

SHEET INDEX

NO	DESCRIPTION	NO	DESCRIPTION
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GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- THE EXISTING TOPOGRAPHY IS PROVIDED BY PENNONI ASSOCIATES, INC., DATED MARCH 2020 AND HAS BEEN SUPPLEMENTED BY HOWARD COUNTY GIS INFORMATION.
- THE BOUNDARY SURVEY IS PROVIDED BY AN ALTA SURVEY BY PENNONI ASSOCIATES, INC., DATED APRIL 5, 2005 AND HAS BEEN SUPPLEMENTED BY HOWARD COUNTY GIS INFORMATION.
- THE COORDINATES SHOWN HEREON ARE IN MARYLAND COORDINATE SYSTEM NAD 83(1) BASED ON THE HOWARD COUNTY GEODETIC CONTROL. HOWARD COUNTY MONUMENT NOS. 42CA AND 0016 WERE USED FOR THIS PROJECT.
- WATER IS PUBLIC, CONTRACT 24-1785-D.
- SEWER IS PUBLIC, CONTRACT 20-5148-D.
- EXISTING UTILITIES SHOWN ON THIS PLAN SET WERE DEVELOPED USING EXISTING RECORD DRAWINGS AND BASE FILES FROM THE UTILITY COMPANIES, FROM VISIBLE MARKINGS AND FEATURES WITHIN THE PROJECT LIMITS, FROM FIELD SURVEYS, AND FROM LIMITED TEST PITS. UTILITIES SHOWN ARE FOR INFORMATIONAL PURPOSES ONLY. THE UTILITY INFORMATION SHOWN MAY BE INACCURATE OR INCOMPLETE. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES WITHIN THE PROJECT LIMITS OF WORK TO HIS OWN SATISFACTION PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES. SHALL AVOID IMPACTS TO UTILITIES, AND SHALL MAINTAIN UNINTERRUPTED UTILITY SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY AT NO COST TO THE PROJECT DEVELOPER/OWNER IN COORDINATION WITH THE AFFECTED UTILITY COMPANIES. FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THIS PROJECT SHALL NOT RELIEVE THE CONTRACTOR FROM PERFORMING SUCH WORK.
- NO WETLANDS, WETLAND BUFFERS, STREAMS, STREAM BUFFERS, STEEP SLOPES (AREAS OF 25% SLOPES DO NOT MEET DEFINITION OF STEEP SLOPES - STEEP SLOPE: A SLOPE THAT AVERAGES 25% OR GREATER OVER 10 VERTICAL FEET) AND FLOODPLAINS ARE PRESENT ON THE PROPERTY.
- SUBJECT PROPERTY ZONED M-1 PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.
- ALL ELEVATIONS SHOWN ARE BASED NAVD83.
- ALL LIGHTING IS TO BE DIRECTED/REFLECTED DOWNWARD AWAY FROM ADJACENT PUBLIC ROADS. PROPOSED LIGHTING CONSISTS OF 4 LIGHT POLES IN THE PARKING AREAS AND BUILDING MOUNTED LIGHTING. EXCEPT FOR SPOTLIGHTS AND LOW INTENSITY LIGHTS AS DEFINED IN SECTION 134.0. C.2. AND 134.0. C.3., OF THE HOWARD COUNTY ZONING REGULATIONS, ALL LIGHT FIXTURES SHALL BE FULLY OR PARTIALLY SHIELDED.
- THERE IS A REDUCTION OF TRIPS DUE TO THE CHANGE IN USE FROM AN AUTO CARE FACILITY TO A SELF STORAGE FACILITY PER THE TRAFFIC EXEMPTION LETTER DATED JULY 29, 2020. THE TRAFFIC EXEMPTION WAS APPROVED ON AUGUST 24, 2020.
- BUILDINGS EXIST ON THE PROPERTY.
- BASED ON AVAILABLE COUNTY MAPS AND RECORDS, THERE ARE NO HISTORIC STRUCTURES OR KNOWN CEMETERIES LOCATED ON THE SUBJECT PROPERTY.
- APPLICABLE DPZ FILE REFERENCES: ECP-20-029, SDP-88-119, SDP-89-70, SDP-01-076, F-89-228, WP-88-55, F-88-134, F-89-228, F-01-143, F-16-050, WP-20-115.
- THIS PROJECT IS EXEMPT FROM FOREST CONSERVATION REQUIREMENTS OF SECTION 16.1020D.(1)(b) BECAUSE THE PROPOSED DEVELOPMENT IS AN ACTIVITY ON A PREVIOUSLY DEVELOPED AREA COVERED BY AN IMPERVIOUS SURFACE AND LOCATED IN THE URBAN PLANNING AREA.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. LANDSCAPE PLANTINGS FOR 14 SHADE TREES, 0 ORNAMENTAL TREES, 0 EVERGREEN TREES, AND 0 SHRUBS HAVE BEEN PROVIDED UNDER THIS PLAN. A FINANCIAL SURETY IN THE AMOUNT OF \$4,200 MUST BE POSTED WITH THE DEVELOPER AGREEMENT FOR THIS PROJECT.
- STORMWATER MANAGEMENT FOR THIS PROJECT WILL BE PROVIDED BY 1 MICRO-BIORETENTION FACILITY. ALL SWM DEVICES WILL BE PRIVATELY OWNED AND MAINTAINED.
- A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
- A GEOTECHNICAL REPORT WAS PREPARED FOR THIS PROJECT BY HILLIS-CARNES ENGINEERING ASSOCIATES, INC. DATED DECEMBER 2, 2020.
- THERE ARE NO EXISTING NATURAL RESOURCE FEATURES ON THIS PROPERTY. THERE IS NO FOREST ON-SITE. NO SPECIMEN TREES EXIST ON SITE. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES, SHALL BE PERMITTED WITHIN LIMITS OF WETLANDS, STREAMS OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION EASEMENT AREAS.
- PENNONI SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION, MEANS, METHODS, TECHNIQUES, OR PROCEDURES, UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES, OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND STANDARD CONSTRUCTION PRACTICES.
- PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
- NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
- ALL FILL, COMMON BORROW, AND/OR TRENCH BACKFILL SHALL BE COMPACTED ACCORDING TO THE LATEST VERSION OF MSHA STANDARDS AND SPECIFICATIONS.
- AN ACCESSIBLE ROUTE SHALL BE PROVIDED BETWEEN HANDICAPPED PARKING OR PUBLIC RIGHT-OF-WAYS TO THE MAIN BUILDING ENTRANCE IN ACCORDANCE WITH CURRENT ADA AND LOCAL STANDARDS. ALL HANDICAPPED RAMPS SHALL BE CONSTRUCTED ACCORDING TO CURRENT ADA AND LOCAL STANDARDS. EXCEPT AS SUPERCEDED IN CURRENT ADA AND LOCAL STANDARDS, THE FOLLOWING SHALL APPLY:
 - MAXIMUM SIDEWALK CROSS SLOPES SHALL BE 2%.
 - A MINIMUM 5'x6' LANDING AREA WITH A MAXIMUM SLOPE IN ANY DIRECTION OF 2% SHALL BE PROVIDED AT ALL CHANGES IN DIRECTION, TOPS AND BOTTOMS OF RAMPS, AND BUILDING EGRESS POINTS.
 - ALL HANDICAPPED PARKING SHALL BE SLOPED NO GREATER THAN 2% IN ANY DIRECTION, INCLUDING A 6' WIDE AREA BEHIND THE PARKING SPACES.
 - AN ACCESS ROUTE FROM THE PARKING SPACES TO THE MAIN BUILDING ENTRANCE SHALL BE PROVIDED. ALL SLOPES ALONG THE DIRECTION OF TRAVEL SHALL NOT EXCEED 1:20 UNLESS THEY FALL UNDER CONDITION B ABOVE. SLOPES IN EXCESS OF 1:20 EXCEPT CURB RAMPS REQUIRE A HANDRAIL MEETING ADA REQUIREMENTS. SEE SITE DEVELOPMENT PLAN FOR A DETAIL OF THE HANDICAPPED PARKING.
- THIS PROJECT IS SUBJECT TO COMPLIANCE WITH THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. DEVELOPMENT OR CONSTRUCTION ON THIS PROPERTY MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION APPLICATION OR BUILDING/GRADING PERMIT APPLICATIONS.
- A DUMPSTER SHALL BE PROVIDED AS SHOWN.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS GIVEN ON THESE DRAWINGS AND IN THE SPECIFICATION BOOKLET AS WELL AS STANDARD STATE AND LOCAL SPECIFICATIONS WHICHEVER IS MORE RESTRICTIVE.
- DEVIATION FROM THESE PLANS AND SPECIFICATIONS WITHOUT PRIOR WRITTEN CONSENT FROM THE ENGINEER MAY CAUSE THE WORK TO BE UNACCEPTABLE.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AT LEAST 48 HOURS PRIOR TO BEGINNING ANY WORK ON THE PROJECT:
 - IBGE
 - ILCOMCAST
 - VERIZON
- CONTRACTOR SHALL CONTACT MISS UTILITY AT 1-800-257-7777 72 HOURS PRIOR TO BEGINNING ANY EXCAVATION WORK ON THE SITE. IN THE EVENT THAT MISS UTILITY WILL NOT MARK UTILITIES ON SITE, A PRIVATE UTILITY LOCATOR SHOULD BE ENGAGED FOR THIS PURPOSE AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL VERIFY ALL EXISTING SITE CONDITIONS PRIOR TO BEGINNING WORK. HE SHALL VERIFY SIZE AND LOCATIONS OF ALL UNDERGROUND UTILITIES AND EXCAVATE TEST PITS AT PROPOSED TEST PIT LOCATIONS. DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER WELL IN ADVANCE OF CONSTRUCTION START. START OF CONSTRUCTION BY THE CONTRACTOR SHALL CONSTITUTE FULL ACCEPTANCE OF ALL SITE CONDITIONS BY THE CONTRACTOR. TEST PITTING DEFINED: FOR THE PURPOSES OF THIS PROJECT, EXCAVATION OF UTILITY TRENCHES DOES NOT CONSTITUTE TEST PITTING. TEST PITTING IS A SEPARATE OPERATION COMPLETED AT LEAST SEVEN DAYS BEFORE UTILITY INSTALLATION IS SCHEDULED TO BEGIN. TEST PITTING MEANS EXCAVATION TO EXPOSE EXISTING UTILITIES IN TWO SITUATIONS: (I) WHERE PROPOSED IMPROVEMENTS CROSS EXISTING UTILITIES (PIPES, LINES, STRUCTURES, APPURTENANCES) AND; (II) WHERE PROPOSED UTILITIES ARE DESIGNED TO CONNECT TO EXISTING UTILITIES. TEST PITTING INCLUDES RECORDING THE TYPE, SIZE, LOCATION AND ELEVATION OF THE EXPOSED UTILITIES, AND PROVIDING THE RECORD TO PENNONI AND THE OWNER. THE RECORD MAY BE A LEGIBLE HAND-WRITTEN FIELD SKETCH.

SITE DEVELOPMENT PLAN

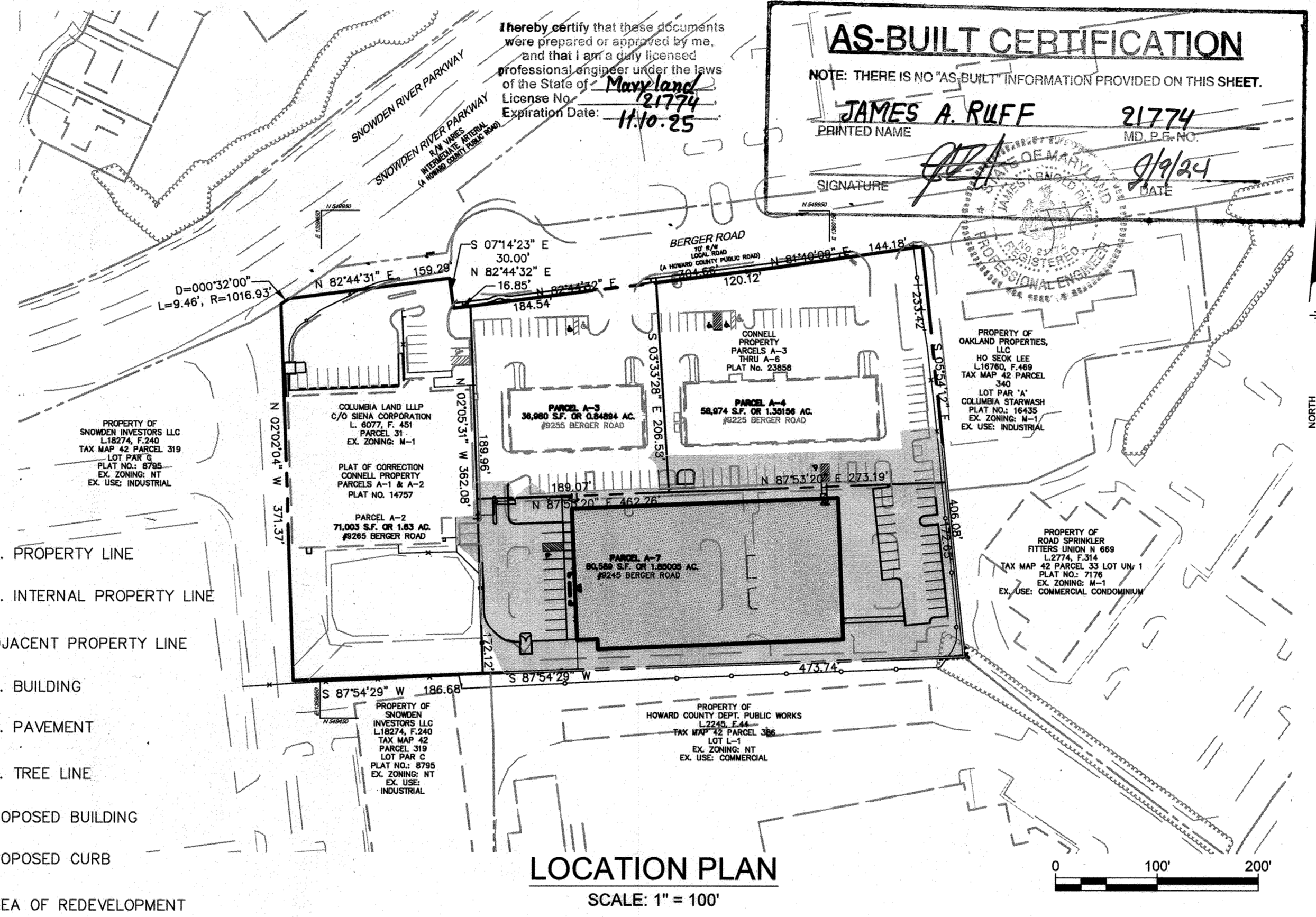
PUBLIC STORAGE

COLUMBIA EXPANSION

9225, 9245, 9255, 9265 BERGER ROAD

6TH ELECTION DISTRICT

HOWARD COUNTY, MARYLAND



LEGEND

- EX. PROPERTY LINE
- EX. INTERNAL PROPERTY LINE
- ADJACENT PROPERTY LINE
- EX. BUILDING
- EX. PAVEMENT
- EX. TREE LINE
- PROPOSED BUILDING
- PROPOSED CURB
- AREA OF REDEVELOPMENT

SITE ANALYSIS DATA

AREA OF SITE: 5.68 ACRES (247,451 SF)

LIMIT OF DISTURBANCE: 2.13 ACRES (92,929 SF)

PRESENT ZONING: M-1 (MANUFACTURING: LIGHT)

EXISTING USES: VEHICULAR SERVICE FACILITIES AND SELF STORAGE FACILITY
 131,275 SF BUILDING PARCEL A-2 (SELF STORAGE)
 7,851 SF BUILDING PARCEL A-3 (VEHICLE SERVICE)
 11,354 SF BUILDING PARCEL A-4 (VEHICLE SERVICE)
 11,919 SF BUILDING PREVIOUS PARCEL A-5 (VEHICLE SERVICE)
 7,800 SF BUILDING PREVIOUS PARCEL A-6 (VEHICLE SERVICE)
 BUILDINGS ON PARCELS A-5 AND A-6 (PREVIOUS) TO BE REMOVED

PROPOSED USES: VEHICULAR SERVICE FACILITIES AND SELF STORAGE FACILITIES (BUILDINGS/USES ON PARCELS A-2 THROUGH A-4 TO REMAIN)

PROPOSED FLOOR AREA: 145,920 SF TOTAL (4 FLOORS) (EACH FLOOR: 36,480 SF)

PROPOSED BUILDING HEIGHT: 48'

MAXIMUM NUMBER OF EMPLOYEES: MAXIMUM 2 EMPLOYEES ON SITE AT ANY GIVEN TIME

EXISTING PARKING: 182 SPACES (INCLUDES 10 SPACES ON PARCEL A-2)

PARKING REQUIRED FOR PROPOSED USE: SELF-STORAGE FACILITY
 4 SPACES PER 1,000 SF OFFICE AREA
 NO PROPOSED OFFICE WITHIN THE PROPOSED BUILDING
 4 x 01,000 = 0 SPACES REQUIRED
 11 SPACES PROVIDED

PARKING REQUIRED FOR EXISTING BUILDINGS (VEHICLE USES) ON PARCELS A-3 AND A-4: VEHICLE USES
 2.0 SPACES PER 1,000 SF BUILDING AREA (EXCLUDING SERVICE BAYS) PLUS 1.0 SPACE PER 1,000 SF OF OUTDOOR DISPLAY AREA, PLUS 3.0 SPACES PER SERVICE BAY
 3,841 SF BUILDING TOTAL (EXCLUDING SERVICE BAYS)
 3,841 SF/1,000 SF X 2.0 SP = 8 SPACES
 30 SERVICE BAYS
 30 X 3 SP/SERVICE BAY = 90 SPACES
 0 SF OF OUTDOOR DISPLAY AREA = 0 SPACES
 8 + 90 = 98 SPACES REQUIRED FOR PARCELS A-3 AND A-4

PARKING REQUIRED FOR EXISTING BUILDING (SELF STORAGE FACILITY) ON PARCEL A-2: 4 SPACES PER 1,000 SF OFFICE AREA
 995 SF OFFICE @ 4 SP/1000 SF = 4 SP ON SITE RESIDENCE (1,385 SF) = 2 SP
 4 SP + 2 SP = 6 SPACES REQUIRED

TOTAL PARKING PROVIDED WITH THIS PLAN: 121 SPACES (11 SPACES PROPOSED PUBLIC STORAGE, 10 SPACES EXISTING PUBLIC STORAGE (PARCEL A-2) AND 100 SPACES FOR USE BY PARCELS A-3 AND A-4)

AREA OF WETLANDS: 0.00 ACRES (0.00 SF)

AREA OF WETLAND BUFFERS: 0.00 ACRES (0.00 SF)

AREA OF STREAM BUFFERS: 0.00 ACRES (0.00 SF)

AREA OF FLOODPLAIN: 0.00 ACRES (0.00 SF)

FOREST AREA: 0 ACRES (0 SF)

AREA OF STEEP SLOPES: 0.17 ACRES± (7,572 SF ±)
 15-25%: 25%+ (WIDE DEFINED)
 20% OR GREATER: 0.30 ACRES ± (13,155 SF ±)
 *STEEP SLOPES LISTED HERE DO NOT MEET DEFINITION OF STEEP SLOPES PER HOWARD COUNTY ZONING CODE AND HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS

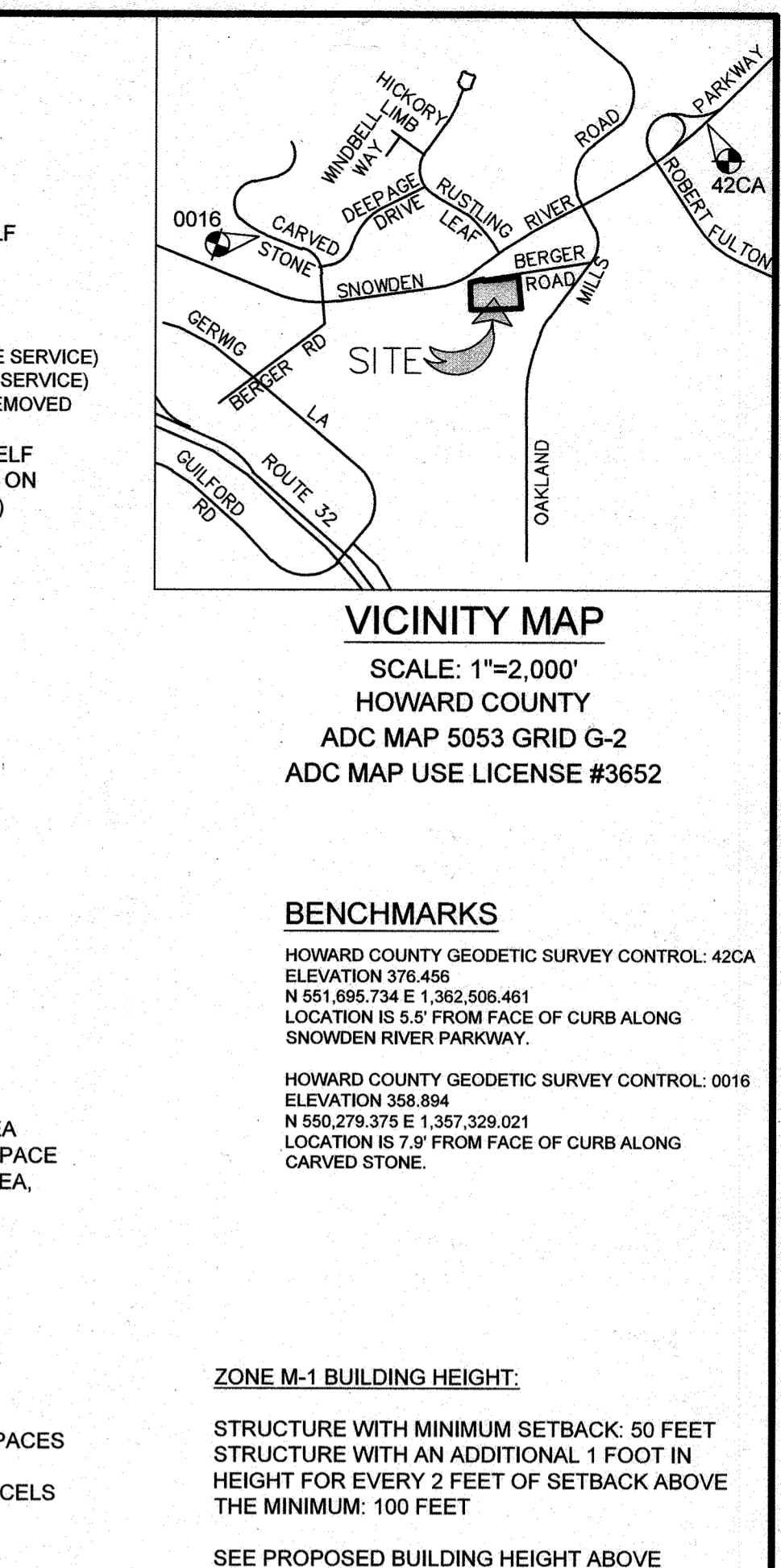
AREA OF ERODIBLE SOILS: 0.47 ACRES (20,727 SF)

IMPERVIOUS AREA WITHIN LOD: EXISTING: 72,787 SF (1.67 ACRES)
 PROPOSED: 63,763 SF (1.46 ACRES)

BUILDING COVERAGE: 82,073 SF / 247,451 SF = 33.2%

GREEN AREA WITHIN LOD: EXISTING: 20,142 SF ±
 PROPOSED: 29,166 SF ±

ZONE M-1 SETBACKS: FROM EXTERNAL PUBLIC STREET RIGHT-OF-WAY: 50 FEET PARKING USES AND FENCES ADJOINING PARKING USES FROM EXTERNAL PUBLIC STREET RIGHT-OF-WAY: 30 FEET FROM INTERNAL PUBLIC STREET RIGHT-OF-WAY: 50 FEET PARKING USES AND FENCES ADJOINING PARKING USES FROM INTERNAL PUBLIC STREET RIGHT-OF-WAY: 10 FEET FROM ANY RESIDENTIAL DISTRICT: 100 FEET FROM RESIDENTIAL USES IN A CAC OR TOD DISTRICT: 75 FEET HOWEVER, IF THE RESIDENTIAL DISTRICT IS SEPARATED FROM THE M-1 DISTRICT BY A PUBLIC STREET RIGHT-OF-WAY, ONLY THE SETBACKS FROM A PUBLIC STREET RIGHT-OF-WAY SHALL APPLY. THESE SETBACKS DO NOT APPLY TO THIS PROPOSED DEVELOPMENT.



APPROVED: DEPARTMENT OF PLANNING AND ZONING

Maura Kendall Fox DIRECTOR 12-22-21 DATE

Andres Friedman CHIEF, DEVELOPMENT ENGINEERING DIVISION 12-1-21 DATE

Andres Friedman CHIEF, DIVISION OF LAND DEVELOPMENT 12/22/21 DATE

DATE	NO.	REVISION	BY

DEVELOPER: PS ATLANTIC COAST 2021 B, LLC
 A DELAWARE LIMITED LIABILITY COMPANY
 701 WESTERN AVENUE
 GLENDALE, CA 91201
 ATTN: ANDRES FRIEDMAN
 PHONE: 818-860-0351

OWNER: PS ATLANTIC COAST 2021 B, LLC
 701 WESTERN AVENUE
 GLENDALE, CA 91201
 ATTN: ANDRES FRIEDMAN
 PHONE: 818-860-0351

PROJECT: PUBLIC STORAGE COLUMBIA EXPANSION

AREA: TAX MAP 42, PARCEL 31 LOTS A-2, A-3, A-4, A-7 ZONED M-1
 GRID NO. 10 6TH ELECTION DISTRICT
 9225, 9245, 9255, 9265 BERGER ROAD
 COLUMBIA, MARYLAND 21046
 HOWARD COUNTY, MARYLAND

TITLE: AS-BUILT COVER SHEET

Pennonni Engineers • Surveyors • Planners
 Landscape Architects

8890 McGaw Road, Suite 100 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

DESIGNED BY: PAI
 DRAWN BY: ALC
 PROJECT NO.: SIENX19001
 DATE: SEPTEMBER 3, 2021
 SCALE: 1" = 100'
 DRAWING NO. 1 OF 21

STORMWATER MANAGEMENT INFORMATION

LOT/PARCEL NUMBER	FACILITY NAME & NUMBER	PRACTICE TYPE (QUANTITY)	PUBLIC	PRIVATE	HOA MAINTAINS	MISC.
LOT A-7/PARCEL 31	MICRO-BIORETENTION #1	M-6 (1)		X	N/A	

MICRO-BIORETENTION SUMMARY TABLE

FACILITY #	DRAINAGE AREA	IMPERVIOUS AREA (SF)	% IMPERVIOUS AREA	SOIL TYPE	PE REQUIRED (REDEVELOPMENT)	PE PROVIDED	ESDv REQUIRED (CF)	ESDv PROVIDED (CF)	FILTER SURFACE AREA (SF)	PONDING DEPTH (IN)	MEDIA DEPTH (FT)	MAINTENANCE
#1	19,960	18,610	93%	D	1.0	1.91	2,038 **	2,818	1,374	12"	2 **	PRIVATE
ADDRESS: 9245 BERGER ROAD							TOTAL	2,818				

** ESDv VOLUME SHOWN IS THE OVERALL REQUIRED VOLUME FOR THE PROJECT. MEDIA DEPTH ACCOUNTED FOR IS DEPTH OF STONE BENEATH THE FACILITY.

