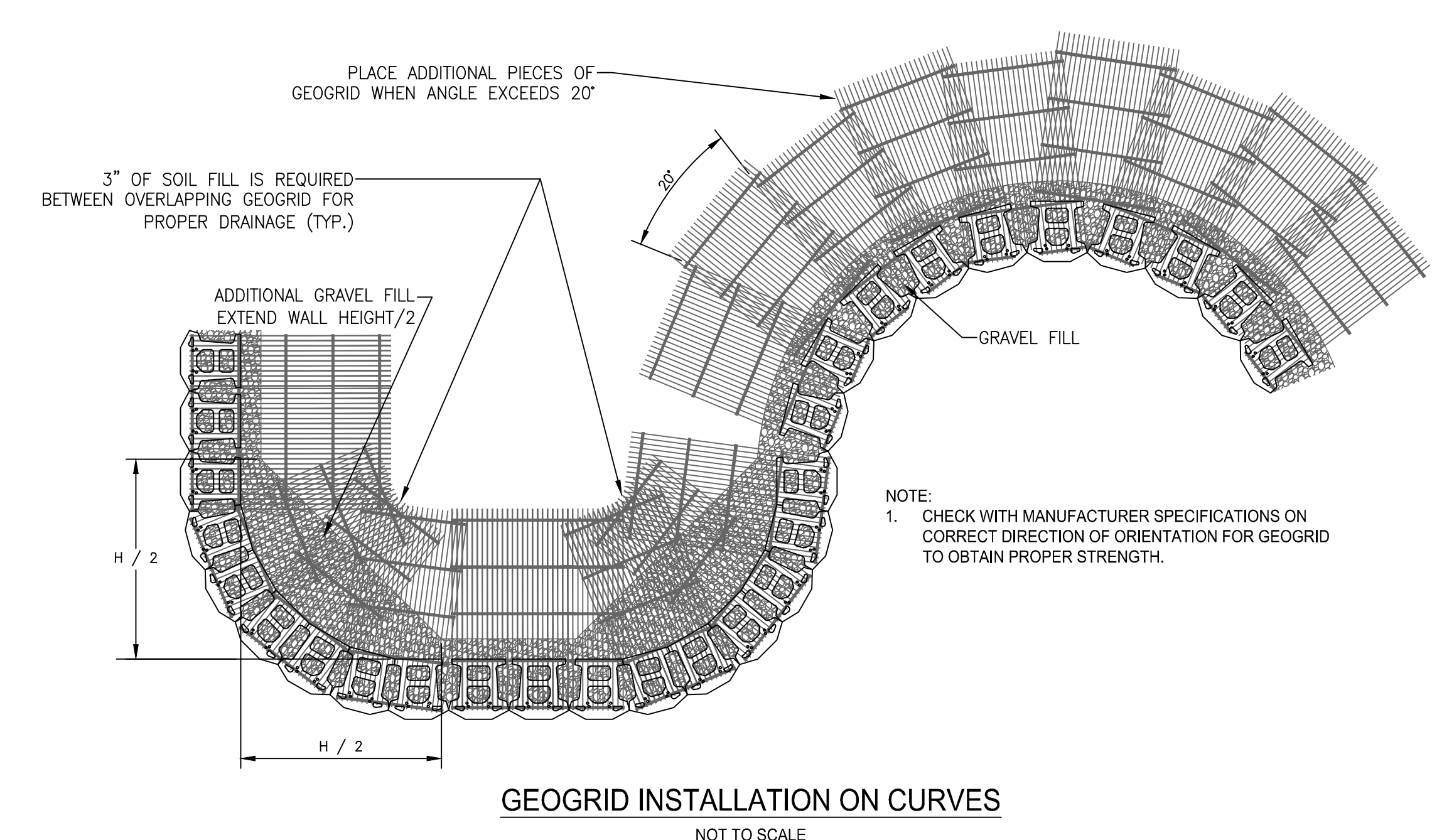
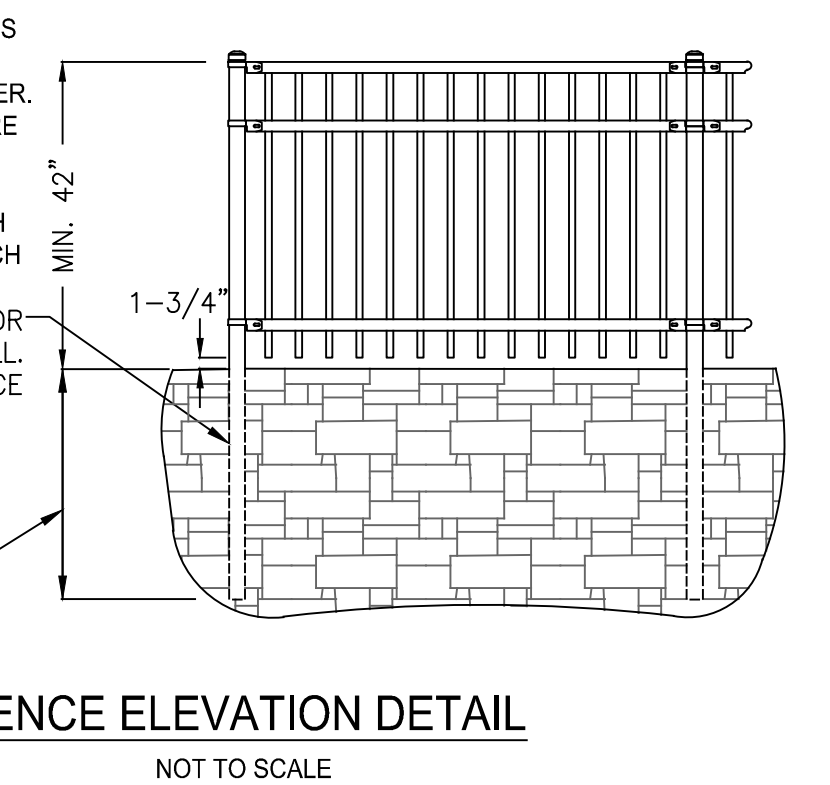


BASE LEVELING PAD NOTES:

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.



NOTE: ALTERNATE FENCE STYLES AND DETAILS MAY BE USED WITH THE PRIOR APPROVAL OF THE OWNER AND THE GEOTECHNICAL ENGINEER. THE FENCE SHALL BE INSTALLED WHERE THERE IS A DROP OFF GREATER THAN 30 INCHES. IN ACCORDANCE WITH COUNTY REQUIREMENTS, THE FENCE MUST BE AT LEAST 42 INCHES HIGH AND CAN NOT ALLOW THE PASSAGE OF A 4-INCH SPHERE.



APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE: OCTOBER 31, 2023

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
For Lynda D. Eisenberg, AICP 6/6/2024

Director: *Jessica Bellah* 6/6/2024

Chief, Division of Land Development: *Chad Edmondson* 6/6/2024

Chief, Development Engineering Division: *Chad Edmondson* 6/6/2024

PREPARED FOR/OWNER:
PATUXENT OWNER LP
1330 NEW HAMPSHIRE AVE. NW
SUITE 116
WASHINGTON, DC 20036
ATTN: ELIZABETH EVERHART
(202)-223-3405

PATUXENT COMMONS
PROPOSED LOT 1
EX. PARCELS 108, 109 & 137

ELECTION DISTRICT No. 5

HOWARD COUNTY, MARYLAND

RW-4

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.

PATUXENT COMMONS
RETAINING WALL
TYPICAL DETAILS

HOWARD COUNTY, MARYLAND

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.

