

PRELIMINARY/FINAL MAJOR SITE PLAN

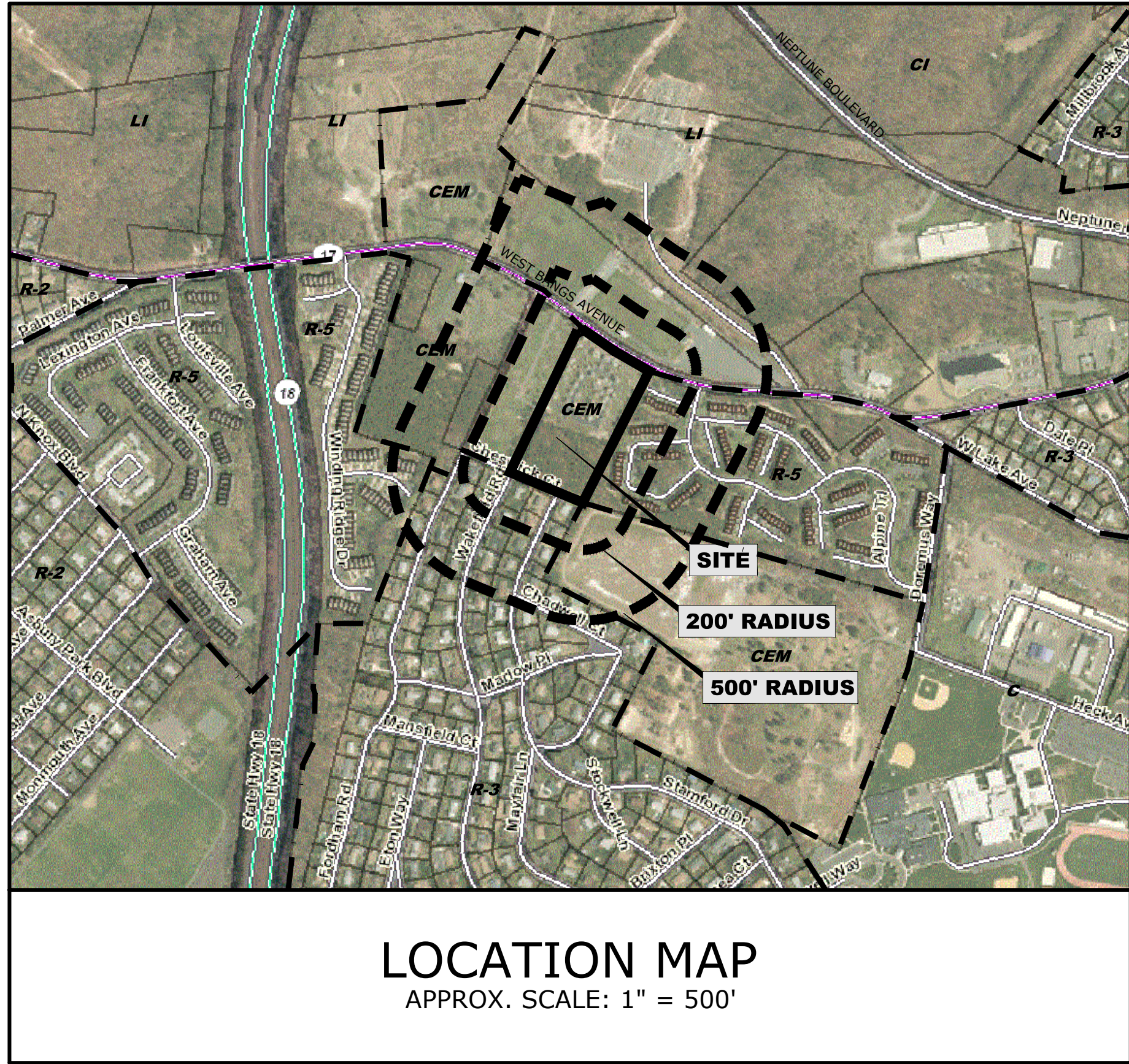
OF

ST. GEORGE CEMETERY

LOT 2 IN BLOCK 1402
TOWNSHIP OF NEPTUNE
MONMOUTH COUNTY, NEW JERSEY
TAX MAP SHEET 41.02

BLOCK	LOT	QUALIFIER	BLOCK	LOT	QUALIFIER
816	17	TOWNSHIP OF NEPTUNE PO BOX 1125 NEPTUNE, NJ 07754	1402	3	C1001 LIGUORI, DENISE JERMAIN & WEINTRAUB 126 COOKMAN AVENUE OCEAN GROVE, NJ 07756
1402	1	AGUDATH ACHIM CONGREGATION PO BOX 187 BRADLEY BEACH, NJ 07720	1402	3	C1002 DWYER, YVONNE 1002 ALPINE TRAIL NEPTUNE, NJ 07753
1402	3	THE SUMMIT AT NEPTUNE CONDOMINIUM 25 NEPTUNE BLVD NEPTUNE TWP, NJ 07753	1402	3	C1003 JORDAN, SANDRA A 1003 ALPINE TRAIL NEPTUNE, NJ 07753
1402	3	C0101 CARROLL, JARED 101 ALPINE TRAIL NEPTUNE, NJ 07753	1402	3	C1004 KEENE, DONOVAN & JOY P ROWEN 8687 CTSTED EAGLE PLACE SANFORD, FL 32771
1402	3	C0102 SHAALAN, ALIA 102 ALPINE TRAIL NEPTUNE, NJ 07753	1402	3	C1005 WETTERMARK, ERIK G 11 SUIWAY AVENUE W LONG BRANCH, NJ 07764
1402	3	C0103 RIAMA ASSOCIATES, LC PO BOX 785 EAST BRUNSWICK, NJ 08816	1402	3	C1006 MACALLISTER, ALEXANDER J 1006 ALPINE TRAIL NEPTUNE, NJ 07753
1402	3	C0104 LUBCKE, JENNIFER M 25 SEQUOIA PKWY OCEAN, NJ 07712	1402	3	C1007 JOHNSON, ROBERT & MARIA 1007 ALPINE TRAIL NEPTUNE, NJ 07753
1402	3	C0105 JEANTY, CHERICE 105 ALPINE TRAIL NEPTUNE, NJ 07753	1402	3	C1008 DENOTE, MARK 1008 ALPINE TRAIL NEPTUNE, NJ 07753
1402	3	C0106 KRALL, MIRANDA 106 ALPINE TRAIL NEPTUNE, NJ 07753	1402	3	C1101 MASSIMINO, JAMES JR & GINOULI, K 1101 ALPINE TRAIL NEPTUNE, NJ 07753
1402	3	C0107 RAMOS, CNESTHAM & MARIEL 107 ALPINE TRAIL NEPTUNE, NJ 07753	1402	3	C1102 U.S. BANK TRUST NA LSP/N RESCAP 3630 PEACHTREE RD NE #1500 ATLANTA, GA 30326
1402	3	C0108 BLOECH, LINDA M 108 ALPINE TRAIL NEPTUNE, NJ 07753	1402	3	C1103 ALDERMAN, MELODY S 1103 ALPINE TRAIL NEPTUNE, NJ 07753
1402	3	C0805 FLORES, RICHARD 805 ALPINE TRAIL NEPTUNE, NJ 07753	1402	5	MT PROSPECT CEMETERY COMPANY PO BOX 8295 RED BANK, NJ 07701
1402	3	C0806 JACKSON, RONALD K & CASSANDRA A 806 ALPINE TRAIL NEPTUNE, NJ 07753	1502	1	ELLINGTON, ROMA & JANVIER, JUDE & ELL 1118 FORDHAM ROAD NEPTUNE, NJ 07753
1402	3	C0807 GRILL, WILLIE 807 ALPINE TRAIL NEPTUNE, NJ 07753	1502	2	TIRONE, BRUNO & JOANN PO BOX 3337 LONG BRANCH, NJ 07740
1402	3	C0808 SHERRY, JEANNE M 808 ALPINE TRAIL NEPTUNE, NJ 07753	1502	3	COSTA, JONAS LAGARES & MARTINIQUE 815 WAKEFIELD ROAD NEPTUNE, NJ 07753
1402	3	C0901 DAVIS, BRYAN K 901 ALPINE TRAIL NEPTUNE, NJ 07753	1502	19	MEDINA, YAMIL 1118 FORDHAM ROAD NEPTUNE, NJ 07753
1402	3	C0902 GIAMBALVO, PHILIP E & SUE A 902 ALPINE TRAIL NEPTUNE, NJ 07753	1503	1	CORNELIUS, EDDIE L 816 WAKEFIELD ROAD NEPTUNE, NJ 07753
1402	3	C0903 MANUEL, GREGORY W, II 903 ALPINE TRAIL NEPTUNE, NJ 07753	1503	2	JEAN, FRANKY & MARIE 815 STAMFORD DRIVE NEPTUNE, NJ 07753
1402	3	C0904 LASSITER, PHINDILE JENNIFER 904 ALPINE TRAIL NEPTUNE, NJ 07753	1503	3	DELDATCH, CALVIN 813 STAMFORD DRIVE NEPTUNE, NJ 07753
1402	3	C0905 MORGAN, DENNIS J JR 905 ALPINE TRAIL NEPTUNE, NJ 07753	1503	17	WHITE, RALPH W JR 814 STAMFORD DRIVE NEPTUNE, NJ 07753
1402	3	C0906 GOMES, BRUNO M & DELIA M 906 ALPINE TRAIL NEPTUNE, NJ 07753	1504	1	FOSTER, MONIQUE 814 STAMFORD DRIVE NEPTUNE, NJ 07753
1402	3	C0907 GHOSH, ANDEENDU & MALANCHIA 56 ROCKWELL CIRCLE MARLBORO, NJ 07746	1504	2	FRANK, GARRY J & RITE H 812 STAMFORD DRIVE NEPTUNE, NJ 07753
1402	3	C0908 MOORE, MARJORIE D 908 ALPINE TRAIL NEPTUNE, NJ 07753			

200' PROPERTY OWNERS



LOCATION MAP
APPROX. SCALE: 1" = 500'

PROJECT ATTORNEY:

JOHN B. ANDERSON, III, ESQ.
FOSS, SAN FILIPPO & MILNE, LLC
225 BROAD STREET
RED BANK, NJ 07701
732 741-2525

PROJECT SURVEYOR:

JAMES B. GODDARD, PLS
C.C. WIDDIS SURVEYING, LLC
175 BROADWAY
LONG BRANCH, NJ 07740
732 222-8815

GENERAL NOTES:	
1.	PROPERTY BEING KNOWN AS LOT 2 IN BLOCK 1402 AS SHOWN ON SHEET 41.02 OF THE CURRENT OFFICIAL TAX MAP OF THE TOWNSHIP OF NEPTUNE, DATED 1956, AND LAST REVISED ON JUNE 18, 1984.
2.	PRELIMINARY/FINAL MAJOR SITE PLAN APPROVAL IS HEREBY REQUESTED FOR THE CONSTRUCTION OF ADDITIONAL GRAVE SITES WITH ASSOCIATED ACCESS ROAD AND RETAINING WALL IMPROVEMENTS.
3.	THE SUBJECT PROPERTY IS LOCATED WITHIN THE CEMETERY ZONE DISTRICT (CEM). THE CEMETERY IS PERMITTED IN THIS ZONE.
4.	SURVEY INFORMATION TAKEN FROM "TOPOGRAPHICAL SURVEY FOR PROPERTY KNOWN AS LOT 2 IN BLOCK 1402, 2345 BANGS AVENUE, TOWNSHIP OF NEPTUNE, MONMOUTH COUNTY, NEW JERSEY" PREPARED BY JAMES B. GODDARD, PLS 37588 OF C.C. WIDDIS SURVEYING, LLC ON FEBRUARY 11, 2019.
5.	THE SUBJECT PROPERTY IS LOCATED IN FLOOD ZONE X AS SHOWN ON THE INSURANCE RATE MAP COMMUNITY - PANEL NUMBER 34025C033F, DATED SEPTEMBER 25, 2009, AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
6.	APPLICANT / PROPERTY OWNER: ST. GEORGE GREEK ORTHODOX CHURCH 1033 WEST PARK AVENUE OCEAN, NJ 07712
7.	UTILITIES: WATER SERVICE: N.J. AMERICAN WATER COMPANY SEWER SERVICE: TOWNSHIP OF NEPTUNE SEWER DEPARTMENT TELEPHONE SERVICE: VERIZON ELECTRIC SERVICE: JCP&L CABLE TELEVISION: FIOS, XFINITY, OPTIMUM GAS SERVICE: NEW JERSEY NATURAL GAS COMPANY

ZONING SUMMARY				
CEM-ZONE				
DESCRIPTION	REQUIRED	EXISTING	PROPOSED	COMMENTS
MINIMUM LOT AREA		228,839.01 SF	228,839.01 SF	
		5.25 AC.	5.25 AC.	
MAXIMUM DENSITY	N/A	N/A	N/A	
MAXIMUM FAR	N/A	N/A	N/A	
MINIMUM LOT WIDTH		335.6 FT	335.6 FT	
MINIMUM LOT FRONTAGE		349.3 FT	349.3 FT	
MINIMUM LOT DEPTH		632.62 FT	632.62 FT	
MINIMUM FRONT YARD SETBACK	40 FT	N/A	N/A	
MINIMUM SIDE YARD SETBACK	20 FT	N/A	N/A	
MINIMUM COMBINED SIDE YARD SETBACK	40 FT	N/A	N/A	
MINIMUM REAR YARD SETBACK	25 FT	N/A	N/A	
MAXIMUM PERCENT BUILDING COVER	N/A	N/A	N/A	
MAXIMUM PERCENT LOT COVERAGE		9.70%	13.70%	
MAXIMUM NUMBER OF STORIES	N/A	N/A	N/A	
MAXIMUM BUILDING HEIGHT	25 FT	N/A	N/A	
MINIMUM IMPROVABLE LOT AREA		214,210.9 SF	214,210.9 SF	
MINIMUM IMPROVABLE AREA DIAMETER OF CIRCLE (FEET)				
OFF STREET PARKING SPACES	N/A	N/A	N/A	
LOADING SPACES	N/A	N/A	N/A	
SIGNS		EX. LOCATION SIGN	EX. LOCATION SIGN	
EXISTING USE	CEMETERY	CEMETERY	CEMETERY	
PROPOSED USE			CEMETERY	
EXISTING FLOOR AREA	N/A	N/A	N/A	
PROPOSED FLOOR AREA	N/A	N/A	N/A	
TREE REMOVAL - SECTION 12-3.4B7			VARIANCE	REQUEST WAIVER

INDEX OF SHEETS

	FILE	NO.	PLAN DATE
TITLE SHEET	TS-1	1 OF 7	10/20/21
SITE LAYOUT & GRADING PLAN	SP-1	2 OF 7	10/20/21
LANDSCAPE AND TREE REMOVAL PLAN	LL-1	3 OF 7	10/20/21
SOIL EROSION & SEDIMENT CONTROL PLAN	SE-1	4 OF 7	10/20/21
SOIL MANAGEMENT AND PREPARATION PLAN	SMPP-1	5 OF 7	10/20/21
SOIL EROSION CONTROL SPECIFICATIONS	SEC-1	6 OF 7	10/20/21
CONSTRUCTION DETAILS	CD-1	7 OF 7	10/20/21

OWNER'S CERTIFICATION:

I/WE ARE THE OWNER (S) OF THE SUBJECT PROPERTY
AND HEREBY GIVE CONSENT TO THE DEVELOPMENT AS
DEPICTED ON THESE PLANS.