ADDRESS CHART

PARCEL NUMBER	STREET ADDRESS
A-2	9285 BERGER ROAD
A-3	9255 BERGER ROAD
A-4	9225 BERGER ROAD
A-7	9245 BERGER ROAD

SUBDIVISION NAME: 3858
GRID #: 10
ZONING: M-1
TAX MAP NO.: 42
ELECT. DIST.: 6
CENSUS TRACT: 606707

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SOILS CHART		STRUCTURAL LIMITATIONS	EROSION	HYDRIC	SLOPE	SOIL	Kw
MAP SYMBOL	NAME	DWELLINGS W/ BASEMENTS	HAZARD	(Y/N)	(%)	GROUP	FACTOR
UID	URBAN LAND-UDORTHERTS COMPLEX	NOT RATED	NOT RATED	N	0-15	D	NOT RATED
SaB	SASSAFRAS LOAM	NOT LIMITED	MODERATE	N	2-5	B	0.32

SOURCE: NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY

LEGEND

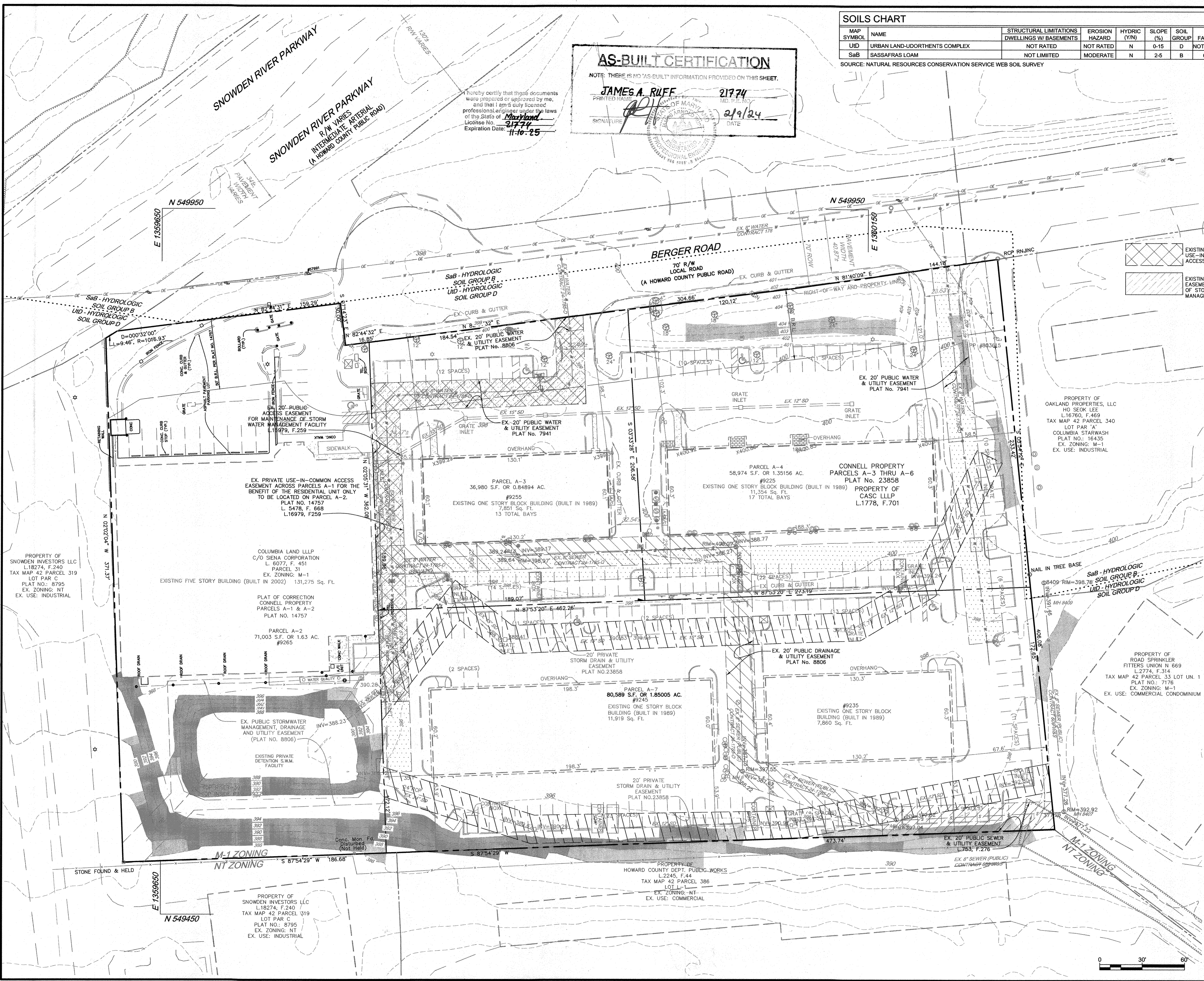
- ⊙ EX. SEWER MANHOLE
- ⊕ EX. STORM DRAIN MANHOLE
- ⊕ EX. FIREHYDRANT
- ⊕ EX. WATER VALVE
- ⊕ EX. ELECTRIC METER
- ⊕ EX. ELECTRIC BOX
- ⊕ EX. GAS METER
- ⊕ EX. GAS VALVE
- ⊕ EX. GAS VENT
- ⊕ EX. LIGHT POLE
- ⊕ EX. BOLLARDS
- ⊕ EX. MONITORING WELL
- ⊕ EX. CHAIN LINK FENCE
- ⊕ EX. ELECTRIC TRANSFORMER
- ⊕ EX. A/C UNITS
- ⊕ EX. POWER POLE
- ⊕ EX. HANDICAP SIGN
- ⊕ EX. SIGN
- ⊕ EX. WOOD FENCE
- ⊕ EX. CONCRETE
- ⊕ EX. ASPHALT
- FG EX. FLAG POLE
- ⊕ EX. HANDICAP SPACE
- 15-25% SLOPES (ERODIBLE SOILS)
- 25% AND GREATER SLOPES (ERODIBLE SOILS) (MADE DEFINED 20% OR GREATER)
- SaB UID SOIL LINE
- EXISTING PRIVATE USE-IN-COMMON ACCESS EASEMENT
- EXISTING PUBLIC ACCESS EASEMENT FOR MAINTENANCE OF STORM WATER MANAGEMENT FACILITY
- EXISTING PRIVATE STORM DRAIN & UTILITY EASEMENT
- EXISTING PUBLIC SEWER & UTILITY EASEMENT
- EXISTING PUBLIC WATER & UTILITY EASEMENT

AS-BUILT CERTIFICATION

NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

JAMES A. RUFF 21774
 PRINTED NAME: JAMES A. RUFF MD. P.E. NO. 21774
 SIGNATURE: [Signature] DATE: 2/9/24
 EXPIRATION DATE: 11-10-25

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. 21774 Expiration Date: 11-10-25



APPROVED: DEPARTMENT OF PLANNING AND ZONING

Wendell Fox 12/28/21
 DIRECTOR DATE

[Signature] 12/1/21
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 12/29/21
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

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 701 WESTERN AVENUE
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 ATTN: ANDRES FRIEDMAN
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OWNER: PS ATLANTIC COAST 2021 B, LLC
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 ATTN: ANDRES FRIEDMAN
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PROJECT: PUBLIC STORAGE COLUMBIA EXPANSION

AREA: TAX MAP 42, PARCEL 31 LOTS A-2, A-3, A-4, A-7 ZONED M-1
 GRID NO. 10 6TH ELECTION DISTRICT
 9225, 9245, 9255, 9265 BERGER ROAD
 COLUMBIA, MARYLAND 21046
 HOWARD COUNTY, MARYLAND

TITLE: **AS-BUILT**
 EXISTING CONDITIONS AND
 SOILS PLAN

Pennoni Associates Inc.
Pennoni Engineers • Surveyors • Planners
 Landscape Architects

8890 McGaw Road, Suite 100 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

SEAL: [Professional Engineer Seal]

DESIGNED BY: PAI
 DRAWN BY: ALC
 PROJECT NO.: SIENX19001
 DATE: SEPTEMBER 3, 2021
 SCALE: 1" = 30'

BY: [Signature] 2/9/24
 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. 46788 EXPIRES 11-10-25

I hereby certify that these documents were prepared or approved by me, and that I am duly licensed under the laws of the State of Maryland. License No. 21774 Expiration Date: 11-10-25

AS-BUILT DEMOLITION
 NOTE: THESE DOCUMENTS ARE THE PROPERTY OF PENNONI ASSOCIATES INC. SHEET NO. 3 OF 21
JAMES A. RUFF 21774
 PROFESSIONAL ENGINEER
 STATE OF MARYLAND
 LICENSE NO. 21774
 EXPIRES 11-10-25
 DATE: 2/9/24

SITE DEMOLITION NOTES

- ALL CONSTRUCTION DEBRIS (THIS INCLUDES RECYCLABLE AND NON-RECYCLABLE) SHALL BE DISPOSED OF IN ACCORDANCE WITH LOCAL JURISDICTION REQUIREMENTS.
- DISPOSE OF ALL DEBRIS OFF-SITE UNLESS INDICATED TO BE SALVAGED.
- NO SLAB OR LAND DISTURBANCE IS PERMITTED WITHOUT APPROVAL OF SEDIMENT CONTROL, AS SHOWN ON DRAWINGS.
- CONTRACTOR SHALL COORDINATE WITH APPROPRIATE UTILITY COMPANY PRIOR TO REMOVAL OR RELOCATION OF ANY EXISTING UTILITIES.
- EXISTING UTILITY LINES HAVE BEEN SHOWN USING THE BEST AVAILABLE RECORDS OBTAINED FROM UTILITY COMPANIES AND FIELD EVIDENCE. PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL ENGAGE A PRIVATE UTILITY LOCATING COMPANY (AT CONTRACTOR'S EXPENSE) TO ENSURE THAT ALL EXISTING UTILITIES HAVE BEEN MARKED.
- ONCE DEMOLITION IS COMPLETED, ALL AREAS OF EXPOSED EARTH SHALL BE STABILIZED WITH HYDRO-SEED AND MULCH.

LEGEND

- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EX. PROPERTY LINE AND RIGHT OF WAY
- EXISTING BUILDING
- EXISTING WATER
- EXISTING SEWER
- EXISTING STORM DRAIN
- EXISTING CURB & GUTTER
- EXISTING SOILS
- EXISTING FIRE HYDRANT
- CURB TO BE REMOVED
- ASPHALT TO BE REMOVED
- SIDEWALK TO BE REMOVED
- EXISTING UTILITY TO BE ABANDONED
- SAWCUT LINE

DEMOLITION KEY

- REMOVE CURB
- REMOVE CONCRETE
- REMOVE FENCE
- BUILDING TO BE DEMOLISHED
- ABANDON EXISTING STORM DRAIN
- REMOVE EXISTING INLET
- ABANDON EXISTING SEWER
- EXISTING MANHOLE TO BE REMOVED
- EXISTING TRANSFORMER TO BE RELOCATED

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Maury Kendall Fox 12-22-21
 DIRECTOR DATE
John J. ... 12-11-21
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
John J. ... 12/22/21
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION	BY

DEVELOPER: PS ATLANTIC COAST 2021 B, LLC
 A DELAWARE LIMITED LIABILITY COMPANY
 701 WESTERN AVENUE
 GLENDALE, CA 91201
 ATTN: ANDRES FRIEDMAN
 PHONE: 818-860-0351

OWNER: PS ATLANTIC COAST 2021 B, LLC
 701 WESTERN AVENUE
 GLENDALE, CA 91201
 ATTN: ANDRES FRIEDMAN
 PHONE: 818-860-0351

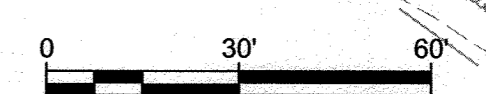
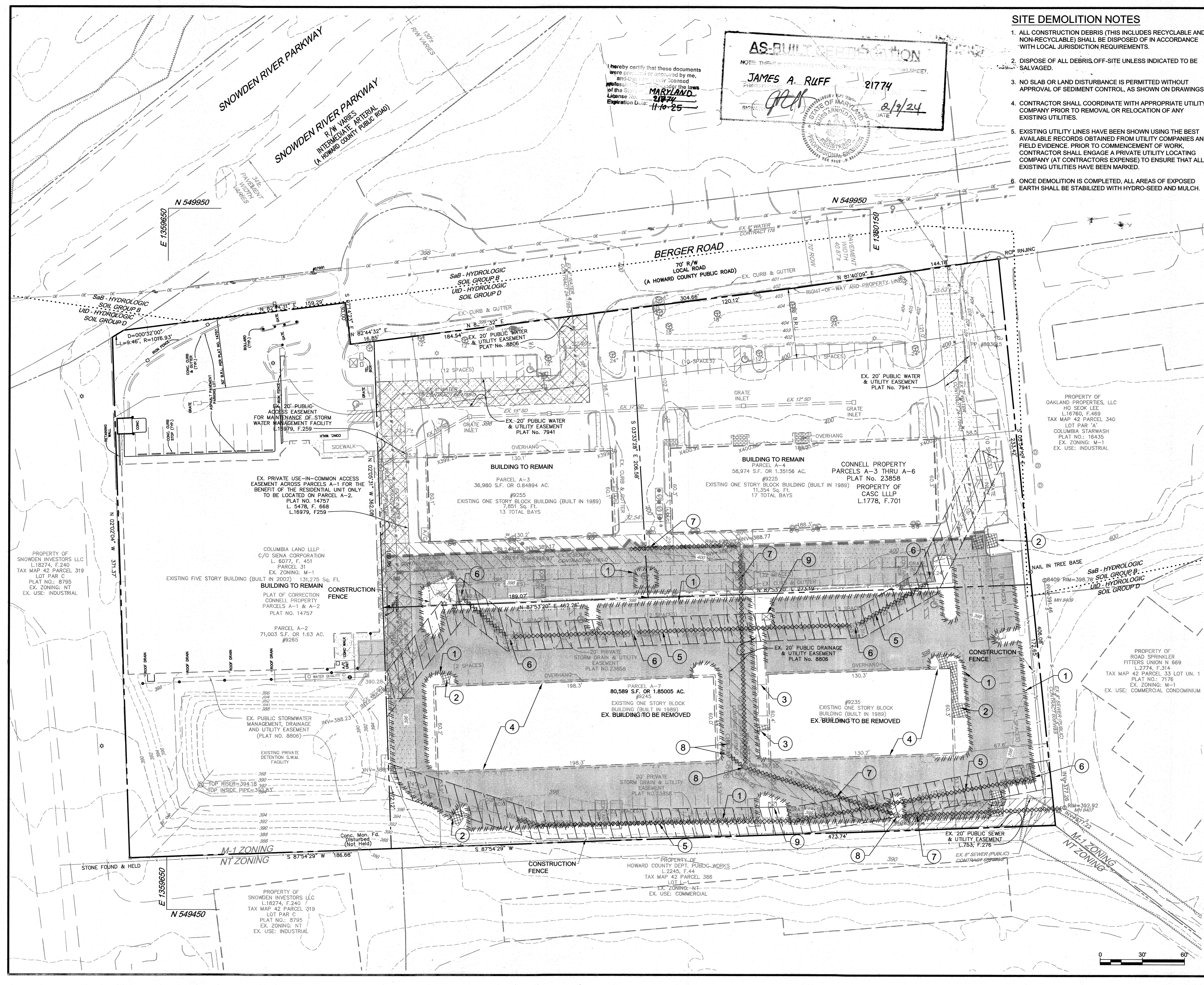
PROJECT: PUBLIC STORAGE COLUMBIA EXPANSION

AREA: TAX MAP 42, PARCEL 31 LOTS A-2, A-3, A-4, A-7 ZONED M-1
 GRID NO. 10 6TH ELECTION DISTRICT
 9225, 9245, 9255, 9265 BERGER ROAD
 COLUMBIA, MARYLAND 21046
 HOWARD COUNTY, MARYLAND

TITLE: **AS-BUILT DEMOLITION PLAN**

Pennoni Associates Inc.
 Engineers • Surveyors • Planners
 Landscape Architects
 8890 McGaw Road, Suite 100 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

DESIGNED BY: PAI
 DRAWN BY: ALC
 PROJECT NO.: SIENX19001
 DATE: SEPTEMBER 3, 2021
 SCALE: 1" = 30'
 DRAWING NO. 3 OF 21
 SDP-20-077



AS-BUILT CERTIFICATION

HEREBY CERTIFY BY MY SEAL THAT THE FACILITY SHOWN ON THIS PLANS WERE CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS MEETS THE APPROVED PLANS AND SPECIFICATIONS.

PRINTED NAME: James A. Ruoff MD. P.E. NO. 21774

SIGNATURE: [Signature] DATE: 2/19/21

AS-BUILT CERTIFICATION

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. 21774 EXPIRATION DATE: 11-10-25

PRINTED NAME: James A. Ruoff MD. P.E. NO. 21774

SIGNATURE: [Signature] DATE: 2/19/21

LEGEND

EXISTING 2' CONTOUR	---
EXISTING 10' CONTOUR	---
EX. PROPERTY LINE AND RIGHT OF WAY	---
EXISTING BUILDING	[Symbol]
EXISTING WATER	[Symbol]
EXISTING SEWER	[Symbol]
EXISTING STORM DRAIN	[Symbol]
EXISTING CURB & GUTTER	[Symbol]
EXISTING FIRE HYDRANT	[Symbol]
PROPOSED 2' CONTOUR	---
PROPOSED 10' CONTOUR	---
LIMIT OF DISTURBANCE	LOD
PROPOSED WATER	[Symbol]
PROPOSED SEWER	[Symbol]
PROPOSED STORM DRAIN	[Symbol]
PROPOSED BUILDING	[Symbol]
PROPOSED CONCRETE	[Symbol]
PROPOSED ASPHALT	[Symbol]
PROPOSED LIGHT	[Symbol]
BORING LOCATION	[Symbol]

NOTES

1. SEE SHEET 9 FOR SITE DETAILS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Mary A. Kendall Fox 12-28-21
DIRECTOR DATE

[Signature] 12-1-21
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 12/22/21
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION	BY

DEVELOPER: PS ATLANTIC COAST 2021 B, LLC
A DELAWARE LIMITED LIABILITY COMPANY
701 WESTERN AVENUE
GLENDALE, CA 91201
ATTN: ANDRES FRIEDMAN
PHONE: 818-860-0351

OWNER: PS ATLANTIC COAST 2021 B, LLC
701 WESTERN AVENUE
GLENDALE, CA 91201
ATTN: ANDRES FRIEDMAN
PHONE: 818-860-0351

PROJECT: PUBLIC STORAGE COLUMBIA EXPANSION

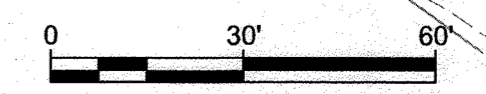
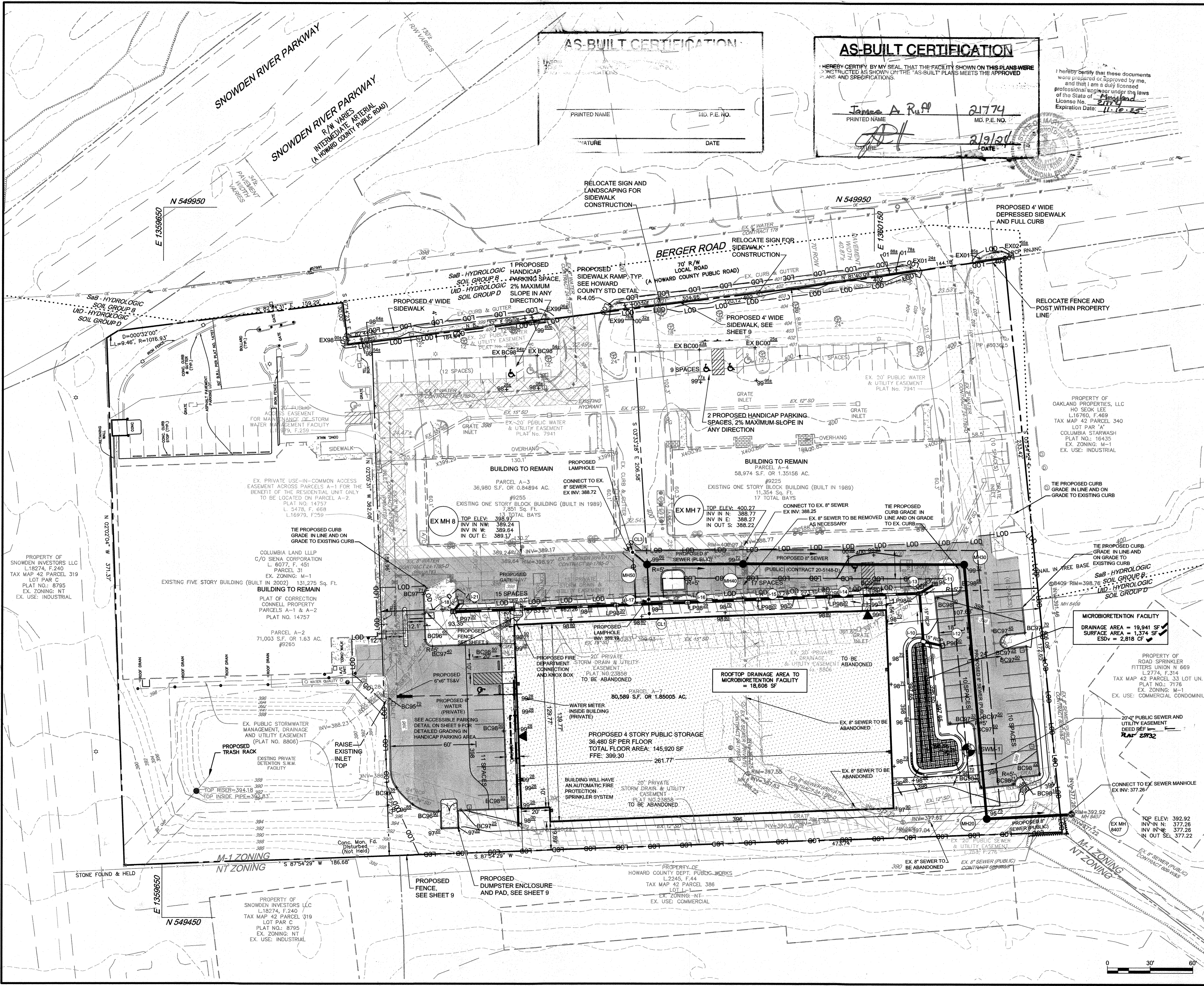
AREA: TAX MAP 42, PARCEL 31 LOTS A-2, A-3, A-4, A-7 ZONED M-1
GRID NO. 10 6TH ELECTION DISTRICT
9225, 9245, 9255, 9265 BERGER ROAD
COLUMBIA, MARYLAND 21046
HOWARD COUNTY, MARYLAND

TITLE: **AS-BUILT SITE DEVELOPMENT PLAN**

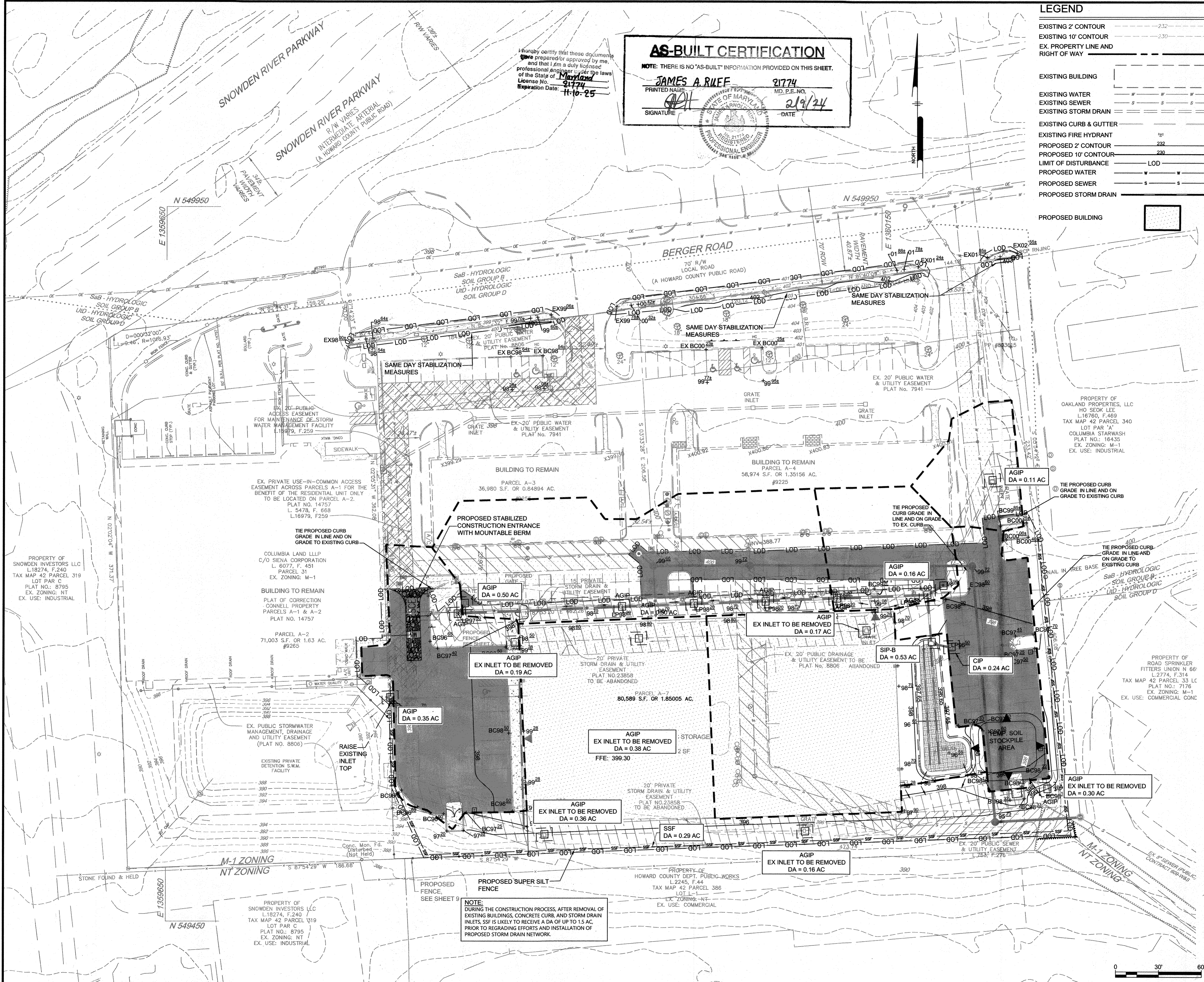
Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects

8890 McGaw Road, Suite 100 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

DESIGNED BY: PAI
DRAWN BY: ALC
PROJECT NO.: SIENX19001
DATE: SEPTEMBER 3, 2021
SCALE: 1" = 30'
DRAWING NO. 4 OF 21



C:\Users\jruoff\OneDrive\Desktop\SDP20-077\SDP20-077.dwg - Columbia Berger Road 22-23-2021.dwg - SDP20-077 SITE DEVELOPMENT PLAN



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. 21774 Expiration Date: 11-10-25

AS-BUILT CERTIFICATION
 NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.
JAMES A. RUEF 21774
 PRINTED NAME MD. P.E. NO.
 DATE: 2/19/24
 SIGNATURE DATE

LEGEND

EXISTING 2' CONTOUR	---
EXISTING 10' CONTOUR	---
EX. PROPERTY LINE AND RIGHT OF WAY	---
EXISTING BUILDING	---
EXISTING WATER	---
EXISTING SEWER	---
EXISTING STORM DRAIN	---
EXISTING CURB & GUTTER	---
EXISTING FIRE HYDRANT	---
PROPOSED 2' CONTOUR	---
PROPOSED 10' CONTOUR	---
LIMIT OF DISTURBANCE	---
PROPOSED WATER	---
PROPOSED SEWER	---
PROPOSED STORM DRAIN	---
PROPOSED BUILDING	---

PROPOSED CONCRETE	---
PROPOSED ASPHALT	---
PROPOSED STABILIZED CONSTRUCTION ENTRANCE	---
PROPOSED SUPER SILT FENCE	---
AT GRADE INLET PROTECTION	---
CURB INLET PROTECTION	---
STANDARD INLET PROTECTION	---

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, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Josh Behr
 SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE) DATE: 10/19/21

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

Steven Rittig
 SIGNATURE OF DEVELOPER (PRINT NAME BELOW SIGNATURE) DATE: 9/7/21

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

Alexander Bratcher
 HOWARD SOIL CONSERVATION DISTRICT DATE: 11/15/21

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Mary Kendall Fox
 DIRECTOR DATE: 12-28-21

Michael Smith
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 12-1-21

Carla Sauer
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 12/22/21

DATE	NO.	REVISION	BY

DEVELOPER: PS ATLANTIC COAST 2021 B, LLC
 A DELAWARE LIMITED LIABILITY COMPANY
 701 WESTERN AVENUE
 GLENDALE, CA 91201
 ATTN: ANDRES FRIEDMAN
 PHONE: 818-860-0351

OWNER: PS ATLANTIC COAST 2021 B, LLC
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PROJECT: PUBLIC STORAGE COLUMBIA EXPANSION

AREA: TAX MAP 42, PARCEL 31 LOTS A-2, A-3, A-4, A-7 ZONED M-1
 GRID NO. 10 6TH ELECTION DISTRICT
 9225, 9245, 9255, 9265 BERGER ROAD
 COLUMBIA, MARYLAND 21046
 HOWARD COUNTY, MARYLAND

TITLE: **AS-BUILT SEDIMENT AND EROSION CONTROL PLAN**

Pennoni Associates Inc.
Pennoni Engineers - Surveyors - Planners
 Landscape Architects
 8890 McGaw Road, Suite 100 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

DESIGNED BY: PAI
 DRAWN BY: ALC
 PROJECT NO: SIENX19001
 DATE: SEPTEMBER 3, 2021
 SCALE: 1" = 30'
 DRAWING NO. 5 OF 21



NOTE: DURING THE CONSTRUCTION PROCESS, AFTER REMOVAL OF EXISTING BUILDINGS, CONCRETE CURBS, AND STORM DRAIN INLETS, SSF IS LIKELY TO RECEIVE A DA OF UP TO 15 AC. PRIOR TO REGRADING EFFORTS AND INSTALLATION OF PROPOSED STORM DRAIN NETWORK.

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

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

PURPOSE

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

CONDITIONS WHERE PRACTICE APPLIES

WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

CRITERIA

A. SOIL PREPARATION

1. TEMPORARY STABILIZATION

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

b. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.

c. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

2. PERMANENT STABILIZATION

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

i. SOIL PH BETWEEN 6.0 AND 7.0.

ii. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).

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

iv. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.

v. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.

b. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.

c. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENEED TO A DEPTH OF 3 TO 5 INCHES.

d. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.

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

B. TOPSOILING

1. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

2. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS.

3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:

a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.

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

c. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.

d. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.

5. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:

a. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF SANDS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2 INCHES IN DIAMETER.

b. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERNARDIA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.

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

6. TOPSOIL APPLICATION

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

b. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF

ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.

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

C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

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

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

3. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #200 MESH SIEVE.

4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

5. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

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

DEFINITION

THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

PURPOSE

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

CONDITIONS WHERE PRACTICE APPLIES

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

CRITERIA

A. SEEDING

1. SPECIFICATIONS

a. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.

b. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWS.

c. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.

d. SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

2. APPLICATION

a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.

i. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1, PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARIES.

ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDING AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.

b. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.

i. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING.

ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.

c. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).

i. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P205 (PHOSPHOROUS), 200 POUNDS PER ACRE; K2O (POTASSIUM), 200 POUNDS PER ACRE.

ii. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.

iii. MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.

iv. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

B. MULCHING

1. MULCH MATERIALS (IN ORDER OF PREFERENCE)

a. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.

b. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.

i. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.

ii. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.

iii. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER, ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.

iv. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.

v. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM.

2. APPLICATION

a. APPLY MULCH TO ALL SEEDING AREAS IMMEDIATELY AFTER SEEDING.

b. WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDING AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE.

c. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.

3. ANCHORING

a. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD:

i. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR.

ii. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.

iii. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PETROSET, TERRA TACK II, TERRA TACK AIR OR OTHER APPROVED EQUAL MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.

iv. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET LONG.

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

DEFINITION

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

PURPOSE

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

CONDITIONS WHERE PRACTICE APPLIES

EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

CRITERIA

1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.

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

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

TEMPORARY SEEDING SUMMARY

NO.	SPECIES	APPLICATION RATE (lb/1000 sq ft)	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-20)		LIME RATE
					N	P205	
	ANNUAL RYEGRASS	40	MAR 1 TO MAY 15; AUG 1 TO OCT 15	0.5			
	BARLEY	98	MAR 1 TO MAY 15; AUG 1 TO OCT 15	1.0	436 lb/ac (10 lb/1000 sq ft)		2 tons/ac (90 lb/1000 sq ft)
	OATS	72	MAR 1 TO MAY 15; AUG 1 TO OCT 15	1.0			
	PEARL MILLET	20	MAY 16 TO JULY 31	0.5			

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION

TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

PURPOSE

TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER

ON DISTURBED SOILS, CONDITIONS WHERE PRACTICE APPLIES

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

CRITERIA

A. SEED MIXTURES

1. GENERAL USE

a. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.

b. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDFIRE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING.

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

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

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 OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.

i. KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.

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

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

iv. KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES: CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATE: 1 1/2 TO 3 POUNDS PER 1000 SQUARE FEET.

