

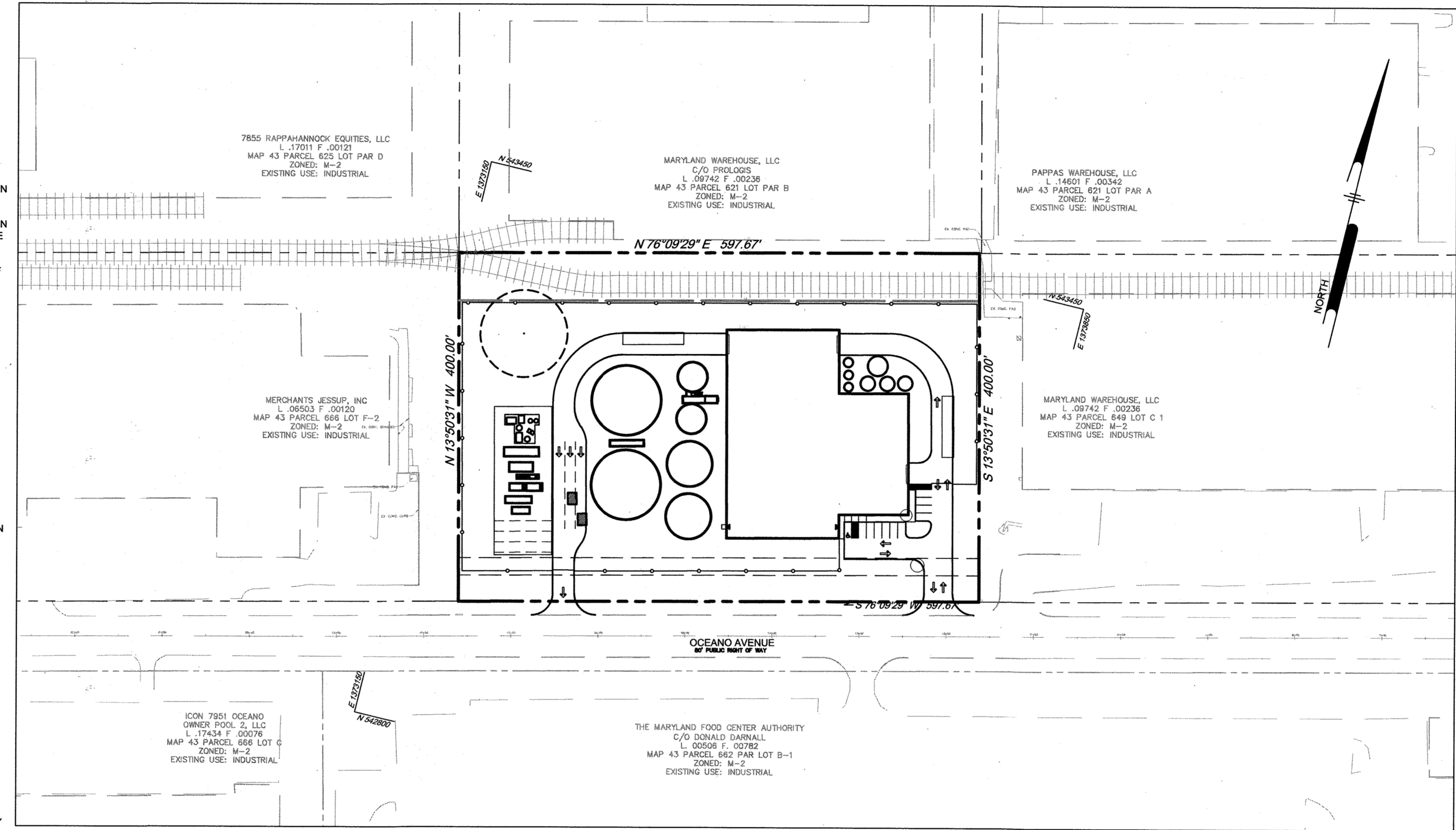
SHEET INDEX

Table with 4 columns: NO, DESCRIPTION, NO, DESCRIPTION. Lists 11 sheets including COVER SHEET, EXISTING CONDITIONS AND SOILS PLAN, etc.

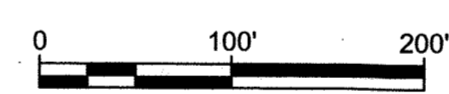
GENERAL NOTES

- 1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY 'MISS UTILITY' AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
... (Notes 1-48) ...

SITE DEVELOPMENT PLAN
MARYLAND FOOD CENTER AUTHORITY
ANAEROBIC DIGESTION FACILITY
7900 N OCEANO AVENUE
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND



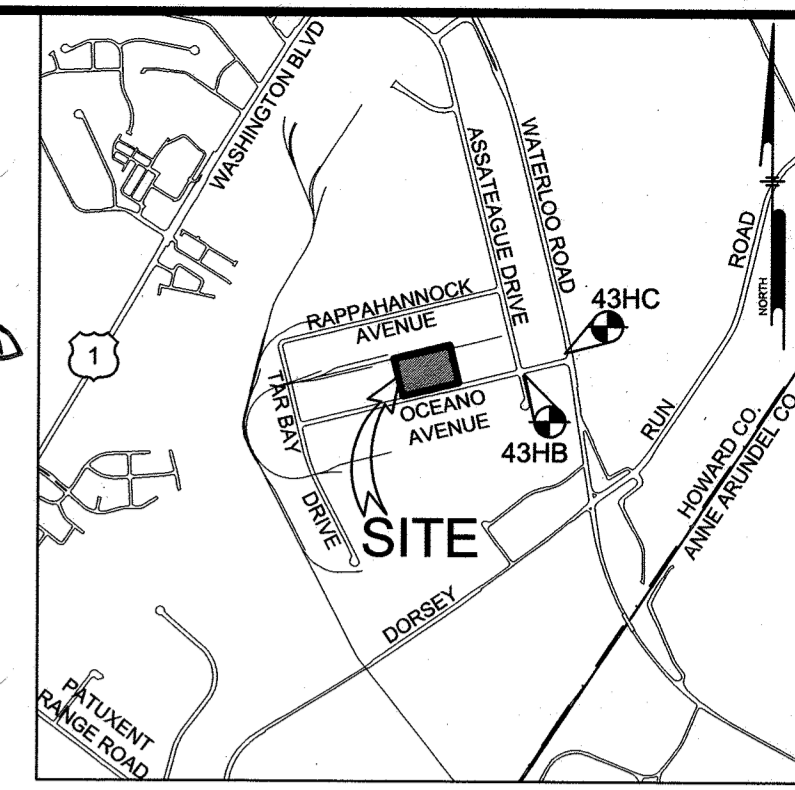
LOCATION PLAN
SCALE: 1" = 100'



- 41. CONTRACT SHALL CONTACT MISS UTILITY AT 1-800-257-7777 72 HOURS PRIOR TO BEGINNING ANY EXCAVATION WORK ON THE SITE.
42. 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 TIE IN LOCATIONS.
... (Notes 41-65) ...

SITE ANALYSIS DATA

Table with 2 columns: FIELD, VALUE. Includes AREA OF SITE (5.49 ACRES), LIMIT OF DISTURBANCE (4.81 ACRES), PROPOSED FLOOR AREA (29,757 SF), etc.



VICINITY MAP

SCALE: 1"=2,000'
HOWARD COUNTY
ADC MAP 41 GRID D-1
ADC MAP USE LICENSE #3652

BENCHMARKS

HOWARD COUNTY SURVEY CONTROL: 43HB
ELEVATION 251.619
N 543,166.735 E 1,374,425.118
LOCATION IS 5.3' FROM FACE OF CURB ALONG OCEANO AVENUE.

HOWARD COUNTY SURVEY CONTROL: 43HC
ELEVATION 253.918
N 543,386.118 E 1,274,935.862
LOCATION IS 2.5' FROM FACE OF CURB ALONG MD ROUTE 175.

GEN. NOTE GB CONTINUED:
AND APPROVAL BY THE HEALTH DEPARTMENT. SUCH FACILITIES MAY INCLUDE, BUT ARE NOT LIMITED TO, THOSE WHICH HAVE SWIMMING POOLS, OR THAT SELL PREPARED OR PACKAGED FOODS, OR THAT MAY HAVE EQUIPMENT THAT EMITS RADIATION.

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT

Signature and date for County Health Officer approval.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Signature and date for Chief, Development Engineering Division approval.

Signature and date for Chief, Division of Land Development approval.

Signature and date for Director, Planning & Zoning approval.

Table with 4 columns: DATE, NO., REVISION, BY. Shows revision history for site plan.

DEVELOPER: MORF I, LLC
9250 BENDIX ROAD
COLUMBIA, MD 21045

OWNER: MARYLAND FOOD CENTER AUTHORITY
7901 OCEANO AVENUE
JESSUP, MD 20794-5411

PROJECT: MARYLAND FOOD CENTER AUTHORITY
ANAEROBIC DIGESTION FACILITY

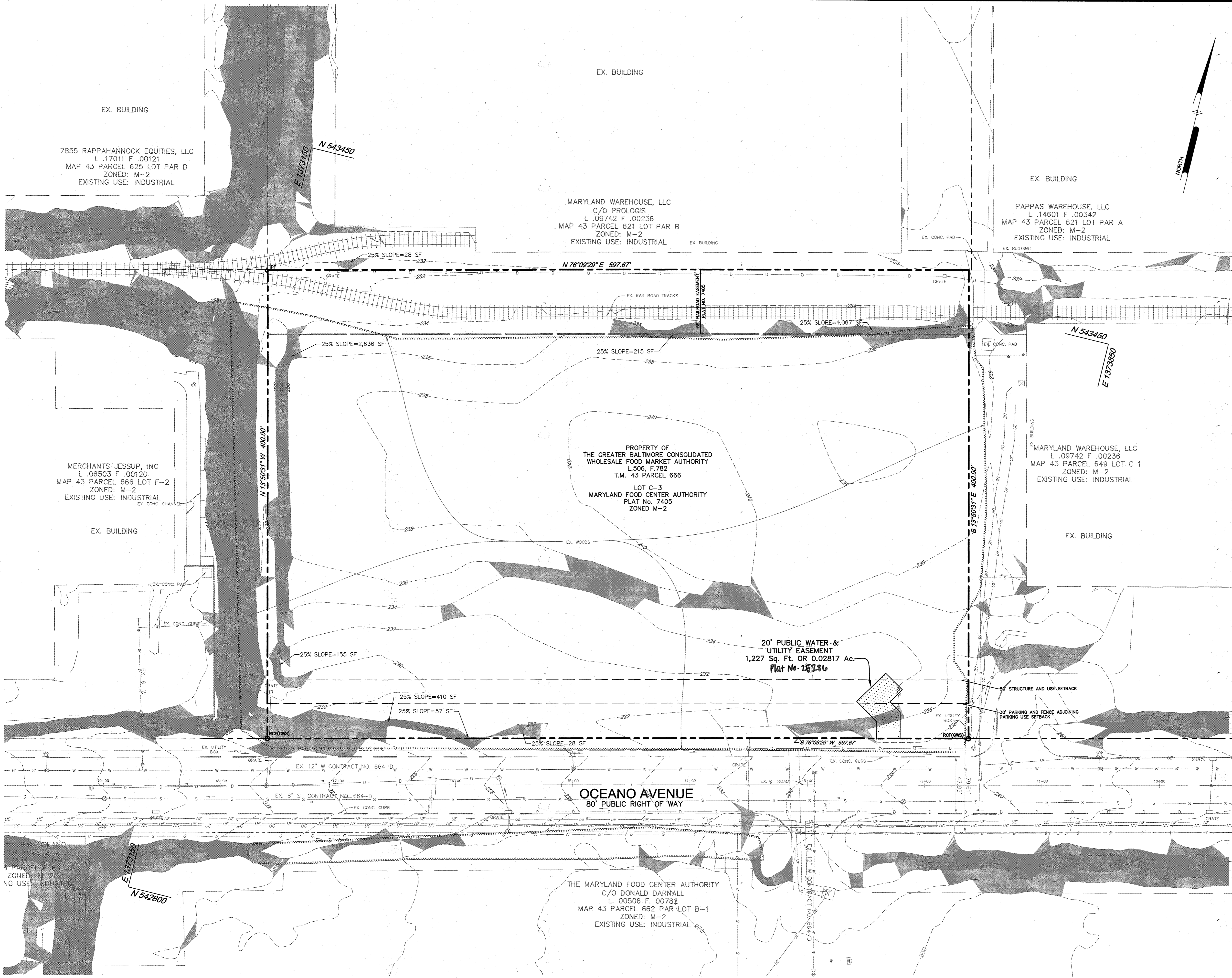
AREA: TAX MAP 43, PARCEL 666 LOT C3 PLAT 7405 ZONED M-2
GRID NO. 21 6TH ELECTION DISTRICT
7900 N OCEANO AVENUE
JESSUP, MARYLAND 20794

COVER SHEET

Pennoni Associates Inc.
Engineers - Surveyors - Planners
Landscape Architects
8818 Centre Park Drive, Suite 200 Columbia, MD 21045

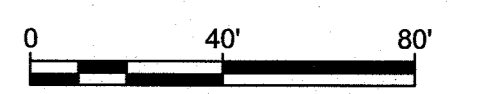
Professional seal and signature of PJS/USN/JTB, dated 3/23/2020.

ADDRESS CHART table with columns: PARCEL NUMBER, STREET ADDRESS, SUBDIVISION NAME, etc.



LEGEND

EXISTING 2' CONTOUR	---
EXISTING 10' CONTOUR	---
EX. PROPERTY LINE AND RIGHT OF WAY	---
EX. TREELINE	---
15-25% SLOPES	---
>25% SLOPES	---
EXISTING WATER	---
EXISTING SEWER	---
EXISTING STORM DRAIN	---
EXISTING GAS	---
EXISTING UNDERGROUND COMMUNICATIONS	---
EXISTING UNDERGROUND ELECTRICAL	---
EXISTING RAILROAD TRACK	---
EXISTING FIRE HYDRANT	---



APPROVED : DEPARTMENT OF PLANNING AND ZONING

<i>[Signature]</i>	4.1.20
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>[Signature]</i>	4/7/2020
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>[Signature]</i>	4-13-2020
Director, Planning & Zoning	DATE

DATE	NO.	REVISION	BY

DEVELOPER
 MORF, LLC
 9250 BENDIX ROAD
 COLUMBIA, MD 21045
 ATTN: GORDON HOLK
 PHONE: 860-462-9533

OWNER
 MARYLAND FOOD CENTER AUTHORITY
 7901 OCEANO AVENUE
 JESSUP, MD 20794-9411
 ATTN: PEGGY TORRE
 PHONE: 410-379-5760

PROJECT
 MARYLAND FOOD CENTER AUTHORITY
 ANAEROBIC DIGESTION FACILITY

AREA
 TAX MAP 43, PARCEL 666 LOT C3 PLAT 7405 ZONED M-2
 GRID NO. 21 6TH ELECTION DISTRICT
 7900 N OCEANO AVENUE
 JESSUP, MARYLAND 20794
 HOWARD COUNTY, MARYLAND

TITLE
 EXISTING CONDITIONS
 AND SOILS PLAN

Pennoni Associates Inc.
 Engineers • Surveyors • Planners
 Landscape Architects
 8818 Centre Park Drive, Suite 200 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

SEAL

DESIGNED BY : PJS/JSN/JTB
 DRAWN BY : JSN/JTB
 PROJECT NO : BTSM/18001
 DATE : JANUARY 13, 2020
 SCALE : 1" = 40'
 DRAWING NO. 2 OF 24

SOILS CHART

MAP SYMBOL	NAME	STRUCTURAL LIMITATIONS	EROSION HAZARD	HYDRIC	SLOPE (%)	SOIL GROUP	Kw FACTOR
UID	URBAN LAND-UDORTMENTS COMPLEX	NOT RATED	SLIGHT	N	0-15	D	0.28

SOURCE: NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY AND HOWARD SOIL CONSERVATION DISTRICT SOIL MAP NUMBER X.
 NOTE: THIS PROPERTY IS LOCATED IN A LARGE AREA OF SOIL TYPE UID AND THE SOIL BOUNDARIES FALL OUTSIDE OF THE VIEW OF THIS PLAN.

LEGEND

EXISTING 2' CONTOUR	---
EXISTING 10' CONTOUR	---
EX. PROPERTY LINE AND RIGHT OF WAY	---
EX. TREELINE	---
EXISTING BUILDING	---
EXISTING WATER	---
EXISTING SEWER	---
EXISTING STORM DRAIN	---
EXISTING GAS	---
EXISTING UNDERGROUND ELECTRIC	---
EXISTING UNDERGROUND COMMUNICATION	---
EXISTING RAILROAD TRACK	---
EXISTING CURB & GUTTER	---
EXISTING FIRE HYDRANT	---
PROPOSED 2' CONTOUR	---
PROPOSED 10' CONTOUR	---
LIMIT OF DISTURBANCE	---
PROPOSED WATER	---
PROPOSED HYDRANT	---
PROPOSED SEWER	---
PROPOSED STORM DRAIN	---
PROPOSED TREELINE	---
PROPOSED MICRO BIORETENTION	---
PROPOSED SPOT ELEVATION	---

DATE	NO.	REVISION	BY
04/16/21	3	REVISED GRADING AND ROOF DRAINS	JSN
07/28/2021	2	WATER METER AND SITE REVISIONS	JTB
09/23/2020	1	REVISED SITE LAYOUT AND GRADING	JSN

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION JP 11-1-21 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT 11/4/21 DATE

DEVELOPER
MORF 1, LLC
9250 BENDIX ROAD
COLUMBIA, MD 21045
ATTN: GORDON HOLK
PHONE: 860-462-9533

OWNER
MARYLAND FOOD CENTER AUTHORITY
7901 OCEANO AVENUE
JESSUP, MD 20794-9411
ATTN: PEGGY TORRE
PHONE: 410-379-5760

PROJECT
MARYLAND FOOD CENTER AUTHORITY
ANAEROBIC DIGESTION FACILITY

AREA
TAX MAP 43, PARCEL 666 LOT C3 PLAT 7405 ZONED M-2
GRID NO. 21 6TH ELECTION DISTRICT
7900 N OCEANO AVENUE
JESSUP, MARYLAND 20794
HOWARD COUNTY, MARYLAND

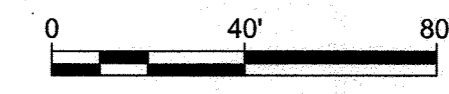
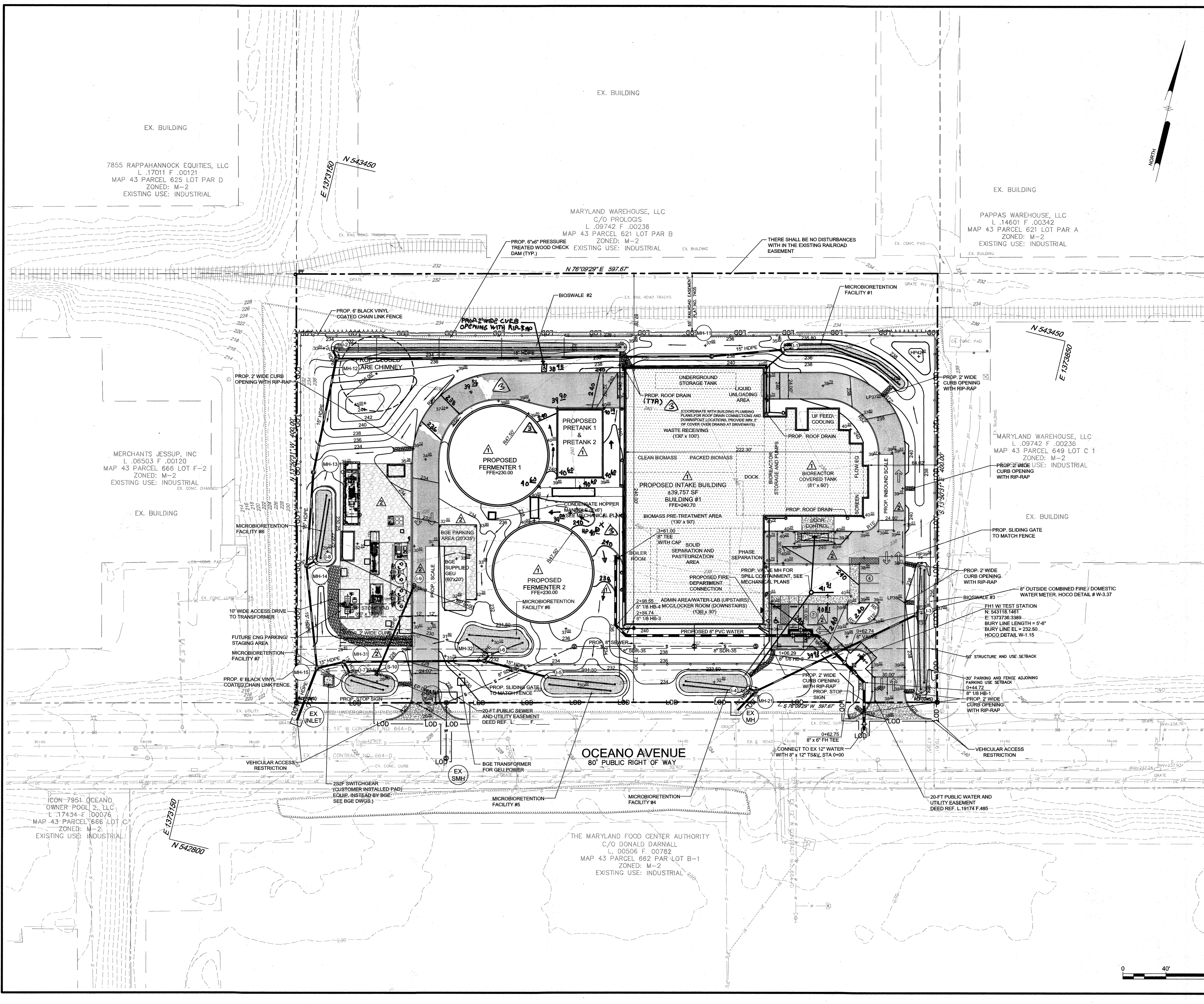
TITLE
REVISED
SITE DEVELOPMENT
PLAN

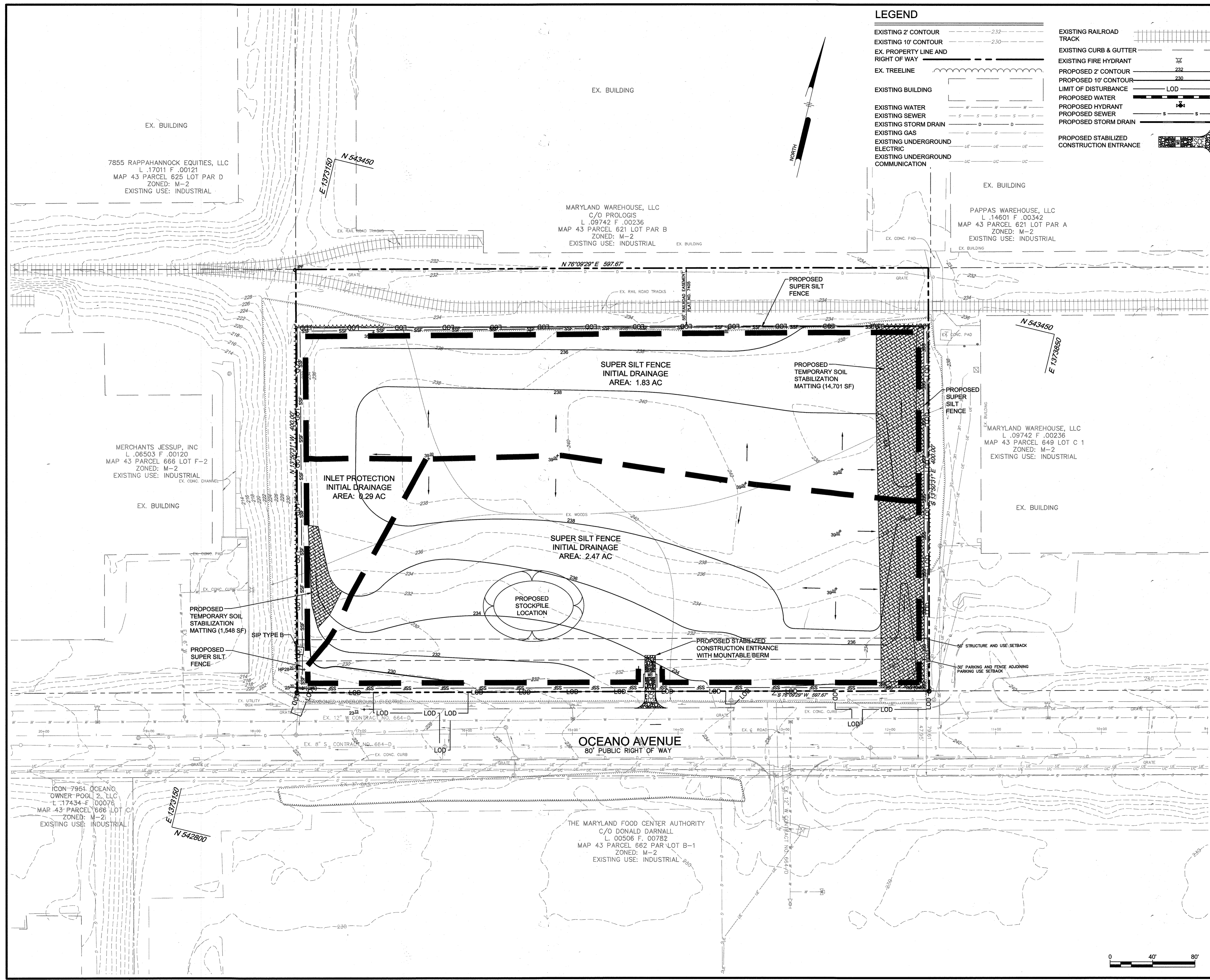
Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects

8818 Centre Park Drive, Suite 200 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

DESIGNED BY: PJS/JSN/JTB
DRAWN BY: JSN/JTB
PROJECT NO.: BTSB18001
DATE: SEPTEMBER 29, 2021
SCALE: 1" = 40'
DRAWING NO.: 3 OF 24

SDP-18-063





LEGEND

- EXISTING 2' CONTOUR -232-
- EXISTING 10' CONTOUR -230-
- EX. PROPERTY LINE AND RIGHT OF WAY
- EX. TREELINE
- EXISTING BUILDING
- EXISTING WATER
- EXISTING SEWER
- EXISTING STORM DRAIN
- EXISTING GAS
- EXISTING UNDERGROUND ELECTRIC
- EXISTING UNDERGROUND COMMUNICATION
- EXISTING RAILROAD TRACK
- EXISTING CURB & GUTTER
- EXISTING FIRE HYDRANT
- PROPOSED 2' CONTOUR 232
- PROPOSED 10' CONTOUR 230
- LIMIT OF DISTURBANCE
- PROPOSED WATER
- PROPOSED HYDRANT
- PROPOSED SEWER
- PROPOSED STORM DRAIN
- PROPOSED SUPER SILT FENCE SSF
- PROPOSED DRAINAGE AREA
- PROPOSED TREELINE
- PROPOSED SPOT ELEVATION
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE

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.

SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE) DATE 3/2/2020

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.

SIGNATURE OF DEVELOPER (PRINT NAME BELOW SIGNATURE) DATE 12/16/19

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

HOWARD SOIL CONSERVATION DISTRICT DATE 3/10/20

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 4-1-20

CHIEF, DIVISION OF LAND DEVELOPMENT DATE 4/17/2020

Director, Planning and Zoning DATE 4-17-2020

DATE	NO.	REVISION	BY

DEVELOPER
 MORF I, LLC
 9250 BENDIX ROAD
 COLUMBIA, MD 21045
 ATTN: GORDON HOLK
 PHONE: 860-462-9533

OWNER
 MARYLAND FOOD CENTER AUTHORITY
 7801 OCEANO AVENUE
 JESSUP, MD 20794-9411
 ATTN: PEGGY TORRE
 PHONE: 410-379-5760

PROJECT
 MARYLAND FOOD CENTER AUTHORITY ANAEROBIC DIGESTION FACILITY

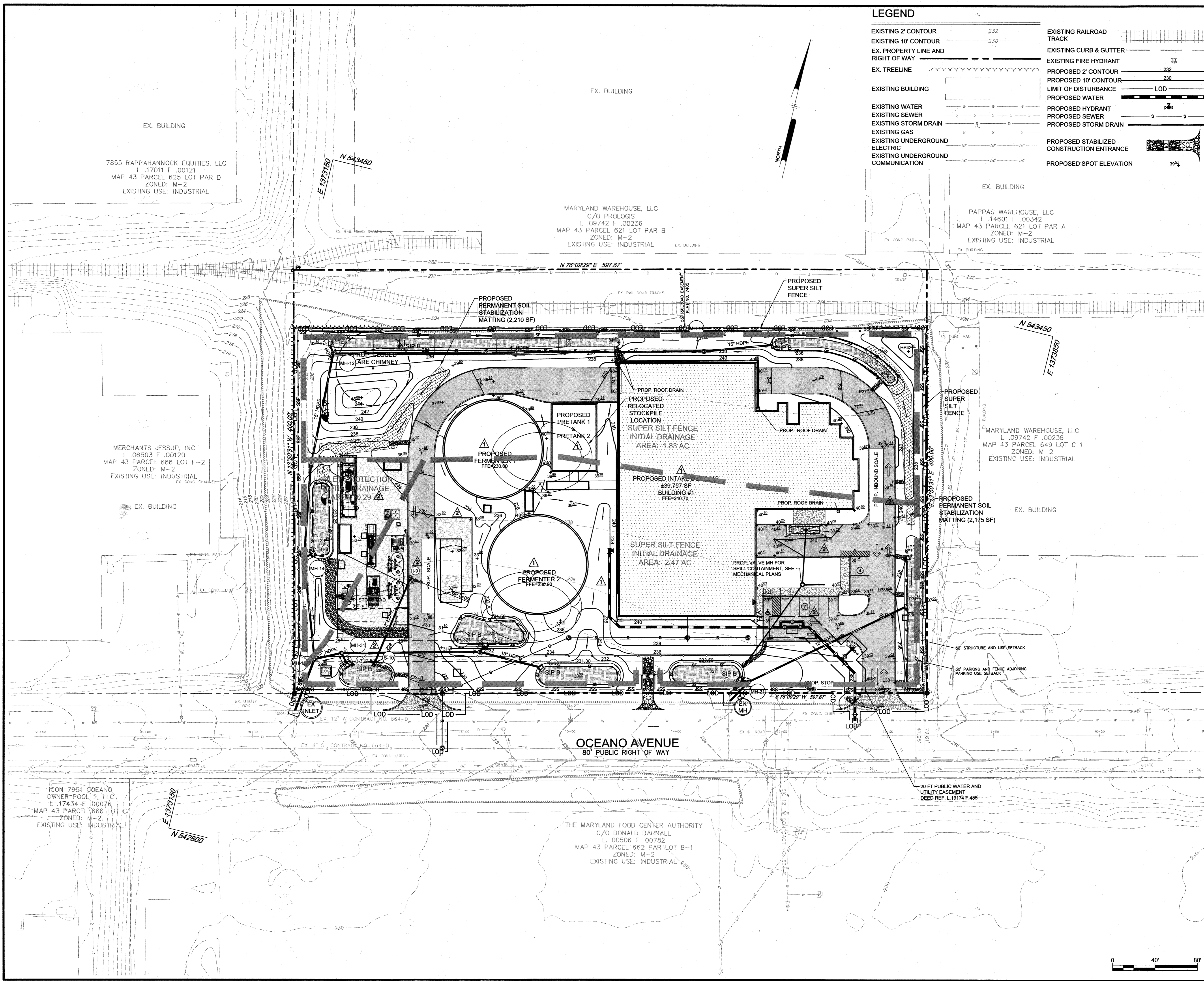
AREA
 TAX MAP 43, PARCEL 666 LOT C3 PLAT 7405 ZONED M-2
 GRID NO. 21 6TH ELECTION DISTRICT
 7800 N OCEANO AVENUE
 JESSUP, MARYLAND 20794
 HOWARD COUNTY, MARYLAND

TITLE
 PHASE I GRADING AND SEDIMENT CONTROL PLAN

Pennoni Associates Inc.
 Engineers • Surveyors • Planners
 Landscape Architects
 8818 Centre Park Drive, Suite 200 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

SEAL

 DESIGNED BY: PJS/JSN/JTB
 DRAWN BY: JSN/JTB
 PROJECT NO.: BLSBH18001
 DATE: DECEMBER 11, 2019
 SCALE: 1" = 40'
 DRAWING NO. 4 OF 24



LEGEND

- EXISTING 2' CONTOUR -232
- EXISTING 10' CONTOUR -230
- EX. PROPERTY LINE AND RIGHT OF WAY ---
- EX. TREELINE ~
- EXISTING BUILDING []
- EXISTING WATER —W—
- EXISTING SEWER —S—
- EXISTING STORM DRAIN —D—
- EXISTING GAS —G—
- EXISTING UNDERGROUND ELECTRIC —UE—
- EXISTING UNDERGROUND COMMUNICATION —UC—
- EXISTING RAILROAD TRACK []
- EXISTING CURB & GUTTER []
- EXISTING FIRE HYDRANT []
- PROPOSED 2' CONTOUR -232
- PROPOSED 10' CONTOUR -230
- LIMIT OF DISTURBANCE LOD
- PROPOSED WATER —W—
- PROPOSED HYDRANT []
- PROPOSED SEWER —S—
- PROPOSED STORM DRAIN —D—
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE []
- PROPOSED SPOT ELEVATION 39.0
- PROPOSED SUPER SILT FENCE —SSF—
- STANDARD INLET PROTECTION []
- PROPOSED TREELINE ~
- PROPOSED EROSION CONTROL MATTING []
- PROPOSED MICRO BIORETENTION []

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.

[Signature] 10.6.2021
 SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE) DATE
 JAMES A. RUFF

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.

[Signature] 9/30/21
 SIGNATURE OF DEVELOPER (PRINT NAME BELOW SIGNATURE) DATE
 JULY DUBOIS

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

[Signature] 10/20/21
 HOWARD SOIL CONSERVATION DISTRICT DATE
 STEPHEN BROTHERS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 11.1.21
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
 [Signature] 11/1/21
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
 [Signature] 11-4-21
 DIRECTOR DATE

DATE	NO.	REVISION	BY
07/28/2021	2	WATER METER AND SITE REVISIONS	JTB
9/23/2020	1	REVISED SITE LAYOUT AND GRADING	JSN

DEVELOPER
 MORF I, LLC
 9250 BENDIX ROAD
 COLUMBIA, MD 21045
 ATTN: GORDON HOLK
 PHONE: 860-462-9533

OWNER
 MARYLAND FOOD CENTER AUTHORITY
 7901 OCEANO AVENUE
 JESSUP, MD 20794-9411
 ATTN: PEGGY TORRE
 PHONE: 410-379-5760

PROJECT
MARYLAND FOOD CENTER AUTHORITY ANAEROBIC DIGESTION FACILITY

AREA
 TAX MAP 43, PARCEL 666 LOT C3 PLAT 7405 ZONED M-2
 GRID NO. 21 6TH ELECTION DISTRICT
 7900 N OCEANO AVENUE
 JESSUP, MARYLAND 20794
 HOWARD COUNTY, MARYLAND

TITLE
REVISED PHASE II GRADING AND SEDIMENT CONTROL PLAN

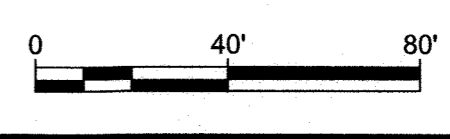
Pennoni Associates Inc.
 Engineers • Surveyors • Planners
 Landscape Architects

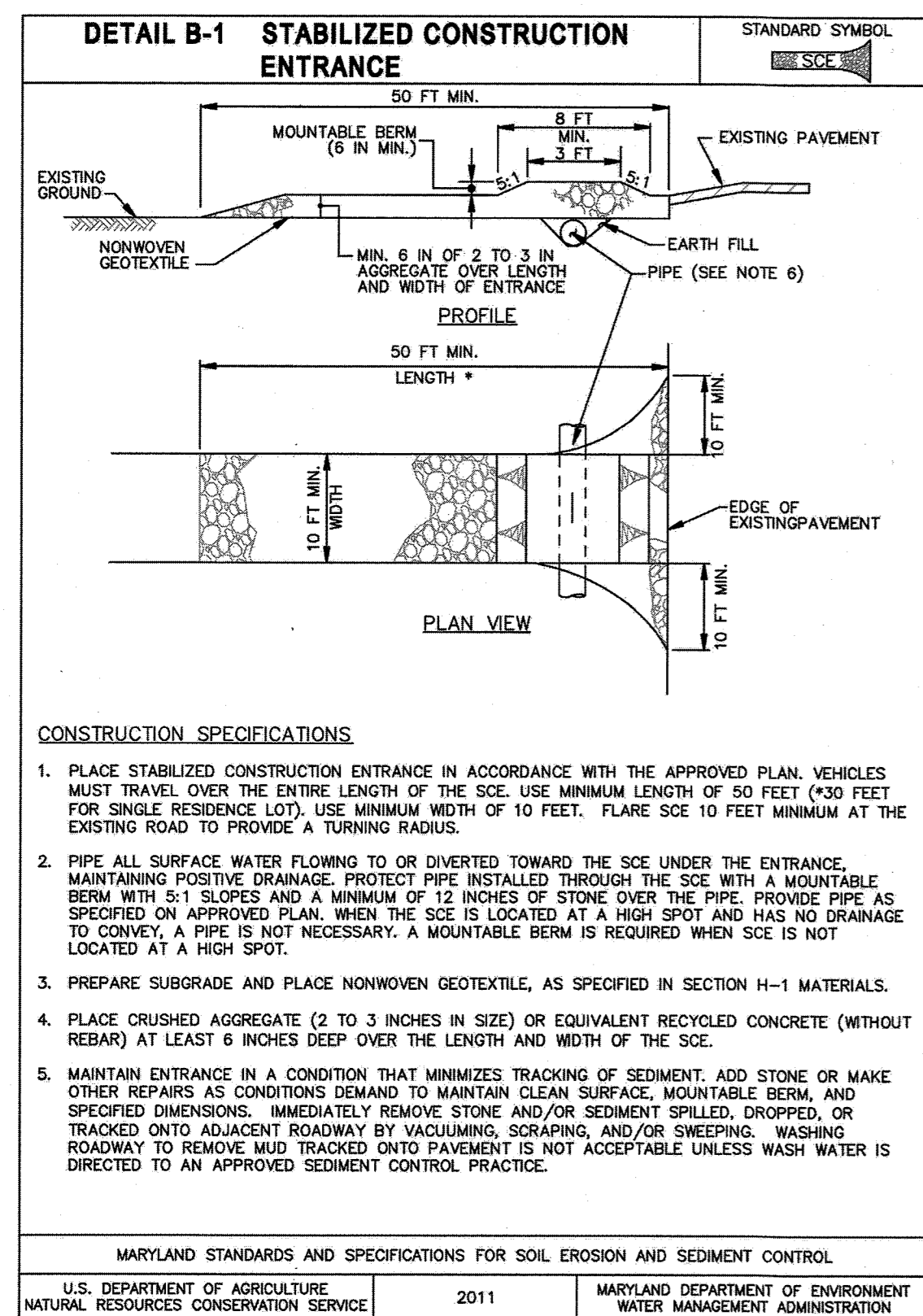
8818 Centre Park Drive, Suite 200 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

SEAL

[Seal]

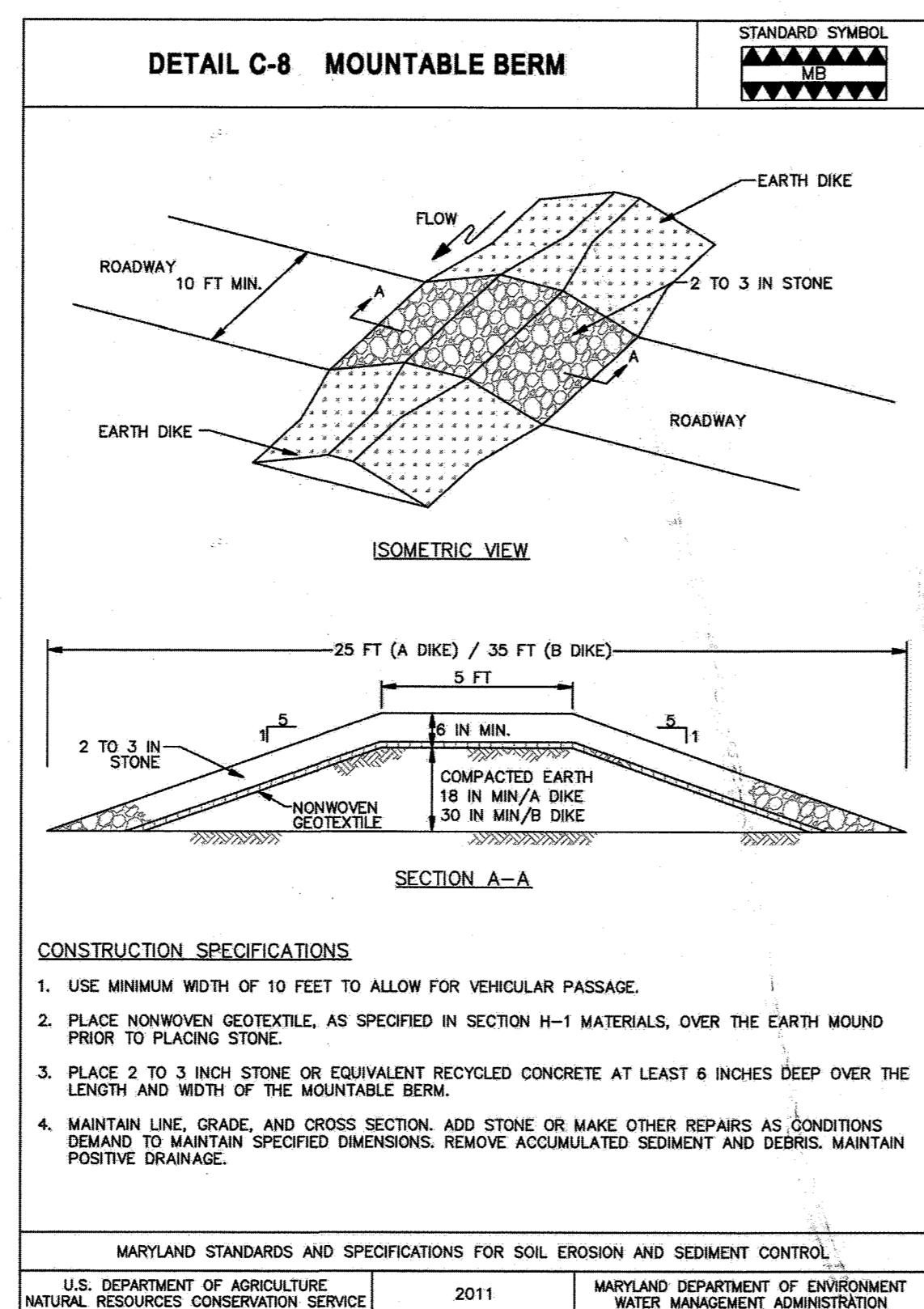
DESIGNED BY: PJS/JSN/JTB
 DRAWN BY: JSN/JTB
 PROJECT NO: B7SB18001
 DATE: SEPTEMBER 29, 2021
 SCALE: 1" = 40'
 DRAWING NO. 5 OF 24





- CONSTRUCTION SPECIFICATIONS**
- PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (40 FEET FOR SINGLE RESIDENCE LOTS). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
 - PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE. MAINTAIN POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
 - PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
 - PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
 - MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ON ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

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



- CONSTRUCTION SPECIFICATIONS**
- USE MINIMUM WIDTH OF 10 FEET TO ALLOW FOR VEHICULAR PASSAGE.
 - PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE EARTH MOUND PRIOR TO PLACING STONE.
 - PLACE 2 TO 3 INCH STONE OR EQUIVALENT RECYCLED CONCRETE AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE MOUNTABLE BERM.
 - MAINTAIN LINE, GRADE, AND CROSS SECTION. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN SPECIFIED DIMENSIONS. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE.

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

U.S. STANDARDS AND SPECIFICATIONS

EROSION CONTROL

Definition: Controlling the suspension of dust particles from construction activities.

Purpose: To prevent blowing and movement of dust from exposed soil surfaces to reduce on and off-site damage including health and traffic hazards.

Conditions Where Practice Applies: Areas subject to dust blowing and movement where on and off-site damage is likely without treatment.

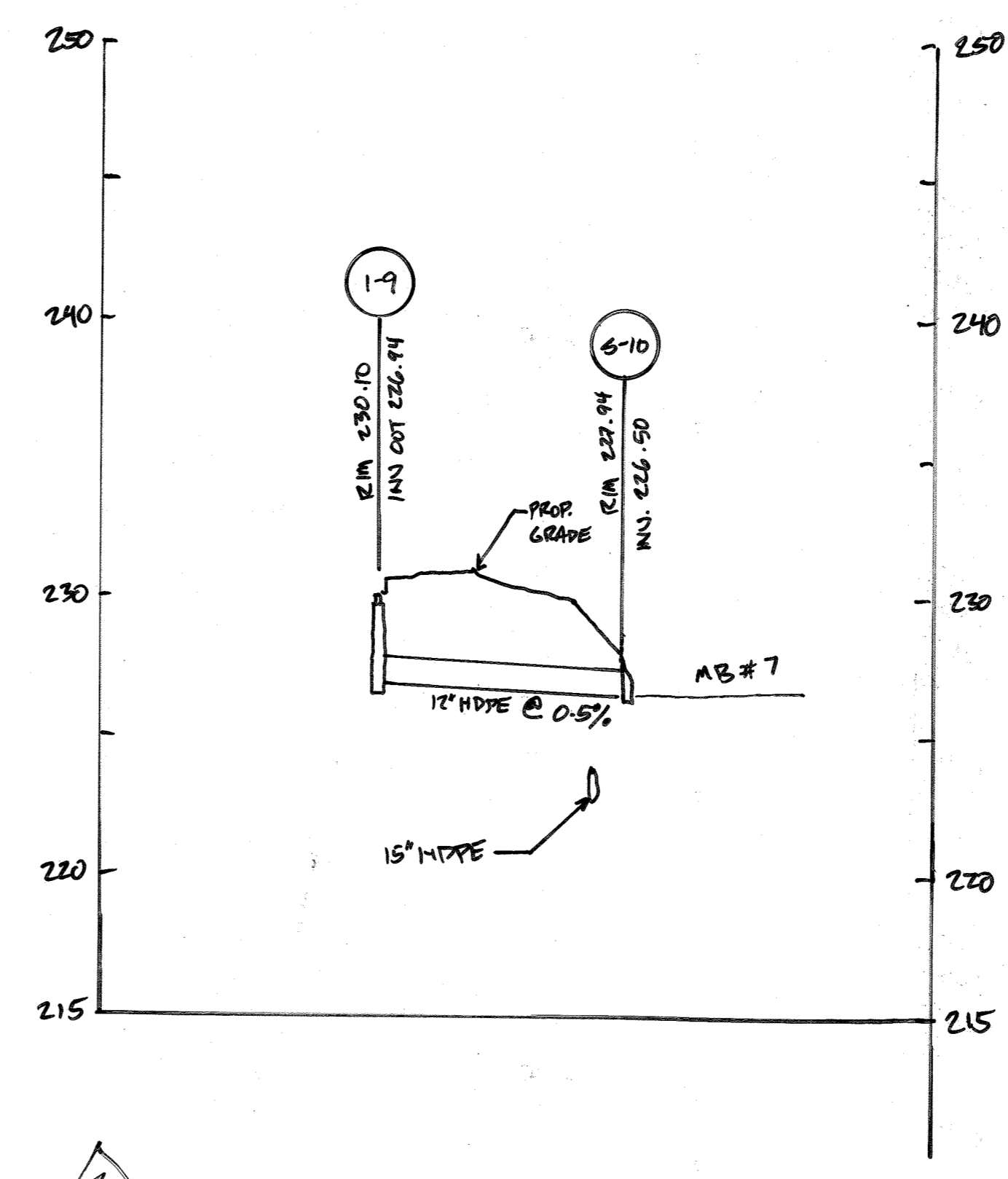
Specifications:

- Mulches:** See Section B-4-2 (8-4) Preparation, Topsoiling, and Soil Amendments, Section B-4-3 Seeding and Misting, and Section C-4-4 Temporary Stabilization. Mulch must be anchored to prevent blowing.
- Vegetative Cover:** See Section B-4-4 Temporary Stabilization.
- Tillage:** Till to roughen surface and bring clods to the surface. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment that may produce the desired effect.
- Strawbeds:** Sprinkle site with water until the surface is moist. Repeat as needed. The site must not be irrigated to the point that runoff occurs.
- Barbed:** Solid board fences, silt fences, snow fences, brush fences, straw bales, and similar material can be used to control air currents and soil blowing.
- Chemical Treatment:** Use of chemical treatment requires approval by the appropriate plan review authority.

SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT. (1 DAY)
- STAKEOUT LIMITS OF DISTURBANCE. (1 DAY)
- CONDUCT A PRE-CONSTRUCTION MEETING WITH COUNTY INSPECTOR. (1 DAY)
- PHASE 1 - MASS GRADING**
- 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 AND TANK PADS, BEGIN BUILDING CONSTRUCTION. (9 MONTHS)
- UPON ESTABLISHMENT OF SUBGRADE, INSTALL WATER MAIN, PRIVATE SANITARY CONNECTIONS, WATER & SEWER HOUSE CONNECTIONS, AND STORM DRAIN. ANY CONTROLS INTERCEPTED BY UTILITY INSTALLATION ARE TO BE REPAIRED THE SAME DAY. (2 MONTHS)
- PHASE 2 - FINAL GRADING**
- WITH COMPLETION OF SUBGRADE AND UTILITY INSTALLATION, INSTALL CURB AND GUTTER. BEGIN PARKING LOT AND LOOP ROAD 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 TO SEDIMENT BASIN DURING FINE GRADING AND PAVING OPERATIONS. (2 WEEKS)
- STABILIZE ALL DISTURBED AREAS. (1 DAY)
- CONSTRUCT MICRO BIOTENTION FACILITIES AND BIOSWALE AND ALL ASSOCIATED UNDERDRAIN/OVERDRAINS. CONTACT PENNON ENGINEER AND QUALIFIED GEOTECHNICAL ENGINEER TO OBSERVE INSTALLATION OF SWM FACILITIES. 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)

- HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES**
- A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-313-1855 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:
 - PRIOR TO THE START OF EARTH DISTURBANCE.
 - UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.
 - PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT.
 - PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES.
 - OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. OTHER RELATED STATE AND FEDERAL PERMITS SHALL BE REFERENCED, TO ENSURE COORDINATION AND TO AVOID CONFLICTS WITH THIS PLAN.
 - ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THEREOF.
 - FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS, AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE EXCEPT FOR THOSE AREAS UNDER ACTIVE GRADING.
 - ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR TOPSOIL (SEC. B-4-2), PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH 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).
 - ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE, AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE CID.
 - SITE ANALYSIS:**
 TOTAL AREA OF SITE: 5.49 ACRES
 AREA DISTURBED: 4.81 ACRES
 AREA TO BE ROOFED OR PAVED: 2.34 ACRES
 AREA TO BE VEGETATIVELY STABILIZED: 2.47 ACRES
 TOTAL CUT: 8,200 CU. YDS.
 TOTAL FILL: 7,700 CU. YDS.
 - ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
 - ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE CID, THE SITE AND ALL CONTROLS SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY; AND THE NEXT DAY AFTER EACH RAIN EVENT. A WRITTEN REPORT BY THE CONTRACTOR, MADE AVAILABLE UPON REQUEST, IS PART OF EVERY INSPECTION AND SHOULD INCLUDE:
 - INSPECTION DATE
 - INSPECTION TYPE (ROUTINE, PRE-STORM EVENT, DURING RAIN EVENT)
 - NAME AND TITLE OF INSPECTOR
 - WEATHER INFORMATION (CURRENT CONDITIONS AS WELL AS TIME AND AMOUNT OF LAST RECORDED PRECIPITATION)
 - BRIEF DESCRIPTION OF PROJECTS STATUS (E.G., PERCENT COMPLETE) AND/OR CURRENT ACTIVITIES
 - EVIDENCE OF SEDIMENT DISCHARGES
 - IDENTIFICATION OF PLAN DEFICIENCIES
 - IDENTIFICATION OF SEDIMENT CONTROLS THAT REQUIRE MAINTENANCE
 - IDENTIFICATION OF MISSING OR IMPROPERLY INSTALLED SEDIMENT CONTROLS
 - COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND STABILIZATION REQUIREMENTS
 - PHOTOGRAPHS
 - MONITORING/SAMPLING
 - MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED
 - OTHER INSPECTION ITEMS AS REQUIRED BY THE GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES (NPDES, MDE).
 - TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.
 - ANY MAJOR CHANGES OR REVISIONS TO THE PLAN OR SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE HSCD PRIOR TO PROCEEDING WITH CONSTRUCTION. MINOR REVISIONS MAY ALLOWED BY THE CID PER THE LIST OF HSCD-APPROVED FIELD CHANGES.
 - DISTURBANCE SHALL NOT OCCUR OUTSIDE THE L.O.D. A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE CID, UNLESS OTHERWISE SPECIFIED AND APPROVED BY HSCD, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.
 - WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE.
 - TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO FINAL GRADE.
 - ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON-THE-CONTOUR, AND BE IMBRICATED AT 25' MINIMUM INTERVALS, WITH LOWER ENDS CURLED UPHILL BY 2' IN ELEVATION.
 - STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUSIVE):
 - USE I AND II MARCH 1 - JUNE 15
 - USE III AND IIII OCTOBER 1 - APRIL 30
 - USE IV MARCH 1 - MAY 31
 - A COPY OF THIS PLAN, THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND ASSOCIATED PERMITS SHALL BE ON-SITE AND AVAILABLE WHEN THE SITE IS ACTIVE.



STORM DRAIN PROFILE 1-9 TO 5-10
 SCALE: 1" = 50'
 VERT SCALE: 1" = 5'

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.

Signature of Engineer: [Signature] DATE: 3/1/2020

DEVELOPER'S CERTIFICATE
 I HAVE HEREBY CERTIFIED 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.

Signature of Developer: [Signature] DATE: 12/19

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

Signature of District: [Signature] DATE: 3/10/20

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Signature of Chief: [Signature] DATE: 4/1/20

Signature of Chief: [Signature] DATE: 4/17/2020

Signature of Director: [Signature] DATE: 4-17-2020

DATE	NO.	REVISION	BY
10-6-21	2	ADD STORM DRAIN PROFILE	PSS

DEVELOPER: MORF I, LLC
 9250 BENDIX ROAD
 COLUMBIA, MD 21045
 ATTN: GORDON HOLK
 PHONE: 860-462-9533

OWNER: MARYLAND FOOD CENTER AUTHORITY
 7901 OCEANO AVENUE
 JESSUP, MD 20794-8411
 ATTN: PEGGY TORRE
 PHONE: 410-379-5760

PROJECT: MARYLAND FOOD CENTER AUTHORITY ANAEROBIC DIGESTION FACILITY

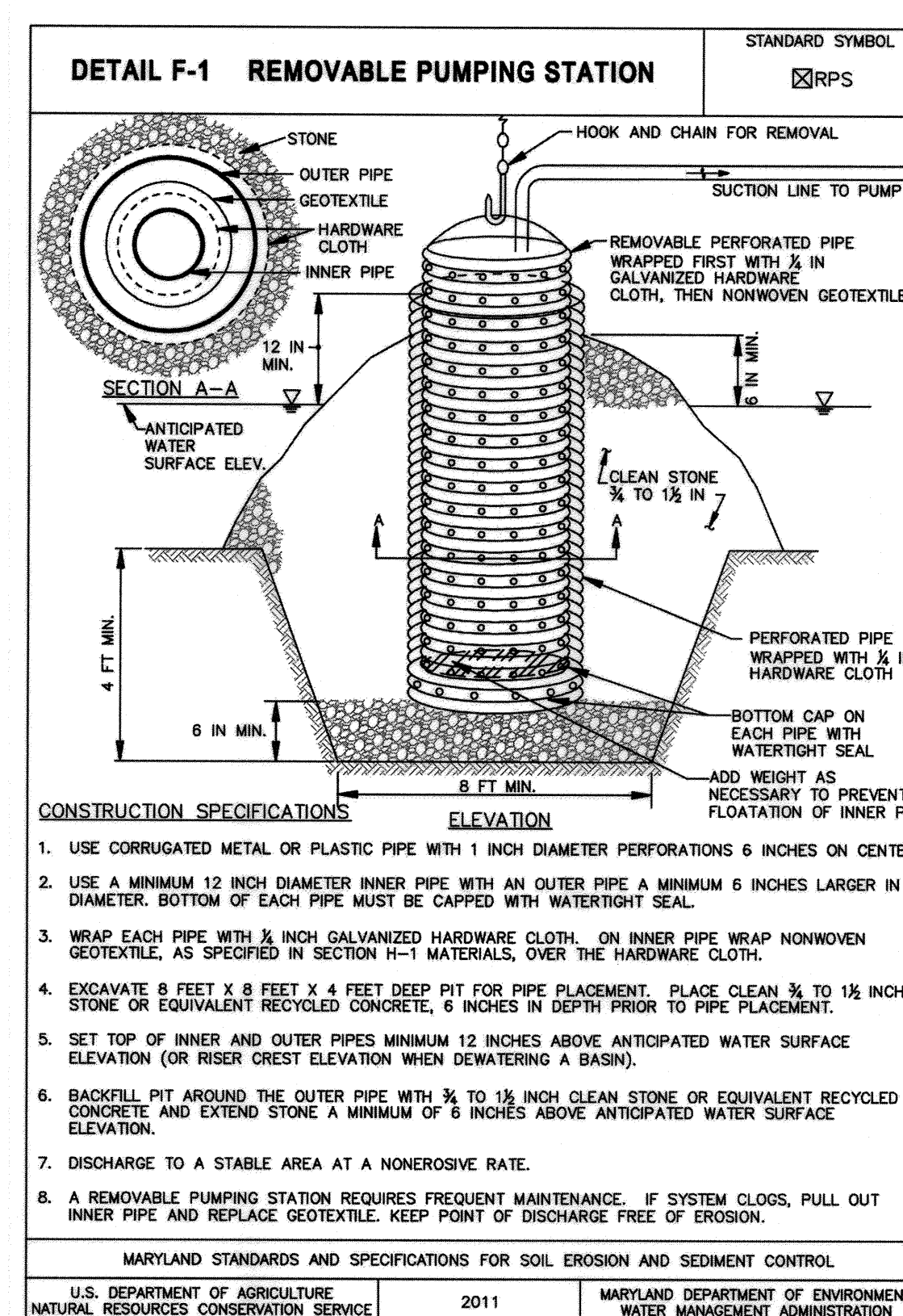
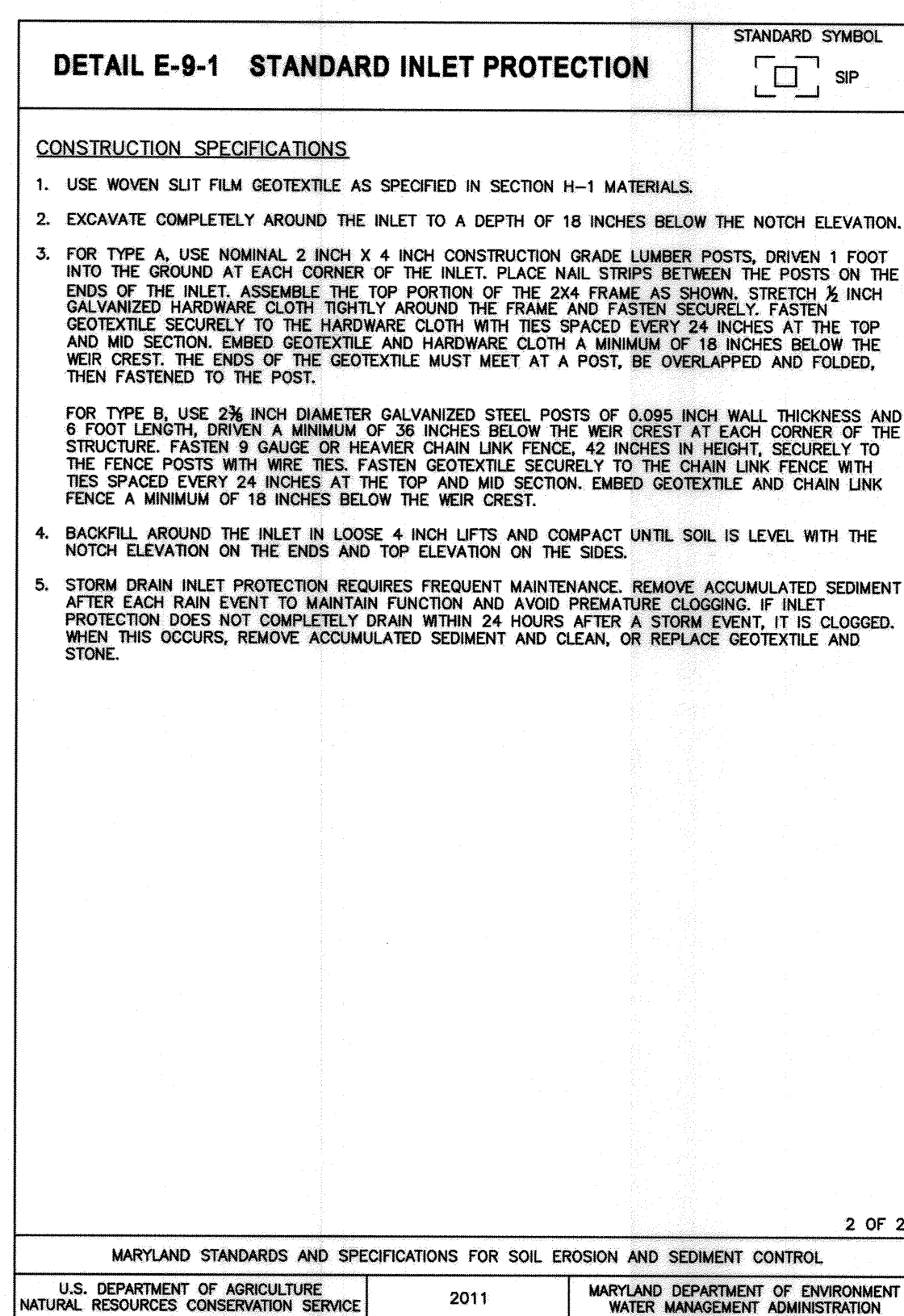
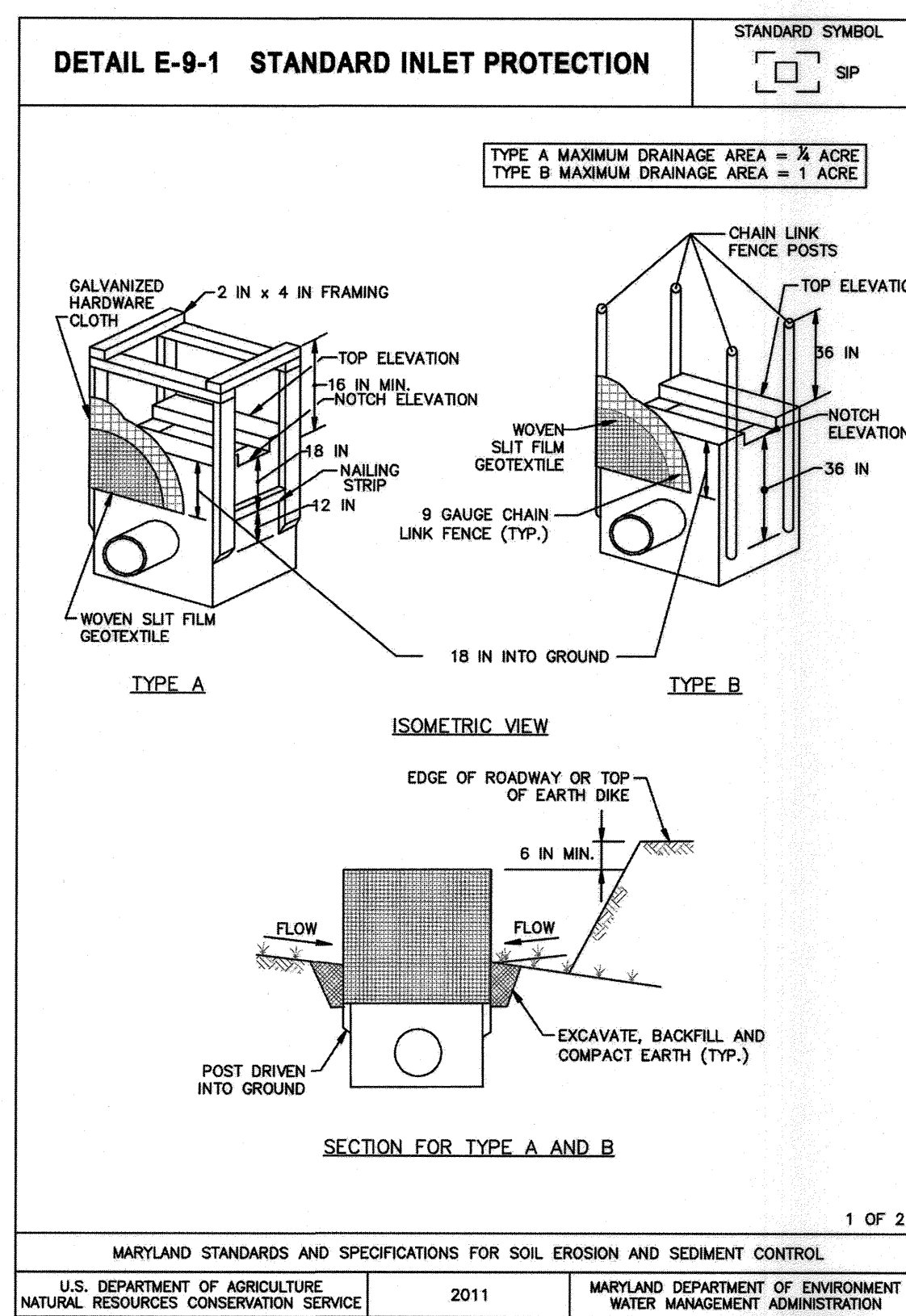
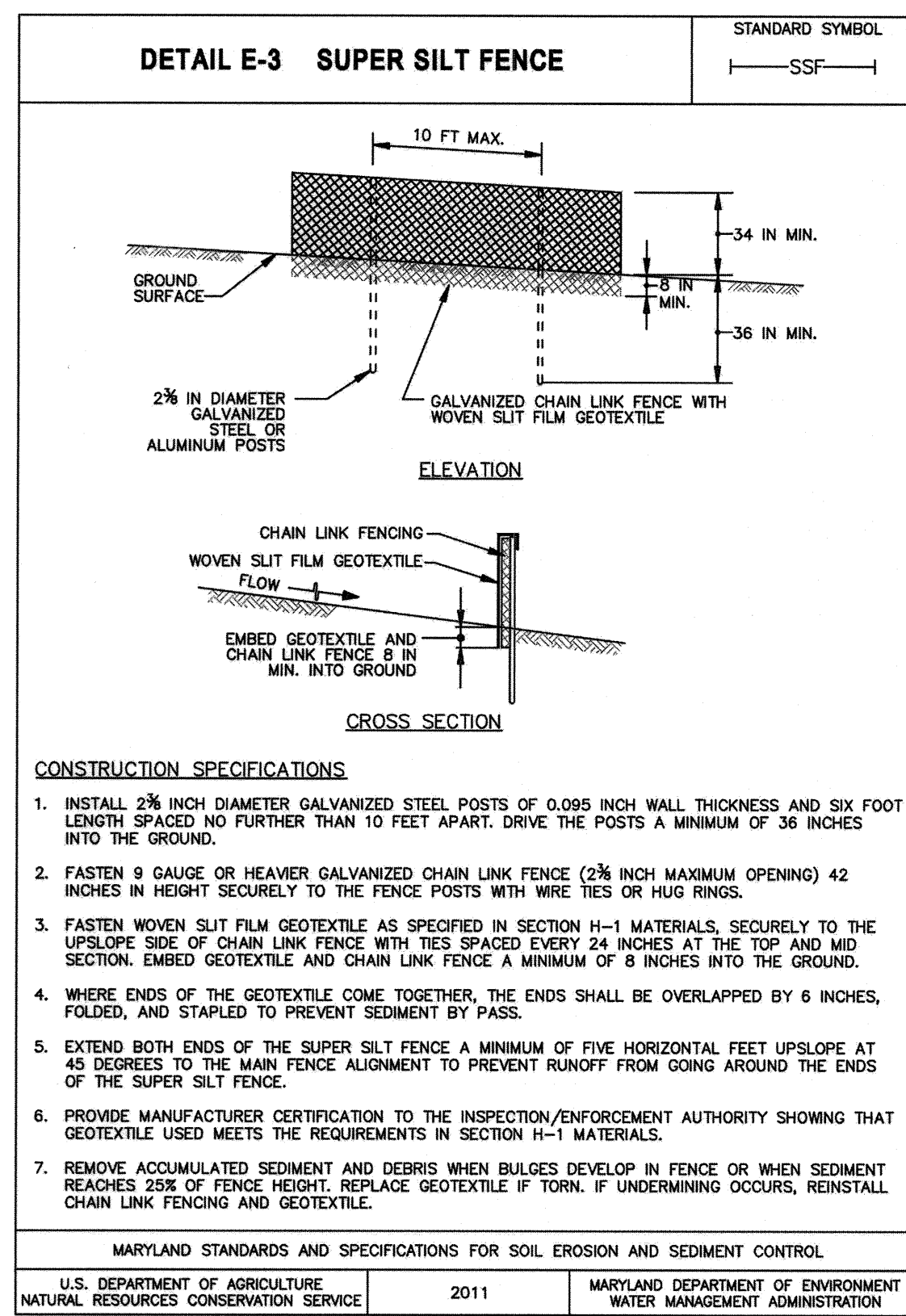
AREA: TAX MAP 43, PARCEL 666 LOT C3 PLAT 7405 ZONED M-2
 GRID NO. 21 6TH ELECTION DISTRICT
 7900 N OCEANO AVENUE
 HOWARD COUNTY, MARYLAND

TITLE: SEDIMENT CONTROL DETAILS

Pennon Associates Inc.
 Engineers • Surveyors • Planners
 Landscape Architects
 8818 Centre Park Drive, Suite 200 Columbia, MD 21045
 T 410.997.8900 F 410.997.9262

SEAL: [Professional Engineer Seal]

DESIGNED BY: PJS/JSN/JTB
 DRAWN BY: JSN/JTB
 PROJECT NO.: B-TSBI18001
 DATE: DECEMBER 11, 2019
 SCALE: AS SHOWN
 DRAWING NO.: 7 OF 24



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.

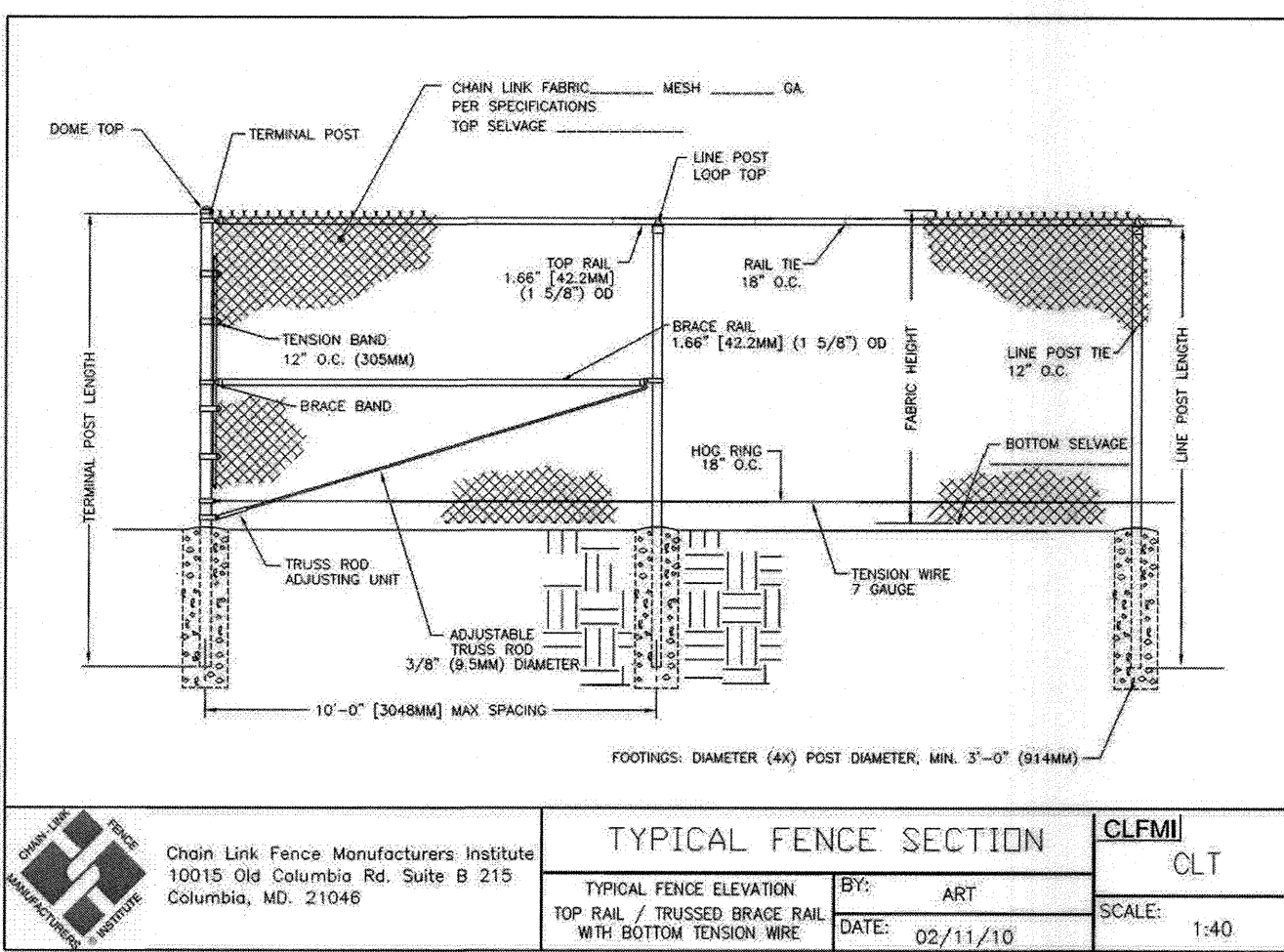
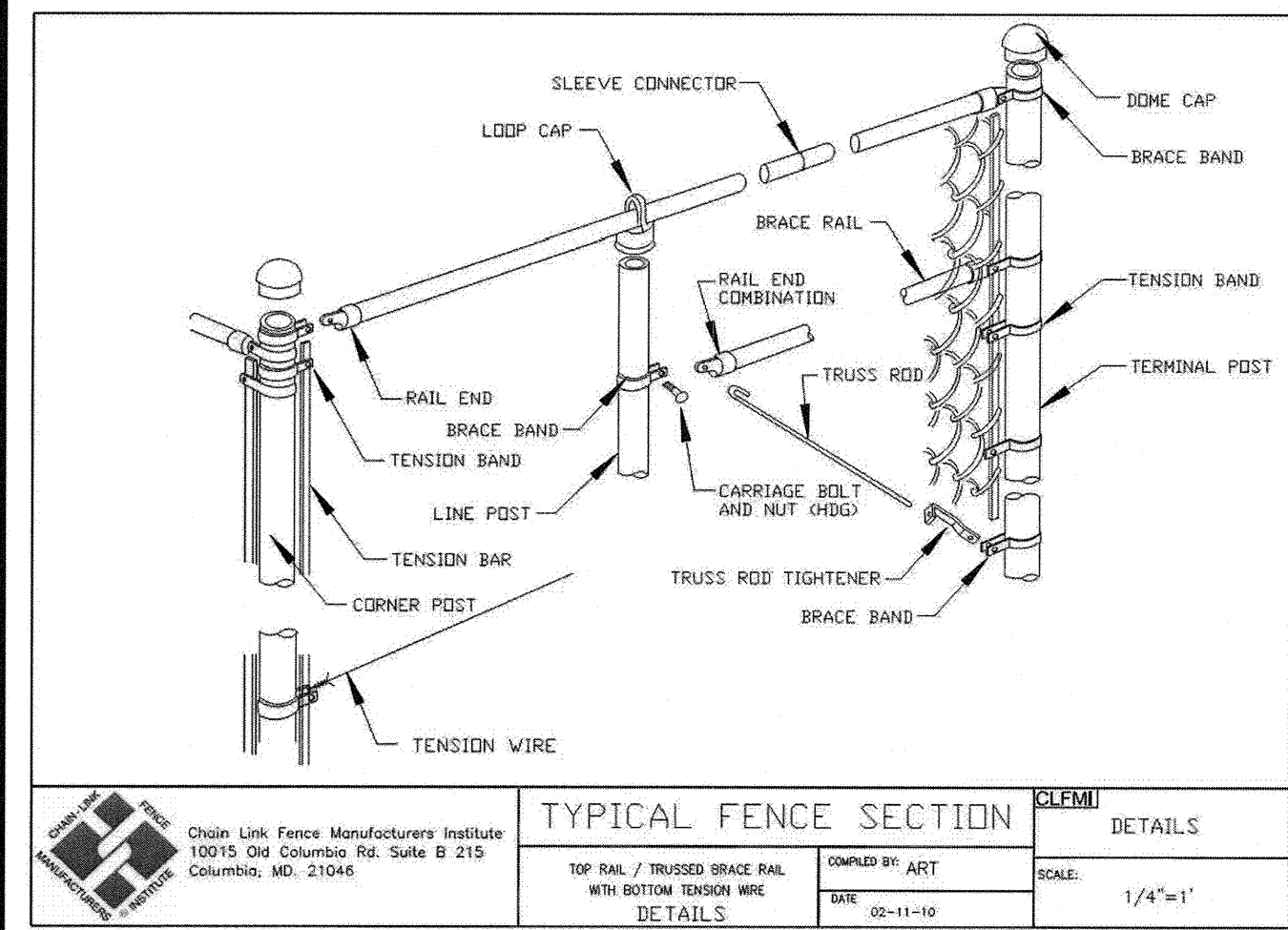
Signature: [Signature] DATE: 3/21/2020

DEVELOPER'S CERTIFICATE

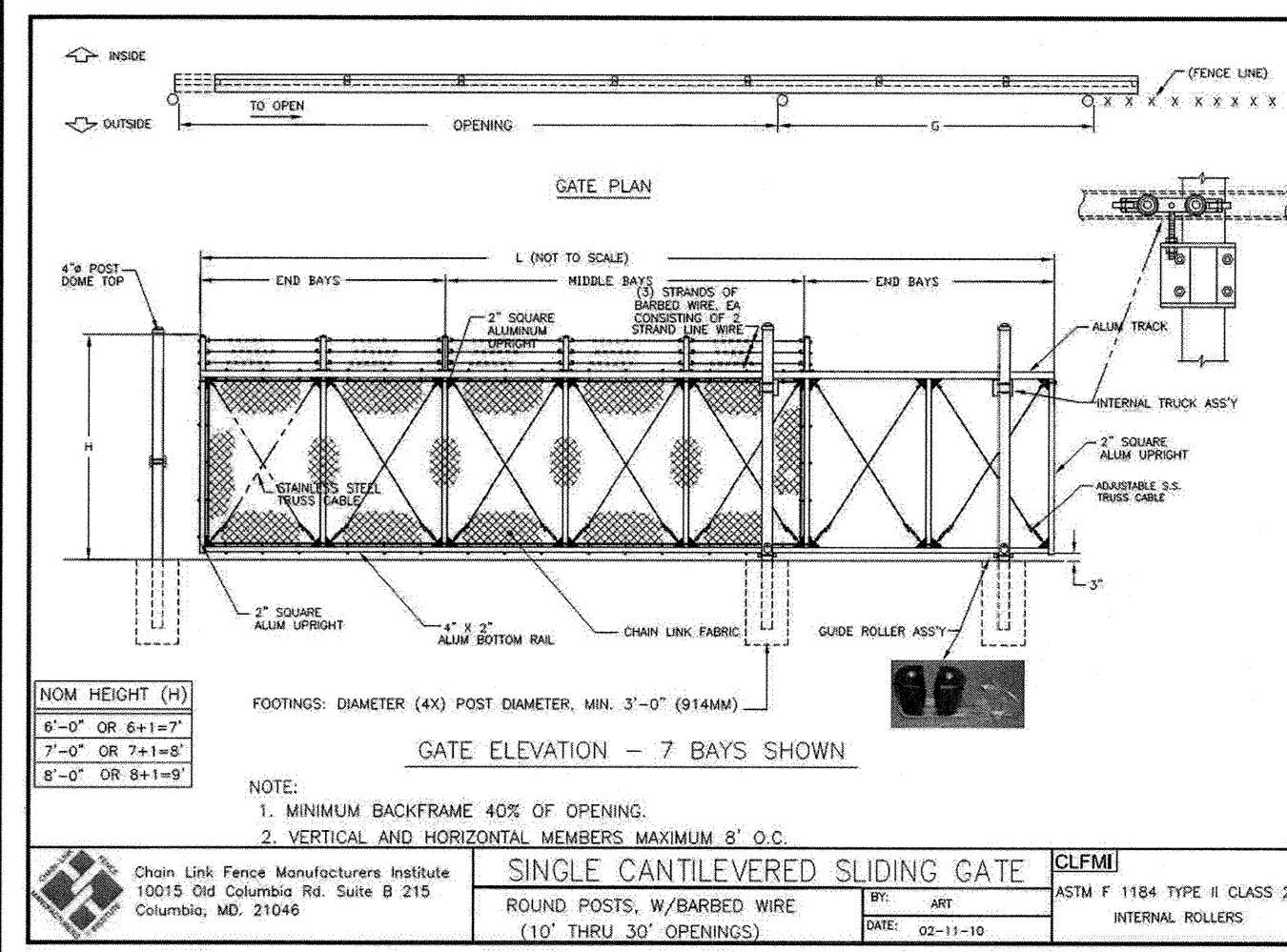
I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING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

Signature: [Signature] DATE: 12/6/19

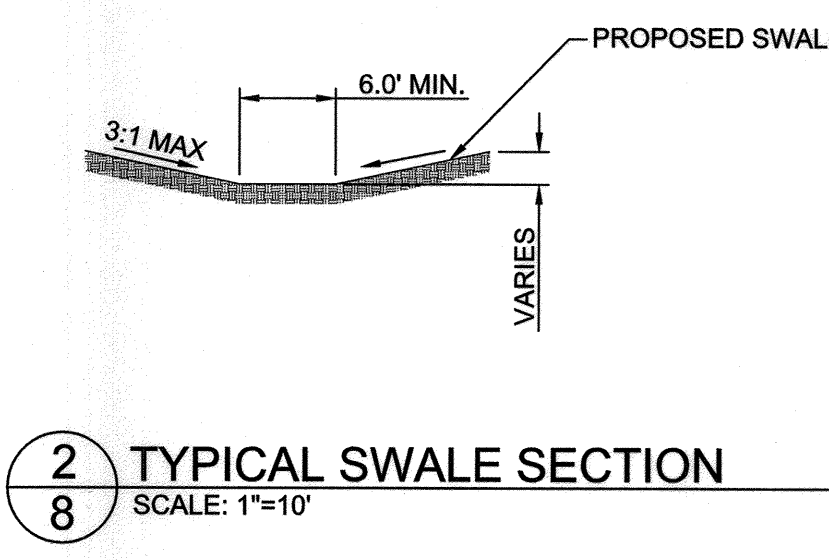
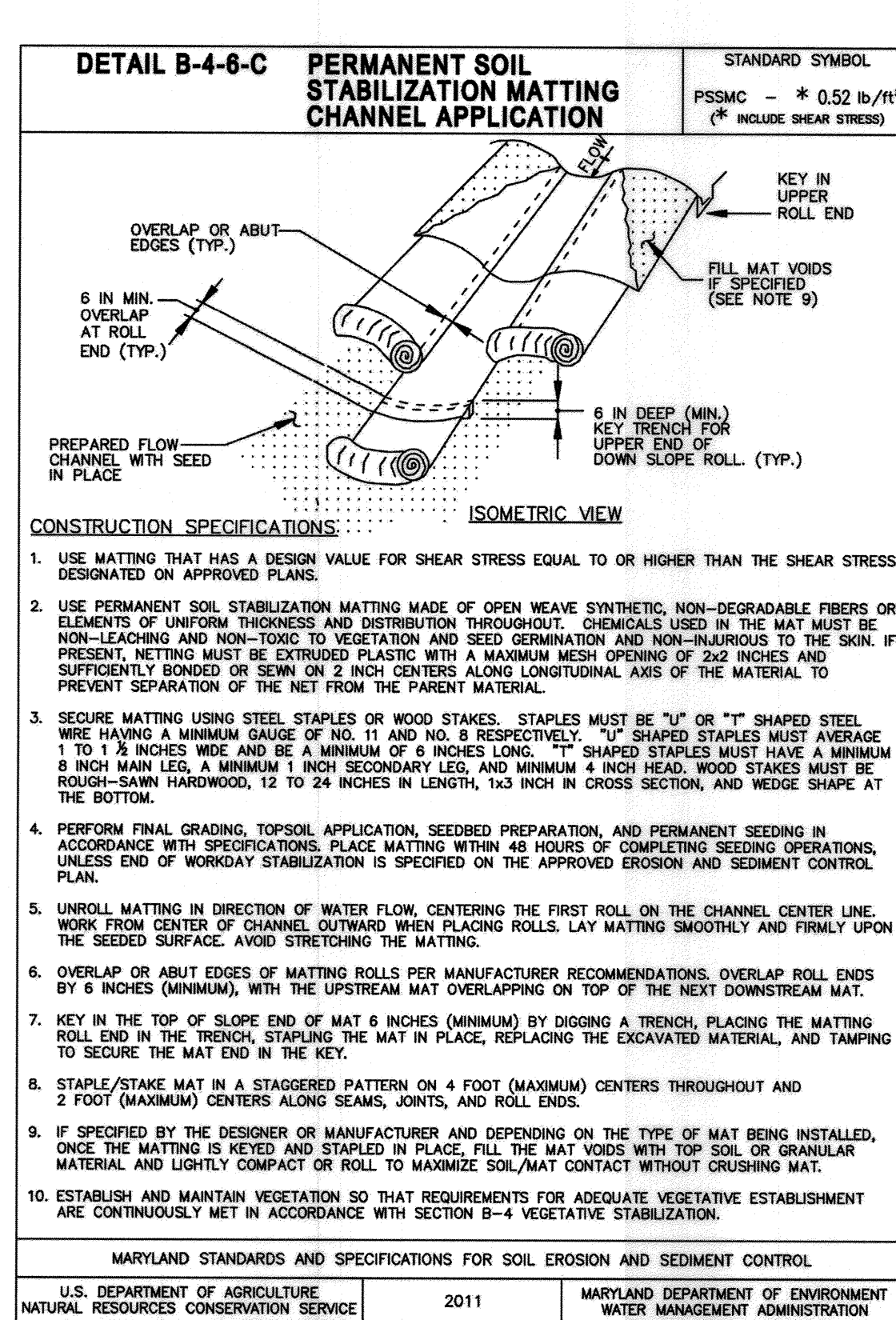
Signature: [Signature] DATE: 3/21/2020



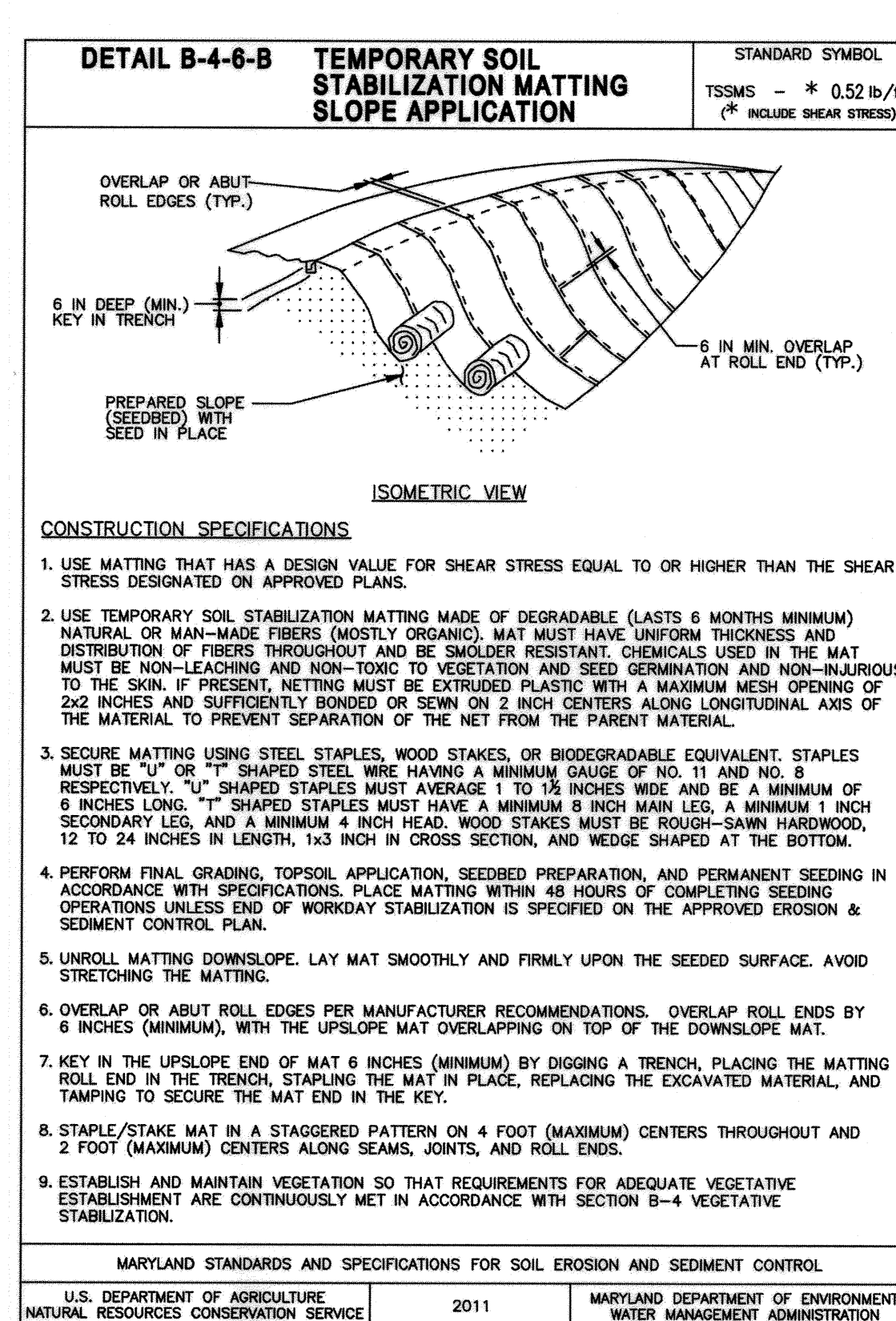
1 CHAIN LINK FENCE
NOT TO SCALE



3 SLIDING GATE
NOT TO SCALE



2 TYPICAL SWALE SECTION
SCALE: 1"=10'



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

Signature: [Signature] DATE: 3/20/20

Signature: [Signature] DATE: 4-1-20

Signature: [Signature] DATE: 4/17/2020

Signature: [Signature] DATE: 4-17-2020

DATE	NO.	REVISION	BY
10/9/20	1	REVISE FENCE NOTE	PJS

DEVELOPER: MORF I, LLC
9250 BENDIX ROAD
COLUMBIA, MD 21045
ATTN: GORDON HOLK
PHONE: 860-462-9533

OWNER: MARYLAND FOOD CENTER AUTHORITY
7801 OCEANO AVENUE
JESSUP, MD 20794-0411
ATTN: PEGGY TORRE
PHONE: 410-379-5760

PROJECT: MARYLAND FOOD CENTER AUTHORITY ANAEROBIC DIGESTION FACILITY

AREA: TAX MAP 43, PARCEL 666 LOT C3 PLAT 7405 ZONED M-2
GRID NO. 21. 6TH ELECTION DISTRICT
7900 N OCEANO AVENUE
JESSUP, MARYLAND 20794
HOWARD COUNTY, MARYLAND

TITLE: SEDIMENT CONTROL DETAILS AND SITE DETAILS

Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects

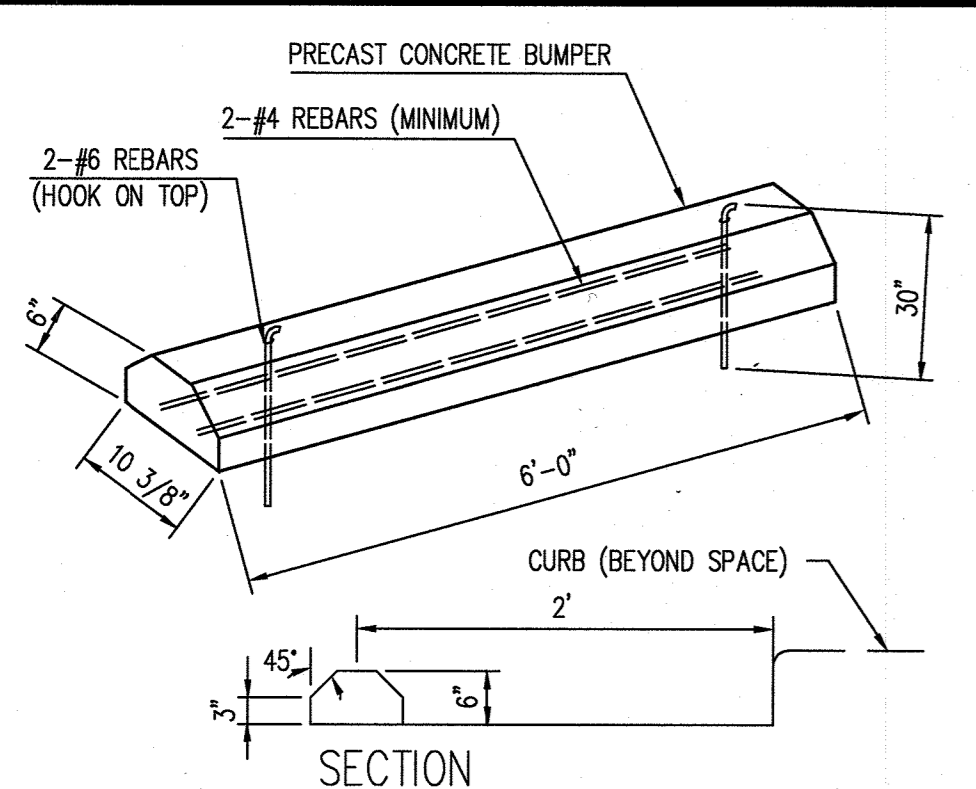
8818 Centre Park Drive, Suite 200 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

DESIGNED BY: PJS/JSN/JTB
DRAWN BY: JSN/JTB
PROJECT NO: BTSB18001
DATE: DECEMBER 11, 2019
SCALE: AS SHOWN
DRAWING NO. 8 OF 24

