

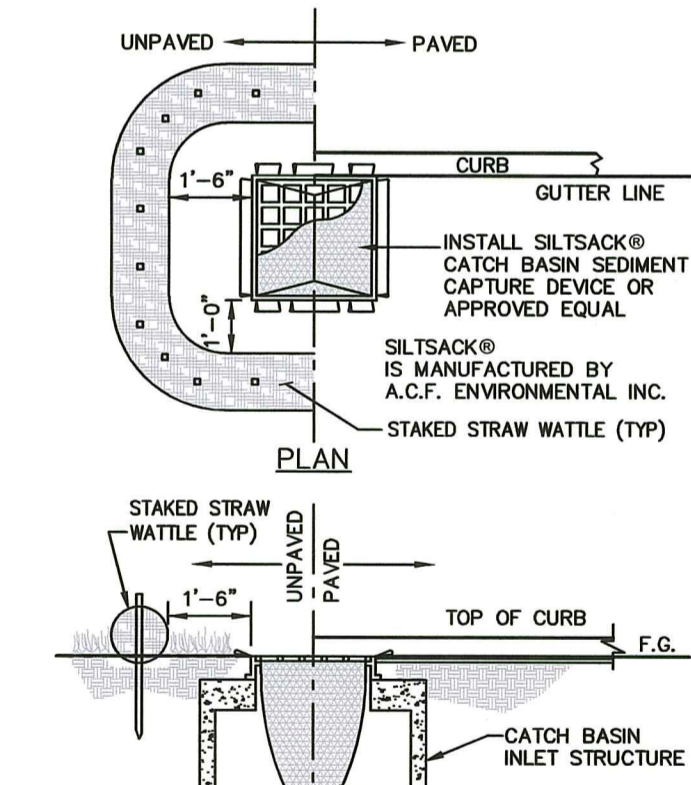
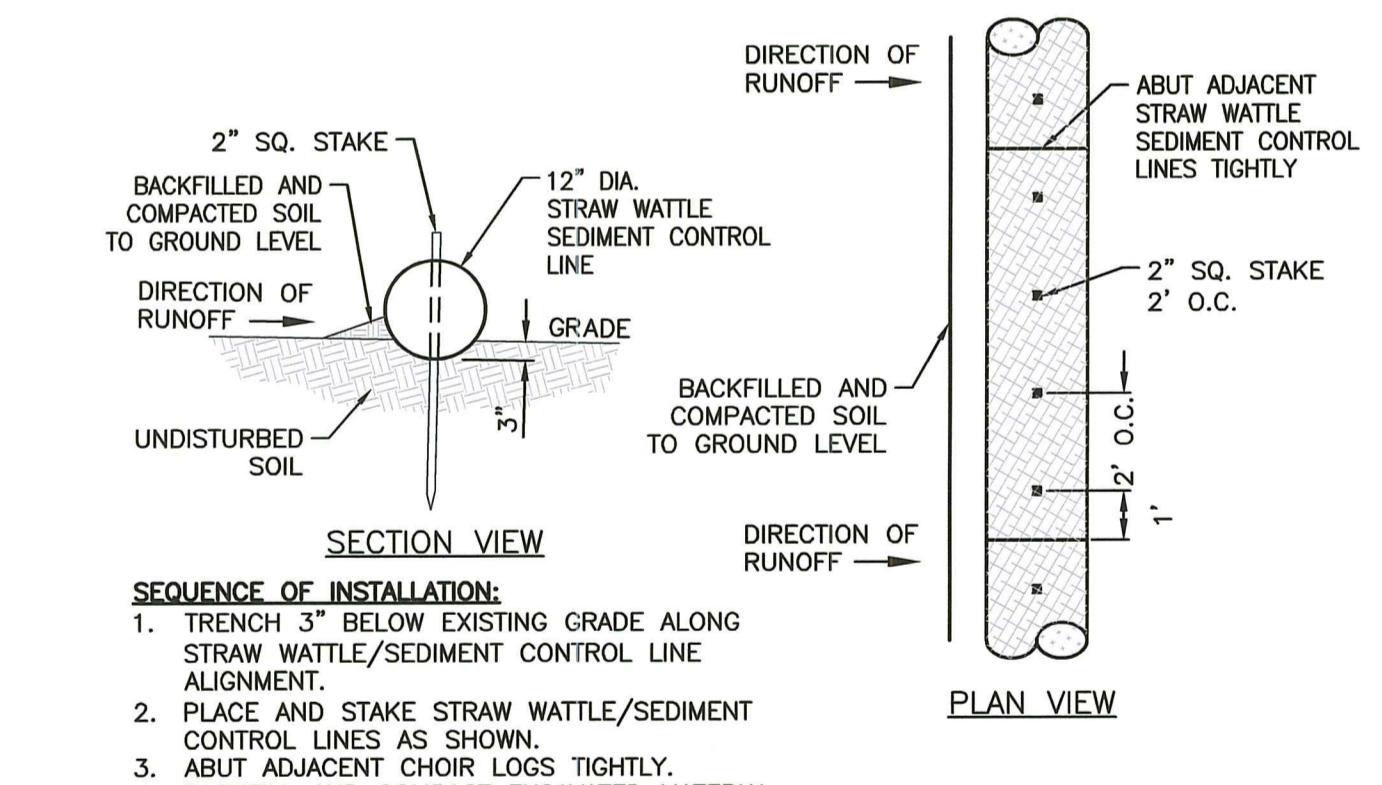
- NOTES:**
- EXISTING CONDITIONS INFORMATION WAS COMPILED FROM A SURVEY PLAN ENTITLED "SURVEY - SITE PLAN" BY MJ GASTON & ASSOCIATES, LLC. DATED DECEMBER 6, 2023.
 - ELEVATIONS ARE REFERENCED TO NAVD88.
 - THE SITE IS NOT LOCATED WITHIN ANY SPECIAL FLOOD HAZARD AREAS AS DETERMINED FROM THE TOWN OF MIDDLETOWN FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP COMMUNITY-PANEL NUMBER 44005 0094 H (MAP REVISED APRIL 5, 2010).
 - THIS PLAN AND ANY ACCOMPANYING CERTIFICATIONS DO NOT CONSTITUTE A CERTIFICATION OF TITLE TO THE PROPERTY DISPLAYED HEREON. THE OWNER OF LOCUS AND ABUTTING PROPERTIES ARE SHOWN ACCORDING TO CURRENT TOWN ASSESSORS RECORDS.
 - EXISTING UTILITY LINES SHOWN ON THIS PLAN ARE FROM AVAILABLE INFORMATION AND ARE APPROXIMATE LOCATIONS. THERE MAY BE EXISTING LINES OTHER THAN THOSE INDICATED. LAND DEVELOPMENT ENGINEERING & CONSULTING, LLC ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN. BEFORE PLANNING FUTURE CONNECTIONS, THE PROPER PUBLIC UTILITY ENGINEERING DEPARTMENT SHOULD BE CONSULTED.
 - A FRESHWATER WETLANDS PERMIT WAS PREVIOUSLY OBTAINED UNDER WETLANDS APPLICATION NO. 23-0096
 - APPROVED DEM SETBACKS & LIMITS OF DISTURBANCE SHOWN ON PROPOSED PLAN SET ENTITLED "SITE PLAN" FOR DAVID T. BARNES BY NATIONAL SURVEYORS-DEVELOPERS, INC. DATED AUGUST 2016.