NOTES:

SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND"

CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE.

c. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES

WESTERN MD.: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 5B, 6A)

CENTRAL

MD.: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 6B)

SOUTHERN MD., EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15

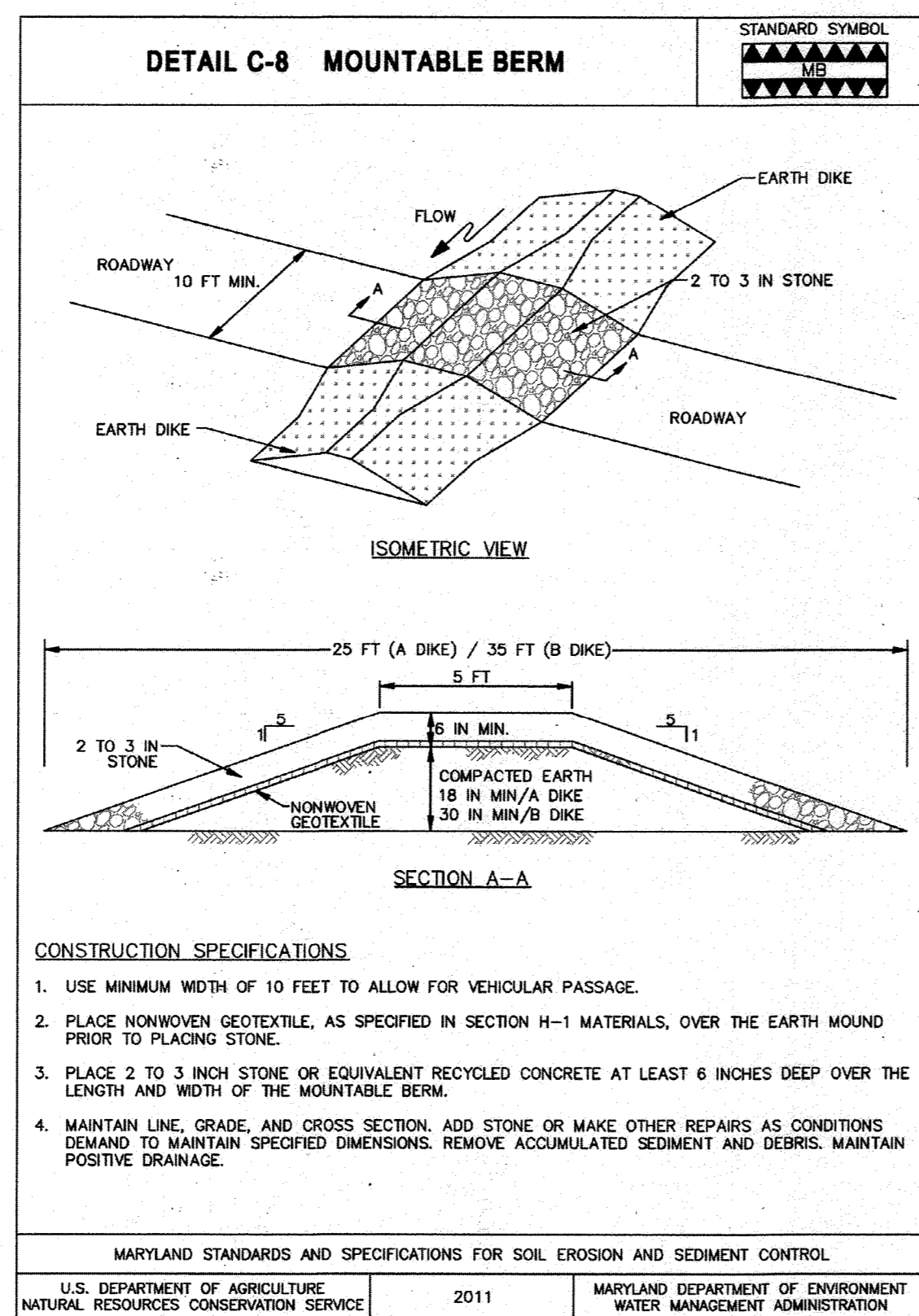
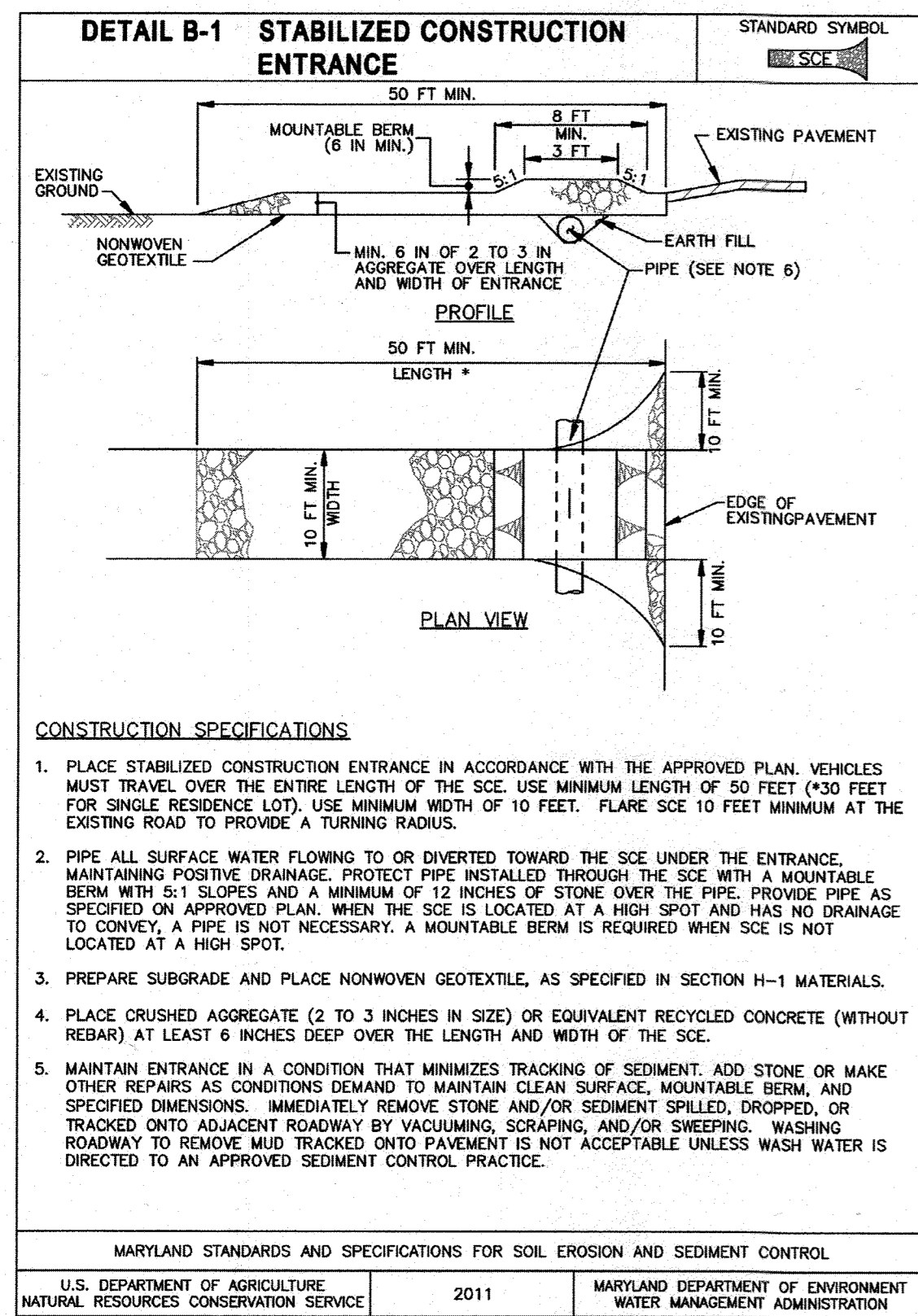
(HARDINESS ZONES: 7A, 7B)

d. TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES, LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 1/2 INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH A CONDITION THAT FUTURE MOWINGS OF GRASSES WILL POSE NO DIFFICULTY.

e. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (1/2 TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.

PERMANENT SEEDING SUMMARY

NO.	SPECIES	APPLICATION RATE (lb/1000 sq ft)	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-20)			LIME RATE
					N	P205	K ₂ O	
8	TALL FESCUE	100	MAR 1-MAY 15; AUG 15-OCT 15	1/4-1/2 IN	45 POUNDS PER ACRE	90 POUNDS PER ACRE	90 POUNDS PER ACRE	2 TONS PER ACRE
9	PERENNIAL RYEGRASS	20	MAR 1-MAY 15; AUG 15-OCT 15	1/4-1/2 IN	1.0 lb/1000 sq ft	2 lb/1000 sq ft	2 lb/1000 sq ft	90 lb/1000 sq ft
11	PEARL MILLET	20	MAY 16-JULY 31	1/4-1/2 IN				



B-4-3 STANDARDS AND SPECIFICATIONS
FOR
SOIL EROSION AND SEDIMENT 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 loads.
Conditions Where Practice Applies
 Areas subject to dust blowing and movement where on and off-site damage is likely without treatment.
Specifications
 1. **Aggregate**: See Section B-4-2 Soil Preparation, Topsoiling, and Soil Amendments, Section B-4-3 Seeding and Mulching, and Section B-4-4 Temporary Stabilization. Mulch must be anchored to prevent blowing.
 2. **Aggregate Cover**: See Section B-4-4 Temporary Stabilization.
 3. **Grading**: Till to roughen surface and bring clods to the surface. Begin planting on windward side of site. Check for loose soil about 12 inches apart, approximately 1000 sq ft, and similar plots are examples of equipment that may produce the desired effect.
 4. **Irrigation**: Sprinkle site with water until the surface is moist. Repeat as needed. The site must not be irrigated to the point that runoff occurs.
 5. **Barriers**: Solid fence, silt fence, straw fence, burlap fence, straw bales, and similar material can be used to control air currents and soil blowing.
 6. **Chemical Treatment**: Use of chemical treatment requires approval by the appropriate plan review authority.

HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES
 1. A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-313-1855 AFTER THE FUTURE LOD AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD. A MINIMUM OF 48 HOUR NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING STAGES:
 A. PRIOR TO THE START OF EARTH DISTURBANCE.
 B. UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.
 C. PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT.
 D. PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES.
 OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. OTHER RELATED STATE AND FEDERAL PERMITS SHALL BE REFERENCED, TO ENSURE COORDINATION AND TO AVOID CONFLICTS WITH THIS PLAN.
 2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THEREOF.
 3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE EXCEPT FOR THOSE AREAS UNDER ACTIVE GRADING.
 4. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR TOPSOIL (SEC. B-4-2), PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES IF THE GROUND IS FROZEN. INCREMENTAL STABILIZATION (SEC. B-4-1) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WITH 3:1 OF CUT AND/OR FILL. STOCKPILES (SEC. B-4-8) IN EXCESS OF 20 FT MUST BE BENCHED WITH STABLE OUTLET. ALL CONCENTRATED FLOW, STEEP SLOPE, AND HIGHLY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. B-4-6).
 5. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE, AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE CID.
 6. **SITE ANALYSIS:**
 TOTAL AREA OF SITE: 5.68 ACRES
 AREA DISTURBED: 2.13 ACRES
 AREA TO BE ROOFED OR PAVED WITHIN LOD: 1.46 ACRES
 AREA TO BE VEGETATIVELY STABILIZED WITHIN LOD: 0.67 ACRES
 TOTAL CUT: 450 CU. YDS.
 TOTAL FILL: 1,450 CU. YDS.
 7. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
 8. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE CID. THE SITE AND ALL CONTROLS SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY, AND THE NEXT DAY AFTER EACH RAIN EVENT. A WRITTEN REPORT BY THE CONTRACTOR, MADE AVAILABLE UPON REQUEST, IS PART OF EVERY INSPECTION AND SHOULD INCLUDE:
 • INSPECTION DATE
 • INSPECTION TYPE (ROUTINE, PRE-STORM EVENT, DURING RAIN EVENT)
 • NAME AND TITLE OF INSPECTOR
 • WEATHER INFORMATION (CURRENT CONDITIONS AS WELL AS TIME AND AMOUNT OF LAST RECORDED PRECIPITATION)
 • BRIEF DESCRIPTION OF PROJECT'S STATUS (E.G., PERCENT COMPLETE) AND/OR CURRENT ACTIVITIES
 • EVIDENCE OF SEDIMENT DISCHARGES
 • IDENTIFICATION OF PLAN DEFICIENCIES
 • IDENTIFICATION OF SEDIMENT CONTROLS THAT REQUIRE MAINTENANCE
 • IDENTIFICATION OF MISSING OR IMPROPERLY INSTALLED SEDIMENT CONTROLS
 • COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND STABILIZATION REQUIREMENTS
 • PHOTOGRAPHS
 • MONITORING/SAMPLING
 • MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED
 • OTHER INSPECTION ITEMS AS REQUIRED BY THE GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES (NPDES, MDE).
 9. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.
 10. ANY MAJOR CHANGES OR REVISIONS TO THE PLAN OR SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE HSCD PRIOR TO PROCEEDING WITH CONSTRUCTION. MINOR REVISIONS MAY ALLOWED BY THE CID PER THE LIST OF HSCD-APPROVED FIELD CHANGES.
 11. DISTURBANCE SHALL NOT OCCUR OUTSIDE THE L.O.D. A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE CID, UNLESS OTHERWISE SPECIFIED AND APPROVED BY HSCD, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.
 12. WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE.
 13. TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO FINAL GRADE.
 14. ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON-THE-CONTOUR, AND BE IMBRICATED AT 25' MINIMUM INTERVALS, WITH LOWER ENDS CURLED UPHILL BY 2' IN ELEVATION.
 15. STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUSIVE):
 • USE I AND IF MARCH 1 - JUNE 15
 • USE II AND IIF OCTOBER 1 - APRIL 30
 • USE IV MARCH 1 - MAY 31
 16. A COPY OF THIS PLAN, THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND ASSOCIATED PERMITS SHALL BE ON-SITE AND AVAILABLE WHEN THE SITE IS ACTIVE.

B-4-3 STANDARDS AND SPECIFICATIONS
FOR
SOIL EROSION AND SEDIMENT CONTROL
DEFINITION
 A mound or pile of soil protected by appropriately designed erosion and sediment control measures.
PURPOSE
 To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.
Conditions Where Practice Applies
 Stockpile areas are utilized when it is necessary to salvage and store soil for later use.
Criteria
 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 and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
 3. Runoff from the stockpile area must drain to a suitable sediment control practice.
 4. Access to the stockpile area from the upgrade side.
 5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
 6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
 7. Stockpiles must be stabilized in accordance with the 3:7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
 8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.
Maintenance
 The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3 Land Grading.

SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT. (1 DAY)
- STAKEOUT LIMITS OF DISTURBANCE. (1 DAY)
- CONDUCT A PRE-CONSTRUCTION MEETING WITH COUNTY INSPECTOR. (1 DAY)
- INSTALL STABILIZED CONSTRUCTION ENTRANCE. CLEAR AND GRUB AS NECESSARY TO INSTALL PERIMETER SUPER SILT FENCES. ALL SEDIMENT CONTROL DEVICES TO BE INSTALLED SIMULTANEOUSLY. (3 DAYS)
- WITH APPROVAL OF SEDIMENT CONTROL INSPECTOR, BEGIN CLEARING AND GRADING. FOLLOW DUST CONTROL PRACTICES PER MDE DETAIL. (3 MONTHS)
- WITH COMPLETION OF BUILDING PAD, BEGIN BUILDING CONSTRUCTION. (9 MONTHS)
- UPON ESTABLISHMENT OF SUBGRADE, INSTALL SEWER MAIN, PRIVATE WATER AND SANITARY CONNECTIONS, WATER & SEWER HOUSE CONNECTIONS, AND STORM DRAIN. ANY CONTROLS INTERCEPTED BY UTILITY INSTALLATION ARE TO BE REPAIRED THE SAME DAY. (2 MONTHS)
- WITH COMPLETION OF SUBGRADE AND UTILITY INSTALLATION, INSTALL CURB AND GUTTER. BEGIN PARKING LOT CONSTRUCTION. CONSTRUCT THE STONE SUBGRADE OF THE ASPHALT AND CONCRETE PAVEMENT ON THE SITE. (1 WEEK)
- INSTALL ASPHALT AND CONCRETE PAVEMENT. (1 WEEK)
- PERFORM FINE GRADING, CONSTRUCT SIDEWALKS, AND ANY OTHER CONSTRUCTION ACTIVITY. MAINTAIN FLOWS DURING FINE GRADING AND PAVING OPERATIONS. (2 WEEKS)
- STABILIZE ALL DISTURBED AREAS. (1 DAY)
- CONSTRUCT MICRO BIORETENTION FACILITY AND ALL ASSOCIATED UNDERDRAIN/OVERDRAINS. CONTACT PENNONI ENGINEER AND QUALIFIED GEOTECHNICAL ENGINEER TO OBSERVE INSTALLATION OF SWM FACILITY. UPON INSTALLATION OF FILTER MEDIA, INSTALL SILT FENCE AROUND FACILITIES, AND INLET PROTECTION AT OVERFLOW INLETS. (6 WEEKS)
- COMPLETE PAVING AND LANDSCAPING ON THE SITE. (2 WEEKS)
- UPON PERMISSION OF COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES AND STABILIZE DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (2 DAYS)

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, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Paul Behr
 SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE) DATE 10/19/21
Josh Behr
 DEVELOPER'S CERTIFICATE

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 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.

Steve Kittle
 SIGNATURE OF DEVELOPER (PRINT NAME BELOW SIGNATURE) DATE 9/7/21
 SIGNATURE OF DEVELOPER (PRINT NAME BELOW SIGNATURE) DATE 9/7/21

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

Alondra Butcher
 HOWARD SOIL CONSERVATION DISTRICT DATE 11/15/21

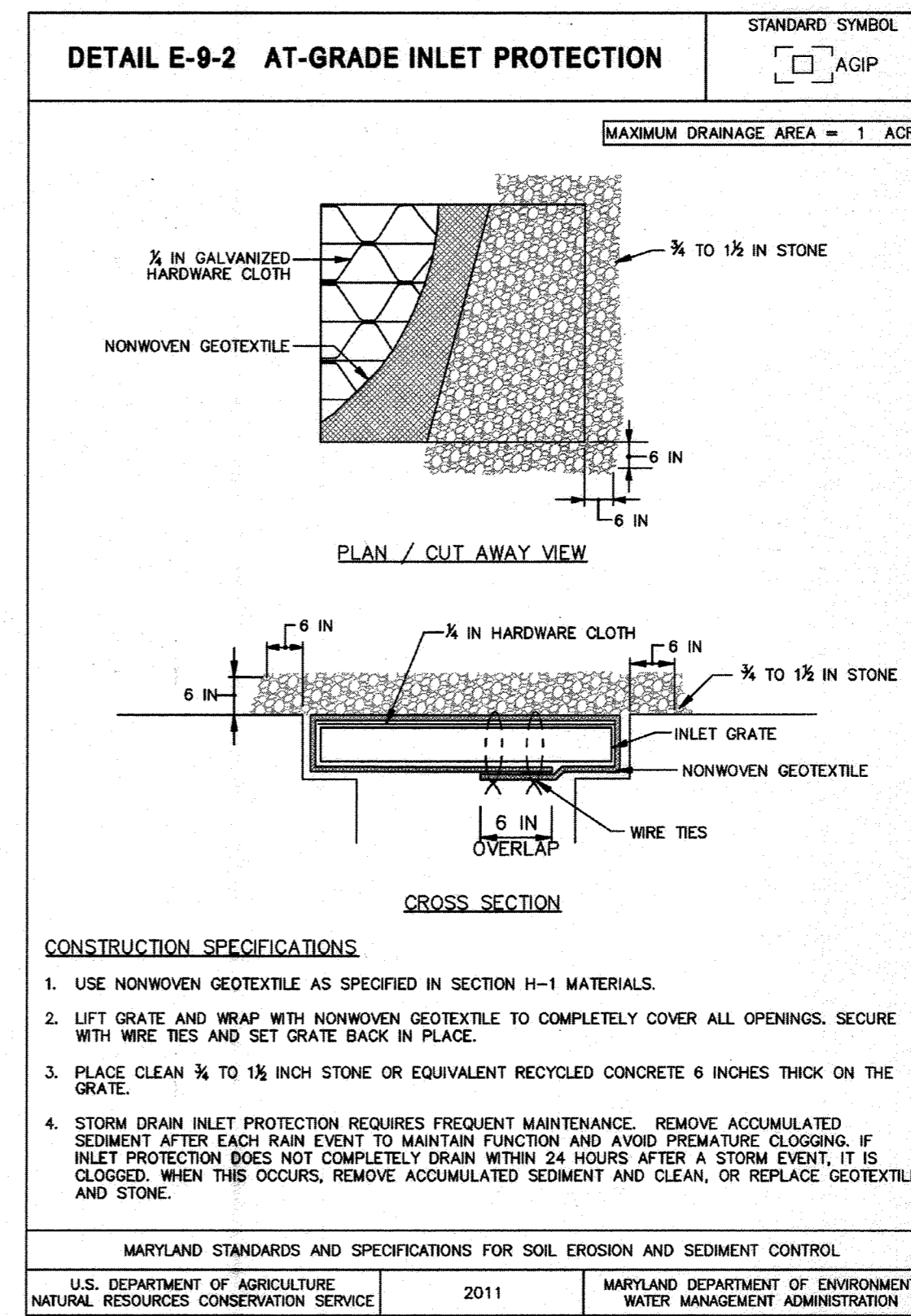
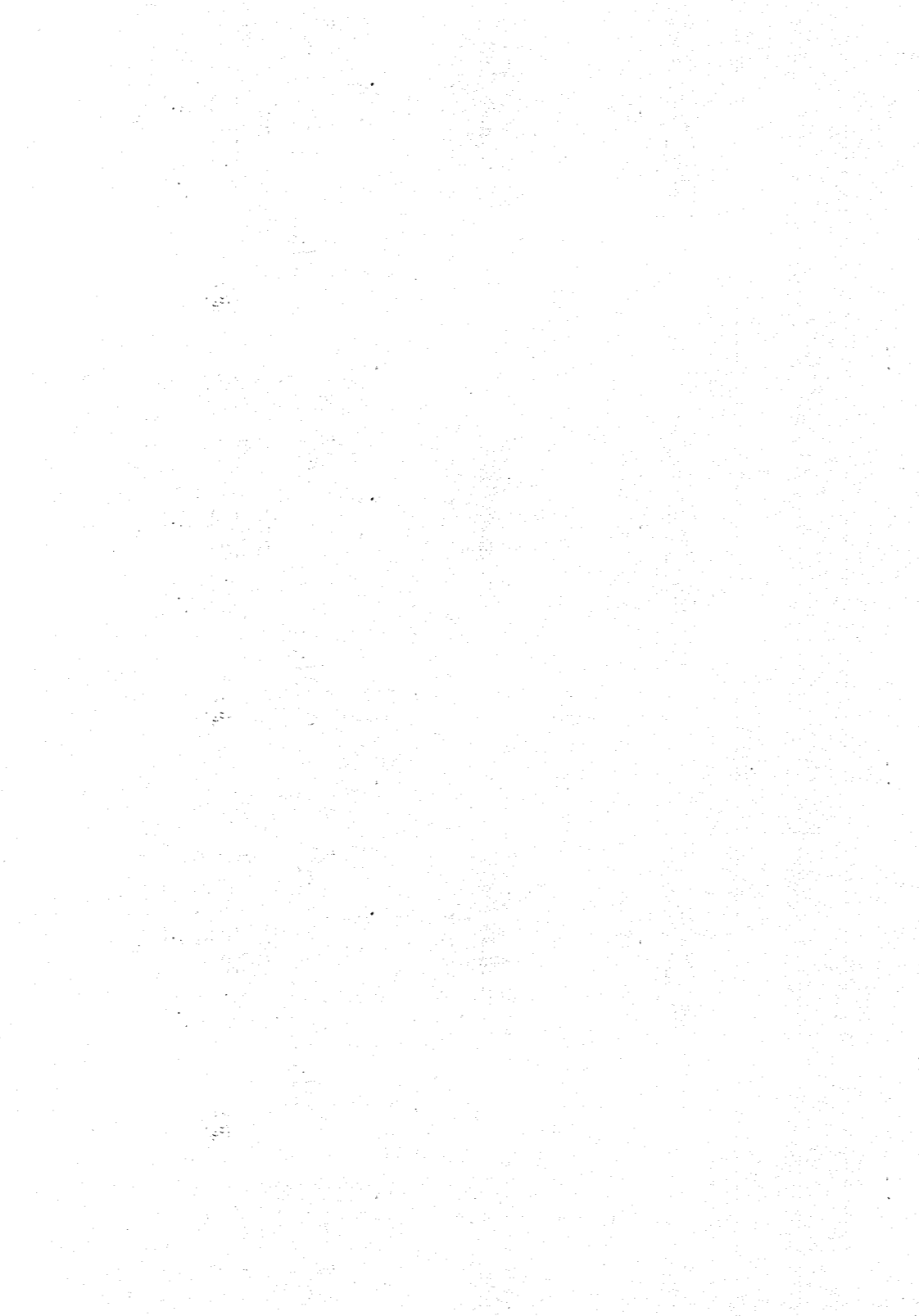
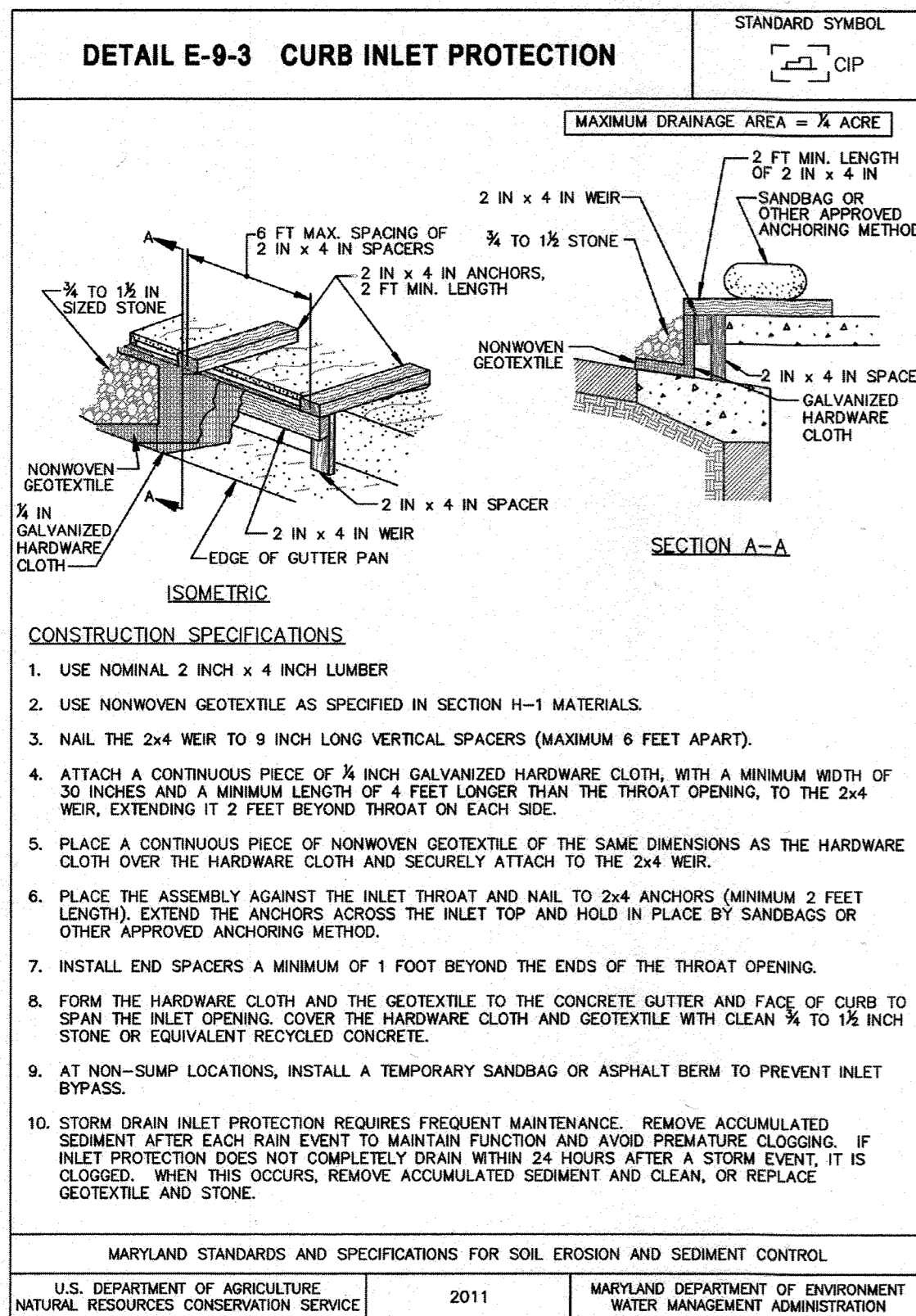
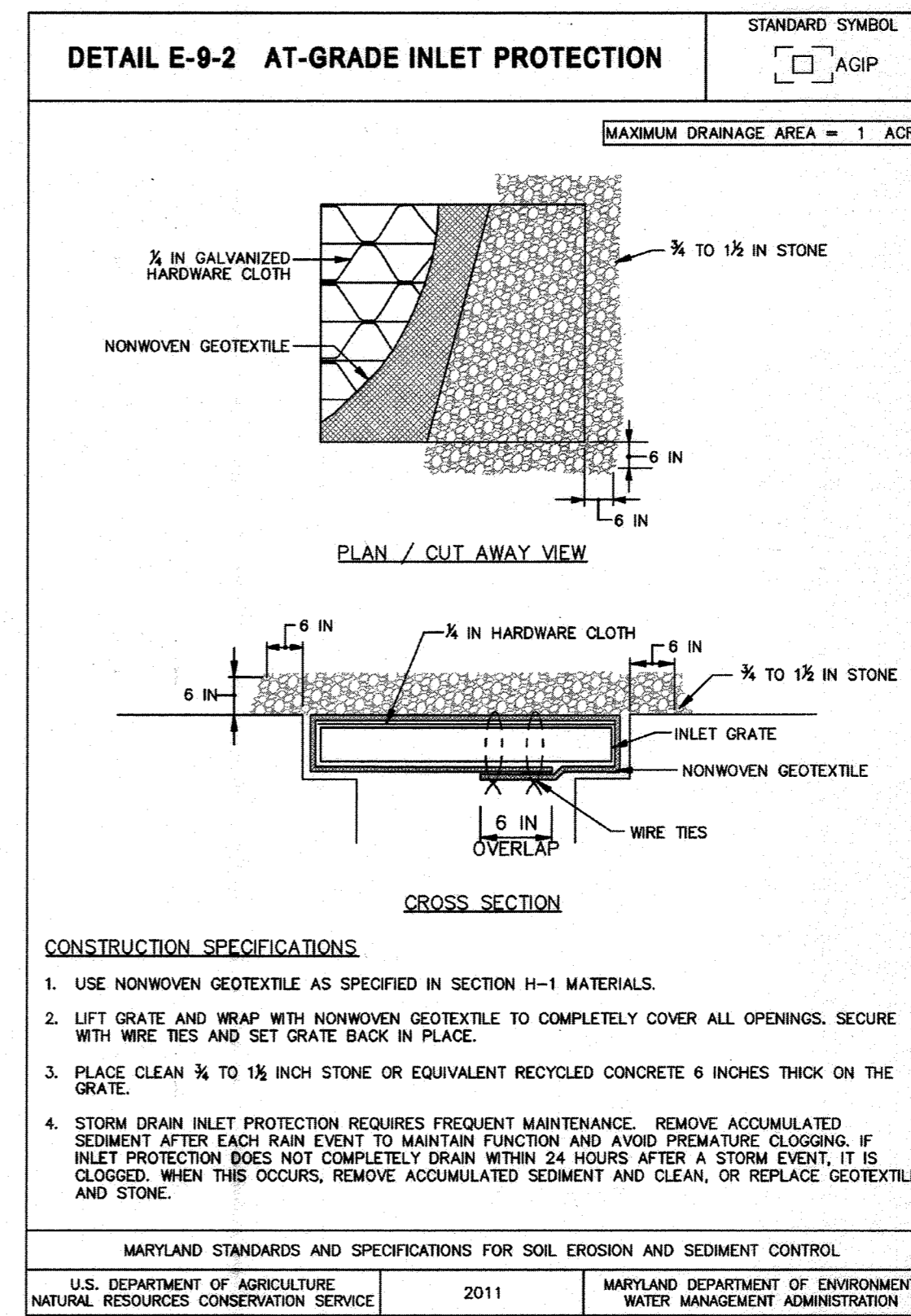
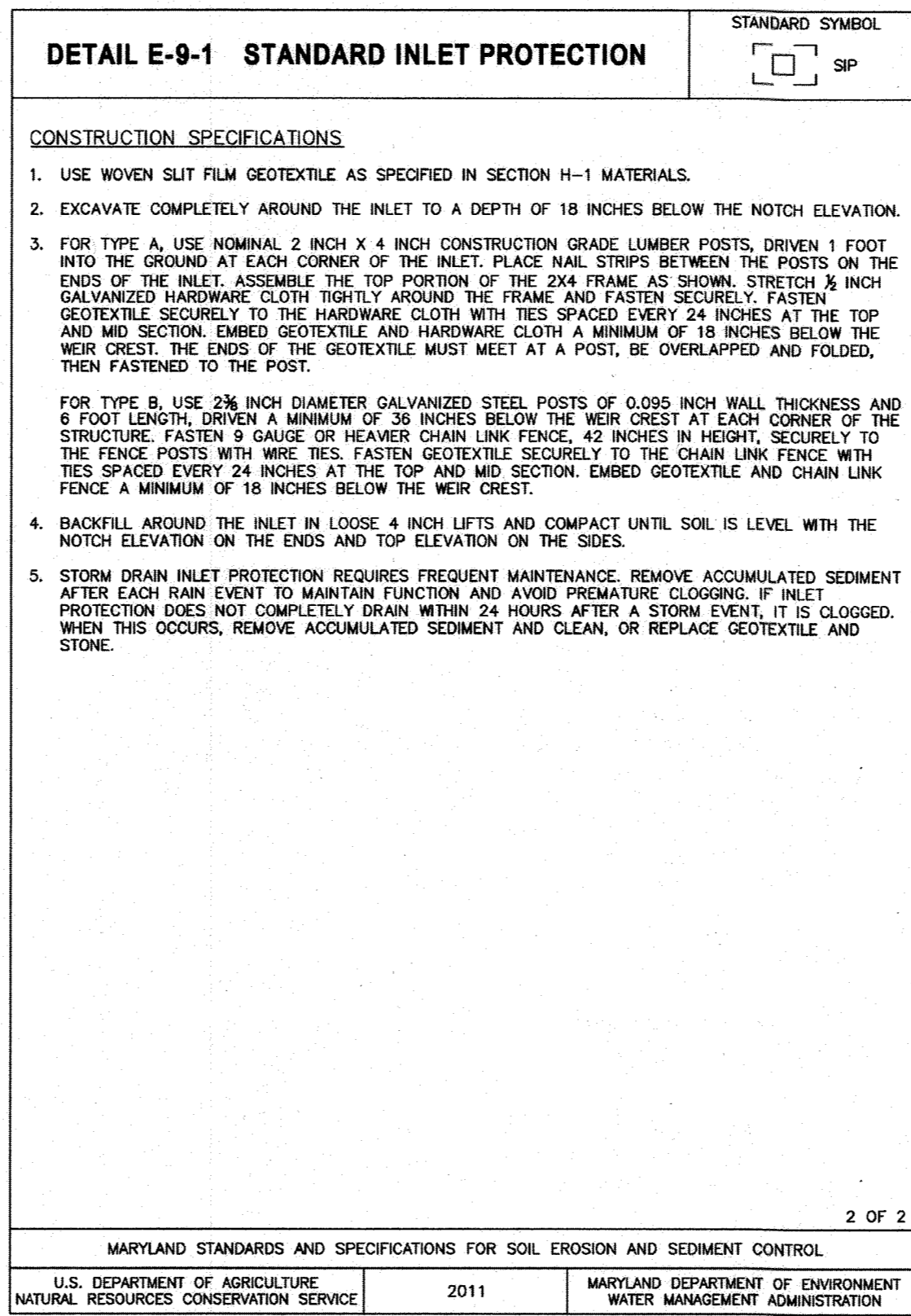
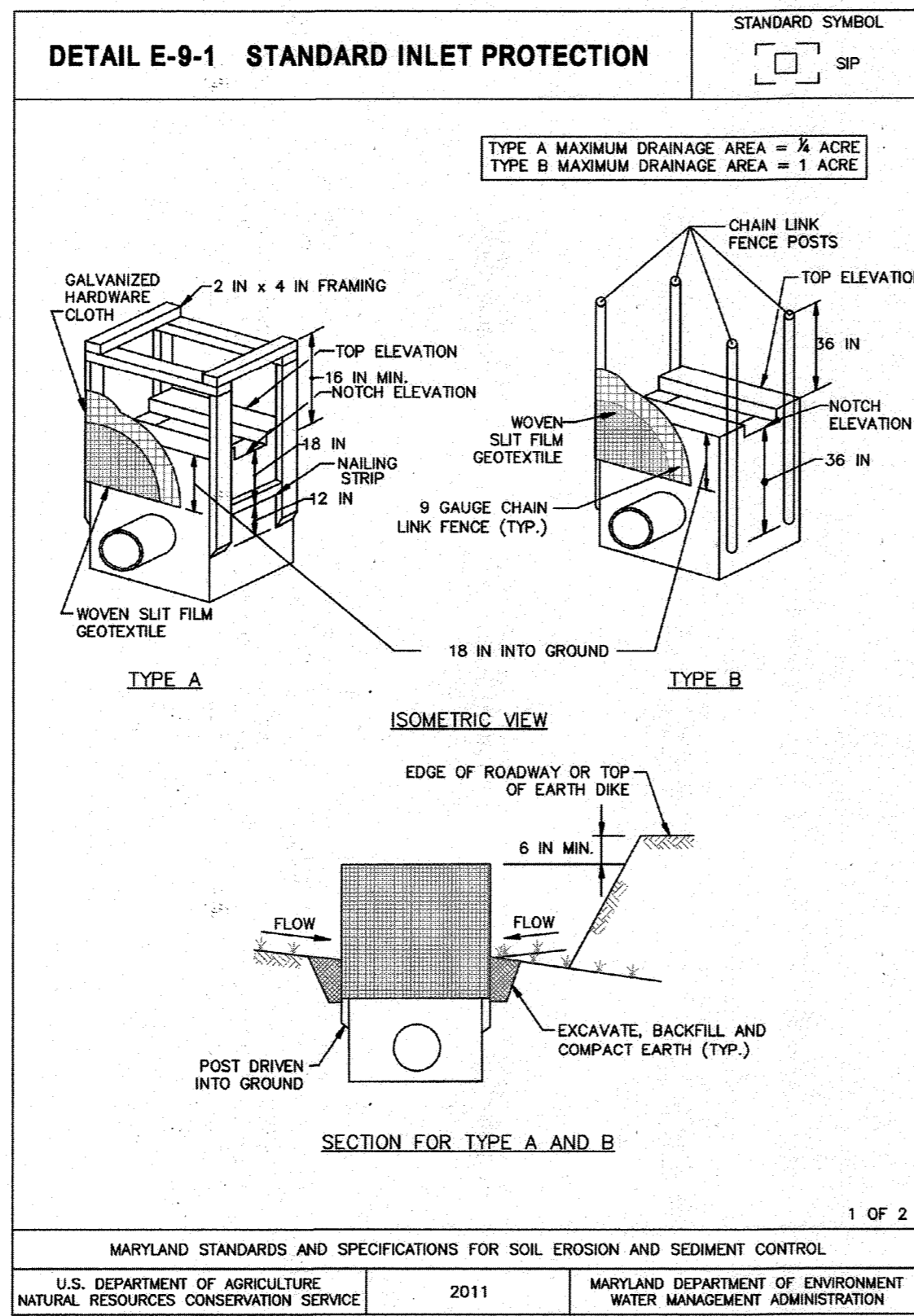
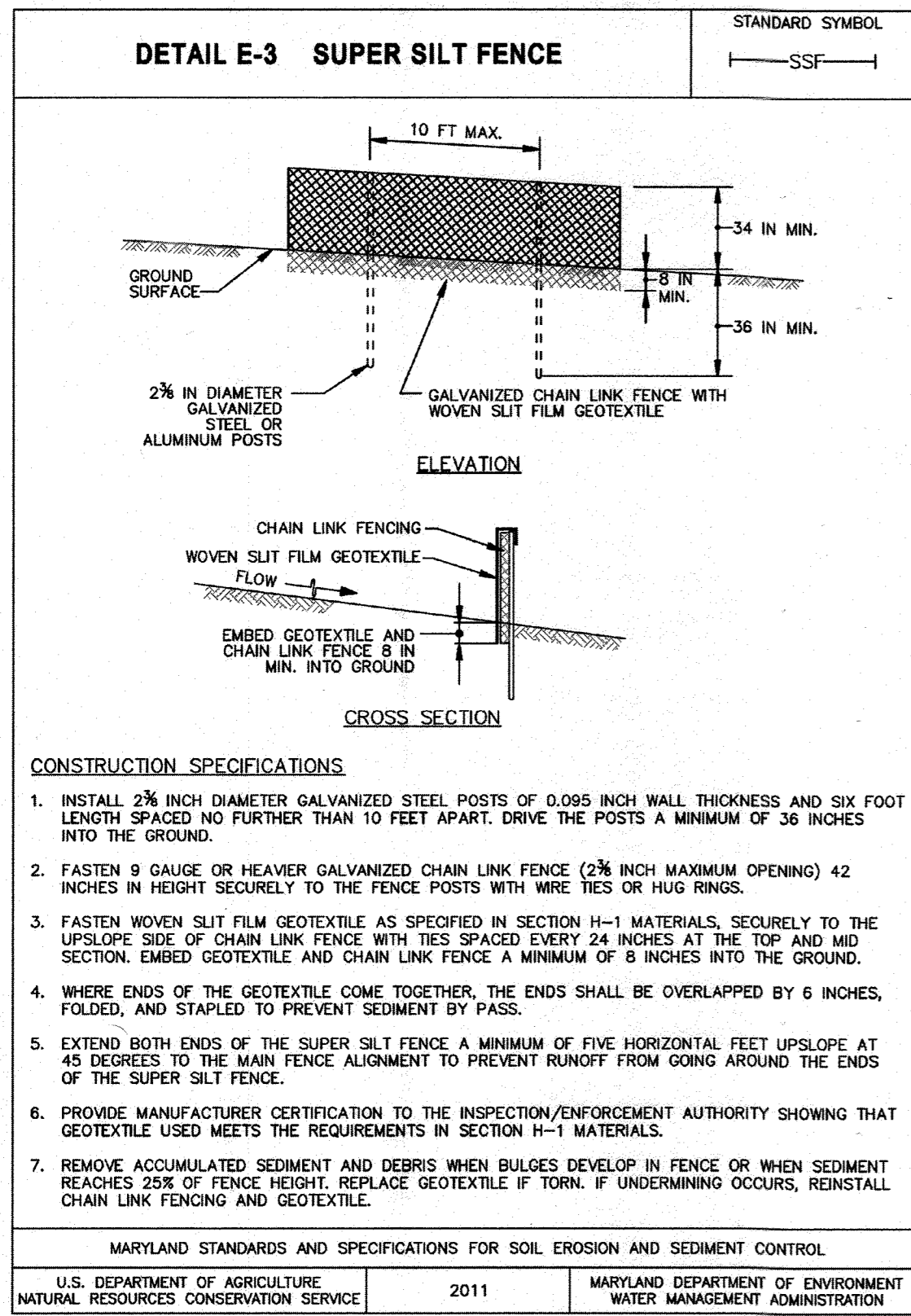
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Manuel Kendall Fox 12-23-21
 DIRECTOR DATE
Paul Behr 12-1-21
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
Alondra Butcher 12/22/21
 CHIEF DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION	BY
DEVELOPER PS ATLANTIC COAST 2021 B, LLC A DELAWARE LIMITED LIABILITY COMPANY 701 WESTERN AVENUE GLENDALE, CA 91201 ATTN: ANDRES FRIEDMAN PHONE: 818-860-0351			
OWNER PS ATLANTIC COAST 2021 B, LLC 701 WESTERN AVENUE GLENDALE, CA 91201 ATTN: ANDRES FRIEDMAN PHONE: 818-860-0351			
PROJECT PUBLIC STORAGE COLUMBIA EXPANSION			
AREA TAX MAP 42, PARCEL 31 LOTS A-2, A-3, A-4, A-7 ZONED M-1 GRID NO. 10 6TH ELECTION DISTRICT 9225, 9245, 9255, 9265 BERGER ROAD COLUMBIA, MARYLAND 21046 HOWARD COUNTY, MARYLAND			
TITLE AS-BUILT SEDIMENT CONTROL DETAILS			

