WORCESTER COUNTY
DEPARTMENT OF PUBLIC WORKS
BERLIN HOMEOWNER CONVENIENCE CENTER BULKHEAD REPAIR
WORCESTER COUNTY, MARYLAND

ABBREVIATIONS

AC	ACRES
APPRX	APPROXIMATELY
BLDG	BUILDING
BW	BOTTOM OF WALL
CATV	CABLE TELEVISION
COMM	COMMUNICATIONS
CONC	CONCRETE
CL	CENTERLINE
CLR	CLEARANCE
CY	CUBIC YARD
EL/ELEV	ELEVATION
ESC	EROSION AND SEDIMENT CONTROL
EX/EXIST	EXISTING
FL	FLOWLINE
FT	FEET
INV	INVERT
LF	LINEAR FOOT
L.O.D	LIMITS OF DISTURBANCE
m.i.	MILE
MOSH	MARYLAND OCCUPATIONAL SAFETY AND HEALTH
N/A	NOT APPLICABLE
NAD 83	NORTH AMERICAN DATUM OF 1983
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
NO.	NUMBER
O.C.	ON CENTER
O.C.E.W.	ON CENTER EACH WAY
OHE	OVERHEAD ELECTRIC
PR	PROPOSED
SCH	SCHEDULE
SD	STORM DRAIN
SF	SQUARE FEET
SWM	STORMWATER MANAGEMENT
TW	TOP OF WALL
TYP	TYPICAL
UGND/UG	UNDERGROUND
W/	WITH
WSEL	WATER SURFACE ELEVATION

GENERAL NOTES:

1. TOPOGRAPHIC SURVEY PERFORMED BY RUSSELL T. HAMMOND SURVEYING, LLC IN OCTOBER 2024, SUPPLEMENTED IN JUNE 2025, AND PROVIDED TO EA ENGINEERING, SCIENCE, & TECHNOLOGY, INC., PBC FOR PLAN PRODUCTION.
2. PARTIAL BOUNDARY DETERMINATION SURVEY PERFORMED BY RUSSELL T. HAMMOND SURVEYING, LLC. IN JUNE 2025.
3. UTILITY INFORMATION IS FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR SHALL LOCATE AND TAKE THE NECESSARY PRECAUTIONS TO LOCATED AND PROTECT THE EXISTING UTILITIES. CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT LEAST 48 HOURS PRIOR TO EXCAVATION.
4. THIS PROJECT IS EXEMPT FROM WORCESTER COUNTY FOREST CONSERVATION LAW. THE PROJECT DOES NOT HAVE QUALIFYING FORESTED AREA WITHIN THE LIMIT OF DISTURBANCE AS DEFINED BY MARYLAND AND WORCESTER COUNTY CODE [NR 1-402(B)].
5. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, AND PROCEDURES, UTILIZED FOR THE CONSTRUCTION UNDER THE SCOPE OF WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR SAFETY OF THE PUBLIC AND CONTRACTOR'S EMPLOYEES. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND STANDARD CONSTRUCTION PRACTICES.
6. FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THIS PROJECT SHALL NOT RELIEVE THE CONTRACTOR FROM PERFORMING SUCH WORK.
7. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH BY WORCESTER COUNTY STANDARDS.
8. ALL DIMENSIONS, LOCATIONS, AND ELEVATIONS OF EXISTING STRUCTURES SHOWN ON THE CONTRACT DRAWINGS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH WORK.
9. ALL ASPECTS OF CONSTRUCTION AND EQUIPMENT INSTALLATION SHALL BE PERFORMED / INSTALLED PLUM AND TRUE AND SHALL CONFORM TO THE PRACTICES OF GOOD WORKMANSHIP.
10. MATERIAL DEMOLISHED/SALVAGED DURING CONSTRUCTION SHALL BECOME THE CONTRACTOR'S PROPERTY UNLESS OTHERWISE NOTED ON THE PLANS AND/OR SPECIFICATIONS.
11. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS CONCERNING SAFETY AND PRESERVATION OF EXISTING UTILITIES ADJACENT TO ANY WORK AND IS RESPONSIBLE FOR THE PROTECTION OF EXISTING STRUCTURES (BELOW GRADE AND ABOVE GRADE) DURING THE COURSE OF DEMOLITION AND CONSTRUCTION. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED IMMEDIATELY AND THE COSTS OF SUCH REPAIR SHALL BE BORNE BY THE CONTRACTOR.
12. CONTRACTOR SHALL TAKE EVERY MEASURE TO PREVENT ANY AND ALL DAMAGE TO NEIGHBORING PROPERTIES. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL SUCH DAMAGE AND WILL REPAIR AND / OR REPLACE ANY OBJECT, PLANT OR PIECE OF PROPERTY TO ORIGINAL STATE ON ADJACENT PROPERTIES THAT IS DAMAGED IN ANY WAY DUE TO THIS CONSTRUCTION.
13. ALL WORK SHALL BE COORDINATED WITH WORCESTER COUNTY DEPARTMENT OF PUBLIC WORKS. CONTRACTOR SHALL PROVIDE FOR AND MAINTAIN TRAFFIC ACCESS TO THE ADJACENT PROPERTY OWNERS AT ALL TIMES.
14. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING THE CONSTRUCTION SITE SECURE AT ALL TIMES.
15. JOB SITE SAFETY SHALL BE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
16. CONTRACTOR IS RESPONSIBLE FOR PERFORMING ALL WORK IN ACCORDANCE WITH STATE AND FEDERAL CONFINED SPACE SAFETY REGULATIONS AS REQUIRED.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORATION OF SURFACES IN ALL DISTURBED AREAS.
18. ANY AND ALL IMPROVEMENTS, SUCH AS ASPHALT OR CONCRETE PAVEMENT, SOD, ETC., IF DAMAGED, SHALL BE RESTORED TO ITS ORIGINAL CONDITION BY THE CONTRACTOR.
19. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO PROCEEDING WITH CONSTRUCTION.
20. THE CONTRACTOR SHALL PROVIDE SURVEY CONSTRUCTION STAKEOUT FOR ALL NECESSARY LINE, GRADES, AND ELEVATIONS OF THE PROPOSED FACILITIES.
21. THE CONTRACTOR SHALL MAINTAIN AN "AS-BUILT" DRAWING RECORD OF THE PROPOSED CONSTRUCTION. THE CONTRACTOR SHALL RECORD ALL DEVIATIONS FROM THE CONTRACT DOCUMENTS AS THEY OCCUR, TO CLEARLY DEPICT HOW WORK WAS ACTUALLY CONSTRUCTED. PARTICULAR ATTENTION SHALL BE GIVEN TO ACCURATE RECORDINGS OF CONCEALED WORK. THE "AS-BUILT" RECORD SHALL INCLUDE DESCRIPTIONS, DRAWINGS, SKETCHES, MARKED PRINTS, AND SIMILAR DATA SHALL BE MAINTAINED AT THE JOB SITE AND SHALL BE KEPT CURRENT ON A DAILY BASIS AS WORK PROGRESSES. ALL "AS-BUILT" DRAWINGS AND RELATED DATA SHALL BE SUBJECT TO REGULAR SURVEILLANCE BY THE OWNER'S ON-SITE REPRESENTATIVE.
22. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE STABILIZED AREAS CONTINUOUSLY MEET APPROPRIATE REQUIREMENTS OF THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION AND SEDIMENT CONTROL.
23. APPROVED PLANS FOR EROSION AND SEDIMENT CONTROL REMAIN VALID FOR 3 YEARS FROM THE DATE OF APPROVAL.

LOCATION MAP
SCALE: 1" = 6 mi.

SHEET LIST

DRAWING NO.	SHEET NO.	DRAWING TITLE
G-001	1	TITLE SHEET
C-101	2	EXISTING CONDITIONS AND DEMOLITION PLAN
C-102	3	PROPOSED SITE LAYOUT
C-103	4	EROSION AND SEDIMENT CONTROL PLAN
C-501	5	DETAILS
C-502	6	EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
C-503	7	EROSION AND SEDIMENT CONTROL NOTES
S1.1	8	STRUCTURAL PLAN, DETAILS, AND NOTES
S2.1	9	SECTIONS AND DETAILS
E-101	10	ELECTRICAL SITE PLAN, NOTES, ABBREVIATIONS, AND LEGEND
E-102	11	ELECTRICAL DETAILS AND ONE-LINE DIAGRAM

VICINITY MAP
SCALE: 1" = 700'

S.W.M. Plan Approval
Worcester County Environmental Programs
Snow Hill, MD 21863
Approved by
Date 11/12/25
THIS APPROVAL EXPIRES IN TWO (2) YEARS.

WAIVER RECOMMENDED

PROJECT AND SITE DATA

1. OWNER: COUNTY COMMISSIONERS OF WORCESTER COUNTY, MARYLAND
   1 WEST MARKET STREET, ROOM 1103
   SNOW HILL, MARYLAND 21863
   CONTACT: MR. DALLAS BAKER, P.E.
   PHONE: 410-632-5623 EXT. 2300
   EMAIL: DBAKER@CO.WORCESTER.MD.US
2. APPLICANT: WORCESTER COUNTY DEPARTMENT OF PUBLIC WORKS
   6113 TIMMONS ROAD
   SNOW HILL, MARYLAND 21863
   CONTACT: MR. DALLAS BAKER, P.E.
   PHONE: (410) 632-5623 EXT. 2300
   EMAIL: DBAKER@CO.WORCESTER.MD.US
3. ENGINEER: EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC. PBC
   11200 RACETRACK ROAD, UNIT 101A
   OCEAN PINES, MARYLAND 21811
   CONTACT: STEVEN LEMASTERS, P.E.
   PHONE: 410-641-5341
   EMAIL: SLEMASTERS@EAEST.COM
4. SITE ADDRESS: 9696 MILL HAVEN ROAD, BERLIN, MD 21811
5. PROPERTY : TAX MAP 25, PARCEL 0423, GRID 0001, AREA= 24.99 ACRES
6. FLOODPLAIN: ZONE X (UNSHADED): AREAS DETERMINES TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FIRM PANEL 24047C0154H LAST REVISED JULY 16, 2015. PANEL 154 OF 450.
7. SOILS PRESENT: UzB - UDORTHENTS, LOAMY (HSG C)
   FmB - FORT MOTT LOAMY SAND (HSG A)
8. PROPOSED L.O.D.: 38,860 SF OR 0.892 ACRES
9. ESTIMATED CUT VOLUME: 235 CY
10. ESTIMATED FILL VOLUME: 165 CY
11. FOREST CONSERVATION IS NOT REQUIRED.
12. NO PART OF THE PROJECT RESIDES WITHIN THE CRITICAL AREA BUFFER.
13. NO WETLANDS WILL BE DISTURBED AS A PART OF THE PROJECT.

CONSULTANTS CERTIFICATION

I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICABLE AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF APPLICABLE SOIL EROSION AND SEDIMENT CONTROL CODES. I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE OWNER/DEVELOPER.

STEVEN LEMASTERS, P.E. — 11/12/2025
MD P.E. NO. 55422 — DATE

CERTIFICATE OF COMPLIANCE

I HEREBY CERTIFY THAT I HAVE INSPECTED THIS SITE AND THAT DRAINAGE ONTO THIS SITE FROM OTHER UPGRADE PROPERTIES, AND FROM THIS SITE ONTO OTHER DOWNGRADE PROPERTIES HAS BEEN ADDRESSED IN SUBSTANTIAL ACCORDANCE WITH APPLICABLE CODES.

STEVEN LEMASTERS, P.E. — 11/12/2025
MD P.E. NO. 55422 — DATE

OWNER/DEVELOPER CERTIFICATION

CERTIFICATION BY THE OWNER OR DEVELOPER THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO THE BEGINNING OF THE PROJECT. ADDITIONALLY, THE OWNER OR DEVELOPER SHALL CERTIFY RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY THE APPROPRIATE ENFORCEMENT AUTHORITY AND/OR MDE.

Dallas Baker Jr — 11/12/25
OWNER SIGNATURE — DATE

Dallas Baker Jr.
PRINTED NAME

COUNTY COMMISSIONERS OF WORCESTER COUNTY, MARYLAND
1 WEST MARKET STREET
SNOW HILL, MARYLAND 21863

LEGEND

DESCRIPTION	EXISTING	PROPOSED
ELECTRIC JUNCTION BOX	J	J
ELECTRIC METER	M	M
ELECTRIC TRANSFORMER	T	
ELECTRIC LIGHT POST	#	#
ELECTRIC UTILITY MARKING	E E E	
ELECTRIC UGND LINE		E E E
PROPERTY BOUNDARY		
PROPERTY MARKER		
SITE RIPRAP/GRAVEL		
SITE MONITORING/OBSERVATION WELL	MW	MW
SITE SIGN		
SITE BOLLARD		
SITE UNKNOWN FEATURE	UNK	UNK
SITE SPOT ELEVATION	EL	EL
SITE CONCRETE		
SITE EDGE OF GRAVEL		
SITE DEMOLITION		
SITE PAVEMENT OVERLAY		
SITE PAVEMENT		
SITE FULL SECTION PAVEMENT RESTORATION		
SITE PERMANENT VEGETATIVE STABILIZATION		
SITE TRAFFIC BARRELS		
SITE SOIL BOUNDARY		
SITE SOIL CLASSIFICATION	SfB HSG B	
SITE STREAM CHANNEL		
SITE TREE/BRUSH LINE		
SITE LIMIT OF FIELD RUN SURVEY		
PLAN NORTH ARROW		
PLAN KEYNOTE CALLOUT		X
PLAN REVISION CALLOUT		#
PLAN SECTION CUT VIEW BEGIN		X
PLAN SECTION CUT VIEW END		X'
ESC STABILIZED CONSTRUCTION ENTRANCE		
ESC SILT FENCE		SF SF
ESC SUPER SILT FENCE		SSF SSF
ESC CONCRETE WASHOUT STRUCTURE		CWS

Sediment Control Plan Approval
Worcester Soil Conservation District
Snow Hill, MD 21863
Approved by
Date 11/12/2025

SUMMARY OF WORK

THE PROJECT GENERALLY CONSISTS OF THE FOLLOWING WORK ITEMS:

- COORDINATION WITH COUNTY TO MAINTAIN OPERATIONS DURING CONSTRUCTION ACTIVITIES
- PHASE CONSTRUCTION OF WALL CONSTRUCTION TO MAINTAIN OPERATIONS
- DEMOLITION OF EXISTING TIMBER WALLS, CONCRETE PADS, AND OTHER ANCILLARY ITEMS AS SHOWN IN THE CONTRACT DOCUMENTS
- CONSTRUCTION OF PROPOSED REINFORCED CONCRETE WALL AND CONCRETE PADS
- REGRADING OF RAMP TO LOWER OVERALL WALL HEIGHT
- FULL DEPTH PAVEMENT TO LIMITS SHOWN
- ASPHALT OVERLAY AND BUTT JOINT TIE INTO EXISTING PAVEMENT
- REFRESH OF STONE ACCESS
- INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROLS
- ELECTRICAL SERVICE UPGRADE
- CONNECTION OF ALL ELECTRICAL COMPONENTS
- ANY WORK THAT REQUIRES BOTH TRAFFIC LANES TO BE INOPERABLE SHALL BE PERFORMED ON WEDNESDAYS WHEN THE SITE IS CLOSED TO THE PUBLIC

THIS FACILITY IS TO BE CONSTRUCTED IN ACCORDANCE WITH THESE PLANS ARE APPROVED BY WORCESTER COUNTY DEPARTMENT OF PUBLIC WORKS.

Dallas Baker Jr — 11/12/25
WORCESTER COUNTY, DIRECTOR OF PUBLIC WORKS — DATE

EA Engineering, Science, and Technology, Inc., PBC

11200 Racetrack Road, Unit A101
Ocean Pines, Maryland 21811
(410) 641-5341

www.eaest.com

HORIZONTAL DATUM:
MD STATE PLANE, NAD 83, US SURVEY FEET

VERTICAL DATUM:
NAVD 88

FULL SIZE PLOT: 24" x 36"

REVISIONS

SEAL

STATE OF MARYLAND · STEVEN R. LEMASTERS · 55422 · PROFESSIONAL ENGINEER · 11/12/2025

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 55422
EXPIRATION DATE: DECEMBER 16, 2025

PROJECT NAME
BERLIN HOMEOWNER CONVENIENCE CENTER BULKHEAD REPAIR

PROJECT ADDRESS
9696 MILL HAVEN ROAD
BERLIN, MD 21811

DRAWING TITLE
TITLE SHEET

DRAWING INFORMATION

DRAWN BY: JWB — DESIGNED BY: JWB/SCL
CHECKED BY: DOK — PROJECT MANAGER: SCL
PROJECT NUMBER: 1060953

DRAWING NO.
G-001

DATE: NOVEMBER 2025 — SHEET: 1 OF 11

100% PLANS - FOR CONSTRUCTION

FILE PATH: \\DCEAINPW\PROJECTS\DOC\WORCESTER COUNTY\1060953 - BERLIN HOMEOWNER BULKHEAD REPAIR\CADD\PRODUCTION\DESIGN SET\1060953 - 00 00 - TITLE SHEET.DWG [G-001] LEMASTERS, STEVEN 11/5/2025 10:58 AM

N/F
COUNTY COMMISSIONERS OF
WORCESTER COUNTY
DEED REF: 00662/00596, TAX MAP #25,
GRID #0012, PARCEL #0100

N/F
COUNTY COMMISSIONERS OF
WORCESTER COUNTY
DEED REF: 00704/00506, TAX MAP #25,
GRID #0011, PARCEL #0423

EX. CAPPED RUBBLE FILL

EX. RIPRAP

EX. RIPRAP ±

EX. GRASS

EX. EDGE OF GRAVEL

EX. CONCRETE SLAB
(TO BE DEMOLISHED)

EX. CONCRETE
BARRIER WALL

EX. GRAVEL

EX. BULK STORAGE CONTAINERS

EX. TRASH COMPACTOR #1

EX. SHEDS
(TO BE DEMOLISHED)

EX. OBSERVATION WELLS

EX. REBAR FOUND

S 03°40'37" E 398.55'

EX. CONCRETE BARRIER
WALL (TO BE DEMOLISHED)

EX. PAVEMENT TO BE DEMOLISHED AND REMOVED
COORDINATE WITH LANDOWNER PRIOR TO
PERFORMING WORK.

EX. RECYCLING CONTAINERS

EX. JUNCTION
BOX

PHASE 2

PHASE 1

EX. WOOD BULKHEAD
(TO BE DEMOLISHED)

EX. TRASH COMPACTOR #2

EX. RAISED WOOD PLATFORM
(TO BE DEMOLISHED)

PR. END OF ±176 LF
OF TRAFFIC CONES

PR. START OF ±176 LF
OF TRAFFIC CONES

EX. WOOD STEPS (TO BE DEMOLISHED
AND REPLACED IN-KIND)

EX. CONCRETE SLAB
(TO BE DEMOLISHED)

EX. TIMBER ALONG EDGE OF
CONCRETE (TO BE DEMOLISHED)

EX. GRAVEL

EX. EDGE OF GRAVEL

EX. 4" X 4" SIGN POST

EX. 4" X 4" SIGN POST

EX. 4" X 6" WOOD
POSTS WITH SIGN

APPROX. EX. ELEC.
METER PANEL

EX. LIGHT POLE

EX. TREELINE

EX. WOODS

N 66°41'14" W 127.07'

EX. COMMUNCATIONS
UTILITY BOX

EX. UNK.
ABANDONED UTILITY

EX. STOP SIGN

EX. USED OIL TANKS

EX. ALUMINUM CANOPY

EX. ASPHALT DRIVE

EX. EDGE OF PAVEMENT

FLOWER STREET

EX. RECYCLING CONTAINERS

N/F
BROOKLYNS ESTATE LLC
DEED REF: 06962/00233, TAX MAP #25,
GRID #0011, PARCEL #0255

EX. ASPHALT DRIVE

EX. UTILITY PED.

EX. WOOD BOLLARD (TYP.)

EX. ELEC. TRANSFORMER

EX. ELEC. METER PANEL

EX. 1" PVC PIPE IN CONC. (TYP)

N 04°09'38" W 287.15'

EX. IRON PIPE FOUND

EX. 1" PVC PIPE IN CONC. (TYP)

EX. CAPPED LANDFILL

EX. WOODEN SIGN POST (TYP.)

EX. EDGE OF
PAVEMENT

CONSTRUCTION ENTRANCE/EXIT-
ACCESS VIA MILL HAVEN RD FROM
FLOWER STREET, 850 FEET WEST.

N/F
JOHNSON ARI A
DEED REF: 066603/00008, TAX MAP #25,
GRID #0011, PARCEL #0254

N/F
COUNTY COMMISSIONERS OF
WORCESTER COUNTY
DEED REF: 00097/00266, TAX MAP #25,
GRID #0011, PARCEL #0110

EX. WOODS

EX. 4" X 4" SIGN POST

UzB

FmB

NOTES:

1. WORK IS TO BE DIVIDED INTO TWO PHASES TO ALLOW FOR THE FACILITY TO REMAIN OPERATIONAL DURING CONSTRUCTION. CONTRACTOR SHALL PERFORM WORK ON ONE SIDE OF THE FACILITY AT A TIME AND MAINTAIN ONE OPEN DRIVE LANE FOR PUBLIC USE OF THE FACILITY DURING CONSTRUCTION. CONTRACTOR SHALL FURNISH AND MAINTAIN TRAFFIC BARRELS. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC FLOW IN AND OUT OF THE FACILITY.
2. DEMOLISH, REMOVE, AND DISPOSE OF EXISTING CONCRETE PADS AT AN APPROVED OFFSITE FACILITY.
3. COORDINATE WITH WORCESTER COUNTY FOR RELOCATION OF EXISTING BULK CONTAINERS DURING PHASE 2.
4. FULLY DEMOLISH AND REMOVE TIMBER PILES. DISPOSE OF DEBRIS AT AN APPROVED OFFSITE FACILITY. BACKFILL, COMPACT, AND TEST.
5. DEMOLISH AND REMOVE WOODEN DECKING, FRAMING, SUPPORTS, AND SHEETING. DISPOSE OF DEBRIS AT AN APPROVED OFFSITE FACILITY. BACKFILL, COMPACT, AND TEST.
6. CONCRETE BLOCK WALL IS TO BE DISASSEMBLED AND STOCKPILED ON-SITE. CONCRETE BLOCKS ARE TO BE LOADED ON TO A COUNTY SUPPLIED TRUCK TO THEN BE TRANSPORTED OFFSITE, BY THE COUNTY.
7. DEMOLISH AND REMOVE PORTIONS OF ASPHALT TO LIMITS INDICATED. DISPOSE OF OFFSITE AT AN APPROVED OFFSITE FACILITY.
8. DEMOLISH EXISTING SHEDS. DISPOSE OF DEBRIS IN ON-SITE BULK CONTAINERS.
9. EXISTING UTILITIES SHALL BE PROTECTED DURING THE COURSE OF DEMOLITION AND CONSTRUCTION. THE EXISTING LIGHT POLE SHALL BE SUPPORTED AND BRACED WHEN EXCAVATIONS ARE OCCURRING WITHIN 10' OF THE POLE.
10. EXISTING ELECTRIC UTILITY LINES DISPLAYED ARE APPROXIMATE. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR FIELD VERIFYING THE LOCATION OF THE UTILITY LINES.
11. THE CONTRACTOR SHALL REPAIR ANY AND ALL DAMAGES DONE TO ANY SITE FEATURE, FACILITY, OR APPURTENANCE ADJACENT TO THE CONSTRUCTION AREA TO ORIGINAL OR BETTER CONDITION. ORIGINAL CONDITION SHALL BE DEFINED AS THE CONDITION OBSERVED AND PHOTO DOCUMENTED PRIOR TO THE START OF CONSTRUCTION.
12. SEE ELECTRICAL PLANS FOR ELECTRIC RELATED ITEMS TO BE DEMOLISHED OR ABANDONED.
13. EXISTING TRASH COMPACTOR #1 SHALL BE DISCONNECTED AND LOADED ONTO A COUNTY-SUPPLIED VEHICLE FOR REUSE.
14. EXISTING TRASH COMPACTOR #2 SHALL BE DISCONNECTED, TEMPORARILY STORED, AND RECONNECTED BY THE CONTRACTOR UPON COMPLETION OF THE PROJECT.

EA Engineering, Science, and Technology, Inc., PBC

11200 Racetrack Road, Unit A101
Ocean Pines, Maryland 21811
(410) 641-5341

www.eaest.com

HORIZONTAL DATUM:
MD STATE PLANE, NAD 83, US SURVEY FEET

VERTICAL DATUM:
NAVD 88

0 7.5' 15 30
1" = 15'
GRAPHIC SCALE IN FEET

FULL SIZE PLOT: 24" x 36"

REVISIONS

SEAL

STATE OF MARYLAND
STEVEN C. LEMASTERS
55422
PROFESSIONAL ENGINEER
11/12/2025

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 55422, EXPIRATION DATE: DECEMBER 16, 2025

PROJECT NAME
BERLIN HOMEOWNER CONVENIENCE CENTER BULKHEAD REPAIR

PROJECT ADDRESS
9696 MILL HAVEN ROAD
BERLIN, MD 21811

DRAWING TITLE
EXISTING CONDITIONS AND DEMOLITION PLAN

DRAWING INFORMATION

DRAWN BY: JWB	DESIGNED BY: JWB/SCL
CHECKED BY: DOK	PROJECT MANAGER: SCL

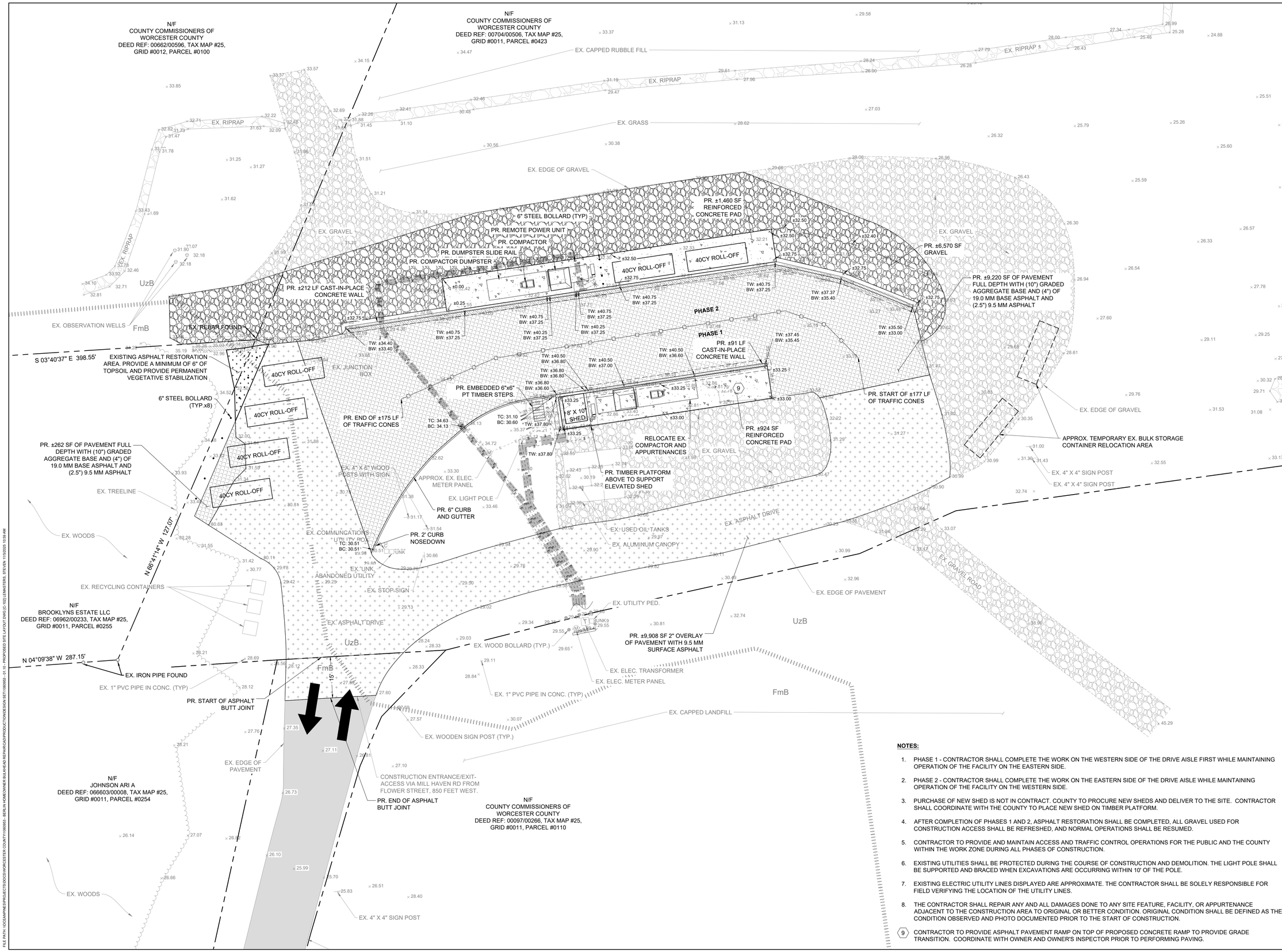
PROJECT NUMBER: 1060953

DRAWING NO.
C-101

DATE: NOVEMBER 2025 SHEET: 2 OF 11

100% PLANS - FOR CONSTRUCTION

FILE PATH: \\OCEANPINE\PROJECTS\DOCS\WORCESTER COUNTY\1060953 - BERLIN HOME\OWNER BULKHEAD REPAIR\CAD\PRODUCTION\DESIGN SET\1060953 - C1-01 - EXISTING CONDITIONS AND DEMO.DWG [C:\1\1].EMASTERS, STEVEN 11/5/2025 10:58 AM



NOTES:

1. PHASE 1 - CONTRACTOR SHALL COMPLETE THE WORK ON THE WESTERN SIDE OF THE DRIVE AISLE FIRST WHILE MAINTAINING OPERATION OF THE FACILITY ON THE EASTERN SIDE.
2. PHASE 2 - CONTRACTOR SHALL COMPLETE THE WORK ON THE EASTERN SIDE OF THE DRIVE AISLE WHILE MAINTAINING OPERATION OF THE FACILITY ON THE WESTERN SIDE.
3. PURCHASE OF NEW SHED IS NOT IN CONTRACT. COUNTY TO PROCURE NEW SHEDS AND DELIVER TO THE SITE. CONTRACTOR SHALL COORDINATE WITH THE COUNTY TO PLACE NEW SHED ON TIMBER PLATFORM.
4. AFTER COMPLETION OF PHASES 1 AND 2, ASPHALT RESTORATION SHALL BE COMPLETED, ALL GRAVEL USED FOR CONSTRUCTION ACCESS SHALL BE REFRESHED, AND NORMAL OPERATIONS SHALL BE RESUMED.
5. CONTRACTOR TO PROVIDE AND MAINTAIN ACCESS AND TRAFFIC CONTROL OPERATIONS FOR THE PUBLIC AND THE COUNTY WITHIN THE WORK ZONE DURING ALL PHASES OF CONSTRUCTION.
6. EXISTING UTILITIES SHALL BE PROTECTED DURING THE COURSE OF CONSTRUCTION AND DEMOLITION. THE LIGHT POLE SHALL BE SUPPORTED AND BRACED WHEN EXCAVATIONS ARE OCCURRING WITHIN 10' OF THE POLE.
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9 CONTRACTOR TO PROVIDE ASPHALT PAVEMENT RAMP ON TOP OF PROPOSED CONCRETE RAMP TO PROVIDE GRADE TRANSITION. COORDINATE WITH OWNER AND OWNER'S INSPECTOR PRIOR TO PERFORMING PAVING.

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STEVEN C. LEWIS
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BERLIN HOMEOWNER
CONVENIENCE CENTER
BULKHEAD REPAIR

PROJECT ADDRESS
9696 MILL HAVEN ROAD
BERLIN, MD 21811

DRAWING TITLE
PROPOSED SITE LAYOUT

DRAWING INFORMATION

DRAWN BY: JWB	DESIGNED BY: JWB/SCL
CHECKED BY: DOK	PROJECT MANAGER: SCL

PROJECT NUMBER: 1060953

DRAWING NO.
C-102

DATE: NOVEMBER 2025 SHEET: 3 OF 11

100% PLANS - FOR CONSTRUCTION

FILE PATH: \\OCEANPINE\PROJECTS\DOCS\WORCESTER COUNTY\1060953 - BERLIN HOMEOWNER BULKHEAD REPAIR\DRAFT\PRODUCTION\DESIGN SET\1060953 - 01 10 - PROPOSED SITE LAYOUT.DWG [C-102 LEMASTERS, STEVEN 11/5/2025 10:59 AM

N/F
COUNTY COMMISSIONERS OF
WORCESTER COUNTY
DEED REF: 00662/00596, TAX MAP #25,
GRID #0012, PARCEL #0100

N/F
COUNTY COMMISSIONERS OF
WORCESTER COUNTY
DEED REF: 00704/00506, TAX MAP #25,
GRID #0011, PARCEL #0423

EX. CAPPED RUBBLE FILL

EX. RIPRAP

EX. RIPRAP ±

EX. GRASS

LIMITS OF DISTURBANCE = 38,860 S.F.

END SUPER SILT FENCE

E-3
SUPER SILT FENCE

EX. EDGE OF GRAVEL

LIMIT OF WORK FOR THE TEMPORARY PLACEMENT OF ROLLOFF BINS

CONSTRACTOR STAGING AREA ON EX. GRAVEL WITHIN THE LIMITS OF WORK AREA. STAGING AREA SHALL NOT IMPACT MODIFIED OPERATIONS OF HOMEOWNER DROPOFF AT THE SITE.

EX. GRAVEL

40CY ROLL-OFF

PHASE 2

PHASE 1

EX. OBSERVATION WELLS

END SUPER SILT FENCE

EX. REBAR FOUND

S 03°40'37" E 398.55'

EX. JUNCTION BOX

PR. END OF ±175 LF OF TRAFFIC CONES

PR. START OF ±177 LF OF TRAFFIC CONES

8' X 10' SHED

EX. EDGE OF GRAVEL

APPROX. TEMPORARY EX. BULK STORAGE CONTAINER RELOCATION AREA

EX. 4" X 6" WOOD POSTS WITH SIGN

APPROX. EX. ELEC. METER PANEL

EX. LIGHT POLE

H-6
ONSITE CONCRETE WASHOUT STRUCTURE

EX. 4" X 4" SIGN POST

EX. 4" X 4" SIGN POST

EX. TREELINE

N 66°41'44" W 127.07'

EX. WOODS

EX. COMMUNICATIONS UTILITY BOX

EX. UNK

ABANDONED UTILITY

EX. STOP SIGN

EX. USED OIL TANKS

EX. ALUMINUM CANOPY

EX. ASPHALT DRIVE

END SILT FENCE

EX. EDGE OF PAVEMENT

E-1
SILT FENCE

EX. GRAVEL ROAD

EX. RECYCLING CONTAINERS

EX. UTILITY PED.

N/F
BROOKLYNS ESTATE LLC
DEED REF: 06962/00233, TAX MAP #25,
GRID #0011, PARCEL #0255

EX. ASPHALT DRIVE

EX. WOOD BOLLARD (TYP.)

N 04°09'38" W 287.15'

EX. IRON PIPE FOUND

EX. ELEC. TRANSFORMER

EX. ELEC. METER PANEL

EX. 1" PVC PIPE IN CONC. (TYP)

EX. 1" PVC PIPE IN CONC. (TYP)

END SILT FENCE

EX. CAPPED LANDFILL

EX. WOODEN SIGN POST (TYP.)

LIMITS OF DISTURBANCE ±38,860 SF.

EX. EDGE OF PAVEMENT

CONSTRUCTION ENTRANCE/EXIT-ACCESS VIA MILL HAVEN RD FROM FLOWER STREET, 850 FEET WEST.

N/F
JOHNSON ARI A
DEED REF: 066603/00008, TAX MAP #25,
GRID #0011, PARCEL #0254

N/F
COUNTY COMMISSIONERS OF
WORCESTER COUNTY
DEED REF: 00097/00266, TAX MAP #25,
GRID #0011, PARCEL #0110

EX. WOODS

EX. 4" X 4" SIGN POST

UzB

FmB

SOIL CLASSIFICATION TABLE

SOIL TYPE	% OF SITE AREA
FmB	11
UzB	89

GENERAL NOTES

1. A STABILIZED CONSTRUCTION ENTRANCE IS NOT PROPOSED FOR THE PROJECT TO ALLOW FOR PUBLIC ACCESS TO THE SITE DURING CONSTRUCTION. THE CONTRACTOR SHALL UTILIZE THE EXISTING GRAVEL AREAS AS A METHOD OF CLEANING VEHICLE TIRES OF SEDIMENT. THE CONTRACTOR IS RESPONSIBLE FOR CLEANING VEHICLES ADEQUATELY TO ENSURE SEDIMENT IS NOT TRACKED ONTO EXITING ASPHALT PAVEMENT. THE CONTRACTOR SHALL PERFORM STREET SWEEPING DAILY TO REMOVE ANY ACCUMULATED SEDIMENT.

2. SHOULD IT BECOME NECESSARY TO DEWATER AN OPEN TRENCH OR OTHER EXCAVATED PIT, AN APPROVED SEDIMENT FILTERING BAG SHALL BE UTILIZED PER DETAILS IN THE DRAWINGS.

STANDARD STABILIZATION NOTE

1. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:

1.A. THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND

1.B. SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

EA Engineering, Science, and Technology, Inc., PBC

11200 Racetrack Road, Unit A101
Ocean Pines, Maryland 21811
(410) 641-5341

www.eaest.com

HORIZONTAL DATUM:
MD STATE PLANE, NAD 83, US SURVEY FEET.

VERTICAL DATUM:
NAVD 88

0 7.5' 15' 30'
1" = 15'
GRAPHIC SCALE IN FEET

FULL SIZE PLOT: 24" x 36"

REVISIONS

SEAL

STATE OF MARYLAND
STEVEN C. LEMASTERS
55422
PROFESSIONAL ENGINEER
11/12/2025

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 55422 EXPIRATION DATE: DECEMBER 16, 2025

PROJECT NAME
BERLIN HOMEOWNER CONVENIENCE CENTER BULKHEAD REPAIR

PROJECT ADDRESS
9696 MILL HAVEN ROAD
BERLIN, MD 21811

DRAWING TITLE
EROSION AND SEDIMENT CONTROL PLAN

DRAWING INFORMATION

DRAWN BY: JWB	DESIGNED BY: JWB/SCL
CHECKED BY: DOK	PROJECT MANAGER: SCL

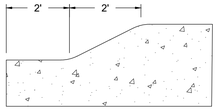
PROJECT NUMBER: 1060953

DRAWING NO.
C-103

DATE: NOVEMBER 2025 SHEET: 4 OF 11

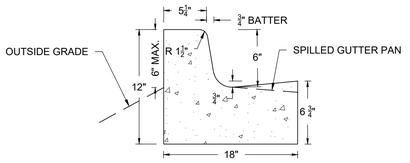
100% PLANS - FOR CONSTRUCTION

FILE PATH: \\OCEANPINE\PROJECTS\DOCS\WORCESTER COUNTY\1060953 - BERLIN HOMEOWNER BULKHEAD REPAIR\DAD\PRODUCTION\DESIGN SET\1060953 - 01-20 - EROSION AND SEDIMENT CONTROL PLAN.DWG [C-103] LEMASTERS, STEVEN 11/5/2025 10:59 AM



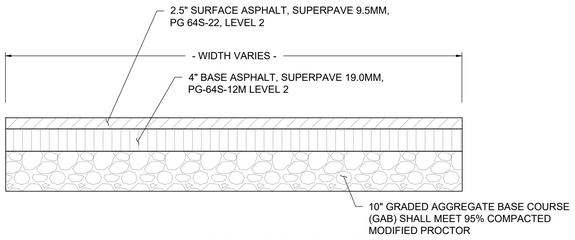
NOSEDOWN / CURB CUT DETAIL
NOT TO SCALE

NOTES:
1. TRANSITIONS SHALL BE SMOOTHLY TAPERED WITH 1" RADIUS ON ALL EDGES.
2. FLEXIBLE OR RIGID PAVEMENT SHALL BE FLUSH TO THE DEPRESSION OF THE CURB CUT.



6" INTEGRAL CURB AND GUTTER
NOT TO SCALE

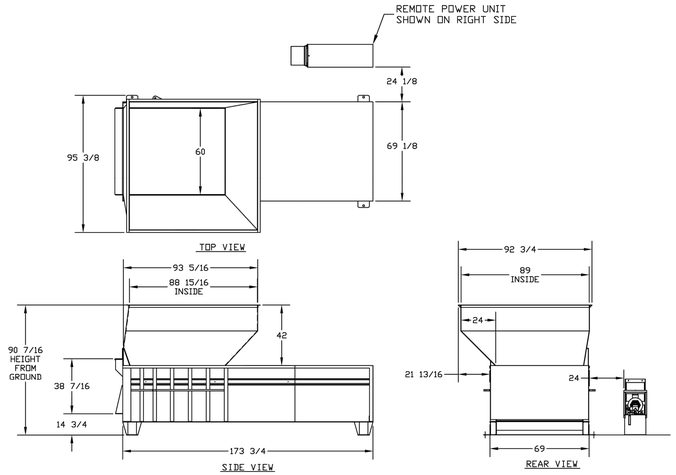
NOTES:
1. CONCRETE SHALL BE MIX NO. 3.
2. SUB-GRADE SHALL BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY.
3. NO GREATER THAN 6" OF EXPOSED CONCRETE SHALL BE PROVIDED BEHIND THE CURB WHEN PERFORMING GRADE TRANSITIONING.



ASPHALT PAVEMENT RESTORATION DETAIL
NOT TO SCALE

NOTES:

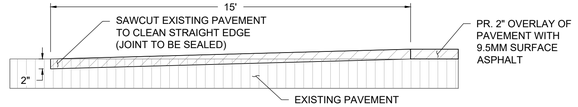
1. ASPHALT PAVEMENT SHALL ADHERE TO THE LATEST VERSION OF THE MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION'S CONSTRUCTION AND MATERIAL STANDARDS AND SPECIFICATIONS.
2. PAVEMENT SECTION SHALL BE UTILIZED FOR ALL ONSITE IMPERVIOUS ASPHALT AREAS WITHIN THE PROJECT LIMITS.
3. SUBGRADE SOILS SHALL BE COMPACTED TO 98% OF THE MAXIMUM DRY DENSITY PER ASTM D698. UNSUITABLE SUB SOILS SHALL BE REMOVED AND REPLACED WITH APPROVED STRUCTURAL FILL.
4. CONTRACTOR SHALL PROOF ROLL THE SUBGRADE SOIL WITH A LOADED TANDEM DUMP TRUCK OR RUBBER TIRE ROLLER WITH GROSS WEIGHT GREATER THAN 30 TONS. SUBGRADE SHALL BE APPROVED BY THE OVERSEEING GEOTECHNICAL ENGINEER PRIOR TO STONE BASE PLACEMENT.
5. CONTRACTOR SHALL PROOF ROLL THE BASE COURSE STONE WITH A LOADED TANDEM AXEL DUMP TRUCK AND APPROVED BY THE OVERSEEING GEOTECHNICAL ENGINEER PRIOR TO ASPHALT PLACEMENT.
6. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE. POOLING/PONDING OF WATER WILL NOT BE ACCEPTED.



TRASH COMPACTOR DETAIL
NOT TO SCALE

NOTES:

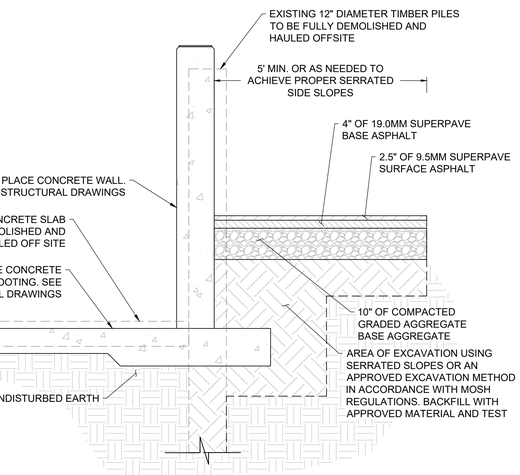
1. DIMENSIONS ARE SHOWN IN INCHES.
2. TRASH COMPACTOR MODEL DISPLAYED IS THE MARATHON RJ-325 RH REMOTE WITH 4 SIDED RF HOPPER EXTENDED 24" ON LEFT SIDE.
3. SEE SITE PLAN FOR SITE REQUIRED CONFIGURATION OF HOPPER AND REMOTE POWER UNIT.
4. CONTRACTOR SHALL FABRICATE A STEEL CHUTE FROM THE WALL INTO THE HOPPER.



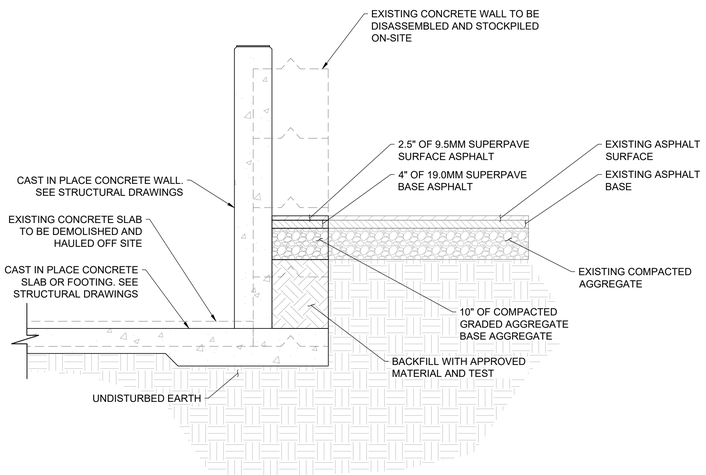
BUTT JOINT DETAIL
NOT TO SCALE

NOTES:

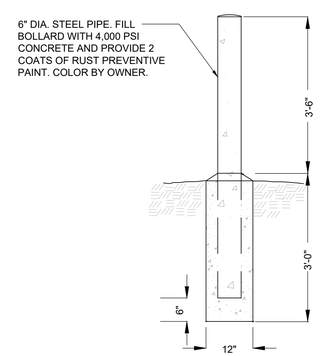
1. ADJUST THE PROFILE OF THE OVERLAY PAVING TO ASSURE A SMOOTH TRANSITION THROUGH THE BUTT JOINT.
2. CRACK SEAL THE JOINT BETWEEN THE BUTT JOINT AND THE EXISTING PAVEMENT.



DEMOLITION OF EXISTING TIMER PILE SECTION DETAIL
NOT TO SCALE



DEMOLITION OF EXISTING CONCRETE BLOCK WALL SECTION DETAIL
NOT TO SCALE



TYPICAL BOLLARD DETAIL
NOT TO SCALE

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11200 Racetrack Road, Unit A101
Ocean Pines, Maryland 21811
(410) 641-5341

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HORIZONTAL DATUM:
MD STATE PLANE, NAD 83, US SURVEY FEET

VERTICAL DATUM:
NAVD 88

FULL SIZE PLOT: 24" x 36"

REVISIONS

SEAL

STATE OF MARYLAND · STEVEN C. LEMASTERS · 55422 · PROFESSIONAL ENGINEER
11/12/2025

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 55422
EXPIRATION DATE: DECEMBER 16, 2025

PROJECT NAME
BERLIN HOMEOWNER CONVENIENCE CENTER BULKHEAD REPAIR

PROJECT ADDRESS
9696 MILL HAVEN ROAD
BERLIN, MD 21811

DRAWING TITLE
DETAILS

DRAWING INFORMATION

DRAWN BY: JWB	DESIGNED BY: JWB/SCL
CHECKED BY: DOK	PROJECT MANAGER: SCL

PROJECT NUMBER: 1060953

DRAWING NO.
C-501

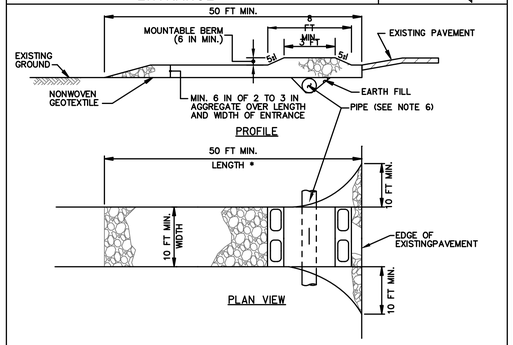
DATE: NOVEMBER 2025 SHEET: 5 OF 11

100% PLANS - FOR CONSTRUCTION

FILE PATH: \\OCEANPINES\PROJECTS\DOCS\WORCESTER COUNTY\1060953 - BERLIN HOMEOWNER BULKHEAD REPAIR\CAD\PRODUCTION\ZEBOX SET\1060953 - 05 00 - DETAILS.DWG [C-501] LEMASTERS, STEVEN 11/5/2025 10:59 AM

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



CONSTRUCTION SPECIFICATIONS

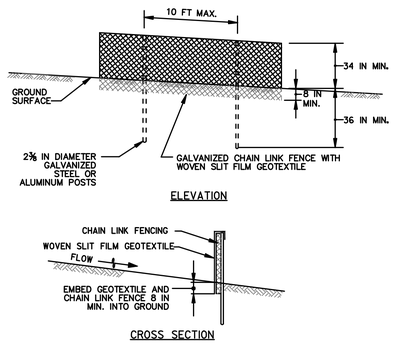
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5d 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.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. 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.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

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

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL: SSF



CONSTRUCTION SPECIFICATIONS

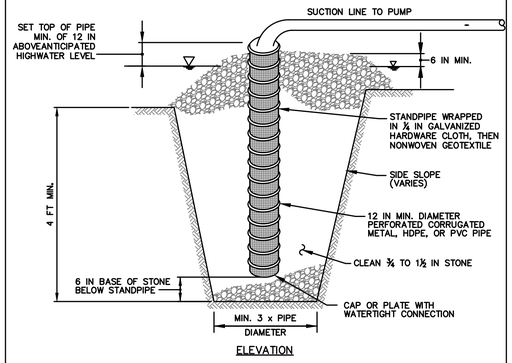
1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HOG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL F-2 SUMP PIT

STANDARD SYMBOL: SP



CONSTRUCTION SPECIFICATIONS

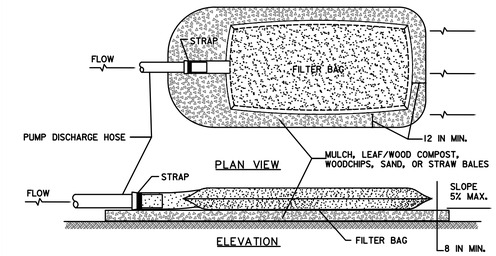
1. USE 12 INCH OR LARGER DIAMETER CORRUGATED METAL, HDPE, OR PVC PIPE WITH 1 INCH DIAMETER PERFORATIONS, 6 INCHES ON CENTER. BOTTOM OF PIPE MUST BE CAPPED WITH WATERTIGHT SEAL.
2. WRAP PIPE WITH ½ INCH GALVANIZED HARDWARE CLOTH AND WRAP NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE HARDWARE CLOTH.
3. EXCAVATE PIT TO THREE TIMES THE PIPE DIAMETER AND FOUR FEET IN DEPTH. PLACE ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE, 6 INCHES IN DEPTH PRIOR TO PIPE PLACEMENT.
4. SET TOP OF PIPE MINIMUM 12 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION.
5. BACKFILL PIT AROUND THE PIPE WITH ¾ TO 1½ INCH CLEAN STONE OR EQUIVALENT RECYCLED CONCRETE AND EXTEND STONE A MINIMUM OF 6 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION.
6. DISCHARGE TO A STABLE AREA AT A NONEROSIVE RATE.
7. A SUMP PIT REQUIRES FREQUENT MAINTENANCE. IF SYSTEM CLOGS, REMOVE PERFORATED PIPE AND REPLACE GEOTEXTILE AND STONE. KEEP POINT OF DISCHARGE FREE OF EROSION.

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

DETAIL F-4 FILTER BAG

STANDARD SYMBOL: FB



CONSTRUCTION SPECIFICATIONS

1. TIGHTLY SEAL SLEEVE AROUND THE PUMP DISCHARGE HOSE WITH A STRAP OR SIMILAR DEVICE.
2. PLACE FILTER BAG ON SUITABLE BASE (E.G., MULCH, LEAF/WOOD COMPOST, WOODCHIPS, SAND, OR STRAW BALES) LOCATED ON A LEVEL OR 5% MAXIMUM SLOPING SURFACE. DISCHARGE TO A STABILIZED AREA. EXTEND BASE A MINIMUM OF 12 INCHES FROM EDGES OF BAG.
3. CONTROL PUMPING RATE TO PREVENT EXCESSIVE PRESSURE WITHIN THE FILTER BAG IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS. AS THE BAG FILLS WITH SEDIMENT, REDUCE PUMPING RATE.
4. REMOVE AND PROPERLY DISPOSE OF FILTER BAG UPON COMPLETION OF PUMPING OPERATIONS OR AFTER BAG HAS REACHED CAPACITY, WHICHEVER OCCURS FIRST. SPREAD THE DEWATERED SEDIMENT FROM THE BAG IN AN APPROVED UPLAND AREA AND STABILIZE WITH SEED AND MULCH BY THE END OF THE WORK DAY. RESTORE THE SURFACE AREA BENEATH THE BAG TO ORIGINAL CONDITION UPON REMOVAL OF THE DEVICE.
5. USE NONWOVEN GEOTEXTILE WITH DOUBLE STITCHED SEAMS USING HIGH STRENGTH THREAD. SIZE SLEEVE TO ACCOMMODATE A MAXIMUM 4 INCH DIAMETER PUMP DISCHARGE HOSE. THE BAG MUST BE MANUFACTURED FROM A NONWOVEN GEOTEXTILE THAT MEETS OR EXCEEDS MINIMUM AVERAGE ROLL VALUES (MARV) FOR THE FOLLOWING:

GRAB TENSILE	250 LB	ASTM D-4632
PUNCTURE	150 LB	ASTM D-4833
FLOW RATE	70 GAL/MIN/FT²	ASTM D-4491
PERMITTIVITY (SEC⁻¹)	1.2 SEC⁻¹	ASTM D-4491
UV RESISTANCE	70% STRENGTH @ 500 HOURS	ASTM D-4355
APPARENT OPENING SIZE (AOS)	0.15–0.18 MM	ASTM D-4751
SEAM STRENGTH	90%	ASTM D-4632

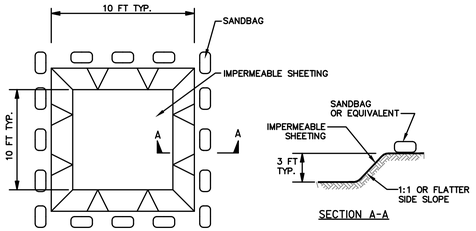
6. REPLACE FILTER BAG IF BAG CLOGS OR HAS RIPS, TEARS, OR PUNCTURES. DURING OPERATION KEEP CONNECTION BETWEEN PUMP HOSE AND FILTER BAG WATER TIGHT. REPLACE BEDDING IF IT BECOMES DISPLACED.

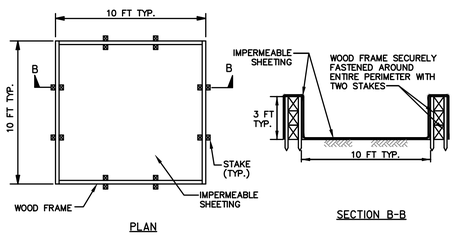
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL H-6 ONSITE CONCRETE WASHOUT STRUCTURE

STANDARD SYMBOL: CWS





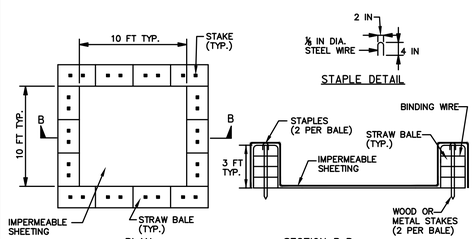
1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL H-6 ONSITE CONCRETE WASHOUT STRUCTURE

STANDARD SYMBOL: CWS



NOTE: CAN BE TWO STACKED BALES OR PARTIALLY EXCAVATED TO REACH 3 FT DEPTH

WASHOUT STRUCTURE WITH STRAW BALES

CONSTRUCTION SPECIFICATIONS

1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET-VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

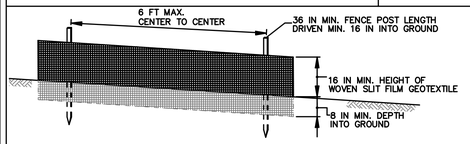
2 OF 2

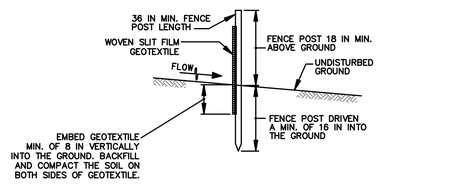
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

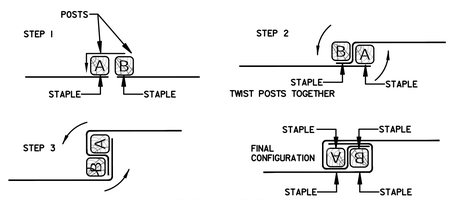
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF







1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1¾ X 1¾ ⅜ ⅛ INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

EA Engineering, Science, and Technology, Inc., PBC

11200 Racetrack Road, Unit A101
Ocean Pines, Maryland 21811
(410) 641-5341

www.eaest.com

HORIZONTAL DATUM: MD STATE PLANE, NAD 83, US SURVEY FEET

VERTICAL DATUM: NAVD 88

SCALE AS SHOWN

FULL SIZE PLOT: 24" x 36"

REVISIONS

SEAL

STATE OF MARYLAND · STEVEN C. LEMASTERS · 55422 · PROFESSIONAL ENGINEER

11/12/2025

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 55422
EXPIRATION DATE: DECEMBER 16, 2025

PROJECT NAME
BERLIN HOMEOWNER CONVENIENCE CENTER BULKHEAD REPAIR

PROJECT ADDRESS
9696 MILL HAVEN ROAD
BERLIN, MD 21811

DRAWING TITLE
EROSION AND SEDIMENT CONTROL DETAILS AND NOTES

DRAWING INFORMATION

DRAWN BY: JWB	DESIGNED BY: JWB/SCL
CHECKED BY: DOK	PROJECT MANAGER: SCL

PROJECT NUMBER: 1060953

DRAWING NO.
C-502

DATE: NOVEMBER 2025 SHEET: 6 OF 11

100% PLANS - FOR CONSTRUCTION

FILE PATH: I:\OCEAN\PMS\PROJECTS\DOCS\WORKSITES\COUNTY\1060953 - BERLIN HOMEOWNER BULKHEAD REPAIR\CADD\PRODUCTION\DESIGN SET\1060953 - DS 11 - ESC DETAILS AND NOTES.DWG [C-502] LEMASTERS, STEVEN 11/6/2025 10:09 AM

B-4 STANDARDS AND SPECIFICATIONS
FOR
VEGETATIVE STABILIZATION

DEFINITION
USING VEGETATION AS COVER TO PROTECT EXPOSED SOIL FROM EROSION.

PURPOSE
TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL.

CONDITIONS WHERE PRACTICE APPLIES
ON ALL DISTURBED AREAS NOT STABILIZED BY OTHER METHODS. THIS SPECIFICATION IS DIVIDED INTO SECTIONS ON INCREMENTAL STABILIZATION; SOIL PREPARATION, SOIL AMENDMENTS AND TOPSOILING; SEEDING AND MULCHING; TEMPORARY STABILIZATION; AND PERMANENT STABILIZATION.

EFFECTS ON WATER QUALITY AND QUANTITY
STABILIZATION PRACTICES ARE USED TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL. WHEN SOIL IS STABILIZED WITH VEGETATION, THE SOIL IS LESS LIKELY TO ERODE AND MORE LIKELY TO ALLOW INFILTRATION OF RAINFALL, THEREBY REDUCING SEDIMENT LOADS AND RUNOFF TO DOWNSTREAM AREAS.

PLANTING VEGETATION IN DISTURBED AREAS WILL HAVE AN EFFECT ON THE WATER BUDGET, ESPECIALLY ON VOLUMES AND RATES OF RUNOFF, INFILTRATION, EVAPORATION, TRANSPIRATION, PERCOLATION, AND GROUNDWATER RECHARGE. OVER TIME, VEGETATION WILL INCREASE ORGANIC MATTER CONTENT AND IMPROVE THE WATER HOLDING CAPACITY OF THE SOIL AND SUBSEQUENT PLANT GROWTH.

VEGETATION WILL HELP REDUCE THE MOVEMENT OF SEDIMENT, NUTRIENTS, AND OTHER CHEMICAL CARRIED BY RUNOFF TO RECEIVING WATERS. PLANTS WILL ALSO HELP PROTECT GROUNDWATER SUPPLIES BY ASSIMILATING THOSE SUBSTANCES PRESENT WITHIN THE ROOT ZONE.

SEDIMENT CONTROL PRACTICES MUST REMAIN IN PLACE DURING GRADING, SEEDBED PREPARATION, SEEDING, MULCHING, AND VEGETATIVE ESTABLISHMENT.

ADEQUATE VEGETATIVE ESTABLISHMENT
INSPECT SEEDED AREAS FOR VEGETATIVE ESTABLISHMENT AND MAKE NECESSARY REPAIRS, REPLACEMENTS, AND RESEEDINGS WITHIN THE PLANTING SEASON.

1. ADEQUATE VEGETATIVE STABILIZATION REQUIRES 95 PERCENT GROUNDCOVER,
2. IF AN AREA HAS LESS THAN 40 PERCENT GROUNDCOVER, RESTABILIZE FOLLOWING THE ORIGINAL RECOMMENDATIONS FOR LIME, FERTILIZER, SEEDBED PREPARATION, AND SEEDING.
3. IF AN AREA HAS BETWEEN 40 AND 94 PERCENT GROUNDCOVER, OVER-SEED AND FERTILIZE USING HALF OF THE RATES ORIGINALLY SPECIFIED.
4. MAINTENANCE FERTILIZER RATES FOR PERMANENT SEEDING ARE SHOWN IN TABLE B.6.

B-4-1 STANDARDS AND SPECIFICATIONS
FOR
INCREMENTAL STABILIZATION

DEFINITION
ESTABLISHMENT OF VEGETATIVE COVER ON CUT AND FILL SLOPES.

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

CONDITIONS WHERE PRACTICE APPLIES
ANY CUT OR FILL SLOPE GREATER THAN 15 FEET IN HEIGHT. THIS PRACTICE ALSO APPLIES TO STOCKPILES.

CRITERIA

A. INCREMENTAL STABILIZATION - CUT SLOPES
   1. EXCAVATE AND STABILIZE CUT SLOPES IN INCREMENTS NOT TO EXCEED 15 FEET IN HEIGHT. PREPARE SEEDBED AND APPLY SEED AND MULCH ON ALL CUT SLOPES AS THE WORK PROGRESSES.
   2. CONSTRUCTION SEQUENCE EXAMPLE (REFER TO FIGURE B.1):
      2.a. CONSTRUCT AND STABILIZE ALL TEMPORARY SWALES OR DIKES THAT WILL BE USED TO CONVEY RUNOFF AROUND THE EXCAVATION.
      2.b. PERFORM PHASE I EXCAVATION, PREPARE SEEDBED, AND STABILIZE.
      2.c. PERFORM PHASE 2 EXCAVATION, PREPARE SEEDBED, AND STABILIZE. OVERSEED PHASE 1 AREAS AS NECESSARY.
      2.d. PERFORM FINAL PHASE EXCAVATION, PREPARE SEEDBED, AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.

NOTE: ONCE EXCAVATION HAS BEGUN, THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

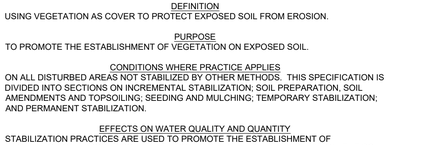


FIGURE B.1: INCREMENTAL STABILIZATION - CUT

B. INCREMENTAL STABILIZATION - FILL SLOPES
   1. CONSTRUCT AND STABILIZE FILL SLOPES IN INCREMENTS NOT TO EXCEED 15 FEET IN HEIGHT. PREPARE SEEDBED AND APPLY SEED AND MULCH ON ALL SLOPES AS THE WORK PROGRESSES.
   2. STABILIZE SLOPES IMMEDIATELY WHEN THE VERTICAL HEIGHT OF A LIFT REACHES 15 FEET OR WHEN THE GRADING OPERATION CEASES AS PRESCRIBED IN THE PLANS.
   3. AT THE END OF EACH DAY, INSTALL TEMPORARY WATER CONVEYANCE PRACTICE(S), AS NECESSARY, TO INTERCEPT SURFACE RUNOFF AND CONVEY IT DOWN THE SLOPE IN A NON-EROSIVE MANNER.
   4. CONSTRUCTION SEQUENCE EXAMPLE (REFER TO FIGURE B.2):
      4.a. CONSTRUCT AND STABILIZE ALL TEMPORARY SWALES OR DIKES THAT WILL BE USED TO DIVERT RUNOFF AROUND THE FILL. CONSTRUCT SILT FENCE ON LOW SIDE OF FILL UNLESS OTHER METHODS SHOWN ON THE PLANS ADDRESS THIS AREA.
      4.b. AT THE END OF THE DAY, INSTALL TEMPORARY WATER CONVEYANCE PRACTICE(S), AS NECESSARY, TO INTERCEPT SURFACE RUNOFF AND CONVEY IT DOWN THE SLOPE IN A NON-EROSIVE MANNER.
      4.c. PLACE PHASE 1 FILL, PREPARE SEEDBED, AND STABILIZE.
      4.d. PLACE PHASE 2 FILL, PREPARE SEEDBED, AND STABILIZE.
      4.e. PLACE FINAL PHASE FILL, PREPARE SEEDBED, AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.

NOTE: ONCE THE PLACEMENT OF FILL HAS BEGUN, THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

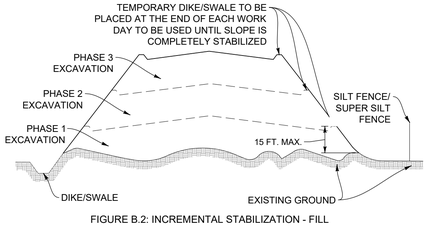


FIGURE B.2: INCREMENTAL STABILIZATION - FILL

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

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

PURPOSE
TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

CONDITIONS WHERE PRACTICE APPLIES
WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

CRITERIA

A. SOIL PREPARATION
   1. TEMPORARY STABILIZATION
      1.a. SEED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
      1.b. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
      1.c. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS
   2. PERMANENT STABILIZATION
      2.a. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:
         a. SOIL PH BETWEEN 6.0 TO 7.0.
         b. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
         c. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE
         d. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
         e. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
      2.a. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
      2.b. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.
      2.c. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
      2.d. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRIABLE. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

B. TOPSOILING
   1. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.
   2. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS.
   3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
      3.a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
      3.b. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT MATERIAL.
      3.c. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
      3.d. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
   4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.
   5. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:
      5.a. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 ½ INCHES IN DIAMETER.
      5.b. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
      5.c. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.
   6. TOPSOIL APPLICATION
      6.a. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.
      6.b. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
      6.c. TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)
   1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES.
   2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTY OF THE PRODUCER.
   3. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.
   4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
   5. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

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

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

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

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

CRITERIA

A. SEEDING
   1. SPECIFICATIONS
      1.a. ALL SEED MUST MEET THE REQUIREMENT OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.
      1.b. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWS.
      1.c. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.
      1.d. SOD AND SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.
   2. APPLICATION
      2.a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.
         a. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1, PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARIES.
         b. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDED AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.
      2.B. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
         a. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST ¾ INCH OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING.
         b. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
      2.C. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).
         a. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD BE EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE TOTAL SOLUBLE NITROGEN; P_2O_5 (PHOSPHOROUS), 200 POUNDS PER ACRE; K_2O (POTASSIUM), 200 POUNDS PER ACRE.
         b. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.
         c. MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.
         d. WHEN HYDROSEEDING, DO NOT INCORPORATE INTO THE SOIL.

B. MULCHING
   1. MULCH MATERIALS (IN ORDER OF PREFERENCE)
      1.a. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLE BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEE LAW AND NOT MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.
      1.b. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.
         a. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORM SPREAD SLURRY.
         b. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
         c. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER, ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.
         d. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BY PHYTO-TOXIC.
         e. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM.
   2. APPLICATION
      2.a. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.
      2.b. WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM DEPTH OF 1 ½ TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE.
      2.c. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 100 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
   3. ANCHORING
      3.a. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD:
         a. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE FLAT AREAS AND IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR.
         b. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
         c. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PETROSET, TERRA TAX II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.
         d. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET LONG.

B-4-4 STANDARDS AND SPECIFICATIONS
FOR
TEMPORARY STABILIZATION

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

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

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

CRITERIA

A. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THE SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.
B. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOILS TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.
C. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONG AS PRESCRIBED IN SECTION B-4-3.A.1.1B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

TEMPORARY SEEDING SUMMARY

HARDINESS ZONE: 7b
SEED MIXTURE:

NO.	SPECIES	APPLICATION RATE(LB/AC)	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-20)	LIME RATE
	ANNUAL RYEGRASS	40	FEB. 15-APR. 30 AUG. 15-NOV. 30	0.5 inches	436 LB/AC (10 LB/ 1000SF)	2 TONS/AC (90 LB/ 1000SF)
	FOXTAIL MILLET	30	MAY 1-AUG. 14	0.5 inches		

B-4-5 STANDARDS AND SPECIFICATIONS
FOR
PERMANENT STABILIZATION

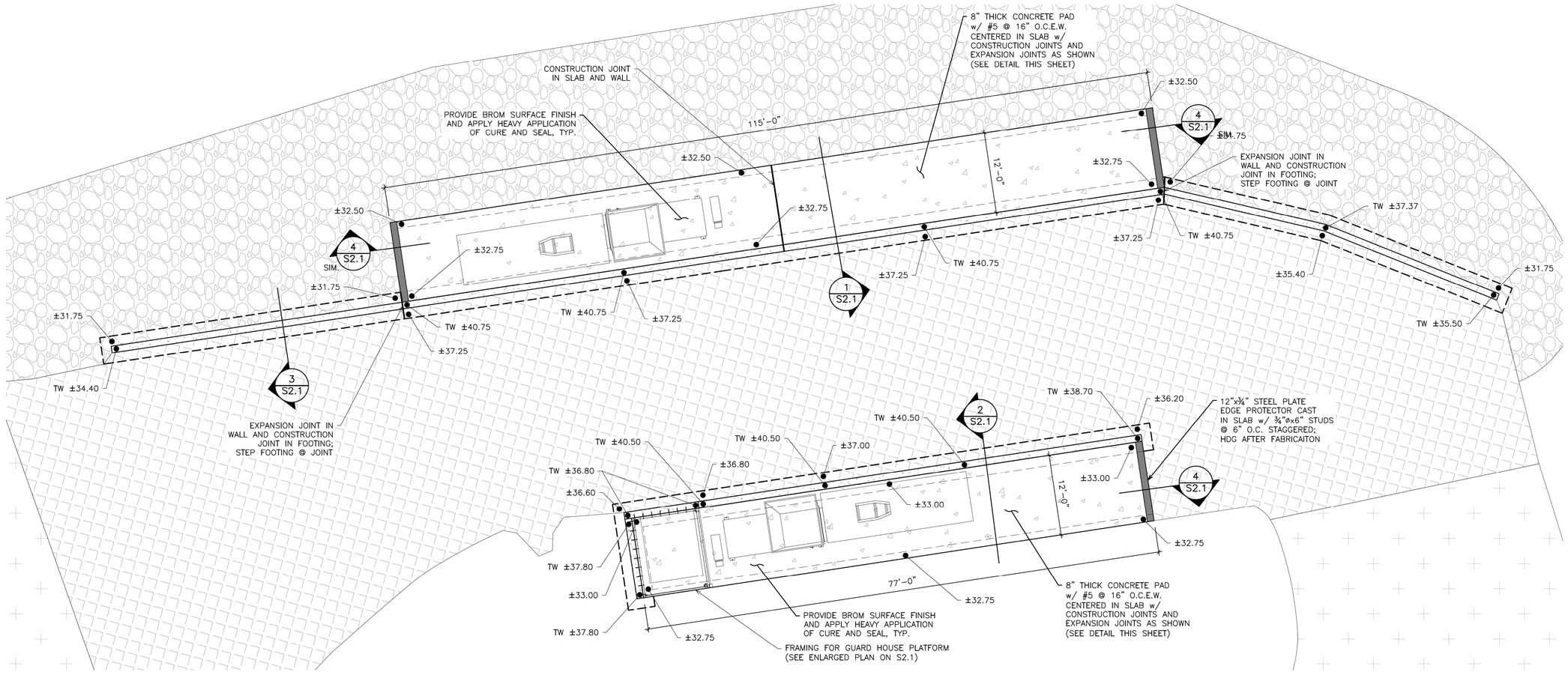
DEFINITION
TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

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

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

CRITERIA

A. SEED MIXTURES
   1. GENERAL USE
      1.a. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
      1.b. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING.
      1.c. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY.
      1.d. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3 ½ POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.
   2. TURFGRASS MIXTURES
      2.a. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
      2.b. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN;
         a. KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF TOTAL MIXTURE BY WEIGHT.
         b. KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERT



FOUNDATION PLAN

SCALE: ⅛" = 1'-0"

NOTE:
1) COORDINATE ALL ELEVATIONS WITH CIVIL DRAWINGS

CAST-IN-PLACE CONCRETE

ALL CONCRETE SHALL BE MADE IN ACCORDANCE WITH DESIGN MIXES WHICH ARE TO BE APPROVED BY THE ENGINEER PRIOR TO CASTING ANY CONCRETE. MIXES SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTION ACI 318. MIXES SHALL HAVE A MINIMUM CEMENT CONTENT OF 520 LB. PER CUBIC YD., MAXIMUM WATER/CEMENT RATIO OF 0.53 FOR INTERIOR CONCRETE PROTECTED FROM FREEZING AND 0.45 FOR ALL EXTERIOR EXPOSED CONCRETE.

MINIMUM SPECIFIED COMPRESSIVE STRENGTH f'c @ 28 DAYS.

LOCATION	MIN. COMP. (F'C)	SLUMP (IN.)	AIR ENTRAINED
SLABS AND WALLS	4000 PSI	4" +/- 1"	5% +/- 1%

FIBERMESH ADDITIVE ACCEPTABLE WITHIN MANUFACTURER RECOMMENDATIONS AND PER COUNTY.

CONCRETE MATERIALS SHALL CONFORM TO ASTM C150, TYPE I FOR PORTLAND CEMENT AND ASTM C33 FOR AGGREGATES. WATER-REDUCING ADMIXTURES SHALL CONFORM TO ASTM C494, TYPE A (FREE OF CALCIUM CHLORIDES), AIR-ENTRAINING ADMIXTURES SHALL CONFORM TO ASTM C260, AND HIGH-RANGE WATER REDUCERS (SUPER-PLASTICIZERS) SHALL CONFORM TO ASTM C494, TYPE F. FLY ASH SHALL COMPLY WITH ASTM C619 FOR CLASS F AND SHALL NOT BE PROPORTIONED IN MIXES WITH MORE THAN 20% CEMENT BY WEIGHT. LIQUID-MEMBRANE CURING COMPOUNDS SHALL BE HIGH-SOLIDS, WATER AND ACRYLIC-BASED, COMPLYING WITH ASTM C309 AS TESTED UNDER ASTM C156.

USE OF ADDITIVES CONTAINING CALCIUM CHLORIDE SHALL NOT BE PERMITTED.
DO NOT USE HIGH-RANGE WATER REDUCING ADMIXTURES IN AIR-ENTRAINED CONCRETE.
CONFORM TO ASTM C260.

ADDITION OF WATER TO THE CONCRETE AT THE JOB SITE FOR THE PURPOSE OF INCREASING THE SLUMP OR FOR RETEMPERING THE CONCRETE WHICH HAS BEGUN TO SET IS STRICTLY PROHIBITED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ANCHOR BOLTS, CLIPS, INSERTS, CONNECTION PLATES, SLEEVES, SLOTS AND OTHER REQUIRED ITEMS IN ACCORDANCE WITH THE CONTRACT DRAWINGS, AND IN COOPERATION WITH OTHER TRADES PRIOR TO PLACING CONCRETE.

REINFORCING STEEL SHALL BE HIGH STRENGTH NEW BILLET STEEL CONFORMING TO ASTM A-615, GRADE 60 (60,000 PSI). WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A-185. ALL REINFORCING SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE WITH ACI'S MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES, (ACI-315). DETAILS OF REINFORCEMENT SHALL CONFORM TO ACI 318, ACI 315, AND CRSI STANDARDS.

ALL REINFORCING STEEL (INCLUDING WELDED WIRE FABRIC) SHALL BE SECURELY TIED AND ANCHORED IN PLACE TO PREVENT DISLOCATION DURING THE PLACING OPERATION.

REINFORCING STEEL SHALL BE CLEAN OF MUD, DEBRIS, LOOSE RUST, CEMENT, GROUT, OR ANY OTHER MATERIAL WHICH MAY INHIBIT THE BOND BETWEEN THE STEEL AND CONCRETE.

STEEL

ALL OTHER STRUCTURAL STEEL, INCLUDING PLATES, TIE RODS AND MISCELLANEOUS SHAPES SHALL CONFORM TO ASTM A36 (36 KSI).

BOLTS FOR CONNECTING STRUCTURAL STEEL SHAPES SHALL BE ASTM A325-N, 3/4 -INCH DIAMETER, UNLESS OTHERWISE NOTED ON THE DRAWINGS OR IN THE PROJECT SPECIFICATIONS.

OTHER BOLTS SHALL CONFORM TO ASTM F1554 GRADE 36.

FABRICATION AND ERECTION OF ALL STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE LATEST SPECIFICATION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.

FOUNDATION

SLAB AND FOOTING SUBGRADE SHALL BE PREPARED PER SOIL REPORT BY SGI, LLC DATED SEPTEMBER 26, 2024 REQUIREMENTS WITH 3000 PSF ALLOWABLE BEARING CAPACITY.

TIMBER

ALL TIMBER SHALL BE #1 SYP TREATED TO 0.6pcf CCA (MIN.)

SHOP DRAWINGS

THE GENERAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS FOR APPROVAL. THE STRUCTURAL ENGINEER WILL NOT BE RESPONSIBLE FOR THE STRUCTURAL CERTIFICATION AND DESIGN OF THE PROJECT IF THE GENERAL CONTRACTOR FAILS TO OBTAIN APPROVAL OF THE SHOP DRAWINGS. THE GENERAL CONTRACTOR SHALL INFORM THE STRUCTURAL ENGINEER IN WRITING CONCERNING DEVIATIONS AND/OR OMISSIONS FROM THE CONTRACT DOCUMENTS AT THE TIME OF SHOP DRAWING SUBMISSION. THE GENERAL CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS AND SHALL MAKE ALL CORRECTIONS HE DEEMS NECESSARY BEFORE SUBMISSION. THE GENERAL CONTRACTOR SHALL STATE ON THE SHOP DRAWINGS THAT CONTRACT DOCUMENT REQUIREMENTS HAVE BEEN MET AND THAT ALL DIMENSIONS, CONDITIONS AND QUANTITIES HAVE BEEN REVIEWED AND VERIFIED AS SHOWN AND/OR CORRECTED ON THE SHOP DRAWINGS.

MISCELLANEOUS ITEMS

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL SAFETY REGULATIONS, PROGRAMS AND PRECAUTIONS RELATED TO ALL WORK ON THIS PROJECT AND FOR THE PROTECTION OF PERSONS AND PROPERTY EITHER ON OR ADJACENT TO THE PROJECT AND SHALL PROTECT SAME AGAINST INJURY, DAMAGE OR LOSS.

THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED ON THE STRUCTURE. SUCH LOADS SHALL NOT EXCEED THE CAPACITY OF THE STRUCTURE AT ANY TIME.

THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION, AND ANY TEMPORARY BRACING OR SUPPORT REQUIRED TO ACCOMMODATE THE CONTRACTOR'S MEANS AND METHODS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

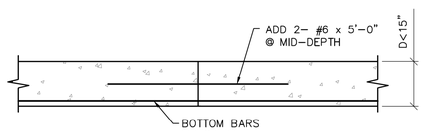
STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE SITE DRAWINGS, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEEING THAT THE WORK OF ALL TRADES IS COORDINATED WITH ADJACENT WORK.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGNING, FURNISHING, ERECTING AND REMOVING ANY TEMPORARY SHORING AND BRACING DURING CONSTRUCTION

SAFETY REGULATIONS SHALL BE STRICTLY FOLLOWED BY THE CONTRACTOR OR SUBCONTRACTOR DURING ALL TIMES OF WORK ON THIS PROJECT. THE ARCHITECT OR ENGINEER SHALL NOT HAVE CONTROL OR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR ACTS OF OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

ALL SPECIALTY BOLTS, INCLUDING EXPANSION TYPE AND EPOXY TYPE ANCHORS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS.

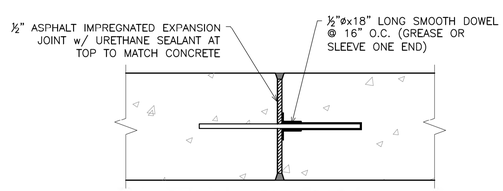
THE CONTRACTOR SHALL PROTECT FROM DAMAGES EXISTING BUILDING(S), OWNER EQUIPMENT, ROADS, WALKS AND UTILITIES. THE CONTRACTOR SHALL MAINTAIN THESE DURING THE COURSE OF THE WORK, AND SHALL REPAIR ALL DAMAGES AT NO ADDITIONAL EXPENSE TO THE OWNER.



NOTE:
CONSTRUCTION JOINTS SHALL BE PLACED IN MIDDLE THIRD OF CLEAR SPAN. CONSTRUCTION JOINTS ARE NOT PERMITTED WITHIN 4'-0" OF OPENINGS

CONSTRUCTION JOINT DETAIL

N.T.S.



EXPANSION JOINT DETAIL

N.T.S.

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9696 MILL HAVEN ROAD
BERLIN, MD 21811

STATE OF MARYLAND
ANDREW R. MILLER
No. 22745
PROFESSIONAL ENGINEER

STRUCTURAL PLAN, DETAILS, AND NOTES

SCALE	: AS NOTED
DESIGN BY	: ARM
DRAWN BY	: TFVT
CHECKED BY:	ARM
GMB FILE	: 240209
DATE	: FEB 2025

SHEET NO.
S1.1

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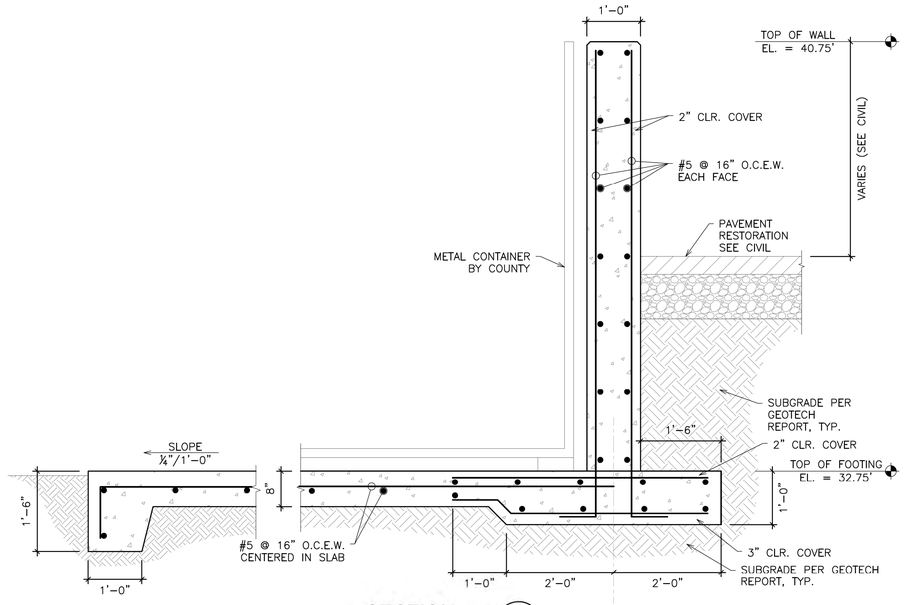
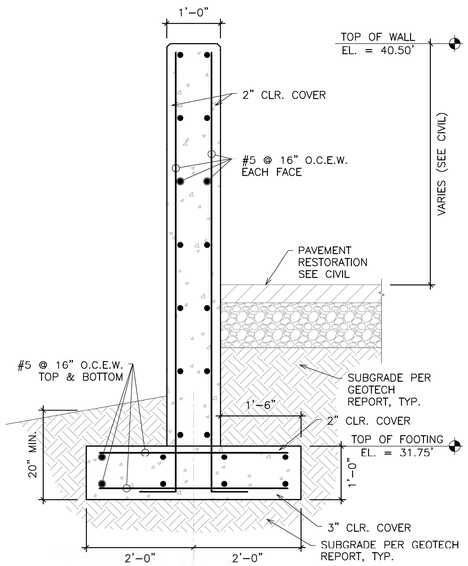


SECTION 1 / S2.1
SCALE: ¾" = 1'-0"



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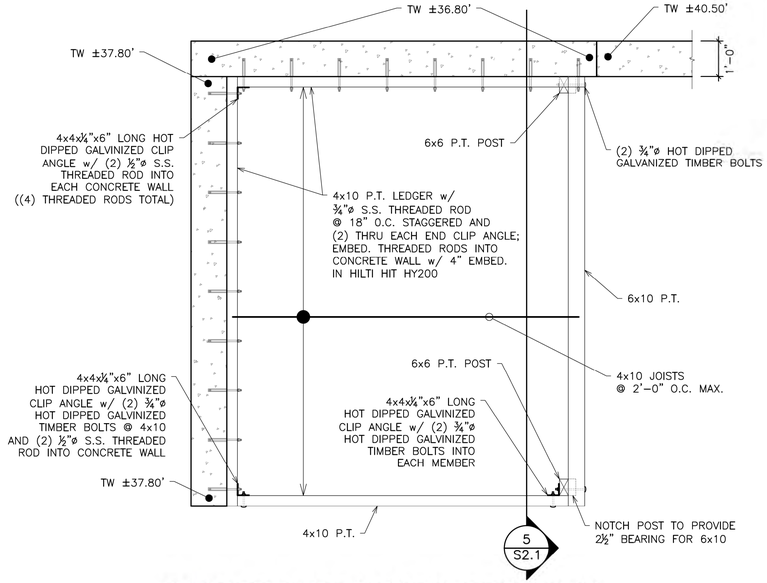
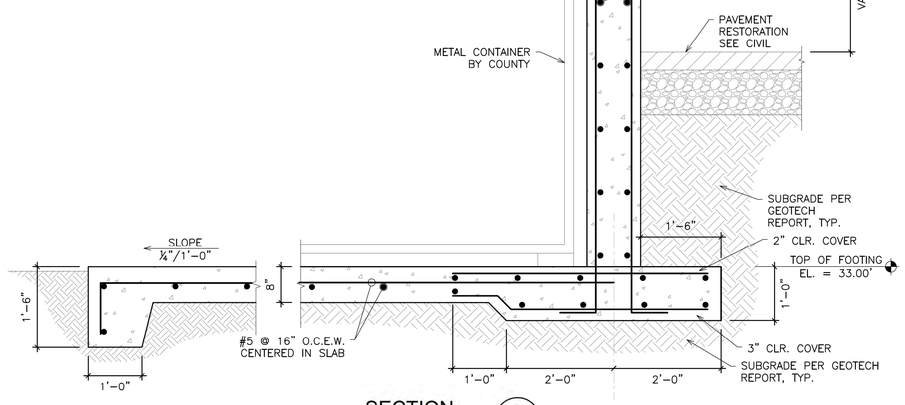
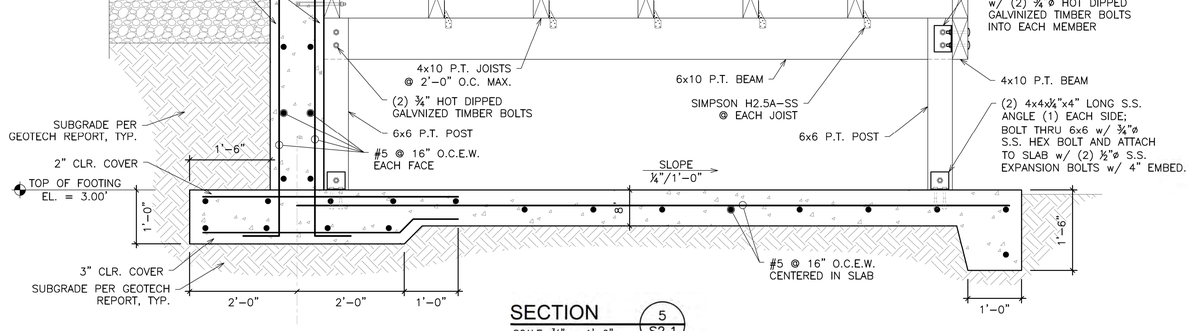


ENLARGED GUARD HOUSE PLATFORM PLAN
SCALE: ½" = 1'-0"

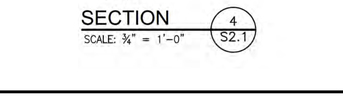
NOTE:
TIMBER TREATMENT SHALL BE MIN. 0.6 CCA.



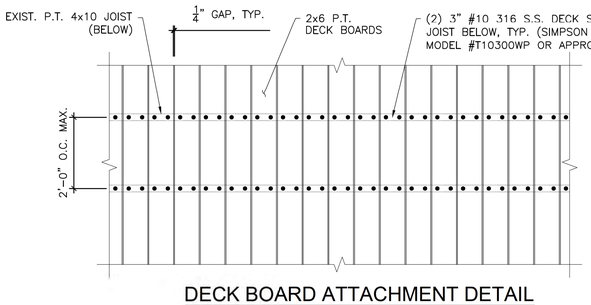
SECTION 2 / S2.1
SCALE: ¾" = 1'-0"



SECTION 5 / S2.1
SCALE: ¾" = 1'-0"



SECTION 4 / S2.1
SCALE: ¾" = 1'-0"



DECK BOARD ATTACHMENT DETAIL
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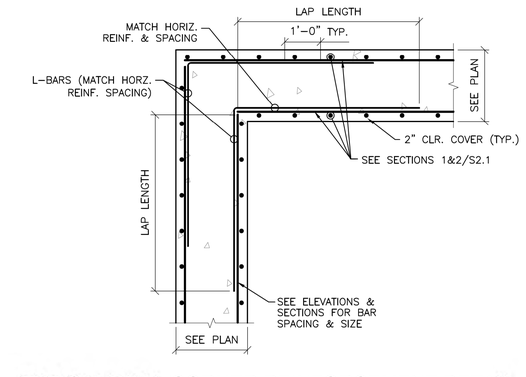

TYPICAL WALL CORNER REINFORCEMENT DETAIL
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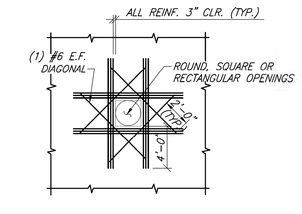

NOTE:

1. PROVIDE ADDITIONAL REINFORCING, (MINIMUM OF ONE-HALF THE NUMBER OF PRINCIPLE REINFORCING, BARS BEING INTERRUPTED BY THE OPENING AT EACH FACE ON EACH SIDE.
2. FOR OPENINGS LESS THAN 12" DIA., NO ADDITIONAL REINFORCING IS REQUIRED PROVIDED, NO REINFORCING IS INTERRUPTED BY THE OPENING.

REBAR DETAIL @ OPENINGS
N.T.S.

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STATE OF MARYLAND
ANTHONY R. MILES
No. 22748
PROFESSIONAL ENGINEER

SECTIONS AND
DETAILS

SCALE	: AS NOTED
DESIGN BY	: ARM
DRAWN BY	: TFVT
CHECKED BY:	ARM
GMB FILE	: 240209
DATE	: FEB 2025

SHEET NO.
S2.1

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G:\Projects\2024\240209 Concrete Wall Structural Design\Drawings\Current\Berlin Transfer Station (240209).dwg, 10/28/2025 6:08 PM, Tyler F.V. Tuthill

ABBREVIATIONS

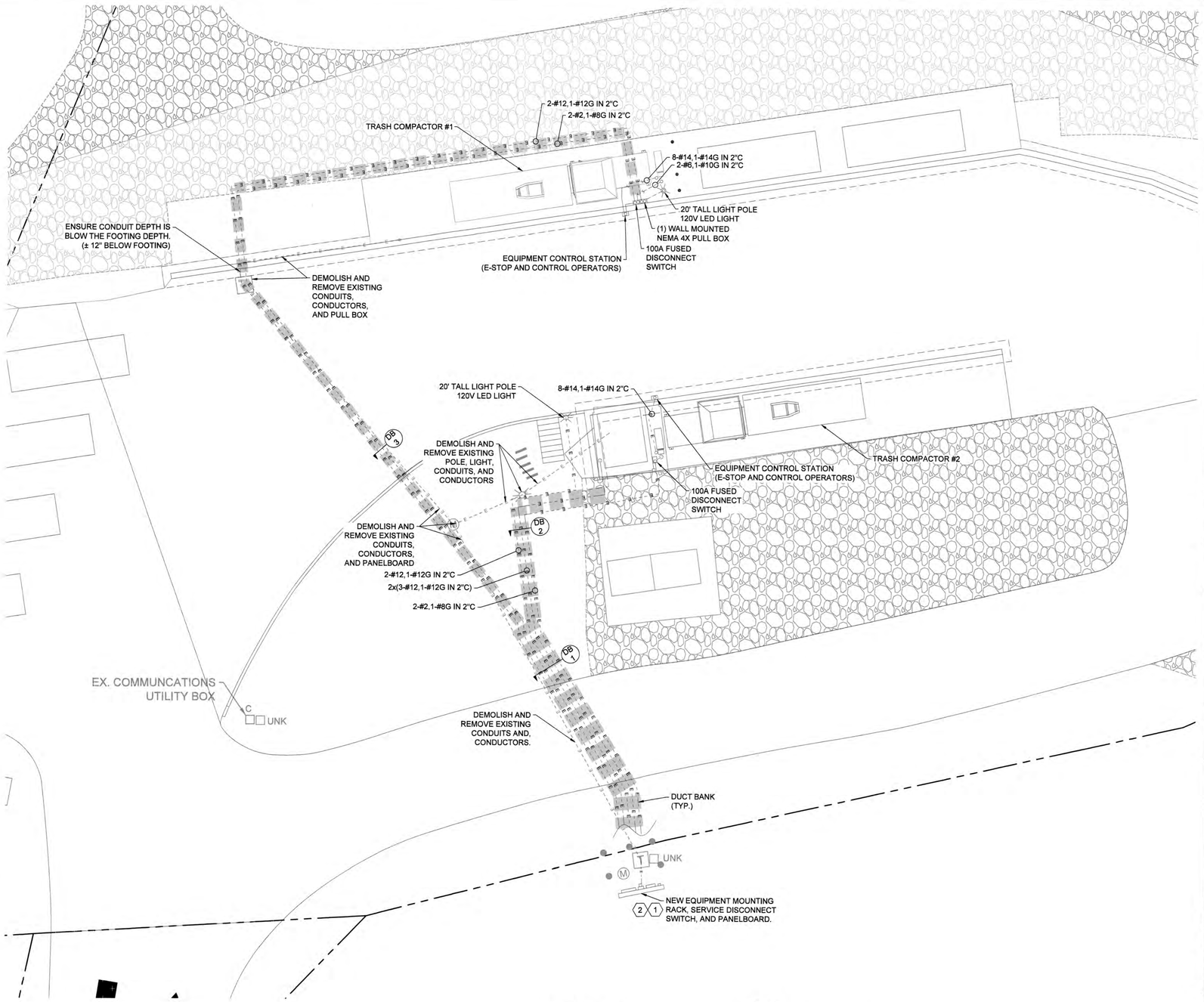
A	AMPERE	MAX	MAXIMUM
AC	ALTERNATING CURRENT	MCM	THOUSAND CIRCULAR MILS
APPROX.	APPROXIMATELY	MIN.	MINIMUM
AT	AMPS TRIP	MTG	MOUNTING
AWG	AMERICAN WIRE GAGE	NEC	NATIONAL ELECTRICAL CODE
CB	CIRCUIT BREAKER	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
CFR	CODE OF FEDERAL REGULATIONS	NFSS	NON-FUSED SAFETY SWITCH
CKT, CIRC.	CIRCUIT	NO.	NUMBER
CP, C.P.	CONTROL PANEL	OL	OVERLOAD
CPT	CONTROL POWER TRANSFORMER	PF-()	POWER FEEDER WITH SOURCE DESIGNATION AND CIRCUIT DESIGNATION
DC	DIRECT CURRENT	PH	PHASE
DIA	DIAMETER	PP-()	POWER PANELBOARD
D.S.	DISCONNECT SWITCH	P-()	PUMP WITH DESIGNATION
DWG	DRAWING	SDBC	SOFT DRAWN BARE COPPER
ELEC	ELECTRICAL	S.E.	SERVICE ENTRANCE
ENCL	ENCLOSURE	SP	SURGE PROTECTOR
EX., EXIST	EXISTING	S.S.	STAINLESS STEEL
G	EQUIPMENT GROUNDING CONDUCTOR OR GREEN	T-()	TRANSFORMER WITH DESIGNATION
GRD	GROUND	TSP	TWISTED SHIELDED PAIR
HOA	HAND-OFF-AUTOMATIC	TYP.	TYPICAL
HZ	HERTZ	UTIL.	UTILITY
JB, JB-()	JUNCTION BOX OR JUNCTION BOX WITH DESIGNATION	V	VOLT
KCMIL	KILO (THOUSAND) CIRCULAR MILS	VAC	VOLTS ALTERNATING CURRENT
KVA	KILOVOLT AMPERE	VFD	VARIABLE FREQUENCY DRIVE
KW	KILOWATT	W/	WITH
LP	LIGHTING PANELBOARD	WWTP	WASTE WATER TREATMENT PLANT
M-()	MOTOR STARTER COIL WITH DESIGNATION	XFM	TRANSFORMER

LEGEND - PLANS & DETAILS

SYMBOL	DESCRIPTION
	CONDUIT EXPOSED
	CONDUIT CONCEALED
	CONDUIT DOWN
	CONDUIT UP
	CONDUIT CONTINUATION / BREAK LINE
C	CONDUIT BODY
J	JUNCTION BOX
	MOTOR
E E E	ELECTRIC UGND LINE
?	CODED NOTE
LP#-# OR PP#-#	HOME RUN TO PANELBOARD
	GROUP OF ITEMS
	RECEPTACLE
	LIGHT
	DUCT BANK
DB #	DUCT BANK SECTION MARKER

GENERAL NOTES

1. ALL WORK IS NEW UNLESS OTHERWISE NOTED AS EXISTING. FOR THE CONVENIENCE OF THE CONTRACTOR, ON DRAWINGS WHICH CONTAIN NEW AND EXISTING FEATURES, A DISTINCTION BETWEEN NEW AND EXISTING MATERIALS, EQUIPMENT, AND STRUCTURES HAS BEEN MADE BY LINE WEIGHT. HEAVY LINE WEIGHT REPRESENTS NEW FEATURES (OR WORK TO BE DONE ON EXISTING FEATURES) AND LIGHT LINE WEIGHT REPRESENTS EXISTING FEATURES.
2. INFORMATION FOR EXISTING UTILITIES IS FROM AVAILABLE RECORDS AND SHALL BE VERIFIED BY THE CONTRACTOR TO HIS OR HER SATISFACTION PRIOR TO CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT EXISTING UTILITIES AND STRUCTURES AND ANY DAMAGE TO THEM SHALL BE REPAIRED IMMEDIATELY (WITHIN 24 HOURS) BY THE CONTRACTOR AT NO COST TO THE OWNER.
3. THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE EXISTING HOMEOWNER DROPOFF FACILITY AT ALL TIMES TO ALLOW COUNTY OPERATIONS AND MAINTENANCE STAFF TO EXECUTE AND COMPLETE ROUTINE DUTIES.
4. ALL WORK SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE.
5. MATERIALS, DEVICES, APPLIANCES, FITTINGS, AND EQUIPMENT INSTALLED SHALL BE LISTED. ALL PRODUCTS SHALL BE USED ONLY IN THE MANNER IN WHICH THEY HAVE BEEN TESTED AND FOUND SUITABLE FOR THE INTENDED USE.
6. EQUIPMENT AND SYSTEMS SHALL BE BONDED AND GROUNDED IN ACCORDANCE WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE, APPLICABLE LOCAL CODES, THE ELECTRICAL UTILITY PROVIDER, AND THE MANUFACTURER'S RECOMMENDATIONS.
7. CONDUIT AND CONDUCTOR SIZES ARE BASED ON COPPER CONDUCTORS UNLESS SPECIFICALLY NOTED OTHERWISE.
8. VOLTAGE DROP CALCULATIONS ARE BASED ON CIRCUIT LOADS AND DISTANCES FOR THE CIRCUIT ROUTING AS SHOWN. IF ALTERNATE CIRCUIT ROUTING, LOADING, OR CONDUCTOR MATERIAL ARE USED, VERIFY THAT THE VOLTAGE DROP IS ACCEPTABLE.
9. UNLESS OTHERWISE NOTED, CONDUCTORS HAVE NOT BEEN DERATED FOR BUNDLING OF CONDUCTORS, OR SIZED FOR MULTIPLE CIRCUITS. IF MULTIPLE CIRCUITS ARE INSTALLED IN A SINGLE RACEWAY, DERATE THE CONDUCTOR AMPACITY IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, AND PROVIDE THE CORRECT CONDUCTOR AND CONDUIT SIZES.
10. THE CONSTRUCTION CODE REQUIREMENTS OF STATE, COUNTY, OR OTHER POLITICAL SUBDIVISION WHICH EXCEED THE REQUIREMENTS OF NATIONAL CODES, STANDARDS, AND APPROVING BODIES SHALL BE MET AND COMPLIED WITH.
11. THE INSTALLATION OF ALL EQUIPMENT SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, REQUIREMENTS, AND GUIDELINES AND SHALL CONFORM TO THE PARTICULAR APPLICATION INVOLVED, IN ACCORDANCE WITH DETAILS SHOWN ON THE DRAWINGS. INSTALLATION OF EQUIPMENT CONNECTIONS TO EQUIPMENT SHALL BE COMPLETE IN EVERY DETAIL IN ACCORDANCE WITH APPLICABLE AND ACCEPTED INDUSTRY STANDARDS AND PRACTICES. PRIOR TO ACCEPTANCE OF ALL OR ANY PART OF THE WORK, THE CONTRACTOR SHALL TEST EACH PIECE OF EQUIPMENT AND SUBMIT WRITTEN CERTIFICATION THAT IT HAS BEEN INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS AND IS READY TO BEGIN OPERATION.



SITE PLAN INSET
SCALE: 1" = 10'

NOTES:

1. INSTALL NEW EQUIPMENT MOUNTING RACK WITH SERVICE DISCONNECT SWITCH AND PANELBOARD TO REPLACE EXISTING PANELBOARD. COORDINATE THE FAULT INTERRUPTING CURRENT RATING OF THE SERVICE EQUIPMENT WITH CHOPTANK ELECTRIC.
2. EXISTING TRASH COMPACTOR #1 (EASTERN SIDE) SHALL REMAIN OPERATIONAL DURING THE CONSTRUCTION OF PHASE 1 (WESTERN SIDE). THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING OR MAINTAINING SERVICE TO TRASH COMPACTOR #1 DURING PHASE 1 CONSTRUCTION ACTIVITIES INCLUSIVE OF THE CONSTRUCTION OF NEW ELECTRIC EQUIPMENT.

EA Engineering, Science, and Technology, Inc., PBC

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Ocean Pines, Maryland 21811
(410) 641-5341

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HORIZONTAL DATUM:
MD STATE PLANE, NAD 83, US SURVEY FEET

VERTICAL DATUM:
NAVD 88

N

0 5.0' 10' 20'
1" = 10'
GRAPHIC SCALE IN FEET

FULL SIZE PLOT: 24" x 36"

REVISIONS

SEAL

STATE OF MARYLAND
DANIELLE KOCHANSKI
2012
REGISTERED
PROFESSIONAL ENGINEER
13 November 2025

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20812
EXPIRATION DATE: APRIL 24, 2027

PROJECT NAME
BERLIN HOMEOWNER CONVENIENCE CENTER BULKHEAD REPAIR

PROJECT ADDRESS
9696 MILL HAVEN ROAD
BERLIN, MD 21811

DRAWING TITLE
ELECTRICAL SITE PLAN, NOTES, ABBREVIATIONS, AND LEGEND

DRAWING INFORMATION

DRAWN BY: JWB	DESIGNED BY: JWB/SCL
CHECKED BY: DOK	PROJECT MANAGER: SCL

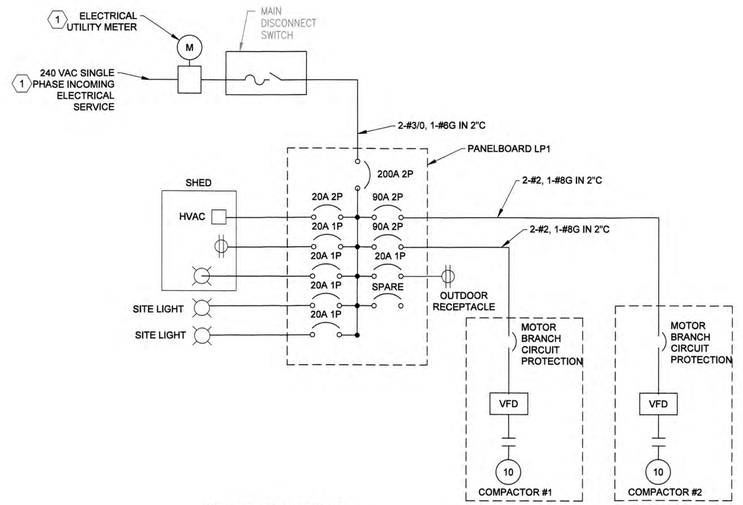
PROJECT NUMBER: 1060953

DRAWING NO.
E-101

DATE: NOVEMBER 2025 SHEET: 10 OF 11

100% PLANS - FOR CONSTRUCTION

FILE PATH: \\OCEANPINE\PROJECTS\DOCS\WORCESTER COUNTY\1060953 - BERLIN HOMEOWNER BULKHEAD REPAIR\CAD\PRODUCTION\DESIGN SET\1060953 - 07-10 - ELECTRICAL.DWG [E-101] LEMASTERS, STEVEN 11/13/2025 3:07 PM



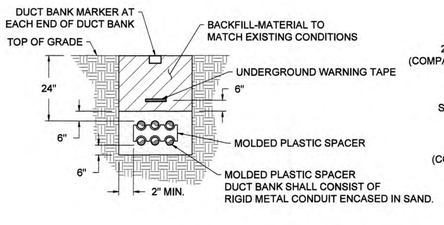
ONE-LINE DIAGRAME NOTES:

1. EXISTING 200A, 240 VAC SINGLE-PHASE SERVICE FROM CHOPTANK ELECTRIC. COORDINATE CONNECTION OF EXISTING 240 VAC, 200A SERVICE WITH NEW DISCONNECT SWITCH AND PANELBOARD LP1 INSTALLATION.

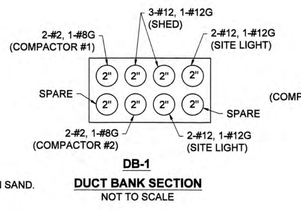
PANEL SCHEDULE

PANELBOARD LP-1 LOCATION ATTENDANT HUT INSTALLATION -
RATINGS 225 AMPS, 240/120 VOLTS, SINGLE PH, 3 WIRE, 60 HZ, GRD BAR -
MAIN LUGS - BKR INTERRUPTING RATING 42,000 SAIC RMS, SYMM, AMPS
MAIN CIRCUIT BREAKER 200 AMPS, CONNECTED LOAD - KVA PANEL SIZE 12

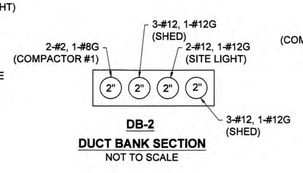
DESCRIPTION	NOTES	BKR AMPS	CKT	A	B	CKT	BKR AMPS	NOTES	DESCRIPTION
SITE LIGHT		20A 1P	1			2	90A 2P		COMPACTOR #1
SITE LIGHT		20A 1P	3			4			
SHED HVAC		20A 1P	5			6	90A 2P		COMPACTOR #2
		20A 1P	7			8			
SHED RECEPTACLES		20A 1P	9			10			SPACE
SHED LIGHTS		20A 1P	11			12	20A 1P		OUTDOOR RECEPTACLE



DUCT BANK DETAIL
NOT TO SCALE



DB-1
DUCT BANK SECTION
NOT TO SCALE



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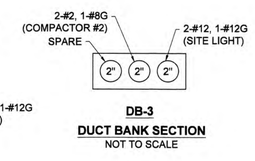
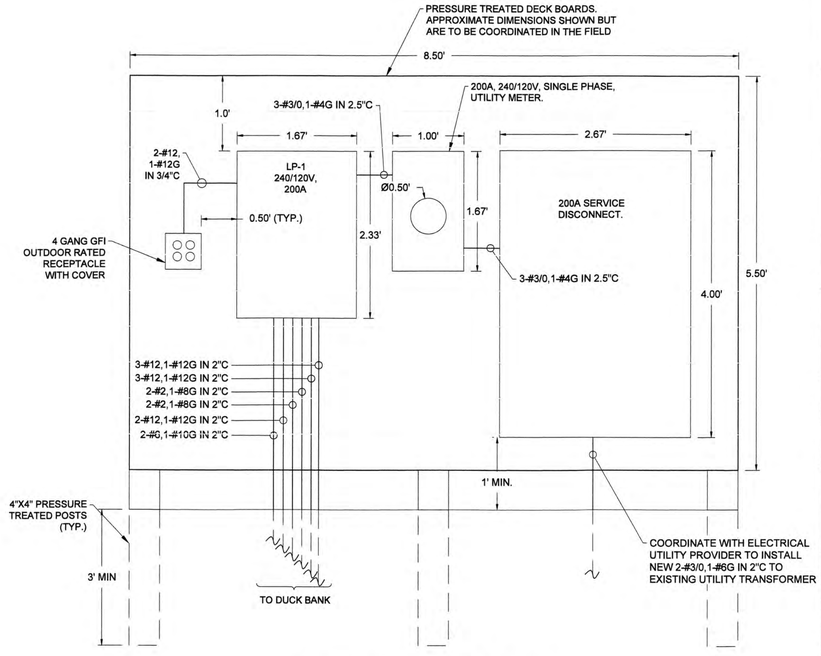
DUCT BANK SECTION
NOT TO SCALE



DB-3
DUCT BANK SECTION
NOT TO SCALE

DUCT BANK DETAIL NOTES

1. TYPICAL DETAIL FOR CONDUIT ARRANGEMENT. EXACT CONFIGURATION OF CONDUITS WITHIN DUCTWILL VARY IN ACCORDANCE WITH CIRCUIT AND EQUIPMENT REQUIREMENTS.



EQUIPMENT MOUNTING RACK - ELEVATION
SCALE: 1" = 1'

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29812
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DRAWING TITLE
ELECTRICAL DETAILS AND ONE-LINE DIAGRAM

DRAWING INFORMATION

DRAWN BY: JWB DESIGNED BY: JWB/SCL
CHECKED BY: DOK PROJECT MANAGER: SCL
PROJECT NUMBER: 1060953

DRAWING NO.
E-102

DATE: NOVEMBER 2025 SHEET: 11 OF 11

100% PLANS - FOR CONSTRUCTION

FILE PATH: N:\CAD\PNP\ES\PROJECTS\DOC\SW\CR\STER COUNTY\1060953 - BERLIN HOMEOWNER BULKHEAD REPAIR\CAD\PRODUCTION\DESIGN SET\1060953 - 07-10 - ELECTRICAL.DWG [E-102] LEMASTERS, STEVEN 11/13/2025 3:57 PM