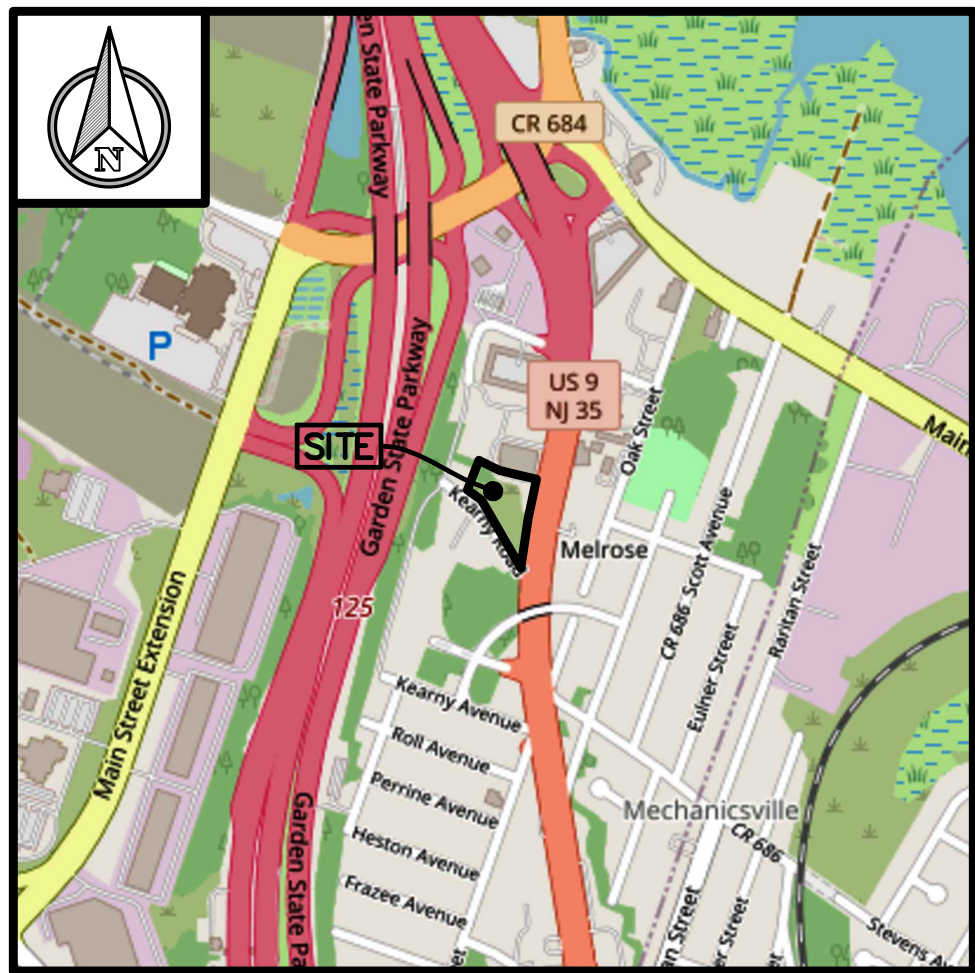


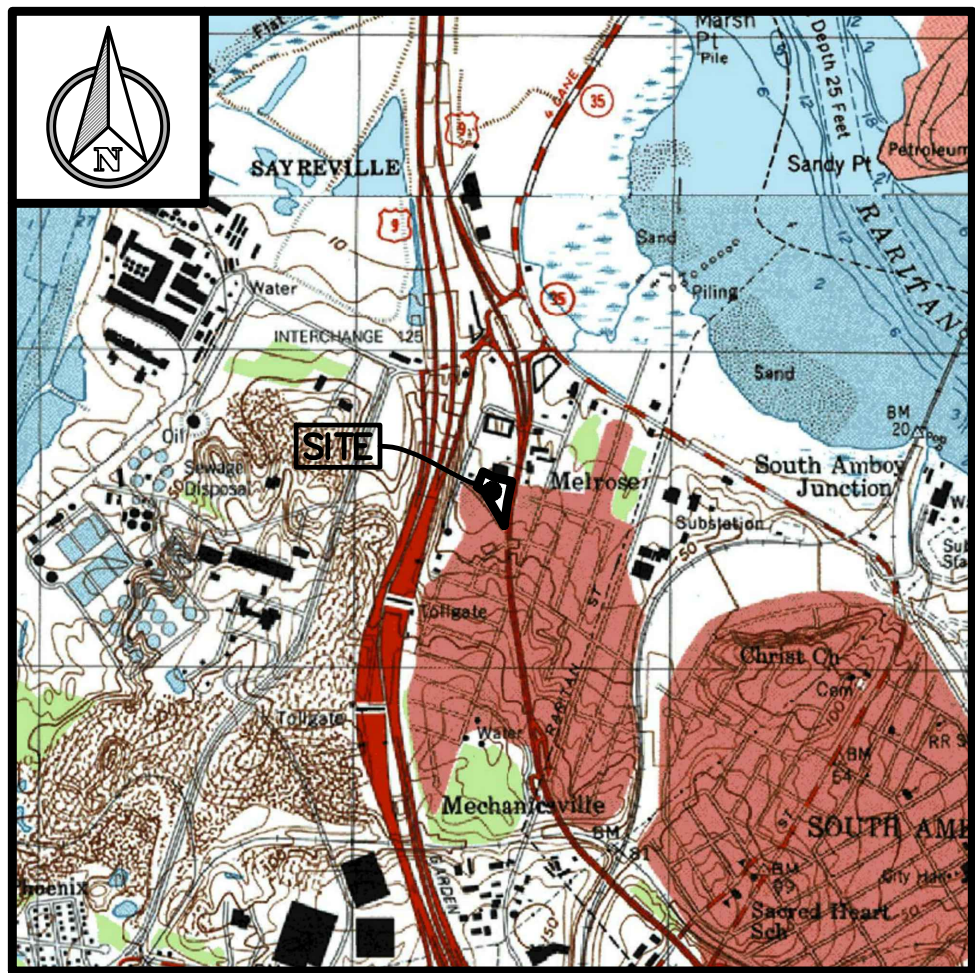
PRELIMINARY/FINAL SITE PLAN  
for

CARAVAN. LLC

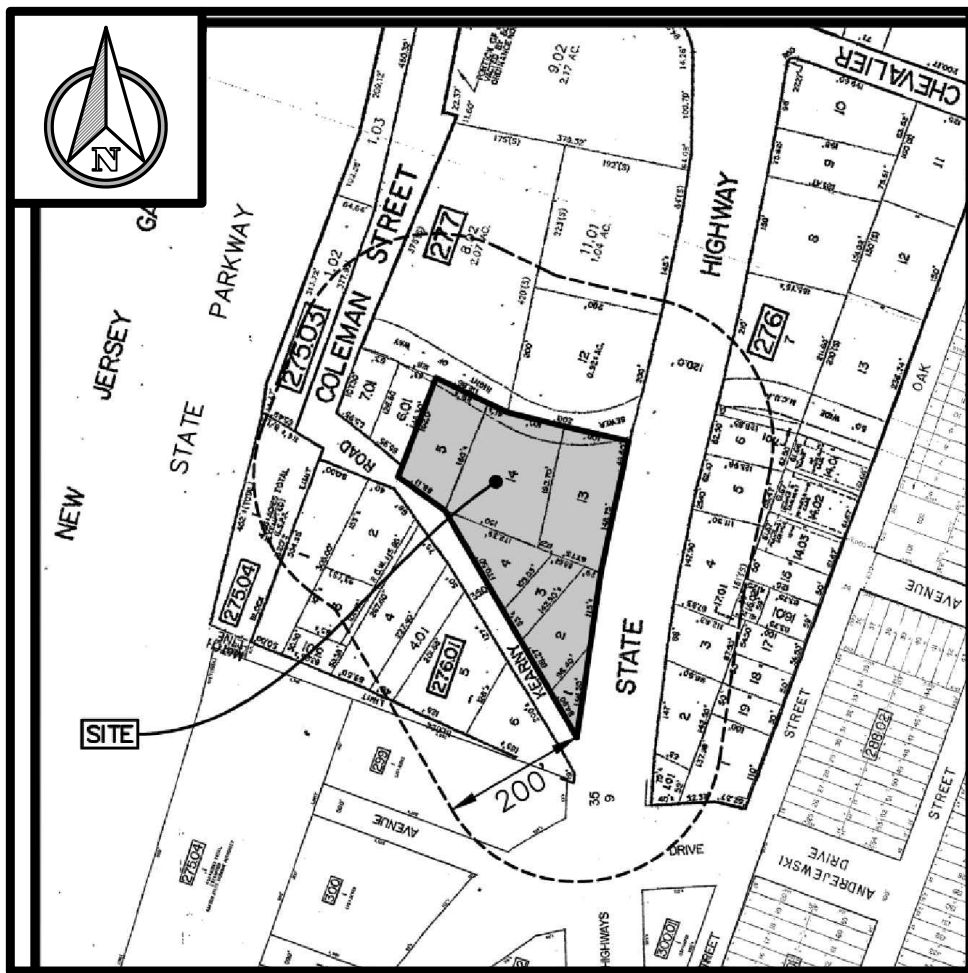
BOROUGH OF SAYREVILLE  
MIDDLESEX COUNTY  
NEW JERSEY  
BLOCK 277, LOT 1-5 & 13-14