AS-BUILT CERTIFICATION
 NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.
JAMES A. RUFF 21774
 PRINTED NAME M.D. P.E. NO.
James A. Ruff 2/9/24
 SIGNATURE DATE

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. 21774 Expiration Date: 11-10-25

SEAL
 DESIGNED BY: PAI
 DRAWN BY: ALC
 PROJECT NO: SIENX19001
 DATE: SEPTEMBER 3, 2021
 SCALE: NO SCALE
 DRAWING NO. 7 OF 21



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, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Josh Behn
SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE) DATE 10/19/21
Josh Behn

DEVELOPER'S CERTIFICATE
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 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.

Steve Ritt
SIGNATURE OF DEVELOPER (PRINT NAME BELOW SIGNATURE) DATE 8/1/21
Steve Ritt

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

Alcandra Bortolisi
HOWARD SOIL CONSERVATION DISTRICT DATE 11/15/21

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Mary A. Kendall Fox
DIRECTOR DATE 12-23-21

John Chant
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 12-1-21

Chris Damm
CHIEF, DIVISION OF LAND DEVELOPMENT DATE 12/22/21

DATE	NO.	REVISION	BY

DEVELOPER PS ATLANTIC COAST 2021 B, LLC
A DELAWARE LIMITED LIABILITY COMPANY
701 WESTERN AVENUE
GLENDALE, CA 91201
ATTN: ANDRES FRIEDMAN
PHONE: 818-860-0351

OWNER PS ATLANTIC COAST 2021 B, LLC
701 WESTERN AVENUE
GLENDALE, CA 91201
ATTN: ANDRES FRIEDMAN
PHONE: 818-860-0351

PROJECT PUBLIC STORAGE COLUMBIA EXPANSION

AREA TAX MAP 42, PARCEL 31 LOTS A-2, A-3, A-4, A-7 ZONED M-1
GRID NO. 10 6TH ELECTION DISTRICT
9225, 9245, 9255, 9265 BERGER ROAD
COLUMBIA, MARYLAND 21046
HOWARD COUNTY, MARYLAND

TITLE AS-BUILT
SEDIMENT CONTROL DETAILS

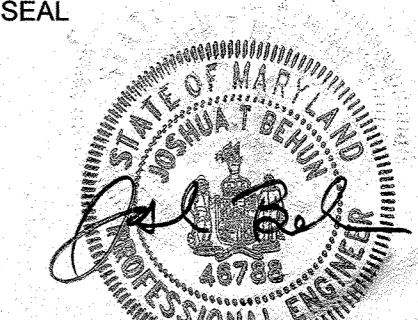
Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects

8890 McGaw Road, Suite 100 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

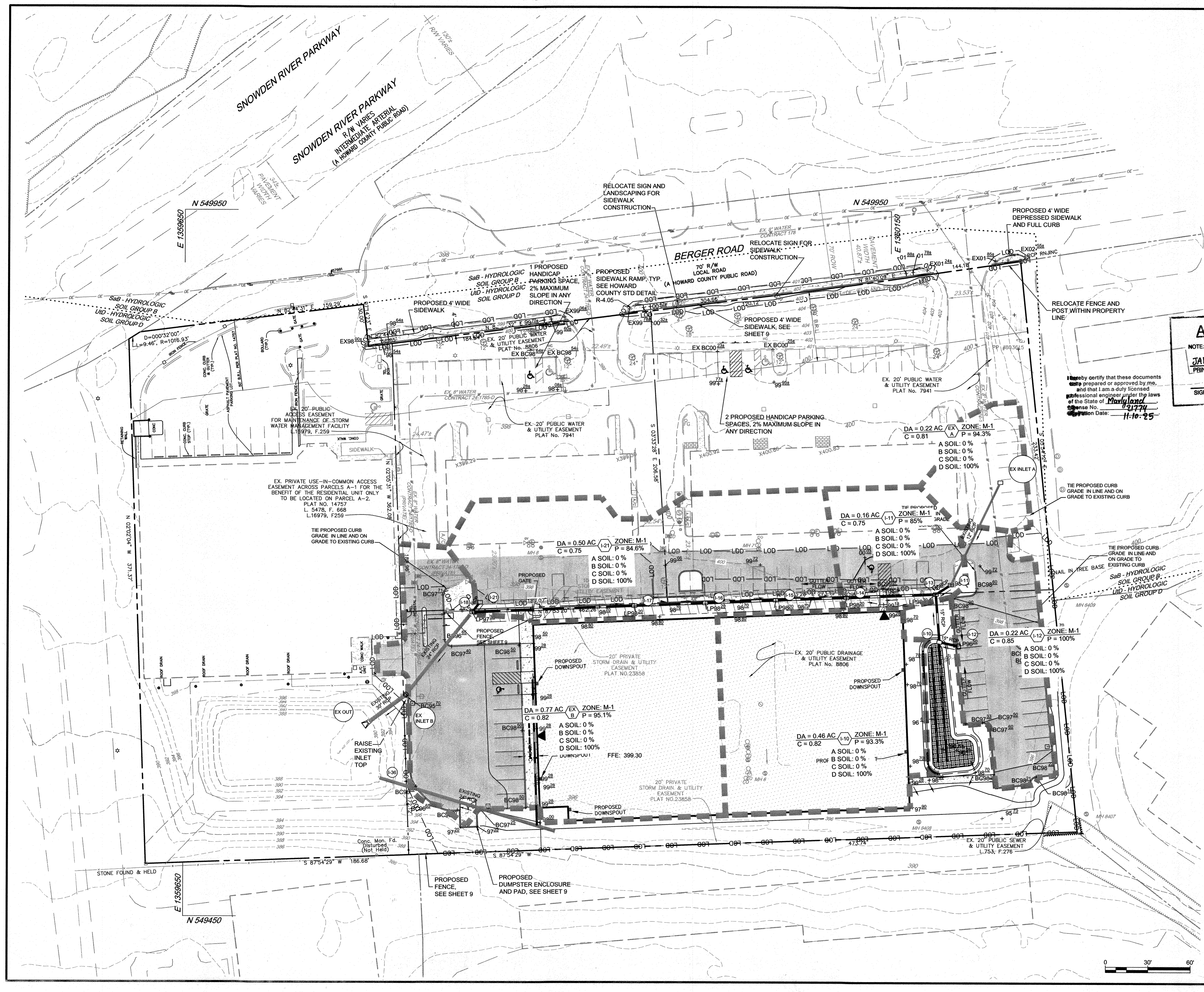
DESIGNED BY: PAI
DRAWN BY: ALC
PROJECT NO: SIENX19001
DATE: SEPTEMBER 3, 2021
SCALE: NO SCALE
DRAWING NO. 8 OF 21

AS-BUILT CERTIFICATION
NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.
JAMES A. RUFF 21774
PRINTED NAME MD. P.E. NO.
James A. Ruff 2/9/21
SIGNATURE DATE

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. 21774 Expiration Date: 11-10-25



BY: *James A. Ruff* 10/19/21
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. 21774, EXPIRATION DATE: 11-10-25.



LEGEND

EXISTING 2' CONTOUR	2.52
EXISTING 10' CONTOUR	2.30
EX. PROPERTY LINE AND RIGHT OF WAY	
EXISTING BUILDING	
EXISTING WATER	
EXISTING SEWER	
EXISTING STORM DRAIN	
EXISTING CURB & GUTTER	
EXISTING FIRE HYDRANT	
PROPOSED 2' CONTOUR	2.32
PROPOSED 10' CONTOUR	2.30
LIMIT OF DISTURBANCE	LOD
PROPOSED WATER	
PROPOSED SEWER	
PROPOSED STORM DRAIN	
PROPOSED BUILDING	
PROPOSED CONCRETE	
PROPOSED ASPHALT	

AS-BUILT CERTIFICATION

NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

JAMES A. RUFF 21774
 PRINTED NAME MD. P.E. NO.
 SIGNATURE DATE 2/9/24
 PROFESSIONAL ENGINEER
 STATE OF MARYLAND
 LICENSE NO. 13774
 EXPIRATION DATE: 11-10-25

APPROVED: DEPARTMENT OF PLANNING AND ZONING

<i>Mary Kendall Fox</i>	12-23-21
DIRECTOR	DATE
<i>[Signature]</i>	12-1-21
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>[Signature]</i>	12-22-21
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE

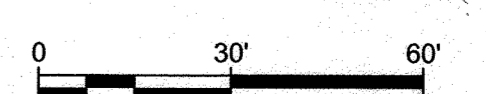
DATE	NO.	REVISION	BY
DEVELOPER: PS ATLANTIC COAST 2021 B, LLC A DELAWARE LIMITED LIABILITY COMPANY 701 WESTERN AVENUE GLENDALE, GA 31201 ATTN: ANDRES FRIEDMAN PHONE: 818-860-0351			
OWNER: PS ATLANTIC COAST 2021 B, LLC 701 WESTERN AVENUE GLENDALE, GA 31201 ATTN: ANDRES FRIEDMAN PHONE: 818-860-0351			
PROJECT: PUBLIC STORAGE COLUMBIA EXPANSION			
AREA: TAX MAP 42, PARCEL 31 LOTS A-2, A-3, A-4, A-7 ZONED M-1 GRID NO. 10 6TH ELECTION DISTRICT 9225, 9245, 9255, 9265 BERGER ROAD COLUMBIA, MARYLAND 21046 HOWARD COUNTY, MARYLAND			

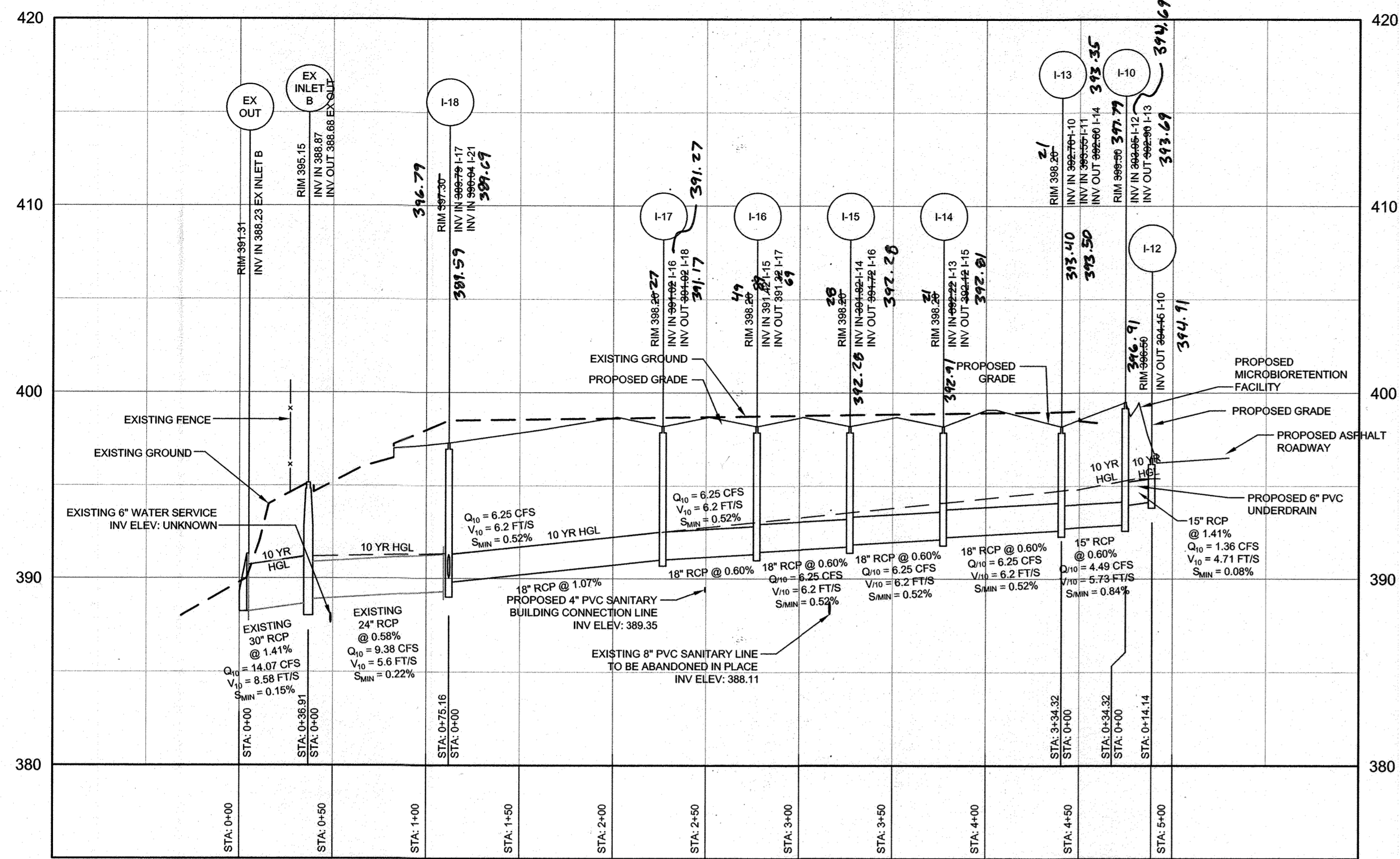
TITLE: AS-BUILT STORM DRAIN DRAINAGE AREA MAP

Pennoni Associates Inc.
Pennoni Engineers • Surveyors • Planners
 Landscape Architects
 8890 McGaw Road, Suite 100 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

SEAL

DESIGNED BY: PAI
 DRAWN BY: ALC
 PROJECT NO: SIENX19001
 DATE: SEPTEMBER 3, 2021
 SCALE: 1" = 30'
 DRAWING NO. 10 OF 21





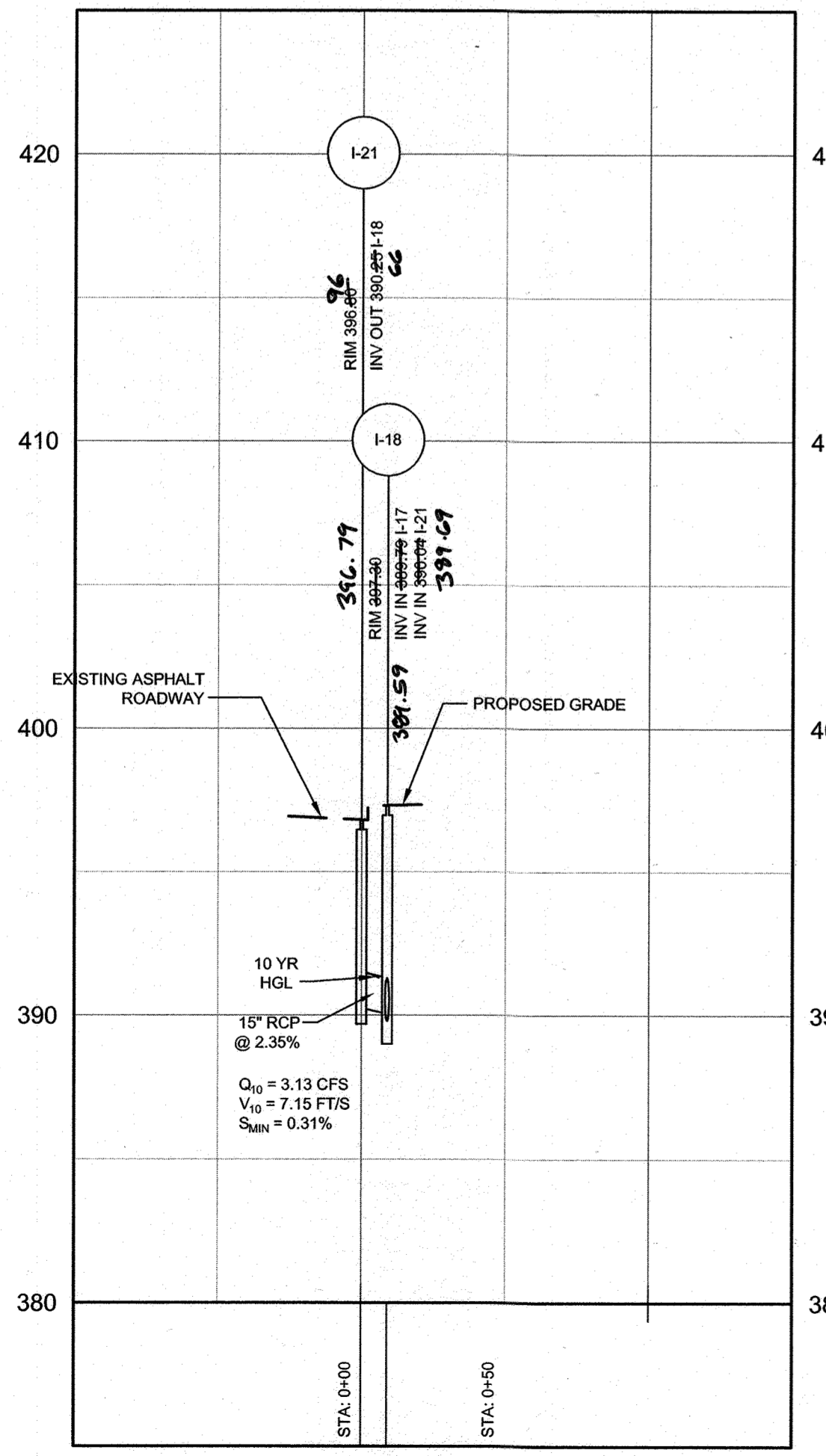
STORM DRAIN PROFILE
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