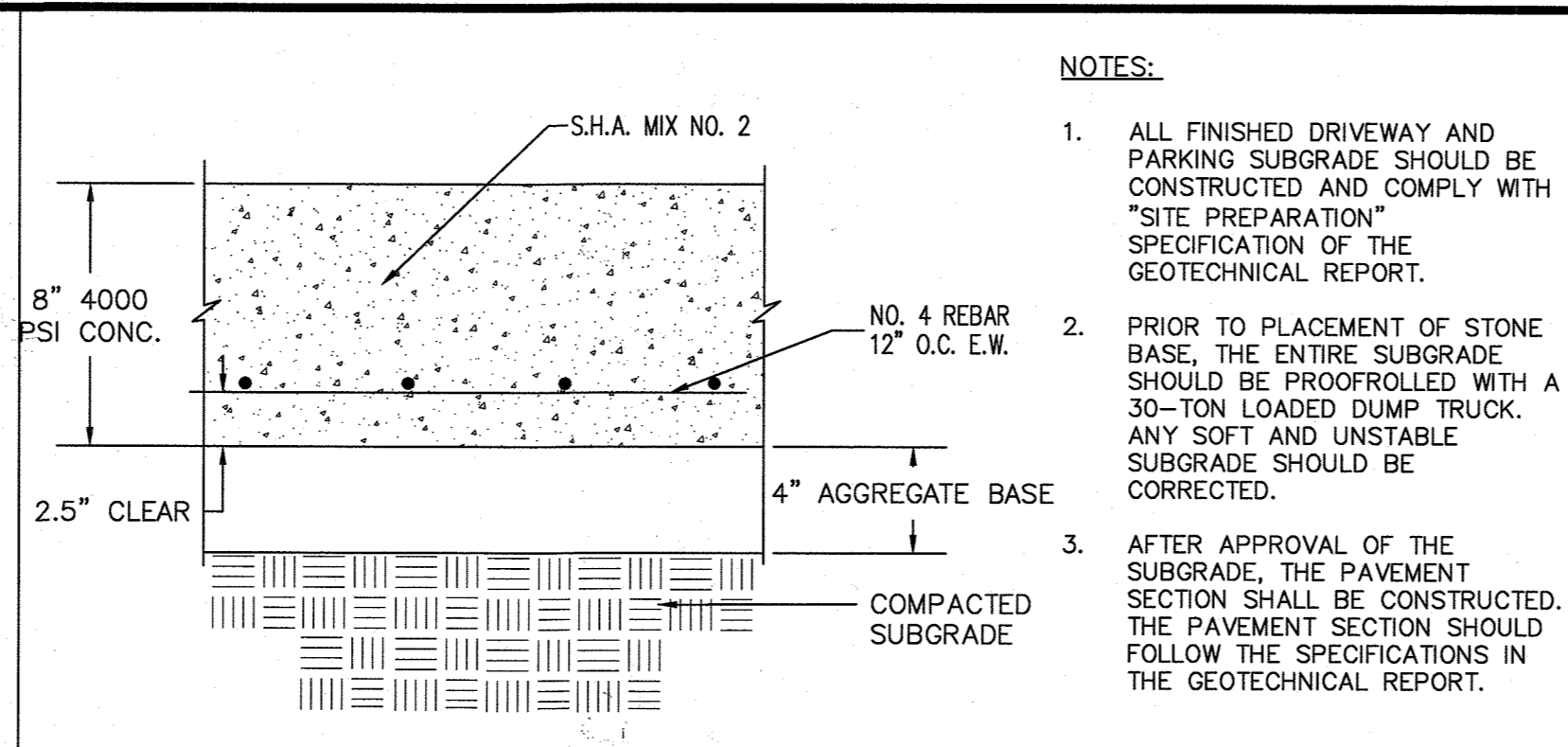
SEAL: [Professional Engineer Seal]

BY: [Signature] DATE: 3/21/2020

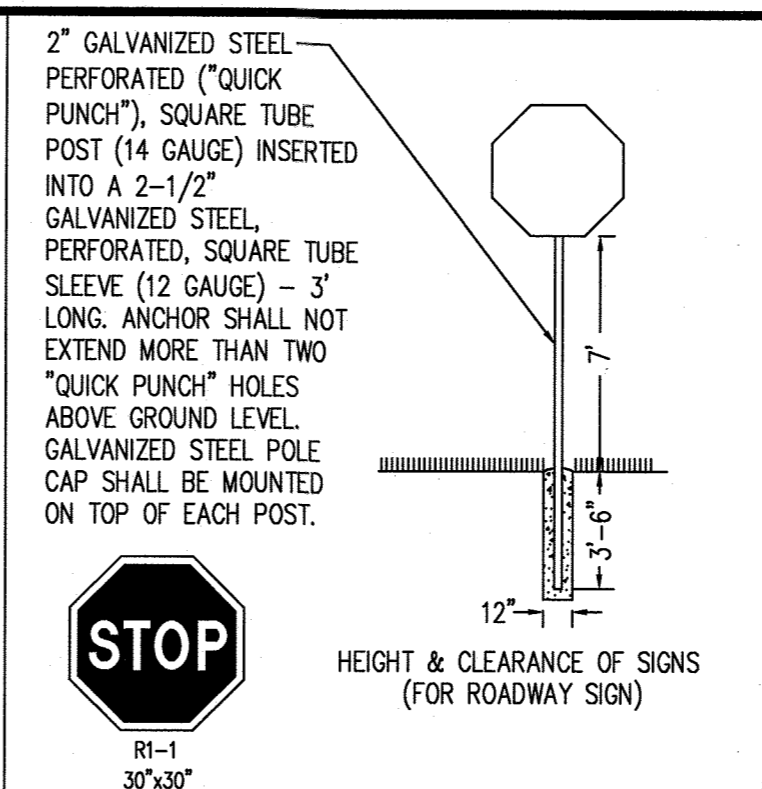
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 2174, EXPIRATION DATE: 11-30-2017



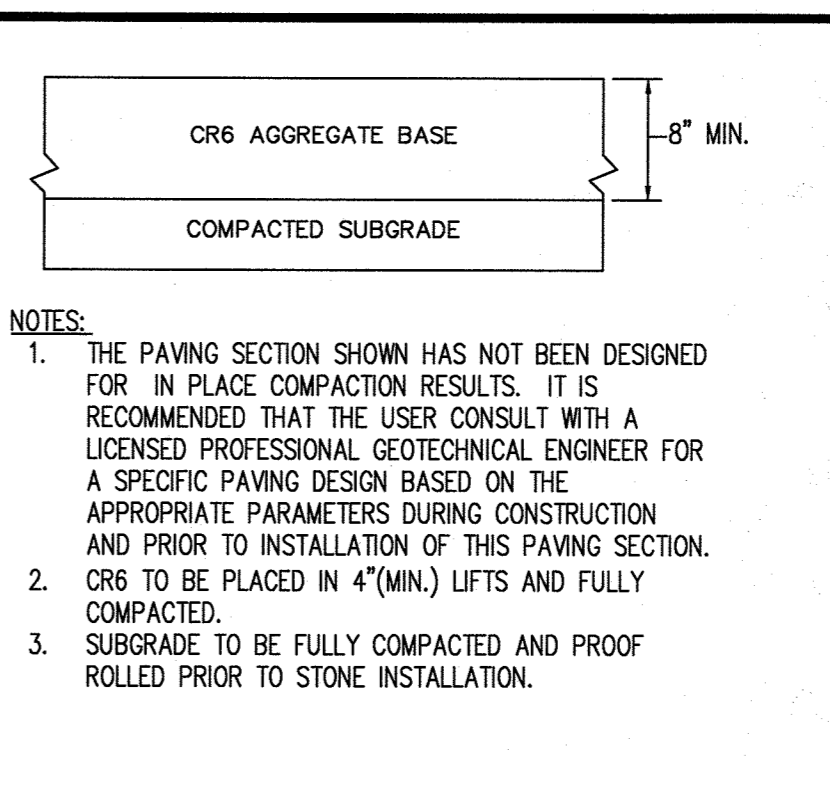
1 CONCRETE WHEEL STOP
NOT TO SCALE



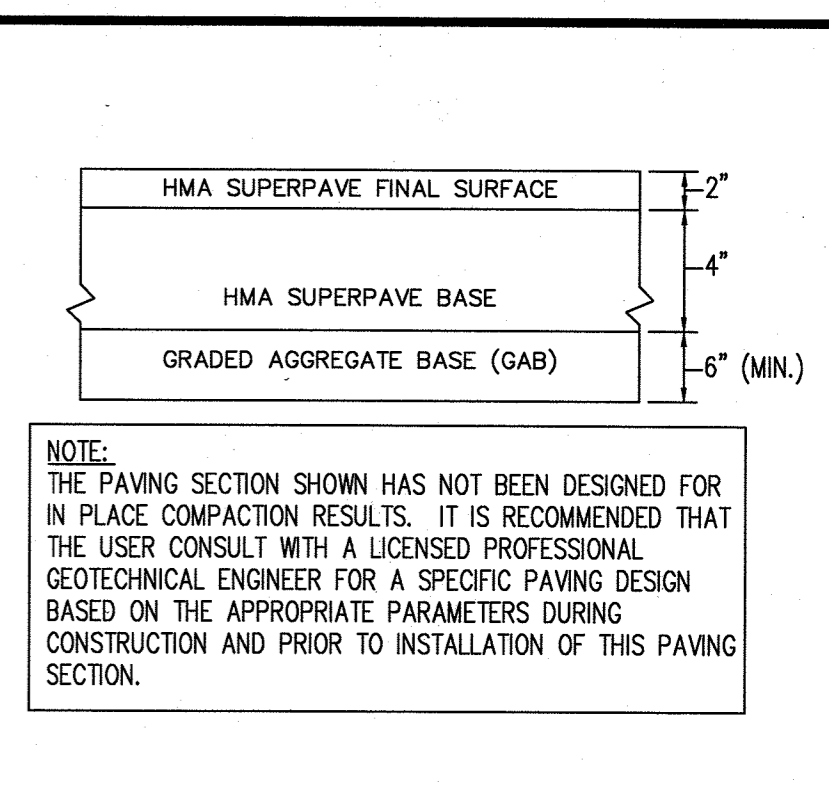
3 CONCRETE PAVEMENT
NOT TO SCALE



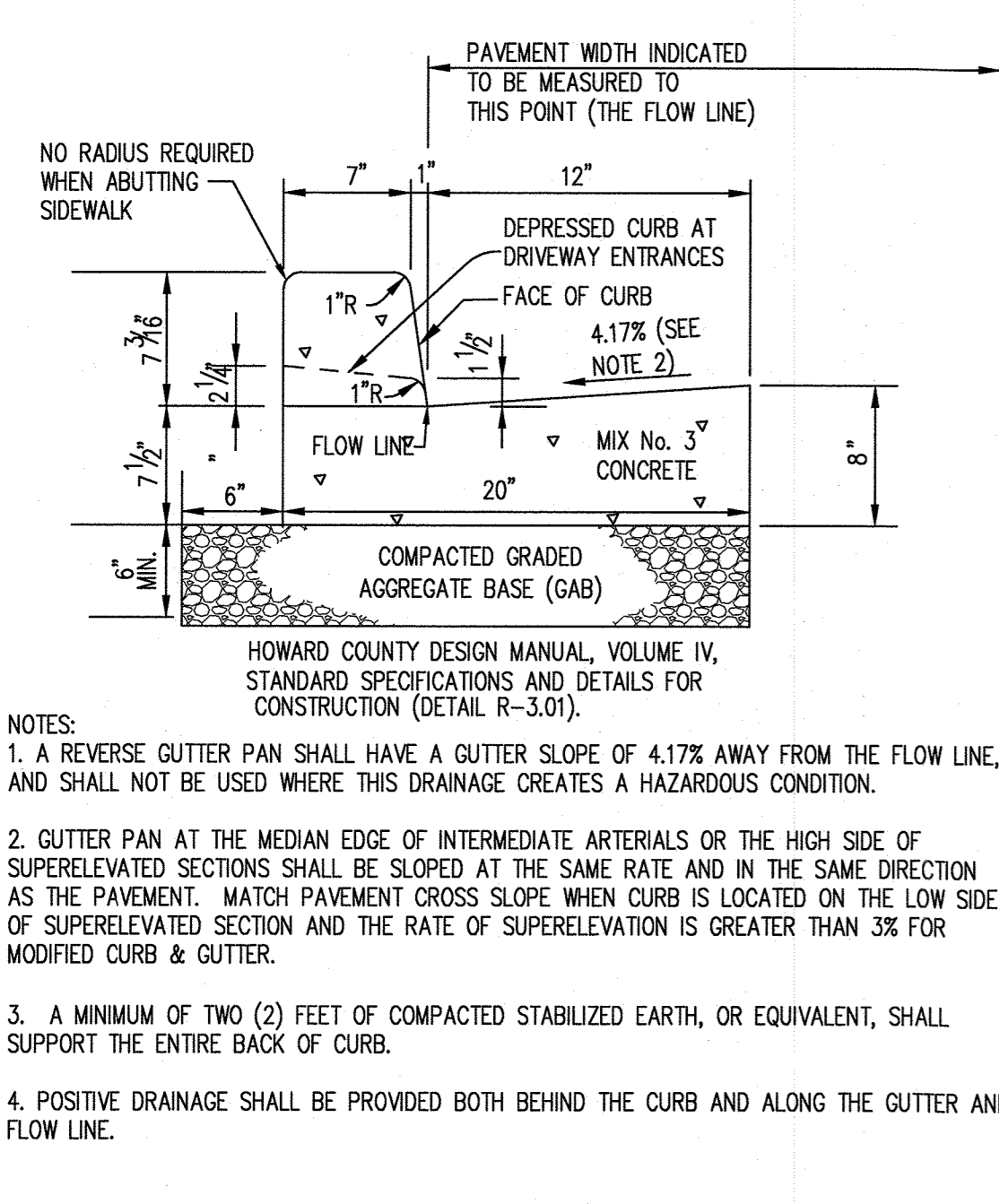
4 STOP SIGN
NOT TO SCALE



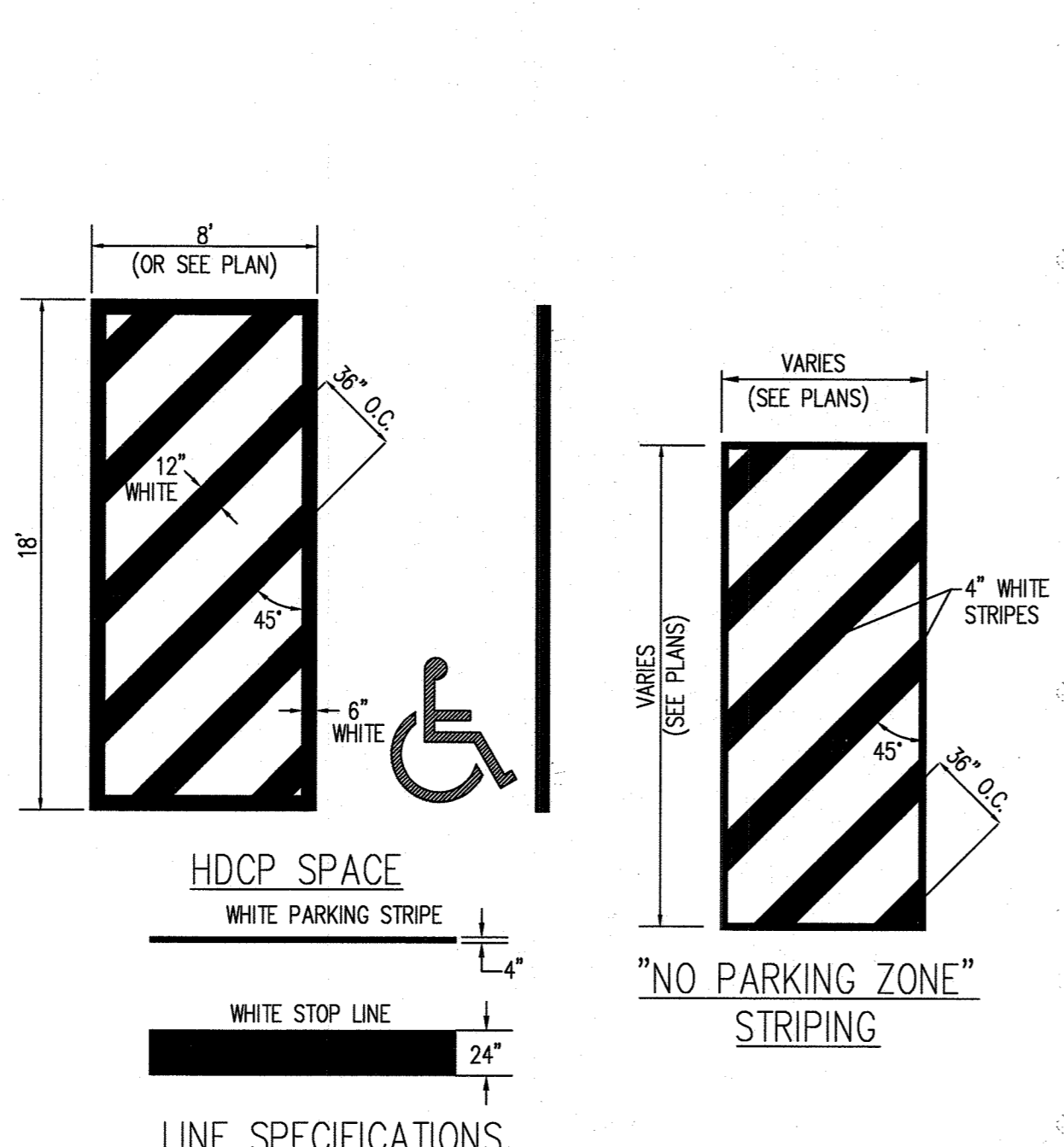
5 GRAVEL EQUIPMENT AREA
NOT TO SCALE



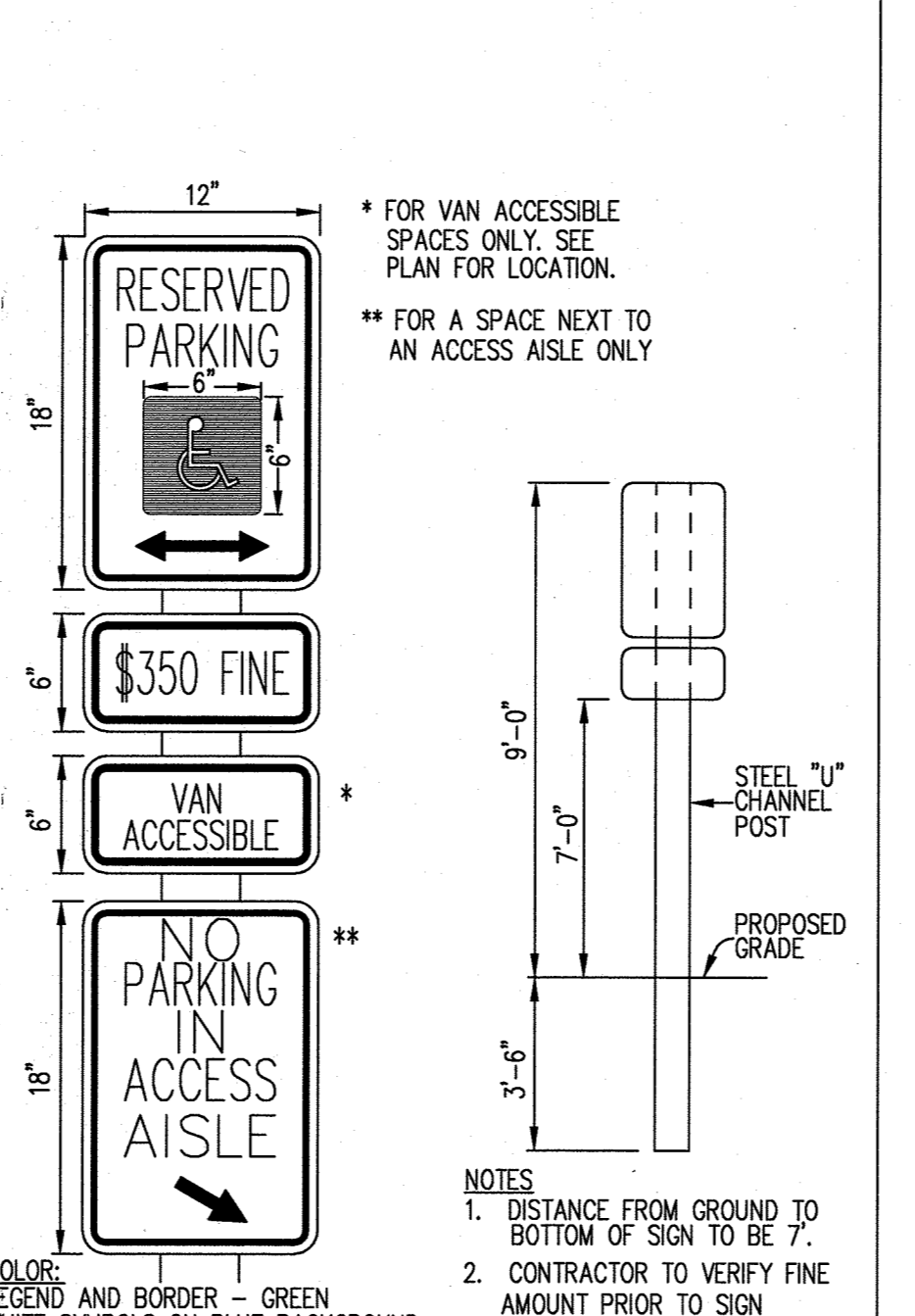
6 HEAVY DUTY PAVING
NOT TO SCALE



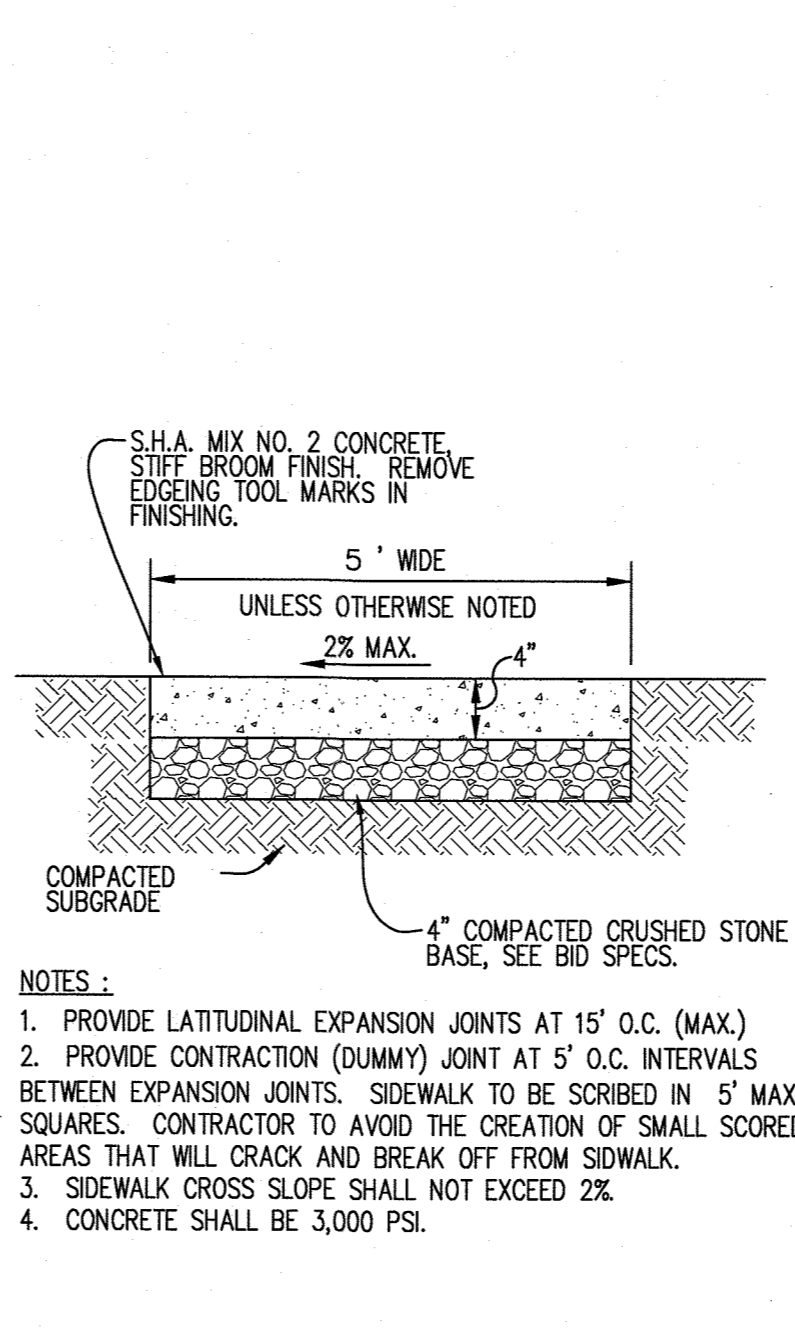
7 7" COMBINATION CURB AND GUTTER
NOT TO SCALE
HC DPW STD. R-3.01



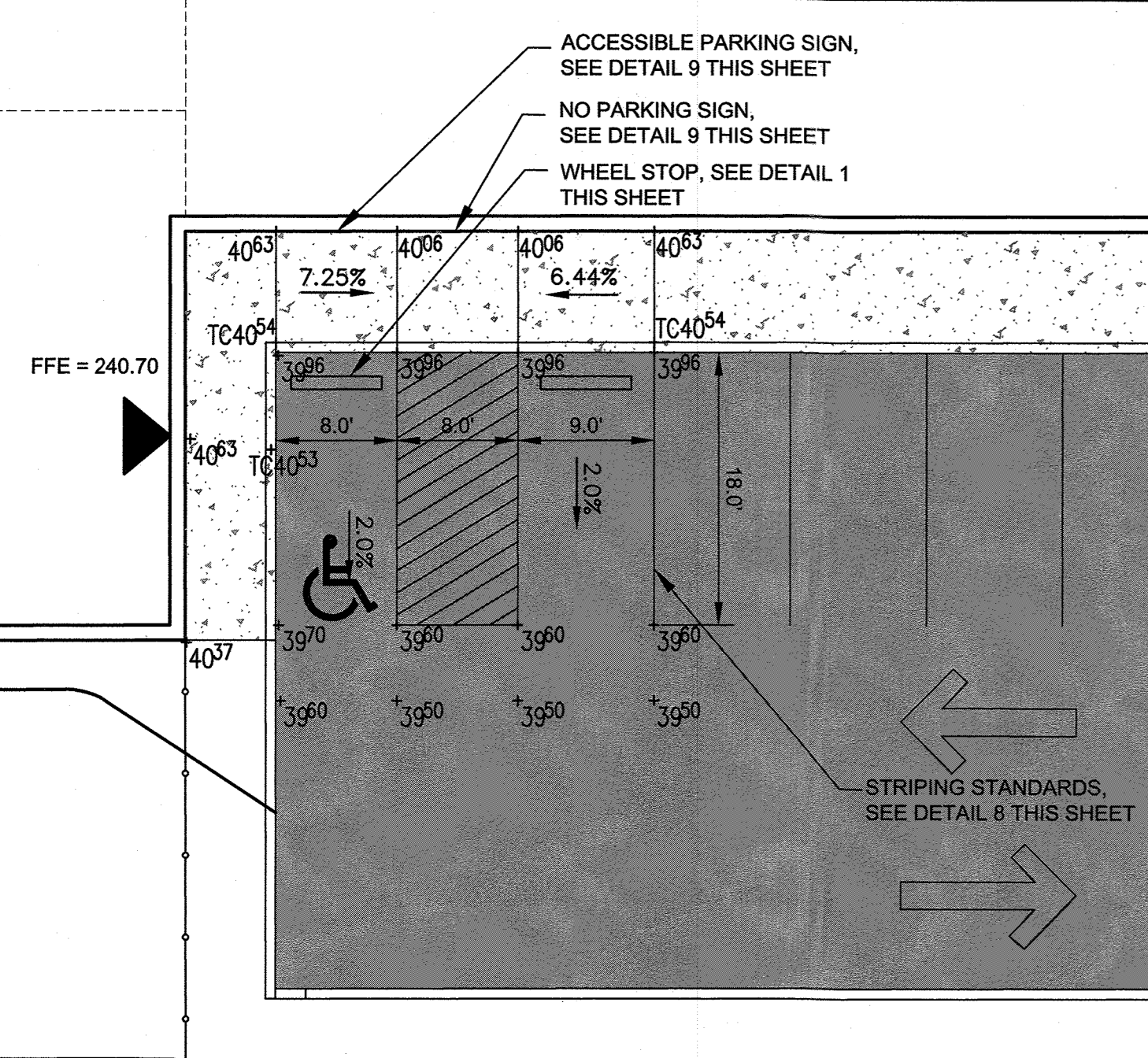
8 STRIPING STANDARDS
NOT TO SCALE



9 ACCESSIBLE PARKING SIGN
NOT TO SCALE



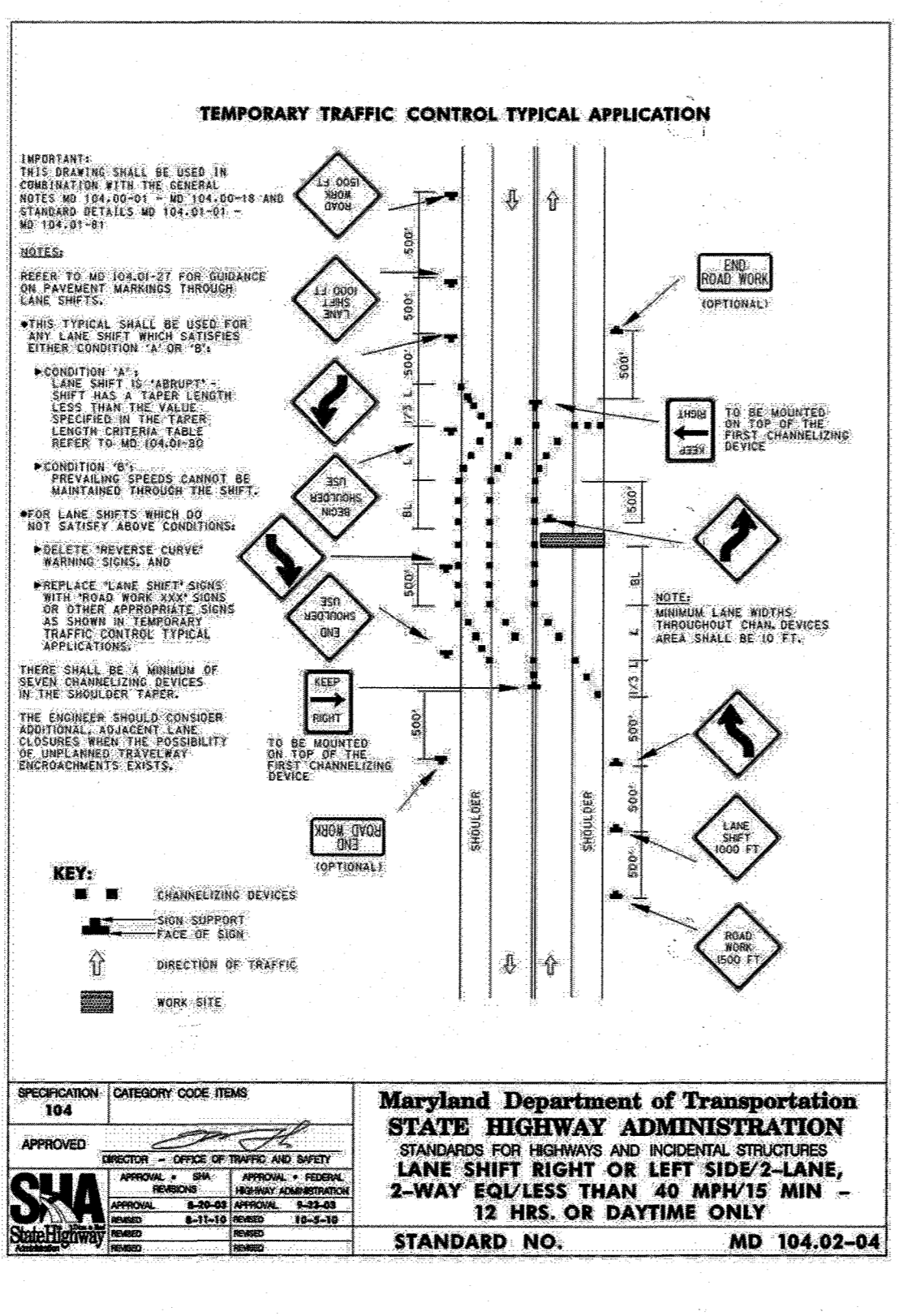
10 CONCRETE SIDEWALK
NOT TO SCALE



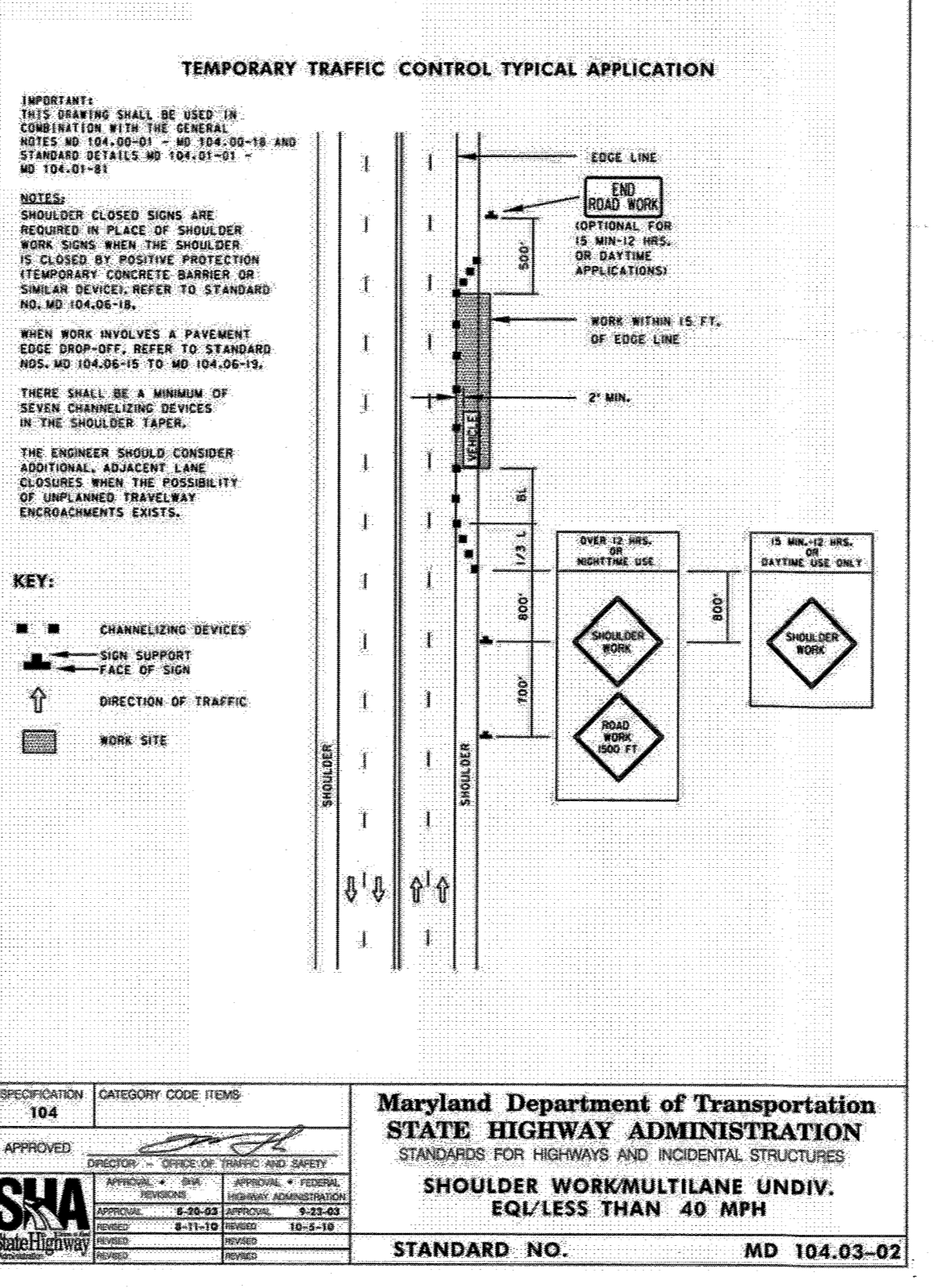
ACCESSIBILITY NOTES:

1. 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 SUPERSEDED IN CURRENT ADA AND LOCAL STANDARDS THE FOLLOWING SHALL APPLY:
 - A) MAXIMUM SIDEWALK CROSS SLOPES SHALL BE 2%.
 - B) A MINIMUM 5' x 8' 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.
 - C) ALL HANDICAPPED PARKING SHALL BE SLOPED NO GREATER THAN 2% IN ANY DIRECTION, INCLUDING A 5' WIDE AREA BEHIND THE PARKING SPACES.
 - D) AN ACCESS ROUTE FROM THE PARKING SPACE(S) 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 FOR CURB RAMPS, REQUIRE A HANDRAIL MEETING ADA REQUIREMENTS.

12 ACCESSIBLE PARKING
SCALE: 1"=10'



Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
LANE SHIFT RIGHT OR LEFT SIDE/LANE, 2-WAY EQ/LESS THAN 40 MPH/15 MIN - 12 HRS. OR DAYTIME ONLY
STANDARD NO. MD 104.02-04



Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
SHOULDER WORK/MULTILANE UNDIV. EQ/LESS THAN 40 MPH
STANDARD NO. MD 104.03-02

APPROVED: DEPARTMENT OF PLANNING AND ZONING			
<i>[Signature]</i>	4-1-20	DATE	
CHIEF, DEVELOPMENT ENGINEERING DIVISION			
<i>[Signature]</i>	4/16/20	DATE	
CHIEF, DIVISION OF LAND DEVELOPMENT			
<i>[Signature]</i>	4-17-2020	DATE	
Director, Planning & Zoning			

DATE	NO.	REVISION	BY

DEVELOPER: MORF I, LLC
9250 BENDIX ROAD
COLUMBIA, MD 21045
ATTN: GORDON HOLK
PHONE: 860-462-9533

OWNER: MARYLAND FOOD CENTER AUTHORITY
7901 OCEANO AVENUE
JESSUP, MD 20794-9411
ATTN: PEGGY TORRE
PHONE: 410-379-8760

PROJECT: MARYLAND FOOD CENTER AUTHORITY ANAEROBIC DIGESTION FACILITY

AREA: TAX MAP 43, PARCEL 666 LOT C3 PLAT 7405 ZONED M-2
GRID NO. 21 6TH ELECTION DISTRICT
7900 N OCEANO AVENUE
JESSUP, MARYLAND 20794
HOWARD COUNTY, MARYLAND

TITLE: SITE DETAILS

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

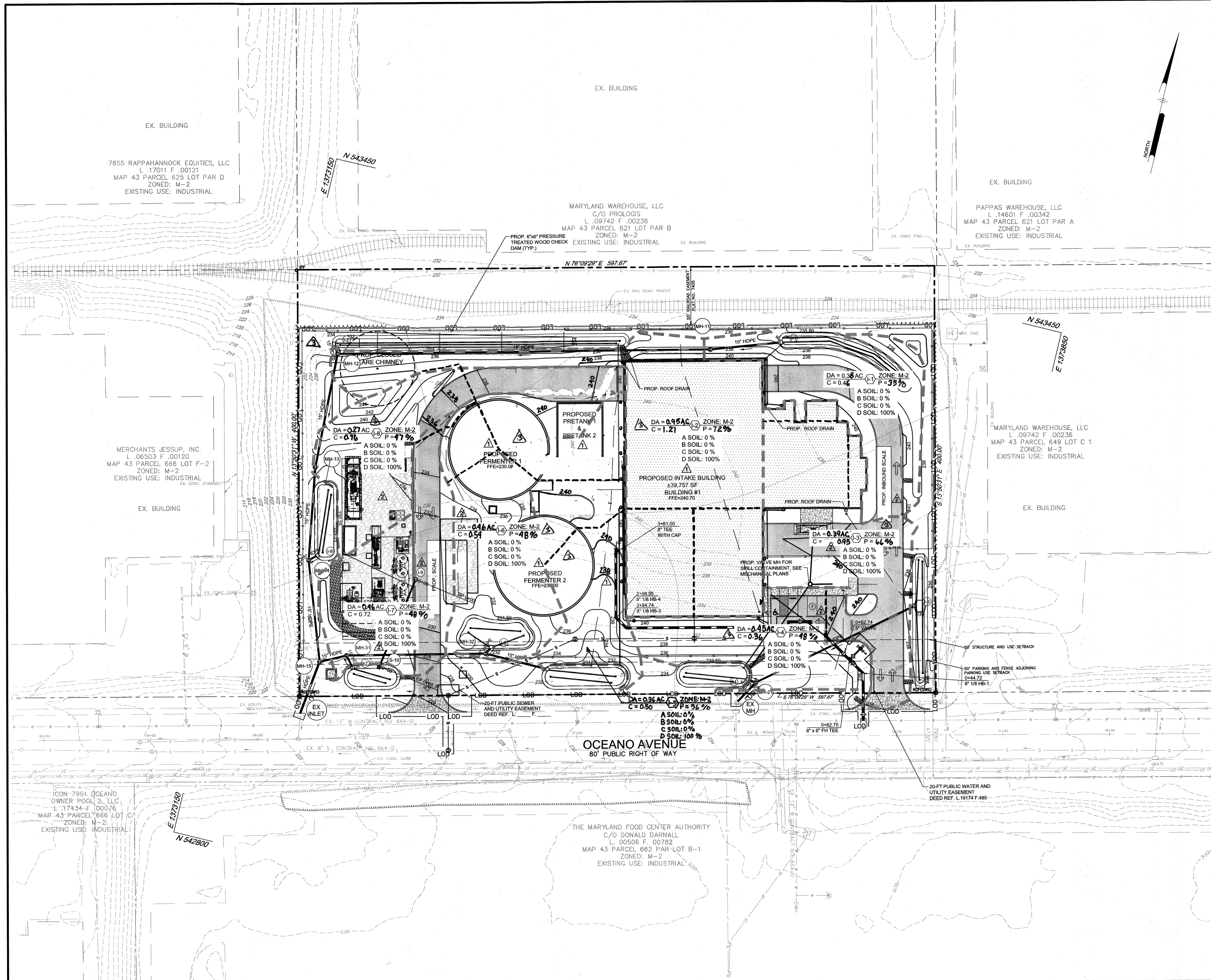
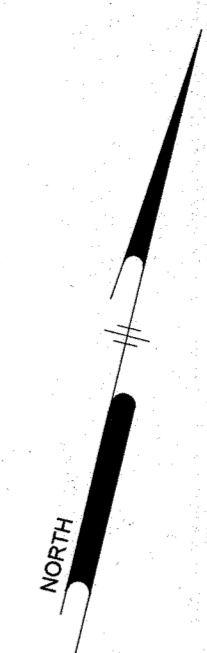
8818 Centre Park Drive, Suite 200 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

SEAL: *[Professional Engineer Seal]*

DESIGNED BY: PJS/JSN/JTB
DRAWN BY: JSN/JTB
PROJECT NO.: B-TS/18001
DATE: JANUARY 13, 2020
SCALE: AS SHOWN
DRAWING NO. 9 OF 24

LEGEND

EXISTING 2' CONTOUR	---
EXISTING 10' CONTOUR	---
EX. PROPERTY LINE AND RIGHT OF WAY	---
EX. TREELINE	---
EXISTING BUILDING	---
EXISTING WATER	---
EXISTING SEWER	---
EXISTING STORM DRAIN	---
EXISTING GAS	---
EXISTING UNDERGROUND ELECTRIC	---
EXISTING UNDERGROUND COMMUNICATION	---
EXISTING RAILROAD TRACK	---
EXISTING CURB & GUTTER	---
EXISTING FIRE HYDRANT	---
PROPOSED 2' CONTOUR	---
PROPOSED 10' CONTOUR	---
LIMIT OF DISTURBANCE	---
PROPOSED WATER	---
PROPOSED HYDRANT	---
PROPOSED SEWER	---
PROPOSED STORM DRAIN	---
PROPOSED TREELINE	---
DRAINAGE AREA	---



04/20/22	3	REVISED DRAINAGE AREAS	JSN
DATE	NO.	REVISION	BY

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 11-1-21
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 11/4/21
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 11-9-21
DIRECTOR DATE

07/28/2021	2	WATER METER AND SITE REVISIONS	JTB
9/23/2020	1	REVISED SITE LAYOUT AND GRADING	JSN
DATE	NO.	REVISION	BY

DEVELOPER
MORF I, LLC
9250 BENDIX ROAD
COLUMBIA, MD 21045
ATTN: GORDON HOLK
PHONE: 860-462-9533

OWNER
MARYLAND FOOD CENTER AUTHORITY
7801 OCEANO AVENUE
JESSUP, MD 20794-9411
ATTN: PEGGY TORRE
PHONE: 410-379-5760

PROJECT
MARYLAND FOOD CENTER AUTHORITY
ANAEROBIC DIGESTION FACILITY

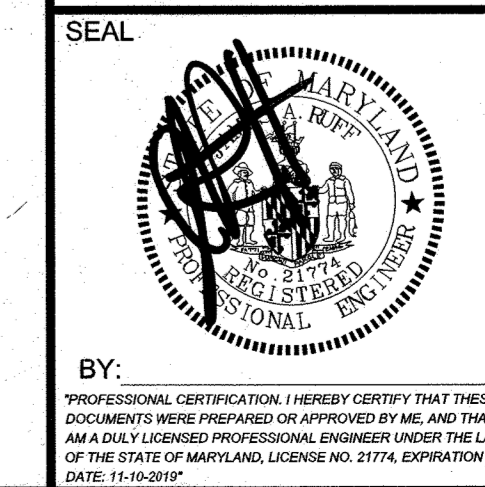
AREA
TAX MAP 43, PARCEL 666 LOT C3 PLAT 7405 ZONED M-2
GRID NO. 21 6TH ELECTION DISTRICT
7900 N OCEANO AVENUE
JESSUP, MARYLAND 20794
HOWARD COUNTY, MARYLAND

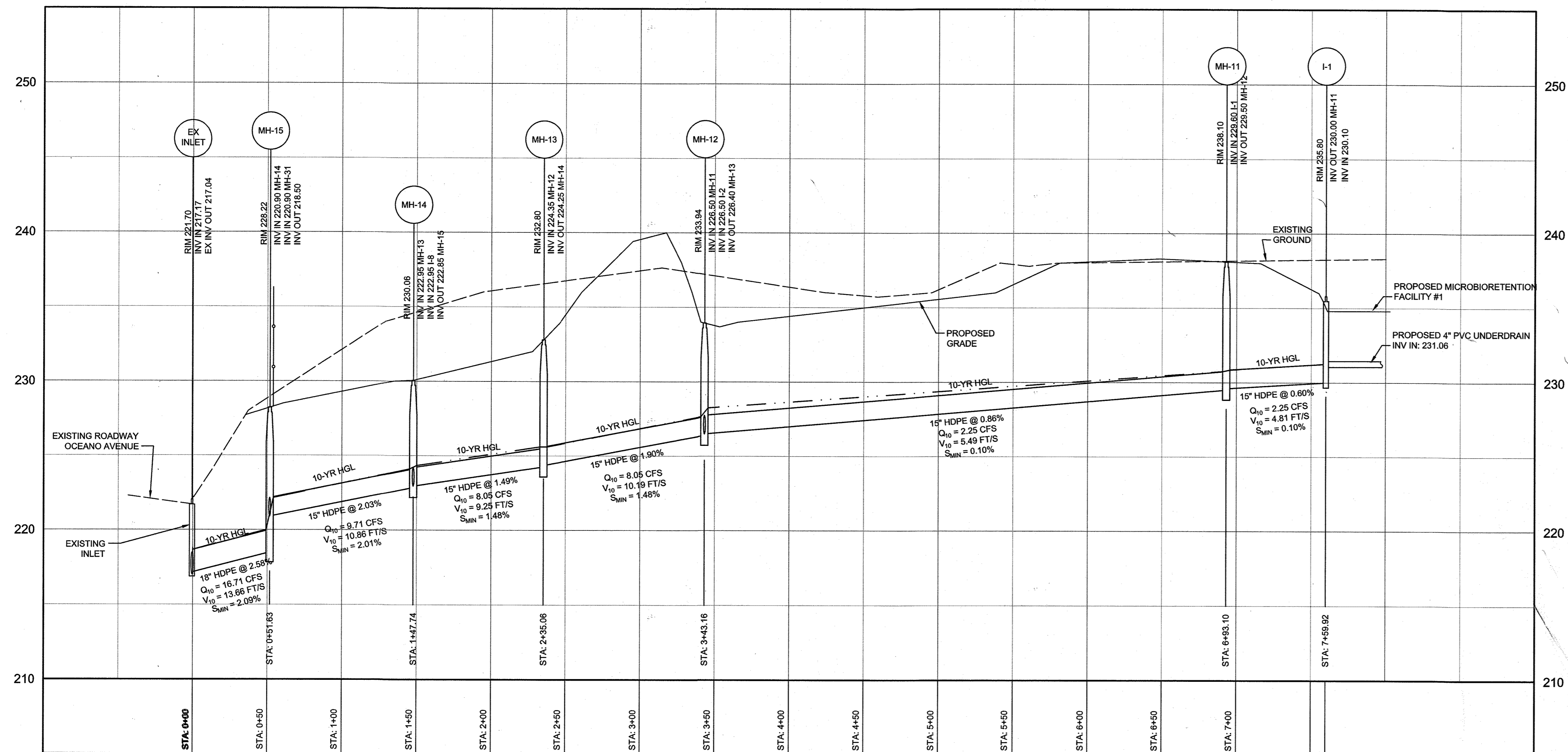
TITLE
REVISED
STORM DRAIN DRAINAGE
AREA MAP

Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects

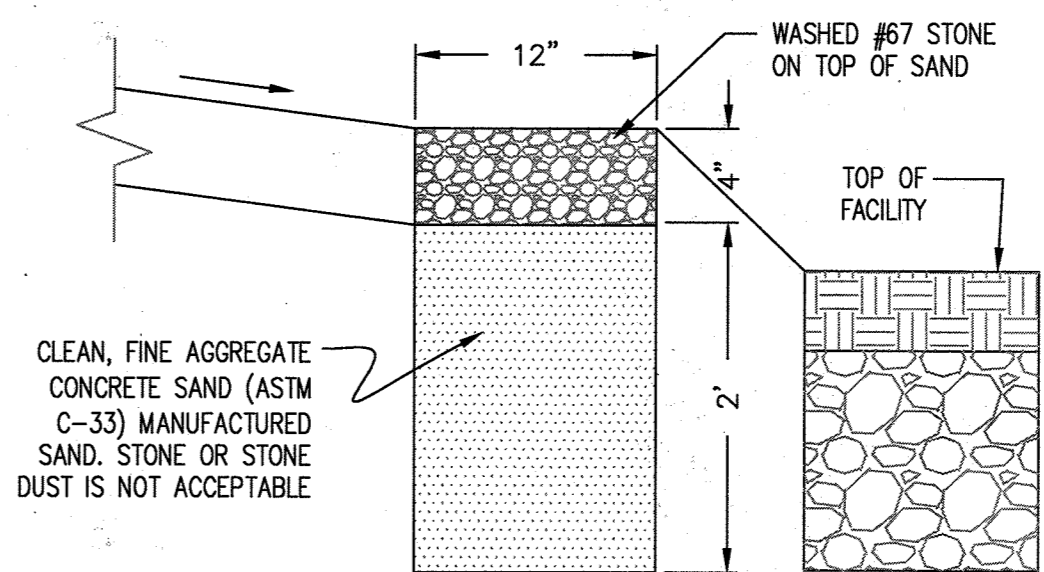
8818 Centre Park Drive, Suite 200 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

DESIGNED BY:	PJS/JSN/JTB
DRAWN BY:	JSN/JTB
PROJECT NO.:	BTSBH18001
DATE:	SEPTEMBER 29, 2021
SCALE:	1" = 40'
DRAWING NO.:	10 OF 24

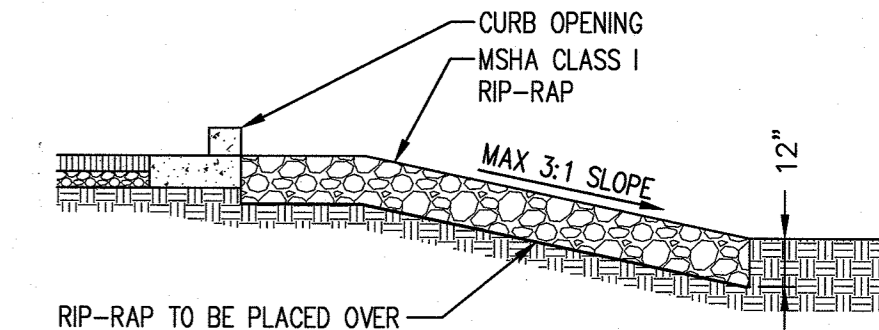




STORM DRAIN PROFILE I-1 TO EXISTING INLET
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

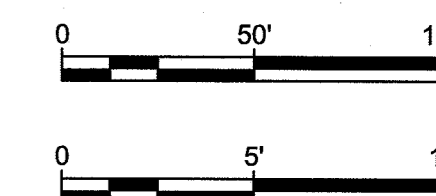


1 STONE DIAPHRAGM TYPICAL SECTION
11 NOT TO SCALE



2 RIP-RAP CHANNEL
11 NOT TO SCALE

PRIVATE STORM DRAIN PIPE SCHEDULE							
MATERIAL	DIAMETER (in)	LENGTH (ft)	FROM STRUCTURE	TO STRUCTURE	INV IN	INV OUT	SLOPE
HDPE	15"	8'	I-6	MH-32	224.10	224.30	2.50%
HDPE	15"	165'	I-3	MH-21	229.85	230.65	0.49%
HDPE	15"	8'	I-4	MH-21	229.71	229.75	0.50%
HDPE	15"	13'	I-7	MH-31	222.25	222.59	2.69%
HDPE	15"	9'	I-8	MH-14	222.95	224.00	11.17%
HDPE	15"	10'	I-2	MH-12	226.50	227.50	10.05%
HDPE	15"	131'	MH-32	MH-31	222.35	224.00	1.26%
HDPE	15"	26'	MH-31	MH-15	220.90	222.25	5.16%
HDPE	15"	60'	I-5	MH-32	224.10	225.29	2.00%
HDPE	15"	24'	MH-21	EX MANHOLE	229.50	229.61	0.45%
HDPE	18"	52'	MH-15	EX INLET	217.17	218.50	2.58%
HDPE	15"	96'	MH-14	MH-15	220.90	222.85	2.03%
HDPE	15"	87'	MH-13	MH-14	222.95	224.25	1.49%
HDPE	15"	108'	MH-12	MH-13	224.35	226.40	1.90%
HDPE	15"	350'	MH-11	MH-12	226.50	229.50	0.88%
HDPE	15"	67'	I-1	MH-11	229.60	230.00	0.60%



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

PE #
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. EXPIRATION DATE:

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature]
CHIEF, DEVELOPMENT ENGINEERING DIVISION 4-1-20 DATE

[Signature]
CHIEF, DIVISION OF LAND DEVELOPMENT 4/17/2020 DATE

[Signature]
Director, Planning & Zoning 4-17-2020 Date

0621 2 ADD STORM DRAIN & STRUCTURES P35
DATE NO. REVISION BY

DEVELOPER
MORF I, LLC
9250 BENDIX ROAD
COLUMBIA, MD 21045
ATTN: GORDON HOLK
PHONE: 860-462-9533

OWNER
MARYLAND FOOD CENTER AUTHORITY
7801 OCEANO AVENUE
JESSUP, MD 20794-9411
ATTN: PEGGY TORRE
PHONE: 410-379-5760

PROJECT
MARYLAND FOOD CENTER AUTHORITY
ANAEROBIC DIGESTION FACILITY

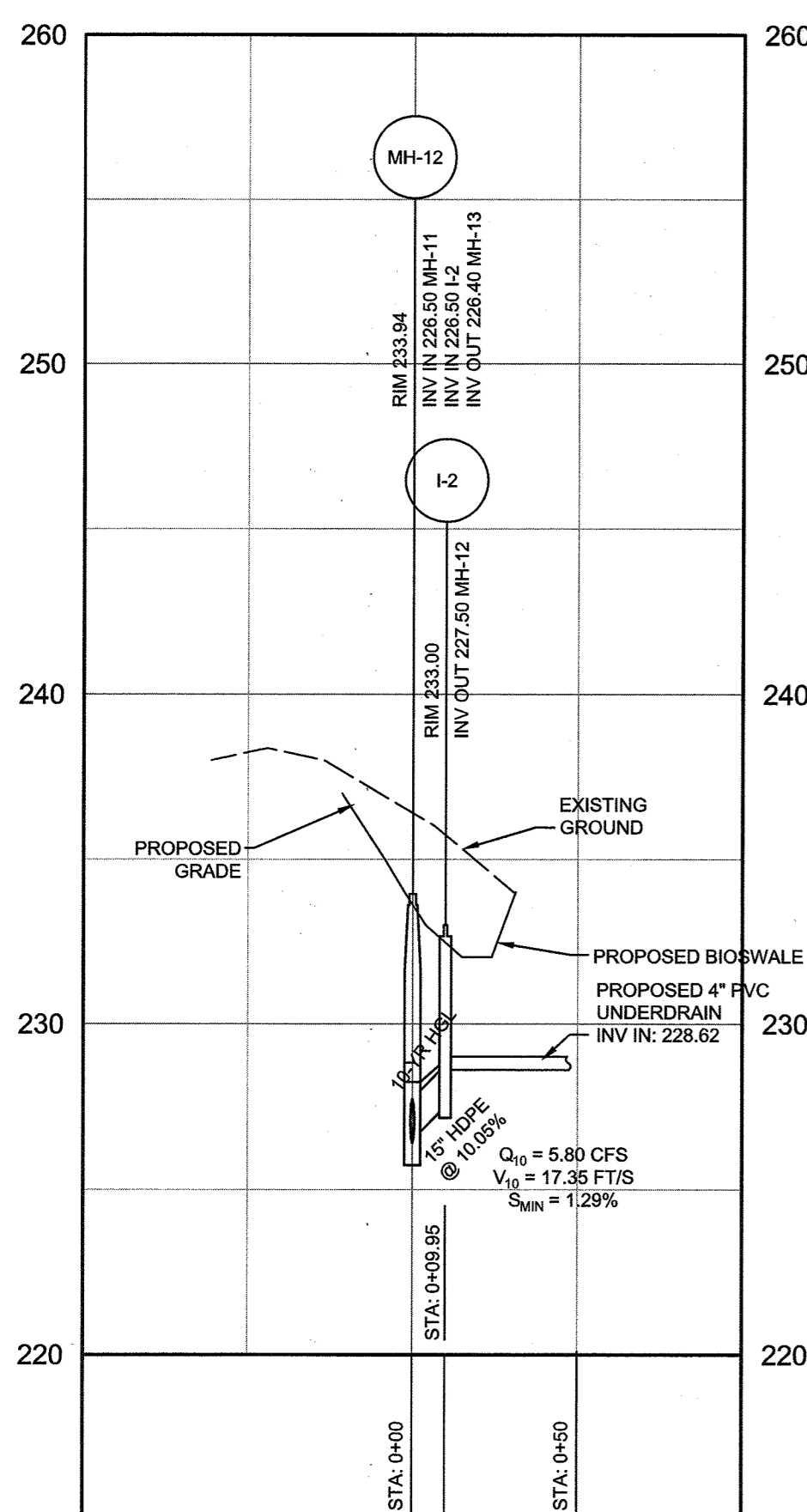
AREA
TAX MAP 43, PARCEL 666 LOT C3 PLAT 7405 ZONED M-2
GRID NO. 21 6TH ELECTION DISTRICT
7900 N OCEANO AVENUE
JESSUP, MARYLAND 20794
HOWARD COUNTY, MARYLAND

TITLE
STORM DRAIN PROFILES AND SCHEDULES

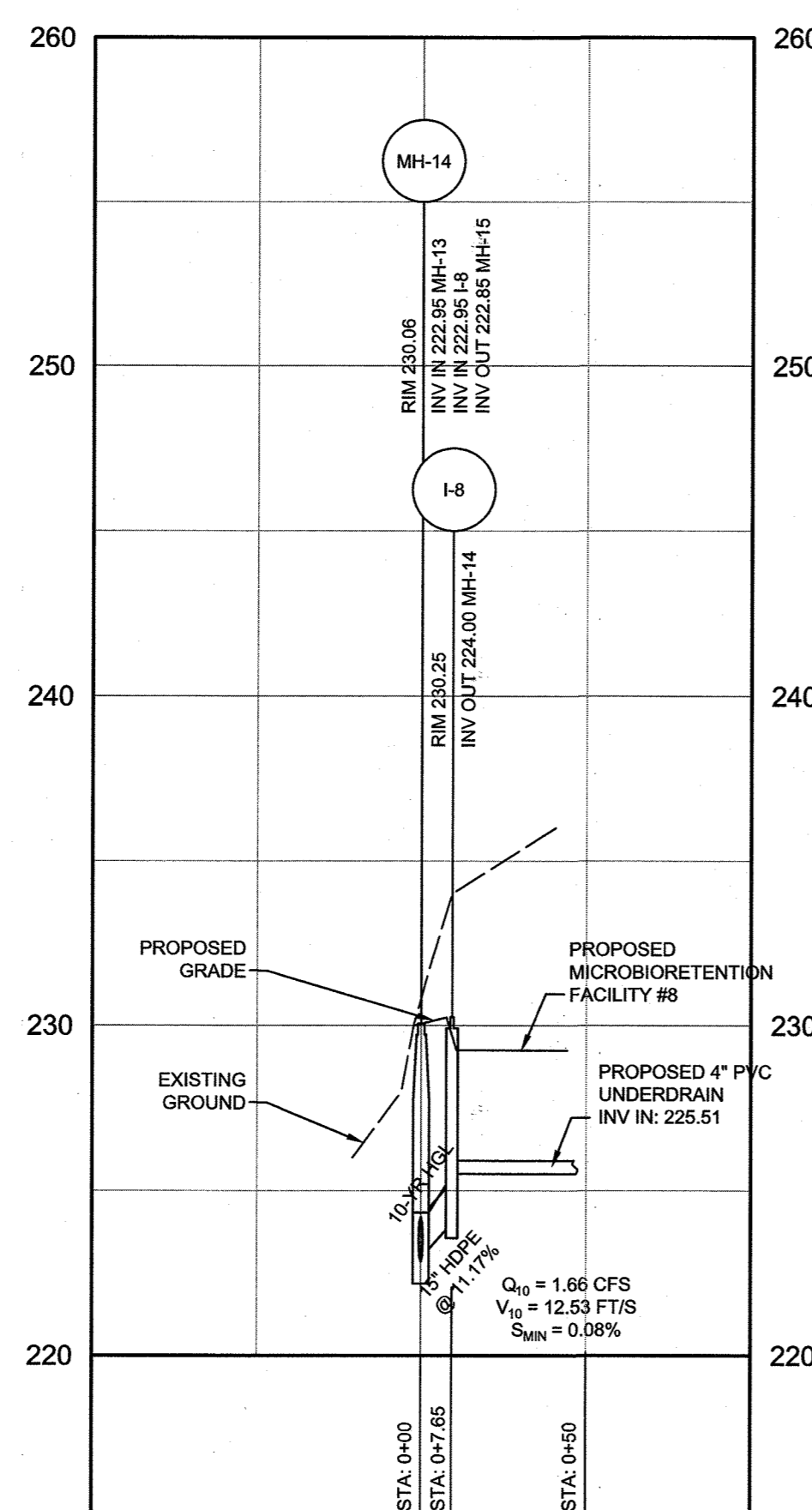
Pennoni Associates Inc.
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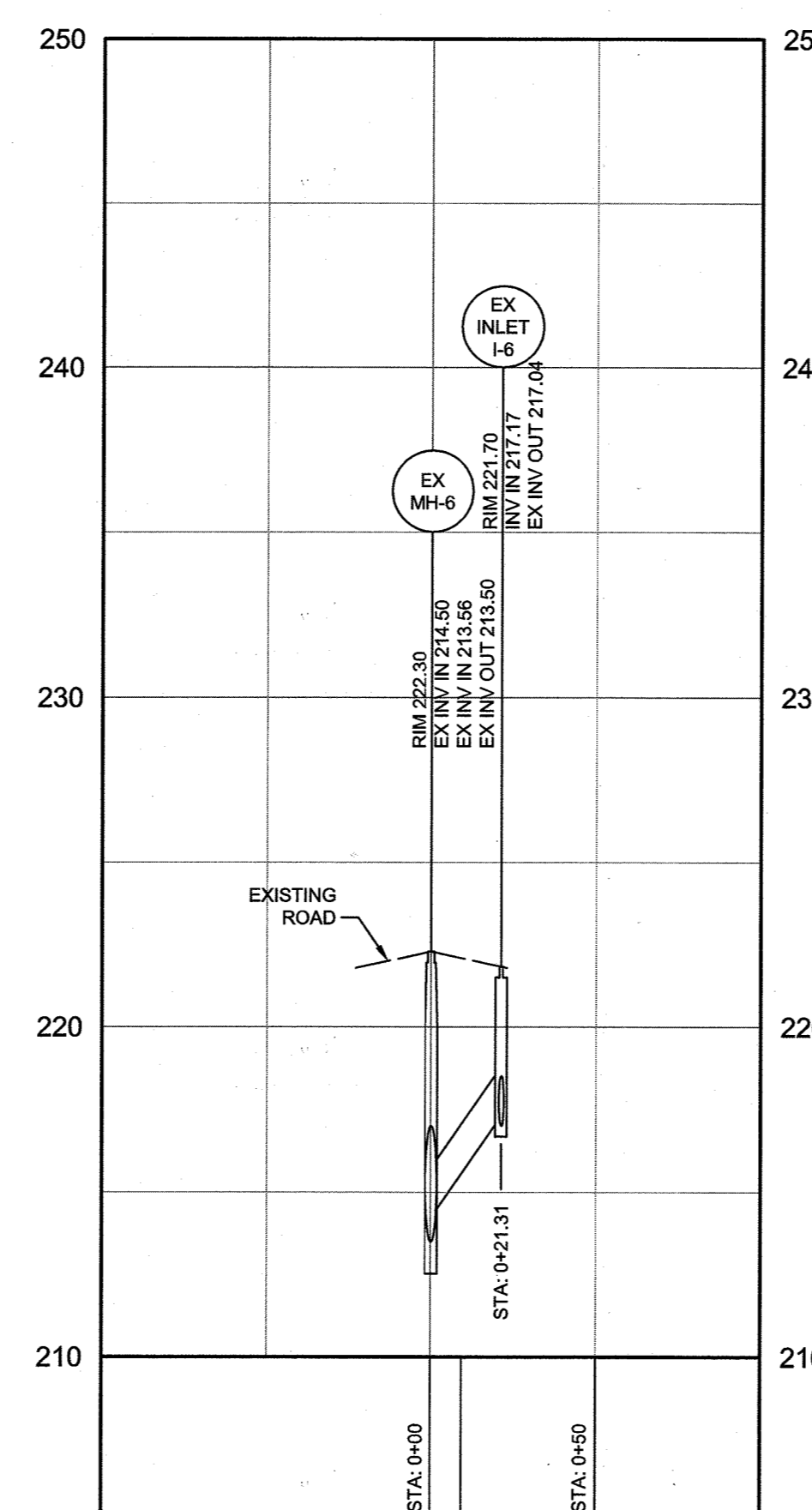
DESIGNED BY: PJS/JSN/JTB
DRAWN BY: JSN/JTB
PROJECT NO.: BTBS18001
DATE: JANUARY 13, 2020
SCALE: AS SHOWN
DRAWING NO. 11 OF 24



STORM DRAIN PROFILE I-2 TO MH-12
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



STORM DRAIN PROFILE I-8 TO MH-14
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

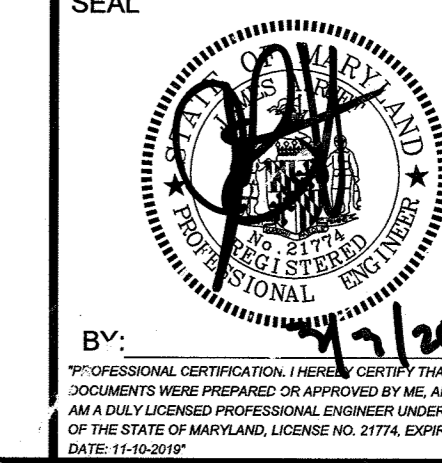


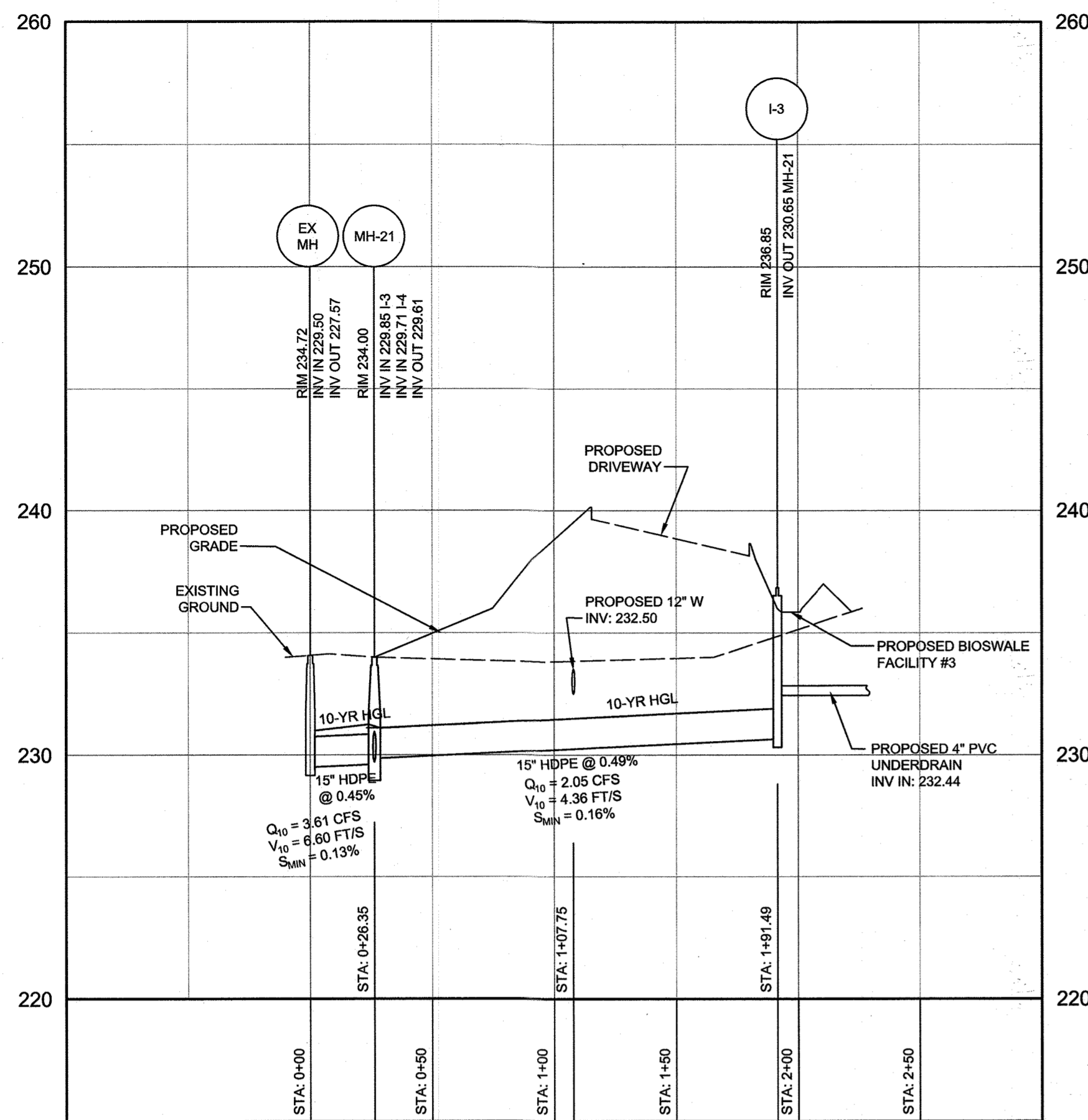
EXISTING STORM DRAIN PROFILE
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

PRIVATE STORM DRAIN STRUCTURE SCHEDULE							
ID	RIM ELEVATION	INV IN (FROM)	INV OUT (TO)	TYPE	DETAIL STANDARD	NORTHING	EASTING
I-1	235.80	MICROBIORETENTION #1	230.00 (15" HDPE) MH-11	NYLOPLAST INLET	SEE DETAIL ON SHEET 15	543379.3985	1373596.4101
I-2	233.00	BIOSWALE #2	227.50 (15" HDPE) MH-12	NYLOPLAST INLET	SEE DETAIL ON SHEET 15	543280.5248	1373188.4059
I-3	236.85	BIOSWALE #3	230.65 (15" HDPE) MH-21	NYLOPLAST INLET	SEE DETAIL ON SHEET 15	543168.9505	1373778.0290
I-4	233.50	MICROBIORETENTION #4	229.75 (15" HDPE) MH-21	NYLOPLAST INLET	SEE DETAIL ON SHEET 15	543064.9495	1373640.5170
I-5	231.30	MICROBIORETENTION #5	225.29 (15" HDPE) MH-32	NYLOPLAST INLET	SEE DETAIL ON SHEET 15	543030.6720	1373455.0881
I-6	231.50	MICROBIORETENTION #6	224.30 (15" HDPE) MH-32	NYLOPLAST INLET	SEE DETAIL ON SHEET 15	543038.7881	1373398.8912
I-7	227.50	MICROBIORETENTION #7	222.59 (15" HDPE) MH-31	NYLOPLAST INLET	SEE DETAIL ON SHEET 15	542989.7590	1373276.9720
I-8	230.25	MICROBIORETENTION #8	224.00 (15" HDPE) MH-14	NYLOPLAST INLET	SEE DETAIL ON SHEET 15	543084.4485	1373220.0923
MH-11	238.10	229.60 (15" HDPE @ 0.60%) I-1	229.50 (15" HDPE) MH-12	NYLOPLAST INLET	SEE DETAIL ON SHEET 15	543357.4219	1373533.3102
MH-12	233.94	226.50 (15" HDPE @ 0.86%) MH-11 226.50 (15" HDPE @ 10.05%) I-2	226.40 (15" HDPE) MH-13	4" MANHOLE	HOCO DPW G-5.12	543272.2301	1373193.8930
MH-13	232.80	224.35 (15" HDPE @ 1.90%) MH-12	224.25 (15" HDPE) MH-14	4" MANHOLE	HOCO DPW G-5.12	543164.2286	1373198.5597
MH-14	230.06	222.95 (15" HDPE @ 1.49%) MH-13 222.95 (15" HDPE @ 11.17%) I-8	222.85 (15" HDPE) MH-15	4" MANHOLE	HOCO DPW G-5.12	543078.1354	1373213.1220
MH-15	228.22	220.90 (15" HDPE @ 2.03%) MH-14 220.90 (15" HDPE @ 5.16%) MH-31	218.50 (18" HDPE)	4" MANHOLE	HOCO DPW G-5.12	542987.6354	1373245.4759
MH-21	234.00	229.85 (15" HDPE @ 0.49%) I-3 229.71 (15" HDPE @ 0.50%) I-4	229.61 (15" HDPE)	4" MANHOLE	HOCO DPW G-5.12	543064.0482	1373648.4878
MH-31	228.36	222.35 (15" HDPE @ 1.26%) MH-32 222.25 (15" HDPE @ 2.69%) I-7	222.25 (15" HDPE) MH-15	4" MANHOLE	HOCO DPW G-5.12	542999.4034	1373268.8160
MH-32	232.07	224.10 (15" HDPE @ 2.00%) I-5 224.10 (15" HDPE @ 2.50%) I-6	224.00 (15" HDPE) MH-31	4" MANHOLE	HOCO DPW G-5.12	543031.5084	1373395.5906
S-10	227.94	226.50 (12" HDPE @ 0.57%)		12" HDPE END SECTION		543096.7453	1373361.0721
I-9	230.10		226.94 (12" HDPE)	A-5 INLET	HOCO DPW G-4.02	543083.92	1373315.0624

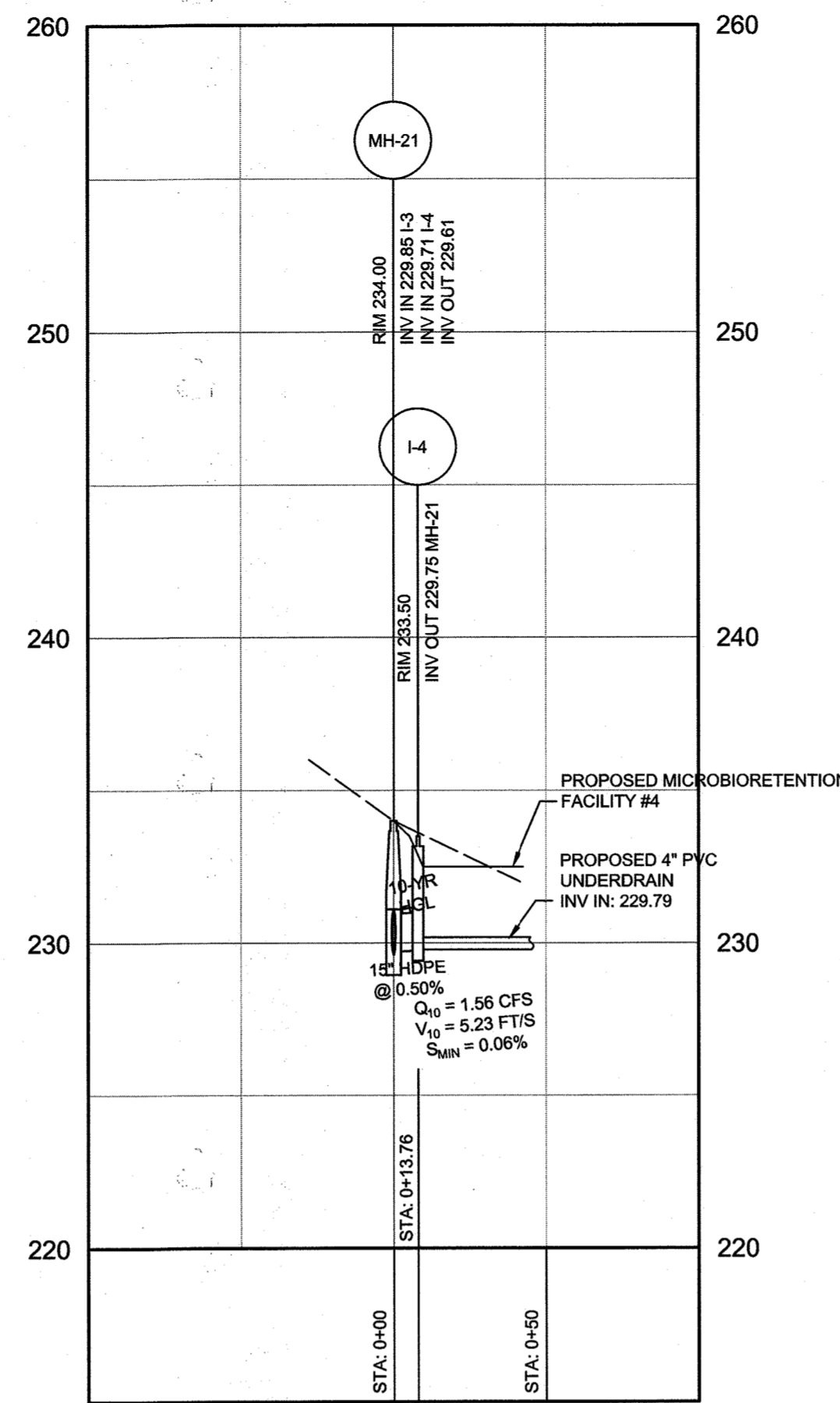
STORM DRAIN PIPE SCHEDULE			
USE	TYPE	SIZE	LENGTH
STORM DRAIN	HDPE	15"	1,162 FT
STORM DRAIN	HDPE	18"	52 FT
MICROBIO UNDERDRAIN	PVC	6"	791 FT
MICROBIO OVERFLOW	PVC	6"	791 FT
STORM DRAIN	HDPE	12"	90 FT

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.

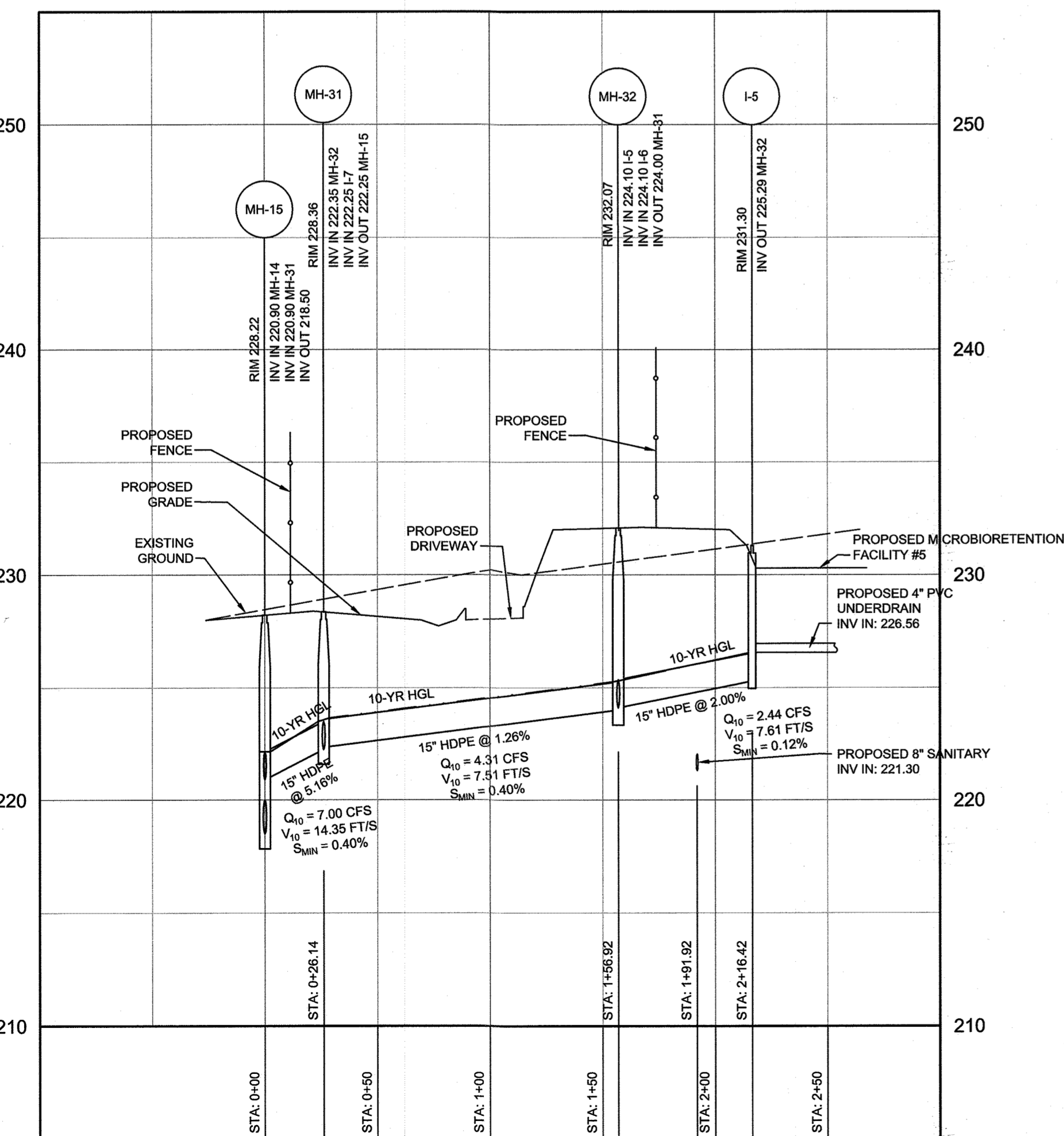




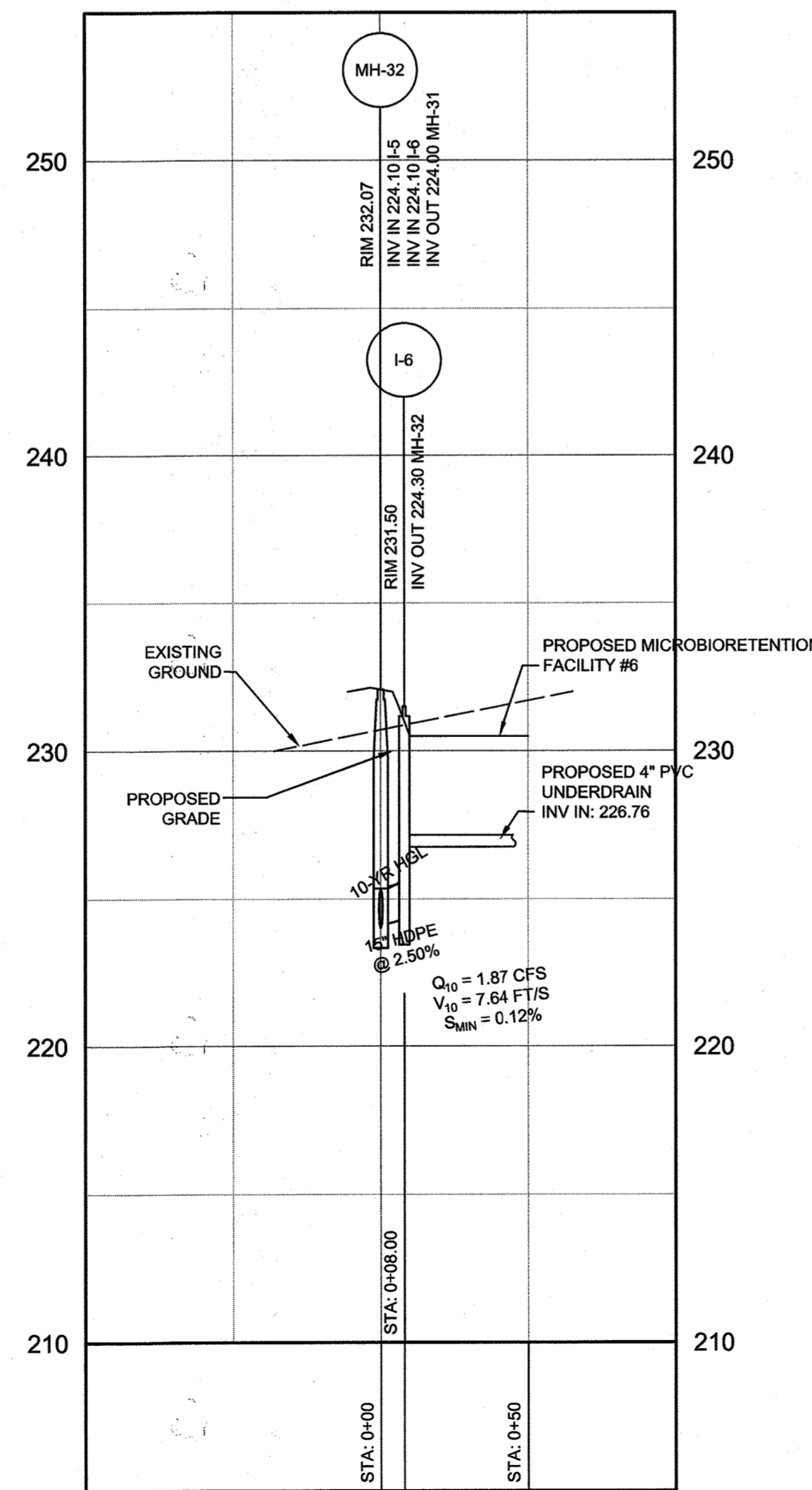
STORM DRAIN PROFILE I-3 TO EX-MH
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



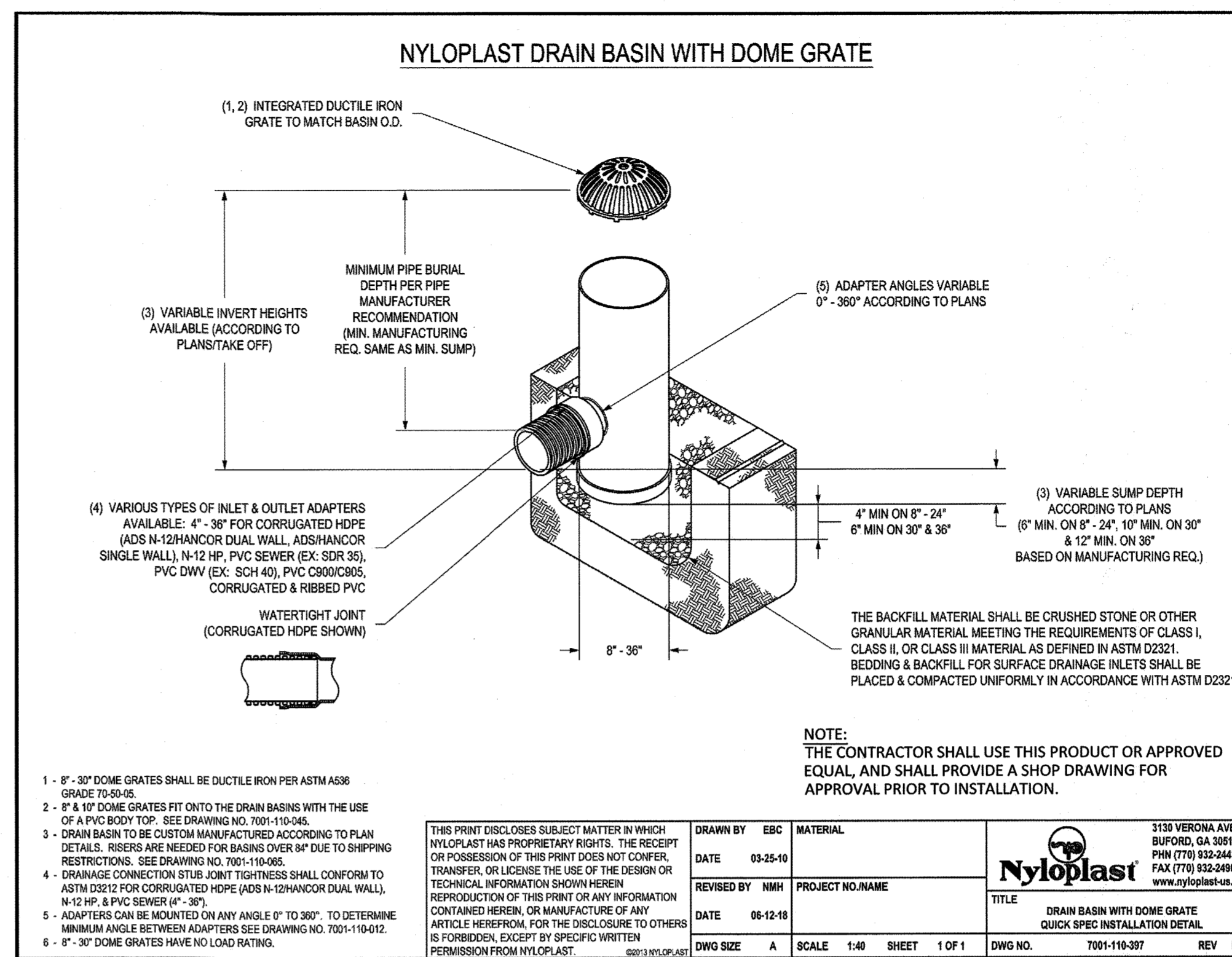
STORM DRAIN PROFILE I-4 TO MH-21
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



STORM DRAIN PROFILE I-5 TO MH-15
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

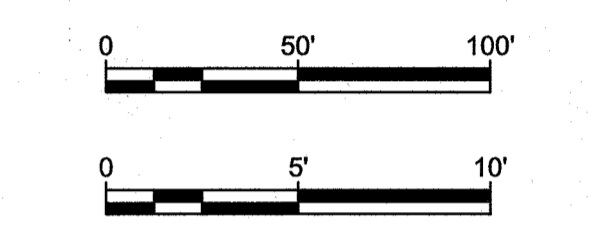


STORM DRAIN PROFILE I-6 TO MH-32
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



1 - 8" x 30" DOME GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.	THIS PRINT DISCLOSES SUBJECT MATTER IN WHICH NYLOPLAST HAS PROPRIETARY RIGHTS. THE RECEIPT OR POSSESSION OF THIS PRINT DOES NOT CONFER, TRANSFER, OR LICENSE THE USE OF THE DESIGN OR TECHNICAL INFORMATION SHOWN HEREIN. REPRODUCTION OF THIS PRINT OR ANY INFORMATION CONTAINED HEREIN, OR MANUFACTURE OF ANY ARTICLE HEREFROM, FOR THE DISCLOSURE TO OTHERS IS FORBIDDEN, EXCEPT BY SPECIFIC WRITTEN PERMISSION FROM NYLOPLAST.	DRAWN BY: EBC DATE: 03-25-10	MATERIAL: NYLOPLAST PROJECT NO: NAME	3100 VERONA AVE BUPROD, GA 30816 PHN (770) 532-2443 FAX (770) 532-2499 www.nyloplast.com
2 - 8" x 10" DOME GRATES FIT ONTO THE DRAIN BASINS WITH THE USE OF A PVC BODY TOP. SEE DRAWING NO. 700-110-046.		REVISED BY: NMH DATE: 06-12-16	TITLE: DRAIN BASIN WITH DOME GRATE QUICK SPEC INSTALLATION DETAIL	
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 8' DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 700-110-046.		DWG SIZE: A SCALE: 1:40 SHEET: 1 OF 1	DWG NO.: 7001-110-397 REV: E	
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D2222 FOR CORRUGATED HDPE (ADS-N-20) AND DUAL WALL, N-12 HP & PVC SEWER (4" - 36").				
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 700-110-042.				
6 - 8" x 30" DOME GRATES HAVE NO LOAD RATING.				

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
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: 4.1.20
PE #

APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature]
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 4/1/2020
[Signature]
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 4/1/2020
Director, Planning & Zoning

DEVELOPER: MORF I, LLC
9250 BENDIX ROAD
COLUMBIA, MD 21045
ATTN: GORDON HOLK
PHONE: 860-462-9533

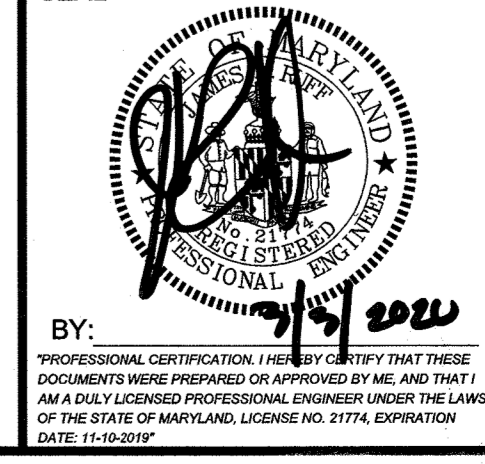
OWNER: MARYLAND FOOD CENTER AUTHORITY
7801 OCEANO AVENUE
JESSUP, MD 20794-9411
ATTN: PEGGY TORRE
PHONE: 410-379-5760

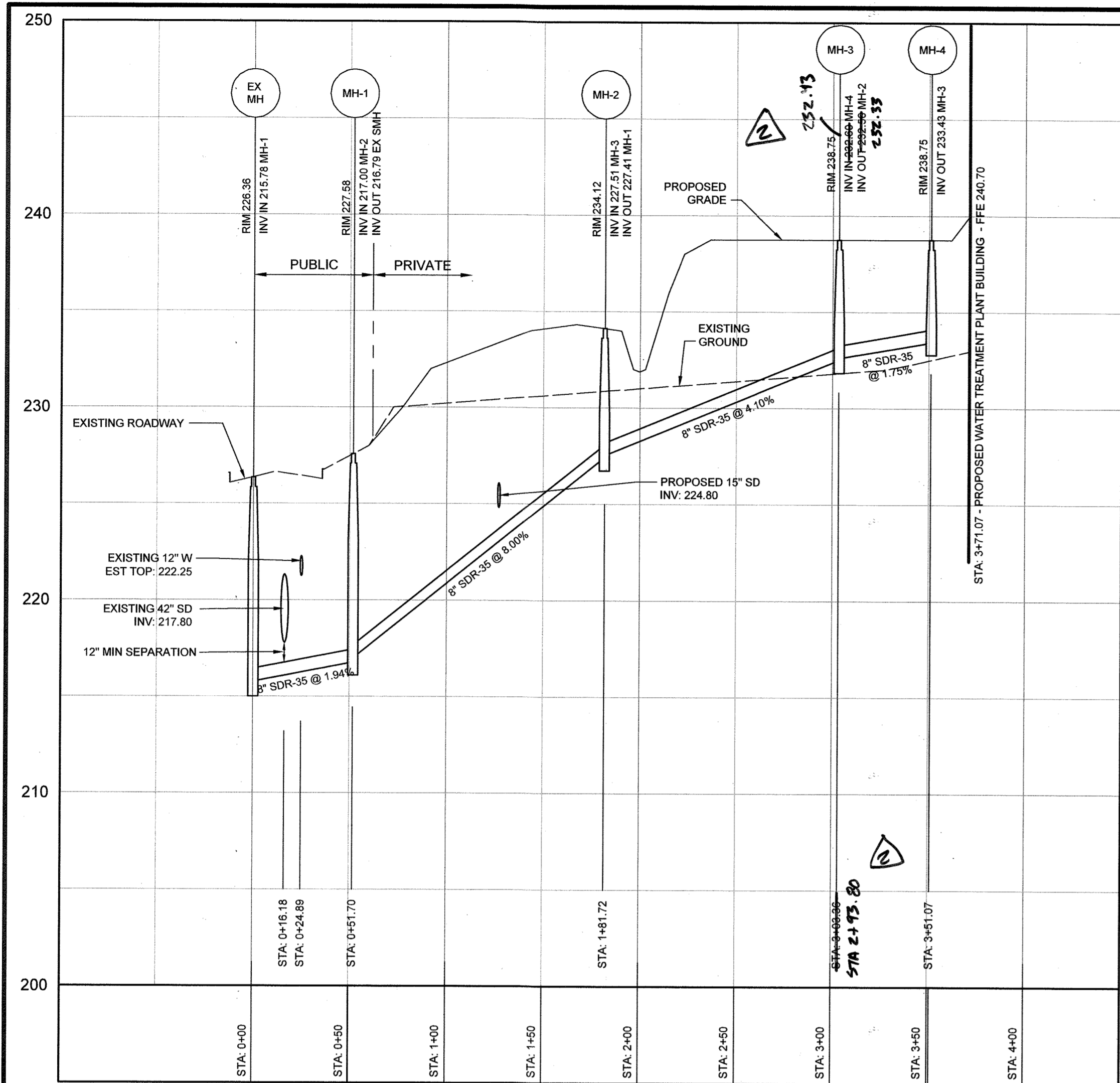
PROJECT: MARYLAND FOOD CENTER AUTHORITY ANAEROBIC DIGESTION FACILITY
AREA: TAX MAP 43, PARCEL 666 LOT C3 PLAT 7405 ZONED M-2
GRID NO. 21 6TH ELECTION DISTRICT
JESSUP, MARYLAND 20794
HOWARD COUNTY, MARYLAND

TITLE: STORM DRAIN PROFILES AND SCHEDULES

Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects
8818 Centre Park Drive, Suite 200 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

DESIGNED BY: PJS/JSN/JTB
DRAWN BY: JSN/JTB
PROJECT NO: BTSB18001
DATE: JANUARY 13, 2020
SCALE: AS SHOWN
DRAWING NO. 12 OF 24





PRIVATE SEWER PROFILE
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'

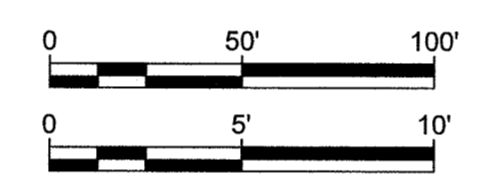
SANITARY SEWER PIPE TABLE						
MATERIAL	DIAMETER (in)	LENGTH (ft)	INV IN	INV OUT	SLOPE	PUBLIC / PRIVATE
SDR-35	8"	67.45'	233.43	232.64	1.75%	PUBLIC
SDR-35	8"	112.12'	232.64	227.51	4.10%	PRIVATE
SDR-35	8"	52'	215.78	216.79	1.94%	PRIVATE
SDR-35	8"	130'	217.00	227.41	8.00%	PRIVATE

SANITARY SEWER STRUCTURE TABLE							
ID	RIM ELEVATION	INV IN (FROM)	INV OUT (TO)	TYPE	NORTHING	EASTING	PUBLIC / PRIVATE
EX SMH	226.36	215.78 (8" SDR-35 @ 1.94%) MH-1	215.88 (EXISTING 8")	48" MH (4)	542934.8307	1373382.7562	PUBLIC
MH-1	227.58	217.00 (8" SDR-35 @ 8.00%) MH-2	216.79 (8" SDR-35) EX SMH	48" MH (4)	542985.0714	1373370.5775	PUBLIC
MH-2	234.12	227.51 (8" SDR-35 @ 4.10%) MH-3	227.41 (8" SDR-35) MH-1	48" MH (4)	543064.1648	1373473.7779	PRIVATE
MH-3	238.75	232.64 (8" SDR-35 @ 1.75%) MH-4	232.64 (8" SDR-35) MH-2	48" MH (4)	543093.2750	1373591.8820	PRIVATE
MH-4	238.75	BUILDING CONNECTION	233.43 (8" SDR-35) MH-3	48" MH (4)	543104.6927	1373638.2054	PRIVATE

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.
- FORCE MAINS SHALL BE D.I.P. ONLY.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS. STANDARD DETAIL G5.52. WHERE WATERTIGHT FRAME AND COVER IS USED, SET TOP OF FRAME 1" - 6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- HOUSE(S) WITH THE SYMBOL "C.N.S" INDICATES THAT THE CELLAR CANNOT BE SERVED.