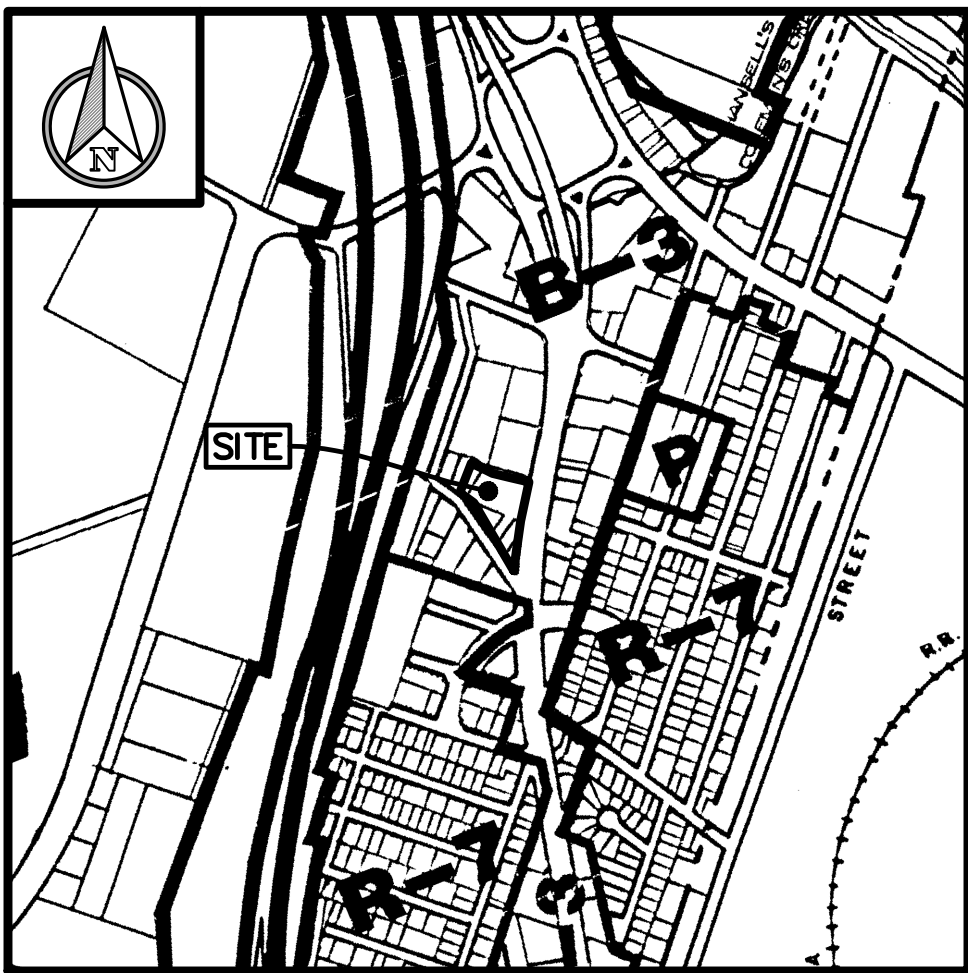
ROAD MAP  
1"=1,000'



U.S.G.S. MAP  
1"=2,000'



TAX MAP  
1"=300'



ZONE MAP  
1"=1,000'

200' OWNERS LIST

BLOCK LOT	NAME & ADDRESS	BLOCK LOT	NAME & ADDRESS
275.03 1.02	B & C Enterprises, LLC 7061 Highway 35 & 9 South Amboy, NJ 08879	276.01 3	Wioletta Paluzzi 35 Kearney Road South Amboy, NJ 08879
275.04 1	Garden State Parkway Authority Administration Building Woodbridge, NJ 07095	276.01 3.01	Jonathan Mocarski 33 Kearney Road South Amboy, NJ 08879
276 1	Russell J. Powell, Jr. 325 Oak Street South Amboy, NJ 08879	276.01 4, 4.01	Edward John McDonough 122 Jansen Avenue Iselin, NJ 08830
276 1.01	Viacom Outdoor, Inc. 185 Highway 46 Fairfield, NJ 07006	276.01 5	Patricia L. Scully - Estate 27 Kearney Road South Amboy, NJ 08879
276 2, 3	7040 Hwy 35 LLC 109 University Drive Lincroft, NJ 07738	276.01 6	Michael P. & Catherine J. O'Connor 21 Kearney Road South Amboy, NJ 08879
276 4, 17.01	Amber, LLC 4 Hauser Lane Matawan, NJ 07747	277 6.01	Robert & Catherine Porter 43 Kearney Road South Amboy, NJ 08879
276 5	Arkady Moshailov 52 Fern Road East Brunswick, NJ 08816	277 7.01	MRT Rental Properties, LLC 256 Maxim Road Howell, NJ 07731
276 6, 7.01	Miguel A. Marmolejos 358 Rector Street, Apt. 218 Perth Amboy, NJ 08861	277 8.02, 11.01, 12	B & C Enterprises, LLC 7061 Highway 35 & 9 North South Amboy, NJ 08879
276 7	Octagon Management, LLC c/o Medina 99 Vliet Street Spotswood, NJ 08884	299 1	SPJP Property, LLC 1180 St. Georges Avenue, #3 Avenel, NJ 07001
276 19	Kim & Deborah Van Pelt 327 Oak Street South Amboy, NJ 08879		Middlesex County Utilities Authority P.O. Box 159 Sayreville, NJ 08872
276.01 1	Luke Genzlinger 41 Kearney Road South Amboy, NJ 08879		
276.01 2	Barbara A. Lofhus 39 Kearney Road South Amboy, NJ 08879		

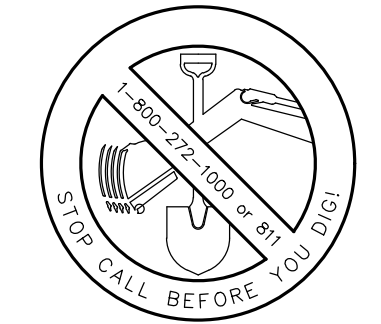
SHEET INDEX		
SHEET #	DWG. #	TITLE
SHEET 1	CV-1	COVER SHEET
SHEET 2	OP-1	OVERALL PLAN
SHEET 3	EC-1	EXISTING CONDITIONS PLAN
SHEET 4	GE-1	GEOMETRY PLAN
SHEET 5	GR-1	GRADING PLAN
SHEET 6	LT-1	LIGHTING PLAN
SHEET 7	LA-1	LANDSCAPE PLAN
SHEET 8	SE-1	SOIL EROSION & SEDIMENT CONTROL PLAN
SHEET 9	SED-1	SOIL EROSION & SEDIMENT CONTROL DETAILS (1)
SHEET 10	SED-2	SOIL EROSION & SEDIMENT CONTROL DETAILS (2)
SHEET 11	DE-1	CONSTRUCTION DETAILS (1)
SHEET 12	DE-2	CONSTRUCTION DETAILS (2)
SHEET 13	DE-3	CONSTRUCTION DETAILS (3)
SHEET 14	DE-4	CONSTRUCTION DETAILS (4)
SHEET 15	DE-5	CONSTRUCTION DETAILS (5)

OWNER  
MICHAEL CARACAPPA  
PATRICA CARACAPPA  
95 OAKLAND MILLS ROAD  
MANALAPAN, NJ 07726

APPLICANT  
CARAVAN LLC  
95 OAKLAND MILLS ROAD  
MANALAPAN, NJ 07726

APPROVED BY	
CHAIRMAN	DATE
SECRETARY	DATE
ENGINEER	DATE

CARAVAN, LLC



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SURFACE ANYWHERE IN THE STATE.



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Highland Park, NJ 08904

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732-846-8585 732-846-9439  
Certificate of Authorization : 240A27951900

CARAVAN, LLC

BOROUGH OF SAYREVILLE  
MIDDLESEX COUNTY  
NEW JERSEY

BLOCK 277,  
LOTS 1-5 & 13-14  
TAX MAP SHEET 93  
2.06 ACRES

COVER SHEET

DRAWN BY: ..... RM  
DESIGNED BY: ..... RM  
APPROVED BY: ..... ST

THIS WORK PREPARED UNDER MY  
IMMEDIATE SUPERVISION...

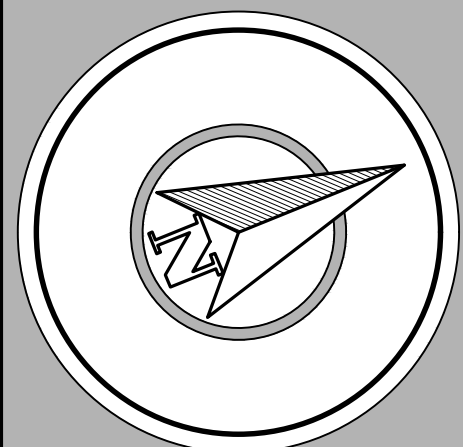
SCOTT H. TURNER  
PROFESSIONAL ENGINEER  
NJPE # 43811

PROJECT NUMBER	2023.091	CV-1
DATE OF ISSUE	JUNE 9, 2025	1
REVISED THROUGH	-	



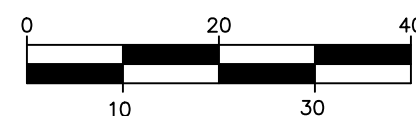






HORIZONTAL DATUM : DB 4035, PG 379

GRAPHIC SCALE



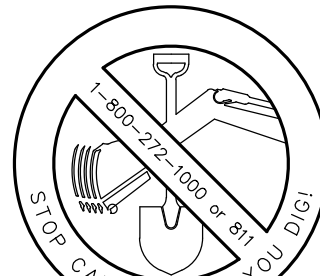
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NEW JERSEY

BLOCK 277  
LOTS 1-5 & 13-14  
TAX MAP SHEET 93  
2.06 ACRES

# EXISTING CONDITIONS PLAN

DRAWN BY . . . RM  
DESIGNED BY . . . RM  
APPROVED BY . . . SHT

IMMEDIATE SUPERVISION...

SCOTT H. TURNER  
PROFESSIONAL ENGINEER  
NJPE# 43811

PROJECT NUMBER	2023.091	EC-1
DATE OF	JUNE 2, 2023	

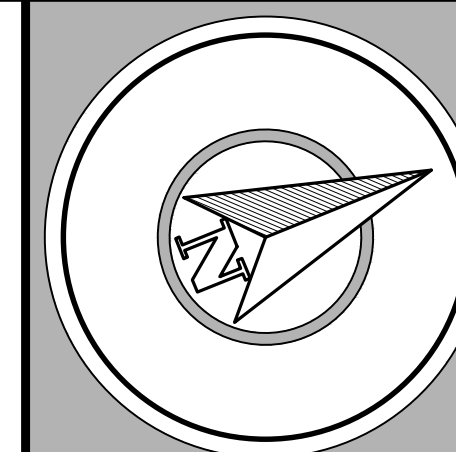
DATE OF ISSUE	JUNE 9, 2025	3

REVISION	—	0
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HORIZONTAL DATUM : DB 4035, PG 379

GRAPHIC SCALE



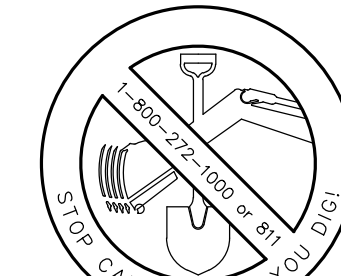
SCALE: 1"=20'

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NEW JERSEY

BLOCK 277  
LOTS 1-5 & 13-14  
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2.06 ACRES

## GRADING & UTILITY PLAN

DRAWN BY	.	.	R
DESIGNED BY	.	.	R
APPROVED BY	.	.	SH

THIS WORK PREPARED UNDER MY  
IMMEDIATE SUPERVISION...

