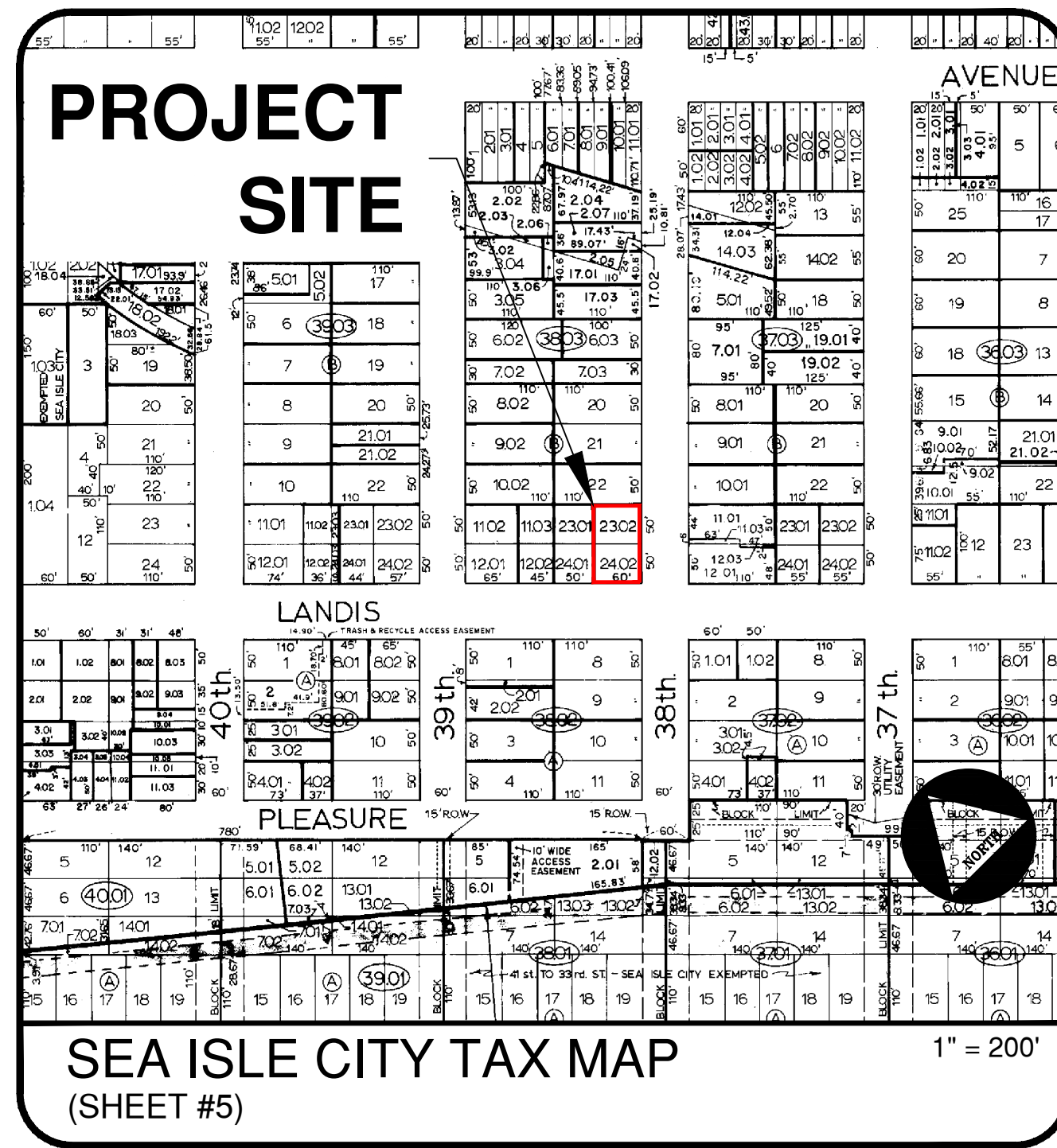
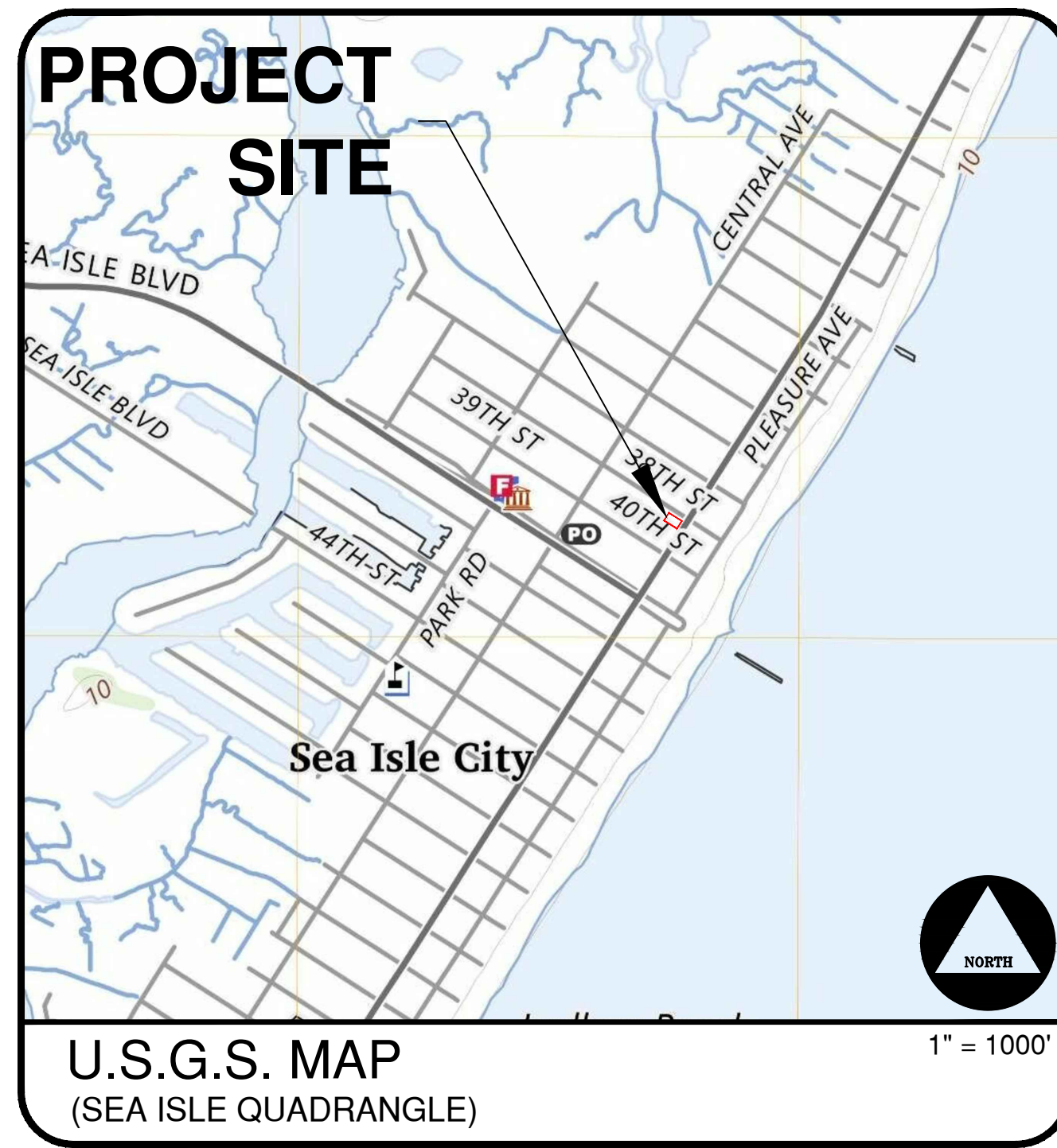




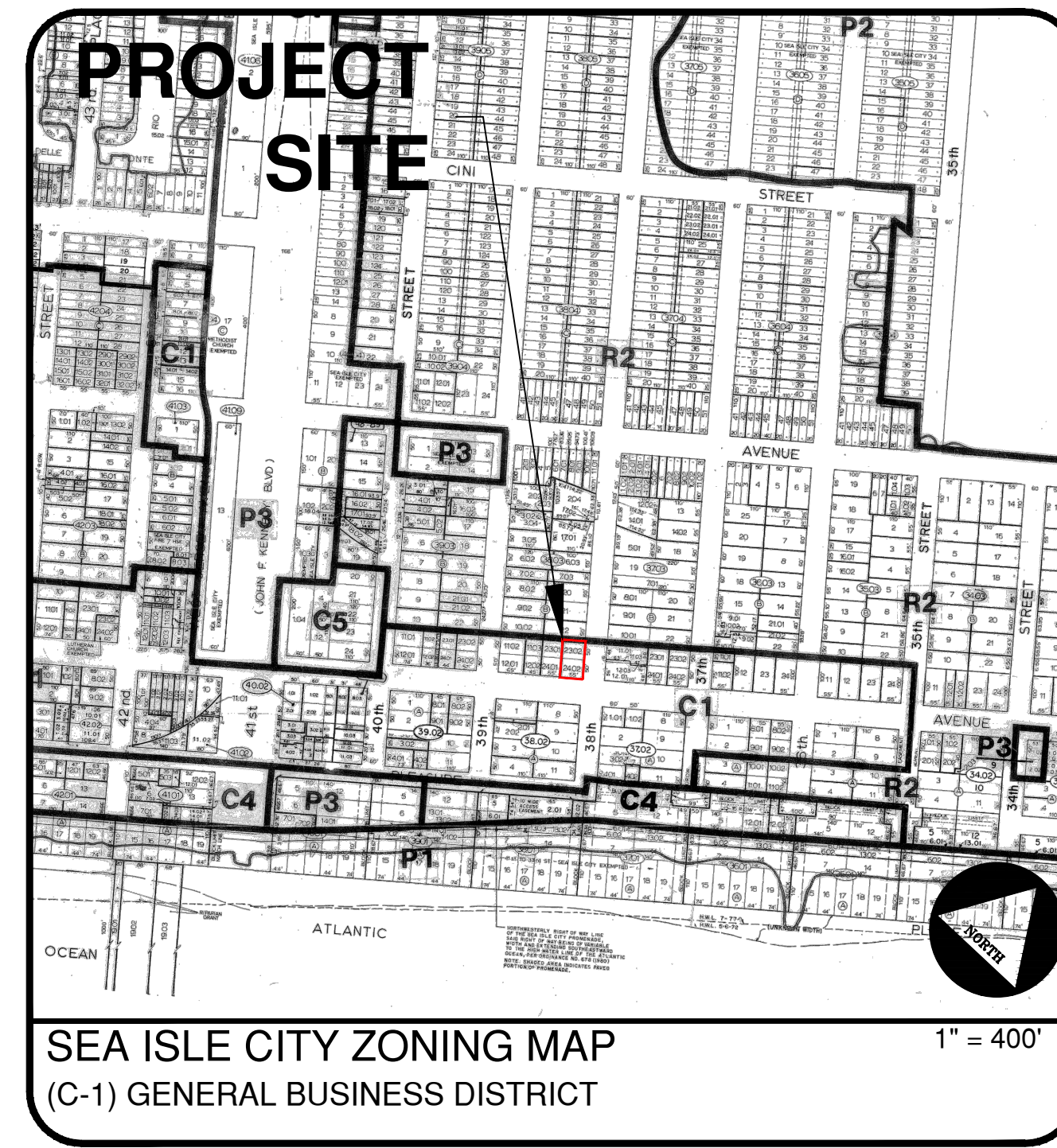
GENERAL LOCATION
(NJDEP 2020 AERIAL)



SEA ISLE CITY TAX MAP
(SHEET #5)



U.S.G.S. MAP
(SEA ISLE QUADRANGLE)



SEA ISLE CITY ZONING MAP
(C-1) GENERAL BUSINESS DISTRICT

City of Sea Isle City
Municipal Services - 2nd Floor
300 Ocean View Blvd
Sea Isle City, NJ 08243
909-624-4444

I, Joseph A. Bernoldi, Jr., CTA, Tax Assessor of the City of Sea Isle City, New Jersey, hereby certify that the attached is a list of owners within two hundred (200) feet of Block 38.03, Lots 23.02 & 24.02 as determined by the official Tax Map and Tax Assessor of the City of Sea Isle City, New Jersey.