DATE	REVISIONS	JOB NO.:
		31230531
		SCALE: AS SHOWN
		DATE: 04/15/2024
		DRAWN BY: CAAF
		DESIGN BY: CAAF
		REVIEW BY: BTD
		SHEET: 26 OF 29

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	POR	20089
DATE	TAX MAP - GRID	SHEET
APRIL 2024	35-17	26 OF 29

SDP-23-026

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5/13/2024 1:55:17 PM

Typical Structural Notes

Section 1 – General Notes:

1.01) Design Code – IBC 2021

1.02) Live Loads: (LL) 350 psf

1.03) Loads greater than the design live loads shall not be placed on the structure. A concrete structure may not support its design live load for 28 days. Contractor shall support adjacent structures, utilities and excavations. Contractor shall have all temporary formwork, sheeting, shoring, underpinning, etc. certified by a qualified engineer as a part of the contractor's work.

1.4) Contractor shall conform with the provisions of the local Building Code and any other Local, State or Federal Regulations.

1.5) The general contractor shall review all shop drawings before submission to the engineer and make all corrections as he deems necessary and shall certify on each drawing as follows:

"I certify that the contract document requirements have been met and all dimensions, conditions and quantities are verified as shown and/or as corrected on this drawing.

Signed _____
(for general contractor)

1.6) The contractor shall support adjacent structures, utilities, and excavations. The contractor shall submit shop drawings and design calculations certified by a registered professional engineer for all temporary formwork, sheeting, shoring, and underpinning as a part of the contractor's work. Contractor shall verify the location of all existing site conditions, structures and utilities prior to commencing work and report discrepancies to the Engineer.

1.7) The General Contractor shall verify floor slab depressions, duct and pipe openings and offsets with the architectural and mechanical drawings.

1.8) Inspection - The Owner is responsible to hire a qualified inspection agency to perform any or all the services specified herein. The Contractor shall afford full cooperation to laboratory personnel and shall provide adequate notice before beginning operations requiring laboratory services. The Testing Laboratory shall make immediate report of all tests and observations and distribute copies as follows: Owner, Architect, Engineer, and Contractor, (one copy each). The Owner may hire the structural engineer as the inspection agency.

1.9) "Typical Details" shown on the drawings apply to all conditions of the project similar to those shown in the details regardless of whether or not they are specifically referenced on the plans. Plans, sections, and details are not to be scaled for determination of quantities, lengths or fit of materials.

1.10) Shop drawings for all structural items must be submitted by the General Contractor. If a Contractor or Owner fails to submit the shop drawings, the firm Meyer Consulting Engineers will not be responsible for the structural certification and/or the design of the project.

Section 2 – Soils:

2.01) Footings are designed for an assumed bearing capacity of 4,000 PSF. Footings shall bear on natural undisturbed soil, 1'-0" below original grade and bottom of exterior footing shall be 2'-6" below finished grade. Contractor shall verify soil pressure in the field. If found to be less than 4,000 PSF, the footings will have to be redesigned. The Contractor shall obtain the Soils Report from the Owner.

2.02) All fill under slabs shall be coarse granular material compacted to 95% of maximum density at optimum water content. All slabs on ground shall have panels poured per ACI-302.1R (latest local approved edition). Section 6.4.1 or all slabs on ground may be poured continuously by using a pre-molded keyed metal joint to form areas not exceeding 650 square feet.

2.03) Do not backfill against walls until supporting slabs are in place and have attained required strength or if shored with shoring designed and certified by a shoring contractor. The shoring contract shall submit shoring drawings and shoring calculation signed and sealed by a P.E. licensed in the State of the project. Where backfill is required on both sides of walls, backfill both sides simultaneously. Unless the wall is designed as a cantilever retaining wall, contract the engineer to determine if concrete walls shown can be backfilled against before the supporting slab is in place.

2.04) All fill and backfill material, all footing bearing, excavations, and compaction control shall be inspected and approved in writing by a Qualified Engineer.

Section 3 – Concrete:

3.01) General contractor shall submit a formwork plan and design calculations certified by a registered professional engineer showing framing sizes, and strengths of formwork, materials, specifications, sequence of construction, and detailed plans of formwork removal and reworking dependent on temperature.

3.02) All formwork shall be in accordance with the American Concrete Institute's "Formwork of Concrete", special publication No. 4 and ACI's "Standard Recommended Practice of Concrete Formwork" (ACI 304-latest edition).

3.03) Except as noted, all reinforcing shall be high strength new billet steel conforming to ASTM designation A615 (Fy = 60,000 psi). All stirrups and ties shall be new intermediate grade steel conforming to ASTM designation A615 (Fy = 60,000 psi). All reinforcing shall be detailed, fabricated, and placed in accordance with the ACI's "Manual of Standard Practice for Detailing Concrete Structures" (ACI 315).

3.04) Reinforcing steel shall be placed in accordance with the "CRSI Manual of Standard Practice for Reinforced Concrete Construction."

3.05) Lap all splices 36 bar diameters (2'-0" min.) except as noted on plans. Bend outside face wall horizontal reinforcing 1'-0" around all corners or provide 4'-0" long corner bars to match horizontal reinforcing. Splicing of #6 or larger bars shall not be permitted unless otherwise noted or authorized by the Engineer. Lapped splices of #14 or #18 bars shall not be permitted.

3.06) Dowels from footings, supporting beams, walls and columns shall be provided for reinforcing bars in adjoining walls, columns, etc., even if not specifically shown on the details. Dowels shall be of the same size and quantity as in the supporting element and shall be embedded a minimum of 30 bar diameters unless otherwise noted.

3.07) All reinforcing bars not otherwise detailed or noted on the drawings shall be continuous with splices as noted herein.

3.08) Design mixes shall be provided by the concrete producer in accordance with the General Notes and shall be approved prior to delivery of materials.

3.09) All splices in reinforcing shall be Class "C" splices in accordance with ACI 318 (latest local approved edition) except as noted in the plans.

3.10) Bend horizontal wall reinforcing 1'-0" minimum around all corners or provide 4'-0" long corner bars to match horizontal reinforcing.

3.11) All concrete work shall be in accordance with the requirements of the American Concrete Institute Code (ACI 318 - latest edition).

3.12) All concrete work shall conform to the latest approved (by local government) editions of the following ACI and ASTM documents:

ACI - 301	specifications
ACI - 318	code
ACI - 214	compression tests
ACI - 308	cold weather
ACI - 315	detailing
ACI - 347	formwork
ACI - 605	hot weather
ACI - 613	proportions of concrete
ACI - 614	placing concrete
ACI - ASCE Committee 423	unbonded tendons
ASTM - C94	ready-mix concrete

3.13) Provide concrete protection for reinforcing in accordance with ACI and as follows unless noted on the drawings:

Ext Slabs -- 1 1/2" Walls -- outside face -- 1 1/2"
inside face -- 1"

3.14) See mechanical and architectural drawings for holes and openings in slabs not shown.

3.15) All concrete, except as noted elsewhere, shall be (fc = 5,000 psi) normal weight concrete. All exterior concrete shall be air-entrained at minimum 3% to maximum 6%.

3.16) Admixtures other than those listed (for set retardation, acceleration or workability) shall be submitted for approval with the mix design. Concrete shall be travel-mixed in accordance with ASTM C24.

3.17) No calcium chloride shall be added to the concrete without written approval by the Engineer.

3.18) The addition of water to concrete at the plant or in the field greater than 1% more than the specified water content is strictly prohibited without written approval by the Engineer.

3.19) Unless noted otherwise, concrete slab surfaces shall receive a smooth, trowelled finish. Surface tolerance shall be 1/4 inch in 10 feet unless otherwise noted. Ramps shall receive a medium broom finish.

3.20) The General Contractor shall submit plans showing all penetrations through the framed slabs. The openings shall be accurately located, sized and dimensioned.