DATE

CERTIFICATION:

CLASSIFIED AND APPROVED AS A PRELIMINARY/FINAL MAJOR SITE PLAN

BY THE TOWNSHIP OF NEPTUNE BOARD ON _____
DATE

CHAIRMAN: _____ DATE: _____

SECRETARY: _____ DATE: _____

BOARD ENGINEER: _____ DATE: _____



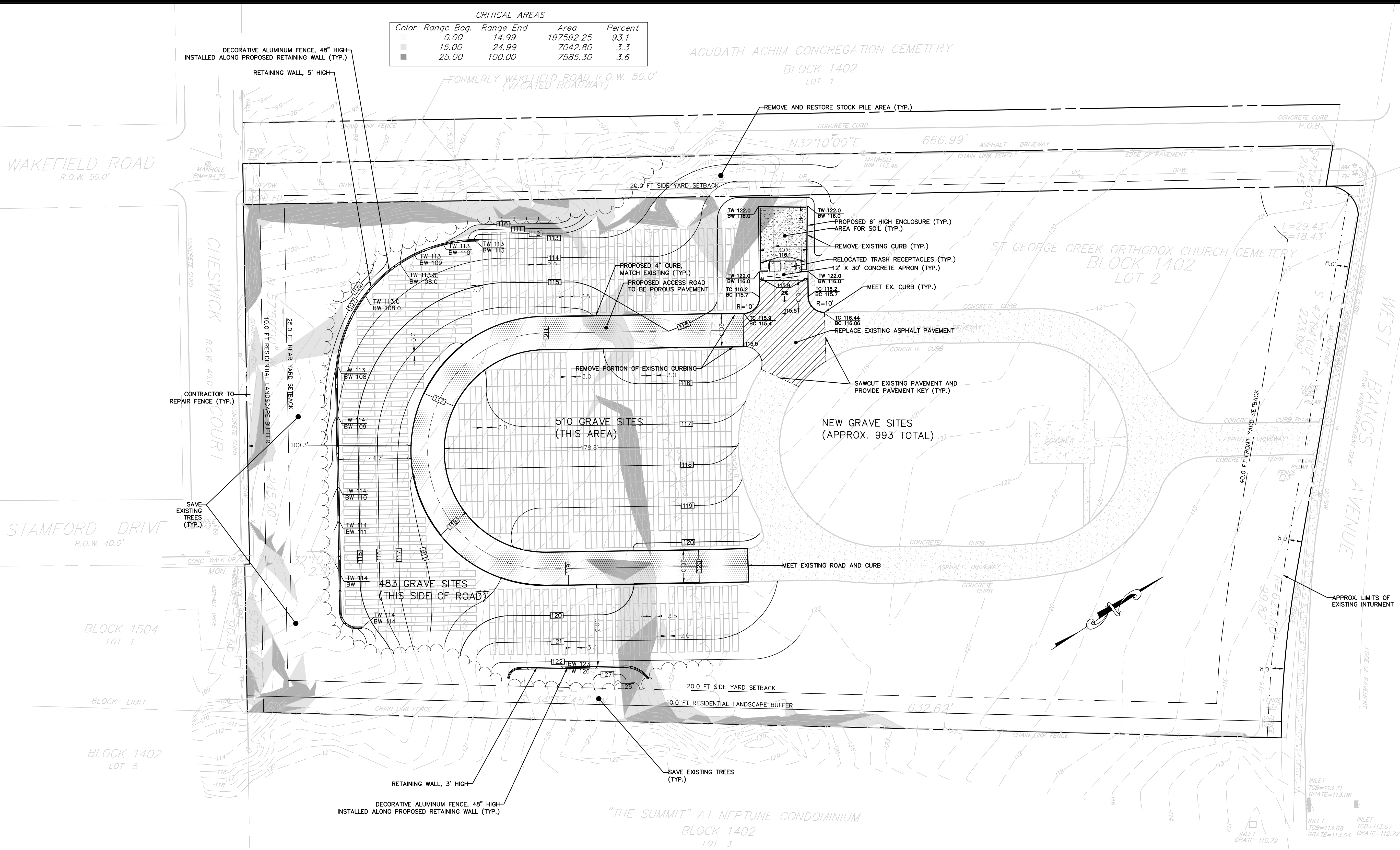
Kennedy Consulting Engineers, LLC
211 Maple Avenue
Red Bank, New Jersey 07701
732.212.9393 TEL • 732.212.9399 FAX

TITLE SHEET

1 OF 7

FILENAME: TS-1
DRAWN BY: DS
DATE: 9/14/21

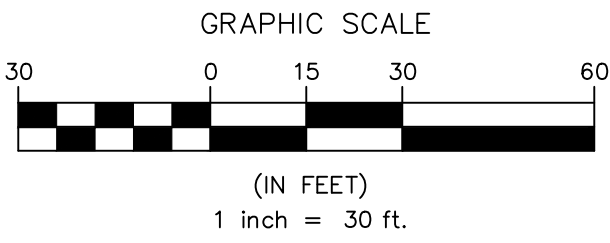
JAMES A. KENNEDY, P.E.
NEW JERSEY PROFESSIONAL ENGINEER NO. 41275




CRITICAL AREAS				
Color	Range Beg.	Range End	Area	Percent
■	0.00	14.99	197592.25	93.1
■	15.00	24.99	7042.80	3.3
■	25.00	100.00	7585.30	3.6

- General Construction Notes**
1. ALL WORK TO CONFORM WITH THE LATEST EDITION OF THE FOLLOWING:
-NJDOT SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
-MONMOUTH COUNTY DESIGN STANDARDS
-MUNICIPAL DESIGN STANDARDS
-N.J. RESIDENTIAL SITE IMPROVEMENT STANDARDS (R.S.I.S.), IF APPLICABLE.
-CURRENT MANUFACTURER'S SPECIFICATIONS, STANDARDS, AND REQUIREMENTS-CURRENT, PREVAILING UTILITY COMPANY OR AUTHORITY SPECIFICATIONS, STANDARDS, AND REQUIREMENTS
 2. ALL BARRIER FREE CONSTRUCTION TO BE IN ACCORDANCE WITH THE LATEST STANDARDS OF THE NEW JERSEY UNIFORM CONSTRUCTION CODE, SUBCHAPTER 7: BARRIER FREE SUBCODE AND/OR 2010 ADA STANDARDS, AS APPLICABLE.
 3. CONTRACTOR IS RESPONSIBLE FOR ALL WORKER SAFETY, TRAINING, AND SAFETY DEVICE USAGE FOR AND DURING THE CONSTRUCTION OF THE IMPROVEMENTS SHOWN ON THIS PLAN.
 4. THE CONTRACTOR IS DESIGNATED AS RESPONSIBLE PARTY DURING CONSTRUCTION OF THE IMPROVEMENTS SHOWN HEREON. AS SUCH, CONTRACTOR WILL PROVIDE ADEQUATE SAFETY TRAINING, EQUIPMENT, AND OVERSIGHT.
 5. CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED PERMITS AND APPROVALS FOR CONSTRUCTION OF THE DEPICTED SITE IMPROVEMENTS.
 6. ALL DISTURBED AREAS ON SITE TO BE STABILIZED IN ACCORDANCE WITH THE FRESHLOD SOIL CONSERVATION DISTRICT STANDARDS.
 7. ALL AREAS NOT COVERED BY IMPERVIOUS SURFACE OR SHOWN TO BE LANDSCAPED SHALL BE SEEDED OR OTHERWISE STABILIZED IN ACCORDANCE WITH SOIL EROSION CONTROL SPECIFICATIONS.
 8. THE NEW JERSEY ONE CALL SYSTEM SHOULD BE CONTACTED PRIOR TO EXCAVATION ON-SITE OR WITHIN R.O.W. (800) 272-1000
 9. ALL UTILITY CONNECTIONS AND RELOCATIONS ARE SHOWN SCHEMATICALLY. THE CONTRACTOR SHALL CONTACT AND COORDINATE WITH EACH UTILITY COMPANY AND ARCHITECT TO PROVIDE THE MOST APPROPRIATE LOCATION FOR UTILITY CONNECTIONS AND/OR RELOCATIONS.
 10. EXISTING SITE AND UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN COLLECTED FROM VARIOUS SOURCES AND IS NOT GUARANTEED AS TO ACCURACY OR COMPLETENESS.
 11. ALL TRAFFIC SIGNS AND STRIPING SHALL CONFORM WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
 12. ANY DAMAGE TO EXISTING STRUCTURES AS A RESULT OF THIS DEVELOPMENT, SHALL BE REPAIRED AT THE SOLE EXPENSE OF THE CONTRACTOR.
 13. DURING R.O.W. WORK, TRAFFIC TO BE PROTECTED AND MAINTAINED IN ACCORDANCE WITH MUTCD PART VI.
 14. CONTRACTOR TO MATCH EXISTING PAVEMENT SPECIFICATIONS FOR ALL PAVEMENT REPAIR TO EXISTING ROADWAYS.
 15. CONCRETE SHALL BE NJDOT CLASS "B" UNLESS OTHERWISE STATED HEREON OR WITHIN THE CONSTRUCTION DETAILS.
 16. ALL IMPROVEMENTS SHOWN HEREON "TO BE REMOVED" SHALL BE DISPOSED OF IN A MANNER NOT CONTRARY TO LOCAL OR STATE ORDINANCES.
 17. CONTRACTOR TO NOTIFY THE UNDERSIGNED, PROFESSIONAL IF FIELD CONDITIONS VARY FROM THAT WHICH IS SHOWN HEREON.
 18. THIS PLAN SET HAS BEEN PREPARED FOR MUNICIPAL AND AGENCY APPROVALS. THIS PLAN NOT TO BE UTILIZED FOR CONSTRUCTION UNTIL MARKED "FOR CONSTRUCTION".
 19. SURVEY INFORMATION TAKEN FROM "TOPOGRAPHICAL SURVEY FOR PROPERTY KNOWN AS LOT 2 IN BLOCK 1402, 2345 BANGS AVENUE, TOWNSHIP OF NEPTUNE, MONMOUTH COUNTY, NEW JERSEY" PREPARED BY JAMES B. GOODARD, PLS 37588 ON FEBRUARY 11, 2019.
 20. ALL RETAINING WALLS WITH HEIGHT OF MORE THAN 30" SHALL BE INSTALLED WITH FENCE OR GUARD ABOVE IN ACCORDANCE WITH THE NJ UNIFORM CONSTRUCTION CODE.

LEGEND	
EXISTING	PROPOSED
CONTOUR	CONTOUR
LOT LINE	LOT LINE
STRUCTURE	STRUCTURE
CONC. SIDEWALK	CONC. SIDEWALK
SPOT GRADE	SPOT GRADE
BUILDING SETBACK LINE	BUILDING SETBACK LINE
DEPRESSED CURBING	DEPRESSED CURBING
WATER SUPPLY	WATER SUPPLY
ELECTRIC	ELECTRIC
CLEANOUT	CLEANOUT
WATER VALVE	WATER VALVE
LIGHT	LIGHT
GAS SUPPLY	GAS SUPPLY
TELEPHONE SERVICE	TELEPHONE SERVICE
CABLE TV SERVICE	CABLE TV SERVICE
SANITARY SEWER PIPE	SANITARY SEWER PIPE
SAN/DRAINAGE MANHOLE	SAN/DRAINAGE MANHOLE
STORM SEWER PIPE	STORM SEWER PIPE



RETAINING WALL NOTE:
A LICENSED STRUCTURAL ENGINEER AT THE COST OF THE APPLICANT SHALL INSPECT THE CONSTRUCTION OF THE PROPOSED STRUCTURAL RETAINING WALL. A SIGNED AND SEALED CERTIFICATION OF PROPER CONSTRUCTION SHALL BE PROVIDED TO THE CONSTRUCTION OFFICIAL.

10/20/21	REVISED PER ZONING OFFICER REVIEW	DS
PRELIMINARY / FINAL MAJOR SITE PLAN		
ST. GEORGE CEMETERY LOT 2 IN BLOCK 1402, TAX MAP 41.02 TOWNSHIP OF NEPTUNE MONMOUTH COUNTY - NEW JERSEY		
 Kennedy Consulting Engineers, LLC 211 Maple Avenue Red Bank, New Jersey 07701 732.212.9393 TEL • 732.212.9399 FAX		SITE LAYOUT & GRADING PLAN 2 OF 7
FILENAME: SP-1		DRAWN BY: DS
DATE: 9/14/21		
JAMES A. KENNEDY, P.E. NEW JERSEY PROFESSIONAL ENGINEER NO. 41275		

Planting Schedule:

Symbol	Qty.	Latin Name	Common Name	Cal.	Height	Root	Spacing	Remarks
Evergreen Trees								
IDL	10	Ilex x aquipernyi 'Dragon Lady'	Dragon Lady Holly		5'-6'	B&B	8' O.C.	Full specimens, branched to the ground
TO	20	Thuja plicata 'Green Giant'	Green Giant Arborvitae		5'-6'	B&B	8' O.C.	Full specimens, branched to the ground
Ornamental Trees								
CR	6	Cornus 'Rutcan'	Rutcan Flowering Dogwood		7'-8'	B&B	-	Full specimens, limbed up to 6' ht
PSC	18	Prunus sargentii columnaris	Columnar Sargent Cherry	2'-2.5'	8'-10'	B&B	-	Full specimens, limbed up to 6' ht
Shrubs								
P	34	Pieris 'Dorothy Wyckoff'	Dorothy Wyckoff Japanese Andromeda		36"	B&B	4' O.C.	Full specimens, branched to the ground
VR	8	Viburnum x rhytidophylloides 'Alleghany'	Alleghany Viburnum		3'-4'	B&B	10' O.C.	Full specimens, branched to the ground To be planted 6' from back of proposed wall.

AGUDATH ACHIM CONGREGATION CEMETERY

BLOCK 1402
LOT 1

ST GEORGE GREEK ORTHODOX CHURCH CEMETERY

BLOCK 1402
LOT 2

BLOCK 1504
LOT 1

BLOCK 1402
LOT 5

BLOCK 1402
LOT 3

"THE SUMMIT" AT NEPTUNE CONDOMINIUM

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1. GENERAL NOTES:

- A. THIS PLAN TO BE USED ONLY FOR THE PURPOSES OF LANDSCAPING AND LIGHTING.
- B. EXAMINE ALL ENGINEERING DRAWINGS AND FIELD CONDITIONS FOR CONDITIONS FOR SPECIFIC LOCATIONS OF UTILITIES, STRUCTURES, ETC. NOTIFY THE UNDERSIGNED PROFESSIONAL IMMEDIATELY IN WRITING IN REFERENCE TO DISCREPANCIES OR LOCATION CONFLICTS.
- C. IN THE EVENT THAT PLANT QUANTITY DISCREPANCIES OR MATERIAL OMISSIONS OCCUR IN THE PLANTING SCHEDULE, THE PLAN SHALL SUPERSEDE.
- D. ALL PLANTING MATERIALS AND METHODS SHALL MEET OR EXCEED THE REQUIREMENTS OF THE MUNICIPAL ORDINANCES AND THE AMERICAN STANDARD FOR NURSERY STOCK, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERMEN. IN THE EVENT OF CONFLICT BETWEEN A.N.J. AND MUNICIPAL STANDARDS, THE MUNICIPAL REQUIREMENTS SHALL SUPERSEDE.
- E. ALL LANDSCAPING SHALL BE PLANTED SO AS TO NOT INTERFERE WITH UTILITY LINES, SIGHT TRIANGLES, UNDERGROUND UTILITIES OR PUBLIC WALKWAYS OR OTHER EXISTING OR PROPOSED STRUCTURES. ALL PLANT MATERIAL PROPOSED WITHIN THE REQUIRED SIGHT DISTANCES OR SIGHT TRIANGLES ARE SELECTED SO AS TO NOT EXCEED A MATURE HEIGHT GREATER THAN 30' ABOVE THE ELEVATION OF THE ADJACENT ROADWAY. STREET TREES AND SHADE TREES PLANTED NEAR PEDESTRIAN OR VEHICULAR ACCESSES, OR WITHIN REQUIRED SIGHT DISTANCES OR SIGHT TRIANGLE EASMENTS SHALL NOT BE BRANCHED ANY LOWER THAN 8'-0" ABOVE GRADE, AND MUST BE APPROPRIATELY PRUNED. NO WOODY PLANTS, EXCEPT GROUNDCOVERS, ARE TO HAVE THEIR CENTERS CLOSER THAN 36" TO THE BACK OF THE CURB. F. ALL LAWN AREAS ARE TO RECEIVE 500 PER SOD INSTALLATION NOTES.

2. PLANT MATERIAL:

- A. NO PLANT SUBSTITUTION SHALL BE ALLOWED WITH REGARD TO SIZE, SPECIES, NAMED VARIETY OR CULTIVAR WITHOUT PRIOR PERMISSION FROM THE SHADE TREE COMMISSION AND THE BOARD ENGINEER.
 - B. ALL PLANTS SHALL BE DUG, PACKED, TRANSPORTED AND HANDLED WITH THE UTMOST CARE TO ENSURE ADEQUATE PROTECTION FROM INJURY DESICCATION.
 - C. ALL PLANTS SHALL BE FREE FROM DISEASE AND INFESTATION, AND ALL LEGALLY REQUIRED AGRICULTURAL CERTIFICATIONS.
 - D. ALL PLANTS SHALL BE PRUNED TO ENHANCE GROWTH PRIOR TO, OR UPON INSTALLATION, WHILE RETAINING NATURAL GROWTH HABIT OF THE CENTRAL LEADER SHALL NOT BE CUT. PLANTS PLANTED BY THE ENGINEER IN THIS CONDITION SHALL NOT BE ACCEPTED. DAMAGED, BROKEN OR CONFLICTING BRANCHES SHALL BE PRUNED CLEANLY, FLUSH WITH THE MAIN TRUNK OR BRANCH.
 - E. ALL PLANTS SHALL BE NURSERY-GROWN AND TAGGED WITH A DURABLE LABEL INDICATING THE GENUS, SPECIES AND SPECIFIED VARIETY OR CULTIVAR.
3. PLANTING:
- A. SOIL MUST BE FROST-FREE, FRIABLE AND NOT MUDDY AT THE TIME OF PLANTING.
 - B. BACKFILL MATERIAL FOR PLANTING PITS SHALL BE COMPOSED OF 70% TOPSOIL, 20% FULLY COMPOSTED COW OR HORSE MANURE AND 10% PEAT MOSS. TOPSOIL SHALL BE SELECT MATERIAL WITH IN EXCESS OF 300% ORGANIC MATERIAL, SECTION 909.10, AND MAY BE FROM ON-SITE OR SELECT IMPORTED SOURCES. SOIL SHALL CONTAIN NO ACIDIC MATERIAL, NOR ANY IMPORTED SOURCES.
 - C. PLANTS SHALL BE SET TO ULTIMATE FINISHED GRADE SO THAT THEY WILL BE LEFT IN THE RELATIONSHIP TO THE SURROUNDING GROUND AS THEY HAD, PRIOR TO BEING DUG. IF EVIDENCE OF SATURATED SOILS IS ENCOUNTERED DURING EXCAVATION OF THE PLANTING PITS, PRIOR TO PLANTING, THE ENGINEER SHALL BE NOTIFIED. PLANTS SHALL BE SET SO THAT THEIR ROOT CROWNS ARE APPROXIMATELY THREE INCHES ABOVE THE FINAL GRADE, WITH TOPSOIL AND MULCH GENTLY MOUNDING TO AVOID EXCESSIVE DRYING AT THE SURFACE. UNDER NO CIRCUMSTANCES SHALL PLANTINGS AT RELATIVELY DRY LOCATIONS BE PERFORMED IN A MOUNDING MANNER.
 - D. THE CORD BINDING THE BALL OF ALL BALLED AND BURLAPPED (B&B) PLANTS SHALL BE CUT AND REMOVED, AND BURLAP ON THE UPPER 1/3 OF THE ROOT BALL SHALL BE REMOVED. PLANTS WITH SYNTHETIC NON-DEGRADABLE ROOT BALL WRAPS SHALL NOT BE ACCEPTABLE.
 - E. ALL PROPOSED TREES SHALL BE SET IN BEDS AS SHOWN OR MULCHED TO THE LIMIT OF THEIR PLANTING PITS. ALL PROPOSED SHRUBS SHALL BE SET IN CONTINUOUS, MASSSED PLANTING BEDS, RATHER THAN ISOLATED INDIVIDUALS. ALL TREE AND SHRUB BEDS SHALL RECEIVE A 4" THICK APPLICATION OF HARDWOOD BARK MULCH.
 - F. A ROOT BARRIER PRODUCT SHOULD BE ADDED TO THE PLANTING PITS OF ALL TREES PROPOSED FOR INSTALLATION WITHIN 10 FEET OF NEW OR EXISTING CONCRETE CURB, SIDEWALK, BUILDING FOUNDATIONS OR BLACKTOP PAVEMENT AREAS.

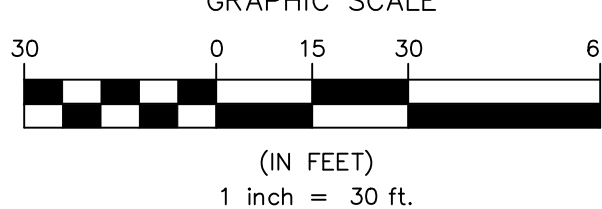
4. MAINTENANCE

- A. ALL PLANTINGS SHALL BE WATERED AS NECESSARY FOR SOUND HORTICULTURAL PRACTICE DURING THE FIRST GROWING SEASON, TO ENSURE THEIR PROPER ESTABLISHMENT.
- B. IN GENERAL SHRUBS ARE TO BE PLANTED AT INTERVALS WHICH WILL ALLOW THEM TO FULLY DEVELOP INTO CONTINUOUS MASSES OF THE INDIVIDUAL SPECIES. THEREFORE, NO PRUNING TO SHAPE OR SHEARING IS REQUIRED OR DESIRABLE, WHERE DEAD OR CONFLICTING BRANCHING DEVELOPS, IT SHOULD BE PRUNED OUT.
- C. ALL GUY WIRES, PLANT STAKES AND THE LIKE SHALL BE REMOVED ONE YEAR AFTER INSTALLATION.
- D. THE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF TWO YEARS FROM THE DATE OF THE PERFORMANCE BOND RELEASE.

5. SOD BED PREPARATION

1. ROUGH GRADING: REMOVE FROM THE SURFACE ALL STONES 1" OR LARGER, AS WELL AS: WIRE, WOOD, ROOTS, CONCRETE, CLODS, LUMPS AND ANY OTHER UNSUITABLE MATERIAL.
2. FINE GRADING: A MINIMUM OF 3" OF SCREENED TOPSOIL SHALL BE SPREAD BY RAKE OR MECHANICALLY RAKED OVER ALL AREAS TO RECEIVE EITHER SEED OR SOD. THE SOIL SHOULD BE SMOOTH OF RUTS, FREE OF UNSUITABLE OBJECTS AND GENERALLY GRADED TO PROVIDE FOR POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS.
3. BED INSPECTION: PRIOR TO SEEDING OR SODDING, THE BED SHALL BE INSPECTED FOR NEWLY CREATED RUTS OR EXTENSIVE TRAFFIC COMPACTION, AND THE AFFECTED AREAS REPAIRED ACCORDINGLY.
4. LIMING/FERTILIZING: APPLY PELLETTIZED LIMESTONE AND FERTILIZER TO SOIL. TEST RECOMMENDATIONS OR AS FOLLOWS:
 - A. LIME TO BE APPLIED AT THE RATE OF 600 LBS. PER ACRE, OR AS PER MANUFACTURER'S RECOMMENDATION.
 - B. STARTER FERTILIZER, SPECIFIED AS 10-20-10, IS TO BE APPLIED AT 500 LBS. PER ACRE.

GRAPHIC SCALE



LEGEND	
EXISTING	PROPOSED

10/20/21

REVISED PER ZONING OFFICER REVIEW

DS

PRELIMINARY / FINAL MAJOR SITE PLAN

ST. GEORGE CEMETERY

LOT 2 IN BLOCK 1402, TAX MAP 41.02

TOWNSHIP OF NEPTUNE

MONMOUTH COUNTY - NEW JERSEY

Kennedy Consulting Engineers, LLC

211 Maple Avenue

Red Bank, New Jersey 07701

732.212.9393 TEL • 732.212.9399 FAX

LANDSCAPE & TREE REMOVAL PLAN

3 OF 7

FILENAME: LL-1

DRAWN BY: DS

DATE: 9/14/21

JAMES A. KENNEDY, P.E.

NEW JERSEY PROFESSIONAL ENGINEER NO. 41275

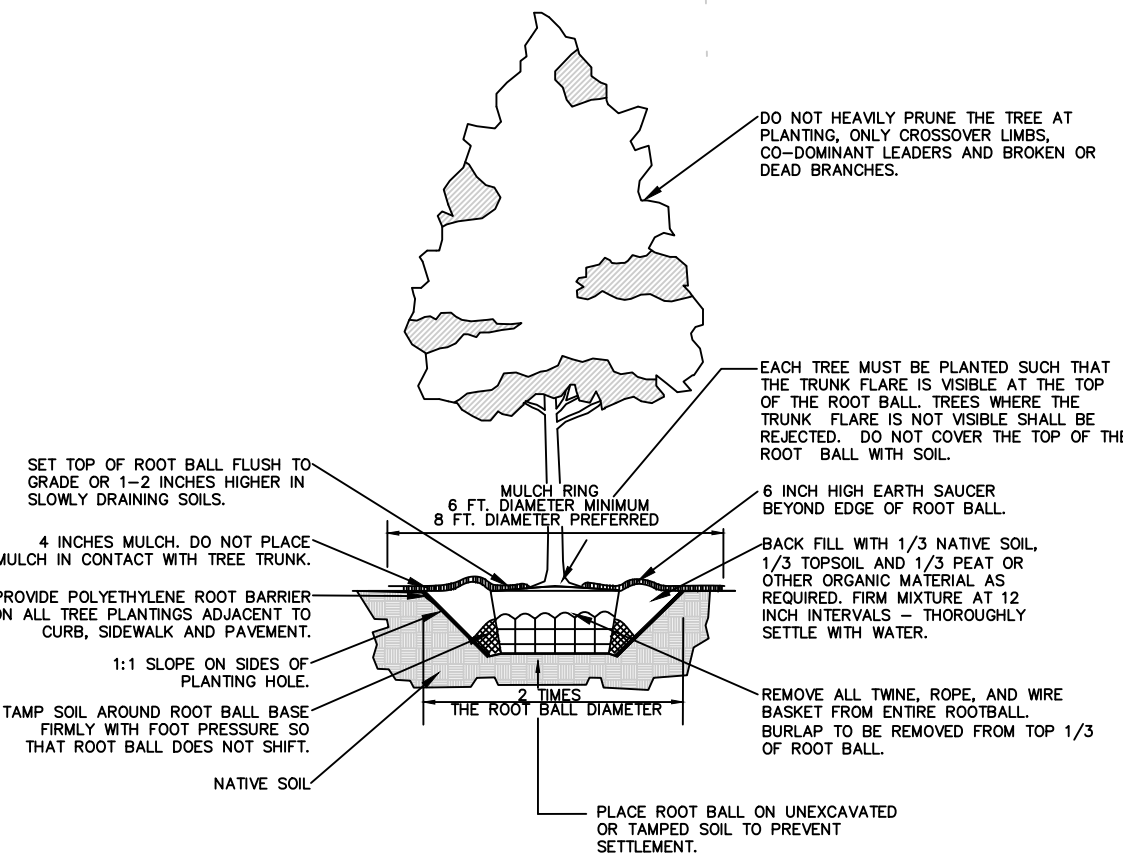
NOTE:
A LANDSCAPE ARCHITECT SHALL PROVIDE CERTIFICATION TO THE CONSTRUCTION OFFICIAL THAT LANDSCAPING INSTALLED IN THE VICINITY OF THE STRUCTURAL RETAINING WALL WILL NOT IMPAIR THE INTEGRITY OF THE WALL.

PROPOSED PLANTINGS SHALL BE PLACED 6' BEHIND WALL TO MINIMIZE FUTURE ROOT INTRUSION.

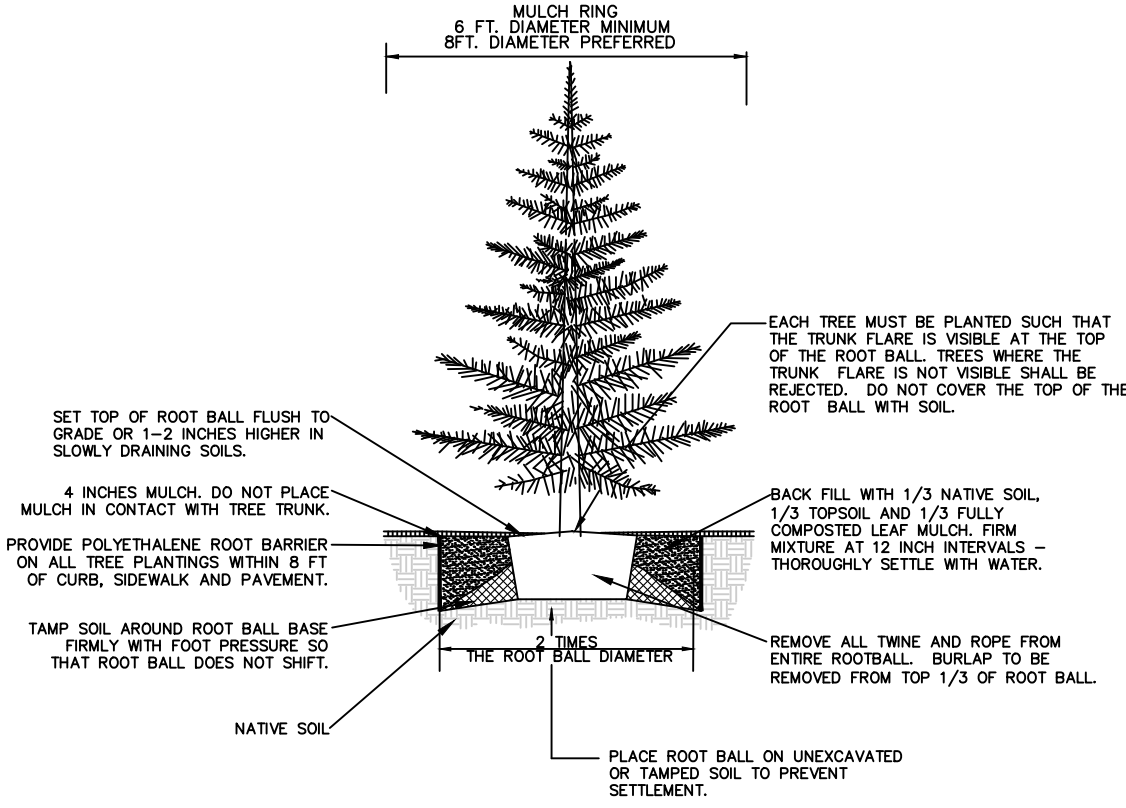
PROPOSED ROOT BARRIER FABRIC TO BE PLACED IN FRONT AND BEHIND THE PROPOSED RETAINING WALL.

SAVE EXISTING TREES (TYP.)

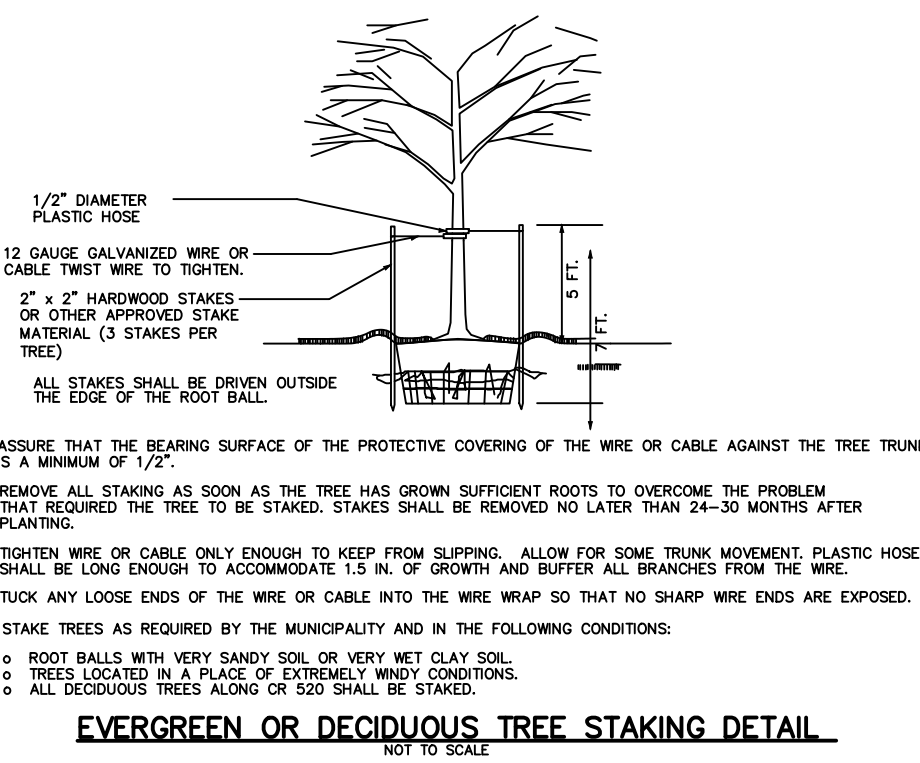
SAVE EXISTING TREES (TYP.)



TYPICAL DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE

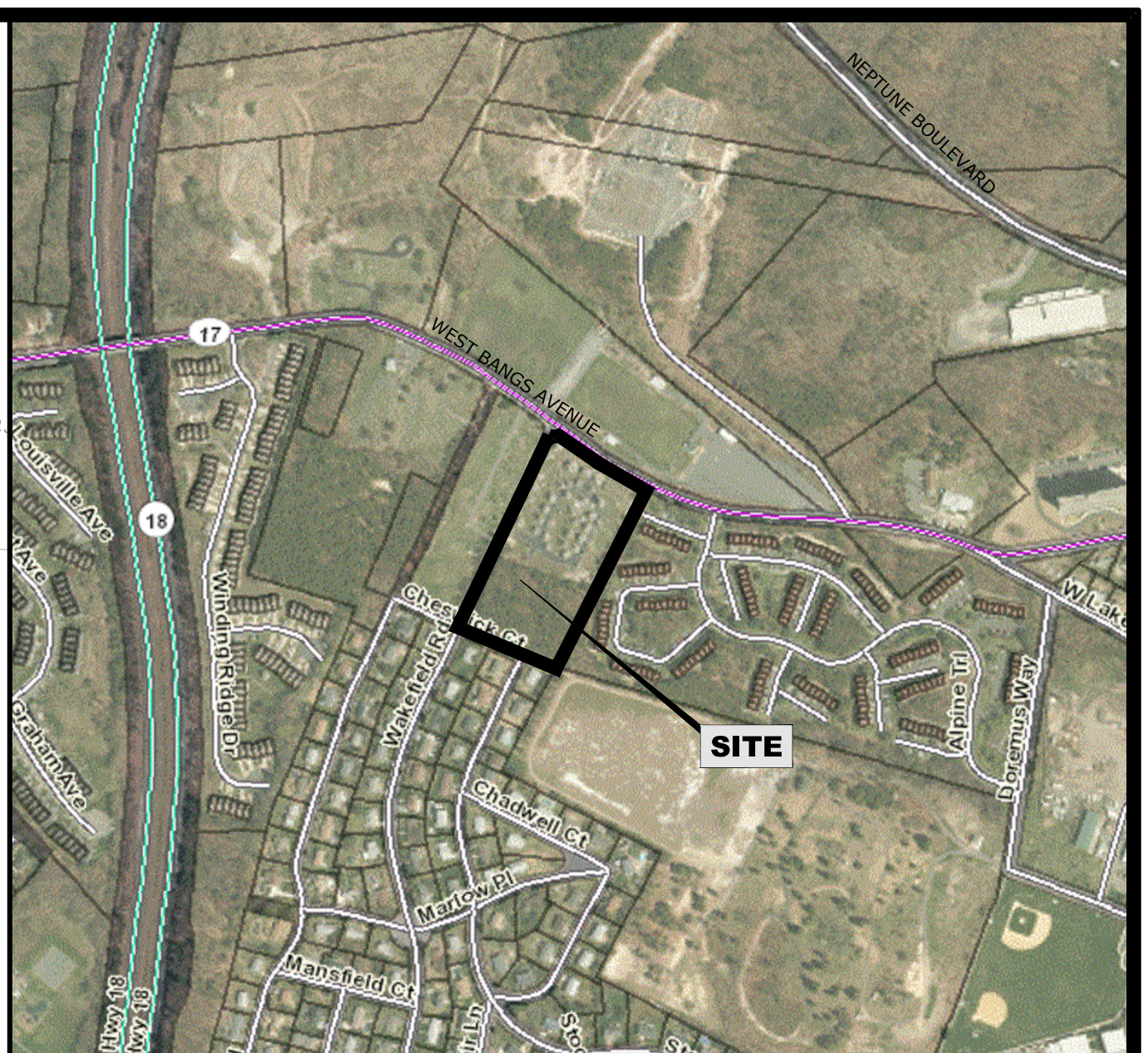
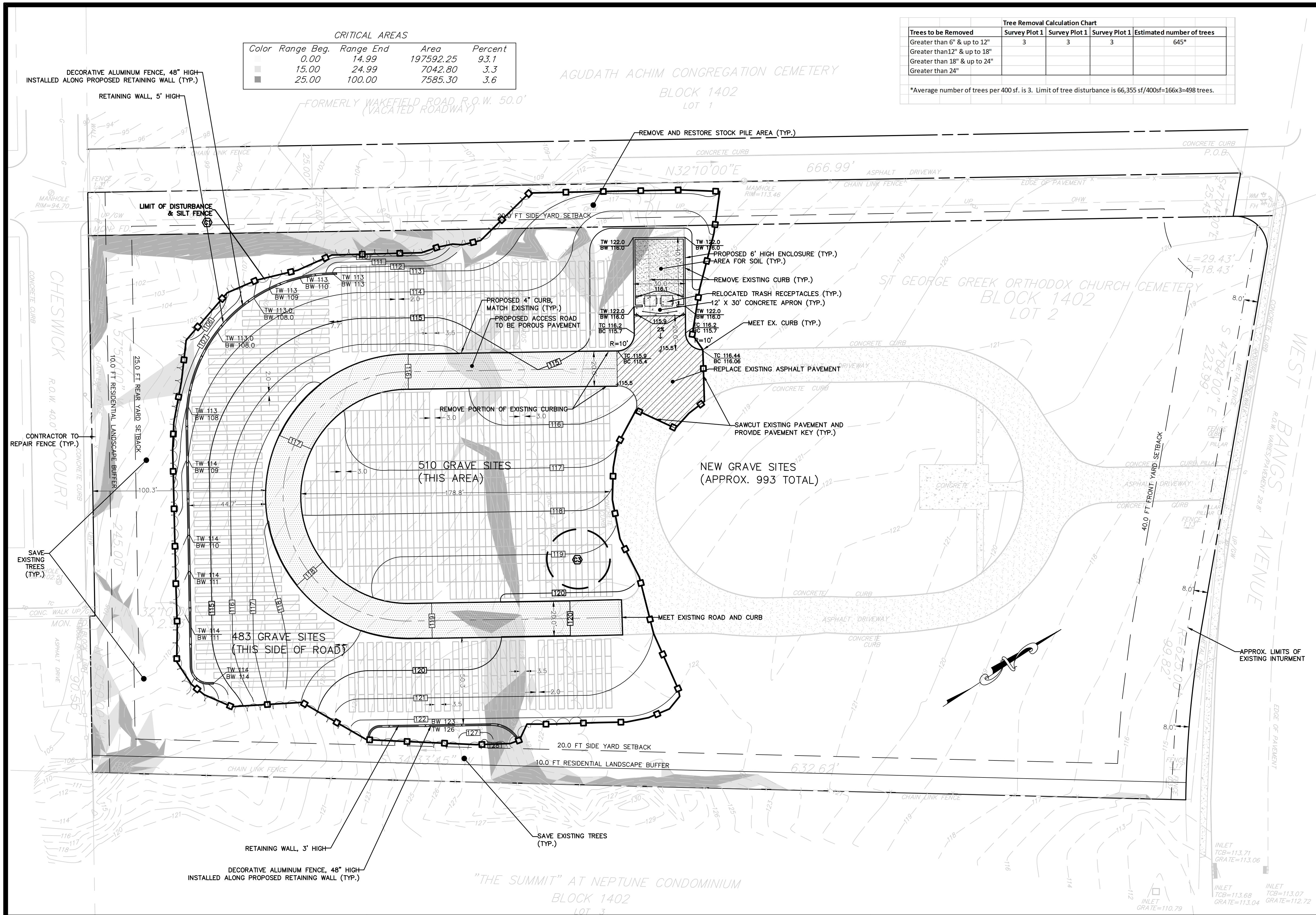


TYPICAL EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE



EVERGREEN OR DECIDUOUS TREE STAKING DETAIL
NOT TO SCALE

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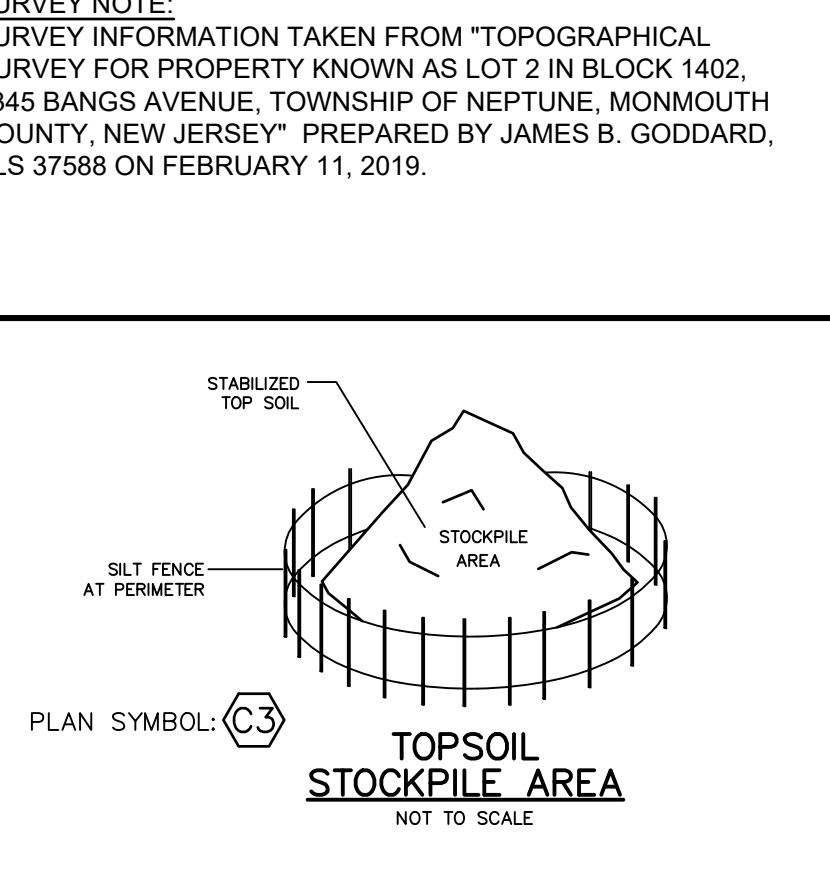
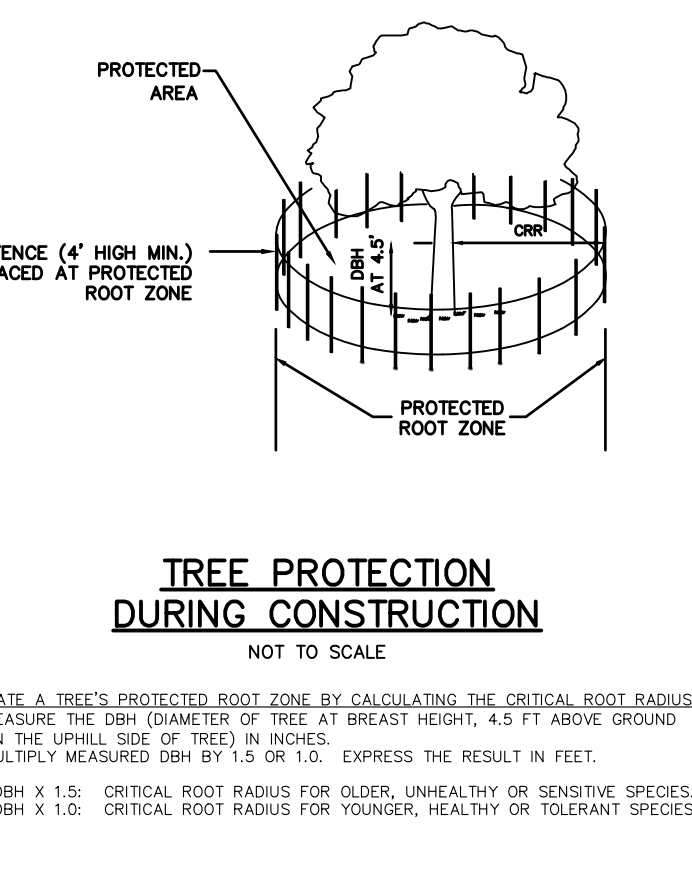
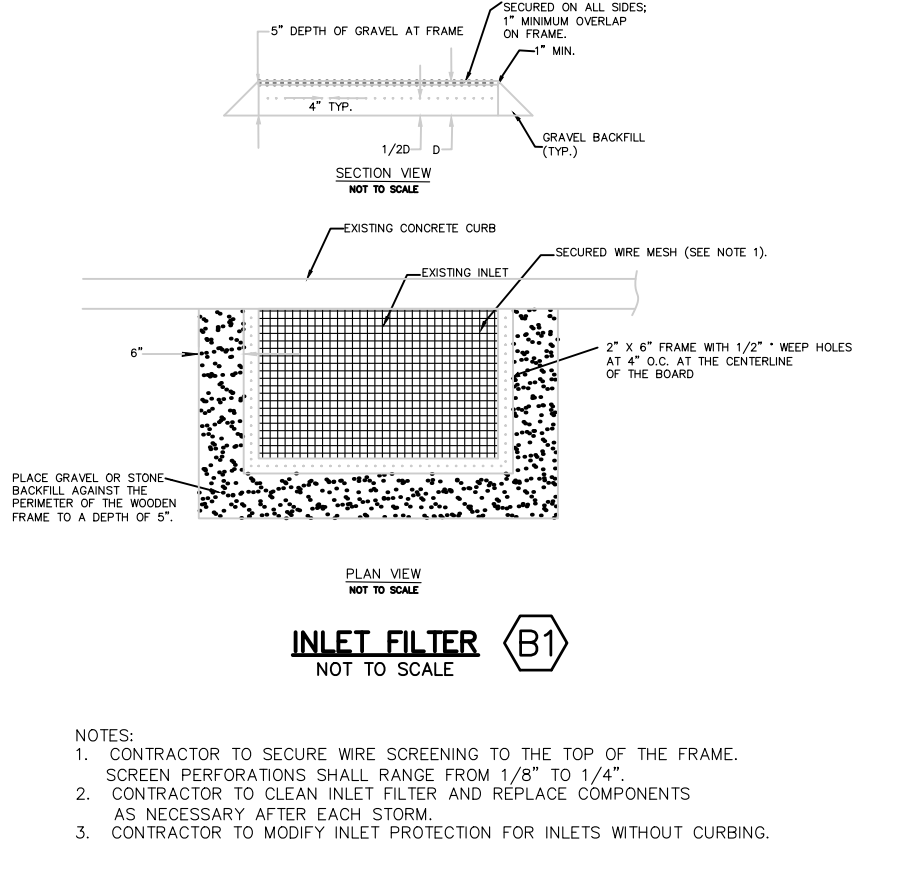
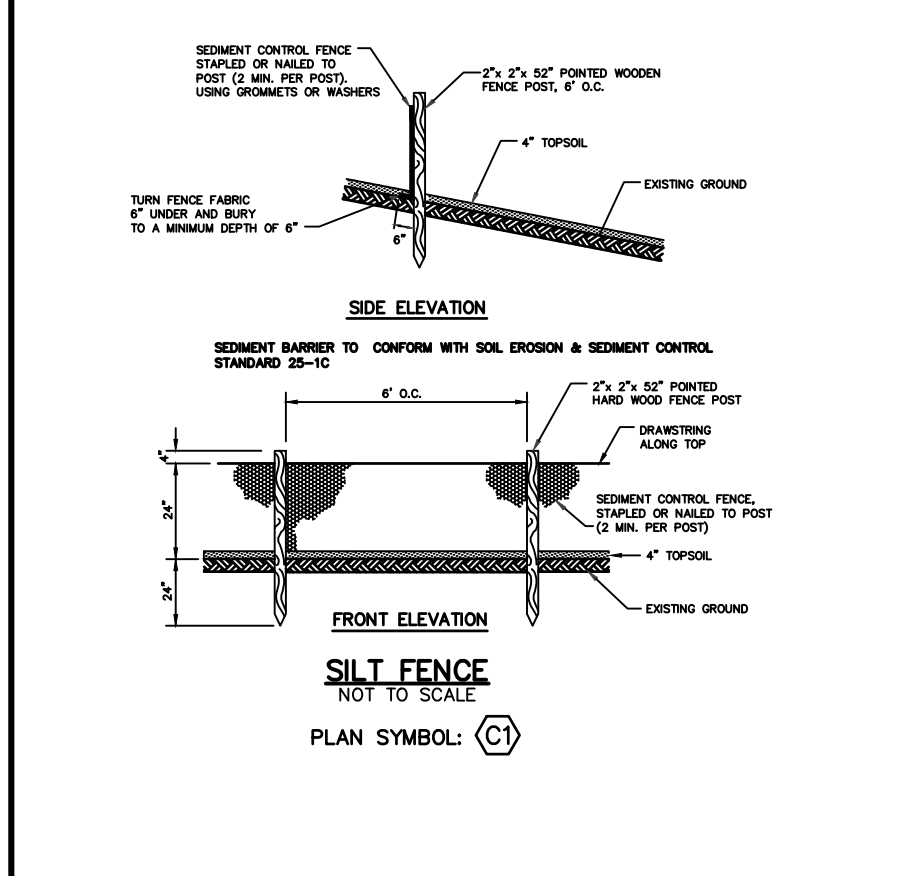
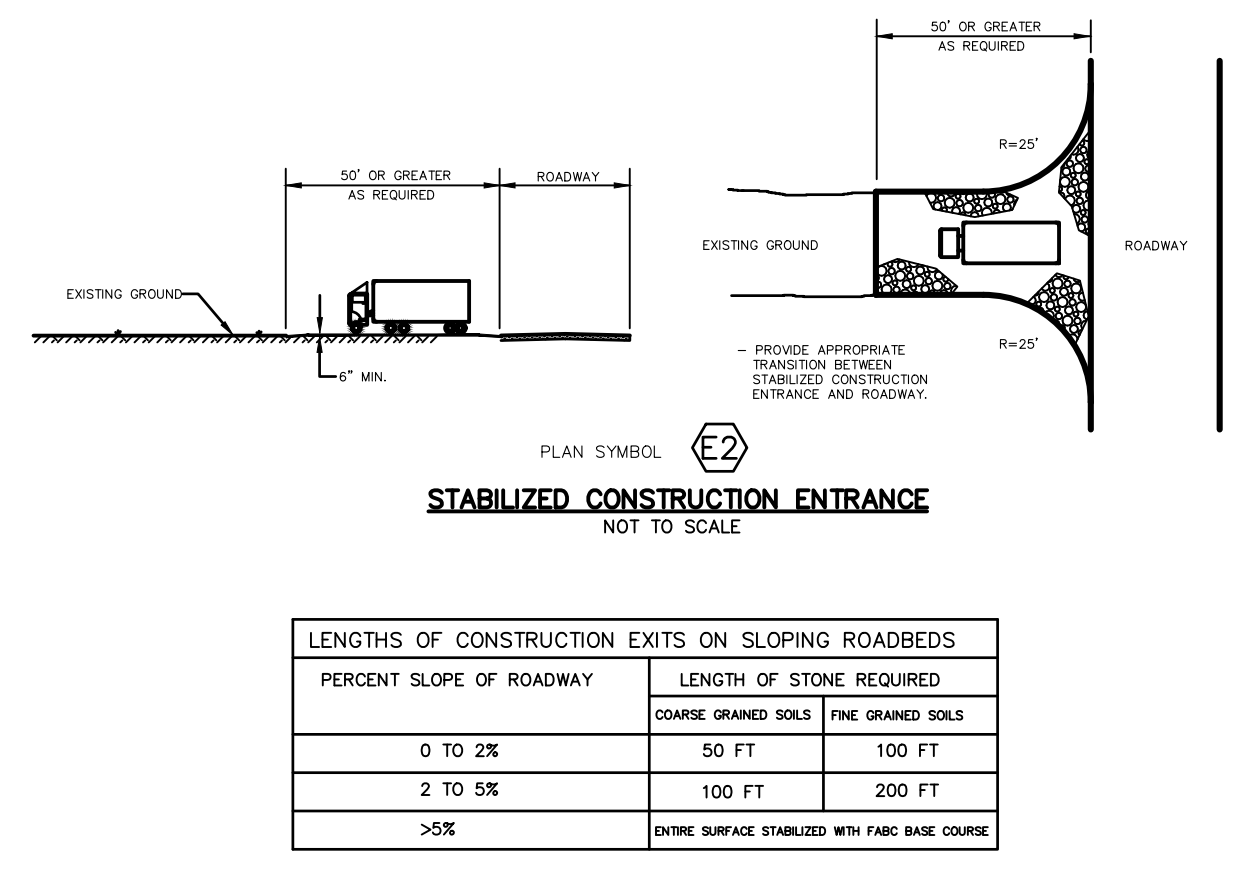
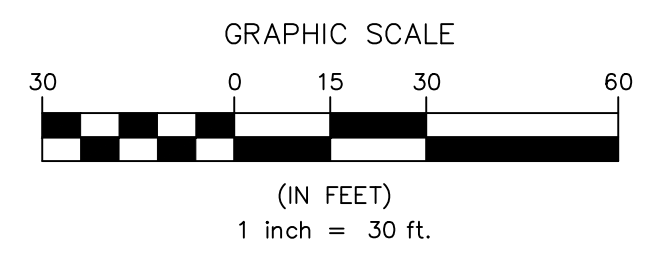
LOCATION MAP
APPROX. SCALE: 1" = 500'

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. The Freehold Soil Conservation District shall be notified forty-eight (48) hours in advance of any soil disturbing activity.
2. 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.
3. 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.
4. 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.
5. 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 State Standard for Stabilization with Mulch Only.
6. Immediately following initial disturbance or rough grading, all critical areas subject to erosion (i.e. steep slopes and roadway embankments) will receive temporary seeding in combination with straw mulch or a suitable equivalent, and a mulch anchor will be installed in accordance with State Standards.
7. 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.
8. 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 entrance consisting of one inch to two inch (1" - 2") stone for a minimum length of ten feet (10') equal to the lot entrance width. All other access points shall be blocked off.
9. All soil washed, dropped, spilled, or tracked outside the limit of disturbance or onto public right-of-ways will be removed immediately.
10. Permanent vegetation is to be seeded or sodded on all exposed areas within ten (10) days after final grading.
11. At the time that site preparation for permanent vegetative stabilization is going to be accomplished, any soil that will not provide 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.
12. 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/acre, (or 450 lbs/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.
13. Conduit Outlet Protection must be installed at all required outfalls prior to the drainage system becoming operational.
14. 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.
15. 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.
16. 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.
17. All soil stockpiles are to be temporarily stabilized in accordance with Soil Erosion and Sediment Control note #6.
18. 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.

Freehold Soil Conservation District
4000 Kozloski Road, Freehold, NJ 07728-5033, (732) 683-8500, fax (732) 683-9140, Email: info@freeholdscd.org
Revised March 2014

LIMIT OF DISTURBANCE
78,668 SF / 1.806 AC



10/20/21

REVISED PER ZONING OFFICER REVIEW

DS

PRELIMINARY / FINAL MAJOR SITE PLAN

ST. GEORGE CEMETERY
LOT 2 IN BLOCK 1402, TAX MAP 41.02
TOWNSHIP OF NEPTUNE
MONMOUTH COUNTY - NEW JERSEY

Kennedy Consulting Engineers, LLC
211 Maple Avenue
Red Bank, New Jersey 07701
732.212.9393 TEL • 732.212.9399 FAX

SOIL EROSION & SEDIMENT CONTROL PLAN

4 OF 7

FILENAME: SE-1

DRAWN BY: DS

DATE: 9/14/21

JAMES A. KENNEDY, P.E.
NEW JERSEY PROFESSIONAL ENGINEER NO. 41275

SURVEY NOTE:
SURVEY INFORMATION TAKEN FROM "TOPOGRAPHICAL
SURVEY FOR PROPERTY KNOWN AS LOT 2 IN BLOCK 1402,
2345 BANGS AVENUE, TOWNSHIP OF NEPTUNE, MONMOUTH
COUNTY, NEW JERSEY" PREPARED BY JAMES B.
GODDARD, PLS 37588 ON FEBRUARY 11, 2019.

Soil Restoration Notes Required on Plans
Soil De-compaction and Testing Requirements

Soil Compaction Testing Requirements

- Subgrade soils **prior to the application of topsoil** (see permanent seeding and stabilization notes for topsoil requirements) shall be free of excessive compaction to a depth of 6.0 inches to enhance the establishment of permanent vegetative cover.
- Areas of the site which are subject to compaction testing and/or mitigation are **graphically denoted** on the certified soil erosion control plan. See example site plan at: <http://www.nj.gov/agriculture/divisions/anr/hrc/hiereosion.html>
- Compaction testing locations** are denoted on the plan. A copy of the plan or portion of the plan shall be used to mark locations of tests, and attached to the **Soil Compaction Mitigation Verification Form**, available from the local soil conservation district or <http://www.nj.gov/agriculture/divisions/anr/hrc/hiereosion.html>. This form must be filled out and submitted prior to receiving a certificate of compliance from the district.
- In the event that **testing indicates compaction** in excess of the maximum thresholds indicated for the simplified testing methods (see details below), the contractor/owner shall have the **option** to perform either (1) compaction mitigation over the entire mitigation area denoted on the plan (excluding exempt areas), or (2) perform additional, more detailed testing to establish the limits of excessive compaction whereupon only the excessively compacted areas would require compaction mitigation. Additional detailed testing shall be performed by a trained, licensed professional.

Compaction Testing Methods

- Probing Wire Test (see detail)
- Hand-held Penetrometer Test (see detail)
- Tube Bulk Density Test (licensed professional engineer required)
- Nuclear Density Test (licensed professional engineer required)

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

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

Procedures for Soil Compaction Mitigation

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

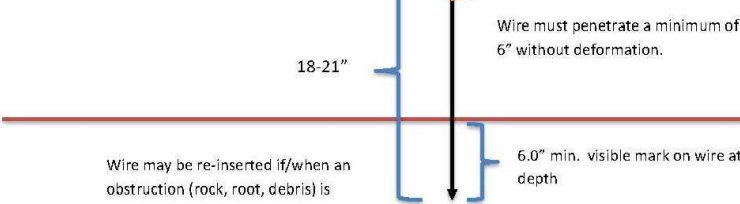
Restoration of compacted soils shall be through deep scarification/tillage (6" minimum depth) where there is no danger to underground utilities (cables, irrigation systems, etc.). In the alternative, another method as specified by a New Jersey Licensed Professional Engineer may be substituted subject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

Effective Date 12/7/2017

Simplified Testing Methods

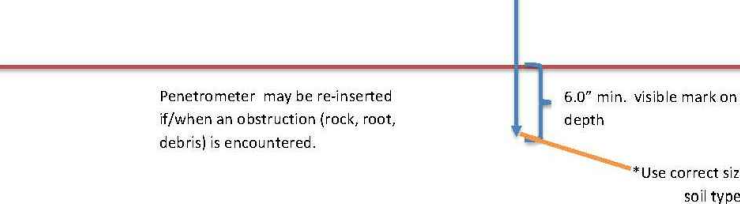
Probing Wire Test- 15.5 ga steel wire (survey flag)

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

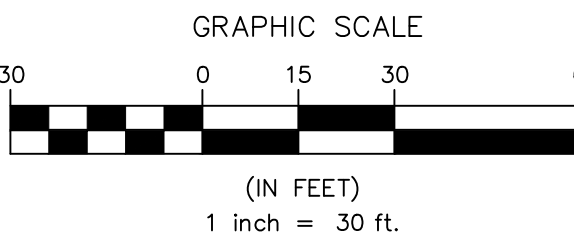


Handheld Soil Penetrometer Test

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



LIMIT OF DISTURBANCE
78,668 SF / 1.806 AC



LEGEND

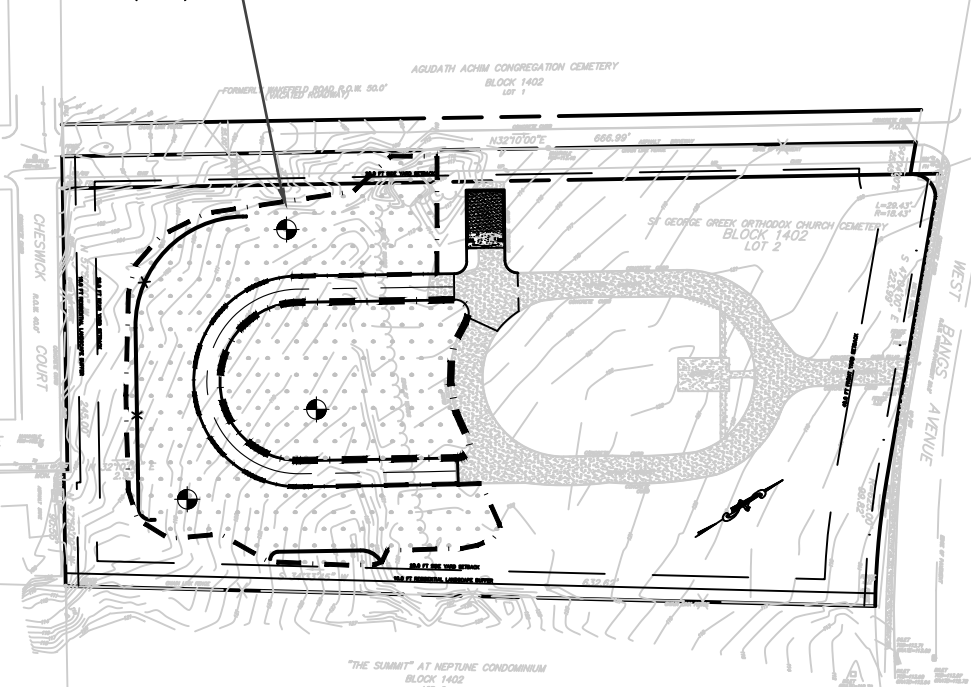
SOIL COMPACTION
TESTING AREAS



RECOMMENDED SOIL
COMPACTION TEST
LOCATION
(APPROX 1 PER 0.5 ACRE)



COMPACTION
TEST LOCATION
(TYP)



TYPICAL SOIL COMPACTION TESTING LOCATIONS
NOT TO SCALE

SOILS, SEED MIXTURES, AND DATES FOR PERMANENT SEEDINGS FOR SOIL STABILIZATION

RECOMMENDED SEED MIXTURE

SOL AND SITES	SEED MIXTURE 1/	MINIMUM SEEDING RATES 2/ (POUNDS)	OPTIMUM SEEDING DATES BASED ON PLANT HARDNESS ZONE 3
A. EXCESSIVELY DRAINED	REFER TO SEED MIXES TABLE 4-2 & TABLE 4-3	PER ACRE PER 1,000 SQ. FT.	ZONE 5b ZONE 6a ZONE 6b ZONE 7a ZONE 7b
1. RESIDENTIAL & COMMERCIAL LOTS	TALL FESCUE (TURF) PERENNIAL RYEGRASS WHITE CLOVER	265 20 5 6 0.1	3/15-5/31 3/1-4/30 2/1-4/30
2. POND AND CHANNEL BANKS, DIKES, BERMS & DAMS	TALL FESCUE (TURF) PERENNIAL RYEGRASS WHITE CLOVER	265 20 5 6 0.1	3/15-5/31 3/1-4/30 2/1-4/30
3. DRAINAGE DITCH SWALE OR BASIN	SWITCHGRASS REDTOP	20 1 .45 0.1	3/15-5/31 3/1-4/30 2/1-4/30
B. WELL TO MODERATELY WELL DRAINED	REFER TO SEED MIXES TABLE 4-2 & TABLE 4-3	PER ACRE PER 1,000 SQ. FT.	ZONE 5b ZONE 6a ZONE 6b ZONE 7a ZONE 7b
1. RESIDENTIAL & COMMERCIAL LOTS	TALL FESCUE (TURF) PERENNIAL RYEGRASS WHITE CLOVER	265 20 5 6 0.1	3/15-5/31 3/1-4/30 2/1-4/30
2. POND AND CHANNEL BANKS, DIKES, BERMS & DAMS	DEERTONGUE REDTOP WILD RYE (ELYMUS) SWITCHGRASS	20 2 .45 0.1 15 .35 25 .60	3/15-5/31 3/1-4/30 2/1-4/30
3. DRAINAGE DITCH SWALE OR BASIN	DEERTONGUE REDTOP WILD RYE (ELYMUS) SWITCHGRASS	20 2 .45 0.1 15 .35 25 .60	3/15-5/31 3/1-4/30 2/1-4/30
C. SOMEWHAT POORLY TO POORLY DRAINED	REFER TO SEED MIXES TABLE 4-2 & TABLE 4-3	PER ACRE PER 1,000 SQ. FT.	ZONE 5b ZONE 6a ZONE 6b ZONE 7a ZONE 7b
1. RESIDENTIAL & COMMERCIAL LOTS	ROUGH BLUEGRASS STRONG CREEPING RED FESCUE	90 130 2.0 3	8/1-10/31 8/15-10/15 8/15-10/30
2. POND AND CHANNEL BANKS, DIKES, BERMS & DAMS	ROUGH BLUEGRASS STRONG CREEPING RED FESCUE	90 130 2.0 3	8/1-10/31 8/15-10/15 8/15-10/30
3. DRAINAGE DITCH SWALE OR BASIN	ROUGH BLUEGRASS STRONG CREEPING RED FESCUE	90 130 2.0 3	8/1-10/31 8/15-10/15 8/15-10/30

NRCS, NJ – FOTG CONSERVATION PRACTICE STANDARD CRITICAL AREA PLANTING

PURPOSE OF THE PLANTING	MIX	RECOMMENDED CULTIVARS (DODDHYT FREE)	SEEDING RATE 1/ (POUNDS PER ACRE)	OPTIMUM SEEDING DATES BASED ON PLANT HARDNESS ZONE
WARM-SEASON/ COOL-SEASON GRASS MIXES			LBS. PER 1,000 SQ. FT.	ZONE 5b ZONE 6a ZONE 6b ZONE 7a ZONE 7b
BOTTOM OF DETENTION BASIN	HARD FESCUE REDTOP FLUKEA	COMMON OR BISHOP STREAMER LARKS	20 1 10 1.45 0.02 0.34	3/15-5/31 3/1-4/30 2/1-4/30 2/1-4/30 2/1-4/30

NOTE: RECOMMENDED CULTIVARS FOR NEW JERSEY. REFER TO RUTGERS COOPERATIVE SERVICES TURFGRASS FACT SHEETS.

NOTES:

- SEEDING MIXTURES AND/OR RATES NOT LISTED ABOVE MAY BE USED IF RECOMMENDED BY THE LOCAL SOIL CONSERVATION SERVICE. RECOMMENDATIONS OF THE COOPERATIVE EXTENSION SERVICE MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT. LEGUMES (FLATPEA, CROWNWETCH, TREFOIL, LESPEDEZA) SHOULD BE MIXED WITH PROPER INOCULANT PRIOR TO PLANTING.
- GRASS SEED MIXTURES CHECKED BY THE CHIEF OF THE BUREAU OF SEED CERTIFICATION, NEW JERSEY DEPARTMENT OF AGRICULTURE, TRENTON, NEW JERSEY, WILL ASSURE THE PURCHASER THAT THE MIXTURE OBTAINED IS THE MIXTURE ORDERED.
- PLANT HARDINESS ZONE (SEE MAP, P. 4-15)
ZONE 5 – PORTIONS OF SUSSEX AND WARREN COUNTIES
ZONE 6 – PORTIONS OF BERGEN, CAMDEN, ESSEX AND GLOUCESTER, ALL OF HUNTERDON, PORTIONS OF MERCER AND MIDDLESEX, ALL OF MORRIS AND PASSAIC, PORTIONS OF SOMERSET, SUSSEX, UNION AND WARREN COUNTIES
ZONE 7 – ATLANTIC, PORTION OF BERGEN, ALL OF BURLINGTON, CAPE MAY AND CUMBERLAND, PORTIONS OF ESSEX AND GLOUCESTER, ALL OF HUDSON, PORTION OF MIDDLESEX, ALL OF MONMOUTH, OCEAN AND SALEM AND PORTION OF UNION COUNTY.

STANDARD FOR TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION

DEFINITION

ESTABLISHMENT OF TEMPORARY VEGETATIVE COVER ON SOILS EXPOSED FOR PERIODS OF TWO TO 6 MONTHS WHICH ARE NOT BEING GRADED, NOT UNDER ACTIVE CONSTRUCTION, OR NOT SCHEDULED FOR PERMANENT SEEDING WITHIN 60 DAYS.

PURPOSE

TO TEMPORARILY STABILIZE THE SOIL AND REDUCE DAMAGE FROM WIND AND WATER EROSION UNTIL PERMANENT STABILIZATION IS ACOMPLISHED.

PROPOSED CONSTRUCTION SEQUENCE

- FIRST WEEK OF CONSTRUCTION APPLY PROPER MEASURES FOR THE CONTROL OF SOIL EROSION AND SEDIMENT CONTROL.
- TEMPORARY STABILIZATION OF AREAS INITIALLY DISTURBED SHALL BE ACCOMPLISHED BY USE OF TEMPORARY SEEDING AND/OR STRAW MULCHING OR EQUIVALENT MATERIAL AT A RATE OF TWO TONS PER ACRE, ACCORDING TO STATE STANDARDS, WILL TAKE APPROXIMATELY ONE WEEK.
- CONSTRUCTION OF PROPOSED GRADING, ACCESS ROAD IMPROVEMENTS AND RETAINING WALL WILL TAKE APPROXIMATELY 2-3 MONTHS.
- TEMPORARY STABILIZATION OF DISTURBED AREAS IN A ROUGH GRADED CONDITION MAINTAINED BY SEEDING AND/OR MULCHING UNTIL PROPER WEATHER CONDITIONS EXIST FOR ESTABLISHMENT OF PERMANENT VEGETATIVE COVER WILL TAKE APPROXIMATELY ONE WEEK.
- MAINTENANCE OF SOIL EROSION PROCEDURES.
- INSTALLATION OF TOPSOIL, FERTILIZER, SEED AND MULCH WILL TAKE APPROXIMATELY ONE WEEK.
- REMOVAL OF SOIL EROSION AND SEDIMENT CONTROL DEVICES AFTER ESTABLISHED VEGETATIVE GROWTH HAS OCCURRED.

TOTAL DURATION OF PROJECT EXPECTED TO BE 3-4 MONTHS.

WATER QUALITY ENHANCEMENT

PROVIDES TEMPORARY PROTECTION AGAINST THE IMPACTS OF WIND AND RAIN, SLOWS THE OVER LAND MOVEMENT OF STORMED WATER RUNOFF, INCREASES INFILTRATION AND RETAINS SOIL AND NUTRIENTS ON SITE, PROTECTING STREAMS OR OTHER STORMWATER CONVEYANCES.

WHERE APPLICABLE

ON EXPOSED SOILS THAT HAVE THE POTENTIAL FOR CAUSING OFF-SITE ENVIRONMENTAL DAMAGE.

METHODS AND MATERIALS

- SITE PREPARATION**
 - GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING, P. 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.).
- SEEDBED PREPARATION**
 - APPLY GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES. FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-20-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE. APPLY LIMESTONE AT THE RATE OF 2 TONS/ACRES UNLESS SOIL TESTING 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, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM SEEDED BED IS PREPARED.
 - INSPECT SEEDED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILLED AS ABOVE.
 - SOILS HIGH ON SULFIDES OR HAVING A pH OF 4 OR LESS REFER TO STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS PG. 1-1.

III. SEEDING

- SELECT SEED FROM RECOMMENDATIONS IN TABLE 7-2.

SPECIES	SEEDING RATES (POUNDS) 1/		OPTIMUM SEEDING DATE BASED ON PLANT HARDNESS ZONE 3/			OPTIMUM SEED DEPTH 2/ (INCHES)
	PER ACRE	PER 1,000 SQ. FEET	ZONE 5	ZONE 6	ZONE 7	
COOL SEASON GRASSES						
PERENNIAL RYEGRASS	100	1.0	3/15 TO 6/1 8/1 TO 9/15	3/1 TO 5/15 8/15 TO 10/1	2/15 TO 5/1 8/15 TO 10/15	0.5
SPRING OATS	86	2.0	3/15 TO 6/1 8/1 TO 9/15	3/1 TO 5/15 8/15 TO 10/1	2/15 TO 5/1 8/15 TO 10/15	1.0
WINTER BARLEY	96	2.2	8/1 TO 9/15	8/15 TO 10/1	8/15 TO 10/15	1.0
ANNUAL RYEGRASS	100	1.0	3/15 TO 6/1 8/1 TO 9/15	3/15 TO 6/1 8/1 TO 9/15	2/15 TO 5/1 8/15 TO 10/15	0.5
WINTER CEREAL RYE	112	2.8	8/1 TO 11/1	8/1 TO 10/15	8/1 TO 12/15	1.0
COOL SEASON GRASSES						
PEARL MILLET	20	0.5	6/1 TO 8/1	5/15 TO 8/15	5/1 TO 8/1	1.0
MILLET (GERMAN OR HUNGARIAN)	30	0.7	6/1 TO 8/1	5/15 TO 8/15	5/1 TO 8/1	1.0

- SEEDING RATE FOR WARM SEASON GRASS SHALL BE ADJUSTED TO REFLECT THE AMOUNT OF PURE LIVE SEED (PLS) AS DETERMINED BY A GERMINATION TEST RESULT. NO ADJUSTMENT IS REQUIRED FOR COOL SEASON GRASSES.
- MAY BE PLANTED THROUGHOUT SUMMER IF SOIL MOISTURE IS ADEQUATE OR SEEDED AREA CAN BE IRRIGATED.
- PLANT HARDINESS ZONE (SEE FIG. 7-1)
ZONE 5 – PORTIONS OF SUSSEX AND WARREN COUNTIES
ZONE 6 – PORTIONS OF BERGEN, CAMDEN, ESSEX AND GLOUCESTER, ALL OF HUNTERDON, PORTIONS OF MERCER AND MIDDLESEX, ALL OF MORRIS AND PASSAIC, PORTIONS OF SOMERSET, SUSSEX, UNION AND WARREN COUNTIES
ZONE 7 – ATLANTIC, PORTION OF BERGEN, ALL OF BURLINGTON, CAPE MAY AND CUMBERLAND, PORTIONS OF ESSEX AND GLOUCESTER, ALL OF HUDSON, PORTION OF MIDDLESEX, ALL OF MONMOUTH, OCEAN AND SALEM AND PORTION OF UNION COUNTY.
- TWICE THE DEPTH FOR SANDY SOILS
- CONVENTIONAL SEEDING. APPLY SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL, OR CULTIPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CULTIPACKED SEEDINGS, SEED SHALL BE INCORPORATED INTO THE SOIL TO A DEPTH OF 1/4 TO 1/2 INCH, BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COARSE TEXTURED SOIL.
- 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 SEEDED. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORT FIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING (ALSO SEE SECTION IV MULCHING). HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. POOR SEED TO SOIL CONTACT OCCURS REDUCING SEED GERMINATION AND GROWTH. HYDROSEEDING MAY BE USED FOR AREAS TOO STEEP FOR CONVENTIONAL EQUIPMENT TO TRAVERSE OR TOO OBSTRUCTED WITH ROCKS, STUMPS, ETC.
- AFTER SEEDING, FIRING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED--TO-SOIL CONTACT, RESTORE CAPILLARITY, 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.

IV. 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.

SEE MULCHING STANDARDS UNDER PERMANENT VEGETATIVE STABILIZATION.

STANDARD FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION

DEFINITION

ESTABLISHMENT OF PERMANENT VEGETATIVE COVER ON EXPOSED SOILS WHERE PERENNIAL VEGETATION IS NEEDED FOR LONG TERM PROTECTION.

PURPOSE

TO PERMANENTLY STABILIZE THE SOIL, ENSURING CONSERVATION OF SOIL AND WATER, AND TO ENHANCE THE ENVIRONMENT.

WATER QUALITY ENHANCEMENT

SLOWS THE OVER-LAND MOVEMENT OF STORMWATER RUNOFF, INCREASES INFILTRATION AND RETAINS SOIL AND NUTRIENTS ON SITE, PROTECTING STREAMS OR OTHER STORMWATER CONVEYANCES.

WHERE APPLICABLE

ON EXPOSED SOILS THAT HAVE A POTENTIAL FOR CAUSING OFF-SITE ENVIRONMENTAL DAMAGE.

METHODS AND MATERIALS

- SITE PREPARATION**
 - GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDED PREPARATION, SEEDING, MULCH APPLICATION AND ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING.
 - IMMEDIATELY PRIOR TO SEEDING AND TOPSOILING APPLICATION, THE SURFACE SHOULD 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 DEPTH OF 5 INCHES (UNSETTLED) IS REQUIRED ON ALL SITE. TOPSOIL SHALL BE AMENDED WITH ORGANIC MATTER, AS NEEDED, IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING.
 - INSTALL NEEDED EROSION CONTROL PRACTICES AND FACILITIES SUCH AS DIVERSIONS, GRADE-STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS.

II. SEEDED 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 MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES (HTTP://NJAES.RUTGERS.EDU/COUNTY/). FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-10-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE AND INTO THE SOIL TO A DEPTH OF 4 INCHES. IF FERTILIZER IS NOT INCORPORATED, APPLY ONE-HALF THE RATE DESCRIBED ABOVE DURING SEEDING 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 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 SEEDED 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 SEEDED PREPARATION. SEE STANDARD FOR MANAGEMENT OF HIGH ACID-PRODUCING SOILS FOR SPECIFIC REQUIREMENTS.

III. SEEDING

- SELECT A MIXTURE FROM TABLE 4-3 OR USE 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 PERMANENT VEGETATION IS ESTABLISHED PRIOR TO A REPORT OF COMPLIANCE INSPECTION. THESE RATES APPLY TO ALL SEEDING METHODS. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVER WITH THE SPECIFIED SEED MIXTURE FOR THE SEEDED AREA AND MOWED ONCE.
- WARM SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT HIGH TEMPERATURES, GENERALLY 85°F AND ABOVE. SEE TABLE 4-3, MIXTURES 1 TO 7. PLANTING RATES FOR WARM-SEASON GRASSES SHALL BE THE AMOUNT OF PURE LIVE SEED (PLS) AS DETERMINED BY GERMINATION TESTING RESULTS.
- COOL-SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT TEMPERATURES BELOW 85°F. MANY GRASSES BECOME ACTIVE AT 65°F. SEE TABLE 4-3, MIXTURES 8-20. ADJUSTMENT OF PLANTING RATES TO COMPENSATE FOR THE AMOUNT OF PLS IS NOT REQUIRED FOR COOL SEASON GRASSES.
- CONVENTIONAL SEEDING IS PERFORMED BY APPLYING SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULTIPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CULTIPACKED SEEDINGS, SEED SHALL BE INCORPORATED INTO THE SOIL WITHIN 24 HOURS OF SEEDING PREPARATION TO A DEPTH OF 1/4 TO 1/2 INCH, BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COARSE TEXTURED SOIL.
- 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 SEEDED. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORT-FIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING (ALSO SEE SECTION IV MULCHING 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.

IV. 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.

- STRAW OR HAY. UNROTTED SMALL GRASS 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% (95% FOR TEMPORARY STABILIZATION) 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.

- PEG AND TWINE. DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 SURFACE FEET. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
- MULCH NETTINGS – STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED.
- CRIMPER (MULCH ANCHORING COULTER 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.
- LIQUID MULCH-BINDERS – MAY BE USED TO ANCHOR SALT HAY, HAY OR STRAW MULCH.

- 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.
- USE ONE OF THE FOLLOWING:

- ORGANIC AND VEGETABLE BASED BINDERS – NATURALLY OCCURRING, POWDER BASED, HYDROPHILIC MATERIALS WHEN MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY CURING CONDITIONS WILL FORM MEMBRANED NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTO-TOXIC EFFECT OR IMPED EROSION. 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.
- 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.

- 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 SEEDED AREA AND WATERED, FORM A MULCH MAT. PELLETIZED MULCH SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. MULCH MAY BE APPLIED BY HAND OR MECHANICAL SPREADER AT THE RATE OF 60-75 LBS/1,000 SQUARE FEET AND ACTIVATED WITH 0.2 TO 0.4 INCHES OF WATER. THIS MATERIAL HAS BEEN FOUND TO BE BENEFICIAL FOR USE ON SMALL LAWN OR RENOVATION AREAS, SEEDED AREAS WHERE WEED-SEED FREE MULCH IS DESIRED OR ON SITES WHERE STRAW MULCH AND TACKIFIER AGENT ARE NOT PRACTICAL OR DESIRABLE.

APPLYING THE FULL 0.2 TO 0.4 INCHES OF WATER AFTER SPREADING PELLETIZED MULCH ON THE SEED BED IS EXTREMELY IMPORTANT FOR SUFFICIENT ACTIVATION AND EXPANSION OF THE MULCH TO PROVIDE SOIL COVERAGE.

V. IRRIGATION (where feasible)

IF SOIL MOISTURE IS DEFICIENT SUPPLY NEW SEEDINGS 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.

VI. TOPDRESSING

SINCE SOIL ORGANIC MATTER CONTENT AND SLOW RELEASE NITROGEN FERTILIZER (WATER INSOLUBLE) IS PRESCRIBED IN SECTION II-A – SEEDED PREPARATION IN THIS STANDARD, NO FOLLOW-UP OF TOPDRESSING IS MANDATORY. AN EXCEPTION MAY BE MADE WHERE GROSS NITROGEN DEFICIENCY EXISTS TO THE EXTENT THAT TURF FAILURE MAY DEVELOP. IN THAT INSTANCE, TOPDRESS 10-10-10 OR EQUIVALENT AT 300 POUNDS PER ACRE OR 7 POUNDS PER 1,000 SQUARE FEET EVERY 3 TO 5 WEEKS UNTIL THE GROSS NITROGEN DEFICIENCY IN THE TURF IS AMELIORATED..

VII. ESTABLISHING PERMANENT VEGETATIVE STABILIZATION

THE QUALITY OF PERMANENT VEGETATION RESTS WITH THE CONTRACTOR. THE TIMING OF SEEDING, PREPARING THE SEEDED, APPLYING NUTRIENTS, MULCH AND OTHER MANAGEMENT ARE ESSENTIAL. THE SEED APPLICATION RATES IN TABLE 4-3 ARE REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. UP TO 50% REDUCTION IN APPLICATION RATES MAY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO REQUESTING A REPORT OF COMPLIANCE FROM THE DISTRICT. THESE RATES APPLY TO ALL METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVER (OF THE SEEDED SPECIES) AND MOWED ONCE. NOTE THIS DESIGNATION OF MOWED ONCE DOES NOT GUARANTEE THE PERMANENCY OF THE TURF SHOULD OTHER MAINTENANCE FACTORS BE NEGLECTED OR OTHERWISE MISMANAGED.

STANDARD FOR STABILIZATION WITH MULCH ONLY

DEFINITION

STABILIZING EXPOSED SOILS WITH NON-VEGETATIVE MATERIALS EXPOSED FOR PERIODS LONGER THAN 14 DAYS.

PURPOSE

TO PROTECT EXPOSED SOL SURFACES FROM EROSION DAMAGE AND TO REDUCE OFFSITE ENVIRONMENTAL DAMAGE.

WATER QUALITY ENHANCEMENT

PROVIDES TEMPORARY MECHANICAL PROTECTION AGAINST WIND OR RAINFALL INDUCED SOIL EROSION UNTIL PERMANENT VEGETATIVE COVER MAY BE ESTABLISHED.

WHERE APPLICABLE

THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO EROSION, WHERE THE SEASON AND OTHER CONDITIONS MAY NOT BE SUITABLE FOR GROWING AN EROSION-RESISTANT COVER OR WHERE STABILIZATION IS NEEDED FOR A SHORT PERIOD UNTIL MORE SUITABLE PROTECTION CAN BE APPLIED.

METHODS AND MATERIALS

- SITE PREPARATION**
 - GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDED PREPARATION, SEEDING, MULCH APPLICATION AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING.
 - 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.
- PROTECTIVE MATERIALS**
 - UNROTTED SMALL-GRAIN STRAW, AT 2.0 TO 2.5 TONS PER ACRE, IS SPREAD UNIFORMLY AT 90 TO 115 POUNDS PER 1,000 SQUARE FEET AND ANCHORED WITH A MULCH ANCHORING TOOL. LIQUID MULCH BINDERS, OR NETTING TIE DOWN, OTHER SUITABLE MATERIALS MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT. THE APPROVAL RATES ABOVE HAVE BEEN MET WHEN MULCH COVERS THE GROUND COMPLETELY UPON VISUAL INSPECTION. I.E. THE SOIL CANNOT BE SEEN BELOW THE MULCH.
 - SYNTHETIC OR ORGANIC SOIL STABILIZERS MAY BE USED UNDER SUITABLE CONDITIONS AND IN QUANTITIES AS RECOMMENDED BY THE MANUFACTURER.
 - WOOD-FIBER OR PAPER-FIBER MULCH AT THE RATE OF 1,500 POUNDS PER ACRE (OR ACCORDING TO THE MANUFACTURER'S REQUIREMENTS) MAY BE APPLIED BY A HYDROSEEDER.
 - MULCH NETTING, SUCH AS PAPER JUTE, EXCELSIOR, COTTON, OR PLASTIC, MAY BE USED.
 - WOODCHIPS APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 2" MAY BE USED. WOODCHIPS WILL NOT BE USED ON AREAS WHERE FLOWING WATER COULD WAS THEM INTO AN INLET AND PLUG IT.
 - GRAVEL, CRUSHED STONE, OR SLAG AT THE RATE OF 9 CUBIC YARDS PER 1,000 SQUARE FEET APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 3 INCHES MAY BE USED. SIZE 2 OR 3 (ASTM C-33) IS RECOMMENDED.

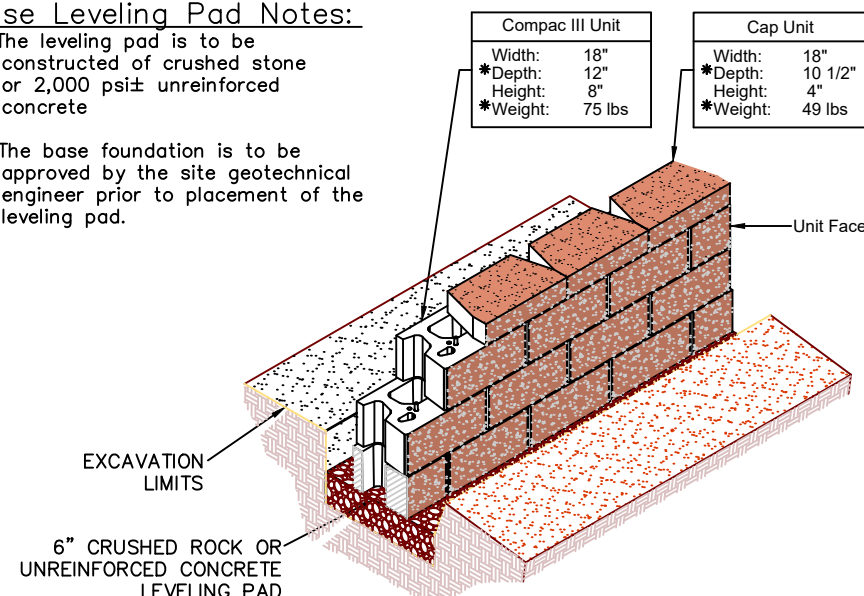
III. MULCH ANCHORING

MULCH ANCHORING SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT OF HAY OR STRAW MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA AND STEEPNESS OF SLOPES.

- 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 CRIS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
- MULCH NETTINGS – STAPLE PAPER, COTTON, OR PLASTIC NETTINGS OVER MULCH. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED. NETTING IS USUALLY AVAILABLE IN ROLLS 4 FEET WIDE AND UP TO 300 FEET LONG.
- CRIMPER MULCH ANCHORING COULTER TOOL – A TRACTOR-DRAWN IMPLEMENT ESPECIALLY DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE. THIS PRACTICE AFFORDS MAXIMUM EROSION CONTROL, BUT ITS USE IS

Base Leveling Pad Notes:

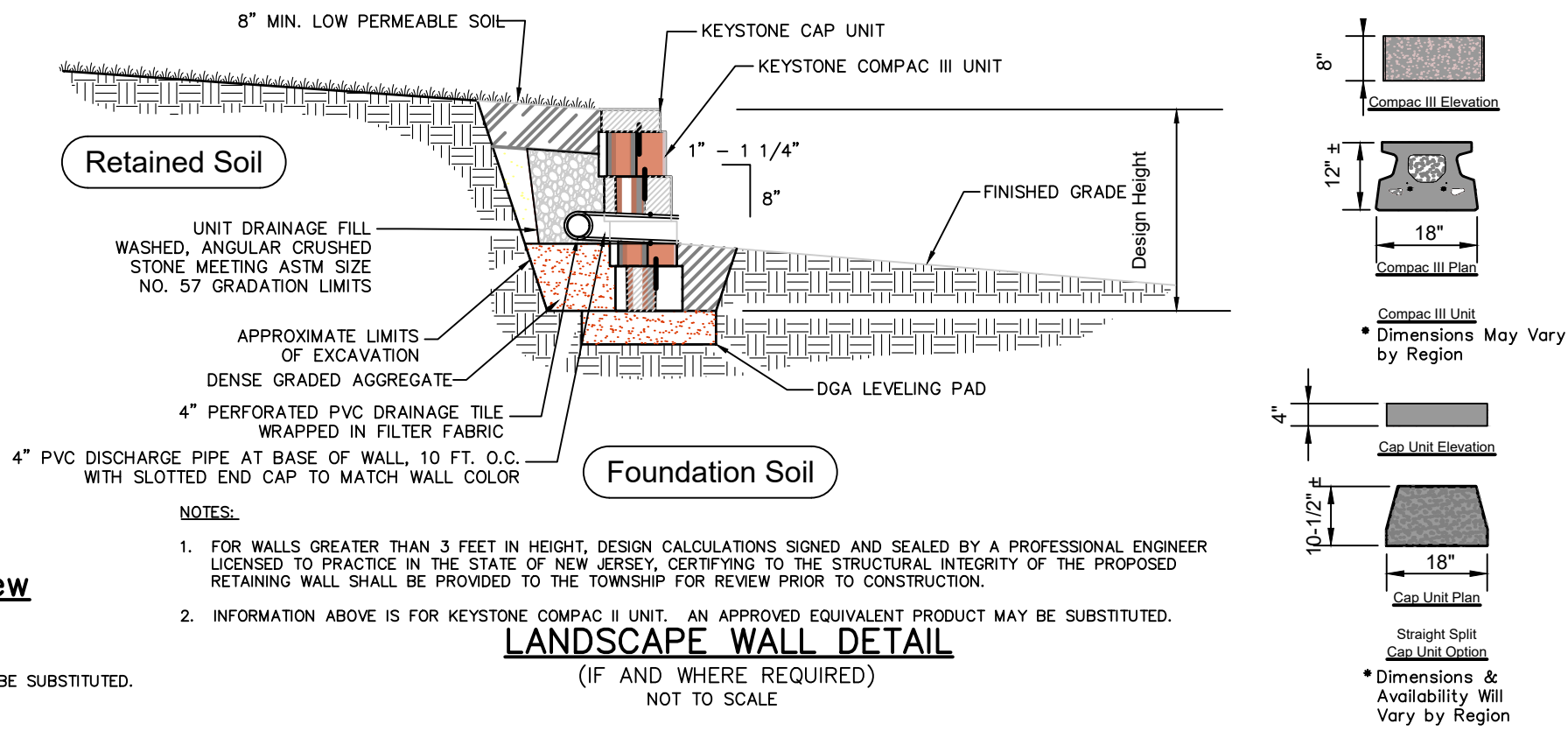
1. The leveling pad is to be constructed of crushed stone or 2,000 psi unreinforced concrete
2. The base foundation is to be approved by the site geotechnical engineer prior to placement of the leveling pad.



Compac III Unit/Base Pad Isometric Section View

NOTE:

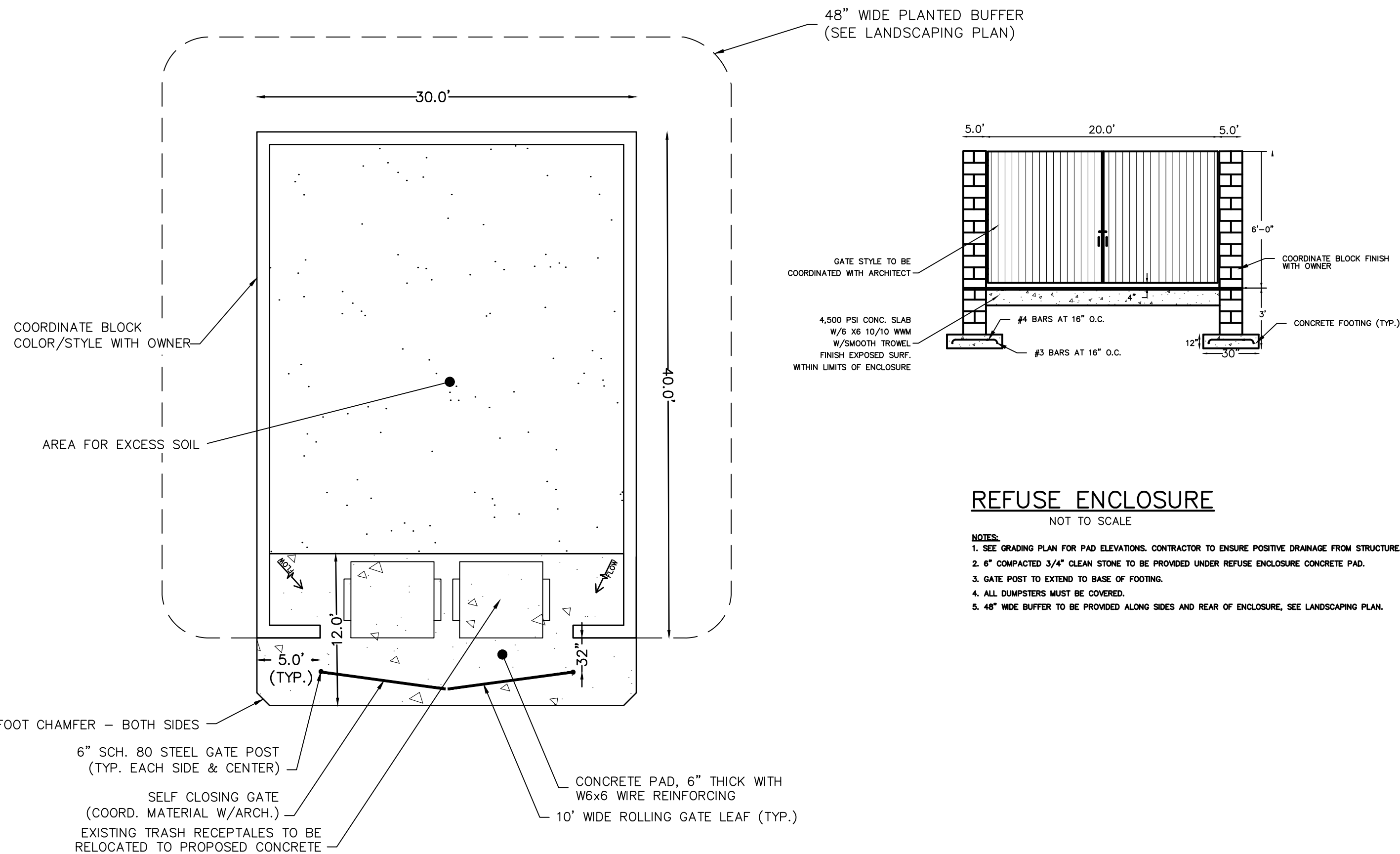
1. INFORMATION ABOVE IS FOR KEYSTONE COMPAC III UNIT. AN APPROVED EQUIVALENT PRODUCT MAY BE SUBSTITUTED.



1. FOR WALLS GREATER THAN 3 FEET IN HEIGHT, DESIGN CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF NEW JERSEY, CERTIFYING TO THE STRUCTURAL INTEGRITY OF THE PROPOSED RETAINING WALL SHALL BE PROVIDED TO THE TOWNSHIP FOR REVIEW PRIOR TO CONSTRUCTION.
2. INFORMATION ABOVE IS FOR KEYSTONE COMPAC II UNIT. AN APPROVED EQUIVALENT PRODUCT MAY BE SUBSTITUTED.

LANDSCAPE WALL DETAIL

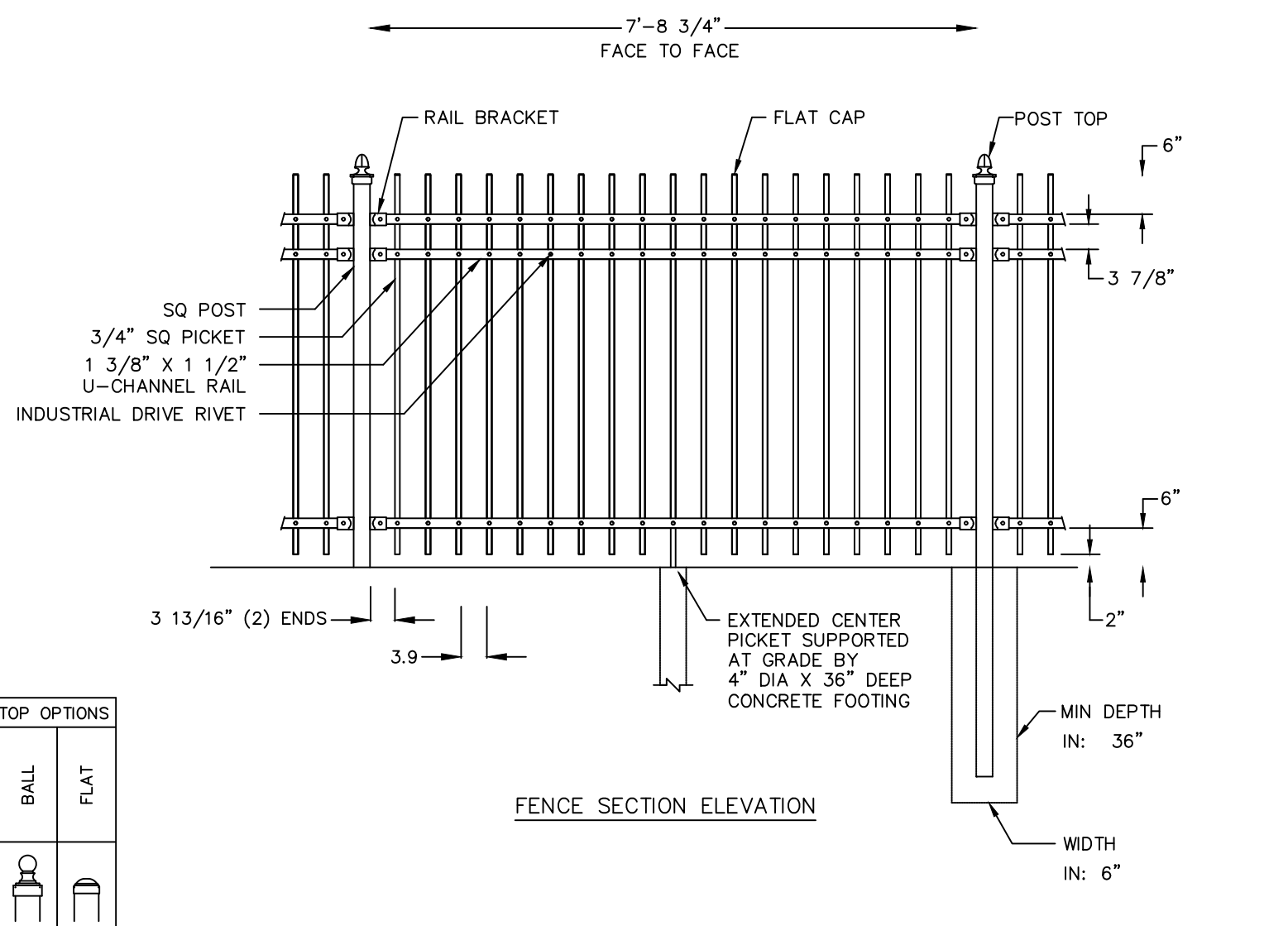
(IF AND WHERE REQUIRED)
NOT TO SCALE



REFUSE ENCLOSURE

NOT TO SCALE

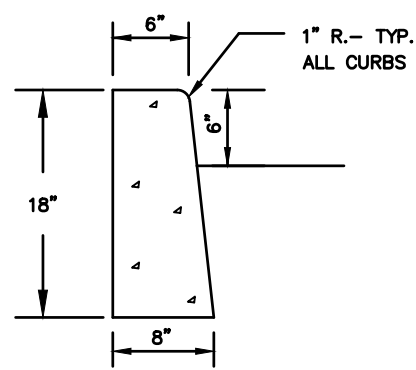
1. SEE GRADING PLAN FOR PAD ELEVATIONS. CONTRACTOR TO ENSURE POSITIVE DRAINAGE FROM STRUCTURE.
2. 4" COMPACTED 3/4" CLEAN STONE TO BE PROVIDED UNDER REFUSE ENCLOSURE CONCRETE PAD.
3. GATE POST TO EXTEND TO BASE OF FOOTING.
4. ALL DUMPSTERS MUST BE COVERED.
5. 48" WIDE BUFFER TO BE PROVIDED ALONG SIDES AND REAR OF ENCLOSURE, SEE LANDSCAPING PLAN.



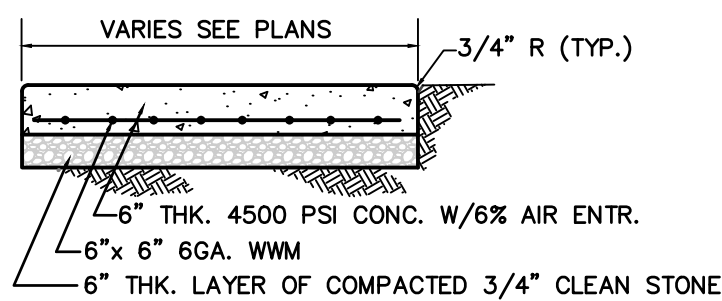
DECORATIVE ALUMINUM FENCE

NOT TO SCALE

NOTE: DECORATIVE ALUMINUM FENCE SHALL BE AS SPECIFIED OR AS APPROVED EQUAL. COLOR, STYLE AND MATERIAL TO BE SELECTED BY OWNER.

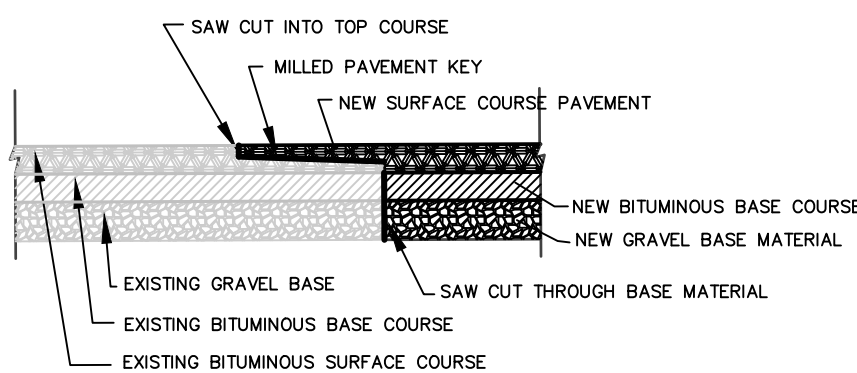


- NOTES:
1. Concrete To Be N.J.S.H.D. Class "B"
 2. Six (6") Inch Face To Be On Type I Curb
 3. Provide Preformed Bituminous Fiber Expansion Joints, 1/2" Thick At 20'0" (Max.) Intervals. Provide Dummy



CONCRETE PAD DETAIL

NOT TO SCALE

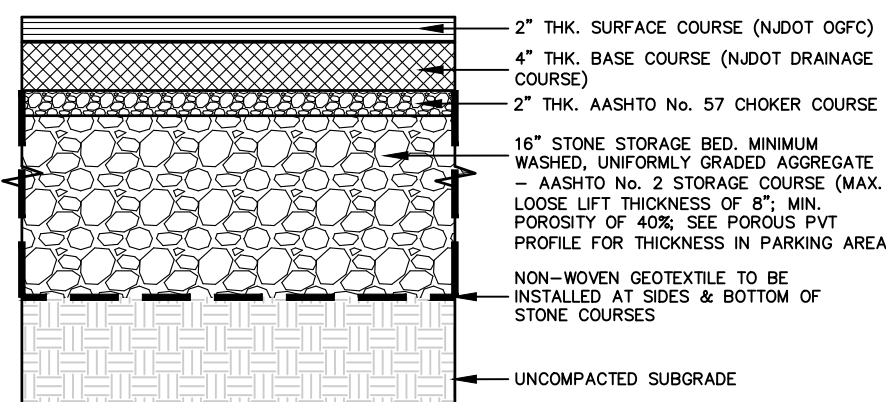


PAVEMENT KEY DETAIL (AS REQ.)

N.T.S.

POROUS PAVEMENT INSTALLATION NOTES

1. COMPACTION OF NATIVE SUBGRADE SHOULD BE AVOIDED PRIOR TO PLACEMENT OF SUB-BASE MATERIALS. TRAFFIC UPON SUBGRADE SHOULD BE MINIMIZED AND LIGHT EQUIPMENT SHOULD BE UTILIZED WHERE POSSIBLE.
2. UNSUITABLE FILL OR IMPERMEABLE MATERIALS SUCH AS CLAY, CEMENTED SAND OR IRONSTONE SHALL BE REMOVED AND REPLACED WITH SUITABLE FILL IF ENCOUNTERED DURING EXCAVATION FINAL EXCAVATION DEPTH AND FILL SHALL BE INSPECTED AND APPROVED BY THE ENGINEER.
3. STONE STORAGE COURSE TO BE INSTALLED IN 8" LIFTS TO A MAXIMUM OF 95% STANDARD PROCTOR COMPACTION.
4. SHOULD CONSTRUCTION TRAFFIC BE REQUIRED AFTER EXCAVATION AND PLACEMENT OF STONE, AN ADDITIONAL 2" OF AASHTO #2 SHALL BE PLACED ON THE STONE STORAGE COURSE PRIOR TO RECEIVING TRAFFIC. THE ADDITIONAL 2" OF STONE SHALL BE REMOVED AFTER CONSTRUCTION AND PRIOR TO THE PLACEMENT OF THE AASHTO #57 CHOKER COURSE. TRAFFIC SHALL NOT BE PERMITTED UPON THE AASHTO #57 CHOKER COURSE. HOWEVER, TRAFFIC MAY BE PERMITTED UPON THE NDOT DRAINAGE COURSE PROVIDED THAT IT IS VACUUM SWEEP PRIOR TO INSTALLING THE SURFACE COURSE.
5. INITIAL ROLLING OF POROUS PAVEMENT SHALL OCCUR AT A MATERIAL TEMPERATURE OF 275°-325°F.
6. POROUS PAVEMENT USE TO BE RESTRICTED UNTIL SURFACE TEMPERATURE IS A MAXIMUM OF 100°F (APPROXIMATELY 2-3 DAYS DEPENDING UPON WEATHER AT TIME OF INSTALLATION). RESTRICTION OF USE SHALL BE EXTENDED TO 5 DAYS WHERE POSSIBLE.
7. POROUS PAVEMENT SHALL BE VACUUM SWEEP DURING CONSTRUCTION SHOULD SILTATION OCCUR AND AT THE CONCLUSION OF CONSTRUCTION.
8. SHOP DRAWINGS AND LABORATORY RESULTS TO BE PROVIDED FOR FABRIC, STONE, FILL AND PAVEMENT PRIOR TO INSTALLATION.
9. REFER TO POROUS PAVING DETAIL, STORMWATER FACILITY OPERATION AND MAINTENANCE MANUAL PREPARED BY KCE, NDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE NJDEP STORMWATER BMP MANUAL FOR FURTHER INFORMATION.



POROUS PAVEMENT DETAIL

NOT TO SCALE

- NOTES:
1. DURING CONSTRUCTION PRECAUTIONS SHOULD BE TAKEN TO PREVENT BOTH SUBGRADE SOIL COMPACTION AND SEDIMENT CONTAMINATION.
 2. ALL EXCAVATION SHOULD BE PERFORMED WITH THE LIGHTEST PRACTICAL EXCAVATION EQUIPMENT.
 3. ALL EXCAVATION EQUIPMENT SHOULD BE PLACED OUTSIDE THE LIMITS OF THE SYSTEM'S STORAGE BED OR BASE.
 4. SEE POROUS PAVEMENT INSTALLATION NOTES ON SHEET 4 FOR ADDITIONAL INFORMATION.

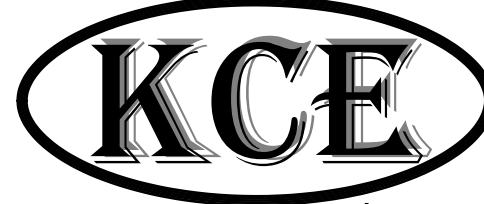
10/20/21

REVISED PER ZONING OFFICER REVIEW

DS

PRELIMINARY / FINAL MAJOR SITE PLAN

ST. GEORGE CEMETERY
LOT 2 IN BLOCK 1402, TAX MAP 41.02
TOWNSHIP OF NEPTUNE
MONMOUTH COUNTY - NEW JERSEY



Kennedy Consulting Engineers, LLC
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Red Bank, New Jersey 07701
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CONSTRUCTION DETAILS

7 OF 7

FILENAME: CD-1
DRAWN BY: DS
DATE: 9/14/21

JAMES A. KENNEDY, P.E.
NEW JERSEY PROFESSIONAL ENGINEER NO. 41275