WATER / SEWER PIPE SCHEDULE			
USE	TYPE	SIZE	LENGTH
WATER (PRIVATE)	PVC DR 18	8"	88 FT
WATER (PUBLIC)	PVC DR 18	8"	73 FT
WATER (PUBLIC)	PVC DR 18	6"	16 FT
SEWER (PRIVATE)	SDR-35	8"	183 FT
SEWER (PUBLIC)	SDR-35	8"	52 FT



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 opening 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 ADO 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.

WATER LINE APPURTENCES TABLE				
ID	ITEM	NORTHING	EASTING	STATION
TS&V1	8" x 12" TS&V	543052.7299	1373754.9013	0+00
FHT-1	8" x 6" TEE	543118.0934	1373736.3108	0+62.75
T	8" x 8" TEE	543153.3568	1373491.7390	3+61.00
FH1	HYDRANT	543062.0905	1373572.6822	0+14.61
HB-1	8" VALVE (PUBLIC)	543096.2140	1373744.2468	0+44.72
HB-2	8" VALVE (PUBLIC)	543138.4354	1373674.2303	1+06.29
HB-3	8" VALVE (PUBLIC)	543085.4611	1373518.0823	2+84.74
HB-4	8" VALVE (PUBLIC)	543092.5142	1373605.5142	2+98.55
WM	WATER METER W-3.37	SEE	PLAN	1+21

WATER NOTES

- ALL WATER MAINS TO BE C900 PVC WITH MINIMUM WALL THICKNESS SDR 18 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- 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.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- TRACER WIRE AND CONTINUITY TEST STATIONS SHALL BE INSTALLED ON ALL DIP AND PVC WATER MAINS IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL.
- 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.
- 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.
- 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.
- 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 CERTAINTYPE 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 (IFEX) BLUE BRUTE DR18 OR EQUAL.
- 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 FITTINGS. 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.

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: 12/23/20
 PE # [Number]

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A QUALIFIED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. [Number], EXPIRATION DATE: [Date]

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION: [Signature] DATE: 12/23/20

CHIEF, DIVISION OF LAND DEVELOPMENT: [Signature] DATE: 12/23/20

DATE	NO.	REVISION	BY
10-6-21	2	WATER METER REVISION	PSS
9/23/2020	1	REVISED SITE LAYOUT AND GRADING	JSN

DEVELOPER
 MORF I, LLC
 9250 BENDIX ROAD
 COLUMBIA, MD 21045
 ATTN: GORDON HOLK
 PHONE: 860-462-9533

OWNER
 MARYLAND FOOD CENTER AUTHORITY
 7801 OCEANO AVENUE
 JESSUP, MD 20794-9411
 ATTN: PEGGY TORRE
 PHONE: 410-379-5760

PROJECT
 MARYLAND FOOD CENTER AUTHORITY
 ANAEROBIC DIGESTION FACILITY

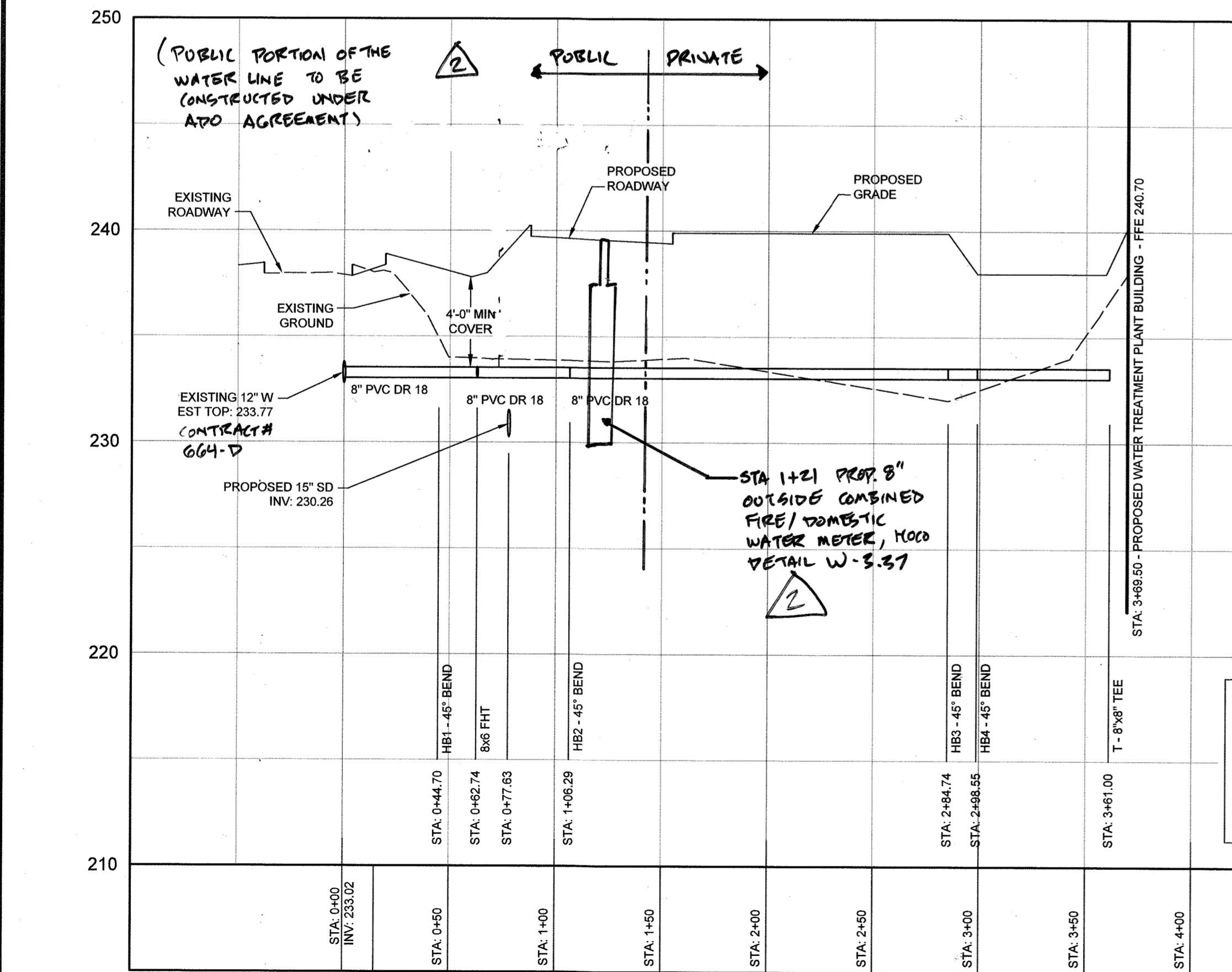
AREA
 TAX MAP 43, PARCEL 666 LOT C3 PLAT 7405 ZONED M-2
 GRID NO. 21 6TH ELECTION DISTRICT
 7900 N OCEANO AVENUE
 JESSUP, MARYLAND 20794
 HOWARD COUNTY, MARYLAND

TITLE
 REVISED
 PRIVATE UTILITY PROFILES
 AND SCHEDULES

Pennoni Associates Inc.
 Engineers - Surveyors - Planners
 Landscape Architects

8818 Centre Park Drive, Suite 200 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

DESIGNED BY: PJS/JSN/JTB
 DRAWN BY: JSN/JTB
 PROJECT NO.: BTSB118001
 DATE: SEPTEMBER 23, 2020
 SCALE: AS SHOWN
 DRAWING NO. 13 OF 24



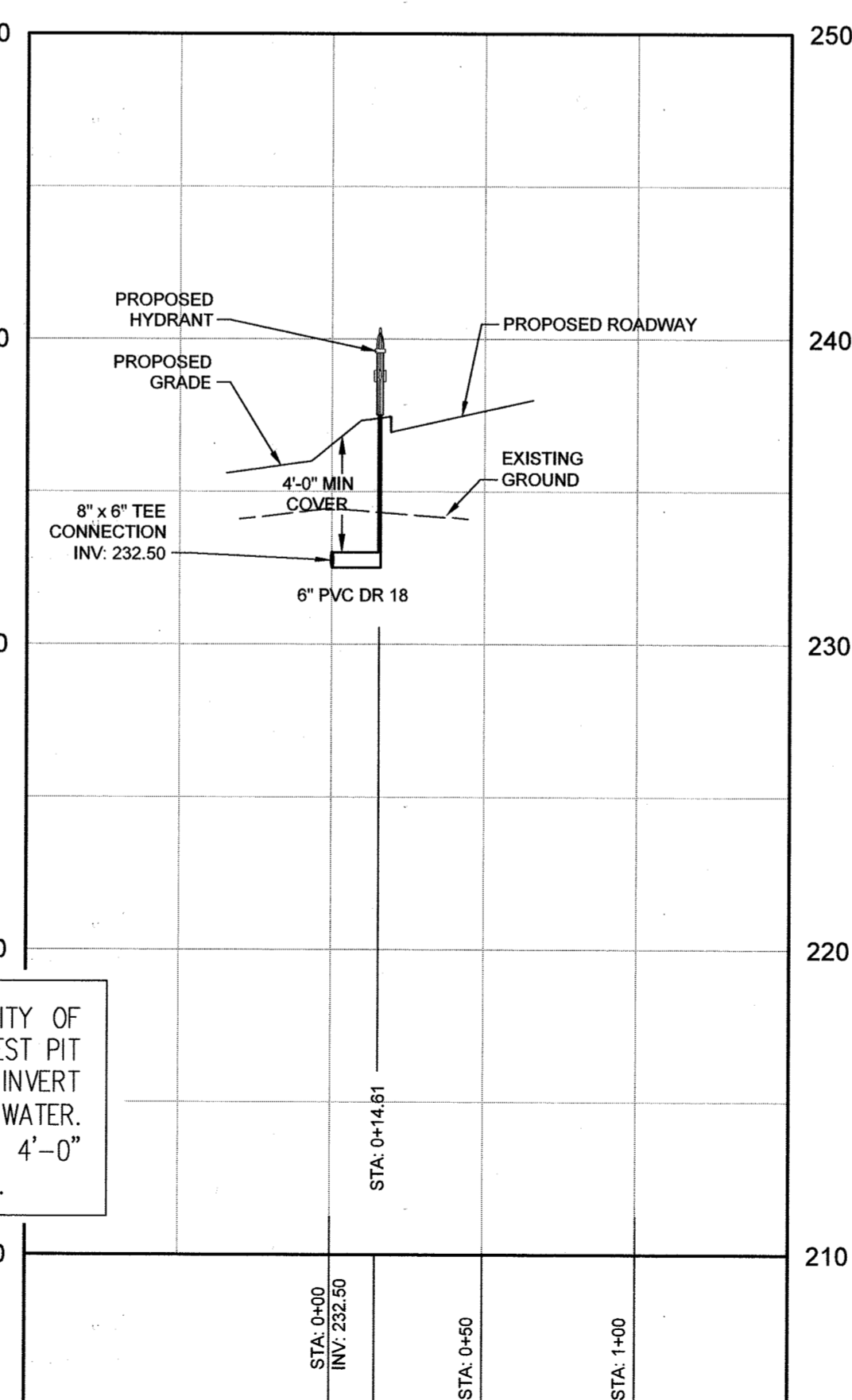
WATER SERVICE PROFILE
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO TEST PIT TO VERIFY EXISTING INVERT FOR EXISTING 12" WATER. PROVIDE AT LEAST 4'-0" COVER OVER THE MAINS.

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.

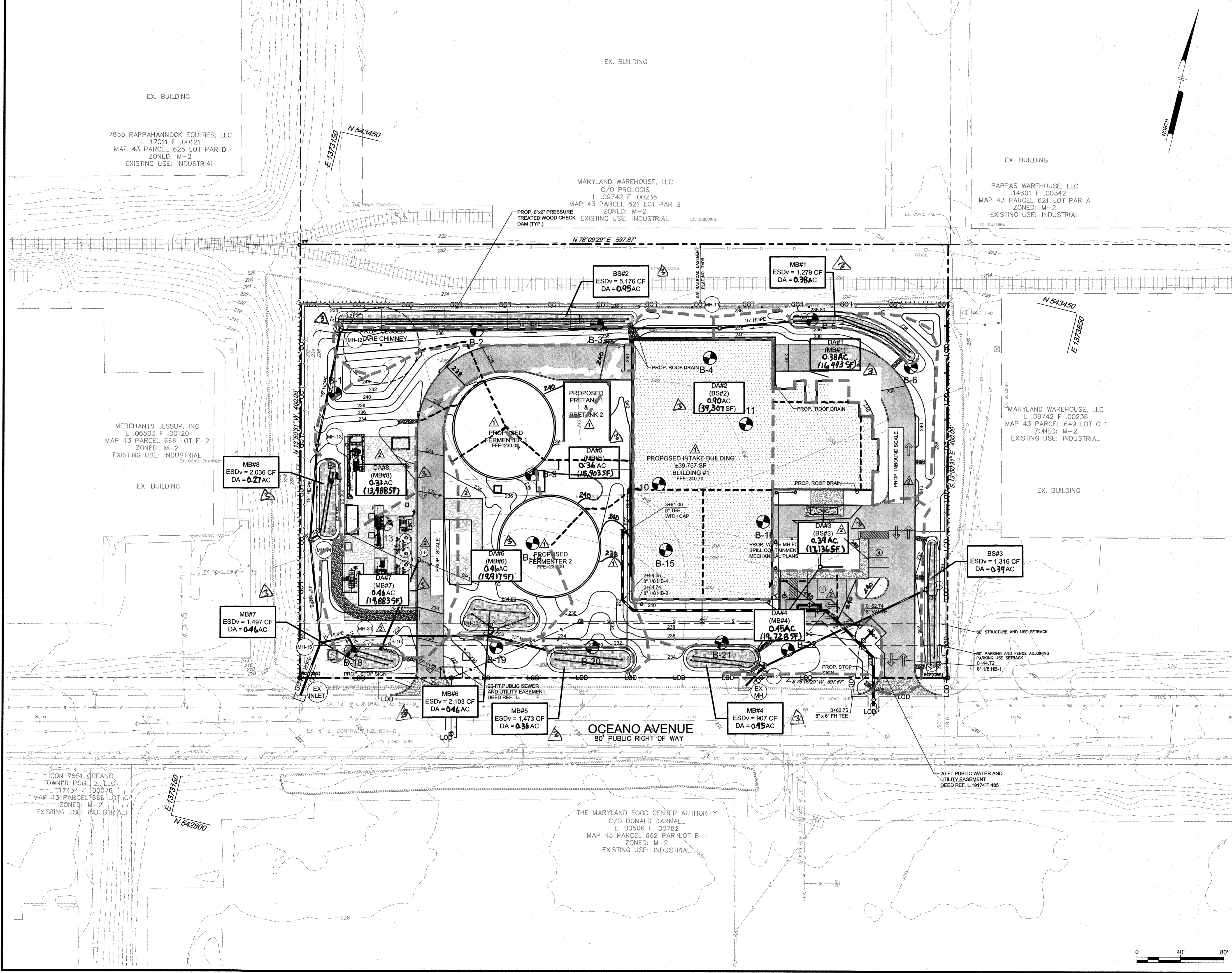
FH1
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



DATE	NO.	REVISION	BY
04/21/22	3	REVISED DRAINAGE AREAS	JSN

LEGEND

EXISTING 2' CONTOUR	---
EXISTING 10' CONTOUR	---
EX. PROPERTY LINE AND RIGHT OF WAY	---
EX. TREELINE	---
EXISTING BUILDING	---
EXISTING WATER	---
EXISTING SEWER	---
EXISTING STORM DRAIN	---
EXISTING GAS	---
EXISTING UNDERGROUND ELECTRIC	---
EXISTING UNDERGROUND COMMUNICATION	---
EXISTING RAILROAD TRACK	---
EXISTING CURB & GUTTER	---
EXISTING FIRE HYDRANT	---
PROPOSED 2' CONTOUR	---
PROPOSED 10' CONTOUR	---
LIMIT OF DISTURBANCE	---
PROPOSED WATER	---
PROPOSED HYDRANT	---
PROPOSED SEWER	---
PROPOSED STORM DRAIN	---
PROPOSED TREELINE	---
PROPOSED MICRO BIORETENTION	---
DRAINAGE AREA	---
SOIL BORINGS	---



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 DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. _____ EXPIRATION DATE _____)

APPROVED: DEPARTMENT OF PLANNING AND ZONING

John P. ... 11-1-21
 CHIEF, DEVELOPMENT ENGINEERING DIVISION JP DATE

R. ... 11/1/21
 CHIEF, DIVISION OF LAND DEVELOPMENT RS DATE

Angie ... 11-4-21
 Director DATE

DATE	NO.	REVISION	BY
07/28/2021	2	WATER METER AND SITE REVISIONS	JTB
9/23/2020	1	REVISED SITE LAYOUT AND GRADING	JSN

DEVELOPER
 MORF I, LLC
 9259 BENDIX ROAD
 COLUMBIA, MD 21045
 ATTN: GORDON HOLK
 PHONE: 860-462-9533

OWNER
 MARYLAND FOOD CENTER AUTHORITY
 7801 OCEANO AVENUE
 JESSUP, MD 20794-9411
 ATTN: PEGGY TORRE
 PHONE: 410-379-5760

PROJECT
MARYLAND FOOD CENTER AUTHORITY ANAEROBIC DIGESTION FACILITY

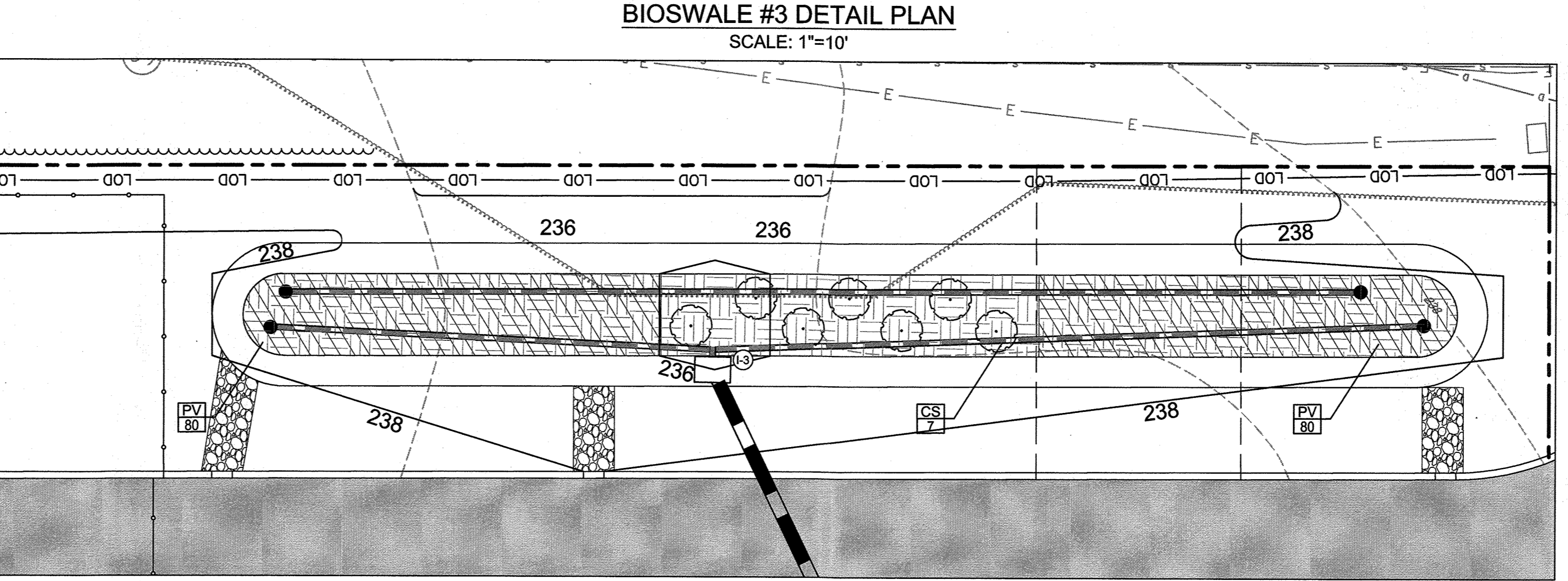
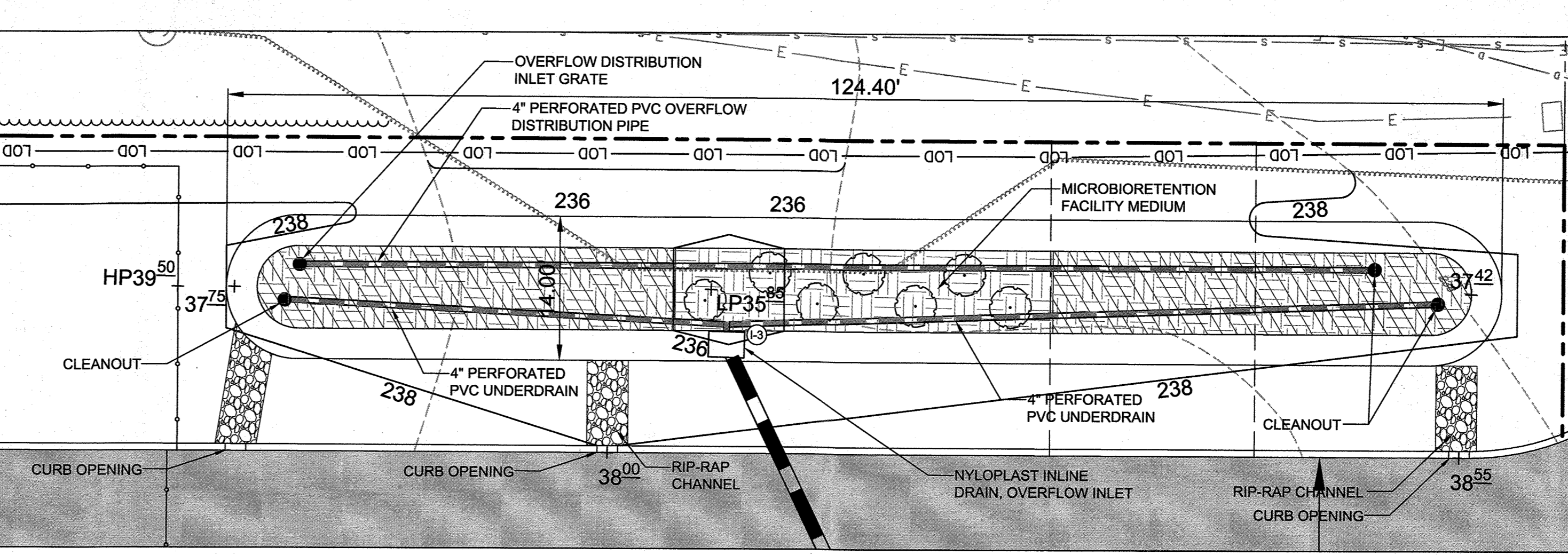
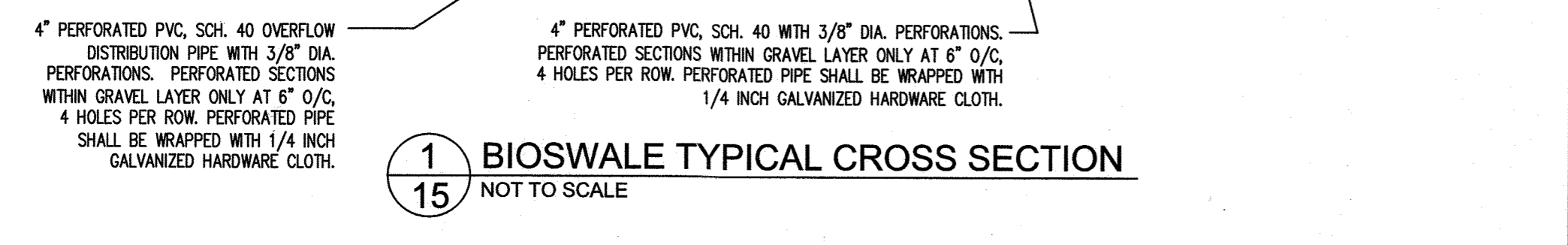
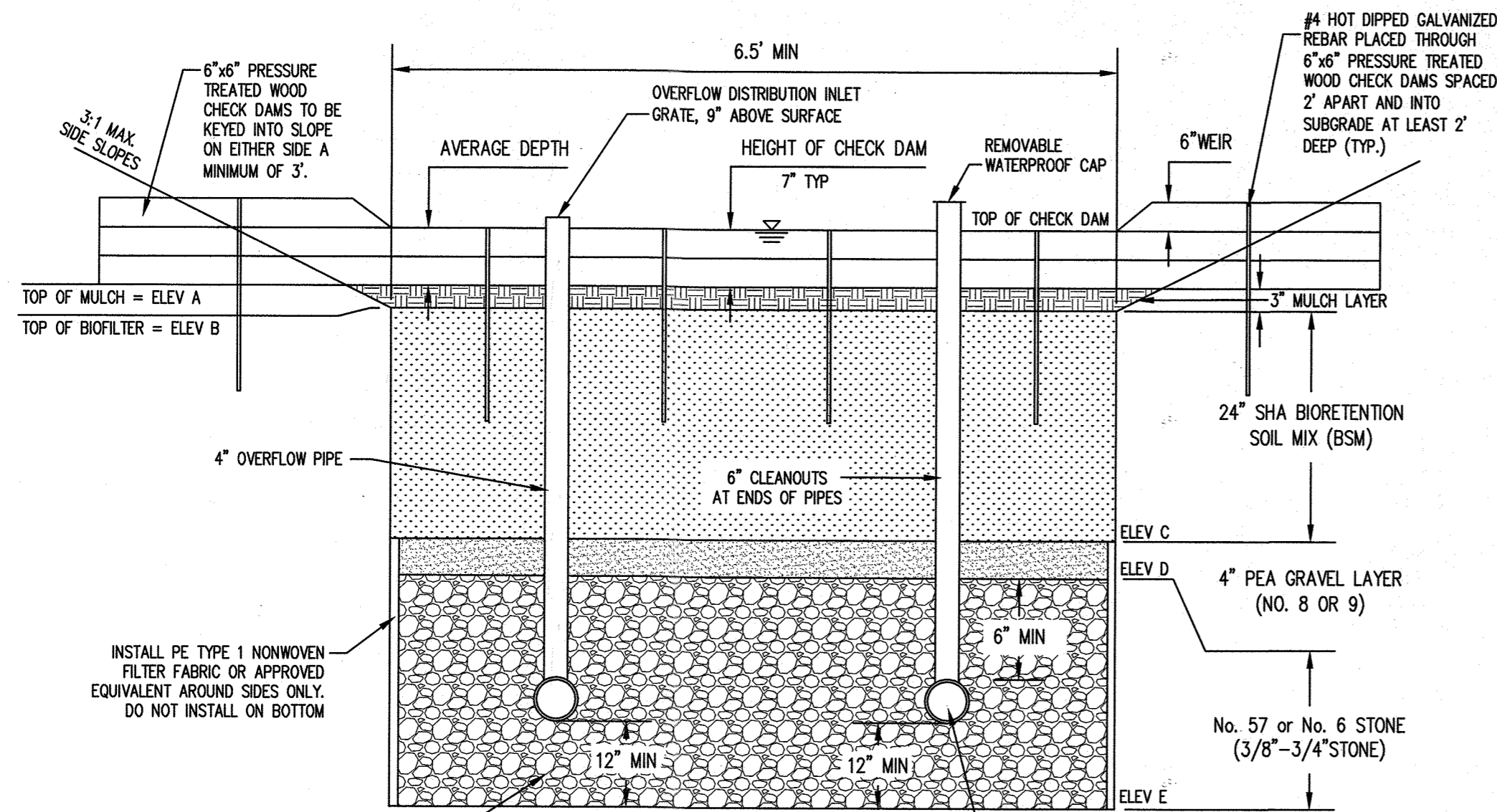
AREA
 TAX MAP 43, PARCEL 666 LOT C3 PLAT 7405 ZONED M-2
 GRID NO. 21 6TH ELECTION DISTRICT
 7900 N OCEANO AVENUE
 JESSUP, MARYLAND 20794
 HOWARD COUNTY, MARYLAND

TITLE
REVISED STORMWATER MANAGEMENT PLAN

Pennoni Associates Inc.
 Engineers • Surveyors • Planners
 Landscape Architects

8818 Centre Park Drive, Suite 200 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

	DESIGNED BY: PJS/JSN/JTB
	DRAWN BY: JSN/JTB
	PROJECT NO: B7SB18001
	DATE: SEPTEMBER 29, 2021
	SCALE: 1" = 40'
BY: _____	SCALE: DRAWING 14 OF 24



BIOSWALE DESIGN DATA						
	BIOSWALE #3					
	HIGH END (NORTH)	HIGH END (SOUTH)	LOW END (CENTER)	HIGH END (NORTH) AS BUILT	HIGH END (SOUTH) AS BUILT	LOW END AS BUILT
HEIGHT OF CHECK DAM	7"	7"	7"			
AVERAGE DEPTH						
FACILITY TOP ELEV A	237.42	237.42	235.85			
ELEV B	237.17	237.17	235.60			
ELEV C	235.17	235.17	233.60			
ELEV D	234.84	234.84	233.27			
BOTTOM ELEV E	233.01	233.01	231.44			
SURFACE AREA AT 'E' (SF)	1,100	1,100	1,100			
OUTFALL PIPE INVERT ELEV FROM STRUCTURE	-	-	230.65			
UNDERDRAIN ELEV AT CLEANOUT	232.44	232.44	-			
DEPTH OF STONE BELOW UNDERDRAIN	12" MIN.	12" MIN.	12" MIN.			

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 QUALIFIED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. _____ EXPIRATION DATE: _____

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 _____ DATE 4-1-20
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 _____ DATE 4/1/2020
 CHIEF, DIVISION OF LAND DEVELOPMENT
 _____ DATE 4-17-2020
 Director, Planning & Zoning

DEVELOPER: MORF I, LLC
 9250 BENDIX ROAD
 COLUMBIA, MD 21045
 ATTN: GORDON HOLK
 PHONE: 860-462-9533

OWNER: MARYLAND FOOD CENTER AUTHORITY
 7801 OCEANO AVENUE
 JESSUP, MD 20794-9411
 ATTN: PEGGY TORRE
 PHONE: 410-379-5760

PROJECT: MARYLAND FOOD CENTER AUTHORITY ANAEROBIC DIGESTION FACILITY
 AREA: TAX MAP 43, PARCEL 666 LOT 3 PLAT 7405 ZONED M-2
 GRID NO. 21 6TH ELECTION DISTRICT
 7900 N OCEANO AVENUE
 JESSUP, MARYLAND 20794
 HOWARD COUNTY, MARYLAND

TITLE: STORMWATER MANAGEMENT DETAILS

Pennoni Associates Inc.
 Engineers • Surveyors • Planners
 Landscape Architects
 8818 Centre Park Drive, Suite 200 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

DESIGNED BY: PJS/JSN/JTB
 DRAWN BY: JSN/JTB
 PROJECT NO.: BTSB18001
 DATE: JANUARY 13, 2020
 SCALE: AS SHOWN
 DRAWING NO. 15 OF 24

SYMBOL	QTY.	SCIENTIFIC/COMMON NAME	SIZE	ROOT	REMARKS
CS	7	CORNUS SERICEA 'FLAVIRAMEA' YELLOW TWIG DOGWOOD	3 GAL.	CONT.	24" ON CENTER
PV	160	PANICUM VIRGATUM VIRGINIA SWITCHGRASS	1 QUART	CONT.	24" ON CENTER

ESDV REQUIRED	ESDV REQUIRED TO MEET WqV	ESDV PROVIDED
15,339 cf	8,522 cf	17,389 CF

20,789 CF OF ESDV PROVIDES A P6 OF 2.7

SITE AREA (ACRES)	4.81
EXISTING IMPERVIOUS SURFACE AREA (ACRES)	0.00
PROPOSED IMPERVIOUS SURFACE AREA (ACRES)	2.34
RAINFALL DEPTH (IN)	1.0
EXISTING IMPERVIOUSNESS	0.0%
PROPOSED IMPERVIOUSNESS	48.7%
WATER QUALITY CALCULATION FOR NEW DEVELOPMENT	
REQUIRED TREATMENT AREA (ACRES)	4.81
RUNOFF COEFFICIENT	0.49
WATER QUALITY VOLUME, WQV (CF)	8,522
RECHARGE VOLUME REQUIRED (CF)	597
RECHARGE VOLUME PROVIDED (CF)	2,406
TOTAL AREA OF SITE	4.81 ACRES (209,353 SF)

OPERATION AND MAINTENANCE SCHEDULE FOR MICROBIORETENTION FACILITY AND BIOSWALE (M-6 & M-8)

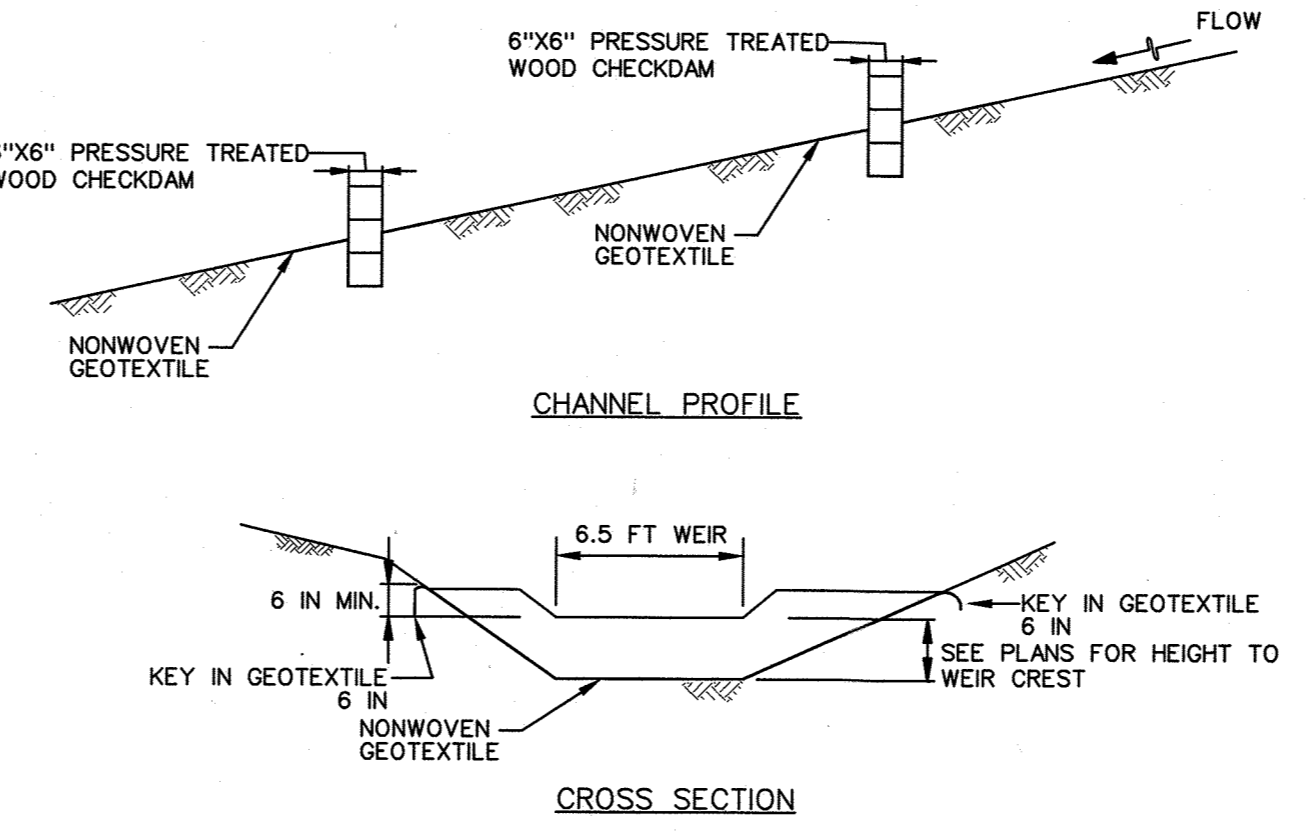
- ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER, CHECK DAMS, AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH, CHECK DAMS, AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION 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/BIOSWALE SPECIFICATIONS

- THE UNDERDRAIN PIPE MUST BE 4-INCH DIAMETER SCHEDULE 40 OR STRONGER PERFORATED PVC PIPE AT 0.00% SLOPE FOR THE MICROBIORETENTION FACILITIES. FOR THE BIOSWALE, THE UNDERDRAIN SLOPE SHALL FOLLOW THE SURFACE GRADE. THREE 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).
- 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 REPLENISHING MAY BE NECESSARY. PINE BARK IS NOT ACCEPTABLE.

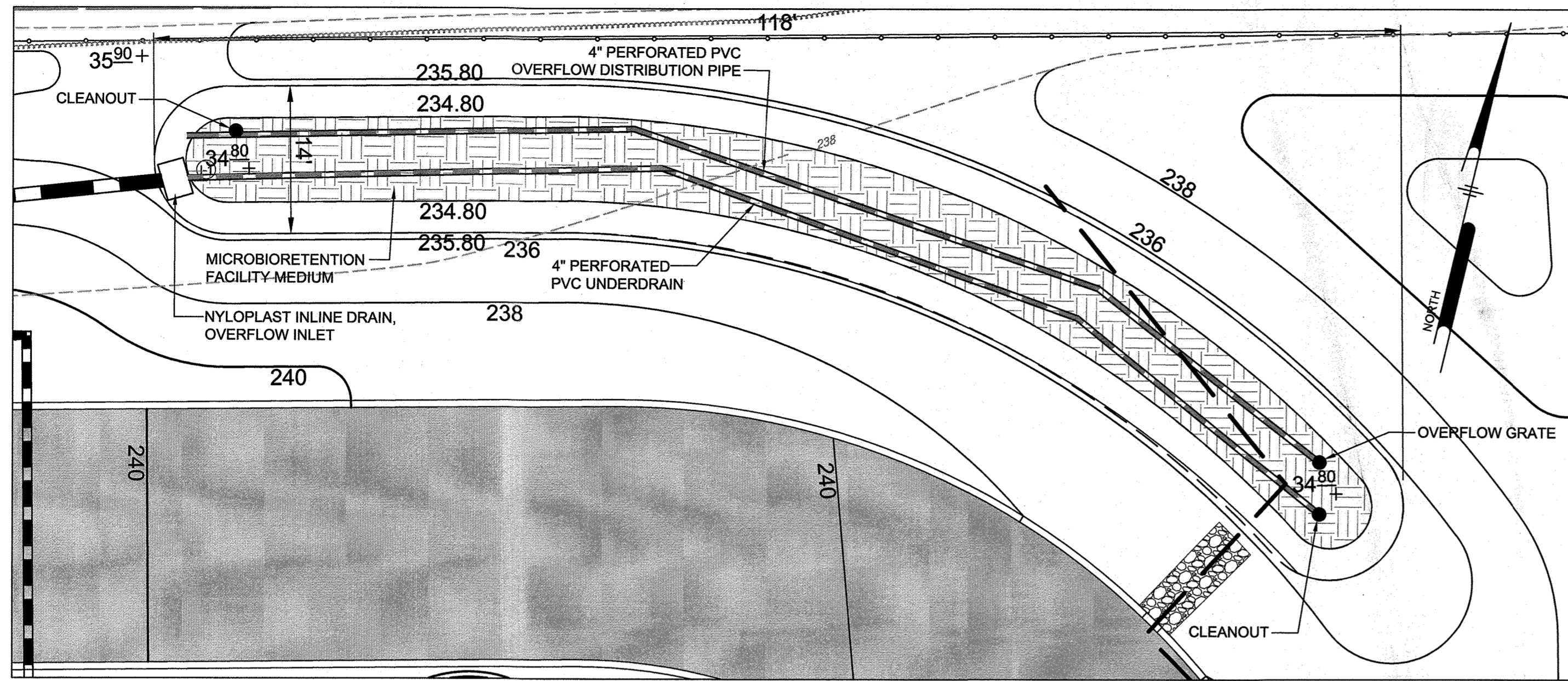
MICROBIORETENTION FACILITY AND BIOSWALE SEQUENCE OF CONSTRUCTION

- DO NOT BEGIN MICROBIORETENTION FACILITY/BIOSWALE INSTALLATION UNTIL SITE UPSTREAM OF MICROBIORETENTION FACILITY/BIOSWALE 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/BIOSWALE. 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/BIOSWALE AREA. (0.5 DAY)
- PREPARE AND SUBMIT AS-BUILTS TO COUNTY.



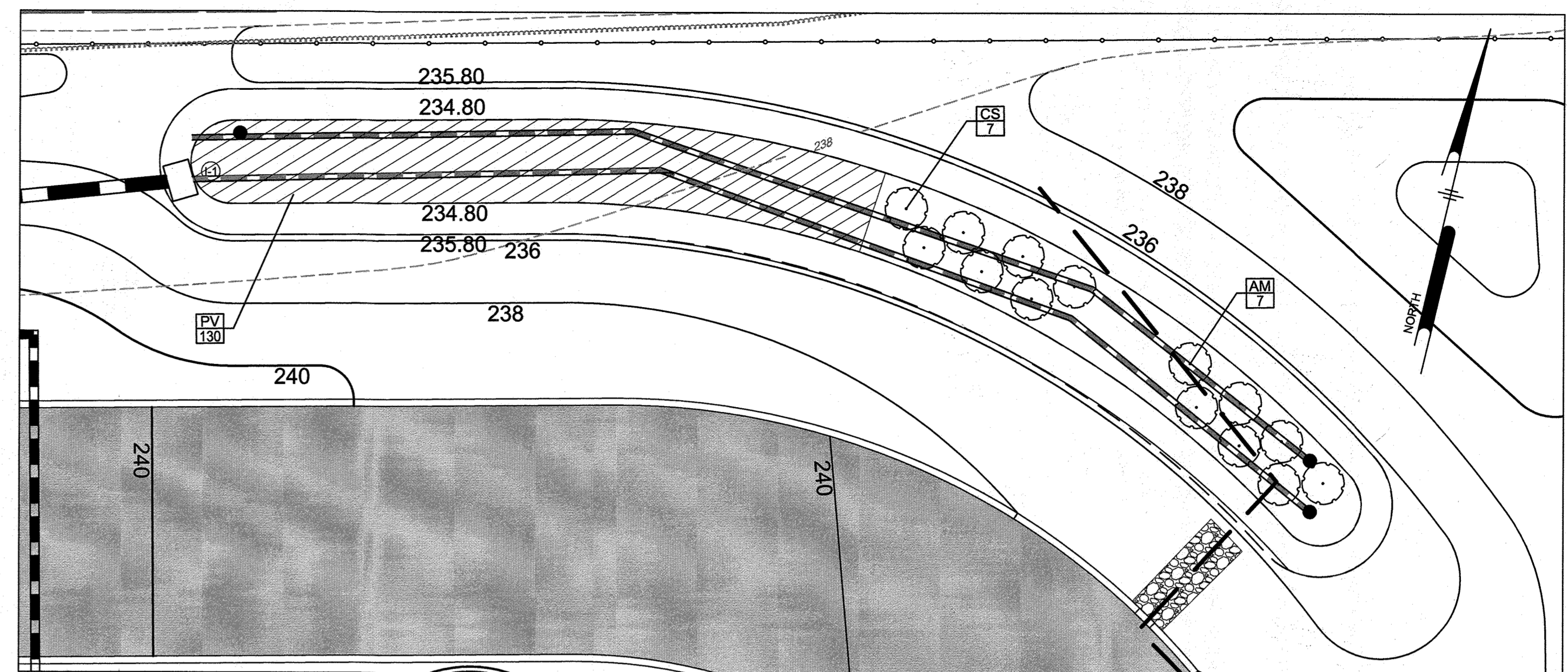
- CHECK DAM CONSTRUCTION SPECIFICATIONS**
- PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, UNDER THE BOTTOM AND SIDES OF THE DAM PRIOR TO PLACEMENT OF TIMBERS. PLACE THE TIMBERS SO THAT IT COMPLETELY COVERS THE WIDTH OF THE CHANNEL AND CHANNEL BANKS. FORM THE WEIR SO THAT TOP OF THE OUTLET CREST IS APPROXIMATELY 6 INCHES LOWER THAN THE OUTER EDGES. WEIR SHALL BE KEYPED INTO SIDE SLOPES OF CHANNEL BY A MINIMUM OF 12".
 - SET THE HEIGHT FOR THE WEIR CREST EQUAL TO THE ELEVATION SHOWN ON THE PLANS TO AVOID SCAUR. THE MAXIMUM HEIGHT OF THE WEIR CREST MUST NOT EXCEED 2.0 FEET.