Note: If this is an application for subdivision or other approval, the applicant must verify the corporate ownership of all public utilities and the general manager of all public utilities companies that own land in any location that is adjacent to or contiguous with the subject (200) feet of the applicant's property.

DRAWN: 03-06-26 J. Bernoldi, Jr. Tax Assessor

Block	Lot	Property Location	Property Address	Property Owner	Value
38.03	118.3874.01	118.3874.01	118.3874.01	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.02	118.3874.02	118.3874.02	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.03	118.3874.03	118.3874.03	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.04	118.3874.04	118.3874.04	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.05	118.3874.05	118.3874.05	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.06	118.3874.06	118.3874.06	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.07	118.3874.07	118.3874.07	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.08	118.3874.08	118.3874.08	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.09	118.3874.09	118.3874.09	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.10	118.3874.10	118.3874.10	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.11	118.3874.11	118.3874.11	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.12	118.3874.12	118.3874.12	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.13	118.3874.13	118.3874.13	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.14	118.3874.14	118.3874.14	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.15	118.3874.15	118.3874.15	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.16	118.3874.16	118.3874.16	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.17	118.3874.17	118.3874.17	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.18	118.3874.18	118.3874.18	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.19	118.3874.19	118.3874.19	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.20	118.3874.20	118.3874.20	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.21	118.3874.21	118.3874.21	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.22	118.3874.22	118.3874.22	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.23	118.3874.23	118.3874.23	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.24	118.3874.24	118.3874.24	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.25	118.3874.25	118.3874.25	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.26	118.3874.26	118.3874.26	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.27	118.3874.27	118.3874.27	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.28	118.3874.28	118.3874.28	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.29	118.3874.29	118.3874.29	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.30	118.3874.30	118.3874.30	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.31	118.3874.31	118.3874.31	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.32	118.3874.32	118.3874.32	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.33	118.3874.33	118.3874.33	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.34	118.3874.34	118.3874.34	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.35	118.3874.35	118.3874.35	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.36	118.3874.36	118.3874.36	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.37	118.3874.37	118.3874.37	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.38	118.3874.38	118.3874.38	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.39	118.3874.39	118.3874.39	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.40	118.3874.40	118.3874.40	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.41	118.3874.41	118.3874.41	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.42	118.3874.42	118.3874.42	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.43	118.3874.43	118.3874.43	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.44	118.3874.44	118.3874.44	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.45	118.3874.45	118.3874.45	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.46	118.3874.46	118.3874.46	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.47	118.3874.47	118.3874.47	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.48	118.3874.48	118.3874.48	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.49	118.3874.49	118.3874.49	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000
38.03	118.3874.50	118.3874.50	118.3874.50	CONDOMINIUM OWNERS ASSOCIATION OF SEA ISLE CITY, INC.	10000

LIST CONTINUED ON SHEET 2

PROPERTY OWNERS LIST WITHIN 200'

1. Applicant / Owner: T.L. Sea Associates, 515 East Moreland Road, Willow Grove, PA 19090, Christine & Jim DiFranco, 267-977-9187/267-253-7375
- Project Location: 3802 Landis Avenue, Sea Isle City, NJ 08243
2. The project site is known as Block 38.03 Lots 23.02 & 24.02 as shown on the Tax Sheet # 5 of the Sea Isle City Tax Maps.
3. The project site is located in the (C-1) General Business Zoning District.
4. The project site consists of an area of 6,000 SF.
5. The lots currently contains a two & a half story, 4-unit residential dwelling, which is to be demolished.
6. It is the intent of the Applicant to construct a three-story building that contains a commercial business space and enclosed parking on the ground level, and five dwelling units on the upper levels. Five, 3-bedroom units will be on the two upper levels.
7. The applicant is seeking a D(5) variance to permit 5 dwelling units, where a maximum of 4.8 units is permitted; and a bulk variance to permit a nonresidential first floor building coverage of 38.16%, where a minimum of 40% is required.
8. The proposed units shall be serviced by proposed municipal water & sewer connections.
9. A stormwater management system has been designed to store a percentage of stormwater generated by the development in accordance with City requirements.
10. The property is located in the AE Elev. 9 Flood Zone.
11. All concrete curb, gutter, sidewalk, pavement disturbed in kind within road rights-of-way are to be repaired in kind.
12. 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.
13. The proposed application will require approvals from the following agencies:
- Sea Isle City Zoning Board
 - DelAtlantic Conservation District
 - Cape May County Planning Department

GENERAL NOTES

Outbound and Topographic survey information was taken from plan entitled "Survey with Elevations, Block 38.03, Lots 23.02 and 24.02, City of Sea Isle City, Cape May County, NJ", prepared by Cape Land Surveying, LLC, George Swensen, N.J.P.L.S., GS43415, dated 9/23/2025.

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
(C-1) GENERAL BUSINESS ZONING DISTRICT
BLOCK 38.03 LOTS 23.02 & 24.02

Description	Required	Existing	Proposed	Variance
Lot Area	5,000 SF	6,000± SF	6,000± SF	NO
Lot Frontage	50'	60'	60'	NO
Lot Width	50'	60'	60'	NO
Lot Depth	100'	100'	100'	NO
Principal Building Setbacks:				
Min. / Max. Front Yard (Landis Ave.)	0' / 5'	7.3'	0.0'	NO
Min. / Max. Front Yard (38th Street)	0' / 5'	6.5'	0.0'	NO
Min. / Max. Total Side Yard	0' / 15'	8.7'	0.0'	NO
Min. Rear Yard	10'	16.8' ±	6.1' to platform	YES
			10.1' to bldg. wall	NO
Max. Building Coverage	95%	46.59%	90.96%	NO
Max. Impervious Lot Coverage	n/a	53.11%	94.7%	NO
Max. Building Height (Sloped Roof)	39' (abv. AE9+1)	<39'	39'	NO
Max. Building Stories	3 stories	3 stories	3 stories	NO
Residential units permitted (1 / 1,250 SF Lot area)	4.8	4	5	YES
Min. 1st Floor Non-Residential Cover	40%	n/a	38.16%	YES
Min. 1st Floor Non-Residential Unit	750 SF	n/a	2,290± SF	NO
Min. Non-Residential Unit Width	15'	n/a	23.9' ±	NO
Min. 1st Floor Commercial Frontage	60%	n/a	80.8%	NO
Min. Non-Residential Frontage (Landis Ave)	60%	n/a	100%	NO
Driveway Width	24'	n/a	16'±21.3'	YES
Green Space Buffer to Rear Yard	4'	n/a	6.1'	NO
Parking Requirement per §26-52.12(a):				
6 Dwelling units (<1,500 SF each)	5 spaces			
(1 space / <1,500 SF unit)				
Total	5 spaces	n/a	6 spaces	NO
Sign Requirement per §26-28.3:				
Sign area *	80 SF	n/a	±80 SF	NO
*All proposed signs shall comply with §26-28.3 or applicant shall request a variance from the Board.				
See Architectural Plans for proposed sign information.				

ZONING INFORMATION

SITE PLAN

FOR

T.L. Sea Associates

BLOCK 38.03, LOTS 23.02 & 24.02

CITY OF SEA ISLE, CAPE MAY COUNTY, NJ

Engineers - Landscape Architects - Planners

SCHEDULE OF SHEETS

COVER SHEET	SHEET NUMBER	ORIGINAL DATE	LAST REVISION DATE
EXISTING CONDITIONS & DEMOLITION PLAN	1 OF 7	2/26/2026	5/18/26
SITE PLAN	2 OF 7	2/26/2026	4/14/26
GRADING & DRAINAGE PLAN	3 OF 7	2/26/2026	5/18/26
UTILITY, LANDSCAPE, & SOIL EROSION	4 OF 7	2/26/2026	5/18/26
ENGINEERING DETAILS	5 OF 7	2/26/2026	5/18/26
SOIL EROSION AND SEDIMENT CONTROL NOTES	6 OF 7	2/26/2026	4/14/26
	7 OF 7	2/26/2026	4/14/26

CITY OF SEA ISLE APPROVAL

Chairman	Date
Secretary	Date
Engineer	Date

COVER SHEET

BLOCK 38.03, LOTS 23.02 & 24.02

CITY OF SEA ISLE

CAPE MAY COUNTY, NEW JERSEY

Environmental Planners, Landscape Architects
 Cambridge Drive Ocean View New Jersey 08230
 www.engineeringdesign.com • CERTIFICATE OF AUTHORIZATION: 24GA2970000
 (609) 390-0332 • Fax (609) 390-9204