SOIL EROSION AND SEDIMENTATION CONTROL NOTES

- PRIOR TO INITIATING CONSTRUCTION, ALL SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLANS, AS DIRECTED BY THE ENGINEER AND/OR AS NECESSITATED BY FIELD CONDITIONS. THE CONTRACTOR SHALL MAINTAIN THESE MEASURES UNTIL ALL WORK IS COMPLETED AND ALL AREAS HAVE BEEN STABILIZED.

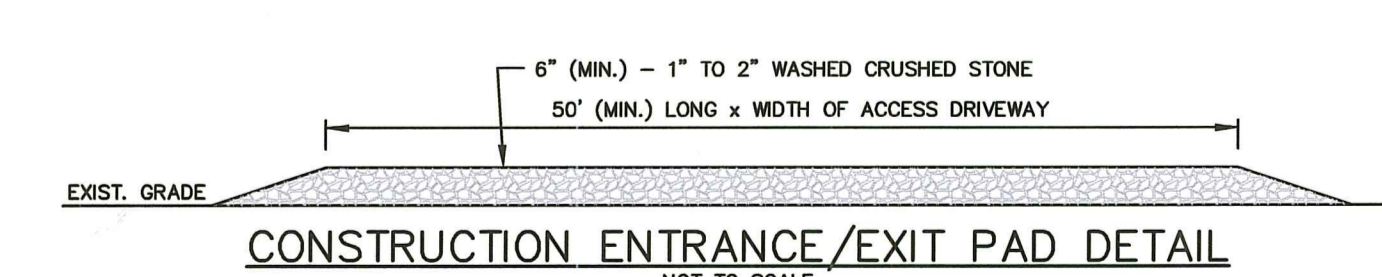
INSTALLATION SEQUENCE

 - INSTALL SILT FENCE AND HAYBALES AS SHOWN ON PLAN.
 - CLEAR AND GRUB SITE.
 - CONSTRUCT SITE INFRASTRUCTURE AS SHOWN ON PLANS.
 - THE FOLLOWING ACTIVITIES SHALL TAKE PLACE IMMEDIATELY FOLLOWING CONSTRUCTION OF EMBANKMENTS AND FILL SLOPES: PLACEMENT OF LOAM AND GRASS SEED, INSTALLATION OF GEOMED SLOPE STABILIZATION.
 - THE CONTRACTOR SHALL INSPECT ALL FILL SLOPES AND EMBANKMENTS ON A WEEKLY BASIS AND FOLLOWING ALL RAINFALL EVENTS UNTIL A MINIMUM 75% GRASS COVER IS ESTABLISHED SUFFICIENT TO PREVENT EROSION FROM OCCURRING.
- ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR OR AS DIRECTED BY THE ENGINEER.
- AFTER THE INSTALLATION OF DRAINAGE STRUCTURES, HAYBALES OR OTHER APPROVED MATERIALS SHALL BE PLACED TO PROTECT THE INTEGRITY OF THE STRUCTURES.
- DISTURBED AREAS SHALL BE STABILIZED WITH THE APPLICATION OF A MINIMUM OF FOUR INCHES (4) OF LOAM AND SHALL BE SEEDING WITH AN APPROVED GRASS MIX OR SHALL BE RIPRAPPED AS SOON AS POSSIBLE AFTER THE FINISHED GRADE HAS BEEN MET. IF FINAL GRADING DOES NOT OCCUR DURING THE GROWING SEASON, THESE AREAS SHALL BE MULCHED WITH HAY AND SECURED BY JUTE NETTING WITH STAPLES. SLOPES EXCEEDING 2:1 SHALL BE LOAMED AND STABILIZED WITH PEGGED SOD OR APPROVED EROSION CONTROL BLANKETS UNLESS OTHERWISE NOTED.
- THE MOUTHS OF ALL CATCH BASINS SHALL BE FITTED WITH SILTSACK OR FILTER FABRIC DURING THE ENTIRE CONSTRUCTION PROCESS TO RETARD SILTATION.
- WHERE APPLICABLE, PROPER DUST CONTROL MEASURES SHALL APPLY TO REDUCE THE SURFACE AND AIR TRANSPORT OF DUST GENERATED DURING CONSTRUCTION. THE FOLLOWING METHODS SHALL BE USED:
 - WET SUPPRESSION WITHOUT WETTING AGENT SHALL BE APPLIED DURING LOAD IN / LOAD OUT AND EARTH MOVING CONSTRUCTION ACTIVITIES, SPECIALLY ON STOCKPILES.
 - INACTIVE STOCKPILES SHALL BE STABILIZED THROUGH APPLICATION OF SOIL STABILIZERS OR SEEDING.
 - WIND SCREENS OR BARRIERS AND PLASTIC TARP COVERS SHALL BE SECURED TO PREVENT WIND DISLODGE AND DAMAGE. ANY DAMAGES SHALL BE REPAIRED OR REPLACED IMMEDIATELY.
- CONTRACTOR SHALL CONSTRUCT A TEMPORARY CRUSHED STONE CONSTRUCTION ENTRANCE APPROXIMATELY DRIVEWAY WIDTH WIDE BY 50' LONG BY 6" DEEP FOR USE DURING CONSTRUCTION ACTIVITIES, AS NECESSARY TO REMOVE SEDIMENT FROM VEHICLES. THE CONSTRUCTION ENTRANCE IS TO BE LOCATED AT THE ENTRANCE TO THE SITE FROM EXISTING ACCESS DRIVEWAY.
- DEWATERING OPERATIONS SHALL BE PROVIDED, IF REQUIRED; ALL DISCHARGE SHALL PASS THROUGH SEDIMENTATION CONTROL DEVICES TO PREVENT IMPACTS UPON WATER BODIES, BORDERING VEGETATED WETLANDS, DRAINAGE SYSTEMS AND ABUTTING PROPERTIES.