ID	RIM ELEVATION	INV IN (FROM)	AS BUILT	INV OUT (TO)	AS BUILT	TYPE	DETAIL STANDARD	NORTHING	EASTING
I-10	399.59 397.79	393.95 (15' RCP @ 1.41%) I-12	394.61	392.90 (15' RCP) I-13	393.69	NYLOPLAST INLET	SEE DETAIL ON SHEET 16	549645.1218	1360185.2674
I-11	399.90 398.73	394.24 (EX 12" RCP @ 1.83%) EX INLET A	394.03	394.14 (15' RCP) I-13	393.98	TYPE S INLET	HOCO DPW D-4.24	549685.7122	1360193.2534
I-12	399.90 398.91			394.15 (15' RCP) I-10	394.91	TYPE S INLET	HOCO DPW D-4.24	549642.1612	1360199.0954
I-13	399.50 398.21	392.70 (15' RCP @ 0.80%) I-10 393.55 (15' RCP @ 4.69%) I-11	393.40 393.50	392.60 (18' RCP) I-14	393.35	TYPE S INLET	HOCO DPW D-4.24	549679.0556	1360182.5642
I-14	399.50 398.28	392.22 (18' RCP @ 0.60%) I-13	392.91	392.12 (18' RCP) I-15	392.81	TYPE S INLET	HOCO DPW D-4.24	549676.4367	1360119.2688
I-15	399.20 398.28	391.82 (18' RCP @ 0.60%) I-14	392.28	391.72 (18' RCP) I-16	392.28	TYPE S INLET	HOCO DPW D-4.24	549674.3950	1360069.3363
I-16	399.20 398.49	391.42 (18' RCP @ 0.60%) I-15	391.89	391.32 (18' RCP) I-17	391.69	TYPE S INLET	HOCO DPW D-4.24	549672.2637	1360019.3740
I-17	399.20 398.27	391.02 (18' RCP @ 0.60%) I-16	391.27	391.02 (18' RCP) I-18	391.17	TYPE S INLET	HOCO DPW D-4.24	549670.3196	1359969.0681
I-18	399.20 398.79	389.79 (18' RCP @ 1.07%) I-17 390.04 (15' RCP @ 2.35%) I-21	389.59 389.69	328.29 (EX 24" RCP) EX INLET B	389.39	TYPE S INLET	HOCO DPW D-4.24	549665.6276	1359854.4011
I-21	399.20 398.76			390.25 (15' RCP) I-18	390.66	TYPE S INLET	HOCO DPW D-4.24	549672.6797	1359859.8676

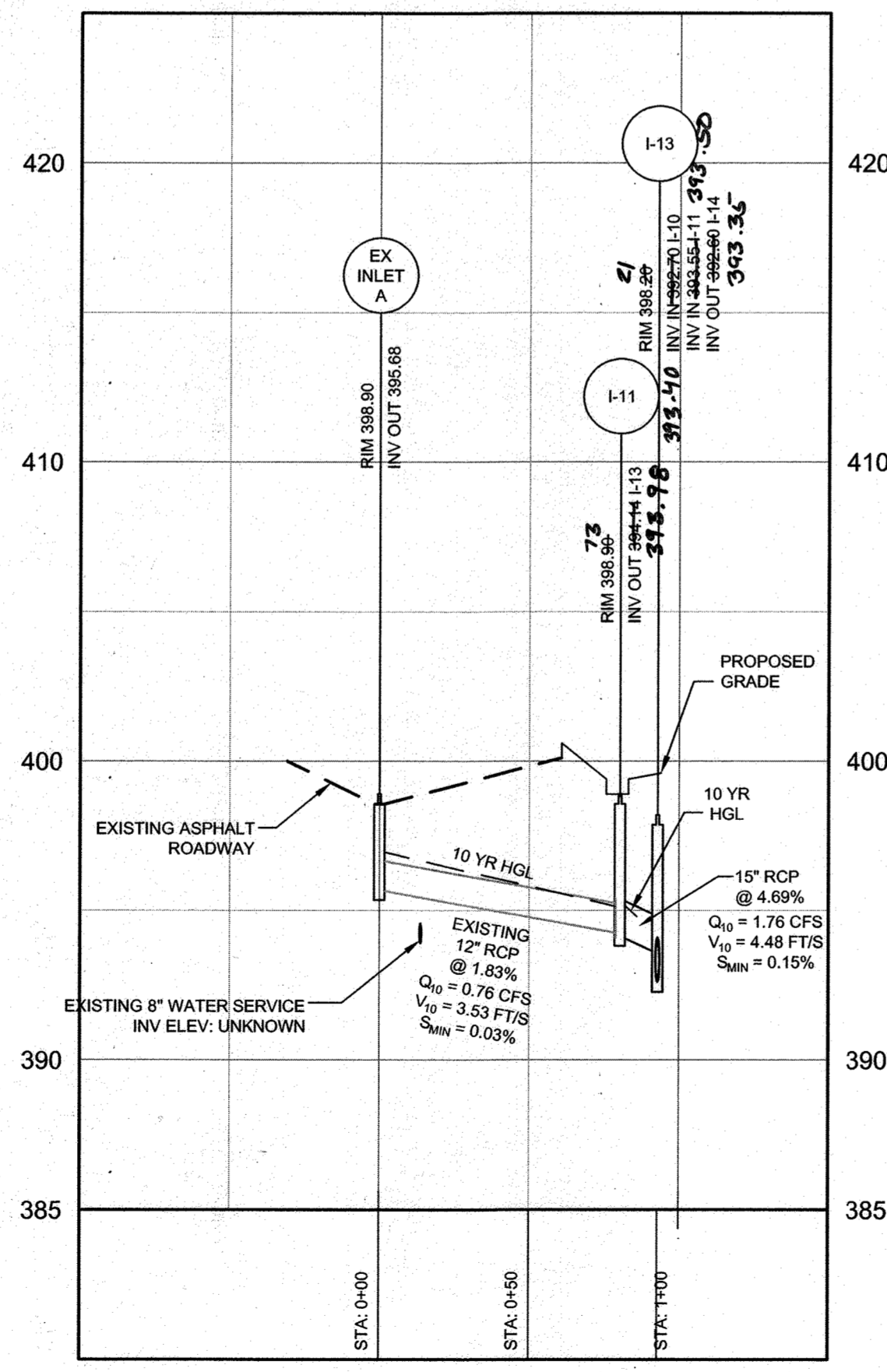
FROM STRUCTURE	TO STRUCTURE	INV OUT	AS BUILT	INV IN	AS BUILT	LENGTH (ft)	MATERIAL	DIAMETER (in)	SLOPE
ROOF DRAIN	EX 24" RCP	390.00	396.00			103'	PVC	12"	5.82%
I-10	I-13	392.90	393.69	392.70	393.40	34'	RCP	15"	0.60%
I-11	I-13	394.14	393.98	393.55	393.50	13'	RCP	15"	4.69%
I-12	I-10	394.15	394.91	393.95	394.69	14'	RCP	15"	1.41%
I-13	I-14	392.60	393.35	392.22	392.91	63'	RCP	18"	0.60%
I-14	I-15	392.12	392.81	391.82	392.28	50'	RCP	18"	0.60%
I-15	I-16	391.72	392.28	391.42	391.89	50'	RCP	18"	0.60%
I-16	I-17	391.32	391.69	391.02	391.27	50'	RCP	18"	0.60%
I-17	I-18	391.02	391.17	389.79	389.59	115'	RCP	18"	1.07%
I-21	I-18	390.25	390.66	390.04	389.69	9'	RCP	15"	2.35%

USE	TYPE	SIZE	LENGTH
STORM DRAIN	RCP	15"	52 FT
STORM DRAIN	RCP	18"	334 FT
MICROBIO UNDERDRAIN	PVC	4"	83 FT
OVERFLOW	PVC	4"	80 FT

- NOTE:
- PRIOR TO ANY UTILITY INSTALLATION OF EXCAVATION, ALL UTILITY CROSSINGS SHALL REQUIRE HAND DUG TEST PIT PROCEDURES TO CONFIRM DEPTH AND LOCATION OF ANY EXISTING UTILITIES ON SITE.
 - ANY PIPES CONSTRUCTED WITHIN FILL MATERIAL TO ADHERE TO THE SPECIFICATIONS OF AASHTO-T-180.



STORM DRAIN PROFILE - NORTH PARKING - WEST INLET
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



STORM DRAIN PROFILE - NORTH PARKING - EAST INLET
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.

Signature of Engineer: [Signature]
Date: 2/1/21
Professional Engineer Seal: [Seal]

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director: [Signature] Date: 12-23-21
Chief, Development Engineering Division: [Signature] Date: 12-1-21
Chief, Division of Land Development: [Signature] Date: 12/22/21

DEVELOPER: PS ATLANTIC COAST 2021 B, LLC
A DELAWARE LIMITED LIABILITY COMPANY
701 WESTERN AVENUE
GLENDALE, CA 91201
ATTN: ANDRES FRIEDMAN
PHONE: 818-860-0351

OWNER: PS ATLANTIC COAST 2021 B, LLC
701 WESTERN AVENUE
GLENDALE, CA 91201
ATTN: ANDRES FRIEDMAN
PHONE: 818-860-0351

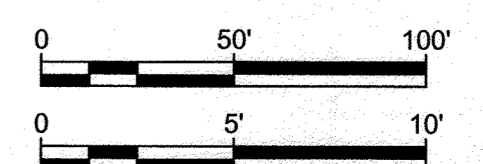
PROJECT: PUBLIC STORAGE COLUMBIA EXPANSION

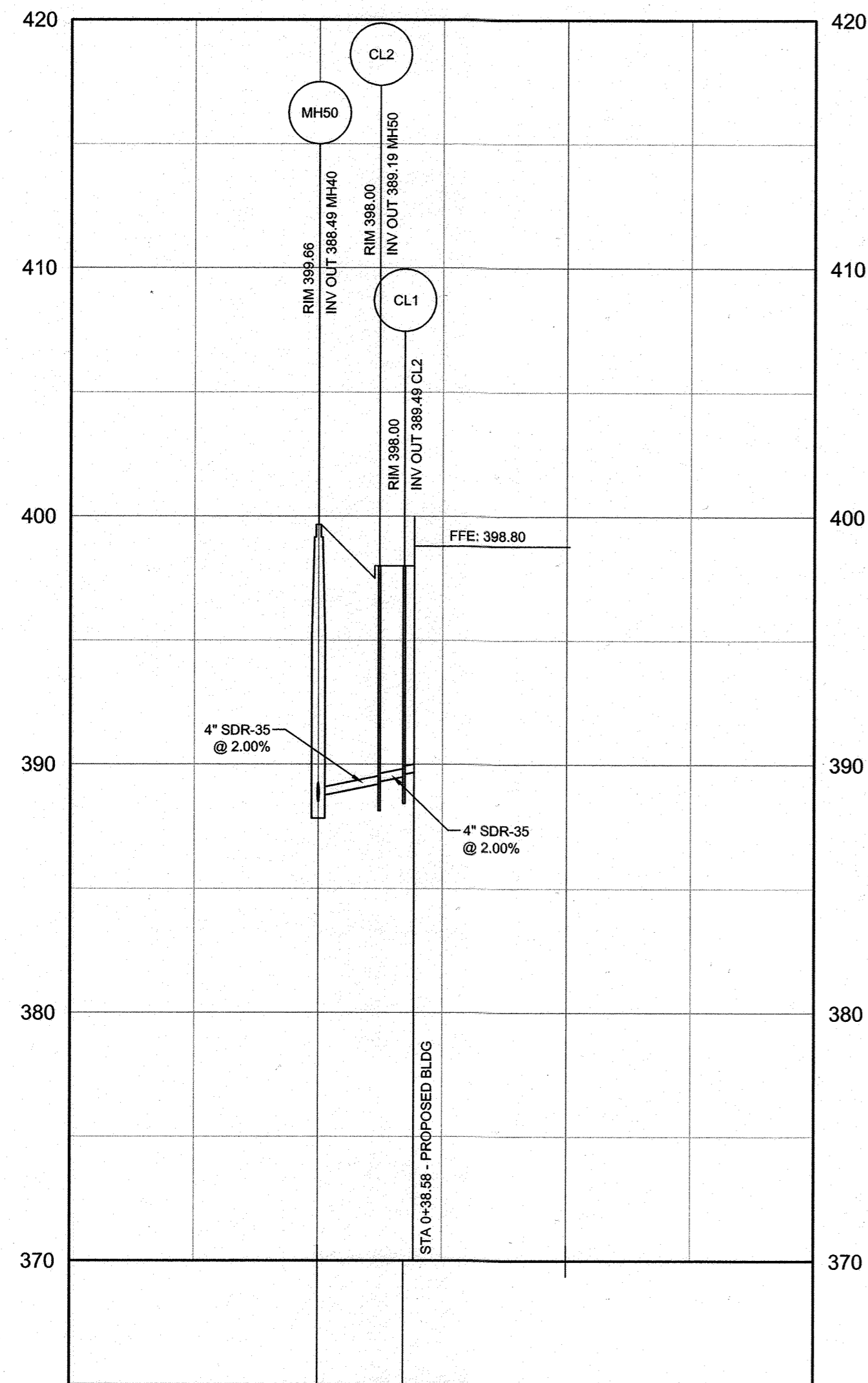
AREA: TAX MAP 42, PARCEL 31 LOTS A-2, A-3, A-4, A-7 ZONED M-1
GRID NO. 10 6TH ELECTION DISTRICT
9225, 9245, 9255, 9265 BERGER ROAD
COLUMBIA, MARYLAND 21046
HOWARD COUNTY, MARYLAND

TITLE: AS-BUILT STORM DRAIN PROFILES

Pennoni Associates Inc.
Engineers - Surveyors - Planners
Landscape Architects
8890 McGaw Road, Suite 100 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

DESIGNED BY: PAI
DRAWN BY: ALC
PROJECT NO: SIENX19001
DATE: SEPTEMBER 3, 2021
SCALE: AS SHOWN
DRAWING NO. 11 OF 21





SANITARY 1 (2) 3+00
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'

GENERAL NOTES

- APPROXIMATE LOCATIONS OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED IN JANUARY 2018 BY PENNONI ASSOCIATES THE BOUNDARY SURVEY IS PROVIDED BY PENNONI ASSOCIATES, INC., DATED JANUARY 2018.
- HORIZONTAL AND VERTICAL SURVEY CONTROLS:
 THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD '83/91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 43CE AND NO. 43FC.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 12 INCHES. CLEAR ALL POLES BY 5'-0" MINIMUM OR TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR THE BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONIES OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
- WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL AT THE LOCATIONS OF THE TEST PITS. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:

AT&T	1-800-252-1133
BGE (CONTRACTOR SERVICES)	410-637-8713
BGE (EMERGENCY)	410-685-0123
BUREAU OF UTILITIES	410-313-4900
COLONIAL PIPELINE CO.	410-795-1390
MISS UTILITY	1-800-257-7777
STATE HIGHWAY ADMINISTRATION	410-531-5533
VERIZON	1-800-743-0033
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL REMOVE TREES, STUMPS, AND ROOTS ALONG THE LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT 410-313-7450 AT LEAST FIVE WORKING DAYS BEFORE OPEN CUTTING OR BORING/JACKING OF ANY COUNTY ROADS FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(A) OF THE HOWARD COUNTY CODE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS CONSTRUCTION INSPECTION DIVISION (C.I.D.) AT (410) 313.1800 AT LEAST FIVE (5) DAYS PRIOR TO THE START OF ANY ADD CONSTRUCTION ACTIVITIES TO SCHEDULE A PRE-CONSTRUCTION SITE MEETING AND INSPECTION. ALL WORK MUST BE PERFORMED UNDER THE CONTINUOUS INSPECTION OF DEPARTMENT OF PUBLIC WORKS C.I.D.

SEWER NOTES

- ALL SEWER MAINS SHALL BE P.V.C. WITH MINIMUM WALL THICKNESS OF SDR 35 UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.

AS-BUILT CERTIFICATION
 NOTE: THERE IS NO "AS-BUILT" INFORM PROVIDED ON THIS SHEET.
JAMES A. RUFF 91774
 PRINTED NAME MD. P.E. NO.
 SIGNATURE DATE 2/2/24

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. 91774 Expiration Date: 11-10-25

AS-BUILT CERTIFICATION
 I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE OF ENGINEER DATE
 (PRINT NAME BELOW SIGNATURE) PE #

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. EXPIRATION DATE:

APPROVED - DEPARTMENT OF PLANNING AND ZONING

Max A. Kennard Fox 12-23-21
 DIRECTOR DATE
[Signature] 12-1-21
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
[Signature] 12/21/21
 CHIEF DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION	BY

DEVELOPER PS ATLANTIC COAST 2021 B, LLC
 A DELAWARE LIMITED LIABILITY COMPANY
 701 WESTERN AVENUE
 GLENDALE, CA 91201
 ATTN: ANDRES FRIEDMAN
 PHONE: 818-860-0351

OWNER
 PS ATLANTIC COAST 2021 B, LLC
 701 WESTERN AVENUE
 GLENDALE, CA 91201
 ATTN: ANDRES FRIEDMAN
 PHONE: 818-860-0351

PROJECT
PUBLIC STORAGE COLUMBIA EXPANSION

AREA
 TAX MAP 42, PARCEL 31 LOTS A-2, A-3, A-4, A-7 ZONED M-1
 GRID NO. 10 6TH ELECTION DISTRICT
 9225, 9245, 9255, 9265 BERGER ROAD
 COLUMBIA, MARYLAND 21046
 HOWARD COUNTY, MARYLAND

TITLE
AS-BUILT
 PRIVATE UTILITY - SANITARY SEWER
 PROFILES AND SCHEDULES

Pennoni Associates Inc.
Pennoni Engineers • Surveyors • Planners
 Landscape Architects
 8890 McGaw Road, Suite 100 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

SEAL

 DESIGNED BY: PAI
 DRAWN BY: ALC
 PROJECT NO.: SIENX19001
 DATE: SEPTEMBER 3, 2021
 SCALE: AS SHOWN
 DRAWING NO. 12 OF 21

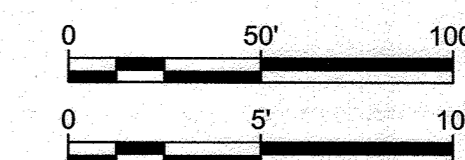
SANITARY SEWER STRUCTURE TABLE									
ID	RIM ELEVATION	INV IN (FROM)	AS BUILT	INV OUT (TO)	AS BUILT	TYPE (STANDARD DETAIL)	NORTHING	EASTING	PUBLIC / PRIVATE
CL1	398.00			389.49 (4" SDR-35) CL2		CLEANOUT	549664.3715	1359992.4755	PRIVATE
CL2	398.00	389.29 (4" SDR-35 @ 2.00%) CL1		389.19 (4" SDR-35) MH50		CLEANOUT LAMPOLE (S-3.21)	549674.3187	1359992.0032	PRIVATE
CL3	399.58			388.72 (8" SDR-35) MH50		CLEANOUT LAMPOLE (S-3.21)	549707.4386	1359980.4919	PRIVATE

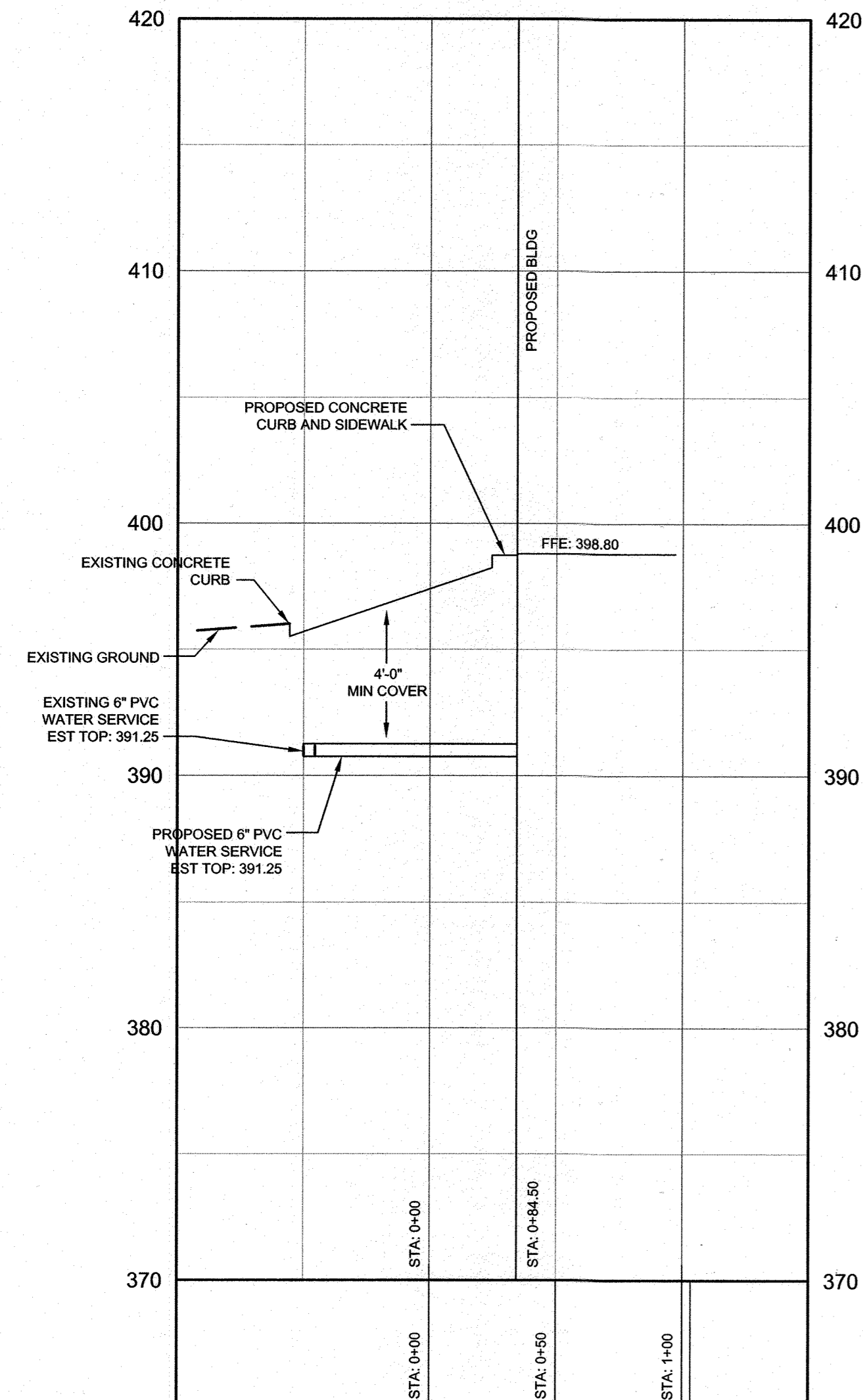
SANITARY SEWER PIPE TABLE										
FROM STRUCTURE	INV OUT	AS BUILT	TO STRUCTURE	INV IN	AS BUILT	LENGTH (ft)	MATERIAL	DIAMETER (in)	SLOPE	PUBLIC / PRIVATE
CL1	389.49		CL2	389.29		10'	SDR-35	4"	2.00%	PRIVATE
CL2	389.19		MH50	388.70		25'	SDR-35	4"	2.00%	PRIVATE
CL3	388.72		MH50	388.59		13'	SDR-35	8"	1.00%	PRIVATE

PRIVATE SEWER PIPE SCHEDULE			
USE	TYPE	SIZE	LENGTH
SEWER (PRIVATE)	SDR-35	8"	126'-0"

NOTE:

- PRIOR TO ANY UTILITY INSTALLATION OR EXCAVATION, ALL UTILITY CROSSINGS SHALL REQUIRE HAND DUG TEST PIT PROCEDURES TO CONFIRM DEPTH AND LOCATION OF EXISTING UTILITIES ON SITE.





6 IN DOMESTIC WATER LINE PROFILE
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'

WATER NOTES

1. ALL WATER MAINS TO BE C900 PVC WITH MINIMUM WALL THICKNESS SDR 18 UNLESS OTHERWISE NOTED.
2. TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
3. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
4. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
5. FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND 1005 OF THE STANDARD SPECIFICATIONS.
6. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
7. TRACER WIRE AND CONTINUITY TEST STATIONS SHALL BE INSTALLED ON ALL DIP AND PVC WATER MAINS IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL.
8. FOR PVC WATER MAINS, ALL RECORDS FOR THE QUALITY CONTROL AND QUALIFICATION TEST REQUIREMENTS NOTED IN SECTION 5.1 OF THE AWWA STANDARD C900 FOR PVC PRESSURE PIPE SHALL BE SUBMITTED WITH THE PIPE MATERIAL CERTIFICATIONS OR SHOP DRAWINGS PRIOR TO APPROVAL OF THE MATERIAL FOR USE. THE TEST RECORDS SHALL BE FOR THE PIPE TO BE INSTALLED UNDER THIS CONTRACT. ALL PVC PIPE SHALL CONTAIN MARKINGS TO ALLOW CROSS REFERENCING OF THE PIPE SUPPLIED TO THE TEST RECORDS RECEIVED.
9. UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS SACRIFICIAL ANODES SHALL BE INSTALLED ON ALL VALVES AND METALLIC FITTINGS USED WITH PVC WATER MAINS IN ACCORDANCE WITH VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. SEVENTEEN (17) POUND MAGNESIUM ANODES SHALL BE INSTALLED ON ALL VALVES AND DUCTILE IRON FITTINGS INCLUDING RESTRAINTS AND HARNESSSES. TWELVE (12) POUND ZINC ANODES SHALL BE INSTALLED ON ALL STAINLESS STEEL FITTINGS AND SADDLES USED WITH PVC MAINS. ALL "TEES" USED WITH PVC MAINS SHALL BE DUCTILE IRON.
10. PROPER ASSEMBLY OF GASKETED PVC PIPE JOINTS: THE MANUFACTURER'S INSERTION LINE OF GASKETED PVC PIPE JOINTS INDICATES THE MAXIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. AFTER ASSEMBLY OF THE JOINT, THE INSERTION LINE SHALL REMAIN VISIBLE. DUAL INSERTION LINES ON GASKETED PVC PIPE INDICATE THE MAXIMUM AND MINIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. THE CONTRACTOR SHALL NOT OVER INSERT OR OVER HOME THE SPIGOT INTO THE BELL OF THE PVC PIPE.
11. ALL CHANGES IN HORIZONTAL OR VERTICAL DIRECTION OF PVC WATER PIPE SHALL BE MADE WITH STANDARD BENDS, 5-DEGREE SWEEPS OR HIGH DEFLECTION (HD) COUPLINGS. NO BENDING OF THE PIPE OR DEFLECTING OF PVC PIPE JOINTS IS PERMITTED. WHERE HIGH DEFLECTION COUPLINGS OR 5-DEGREE SWEEPS ARE PERMITTED, THE CONTRACTOR SHALL PROVIDE ON FULL PIPE LENGTH (20-FOOT LONG) ON EITHER SIDE OF THE HIGH DEFLECTION COUPLING OR 5-DEGREE SWEEP. THAT CONTRACTOR SHALL USE A VIBRATORY PLATE COMPACTOR OR OTHER APPROVED MEANS TO THOROUGHLY COMPACT THE #57 STONE ON BOTH SIDES OF THE HIGH DEFLECTION COUPLING OR 5-DEGREE SWEEP, TAKING CARE NOT TO USE COMPACTION EQUIPMENT DIRECTLY OVER THE FITTING.

PVC HIGH DEFLECTION COUPLINGS SHALL BE LIMITED TO A TOTAL DEFLECTION OF 3-DEGREES (1 1/2 -DEGREE ON EITHER END OF THE COUPLING), SHALL BE RATED FOR A MINIMUM 200 PSI MEETING THE REQUIREMENTS OF AWWA C900, SHALL HAVE A MINIMUM LAY LENGTH OF 9-INCHES AND SHALL HAVE CENTER STOPS. PVC HIGH DEFLECTION COUPLINGS SHALL BE CERTAINTEEED PVC HIGH DEFLECTION (HD) STOP COUPLINGS OR EQUAL.

FIVE DEGREE SWEEPS SHALL BE BELL BY SPIGOT, RATED FOR A MINIMUM 225 PSI, DR 18 MEETING THE REQUIREMENTS OF AWWA C900 AND SHALL BE MULTI FITTINGS (IPEX) BLUE BRUTE DR18 OR EQUAL.
12. WHEN PVC HIGH DEFLECTION COUPLINGS OR PVC 5-DEGREE SWEEPS ARE USED TO FACILITATE CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENTS OF AWWA C900 PVC PIPELINES, THE CONTRACTOR SHALL INSTALL DEVICES FOR THE PREVENTION OF OVER-INSERTION OF THE PVC PIPE SPIGOTS OR PLAIN ENDS INTO THE PUSH ON BELL JOINT ON BOTH SIDES OF THE HIGH DEFLECTION COUPLINGS AND 5-DEGREE SWEEPS. BELL STOPS SHALL BE PLACED AT THE PROPER INSERTION LINE FOR THE FITTING. THE BELL STOP SHALL BE MANUFACTURED OF DUCTILE IRON AND INCORPORATES AN EXPANSION RETENTION SPRING TO ALLOW FOR PIPE EXPANSION AND CONTRACTION. THE BELL STOPS SHALL BE SERIES 5000 MEGA-STOP, AS MANUFACTURED BY EBAA IRON, INC. OR APPROVED EQUAL.

WATER LINE APPURTENCES TABLE				
ID	ITEM	NORTHING	EASTING	STATION
TS&V1	6" x 6" TAPPING SLEEVE AND VALVE	549,605.98	1,359,815.00	0+00
	6" VALVE PRIVATE			

NOTE:
 1. PRIOR TO ANY UTILITY INSTALLATION OR EXCAVATION, ALL UTILITY CROSSINGS SHALL REQUIRE HAND DUG TEST PIT PROCEDURES TO CONFIRM DEPTH AND LOCATION OF EXISTING UTILITIES ON SITE.

AS-BUILT CERTIFICATION
 NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.
JAMES A. RUFF 21774
 PRINTED NAME MD. P.E. NO.
 SIGNATURE DATE: 9/9/24

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. 21774
 Expiration Date: 11-10-25

AS-BUILT CERTIFICATION
 I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.
 SIGNATURE OF ENGINEER DATE
 (PRINT NAME BELOW SIGNATURE) PE #

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. 21774, EXPIRATION DATE: 11-10-25.