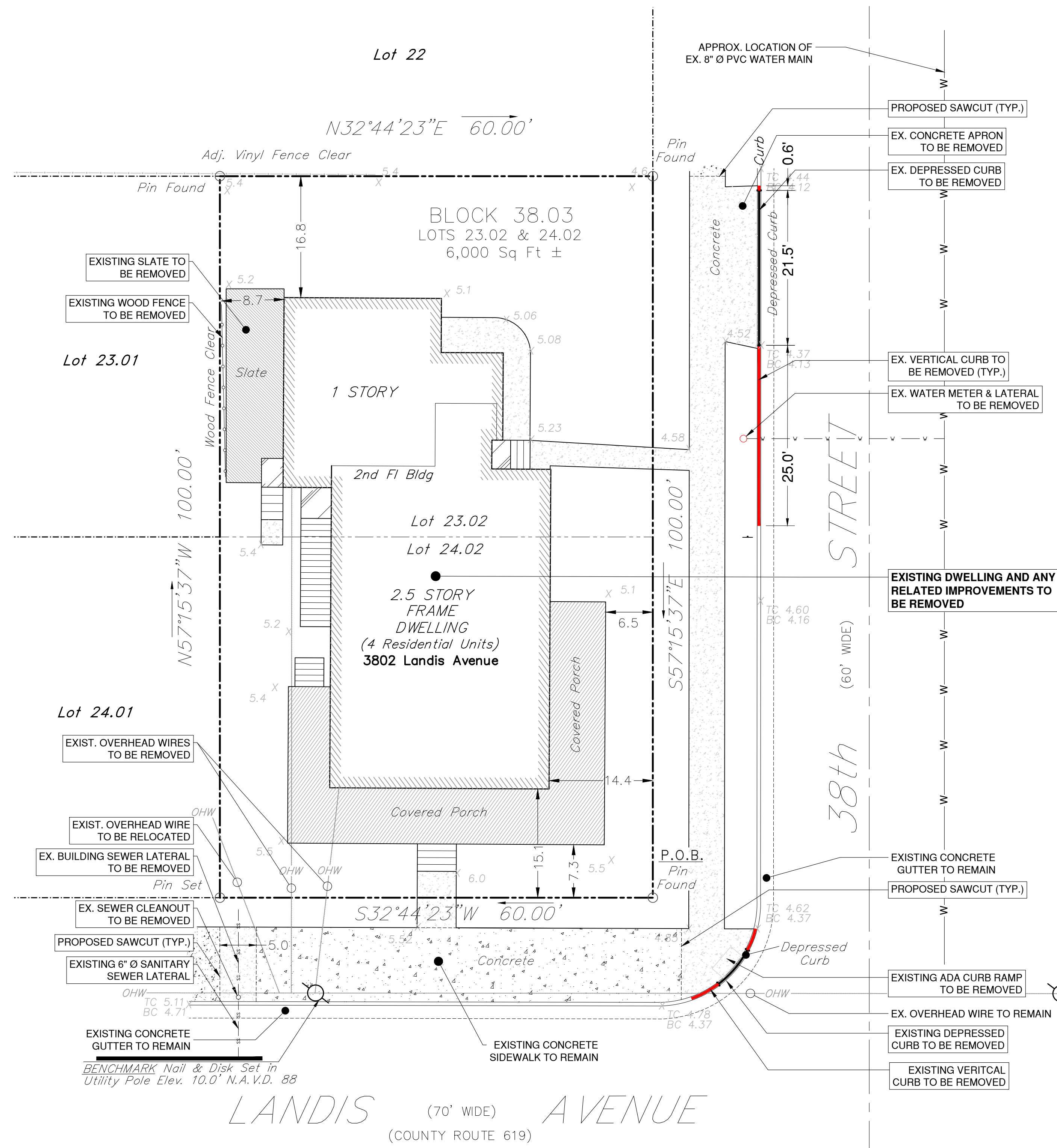
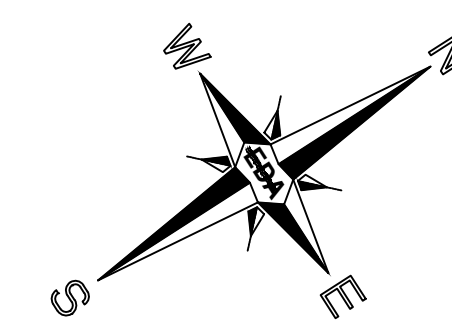
VINCENT C. ORLANDO

PROFESSIONAL ENGINEER
N.J.P.E. LIC. #32498

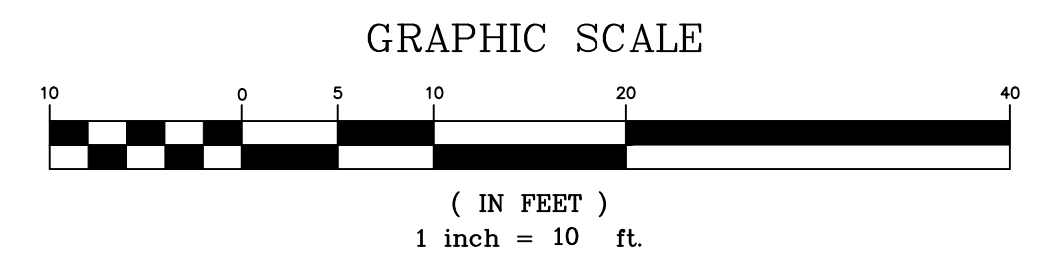
IF THIS PLAN OR DOCUMENT DOES NOT CONTAIN A RAISED SEAL IMPRESSION BEARING THE NAME AND REGISTRATION NUMBER OF THE ABOVE SIGNED PROFESSIONAL, IT MAY NOT BE AN AUTHORIZED COPY OF THE ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. REPRODUCTION OR FURTHER DISSEMINATION OF THE CONTENTS IN WHOLE OR IN PART REQUIRES PERMISSION IN WRITING FROM ENGINEERING DESIGN ASSOCIATES, P.A.

REVISION	DATE	BY
Rev. per Zng Brd Mtg.	5/18/26	MJH
Rev. per City Engineer	4/14/26	PMMc
Rev. per Engineer	3/13/26	PMMc

DATE: 2/26/26	DRAWN BY: PMMc
SCALE: AS NOTED	CHECKED BY: VCO
PROJECT #: 10838	SHEET: 1 OF 7



Outbound and Topographic survey information was taken from plan entitled "Survey with Elevations, Block 38.03, Lots 23.02 and 24.02, City of Sea Isle City, Cape May County, NJ", prepared by Cape Land Surveying, LLC, George Swensen, N.J.P.L.S. GS43415, dated 9/23/2025.



EDA Engineering Design Associates, P.A.
 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 #AG2707000

EXISTING CONDITIONS & DEMOLITION PLAN
 BLOCK 38.03, LOTS 23.02 & 24.02
 SEA ISLE CITY
 CAPE MAY COUNTY, NEW JERSEY

VINCENT C. ORLANDO
 PROFESSIONAL ENGINEER
 N.J.P.E. LIC. #32498

IF THIS PLAN OR DOCUMENT DOES NOT CONTAIN A RAISED SEAL IMPRESSION BEARING THE NAME AND REGISTRATION NUMBER OF THE ABOVE SIGNED PROFESSIONAL, IT MAY NOT BE AN AUTHORIZED COPY OF THE ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. REPRODUCTION OR FURTHER DISSEMINATION OF THE CONTENTS IN WHOLE OR IN PART REQUIRES PERMISSION IN WRITING FROM ENGINEERING DESIGN ASSOCIATES, P.A.

REVISION	DATE	BY
Rev. per City Engineer	4/14/26	PMMc

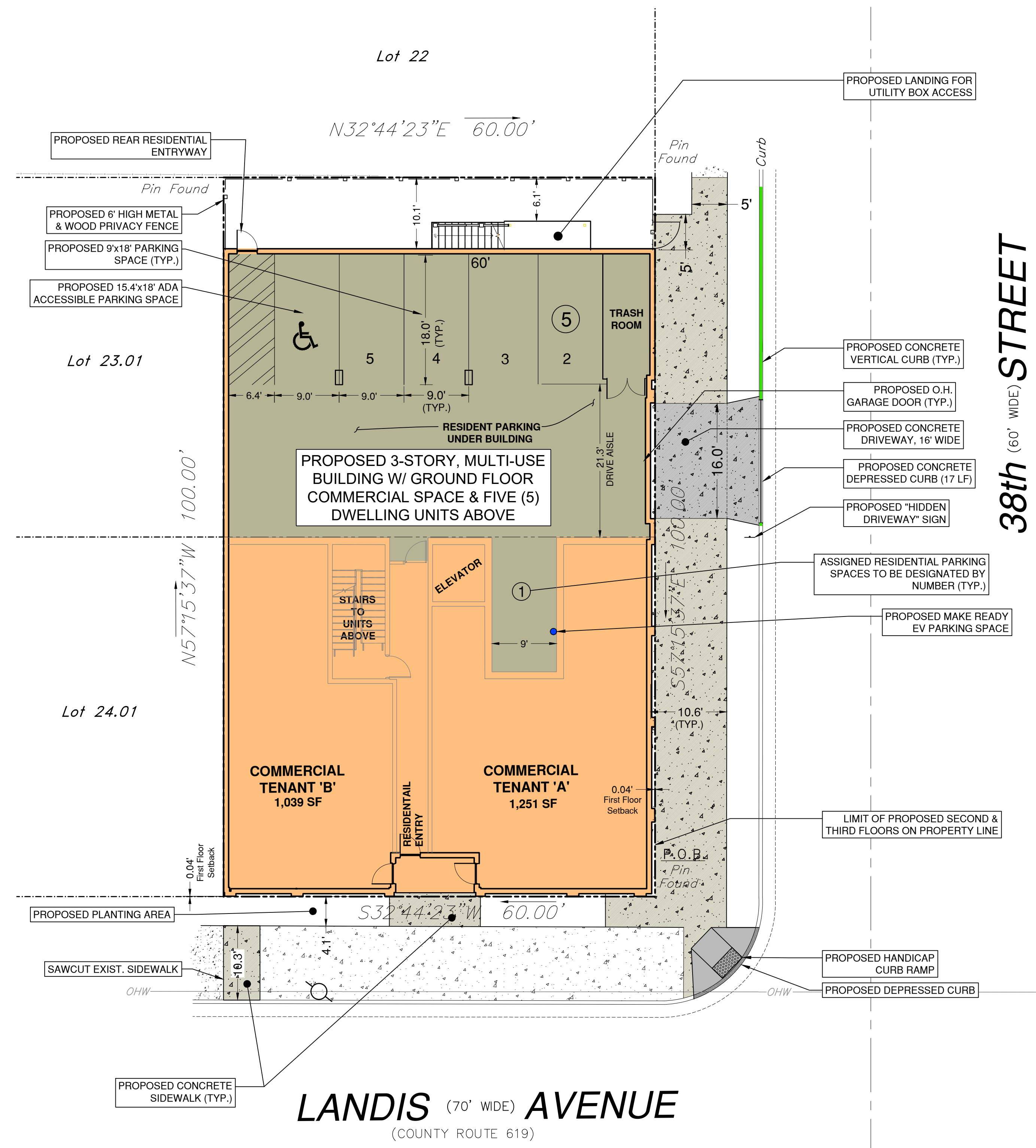
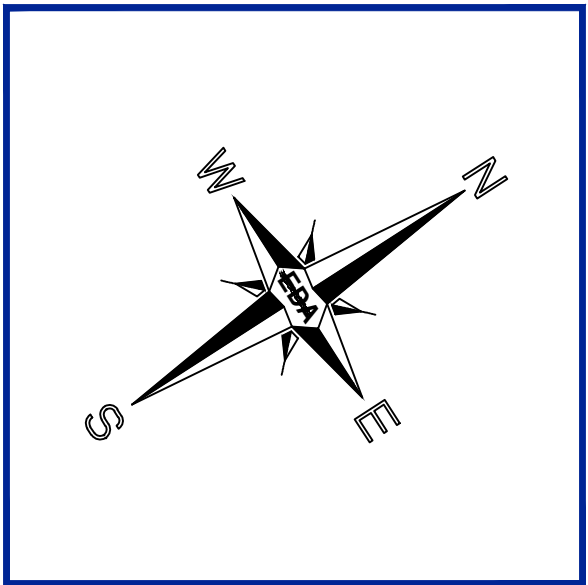