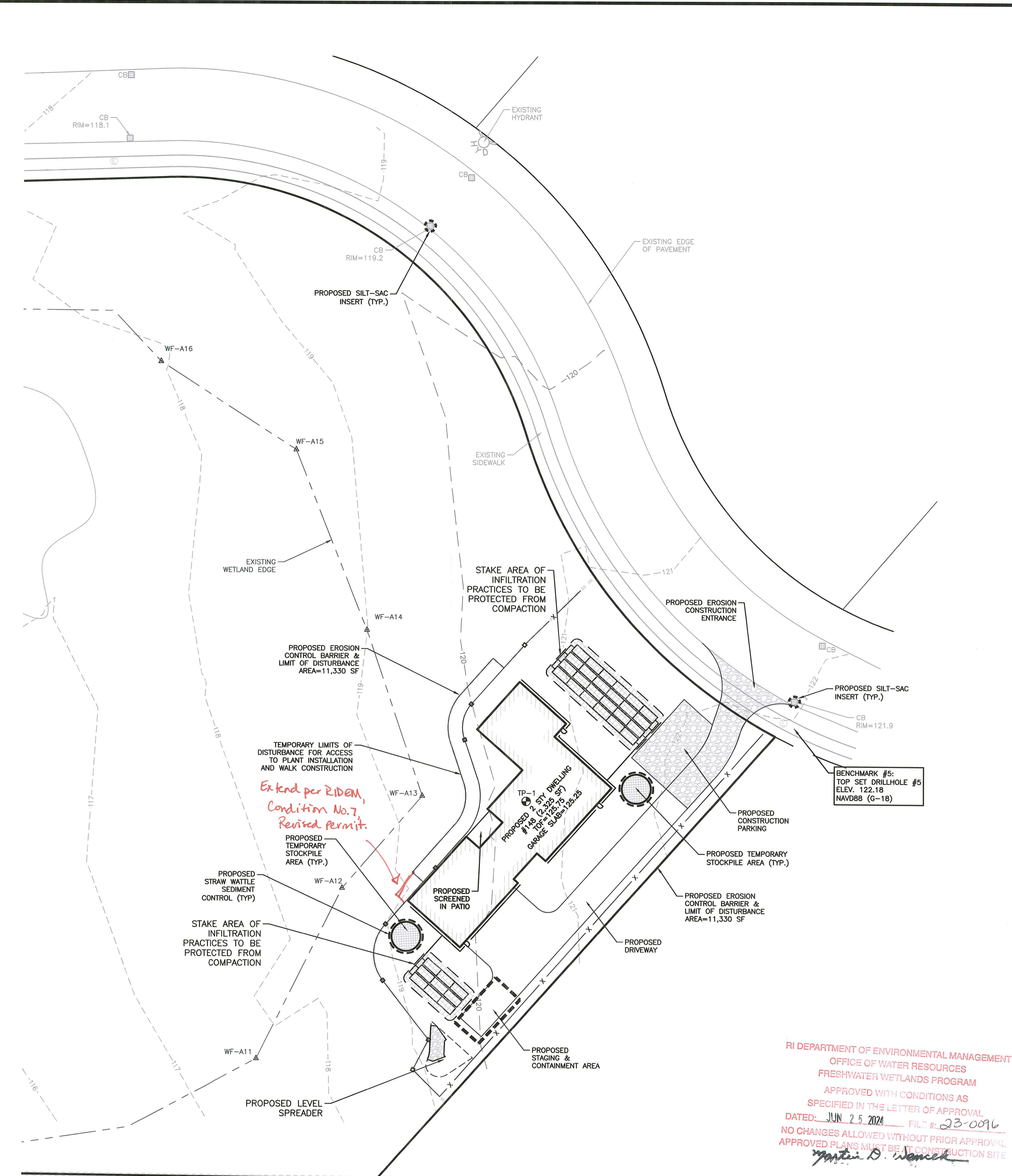
TYPICAL EROSION/SEDIMENT CONTROL FENCE STRAW WATTLE DETAIL
NOT TO SCALE

INLET SEDIMENTATION CONTROL DETAIL
NOT TO SCALE



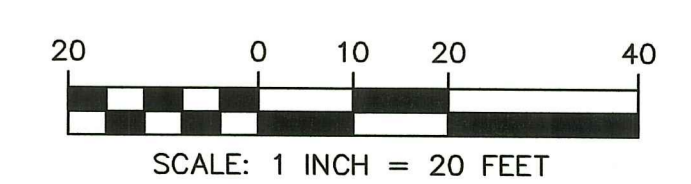
CONSTRUCTION ENTRANCE/EXIT PAD DETAIL
NOT TO SCALE

NOTE:
CONSTRUCTION ENTRANCE IS A TEMPORARY STONE - STABILIZED PAD LOCATED AT POINTS OF VEHICULAR INGRESS AND EGRESS ON THE CONSTRUCTION SITE TO AND FROM A PAVED PUBLIC ROAD OR OTHER PAVED AREAS.



RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: JUN 25 2024 FILE # 23-0096
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Matthew D. Wencik



LDEC
Land Development Engineering & Consulting, LLC
207 High Point Avenue, Unit 6
Portsmouth, RI 02871
T: 401-354-2050 F: 401-369-9775
WWW.SDE-LDEC.COM

NO.	DATE	DESCRIPTION	APPROVED

DATE: APRIL 22, 2024
DRAWN BY: SJE DESIGN BY: SJE CHECK BY: MER
PROJECT NO. 23110
ISSUED FOR: PERMITTING

MICHAEL E. RUSSELL
No. 7856
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

EROSION CONTROL PLAN
148 TROUT DRIVE
ASSESSOR'S MAP 120, PARCEL 903
MIDDLETOWN, RHODE ISLAND
PREPARED FOR: SEAN SULLIVAN & COLLEEN WEAVER

Environmental Management
MAY 15 2024
RI Department of Environmental Management
Office of Water Resources

DRAWING TITLE:
EROSION CONTROL PLAN
SCALE: 1"=20'
SHEET NO.
2 OF 3

SOIL EROSION AND SEDIMENTATION CONTROL NOTES:

THE HAYBALE AND SILT FENCE LINE ILLUSTRATED ON THESE PLANS SHALL SERVE AS THE STRICT LIMIT OF DISTURBANCE FOR THE PROJECT WITHIN OR ADJACENT TO REGULATED FRESHWATER WETLAND AREAS.

THE LIMITS OF CLEARING, GRADING, AND DISTURBANCE SHALL BE KEPT TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION. ALL AREAS OUTSIDE OF THESE LIMITS, AS DEPICTED ON THE PLAN SHALL BE TOTALLY UNDISTURBED, TO REMAIN IN NATURAL CONDITION.

ALL CATCH BASINS SHALL BE PROTECTED WITH STAKED HAYBALES (R.I. STD. 9.8.0) DURING CONSTRUCTION ACTIVITIES. ALL PROPOSED STORMWATER DISCHARGE AREAS SHALL BE LINED WITH A RIPRAP SPLASH PAD AND PROTECTED WITH STAKED HAYBALE OUTLET PROTECTION (R.I. STD. 9.1.0). OR STAKED HAYBALE WITH SILT FENCE (R.I. STD. 9.3.0) SHALL ALSO BE INSTALLED AT ALL EXISTING STORMWATER DISCHARGE LOCATIONS WHERE DISTRIBUTING PIPES, CATCH BASINS, AND MANHOLES ARE TO BE CLEANED AND FLUSHED.

ALL DISTURBED SLOPES EITHER NEWLY CREATED OR CURRENTLY EXPOSED SHALL BE SEEDED, PROTECTED AND MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL REGULARLY CHECK ALL SEEDED AREAS TO ENSURE THAT A GOOD STAND OF VEGETATION IS MAINTAINED.

ALL HAYBALES, TEMPORARY TREATMENT (HAY, STRAW, ETC.) AND TEMPORARY EROSION PROTECTION SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.

STOCKPILES OF TOPSOIL SHALL NOT BE LOCATED NEAR WATERWAYS OR WETLAND EDGES. THEY SHALL HAVE SIDE SLOPES OF NO GREATER THAN 2:1 AND SHALL BE TEMPORARILY SEEDED AND/OR STABILIZED PER CONTRACT SPECIFICATIONS.