SCOTT H. TURNER  
PROFESSIONAL ENGINEER  
NJPE# 43811

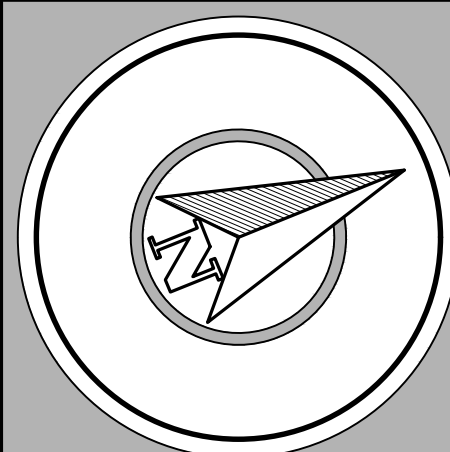
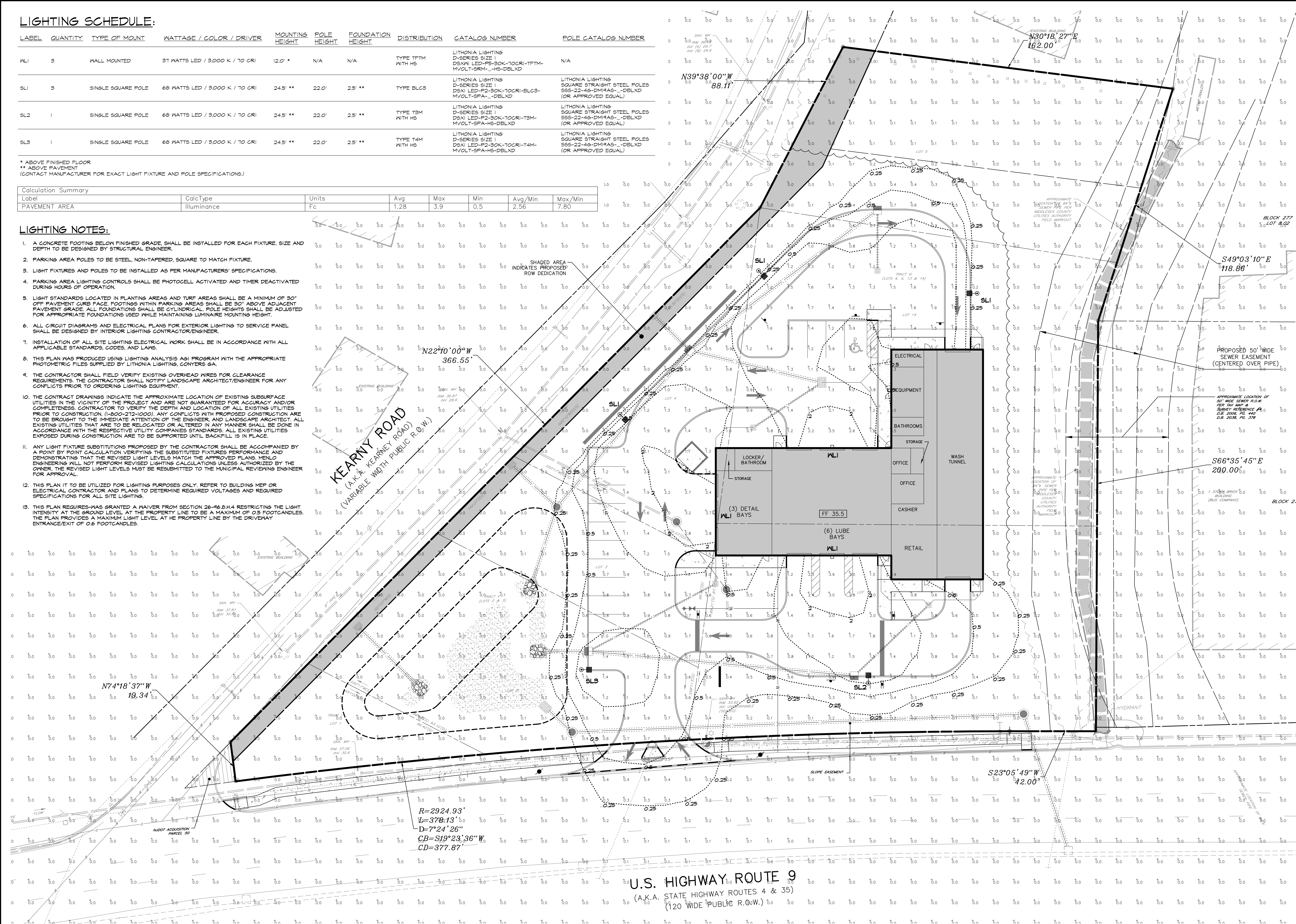
PROJECT NUMBER	2023.091	GU-1
DATE OF ISSUE	JUNE 9, 2025	5
REVISION		



LABEL	QUANTITY	TYPE OF MOUNT	WATTAGE / COLOR / DRIVER	MOUNTING HEIGHT	POLE HEIGHT	FOUNDATION HEIGHT	DISTRIBUTION	CATALOG NUMBER	POLE CATALOG NUMBER
KL1	3	WALL MOUNTED	37 WATTS LED / 3,000 K / 70 CRI	12.0' *	N/A	N/A	TYPE TFTM WITH H5	LITHONIA LIGHTING D-SERIES SIZE I DSXN1 LED-P5-30K-T0CRI-TFTM- MYOLT-SRM--L-H5-DBLXD	N/A
SL1	3	SINGLE SQUARE POLE	68 WATTS LED / 3,000 K / 70 CRI	24.5' **	22.0'	2.5' **	TYPE BLG3	LITHONIA LIGHTING D-SERIES SIZE I DSXN1 LED-P2-30K-T0CRI-BLG3- MYOLT-SPA--L-DBLXD	LITHONIA LIGHTING SQUARE STRAIGHT STEEL POLES SS5-22-45-DM1A5--L-DBLXD (OR APPROVED EQUAL)
SL2	1	SINGLE SQUARE POLE	68 WATTS LED / 3,000 K / 70 CRI	24.5' **	22.0'	2.5' **	TYPE T3M WITH H5	LITHONIA LIGHTING D-SERIES SIZE I DSX1 LED-P2-30K-T0CRI-T3M- MYOLT-SPA-H5-DBLXD	LITHONIA LIGHTING SQUARE STRAIGHT STEEL POLES SS5-22-45-DM1A5--L-DBLXD (OR APPROVED EQUAL)
SL3	1	SINGLE SQUARE POLE	68 WATTS LED / 3,000 K / 70 CRI	24.5' **	22.0'	2.5' **	TYPE T4M WITH H5	LITHONIA LIGHTING D-SERIES SIZE I DSX1 LED-P2-30K-T0CRI-T4M- MYOLT-SPA-H5-DBLXD	LITHONIA LIGHTING SQUARE STRAIGHT STEEL POLES SS5-22-45-DM1A5--L-DBLXD (OR APPROVED EQUAL)

Calculation Summary						
Label	CalcType	Units	Avg	Max	Min	Avg/Min
PAVEMENT AREA	Illuminance	Fc	1.28	3.9	0.5	7.80

1. A CONCRETE FOOTING BELOW FINISHED GRADE, SHALL BE INSTALLED FOR EACH FIXTURE. SIZE AND DEPTH TO BE DESIGNED BY STRUCTURAL ENGINEER.
2. PARKING AREA POLES TO BE STEEL, NON-TAPERED, SQUARE TO MATCH FIXTURE.
3. LIGHT FIXTURES AND POLES TO BE INSTALLED AS PER MANUFACTURERS' SPECIFICATIONS.
4. PARKING AREA LIGHTING CONTROLS SHALL BE PHOTOCELL ACTIVATED AND TIMER DEACTIVATED DURING HOURS OF OPERATION.
5. LIGHT STANDARDS LOCATED IN PLANTING AREAS AND TURF AREAS SHALL BE A MINIMUM OF 30" OFF PAVEMENT CURB FACE. FOOTINGS WITHIN PARKING AREAS SHALL BE 30" ABOVE ADJACENT PAVED AREAS. LIGHT STANDARDS SHALL BE CYLINDRICAL. POLE HEIGHTS SHALL BE ADJUSTED FOR APPROPRIATE FOUNDATIONS USED WHILE MAINTAINING LUMINAIRE MOUNTING HEIGHT.
6. ALL CIRCUIT DIAGRAMS AND ELECTRICAL PLANS FOR EXTERIOR LIGHTINGS TO SERVICE PANEL SHALL BE DESIGNED BY INTERIOR LIGHTING CONTRACTOR/ENGINEER.
7. INSTALLATION OF ALL SITE LIGHTING ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE STANDARDS, CODES, AND LAWS.
8. THIS PLAN WAS PRODUCED USING LIGHTING ANALYSIS ASI PROGRAM WITH THE APPROPRIATE PHOTOMETRIC FILES SUPPLIED BY LITHONIA LIGHTING, CONTERS SA
9. THE CONTRACTOR SHALL FIELD VERIFY EXISTING OVERHEAD WIRES FOR CLEARANCE REQUIREMENTS. THE CONTRACTOR SHALL HAVE A LANDSCAPE ARCHITECT/ENGINEER FOR ANY CONFLICTS PRIOR TO ORDERING LIGHTING EQUIPMENT.
10. THE CONTRACT DRAWINGS INDICATE THE APPROXIMATE LOCATION OF EXISTING SUBSURFACE UTILITIES IN THE VICINITY OF THE PROJECT AND ARE NOT GUARANTEED FOR ACCURACY AND/OR COMPLETENESS. CONTRACTOR TO VERIFY THE DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCT A MAXIMUM 275-1000'. ANY CONFLICTS WITH PROPOSED CONSTRUCTION ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER, AND LANDSCAPE ARCHITECT, ALL EXISTING UTILITIES THAT ARE TO BE RELOCATED OR ALTERED IN ANY MANNER SHALL BE DONE IN ACCORDANCE WITH THE CITY OF CHICAGO'S STANDARD SPECIFICATIONS FOR UTILITIES EXPOSED DURING CONSTRUCTION ARE TO BE SUPPORTED UNTIL BACKFILL IS IN PLACE.
11. ANY LIGHT FIXTURE SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE ACCOMPANIED BY A POINT BY POINT CALCULATION VERIFYING THE SUBSTITUTED FIXTURES PERFORMANCE AND DEMONSTRATING THAT THE REVISED LIGHT LEVELS MATCH THE APPROVED PLANS. MENO ENGINEERING WILL NOT PERFORM REVISED LIGHTINGS CALCULATIONS UNLESS AUTHORIZED BY THE OWNER. THE REVISED LIGHT LEVELS MUST BE RESUBMITTED TO THE MUNICIPAL REVIEWING ENGINEER FOR APPROVAL.
12. THIS PLAN IT TO BE UTILIZED FOR LIGHTINGS PURPOSES ONLY. REFER TO BUILDING MEP OR ELECTRICAL CONTRACTOR AND PLANS TO DETERMINE REQUIRED VOLTAGES AND REQUIRED SPECIFICATIONS FOR ALL SITE LIGHTING.
13. THIS PLAN REQUIRES WAS GRANTED A WAIVER FROM SECTION 26-46.5.H.4 RESTRICTING THE LIGHT INTENSITY AT THE GROUND LEVEL AT THE PROPERTY LINE TO BE A MAXIMUM OF 0.5 FOOTCANDLES THE LIGHT PROVIDED AT MAXIMUM GROUND LEVEL AT THE PROPERTY LINE BY THE DRIVEWAY ENTRANCE/EXIT OF 6.0 FOOTCANDLES.