2 TYPICAL CHECK DAM NOT TO SCALE



MICRO-BIORETENTION #1 DETAIL PLAN

SCALE: 1"=10'



MICRO-BIORETENTION #1 LANDSCAPE PLAN

SCALE: 1"=10'

MICRO-BIORETENTION #1 PLANT SCHEDULE					
SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
AM	7	ARONIA MELANOCARPA BLACK CHOKEBERRY	3 GAL.	CONT.	24" ON CENTER
CS	7	CORNUS SERICEA 'FLAVIRAMEA' YELLOW TWIG DOGWOOD	3 GAL.	CONT.	24" ON CENTER
PV	130	PANICUM VIRGATUM VIRGINIA SWITCHGRASS	1 QUART	CONT.	24" ON CENTER

MICRO-BIORETENTION #4 PLANT SCHEDULE					
SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
AM	9	ARONIA MELANOCARPA BLACK CHOKEBERRY	3 GAL.	CONT.	24" ON CENTER
IS	58	IRIS VERSICOLOR 'BLUE FLAG' BLUE FLAG IRIS	1 QUART	CONT.	24" ON CENTER

MICRO-BIORETENTION #5 PLANT SCHEDULE					
SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
CS	10	CORNUS SERICEA 'FLAVIRAMEA' YELLOW TWIG DOGWOOD	3 GAL.	CONT.	24" ON CENTER
CE	58	CAREX 'EVERGOLD' EVERGOLD SEDGE	1 QUART	CONT.	24" ON CENTER

MICRO-BIORETENTION DESIGN DATA						
	#1	#4	#5	#1 AS BUILT	#4 AS BUILT	#5 AS BUILT
ESDv ELEV	235.80	233.50	231.30			
FACILITY TOP ELEV A	234.80	232.50	230.30			
ELEV B	234.55	232.25	230.05			
ELEV C	232.55	230.25	228.05			
ELEV D	232.22	229.92	227.72			
ELEV E	231.89	229.59	227.38			
BOTTOM ELEV F	230.06	227.76	225.56			
SURFACE AREA AT 'F' (SF)	946	1,016	1,205			
OVERFLOW STRUCTURE	235.55	233.25	231.05			
OUTFLOW PIPE INVERT ELEV FROM STRUCTURE	230.00	229.75	225.29			
UNDERDRAIN INVERT ELEV AT CLEANOUT	231.06	229.79	226.56			
DEPTH OF STONE BELOW UNDERDRAIN	12" MIN	24"	12" MIN			

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

[Signature] 4.1.20
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 4/17/20
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 4-17-2020
 Director, Planning & Zoning DATE

04/17/20 1 REVISE DRAINAGE AREAS PJS
 DATE NO. REVISION BY

DEVELOPER MORF I, LLC
 9250 BENDIX ROAD
 COLUMBIA, MD 21045
 ATTN: GORDON HOLK
 PHONE: 860-462-9533

OWNER MARYLAND FOOD CENTER AUTHORITY
 7801 OCEANO AVENUE
 JESSUP, MD 20794-9411
 ATTN: PEGGY TORRE
 PHONE: 410-379-5760

PROJECT MARYLAND FOOD CENTER AUTHORITY ANAEROBIC DIGESTION FACILITY

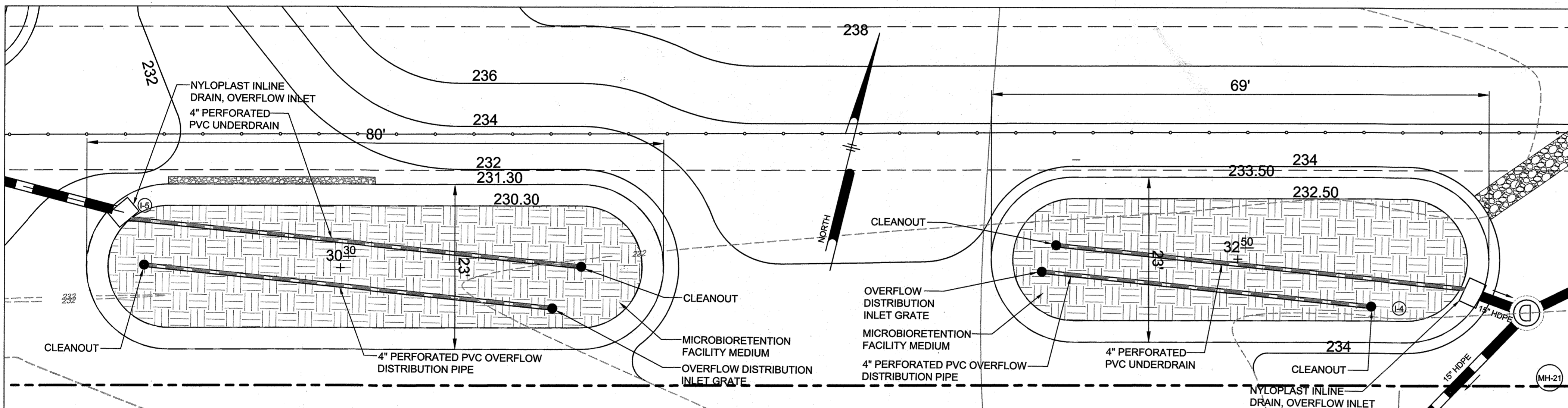
AREA TAX MAP 43, PARCEL 666 LOT C3 PLAT 7405 ZONED M-2 GRID NO. 21 6TH ELECTION DISTRICT 7900 N OCEANO AVENUE JESSUP, MARYLAND 20794 HOWARD COUNTY, MARYLAND

TITLE STORMWATER MANAGEMENT DETAILS

Pennoni Associates Inc.
 Engineers • Surveyors • Planners
 Landscape Architects

8818 Centre Park Drive, Suite 200 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

DESIGNED BY: PJS/JSN/JTB
 DRAWN BY: JSN/JTB
 PROJECT NO.: B-TSBI18001
 DATE: JANUARY 13, 2020
 SCALE: 1"=10'
 DRAWING NO. 16 OF 24

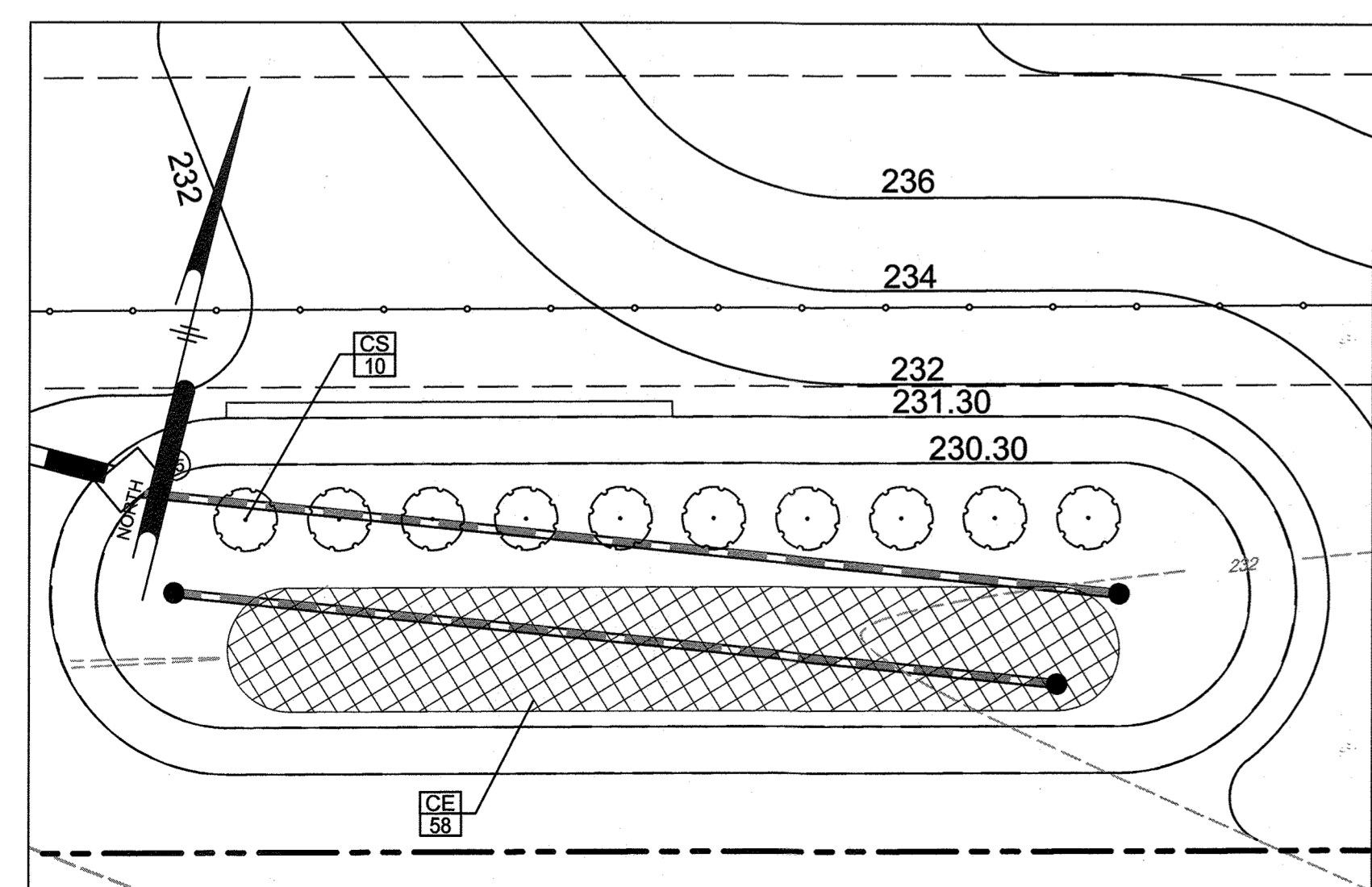


MICRO-BIORETENTION #5 DETAIL PLAN

SCALE: 1"=10'

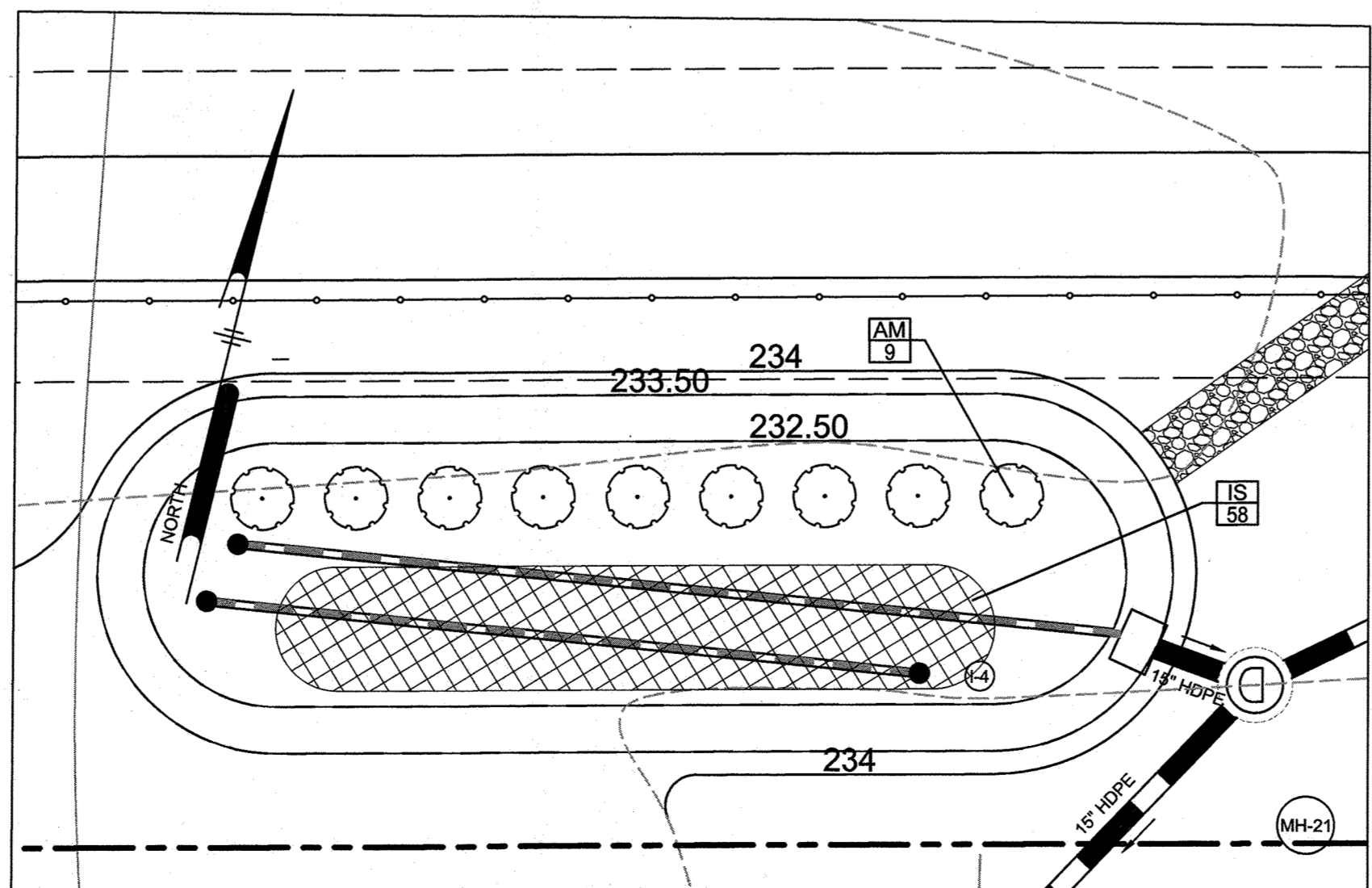
MICRO-BIORETENTION #4 DETAIL PLAN

SCALE: 1"=10'



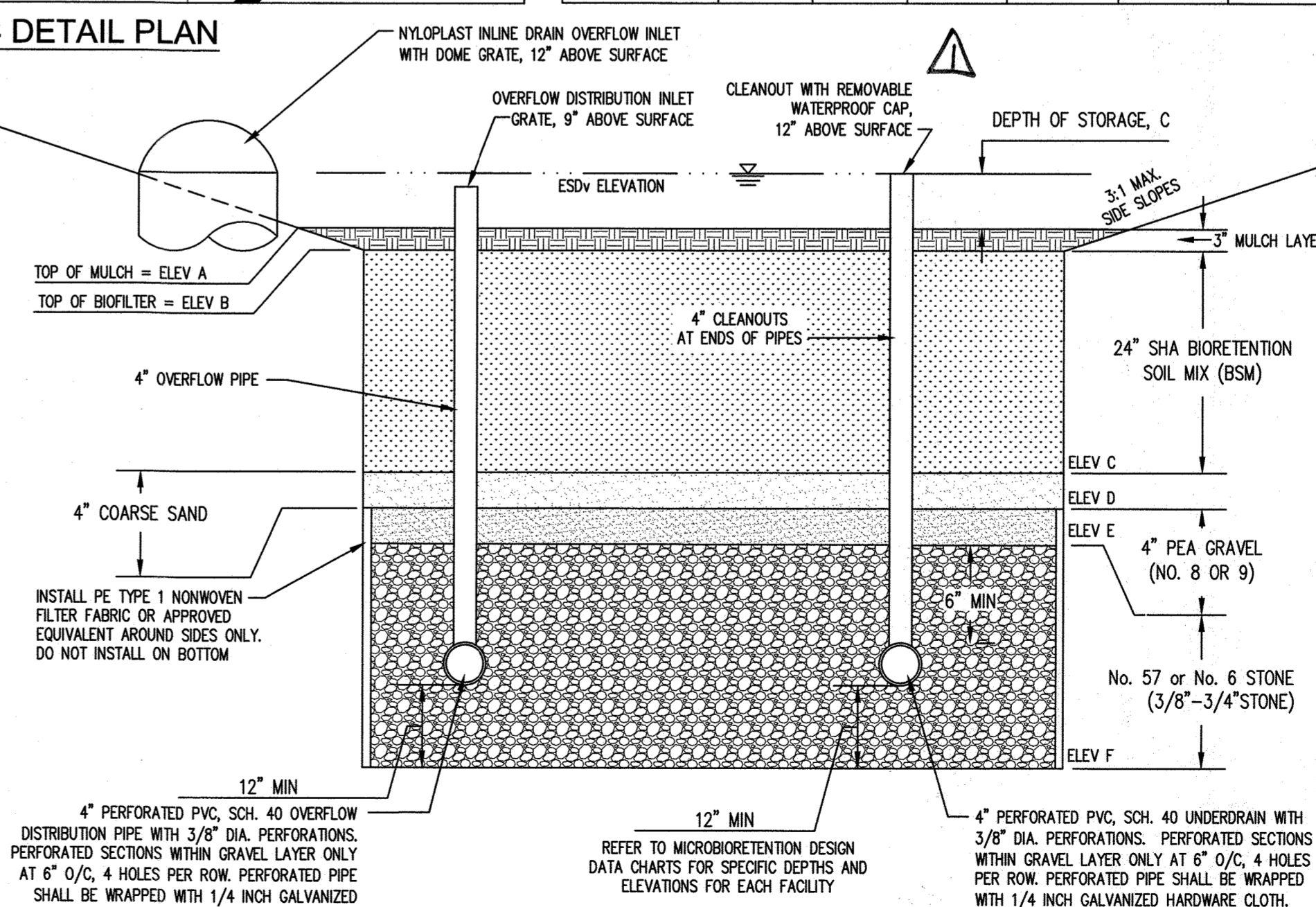
MICRO-BIORETENTION #5 LANDSCAPE PLAN

SCALE: 1"=10'



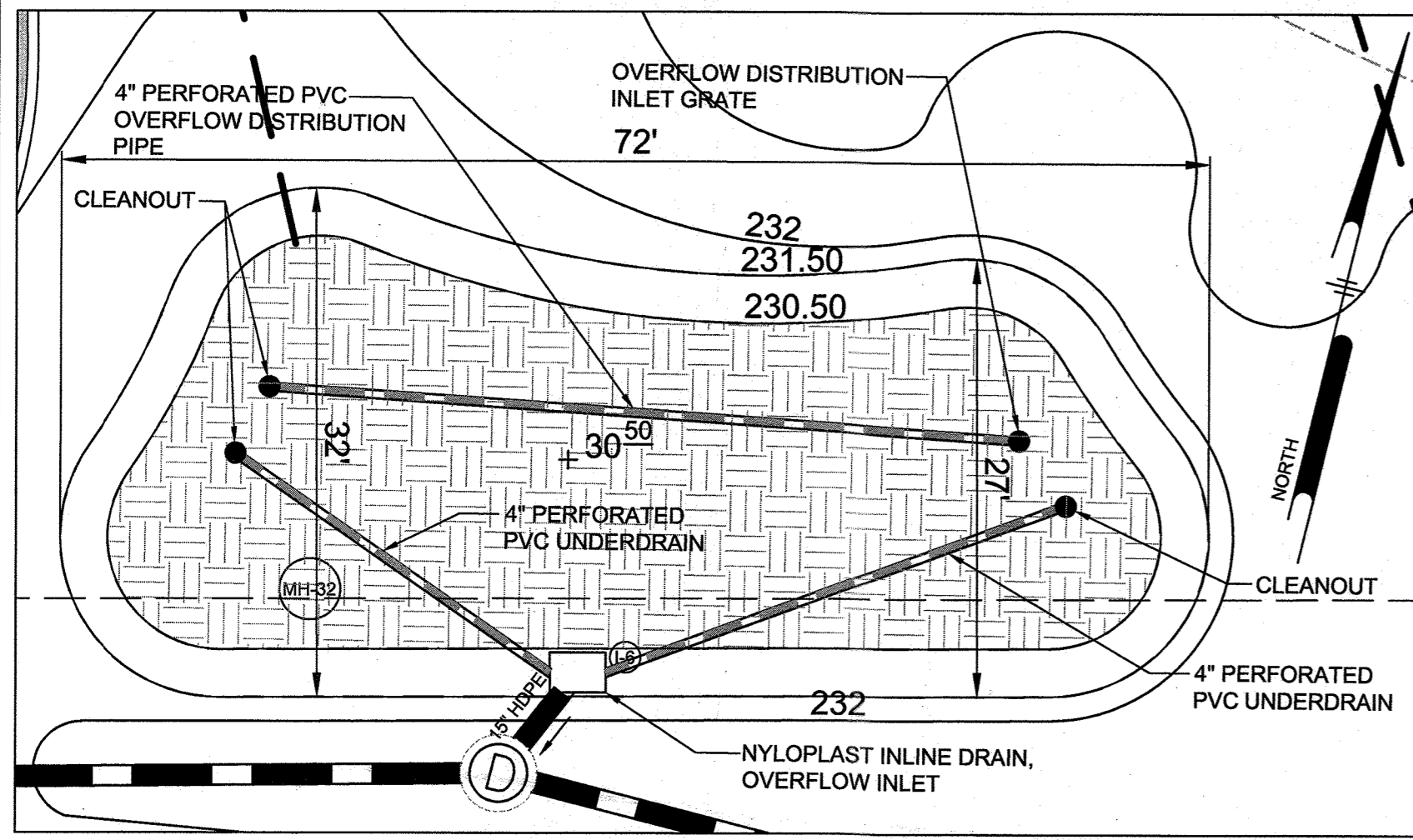
MICRO-BIORETENTION #4 LANDSCAPE PLAN

SCALE: 1"=10'

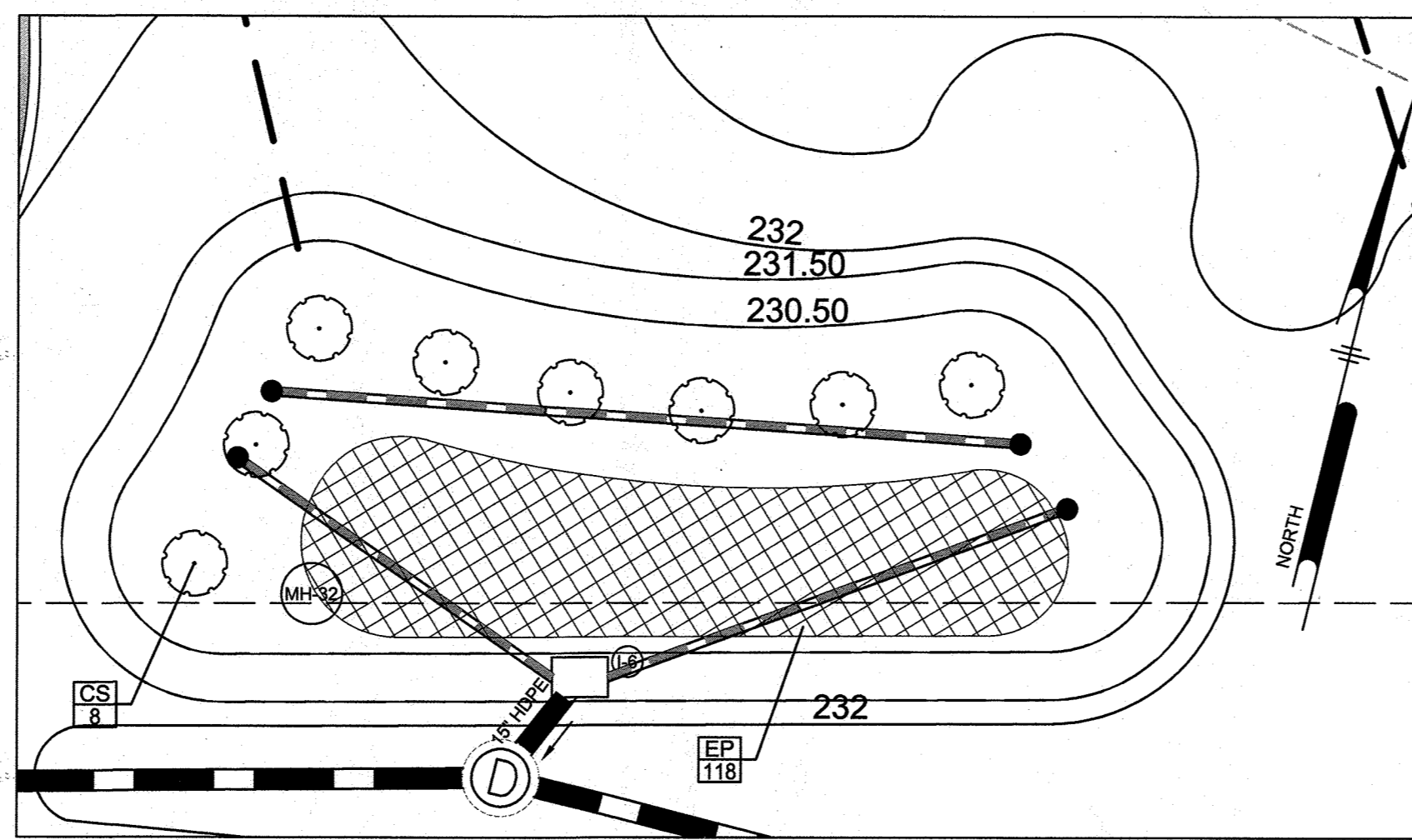


1 MICROBIORETENTION TYPICAL SECTION

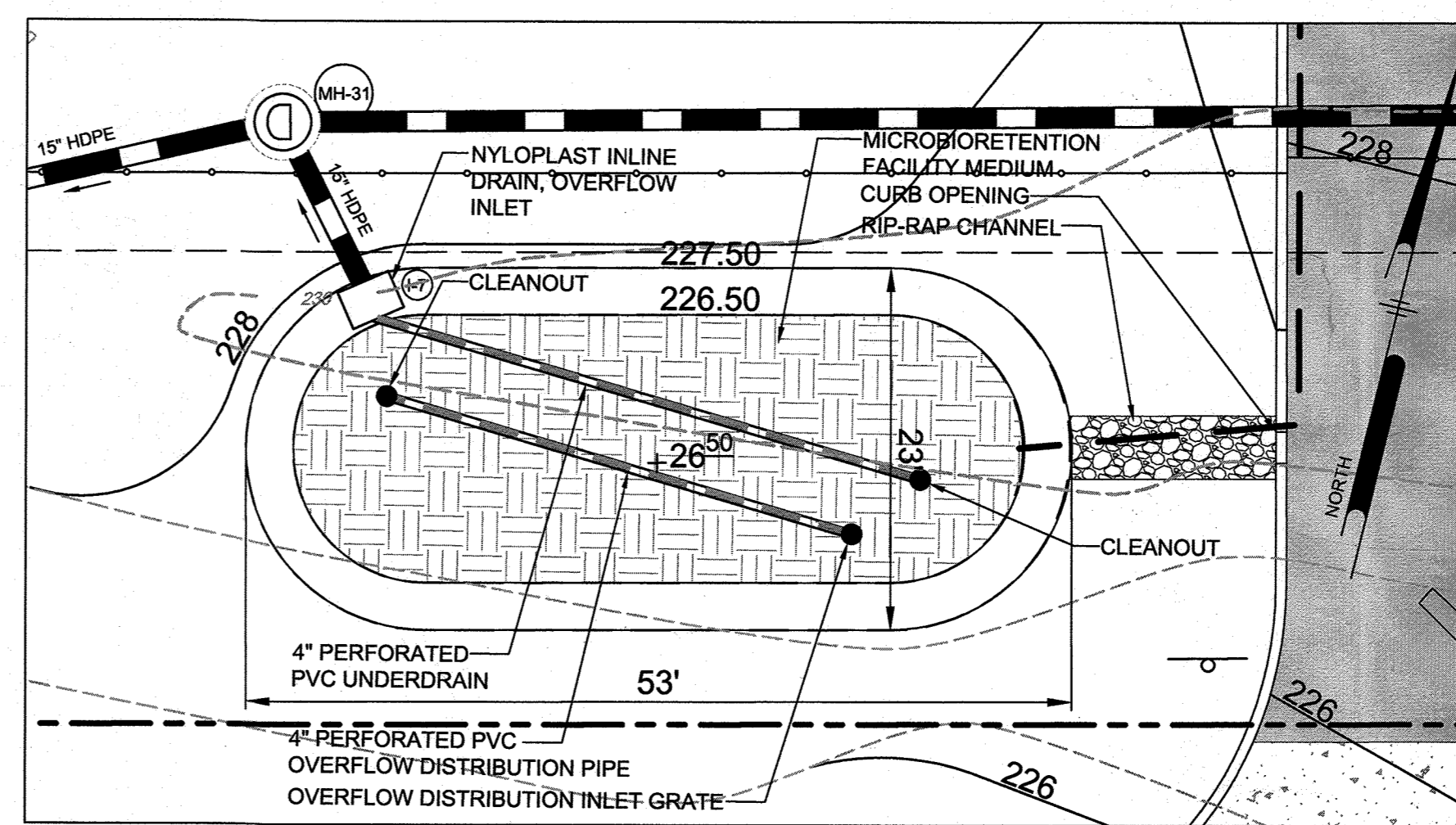
16 NOT TO SCALE



MICRO-BIORETENTION #6 DETAIL PLAN
SCALE: 1"=10'



MICRO-BIORETENTION #6 LANDSCAPE PLAN
SCALE: 1"=10'

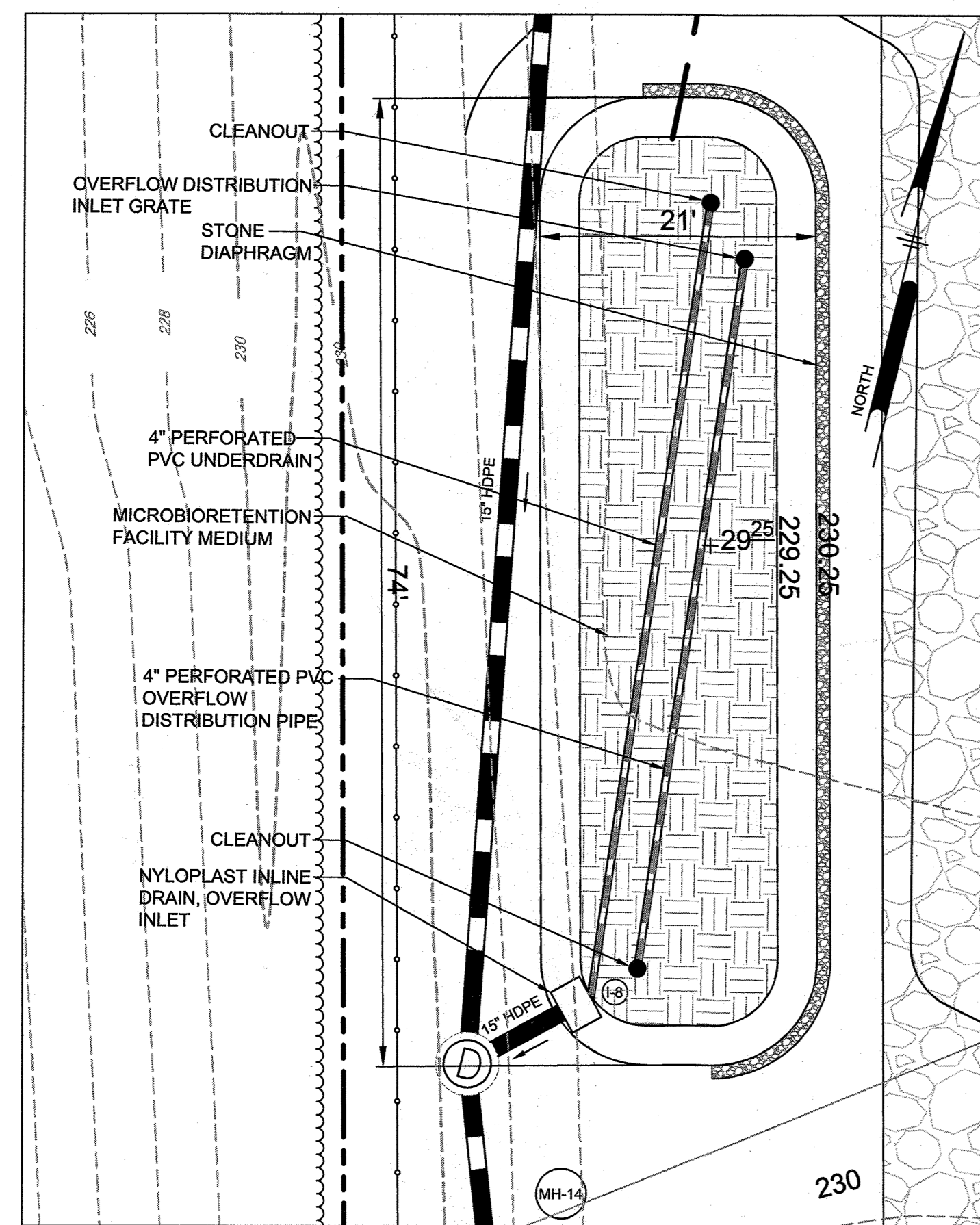


MICRO-BIORETENTION #7 DETAIL PLAN
SCALE: 1"=10'

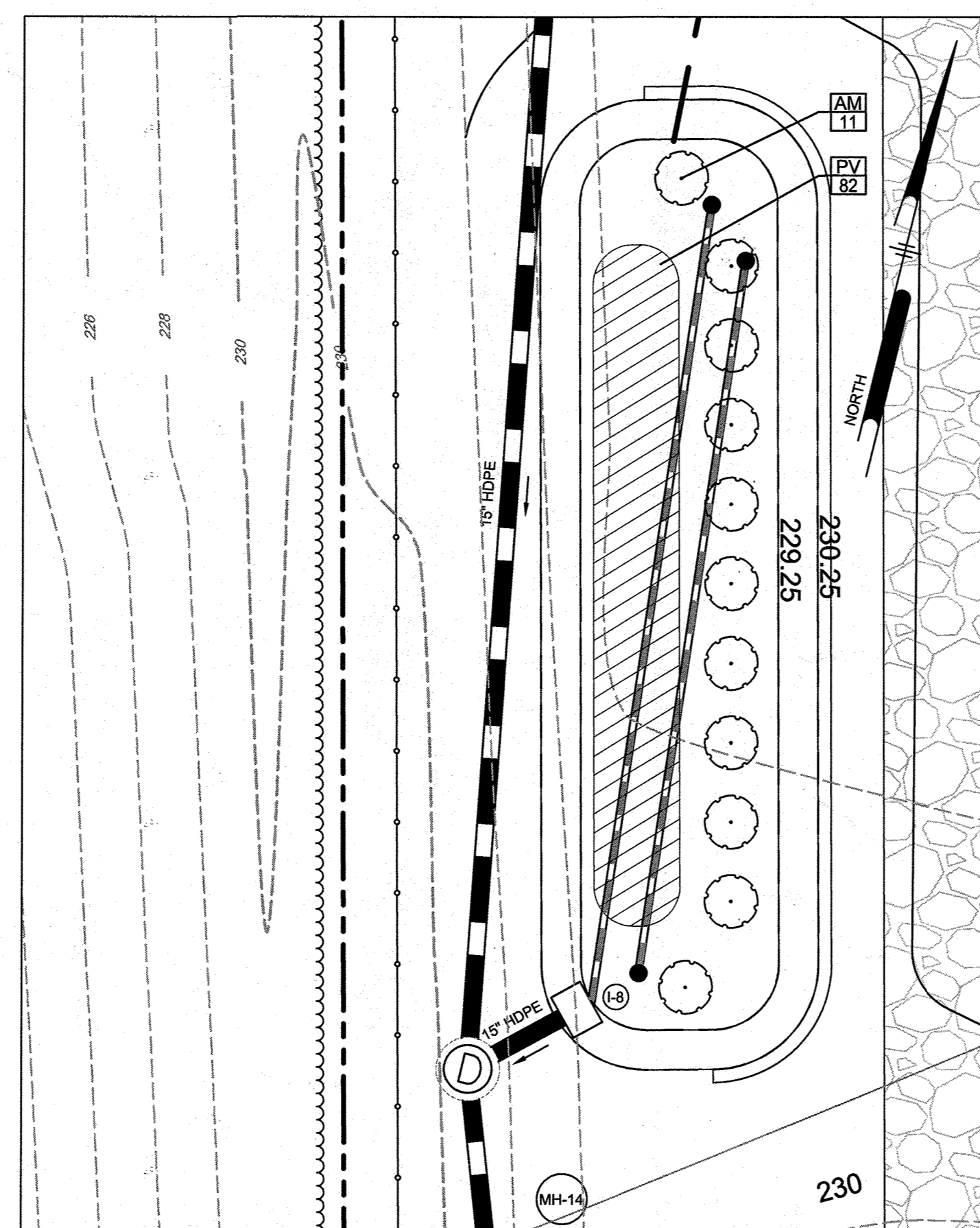
MICRO-BIORETENTION #6 PLANT SCHEDULE					
SYMBOL	QTY.	SCIENTIFIC/COMMON NAME	SIZE	ROOT	REMARKS
CS	8	CORNUS SERICEA 'FLAVIRAMA' YELLOW TWIG DOGWOOD	3 GAL.	CONT.	24" ON CENTER
EP	118	EUPATORIUM PURPUREUM JOE PYE WEED	1 QUART	CONT.	24" ON CENTER

MICRO-BIORETENTION #7 PLANT SCHEDULE					
SYMBOL	QTY.	SCIENTIFIC/COMMON NAME	SIZE	ROOT	REMARKS
AM	6	ARONIA MELANOCARPA BLACK CHOKEBERRY	3 GAL.	CONT.	24" ON CENTER
IS	55	IRIS VERSICOLOR 'BLUE FLAG' BLUE FLAG IRIS	1 QUART	CONT.	24" ON CENTER

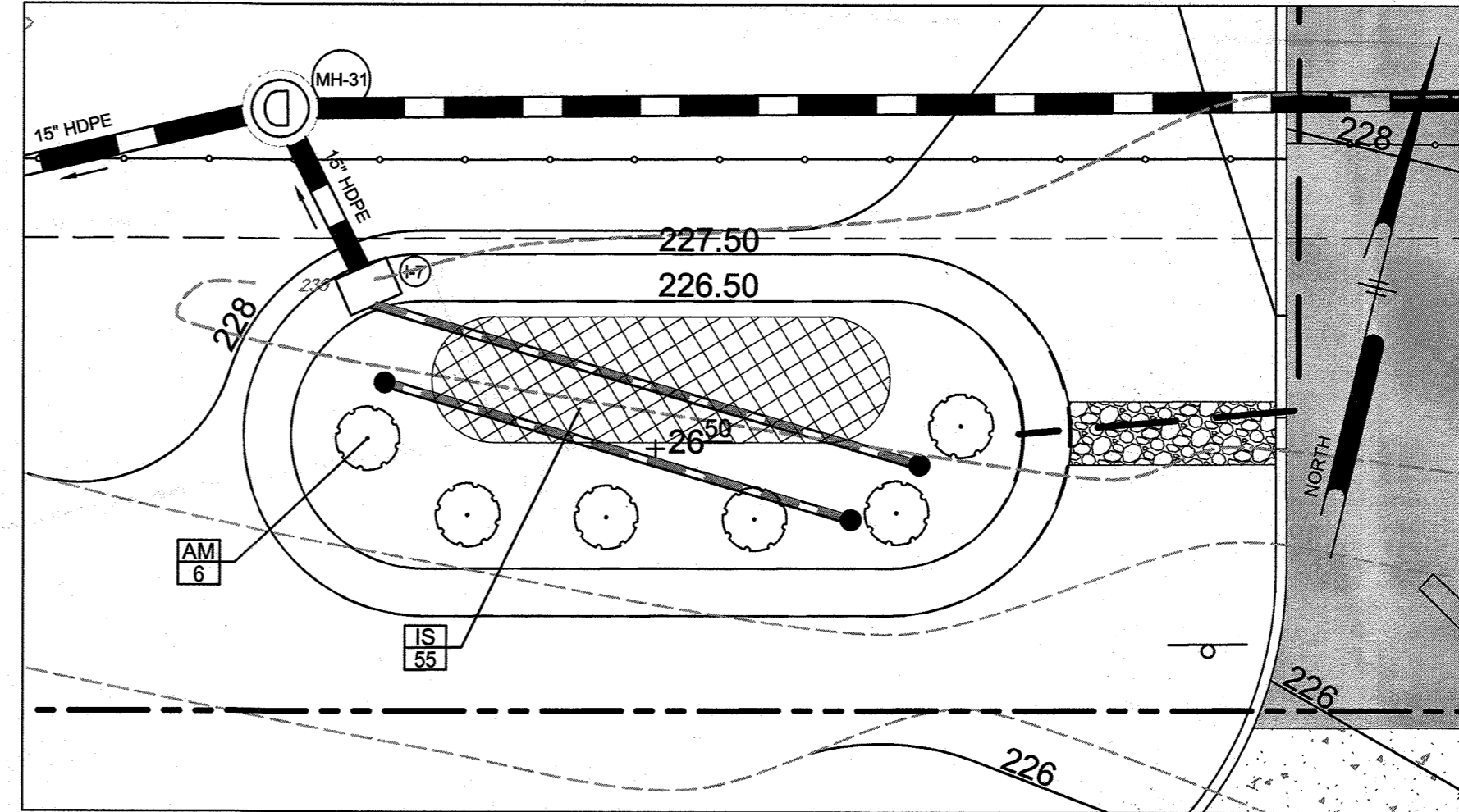
MICRO-BIORETENTION #8 PLANT SCHEDULE					
SYMBOL	QTY.	SCIENTIFIC/COMMON NAME	SIZE	ROOT	REMARKS
AM	11	ARONIA MELANOCARPA BLACK CHOKEBERRY	3 GAL.	CONT.	24" ON CENTER
PV	82	PANICUM VIRGATUM VIRGINIA SWITCHGRASS	1 QUART	CONT.	24" ON CENTER



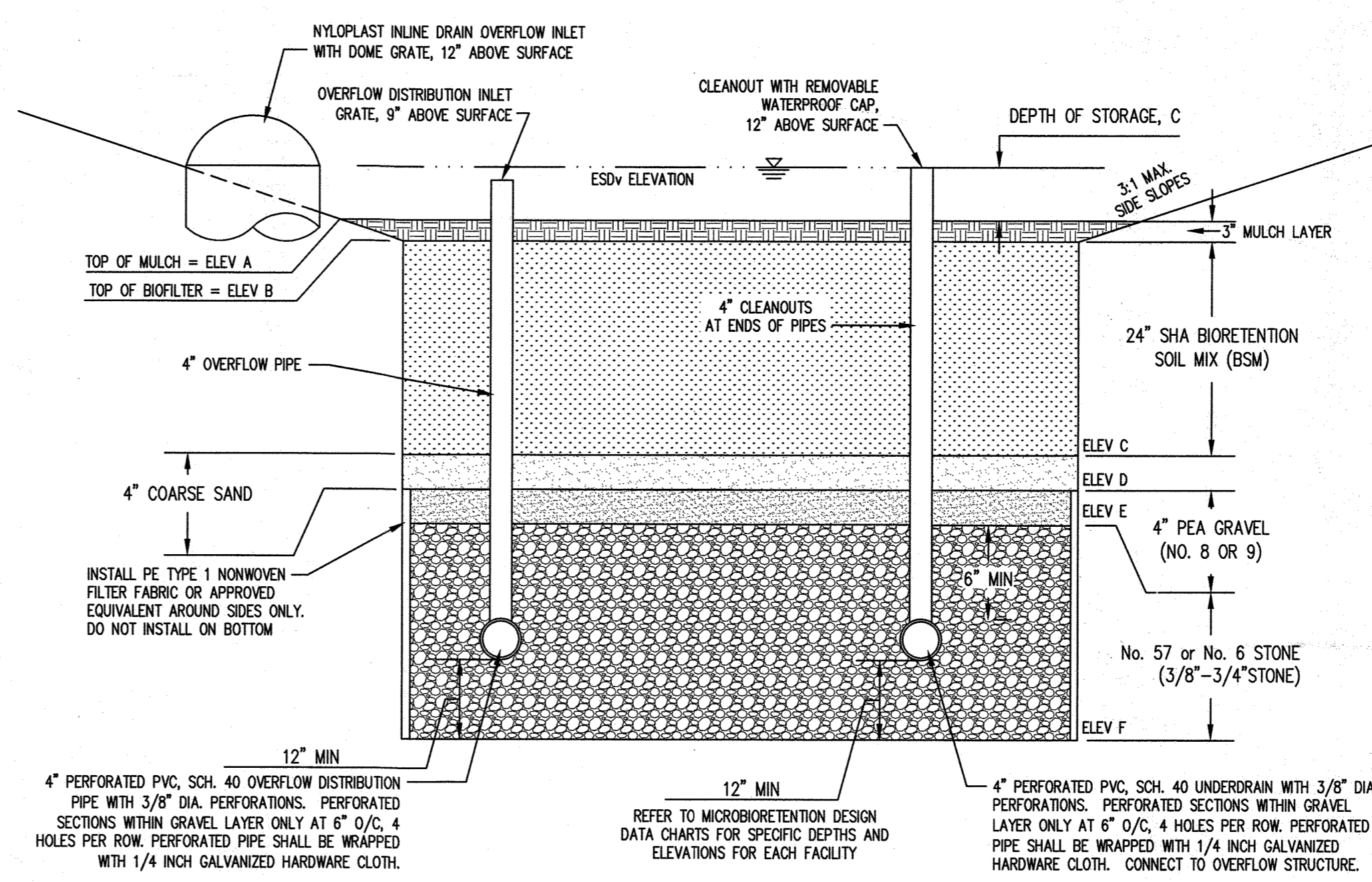
MICRO-BIORETENTION #8 DETAIL PLAN
SCALE: 1"=10'



MICRO-BIORETENTION #8 LANDSCAPE PLAN
SCALE: 1"=10'



MICRO-BIORETENTION #7 LANDSCAPE PLAN
SCALE: 1"=10'



4 MICROBIORETENTION TYPICAL SECTION
15 NOT TO SCALE

MICRO-BIORETENTION DESIGN DATA						
	#6	#7	#8	#6 AS BUILT	#7 AS BUILT	#8 AS BUILT
ESDv ELEV	231.50	227.50	230.25			
FACILITY TOP ELEV A	230.50	226.50	229.25			
ELEV B	230.25	226.25	229.00			
ELEV C	228.25	224.25	227.00			
ELEV D	227.92	223.92	226.67			
ELEV E	227.59	223.59	226.33			
BOTTOM ELEV F	225.76	221.26	224.50			
SURFACE AREA AT 'F' (SF)	1,125	730	993			
OVERFLOW STRUCTURE	231.25	227.25	230.00			
OUTFLOW PIPE INVERT ELEV FROM STRUCTURE	224.30	222.59	224.00			
UNDERDRAIN INVERT ELEV AT CLEANOUT	226.76	222.76	225.50			
DEPTH OF STONE BELOW UNDERDRAIN	20"	25"	24"			

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 FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. _____ EXPIRATION DATE: _____

APPROVED: DEPARTMENT OF PLANNING AND ZONING

 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 4.1.20

 CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 4/17/2020

 Director, Planning & Zoning DATE: 4-17-2020

DATE	NO.	REVISION	BY
04/20/20	2	REVISED DRAINAGE AREAS	JSN
10/07/20	1	REVISE MICROBIOTIC SUMMARY	PJS

DEVELOPER: MORF I, LLC
 9250 BENDIX ROAD
 COLUMBIA, MD 21045
 ATTN: GORDON HOLK
 PHONE: 860-462-8533

OWNER: MARYLAND FOOD CENTER AUTHORITY
 7801 OCEANO AVENUE
 JESSUP, MD 20794-9411
 ATTN: PEGGY TORRE
 PHONE: 410-379-5760

PROJECT: MARYLAND FOOD CENTER AUTHORITY ANAEROBIC DIGESTION FACILITY

AREA: TAX MAP 43, PARCEL 666 LOT C3 PLAT 7405 ZONED M-2
 GRID NO. 21 6TH ELECTION DISTRICT
 JESSUP, MARYLAND 20794
 HOWARD COUNTY, MARYLAND

TITLE: STORMWATER MANAGEMENT DETAILS

Pennoni Associates Inc.
 Engineers • Surveyors • Planners
 Landscape Architects

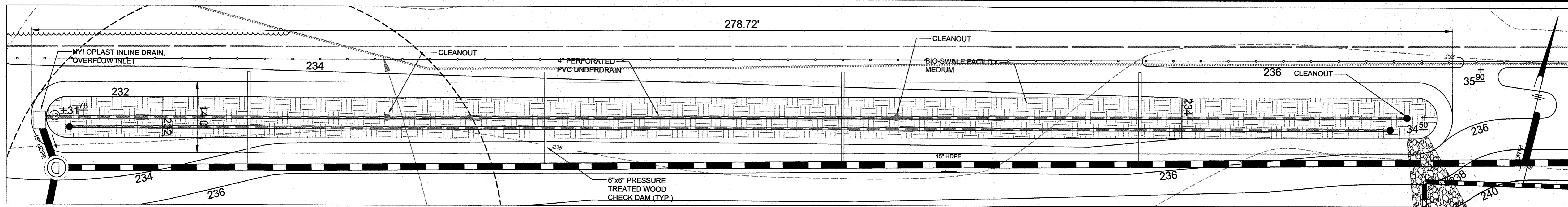
8818 Centre Park Drive, Suite 200 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