THE HAYBALES SHALL BE CHECKED BY THE CONTRACTOR ON A WEEKLY BASIS AND AFTER EACH STORM FOR UNDERMINING OR DETERIORATION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY HAYBALES AS NEEDED. THE CONTRACTOR SHALL CLEAN THE ACCUMULATED SEDIMENT IF HALF OF THE ORIGINAL HEIGHT OF THE BALES BECOMES FILLED WITH SEDIMENTS.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL SOIL EROSION AND SEDIMENT CONTROLS ON THE PROJECT SITE FOR THE ENTIRE DURATION OF THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL FOLLOW THE DIRECTION OF THE RESIDENT ENGINEER WITH REGARD TO INSTALLATION, MAINTENANCE, AND REPAIR OF ALL SOIL EROSION AND SEDIMENTATION CONTROLS ON THE PROJECT SITE. TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROLS (HAYBALES, SILT FENCE, ETC.) SHALL BE MAINTAINED UNTIL ALL EXPOSED SOILS ARE SATISFACTORILY STABILIZED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND/OR RESEEDING ALL AREAS THAT DO NOT DEVELOP WITHIN ONE YEAR FROM THE COMPLETION OF CONSTRUCTION.

ALL REFERENCED SOIL EROSION AND SEDIMENTATION CONTROLS INCLUDING MATERIALS USED, APPLICATION RATES AND THE INSTALLATION PROCEDURES SHALL BE PERFORMED PER THE "RHODE ISLAND EROSION AND SEDIMENTATION HANDBOOK", DATED 1993.

BMP MAINTENANCE SCHEDULE:

ALL MAINTENANCE (INCLUDING CLEANING) REQUIRED DURING THE CONSTRUCTION PHASE OF THE PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL INCLUDE:

INSPECTION OF ALL SLOPES, BERMS, AND OTHER CONTROL STRUCTURES (INCLUDING ROADWAY SIDE SLOPES, FOR STRUCTURAL INTEGRITY/STABILITY AND EVIDENCE OF SOIL EROSION PROCESSES, AND MAINTENANCE OF THESE STRUCTURES IF NECESSARY. INSPECTIONS SHALL BE PERFORMED FOLLOWING ALL RAIN EVENTS OF 1/4 INCH RAINFALL OR MORE IN A 24-HOUR PERIOD, OR BI-MONTHLY IF NO RAINFALL EVENT OCCURS.

REPLANTING, REGRADING, OR OTHER REPAIRS NEEDED AS A RESULT OF SOIL EROSION AND SEDIMENTATION PROCESSES SHALL BE DONE PROMPTLY.

SITE PLAN NOTES:

DETAILED ENGINEERING REVIEW FOR PROPOSED UTILITIES COVERED UNDER SEPERATE SUBMISSION, TO GOVERNING AGENCIES. THE DETAILED ENGINEERING PLANS FOR UTILITIES INSTALLATION AND CONNECTION HAVE NOT BEEN PROVIDED UNDER THIS SUBMISSION.

THE LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE LATEST AVAILABLE INFORMATION. THE UTILITY LOCATIONS ARE APPROXIMATE AND MAY NOT BE ALL INCLUSIVE. THE CONTRACTOR SHALL CHECK AND VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, BOTH OVERHEAD AND UNDERGROUND, AND "DIG-SAFE" MUST BE NOTIFIED PRIOR TO COMMENCING ANY CONSTRUCTION OPERATIONS. RESTORATION AND REPAIR OF DAMAGE TO EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR WITH NO ADDITIONAL COST TO THE OWNER. NO EXCAVATION SHALL COMMENCE UNTIL ALL INVOLVED UTILITY COMPANIES AND/OR TOWN WHOSE FACILITIES MIGHT BE AFFECTED BY ANY WORK TO BE PERFORMED BY THE CONTRACTOR ARE NOTIFIED AT LEAST 72 HOURS IN ADVANCE.

MAINTENANCE AND PROTECTION OF TRAFFIC NOTES:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MAINTENANCE AND PROTECTION OF PEDESTRIAN AND VEHICULAR TRAFFIC INCLUDING POLICE PROTECTION. ALL TEMPORARY AND VEHICULAR SIGNS, BARRICADES AND LANE CLOSURES SHALL BE IN CONFORMANCE WITH THE LATEST REVISIONS OF MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.)

TEMPORARY CONSTRUCTION SIGNS AND ALL APPLICABLE TRAFFIC CONTROL DIVIDES SHALL BE IN PLACE PRIOR TO THE START OF WORK IN ANY AREA OPEN TO TRAFFIC.

THE PRIVATE VEHICLES OF CONSTRUCTION WORKERS WILL NOT BE PARKED IN THE STATE RIGHT-OF-WAY.

ALL MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL SETUPS, SIGNS CHANNELING DEVICES, ETC. SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. 1988 EDITION, INCLUDING REVISION 3, SEPTEMBER 3, 1993 AND SUBSEQUENT ADDENDA.

SIGN MOUNTINGS SHALL BE IN ACCORDANCE WITH THE R.I.D.O.T. SPECIFICATIONS FOR TEMPORARY CONSTRUCTION SIGNS.