3.21) All field and lab testing of concrete shall conform to the latest approved (by local government) editions of ASTM:

ASTM-C-431	Field cylinder specimens
ASTM-C-143	Slump test
ASTM-C-173 or C-231	Air content (when required)
ASTM-C-39	Lab testing cylinders
ASTM-C-172	Sampling fresh concrete
ASTM-C-42	Hardened cores (when required)

Upon completion of concrete testing, the agency shall certify their results as follows:

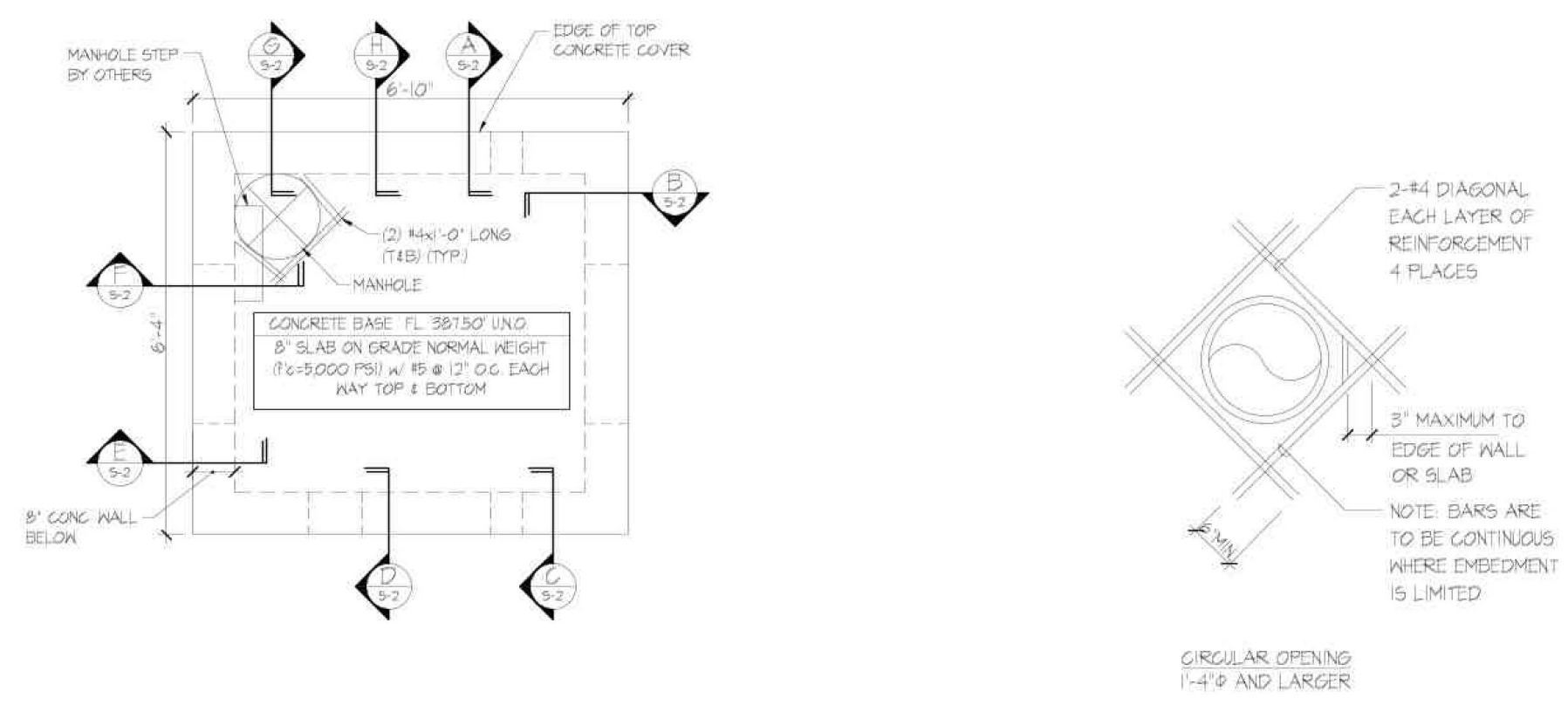
"I certify that the field and lab testing conforms to the ASTM documents and good practice."

Signed _____, P.E.
(for Agency)

3.22) Concrete test cylinders shall be made in accordance with ACI 318. Mold and cure samples in accordance with ASTM C31. Test cylinders in accordance with ASTM C39, 1 at 7 days age, and 2 at 28 days. Determine slump in accordance with ASTM C143. Determine air content of concrete for each strength test in accordance with ASTM C231.

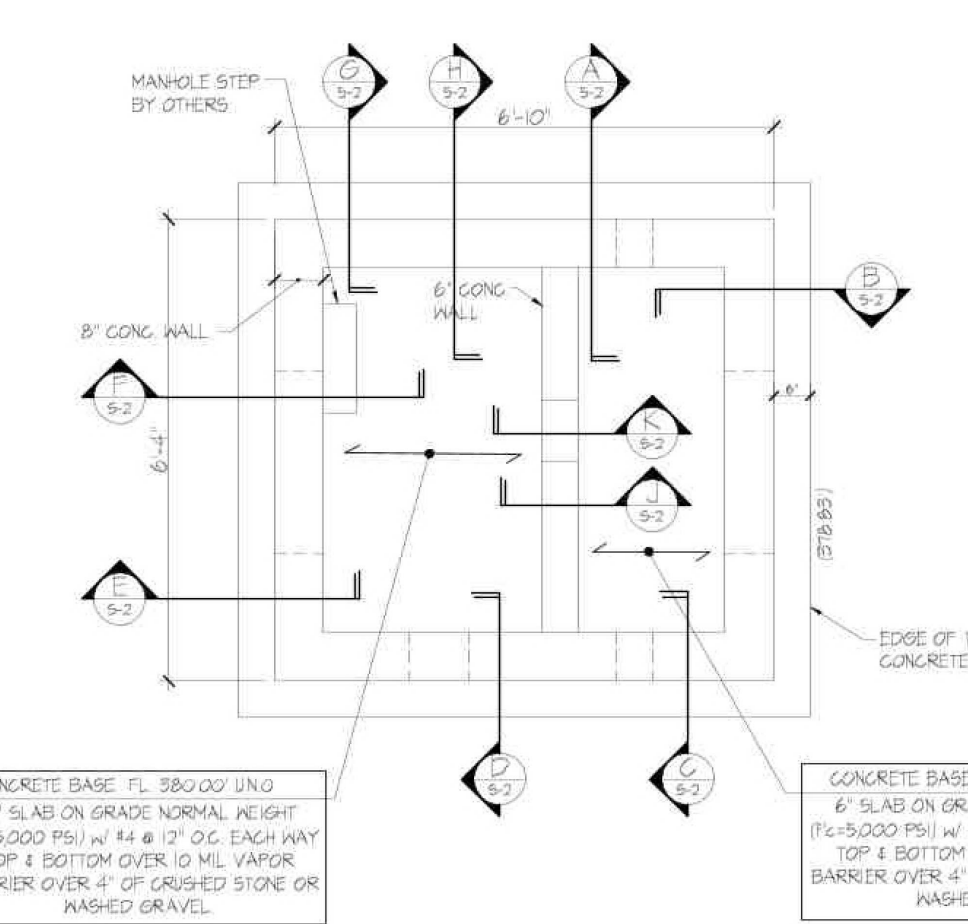
3.23) Certify delivery tickets and control addition of water at the site.

3.24) Inspection of all placed concrete and reinforcement is required. Engineer shall approve inspector. Inspection Agency shall certify formwork, concrete and reinforcement under an engineer's seal. Submit daily reports to Owner, Contractor, Architect, Building Department, and Engineer.