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Director: *Maryland Ford* 12/23/21
 Chief, Development Engineering Division: *[Signature]* 12-1-21
 Chief, Division of Land Development: *[Signature]* 12/22/21

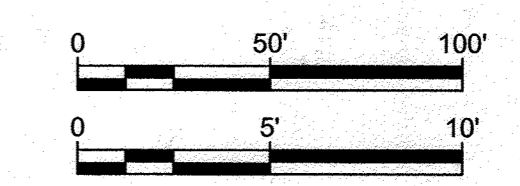
DEVELOPER: PS ATLANTIC COAST 2021 B, LLC
 A DELAWARE LIMITED LIABILITY COMPANY
 701 WESTERN AVENUE
 GLENDALE, CA 91201
 ATTN: ANDRES FRIEDMAN
 PHONE: 818-860-0351

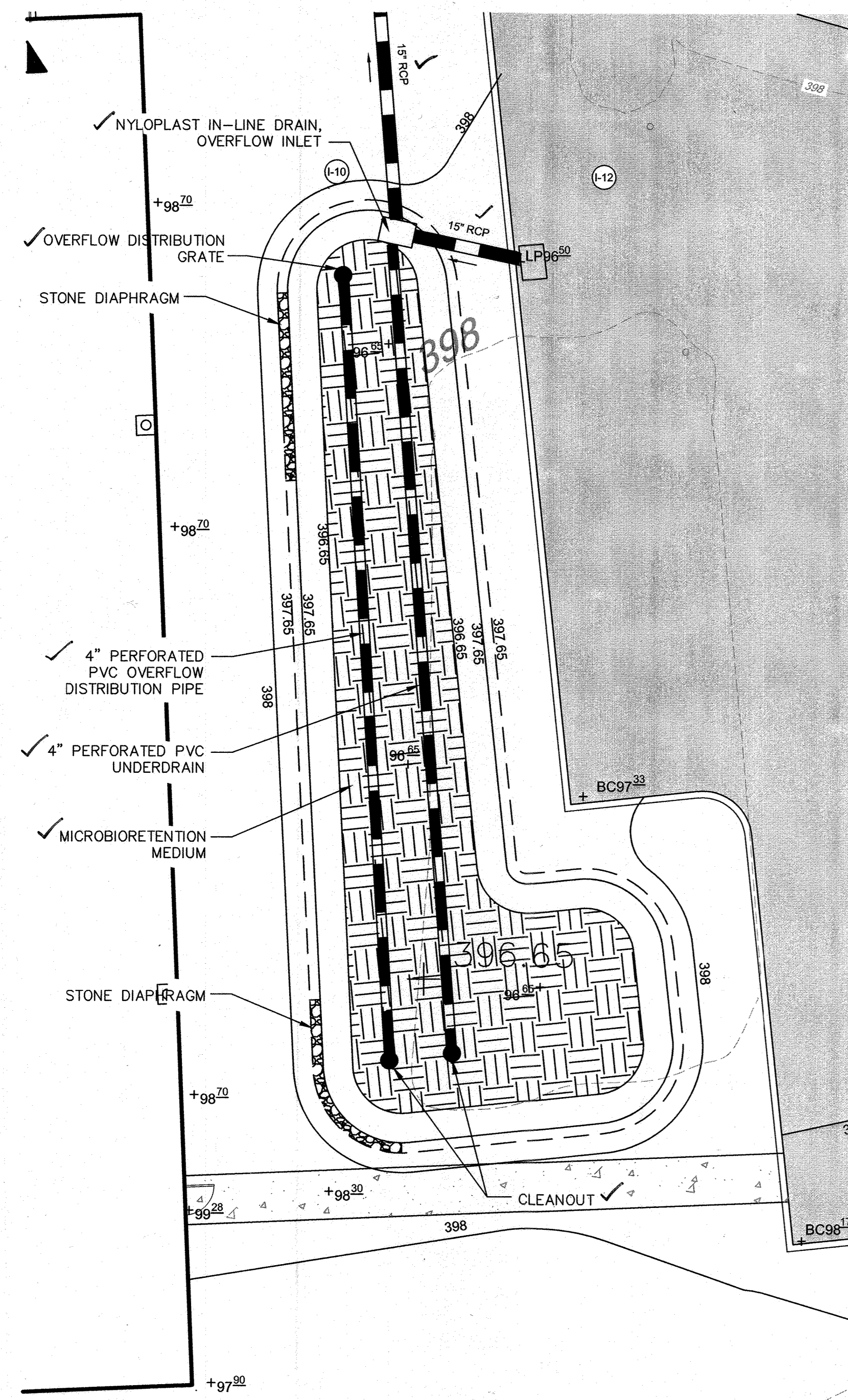
OWNER: PS ATLANTIC COAST 2021 B, LLC
 701 WESTERN AVENUE
 GLENDALE, CA 91201
 ATTN: ANDRES FRIEDMAN
 PHONE: 818-860-0351

PROJECT: PUBLIC STORAGE COLUMBIA EXPANSION
 AREA: TAX MAP 42, PARCEL 31 LOTS A-2, A-3, A-4, A-7 ZONED M-1
 GRID NO. 10 6TH ELECTION DISTRICT
 9225, 9245, 9255, 9265 BERGER ROAD
 COLUMBIA, MARYLAND 21046
 HOWARD COUNTY, MARYLAND

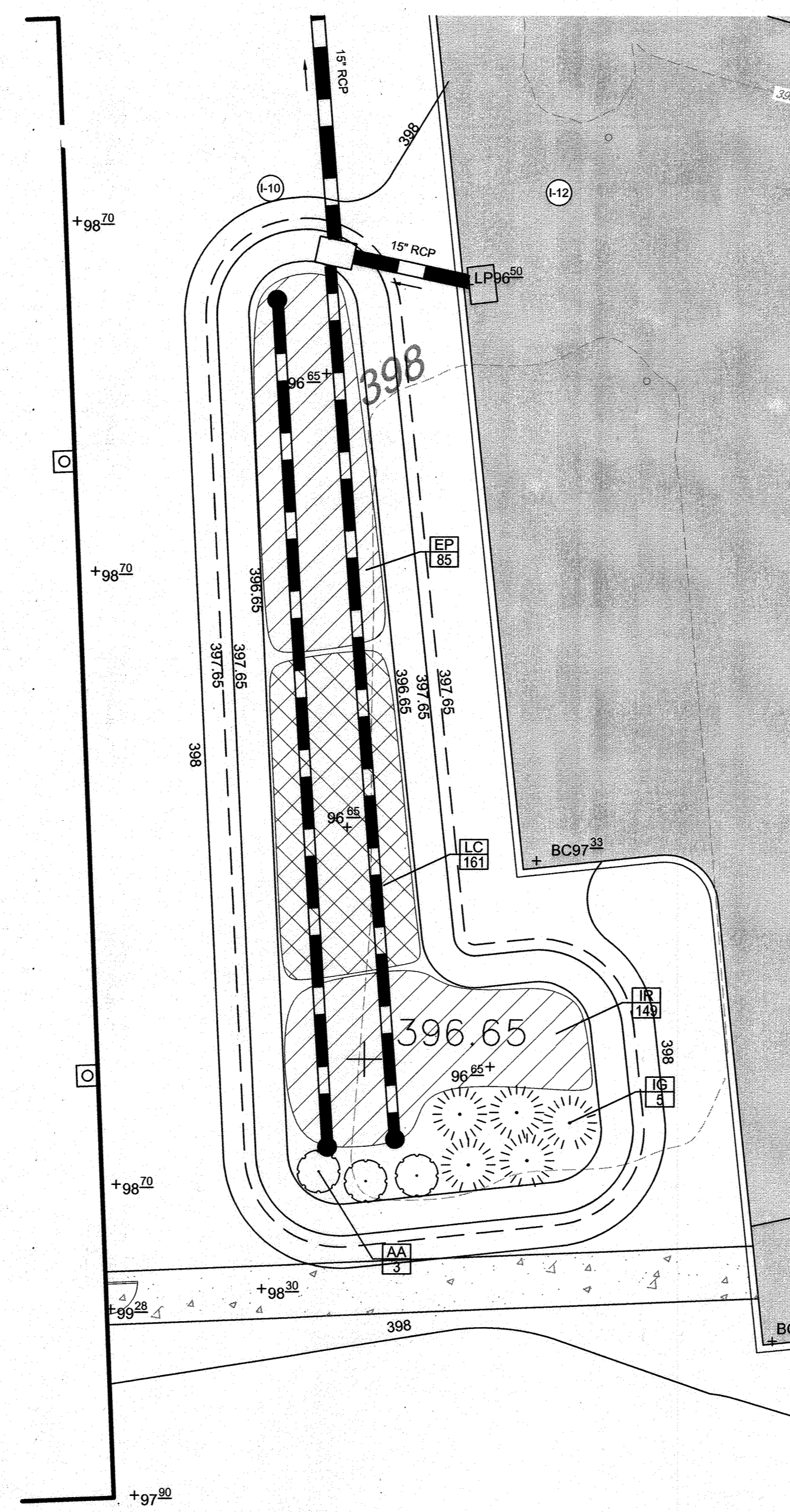
TITLE: **AS-BUILT**
 PRIVATE UTILITY - WATER
 PROFILE AND SCHEDULE
 Pennoni Associates Inc.
 Engineers • Surveyors • Planners
 Landscape Architects
 8890 McGaw Road, Suite 100 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

SEAL: [Professional Engineer Seal for James A. Ruff, License No. 21774, State of Maryland]
 DESIGNED BY: PAI
 DRAWN BY: ALC
 PROJECT NO: SIENX19001
 DATE: SEPTEMBER 3, 2021
 SCALE: AS SHOWN
 DRAWING NO. 13 OF 21





MICROBIORETENTION DETAIL PLAN
SCALE: 1" = 10'-0"



MICROBIORETENTION LANDSCAPING PLAN
SCALE: 1" = 10'-0"

MICROBIORETENTION PLANT SCHEDULE					
SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
AA	3	ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA' BRILLIANTISSIMA RED CHOKEBERRY	3 GAL.	CONT.	AS SHOWN
IG	5	ILEX GLABRA 'SHAMROCK' SHAMROCK INKBERRY	3 GAL.	CONT.	AS SHOWN
EP	85	EUPATORIUM PURPUREUM 'GATEWAY' GATEWAY JOE PYE WEEED	1 GAL.	CONT.	24" ON CENTER
IR	149	IRIS VERSICOLOR 'BLUE FLAG' BLUE FLAG IRIS	1 GAL.	CONT.	18" ON CENTER
LC	161	LOBELIA CARDINALIS CARDINAL FLOWER	1 GAL.	CONT.	18" ON CENTER

OPERATION AND MAINTENANCE SCHEDULE FOR MICROBIORETENTION FACILITY (M-6)

- ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER, CHECK DAMS, AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A.4.1 AND 2.
- SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.
- MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
- SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

MICROBIORETENTION SPECIFICATIONS

- THE UNDERDRAIN PIPE MUST BE 4-INCH DIAMETER SCHEDULE 40 OR STRONGER PERFORATED PVC PIPE AT 0.00% SLOPE FOR THE MICROBIORETENTION FACILITIES. TWELVE INCHES OF GRAVEL MUST BE PLACED UNDER THE PIPE, WITH A MINIMUM OF 6 INCHES OF GRAVEL OVER THE PIPE. PERFORATIONS MUST BE 3/8 INCH IN DIAMETER AND MUST BE LOCATED 4 INCHES ON CENTER, EVERY 90 DEGREES AROUND THE PIPE. PERFORATED PIPE MUST BEGIN AT LEAST 5 FT. INSIDE THE FILTER MEDIA. FILTER FABRIC MUST NOT BE WRAPPED AROUND THE UNDERDRAIN PIPE.
- 4" INCH CLEAN-OUTS SHOULD BE USED. CLEANOUTS FOR EACH PIPE SHOULD EXTEND 12 INCHES ABOVE THE TOP OF THE PLANTING MEDIA AND HAVE A REMOVABLE CAP. OVERFLOW PIPES SHALL HAVE A REMOVABLE RATE THAT FITS SNUGLY INSIDE THE PIPE.
- THE GRAVEL LAYER SURROUNDING THE UNDERDRAIN PIPES MUST MEET MSHA SIZE #57 (TABLE 901A), AND MUST PROVIDE A MINIMUM OF 6 INCHES COVER OVER THE PIPE, AND MINIMUM 3 INCHES UNDER THE PIPE. NO GEOTEXTILE OR FILTER FABRIC IS ALLOWED ANYWHERE WITHIN THE FILTER MEDIA (STONE OR SAND). FILTER FABRIC SHALL BE PLACED ALONG THE SIDES OF THE FACILITY, BUT NOT ON THE BOTTOM.
- A MINIMUM 4-INCH FINE AGGREGATE SAND LAYER SHALL BE PROVIDED BELOW THE SOIL FILTER/PLANTING MEDIA. THE SAND MUST BE ASTM C33 FINE AGGREGATE CONCRETE SAND. MANUFACTURED SAND OR STONE DUST IS NOT ACCEPTABLE.
- A MINIMUM 4-INCH PEA GRAVEL LAYER SHALL BE PROVIDED BETWEEN THE SAND AND THE STONE.
- THE PLANTING MEDIA MIX SHALL MEET SHA BIORETENTION SOIL MIX STANDARDS. THE SOIL SHALL MEET THE FOLLOWING MINIMUM CRITERIA: A HOMOGENEOUS MIXTURE COMPOSED OF 5 PARTS COARSE SAND, 3 PARTS BASE SOIL, AND 2 PARTS FINE BARK. THE SOIL SHALL BE FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN 2 INCHES. SOIL SHALL CONTAIN A MINIMUM ORGANIC MATTER PERCENTAGE OF 5%. THE PLANTING MATERIAL SHALL BE FLOODED AFTER PLACEMENT. ANY SETTLEMENT THAT OCCURS SHALL BE FILLED BACK TO THE DESIGN ELEVATION.
- THE SURFACE MULCH LAYER WILL CONSIST OF STANDARD FINE SHREDDED AGED HARDWOOD MULCH. THE MULCH SHOULD BE UNIFORMLY TO A DEPTH OF 3 INCHES. YEARLY REPLISHING MAY BE NECESSARY. PINE BARK IS NOT ACCEPTABLE.

TABLE B.4.1 MATERIALS SPECIFICATIONS FOR MICRO-BIORETENTION FACILITIES			
MATERIAL	SPECIFICATION	SIZE	NOTES
PLANTINGS	SEE PLANTING NOTES	N/A	PLANTINGS ARE SITE SPECIFIC
PLANTING SOIL (2 TO 4" DEEP)	LOAMY SAND (60-65%) & COMPOST (35-40%) OR SANDY LOAM (30%) COARSE SAND (30%) & COMPOST (40%)	N/A	USDA SOIL TYPES LOAMY SAND OR SANDY LOAM CLAY CONTENT <5%
ORGANIC CONTENT	MIN 10% BY DRY WEIGHT (ASTM D 2974)		
MULCH	SHREDDED HARDWOOD		AGED 6 MONTHS, NO PINE OR WOOD CHIPS
PEA GRAVEL DIAPHRAGM	PEA GRAVEL: ASTM D 448	No 8 OR No 9 (1/8" TO 3/8")	
CURTAIN DRAIN	ORNAMENTAL STONE: WASHED COBBLES	STONE: 2" TO 5"	
GEOTEXTILE		N/A	PE TYPE 1 NONWOVEN
GRAVEL (UNDERDRAINS AND INFILTRATION BERMS)	AASHTO M-43	No 57 OR No 6 AGGREGATE (3/8" TO 3/4")	
UNDERDRAIN PIPING	F 758, TYPE PS 28 OR AASHTO M-278	4" TO 6" RIGID SCHEDULE 40 PVC OR SDR35	SLOTTED OR PERFORATED PIPE; 3/8" PERF @ 6" ON CENTER, 4 HOLES PER ROW, MIN OF 3" OF GRAVEL OVER PIPES; NOT NECESSARY UNDERNEATH PIPES. PERFORATED PIPE SHALL BE WRAPPED WITH 1/4" GALVANIZED HARDWARE CLOTH
POURED IN PLACE CONCRETE (IF REQUIRED)	MSHA MIX No 3 f _c =3500 PSI @ 28 DAYS, NORMAL WEIGHT, AIR ENTRAINED, REINFORCING TO MEET ASTM 615-60	N/A	ON-SITE TESTING OF POURED IN PLACE CONCRETE REQUIRED: 28 DAY STRENGTH AND SLUMP TEST; ALL CONCRETE DESIGN (CAST IN PLACE OR PRE CAST) NOT USING PREVIOUSLY APPROVED STATE OR LOCAL STANDARDS REQUIRES DESIGN DRAWINGS SEALED AND APPROVED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF MARYLAND - DESIGN TO INCLUDE MEETING ACI CODE 309 R/89; VERTICAL LOADING (H-10 OR H-20); ALLOWABLE HORIZONTAL LOADING (BASED ON SOIL PRESSURES); AND ANALYSIS OF POTENTIAL CRACKING
SAND	AASHTO M-6 OR ASTM C 33	0.02" TO 0.04"	SAND SUBSTITUTIONS SUCH AS DIABASE AND GRAYSTONE (AASHTO) #10 ARE NOT ACCEPTABLE. NO CALCIUM CARBONATED OR DOLOMITIC SAND SUBSTITUTIONS ARE ACCEPTABLE. NO "ROCK DUST" CAN BE USED FOR SAND

SITE IMPERVIOUSNESS AND WATER QUALITY VOLUME (REDEVELOPMENT)	
SITE AREA (ACRES)	2.07
EXISTING IMPERVIOUS SURFACE AREA (ACRES)	1.69
PROPOSED IMPERVIOUS SURFACE AREA (ACRES)	1.44
RAINFALL DEPTH (IN)	1.0
EXISTING IMPERVIOUSNESS	82.0%
PROPOSED IMPERVIOUSNESS	69.6%
WATER QUALITY CALCULATION FOR REDEVELOPMENT	
REQUIRED TREATMENT AREA (ACRES)	N/A
RUNOFF COEFFICIENT	0.95
WATER QUALITY VOLUME, WQv (CF)	N/A
RECHARGE VOLUME REQUIRED (CF)	N/A
TOTAL AREA OF SITE	2.07 ACRES (90,072 SF)

MICROBIORETENTION FACILITY SEQUENCE OF CONSTRUCTION

- DO NOT BEGIN MICROBIORETENTION FACILITY INSTALLATION UNTIL SITE UPSTREAM OF MICROBIORETENTION FACILITY IS STABILIZED AND FINE GRADING HAS BEEN COMPLETED. IT IS THE RESPONSIBILITY OF THE OWNER TO ENGAGE A QUALIFIED GEOTECHNICAL ENGINEER TO OBSERVE THE CONSTRUCTION AND INSTALLATION OF THESE FACILITIES AND PROVIDE REPORTS AND CERTIFICATIONS THAT FACILITIES WERE INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS.
- STAKEOUT LIMITS OF FACILITY. COORDINATE WITH THE ENGINEER TO VERIFY DIMENSIONS AND ENSURE THAT ENOUGH STAKEOUT INFORMATION IS PROVIDED TO ACCURATELY CONSTRUCT FACILITY. (1 DAY)
- EXCAVATE MICROBIORETENTION FACILITY. CONSTRUCTION SHALL BE PERFORMED WITH LIGHTWEIGHT, WIDE-TRACKED EQUIPMENT TO MINIMIZE DISTURBANCE AND COMPACTION. IT IS RECOMMENDED THAT THE ENGINEER BE CONTACTED TO VERIFY AND SURVEY LIMITS OF EXCAVATION UPON COMPLETION OF EXCAVATION, PRIOR TO PIPE AND UNDERDRAIN CONSTRUCTION AND MATERIAL BACKFILL. EXCAVATED MATERIALS SHALL BE PLACED IN A CONTAINED AREA. (1 DAY)
- PLACE STONE AND UNDERDRAINS. (1 DAY)
- PLACE SAND LAYER IN LIFTS OF THREE INCHES. (0.5 DAY)
- PLACE PLANTING SOIL AND OBSERVATION WELLS. (1 DAY)
- PLACE CHECK DAMS (1 DAY)
- PLACE MULCH. (0.5 DAY)
- INSTALL PLANT MATERIAL. (1 DAY)
- STABILIZE MICROBIORETENTION FACILITY AREA. (0.5 DAY)
- PREPARE AND SUBMIT AS-BUILTS TO COUNTY.

AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.

Signature of Engineer: [Signature] DATE: 2/1/24
PE # 81774
STATE OF MARYLAND PROFESSIONAL ENGINEER LICENSE NO. 81774, EXPIRATION DATE: 11-01-27

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director: Mary Ann Kendall Fox DATE: 12-13-21
Chief, Development Engineering Division: [Signature] DATE: 12-1-21
Chief, Division of Land Development: [Signature] DATE: 12/22/21

DEVELOPER: PS ATLANTIC COAST 2021 B, LLC
A DELAWARE LIMITED LIABILITY COMPANY
701 WESTERN AVENUE
GLENDALE, CA 91201
ATTN: ANDRES FRIEDMAN
PHONE: 818-860-0351

OWNER: PS ATLANTIC COAST 2021 B, LLC
701 WESTERN AVENUE
GLENDALE, CA 91201
ATTN: ANDRES FRIEDMAN
PHONE: 818-860-0351

PROJECT: PUBLIC STORAGE COLUMBIA EXPANSION

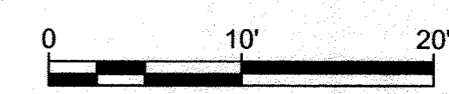
AREA: TAX MAP 42, PARCEL 31 LOTS A-2, A-3, A-4, A-7 ZONED M-1
GRID NO. 10 6TH ELECTION DISTRICT
9225, 9245, 9255, 9265 BERGER ROAD
COLUMBIA, MARYLAND 21046
HOWARD COUNTY, MARYLAND

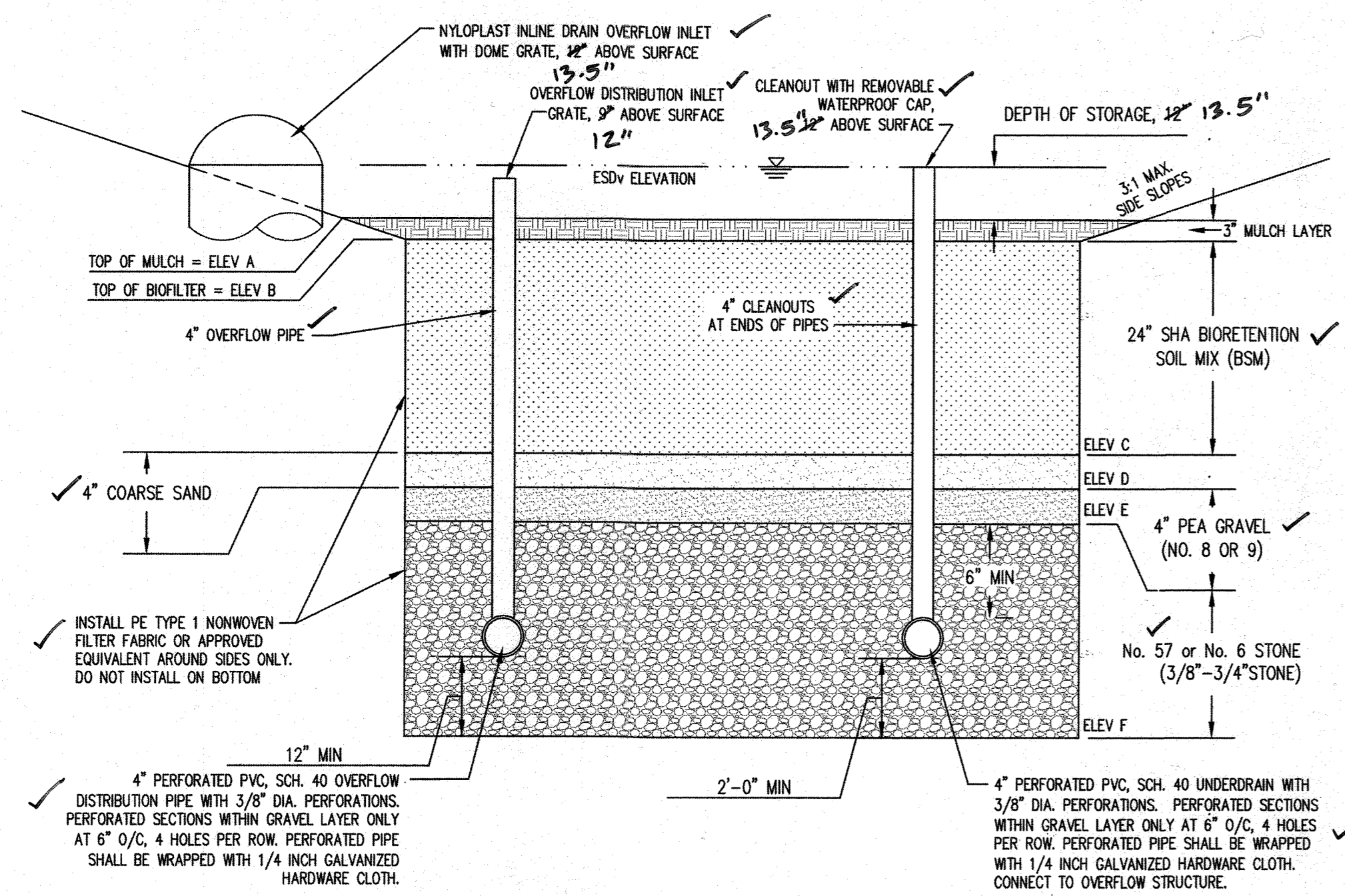
TITLE: AS-BUILT
STORMWATER MANAGEMENT
DETAILS

Penonni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects

8890 McGaw Road, Suite 100 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

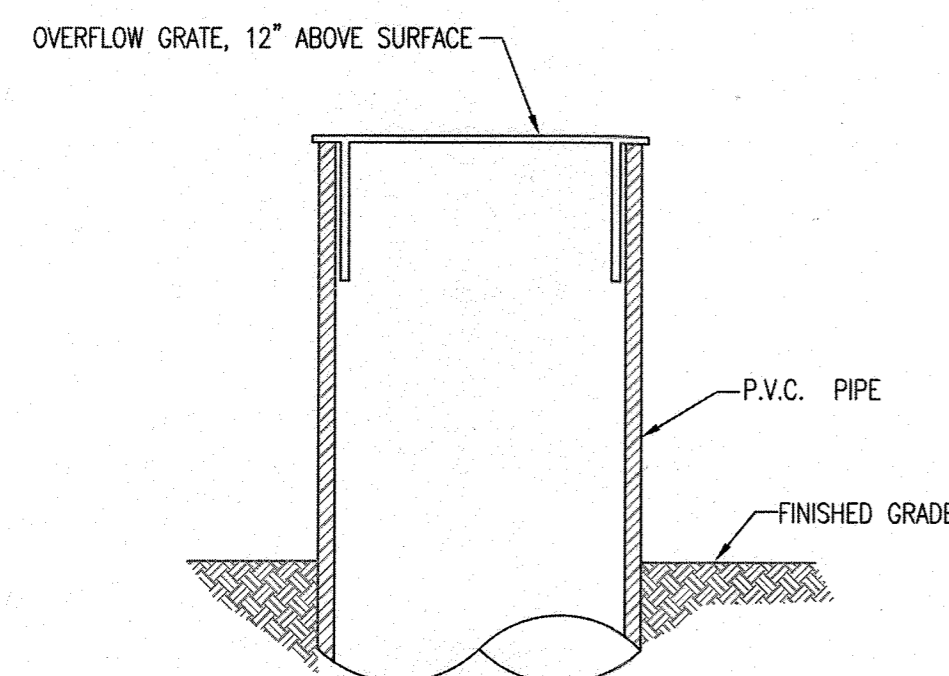
DESIGNED BY: PAI
DRAWN BY: ALC
PROJECT NO: SIENX19001
DATE: SEPTEMBER 3, 2021
SCALE: 1" = 10'
DRAWING NO. 15 OF 21



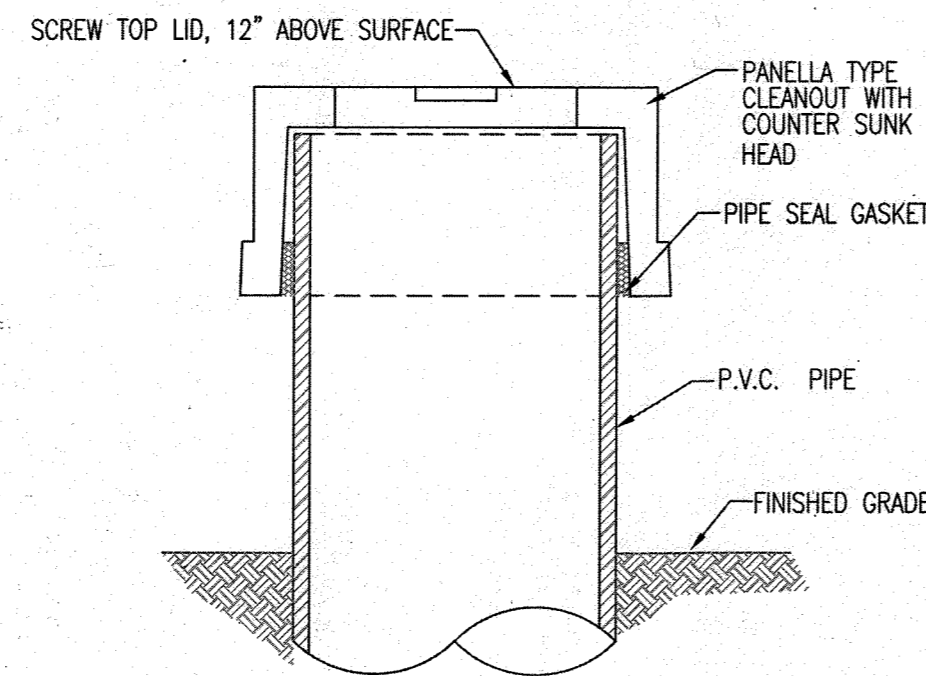


MICROBIORETENTION DESIGN DATA		
	#1	#1 AS BUILT
ESDv ELEV	397.90	397.79
FACILITY TOP ELEV A	396.65	
ELEV B	396.40	
ELEV C	394.40	
ELEV D	394.07	
ELEV E	393.74	
BOTTOM ELEV F	390.90	
SURFACE AREA AT "F" (SF)	1,374	1,488
OVERFLOW STRUCTURE	397.65	397.79
OUTFLOW PIPE INVERT ELEV FROM STRUCTURE	393.90	393.66
UNDERDRAIN INVERT ELEV AT CLEANOUT	392.91	392.74
DEPTH OF STONE BELOW UNDERDRAIN	2.01'	

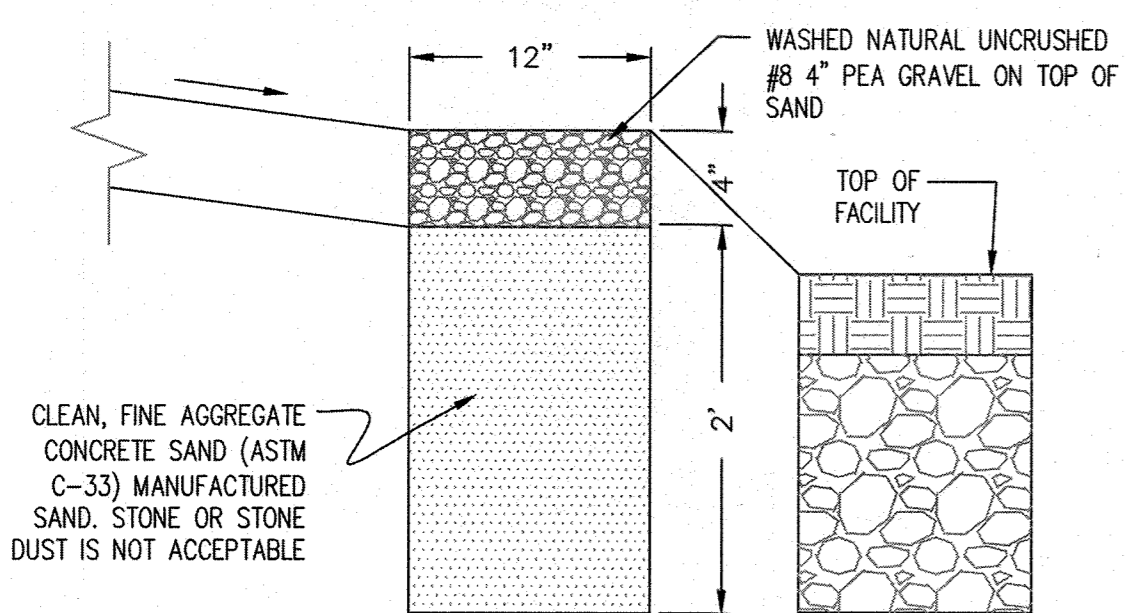
1 MICROBIORETENTION TYPICAL SECTION
NOT TO SCALE