ESTABLISHMENT OF VEGETATIVE COVER:

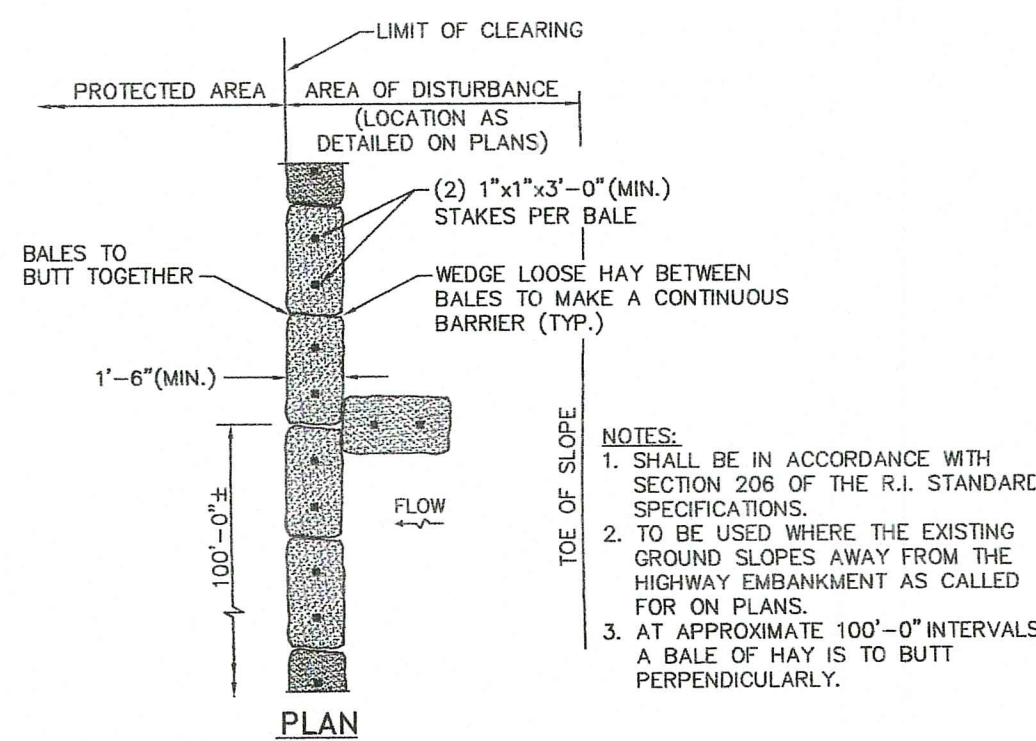
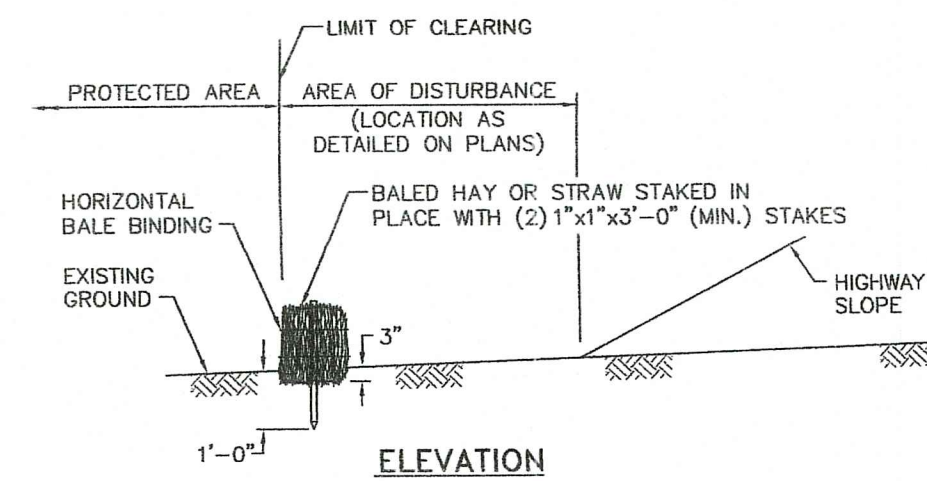
ALL FILL SHALL BE THOROUGHLY COMPACTED UPON PLACEMENT IN STRICT CONFORMANCE WITH THE R.I. STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 202.

SLOPES SHALL NOT BE LEFT UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME SUCH AS THE INACTIVE WINTER SEASON.

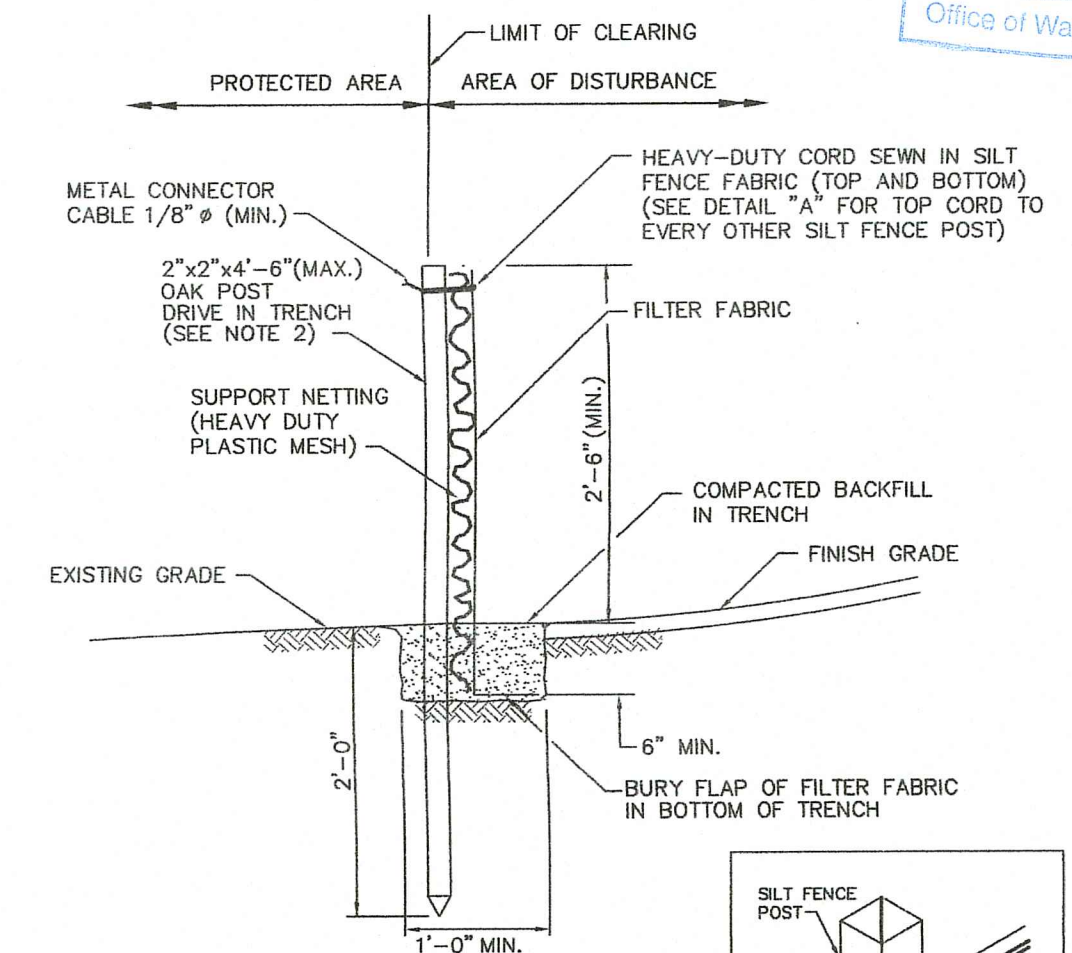
THE TOPSOIL SHALL HAVE A SANDY LOAM TEXTURE RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS AND SHALL CONFORM TO RHODE ISLAND STANDARD SPECIFICATION M.20.

THE SEED MIX TO BE USED ON SLOPE APPROACHING WETLAND SHALL BE THE NEW ENGLAND CONSERVATION/WILDLIFE MIX FROM NEW ENGLAND WETLAND PLANTS, INC. OR APPROVED EQUAL APPLIED AT A RATE OF 25 LBS. PER ACRE AND MULCHED WITH STRAW.

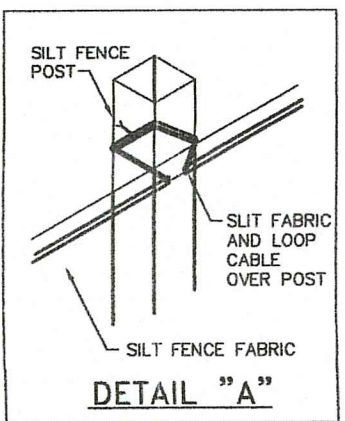
EARLY SPRING OR LATE SUMMER SEEDING IS RECOMMENDED. LIME AND FERTILIZER AS REQUIRED BY SOIL TESTING TO COMPLIMENT OR UPGRADE EXISTING CONDITIONS.



BALED HAY EROSION CHECK



- NOTES:
- SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
 - 2"x2"x4'-6"(MAX.) OAK POSTS FOR SILT FENCE SHALL BE LOCATED 8'-0"(MAX.) O.C. IN WETLAND AREAS AND 4'-0"(MAX.) O.C. IN WETLAND RAVINE, GULLY OR DROP-OFF AREAS AS SHOWN ON PLANS.
 - 1"x1"x4'-6"(MIN.) POSTS PERMITTED FOR PRE-FABRICATED SILT FENCE.
 - SILT FENCE SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.