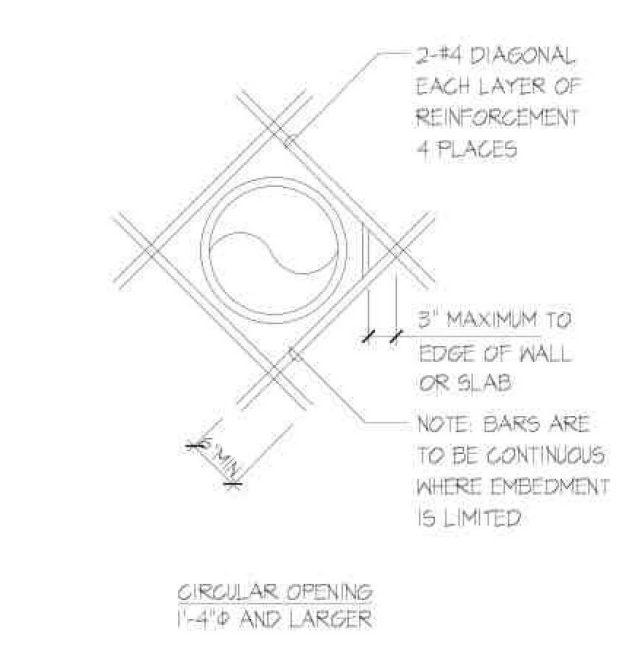
STORM CHAMBERS TOP PLAN
SCALE: 1/2" = 1'-0"

NOTES:
1) COORDINATE WITH CIVIL DRAWINGS FOR STORM CHAMBER LOCATIONS.



STORM CHAMBERS BOTTOM PLAN
SCALE: 1/2" = 1'-0"

NOTES:
1) COORDINATE WITH CIVIL DRAWINGS FOR STORM CHAMBER LOCATIONS.



OPENINGS IN CONCRETE WALL
NOT TO SCALE

DocuSigned by:
Lawrence N...
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05/14/24

APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE: OCTOBER 31, 2023

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

DocuSigned by: <i>Jessica Bellah</i> Director	For Lynda D. Eisenberg, AICP	6/6/2024
DocuSigned by: <i>Chief, Division of Land Development</i>		6/6/2024
DocuSigned by: <i>Chief, Development Engineering Division</i>		6/6/2024



STRUCT. DETAILS
FOR SWM
STRUCTURE #101

SHEET
28 of 29

MOSELEYARCHITECTS

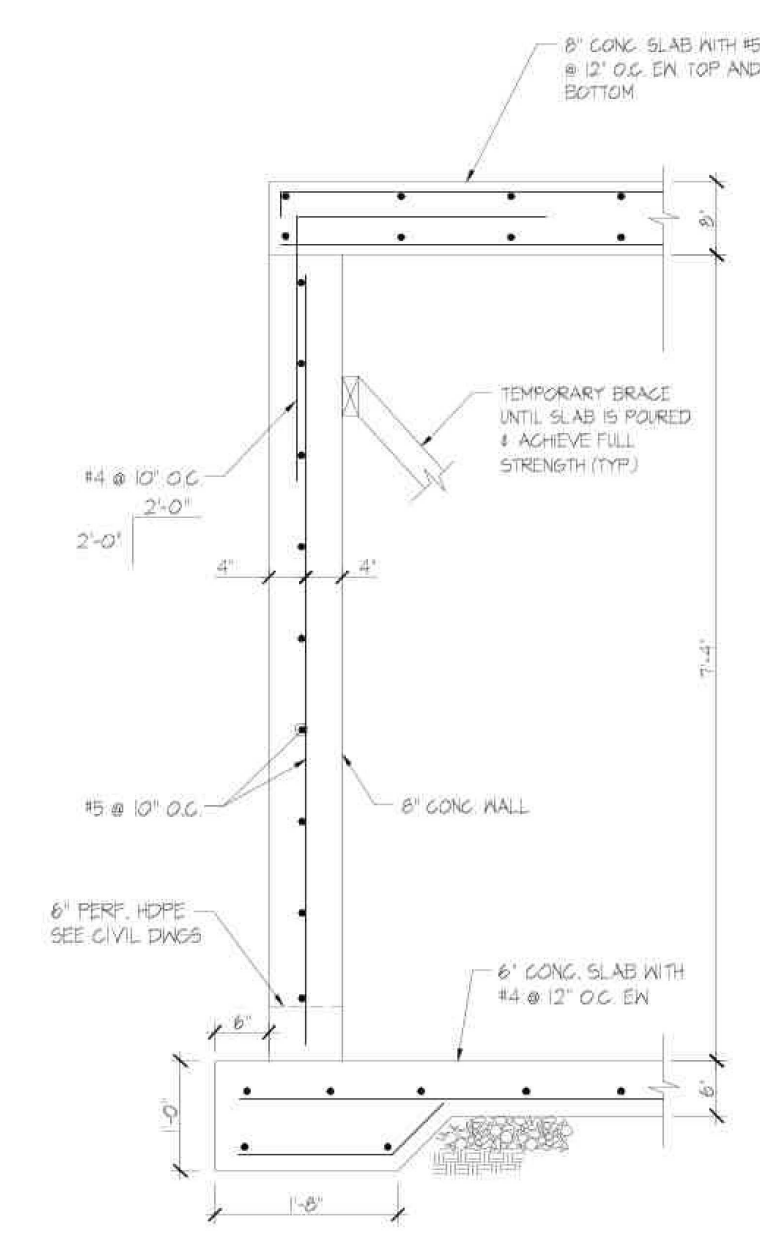
1414 KEY HIGHWAY, SECOND FLOOR, BALTIMORE, MD 21230
PHONE (410) 539-4300 FAX (410) 539-0660
MOSELEYARCHITECTS.COM

PATUXENT COMMONS

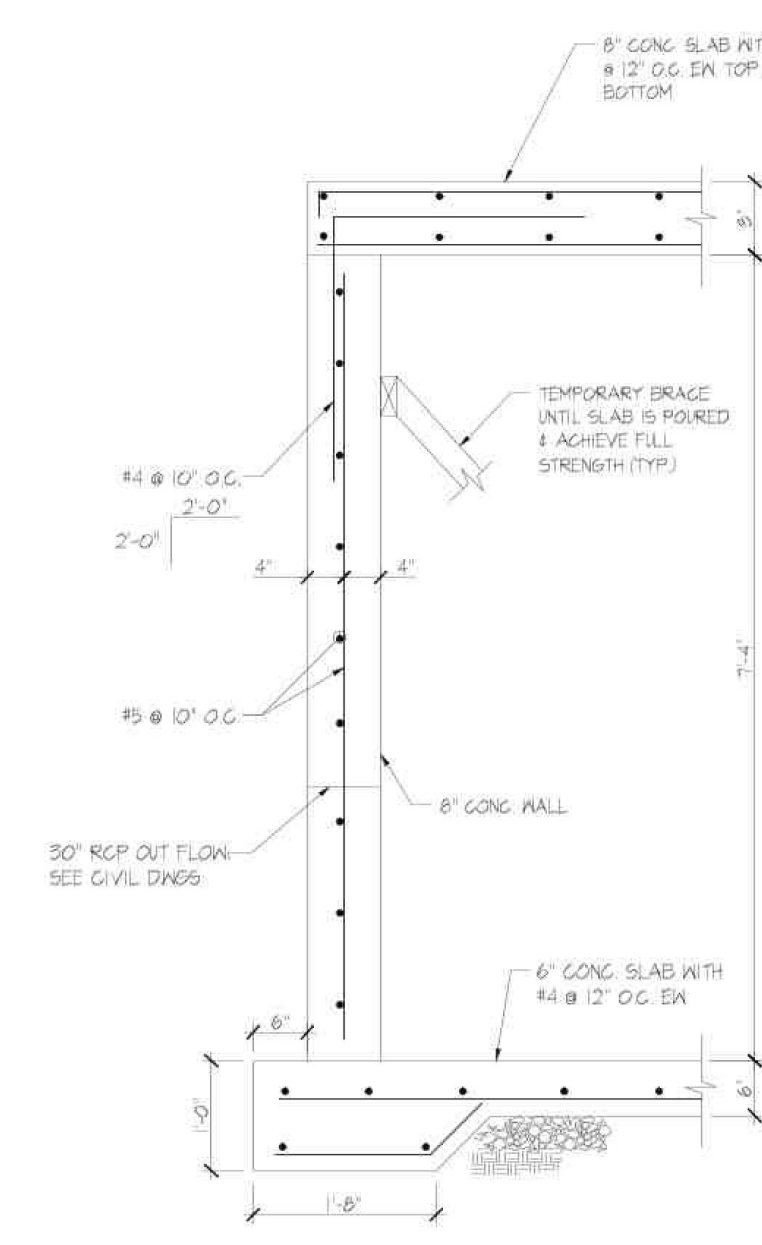
581075
MISSION FIRST HDC
6441 Freetown Rd. Columbia, MD. 21044