HORIZONTAL DATUM : DB 4035, PG 379

SCALE: 1"=20'

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BOROUGH OF SAYREVILLE  
MIDDLESEX COUNTY  
NEW JERSEY

BLOCK 277  
LOTS 1-5 & 13-14  
TAX MAP SHEET 93  
2.06 ACRES

## LIGHTING PLAN

DRAWN BY	.	.	J
DESIGNED BY	.	.	J
APPROVED BY	.	.	KR

THIS WORK PREPARED UNDER MY  
IMMEDIATE SUPERVISION...

KENNETH R. GRISEWOOD  
LANDSCAPE ARCHITECT NJ  
LICENSE #AS000071

PROJECT NUMBER	2023.091	LT-1
DATE OF ISSUE	JUNE 9, 2025	6

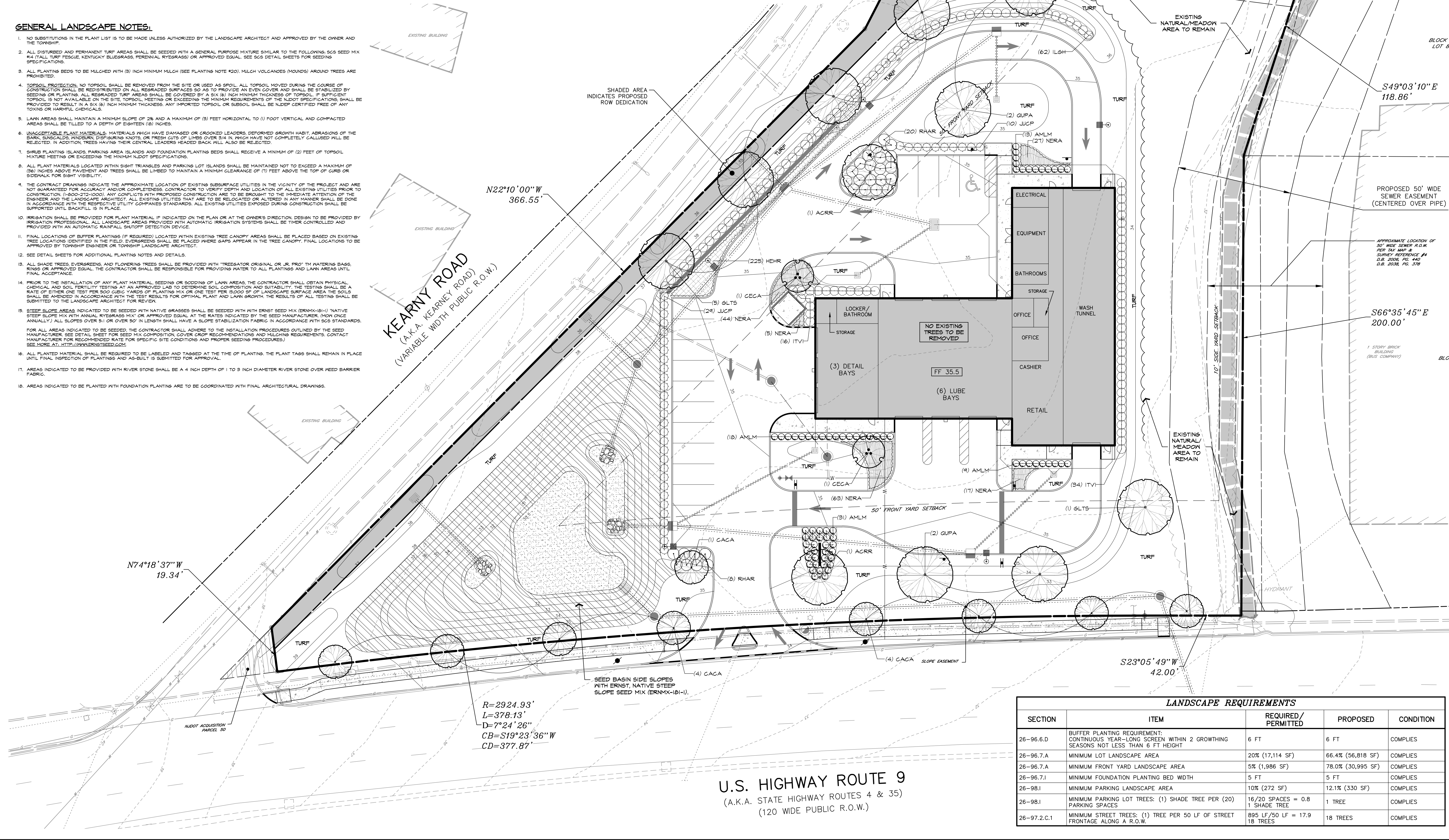


# PLANT SCHEDULE

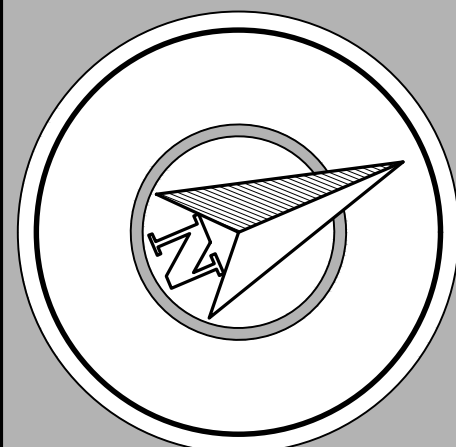
CODE	QTY	BOTANICAL NAME	COMMON NAME	MATURE SPREAD	MATURE HEIGHT	CALIPER	PLANTING HT.	TYPE	REMARKS
<b>DECIDUOUS TREES</b>									
ACRR	2	ACER RUBRUM 'FRANKS RED'	RED SUNSET MAPLE	40'	50'	3'-3.5" CAL.	14'-16'	B4B	STRAIGHT, SYMMETRICAL, FULL CROWN, HEAD TO 7'
CACA	4	CAROLINIA CAROLINIANA	AMERICAN HORSEBEAN	40'	20'	3'-3.5" CAL.	12'-14'	B4B	STRAIGHT, SYMMETRICAL, FULL CROWN, HEAD TO 7'
GLTS	6	GLADSTONIA TRIACANTHOS 'NORMIS SHADMASTER'	SHADEMASTER THORNLESS LOCUST	40'	50'	2.5'-3" CAL.	14'-16'	B4B	STRAIGHT, SYMMETRICAL, FULL CROWN, HEAD TO 7'
QUPA	4	QUERCUS PALUSTRIS	PIN OAK	40'	75'	3'-3.5" CAL.	14'-16'	B4B	STRAIGHT, SYMMETRICAL, FULL CROWN, HEAD TO 7'
<b>EVERGREEN TREES</b>									
THPC	31	THUJA PLICATA 'GREEN GIANT'	GREEN GIANT ARBORVITAE	15'	30'		6'-7'	B4B	STRAIGHT, SYMMETRICAL, DENSE, LOW BRANCHED
<b>FLOWERING TREES</b>									
CECA	2	CERCIS CANADENSIS	EASTERN REDBUD	20'	30'	(3) STEM CLUMP	9'-10'	B4B	(3) STEM CLUMP, SYMMETRICAL, LOW BRANCHED
<b>SHRUBS</b>									
AMLM	71	ARONIA MELANOCARPA 'LOW SCAPE MOUND'	LOW SCAPE MOUND BLACK CHOKEBERRY	4'	2'	18'-24"		B4B	(4) CANES MIN, WELL FURNISHED
ILGH	62	ILEX GLABRA 'CHAMZIN'	NORDIC HOLLY	4'	4'		9'-9.5'	#5 CAN	WELL FURNISHED, DENSE, LOW BRANCHED, SPACE EVENLY
ITVI	50	ITEA VIRGINICA 'LITTLE HENRY'	LITTLE HENRY SWEETSPICE	4'	4'		24'-30"	#5 CAN	WELL FURNISHED, LOW BRANCHED, DENSE, SPACE EVENLY
JJCP	34	JUNIPERUS CHINENSIS 'PFITZERIANA COMPACTA'	COMPACTA PFITZER	6'	4'	2.5'-3'		#5 CAN	WELL FURNISHED, DENSE
PHFR	21	PHOTINIA X FRAGRANS	PHOTINIA	10'	10'			#5 CAN	DENSE, WELL FURNISHED, SYMMETRICAL
RHAR	28	RHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	8'	9'	18'-24"		#5 CAN	DENSE, WELL FURNISHED, SYMMETRICAL, LOW BRANCHED
<b>GROUND COVERS</b>									
HEHR	228	HEMEROCALLIS HYBRID 'HAPPY RETURNS'	HAPPY RETURNS DAYLILY	#2 CAN @ 18" OC	15'	15'		(3) FAN CLUMP, WELL ROOTED	
NERA	156	NEPETA RACEMOSA 'WALKER'S LOW'	CATMINT	#2 CAN @ 24" OC	15'	15'		COMPACT, HEAVY CLUMP	

## GENERAL LANDSCAPE NOTES:

- NO SUBSTITUTIONS IN THE PLANT LIST IS TO BE MADE UNLESS AUTHORIZED BY THE LANDSCAPE ARCHITECT AND APPROVED BY THE OWNER AND THE TOWNSHIP.
- ALL DISTURBED AND PERMANENT TURF AREAS SHALL BE SEEDING WITH A GENERAL PURPOSE MIXTURE SIMILAR TO THE FOLLOWING: SCS SEED MIX #4 (TALL TURF) ESSEX, KENTUCKY BLUEGRASS, PERENNIAL RYEGRASS OR APPROVED EQUAL. SEE SCS DETAIL SHEETS FOR SEEDING SPECIFICATIONS.
- ALL PLANTING BEDS TO BE MULCHED WITH (3) INCH MINIMUM MULCH (SEE PLANTING NOTE #20). MULCH VOLCANOES (MOUNDS) AROUND TREES ARE PROHIBITED.
- TOPSOIL PROTECTION: NO TOPSOIL SHALL BE REMOVED FROM THE SITE OR USED AS SPOIL. ALL TOPSOIL MOVED DURING THE COURSE OF CONSTRUCTION SHALL BE REDISTRIBUTED ON ALL REGRADED SURFACES SO AS TO PROVIDE AN EVEN COVER AND SHALL BE STABILIZED BY SEEDING OR PLANTING. ALL REGRADED TURF AREAS SHALL BE COVERED BY A SIX (6) INCH MINIMUM THICKNESS OF TOPSOIL. IF SUFFICIENT TOPSOIL IS NOT AVAILABLE ON THE SITE, TOPSOIL MEETING OR EXCEEDING THE MINIMUM REQUIREMENTS OF THE NDOT SPECIFICATIONS SHALL BE PROVIDED TO RESULT IN A SIX (6) INCH MINIMUM THICKNESS. ANY IMPORTED TOPSOIL OR SUBSOIL SHALL BE NDOT CERTIFIED FREE OF ANY TOXINS OR HARMFUL CHEMICALS.
- LAWN AREAS SHALL MAINTAIN A MINIMUM SLOPE OF 2% AND A MAXIMUM OF (3) FEET HORIZONTAL TO (1) FOOT VERTICAL AND COMPACTED AREAS SHALL BE TILLED TO A DEPTH OF EIGHTEEN (18) INCHES.
- UNACCEPTABLE PLANT MATERIALS: MATERIALS WHICH HAVE DAMAGED OR CROOKED LEADERS, DEFORMED GROWTH HABIT, ABRASIONS OF THE BARK, SINGULARS, KNUCKLES, DISFIGURING KNOTS, OR FRESH CUTS OF LIMBS OVER 3/4 IN. WHICH HAVE NOT COMPLETELY CALLEDUS WILL BE REJECTED. IN ADDITION, TREES HAVING THEIR CENTRAL LEADERS HEADED BACK WILL ALSO BE REJECTED.
- SHRUB PLANTING ISLANDS, PARKING AREA ISLANDS AND FOUNDATION PLANTING BEDS SHALL RECEIVE A MINIMUM OF (2) FEET OF TOPSOIL MIXTURE MEETING OR EXCEEDING THE MINIMUM NDOT SPECIFICATIONS.
- ALL PLANT MATERIALS LOCATED WITHIN SIGHT TRIANGLES AND PARKING LOT ISLANDS SHALL BE MAINTAINED NOT TO EXCEED A MAXIMUM OF (36) INCHES ABOVE PAVEMENT AND TREES SHALL BE LIMBED TO MAINTAIN A MINIMUM CLEARANCE OF (7) FEET ABOVE THE TOP OF CURB OR SIDEWALK FOR SIGHT VISIBILITY.
- THE CONTRACT DRAWINGS INDICATE THE APPROXIMATE LOCATION OF EXISTING SUBSURFACE UTILITIES IN THE VICINITY OF THE PROJECT AND ARE NOT GUARANTEED FOR ACCURACY AND/OR COMPLETENESS. CONTRACTOR TO VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. (800-275-1000). ANY CONFLICTS WITH PROPOSED CONSTRUCTION ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER AND THE LANDSCAPE ARCHITECT. ALL EXISTING UTILITIES THAT ARE TO BE RELOCATED OR ALTERED IN ANY MANNER SHALL BE DONE IN ACCORDANCE WITH THE RESPECTIVE UTILITY COMPANIES STANDARDS. ALL EXISTING UTILITIES EXPOSED DURING CONSTRUCTION SHALL BE SUPPORTED UNTIL BACKFILL IS IN PLACE.
- IRRIGATION SHALL BE PROVIDED FOR PLANT MATERIAL IF INDICATED ON THE PLAN OR AT THE OWNER'S DIRECTION. DESIGN TO BE PROVIDED BY IRRIGATION PROFESSIONAL. ALL LANDSCAPE AREAS PROVIDED WITH AUTOMATIC IRRIGATION SYSTEMS SHALL BE THEIR CONTROLLED AND PROVIDED WITH AN AUTOMATIC RAINFALL SHUTOFF DETECTION DEVICE.
- FINAL LOCATIONS OF BUFFER PLANTINGS (IF REQUIRED) LOCATED WITHIN EXISTING TREE CANOPY AREAS SHALL BE PLACED BASED ON EXISTING TREE LOCATIONS IDENTIFIED IN THE FIELD. EVERGREENS SHALL BE PLACED WHERE GAPS APPEAR IN THE TREE CANOPY. FINAL LOCATIONS TO BE APPROVED BY TOWNSHIP ENGINEER OR TOWNSHIP LANDSCAPE ARCHITECT.
- SEE DETAIL SHEETS FOR ADDITIONAL PLANTING NOTES AND DETAILS.
- ALL SHADE TREES, EVERGREENS AND FLOWERING TREES SHALL BE PROVIDED WITH 'TREESATOR ORIGINAL OR JR. PRO' TM WATERING BAGS, RINGS OR APPROVED EQUAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING WATER TO ALL PLANTINGS AND LAWN AREAS UNTIL FINAL ACCEPTANCE.
- PRIOR TO THE INSTALLATION OF ANY PLANT MATERIAL, SEEDING OR SODDING OF LAWN AREAS, THE CONTRACTOR SHALL OBTAIN PHYSICAL, CHEMICAL AND SOIL FERTILITY TESTING AT AN APPROVED LAB TO DETERMINE SOIL COMPOSITION AND SUITABILITY. THE TESTING SHALL BE A RATE OF EITHER ONE TEST PER 500 SQ. YD. OR ONE TEST PER 5000 SQ. YD. OF LANDSCAPE SURFACE AREA. THE SOILS SHALL BE AMENDED IN ACCORDANCE WITH THE TEST RESULTS FOR OPTIMAL PLANT AND LAWN GROWTH. THE RESULTS OF ALL TESTING SHALL BE SUBMITTED TO THE LANDSCAPE ARCHITECT FOR REVIEW.
- STEEP SLOPE AREAS INDICATED TO BE SEEDING WITH NATIVE GRASSES SHALL BE SEEDING WITH ERNST SEED MIX (ERNMX-18-1) NATIVE STEEP SLOPE MIX WITH ANNUAL RYEGRASS MIX OR APPROVED EQUAL. AT THE RATES INDICATED BY THE SEED MANUFACTURER (NON-ONCE ANNUALLY) ALL SLOPES OVER 5:1 OR OVER 50' IN LENGTH SHALL HAVE A SLOPE STABILIZATION FABRIC IN ACCORDANCE WITH SCS STANDARDS. FOR ALL AREAS INDICATED TO BE SEEDING, THE CONTRACTOR SHALL ADHERE TO THE INSTALLATION PROCEDURES OUTLINED BY THE SEED MANUFACTURER. SEE DETAIL SHEET FOR SEED MIX COMPOSITION, COVER CROP RECOMMENDATIONS AND MAINTENANCE REQUIREMENTS. CONTACT MANUFACTURER FOR RECOMMENDED RATE FOR SPECIFIC SITE CONDITIONS AND PROPER SEEDING PROCEDURES. SEE MORE AT: [HTTP://WWW.ERNSTSEED.COM](http://www.ernstseed.com)
- ALL PLANTED MATERIAL SHALL BE REQUIRED TO BE LABELED AND TAGGED AT THE TIME OF PLANTING. THE PLANT TAGS SHALL REMAIN IN PLACE UNTIL FINAL INSPECTION OF PLANTINGS AND AS-BUILT IS SUBMITTED FOR APPROVAL.
- AREAS INDICATED TO BE PROVIDED WITH RIVER STONE SHALL BE A 4 INCH DEPTH OF 1 TO 3 INCH DIAMETER RIVER STONE OVER NEED BARRIER FABRIC.
- AREAS INDICATED TO BE PLANTED WITH FOUNDATION PLANTINGS ARE TO BE COORDINATED WITH FINAL ARCHITECTURAL DRAWINGS.

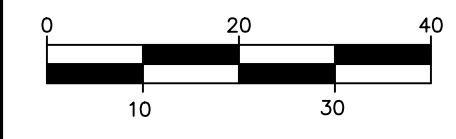


LANDSCAPE REQUIREMENTS				
SECTION	ITEM	REQUIRED/PERMITTED	PROPOSED	CONDITION
26-96.6.D	BUFFER PLANTING REQUIREMENT: CONTINUOUS YEAR-LONG SCREEN WITHIN 2 GROWTHING SEASONS NOT LESS THAN 6 FT HEIGHT	6 FT	6 FT	COMPLIES
26-96.7.A	MINIMUM LOT LANDSCAPE AREA	20% (17,114 SF)	66.4% (56,818 SF)	COMPLIES
26-96.7.A	MINIMUM FRONT YARD LANDSCAPE AREA	5% (1,986 SF)	78.0% (30,995 SF)	COMPLIES
26-96.7.I	MINIMUM FOUNDATION PLANTING BED WIDTH	5 FT	5 FT	COMPLIES
26-98.I	MINIMUM PARKING LANDSCAPE AREA	10% (272 SF)	12.1% (330 SF)	COMPLIES
26-98.I	MINIMUM PARKING LOT TREES: (1) SHADE TREE PER (20) PARKING SPACES	16/20 SPACES = 0.8 1 SHADE TREE	1 TREE	COMPLIES
26-97.2.C.1	MINIMUM STREET TREES: (1) TREE PER 50 LF OF STREET FRONTAGE ALONG A R.O.W.	895 LF/50 LF = 17.9 18 TREES	18 TREES	COMPLIES



HORIZONTAL DATUM : DB 4035, PG 379

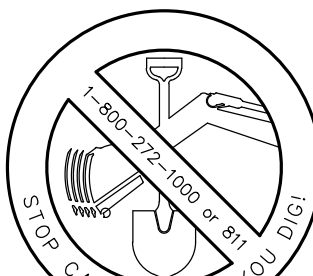
## GRAPHIC SCALE



SCALE: 1"=20'

## REVISIONS

NO.	DESCRIPTION	DATE
1	THIS DRAWING IS FOR PERMIT PURPOSES ONLY. NOT FOR CONSTRUCTION UNTIL THIS BOX HAS BEEN CHECKED AND DATED.	
2	CHKD BY: _____ DATE: _____	



THE STATE OF NEW JERSEY REQUIRES NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE.