DATE: 2/26/26	DRAWN BY: PMMc
SCALE: AS NOTED	CHECKED BY: VCO
PROJECT #: 10388	SHEET: 2 OF 7

EXISTING CONDITIONS & DEMO PLAN



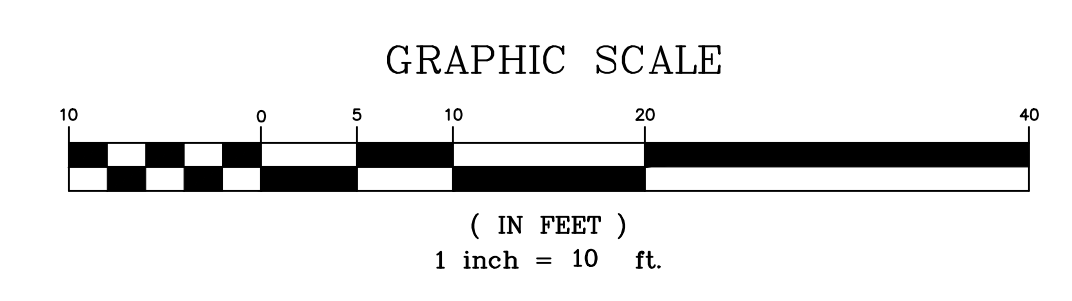
Engineers - Landscape Architects - Planners



NOTE:

1. CURB AND SIDEWALK TO BE REPLACED AT THE DIRECTION OF THE MUNICIPAL ENGINEER
2. CONCRETE GUTTER DISTURBED OR DAMAGED BY CONSTRUCTION SHOULD BE REMOVED AND REPLACED AS DIRECTED BY THE MUNICIPAL ENGINEER
3. ANY REQUIRED ELECTRIC TRANSFORMERS SHALL BE LOCATED ON-SITE & NOT IN THE PUBLIC RIGHT-OF-WAY.
4. SEE ARCHITECT'S PLAN FOR BUILDING DIMENSIONS AND LAYOUT

SITE PLAN



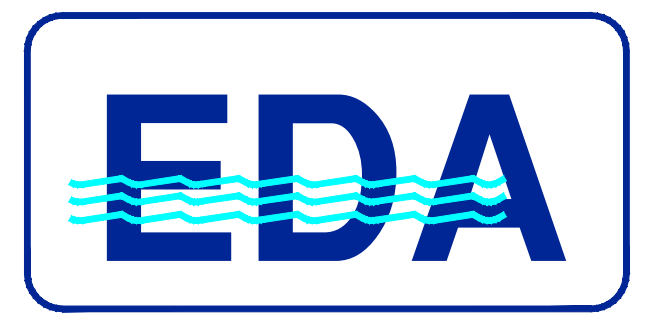
EDA Engineering Design Associates, P.A.
 Environmental Planners, Landscape Architects
 CAMBRIDGE PROFESSIONAL OFFICES
 5 Cambridge Drive, Ossining, New York 10520
 (609) 390-0332 • Fax (609) 390-9204 • www.engineeringdesign.com • CERTIFICATE OF AUTHORIZATION: 242270000

SITE PLAN
 BLOCK 38.03, LOTS 23.02 & 24.02
 SEA ISLE CITY
 CAPE MAY COUNTY, NEW JERSEY

VINCENT C. ORLANDO
 PROFESSIONAL ENGINEER
 N.J.P.E. LIC. #32498

IF THIS PLAN OR DOCUMENT DOES NOT CONTAIN A RAISED SEAL IMPRESSION BEARING THE NAME AND REGISTRATION NUMBER OF THE ABOVE SIGNED PROFESSIONAL, IT MAY NOT BE AN AUTHORIZED COPY OF THE ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. REPRODUCTION OR FURTHER DISSEMINATION OF THE CONTENTS IN WHOLE OR IN PART REQUIRES PERMISSION IN WRITING FROM ENGINEERING DESIGN ASSOCIATES, P.A.

REVISION	DATE	BY
Rev. per Zng Brd Mtg.	5/18/26	MJH
Rev. per City Engineer	4/14/26	PMMc



DATE: 2/26/26	DRAWN BY: PMMc
SCALE: AS NOTED	CHECKED BY: VCO
PROJECT #: 10388	SHEET: 3 OF 7

Stormwater Management Calculations
Block 38.03, Lot 23.02 & 24.02
City of Sea Isle, Cape May County, NJ

The 6,000 SF property, located on Landis Ave is currently a four unit residential building. The applicant intends to construct a new mixed-use building with commercial on the first floor and a total of five (5) dwelling units on the 2nd and 3rd floors above. A stormwater trench with two 8" perforated HDPE pipes surrounded by stone has been proposed to mitigate runoff. The design is to encompass lots 23.02 & 24.02. The design is also for 30% of the difference between the 25 year storm in proposed conditions and pre-development (vacant) runoff conditions.

Pre-Development Runoff Calculation

$Q = c \cdot i \cdot A$
 $c = 0.25$ (Grass/Landscape); $A = 6,000$ SF = .1377 Ac; $i = 7.27$ in/hr ($T_c = 5$ Min.)
 $Q = (0.25) \cdot (7.27) \cdot (.1377) = 0.25$ cfs
 $V = (Q) \cdot T/t$
 $T/t = 2.5$ (T/c) where (T/c) is 5 minutes
 $V = (0.25 \text{ cfs}) \cdot (12.5 \text{ min.}) / (60 \text{ sec./min})$
 $V = 187.5$ CF

Post-Development Runoff Calculation

$Q = c \cdot i \cdot A$
 $i = 7.27$ in/hr ($T_c = 5$ Min.)
 $c = 0.99$ (Impervious) $A = 5679$ SF = 0.130 Ac
 $Q = (0.99) \cdot (7.27) \cdot (.130) = 0.936$ CFS
 $c = 0.25$ (Grass/Landscape) $A = 321$ SF = 0.007 Ac
 $Q = (0.25) \cdot (7.27) \cdot (.007) = 0.0127$ CFS
 Total $Q = 0.936$ CFS + 0.0127 CFS = 0.948 CFS
 $V = (Q) \cdot T/t$
 $T/t = 2.5$ (T/c) where (T/c) is 5 minutes
 $V = (0.948 \text{ CFS}) \cdot (12.5 \text{ min.}) / (60 \text{ sec./min})$
 $V = 711$ CF

Volume Calculation

(Pre-Development Runoff) = 187.5 CF
 (Post-Development Runoff) = 711 CF
 Runoff Created = 523.5 CF
 30% Volume = 157.05 CF

Storage Calculation

(2) 8" Pipes @ 50 LF = 34.9 CF
 $3.14 \times (.33)^2 \times 50$
 1.5' x 5.25' x 50' Stone Trench = 125.6 CF
 $[(1.5' \times 5.25' \times 50') - 34.9] \cdot (0.35)$
Total = 160.5 CF > 157.05 CF Required

Summary:

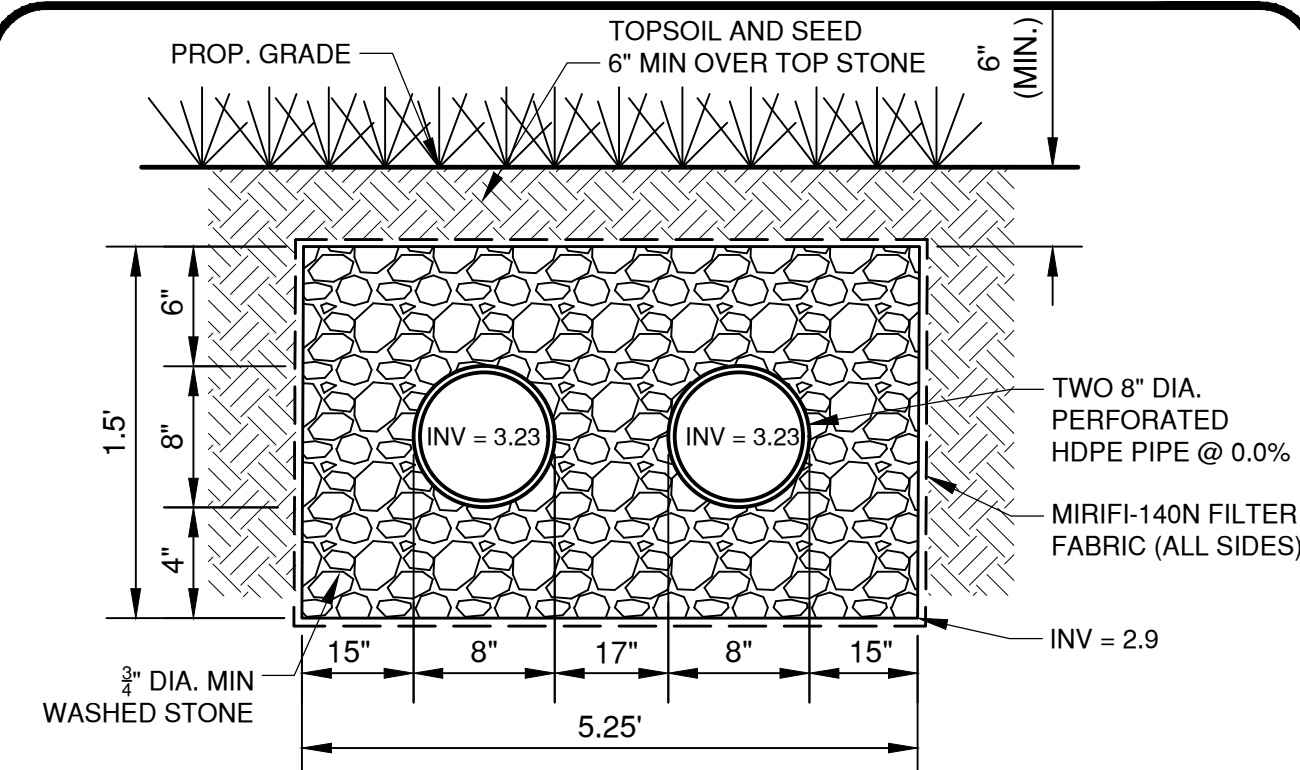
The 25 year design storm generates approximately 672 CF of stormwater runoff from all improvements, of which 202 CF (30%) is required to be stored. The infiltration system has been designed to store approximately 160.5 CF of runoff. If the quantity of runoff exceeds the capacity of the trench, runoff will flow out of the proposed inlet and towards existing drainage patterns on the existing roadway.