3 OVERFLOW GRATE
NOT TO SCALE



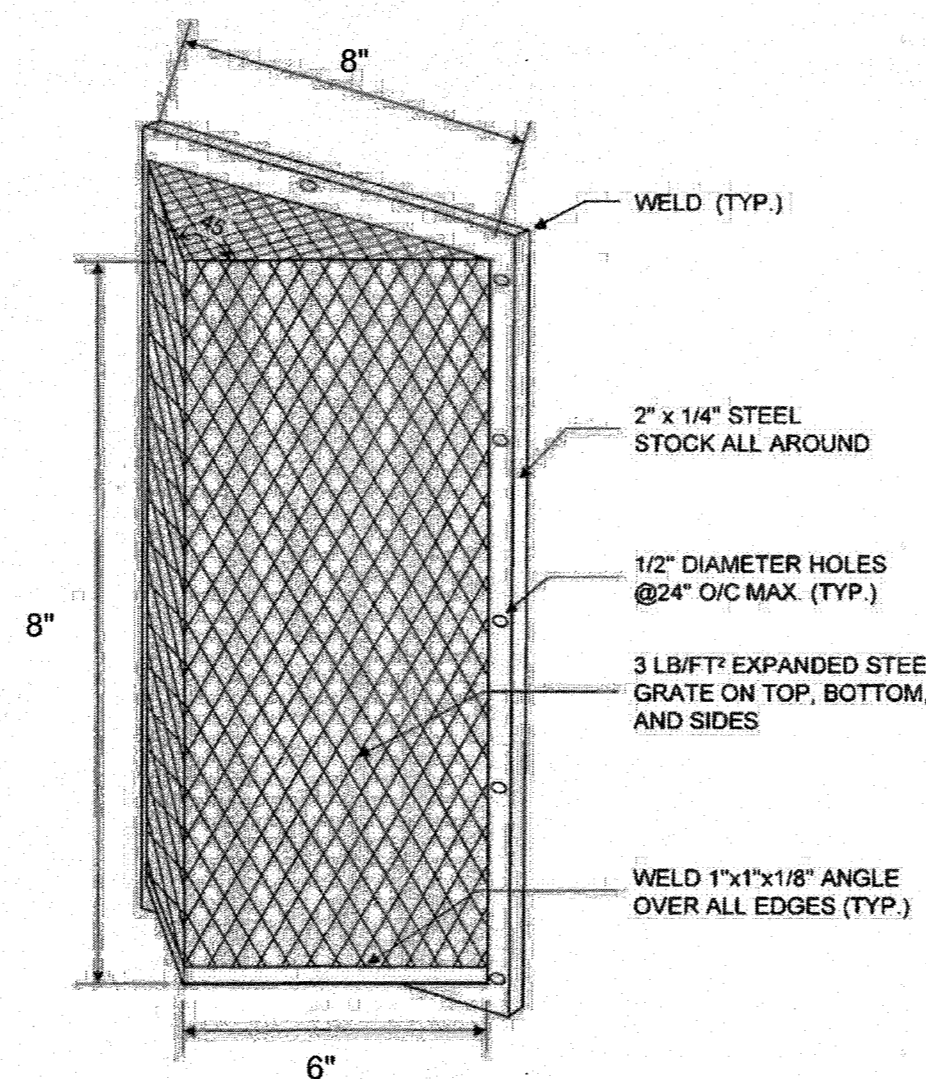
4 CLEAN-OUT OBSERVATION WELL CAP
NOT TO SCALE



5 STONE DIAPHRAGM TYPICAL SECTION
NOT TO SCALE

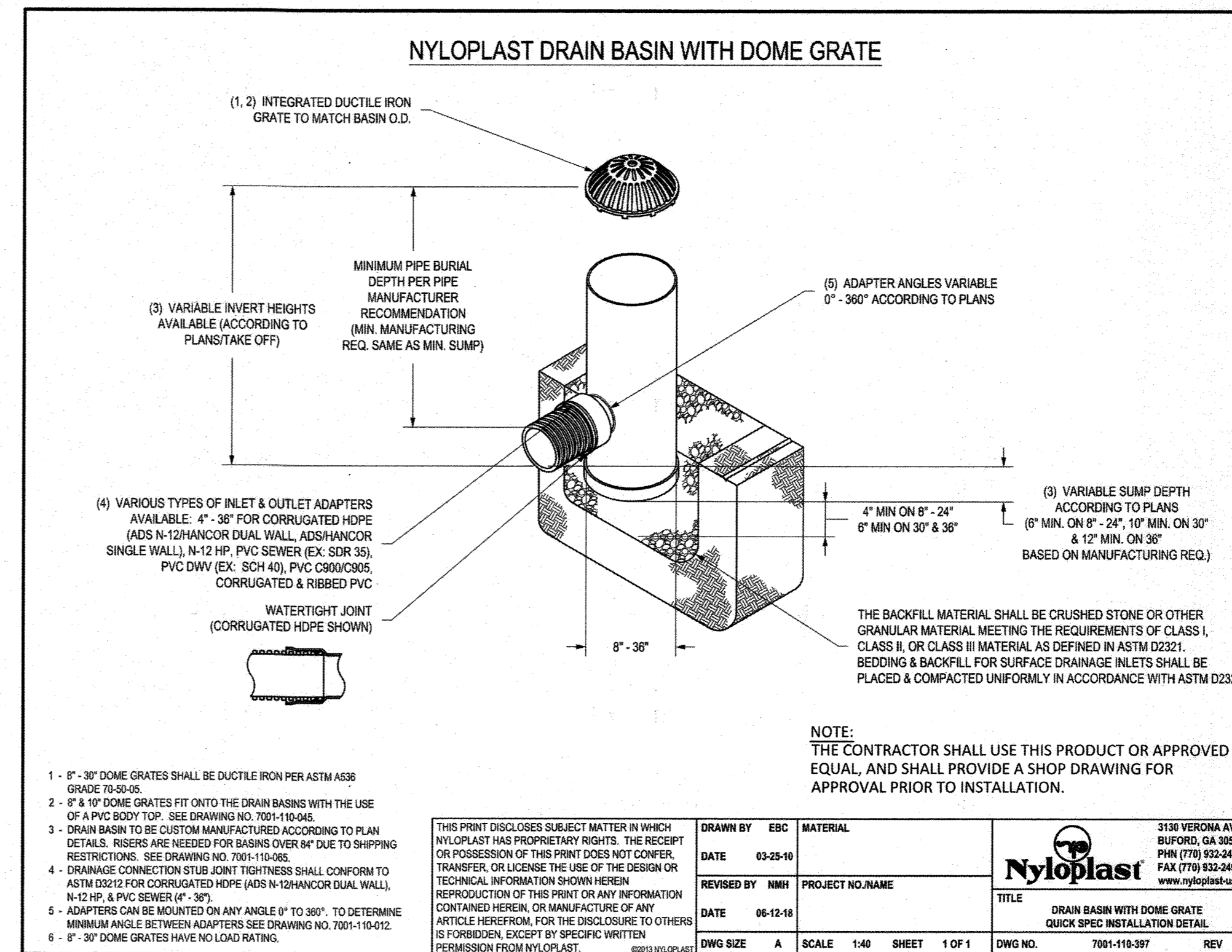
Appendix D.8. Miscellaneous Details for Compliance with Performance Criteria

Detail 1. Trash Rack Protection for Low Flow Orifice



6 TRASH RACK PROTECTION FOR LOW FLOW ORIFICE
NOT TO SCALE

- NOTES:
- TRASH RACK TO BE CENTERED OVER OPENING.
 - STEEL TO CONFORM TO ASTM A-36
 - ALL SURFACES TO BE COATED WITH ZRC COLD GALVANIZING COMPOUND AFTER WELDING
 - TRASH RACK SHALL BE FASTENED TO EXISTING PLATE ON END OF 12" PIPE WITH 1/2" STAINLESS STEEL HEX HEAD BOLTS.
 - CONTRACTOR TO PROVIDE SHOP DRAWING FOR APPROVAL PRIOR TO FABRICATION AND INSTALLATION.



NOTE: THE CONTRACTOR SHALL USE THIS PRODUCT OR APPROVED EQUAL, AND SHALL PROVIDE A SHOP DRAWING FOR APPROVAL PRIOR TO INSTALLATION.

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DRAWN BY EDC DATE 03-25-10 MATERIAL
REVISED BY NMH PROJECT NO. NAME
DATE 06-13-10
DWG SIZE A SCALE 1:40 SHEET 1 OF 1 DWG NO. 7001-119-397 REV E

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION											
Project Name		ezStorage - Columbia Expansion			Boring No.		SWM-1				
Location		Columbia, MD			Job #		20404A				
Datum		Hammer Wt.		140 lbs.		Hole Diameter		3.25 in.			
Surf. Elev.		ft		Hammer Drop		ft		Rock Core Diameter			
Date Started		8-5-20		Pipe Size (O.D.)		2.0 in.		Boring Method			
						HSA		Date Completed			
								8-5-20			
Elevation/Depth (ft)	SOIL SYMBOLS/SAMPLE CONDITIONS	Description	Boring and Sampling Notes	Sample No.	Rec. (in)	NM (%)	SPT Blows		SPT N (blows/ft)		
							N	10	30	50	
0		Asphalt - 5.5" Gravel Base - 3" Groundwater was not encountered while drilling		1	16		2-3-5	8			
1		Dark brown to brown, moist, loose, clayey SAND, some gravel. (SC; Fill)		2	16		3-3-4	7			
2		Brown, moist, soft to stiff, CLAY, trace sand. (CL)		3	16		2-2-3	5			
3		Brown to tan		4	18		5-6-9	15			
4		Bottom of boring at 10'	Boring was backfilled at completion								

SAMPLER TYPE	SAMPLE CONDITIONS	AT COMPLETION	GROUND WATER	CAVE IN DEPTH	BORING METHOD
DRIVEN SPLIT SPOON UNLESS OTHERWISE	D - DISINTEGRATED	AFTER 24 HRS.	Dry	6.4	HSA - HOLLOW STEM AUGERS
PT - PRESSED SHELBY TUBE	U - UNDISTURBED	AFTER HRS.			CFA - CONTINUOUS FLIGHT AUGERS
CA - CONTINUOUS FLIGHT AUGER	L - LOST				DC - DRIVING CASING
RC - ROCK CORE					MD - MUD DRILLING

STANDARD PENETRATION TEST-DRIVING 2" O.D. SAMPLER 1" WITH 140# HAMMER FALLING 30" COUNT MADE AT 6" INTERVALS.

AS-BUILT CERTIFICATION

I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.

Signature of Engineer: *[Signature]* DATE: 8/9/21
 PE # 21774
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 21774 EXPIRATION DATE: 11-10-25

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Mary A. Kendall Fox 12-23-21
 DIRECTOR DATE
 [Signature] 12-1-21
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
 [Signature] 12/22/21
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DEVELOPER: PS ATLANTIC COAST 2021 B, LLC
 A DELAWARE LIMITED LIABILITY COMPANY
 701 WESTERN AVENUE
 GLENDALE, CA 91201
 ATTN: ANDRES FRIEDMAN
 PHONE: 818-860-0351

OWNER: PS ATLANTIC COAST 2021 B, LLC
 701 WESTERN AVENUE
 GLENDALE, CA 91201
 ATTN: ANDRES FRIEDMAN
 PHONE: 818-860-0351

PROJECT: PUBLIC STORAGE COLUMBIA EXPANSION

AREA: TAX MAP 42, PARCEL 31 LOTS A-2, A-3, A-4, A-7 ZONED M-1
 GRID NO. 10 6TH ELECTION DISTRICT
 9225, 9245, 9255, 9265 BERGER ROAD
 COLUMBIA, MARYLAND 21046
 HOWARD COUNTY, MARYLAND

TITLE: AS-BUILT STORMWATER MANAGEMENT DETAILS

Pennoni Associates Inc.
 Engineers • Surveyors • Planners
 Landscape Architects

8890 McGaw Road, Suite 100 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

DESIGNED BY: PAI
 DRAWN BY: ALC
 PROJECT NO: SIENX19001
 DATE: SEPTEMBER 3, 2021
 SCALE: AS SHOWN
 DRAWING NO. 16 OF 21

LEGEND

PROPOSED CONCRETE [Pattern]

PROPOSED ASPHALT (SEE SITE DETAILS SHEET FOR DETAIL) [Pattern]

STRIPING AND SIGNAGE GENERAL NOTES

1. ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL CONFORM WITH THE LATEST EDITION OF THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MDMUTCD).
2. ALL POSTS USED FOR TRAFFIC CONTROL SIGNS, INSTALLED IN THE COUNTY RIGHT-OF-WAY, SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED "QUICK PUNCH" SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK PUNCH" HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.

PAVING GENERAL NOTES

1. NEW PROPOSED PAVING IS TO BE COORDINATED WITH THE NEW AND EXISTING CONDITIONS. IF ADDITIONAL PAVING IS NECESSARY, THE CONTRACTOR IS TO PLACE ADDITIONAL PAVING TO MAKE THE DRAINAGE AND SLOPES WORK WITH THE EXISTING CONDITIONS.

AS-BUILT CERTIFICATION

NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

JAMES A. RUFF 91774
 PRINTED NAME MD P.E. NO.
 SIGNATURE DATE 2/9/24

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. 91774 Expiration Date: 11-10-25

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Mary A. Kimmel For 12-22-21
 DIRECTOR DATE
 Chief, Development Engineering Division 12-1-21
 DATE
 Chief, Division of Land Development 12/22/21
 DATE

DATE	NO.	REVISION	BY

DEVELOPER PS ATLANTIC COAST 2021 B, LLC
 A DELAWARE LIMITED LIABILITY COMPANY
 701 WESTERN AVENUE
 GLENDALE, CA 91201
 ATTN: ANDRES FRIEDMAN
 PHONE: 818-860-0351

OWNER PS ATLANTIC COAST 2021 B, LLC
 701 WESTERN AVENUE
 GLENDALE, CA 91201
 ATTN: ANDRES FRIEDMAN
 PHONE: 818-860-0351

PROJECT PUBLIC STORAGE COLUMBIA EXPANSION

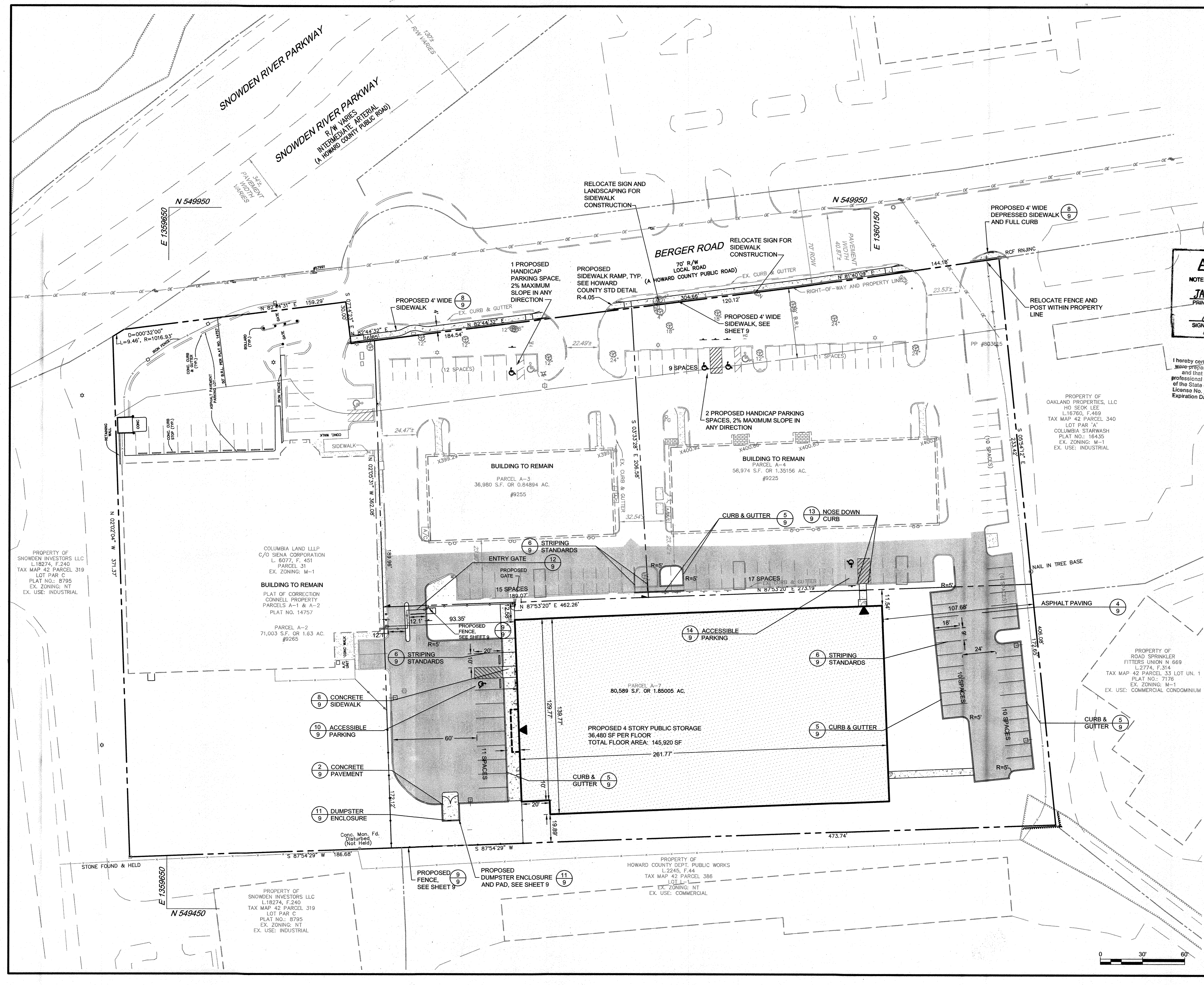
AREA TAX MAP 42, PARCEL 31 LOTS A-2, A-3, A-4, A-7 ZONED M-1
 GRID NO. 10 6TH ELECTION DISTRICT
 9225, 9245, 9255, 9265 BERGER ROAD
 COLUMBIA, MARYLAND 21046
 HOWARD COUNTY, MARYLAND

TITLE **AS-BUILT PAVING, STRIPING AND SIGNAGE PLAN**

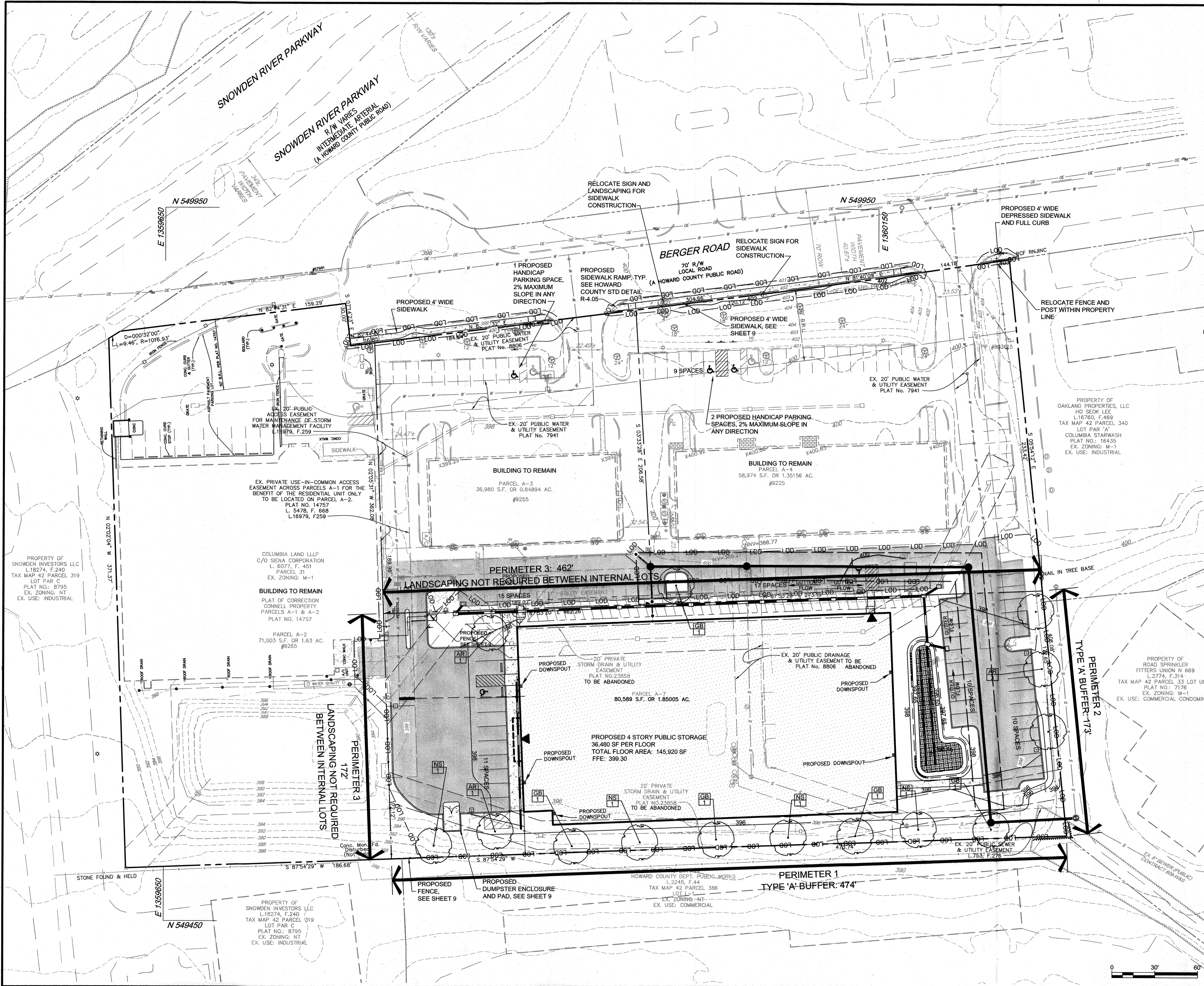
Pennoni Associates Inc.
Pennoni Engineers • Surveyors • Planners
 Landscape Architects
 8890 McGaw Road, Suite 100 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

SEAL [Professional Engineer Seal]

DESIGNED BY: PAI
 DRAWN BY: ALC
 PROJECT NO: SIENX19001
 DATE: SEPTEMBER 3, 2021
 SCALE: 1" = 30'
 DRAWING NO. 17 OF 21



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LEGEND

- PROPOSED SHADE TREE
- PROPOSED EVERGREEN TREE
- REQUIRED LANDSCAPING PER THE HOWARD COUNTY LANDSCAPE MANUAL
- PARKING LOT ISLAND AREA CREDIT

AS-BUILT CERTIFICATION

NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

PRINTED NAME: **JAMES A. RUFF** 91774
 M.D. P.E. NO. 91774

SIGNATURE: *[Signature]* DATE: 8/19/21

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. 91774 Expiration Date: 11-10-25

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director	<i>Mary Kendall Fir</i>	12-29-21
Chief, Development Engineering Division	<i>[Signature]</i>	12-1-21
Chief, Division of Land Development	<i>[Signature]</i>	12-22-21

DEVELOPER: PS ATLANTIC COAST 2021 B, LLC
 A DELAWARE LIMITED LIABILITY COMPANY
 701 WESTERN AVENUE
 GLENDALE, CA 91201
 ATTN: ANDRES FRIEDMAN
 PHONE: 818-860-0351

OWNER: PS ATLANTIC COAST 2021 B, LLC
 701 WESTERN AVENUE
 GLENDALE, CA 91201
 ATTN: ANDRES FRIEDMAN
 PHONE: 818-860-0351

PROJECT: PUBLIC STORAGE COLUMBIA EXPANSION

AREA: TAX MAP 42, PARCEL 31 LOTS A-2, A-3, A-4, A-7 ZONED M-1
 GRID NO. 10 6TH ELECTION DISTRICT
 9225, 9245, 9255, 9265 BERGER ROAD
 COLUMBIA, MARYLAND 21046
 HOWARD COUNTY, MARYLAND

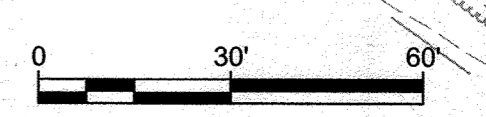
TITLE: **AS-BUILT LANDSCAPE PLAN**

Pennoni Associates Inc.
 Engineers • Surveyors • Planners
 Landscape Architects

8890 McGaw Road, Suite 100 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

SEAL: *[Professional Seal]*

DESIGNED BY: PAI
 DRAWN BY: ALC
 PROJECT NO: SIENX19001
 DATE: SEPTEMBER 3, 2021
 SCALE: 1" = 30'
 DRAWING NO. 18 OF 21



PLANT SCHEDULE					
SYMBOL	QTY.	SCIENTIFIC / COMMON NAME	SIZE	ROOT	REMARKS
SHADE TREES					
AA	5	ACER RUBRUM 'BOWHALL' BOWHALL RED MAPLE	2.5-3" CAL.	B&B	AS SHOWN
GB	5	GINKGO BILOBA 'AUTUMN GOLD' AUTUMN GOLD GINKGO	2.5-3" CAL.	B&B	MALE ONLY
NS	4	NYSSA SYLVATICA BLACK GUM	2.5-3" CAL.	B&B	AS SHOWN

SCHEDULE A - PERIMETER LANDSCAPE EDGE		
	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES
PERIMETER	1	2
LANDSCAPE TYPE	A	A
LINEAR FEET OF ROADWAY FRONTAGE / PERIMETER	474'	173'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO
CREDIT FOR WALL, FENCE, BERM OR DRIVE AISLE (YES/NO/LINEAR FEET)	NO	NO
LINEAR FEET REMAINING	474'	173'
NUMBER OF PLANTS REQUIRED		
SHADE TREES	8	3
EVERGREEN TREES	0	0
SHRUBS	0	0
NUMBER OF PLANTS PROVIDED		
SHADE TREES	8	3
EVERGREEN TREES	0	0
SMALL FLOWERING TREES	0	0
SHRUBS	0	0

SCHEDULE B - PARKING LOT INTERNAL LANDSCAPING	
PARKING LOT	1
NUMBER OF PARKING SPACES	37
NUMBER OF SHADE TREES REQUIRED (1/20 SPACES)	2
NUMBER OF TREES PROVIDED	
SHADE TREES	2
OTHER TREES (2:1 SUBSTITUTION)	0
NUMBER OF ISLANDS PROVIDED	2*

NOTE:
* 2 SHADE TREES ARE PROPOSED AT EITHER END OF THE PROPOSED 11 PARKING SPACES AND WILL TAKE CREDIT FOR THE 2 REQUIRED LANDSCAPE ISLANDS. OTHER EXISTING ISLANDS HAVE UTILITY EASEMENTS AND CANNOT BE PLANTED.

PLANTING SPECIFICATIONS

- Plants, related material, and operations shall meet the detailed description, as given on the plans and as described herein. Where discrepancies exist between Standards & Guidelines referenced within these specifications and the Howard County Landscape Manual, the latter takes precedence.
- All plant material, unless otherwise specified, that is not nursery grown, uniformly branched, does not have a vigorous root system, and does not conform to the most recent edition of the American Association of Nurserymen (AAN) Standards will be rejected. Plant material that is not healthy, vigorous, free from defects, decay, disfiguring roots, sunscald injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable disfigurements will be rejected. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will be rejected. All B & B plants shall be freshly dug; no heeled-in plants or plants from cold storage will be accepted.
- Unless otherwise specified, all general conditions, planting operations, details and planting specifications shall conform to the most recent edition of the "Landscape Specification Guidelines by the Landscape Contractors Association of MD, DC, & VA", (hereinafter "Landscape Guidelines") approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architects.
- Contractor shall guarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section on the Landscape Guidelines. Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and replacement of specified plant material.
- Contractor shall be responsible for notifying all relevant and appropriate utility companies, utility contractors, and "Miss Utility" a minimum of 48 hours prior to the beginning of any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Major changes will require the approval of the landscape architect. Damage to existing structure and utilities shall be repaired at the expense of the Contractor.
- Protection of existing vegetation to remain shall be accomplished via the temporary installation of 4 foot high snow fence at the drip line, see detail.
- Contractor is responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within growing season of completion of site construction. Do not plant Pinus strobus or Xcupressocyparis leylandii between November 15 and March 15. Landscape plants are not to be installed before site is graded to final grade.
- Contractor to regrade, fine grade, sod, hydroseed and straw mulch all areas disturbed by their work.
- Bid shall be based on actual site conditions. No extra payment shall be made for work arising from actual site conditions differing from those indicated on drawings and specifications.

PLANTING SPECIFICATIONS CONTINUED

- Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on the plant list, the quantities on the plant take precedence. Where discrepancies on the plant list exist between the symbols and the callout leader, the number of symbols take precedence.
- All shrubs and groundcover areas shall be planted in continuous planting beds, prepared as specified, unless otherwise indicated on plans. (See Specification 13). Beds to be mulched with minimum 2" and maximum 3" of composted, double-shredded hardwood mulch throughout.
- Positive drainage shall be maintained on planting beds (minimum 2 percent slope).
- Bed preparation shall be as follows: Till into a minimum depth of 6" 1 yard of Compro or Leafgro per 200 SF of planting bed, and 1 yard of topsoil per 100 SF of bed. Add 3 lbs of standard 5-10-5 fertilizer per cubic yard of planting mix and till. Ericaceous plants (Azaleas, Rhododendrons, etc.); top dress after planting with iron sulfate or comparable product according to package directions. Taxus baccata "Repondens" (English weeping yew): Top dress after planting with 1/4 to 1/2 cup lime each.
- Planting mix: For trees not in a prepared bed, mix 50% Compro or Leafgro with 50% soil from tree hole to use as backfill, see tree planting detail.
- Weed & insect control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. For tree planting, apply a pre-emergent on top of soil and root ball before mulching. Caution: For areas to be planted with a ground cover, be sure to carefully check the chemical used to assure its adaptability to the specific groundcover to be treated. Maintain the much weed-free for the extent of the warranty period. Under no circumstances is a pesticide containing chlorpyrifos to be used as a means of pest control.
- Water: All plant material planted shall be watered thoroughly the day of planting. All plant material not yet planted shall be properly protected from drying out until planted. At a minimum, water unplanted plant material daily and as necessary to avoid desiccation.
- Pruning: Do not heavily prune trees and shrubs at planting. Prune only broken, dead, or diseased branches.
- All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded, grass seed planted, and covered with straw mulch.