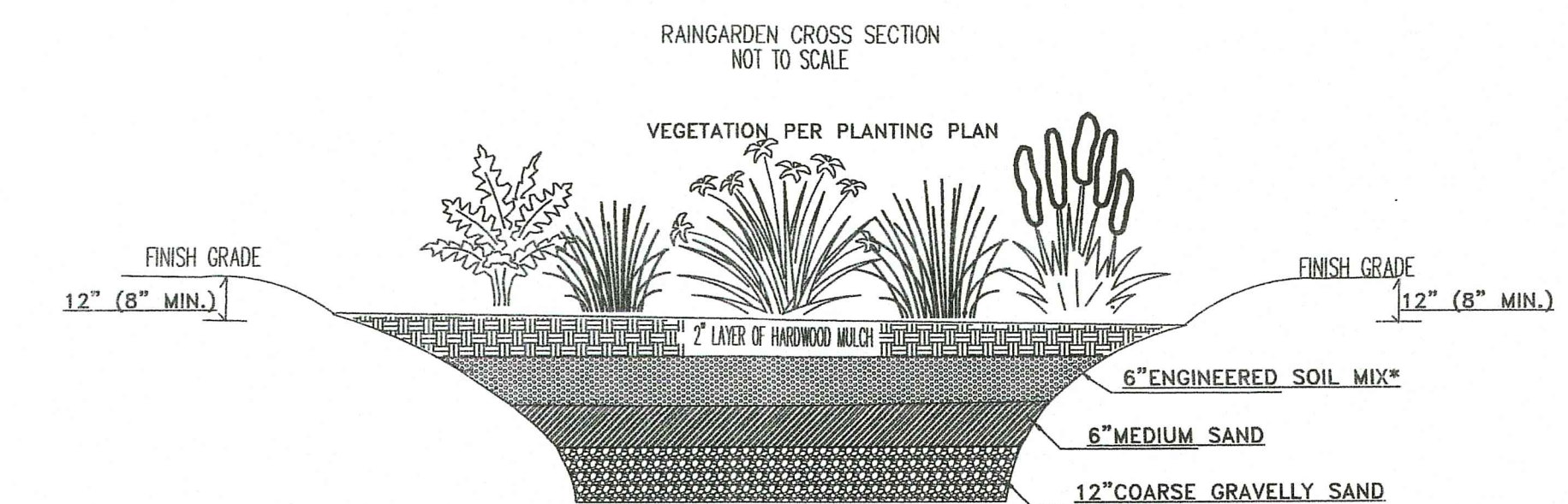
SILT FENCE DETAIL



Tables 7. and 8. Rain Garden Sizing Guidance

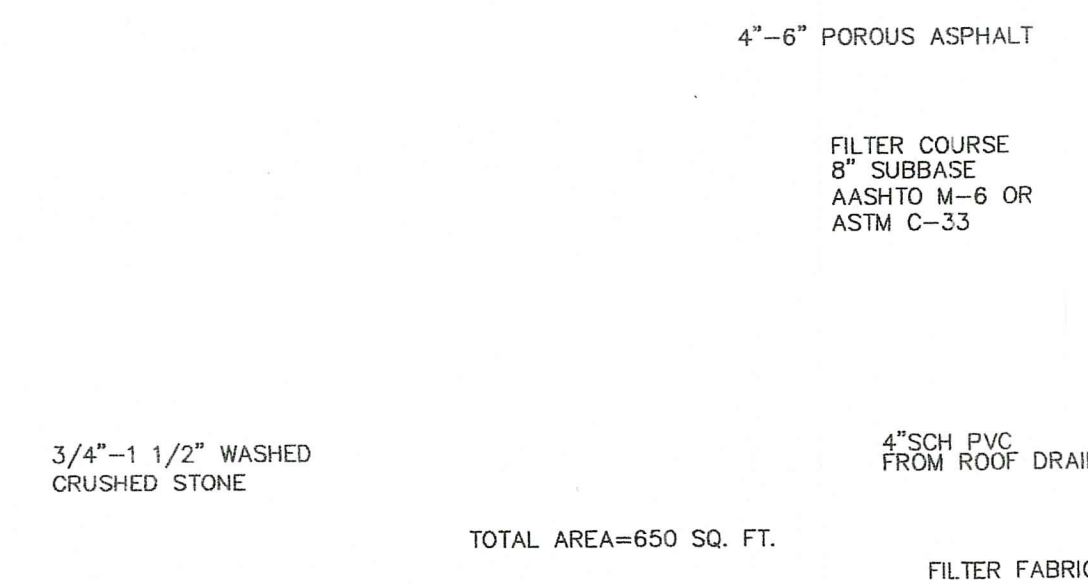
Drainage Area (Square feet)	Rain Garden Surface Area in Sandy Soils (Sands, Loamy Sands and Sandy Loams) (square feet)		
	for 4 inch deep garden	for 6 inch deep garden	for 8 inch deep garden
100	19	15	8
200	38	30	16
300	57	45	24
400	76	60	32
500	95	75	40
600	114	90	48
700	133	105	56
800	152	120	64
900	171	135	72
1000	190	150	80

Drainage Area (Square feet)	Rain Garden Surface Area in Silty Soils (Loams and Silty Loams) (square feet)		
	for 4 inch deep garden	for 6 inch deep garden	for 8 inch deep garden
100	24	25	16
200	48	50	32
300	72	75	48
400	96	100	64
500	120	125	80
600	144	150	96
700	168	175	112
800	192	200	128
900	216	225	144
1000	240	250	160



PLANT SCHEDULE

SYMBOL	SPECIES NAME	COMMON NAME
AD	ASTER DIVARICATUS	WHITE WOOD ASTER
CS	CAREX CONTITA	FRINGED SEDGE
CS	CAREX STRICTA	TUSSOCK SEDGE
IV	IRIS VERSICOLOR	BLUE FLAG IRIS
LC	LOBELIA CARDINALIS	CARDINAL FLOWER
LS	MATTEUCCIA STRUTHOPTERIS	OSTRICH FERN
OC	OSMUNDA CINIANDROMEA	CINNAMON FERN
PC	FONTENELLA CORDATA	PICKEREL PLANT



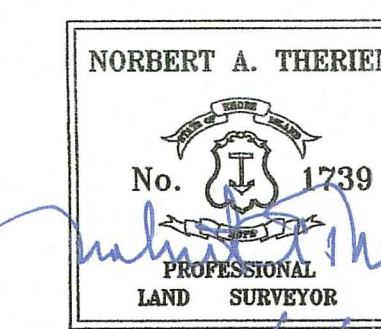
INFILTRATION TRENCH DETAIL NOT TO SCALE

R.I. DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: JUN 29 2023 FILE #: 23-0046
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

DAVID T. BARNES
ASSESSORS PLAT 120 LOT 903
148 TROUT DRIVE
MIDDLETOWN, RHODE ISLAND

DETAILS

DRAWN BY: W.C.R.	CHECKED BY: N.A.T.	FIELD BY: S.K.,D.M.
AUGUST 2016	JOB No. 2016-144	SHEET 2 OF 2



NATIONAL
Surveyors-Developers
Inc.
42 Hamlet Ave., Woonsocket, R.I.
(401) 769-7779

"I CERTIFY THAT THE INFORMATION SHOWN HEREON HAS BEEN OBTAINED BY AN ACTUAL SURVEY ON THE GROUND, THAT IT IS CORRECT AND THIS SURVEY AND PLAN CONFORM TO A CLASS STANDARD AS ADOPTED BY THE RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS.

BY: *Norbert A. Therien*
NORBERT A. THERIEN P.L.S.