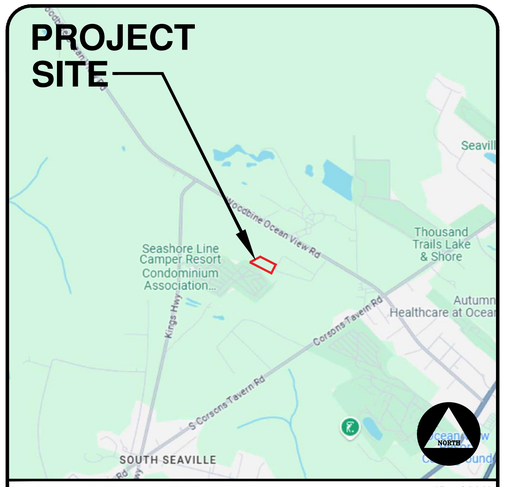
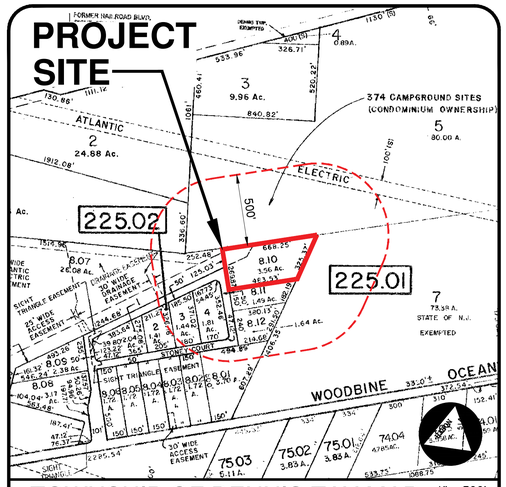
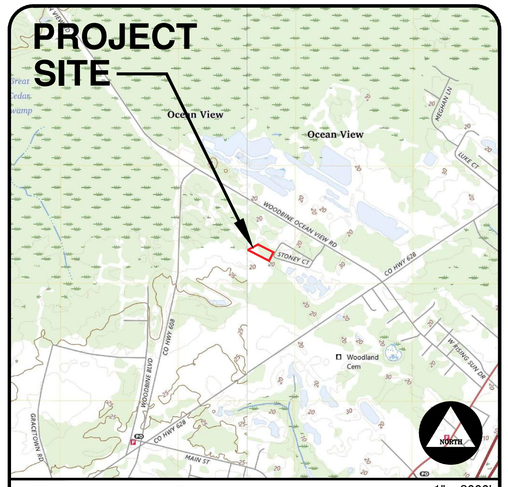


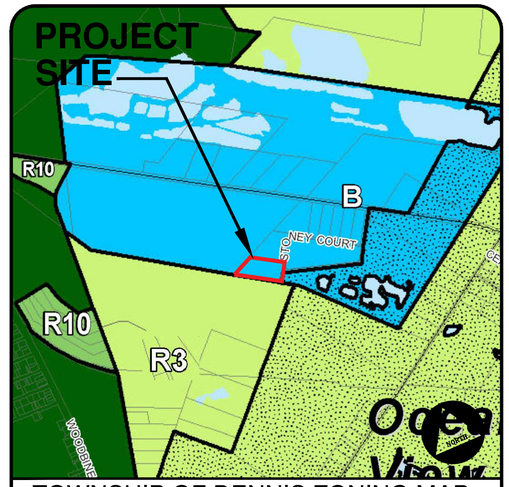
GENERAL LOCATION
(CAPE MAY COUNTY ROADWAY MAP)
1" = 2000'



TOWNSHIP OF DENNIS TAX MAP
(SHEET #26)
1" = 500'



U.S.G.S. MAP
(SEA ISLE CITY QUADRANGLE)
1" = 2000'



TOWNSHIP OF DENNIS ZONING MAP
(B) BUSINESS ZONING DISTRICT
1" = 1000'

Block Lot Qual.	Property Location Additional Lot Qualifier	Property Class	Owner Name Address City, State	Zip Code
224 76	200 WOODBINE-OCEANVIEW RD 084446.88	4A	ATLANTIC CITY ELECTRIC C/O AVI DEPT 5100 HARDING HWY MAYS LANDING, NJ	083302260
225.01 1	CORSON TAVERN RD	1	SEA QUEST ENTERPRISES LLC PO BOX 1877 OCEAN VIEW, NJ	082300007
225.01 5	710 KINGS HWY	15F	SEASHORE LINE CAMPERS RESORT PO BOX 552 SOUTH SEAVILLE, NJ	082460592
225.01 5 C322	IRON HORSE RD #27	2	SOFFONDA, RUDOLPH & BARBARA 27 IRON HORSE CLAYTON, NJ	083122061
225.01 5 C327	ROCK ISLAND RD #257	2	PETRO, JEFFREY & CHRISTINE 374 RAVEN BLUD STATEN ISLAND, NY	103091649
225.01 5 C328	ROCK ISLAND RD #258	2	VAN, FOI & DEBRA 1 WOODBINE RD VINELAND, NJ	083609622
225.01 5 C329	ROCK ISLAND RD #259	2	BOYLE, MONICA & WHISTED-SAUNDERS, A 17-11 HALLEY RD DREXEL HILL, PA	190265466
225.01 5 C340	ROCK ISLAND RD #260	2	PERROTO, JAMES R & PATRICIA J 17 SALEM LANE HORSHAM, PA	190441029
225.01 5 C261	ROCK ISLAND RD #261	2	PANARELLO, PHILIP J JR & ANNA R 447 PACESIDE AVE WILLIAMSTOWN, NJ	080943417
225.01 5 C262	ROCK ISLAND RD #262	2	CANON, RICHARD, C & VICTORIA A 2219 SANDPOINT RD FINKSBURG, MD	210481436
225.01 5 C266	WEST JERSEY SEASHORE #266	2	BALL, CHARLES H & BARBARA A 2112 BIRCH CIR WARRINGTON, PA	189761572
225.01 5 C269	ROCK ISLAND RD #269	2	O'NEILL, JOHN P & KRISTIN 2572 ORTHODOX ST PHILADELPHIA, PA	191371636
225.01 5 C274	ROCK ISLAND RD #274	2	BRADY, JASON 5578 HANCE AVE PHILADELPHIA, PA	191282423
225.01 5 C275	ROCK ISLAND RD #275	2	HOMSTEDS WILLOW AND FIONA LLC PO BOX 39 SOUTH SEAVILLE, NJ	082460059
225.01 5 C276	ROCK ISLAND RD #276	2	THE HOMSTEDS WILLOW & FIONA LLC PO BOX 39 SOUTH SEAVILLE, NJ	082460059
225.01 5 C277	ROCK ISLAND RD #277	2	EHLE, SCOTT H 22 FAIRVIEW AVE PENNSVILLE, NJ	080701504
225.01 5 C278	ROCK ISLAND RD #278	2	NOELLI-HICKS, CYNTHIA A 1 CHESTNUT ST SPRING CITY, PA	194759833
225.01 5 C279	ROCK ISLAND RD #279	2	DALY, JULIE 444 W GULTSTONE AVE #123 MESA, PA	190633995
225.01 5 C280	ROCK ISLAND RD #280	2	WOJCIC, MICHAEL & EILEEN 1 WOODBINE RD WINDHAM, NJ	080931121
225.01 5 C281	ROCK ISLAND RD #281	2	FERRELL, PATRICK H & CHRISTINA J 592 BENEDICTIP RD KUTZTOWN, PA	195309328
225.01 5 C283	ROCK ISLAND RD #282	2	VANDYKE, ERIN & DAWN ETALS 498 COLLEGE BLVD WENONAH, NJ	080901113
225.01 5 C283	ROCK ISLAND RD #283	2	MILLER, THOMAS C & CAROL A 179 BROOK LANE HAMILTON, NJ	086603927
225.01 5 C284	ROCK ISLAND RD #284	2	OGDEN, LISA A 1266 UPTON CIRCLE WEST CHESTER, PA	193605869
225.01 5 C285	ROCK ISLAND RD #285	2	BERTOLINI, DEENA J 339 BIGHO ST ELMER, NJ	083182266
225.01 5 C286	ROCK ISLAND RD #286	2	SHUSTER, RAYMOND & ANNAMARIE 511 HAWTORD DR CINNAMINSON, NJ	080744080
225.01 5 C287	ROCK ISLAND RD #287	2	KELLY, WILLIAM C & DAWN N 408 SWEETBRIAR CT YARDLEY, PA	190674760
225.01 5 C288	ROCK ISLAND RD #288	2	CONNOLLY, RONALD & TERESA D 26 STONEHEDGE CIR LAND HOWELL CT	064683249
225.01 5 C289	SANTA FE TRAIL #289	2	ZIMMERMAN, PAUL & ELISA E 14TH ST BURLINGTON, NJ	080144638
225.01 5 C290	SANTE FE TRAIL #290	2	FORTE, JOSEPH A & EDWIN H 1900 GROVEL AVE LANCASTER, PA	176033393
225.01 5 C340	CORNELIUS VANDEK #345	2	MCLAUGHLIN, PAUL & ANTOINETTE 1194 LEXINGTON DR DEPTFORD, NJ	080966518
225.01 5 C372	ROCK ISLAND RD #372	2	KILGARIF, JOSEPH W & TERESA D 230 S NEW HOLLAND RD KINGTON, PA	175359719
225.01 5 C373	CORNELIUS VANDEK. #373	2	BUZOV, RAYMOND J & HENAUSTTA 99 EAGLE HILL RD LEVITTOWN, PA	190375423
225.01 7.03	WOODBINE-OCEANVIEW RD 084646.2	1	TURNER-O'HEARON/MCCREERH ASSOCIATES PO BOX 607 OCEAN VIEW, NJ	082300027
225.01 8.07	15 STONEY COURT	1	STONEY COURT LLC 1 MOON WAY TINTON FALLS, NJ	07724
225.01 8.11	35 STONEY COURT	4A	WEISHAUSTORD LLC 35 STONEY COURT OCEAN VIEW, NJ	082301041
225.01 8.12	39 STONEY COURT	4A	DENNIS LAND LLC 2122 DUNE DR #10 AVALON, NJ	083502000
225.01 9	305 WOODBINE-OCEANVIEW RD 084644.4	4A	ATLANTIC CITY ELECTRIC CO AVI DEPT 5100 HARDING HWY MAYS LANDING, NJ	083302260
225.02 4	30 STONEY COURT	4A	STONEY LANE HOLDENGS LLC 30 STONEY CT OCEAN VIEW, NJ	082301031
226 1	246 WOODBINE-OCEANVIEW RD 084455.10	1	PITTALUGA, PETER A & MARIA G 242 WOODBINE-OCEANVIEW RD OCEAN VIEW, NJ	082301062
226 2	248 WOODBINE-OCEANVIEW RD 084455.01.01	2	APPA, RICHARD A 250 WOODBINE OCEANVIEW RD OCEAN VIEW, NJ	082301063
226 8	250 WOODBINE-OCEANVIEW RD 084455.02.05	15F	APPA, RICHARD A & BARBARA C 250 WOODBINE OCEANVIEW RD OCEAN VIEW, NJ	082301062
226 9	256 WOODBINE-OCEANVIEW RD 084455.1.04	1	SCHARNAGL, DAWN M 136 RYANS RUN BECKONRIDGE, NJ	080813714
226 10	436 CORSON TAVERN RD 084455.1.03	2	KACZOS, WALTER J 432 CORSON TAVERN RD OCEAN VIEW, NJ	082301094
226 11	436 CORSON TAVERN RD 084455.1.02	2	DELLA SALA, GEORGE & MATTHEW G 436 CORSON TAVERN RD OCEAN VIEW, NJ	082301084
233 4	145 WOODBINE-OCEANVIEW RD 084453.4	2	BRY, JOSEPH W & JULIA M 145 WOODBINE OCEANVIEW RD OCEAN VIEW, NJ	082301014
233 5	149 WOODBINE-OCEANVIEW RD 084453.5	2	KIERNAN, COURTNEY M 149 WOODBINE OCEANVIEW RD OCEAN VIEW, NJ	082301016
233 6	153 WOODBINE-OCEANVIEW RD 084453.6	2	EDWARDS, FRANK P JR 153 RT 9 SEA ISLE CITY, NJ	082431278
233 7	424 CORSON TAVERN RD 084453.7	2	OPUSZYNSKI, CHERYL A & JOSEPH M 424 CORSON TAVERN RD OCEAN VIEW, NJ	082301024
233 8	420 CORSON TAVERN RD 084453.8	2	LYONS, TERRI 420 CORSON TAVERN RD OCEAN VIEW, NJ	082301024
233 9	5 RED CEDAR DR 084453.18	2	BERSON, KIMBERLY A 5 RED CEDAR DR OCEAN VIEW, NJ	082301031
233 10	9 RED CEDAR DR 084453.19	2	ALLEN, ETHEL L 22 NW 11TH ST DELRAY BEACH, FL	3344429849

DN-309, CENTRAL MAIL ROOM
CAPE MAY COURT HOUSE, NJ 08210

VERIZON COMMUNICATIONS
%ENGINEERING DEPARTMENT
10 TANSBORO RD, FL 2
BERLIN, NJ 08009

COMCAST CABLE
901 W LEEDS AVENUE
ABSECON, NJ 08201

PUBLIC SERVICE ELECTRIC & GAS CO.
MANAGER-CORPORATE PROPERTIES
80 PARK PLAZA, T6B
NEWARK, NJ 07102

SOUTH JERSEY GAS COMPANY
% JOSEPH SCHNEIDER
GENERAL MANAGER
SYSTEM ENGINEERING & PLANNING
1 SO JERSEY PLAZA
FOLSOM, NJ 08037

CONECTIV REAL ESTATE DEPARTMENT
5100 HARDING HIGHWAY, SUITE 399
MAYS LANDING, NJ 08330-9902

CAPE ATLANTIC SOIL
CONSERVATION DISTRICT
ATTN: MICHAEL KENT
6260 OLD HARDING HIGHWAY
MAYS LANDING, NJ 08330

STATE OF NJ-DOT
CN-600 1035 PARKWAY AVE
TRENTON, NJ 08625-0600

PROPERTY OWNERS LIST WITHIN 200'

1. Applicant/Owner:
   Wes, Paige, Ford, LLC
   c/o Shaun Andrews
   35 Stoney Court
   Ocean View, NJ 08230
   Phone: (856) 297-7245

   Project Location:
   31 Stoney Court
   Ocean View, NJ 08230
2. The project site is known as Block 225.01 Lot 8.10, as shown on the Tax Plate #26 of the Township of Dennis Tax Maps.
3. The project site is located in the (B) Business Zoning District.
4. The project site consists of an area of 3.557± Acres & is currently vacant.
5. It is the intent of the applicant to construct a 13,600 SF Gymnastics Building, a 5,000 SF Contractor Storage Building & associated parking lots.
6. The proposed buildings will each be serviced by an on-site septic system & well.
7. All concrete curb, sidewalk, pavement disturbed in kind within road rights-of-way are to be repaired in kind.
8. All traffic signs, other signs, mailboxes, poles and/or safety devices that will be removed during construction are to be reinstalled at the proper location.
9. Stormwater Calculations are submitted under separate cover. Calculations were prepared by Engineering Design Associates and dated April 8, 2025.
10. The proposed application will require approvals from the following agencies:
    - Dennis Township Land Use Board
    - Cape May County Planning Board
    - Cape Atlantic Soil Conservation District
    - Cape May County Health Department

GENERAL NOTES

Outbound & Topographic information taken from plan entitled "Survey with Elevations" situate in Block 225.01 Lot 8.10, Township of Dennis, Cape May County, NJ prepared by Cape Land Surveying, George Swensen, NJPLS #43415 & dated 3/14/2025. Elevations are in feet & refer to NAVD88.

SURVEY INFORMATION

This set of plans has been prepared for purposes of municipal and agency review and approval. This set of plans shall not be utilized as construction documents until all conditions of approval have been satisfied on the drawings and each drawing has been revised to indicate " Issued for Construction."

Contractor shall check and verify all existing utilities, grades, site dimensions and existing conditions before proceeding with construction. Any discrepancies or unusual conditions are to be reported to design engineer/project staff immediately for adjustments or directions.

All construction to be performed in accordance with NJDOT Standard Specifications and supplementary specifications for this project.

These drawings do not include the necessary components for construction safety; however, all construction must be done in compliance with the Occupational Safety and Health Act of 1970 and all rules and regulations appurtenant to this project.

CONTRACTOR NOTES

ZONING INFORMATION
(B) BUSINESS ZONING DISTRICT

Description	Required	Proposed	Variance
Principal Building			
Lot Area (min.)	60,000 SF	154,942.92 SF	NO
Lot Frontage (min.)	150'	269.87'	NO
Lot Width (min.)	150'	269.7'	NO
Lot Depth (min.)	200'	575.9'	NO
Front Yard Setback (min.)	75'	77.5'	NO
Rear Yard Setback (min.)	50'	84.0'	NO
Side Yard Setback (min.)	25'	49.4' 49.3'	NO
Principal Building Coverage (max.)	35%	12.00%	NO
Impervious Coverage (max.)	50%	43.57%	NO
Building Height (max.)	35'	<35'	NO
Parking Requirements			
Front Yard Setback (min.)	50'	50.0'	NO
Side Yard Setback (min.)	30'	18.3', 18.4'	YES
Number of Spaces			
Gymnastics (9,200 SF) (5 spaces/1,000 SF)	46	46	NO
Contractor Storage (5,000 SF) (1 space/ 1,000 SF)	5	3	YES
Parking Space	9' x 18'	9' x 18'	NO
Drive Aisle (Two-Way)	25'	25'	NO
Sign Requirements			
Number of Signs (max.)	1	1	NO
Sign Area (max.)	32 SF	<32 SF	NO
Sign Height (max.)	25'	<25'	NO
Setbacks			
Property Line	100'	10'	YES
Driveway	50'	25'	YES

Variances Requested
- Section 185-25(B) to permit a Gymnastics Building in the Business Zoning District.
- Section 185-25(F)(2) to permit drive aisle 18.3' & 18.4' from side property line, where 30' is required.
- Section 185-38(B)(15) to permit 3 parking spaces for the contractor storage where 5 is required.
- Section 185-43(B)(7) to permit a sign 10' from the property line, where 100' is required.
- Section 185-43(B)(7) to permit a sign 25' from the driveway, where 50' is required.

Waivers Requested
- Section 185-41(K) to waive submission of an Environmental Assessment.

ZONING INFORMATION

SITE PLAN FOR WES, PAIGE, FORD, LLC

BLOCK 225.01, LOT 8.10
TOWNSHIP OF DENNIS
CAPE MAY COUNTY, NEW JERSEY

EDA Engineers - Landscape Architects - Planners

SCHEDULE OF SHEETS	SHEET NUMBER	ORIGINAL DATE	LAST REVISION DATE
COVER SHEET	1 OF 10	5/13/2025	-
SITE PLAN	2 OF 10	5/13/2025	-
GRADING & DRAINAGE PLAN	3 OF 10	5/13/2025	-
LIGHTING & LANDSCAPING PLAN	4 OF 10	5/13/2025	-
SOIL EROSION & SEDIMENT CONTROL PLAN	5 OF 10	5/13/2025	-
ENGINEERING DETAILS	6 OF 10	5/13/2025	-
ENGINEERING DETAILS	7 OF 10	5/13/2025	-
ENGINEERING DETAILS	8 OF 10	5/13/2025	-
ENGINEERING DETAILS	9 OF 10	5/13/2025	-
SOIL EROSION & SEDIMENT CONTROL DETAILS	10 OF 10	5/13/2025	-

TOWNSHIP OF DENNIS APPROVAL BLOCK

Chairman _____ Date _____

Secretary _____ Date _____

Engineer _____ Date _____

EDA Engineering Design Associates, P.A.
Engineers Environmental Planners Landscape Architects
CAMBRIDGE PROFESSIONAL OFFICES
5 Cambridge Drive Ocean View New Jersey 08230
(609) 390-0332 ◦ Fax (609) 390-9204 ◦ www.engineeringdesign.com ◦ CERTIFICATE OF AUTHORIZATION#: 24GA27970000

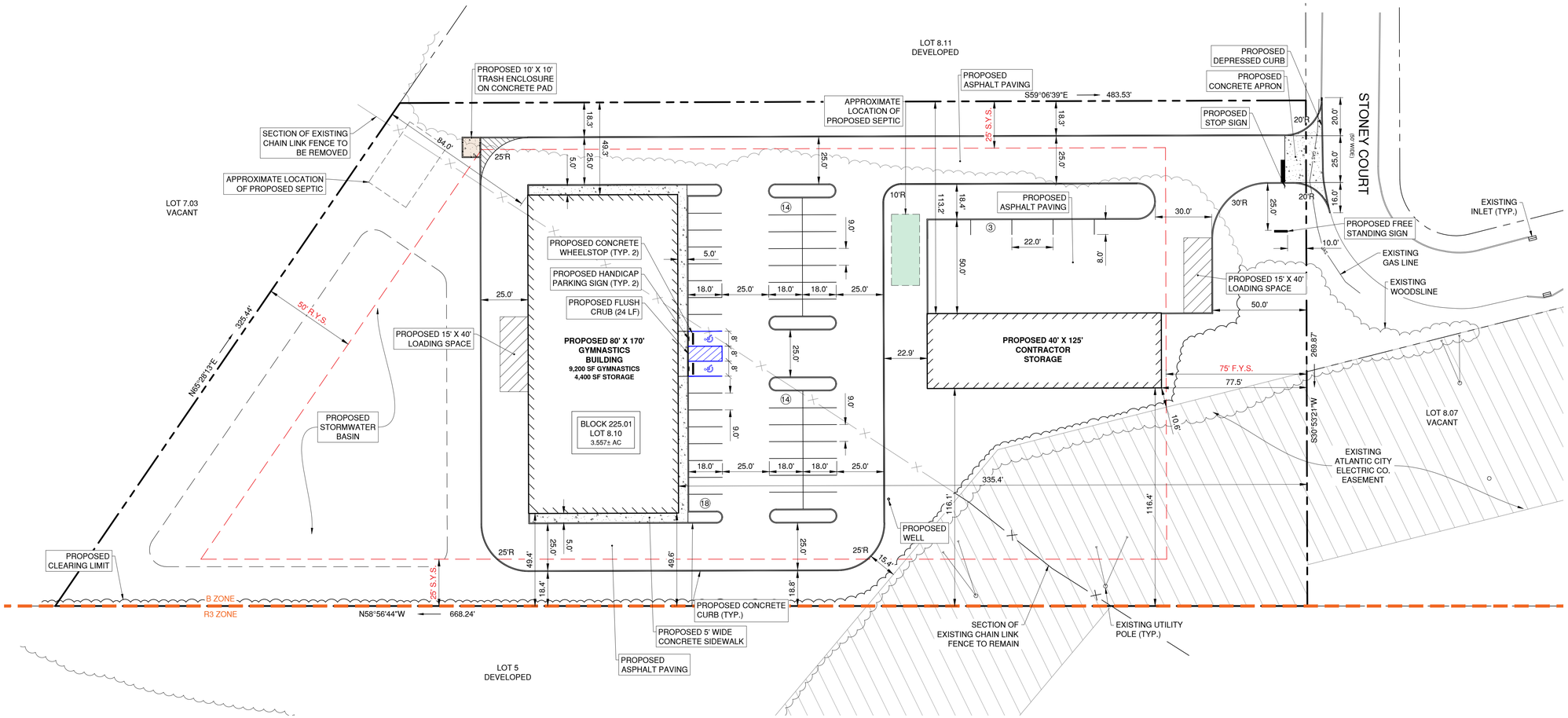
COVER SHEET
BLOCK 225.01, LOT 8.10
TOWNSHIP OF DENNIS
CAPE MAY COUNTY, NEW JERSEY

JOSEPH H. MAFFEI
PROFESSIONAL ENGINEER
N.J.P.E. LIC. #37894

REVISION	DATE	BY

EDA

DATE: 5/13/2025	DRAWN BY: MAJ
SCALE: AS NOTED	CHECKED BY: JHM
PROJECT #: 10625	SHEET: 1 0F 10



SITE PLAN

NOTE: SEE SHEET 4
FOR SIGHT TRIANGLE.

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

EDA Engineers - Landscape Architects - Planners

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Engineers Environmental Planners Landscape Architects
CAMBRIDGE PROFESSIONAL OFFICES
5 Cambridge Drive Ocean View New Jersey 08230
(609) 390-0332 ◦ Fax (609) 390-9204 ◦ www.engineeringdesign.com ◦ CERTIFICATE OF AUTHORIZATION# 24GA27970300

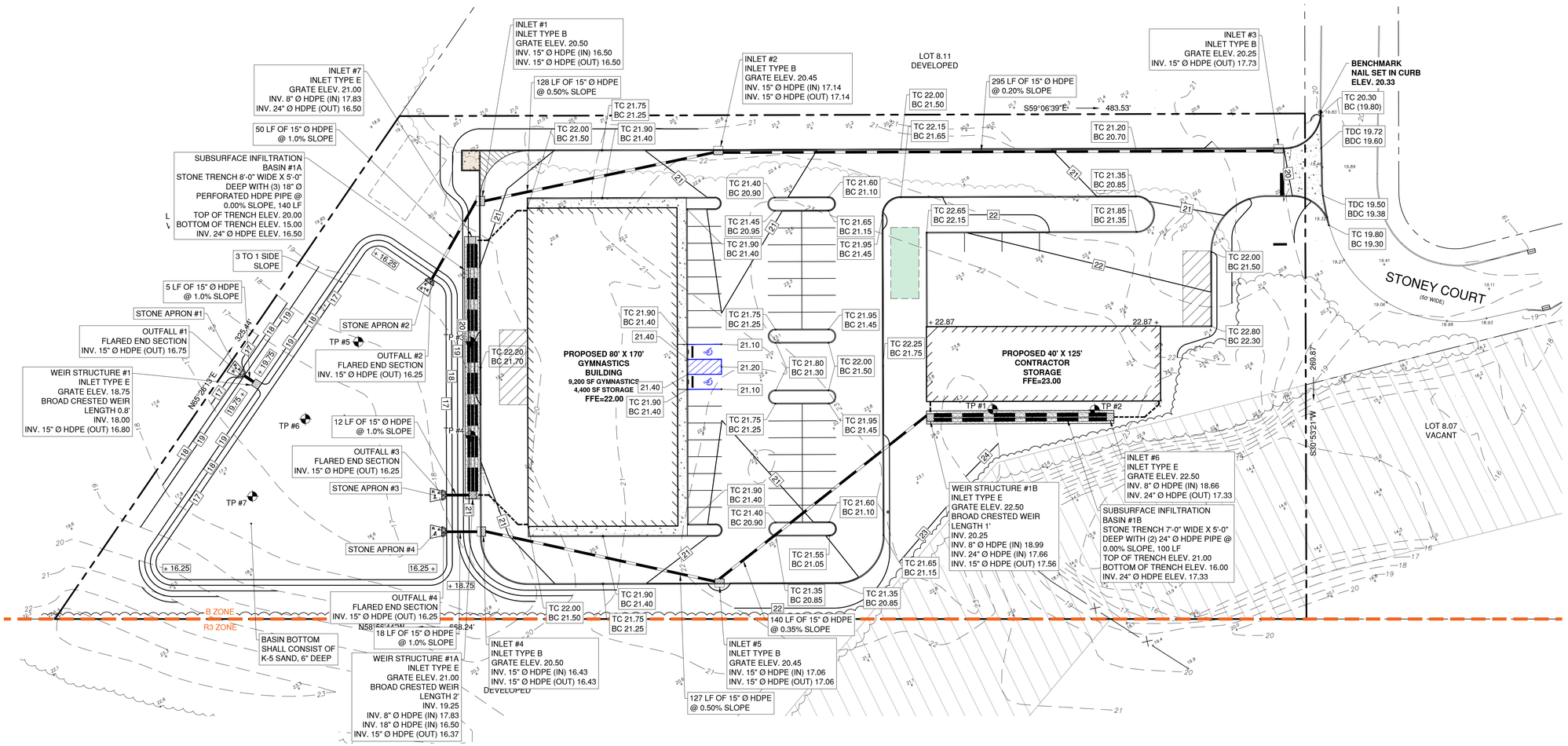
SITE PLAN
BLOCK 225.01, LOT 8.10
TOWNSHIP OF DENNIS
CAPE MAY COUNTY, NEW JERSEY

JOSEPH H. MAFFEI
PROFESSIONAL ENGINEER
N.J.P.E. LIC. #37894

REVISION	DATE	BY

EDA

DATE: 5/13/2025	DRAWN BY: MAJ
SCALE: AS NOTED	CHECKED BY: JHM
PROJECT #: 10625	SHEET: 2 0F 10



GRADING & DRAINAGE PLAN

EDA Engineers - Landscape Architects - Planners

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

EDA Engineering Design Associates, P.A.
Engineers Environmental Planners Landscape Architects
CAMBRIDGE PROFESSIONAL OFFICES
5 Cambridge Drive Ocean View New Jersey 08230
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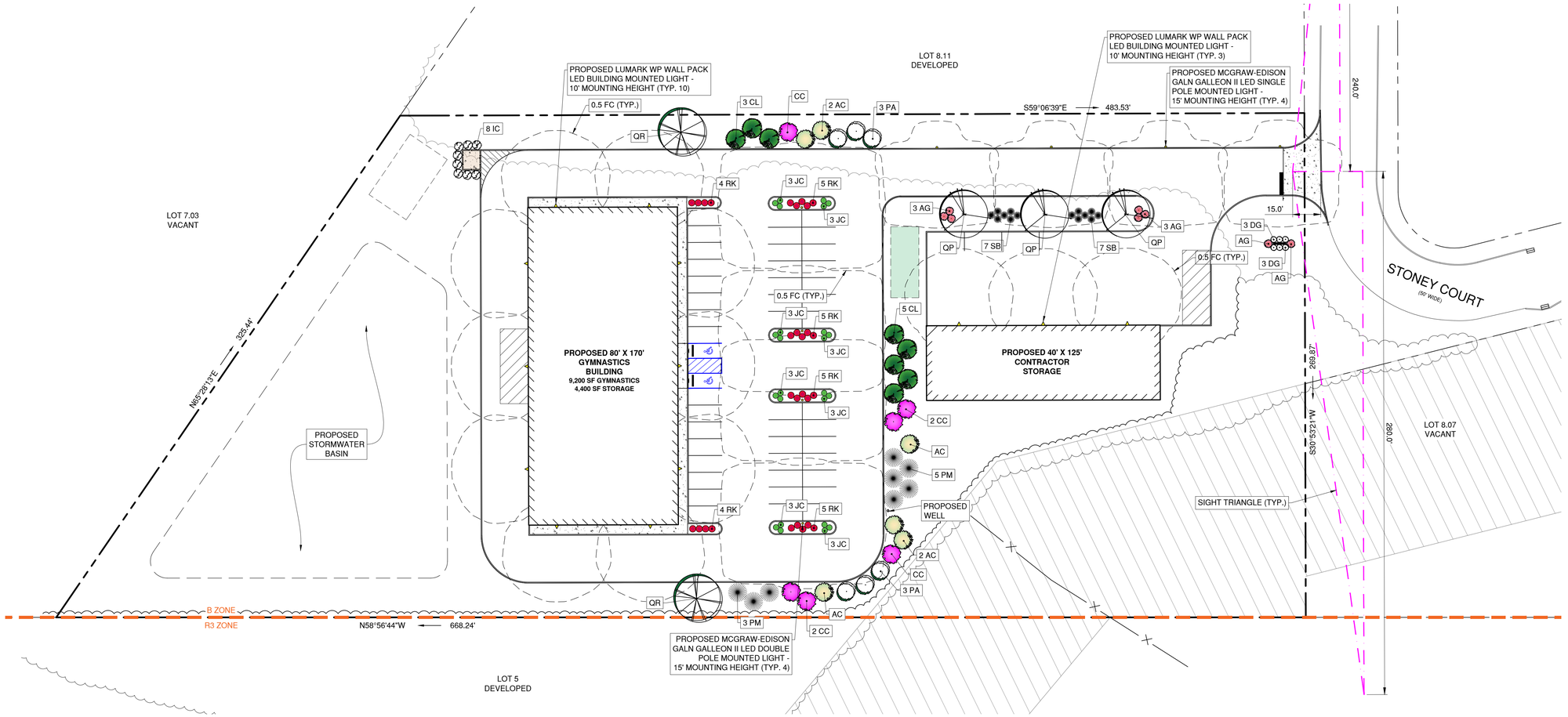
GRADING & DRAINAGE PLAN
BLOCK 225.01, LOT 8.10
TOWNSHIP OF DENNIS
CAPE MAY COUNTY, NEW JERSEY

JOSEPH H. MAFFEI
PROFESSIONAL ENGINEER
N.J.P.E. LIC. #37894

REVISION	DATE	BY

DATE: 5/13/2025	DRAWN BY: MAJ
SCALE: AS NOTED	CHECKED BY: JHM
PROJECT #: 10625	SHEET: 3 0F 10



LANDSCAPING & LIGHTING PLAN

EDA Engineers - Landscape Architects - Planners

PLANT SCHEDULE

ABB.	BOTANICAL NAME	COMMON NAME	QTY	SIZE	COMMENTS
SHRUBS					
AG	*Abelia X Grandiflora Rose Creek*	Rose Creek Abelia	8	18" - 24"	#3 Can.
DG	*Deutzia Gracilus Chardonnay Pearls*	Chardonnay Pearls Deutzia	6	15" - 18"	#3 Can.
IC	*Ilex Crenata Excelsa Schwoebel*	Schwoebel Upright Holly	8	48" - 54"	#10 Can.
JC	*Juniper Chinensis Sargentii Viridis*	Sargent Green Juniper	24	15" - 18"	#3 Can.
RK	*Rosa Knockout*	Knockout Rose Double Red	28	18"-24"	#3 Can.
SB	*Spiraea X Bumaldo Anthony Waterer*	Anthony Waterer Spirea	14	18" - 24"	#3 Can.
CONIFEROUS TREES					
CL	*Cupressocyparis Leylandii*	Leyland Cypress	8	7' - 8'	B & B
PA	*Picea Abies*	Norway Spruce	6	5' - 6'	B & B
PM	*Pseudotsuga Menziesii*	Douglas Fir	8	5' - 6'	B & B
SHADE TREES					
QP	*Quercus Phellos*	Willow Oak	3	2 ½" - 3" Cal.	B & *B*
QR	*Quercus Rubra*	Red Oak	2	2 ½" - 3" Cal.	B & *B*
ORNAMENTAL TREES					
AC	*Amelanchier Canadensis*	Shadblow Serviceberry	6	7' - 8'	B & *B*
CC	*Cercis Canadensis*	Eastern Redbud	6	7' - 8'	B & *B*

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

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LIGHTING & LANDSCAPING PLAN
BLOCK 225.01, LOT 8.10
TOWNSHIP OF DENNIS
CAPE MAY COUNTY, NEW JERSEY

JOSEPH H. MAFFEI
PROFESSIONAL ENGINEER
N.J.P.E. LIC. #37894

REVISION	DATE	BY

EDA

DATE: 5/13/2025	DRAWN BY: MAJ
SCALE: AS NOTED	CHECKED BY: JHM
PROJECT #: 10625	SHEET: 4 0F 10

Soil De-compaction and Testing Requirements

Soil Compaction Testing Requirements

1. Subgrade soils **prior to the application of topsoil** (see permanent seeding and stabilization notes for topsoil requirements) shall be free of excessive compaction to a depth of 6.0 inches to enhance the establishment of permanent vegetative cover.

2. Areas of the site which are subject to compaction testing and/or mitigation are **graphically denoted** on the certified soil erosion control plan.

3. **Compaction testing locations** are denoted on the plan. A copy of the plan or portion of the plan shall be used to mark locations of tests, and attached to the compaction remediation form, available from the local soil conservation district. This form must be filled out and submitted prior to receiving a certificate of compliance from the district.

4. In the event that testing indicates compaction in excess of the maximum thresholds indicated for the simplified testing methods (see details below), the contractor/owner shall have the option to perform either (1) compaction mitigation over the entire mitigation area denoted on the plan (excluding exempt areas), or (2) perform additional, more detailed testing to establish the limits of excessive compaction whereupon only the excessively compacted areas would require compaction mitigation. Additional detailed testing shall be performed by a trained, licensed professional.

Compaction Testing Methods

A. Probing Wire Test (see detail)
B. Hand-held Penetrometer Test (see detail)
C. Tube Bulk Density Test (licensed professional engineer required
D. Nuclear Density Test (licensed professional engineer required)

Note: Additional testing methods which conform to ASTM standards and specifications, and which produce a dry weight, soil bulk density measurement may be allowed subject to District approval.

Soil compaction testing is not required if/when subsoil compaction remediation (scarification/tillage (6" minimum depth) or similar) is proposed as part of the sequence of construction.

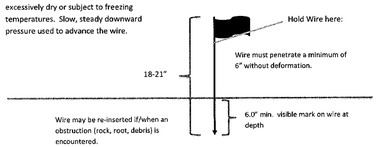
Procedures for Soil Compaction Mitigation

Procedures shall be used to mitigate excessive soil compaction **prior to placement of topsoil** and establishment of permanent vegetative cover.

Restoration of compacted soils shall be through deep scarification/tillage (6" minimum depth) where there is no danger to underground utilities (cables, irrigation systems, etc.). In the alternative, another method as specified by a New Jersey Licensed Professional Engineer maybe substituted subject to District Approval.

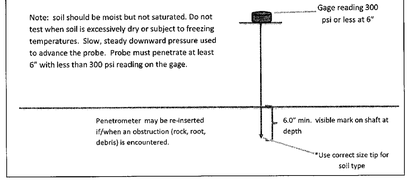
Probing Wire Test- 15.5 ga steel wire (survey flag)

Note: soil should be moist but not saturated. Do not test when soil is excessively dry or subject to freezing temperatures. Slow, steady downward pressure used to advance the wire.



Handheld Soil Penetrometer Test

Note: soil should be moist but not saturated. Do not test when soil is excessively dry or subject to freezing temperatures. Slow, steady downward pressure used to advance the probe. Probe must penetrate at least 6" with less than 300 psi reading on the gage.



TOPSOIL & SOIL DE-COMPACTION REQUIREMENTS

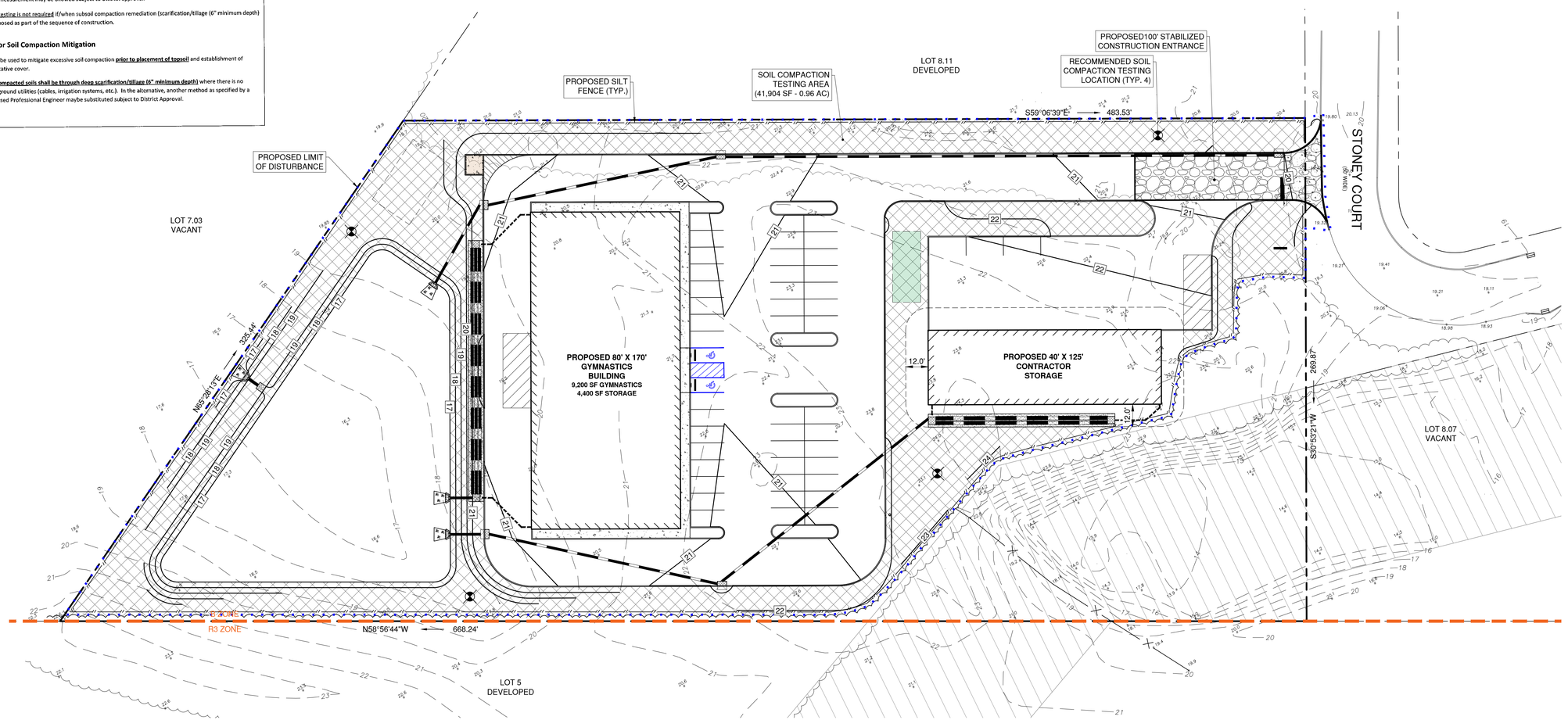
1. A minimum of 5 inches of topsoil is required on areas to be vegetated to improve the soil medium for plant establishment and maintenance per Chapter 8 of the "Standards for Soil Erosion and Sediment Control in New Jersey" dated July 2017.
2. Subgrade soils shall be free of excessive compaction to a depth of 6 inches to enhance the establishment of permanent vegetative cover per Chapter 19 of the "Standards for Soil Erosion and Sediment Control in New Jersey" dated July 2017.
3. Subsoils are to be proactively de-compacted or soil compaction tested prior to the application of topsoil. Compaction testing method/prodecure shall be performed per Chapter 19 by the contractor or other project owner's representative. If the testing indicates subsoil compaction, the subsoil shall be de-compacted to a depth of 6 inches prior to the application of topsoil.
4. If compaction testing is not performed, subsoils shall be scarified/ tilled to a minimum depth of 6 inches as part of the sequence of construction where there is no danger to underground utilities (cables, irrigation systems, etc.). In the alternative, another method as specified by a New Jersey Licensed Professional Engineer maybe substituted subject to District approval.

SOIL EROSION NOTES:

A REPORT OF COMPLIANCE MUST BE OBTAINED FROM THE DISTRICT PRIOR TO RECEIVING A CERTIFICATE OF OCCUPANCY FROM THE MUNICIPALITY. A REQUEST FOR A DISTRICT INSPECTION FOR THE RELEASE OF A REPORT OF COMPLIANCE MUST BE MADE 5 WORKING DAYS IN ADVANCE. THIS APPLIES TO BOTH COMPLETE (FINAL) AND CONDITIONAL (TEMPORARY) CERTIFICATES. ALL STREETS AND UNITS MUST BE PROPERLY IDENTIFIED. A REPORT OF COMPLIANCE WILL NOT BE RELEASED FOR A UNIT IF IT CAN NOT BE IDENTIFIED. IDENTIFY ALL UNITS AT THE SITE BY BLOCK, LOT AND STREET ADDRESS.

REMOVE ALL SEDIMENT THAT MAY BE SPILLED, DROPPED OR TRACKED OFF THE PROJECT SITE. ALL PAVED RIGHTS OF WAY ADJACENT TO THE PROJECT SITE MUST BE MAINTAINED IN A CLEAN, SWEPT CONDITION THROUGHOUT CONSTRUCTION. IT MAY BE NECESSARY TO INSTALL CRUSHED STONE PAD(S) TO HELP REDUCE OFF SITE TRACKING OF SEDIMENT.

THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ANY EROSION OR SEDIMENTATION THAT MAY OCCUR BELOW STORM WATER OUTFALLS OR OFFSITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.



LEGEND:

- SOIL COMPACTION TESTING AREA TOTAL 41,904 SF (0.96 Acres)
- RECOMMENDED SOIL COMPACTION TEST LOCATION
- APPROXIMATE LIMIT OF DISTURBANCE
- PROPOSED SILT FENCE

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

SOIL EROSION & SEDIMENT CONTROL PLAN

EDA Engineers - Landscape Architects - Planners

EDA Engineering Design Associates, P.A.
Engineers Environmental Planners Landscape Architects
CAMBRIDGE PROFESSIONAL OFFICES
5 Cambridge Drive Ocean View New Jersey 08230
(609) 390-0332 ◦ Fax (609) 390-9204 ◦ www.engineeringdesign.com ◦ CERTIFICATE OF AUTHORIZATION# 24GA27970000

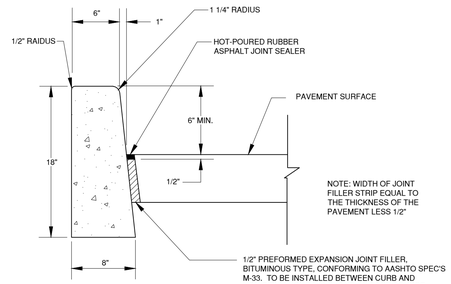
SOIL EROSION & SEDIMENT CONTROL PLAN
BLOCK 225.01, LOT 8.10
TOWNSHIP OF DENNIS
CAPE MAY COUNTY, NEW JERSEY

JOSEPH H. MAFFEI
PROFESSIONAL ENGINEER
N.J.P.E. LIC. #37894

REVISION	DATE	BY

EDA

DATE: 5/13/2025	DRAWN BY: MAJ
SCALE: AS NOTED	CHECKED BY: JHM
PROJECT #: 10625	SHEET: 5 0F 10

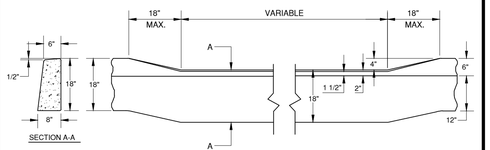


NOTES:

1. CONCRETE TO BE NJDOT CLASS "B" (AIR ENTRAINED)
2. TRANSVERSE JOINTS 1/2" WIDE SHALL BE INSTALLED IN THE CURB 20'-0" APART AND SHALL BE FILLED WITH PREFORMED BITUMINOUS-IMPREGNATED FIBER JOINT FILLER, COMPLYING WITH THE REQUIREMENTS OF AASHTO M-213, RECESSED 1/4" FROM THE FRONT FACE AND TOP OF THE CURB
3. DUMMY JOINTS (FORMED) SHALL BE INSTALLED MIDWAY BETWEEN EXPANSION JOINTS.

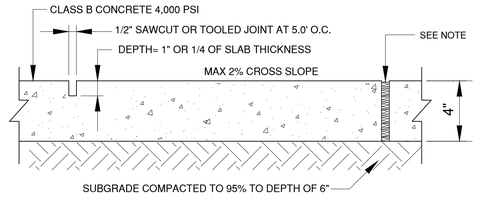
CONCRETE CURB DETAIL

N.T.S.



DEPRESSED CURB DETAIL

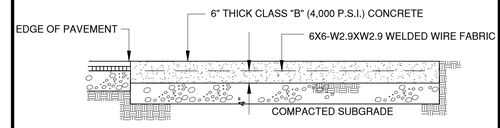
N.T.S.



NOTE : INSTALL 1/2" WIDE TRAVERSE JOINTS IN SIDEWALK 20.0' C-C. FILL JOINTS WITH PREFORMED BITUMINOUS IMPREGNATED FIBER JOINT FILLER WHICH COMPLIES WITH REQUIREMENTS FOR TYPE 3 FILLER IN AASHTO SPEC M-153.

CONCRETE SIDEWALK DETAIL

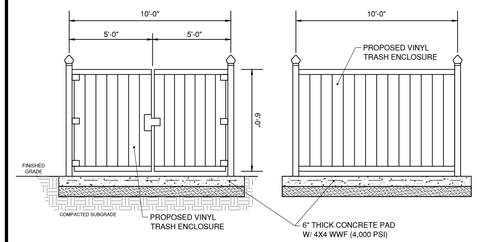
N.T.S.



NOTE: THE WIDTH AND THE LENGTH OF THE DRIVEWAYS ARE NOTED ON THE PLANS

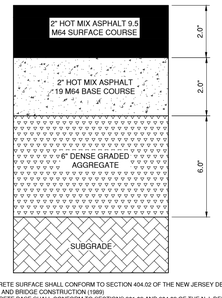
CONCRETE APRON DETAIL

N.T.S.



TRASH ENCLOSURE DETAIL

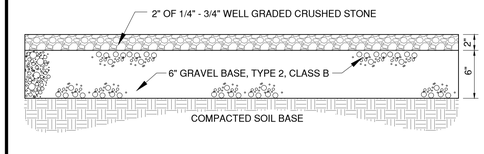
N.T.S.



1. MATERIALS FOR THE ASPHALT CONCRETE SURFACE SHALL CONFORM TO SECTION 404.02 OF THE NEW JERSEY DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (1989).
2. MATERIALS FOR THE ASPHALT CONCRETE BASE SHALL CONFORM TO SECTIONS 301.02 AND 304.02 OF THE N.J. DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (1989).
3. THICKNESSES MAY HAVE TO BE CONSTRUCTED IN MULTIPLE LIFTS, BASED ON EQUIPMENT CAPABILITIES.
4. THE GRANULAR BASE SHALL BE DENSE GRADED AGGREGATE CONFORMING TO SECTION 901.08 OR SOIL AGGREGATE DESIGNATED I-5 CONFORMING TO SECTION 901.09 AND SHOWN IN TABLE 901-2 OF THE N.J. DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (1989).
5. ALL SUBGRADES SHALL BE CONSIDERED "POOR," UNLESS THE APPLICANT PROVES OTHERWISE THROUGH CBR TESTING OR FIELD EVALUATION OF SOIL CLASSIFICATION. TEST RESULTS SHALL BE REVIEWED BY THE MUNICIPAL ENGINEER.
6. SUBGRADE COMPACTION SHALL BE APPROVED BY THE MUNICIPAL ENGINEER.
7. DRAWINGS ARE BASED ON THE FOLLOWING DESIGN ASSUMPTIONS: A 20-YEAR DESIGN PERIOD WITH STAGED CONSTRUCTION IS USED. BASE COURSES ARE DESIGNED TO WITHSTAND THE CONSTRUCTION TRAFFIC ANTICIPATED DURING A 3-YEAR CONSTRUCTION PERIOD AND HAVE A RESIDUAL LIFE OF 17 YEARS AT THE END OF THE 3-YEAR PERIOD. THE ENTIRE PAVEMENT SECTION, BASE COURSE PLUS FINISH COURSE, IS DESIGNED TO WITHSTAND THE TRAFFIC LOADING FOR THE REMAINING 17 YEARS OF THE 20-YEAR DESIGN PERIOD.

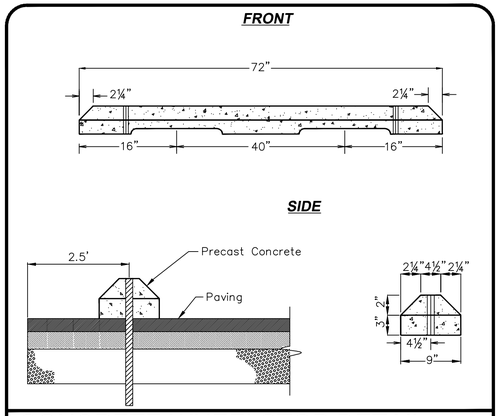
ASPHALT PAVING DETAIL

N.T.S.



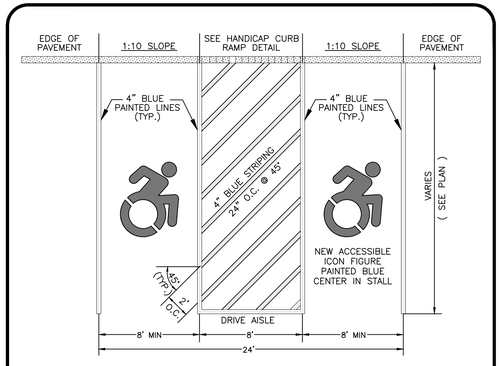
STONE PAVING DETAIL

N.T.S.



CONCRETE WHEELSTOP DETAIL

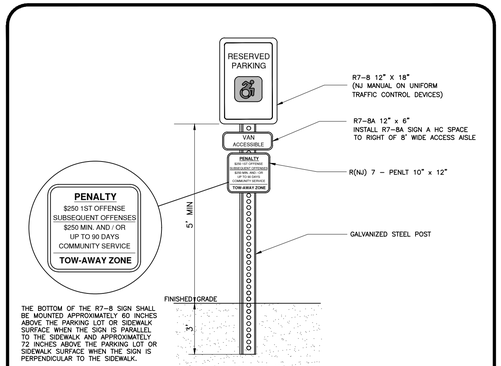
N.T.S.



NOTE:
SEE PLAN FOR ALTERNATE 5 FOOT AISLE WIDTH

HANDICAP PARKING DETAIL

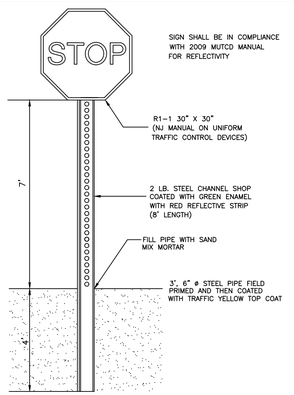
N.T.S.



THE BOTTOM OF THE R7-8 SIGN SHALL BE MOUNTED APPROXIMATELY 60 INCHES ABOVE THE PARKING LOT OR SIDEWALK SURFACE WHEN THE SIGN IS PARALLEL TO THE SIDEWALK AND APPROXIMATELY 72 INCHES ABOVE THE PARKING LOT OR SIDEWALK SURFACE WHEN THE SIGN IS PERPENDICULAR TO THE SIDEWALK.

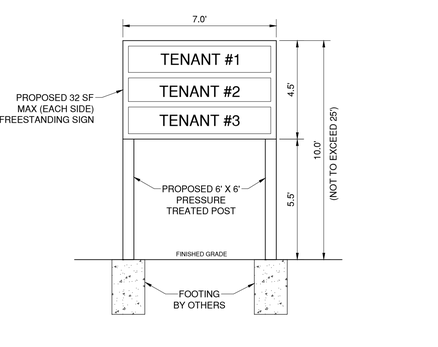
HANDICAP PARKING SIGN DETAIL

N.T.S.



STOP SIGN DETAIL

N.T.S.



NOTE: ADDITIONAL SIGNAGE DETAILS SUCH AS COLOR AND MATERIAL(S) TO BE PROVIDED BY OTHERS.

FREESTANDING SIGN DETAIL

N.T.S.

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CAMBRIDGE PROFESSIONAL OFFICES
5 Cambridge Drive Ocean View New Jersey 08230
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ENGINEERING DETAILS

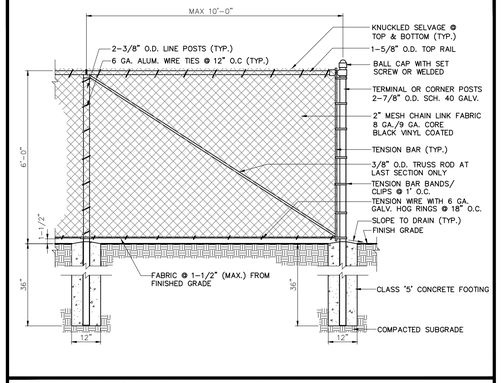
BLOCK 225.01, LOT 8.10
TOWNSHIP OF DENNIS
CAPE MAY COUNTY, NEW JERSEY

JOSEPH H. MAFFEI
PROFESSIONAL ENGINEER
N.J.P.E. LIC. #37894

REVISION	DATE	BY

EDA

DATE: 5/13/2025	DRAWN BY: MAJ
SCALE: AS NOTED	CHECKED BY: JHM
PROJECT #: 10625	SHEET: 6 0F 10



CHAIN LINK FENCE DETAIL

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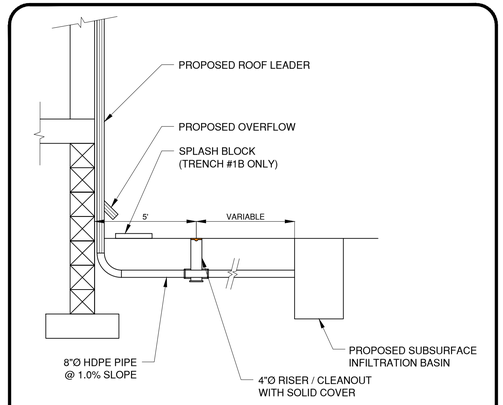
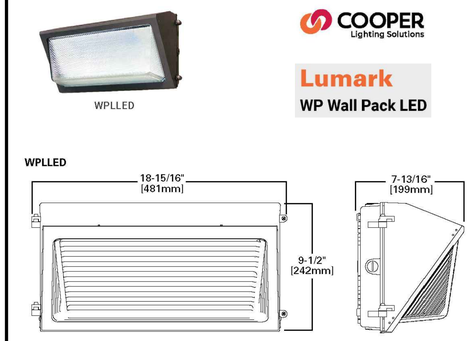


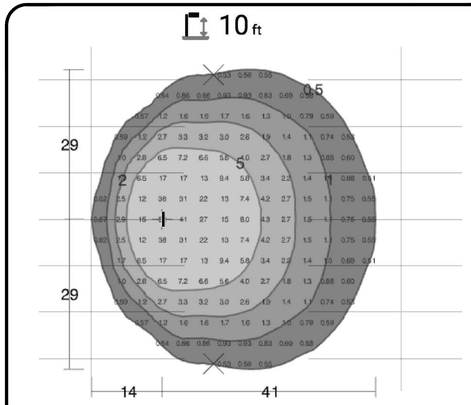
DOWNSPOUT CONNECTION DETAIL

N.T.S.



BUILDING MOUNTED LIGHT DETAIL

N.T.S.



BUILDING MOUNTED LIGHT DETAIL

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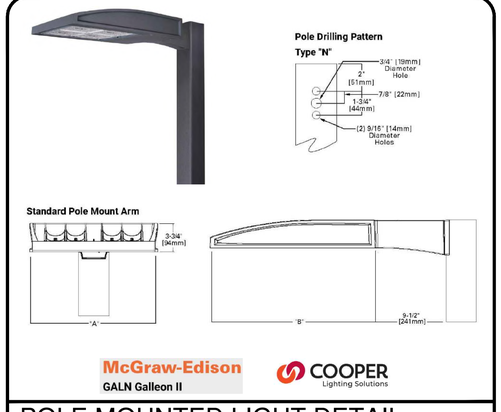
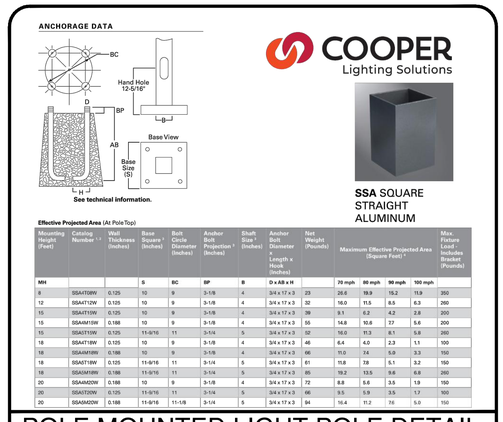


POLE MOUNTED LIGHT DETAIL

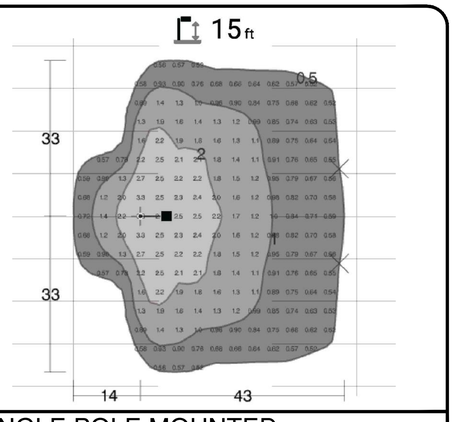
N.T.S.



Mounting Height (Feet)	Catalog Number [1,2]	Wall Thickness (Inches)	Base Square [3] (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection [3] (Inches)	Shaft Size [3] (Inches)	Anchor Bolt Diameter x Length x Hook Radius	Net Weight (Pounds)		Maximum Effective Projected Area (Square Feet) [4]			Max. Fixture Load - Includes Bracket (Pounds)
MH			S	BC	BP	B	D x AB x H			70 mph	80 mph	90 mph	100 mph	
8	SSA4T08W	0.125	10	9	3-1/8	4	3/4 x 17 x 3	23		26.6	19.9	15.2	11.9	350
12	SSA4T12W	0.125	10	9	3-1/8	4	3/4 x 17 x 3	32		16.0	11.5	8.5	6.3	260
15	SSA4T15W	0.125	10	9	3-1/8	4	3/4 x 17 x 3	39		9.1	6.2	4.2	2.8	200
15	SSAM15W	0.188	10	9	3-1/8	4	3/4 x 17 x 3	55		14.8	10.8	7.7	5.6	200
15	SSAS15W	0.125	11-9/16	11	3-1/4	5	3/4 x 17 x 3	52		16.0	11.3	8.1	5.8	260
18	SSA4T18W	0.125	10	9	3-1/8	4	3/4 x 17 x 3	46		6.4	4.0	2.3	1.1	100
18	SSAM18W	0.188	10	9	3-1/8	4	3/4 x 17 x 3	66		11.0	7.4	5.0	3.3	150
18	SSAS18W	0.125	11-9/16	11	3-1/4	5	3/4 x 17 x 3	61		11.8	7.8	5.1	3.2	150
18	SSASM18W	0.188	11-9/16	11	3-1/4	5	3/4 x 17 x 3	85		19.2	13.5	9.6	6.8	260
20	SSAM20W	0.188	10	9	3-1/8	4	3/4 x 17 x 3	72		8.8	5.6	3.5	1.9	150
20	SSAS20W	0.125	11-9/16	11	3-1/4	5	3/4 x 17 x 3	66		9.5	5.9	3.5	1.7	100
20	SSASM20W	0.188	11-9/16	11-1/8	3-1/4	5	3/4 x 17 x 3	94		16.4	11.2	7.6	5.0	150

POLE MOUNTED LIGHT POLE DETAIL

N.T.S.



SINGLE POLE MOUNTED LIGHT DETAIL

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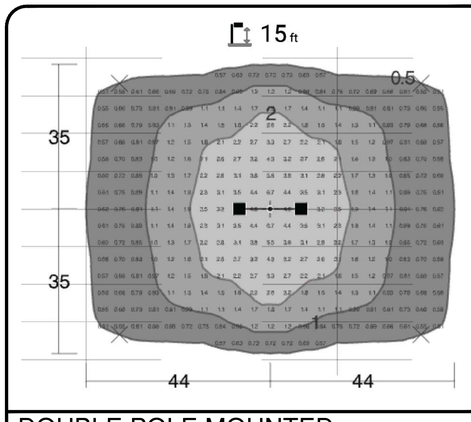

DOUBLE POLE MOUNTED LIGHT DETAIL

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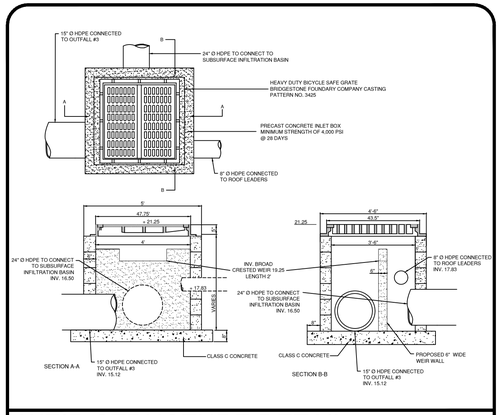
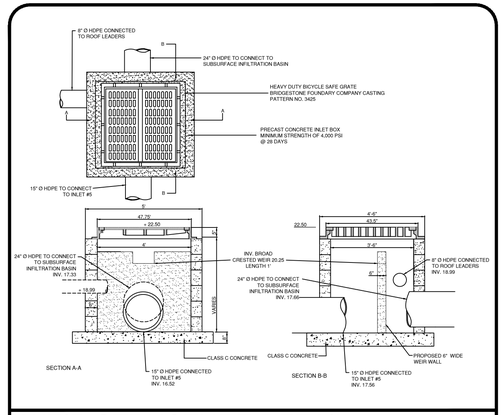


WEIR STRUCTURE DETAIL
SUBSURFACE INFILTRATION BASIN #1A

N.T.S.



WEIR STRUCTURE DETAIL
SUBSURFACE INFILTRATION BASIN #1B

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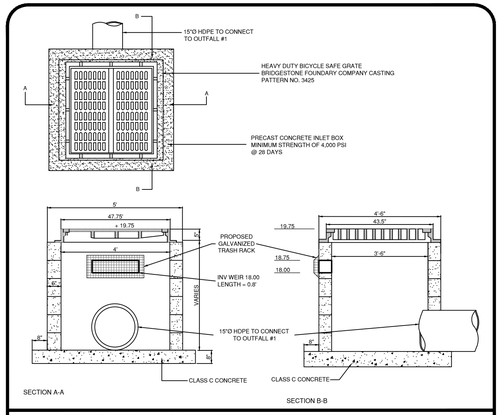
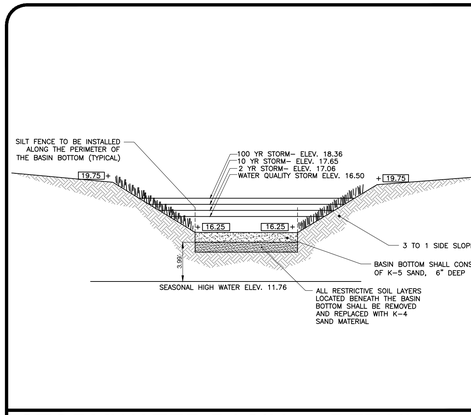


WEIR STRUCTURE DETAIL
INFILTRATION BASIN #1

N.T.S.



STORMWATER BASIN #1 DETAIL
CURRENT RAINFALL RATES

N.T.S.

EDA Engineering Design Associates, P.A.
Engineers Environmental Planners Landscape Architects
CAMBRIDGE PROFESSIONAL OFFICES
5 Cambridge Drive Ocean View New Jersey 08230
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ENGINEERING DETAILS
BLOCK 225.01, LOT 8.10
TOWNSHIP OF DENNIS
CAPE MAY COUNTY, NEW JERSEY

JOSEPH H. MAFFEI
PROFESSIONAL ENGINEER
N.J.P.E. LIC. #37894

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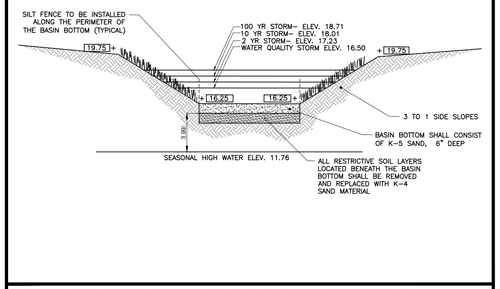
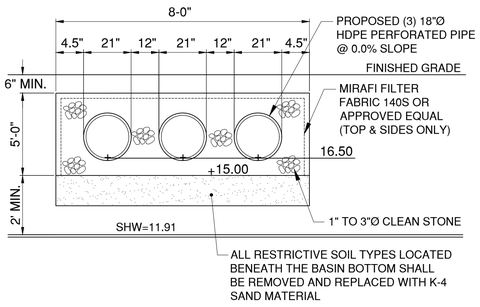
REVISION	DATE	BY

EDA

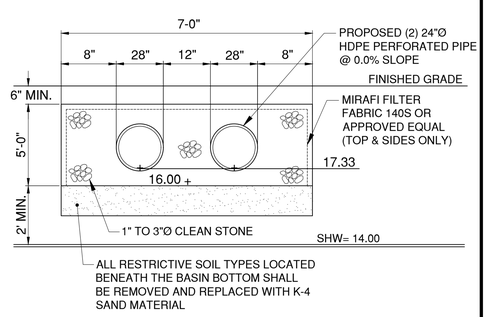
DATE: 5/13/2025	DRAWN BY: MAJ
SCALE: AS NOTED	CHECKED BY: JHM
PROJECT #: 10625	SHEET: 7 0F 10



STORMWATER BASIN #1 DETAIL
FUTURE RAINFALL RATES
N.T.S.



SUBSURFACE INFILTRATION
BASIN #1A DETAIL
N.T.S.



SUBSURFACE INFILTRATION
BASIN #1B DETAIL
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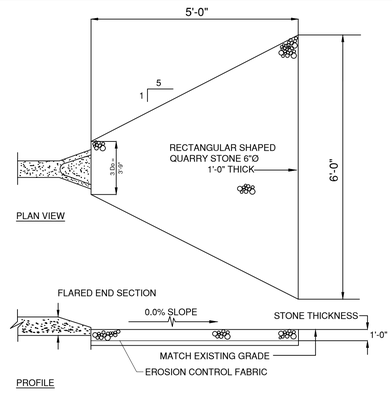
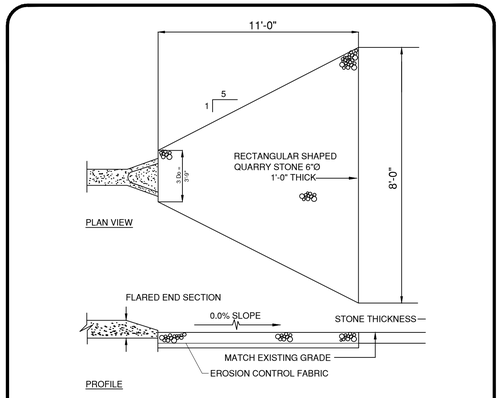
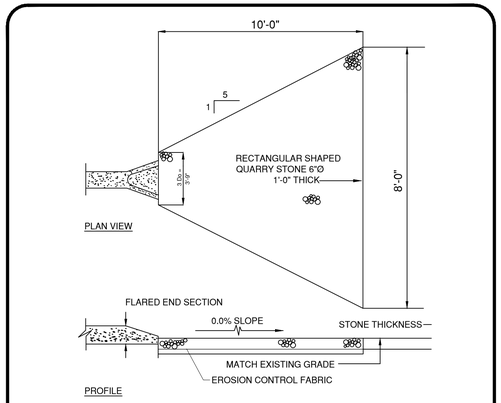


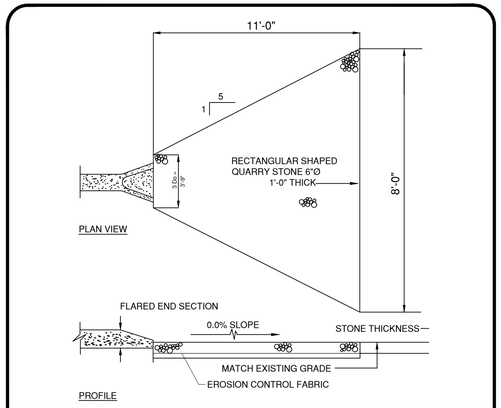
STONE APRON #1 DETAIL
N.T.S.



STONE APRON #2 DETAIL
N.T.S.



STONE APRON #3 DETAIL
N.T.S.



STONE APRON #4 DETAIL
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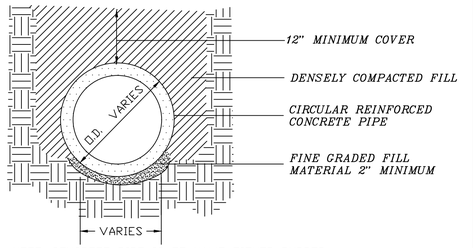

PIPE BEDDING DETAIL
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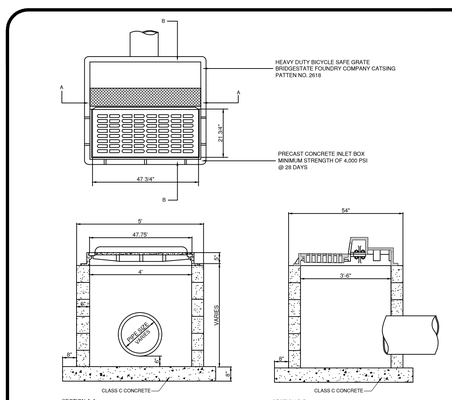

TYPE B INLET DETAIL
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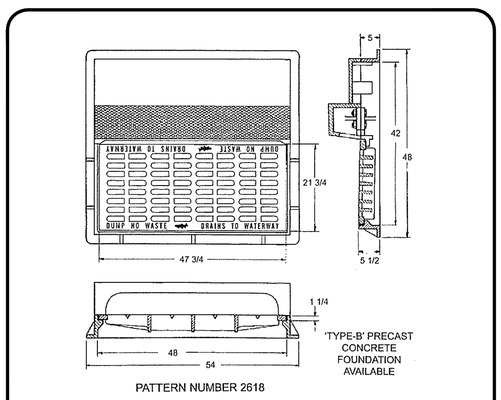

TYPE B INLET GRATE DETAIL
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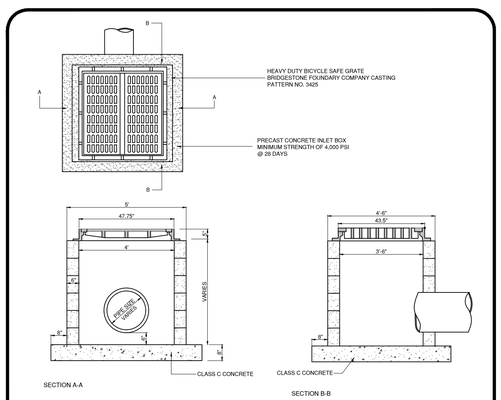

TYPE E INLET DETAIL
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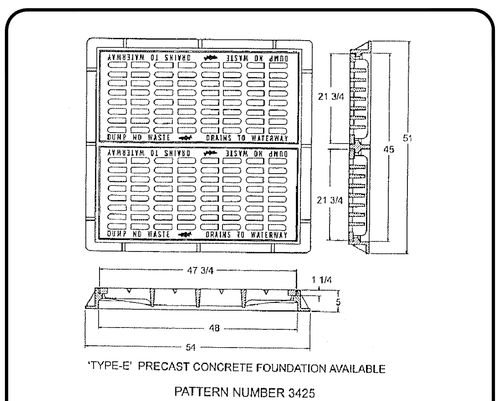


TYPE E INLET GRATE DETAIL
N.T.S.

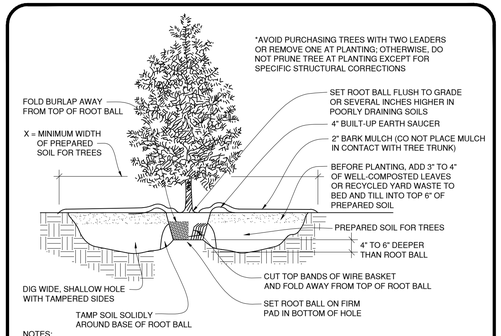
Engineering Design Associates, P.A.
Engineers Environmental Planners Landscape Architects
CAMBRIDGE PROFESSIONAL OFFICES
5 Cambridge Drive Ocean View New Jersey 08230
(609) 390-0332 ◦ Fax (609) 390-9204 ◦ www.engineeringdesign.com ◦ CERTIFICATE OF AUTHORIZATION#: 24GA27970300

ENGINEERING DETAILS
BLOCK 225.01, LOT 8.10
TOWNSHIP OF DENNIS
CAPE MAY COUNTY, NEW JERSEY

JOSEPH H. MAFFEI
PROFESSIONAL ENGINEER
N.J.P.E. LIC. #37894

REVISION	DATE	BY

DATE: 5/13/2025	DRAWN BY: MAJ
SCALE: AS NOTED	CHECKED BY: JHM
PROJECT #: 10625	SHEET: 8 0F 10

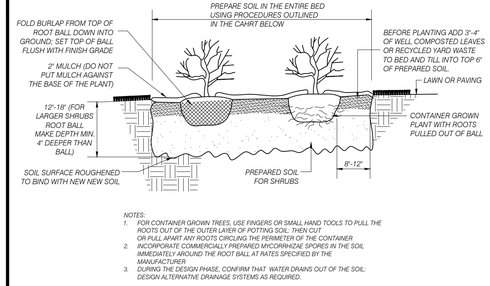


NOTES:

1. For container-grown trees, use fingers or small hand tools to pull the roots out of the outer layer of potting soil; then cut or pull apart any roots circling the perimeter of the container.
2. Incorporate commercially prepared mycorrhiza spores in the soil immediately around the root ball at rates specified by the manufacturer.
4. Thoroughly soak the tree root ball and adjacent prepared soil several times during the first month after planting and regularly throughout the following two summers.
5. The planting process is similar for deciduous and evergreen trees.

EVERGREEN TREE PLANTING DETAIL

N.T.S.

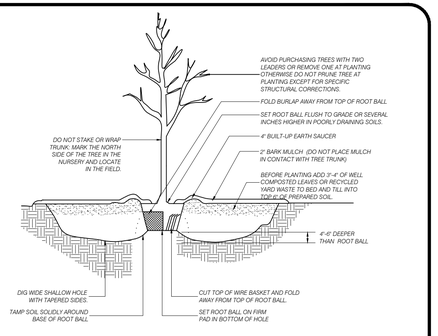


NOTES:

1. FOR CONTAINER GROWN TREES, USE FINGERS OR SMALL HAND TOOLS TO PULL THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL; THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OF THE CONTAINER
2. INCORPORATE COMMERCIALLY PREPARED MYCORRHIZAE SPORES IN THE SOIL IMMEDIATELY AROUND THE ROOT BALL AT RATES SPECIFIED BY THE MANUFACTURER
3. DURING THE DESIGN PHASE, CONFIRM THAT WATER DRAINS OUT OF THE SOIL; DESIGN ALTERNATIVE DRAINAGE SYSTEMS AS REQUIRED.

SHRUB PLANTING DETAIL

N.T.S.



NOTES:

1. FOR CONTAINER GROWN TREES, USE FINGERS OR SMALL HAND TOOLS TO PULL THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL; THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OF THE CONTAINER.
2. INCORPORATE COMMERCIALLY PREPARED MYCORRHIZA SPORES IN THE SOIL IMMEDIATELY AROUND THE ROOT BALL AT RATES SPECIFIED BY THE MANUFACTURER.
3. DURING THE DESIGN PHASE, CONFIRM THAT WATER DRAINS OUT OF THE SOIL; DESIGN ALTERNATIVE DRAINAGE SYSTEMS AS REQUIRED.
4. THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
5. THE PLANTING PROCESS IS SIMILAR FOR DECIDUOUS AND EVER-GREEN TREES.

SHADE TREE PLANTING DETAIL

N.T.S.

LANDSCAPE NOTES

1. DRAWINGS TO BE SCALED FOR PURPOSES OF LOCATING SOIL BERMS, PLANT MATERIAL, PLANTING BEDS, GROUND COVER AREAS AND OTHER SITE AMENITIES SHOWN. DRAWINGS ARE DIAGRAMATIC; PLANT MATERIAL SUBJECT TO FIELD ADJUSTMENT.

2. ALL PLANT MATERIAL TO BE SET IN PREPARED MULCH BEDS. FINAL BED LINES TO BE APPROVED IN THE FIELD BY THE LANDSCAPE ARCHITECT OR HIS REPRESENTATIVE.

3. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL PLANT MATERIAL QUANTITIES. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. PLAN HOLDS PRECEDENT.

GRASSES

AREAS TO BE SEEDED SHALL CONSIST OF THE FOLLOWING SEED MIXTURES TO INSURE A HIGH QUALITY GRASS.

REBEL II TALL FESCUE - 8 LBS PER 1000 SF
ECLIPSE KENTUCKY BLUE GRASS - 4 LBS PER 1000 SF

FERTILIZING AND LIMING SHALL BE COMPLETED PRIOR TO SEEDING LAWN AREAS TWICE PER YEAR.

PLANTING BED

PLANTING BED TO BE CONSTRUCTED AS SHOWN ON DETAIL. BED TO BE CONSTRUCTED USING THE FOLLOWING SPECIFICATIONS OR AN APPROVED EQUAL.

A. MULCH - BEDS TO BE FILLED WITH A 4" LAYER OF LICORICE ROOT MULCH (RIGHT DRESS INC.)

B. WEED BARRIER - MULCH TO BE PLACED OVER TERRA TOP LS WEED CONTROL FABRIC OR 4 MIL. BLACK POLYETHYLENE.

C. EDGING - PLANTING BED TO BE EDGED WITH BLACK DIAMOND POLYETHYLENE BED DIVIDER (VALLEY VIEW SPECIALTIES CO.)

LANDSCAPING NOTES

N.T.S.

TEST PIT #1

DEPTH	DESCRIPTION
0"- 4"	10YR 4/2 Dark Grayish Brown, Sandy Loam, Subangular Blocky, Friable
4"- 32"	10YR 6/6 Brownish Yellow, Loamy Sand, Subangular Blocky, Friable
32"-48"	10YR 4/6 Dark Yellowish Brown, Loamy Sand, Subangular Blocky. Friable
48"-120"	10YR 7/4 Very Pale Brown, Sand, Single Grain, Loose
120"-138"	10YR 7/3 Very Pale Brown, Sand, Single Grain, Loose w/mottles of 10YR 8/1 White, Few, Fine & Faint
138"-192"	10YR 7/1 Light Gray, Sand, Single Grain, Loose

Depth of Seasonal High Water: 120"
Depth of Groundwater: 162"
Date Performed: 4/10/2025
Performed By: Christopher J Carey, LLA
Soil Type: (PHG) Pits, Sand & Gravel
Existing Grade Elevation: 24.00
Seasonal High Water Elevation: 14.00

TEST PIT #1 RESULTS

N.T.S.

TEST PIT #2

DEPTH	DESCRIPTION
0"- 7"	10YR 4/2 Dark Grayish Brown, Sandy Loam, Subangular Blocky, Friable
7"- 35"	10YR 6/6 Brownish Yellow, Loamy Sand, Subangular Blocky, Friable
35"-50"	10YR 4/6 Dark Yellowish Brown, Loamy Sand, Subangular Blocky, Friable
50"-112"	10YR 7/4 Very Pale Brown, Sand, Single Grain, Loose
112"-141"	10YR 7/3 Very Pale Brown, Sand, Single Grain, Loose w/mottles of 10YR 7/1 Light Gray, Few, Fine & Faint
141"-180"	10YR 7/1 Light Gray, Sand, Single Grain,, Loose

Depth of Seasonal High Water: 112"
Depth of Groundwater: 160"
Date Performed: 4/10/2025
Performed By: Christopher J Carey, LLA
Soil Type: (PHG) Pits, Sand & Gravel
Existing Grade Elevation: 23.30
Seasonal High Water Elevation: 13.97

TEST PIT #2 RESULTS

TEST PIT #3

DEPTH	DESCRIPTION
0"- 5"	10YR 4/2 Dark Grayish Brown, Sandy Loam, Subangular Blocky, Friable
5"- 41"	10YR 5/4 Yellowish Brown, Sandy Loam, Subangular Blocky, Friable
41"-88"	10YR 7/6 Yellow, Loamy Sand, Subangular Blocky, Friable
88"-123"	10YR 7/2 Light Gray, Sand, Single Grain, Loose w/mottles of 10YR 8/1 White, Few, Fine & Faint
123"- 151"	10YR 8/1 White, Sand, Single Grain, Loose

Depth of Seasonal High Water: 88"
Depth of Groundwater: 120"
Date Performed: 4/10/2025
Performed By: Christopher J Carey, LLA
Soil Type: (EveB) Evesboro Sand
Existing Grade Elevation: 19.24
Seasonal High Water Elevation: 11.91

TEST PIT #3 RESULTS

TEST PIT #4

DEPTH	DESCRIPTION
0"- 6"	10YR 4/2 Dark Grayish Brown, Sandy Loam, Subangular Blocky, Friable
6"- 34"	10YR 6/4 Light Yellowish Brown, Loamy Sand, Subangular Blocky, Friable
34"-52"	10YR 7/6 Yellow, Sand, Single Grain, Loose
52"-66"	10YR 6/4 Light Yellowish Brown, Sand, Single Grain, Loose
66"- 85"	10YR 6/3 Pale Brown, Sand, Single Grain, Loose w/mottles of 10YR 7/1 Light Gray, Few, Fine & Faint
85"- 146"	10YR 8/1 White, Sand, Single Grain, Loose

Depth of Seasonal High Water: 85"
Depth of Groundwater: 118"
Date Performed: 4/10/2025
Performed By: Christopher J Carey, LLA
Soil Type: (EveB) Evesboro Sand
Existing Grade Elevation: 18.90
Seasonal High Water Elevation: 11.82

TEST PIT #4 RESULTS

TEST PIT #5

DEPTH	DESCRIPTION
0"- 7"	10YR 4/2 Dark Grayish Brown, Sandy Loam, Subangular Blocky, Friable
7"- 40"	10YR 6/4 Light Yellowish Brown, Loamy Sand, Subangular Blocky, Friable
40"-75"	10YR 7/6 Yellow, Loamy Sand, Subangular Blocky, Friable
75"-112"	10YR 7/3 Very Pale Brown, Sand, Single Grain, Loose w/mottles of 10YR 7/1 Light Gray, Few, Fine & Faint
112"- 135"	10YR 8/1 White, Sand, Single Grain, Loose

Depth of Seasonal High Water: 75"
Depth of Groundwater: 115"
Date Performed: 4/10/2025
Performed By: Christopher J Carey, LLA
Soil Type: (EveB) Evesboro Sand
Existing Grade Elevation: 18.01
Seasonal High Water Elevation: 11.76

TEST PIT #5 RESULTS

TEST PIT #6

DEPTH	DESCRIPTION
0"- 7"	10YR 4/2 Dark Grayish Brown, Sandy Loam, Subangular Blocky, Friable
7"- 17"	10YR 7/3 Very Pale Brown, Sand, Single Grain, Loose
17"-31"	10YR 5/6 Yellowish Brown, Sandy Loam, Subangular Blocky, Friable
31"-55"	10YR 7/4 Very Pale Brown, Sand, Single Grain, Loose
55"- 95"	10YR 7/3 Very Pale Brown, Sand, Single Grain, Loose w/mottles of 10YR 7/1 Light Gray, Few, Fine & Faint
95"- 120"	10YR 8/1 White, Sand, Single Grain, Loose

Depth of Seasonal High Water: 55"
Depth of Groundwater: 90"
Date Performed: 4/10/2025
Performed By: Christopher J Carey, LLA
Soil Type: (EveB) Evesboro Sand
Existing Grade Elevation: 16.30
Seasonal High Water Elevation: 11.72

TEST PIT #6 RESULTS

TEST PIT #7

DEPTH	DESCRIPTION
0"- 10"	10YR 7/1 Light Gray. Sand, Single Grain, Loose
10"- 21"	10YR 7/3 Very Pale Brown, Sand, Single Grain, Loose
21"-33"	10YR 5/6 Yellowish Brown, Loamy Sand, Subangular Blocky, Friable
33"- 67"	10YR 7/3 Very Pale Brown, Sand, Single Grain, Loose
67"- 120"	10YR 7/1 Light Gray, Sand, Single Grain, Loose w/mottles of 10YR 4/6 Dark Yellowish Brown, Few, Fine & Faint

Depth of Seasonal High Water: 67"
Depth of Groundwater: 108"
Date Performed: 4/10/2025
Performed By: Christopher J Carey, LLA
Soil Type: (EveB) Evesboro Sand
Existing Grade Elevation: 17.30
Seasonal High Water Elevation: 11.72

TEST PIT #7 RESULTS

Engineering Design Associates, P.A.
Engineers Environmental Planners Landscape Architects
CAMBRIDGE PROFESSIONAL OFFICES
5 Cambridge Drive Ocean View New Jersey 08230
(609) 390-0332 ◦ Fax (609) 390-9204 ◦ www.engineeringdesign.com ◦ CERTIFICATE OF AUTHORIZATION# 24GA27970300

ENGINEERING DETAILS
BLOCK 225.01, LOT 8.10
TOWNSHIP OF DENNIS
CAPE MAY COUNTY, NEW JERSEY

JOSEPH H. MAFFEI
PROFESSIONAL ENGINEER
N.J.P.E. LIC. #37894

REVISION	DATE	BY

DATE: 5/13/2025	DRAWN BY: MAJ
SCALE: AS NOTED	CHECKED BY: JHM
PROJECT #: 10625	SHEET: 9 0F 10

SOIL EROSION AND SEDIMENT CONTROL PLAN

1. The soil erosion inspector may require additional soil erosion measure to be installed, in accordance with the Standards for Soil Erosion and Sediment Control in New Jersey. 7th Edition,January 2014, Revised July 2017.
2. The property owner shall be responsible for any erosion or sedimentation that may occur below stormwater outfalls or offsite as a result of the construction project.
3. The soil conservation district shall be notified 48 hours prior to any land disturbance.
4. All applicable erosion and sediment control practices shall be in place prior to any grading or installation of proposed structures or utilities.
5. Soil Erosion and Sediment Control practices on this plan shall be constructed in accordance with the standards for Soil Erosion and Sediment Control in New Jersey.
6. Applicable erosion and sediment control practices shall be left in place until construction is completed and/or the area is stabilized.
7. The contractor shall perform all work, furnish all materials and equipment required to reasonably control soil erosion resulting from construction operations and prevent excessive flow of sediment from the construction site.
8. Any disturbed area that is to be left exposed for more than sixty (60) days and not subject to construction traffic shall immediately receive a temporary seeding and fertilization in accordance with the New Jersey Standards and their rates should be included in the narrative. If the season prohibits temporary seeding, the disturbed areas will be mulched with salt hay or equivalent and anchored in accordance with the New Jersey Standards (i.e. peg and twine, mulch netting or liquid mulch binder).
9. It shall be the responsibility of the developer to provide confirmation of lime, fertilizer and seed and seed application and rates of application at the request of the Soil Conservation District.
10. All critical areas subject to erosion will receive a temporary seeding in combination with straw mulch at a rate of 2 tons per acre, according to the New Jersey Standards immediately following rough grading.
11. The site shall at all times be graded and maintained such that all stormwater runoff is diverted to soil erosion and sediment control facilities.
12. All sedimentation structures will be inspected and maintained on a regular basis and after every storm event.
13. A crushed stone, tire cleaning pad will be installed wherever a construction access exists. The stabilized pad will be installed according to the standards for stabilized construction access.
14. All driveways must be stabilized with 2 1/2" crushed stone or sub-base prior to individual lot construction.
15. Remove any sediment that may be spilled, dropped, or tracked off the project site. All paved rights-of-way adjacent to the project site must be maintained in a clean, swept condition throughout construction.
16. All catch basin inlets will be protected according to the certified plan.
17. All storm drainage outlets will be stabilized, as required, before the discharge points become operational.
18. All dewatering operations must discharge directly into a sediment filter area. The sediment filter should be composed of a suitable sediment filter fabric. (see detail). The basin must be dewatered to normal pool within 10 days of the design storm.
19. N.J..SA. 4:24-39, Eat Seq. requires that no certificate of occupancy be issued before all provisions of the certified soil erosion and sediment control plan have been complied with for permanent measures. All site work for the project must be completed prior to the district issuing a report of compliance as a prerequisite to the issuance of a certificate of occupancy by the municipality.
20. A copy of the certified Soil Erosion and Sediment Control Plan must be maintained on the project site during construction.
21. Any conveyance of this project prior to its completion will transfer full responsibility for compliance with the certified plan to any subsequent owners.
22. Immediately after the completion of stripping and stockpiling of topsoil, the stockpile must be stabilized according to the standard for temporary vegetative cover. Stabilize topsoil with straw mulch for protection if the season does not permit the application and establishment of temporary seeding. All soil stockpiles are not to be located within fifty (50) feet of a floodplain, slope, roadway or drainage facility and the base must be protected with a sediment barrier.
23. Any changes to the site plan will require the submission of a revised Soil Erosion and Sediment Control Plan to the Soil Conservation District. The revised plan must be in accordance with the current New Jersey Standards for Soil Erosion and Sediment Control.
24. Methods for the management of high acid producing soils shall be in accordance with the standards. High acid producing soils are those found to contain iron sulfides or have a pH of 4 or less.
25. Maximum side slopes of all exposed surfaces shall not be constructed steeper than 3:1 unless otherwise approved by the district.
26. Dust is to be controlled by an approved method according to the New Jersey Standards and may include watering with a solution of calcium chloride and water.
27. Adjoining properties shall be protected from excavation and land filling operations on the proposed site.
28. Use staged construction methods to minimize exposed surfaces, where applicable.
29. All vegetative material shall be selected in accordance with American Standards for Nursery Stock of the American Association of the Nurseryman and in accordance with the New Jersey Standards for Soil Erosion and Sediment Control in New Jersey.
30. Natural vegetation and species shall be retained where specified on the Landscaping Plan.
31. The permanent vegetative cover such as seeding or sodding on all areas shall be accomplished within 10 days after final grading operations have been completed.
32. Excavated soil material shall not be placed adjacent to rivers, streams, or bodies of water in a manner that will cause it to be washed away by high water or runoff. Excess borrow material removed from the construction site shall be stabilized at the site of placement.
33. This certification is limited to the controls specified in this plan. It is not authorization to engage in the proposed land use unless such use has been previously approved by the municipality, county, State agency or other controlling agency.

STORMWATER MANAGEMENT MAINTENANCE PROGRAM

BASIN MAINTENANCE

In order to ensure that all retention and detention basins function properly, a maintenance program must be followed. The following are the minimum requirements for the maintenance of all basins.

1. Annual visual inspection of outlet structures and basins.
   a. Inspection of outlet structures to include checking for obstructions of outfall pipes and the accumulation of silts and sediments.
   b. Inspection of basins to include the removal of debris and accumulated particles such as silts and sediments.
2. For maintenance of vegetated basins:
   a. Mowing of grass is required regularly to ensure the aesthetic quality of the site. All clippings shall be raked and bagged to avoid thatch buildup.
   b. A dense turf, with extensive root growth, is encouraged to reduce erosion and enhance infiltration throughout the bottom and the side of the basin. Well-established turf of the floor and sides will grow through sediment deposits, thus forming a porous turf and preventing the formation of an impermeable layer.
   c. Grasses of the fescue family are recommended for seeding, primarily due to their adaptability to dry sandy soils, drought resistance, hardiness, and ability to withstand brief inundations. Fescues will also permit longer intervals between mowings.
   d. Seed type: A mixture of the following special water-tolerant seed will ensure a high quality grass for retention basins.

INGREDIENTS	
Mixture #8	**SEEDING RATE**
Fescue	2.1Lb./1,000 SF
Perennial Rye Grass	0.25Lb./1,000 SF
Kentucky Bluegrass	0.25Lb./1,000 SF
White Clover	0.10Lb./1,000 SF

   e. Fertilizing and liming: Bi-annually
      Fertilize with 10-20-10 at a rate of 1 1lbs./1,000 SF
      Lime with pulverized dolomite limestone at a rate of 90lbs./1,000 SF
3. Long term Maintenance
   a. In order to ensure proper function of all basins, every seven years each basin bottom shall be scarified to a depth of 4" to remove sediments and silts. Then 4" of topsoil must be added and resided.

STORM WATER STRUCTURE MAINTENANCE

Maintenance is the work required to keep structures in practice, or restore them to their original physical and functional condition. Maintenance as it applies to this situation shall be divided into two stages, that which is necessary to allow for continuing performance of storm water controls during the construction period and long term maintenance following construction. Both stages are necessary for the life of the storm water structures and systems.

1. MINIMUM REQUIREMENTS FOR MAINTENANCE
   a. TRENCHES/SWALES
      Trenches/Swales to be inspected for rubbish or channel obstructions, bank failure,accumulation of silts and sediments, undesirable vegetation growth, rodents, and overall system failure.
   b. OUTLET STRUCTURE/CONDUIT
      Inspection of outlet structures and conduit to include checking for obstruction of pipe, accumulation of silts and sediments, cracking, corrosion, deterioration from freezing, salt or chemicals, excessive wear or damage from settling.
   c. SPILLWAYS/INLETS/MANHOLES
      Inspection to include checking for cracking, rodents, obstructions (silt-sediment, trash or other.) Check any gates, racks, or grates, for damage from corrosion, ice debris. Check for unauthorized modifications, tampering or vandalism.
2. LONG TERM MAINTENANCE
   As noted, any basin, pipe, pit, trench or inlet not functioning as designed will be thoroughly as prescribed. Any system that continues to remain inoperable after thorough cleaning must be removed and replaced.

RESPONSIBILITY

All on-site retention facilities shall be the sole responsibility of the developer/owner, his assigns and/or heir. The responsibility shall include but not be limited to installation, inspection, and maintenance.

DETENTION FACILITY MAINTENANCE

The primary mechanical equipment use in the Annual Maintenance of the Basins will be for lawn cutting. The exact type and size of this equipment is to be determined by the maintenance service under contract for the project.

STANDARDS FOR STABILIZATION WITH MULCH

METHODS AND MATERIALS

1. Site Preparation

A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance wit Standards for Land Grading
B. Install needed erosion control practices or facilities such as diversions, grade stabilization structures, channel stabilization measures, sediment basins, and waterways. See Standards 11 through 42.

2. Protective Materials

A. Unrotted small-grain straw, at 2.0 to 2.5 tons per acre, is spread uniformly at 90 to 115 pounds per 1,000 square feet and anchored with a mulch anchoring tool, liquid mulch binders, or netting tie down. Other suitable materials may be used if approved by the Soil Conservation District. The approved rates above have been met when the mulch covers the ground completely upon visual inspection, i.e. the soil cannot be seen below the mulch.
B. Synthetic or organic soil stabilizers may be used under suitable conditions and in quantities as recommended by the manufacturer.
C. Wood-fiber or paper-fiber mulch at the rate of 1,500 pounds per acre (or according to the manufacturer's requirements) may be applied by a hydroseeder.
D. Mulch netting, such as paper jute, excelsior, cotton, or plastic, may be used.
E. Woodchips applied uniformly to a minimum depth of 2 inches may be used. Woodchips will not be used on areas where flowing water could wash them into an inlet and plug it.
F. Gravel, crushed stone, or slag at the rate of 9 cubic yards per 1,000 sq. ft. applied uniformly to a minimum depth of 3 inches may be used. Size 2 or 3 (ASTM C-33) is recommended.

3. Mulch Anchoring - should be accomplished immediately after placement of hay or straw mulch to minimize loss by wind or water. This may be done by one of the following methods, depending upon the size of the area and steepness of slopes.

A. Peg and Twine - Drive 8 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a criss-cross and a square pattern. Secure twine around each peg with two or more round turns.
B. Mulch Nettings - Staple paper, jute, cotton, or plastic nettings to the soil surface. Use a degradable netting in areas to be mowed.
C. Crimper Mulch Anchoring Coulter Tool - A tractor-drawn implement especially designed to punch and anchor mulch into the soil surface. This practice affords maximum erosion control, but its use is limited to those slopes upon which the tractor can operate safely. Soil penetration should be about 3 to 4 inches. On sloping land, the operation should be on the contour.
D. Liquid Mulch-Binders
1. Applications should be heavier at edges where wind may catch the mulch, in valleys, and at crests of banks. Remainder of area should be uniform in appearance.
2. Use one of the following:
   a. Organic and Vegetable Based Binders - Naturally occurring, powder based, hydrophilic materials that mixed with water formulates a gel and when applied to mulch under satisfactory curing conditions will form membrane networks of insoluble polymers. The vegetable gel shall be physiologically harmless and not result in a phyto-toxic effect or impede growth of turfgrass. Vegetable based gels shall be applied at rates and weather conditions recommended by the manufacturer.
   b. Synthetic Binders - High polymer synthetic emulsion, miscible with water when diluted and following application to mulch, drying and curing shall no longer be soluble or dispersible in water. It shall be applied at rates and weather conditions recommended by the manufacturer and remain tacky until germination of grass.

STANDARDS FOR TOPSOILING

METHODS AND MATERIALS

1. Materials

a. Topsoil should be friable1, loamy2, free of debris, objectionable weeds and stones, and contain no toxic substance or adverse chemical or physical condition that may be harmful to plant growth. Soluble salts should not be excessive (conductivity less than 0.5 millimhos per centimeter. More than 0.5 millimhos may desiccate seedlings and adversely impact growth). Imported topsoil shall have a minimum organic matter content of 2.75 percent. Organic matter content may be raised by additives.
b. Topsoil substitute is a soil material which may have been amended with sand, silt, clay, organic matter, fertilizer or lime and has the appearance of topsoil. Topsoil substitutes may be utilized on sites with insufficient topsoil for establishing permanent vegetation. All topsoil substitute materials shall meet the requirements of topsoil noted above. Soil tests shall be performed to determine the components of sand, silt, clay, organic matter, soluble salts and pH level.

2. Stripping and Stockpiling

a. Field exploration should be made to determine whether quantity and or quality of surface soil justifies stripping.
b. Stripping shall be confined to the immediate construction area.
c. Where feasible, lime may be applied before stripping at a rate determined by soil tests to bring the soil pH to approximately 6.5.
d. A 4-6 inch stripping depth is common, but may vary depending on the particular soil.
e. Stockpiles of topsoil should be situated so as not to obstruct natural drainage or cause off-site environmental damage.
f. Stockpiles should be vegetated in accordance with standards previously described herein; see standards for Permanent (pg. 4-1) or Temporary (pg.7-1) Vegetative Cover for Soil Stabilization. Weeds should not be allowed to grow on stockpiles.

3. Site Preparation

a. Grade at the onset of the optimal seeding period so as to minimize the duration and area of exposure of disturbed soil to erosion. Immediately proceed to establish vegetative cover in accordance with the specified seed mixture. Time is of the essence
b. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application and anchoring, and maintenance.
c. As guidance for ideal conditions, subsoil should be tested for lime requirement. Limestone, if needed, should be applied to bring soil to a pH of approximately 6.5 and incorporated into the soil as nearly as practical to a depth of 4 inches.
d. Prior to topsoiling, the subsoil shall be in compliance with the Standard for Land Grading, pg. 19-1.
e. Employ needed erosion control practices such as diversions, grade stabilization structures, channel stabilization measures, sedimentation basins, and waterways. See Standards 11 through 42.

4. Applying Topsoil

a. Topsoil should be handled only when it is dry enough to work without damaging soil structure; i.e., less than field capacity (see glossary).
b. A uniform application to an average depth of 5.0 inches, minimum of 4 inches, firmed in place is required. Alternative depths may be considered where special regulatory and/or industry design standards are appropriate such as on golf courses, sports fields, landfill capping, etc.. Soils with a pH of 4.0 or less or containing iron sulfide shall be covered with a minimum depth of 12 inches of soil having a pH of 5.0 or more, in accordance with the Standard for Management of High Acid Producing Soil (pg. 1-1).
c. Pursuant to the requirements in Section 7 of the Standard for Permanent Vegetative Stabilization, the contractor is responsible to ensure that permanent vegetative cover becomes established on at least 80% of the soils to be stabilized with vegetation. Failure to achieve the minimum coverage may require additional work to be performed by the contractor to include some or all of the following: supplemental seeding, re-application of lime and fertilizers, and/or the addition of organic matter (i.e. compost) as a top dressing. Such additional measures shall be based on soil tests such as those offered by Rutgers Cooperative Extension Service or other approved laboratory facilities qualified to test soil samples for agronomic properties.

STANDARDS FOR PERMANENT VEGETATIVE COVER

METHODS AND MATERIALS

1. Site Preparation

A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with Standard for Land Grading.
B. Immediately prior to seeding and topsoil application, the subsoil shall be evaluated for compaction in accordance with the Standard for Land Grading .
C. Topsoil should be handled only when it is dry enough to work without damaging the soil structure. A uniform application to a depth of 5 inches (unsettled) is required on all sites. Topsoil shall be amended with organic matter, as needed, in accordance with the Standard for Topsoiling.
D. Install needed erosion control practices or facilities such as diversions, grade-stabilization structures, channel stabilization measures, sediment basins, and waterways.

2. Seedbed Preparation

A. Uniformly apply ground limestone and fertilizer to topsoil which has been spread and firmed, according to soil test recommendations such as offered by Rutgers Co-operative Extension Soil sample mailers are available from the local Rutgers Cooperative Extension offices (http://njaes.rutgers.edu/county/). Fertilizer shall be applied at the rate of 500 pounds per acre or 11 pounds per 1,000 square feet of 10-10-10 or equivalent with 50% water insoluble nitrogen unless a soil test indicates otherwise and incorporated into the surface 4 inches. If fertilizer is not incorporated, apply one-half the rate described above during seedbed preparation and repeat another one-half rate application of the same fertilizer within 3 to 5 weeks after seeding.
B. Work lime and fertilizer into the topsoil as nearly as practical to a depth of 4 inches with a disc, spring-tooth harrow, or other suitable equipment. The final harrowing or disking operation should be on the general contour. Continue tillage until a reasonable uniform seedbed is prepared.
C. High acid producing soil. Soils having a pH of 4 or less or containing iron sulfide shall be covered with a minimum of 12 inches of soil having a pH of 5 or more before initiating seedbed reparation. See Standard for Management of High Acid-Producing Soils for specific requirements.

SOIL CONSERVATION NOTES

3. Seeding

A. Select a mixture from Table 4-3 or use a mixture recommended by Rutgers Cooperative Extension or Natural Resources Conservation Service which is approved by the Soil Conservation District. Seed germination shall have been tested within 12 months of the planting date. No seed shall be accepted with a germination test date more than 12 months old unless retested.
1. Seeding rates specified are required when a report of compliance is requested prior to actual establishment of permanent vegetation. Up to 50% reduction in rates may be used when permanent vegetation is established prior to a report of compliance inspection. These rates apply to all methods of seeding. Establishing permanent vegetation means 80% vegetative coverage with the specified seed mixture for the seeded area and mowed once.
2. Warm-season mixtures are grasses and legumes which maximize growth at high temperatures, generally 85° F and above. See Table 4-3 mixtures 1 to 7. Planting rates for warm-season grasses shall be the amount of Pure Live Seed (PLS) as determined by germination testing results.
3. Cool-season mixtures are grasses and legumes which maximize growth at temperatures below 85° F Many grasses become active at 65° F. See Table 4-3, mixtures 8-20. Adjustment of planting rates to compensate for the amount of PLS is not required for cool season grasses.

B. Conventional Seeding is performed by applying seed uniformly by hand, cyclone (centrifugal) seeder, drop seeder, drill or cultipacker seeder, Except for drilled, hydroseeded or cultipacked seedings, seed shall be incorporated into the soil within 24 hours of seedbed preparation to a depth of 1/4 to 1/2 inch, by raking or dragging. Depth of seed placement may be 1/4 inch deeper on coarse-textured soil.

C. After seeding, firming the soil with a corrugated roller will assure good seed-to-soil contact, restore capillarity, and improve seedling emergence. This is the preferred method. When performed on the contour, sheet erosion will be minimized and water conservation on site will be maximized.

D. Hydroseeding is a broadcast seeding method usually involving a truck, or trailer-mounted tank, with an agitation system and hydraulic pump for mixing seed, water and fertilizer and spraying the mix onto the prepared seedbed. Mulch shall not be included in the tank with seed. Short fibered mulch may be applied with a hydroseeder following seeding. (also see Section IV Mulching) Hydroseeding is not a preferred seeding method because seed and fertilizer are applied to the surface and not incorporated into the soil. Poor seed to soil contact occurs reducing seed germination and growth. Hydroseeding may be used for areas too steep for conventional equipment to traverse or too obstructed with rocks, stumps, etc.

4. Mulching

Mulching is required on all seeding. Mulch will protect against erosion before grass is established and will promote faster and earlier establishment. The existence of vegetation sufficient to control soil erosion shall be deemed compliance with this mulching requirement.

A. Straw or Hay. Unrotted small grain straw, hay free of seeds, to be applied at the rate of 1-1/2 to 2 tons per acre (70 to 90 pounds per 1,000 square feet), except that where a crimper is used instead of a liquid mulch-binder (tackifying or adhesive agent), the rate of application is 3 tons per acre. Mulch chopper-blowers must not grind the mulch. Hay mulch is not recommended for establishing fine turf or lawns due to the presence of weed seed.

   Application - Spread mulch uniformly by hand or mechanically so that at least 85% of the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 square feet sections and distribute 70 to 90 pounds within each section.

   Anchoring shall be accomplished immediately after placement to minimize loss by wind or water. This may be done by one of the following methods, depending upon the size of the area, steepness of slopes, and costs.

1. Peg and Twine. Drive 8 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a criss-cross and a square pattern. Secure twine around each peg with two or more round turns.
2. Mulch Nettings. Staple paper, jute, cotton, or plastic nettings to the soil surface. Use a degradable netting in areas to be mowed.
3. Crimper (mulch anchoring tool). A tractor-drawn implement, somewhat like a disc harrow, especially designed to push or cut some of the broadcast long fiber mulch 3 to 4 inches into the soil so as to anchor it and leave part standing upright. This technique is limited to areas traversable by a tractor, which must operate on the contour of slopes. Straw mulch rate must be 3 tons per acre. No tackifying or adhesive agent is required.

4. Liquid Mulch-Binders - May be used to anchor salt hay, hay or straw mulch.
a. Applications should be heavier at edges where wind may catch the mulch, in valleys, and at crests of banks. The remainder of the area should be uniform in appearance.
b. Use one of the following:
(1) Organic and Vegetable Based Binders - Naturally occurring, powder-based, hydrophilic materials when mixed with water formulates a gel and when applied to mulch under satisfactory curing conditions will form membrained networks of insoluble polymers. The vegetable gel shall be physiologically harmless and not result in a phytotoxic effect or impede growth of turfgrass. Use at rates and weather conditions as recommended by the manufacturer to anchor mulch materials. Many new products are available, some of which may need further evaluation for use in this state.
(2) Synthetic Binders - High polymer synthetic emulsion, miscible with water when diluted and following application to mulch, drying and curing shall no longer be soluble or dispersible in water. It shall be applied at rates recommended by the manufacturer and remain tacky until germination of grass.

Note: All names given above are registered trade names. This does not constitute a recommendation of these products to the exclusion of other products.

B. Wood-fiber or paper-fiber mulch. Shall be made from wood, plant fibers or paper containing no growth or germination inhibiting materials, used at the rate of 1,500 ponds per acre (or as recommended by the project manufacturer) and may be applied by a hydroseeder. This mulch shall not be mixed in the tank with seed. Use is limited to flatter slopes and during optimum seeding periods in spring and fall.

C. Pelletized mulch - compressed and extruded paper and/or wood fiber product, which may contain co-polymers, tackifiers, fertilizers and coloring agents. The dry pellets, when applied to a seeded area and watered, form a mulch mat. Pelletized mulch shall be applied in accordance with the manufacturer's recommendations. Mulch may be applied by hand or mechanical spreader at the rate of 60-75 lbs./1,000 square feet and activated with 0.2 to 0.4 inches of water. This material has been found to be beneficial for use on small lawn or renovation areas, seeded areas where weed seed free mulch is desired, or on sites where straw mulch and tackifier agent are not practical or desirable. Applying the full 0.2 to 0.4 inches of water after spreading pelletized mulch on the seed bed is extremely important for sufficient activation and expansion of the mulch to provide soil coverage.

5. Irrigation (where feasible)
   If soil moisture is deficient supply new seeding with adequate water (a minimum of 1/4 inch applied up to twice a day until vegetation is well established). This is especially true when seedings are made in abnormally dry or hot weather or on droughty sites.
6. Topdressing
   Since soil organic matter content and slow release nitrogen fertilizer (water insoluble) are prescribed in Section 2A - Seedbed Preparation in this Standard, no follow-up of topdressing is mandatory. An exception may be made where gross nitrogen deficiency exists in the soil to the extent that turf failure may develop. In that instance, topdress with 10-10-10 or equivalent at 300 pounds per acre or 7 pounds per 1,000 square feet every 3 to 5 weeks until the gross nitrogen deficiency in the turf is ameliorated.
7. Establishing Permanent Vegetative Stabilization
   The quality of permanent vegetation rests with the contractor. The timing of seeding, preparing the seedbed, applying nutrients, mulch and other management are essential. The seed application rates in Table 4-3 are required when a Report of Compliance is requested prior to actual establishment of permanent vegetation. Up to 50% reduction in application rates may be used when permanent vegetation is established prior to requesting a Report of Compliance from the district. These rates apply to all methods of seeding. Establishing permanent vegetation means 80% vegetative cover (of the seeded species) and mowed once. Note this designation of mowed once does not guarantee the permanency of the turf should other maintenance factors be neglected or otherwise mismanaged.

STANDARDS FOR TEMPORARY VEGETATIVE COVER

METHODS AND MATERIALS

1. Site Preparation

A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with Standards for Land Grading, pg. 19-1.
B. Install needed erosion control practices or facilities such as diversions, grade stabilization structures, channel stabilization measures, sediment basins, and waterways. See Standards 11 through 42.
C. Immediately prior to seeding, the surface should be scarified 6" to 12" where there has been soil compaction. This practice is permissible only where there is no danger to underground utilities (cables, irrigation systems, etc.).

2. Seedbed Preparation

A. Apply ground limestone and fertilizer according to soil test recommendations such as offered by Rutgers Co-operative Extension. Soil sample mailers are available from the local Rutgers Cooperative Extension offices. Fertilizer shall be applied at the rate of 500 pounds per acre or 11 pounds per 1,000 square feet of 10-20-10 or equivalent with 50% water insoluble nitrogen unless a soil test indicates otherwise and incorporated into the surface 4 inches. If fertilizer is not incorporated, apply one-half the rate described above during seedbed preparation and repeat another one-half rate application of the same fertilizer within 3 to 5 weeks after seeding.
B. Work lime and fertilizer into the topsoil as nearly as practical to a depth of 4 inches with a disc, spring-tooth harrow, or other suitable equipment. The final harrowing or disking operation should be on the general contour. Continue tillage until a reasonable uniform seedbed is prepared.
C. Inspect seedbed just before seeding. If traffic has left the soil compacted, the area must be retilled in accordance with the above.
D. Soils high in sulfides or having a pH of 4 or less refer to Standard for Management of High Acid Producing Soils, pg. 1-1.

3. Seeding

A. Select seed from recommendations in Table 7-2.
B. Conventional Seeding. Apply seed uniformly by hand, cyclone (centrifugal) seeder, drop seeder, drill or cultipacker seeder. Except for drilled, hydroseeded or cultipacked seedings, seed shall be incorporated into the soil, to a depth of 1/4 to 1/2 inch, by raking or dragging. Depth of seed placement may be 1/4 inch deeper on coarse textured soil.
C. Hydroseeding is a broadcast seeding method usually involving a truck or trailer mounted tank, with an agitation system and hydraulic pump for mixing seed, water and fertilizer and spraying the mix onto the prepared seedbed. Mulch shall not be included in the tank with seed. Short fibered mulch may be applied with a hydroseeder following seeding. (also see Section IV Mulching) Hydroseeding is not a preferred seeding method because seed and fertilizer are applied to the surface and not incorporated into the soil. Poor seed to soil contact occurs reducing seed germination and growth. Hydroseeding may be used for areas too steep for conventional equipment to traverse or too obstructed with rocks, stumps, etc.
D. After seeding, firming the soil with a corrugated roller will assure good seed-to-soil contact, restore capillarity, and improve seedling emergence. This is the preferred method. When performed on the contour, sheet erosion will be minimized and water conservation on site will be maximized.

4. Mulching

Mulching is required on all seeding. Mulch will insure against erosion before grass is established and will promote faster and earlier establishment. The existence of vegetation sufficient to control soil erosion shall be deemed compliance with this mulching requirement.

A. Straw or Hay. Unrotted small grain straw, hay free of seeds, applied at the rate of 1-1/2 to 2 tons per acre (70 to 90 pounds per 1,000 square feet), except that where a crimper is used instead of a liquid mulch-binder (tackifying or adhesive agent), the rate of application is 3 tons per acre. Mulch chopper-blowers must not grind the mulch. Hay mulch is not recommended for establishing fine turf or lawns due to the presence of weed seed.

   Application. Spread mulch uniformly by hand or mechanically so that approximately 95% of the soil surface will be covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 square feet sections and distribute 70 to 90 pounds within each section.

   Anchoring shall be accomplished immediately after placement to minimize loss by wind or water. This may be done by one of the following methods, depending upon the size of the area, steepness of slopes, and costs.

1. Peg and Twine. Drive 8 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a criss-cross and a square pattern. Secure twine around each peg with two or more round turns.
2. Mulch Nettings. Staple paper, jute, cotton, or plastic nettings to the soil surface. Use a degradable netting in areas to be mowed.
3. Crimper (mulch anchoring tool). A tractor-drawn implement, somewhat like a disc harrow, especially designed to push or cut some of the broadcast long fiber mulch 3 to 4 inches into the soil so as to anchor it and leave part standing upright. This technique is limited to areas traversable by a tractor, which must operate on the contour of slopes. Straw mulch rate must be 3 tons per acre. No tackifying or adhesive agent is required.
4. Liquid Mulch-Binders - May be used to anchor salt hay, hay or straw mulch.
a. Applications should be heavier at edges where wind may catch the mulch, in valleys, and at crests of banks. The remainder of the area should be uniform in appearance.
b. Use one of the following:
(1) Organic and Vegetable Based Binders - Naturally occurring, powder based, hydrophilic materials when mixed with water formulates a gel and when applied to mulch under satisfactory curing conditions will form membrained networks of insoluble polymers. The vegetable gel shall be physiologically harmless and not result in a phytotoxic effect or impede growth of turfgrass. Use at rates and weather conditions as recommended by the manufacturer to anchor mulch materials. Many new products are available, some of which may need further evaluation for use in this state.
(2) Synthetic Binders - High polymer synthetic emulsion, miscible with water when diluted and following application to mulch, drying and curing shall no longer be soluble or dispersible in water. It shall be applied at rates recommended by the manufacturer and remain tacky until germination of grass.

Note: All names give above are registered trade names. This does not constitute a commendation of these products to the exclusion of other products.

B. Wood-fiber or paper-fiber mulch. Shall be made from wood, plant fibers or paper containing no growth or germination inhibiting materials, used at the rate of 1,500 ponds per acre (or as recommended by the project manufacturer) and may be applied by a hydroseeder. This mulch shall not be mixed in the tank with seed. Use is limited to flatter slopes and during optimum seeding periods in spring and fall.

C. Pelletized mulch. Compressed and extruded paper and/or wood fiber product, which may contain co-polymers, tackifiers, fertilizers and coloring agents. The dry pellets, when applied to a seeded area and watered, forma mulch mat. Pelletized mulch shall be applies in accordance with the manufacturers recommendations. Mulch may be applied by hand or mechanical spreader at the rate of 60-75 lbs./1,000 square feet and activated with 0.2 to 0.4 inches of water. This material has been found to be beneficial for use on small lawn or renovation areas, seeded areas where weed-seed free mulch is desired or on sites where straw mulch and tackifier agent are not practical or desirable.

Applying the full 0.2 to 0.4 inches of water after spreading pelletized mulch on the seed bed is extremely important for sufficient activation and expansion of the mulch to provide soil coverage.

DUST CONTROL STANDARDS

The following methods should be considered for dust control at the request of the Township Construction Code Official, or upon inspection by an S.C.D. official.

1. Spray - On Adhesive - On mineral soils (not effective on muck soils.) Keep traffic off these areas.

	Water Dilution	Type of Nozzle	Apply Gallons/Acre
Anionic asphalt emulsion	7:1	Coarse spray	1,200
Latex emulsion	12 1/2 :1	Fine spray	235
Resin in water	4:1	Fine spray	300

2. Tillage - To roughen surface and bring clods to the surface. This is a temporary emergency measure which should be used before soil blowing starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, and spring-toothed harrows are examples of equipment which may produce the desired effect.
3. Sprinkling - Site is sprinkled until the surface is wet.
4. Barriers - Solid board fences, snow fences, burlap fences, crate walls, bales of hay and similar material can be used to crate walls, bales of hay and similar material can be used to control air currents and soil blowing.
5. Calcium Chloride - Shall be in the form of loose dry granules at a rate that will keep surface moist but not cause or flakes fine enough to keed through commonly used spreaders pollution or plant damage. If used on steeper slopes, Then pollution or plant damage. If used on steeper slopes, Then use other practices to prevent washing into streams or accumulation around plants.
6. Stone - Cover surface with crushed stone or coarse gravel.
7. Mulch - Stabilization with approved mulches and vegetation cover being temporary of permanent.

STANDARD FOR LAND GRADING

PLANNING CRITERIA

The grading plan and installation shall be based upon adequate topographic surveys and investigations. The plan is to show the location, slope, cut, fill and finish elevation of the surfaces to be graded. The plan should also include auxiliary practices for safe disposal of runoff water, slope stabilization, erosion control and drainage. Facilities such as waterways, ditches, diversions, grade-stabilization structures, retaining walls and subsurface drains should be included where necessary.
Erosion control measures shall be designed and installed in accordance with the applicable standard contained herein.
The development and establishment of the plan shall include the following:

1. The cut face of earth excavations and fills shall be no steeper than the safe angle of repose for the materials encountered and flat enough for proper maintenance.
2. The permanently exposed faces of earth cuts and fills shall be vegetated or otherwise protected from erosion.
3. Provisions shall be made to safely conduct surface water to storm drains or suitable water courses and to prevent surface runoff from damaging cut faces and fill slopes.
4. Subsurface drainage is to be provided in areas having a high water table, to intercept seepage that would adversely affect slope stability, building foundations or create undesirable wetness. See Standard for Subsurface Drainage, pg. 32-1.
5. Adjoining property shall be protected from excavation and filling operations.
6. Fill shall not be placed adjacent to the bank of a stream or channel, unless provisions are made to protect the hydraulic, biological, aesthetic and other environmental functions of the stream.

SOIL CONSERVATION NOTES

Soil Management and Preparation

Subgrade soils prior to the application of topsoil shall be free of excessive compaction to a depth of 6.0 inches to enhance the establishment of permanent vegetative cover.
This section of this Standard addresses the potential for excessive soil compaction in light of the intended land use, testing for excessive soil compaction where permanent vegetation is to be established and mitigation of excessive soil compaction when appropriate.
Due to use or setting, certain disturbed areas will not require compaction remediation including, but not limited to the following:

4. Within 20 feet of building foundations with basements, 12 feet from slab or crawl space construction.
5. Where soils or gravel surfaces will be required to support post-construction vehicular traffic loads such as roads, parking lots and driveways (including gravel surfaces), bicycle paths or pedestrian walkways (sidewalks etc)
6. Airports, railways or other transportation facilities
7. Areas requiring industry or government specified soil designs, including golf courses, landfills, wetland restoration, septic disposal fields, wet/lined ponds, etc.
8. Areas developed or regulated by other local, state or federal regulations which dictate soil conditions
9. Brownfields (capped uses), urban redevelopment areas, , in-fill areas, , recycling yards, junk yards, quarries and
10. Slopes determined to be inappropriate for safe operation of equipment
11. Portions of a site where no heavy equipment travel or other disturbance has taken place
12. Areas receiving temporary vegetative stabilization in accordance with the Standard.
13. Where the area available for remediation practices is 500 square feet or less in size.
14. Locations containing shallow (close to the surface) bedrock conditions.

Areas of the site within are subject to compaction testing and/or mitigation shall be graphically denoted on the certified soil erosion control plan.
Soil compaction remediation or testing to prove remediation is not necessary will be required in areas where permanent vegetation is to be established that are not otherwise exempted above. Testing method shall be selected, and soil compaction testing shall be performed by, the contractor or other project owner's representative (e.g. engineer). A minimum of two (2) tests shall be performed for projects with an overall limit of disturbance of up to one (1) acre and at a rate of two (2) tests per acre of the overall limit of disturbance for larger areas which shall be evenly distributed over the area of disturbance subject to testing. Tests shall be performed in areas representative of the construction activity pervading in the area. In the event this testing indicates compaction in excess of the maximum thresholds indicated for the testing method, the contractor/owner shall have the option to perform compaction mitigation over the entire disturbed area (excluding exempt areas) or to perform additional testing to establish the limits of excessive compaction whereupon only the excessively compacted areas would require compaction mitigation.
Soil compaction testing is not required if/when subsoil compaction remediation (scarification/tillage (6" minimum depth) or similar) is proposed as part of the sequence of construction.

Soil Test Method Options

1. Probing Wire Test Method
This test shall be conducted with a firm wire (15-1/2 gauge steel wire - e.g. survey marker flag, straight wire stock, etc.), 18 to 21 inches in length, with 6" inches from one end visibly marked on the wire. Conduct wire flag test by holding the wire flag near the ground surface, and push it vertically into the soil at several different locations in the field to the lesser of a 6 inch depth or the depth at which it bends due to resistance in the soil. Record the depth at which it bends due to resistance in the soil. The wire should penetrate without bending or deforming at least 6" into the ground by hand, without the use of tools. If penetration fails and an obstruction is suspected (rocks, root, etc.) the test can be conducted in the same general area. If the test is successful the soil is not excessively compacted. If the wire is difficult to insert (wire bends or deforms prior to reaching 6 inches in depth) the soil may be excessively compacted and compaction mitigation or further testing via method 3 or 4 below is required, the choice of which is at the contractor/owner's discretion.

2. Handheld Soil Penetrometer Test Method
This test shall be conducted based on the Standard Operation Procedure (