GENERAL NOTES:

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING MUST BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$4,200.
14 SHADE TREES @ \$300 = \$4,200
0 ORNAMENTAL TREES @ \$150 = \$0
0 EVERGREEN TREES @ \$150 = \$0
0 SHRUBS @ \$30 = \$0
- THIS PLAN IS FOR LANDSCAPING PURPOSES ONLY.
- CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
- ALL MATERIAL SELECTED 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 NURSERYMEN.
- ALL MATERIAL SHALL BE PLANTED IN ACCORDANCE WITH THE MINIMUM STANDARDS CITED IN THE LATEST EDITION OF "LANDSCAPE SPECIFICATION GUIDELINES" PUBLISHED BY THE LANDSCAPE CONTRACTORS ASSOCIATION.
- AT THE TIME OF INSTALLATION, ALL SHRUBS AND OTHER PLANTINGS SHALL BE OF THE PROPER HEIGHT AND/OR SPREAD REQUIREMENTS IN ACCORDANCE WITH THIS PLAN AND THE HOWARD COUNTY LANDSCAPE MANUAL.
- NO SUBSTITUTIONS OR RELOCATION OF PLANTS MAY BE MADE WITHOUT PRIOR APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING OF HOWARD COUNTY. ANY DEVIATION FROM THIS LANDSCAPE PLAN MAY RESULT IN A REQUIREMENT FOR SUBMITTAL OF AN OFFICIAL "REDLINE REVISION" TO THE SITE DEVELOPMENT PLAN(S) AND/OR DENIAL IN THE RELEASE OF LANDSCAPE SURETY.
- THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERMS, 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.
- AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE, SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPING MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.

DEVELOPER'S/BUILDER'S CERTIFICATE:

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

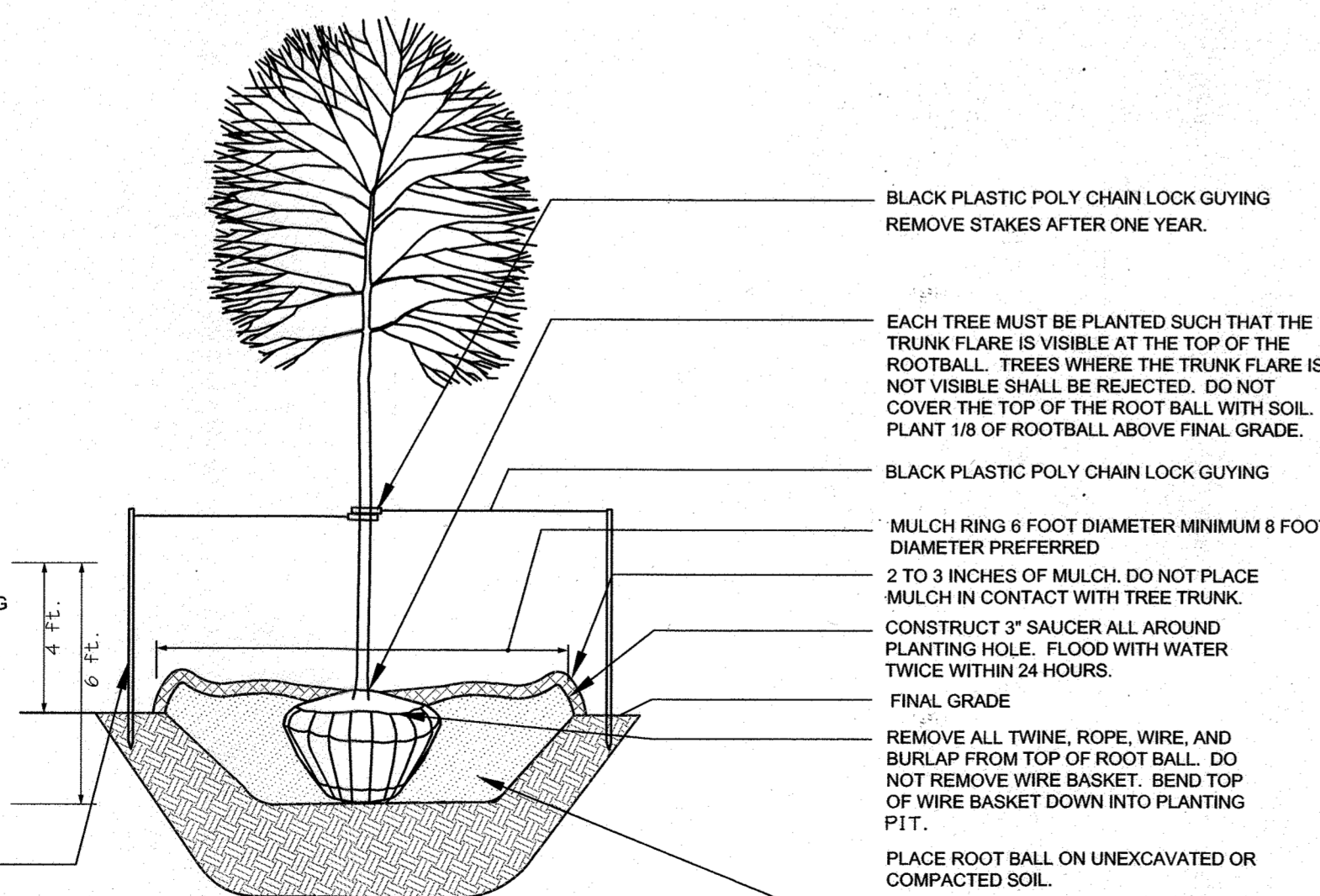
[Signature] 9/7/21
SIGNATURE DATE

AS-BUILT CERTIFICATION			
NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.			
JAMES A. RUFF	9/7/21		
PRINTED NAME	MD. P.E. NO.		
<i>[Signature]</i>	2/9/24		
SIGNATURE	DATE		

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. 21774
Expiration Date: 11-10-25

NOTES:

- DO NOT HEAVILY PRUNE THE TREE AT PLANTING. PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS, AND BROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED; HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.
- STAKE TREES AS SHOWN.
- DIG PLANTING PIT TWICE AS WIDE AS THE DIAMETER OF THE TOP OF THE ROOT BALL WITH A MINIMUM PLANTING PIT DIAMETER OF 5'.
- TIGHTEN GUYS ONLY ENOUGH TO KEEP FROM SLIPPING. ALLOW FOR SOME TRUNK MOVEMENT. GUYS SHALL BE LONG ENOUGH TO ACCOMMODATE 1.5 IN. OF GROWTH AND BUFFER ALL BRANCHES.
- TUCK ANY LOOSE ENDS OF THE GUY SO THAT NO LOOSE ENDS ARE EXPOSED.
- CONTRACTOR TO REMOVE AND GRADE OUT PLANTING SAUCER AT END OF ONE YEAR MAINTENANCE PERIOD. AREA AROUND TREES SHALL BE GRADED SMOOTH TO ELIMINATE MOUNDING. CONTRACTOR TO REMULCH AREA AROUND TREE WHEN GRADING IS COMPLETE.



BLACK PLASTIC POLY CHAIN LOCK GUYING
REMOVE STAKES AFTER ONE YEAR.

EACH TREE MUST BE PLANTED SUCH THAT THE TRUNK FLARE IS VISIBLE AT THE TOP OF THE ROOTBALL. TREES WHERE THE TRUNK FLARE IS NOT VISIBLE SHALL BE REJECTED. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL. PLACE 1/8 OF ROOTBALL ABOVE FINAL GRADE.

BLACK PLASTIC POLY CHAIN LOCK GUYING

MULCH RING 6 FOOT DIAMETER MINIMUM 8 FOOT DIAMETER PREFERRED
2 TO 3 INCHES OF MULCH. DO NOT PLACE MULCH IN CONTACT WITH TREE TRUNK.
CONSTRUCT 3" SAUCER ALL AROUND PLANTING HOLE. FLOOD WITH WATER TWICE WITHIN 24 HOURS.
FINAL GRADE

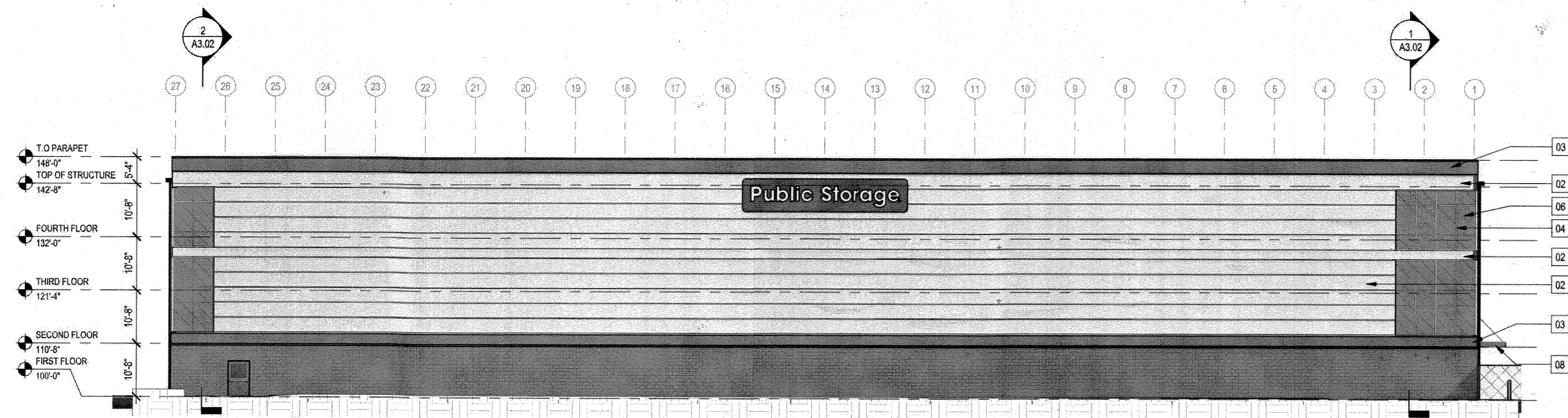
REMOVE ALL TWINE, ROPE, WIRE, AND BURLAP FROM TOP OF ROOT BALL. DO NOT REMOVE WIRE BASKET. SEND TOP OF WIRE BASKET DOWN INTO PLANTING PIT.

PLACE ROOT BALL ON UNEXCAVATED OR COMPACTED SOIL.

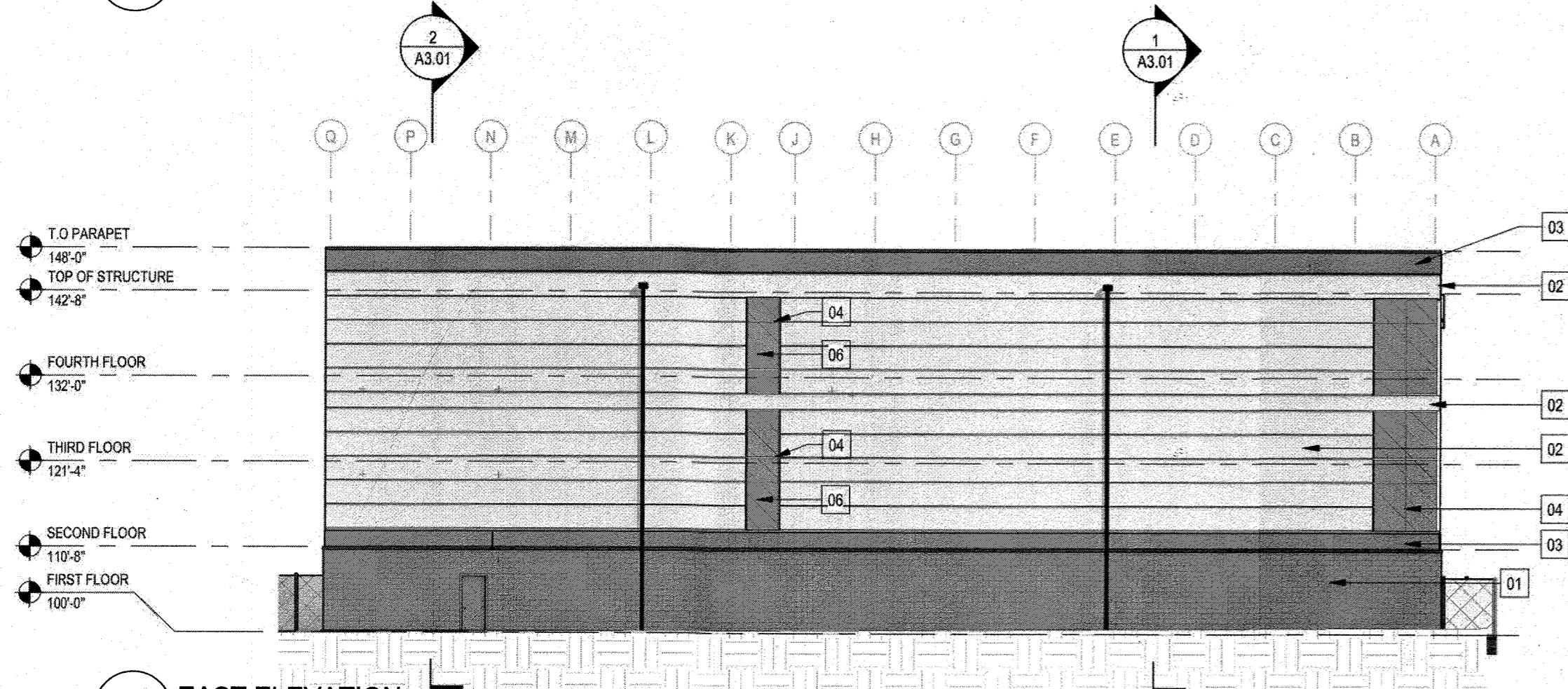
BACKFILL WITH PLANTING MIX (SEE PLANTING SPECIFICATIONS). TAMP SOIL AROUND ROOT BALL BASE FIRMLY WITH FOOT PRESSURE SO THAT ROOT BALL DOES NOT SHIFT.

1 DECIDUOUS B&B TREE PLANTING DETAIL (TREES 3" CAL. OR SMALLER)
19 NOT TO SCALE

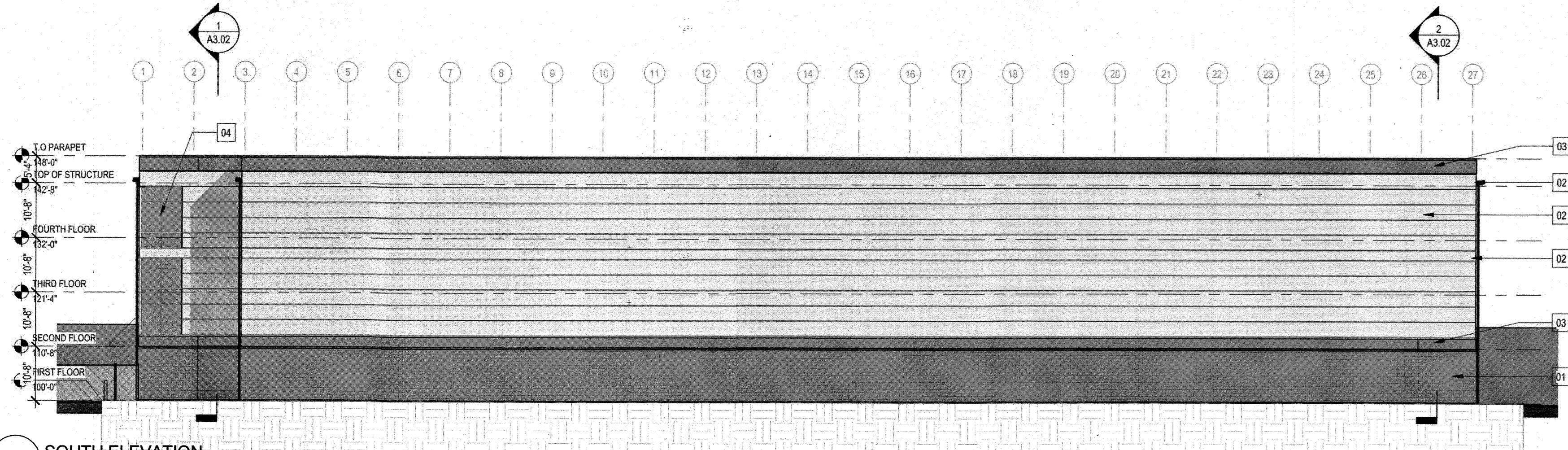
APPROVED: DEPARTMENT OF PLANNING AND ZONING			
<i>[Signature]</i>	12-23-21		
DIRECTOR	DATE		
<i>[Signature]</i>	12-1-21		
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE		
<i>[Signature]</i>	12/22/21		
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE		
DATE	NO.	REVISION	BY
DEVELOPER PS ATLANTIC COAST 2021 B, LLC A DELAWARE LIMITED LIABILITY COMPANY 701 WESTERN AVENUE GLENDALE, CA 91201 ATTN: ANDRES FRIEDMAN PHONE: 818-860-0351			
OWNER PS ATLANTIC COAST 2021 B, LLC 701 WESTERN AVENUE GLENDALE, CA 91201 ATTN: ANDRES FRIEDMAN PHONE: 818-860-0351			
PROJECT PUBLIC STORAGE COLUMBIA EXPANSION			
AREA TAX MAP 42, PARCEL 31 LOTS A-2, A-3, A-4, A-7 ZONED M-1 GRID NO. 10 6TH ELECTION DISTRICT 9225, 9245, 9255, 9265 BERGER ROAD COLUMBIA, MARYLAND 21046 HOWARD COUNTY, MARYLAND			
TITLE AS-BUILT LANDSCAPE NOTES AND DETAILS			
Pennoni Associates Inc. Engineers • Surveyors • Planners Landscape Architects 8890 McGaw Road, Suite 100 Columbia, MD 21045 T 410.997.8900 F 410.997.9282			
SEAL	DESIGNED BY: PAI		
	DRAWN BY: ALC		
	PROJECT NO: SIENX19001		
	DATE: SEPTEMBER 3, 2021		
	SCALE: NO SCALE		
BY: <i>[Signature]</i>	10-17-21		
DRAWING NO. 19 OF 21			



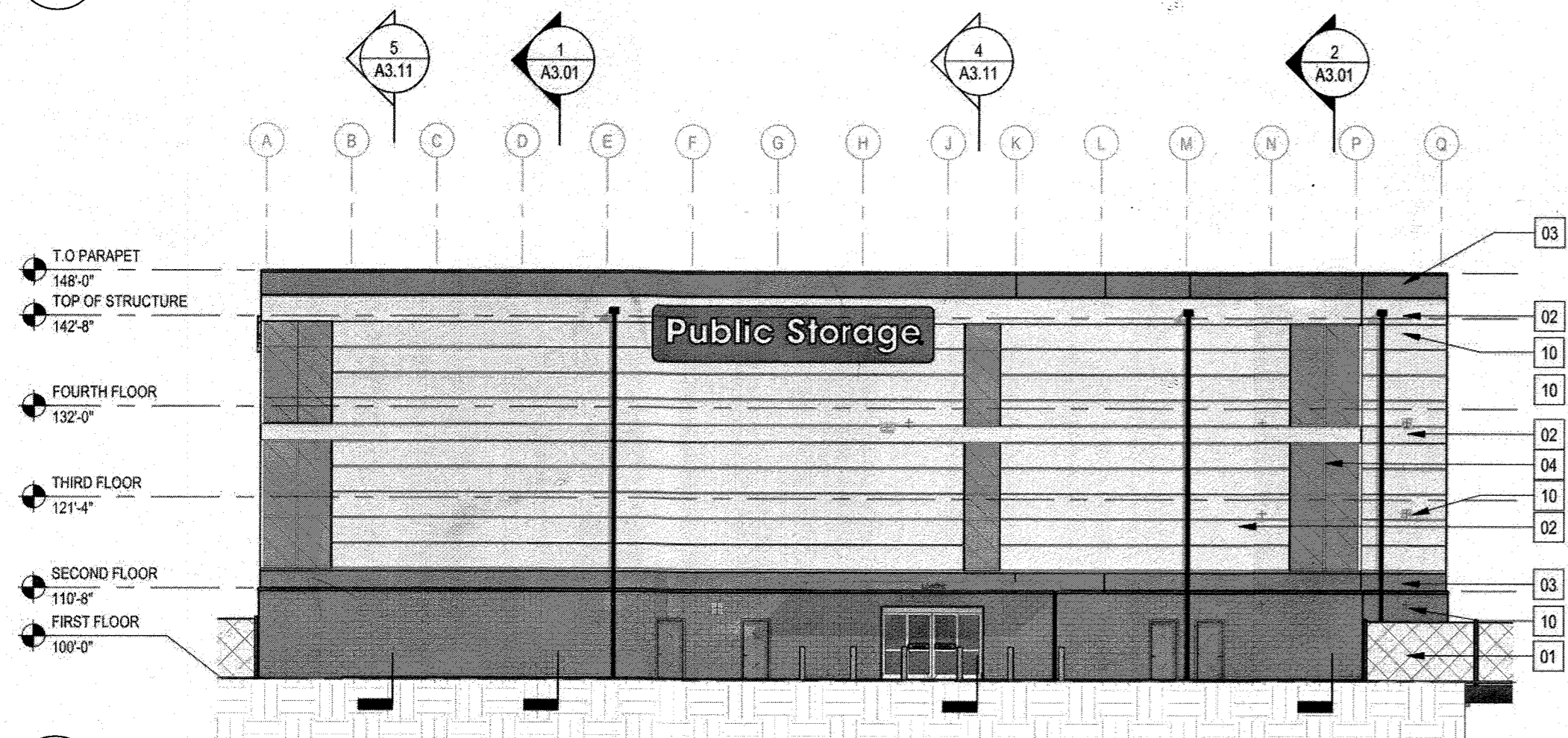
NORTH ELEVATION
NOT TO SCALE



EAST ELEVATION
NOT TO SCALE



SOUTH ELEVATION
NOT TO SCALE



WEST ELEVATION
NOT TO SCALE

AS-BUILT CERTIFICATION
NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

PRINTED NAME: **JAMES A. RUEF** MD. P.E. NO. **21774**
SIGNATURE: *[Signature]* DATE: **12/24**

STATE OF MARYLAND
PROFESSIONAL ENGINEER
LICENSE NO. 21774
EXPIRES 11-10-25

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. 21774
Expiration Date: 11-10-25

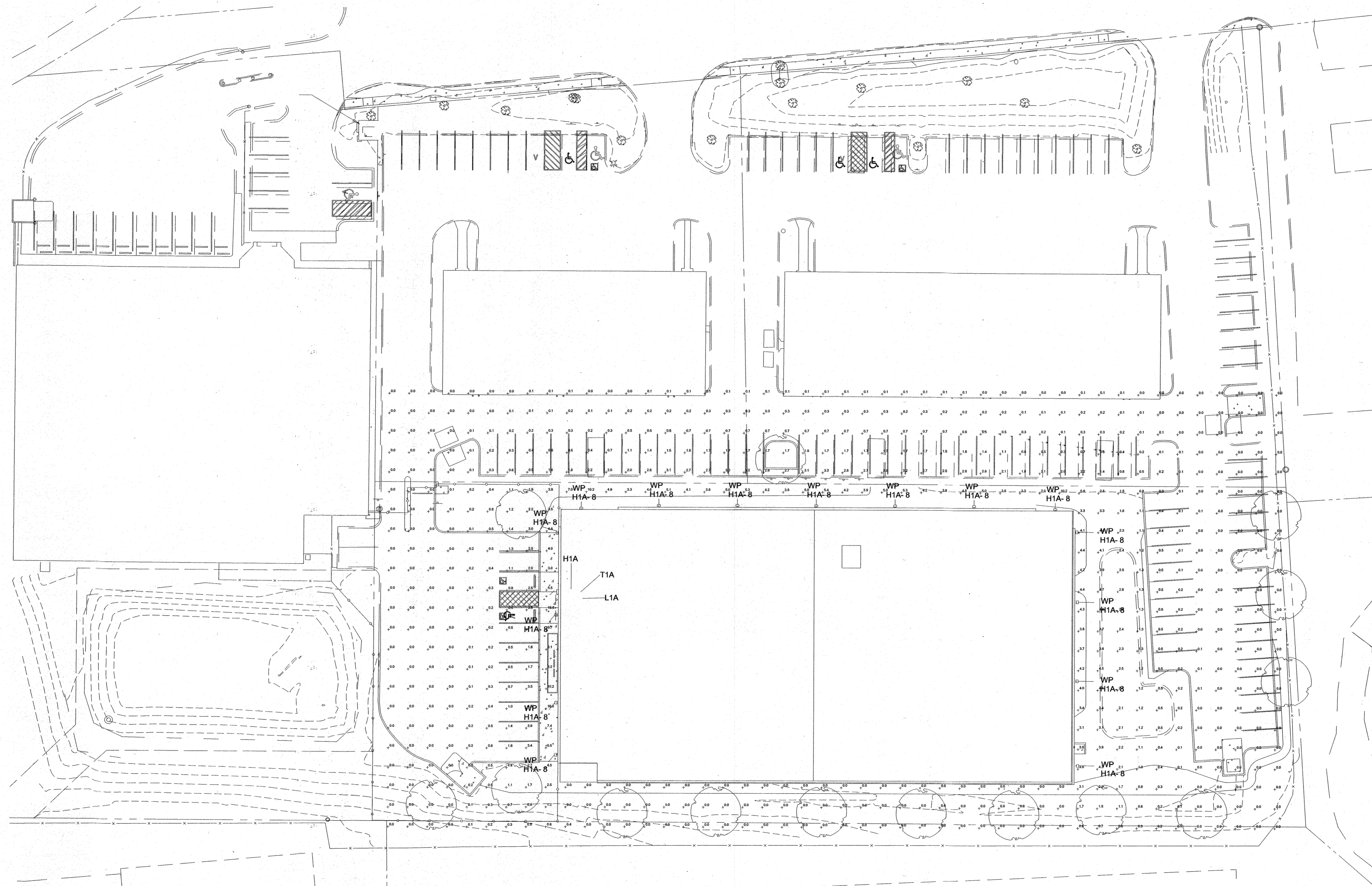
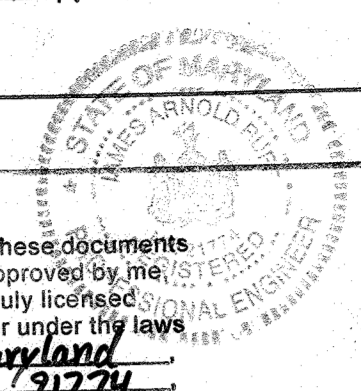
APPROVED: DEPARTMENT OF PLANNING AND ZONING			
<i>Maury Kendall Fox</i>		<i>12-23-21</i>	DATE
DIRECTOR			
<i>Shel Clark</i>		<i>12-1-21</i>	DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION			
<i>James S. Smith</i>		<i>12/22/21</i>	DATE
CHIEF, DIVISION OF LAND DEVELOPMENT			
DATE	NO.	REVISION	BY
DEVELOPER: PS ATLANTIC COAST 2021 B, LLC A DELAWARE LIMITED LIABILITY COMPANY 701 WESTERN AVENUE GLENDALE, CA 91201 ATTN: ANDRES FRIEDMAN PHONE: 818-860-0351			
OWNER: PS ATLANTIC COAST 2021 B, LLC 701 WESTERN AVENUE GLENDALE, CA 91201 ATTN: ANDRES FRIEDMAN PHONE: 818-860-0351			
PROJECT: PUBLIC STORAGE COLUMBIA EXPANSION			
AREA: TAX MAP 42, PARCEL 31 LOTS A-2, A-3, A-4, A-7 ZONED M-1 GRID NO. 10 6TH ELECTION DISTRICT 9225, 9245, 9255, 9265 BERGER ROAD COLUMBIA, MARYLAND 21046 HOWARD COUNTY, MARYLAND			
TITLE: AS-BUILT BUILDING ELEVATIONS			
Pennoni Associates Inc. Engineers • Surveyors • Planners Landscape Architects 8890 McGaw Road, Suite 100 Columbia, MD 21045 T 410.997.8900 F 410.997.9282			
DESIGNED BY: PAI		DRAWN BY: ALC	
PROJECT NO: SIENX19001			
DATE: SEPTEMBER 3, 2021			
SCALE: NOT TO SCALE			
DRAWING NO. 20 OF 21			

AS-BUILT CERTIFICATION

NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

PRINTED NAME: JAMES A. RUFF MD. P.E. NO. 21774
 SIGNATURE: *[Signature]* DATE: 2/9/24

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. 21774
 Expiration Date: 11-10-25



APPROVED: DEPARTMENT OF PLANNING AND ZONING

Mary Kendall Fox 12-23-21
 DIRECTOR DATE
[Signature] 12-1-21
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
[Signature] 12-22-21
 CHIEF DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION	BY

DEVELOPER: PS ATLANTIC COAST 2021 B, LLC
 A DELAWARE LIMITED LIABILITY COMPANY
 701 WESTERN AVENUE
 GLENDALE, CA 91201
 ATTN: ANDRES FRIEDMAN
 PHONE: 818-860-0351

OWNER: PS ATLANTIC COAST 2021 B, LLC
 701 WESTERN AVENUE
 GLENDALE, CA 91201
 ATTN: ANDRES FRIEDMAN
 PHONE: 818-860-0351

PROJECT: PUBLIC STORAGE COLUMBIA EXPANSION

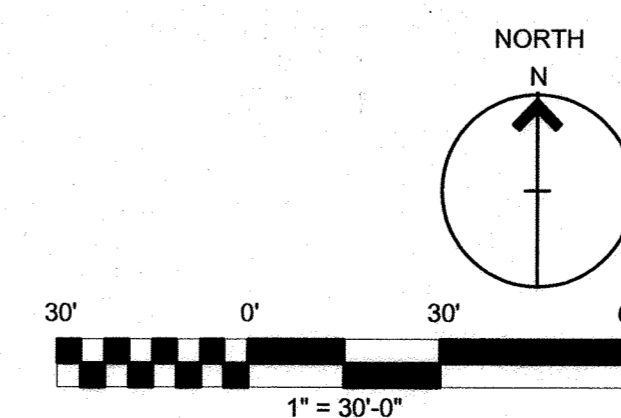
AREA: TAX MAP 42, PARCEL 31 LOTS A-2, A-3, A-4, A-7 ZONED M-1.
 GRID NO. 10 6TH ELECTION DISTRICT
 9225, 9245, 9255, 9265 BERGER ROAD
 COLUMBIA, MARYLAND 21046
 HOWARD COUNTY, MARYLAND

TITLE: **AS-BUILT LIGHTING PLAN**

Pennoni Pennoni Associates Inc.
 Engineers · Surveyors · Planners
 Landscape Architects

8890 McGaw Road, Suite 100 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

SEAL: *[Seal]*
 DESIGNED BY: DMC
 DRAWN BY:
 PROJECT NO: SIENX19001
 DATE: SEPTEMBER 3, 2021
 SCALE: 1"=30'
 DRAWING NO. 21 OF 21



Summit
 CONSULTANTS, INC.
 Texas BPE Registration # F-207

1300 Summit Avenue Suite 500 4144 N. Central Expwy Suite 635
 Fort Worth, Texas 76102 Dallas, Texas 75204
 Office 817.878.4242 Office 214.420.9111
 www.summitnep.com

BY: *[Signature]*
 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. 22305. EXPIRATION DATE: 10/1/22