SEAL: _____

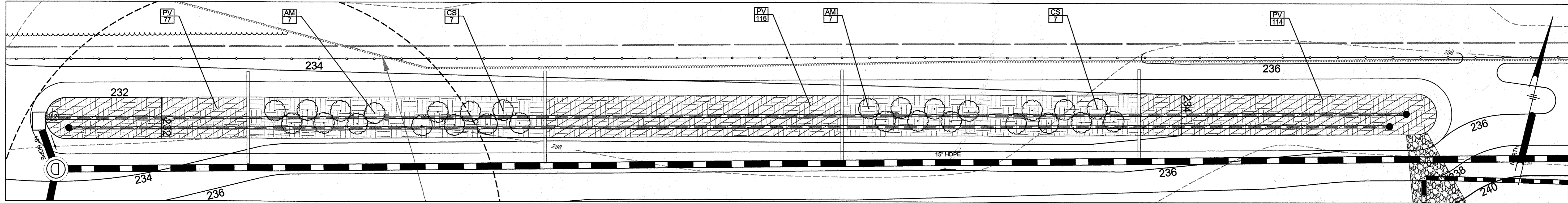
DESIGNED BY: PJS/JSN/JTB
 DRAWN BY: JSN/JTB
 PROJECT NO.: BT/SBI18001
 DATE: JANUARY 13, 2020
 SCALE: 1"=10'
 DRAWING NO.: 17 OF 24

MICRO-BIORETENTION SUMMARY TABLE											
FACILITY #	DRAINAGE AREA (SE)	IMPERVIOUS AREA (SF)	% IMPERVIOUS AREA	SOIL TYPE	PE REQUIRED (FROM TABLE 5.3)	ESDv REQUIRED (CF)	ESDv PROVIDED (CF)	FILTER SURFACE AREA (SF)	PONDING DEPTH (IN)	MEDIA DEPTH (FT)	MAINTENANCE
#1	16,443	5,762	35%	D	2.6	15,339**	1,302	946	12"	2	PRIVATE
#4	19,728	9,435	48%	D	2.6	2,060	1,016	1,016	12"	2	PRIVATE
#5	15,903	8,838	56%	D	2.6	1,909	1,205	1,205	12"	2	PRIVATE
#6	19,917	9,619	48%	D	2.6	2,093	1,125	1,125	12"	2	PRIVATE
#7	19,883	15,183	76%	D	2.6	1,497	730	730	12"	2	PRIVATE
#8	13,488	6,521	48%	D	2.6	2,036	993	993	12"	2	PRIVATE

** ESDv VOLUME SHOWN IS THE OVERALL REQUIRED VOLUME FOR THE PROJECT

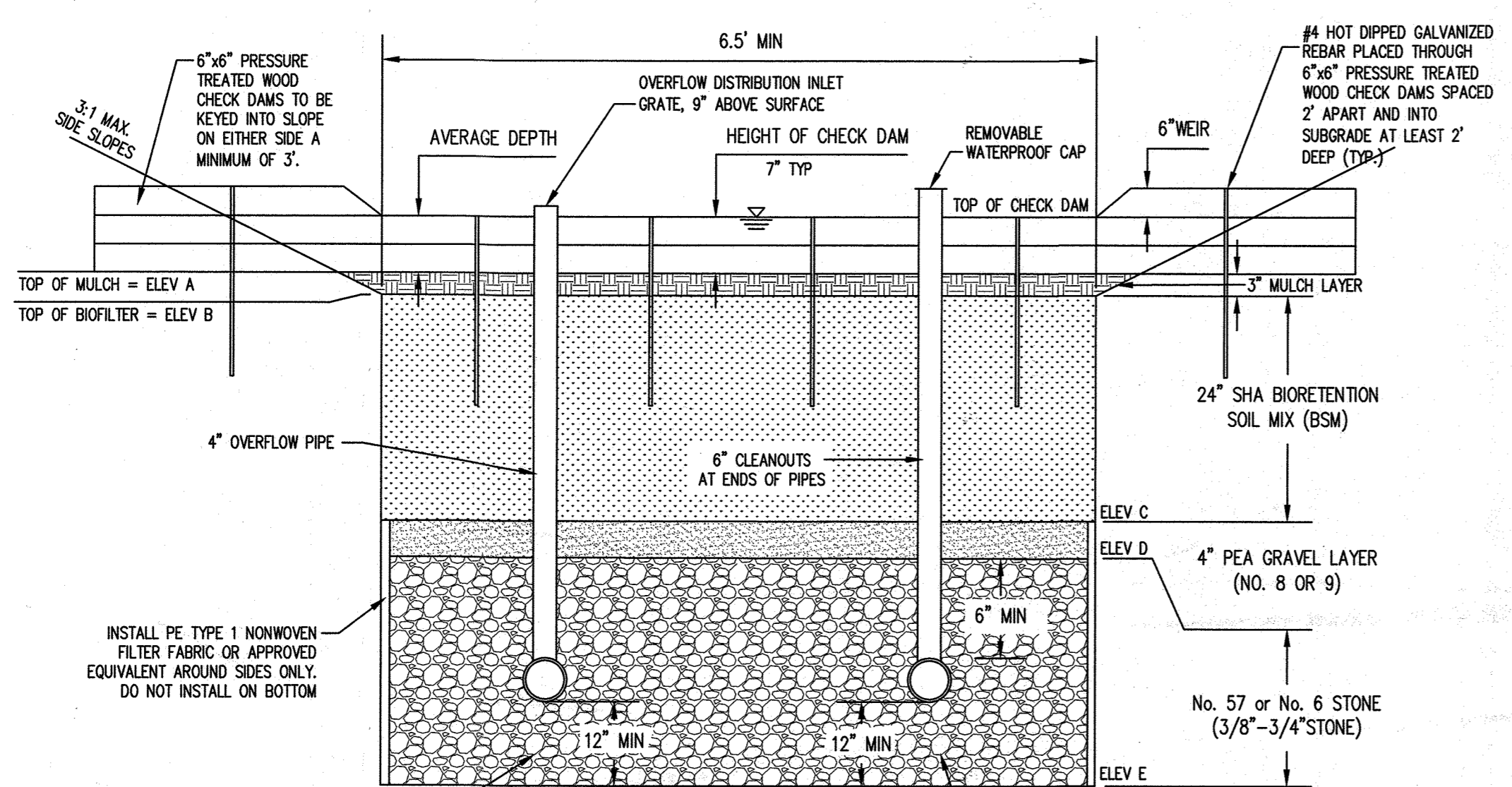


BIOSWALE #2 DETAIL PLAN
SCALE: 1"=10'



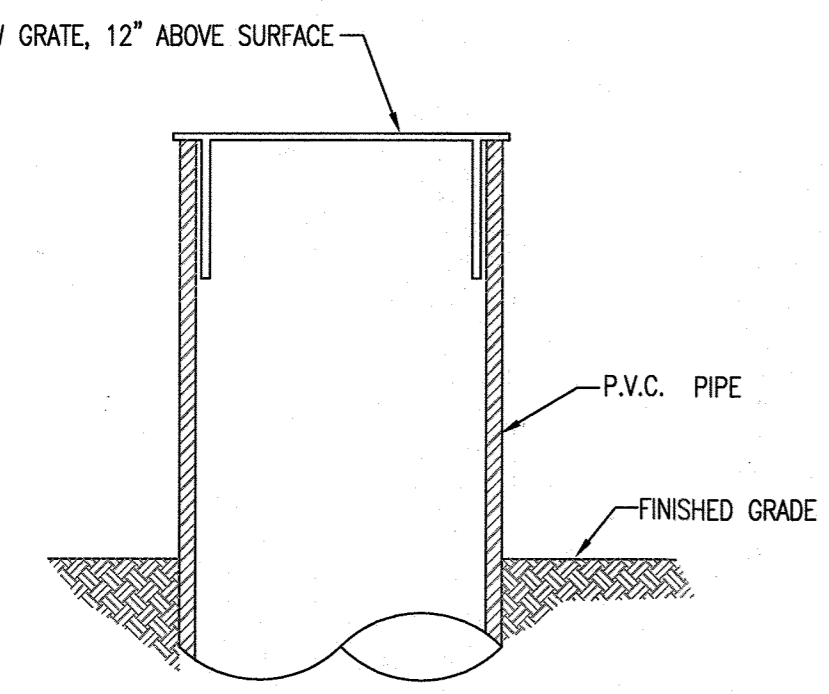
BIOSWALE #2 LANDSCAPE PLAN
SCALE: 1"=10'

BIOSWALE #2 PLANT SCHEDULE					
SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
AM	14	ARONIA MELANOCARPA BLACK CHOKEBERRY	3 GAL.	CONT.	24" ON CENTER
CS	14	CORNUS SERICEA 'FLAVIRAMEA' YELLOW TWIG DOGWOOD	3 GAL.	CONT.	24" ON CENTER
PV	307	PANICUM VIRGATUM VIRGINIA SWITCHGRASS	1 QUART	CONT.	24" ON CENTER

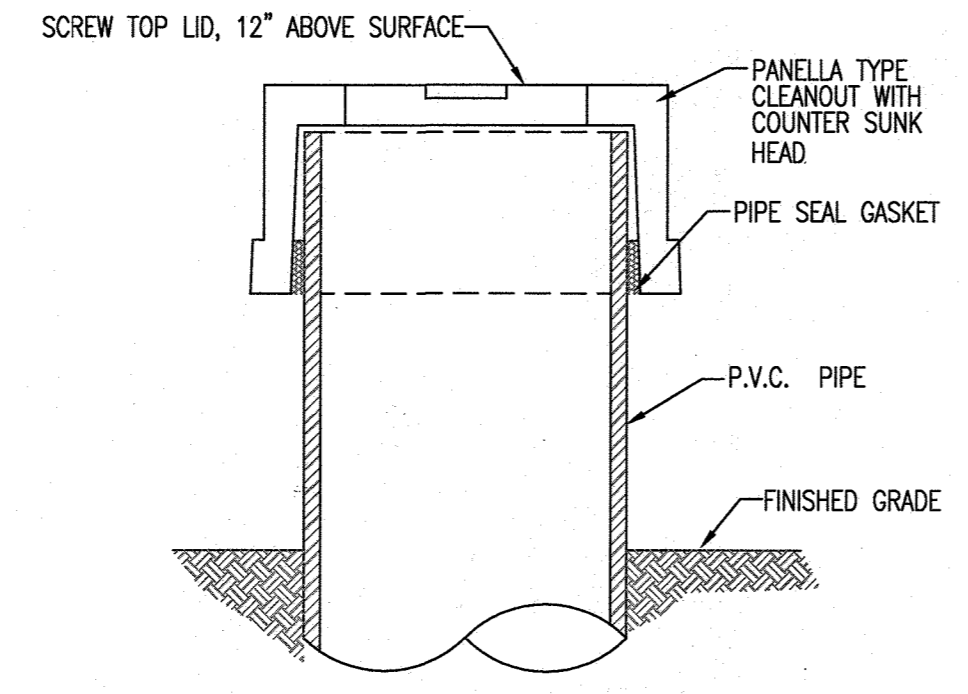


1 BIOSWALE TYPICAL CROSS SECTION
NOT TO SCALE

	BIOSWALE #2			
	HIGH END (EAST)	LOW END (WEST)	HIGH END AS BUILT	LOW END AS BUILT
HEIGHT OF CHECK DAM	7"	7"		
AVERAGE DEPTH				
FACILITY TOP ELEV A	234.50	231.78		
ELEV B	234.25	231.53		
ELEV C	232.25	229.53		
ELEV D	231.92	229.20		
BOTTOM ELEV E	230.09	227.37		
SURFACE AREA AT 'E' (SF)	1,754	1,754		
OUTFALL PIPE INVERT ELEV FROM STRUCTURE	-	227.50		
UNDERDRAIN ELEV AT CLEANOUT	231.09	-		
DEPTH OF STONE BELOW UNDERDRAIN	24"	24"		



2 OVERFLOW GRATE
NOT TO SCALE



3 CLEAN-OUT OBSERVATION WELL CAP
NOT TO SCALE

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)

PROFESSIONAL CERTIFICATION: 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. _____ EXPIRATION DATE: _____

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 4.1.20
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 4/17/2020
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 4-17-2020
Director, Planning & Zoning DATE

DEVELOPER: MORF I, LLC
9250 BENDIX ROAD
COLUMBIA, MD 21045
ATTN: GORDON HOLK
PHONE: 880-462-9533

OWNER: MARYLAND FOOD CENTER AUTHORITY
7901 OCEANO AVENUE
JESSUP, MD 20794-9411
ATTN: PEGGY TORRE
PHONE: 410-379-5760

PROJECT: MARYLAND FOOD CENTER AUTHORITY ANAEROBIC DIGESTION FACILITY

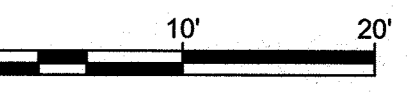
AREA: TAX MAP 43, PARCEL 666 LOT C3 PLAT 7405 ZONED M-2
GRID NO. 21 6TH ELECTION DISTRICT
7900 N OCEANO AVENUE
JESSUP, MARYLAND 20794
HOWARD COUNTY, MARYLAND

TITLE: STORMWATER MANAGEMENT DETAILS

Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects

8818 Centre Park Drive, Suite 200 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

DESIGNED BY: PJS/JSN/JTB
DRAWN BY: JSN/JTB
PROJECT NO: BTSBI18001
DATE: JANUARY 13, 2020
SCALE: 1"=10'
DRAWING NO. 18 OF 24



LEGEND

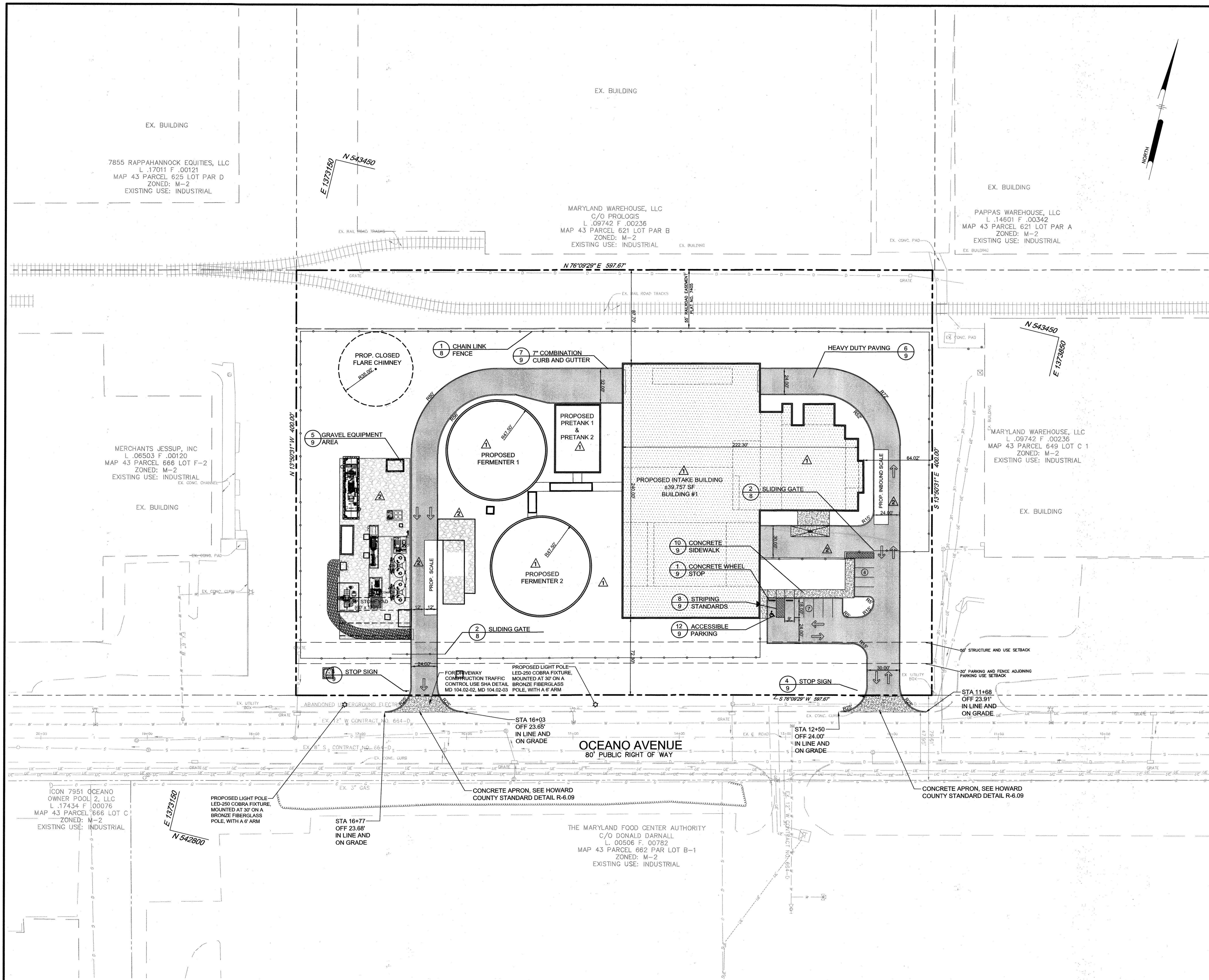
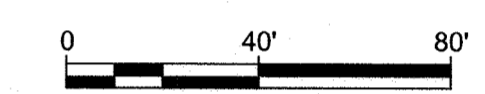
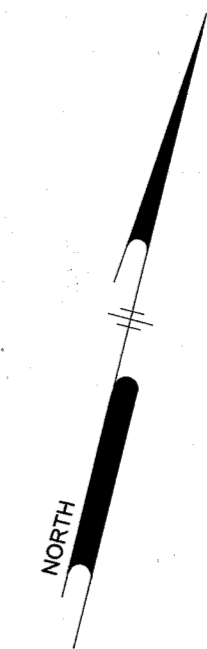
- EX. PROPERTY LINE AND RIGHT OF WAY
- PROPOSED CONCRETE PAVEMENT
- PROP. P-5 PAVING
- PROP. LARGE TRUCK ROUTE THROUGH SITE

STRIPING AND SIGNAGE GENERAL NOTES

1. ON THE APPROACH SIDE OF A STOP SIGN, NO STREET TREE CAN BE PLANTED WITHIN 30' OF THE STOP SIGN.
2. THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY - TRAFFIC DIVISION (410.313.2430) PRIOR TO INSTALLATION.
3. ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL CONFORM WITH THE LATEST EDITION OF THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES* (MDMUTCD).
4. 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.

LIGHTING GENERAL NOTE

1. SEE LIGHTING DETAILS ON SHEET 23.



APPROVED : DEPARTMENT OF PLANNING AND ZONING

[Signature] 11-1-21
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
[Signature] 11-1-21
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
[Signature] 11-4-21
 DIRECTOR DATE

DATE	NO.	REVISION	BY
07/28/2021	2	WATER METER AND SITE REVISIONS	JTB
9/23/2020	1	REVISED SITE LAYOUT AND GRADING	JSN

DEVELOPER
 MORF I, LLC
 9250 BENDIX ROAD
 COLUMBIA, MD 21045
 ATTN: GORDON HOLK
 PHONE: 860-462-9533

OWNER
 MARYLAND FOOD CENTER AUTHORITY
 7901 OCEANO AVENUE
 JESSUP, MD 20794-9411
 ATTN: PEGGY TORRE
 PHONE: 410-379-5760

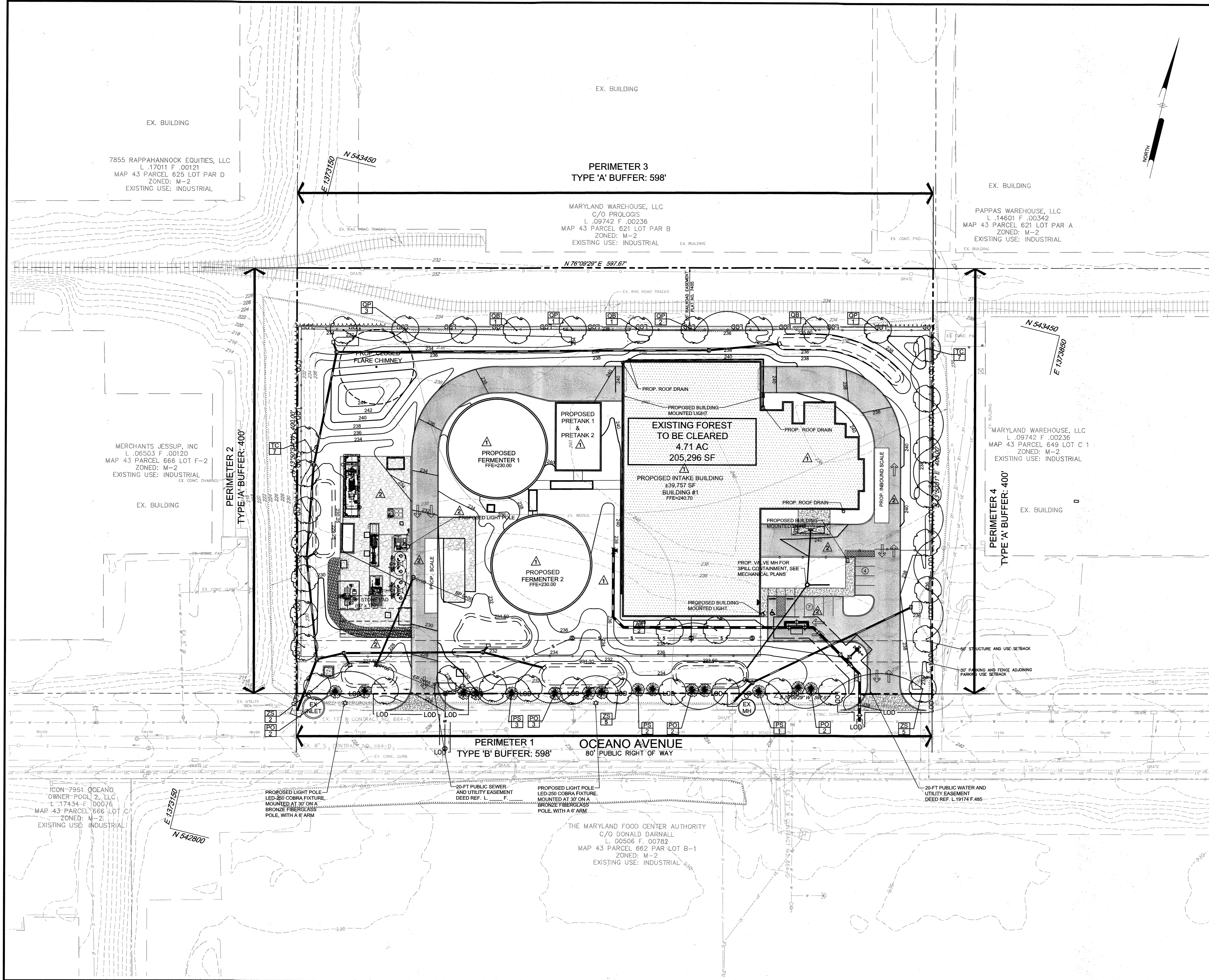
PROJECT
 MARYLAND FOOD CENTER AUTHORITY ANAEROBIC DIGESTION FACILITY

AREA
 TAX MAP 43, PARCEL 666 LOT C3 PLAT 7405 ZONED M-2
 GRID NO. 21 6TH ELECTION DISTRICT
 7900 N OCEANO AVENUE
 JESSUP, MARYLAND 20794
 HOWARD COUNTY, MARYLAND

TITLE
 REVISED PAVING, STRIPING, AND SIGNAGE PLAN

Pennoni Associates Inc.
 Engineers • Surveyors • Planners
 Landscape Architects
 8818 Centre Park Drive, Suite 200 Columbia, MD 21045
 T 410.997.8900 F 410.997.9282

	DESIGNED BY : PJS/JSN/JTB
	DRAWN BY : JSN/JTB
	PROJECT NO : B-TSBI18001
	DATE : SEPTEMBER 29, 2021
	SCALE : 1" = 40'
BY:	DRAWING NO. 19 OF 24



- LEGEND**
- EX. TREELINE
 - PROPOSED TREE LINE
 - PROPOSED SHADE TREE
 - PROPOSED EVERGREEN TREE
 - REQUIRED LANDSCAPING PER THE HOWARD COUNTY LANDSCAPE MANUAL
 - PROPOSED LIGHT POLE
 - PROPOSED BUILDING MOUNTED LIGHT

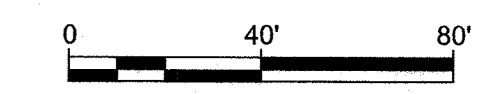
GENERAL NOTE

- SEE LIGHTING DETAILS ON SHEET 23.

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: *Julie J. Dulter* DATE: 9/30/21



APPROVED: DEPARTMENT OF PLANNING AND ZONING

<i>John P. ...</i>	11/1/21
CHIEF, DEVELOPMENT ENGINEERING DIVISION JR	DATE
<i>...</i>	11/4/21
CHIEF, DIVISION OF LAND DEVELOPMENT JR	DATE
<i>...</i>	11-4-21
Director	DATE

DATE	NO.	REVISION	BY
07/28/2021	2	WATER METER AND SITE REVISIONS	JTB
9/23/2020	1	REVISED SITE LAYOUT AND GRADING	JSN

DEVELOPER

MORF I, LLC
9250 BENDIX ROAD
COLUMBIA, MD 21045
ATTN: GORDON HOLK
PHONE: 860-462-9533

OWNER

MARYLAND FOOD CENTER AUTHORITY
7801 OCEANO AVENUE
JESSUP, MD 20794-9411
ATTN: PEGGY TORRE
PHONE: 410-379-5760

PROJECT

MARYLAND FOOD CENTER AUTHORITY
ANAEROBIC DIGESTION FACILITY

AREA

TAX MAP 43, PARCEL 666 LOT C3 PLAT 7405 ZONED M-2
GRID NO. 21 6TH ELECTION DISTRICT
7900 N OCEANO AVENUE
JESSUP, MARYLAND 20794
HOWARD COUNTY, MARYLAND

TITLE

REVISED
LANDSCAPE, LIGHTING AND
FOREST CONSERVATION PLAN

Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects

8818 Centre Park Drive, Suite 200 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

SEAL

DESIGNED BY: PJS/JSN/JTB
DRAWN BY: JSN/JTB
PROJECT NO.: BTSB118001
DATE: SEPTEMBER 29, 2021
SCALE: 1" = 40'
DRAWING NO. 20 OF 24

PLANT SCHEDULE					
SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
SHADE TREES					
AA	2	ACER X FREEMANII 'ARMSTRONG' ARMSTRONG COLUMNAR MAPLE	2.5-3" CAL.	B&B	AS SHOWN
TC	14	TILIA CORDATA 'GREENSPIRE' GREENSPIRE LITTLELEAF LINDEN	2.5-3" CAL.	B&B	AS SHOWN
QB	3	QUERCUS BICOLOR SWAMP WHITE OAK	2.5-3" CAL.	B&B	AS SHOWN
QP	7	QUERCUS PHELLOS WILLOW OAK	2.5-3" CAL.	B&B	AS SHOWN
ZS	12	ZELKOVA SERRATA 'VILLAGE GREEN' VILLAGE GREEN JAPANESE ZELKOVA	2.5-3" CAL.	B&B	AS SHOWN
EVERGREEN TREES					
PS	6	PINUS STROBUS EASTERN WHITE PINE	6-8" HT.	B&B	AS SHOWN
PO	9	PICEA OMORIKI SERBIAN SPRUCE	6-8" HT.	B&B	AS SHOWN

SCHEDULE A - PERIMETER LANDSCAPE EDGE				
	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES
PERIMETER	1	2	3	4
LANDSCAPE TYPE	B	A	A	A
LINEAR FEET OF ROADWAY FRONTAGE/ PERIMETER	598' ±	400' ±	598' ±	400' ±
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO
CREDIT FOR WALL, FENCE, BERM OR DRIVE AISLE (YES/NO/LINEAR FEET)	NO	NO	NO	NO
LINEAR FEET REMAINING	598' ±	400' ±	598' ±	400' ±
NUMBER OF PLANTS REQUIRED				
SHADE TREES	12	7	10	7
EVERGREEN TREES	15	0	0	0
SHRUBS	0	0	0	0
NUMBER OF PLANTS PROVIDED				
SHADE TREES	12	7	10	7
EVERGREEN TREES	15	0	0	0
SMALL FLOWERING TREES SHRUBS	0	0	0	0

SCHEDULE B - PARKING LOT INTERNAL LANDSCAPING	
PARKING LOT	1
NUMBER OF PARKING SPACES	11
NUMBER OF SHADE TREES REQUIRED (1/20 SPACES)	1
NUMBER OF TREES PROVIDED	
SHADE TREES	1
OTHER TREES (2:1 SUBSTITUTION)	0
NUMBER OF ISLANDS PROVIDED	2

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 diseases, 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 heated-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 Xcupressyparis 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

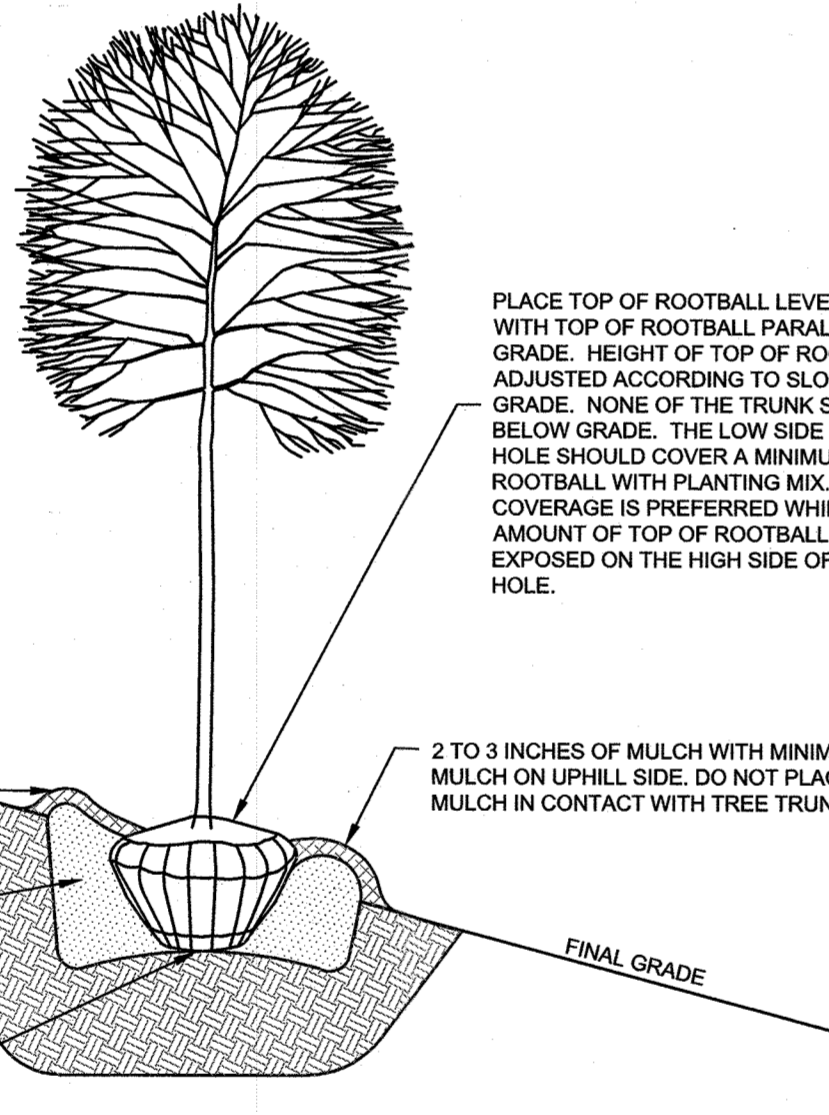
- Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on the plant list, the quantities on the plant take precedence. Where discrepancies on the plan exist between the symbols and the callout leader, the number 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 'Rependans' (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 mulch 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 \$13,650.00.
38 SHADE TREES @ \$300 = \$11,400.00
0 ORNAMENTAL TREES @ \$150 = \$0
15 EVERGREEN TREES @ \$150 = \$2,250.00
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.

NOTES:

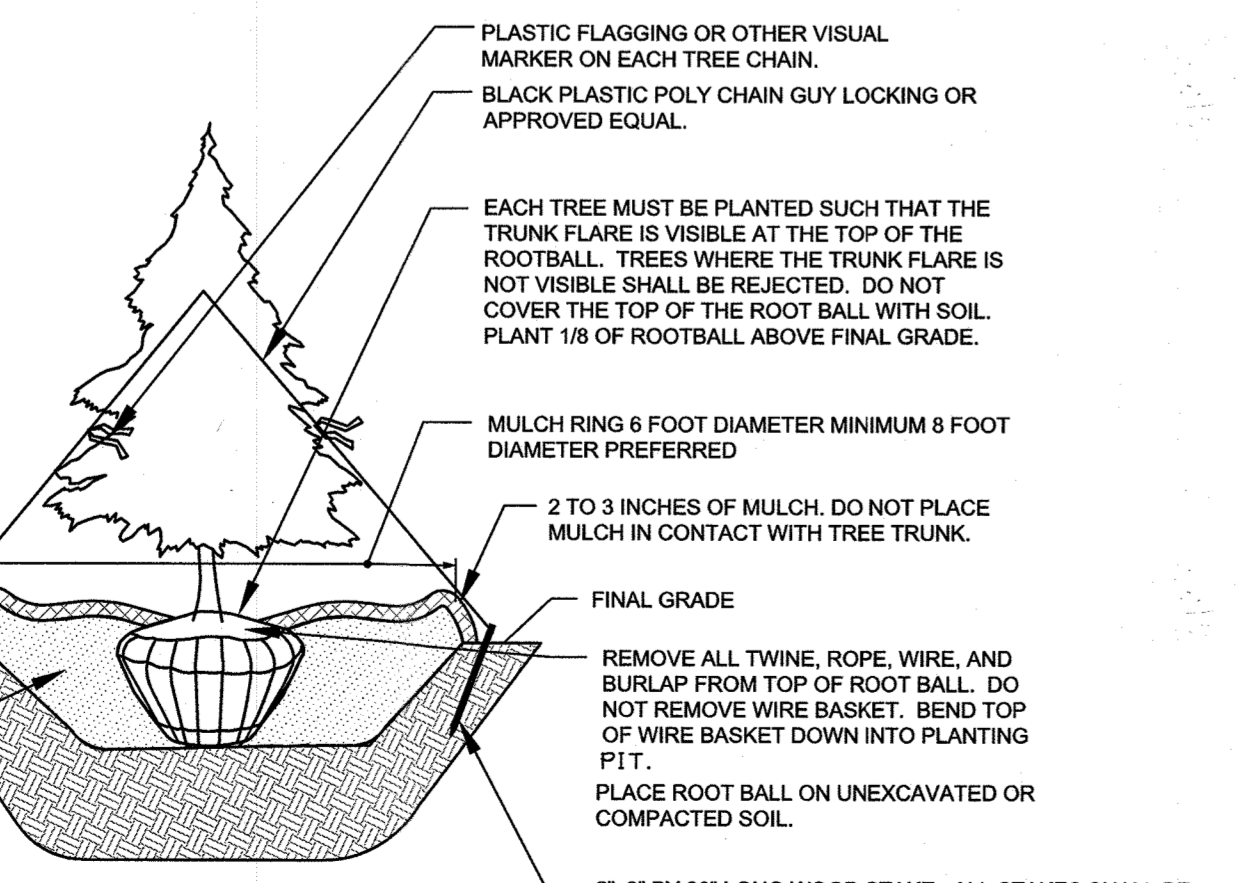
- DO NOT HEAVILY PRUNE THE TREE AT PLANTING. PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS, AND BROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED; HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.
- STAKE TREES ONLY IF RECOMMENDED ON THE PLANT SCHEDULE OR UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT. STAKING DETAIL SHOWN ONLY IF RECOMMENDED.
- B&B TREES: DIG PLANTING PIT TWICE AS WIDE AS THE DIAMETER OF THE TOP OF THE ROOT BALL WITH A MINIMUM PLANTING PIT DIAMETER OF 5".
- CONTAINERIZED TREES: DIG PLANTING PIT TWO AND A HALF TIMES AS WIDE AS THE DIAMETER OF THE CONTAINER WITH A MINIMUM PLANTING PIT DIAMETER OF 30". REMOVE CONTAINER JUST BEFORE PLANTING. INSPECT HEALTH OF ROOTS. REJECT MATERIAL WITH UNHEALTHY OR INSUFFICIENT ROOTS. REMOVE ALL TWINE, ROPE, WIRE, AND BURLAP FROM TOP OF ROOT BALL. DO NOT REMOVE WIRE BASKET. BEND TOP OF WIRE BASKET DOWN INTO PLANTING PIT.



1 DECIDUOUS B&B AND CONTAINERIZED TREE PLANTING DETAIL FOR STEEP SLOPES
NOT TO SCALE

NOTES:

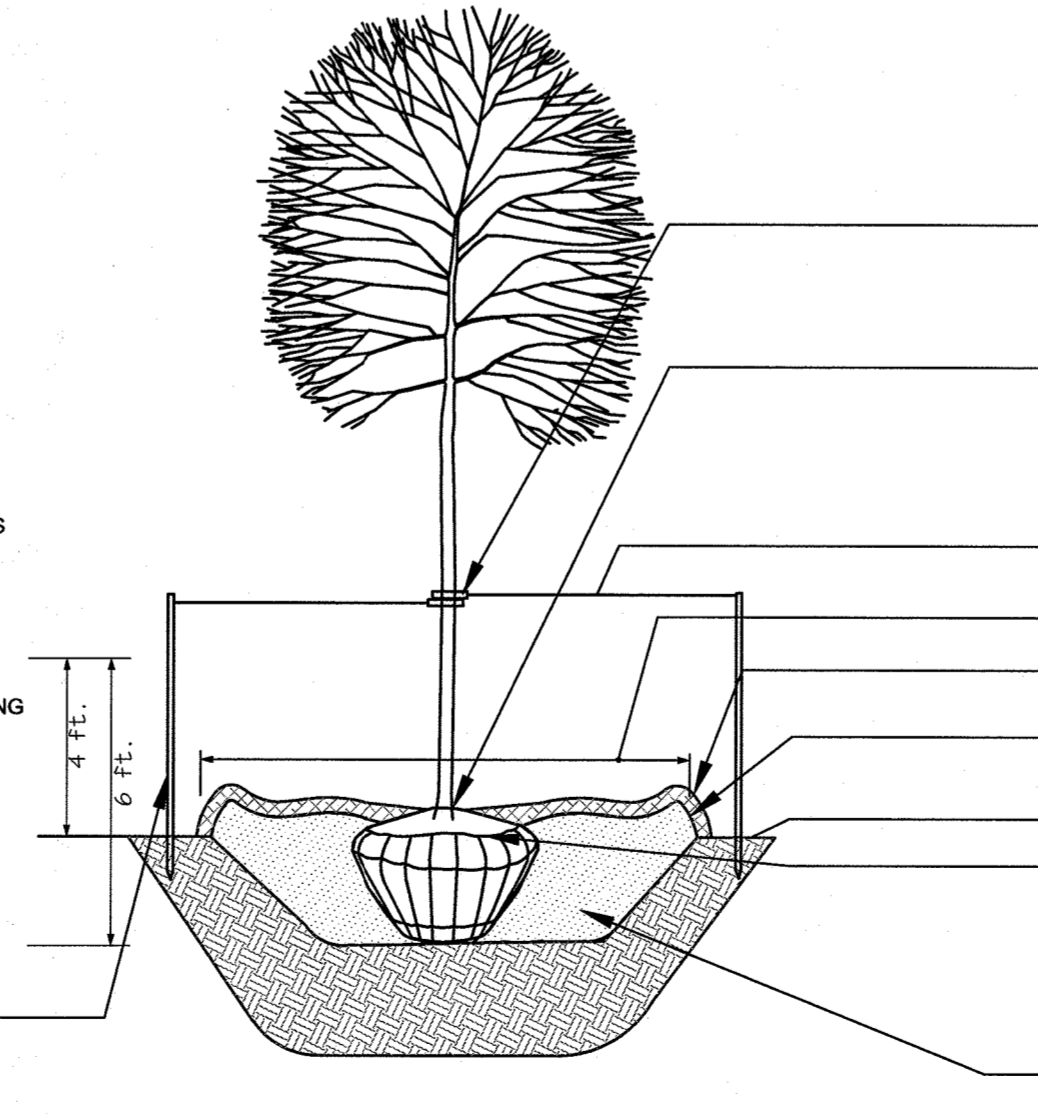
- SELECT ONLY NURSERY STOCK WITH A SINGLE LEADER UNLESS OTHERWISE SPECIFIED ON PLAN. PLANTS WITH CO-DOMINANT, MISSING, OR DAMAGED LEADERS SHALL BE REJECTED.
- STAKE TREES AS SHOWN.
- DIG PLANTING PIT TWICE AS WIDE AS THE DIAMETER OF THE TOP OF THE ROOT BALL WITH A MINIMUM PLANTING PIT DIAMETER OF 5".
- 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.



2 EVERGREEN B&B TREE PLANTING DETAIL
NOT TO SCALE

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.



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

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] 12/16/19
SIGNATURE DATE

FOREST CONSERVATION WORKSHEET
VERSION 1.0
(Enter in Yellow Cells)

NET TRACT AREA:

A. Total tract area.....	5.49
B. Area within 100 year floodplain.....	0.00
C. Area to remain in agricultural production.....	0.00
D. Net tract area.....	5.49

LAND USE CATEGORY: (from table 3.2.1, page 40, Manual)

ARA	MDR	IDA	HDR	MPD	CIA
0	0	0	0	0	1

E. Afforestation Threshold.....	15% x D =	0.80
F. Conservation Threshold.....	15% x D =	0.80

EXISTING FOREST COVER:

G. Existing forest cover (excluding floodplain).....	4.71
H. Area of forest above afforestation threshold.....	3.90
I. Area of forest above conservation threshold.....	3.90

BREAK EVEN POINT (BEP):

J. Forest retention above threshold with no mitigation (BEP).....	1.60
K. Clearing permitted without mitigation.....	3.10

PROPOSED FOREST CLEARING:

L. Total area of forest to be cleared.....	4.71
M. Total area of forest to be retained.....	0.00

PLANTING REQUIREMENTS:

N. Reforestation for clearing above conservation threshold.....	1.00
P. Reforestation for clearing below conservation threshold.....	1.60
Q. Credit for retention above conservation threshold.....	0.00
R. Total reforestation required.....	2.60
S. Total afforestation required.....	0.00
T. Total reforestation and afforestation required.....	2.60

APPROVED : DEPARTMENT OF PLANNING AND ZONING

[Signature] 4.1.20
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 4/17/2020
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 4-17-2020
Director, Planning & Zoning Date