SOIL BORING #1 (Elev. 5.2)

DEPTH	DESCRIPTION
0" - 6"	3/4" Stone
6" - 16"	10YR 6/6 Sandy Loam, Subangular Blocky, Friable
16" - 24"	10YR 7/3 Sand, Single Grain, Loose
24" - 33"	10YR 6/2 Sand, Single Grain, Loose
33" - 40"	10YR 2/1 Silt Loam, Subangular Blocky, Friable

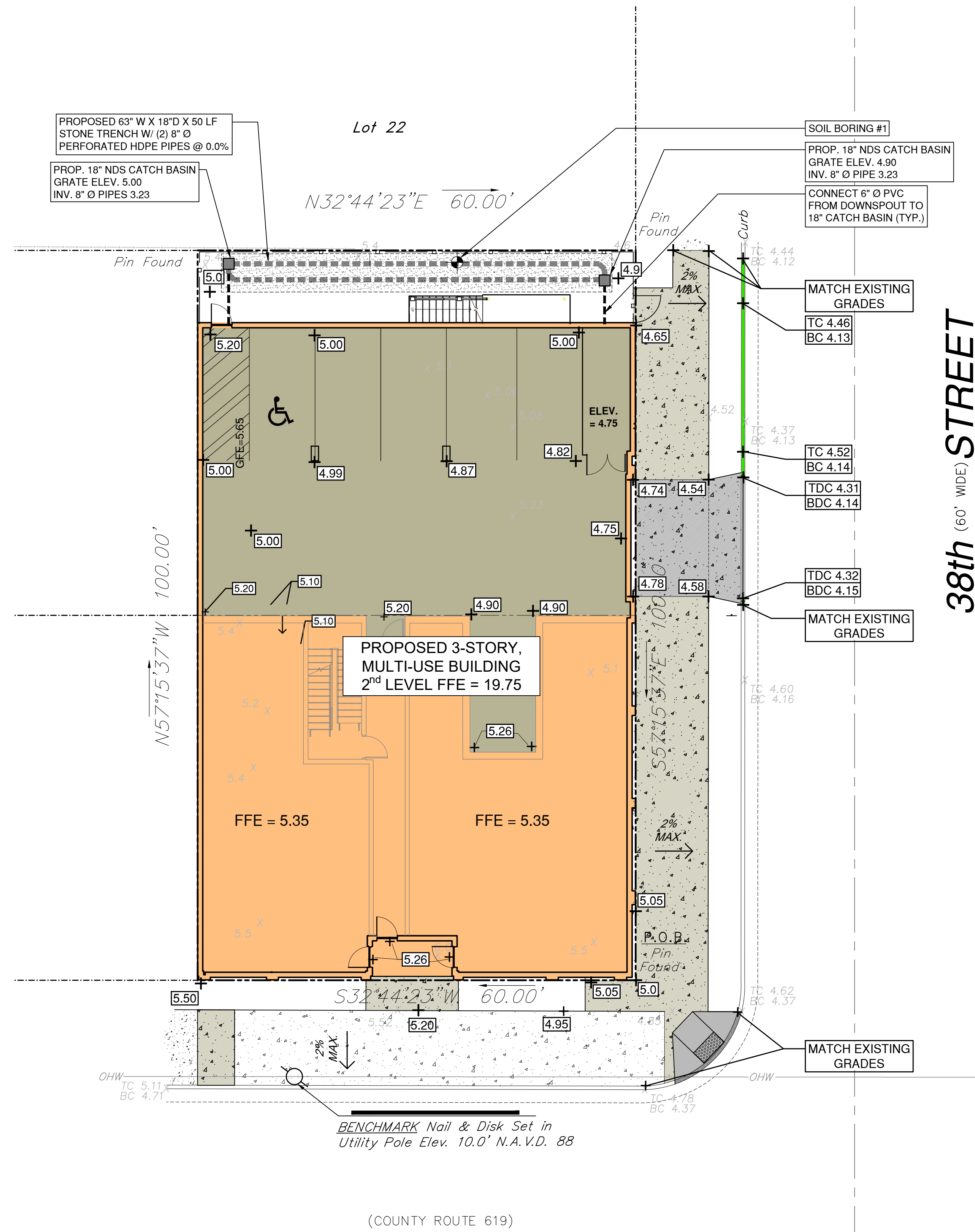
Depth of Groundwater: 28" (@ Elev. 2.86)
 Date Performed: 2/16/2026
 Performed By: Christopher J. Carey

SOIL BORING #1



DRAINAGE TRENCH DETAIL

N.T.S.



GRADING & DRAINAGE PLAN

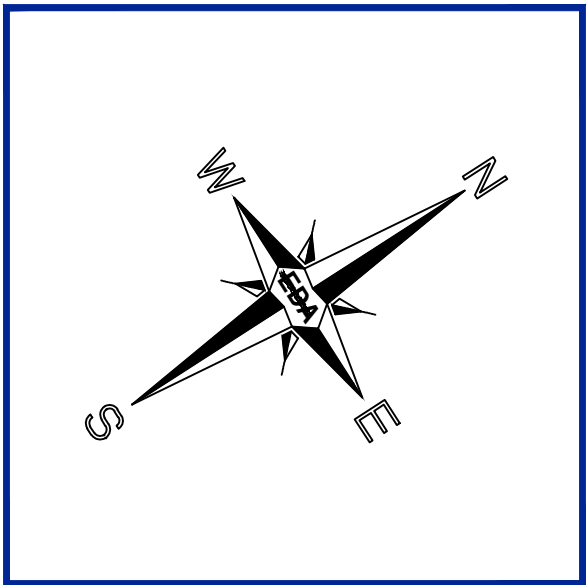
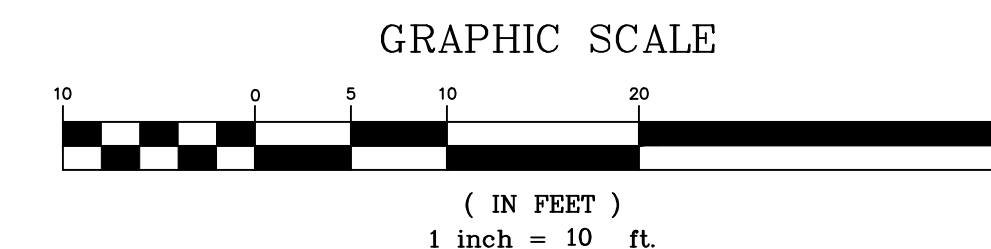


Engineers - Landscape Architects - Planners

Outbound and Topographic survey information taken from plan entitled "Survey with Elevations, Block 38.03, Lots 23.02 and 24.02, City of Sea Isle City, Cape May County, NJ", prepared by Cape Land Surveying, LLC, George Swensen, N.J.P.L.S. GS43415, dated 9/23/2025.

LEGEND

- +4.54 Existing Spot Elevation
- +5.0 Proposed Spot Elevation
- +TDC 4.32 Top Depressed Curb
- +BDC 4.15 Bottom Depressed Curb



EDA Engineering Design Associates, P.A.
 Environmental Planners, Landscape Architects
 CAMBRIDGE PROFESSIONAL OFFICES
 5 Cambridge Drive, Ocean View, New Jersey 08230
 (609) 390-9204 • Fax (609) 390-9204 • www.engineeringdesign.com • CERTIFICATE OF AUTHORIZATION: 2462707000

GRADING & DRAINAGE PLAN
 BLOCK 38.03, LOTS 23.02 & 24.02
 SEA ISLE CITY
 CAPE MAY COUNTY, NEW JERSEY

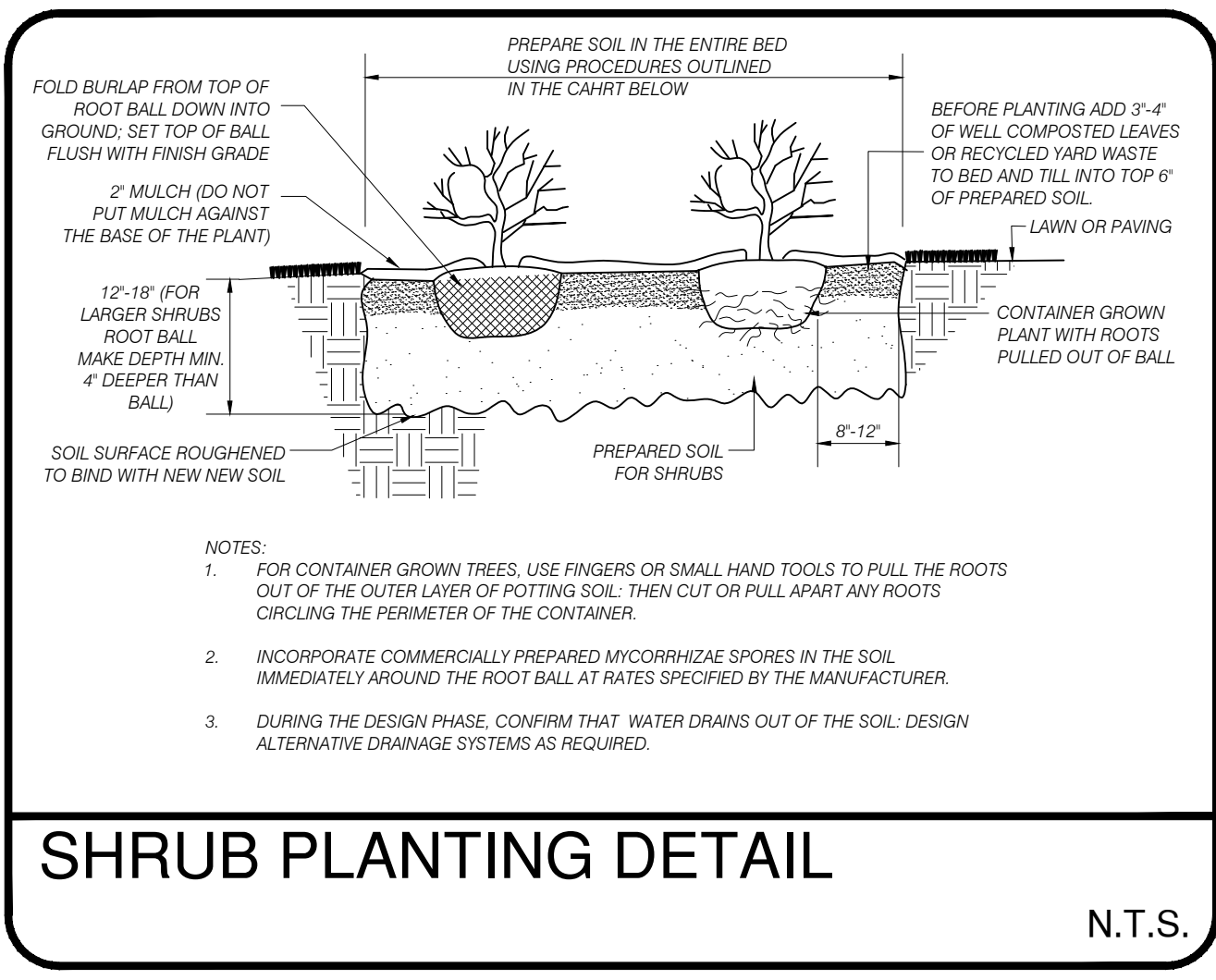
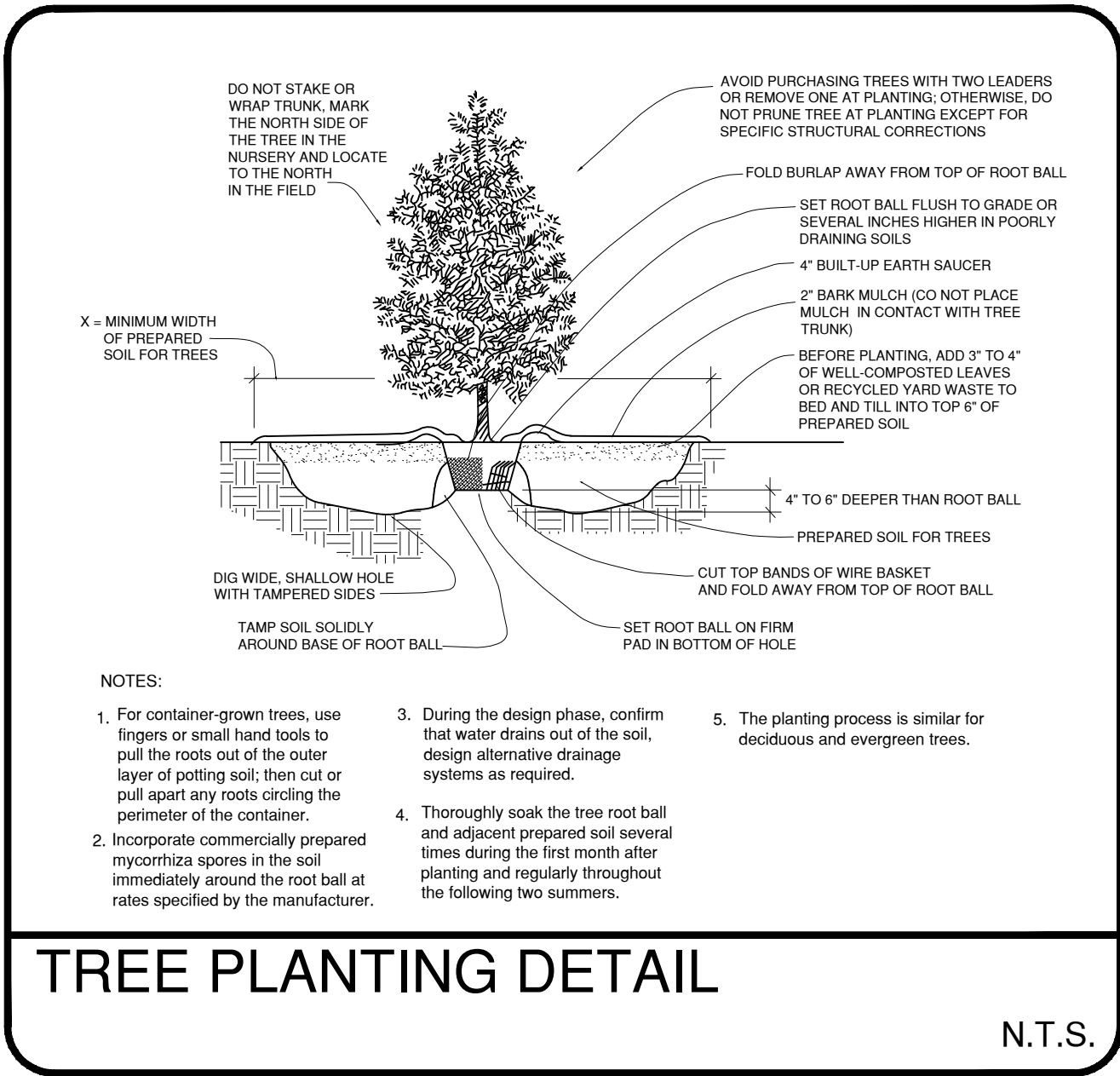
VINCENT C. ORLANDO
 PROFESSIONAL ENGINEER
 N.J.P.E. LIC. #32498