261 Cleveland Avenue  
Highland Park, NJ 08904

menloeng.com in f

732-846-8585 732-846-9439

Certificate of Authorization : 240A27951900

CARAVAN, LLC

BOROUGH OF SAYREVILLE  
MIDDLESEX COUNTY  
NEW JERSEY

BLOCK 277  
LOTS 1-5 & 13-14  
TAX MAP SHEET 93  
2.06 ACRES

## LANDSCAPE PLAN

DRAWN BY: JF  
DESIGNED BY: JF  
APPROVED BY: KR

THIS WORK PREPARED UNDER MY IMMEDIATE SUPERVISION...

KENNETH R. GRISEWOOD  
LANDSCAPE ARCHITECT NJ  
LICENSE #AS000071

PROJECT NUMBER: 2023.091 LA-1  
DATE OF ISSUE: JUNE 9, 2025  
REVISION: 7

U.S. HIGHWAY ROUTE 9  
(A.K.A. STATE HIGHWAY ROUTES 4 & 35)  
(120 WIDE PUBLIC R.O.W.)



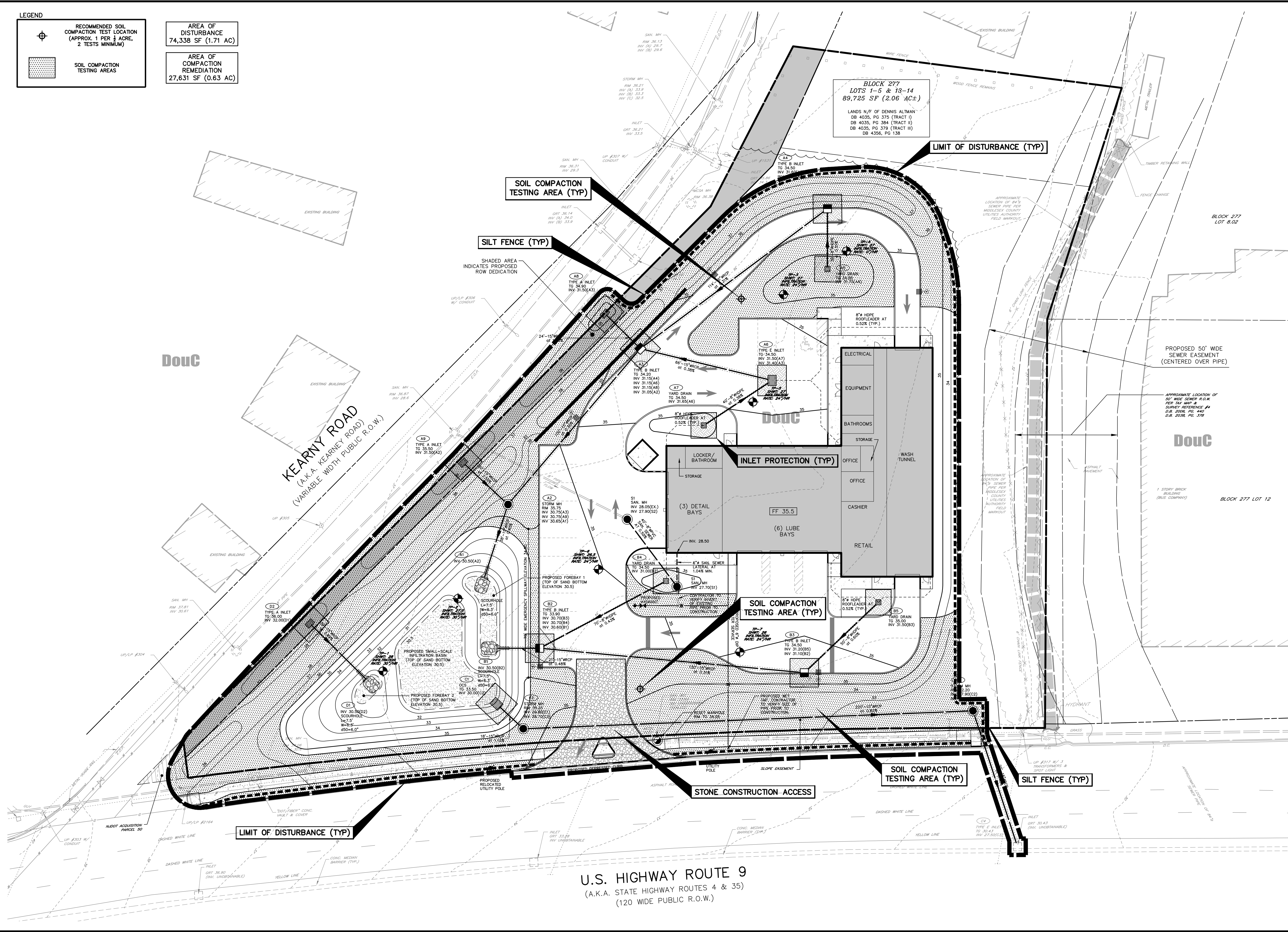
LEGEND

RECOMMENDED SOIL  
COMPACTION TEST LOCATION  
(APPROX. 1 PER 1/2 ACRE,  
2 TESTS MINIMUM)

SOIL COMPACTION  
TESTING AREAS

AREA OF  
DISTURBANCE  
74,338 SF (1.71 AC)

AREA OF  
COMPACTION  
REMEDATION  
27,631 SF (0.63 AC)



HORIZONTAL DATUM : DB 4035, PG 379

GRAPHIC SCALE

SCALE: 1"=20'

REVISIONS

NO.	DESCRIPTION	DATE
1	ISSUED FOR PERMIT	06/09/2025

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CHKD BY: DATE:

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PREPARING TO DISTURB THE EARTH'S  
SURFACE ANYWHERE IN THE STATE.

menlo  
engineering  
associates

Civil Engineering Consultants  
Landscape Architects  
Professional Planners

261 Cleveland Avenue  
Highland Park, NJ 08904

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732-846-8585 732-846-9439

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CARAVAN, LLC

BOROUGH OF SAYREVILLE  
MIDDLESEX COUNTY  
NEW JERSEY

BLOCK 277  
LOTS 1-5 & 13-14  
TAX MAP SHEET 93  
2.06 ACRES

SOIL EROSION  
& SEDIMENT  
CONTROL PLAN

DRAWN BY: RM  
DESIGNED BY: RM  
APPROVED BY: SHT

THIS WORK PREPARED UNDER MY  
IMMEDIATE SUPERVISION...

SCOTT H. TURNER  
PROFESSIONAL ENGINEER  
NJPE# 43811

PROJECT  
NUMBER: 2023.091 SE-1

DATE OF  
ISSUE: JUNE 9, 2025

REVISION: 8

U.S. HIGHWAY ROUTE 9  
(A.K.A. STATE HIGHWAY ROUTES 4 & 35)  
(120 WIDE PUBLIC R.O.W.)



## STANDARD FOR PERMANENT VEGETATIVE COVER

### 1. SITE PREPARATION

- 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.
- IMMEDIATELY PRIOR TO SEEDING AND TOPSOIL APPLICATION, THE SUBSOIL SHALL BE EVALUATED FOR COMPACTION IN ACCORDANCE WITH THE STANDARD FOR LAND GRADING.
- 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.
- INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE-STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS.

### 2. SEEDBED PREPARATION

- 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 MAIERS 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.
- 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.
- HIGH ACID PRODUCING 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 PREPARATION. SEE STANDARD FOR MANAGEMENT OF HIGH ACID-PRODUCING SOILS FOR SPECIFIC REQUIREMENTS.

### 3. SEEDING

- SELECT A MIXTURE FROM TABLE 4-2 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.
- 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 THE PERMANENT VEGETATION IS ESTABLISHED PRIOR TO A REPORT OF COMPLIANCE INSPECTION. THESE RATES APPLY TO ALL METHODS INCLUDING ESTABLISHING PERMANENT VEGETATION MEANS BOX VEGETATIVE COVERAGE WITH THE SPECIFIED SEED MIXTURE FOR THE SEEDBED AREA AND MOWED ONCE.
- WARM-SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT HIGH TEMPERATURES, GENERALLY 85°F AND ABOVE. SEE TABLE 4-2 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.
- COLD-SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT TEMPERATURES BELOW 85°F. MANY GRASSES BECOME ACTIVE AT 65°F. SEE TABLE 4-2, MIXTURES 8-20. ADJUSTMENT OF PLANTING RATES TO COMPENSATE FOR THE AMOUNT OF PLS IS NOT REQUIRED FOR COOL SEASON GRASSES.
- CONVENTIONAL SEEDING IS PERFORMED BY APPLYING SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, OR CULPICKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CULPICKED 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 RANKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COARSE-TEXTURED SOIL.
- AFTER SEEDING, FIRING 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.
- 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 APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. WHEN FERTILIZER FOLLOWING SEEDING, (ALSO SEE SECTION 4-MULCHING BELOW). HYDROSEEDING IS NOT A REFERRED 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 DETERMINED COMPLIANCE WITH THIS MULCHING REQUIREMENT.

- STRAW OR HAY, UNROOTED 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 ROUNDS.
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 COILER 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 UNDER SATISFACTORY DRYING CONDITIONS WILL FORM MEMBRANED NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTOXIC EFFECT OR IMPEDE GROWTH OF TURF GRASS. 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, MISOLUBLE 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.

- 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 OPTIMUM SEEDING PERIODS IN SPRING AND FALL.

- 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 SEEDBED AREA AND WATERED, FORM A MULCH MAT. PELLETIZED MULCH SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. FORM A MULCH MAT. PELLETIZED MULCH SHALL 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 LAWNS OR RENOVATION AREAS. SEEDBED AREAS WHERE WOOD-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 ALLEGRIATED.

### 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 OF THE SEED APPLICATION RATES ARE THE CONTRACTOR'S RESPONSIBILITY. A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. UP TO 50% REDUCTION IN APPLICATION RATES MAY BE USED WHEN THE 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 BOX 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.

