PROPERTY	OWNERS LIST			
PROPERTY ID	PROPERTY LOCATION	CLASS	OWNERS NAME & ADDRESS	
49 52.01	NORCROSS AVE	1	YUNCO, LLC 21 LAUREL ROAD DEMAREST, NJ	07627
49 53	102 NORCROSS AVE.	4B	SCOTT REALTY HOLDINGS LLC 102 NORCROSS AVE METUCHEN, NJ	08840
49 54	104-108 NORCROSS AVE.	4B	104 NORCROSS ACQUISITION P.O.BOX 4195 METUCHEN, NJ	LLC 08840
51.4 25	278 CENTRAL AVE.	2	ILLUZZI, JOSEPH A JR 278 CENTRAL AVE. METUCHEN, N.J.	08840
51.4 26	274 CENTRAL AVE. L26.1	2	BACCHUS,EUSTACE & JUANA 274 CENTRAL AVE. METUCHEN, NJ	08840
51.4 27	CENTER ST L27-1,23,24	15C	BOROUGH OF METUCHEN 500 MAIN ST. METUCHEN, NJ	08840
51.04 20.01	292 CENTRAL AVE.	2	RUFOLO, JOSEPH 6 Moyse place ste 200 Edison, Nj	08820
52 11.1	519 W. CHESTNUT AVE. 11.2	2	SOLTYS, MICHAEL & JUDY 519 W CHESNUT AVE METUCHEN NJ	08840
52 13.1	521 W. CHESTNUT AVE. 13.2	2	KOCHY,LEANNE & QUACKENBUS 521 W CHESTNUT AVE METUCHEN, NJ	H,JAMES C 08840
52 15	252 CENTRAL AVE. 17,19	2	ANTIN,SETH J. & JENNIFER 252 CENTRAL AVE. METUCHEN, NJ	S. 08840
52 21	256 CENTRAL AVE. L23	2	ABDELSHAHID, NADER & GEOR 256 CENTRAL AVE. METUCHEN NJ	GETTE 08840
52 25		2	OGLESBY, DEIRDRE 258 CENTRAL AVE METUCHEN NJ	08840
53 3.1	236 CENTRAL AVE. L3.2,1	15D	METUCHEN CONG OF JEHOVAH C/O DICAMPI 669 OLD POST	WITNESS
48.1 61.1	203 NORCROSS AVE.	4B	LEONARD STREET PARTNERSHI 4 YORKSHIRE COURT WARREN, NJ	P 07059
48.1 65	4 LEONARD ST.	4B	METUCHEN REALTY, L.L.C. 4 LEONARD STREET METUCHEN, NJ	08840
49 11	COPPERFIELD LANE 57	4C		
49 14.1	233 CENTRAL AVE.	4A	340 CAMPUS DR	08837
49 14,2	235 CENTRAL AVE.	2		08840
49 16		1	247 CENTRAL METUCHEN LLC 247 CENTRAL AVE METUCHEN, NJ	08840
49 18.1	247 CENTRAL AVE.	4A		08840
49 18.2	257 CENTRAL AVE.	4 A	257 CENTRAL AVE	08840
49 18.3	267 CENTRAL AVE.	4A	LEPORE REALTY LLC 257 CENTRAL AVE. METUCHEN, NJ	08840
49 32.6	279 CENTRAL AVE. L33	4 A	METUCHEN CENTRAL, LLC 43 OAK AVE. METUCHEN, NJ	08854
49 39	33 JERSEY AVE.	4B	TWO BROTHER'S HOLDINGS LL 33 JERSEY AVE METUCHEN, NJ	C 08840
49 40 TO1	JERSEY AVE.	4A	NY SMSA LP D/B/A VERIZON P.O.# 2549-DUFF & PHELPS Addison, TX	WIRELESS 75001
49 50	289 CENTRAL AVE.	4 A	TOP SEED REALTY 4 LLC 160 LIBERTY ST, UNIT-3B METUCHEN, NJ	08840
49 51.01	281-287 CENTRAL AVE.	4A	YUNCO, LLC 21 LAUREL ROAD DEMAREST, NJ	07627
P.S.E. & G. Manager-C 6 80 Park Pla Newark, NJ	prporate Properties za, T6B		Elizabethtown Gas Co. 1 Elizabeth Plaza P.O. Box 3175 Union, NJ 07083	

Cablevision of Raritan Valley 275 Centennial Avenue CN 6805 Piscataway, NJ 08855 Attn: Margurite Prenderville

Construction Department

Texas Eastern Transmission Corp. 501 Coolidge Street South Plainfield, NJ 07080

New Jersey Bell Telephone Co. 540 Broad St. - Room 305 Newark, NJ 07101

Middlesex County Planning Board **Middlesex County Administration Building** John F. Kennedy Square 75 Bayard Street, 5th Floor New Brunswick, NJ 08901

Buckeye Pipeline

Emaus, Pa. 18049

Middlesex Water Co.

Iselin, NJ 08830

Parking Authority

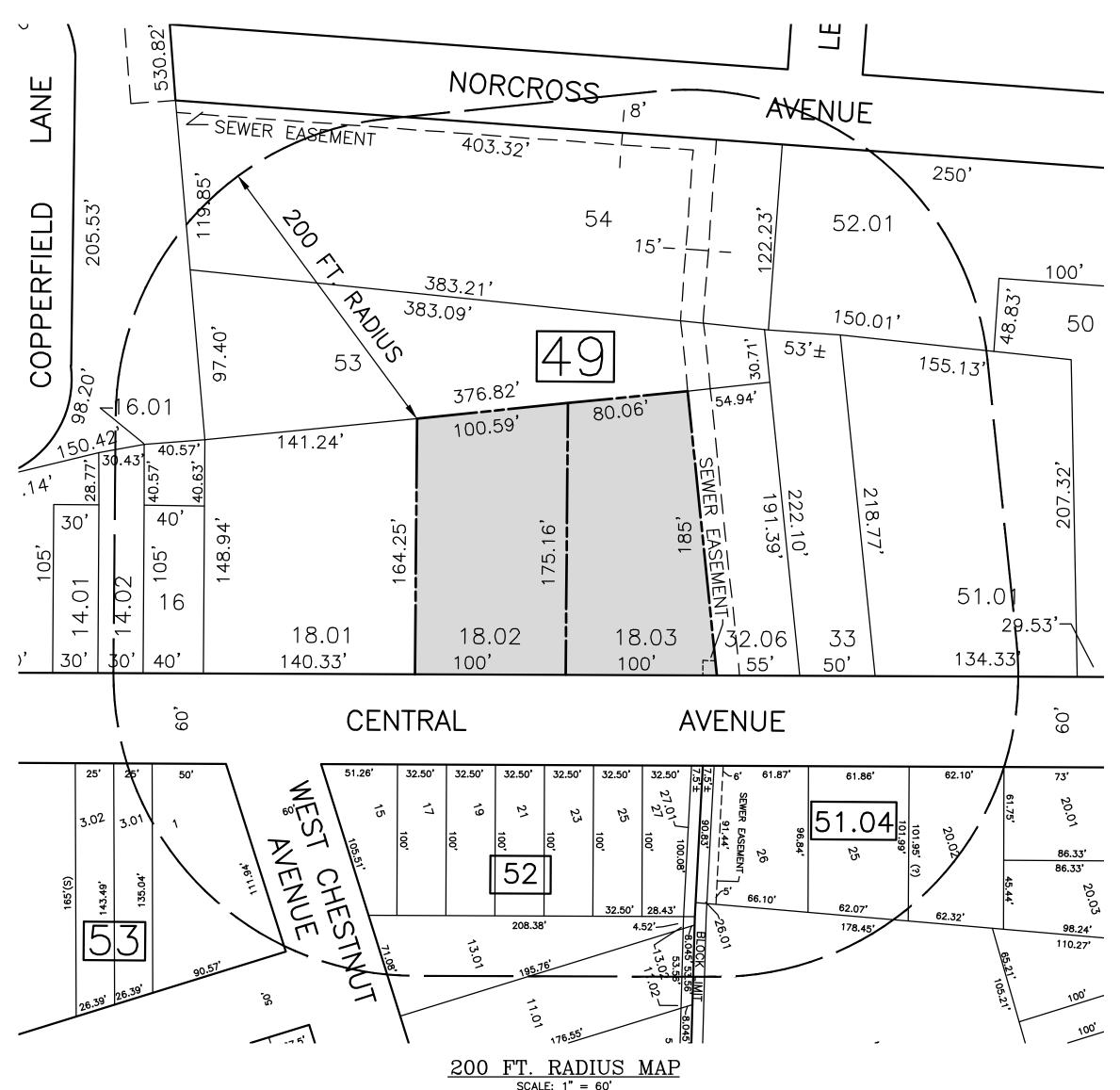
Metuchen, NJ 08840

500 Main Street

485 Rt 1 So., Bldg C. 4th Flr.

P.O. Box 368

PRELIMINARY & FINAL MAJOR SITE PLAN PREPARED FOR 257 & 267 CENTRAL AVENUE BLOCK 49, LOTS 18.02 & 18.03



CONSTRUCTION NOTES:

- 1. PRIOR TO COMMENCEMENT OF ANY WORK, THE CONTRACTOR SHALL OBTAIN ALL THE NECESSARY STATE, COUNTY AND CITY PERMITS.
- 2. THE CONTRACTOR SHALL CONTACT THE UTILITIES COORDINATION COMMITTEE AT 1-800-272-1000 FOR A UTILITY MARK UP IN THE AREA OF THE CONSTRUCTION AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF ANY WORK.
- 3. THESE PLANS IN NO WAY SHOW ALL THE EXISTING UNDERGROUND UTILITIES LOCATED WITHIN THE PROJECT SITE AND CENTRAL AVENUE R.O.W. EXISTING UTILITIES INFORMATION AS SHOWN ON THESE PLANS HAS BEEN COLLECTED FROM VARIOUS SOURCES AND ARE NOT CERTIFIED FOR ACCURACY OR COMPLETENESS. IT IS THEREFORE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE EXACT LOCATION AND DEPTH OF ALL THE EXISTING UTILITIES IN THE AREA OF CONSTRUCTION PRIOR TO COMMENCEMENT OF ANY WORK.
- 4. WHERE EXISTING UTILITIES ARE TO BE CROSSED BY THE PROPOSED CONSTRUCTION, TEST PITS SHALL BE DUG BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION ACTIVITY TO ASCERTAIN EXISTING INVERTS, MATERIALS AND SIZES. THE TEST PIT INFORMATION SHALL BE PROVIDED TO THE ENGINEER PRIOR TO CONSTRUCTION IN ORDER TO PERMIT ADJUSTMENTS, IF REQUIRED.

TAX MAP 10 BOROUGH OF METUCHEN, MIDDLESEX COUNTY, NEW JERSEY

5. ALL THE EXISTING POWER POLES WITHIN 10 FEET OF THE PROPOSED IMPROVEMENTS SHALL EITHER BE RELOCATED OR SUPPORTED PER THE RECOMMENDATIONS OF THE UTILITY COMPANY.

GENERAL NOTES COUNTY, NEW JERSEY. 2. AREA OF SITE:

> LOT 18.02 - 16,973.55 SF (0.39 ACRES) LOT 18.03 - 16,165.40 SF (0.37 ACRES) TOTAL AREA = 33,138.95 SF (0.76 ACRES

PROPERTY IS SITUATED IN ZONE "B-2" (NEIGHBORHOOD BUSINESS DISTRICT). LOT 18.02 CURRENTLY HAS AN EXISTING 2 STORY FRAME & STUCCO DWELLING AND 14 EXISTING PAVED PARKING STALLS. LOT 18.03 CURRENTLY HAS AN EXISTING 2 STORY FRAME & STUCCO DWELLING AND 7 PAVED PARKING STALLS AND 15 UN-PAVED PARKING STALLS.

LOT 18.02 – EXISTING	2 STORY
RETAIL AREA:	2,879 SF
STORAGE AREA:	1,258 SF
APARTMENTS:	(3) 2 BR UNITS
LOT 18.03 – EXISTING	2 STORY
RETAIL AREA:	1,940 SF
OFFICE AREA:	295 SF
APARTMENTS:	(2) 1 BR UNITS

- THE APPLICANT PROPOSES TO PAVE AND STRIPE THE REAR OF BOTH LOTS 18.02 & 8.03 PER PRIOR APPROVALS (1987 & 2013)
- SURVEY REFERENCE: THE OUTBOUND SURVEY AND TOPOGRAPHIC INFORMATION SHOWN ON THESE PLANS IS BASED ON A PLAN ENTITLED, "TOPOGRAPHIC SURVEY 257 & 267 CENTRAL AVENUE BOROUGH OF METUCHEN, MIDDLESEX COUNTY, NEW JERSEY, BLOCK 49 LOTS 18.02 & 18.03", PREPARED BY BRUNSWICK SURVEYING INCORPORATED, PISCATAWAY, N.J. DATED 05/02/2019.
- AND/OR MIDDLESEX COUNTY STANDARDS AND SPECIFICATIONS.
- 8. <u>OWNER/APPLICANT:</u> LOT 18.02 RONALD HOLDINGS, LLC C/O BERNADETTE LAPORE 257 CENTRAL AVENUE METUCHEN, NEW JERSEY 08840

		EXISTING LOTS	
	REQUIRED	18.02 & 18.03	PROPOSED
MINIMUM LOT AREA	5,000 SF	33,138.95 SF	33,138.95 SF
MINIMUM LOT WIDTH	40 FT.	198.89 FT	198.89 FT
MINIMUM LOT DEPTH	100 FT.	174.08 FT	174.08 FT
MINIMUM FRONT YARD SETBACK	10 FT.	9.5 FT	9.5 FT
MINIMUM EACH SIDE YARD SETBACK	0 FT.	1.7 FT	1.7 FT
MINIMUM BOTH SIDE YARDS SETBACK	0 FT	21.9 FT	21.9 FT
MINIMUM REAR YARD SETBACK	25 FT	55.2 FT	55.2 FT
MAXIMUM BUILDING COVERAGE (PRINCIPLE & ACC.)	70%	(7,096 SF) 21.4%	(7,096 SF) 21.4%
MAXIMUM IMPERVIOUS COVERAGE (BLDG. & PVMT.)	80%	63.2%	65.8 %
BUILDING HEIGHT	3 STORIES/35 FT	< 3 STORIES/35 FT	< 3 STORIES/35 FT

OFF-STREET PARKING

#257 CENTRAL A	VENUE EXISTING CONDITIONS -
RETAIL AREA: STORAGE AREA: DWELLING UNIT:	2,879 SF / 200 = 14 3 1,258 SF / 400 = 3 3 (3) UNITS / 1 PER UNIT = 3 TOTAL = 20
	TOTAL = 24

24 STALLS PROVIDED (PAVED) #267 CENTRAL AVENUE EXISTING CONDITIONS - PREVIOUS APPROVAL (2013) PARKING CALCULATIONS

RETAIL AREA (B USE): 1,940 SF / 180 = 11 STALL REQUIRED OFFICE AREA (B USE): 295 SF / 180 = 2 STALLS REQUIRED(2) 1 BR UNITS / 1.5 PER UNIT = 3 STALLS REQUIRED APARTMENT: TOTAL = 16 STALLS REQUIRED

TOTAL PARKING REQUIRED FOR BOTH LOTS = 36 STALLS (EXISTING) TOTAL PARKING PROVIDED FOR BOTH LOTS = 46 STALLS (EXISTING)

#257 PROPOSED	CONE	<u>OITIO</u>	<u>NS - P/</u>	ARKING	CALCU
RETAIL AREA: STORAGE AREA: APARTMENT:	(3) 2	BR		58 SF	/ 180 = / 1000 PER UNI TOTAL
					TOTAL
#267 PROPOSED	CONE	DITIO	<u>NS - P</u>	ARKING	CALCU
RETAIL AREA: OFFICE AREA: APARTMENT:	(2) 1	BR		295 SF	/ 180 = / 180 E <u>R_UNI</u>

JLATIONS = 11 STALL REQUIRED = 2 STALL REQUIRED INIT = 4 STALLS REQUIRED TOTAL = 17 STALLS REQUIRED TOTAL = 25 STALLS PROVIDED (PAVED)

TOTAL PARKING REQUIRED FOR BOTH LOTS = 40 STALLS (PROPOSED) TOTAL PARKING PROVIDED FOR BOTH LOTS = 49 STALLS (PROPOSED) (TANDEM PARKING TO BE BANKED = 7 STALLS)

SUBMISSION NOTES: 1. NO FLOODPLAINS, FLOODWAY, OR FLOOD FRINGE AREAS ARE KNOWN TO EXIST WITHIN 100 FEET OF THE SITE ACCORDING TO FIRM COMMUNITY PANEL NUMBER 34023C0061F. NO MARSHES, PONDS, OR LANDS SUBJECT TO FLOODING ARE KNOWN TO EXIST WITHIN 100 FEET OF THE SITE. 3. SITE SOILS ARE GENERALLY RAPID DRAINING SAND AND PEA GRAVEL FILL ON HISTORIC SWAMPLAND (FRINGE OF DISMAL SWAMP) FILLED OVER 100 YEARS AGO.

REGULATORY NOTES: 1. THE APPLICANT SHALL SUBMIT AN APPLICATION WITH FREEHOLD SOIL CONSERVATION DISTRICT.

- 2. STORM WATER MANAGEMENT:
- AND OFF-SITE WORK SINCE THE PROJECT IS IN THE METROPOLITAN PLANNING DISTRICT, GROUNDWATER RECHARGEIS NOT REQUIRED. 2.2 2.3
- STATION UNDER FAMILIAL COMMON OWNERSHIP).
- REAFFIRMED BY SUBSEQUENT BOROUGH APPROVALS. RELIEF FROM 110-155.B REQUESTED FOR LOADING SPACES. SITE HAS OPERATED SINCE 1987 WITHOUT LOADING SPACES.
- MOUNTED SPOTLIGHTS.
- 6. BUILDING.
- 7. RELIEF FROM ALL OTHER DESIGN STANDARDS NOT SPECIFICALLY ADDRESSED HEREIN AS EXISTING CONDITIONS.

PROPERTY KNOWN AND DESIGNATED AS LOTS 18.02 & 18.03 IN BLOCK 49 AS SHOWN ON THE CURRENT TAX MAP SHEET No. 10 OF THE BOROUGH OF METUCHEN, MIDDLESEX

NOTE: ALL ELEVATIONS ARE BASED ON AN ASSUMED DATUM

ALL PROPOSED IMPROVEMENTS SHALL CONFORM TO THE BOROUGH OF METUCHEN

LOT 18.03 RONALD HOLDINGS, LLC C/O BERNADETTE LAPORE

257 CENTRAL AVENUE METUCHEN, NEW JERSEY 08840

BULK REQUIREMENTS: ZONE "B-2" (NEIGHBORHOOD BUSINESS DISTRICT)

PREVIOUS APPROVAL (1987) PARKING CALCULATIONS STALL REQUIRED

STALLS REQUIRED STALLS REQUIRED

0 STALLS REQUIRED

7 STALLS PROVIDED (PAVED) + 15 STALLS PROVIDED (UN-PAVED) TOTAL = 22 POTENTIAL STALLS PROVIDED

JLATIONS

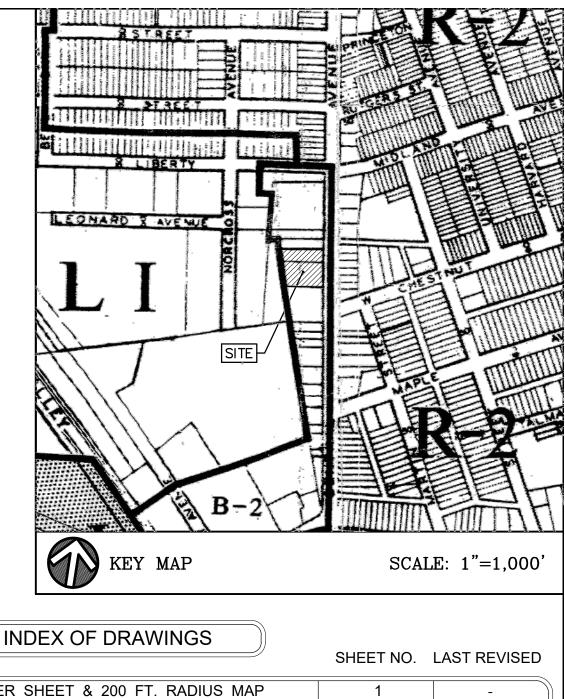
= 16 STALL REQUIRED 0 = 1 STALL REQUIRED NIT = 6 STALLS REQUIRED $_{-}$ = 23 STALLS REQUIRED

= 24 STALLS PROVIDED (PAVED)

2.1 SINCE THE PROJECT WILL NOT DISTURB MORE THAN ONE ACRE OR CREATE MORE THAN 0.25 ACRES OF IMPERVIOUS SURFACE, IT DOES NOT TRIGGER THE MAJOR SITE DEVELOPMENT RULES FOR NJDEP TIER 2 STORMWATER. THE PROJECT WILL INCREASE IMPERVIOUS SURFACE ON THE SITE BY APPROXIMATELY 5,900 SQUARE FEET OR 0.13 ACRES. THE TOTAL AREA OF DISTURBANCE IS APPROXIMATELY 20,000 SQUARE FEET OR 0.46 ACRES FOR BOTH ON-SITE

DEPTH TO GROUNDWATER ASSUMED TO BE 5 FEET BGS BASED ON GROUNWATER MONITORING WELL WATER ELEVATIONS AT BLOCK 49, LOT 18.01 (GAS RELIEF FROM 110-151.D REQUESTED FOR DRIVEWAY WIDTH AT 12.4 FEET IN LIMITED SECTION. THIS IS AN EXISTING CONDITION CREATED IN 1987 AND

RELIEF FROM 110-157 REQUESTED. ALTHOUGH THE PARKING LOT WILL BE UPGRADED FROM GRAVEL TO PAVEMENT, THE AREA ILLUMINATED WITH BUILDING RELIEF FROM 110-175.D REQUESTED FOR REFUSE AREA SCREENING. THE AREA IS SCREENED BY A SLATTED FENCE NORTH AND LOCATION BEHIND EXISTING



COVER SHEET & 200 FT. RADIUS MAP	1	-
EXISTING CONDITIONS MAP & SITE PLAN	2	-
GRADING & LANDSCAPING PLAN	3	-
SOIL EROSION & SEDIMENT CONTROL PLAN	4	-

APPROVED BY THE PLANNING BOARD

CHAIRMAN OF THE PLANNING BOARD	DATE
SECRETARY OF THE PLANNING BOARD	DATE

BOROUGH ENGINEER

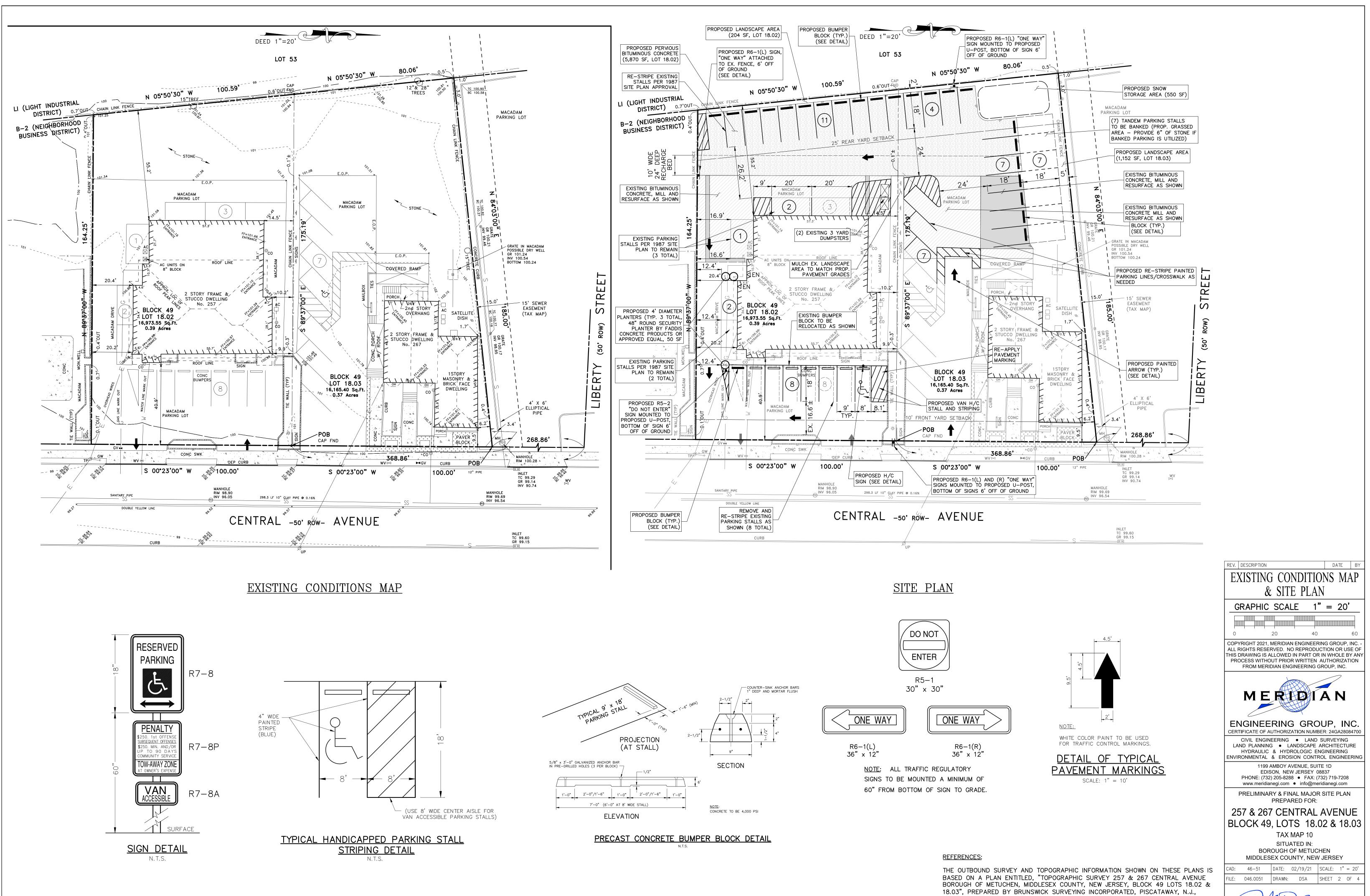


ESLIE A. WALKER III. PE

NEW JERSEY LICENSE NUMBER: 24GE04729700

PROFESSIONAL ENGINEER

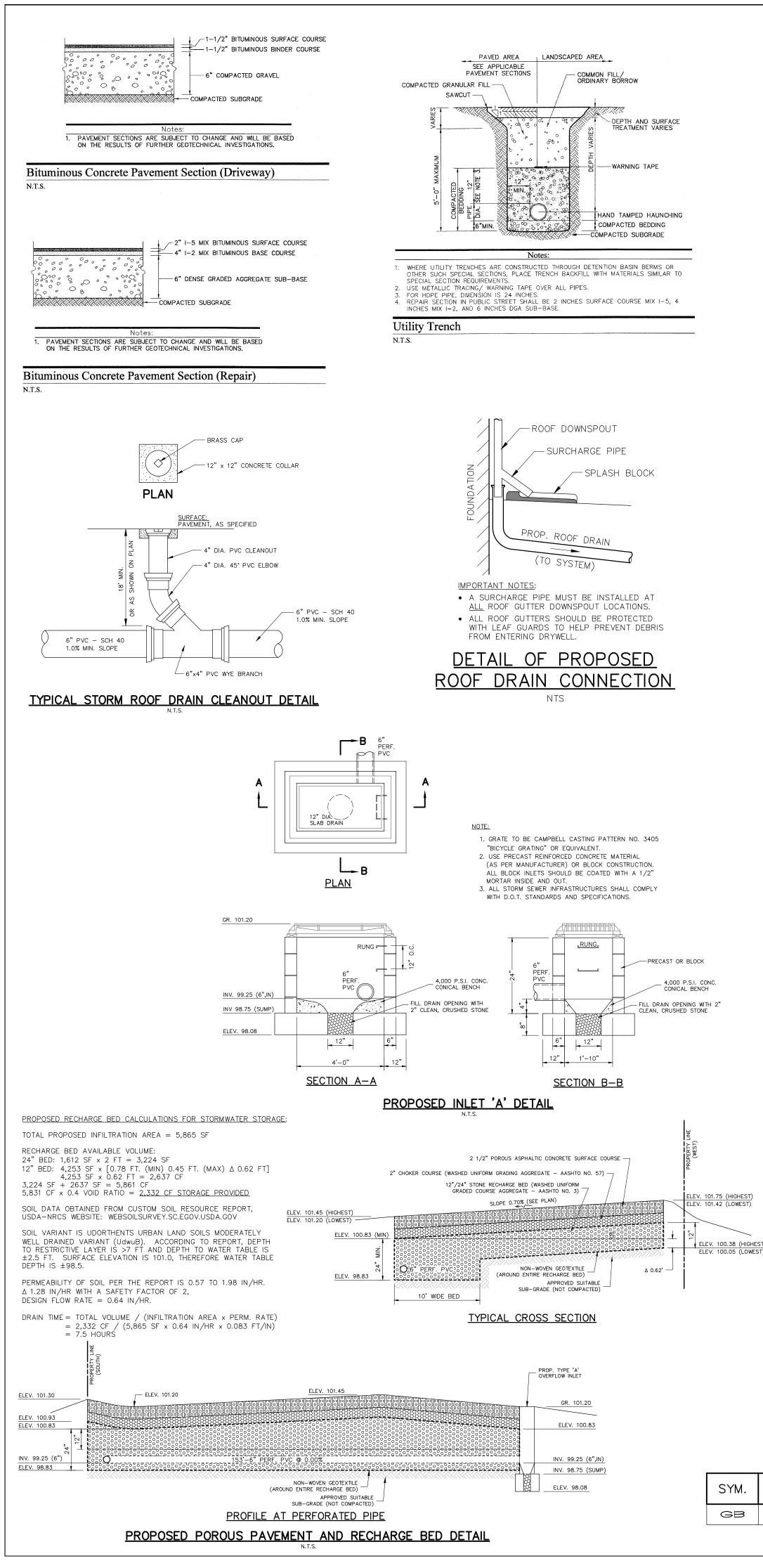
DATE



DATED 05/02/2019.

NOTE: ALL ELEVATIONS ARE BASED ON AN ASSUMED DATUM.

E:	046.0051	DRAWN:	DSA	SHEET	2	OF	2
	\frown	1.					
	$ \longrightarrow $	M-	FC		02	2/19/	/ :
ES	LIE A. W	/ALKE	R III, P	Έ	D	AT	E
ROFE	ESSIONAL EN	IGINEER					
EW J	ERSEY LICE	NSE NUMB	ER: 24GE	04729700	0		

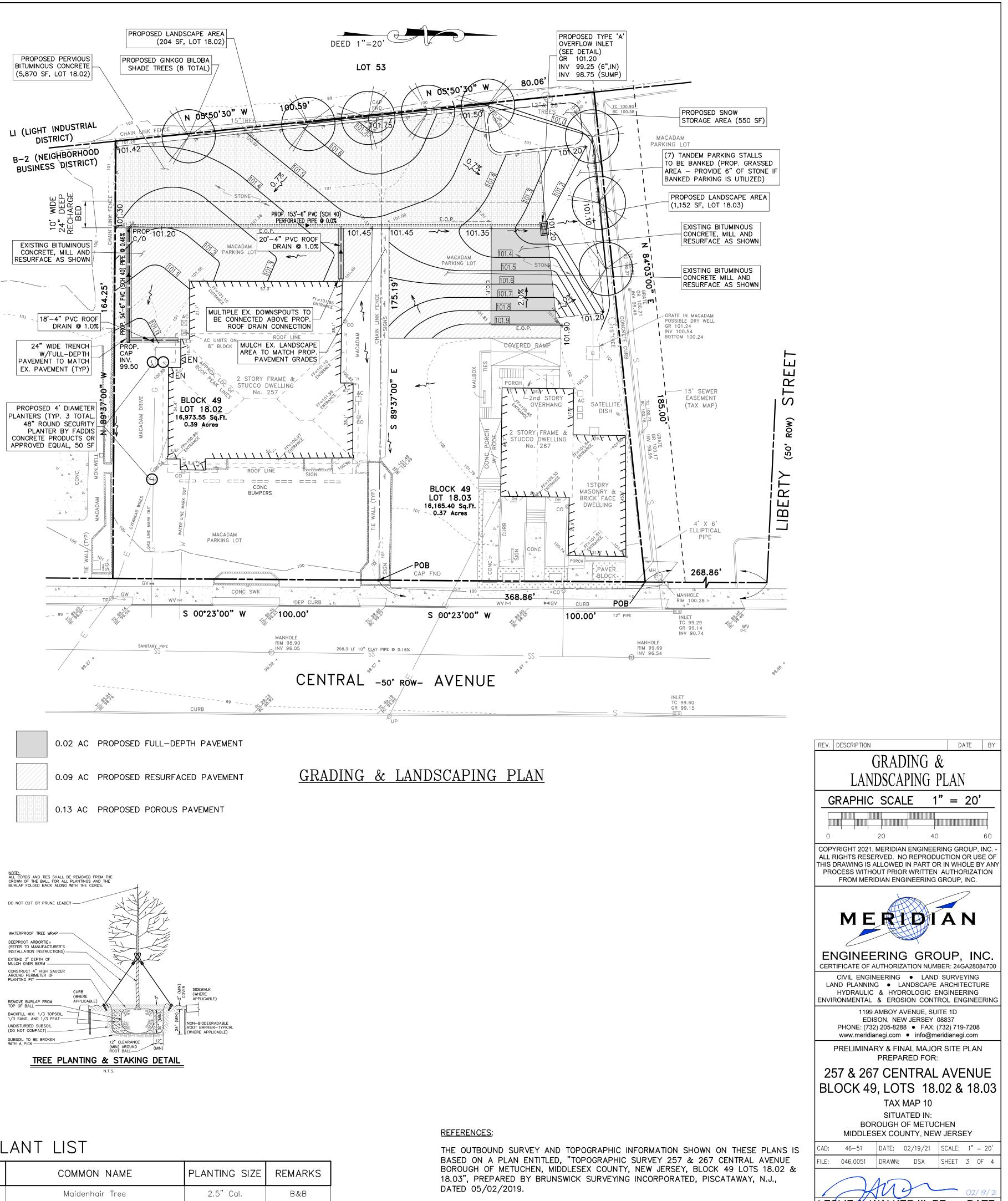


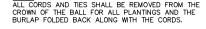
PLANTING NOTES

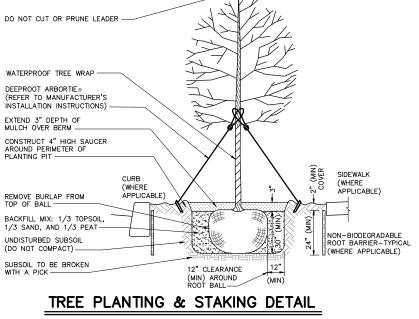
- 1. All landscaping plant material are shown in a semi-mature size in this plan set. Sizes indicated in Plant List are sizes at time of installation.
- 2. The staking layout of all retaining walls, walkways, patio and deck surfaces, irrigation lines, and plantings (where applicable) shall be inspected by the Municipal Engineer (or similar agent as applicable) prior to installation. It is the contractor's responsibility to notify the Municipal Engineer (or similar agent as applicable) as to when the work shall
- 3. Plant locations shown on this plan are diagrammatic. The final locations of all plant materials shall be determined and approved by the Municipal Engineer (or similar agent as applicable).
- 4. The quality and size of plants, spread of roots and size of root balls shall be in accordance with ANSI Z60.1-1986, "American Standard for Nursery Stock" as published by the American Association of Nurserymen.
- 5. The Contractor shall examine all field conditions for exact locations of utilities, drainage systems and irrigation systems and shall adjust proposed plantings accordingly.
- 6. The Contractor shall notify the Municipal Engineer (or similar agent as applicable) in writing of all soil or drainage conditions which the Contractor considers detrimental to the growth of the plant material.
- 7. GUARANTEE OF PLANT MATERIALS AND GROWTH : All plants and trees shall be guaranteed by the Contractor to be in vigorous growing condition. Provision shall be made for a growth guarantee of at least one year for trees, and a minimum of one growing season for shrubs. Replacements shall be made at the beginning of the first succeeding planting season
- 8. All plant substitutions are to be verified with the Municipal Engineer (or similar agent as applicable) prior to purchase and installation.
- 9. All trees over six feet in height are to be staked at time of installation. All street trees (as applicable) shall be located minimum of four (4) feet from the sidewalk in the front lawn area, and shall be spaced an average of fifty (50) feet apart unless indicated otherwise in this plan set.
- 10. All landscape areas, either newly created or in existing areas that require repair shall be provided with a 4" thick minimum topsoil layer if none less than 4" are present and shall be temporarily seeding during construction at the rates and applications as specified in the 'Temporary Stabilization Specs' notation of the Soil Erosion and Sediment Control Details within this plan set. If lawns are to be provided, seed at the rates and applications as specified in the 'Permanent Stabilization Specs' notation of the soil erosion and sediment control details within this plan set.
- 11. All side slopes and bottoms of intermittent water-containing structures (such as grassed waterways or detention basins, if applicable) shall be provided with 6" thick minimum topsoil layers and shall be seeding at the rates and applications as specified in the 'Intermittent Waterways - Permanent Seeding Specs' notation of the Soil Erosion and Sediment Control Details within this plan set.
- 12. The Contractor shall lime, fertilize and mulch all landscape areas at the rate specified by the Soil Erosion and Sediment Control Permanent Stabilization notes within this plan set.
- 13. It is the Contractor's responsibility to determine soil acidity levels of the underlying soils of the new lawn areas. A PH level of 4 or less will require a new 12" minimum layer of soil with a PH of 5 or greater before the topsoil is applied. The acidic underlying soil shall either be ameliorated by scarifying 12" of the soil and adding limestone until the soil is no longer acidic or a new layer will be applied on top, which ever is most applicable.
- 14. No soil shall be placed atop the planting rootball and the root collar must be exposed. Wire baskets and the top $\frac{1}{4}$ of jute burlap are to be removed prior to backfilling the planting pit. Any material other than jute burlap must be removed completely. The sub-soil should not be disturbed directly under the root ball platfor
- 15. The Contractor shall fertilize all landscaping plant material with 5-10-5 fertilizer, or approved equal, at the rate specified by the manufacturer.
- 16. All tree pits, plant beds and ground cover areas shall be mulched to a 3-inch depth (after settlement) with shredded hardwood mulch. Shredded hardwood mulch with a maximum of one (1) inch of mulch shall be placed within twelve (12) inches of tree trunks. The mulch should not come in contact with the trunk or the root collar. The mulch shall have no leaves, weeds, branches, shavings, twigs over $\frac{1}{2}$ " diameter, or foreign material such as stones,
- 17. All water applied to planted or lawn areas shall be free from impurities harmful to vegetation and applied at a rate of five gallons of water per square yard of plant pit. all watering is the responsibility of the applicant.
- 18. Backfill material for raised plant beds shall consist of natural loam topsoil, free from subsoil, and shall be obtained from an area which has never been stripped. opsoil shall have been removed from a depth of no more than 1 foot, or less if subsoil is encountered. Topsoil shall be of uniform auality, free from hard clods, stiff clay hard pan, sods, partially disintegrated stone, lime cement, tar residues, chips or any other undesirable material.
- 18. All proposed trees (as applicable) should be provided with anchoring and stakes. Anchoring must be cord made of strong, soft fabric material (NO WIRE). All anchoring and stakes must be removed after one (1) year.
- 19. Areas disturbed by landscape operations shall be graded to match existing. Topsoil and seed as required.
- 20. Provide Tree protection fencing as specified in the Soil Erosion and Sediment Control Details within this plan set.
- 21. Plant material shown in a mass or touching each other shall be allowed to grow together to perform as a screen or hedge. DO NOT PRUNE OR SHEAR INTO INDIVIDUAL FREE-STANDING PLANTS OR TREES!!!
- 22. FALL HAZARD NOTES: All plant materials that are known or suspected to have a Fall Planting Hazard shall be dug, transplanted and installed during the Spring Planting seasor The following plant species are known to have a Fall Planting Hazard:

-	Acer rubrum & vars.	Platanus acerifolia
	Betula varieties	Prunus – all stone fruits
	Carpinus varieties	Pyrus – all pears
	Cornus varieties	Quercus - all oaks
	Crataegus varieties	Salix – weeping varieties
	Koelreuteria	Styrax japonica
	Liquidambar styraciflua	Tilia tomentosa
	Liriodendron tulipifera	Zelkova varieties
	Magnolia varieties	

- 23. This drawing is to be used for Landscaping development purposes only.
- 24. All landscaping procedures and applications as indicated in this plan set shall be performed in strict compliance with the Standards for Soil Erosion and Sediment Control in New Jersey.







PLANT LIST

QUAN.	BOTANICAL NAME	COMMON NAME	PLANTING SIZE	REMARKS
8	Ginko biloba	Maidenhair Tree	2.5" Cal.	B&B

NOTE: ALL ELEVATIONS ARE BASED ON AN ASSUMED DATUM.

SLIE A. WALKER III, PE	DA
DFESSIONAL ENGINEER	
V JERSEY LICENSE NUMBER: 24GE04729700	

PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION (reference: Section 4-1, The Standards for Soil Erosion and Sediment Control in NJ, 7th Edition, January 2014)

Site Preparation

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

Seedbed Preparation

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

Seeding

- A. Select a mixture from Table 4-3 or use a mixture recommended by Rutgers Cooperative Extension or Natural Resources Conservation Service which is approved by the Soil Conservation District. Seed germination shall have been tested within 12 months of the planting date. No seed shall be accepted with a germination test date more than 12 months old unless retested.
- 1. Seeding rates specified are required when a report of compliance is requested prior to actual establishment of permanent vegetation. Up to 50% reduction in rates may be used when permanent vegetation is established prior to a report of compliance inspection. These rates apply to all methods of seeding. Establishing permanent vegetation means 80% vegetative coverage with the specified seed mixture for the seeded area and mowed once.
- 2. Warm-season mixtures are grasses and legumes which maximize growth at high temperatures, generally 85° F and above. See Table 4-3 mixtures 1 to 7. Planting rates for warm-season grasses shall be the amount of Pure Live Seed (PLS) as determined by germination testing results.
- 3. Cool-season mixtures are grasses and legumes which maximize growth at temperatures below 85°F. Many grasses become active at 65° F. See Table 4-3, mixtures 8-20. Adjustment of planting rates to compensate for the amount of PLS is not required for cool season grasses.
- B. Conventional Seeding is performed by applying seed uniformly by hand, cyclone (centrifugal) seeder, drop seeder, drill or cultipacker seeder. Except for drilled, hydroseeded or cultipacked seedings, seed shall be incorporated into the soil within 24 hours of seedbed preparation to a depth of 1/4 to 1/2 inch, by raking or dragging. Depth of seed placement may be 1/4 inch deeper on coarse-textured soil. C. After seeding, firming the soil with a corrugated roller will assure good seed-to-soil contact, restore capillarity, and improve seedling emergence. This is the preferred method. When performed on the contour, sheet erosion will be minimized and water conservation on site
- will be maximized. D. Hydroseeding is a broadcast seeding method usually involving a truck, or trailer-mounted tank, with an agitation system and hydraulic pump for mixing seed, water and fertilizer and spraying the mix onto the prepared seedbed. Mulch shall not be included in the tank with seed. Shortfibered mulch may be applied with a hydroseeder following seeding (also see Section 4-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.

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. Refer to the detail "EXPOSED SOILS STABILIZED WITH MULCH ONLY DURING NON-GROWING SEASON & FOR FASTER ESTABLISHMENT" for application specifications

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.

Topdressing

Since soil organic matter content and slow release nitrogen fertilizer (water insoluble) are prescribed in Section 2A - Seedbed Preparation in this Standard, no follow-up of topdressing is mandatory. An exception may be made where gross nitrogen deficiency exists in the soil to the extent that turf failure may develop. In that instance, topdress with 10-10-10 or equivalent at 300 pounds per acre or 7 pounds per 1,000 square feet every 3 to 5 weeks until the gross nitrogen deficiency in the turf is ameliorated.

Establishing Permanent Vegetative Stabilization

The quality of permanent vegetation rests with the contractor. The timing of seeding, preparing the seedbed, applying nutrients, mulch and other management are essential. The seed application rates in Table 4-3 are required when a Report of Compliance is requested prior to actual establishment of permanent vegetation. Up to 50% reduction in application rates may be used when permanent vegetation is established prior to requesting a Report of Compliance from the district. These rates apply to all methods of seeding. Establishing permanent vegetation means 80% vegetative cover (of the seeded species) and mowed once. Note this designation of mowed once does not guarantee the permanency of the turf should other maintenance factors be neglected or otherwise mismanaged.

TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION

(reference: Section 7-1, The Standards for Soil Erosion and Sediment Control in NJ, 7th Edition, January 2014)

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

. Seedbed Preparation

A. Apply ground limestone and fertilizer according to soil test recommendations such as offered by Rutgers Co-operative Extension. Soil sample mailers are available from the local Rutgers Cooperative Extension offices. Fertilizer shall be applied at the rate of 500 pounds per acre or 11 pounds per 1,000 square feet of 10-20-10 or equivalent with 50% water insoluble nitrogen unless a soil test indicates otherwise. Apply limestone at the minimum rate of 2 tons/acre or, if the soil testing indicates clay, clay loam and high organic soil, use 3 tons/acre. 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

B. 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 reasonable uniform seedbed is prepared.

- C. Inspect seedbed just before seeding. If traffic has left the soil compacted, the area must be retilled in accordance with the above.
- D. Soils high in sulfides or having a pH of 4 or less refer to Standard for Management of High Acid Producing Soils, pg. 1-1.

3. Seeding A. Select seed from table below

TEMPORARY SEEDING SPECIFICATIONS (PLANT HARDINESS ZONE 6B):

	•	,			
COOL SEASON GRASSES					
SEED SELECTIONS	SEEDING RATES	SEEDING DEPTH	OPTIMAL PLANTING PERIODS:		
1. PERENNIAL RYEGRASS	100 LBS./AC (1.0 LBS./1,000 SF)	0.5" (1" IN SANDY SOILS)	MARCH 1 TO MAY 15 & AUGUST 15 TO OCTOBER 1		
2. SPRING OATS	86 LBS./AC (2.0 LBS./1,000 SF)	1.0" (2" IN SANDY SOILS)	MARCH 1 TO MAY 15 & AUGUST 15 TO OCTOBER 1		
3. WINTER BARLEY	96 LBS./AC (2.2 LBS./1,000 SF)	1.0" (2" IN SANDY SOILS)	AUGUST 15 TO OCTOBER 1		
4. ANNUAL RYEGRASS	100 LBS./AC (1.0 LBS./1,000 SF)	0.5" (1" IN SANDY SOILS)	MARCH 15 TO JUNE 1 & AUGUST 1 TO SEPTEMBER 15		
5. WINTER CEREAL RYE	112 LBS./AC (2.8 LBS./1,000 SF)	1.0" (2" IN SANDY SOILS)	AUGUST 1 TO NOVEMBER 15		
WARM SEASON GRASSES					
SEED SELECTIONS	SEEDING RATES	SEEDING DEPTH	OPTIMAL PLANTING PERIODS:		
6. PEARL MILLET	20 LBS./AC (0.5 LBS./1,000 SF)	1.0" (2" IN SANDY SOILS)	MAY 15 TO AUGUST 15		
7. MILLET (GERMAN OR HUNGARIAN)	30 LBS./AC (07 LBS./1,000 SF)	1.0" (2" IN SANDY SOILS)	MAY 15 TO AUGUST 15		

1. Seeding rate for warm season grass, selections 5 - 7 shall be adjusted to reflect the amount of Pure Line Seed (PLS) as determined by a germination test result. No adjustment is required for cool season grasses. 2. May be planted throughout summer if soil moisture is adequate or seeded area can be irrigated.

3. Plant Hardiness Zone. (see figure 7-1, pg. 7-4)

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

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

D. After seeding, firming the soil with a corrugated roller will assure good seed-to-soil contact, restore capillarity, and improve seedling emergence. This is the preferred method. When performed on the contour, sheet erosion will be minimized and water conservation on site will be maximized. 4. Mulching

Mulching is required on all seeding. Mulch will 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. Refer to the detail "EXPOSED SOILS STABILIZED WITH MULCH ONLY DURING NON-GROWING SEASON & FOR FASTER ESTABLISHMENT" for application specifications.

SITE CONDITIONS:

SITE CONSISTS OF MOSTLY UDORTHENTS URBAN LAND COMPLEX SOMEWHAT WELL DRAINED SOIL USDA PLANT HARDINESS ZONE 6A

(FOR LAWN AREAS)	
<u>RE</u>	PLANTING RATES
EGRASS EEPING RED FESCUE	90 LBS./AC (2.0 LBS./1,000 SF) 130 LBS./AC (3.0 LBS./1,000 SF)
ANTING PERIODS:	ACCEPTABLE PLANTING PERIODS:
TO OCTOBER 15	MARCH 1 TO APRIL 30 OR MAY 1 TO AUGUST 14* (SEE REMAR
<u>CE LEVEL</u> : (C-D)	

LAWN/RECREATION AREAS. PREFERABLY MOIST SHADE. FOR SUMMER SEEDINGS, SITE MUST BE IRRIGATED.

,	
SEED MIXTURE	PLANTING RATES
SPARTAN II HARD FESCUE	120 LBS/AC (2.5 LBS/1,000 S
AZAY SHEEP FESCUE	100 LBS/AC (2.0 LBS/1,000 \$
TRANSIST INTERMEDIATE RYEGRASS	40 LBS/AC (0.4 LBS/1,000 S
OPTIMAL PLANTING PERIODS: AUGUST 1 TO OCTOBER 1	ACCEPTABLE PLANTING PERIOD MARCH 15 TO MAY 31 JUNE 1 TO JULY 31
MAINTENANCE LEVEL: (D)	JUNE I TO JUET ST
REMARKS: TYPICALLY A COOL SEASON	MIXTURE, INTENDED FOR REMOTE LA

(1010)	
1.	The Freehold Soil Conservation District shall be notified forty-eight (48) hours
soil d	isturbing activity.

blocked off.

employed

settled soil with a pH of 5 or more, or 24" where trees or shrubs are to be planted.

becoming operational.

4000 Kozloski Road, Freehold, NJ 07728-5033

fax: (732) 683-9140

ECURE THE TWINE. REFER TO DETAIL BELOW.