DATE	NO.	REVISION	BY

DEVELOPER: MORF I, LLC
9250 BENDIX ROAD
COLUMBIA, MD 21045
ATTN: GORDON HOLK
PHONE: 860-462-9533

OWNER: MARYLAND FOOD CENTER AUTHORITY
7801 OCEANO AVENUE
JESSUP, MD 20794-9411
ATTN: PEGGY TORRE
PHONE: 410-379-5760

PROJECT: MARYLAND FOOD CENTER AUTHORITY ANAEROBIC DIGESTION FACILITY

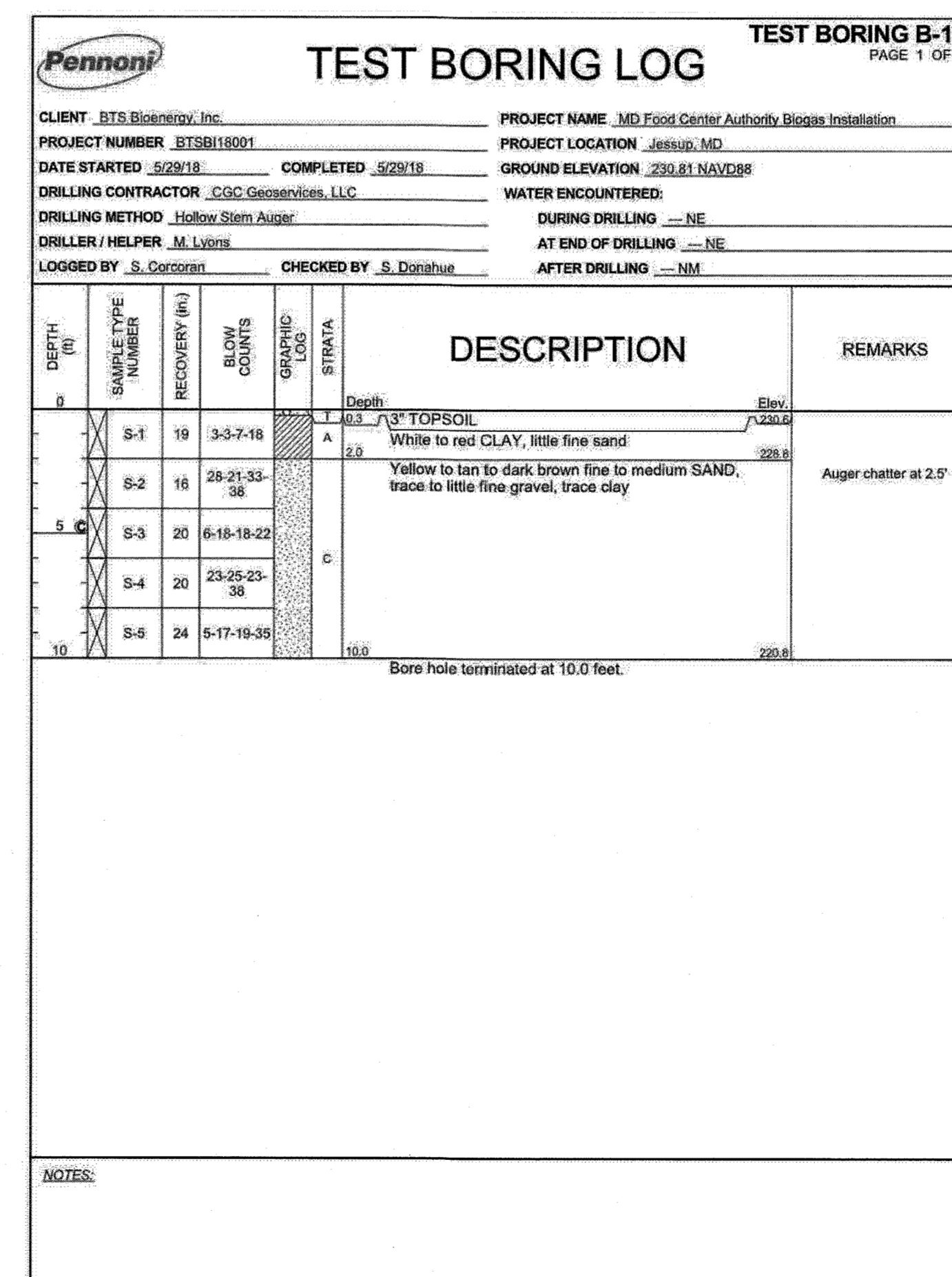
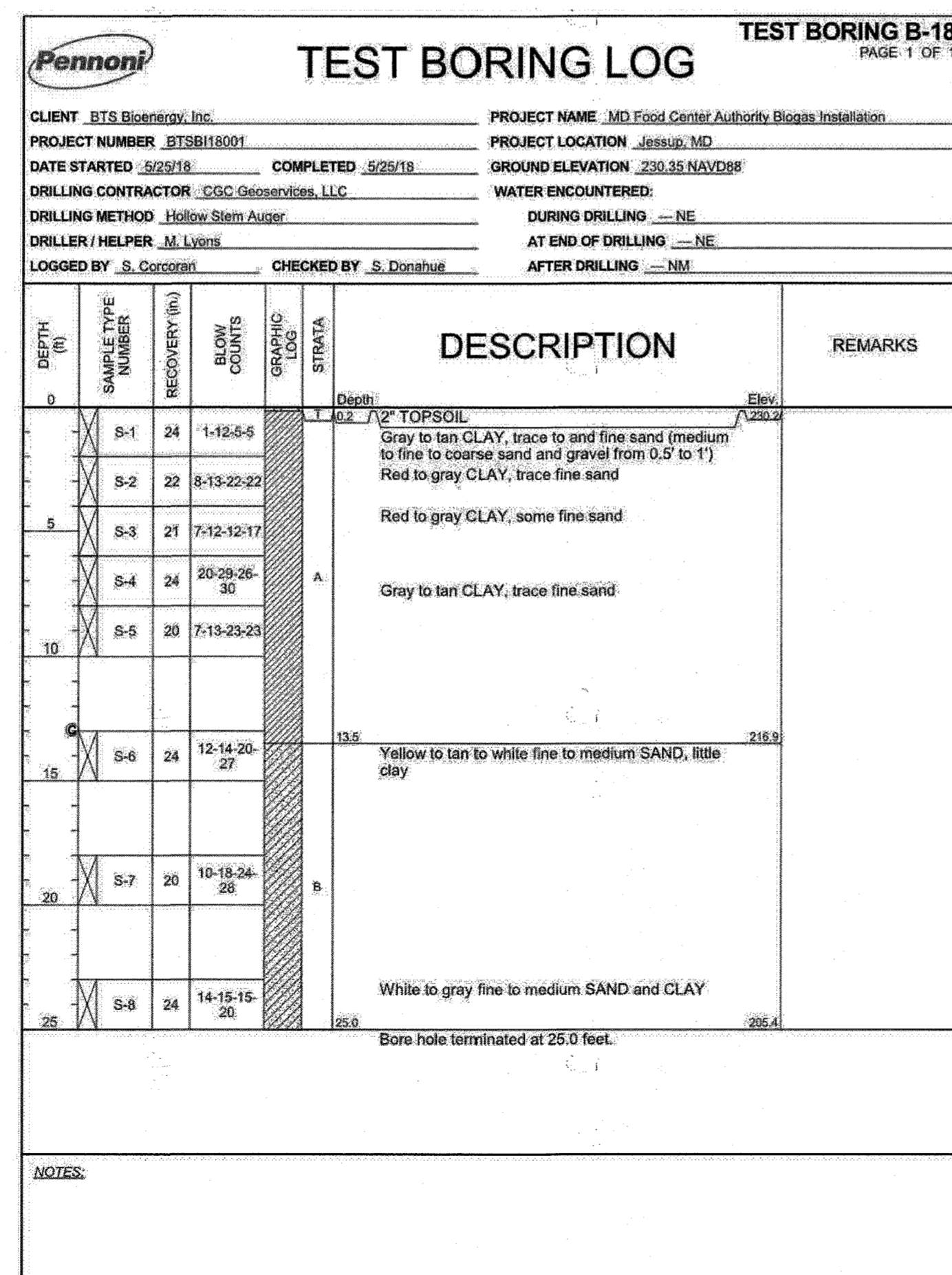
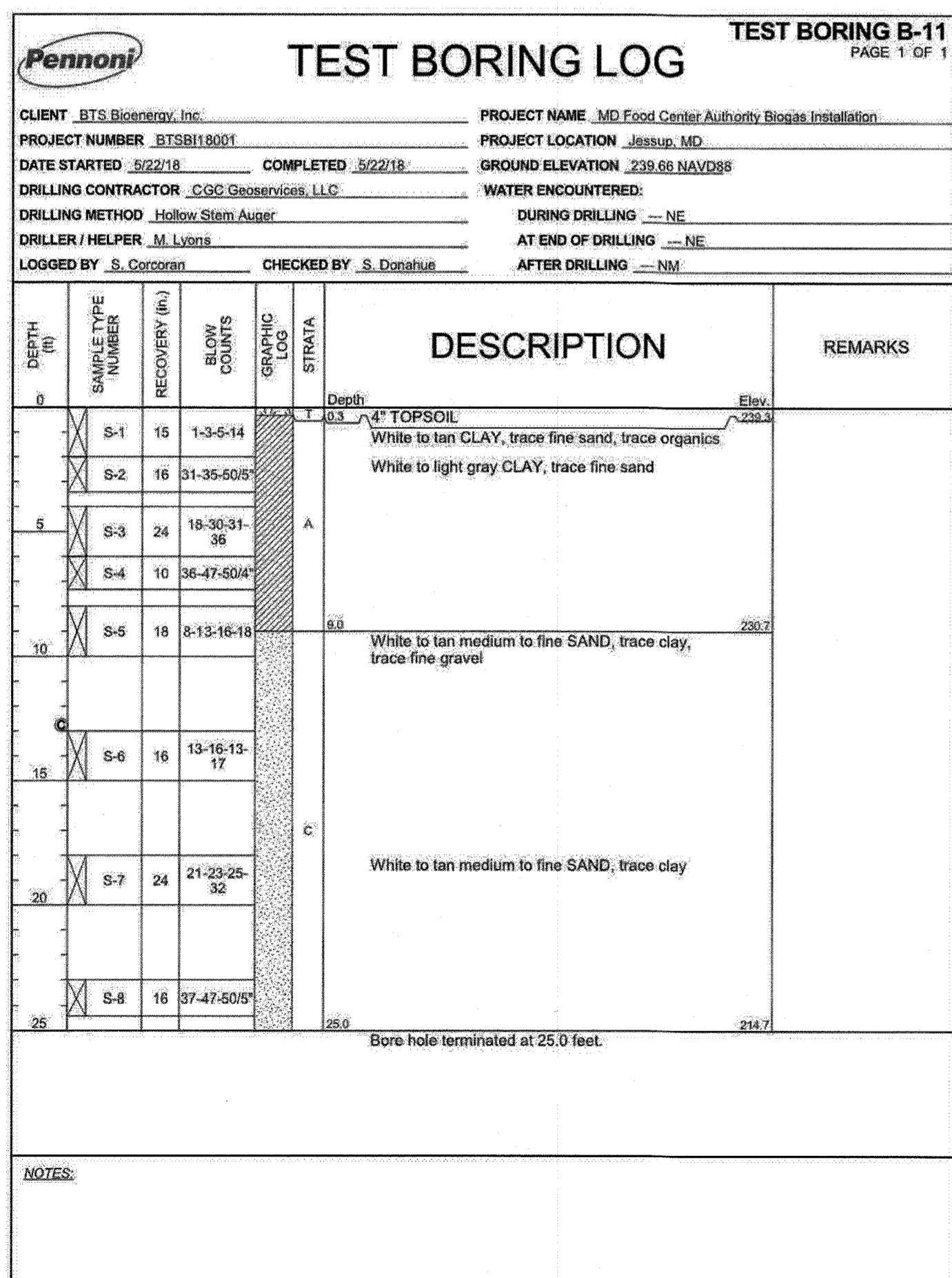
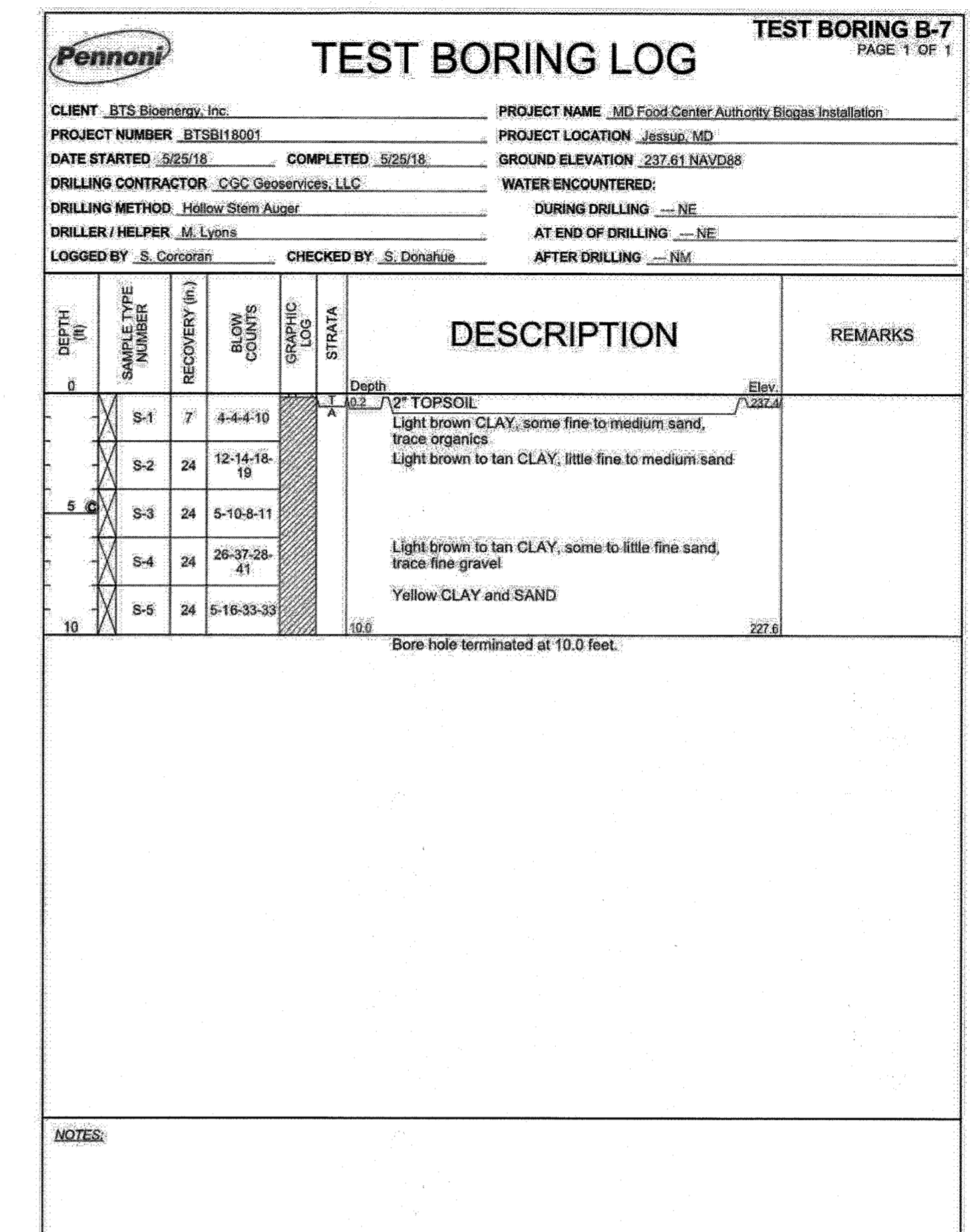
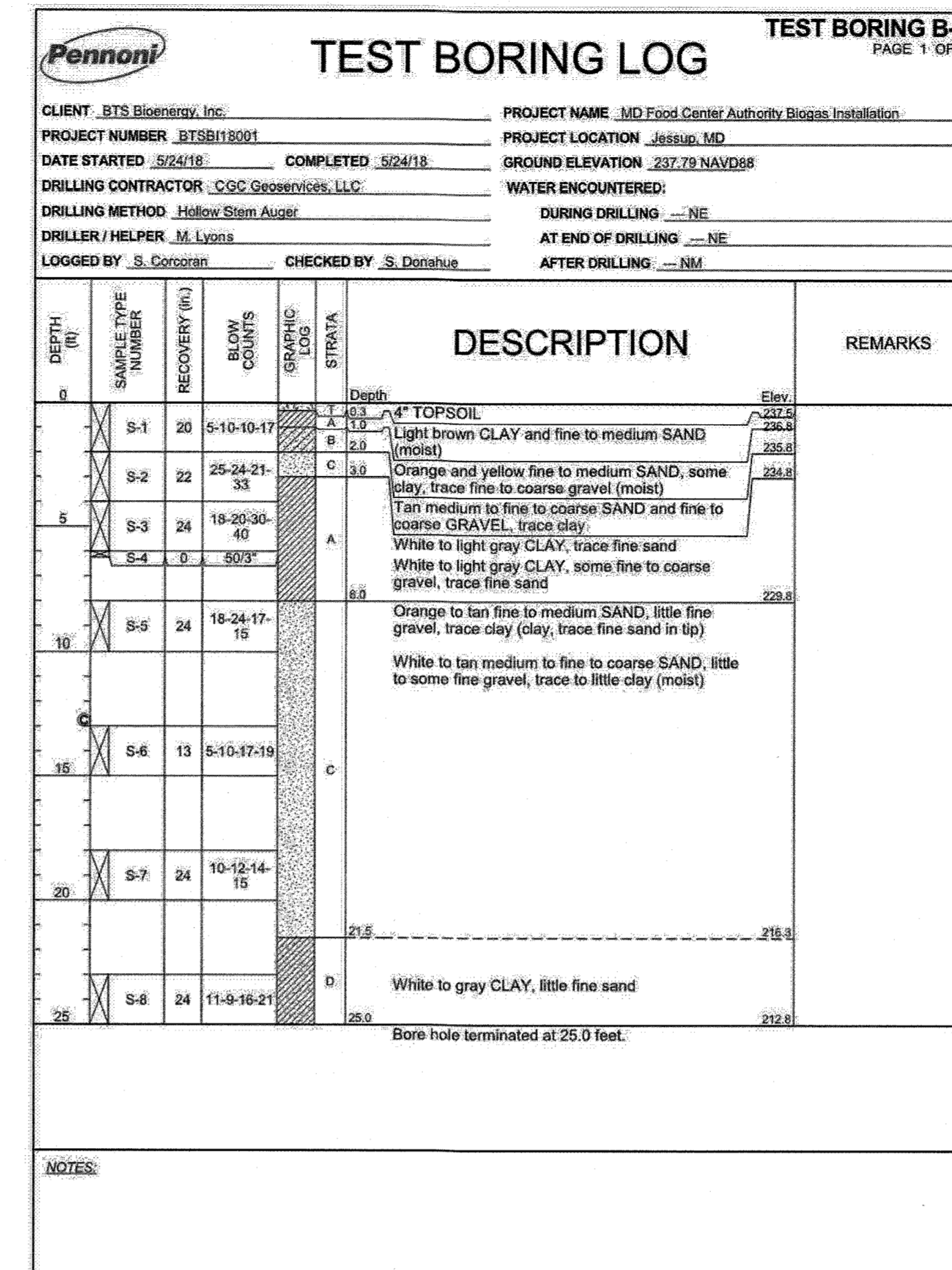
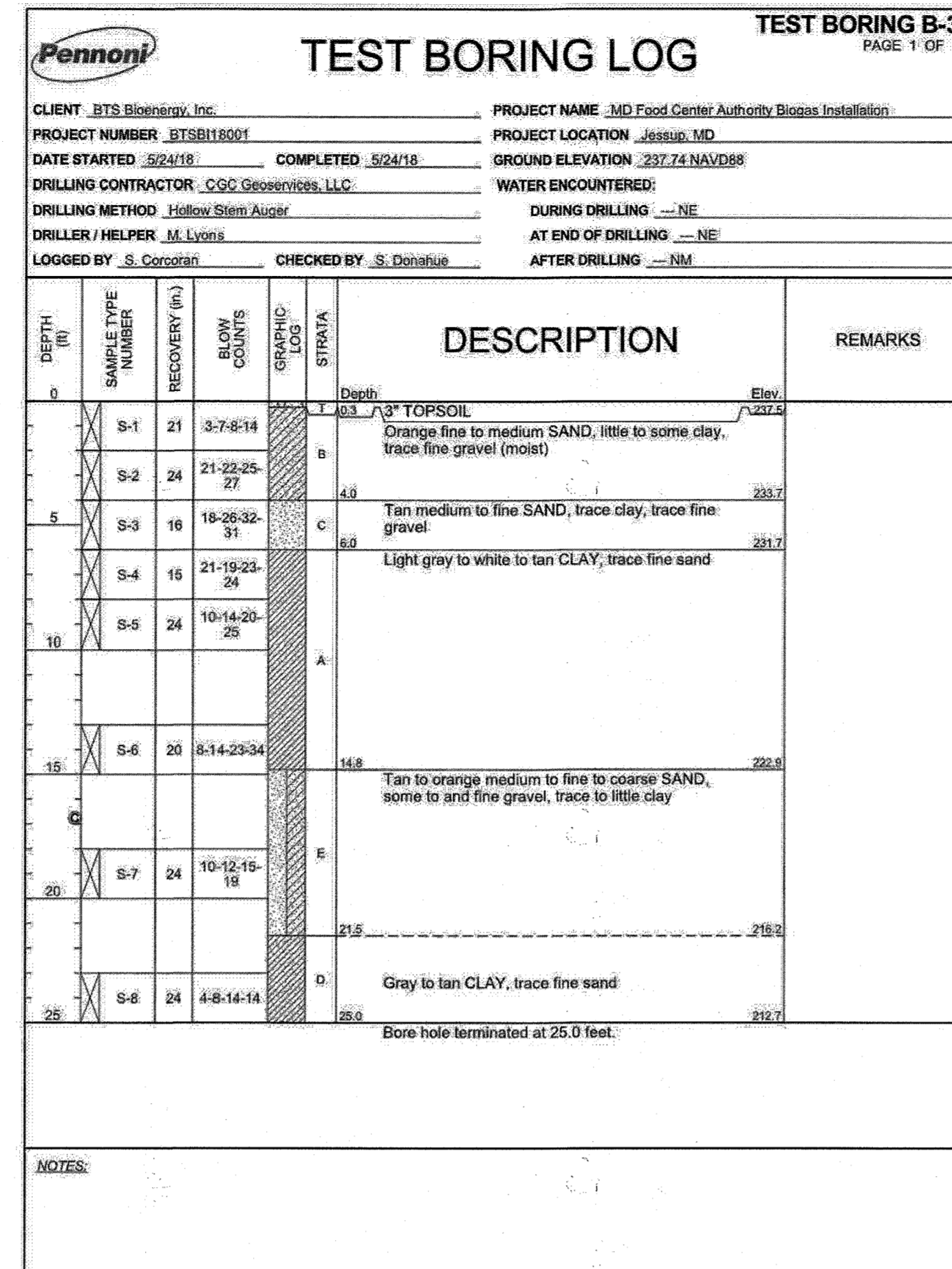
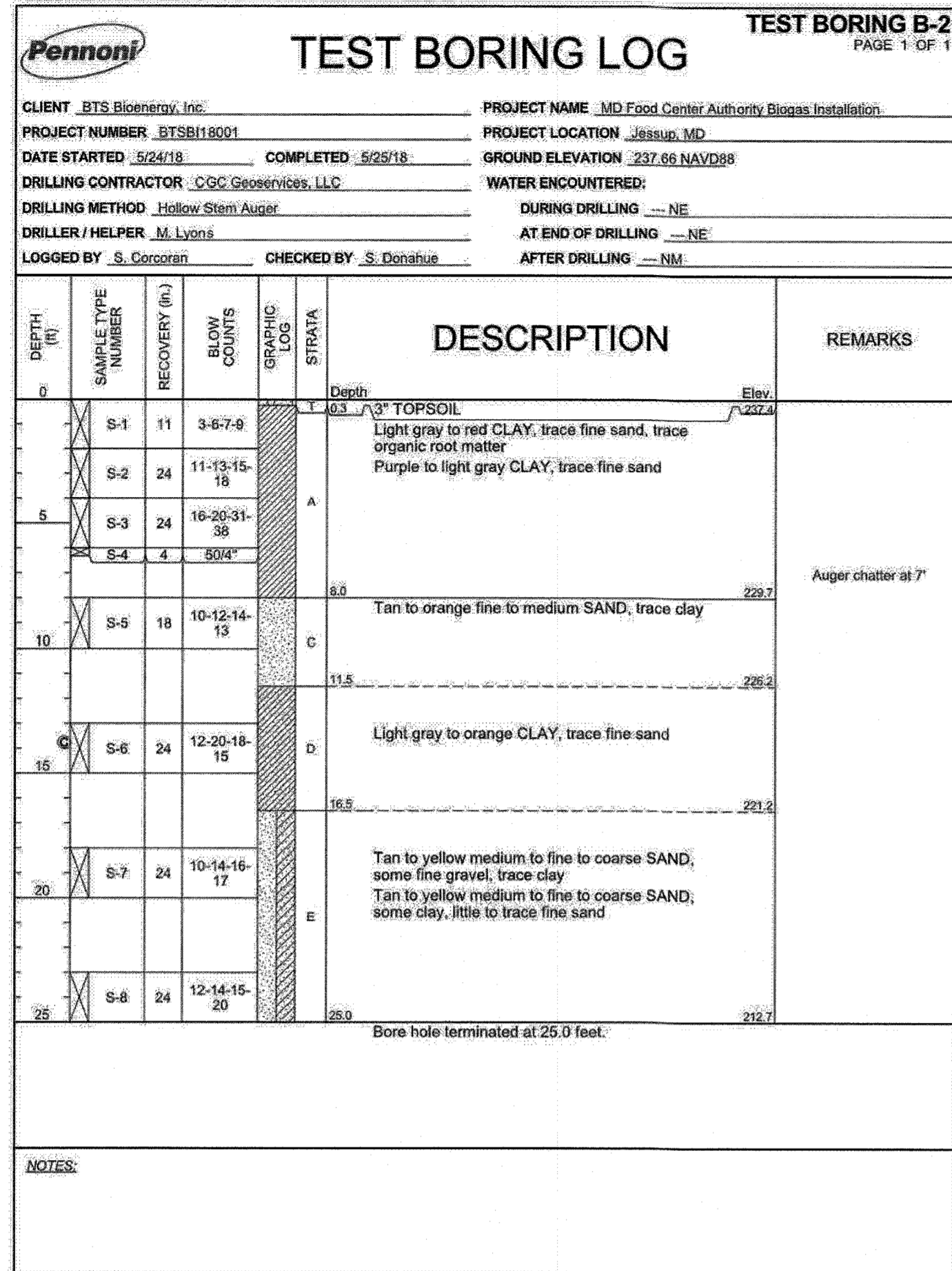
AREA: TAX MAP 43, PARCEL 666 LOT C3 PLAT 7405 ZONED M-2
GRID NO. 21 6TH ELECTION DISTRICT
7900 N OCEANO AVENUE
JESSUP, MARYLAND 20794
HOWARD COUNTY, MARYLAND

TITLE: LANDSCAPE AND FOREST CONSERVATION NOTES AND DETAILS

Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects

8818 Centre Park Drive, Suite 200 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

DESIGNED BY: PJS/JSN/JTB
DRAWN BY: JSN/JTB
PROJECT NO.: BTBSI18001
DATE: DECEMBER 11, 2019
SCALE: AS SHOWN
DRAWING NO. 21 OF 24



APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 4.1.20
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 4/17/2020
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 4.17.2020
Director, Planning & Zoning DATE

DATE	NO.	REVISION	BY

DEVELOPER: MORF I, LLC
9250 BENDIX ROAD
COLUMBIA, MD 21045
ATTN: GORDON HOLK
PHONE: 860-462-9533

OWNER: MARYLAND FOOD CENTER AUTHORITY
7801 OCEANO AVENUE
JESSUP, MD 20794-9411
ATTN: PEGGY TORRE
PHONE: 410-379-5760

PROJECT: MARYLAND FOOD CENTER AUTHORITY ANAEROBIC DIGESTION FACILITY

AREA: TAX MAP 43, PARCEL 666 LOT C3 PLAT 7405 ZONED M-2
GRID NO. 21 6TH ELECTION DISTRICT
7900 N OCEANO AVENUE
JESSUP, MARYLAND 20794
HOWARD COUNTY, MARYLAND

TITLE: SOIL BORING LOGS

Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects

8818 Centre Park Drive, Suite 200 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

SEAL: PROFESSIONAL ENGINEER STATE OF MARYLAND

DESIGNED BY: PJS/JSN/JTB
DRAWN BY: JSN/JTB
PROJECT NO.: BTSB118001
DATE: JANUARY 13, 2020
SCALE: AS SHOWN
DRAWING NO.: 22 OF 24

SDP-18-063

TEST BORING LOG

TEST BORING B-20
PAGE 1 OF 1

CLIENT: BTS Biorecovery, Inc. **PROJECT NAME:** MD Food Center Authority Biogas Installation
PROJECT NUMBER: B12SBI16001 **PROJECT LOCATION:** Jessup, MD
DATE STARTED: 5/28/18 **COMPLETED:** 5/28/18 **GROUND ELEVATION:** 231.04 NAVD8R
DRILLING CONTRACTOR: CGC Geoservices, LLC **WATER ENCOUNTERED:**
DRILLER / HELPER: M Lyons **AT END OF DRILLING:** ---NE
LOGGED BY: S. Corbom **CHECKED BY:** S. Donohue **AFTER DRILLING:** ---NM

DEPTH (ft)	RECOVERY (ft)	RECOVERY (ft)	RECOVERY (ft)	RECOVERY (ft)	RECOVERY (ft)	DESCRIPTION	REMARKS
0	S-1	22	14-8-12	1.5	1.5	4" TOPSOIL	
0	S-1	22	14-8-12	1.5	1.5	Light gray to brown CLAY.	
0	S-2	18	7-10-11-12			No Recovery (Coarse gravel stuck in spoon)	
5	S-3	18	3-3-5-6			White to tan to purple to gray fine to medium SAND, trace clay, trace fine gravel (moist to wet)	
5	S-4	17	5-8-7-11			Light gray to brown fine to medium SAND, little clay, little fine gravel	
10	S-5	17	5-6-6-12			Tan to orange medium to fine SAND, trace clay	
10	S-5	17	5-6-6-12			Bore hole terminated at 10.0 feet.	

TEST BORING LOG

TEST BORING B-21
PAGE 1 OF 1

CLIENT: BTS Biorecovery, Inc. **PROJECT NAME:** MD Food Center Authority Biogas Installation
PROJECT NUMBER: B12SBI16001 **PROJECT LOCATION:** Jessup, MD
DATE STARTED: 5/18/18 **COMPLETED:** 5/18/18 **GROUND ELEVATION:** 231.38 NAVD8R
DRILLING CONTRACTOR: CGC Geoservices, LLC **WATER ENCOUNTERED:**
DRILLER / HELPER: M Lyons **AT END OF DRILLING:** ---NE
LOGGED BY: S. Corbom **CHECKED BY:** S. Donohue **AFTER DRILLING:** ---NM

DEPTH (ft)	RECOVERY (ft)	RECOVERY (ft)	RECOVERY (ft)	RECOVERY (ft)	RECOVERY (ft)	DESCRIPTION	REMARKS
0	S-1	21	2-6-6-11	0.3	0.3	4" TOPSOIL	
0	S-1	21	2-6-6-11	0.3	0.3	Red to white to yellow CLAY, little fine sand	
0	S-2	24	46-37-20-28			No Recovery (Coarse gravel stuck in spoon)	
5	S-3	13	7-14-24-34			White to tan to purple to gray fine to medium SAND, trace silt, trace fine gravel	
5	S-4	10	36-50-30-34			White to tan to purple to gray fine to medium SAND, little clay, trace silt	
10	S-5	24	23-50-30-34			White to tan to purple to gray fine to medium SAND, little clay, trace silt	
10	S-5	24	23-50-30-34			Bore hole terminated at 10.0 feet.	

TEST BORING LOG

TEST BORING B-22
PAGE 1 OF 1

CLIENT: BTS Biorecovery, Inc. **PROJECT NAME:** MD Food Center Authority Biogas Installation
PROJECT NUMBER: B12SBI16001 **PROJECT LOCATION:** Jessup, MD
DATE STARTED: 5/16/18 **COMPLETED:** 5/21/18 **GROUND ELEVATION:** 232.09 NAVD8R
DRILLING CONTRACTOR: CGC Geoservices, LLC **WATER ENCOUNTERED:**
DRILLER / HELPER: M Lyons **AT END OF DRILLING:** ---NE
LOGGED BY: S. Corbom **CHECKED BY:** S. Donohue **AFTER DRILLING:** ---NM

DEPTH (ft)	RECOVERY (ft)	RECOVERY (ft)	RECOVERY (ft)	RECOVERY (ft)	RECOVERY (ft)	DESCRIPTION	REMARKS
0	S-1	21	2-6-6-11	0.3	0.3	4" TOPSOIL	
0	S-1	21	2-6-6-11	0.3	0.3	White to yellow CLAY, trace fine sand	
5	S-3	16	7-14-24-34			White to tan to light brown fine to medium SAND, trace fine gravel, trace silt	
5	S-4	10	36-50-30-34			Tan fine to medium SAND, little clay, trace fine gravel	
10	S-5	24	23-50-30-34			White to tan fine to medium SAND, and CLAY	
10	S-5	24	23-50-30-34			White CLAY, trace fine sand	
15	S-6	24	13-20-20-30			Yellow to tan SILTY CLAY, little to some fine sand (gravel sized weathered rock in top of spoon)	
20	S-7	24	9-10-12-14			Yellow to tan SILTY CLAY, little to some fine sand	
25	S-8	24	8-17-33-30			Bore hole terminated at 25.0 feet.	

SNTS

Project Name: HANOVER WHSE **Catalog Number:** SNTS3995Q1101928139518K **SPN:** ABF-CLC

Square Non-Tapered Steel Pole

Pole Size: 4" x 4" x 10' (10' height)

Base Plate: 4" x 4" x 1/2" (10' height)

Anchor Bolts: 3/8" x 12" (10' height)

Notes:

- * 10' height pole is standard. Other heights available.
- * 10' height pole is standard. Other heights available.

Pole Height (ft)	Max. Allowable EFL (ft)	Max. Allowable WFL (ft)	Max. Allowable TFL (ft)	Max. Allowable SFL (ft)	Max. Allowable VFL (ft)	Max. Allowable HFL (ft)	Max. Allowable DFL (ft)
10	25.0	25.0	25.0	25.0	25.0	25.0	25.0

SNTS

Anchor Bolts:

Notes:

- * 10' height pole is standard. Other heights available.
- * 10' height pole is standard. Other heights available.

Pole Height (ft)	Max. Allowable EFL (ft)	Max. Allowable WFL (ft)	Max. Allowable TFL (ft)	Max. Allowable SFL (ft)	Max. Allowable VFL (ft)	Max. Allowable HFL (ft)	Max. Allowable DFL (ft)
10	25.0	25.0	25.0	25.0	25.0	25.0	25.0

VLX™ LED

Project Name: HANOVER WHSE **Catalog Number:** VLX128LC74KUNVMBK **SPN:** AV

Dimensional Drawings:

Product Name: VLX-1-L-T3-128LC-7-4K

Model	Optics	Source	Current (mA)	Kelvin	Voltage	Mounting	Finish	Options
VLX-1	64 (64LC)	350 (35)	550K	480 (18)	347 (18)	Wall Mount (AM)	Black (BK)	PhotoCell & Recastable (PCR120) (PCR200) (PCR300) (PCR400) (PCR500) (PCR600) (PCR700) (PCR800) (PCR900) (PCR1000)

VLX™ LED

Project Name: HANOVER WHSE **Catalog Number:** VLX128LC74KUNVMBK **SPN:** AV

Dimensional Drawings:

Product Name: VLX-1-L-T3-128LC-7-4K

Model	Optics	Source	Current (mA)	Kelvin	Voltage	Mounting	Finish	Options
VLX-1	64 (64LC)	350 (35)	550K	480 (18)	347 (18)	Wall Mount (AM)	Black (BK)	PhotoCell & Recastable (PCR120) (PCR200) (PCR300) (PCR400) (PCR500) (PCR600) (PCR700) (PCR800) (PCR900) (PCR1000)

VLX™ LED

Project Name: HANOVER WHSE **Catalog Number:** VLX128LC74KUNVMBK **SPN:** AV

Dimensional Drawings:

Product Name: VLX-1-L-T3-128LC-7-4K

Model	Optics	Source	Current (mA)	Kelvin	Voltage	Mounting	Finish	Options
VLX-1	64 (64LC)	350 (35)	550K	480 (18)	347 (18)	Wall Mount (AM)	Black (BK)	PhotoCell & Recastable (PCR120) (PCR200) (PCR300) (PCR400) (PCR500) (PCR600) (PCR700) (PCR800) (PCR900) (PCR1000)

VLX™ LED

Project Name: HANOVER WHSE **Catalog Number:** VLX128LC74KUNVMBK **SPN:** AV

Dimensional Drawings:

Product Name: VLX-1-L-T3-128LC-7-4K

Model	Optics	Source	Current (mA)	Kelvin	Voltage	Mounting	Finish	Options
VLX-1	64 (64LC)	350 (35)	550K	480 (18)	347 (18)	Wall Mount (AM)	Black (BK)	PhotoCell & Recastable (PCR120) (PCR200) (PCR300) (PCR400) (PCR500) (PCR600) (PCR700) (PCR800) (PCR900) (PCR1000)

Luminaire Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
☼	A	1	VISIONAIRE LIGHTING LLC	VLX-1-L-T3-128LC-7-4K	37-1/4" L. X 17" W. X 10-3/4" H. LED LUMINAIRE LEDS WITH OPTICS		1	vlx-1_T3_128LC_7_4K.IES	21398.21	1	287
☼	B	4	VISIONAIRE LIGHTING LLC	VLX-1-L-T3-64LC-5-4K	37-1/4" L. X 17" W. X 10-3/4" H. LED LUMINAIRE LEDS WITH OPTICS		4	vlx-1_T3_64LC_5_4K.IES	9411.8	1	104.74

GENERAL NOTE

1. 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.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 4/1/20
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 4/17/2020
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 4/17/2020
Director Planning & Zoning DATE

DEVELOPER: MORF I, LLC
9250 BENDIX ROAD
COLUMBIA, MD 21045
ATTN: GORDON HOLSK
PHONE: 860-462-9533

OWNER: MARYLAND FOOD CENTER AUTHORITY
7801 OCEANO AVENUE
JESSUP, MD 20794-9411
ATTN: PEGGY TORRE
PHONE: 410-379-5760

PROJECT: MARYLAND FOOD CENTER AUTHORITY ANAEROBIC DIGESTION FACILITY

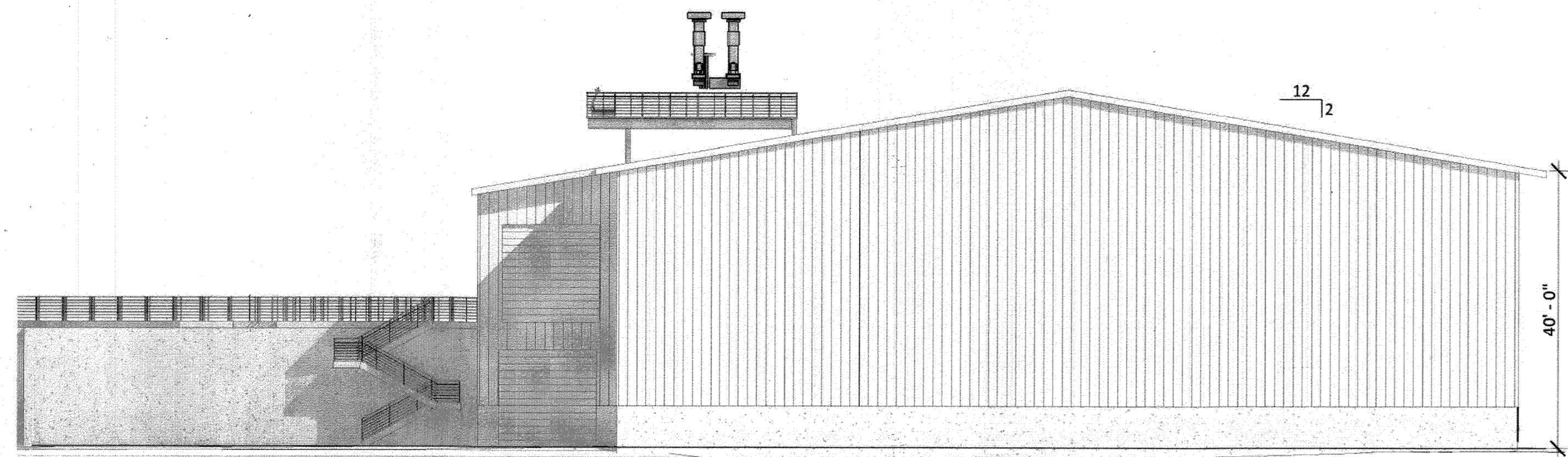
AREA: TAX MAP 43, PARCEL 666 LOT C3 PLAT 7405 ZONED M-2
GRID NO. 21 6TH ELECTION DISTRICT
7900 N OCEANO AVENUE
JESSUP, MARYLAND 20794
HOWARD COUNTY, MARYLAND

TITLE: SOIL BORING LOGS AND LIGHTING DETAILS

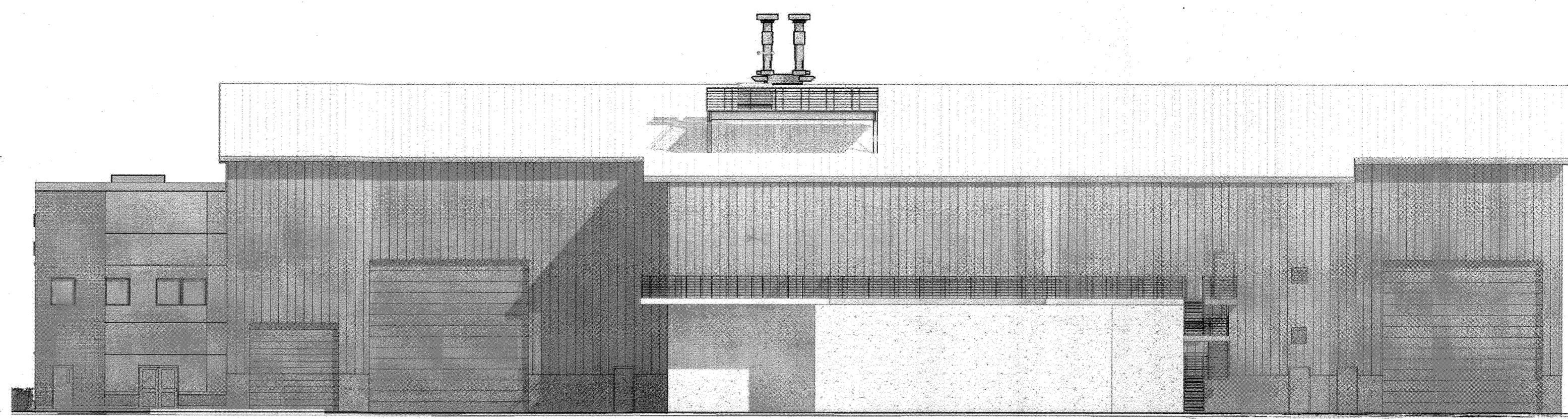
Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects

8818 Centre Park Drive, Suite 200 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

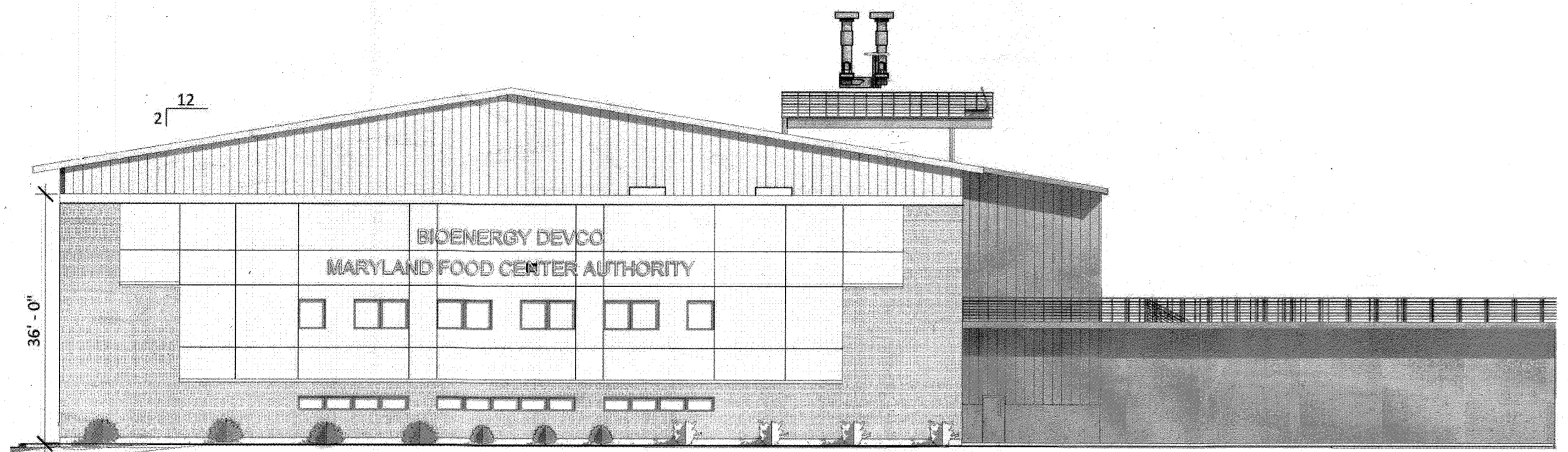
DESIGNED BY: PJS/JSN/JTB
DRAWN BY: JSN/JTB
PROJECT NO.: B12SBI16001
DATE: JANUARY 13, 2020
SCALE: AS SHOWN
DRAWING NO.: 23 OF 24



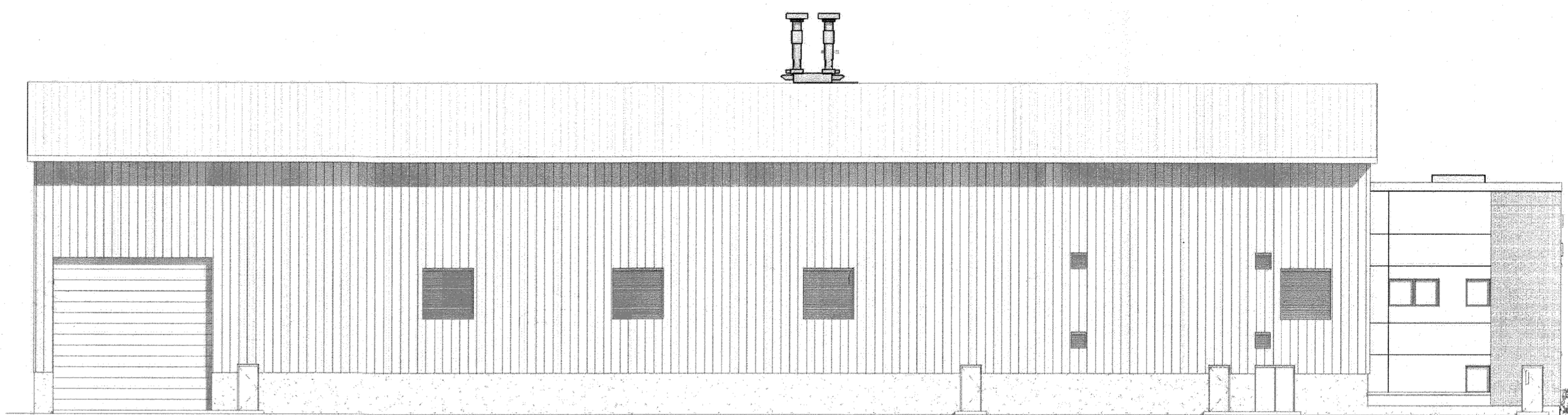
PROPOSED NORTH ELEVATION
NOT TO SCALE



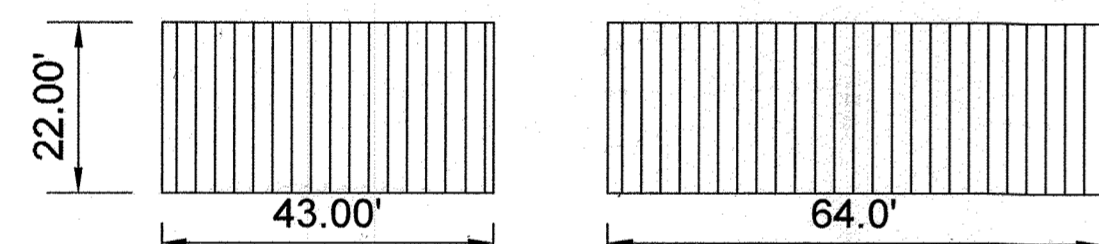
PROPOSED EAST ELEVATION
NOT TO SCALE



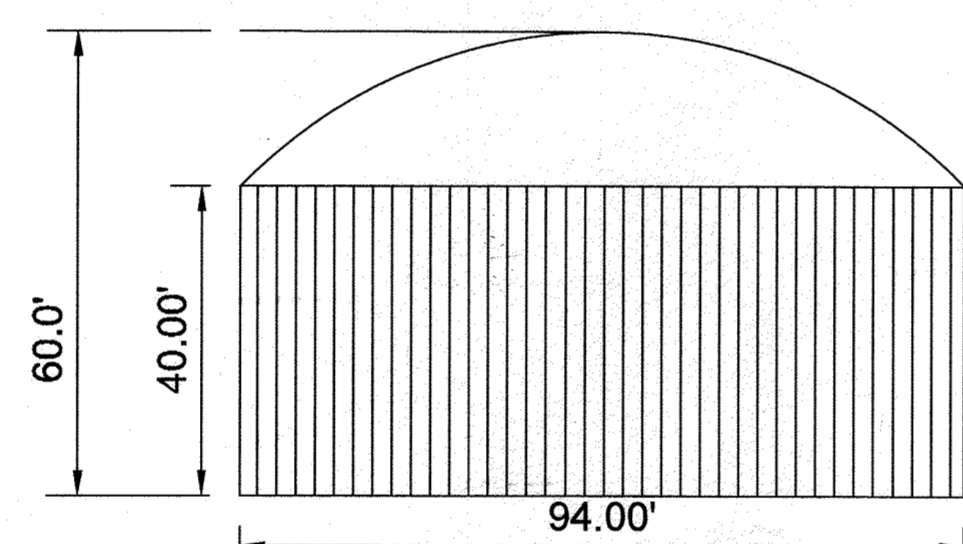
PROPOSED SOUTH ELEVATION
NOT TO SCALE



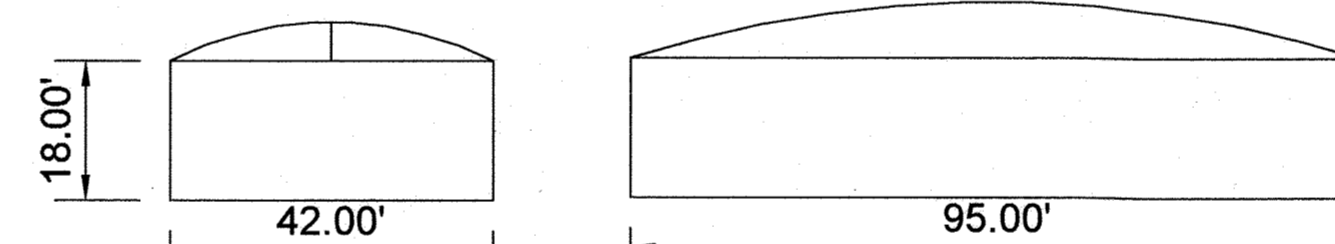
PROPOSED WEST ELEVATION
NOT TO SCALE



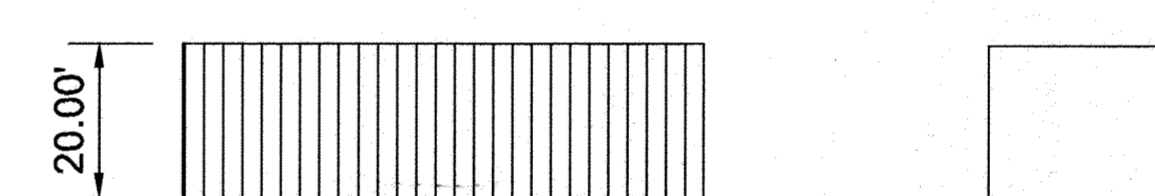
PROPOSED PRE-TANKS
NOT TO SCALE



PROPOSED FERMENTER (TYP.)
NOT TO SCALE



PROPOSED WASTEWATER
PRETREATMENT BIOREACTOR TANK
NOT TO SCALE



PROPOSED CONTAINERS (TYP.)
NOT TO SCALE

APPROVED : DEPARTMENT OF PLANNING AND ZONING			
<i>Ch. Edmondson</i>		12/14/20	
CHIEF, DEVELOPMENT ENGINEERING DIVISION		DATE	
<i>R.</i>		12/23/20	
CHIEF, DIVISION OF LAND DEVELOPMENT		DATE	
9/23/2020	1	REVISED ARCHITECTURAL ELEVATIONS	JSN
DATE	NO.	REVISION	BY
DEVELOPER			
MORF I, LLC 9250 BENDIX ROAD COLUMBIA, MD 21045 ATTN: GORDON HOLK PHONE: 860-462-9533			
OWNER			
MARYLAND FOOD CENTER AUTHORITY 7801 OCEANO AVENUE JESSUP, MD 20794-9411 ATTN: PEGGY TORRE PHONE: 410-379-5760			
PROJECT			
MARYLAND FOOD CENTER AUTHORITY ANAEROBIC DIGESTION FACILITY			
AREA			
TAX MAP 43, PARCEL 666 LOT C3 PLAT 7405 ZONED M-2 GRID NO. 21 6TH ELECTION DISTRICT 7900 N OCEANO AVENUE JESSUP, MARYLAND 20794 HOWARD COUNTY, MARYLAND			
TITLE			
REVISED ARCHITECTURAL ELEVATIONS AND LIGHTING DETAILS			
Pennoni Associates Inc. Pennoni Engineers • Surveyors • Planners Landscape Architects 8818 Centre Park Drive, Suite 200 Columbia, MD 21045 T 410.997.8900 F 410.997.9282			
SEAL		DESIGNED BY : PJS/JSN/JTB	
		DRAWN BY: JSN/JTB	
		PROJECT NO : BTSBH18001	
		DATE : SEPTEMBER 23, 2020	
		SCALE : 1"=30'	
BY:		DRAWING NO. 24 OF 24	