## STANDARD FOR TEMPORARY VEGETATIVE COVER

### 1. SITE PREPARATION

- 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.
- 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.
- 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

- APPLY GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION SOIL SAMPLE MAIERS 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, CALCIUM CARBONATE IS THE EQUIVALENT AND STANDARD FOR MEASURING THE ABILITY OF LIMING MATERIALS TO NEUTRALIZE SOIL ACIDITY AND SUPPLY CALCIUM AND MAGNESIUM TO GRASSES AND LEGUMES.
- WORK LIME AND FERTILIZER INTO THE SOIL 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.
- INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILLED IN ACCORDANCE WITH THE ABOVE.
- 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

- SELECT SEED FROM RECOMMENDATIONS IN TABLE 7-2.
- CONVENTIONAL SEEDING. APPLY SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULPICKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CULPICKED SEEDINGS, SEED SHALL BE INCORPORATED INTO THE SOIL, TO A DEPTH OF 1/4 TO 1/2 INCH, BY RANKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COARSE-TEXTURED SOIL.
- 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 INCORPORATED IN THE TANK WITH SEED. SHORT FIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING. (ALSO SEE SECTION 4 MULCHING) HYDROSEEDING IS NOT A REFERRED 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.
- AFTER SEEDING, FIRING 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 DETERMINED COMPLIANCE WITH THIS MULCHING REQUIREMENT.

- STRAW OR HAY, UNROOTED 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 ROUNDS.
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 COILER 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 UNDER SATISFACTORY DRYING CURING CONDITIONS WILL FORM MEMBRANED NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTOXIC EFFECT OR IMPEDE GROWTH OF TURF GRASS. USE AT RATES AND WEATHER CONDITIONS AS RECOMMENDED BY THE MANUFACTURERS 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, MISOLUBLE 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.

- 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 OPTIMUM SEEDING PERIODS IN SPRING AND FALL.

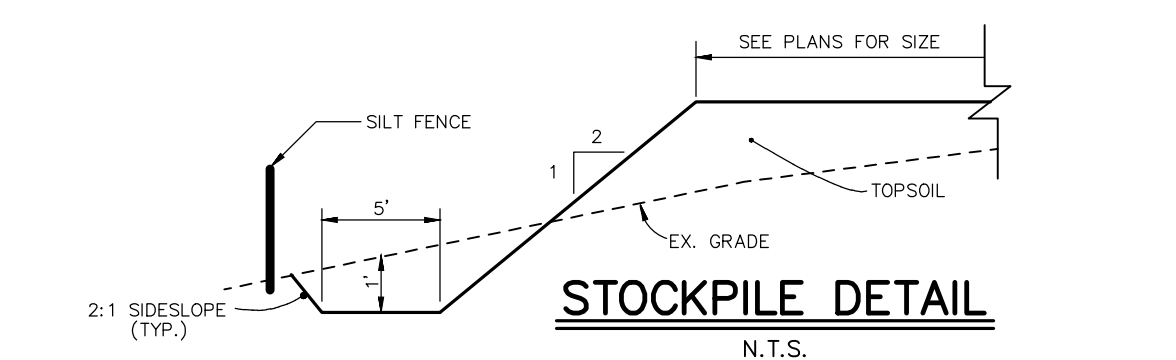
- PELLETIZED MULCH – COMPRESSED AND EXTRUDED PAPER AND/OR WOOD FIBER PRODUCT, WHICH MAY CONTAIN CO-POLYMERS, TACKIFIERS, FERTILIZERS, AND COLORING AGENTS. THE DRY PELLETS, WHEN APPLIED TO A SEEDBED AREA AND WATERED, FORM A MULCH MAT. PELLETIZED MULCH SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. FORM A MULCH MAT. PELLETIZED MULCH SHALL 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 LAWNS OR RENOVATION AREAS. SEEDBED AREAS WHERE WOOD-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.

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.

TABLE 7-2

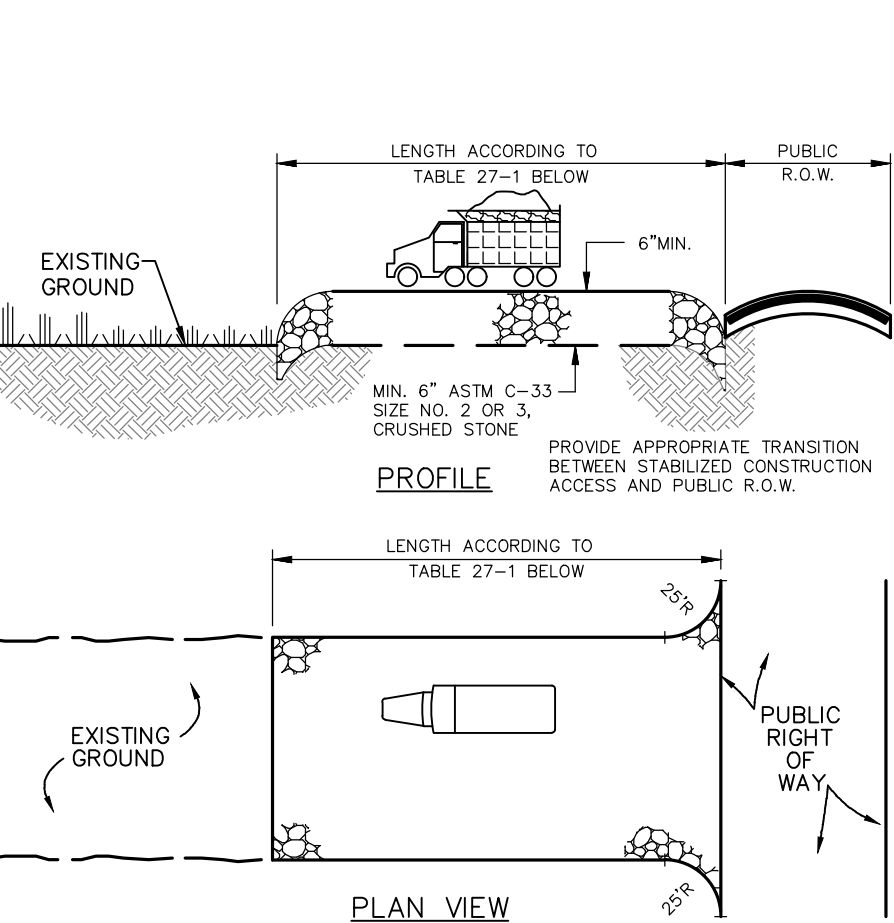
TEMPORARY VEGETATIVE STABILIZATION GRASSES, SEEDING RATES, DATES AND DEPTH.

SEED SELECTIONS	SEEDING RATE 2 (pounds)		OPTIMUM SEEDING DATE Based on Plant Hardiness Zone 3			OPTIMUM SEED DEPTH 4 (inches)
	Per Acre	Per 1000 Sq. Ft.	ZONE 5b, 6a	ZONE 6b	ZONE 7a, b	
COOL SEASON GRASSES						
1. PERENNIAL RYEGRASS	100	1.0	3/15- 6/1- 8/1- 9/15	3/1- 5/15 8/15- 10/1	2/15- 5/1 8/15- 10/15	0.5
2. SPRING OATS	86	2.0	3/15- 6/1- 8/1- 9/15	3/1- 5/15 8/15- 10/1	2/15- 5/1 8/15- 10/15	1.0
3. WINTER BARLEY	96	2.2	8/1- 9/15	8/15- 10/1	8/15- 10/15	1.0
4. ANNUAL RYEGRASS	100	1.0	3/15- 6/1- 8/1- 9/15	3/15- 6/1- 8/1- 9/15	2/15- 5/1 8/15- 10/15	0.5
5. WINTER CEREAL RYE	112	2.8	8/1- 11/1	8/1- 11/15	8/15- 12/15	1.0
WARM SEASON GRASSES						
6. PEARL MILLET	20	0.5	6/1- 8/1	5/15- 8/15	5/1- 9/1	1.0
7. MILLET (GERMAN OR HUNGARIAN)	30	0.7	6/1- 8/1	5/15- 8/15	5/1- 9/1	1.0



## SOIL EROSION AND SEDIMENT CONTROL NOTES

- THE FREEHOLD SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY SOIL DISTURBING ACTIVITY.
- ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
- ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLANS WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RE-CERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT STATE SOIL EROSION AND SEDIMENT CONTROL STANDARDS.
- N.J.S.A. 4:24-39 ET. SEQ. REQUIRES THAT NO CERTIFICATES OF OCCUPANCY BE ISSUED BEFORE THE DISTRICT DETERMINES THAT A PROJECT OR PORTION THEREOF IS IN FULL COMPLIANCE WITH THE CERTIFIED PLAN AND STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL. IN NEW JERSEY AND A REPORT OF COMPLIANCE HAS BEEN ISSUED. UPON WRITTEN REQUEST FROM THE APPLICANT, THE DISTRICT MAY ISSUE A REPORT OF COMPLIANCE WITH CONDITIONS ON A LOT-BY-LOT OR SECTION-BY-SECTION BASIS PROVIDED THAT THE PROJECT OR PORTION THEREOF IS IN SATISFACTORY COMPLIANCE WITH THE SEQUENCE OF DEVELOPMENT AND TEMPORARY MEASURES FOR SOIL EROSION AND SEDIMENT CONTROL HAVE BEEN IMPLEMENTED, INCLUDING PROVISIONS FOR STABILIZATION AND SITE WORK.
- ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN SIXTY (60) DAYS, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF 2 TO 2 1/2 TONS PER ACRE, ACCORDING TO THE STANDARD FOR STABILIZATION WITH MULCH ONLY.
- IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E. SOIL STOCKPILES, STEEP SLOPES AND ROADWAY EMBANKMENTS) USED MUST BE IN ACCORDANCE WITH THE STANDARD FOR STABILIZATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AND A MULCH ANCHOR, IN ACCORDANCE WITH STATE STANDARDS.
- A SUB-BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS TO STABILIZE STREETS, ROADS, DRIVEWAYS, AND PARKING AREAS, IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUB-BASE SHALL BE INSTALLED WITHIN FIFTEEN (15) DAYS OF THE PRELIMINARY GRADING.
- THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A PAD OF CLEAN CRUSHED STONE AT POINTS WHERE TRAFFIC WILL BE ACCESSING THE CONSTRUCTION SITE. AFTER INTERIOR ROADWAYS ARE PAVED, INDIVIDUAL LOTS REQUIRE A STABILIZED CONSTRUCTION ACCESS CONSISTING OF ONE INCH TO TWO INCH (1"-2") STONE FOR A MINIMUM LENGTH OF TEN FEET (10') EQUAL TO THE LOT ENTRANCE WIDTH. OTHER ACCESS POINTS SHALL BE BLOCKED OFF.
- ALL SOIL WASHED, DROPPED, SPILLED, OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHT-OF-WAYS WILL BE REMOVED IMMEDIATELY.
- PERMANENT VEGETATION IS TO BE SEEDBED OR SOODED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING.
- AT THE TIME THAT SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT IS NOT YET COVERED BY A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT IT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE EMPLOYED.
- IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, ANY SOIL HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDES SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE. APPLIED AT THE RATE OF 10 TONS PER ACRE, (OR 450 LBS/1,000 SQ. FT. OF SURFACE AREA) AND COVERED WITH A MINIMUM OF 12" OF SETTLED SOIL WITH A PH OF 5 OR MORE, OR 24" WHERE TREES OR SHRUBS ARE TO BE PLANTED.
- CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.
- UNFILTERED DEWATERING IS NOT PERMITTED. NECESSARY PRECAUTIONS MUST BE TAKEN DURING ALL DEWATERING OPERATIONS TO MINIMIZE SEDIMENT TRANSFER. ANY DEWATERING METHODS USED MUST BE IN ACCORDANCE WITH THE STANDARD FOR DEWATERING.
- SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET. TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED OR MULCH SHALL BE APPLIED AS REQUIRED BY THE STANDARD FOR DUST CONTROL.
- STOCKPILE AND STAGING LOCATIONS ESTABLISHED IN THE FIELD SHALL BE PLACED WITHIN THE LIMIT OF DISTURBANCE ACCORDING TO THE CERTIFIED PLAN. STAGING AND STOCKPILES NOT LOCATED WITHIN THE LIMIT OF DISTURBANCE WILL REQUIRE CERTIFICATION OF A REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN. CERTIFICATION OF A NEW SOIL EROSION AND SEDIMENT CONTROL PLAN MAY BE REQUIRED FOR THESE ACTIVITIES IF AN AREA GREATER THAN 5,000 SQUARE FEET IS DISTURBED.
- ALL SOIL STOCKPILES ARE TO BE TEMPORARILY STABILIZED IN ACCORDANCE WITH SOIL EROSION AND SEDIMENT CONTROL NOTE #6.
- THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ANY EROSION OR SEDIMENTATION THAT MAY OCCUR BELOW STORMWATER OUTFALLS OR OFFSITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.