IF THIS PLAN OR DOCUMENT DOES NOT CONTAIN A RAISED SEAL IMPRESSION BEARING THE NAME AND REGISTRATION NUMBER OF THE ABOVE SIGNED PROFESSIONAL, IT MAY NOT BE AN AUTHORIZED COPY OF THE ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. REPRODUCTION OR FURTHER DISSEMINATION OF THE CONTENTS IN WHOLE OR IN PART REQUIRES PERMISSION IN WRITING FROM ENGINEERING DESIGN ASSOCIATES, P.A.

REVISION	DATE	BY
Rev. per Zng Brd Mtg.	5/18/26	MJH
Rev. per City Engineer	4/14/26	PMMc



DATE: 2/26/26	DRAWN BY: PMMc
SCALE: AS NOTED	CHECKED BY: VCO
PROJECT #: 10388	SHEET: 4 OF 7



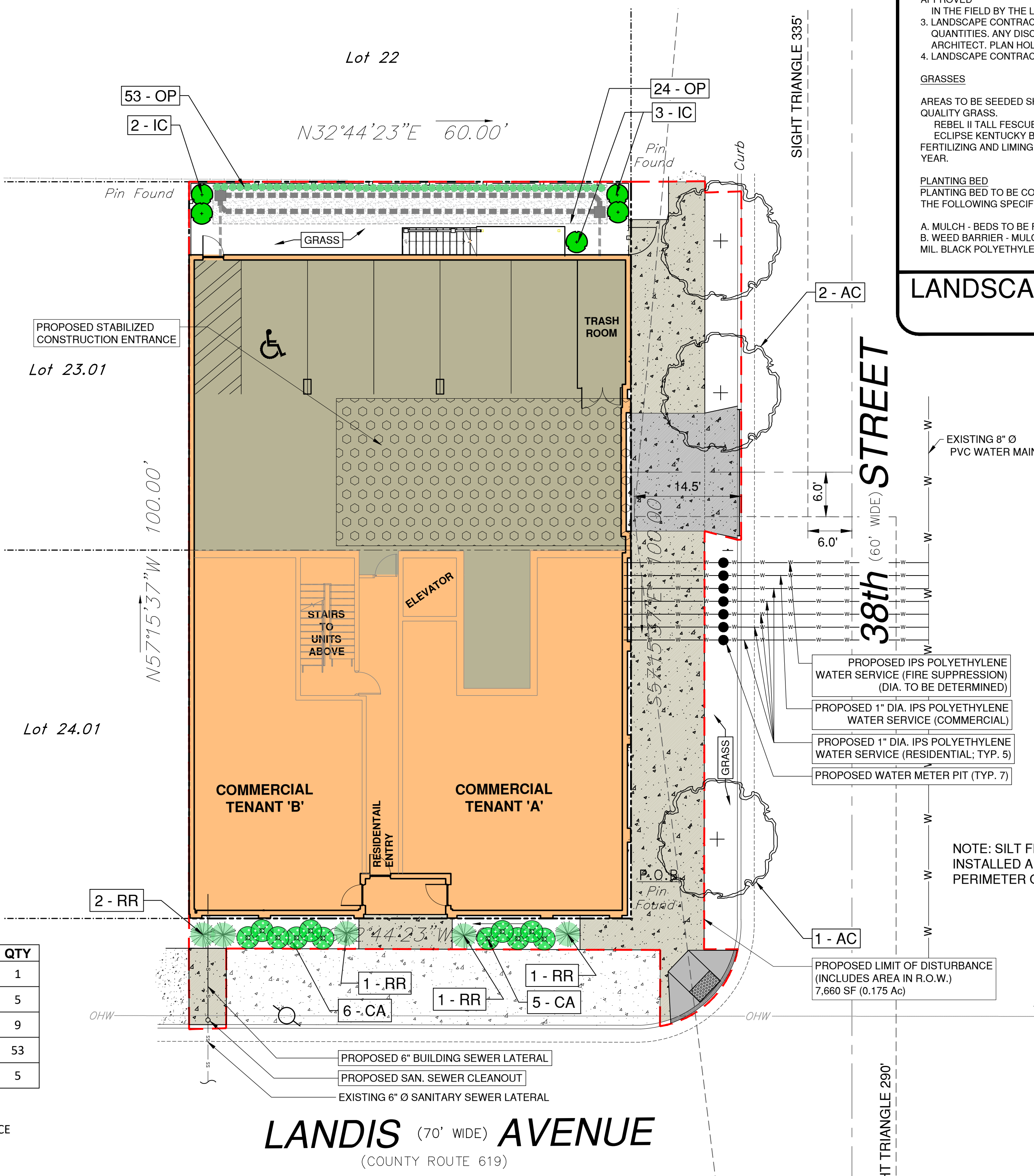
PLANTING SCHEDULE

ABRV	BOTANICAL NAME	COMMON NAME	SIZE	NOTES	QTY
AC	ACER SACCHARUM 'GOLDSPIRE'	'GOLDSPIRE' SUGAR MAPLE	6'-7'	B&B	1
IC	ILEX CRENATA 'SKY PENCIL'	SKY PENCIL JAPANESE HOLLY	#5	CONT.	5
CA	CLETHA ALNIFOLIA 'HUMMINGBIRD'	HUMMINGBIRD SUMMERSWEET	#5	CONT.	9
OP	OPHIOPOGON PLANISCAPUS 'NIGRESCENS'	BLACK MONDO GRASS	#1	CONT.	53
RR	ROSA RUGOSA	RUGOSA ROSE	#5	CONT.	5

NOTE: ALL LANDSCAPED AREAS SHALL BE IRRIGATED. IRRIGATION SYSTEM TO HAVE RAIN SENSOR. IRRIGATION DESIGN TO BE PROVIDED BY LANDSCAPE CONTRACTOR & SUBMITTED TO CONSTRUCTION OFFICE AND MUNICIPAL ENGINEER FOR REVIEW AND APPROVAL.

NOTE:

- CONTRACTOR SHALL CONTACT THE SEA ISLE CITY DEPARTMENT OF PUBLIC WORKS, ATLANTIC CITY ELECTRIC AND SOUTH JERSEY GAS COMPANY TO VERIFY EXISTING UTILITY SERVICES AND DEPTHS. THE DESIGN ENGINEER SHALL MEET WITH THE CITY ENGINEER AND PUBLIC WORKS DIRECTOR TO DETERMINE THE APPROPRIATE WATER DISTRIBUTION SYSTEM.



NOTE: EXISTING SANITARY SEWER LATERAL CONNECTION TO BE REMOVED AND REPLACED AT THE DIRECTION OF PUBLIC WORKS ENGINEER

LANDSCAPE NOTES:

- 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.
- 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.
- 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.
- LANDSCAPE CONTRACTOR SHALL PROVIDE IRRIGATION AS NEEDED.

GRASSES

AREAS TO BE SEEDDED 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

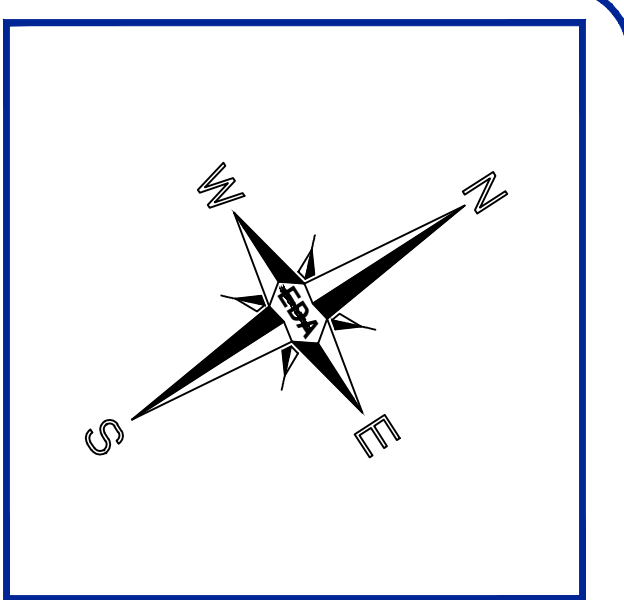
FERTILIZING AND LIMING SHALL BE COMPLETED PRIOR TO SEEDING LAWN AREAS TWICE PER YEAR.