PROJECT NO:	581075
DATE:	May 15, 2024
REVISIONS	
DATE	DESCRIPTION

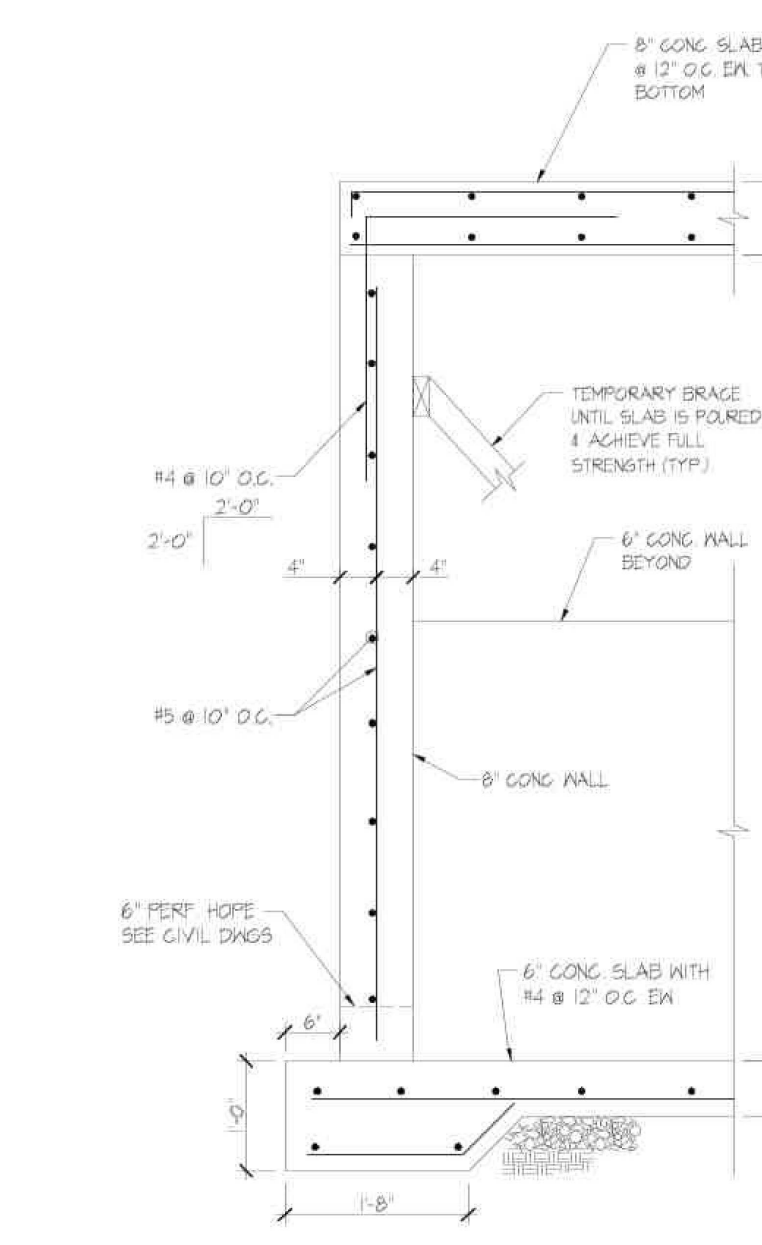
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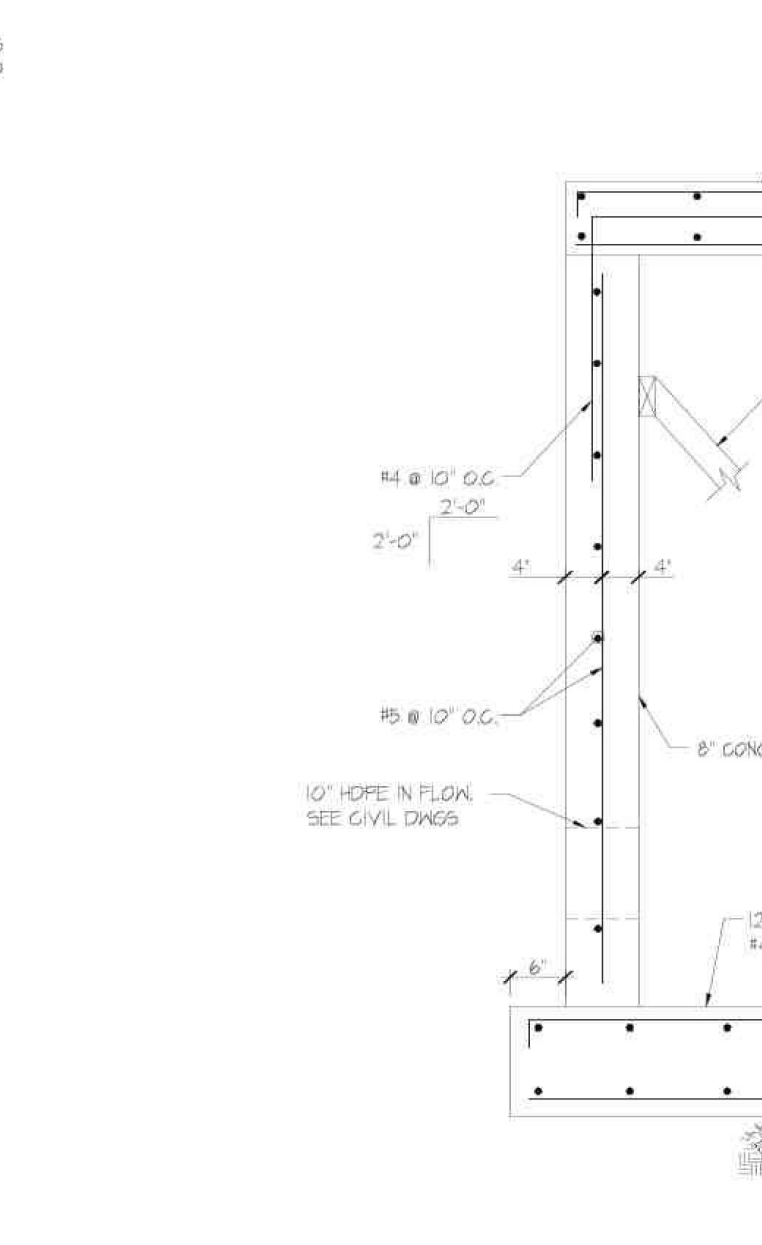
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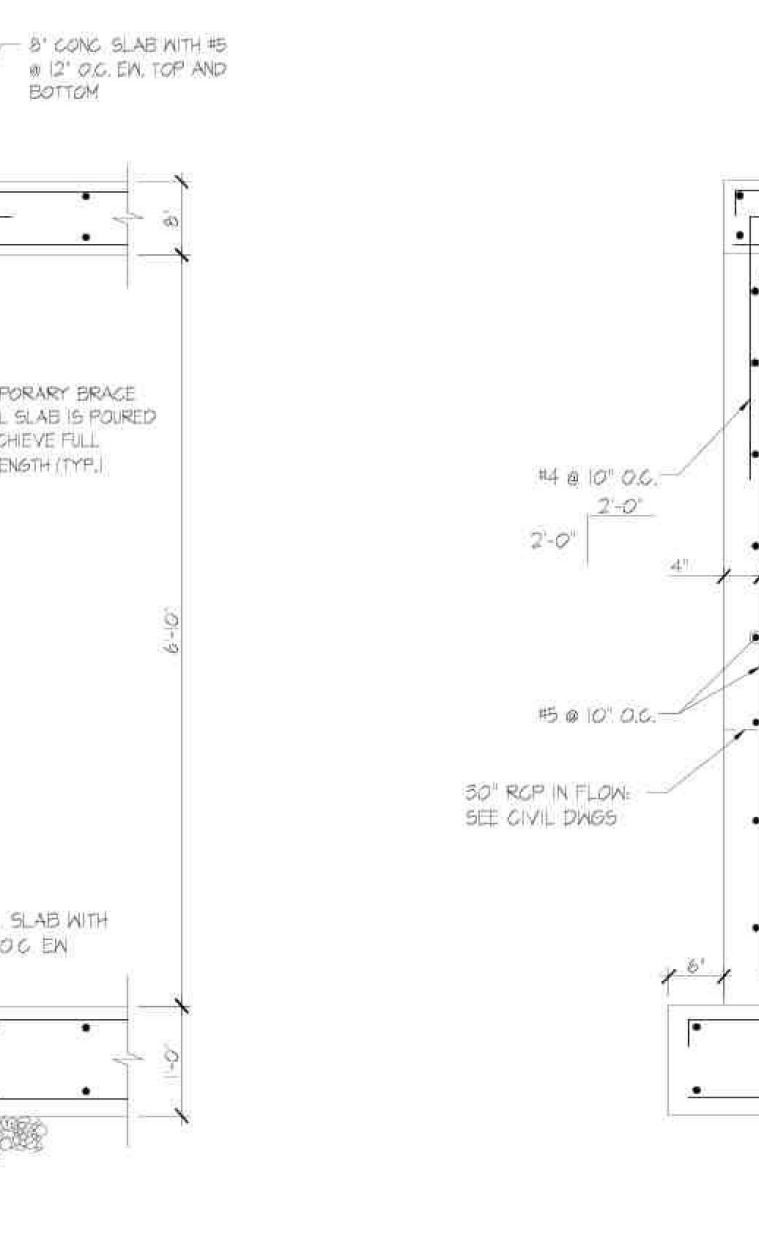
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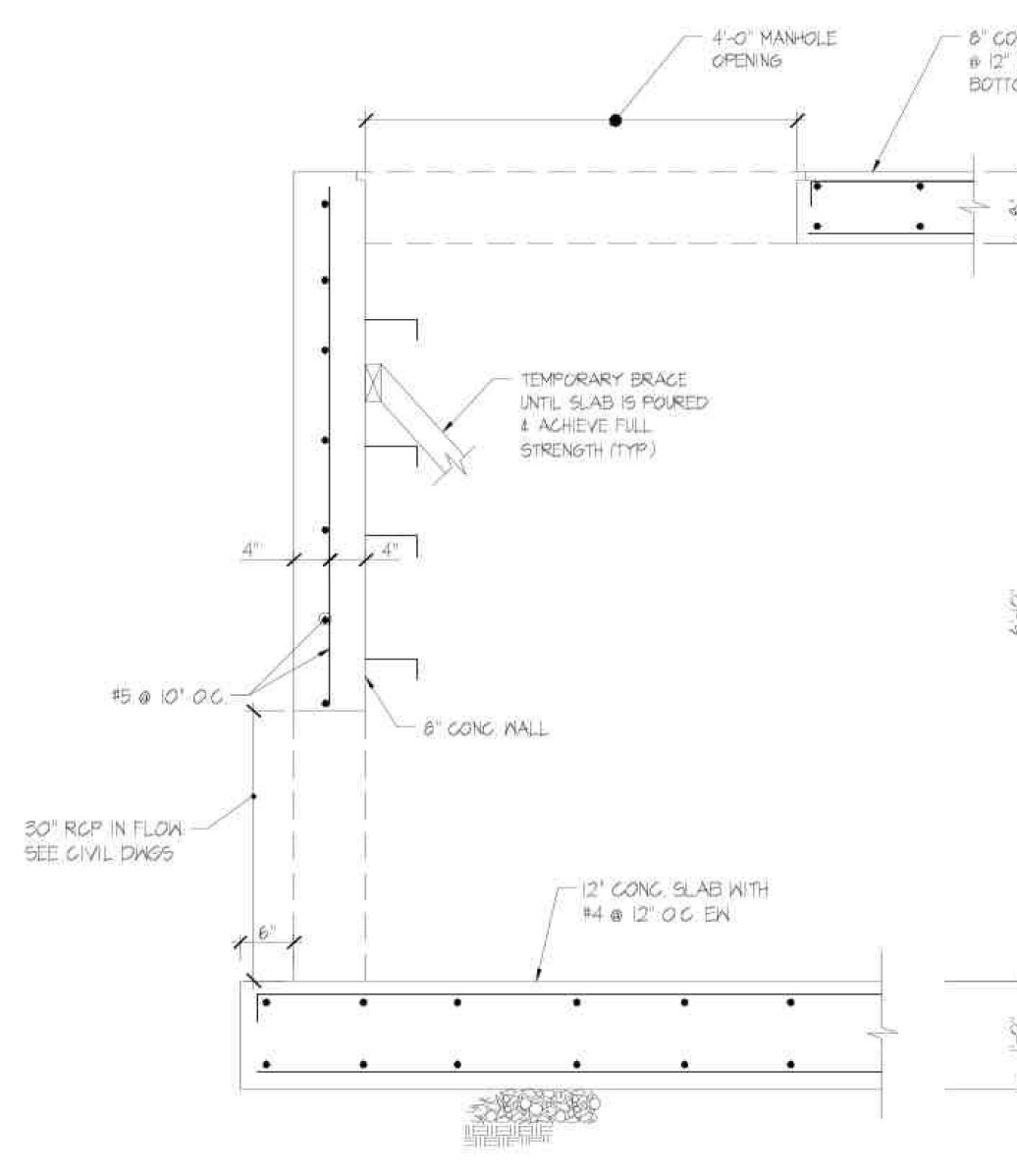
SECTION C
SCALE: 3/4" = 1'-0"



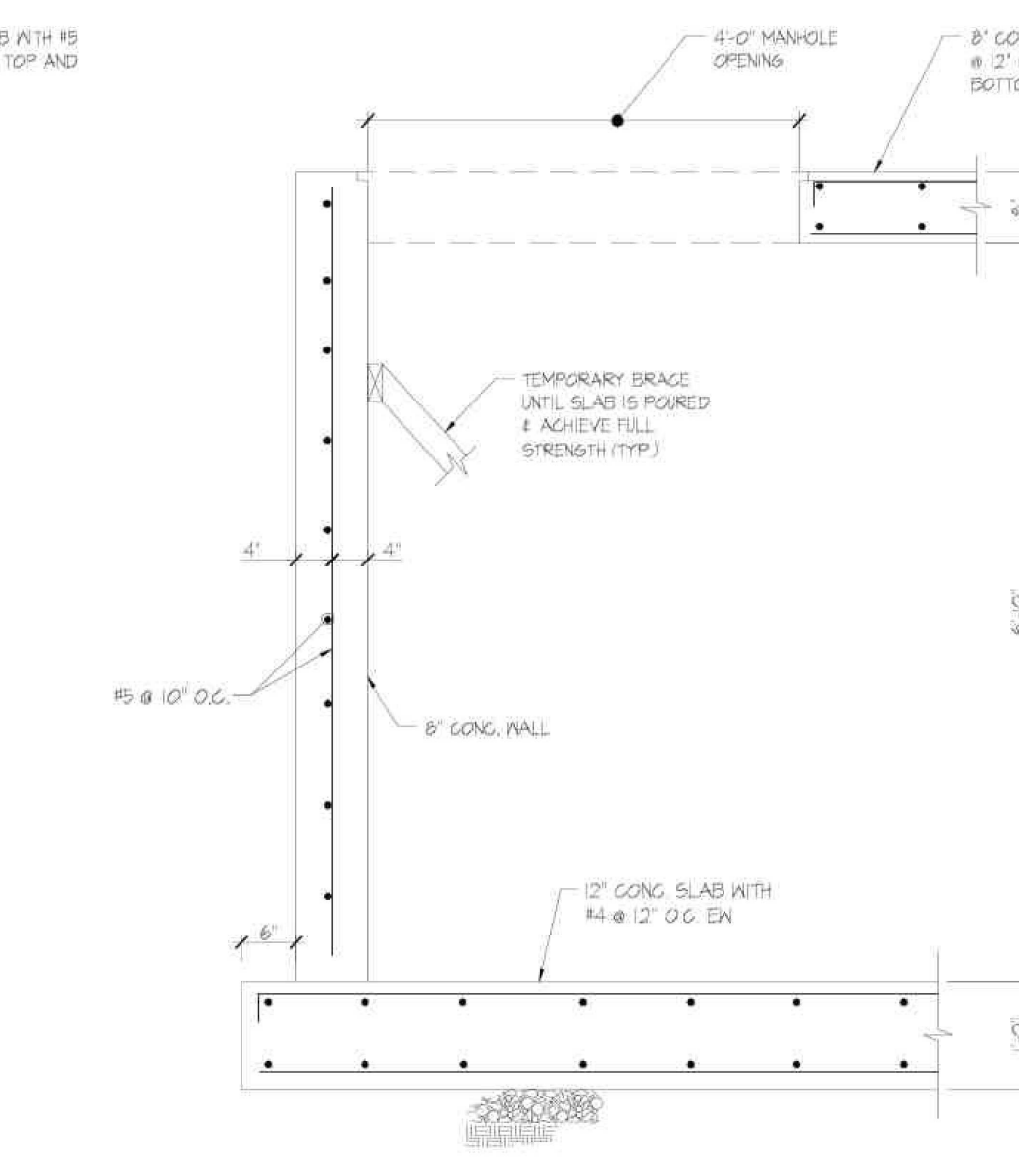
SECTION D
SCALE: 3/4" = 1'-0"



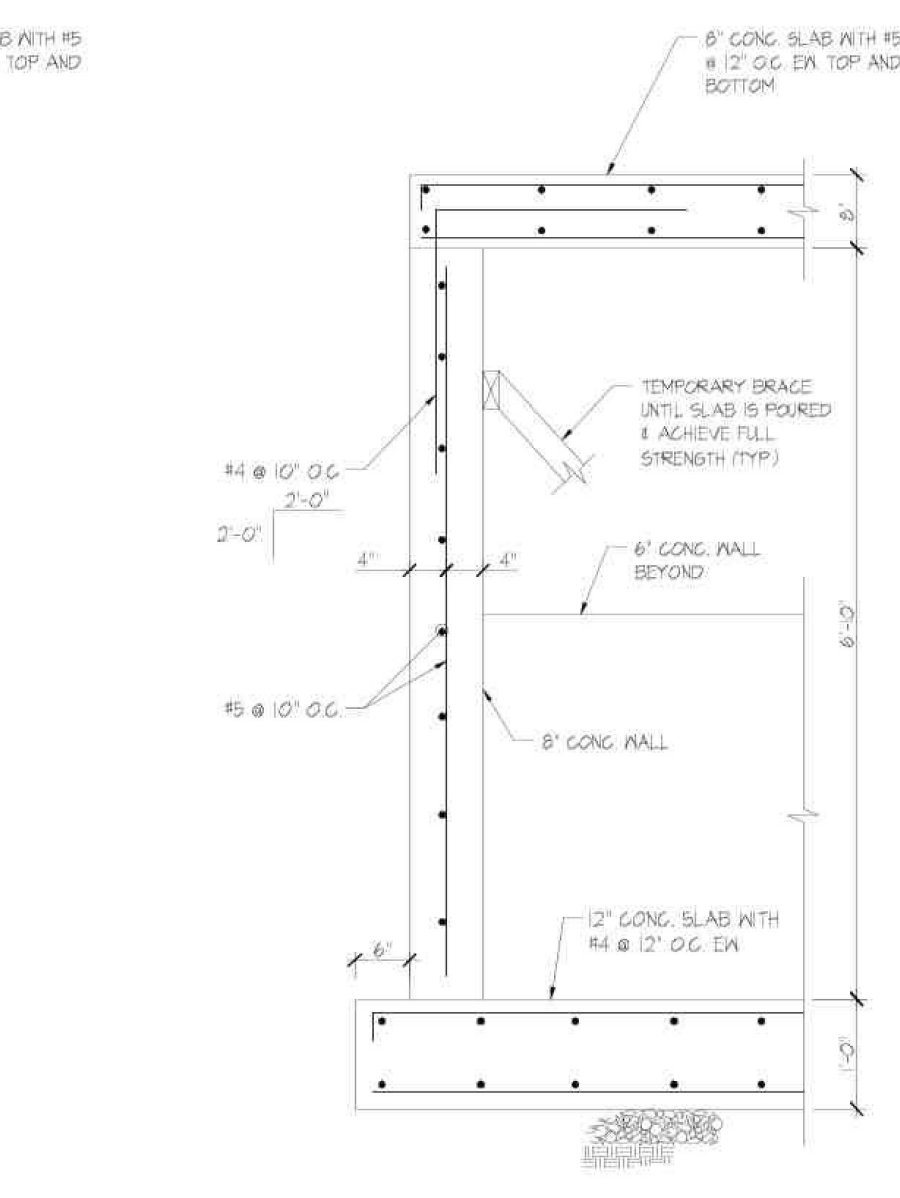
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SCALE: 3/4" = 1'-0"



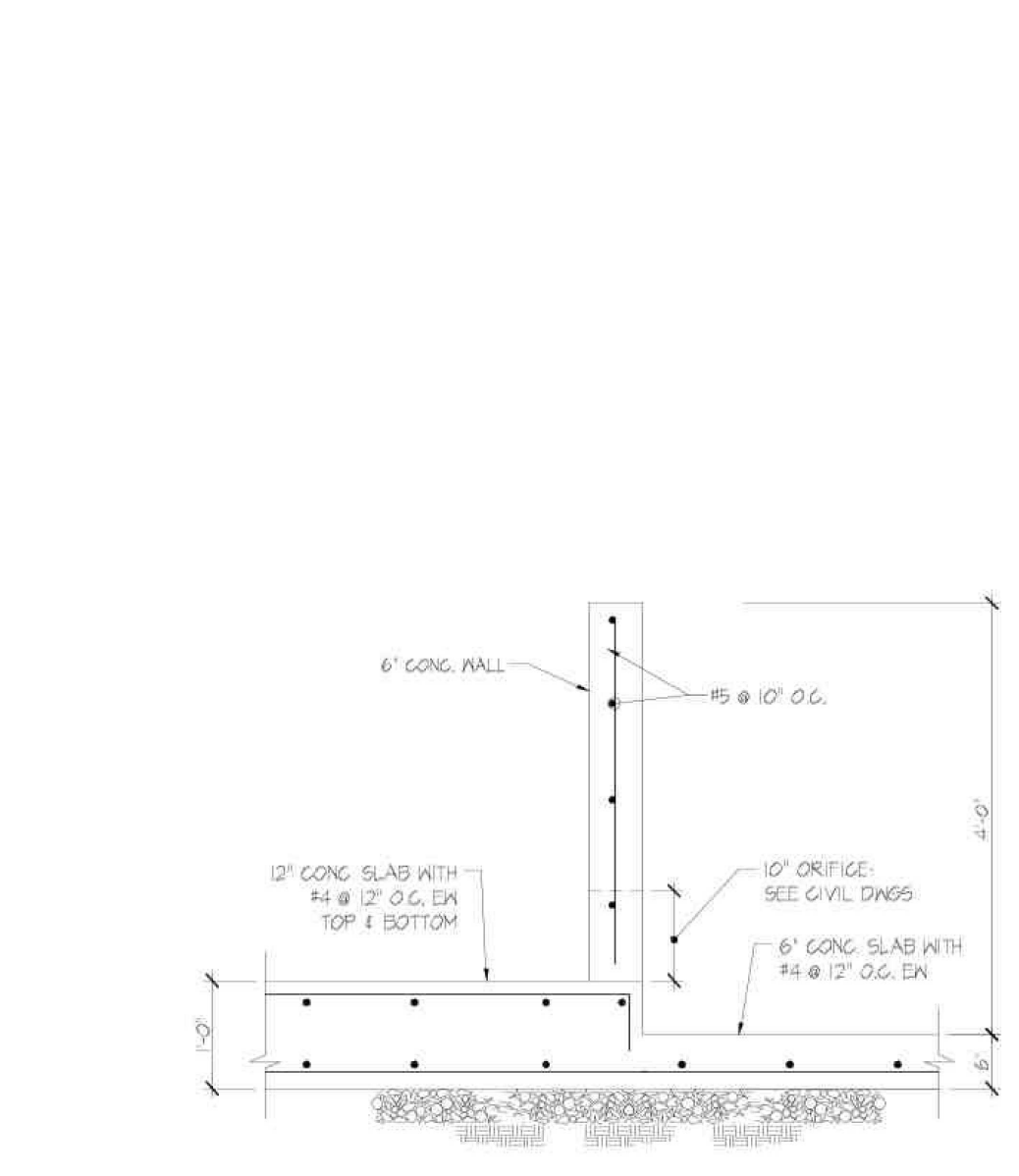
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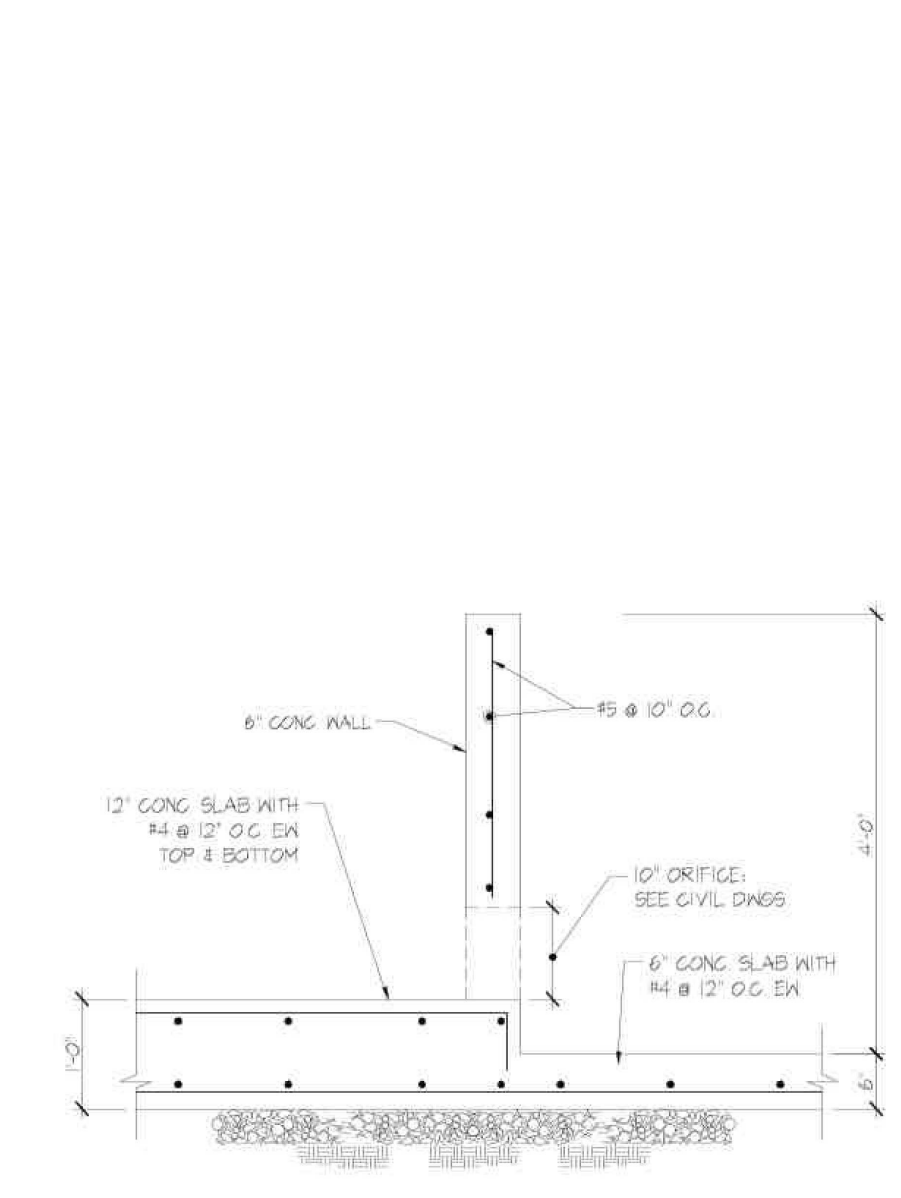
SECTION G
SCALE: 3/4" = 1'-0"



SECTION H
SCALE: 3/4" = 1'-0"



SECTION J
SCALE: 3/4" = 1'-0"



SECTION K
SCALE: 3/4" = 1'-0"

APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE: **OCTOBER 31, 2023**

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

DocuSigned by: <i>Jessica Billak</i> Director	For Lynda D. Eisenberg, ATCP	6/6/2024
DocuSigned by: <i>CHD Edmondson</i> Chief, Development Engineering Division		6/6/2024



PROJECT NO. 581075	
DATE: May 15, 2024	
REVISIONS	
DATE	DESCRIPTION

STRUCT. DETAILS
FOR SWM
STRUCTURE #101

SHEET
29 of 29

MOSELEYARCHITECTS
1414 KEY HIGHWAY, SECOND FLOOR, BALTIMORE, MD 21230
PHONE (410) 539-4300 FAX (410) 539-0660
MOSELEYARCHITECTS.COM

DocuSigned by:
Lawrence N...
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05/14/24

PATUXENT COMMONS
581075
MISSION FIRST HDC
6441 Freetown Rd. Columbia, MD. 21044

PROJECT NO. 581075
DATE: May 15, 2024
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DATE DESCRIPTION
STRUCT. DETAILS
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STRUCTURE #101
SHEET
29 of 29
SDP-23-026