### NOTES

- AT POORLY DRAINED LOCATIONS, SUBSURFACE DRAINAGE GRAVEL FILTER OR GEOTEXTILE SHALL BE INSTALLED BEFORE INSTALLING THE STABILIZED CONSTRUCTION ENTRANCE.
- INDIVIDUAL LOT ENTRANCE AND EGRESS-- AFTER INTERIOR ROADWAYS ARE PAVED, INDIVIDUAL LOT INGRESS/EGRESS POINTS MAY REQUIRE A STABILIZED CONSTRUCTION ENTRANCE CONSISTING OF NO. 3 STONE (1" TO 2") TO PREVENT OR MINIMIZE TRACKING OF SEDIMENTS. WIDTH OF THE STONE INGRESS/EGRESS SHALL BE EQUAL TO LOT ENTRANCE WIDTH AND SHALL BE A MINIMUM OF TEN FEET IN LENGTH.
- THE WASHING-- IF SPACE IS LIMITED, VEHICLE TIRES MAY BE WASHED WITH CLEAN WATER BEFORE ENTERING A PAVED AREA. A WASH STATION MUST BE LOCATED SUCH THAT WASH WATER WILL NOT FLOW INTO PAVED ROADWAYS OR INTO UNPROTECTED STORM DRAINAGE SYSTEMS.
- WHEN THE CONSTRUCTION ACCESS EXISTS ONTO A MAJOR ROADWAY, A PAVED TRANSITION AREA MAY BE INSTALLED BETWEEN THE END OF THE ROADWAY AND THE STONED ENTRANCE TO PREVENT LOOSE STONE FROM BEING TRANSPORTED OUT ONTO THE ROADWAY BY HEAVY EQUIPMENT ENTERING OR LEAVING THE SITE.
- THE ENTRANCE SHALL BE MAINTAINED IN SUCH A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ON ROADWAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANUP OF ANY MEASURES USED TO TRAP SEDIMENT.

Table 27-1: Lengths of Construction Exits on Sloping Roadbeds

Percent Slope of Roadway	Length of Stone Required	
	Coarse Grained Soils	Fine Grained Soils
0 to 2%	50 ft	100 ft
2 to 5%	100 ft	200 ft
>5%	Entire surface stabilized with FABC base course!	

1. As prescribed by local ordinance or other governing authority.

## STABILIZED CONSTRUCTION ACCESS

N.T.S.

## DUST CONTROL

DEFINITION

THE CONTROL OF DUST ON CONSTRUCTION SITES AND ROADS.

PURPOSE

TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCED ON-SITE AND OFF-SITE DAMAGE AND HEALTH HAZARDS AND IMPROVE TRAFFIC SAFETY.

CONDITION WHERE PRACTICE APPLIES

THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON-SITE AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT. CONSULT WITH LOCAL MUNICIPAL ORDINANCES ON ANY RESTRICTIONS.





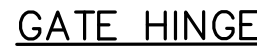












PIPE DIAMETER	TRENCH WIDTH
4"	2'-0"
6"	2'-0"
8"	2'-6"
10"	3'-0"
12"	3'-0"
15"	3'-6"
18"	3'-6"
21"	4'-0"
24"	4'-0"
27"	4'-0"
30"	4'-0"
33"	4'-6"
36"	4'-6"
42"	5'-6"
48"	6'-0"
54"	6'-0"

N.T.S.

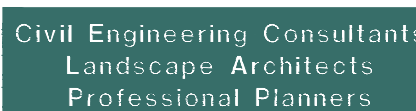
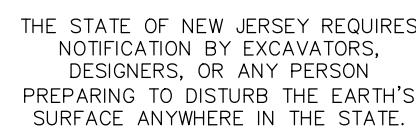
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## REVISIONS

CHKD BY: \_\_\_\_\_ DATE: \_\_\_\_\_



732-846-8585      732-846-9439

Certificate of Authorization : 24GA27951900

THIS WORK PREPARED UNDER MY  
IMMEDIATE SUPERVISION...

PROJECT	2023 091	DE-3
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NUMBER	20201001	DE 0

13







SL LIGHT FIXTURE DETAILS-1

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N.T.S.

SL LIGHT FIXTURE DETAILS-2

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N.T.S.

SL LIGHT FIXTURE DETAILS-3

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N.T.S.

SL LIGHT FIXTURE DETAILS-4

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N.T.S.

### CONSTRUCTION DETAIL NOTES

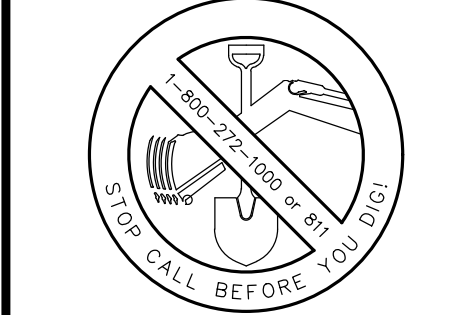
1. ALL TRAFFIC SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO THE CURRENT EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. ALL CONSTRUCTION DETAILS SHALL BE SUPERSEDED BY ANY CHANGES TO THE MUNICIPAL, COUNTY OR STATE DETAILS UNLESS OTHERWISE NOTED.
3. STRUCTURAL DETAILS ARE PROVIDED FOR INFORMATION ONLY. THE CITY OF SHOP DRAWINGS SHALL BE PROVIDED TO THE TOWNSHIP ENGINEER FOR ALL APPLICABLE STRUCTURAL ELEMENTS PRIOR TO CONSTRUCTION.
4. SHOP DRAWINGS SHALL BE PROVIDED TO THE TOWNSHIP ENGINEER PRIOR TO THE ORDERING OF MATERIALS.
5. DETAILS ASSUME APPROPRIATE LOADS AND FACTORS OF SAFETY AS PROVIDED FOR IN THE SPECIFICATIONS FOR SOILS. ACTUAL FIELD CONDITIONS SHALL BE CONFIRMED BY ON-SITE INVESTIGATION, ENGINEERING AND/OR TESTING.
6. RESIDENTIAL DEVELOPMENTS SHALL CONFORM TO DETAILS WITHIN THE CURRENT EDITION OF THE RESIDENTIAL SITE IMPROVEMENT STANDARDS (R.S.I.S.).
7. ALL CONSTRUCTION DETAILS ARE NOT TO BE ALTERNATE (N.T.S.) UNLESS OTHERWISE NOTED.

## REVISIONS

[illegible]

THIS DRAWING IS FOR  
PERMIT PURPOSES ONLY

NOT FOR CONSTRUCTION UNTIL THIS BOX  
HAS BEEN CHECKED AND DATED



THE STATE OF NEW JERSEY REQUIRES  
NOTIFICATION BY EXCAVATORS,  
DESIGNERS, OR ANY PERSON  
PREPARING TO DISTURB THE EARTH'S  
SURFACE ANYWHERE IN THE STATE.

SL LIGHT POLE DETAILS-1

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N.T.S.

SL LIGHT POLE DETAILS-2

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N.T.S.

SL LIGHT POLE DETAILS-3

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N.T.S.

## SL LIGHT POLE DETAILS-4

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Civil Engineering Consultant Landscape Architects Professional Planners		
261 Cleveland Avenue Highland Park, NJ 08904		
menloeng.com    in   f   t		
☎ 732-846-8585    732-846-9439    📠		
Certificate of Authorization : 24CA27951900		
<h1 style="margin: 0;">CARAVAN, LLC</h1>		
<h1 style="margin: 0;">BOROUGH OF SAYREVILLE MIDDLESEX COUNTY NEW JERSEY</h1>		
<h1 style="margin: 0;">BLOCK 277 LOTS 1-5 &amp; 13-14 TAX MAP SHEET 93 2.06 ACRES</h1>		
<h1 style="margin: 0;">CONSTRUCTION DETAILS (5)</h1>		
DRAWN BY .....		R
CHECKED BY .....		R
APPROVED BY .....		S
THIS WORK PREPARED UNDER MY IMMEDIATE SUPERVISION...		
<hr/> <b>SCOTT H. TURNER</b> PROFESSIONAL ENGINEER N.J.P.E.# 43811		
PROJECT NUMBER	2023.091	DE-5
DATE OF ISSUE	JUNE 9, 2025	15
REVISION	-	