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.

LANDSCAPE NOTES



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: 2462707000

UTILITY, LANDSCAPE, & SOIL EROSION PLAN
BLOCK 38.03, LOTS 23.02 & 24.02
SEA ISLE CITY
CAPE MAY COUNTY, NEW JERSEY

VINCENT C. ORLANDO
PROFESSIONAL ENGINEER
N.J.P.E. LIC. #32498

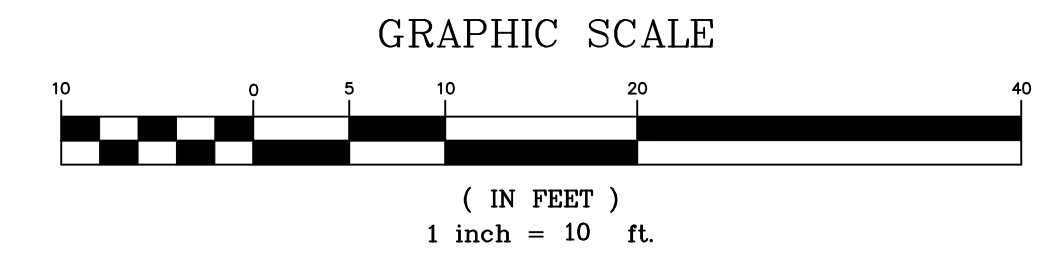
IF THIS PLAN OR DOCUMENT DOES NOT CONTAIN A RAISED SEAL IMPRESSION BEARING THE NAME AND REGISTRATION NUMBER OF THE ABOVE SIGNED PROFESSIONAL, IT MAY NOT BE AN AUTHORIZED COPY OF THE ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. REPRODUCTION OR FURTHER DISSEMINATION OF THE CONTENTS IN WHOLE OR IN PART REQUIRES PERMISSION IN WRITING FROM ENGINEERING DESIGN ASSOCIATES, P.A.

Rev. per Zng Brd Mtg.	5/18/26	MJH
Rev. per City Engineer	4/14/26	PMMc
REVISION	DATE	BY



DATE: 2/26/26	DRAWN BY: PMMc
SCALE: AS NOTED	CHECKED BY: VCO
PROJECT #: 10388	SHEET: 5 OF 7

UTILITY, LANDSCAPE & SOIL EROSION PLAN



SOIL EROSION AND SEDIMENT CONTROL PLAN

1. The soil erosion inspector may require additional soil erosion measures 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 outlets or offsite as a result of the construction project.

3. The soil conservation plan 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 a work, furnish all materials and install all measures required to reasonably control soil erosion resulting from construction operations and prevent excessive loss 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. If the exposed materials are not subject to construction traffic, 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 methods and rates of application as 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 2.5 tons per acre, according to the New Jersey Standards immediately following rough grading.

11. The seed and all areas to be graded and maintained such as a regular barrier runoff is diverted to soil erosion and sediment control facilities.

12. All sedimentation structures will be inspected and maintained on an regular basis and after every storm event.

13. A crushed stone, the clearing 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 2.5" crushed stone or less 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 for a clean, sweep 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 diverting operations must discharge directly into a sediment filter area. The sediment filter shall be composed of a suitable sediment fabric filter. (see detail). The basin must be downsized to normal pool within 10 days of the design storm.

19. M.A.A., 24-26, Erii Sed, requires that no certificate of occupancy be issued before all provisions of the certified soil erosion and sediment control plan have been completed with permanent measures. All site work for the project must be completed prior to the district issuing a certificate 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 transfers full responsibility for compliance with the certified plan to any subsequent owners.

22. Immediately after the completion of stripping and stockpiling of topsoil, the topsoil must be stabilized according to the standards for temporary vegetative cover. Stabilize topsoil with straw mulch for protection if the season does not permit the application and establishment of permanent vegetation. 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. Dues 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. Grading operations shall be protected from erosion and land filling operations on the proposed site.

28. Use staged construction methods to minimize exposed surfaces, where applicable.

29. All negative material shall be removed 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 wherever 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 site shall be stabilized in place.

33. This certification is limited to the conditions specified in this plan. It is not authorization to engage in the proposed land use unless such has been previously approved by the municipality, county, State agency or other controlling authority.

STORM WATER MANAGEMENT PROGRAM

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:

- Annual visual inspection of outlet structures and basins.
 - Inspection of outlet structures to ensure the presence of obstructions of outlet pipes and the accumulation of silt and sediments.
 - Inspection of basins to include the removal of debris and accumulated particles such as silt and sediments.
- For maintenance of vegetated basins:
 - Mowing of grass is required regularly to ensure the aesthetic quality of the site. All mowings shall be rolled and bagged to avoid trash buildup.
 - A dense lawn 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 impervious seal.
 - Grasses of the local area shall be used for establishing a permanent lawn. Grasses should be selected for drought resistance, hardiness, and ability to withstand bird mudflats. Fescues will also permit long intervals between mowings.
 - Seed type: A mixture of the following special water tolerant seed mixtures ensuring a high quality grass for retention basins.

Mixture #	SEEDING RATE
Fescue	2.1 LB./1,000 SF
Kentucky Blue Grass	0.25 LB./1,000 SF
White Clover	0.25 LB./1,000 SF
	0.10 LB./1,000 SF

a. Fertilizing and liming: Annually
 b. Fertilize with 12-0-12 at a rate of 1 lbm./1,000 SF
 c. Lime with pulverized dolomite limestone at a rate of 90lb./1,000 SF
 d. Long term Maintenance
 e. 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 reseeded.

STANDARDS FOR STABILIZATION WITH MULCH

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.
 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. **Unprotected small-grain straw**, at 2.0 to 2.5 tons per acre, a ground uniformly at 90° to 115 pounds per 1,000 square feet and anchored with a mulch anchoring tool, liquid mulch binders, or netting to down. Other suitable materials may be used if approved by the Soil Conservation District. The approved areas above have been listed when the mulch covers the ground completely upon visual inspection, i.e. the soil cannot be seen below the mulch.

3. **Synthetic Organic Soil Stabilizers** may be used under suitable conditions and in quantities as recommended by the manufacturer.

4. **Wood-fiber or paper-fiber mulch** shall be at a minimum depth of 1 inch per acre (or according to the manufacturer's requirements) may be applied by a hydroseeder.

5. **Mulch Netting**, such as paper jute, excelsior, etc.

6. **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.

7. **Gravel**, crushed stone, or silt at a rate of 1 cubic yard per acre to a minimum depth of 3 inches. Use 3/4" ASTM C-33 is recommended.

8. **Mulch Anchoring** - should be accomplished immediately after placement of hay or straw on areas less by wind or water. This may be done by one of the following methods, depending upon the size of the area and steepness of slope:
 a. Peg and Twine - Drive 10 to 12 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 cross-crow and a square pattern. Secure twine around each peg with two or more round turns.
 b. Mulch Netting - Staple paper, jute, cotton, or plastic netting to the soil surface. Use a degradable netting in areas to be mowed. Netting is usually available in rolls 4 feet wide and to 300 feet long.
 c. Crimper (mulch anchoring tool) - A tractor-driven implement especially designed to push or anchor mulch into the soil surface. This practice affords maximum mulch coverage, 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 - May be used to anchor hay or straw mulch.
 e. Applications should be heavier at edges where wind may catch the mulch, in valleys, and at crests of banks. Remainder of the area should be uniform in application. Use one of the following:
 i. 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 result in a phytoxic effect or impede growth of turf grass. Use at rates and weather conditions recommended by the manufacturer and remain tacky until germination of grass.
 ii. Synthetic Binders - High polymer synthetic emulsion, miscible with water when diluted and following application of 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 PERMANENT VEGETATIVE COVER

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 be applied 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 graded and firm, according to soil test recommendations such as offered by Rutgers Co-operative Extension Soil sample matrices are available from the local Rutgers Cooperative Extension offices (http://njrec.rutgers.edu/soils). Fertilizer shall be applied at the rate of 500 pounds per acre or 1 pound per 1,000 square feet with 50% water soluble nitrogen with 50% water insoluble nitrogen and incorporated into the surface 4 inches. If fertilizer is not incorporated, apply one-half the rate described above during seedbed preparation and apply another one-half rate application of the same fertilizer within 3 to 5 weeks after seeding.
 b. Work time and fertilizer into the topsoil as readily as practical to a depth of 4 inches with a disc, spring-tine harrow, or other suitable equipment. The final harrowing or disking operation should be 7-11 Standards for Soil Erosion and Sediment Control in New Jersey, January 2014 be in the general contour. Continue tillage until a reasonable uniform seedbed is prepared.
 c. High acid producing soils: Soils having a pH of 4 or less or containing iron sulfides shall be sprayed with a minimum of 12 inches of soil having a pH of 5 or more before initiating seedbed preparation. See Standard for Management of High Acid Producing Soils for specific requirements.

Material	Application Rate
Topsoil should be handle1, loamy2, free of debris, objectionally weeds and stones, and contain no toxic substance or adverse chemical or physical condition that may be harmful to plant growth. Suitable soils should not be excessive (collectively less than 0.5 milligrams per container. More than 0.5 milligrams may desiccate seedlings and adversely impact growth). Imported topsoil shall have a minimum organic matter content of 2.5 percent. Organic matter content may be raised by additives.	

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 readily 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 inches, minimum of 4 inches, formed 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 sulfides 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 Standards for Permanent Vegetative Stabilization, the contractor shall be 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, no-application of lime and fertilizers, and/or the addition of organic matter (e.g. 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 samples for agronomic properties.

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 be applied 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 graded and firm, according to soil test recommendations such as offered by Rutgers Co-operative Extension Soil sample matrices are available from the local Rutgers Cooperative Extension offices (http://njrec.rutgers.edu/soils). Fertilizer shall be applied at the rate of 500 pounds per acre or 1 pound per 1,000 square feet with 50% water soluble nitrogen with 50% water insoluble nitrogen and incorporated into the surface 4 inches. If fertilizer is not incorporated, apply one-half the rate described above during seedbed preparation and apply another one-half rate application of the same fertilizer within 3 to 5 weeks after seeding.
 b. Work time and fertilizer into the topsoil as readily as practical to a depth of 4 inches with a disc, spring-tine 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 soils: Soils having a pH of 4 or less or containing iron sulfides shall be sprayed with a minimum of 12 inches of soil having a pH of 5 or more before initiating seedbed preparation. See Standard for Management of High Acid Producing Soils for specific requirements.

SOIL CONSERVATION NOTES

Engineers - Landscape Architects - Planners

4. **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 preparation shall have been completed within 12 months of the planting date. No seed shall be applied with a germination test rate more than 12 months old unless otherwise noted.
 b. 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 cover with the specified seed mixture for the seeded area and moved area.
 c. Warm-season mixtures are grasses and legumes which maximize growth at high temperatures, generally 60° F and above. See Table 4-3 mixtures 1 to 7. Planting rates for warm-season grasses shall be as specified for the mixture used.
 d. Cool-season mixtures are grasses and legumes which maximize growth at temperatures below 60° F. Many grasses are listed above 60° 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.
 e. Conventional Seeding is performed by hand, cyclone (centrifugal) seeder, drop seeder, drill or catpucker seeder. Except for drilled, hydroseeded or outpocketed seedings, seed shall be incorporated into the soil within 24 hours of seedbed preparation to a depth of 1 to 1.5 inch, by raking or dragging. Depth of seed placement may be 1/4 inch deeper on contour and slope.
 f. After seeding, firming the soil with a compacted roller will assure good seed-to-soil contact, restore capability, and improve seeding emergence. This is the preferred method. When performed on the contour, sheet erosion will be minimized and water conservation on site will be maximized.
 g. 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 7 Mulching below). Hydroseeding is not a preferred seeding method because seed and fertilizer are applied to the surface and not incorporated into the soil. When poor seed to soil contact occurs, there is a reduced seed germination and growth.

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 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 (staking or adhesive agent), the rate of application is 3 tons per acre. Much chopper-blenders must grind the mulch. Hay mulch is not recommended for establishing turf law or lawns due to the presence of weed seed.
 Application: Spread mulch uniformly by hand or mechanically so that approximately 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 slope, 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 cross-crow and a square pattern. Secure twine around each peg with two or more round turns.
 2. Mulch Netting - Staple paper, jute, cotton, or plastic netting to the soil surface. Use a degradable netting in areas to be mowed.
 3. Crimper (mulch anchoring tool) - A tractor-driven implement especially designed to push or anchor mulch into the soil surface. This practice affords maximum mulch coverage, 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.
 4. Liquid Mulch-Binders - May be used to anchor hay or straw mulch.
 e. 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 application. Use one of the following:
 i. 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 result in a phytoxic effect or impede growth of turf grass. Use at rates and weather conditions recommended by the manufacturer and remain tacky until germination of grass.
 ii. Synthetic Binders - High polymer synthetic emulsion, miscible with water when diluted and following application of mulch, drying and curing shall no longer be soluble or dispersible in water. Binder 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 pounds per acre (or as recommended by the product manufacturer) and may be applied by a hydroseeder. Mulch shall not be mixed in the tank with seed. Use is limited to flatter slopes and during optimal seeding periods in spring and fall.
 C. **Pelletized mulch** - compressed and crushed 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 mat that will protect the seed from erosion. 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 mix 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.
 D. **Liquid Mulch-Binders** - May be used to anchor hay or straw mulch.
 e. 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 application. Use one of the following:
 i. 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 result in a phytoxic effect or impede growth of turf grass. Use at rates and weather conditions recommended by the manufacturer and remain tacky until germination of grass.
 ii. Synthetic Binders - High polymer synthetic emulsion, miscible with water when diluted and following application of mulch, drying and curing shall no longer be soluble or dispersible in water. Binder 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.

2. **Establishing Permanent Vegetative Stabilization**
 The quality of permanent vegetative cover, the timing of seeding, preparing the seeds with the seed, 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 a Report of Compliance from the district. These rates apply to all methods of seeding. Establishing permanent vegetation means 80% vegetative cover with the specified seed mixture for the seeded area and moved area. Note the designer of record does not guarantee the permanency of the turf should other maintenance factors be neglected or otherwise mismanaged.

STANDARDS FOR TEMPORARY VEGETATIVE COVER

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. 3-1.
 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 to 1" to 1 1/2" where there has been soil compaction. This practice is permissible only where there is no danger to underground utilities (cables, irrigation systems, etc.) or in the alternative, another method as specified by a New Jersey Licensed Professional Engineer.

2. **Seedbed Preparation**
 a. Apply ground limestone and fertilizer according to soil test recommendations such as offered by Rutgers Co-operative Extension. Soil sample matrices are available from the local Rutgers Cooperative Extension offices (http://njrec.rutgers.edu/soils). Fertilizer shall be applied at the rate of 500 pounds per acre or 1 pound per 1,000 square feet with 50% water soluble nitrogen with 50% water insoluble nitrogen and incorporated into the surface 4 inches. If fertilizer is not incorporated, apply one-half the rate described above during seedbed preparation and apply another one-half rate application of the same fertilizer within 3 to 5 weeks after seeding.
 b. Work time and fertilizer into the topsoil as readily as practical to a depth of 4 inches with a disc, spring-tine harrow, or other suitable equipment. The final harrowing or disking operation should 7-11 Standards for Soil Erosion and Sediment Control in New Jersey, January 2014 be in the general contour. Continue tillage until a reasonable uniform seedbed is prepared.
 c. Inspect seedbed just before seeding. If traffic has hit the soil packed, the area must be rolled 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.

4. **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 catpucker seeder. Except for drilled, hydroseeded or outpocketed seedings, seed shall be incorporated into the soil within 24 hours of seeding to a depth of 1 to 1.5 inch, by raking or dragging. Depth of seed placement may be 1/4 inch deeper on contour and slope.
 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 7 Mulching below). 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 mixing 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 compacted roller will assure good seed-to-soil contact, restore capability, and improve seeding 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, to be applied at the rate of 1 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 (staking or adhesive agent), the rate of application is 3 tons per acre (70 to 90 pounds per 1,000 square feet). Hay mulch is not recommended for establishing turf law or lawns due to the presence of weed seed.
 Application: Spread mulch uniformly by hand or mechanically so that approximately 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 slope, 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 cross-crow and a square pattern. Secure twine around each peg with two or more round turns.
 2. Mulch Netting - Staple paper, jute, cotton, or plastic netting to the soil surface. Use a degradable netting in areas to be mowed. Netting is usually available in rolls 4 feet wide and to 300 feet long.
 3. Crimper (mulch anchoring tool) - A tractor-driven implement especially designed to push or anchor mulch into the soil surface. This practice affords maximum mulch coverage, 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.
 4. Liquid Mulch-Binders - May be used to anchor hay or straw mulch.
 e. 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 application. Use one of the following:
 i. 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 result in a phytoxic effect or impede growth of turf grass. Use at rates and weather conditions recommended by the manufacturer and remain tacky until germination of grass.
 ii. Synthetic Binders - High polymer synthetic emulsion, miscible with water when diluted and following application of 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.
 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 pounds per acre (or as recommended by the product 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 optimal seeding periods in spring and fall.
 C. **Pelletized mulch** - Compressed and crushed 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 mat that will protect the seed from erosion. 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 mix 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.
 D. **Liquid Mulch-Binders** - May be used to anchor hay or straw mulch.
 e. 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 application. Use one of the following:
 i. 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 result in a phytoxic effect or impede growth of turf grass. Use at rates and weather conditions recommended by the manufacturer and remain tacky until germination of grass.
 ii. Synthetic Binders - High polymer synthetic emulsion, miscible with water when diluted and following application of 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.

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 be applied 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 graded and firm, according to soil test recommendations such as offered by Rutgers Co-operative Extension Soil sample matrices are available from the local Rutgers Cooperative Extension offices (http://njrec.rutgers.edu/soils). Fertilizer shall be applied at the rate of 500 pounds per acre or 1 pound per 1,000 square feet with 50% water soluble nitrogen with 50% water insoluble nitrogen and incorporated into the surface 4 inches. If fertilizer is not incorporated, apply one-half the rate described above during seedbed preparation and apply another one-half rate application of the same fertilizer within 3 to 5 weeks after seeding.
 b. Work time and fertilizer into the topsoil as readily as practical to a depth of 4 inches with a disc, spring-tine 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 soils: Soils having a pH of 4 or less or containing iron sulfides shall be sprayed with a minimum of 12 inches of soil having a pH of 5 or more before initiating seedbed preparation. See Standard for Management of High Acid Producing Soils for specific requirements.

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 be applied 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 graded and firm, according to soil test recommendations such as offered by Rutgers Co-operative Extension Soil sample matrices are available from the local Rutgers Cooperative Extension offices (http://njrec.rutgers.edu/soils). Fertilizer shall be applied at the rate of 500 pounds per acre or 1 pound per 1,000 square feet with 50% water soluble nitrogen with 50% water insoluble nitrogen and incorporated into the surface 4 inches. If fertilizer is not incorporated, apply one-half the rate described above during seedbed preparation and apply another one-half rate application of the same fertilizer within 3 to 5 weeks after seeding.
 b. Work time and fertilizer into the topsoil as readily as practical to a depth of 4 inches with a disc, spring-tine 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 soils: Soils having a pH of 4 or less or containing iron sulfides shall be sprayed with a minimum of 12 inches of soil having a pH of 5 or more before initiating seedbed preparation. See Standard for Management of High Acid Producing Soils for specific requirements.

SOIL CONSERVATION NOTES

Engineers - Landscape Architects - Planners

Soil Management and Preparation
 Subgrade soils prior to the application of topsoil shall be free of excessive compaction to a depth of 60 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 measures to be implemented. The testing and mitigation measures shall be performed in accordance with the following:
 Due to use of 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 curb or swale space construction.
 5. Where soils or gravel areas will be covered with a permanent or temporary surface with an overall length of 100 feet or more and a width of 10 feet or more.
 6. Due to use of 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 curb or swale space construction.
 5. Where soils or gravel areas will be covered with a permanent or temporary surface with an overall length of 100 feet or more and a width of 10 feet or more.
 6. Due to use of 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 curb or swale space construction.
 5. Where soils or gravel areas will be covered with a permanent or temporary surface with an overall length of 100 feet or more and a width of 10 feet or more.
 6. Due to use of 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 curb or swale space construction.
 5. Where soils or gravel areas will be covered with a permanent or temporary surface with an overall length of 100 feet or more and a width of 10 feet or more.
 6. Due to use of 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 curb or swale space construction.
 5. Where soils or gravel areas will be covered with a permanent or temporary surface with an overall length of 100 feet or more and a width of 10 feet or more.
 6. Due to use of 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 curb or swale space construction.
 5. Where soils or gravel areas will be covered with a permanent or temporary surface with an overall length of 100 feet or more and a width of 10 feet or more.
 6. Due to use of 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 curb or swale space construction.
 5. Where soils or gravel areas will be covered with a permanent or temporary surface with an overall length of 100 feet or more and a width of 10 feet or more.
 6. Due to use of 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 curb or swale space construction.
 5. Where soils or gravel areas will be covered with a permanent or temporary surface with an overall length of 100 feet or more and a width of 10 feet or more.
 6. Due to use of 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 curb or swale space construction.
 5. Where soils or gravel areas will be covered with a permanent or temporary surface with an overall length of 100 feet or more and a width of 10 feet or more.
 6. Due to use of 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 curb or swale space construction.
 5. Where soils or gravel areas will be covered with a permanent or temporary surface with an overall length of 100 feet or more and a width of 10 feet or more.
 6. Due to use of setting, certain disturbed areas will not require compaction remediation, including, but not limited to the following: