

PRELIMINARY AND FINAL MAJOR SITE PLAN

PREPARED FOR:

PINE BELT NISSAN

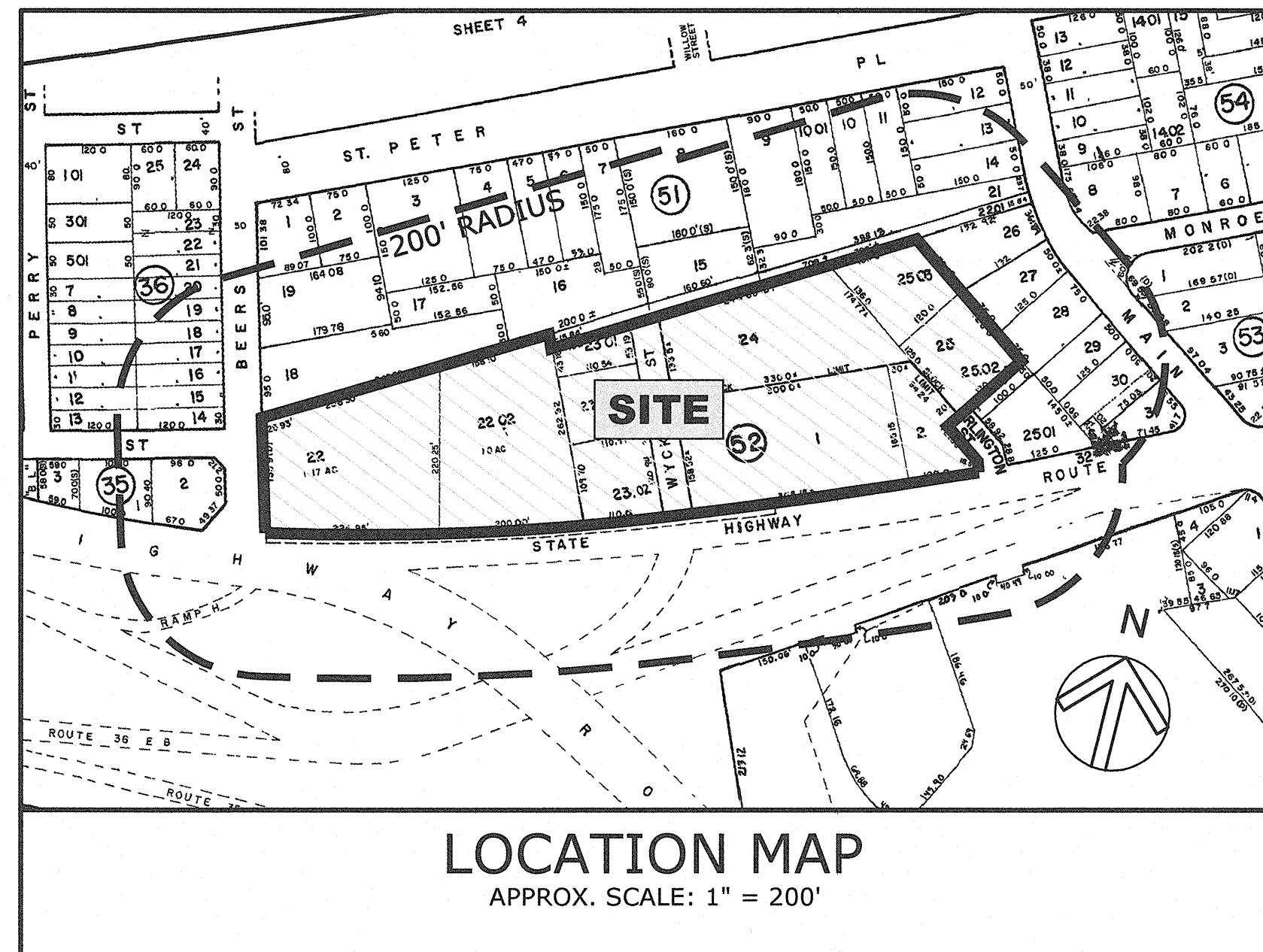
LOTS 1 & 2 - BLOCK 52

LOTS 22, 22.02, 23.02, 23.03, 24, 25 & 25.03 - BLOCK 51

BOROUGH OF KEYPORT
MONMOUTH COUNTY - NEW JERSEY
TAX MAP SHEET 2 - DATED 01/07/1995

BLOCK	LOT	ADDRESS	51	13	HENNERBERGER, JAMES A. 324 MAIN STREET KEYPORT, NJ 07735
35	1	SVENSON, HARRY W & LISA 49 BROWER DRIVE BRICK, NJ 08723	51	14	COUNTS, CURTIS & HELMS JAMIE 320 MAIN KEYPORT, NJ 07735
35	2	TRICON MANAGEMENT LLC 322 BEERS ST KEYPORT, NJ 07735	51	16	CADDE, JACK & APOLLO PLUMBING 110 WEST FRONT ST KEYPORT, NJ 07735
36	11	MANETTO, CARLO S 201 FIRST AVE MANASQUAN, NJ 08736	51	18.01	GALLO, JAMES 316 BEERS STREET KEYPORT, NJ 07735
36	14	GENOVESE, SALVATORE & DEBRA 320 BEERS STREET KEYPORT, NJ 07735	51	18.02	GREISS, ANTON 317 BEERS ST KEYPORT, NJ 07735
36	11	MANETTO, CARLO S 201 FIRST AVE MANASQUAN, NJ 08736	51	19	EPA ENTERPRISES, LLC 313 BEERS STREET KEYPORT, NJ 07735
36	14	GENOVESE, SALVATORE & DEBRA 320 BEERS STREET KEYPORT, NJ 07735	51	22.01	BOROUGH OF KEYPORT 70 WEST FRONT STREET KEYPORT, NJ 07735
36	16	LOPACZ, JAMES A & LAURIE 316 BEERS KEYPORT, NJ 07735	51	22.02	417 ASSOCIATES LLC LOUIS TREBINO-PO BOX 309 TOMS RIVER, NJ 08754
36	18	PERELLA, DANIEL V 316 BEERS KEYPORT, NJ 07735	51	25	417 ASSOCIATES LLC C/O 71 ROUTE 37 EAST TOMS RIVER, NJ 08754
51	1	MELL, SAMUEL JR 309 BEERS KEYPORT, NJ 07735	51	25.01	103 HWY 35, LLC 103 HIGHWAY 35 KEYPORT, NJ 07735
51	2	VENTURA, ERIC & GIANNONE, LAURIE 92 ST PETER PLACE KEYPORT, NJ 07735	51	25.02	PRENDERGAST, JAMES & ROSE MARIE 340 MAIN ST KEYPORT, NJ 07735
51	3.01	BROCKUP, DAWN 80 ST. PETERS PLACE KEYPORT, NJ 07735	51	26	STATES, RICHARD E. & POINT, JEAN 324 MAIN STREET KEYPORT, NJ 07735
51	3.02	LUCARELLO, VICTOR 88 ST PETERS PLACE KEYPORT, NJ 07735	51	27.01	SCAROLLA, ANTHONY 338 MAIN ST KEYPORT, NJ 07735
51	4	DAMATO, LOUIS 84 ST. PETERS PLACE KEYPORT, NJ 07735	51	27.02	GWYNN, JESSICA P 338 MAIN ST KEYPORT, NJ 07735
51	5	PALEGGI, VICTOR & DAWN 82 ST PETERS PLACE KEYPORT, NJ 07735	51	28	PRENDERGAST, JAMES & ROSE MARIE 340 MAIN KEYPORT, NJ 07735
51	6	MARCELLANO, JOHN & ANN MARIE HAW 80 ST PETERS PLACE KEYPORT, NJ 07735	51	29	COLE, JOSEPH W. & DOROTHY S. 340 MAIN KEYPORT, NJ 07735
51	7	DISTASI, FRANK & AMBER 78 ST. PETERS PLACE KEYPORT, NJ 07735	52	1	417 ASSOCIATES- A N J PARTNERSHIP PO BOX 309 TOMS RIVER, NJ 08754
51	8	GALLO, THOMAS 50 ST. PETERS PLACE KEYPORT, NJ 07735	52	2	417 ASSOCIATES, L.L.C. 71 ROUTE 37 EAST TOMS RIVER, NJ 08754
51	9	RALPH, WILLIAM A. & JULIA C. 70 ST PETER KEYPORT, NJ 07735	54	8	MULTAY, STEVEN D 327 MAIN STREET KEYPORT, NJ 07735
51	10	WATTENBERG, LANA 20 ST. PETER KEYPORT, NJ 07735	110	27.01	BLDG KEYPORT LLC & WREN KEYPORT 417 8 TH ST 4 TH FLOOR NEW YORK, NY 10016
51	10.01	GRAHAM, ELMER J JR 22 ST. PETER KEYPORT, NJ 07735	110	27.01	BLDG KEYPORT LLC & WREN KEYPORT 417 8 TH ST 4 TH FLOOR NEW YORK, NY 10016
51	11	WEIGAND, MARGARET E 18 ST PETER PLACE KEYPORT, NJ 07735	110	27.02	BLDG KEYPORT LLC & WREN KEYPORT 417 8 TH ST 4 TH FLOOR NEW YORK, NY 10016
51	12	SMITH, MICHAEL V & MELUSSAM 318 MAIN ST KEYPORT, NJ 07735	110	27.03	BLDG KEYPORT LLC & WREN KEYPORT 417 8 TH ST 4 TH FLOOR NEW YORK, NY 10016

200' PROPERTY OWNERS



LOCATION MAP
APPROX. SCALE: 1" = 200'

PROJECT ATTORNEY:
JOHN A. GIUNCO, ESQ.
GIORDANO, HALLERAN & CIESLA
125 HALF MIDE ROAD
MIDDLETOWN, N.J. 07748
TEL. NO. 732-741-3900

PROJECT SURVEYOR:
YORKANIS & WHITE, INC.
23 VILLAGE COURT
HAZLET, NJ 07730

GENERAL NOTES:

- PROPERTY BEING KNOWN AS LOTS 1 AND 2 OF BLOCK 52 AND LOTS 22, 22.02, 23.03, 24, 25 & 25.03 OF BLOCK 51 AS SHOWN ON SHEET 2 OF THE CURRENT OFFICIAL TAX MAP OF THE BOROUGH OF KEYPORT (SHEET 2 REVISED THROUGH JANUARY 7, 1995).
- PRELIMINARY/FINAL MAJOR SITE PLAN APPROVAL IS HEREBY REQUESTED FOR THE DEVELOPMENT OF THE SUBJECT SITE. THE SITE PLAN WILL BE IN TWO PHASES: PHASE 1 CONSISTS OF THE DEMOLITION OF EXISTING SIGNS AND THE CONSTRUCTION OF NEW SIGNAGE ALONG ROUTE 35; THE CONSTRUCTION OF AN EV CHARGING AREA WILL TAKE PLACE IN PHASE 1. PHASE 2 CONSISTS OF THE EXISTING BUILDING DEMOLITION AND THE CONSTRUCTION OF A PAVED PARKING AREA.
- THE SUBJECT PROPERTY IS LOCATED WITHIN THE HIGHWAY COMMERCIAL DISTRICT (HC) ZONE.
- BOUNDARY AND TOPOGRAPHICAL INFORMATION SHOWN HEREON TAKEN FROM "BOUNDARY & TOPOGRAPHICAL SURVEY MAP OF PROPERTY KNOWN AS LOTS 22, 22.02, 23.02, 23.03, 24, 25 & 25.03 IN BLOCK 51 AND LOTS 1 & 2 IN BLOCK 52, BOROUGH OF KEYPORT, MONMOUTH COUNTY, NEW JERSEY" PREPARED BY JOHN T. LUTS, PLS OF YORKANIS & WHITE, INC ON APRIL 18, 2022, AND CERTIFIED TO KENNEDY CONSULTING ENGINEERS, LLC.
- PROPERTY OWNER/ APPLICANT:
JOE HILL / PINEBELT NISSAN, INC.
71 ROUTE 37 EAST
TOMS RIVER, NJ 08754
- UTILITIES:
WATER SERVICE: BOROUGH OF KEYPORT WATER/SEWER DEPARTMENT
SEWER SERVICE: BOROUGH OF KEYPORT WATER/SEWER DEPARTMENT
TELEPHONE SERVICE: VERIZON
ELECTRIC SERVICE: JERSEY CENTRAL POWER & LIGHT
CABLE TELEVISION: CABLEVISION
GAS SERVICE: NEW JERSEY NATURAL GAS COMPANY

ZONING SUMMARY: LOTS 1 & 2 IN BLOCK 52, LOTS 22, 22.02, 23.02, 23.03, 24, 25 & 25.03 IN BLOCK 51 - HC ZONE

DESCRIPTION	REQUIRED	EXISTING	PROPOSED
MIN LOT AREA	10,000 SF	5.44 AC	5.44 AC
MIN LOT WIDTH	100 FT	963 FT	963 FT
PRINCIPAL STRUCTURE:			
MIN FRONT SETBACK	50 FT	46.2 FT	71.7 FT
MIN SIDE SETBACK (ONE)	6 FT	9.8 FT	50 FT
MIN SIDE SETBACK (BOTH)	16 FT	59.8 FT	178.2 FT
MIN REAR YARD	20 FT	50 FT	50 FT
MAX. HEIGHT	40 FT / 3-1/2 STORIES	2 STORIES	2 STORIES
MAX. LOT COVERAGE	90%	51.7% (122,897 SF)	53.9% (127,861 SF)
MAX. BLDG COVERAGE	35%	13.5% (32,048 SF)	12.3% (29,169 SF)
OFF-STREET PARKING	1/1000 SF + 1/2 EMPL. = 61 SPACES*	234 SPACES	289 SPACES
ACCESSORY STRUCTURE:			
MIN SIDE SETBACK (ONE)	6 FT	20.6 FT	20.6 FT
MIN REAR YARD SETBACK	16 FT	3.3 FT	3.3 FT
MAX. HEIGHT	16 FT	18.3 FT	18.3 FT

*OFF-STREET PARKING CALCULATION:
(27,840 SF*1/1000 SF) + (65 EMPL*1/2 EMPL.) = 61 SPACES
EXISTING
NONCONFORMANCE

INDEX OF SHEETS

	FILE	NO.	PLAN DATE
TITLE SHEET	TS-1	1 OF 6	02/22/23
EXISTING CONDITIONS & PHASING PLAN	EX-1	2 OF 6	02/22/23
LAYOUT, GRADING & UTILITY PLAN	LP-1	3 OF 6	02/22/23
LIGHTING PLAN	LI-1	4 OF 6	02/22/23
SOIL EROSION & SEDIMENT CONTROL PLAN	SE-1	5 OF 6	02/22/23
SOIL EROSION CONTROL NOTES	SESC-1	6 OF 6	02/22/23

SITE PLAN OF:
BLOCK: _____ LOT: _____ ZONE: _____
DATE: _____ SCALE: _____
APPLICANT: _____
ADDRESS: _____

I CONSENT TO THE FILING OF THIS SITE PLAN WITH THE
PLANNING BOARD:

(OWNER) (DATE)
I HEREBY CERTIFY THAT I HAVE PREPARED THE SITE PLAN AND THAT
ALL DIMENSIONS AND INFORMATION THEREON DEPICTED IS CORRECT.

(NAME) (TITLE & LICENSE)
I HAVE REVIEWED THIS SITE PLAN AND CERTIFY THAT IT MEETS ALL
CODES AND ORDINANCES UNDER THAT JURISDICTION.

(DATE) (MUNICIPAL ENGINEER)

APPROVED BY PLANNING BOARD:

PRELIMINARY: _____

FINAL: _____

(CHAIRMAN) (DATE)

SIGNAGE INFORMATION

ALLOWABLE SIGNAGE (ORDINANCE 25-1-17):

BUILDING MOUNTED SIGNS:

100 S.F. OR 10% OF TOTAL AREA OF BUILDING WALL

FRONT ELEVATION AREA: 3,909 S.F. (100 S.F. ALLOWED)
SERVICE ELEVATION AREA: 825 S.F. (82.5 S.F. ALLOWED)

PROPOSED MOUNTED SIGNS:

FRONT ELEVATION: 319.67 S.F. (VARIANCE REQUIRED)
SERVICE ELEVATION: 34.11 S.F. (COMPLIES)

FREE STANDING SIGNS:

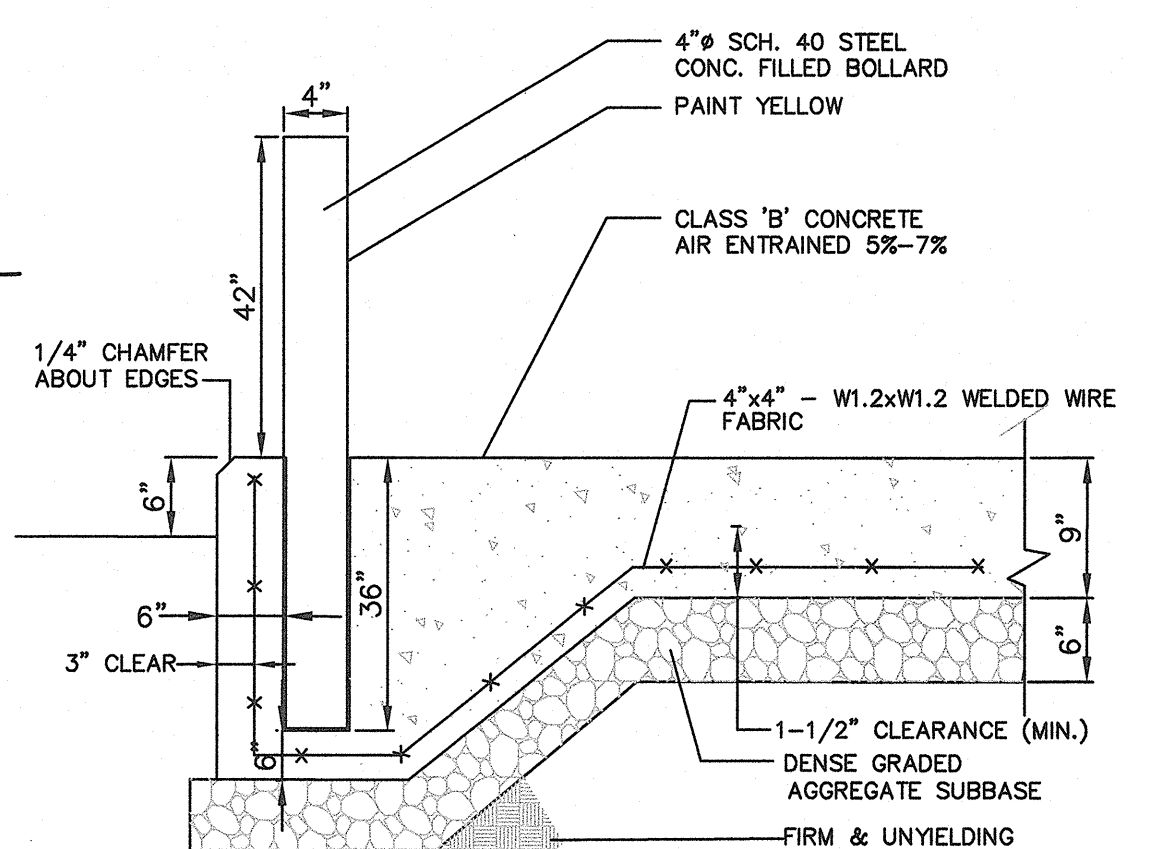
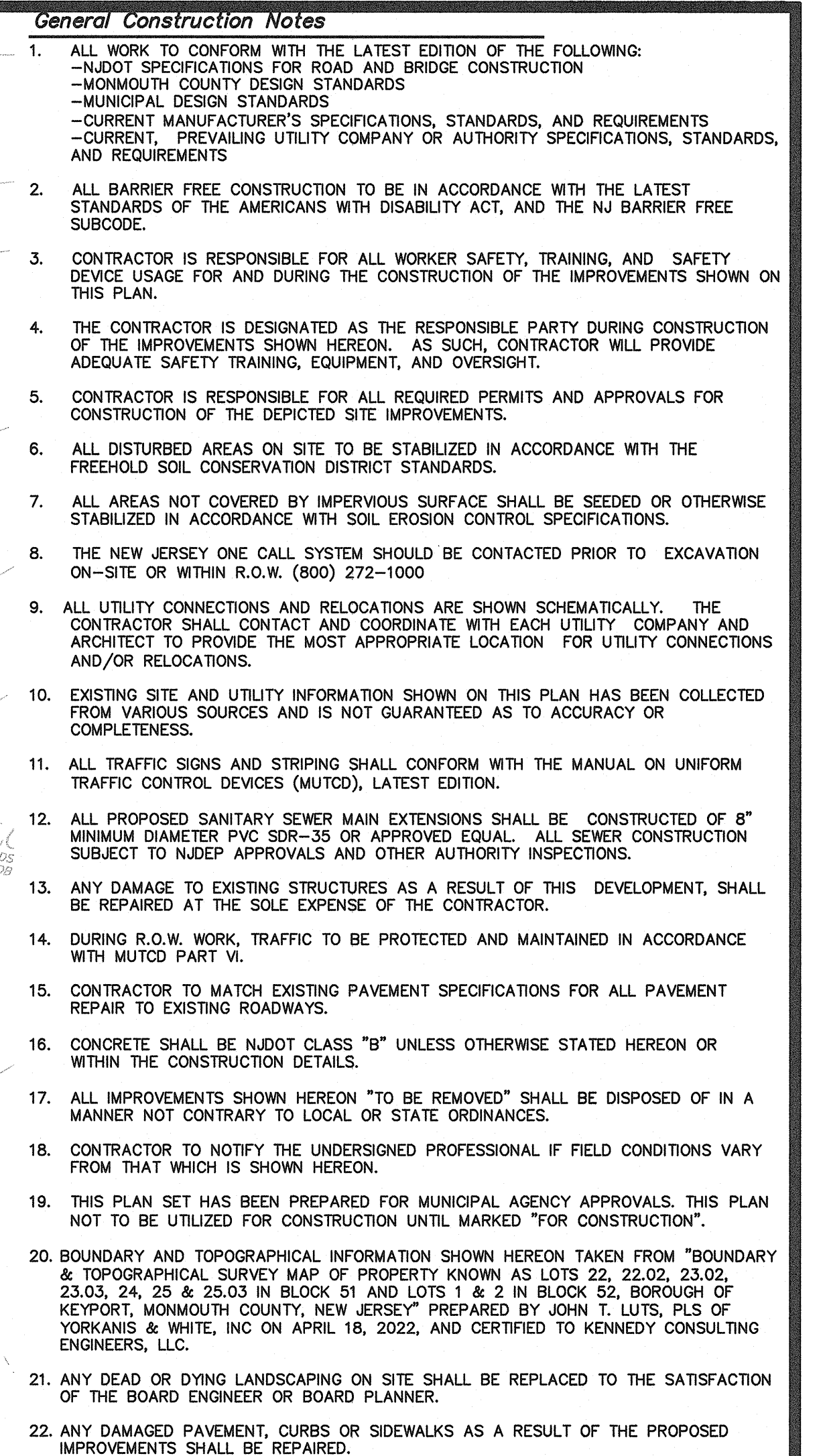
25 FT HEIGHT OR THE HEIGHT OF THE PRINCIPAL BUILDING

PROPOSED FREESTANDING SIGNS:

CERTIFIED PRE-OWNED TOTEM SIGN: 9.81 FT (COMPLIES)
MAIN BRAND PYLON SIGN: 35 FT (VARIANCE REQUIRED)
GROUND DIRECTIONAL SIGNS (2): 4.36 FT (COMPLIES)

*SEE ARCHITECTURAL PLANS ENTITLED "PROPOSED ALTERATIONS TO PINE
BELT NISSAN, 111 NJ-36, KEYPORT, NEW JERSEY, BLOCK 52 LOT 1,"
PREPARED BY TOKARSKI & MILLERMAN ARCHITECTS, LLC, DATED 01/13/2022

02/22/23	RESOLUTION COMPLIANCE	KTS
PRELIMINARY AND FINAL MAJOR SITE PLAN		
PINE BELT NISSAN LOTS 1 & 2 IN BLOCK 52, LOTS 22, 22.02, 23.02, 23.03, 24, 25 & 25.03 IN BLOCK 51 BOROUGH OF KEYPORT - TAX MAP SHEET 2 MONMOUTH COUNTY - NEW JERSEY		
 Kennedy Consulting Engineers, LLC 211 Maple Avenue Red Bank, New Jersey 07701 732.212.9393 TEL • 732.212.9399 FAX		TITLE SHEET 1 OF 6 FILENAME: TS-1 DRAWN BY: KTS/ARC DATE: 07/14/22
JAMES A. KENNEDY, P.E. NEW JERSEY PROFESSIONAL ENGINEER NO. 41275		DIGITAL SIGNATURE VALID FOR PDF ONLY

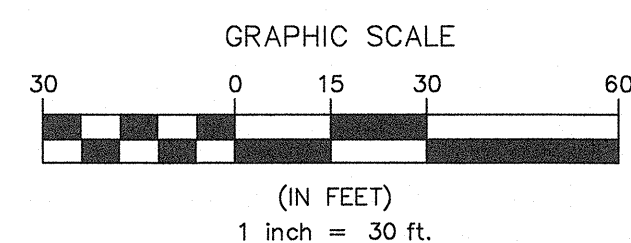


NOTES:

1. FINAL DESIGN TO BE VERIFIED PRIOR TO CONSTRUCTION.

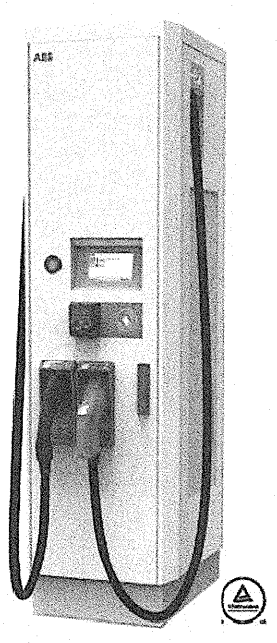
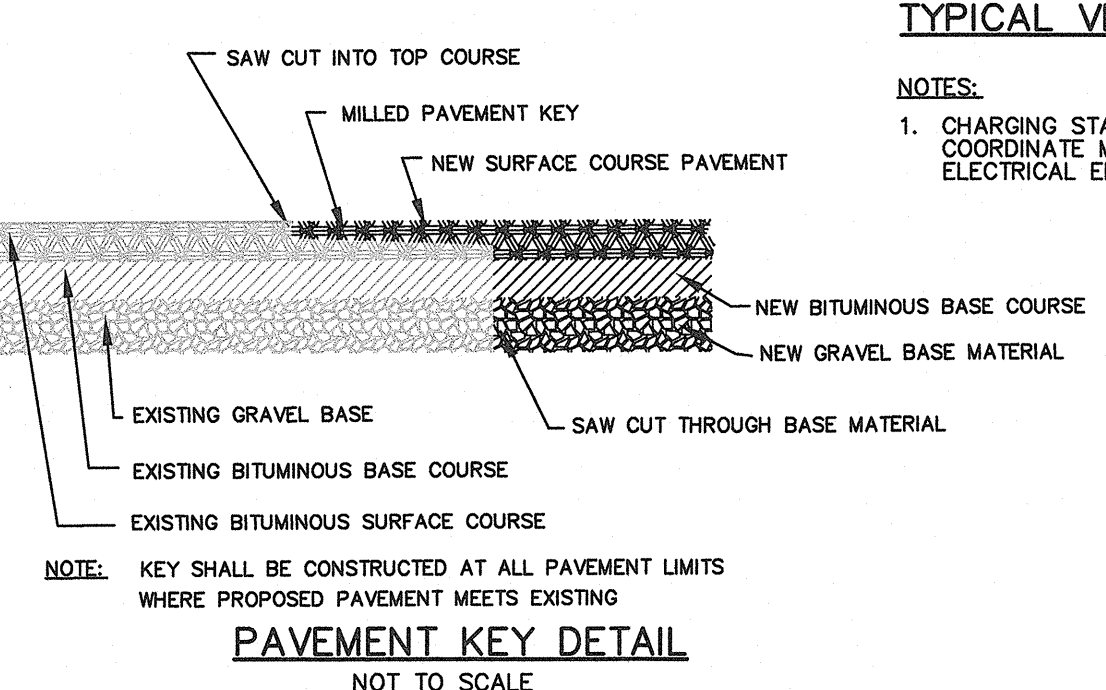
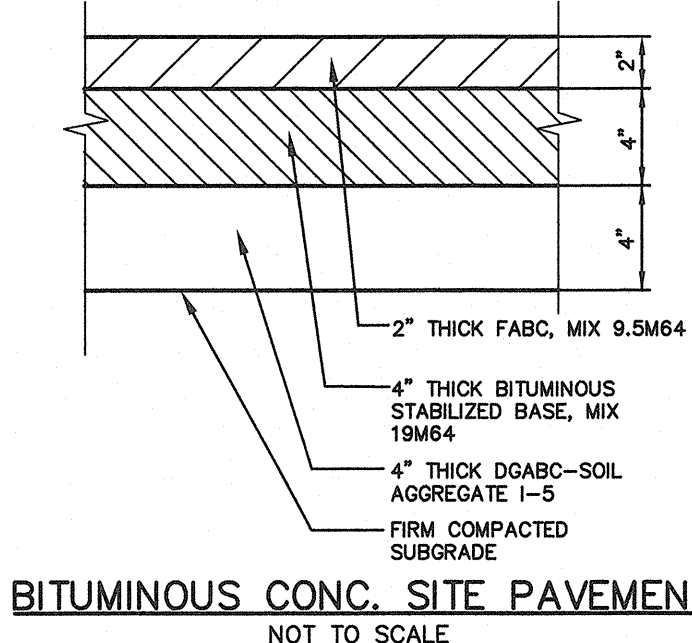
RAISED CONC. PAD DETAIL
NOT TO SCALE

02/22/23	RESOLUTION COMPLIANCE	KTS
PRELIMINARY AND FINAL MAJOR SITE PLAN		
PINE BELT NISSAN		
LOTS 1 & 2 IN BLOCK 52,		
LOTS 22, 22.02, 23.02, 23.03, 24, 25 & 25.03 IN BLOCK 51		
BOROUGH OF KEYPORT - TAX MAP SHEET 2		
MONMOUTH COUNTY - NEW JERSEY		
 COA 24GA28049700 Kennedy Consulting Engineers, LLC 211 Maple Avenue Red Bank, New Jersey 07701 732.212.9393 TEL • 732.212.9399 FAX	LAYOUT, GRADING & UTILITY PLAN	
	3 OF 6	
	FILENAME: LP-1	
	DRAWN BY: KTS/ARC	
	DATE: 07/14/22	
 JAMES A. KENNEDY, P.E. NEW JERSEY PROFESSIONAL ENGINEER NO. 41275	DIGITAL SIGNATURE VALID FOR PDF ONLY	



LEGEND

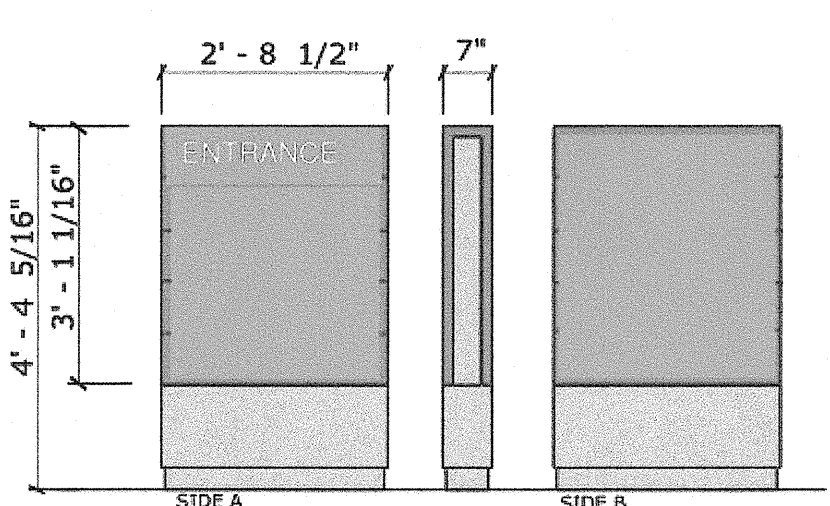
EXISTING	PROPOSED
— — — — —	— — — — —
CONTOUR	CONTOUR
LOT LINE	LOT LINE
-----	DRAINAGE PIPE
FENCE	
	STRUCTURE
-----	BUILDING SETBACK LINE
CONCRETE CURB	-----
SAN. SEWER MAIN PIPE	-----
SAN. SEWER LATERAL	
	SEWER MANHOLE
	DRAINAGE MANHOLE
	CONC. SIDEWALK
	DRAINAGE INLET
	SPOT GRADE
	ROADWAY REPAIR
	DEPRESSED CURBING
	LIGHT POLE
	WATER SUPPLY
	GAS LINE
	ELECTRIC/TELEPHONE
	CLEANOUT
	WATER VALVE



TYPICAL VEHICLE CHARGING STATION

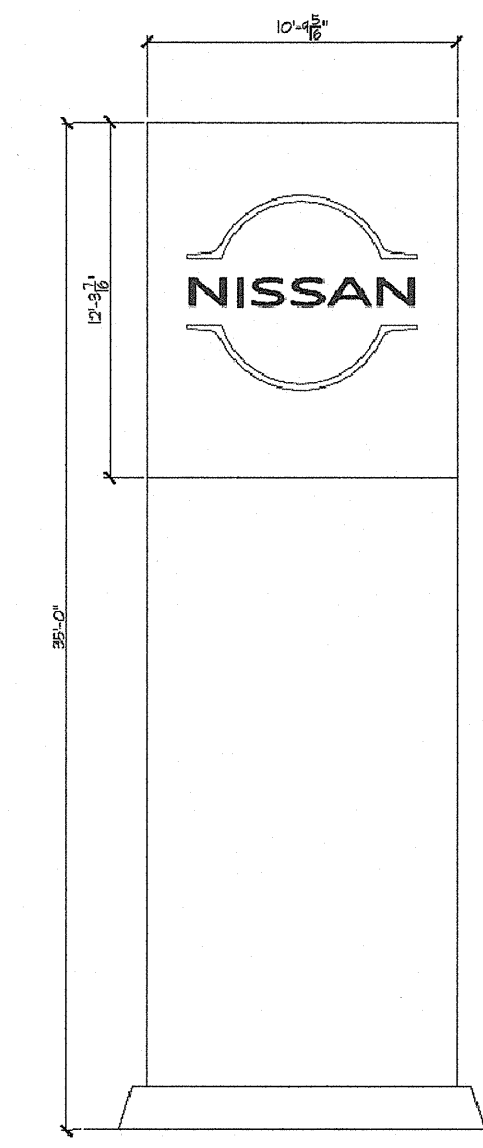
NOTES:

1. CHARGING STATION SHALL BE TERRA 54 BY INCHARGE. COORDINATE MODEL AND CONFIGURATION WITH ELECTRICAL ENGINEER.

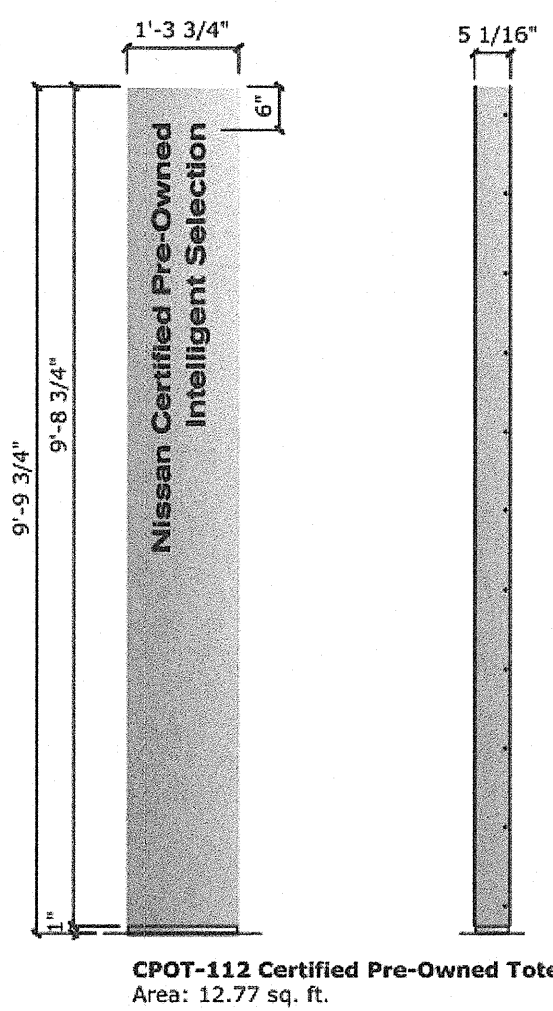


DG-4 Ground Directional
Area: 11.81 sq. ft. (Red: 8.36 sq. ft.)

DG-4 GROUND DIRECTIONAL SIGN DETAIL
NOT TO SCALE

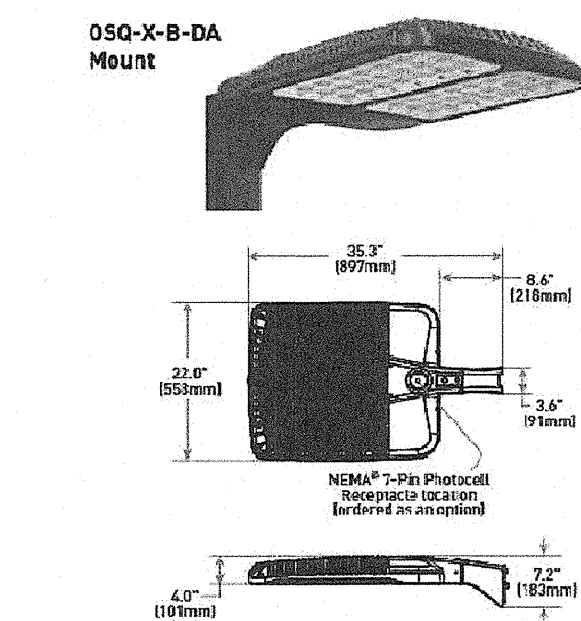
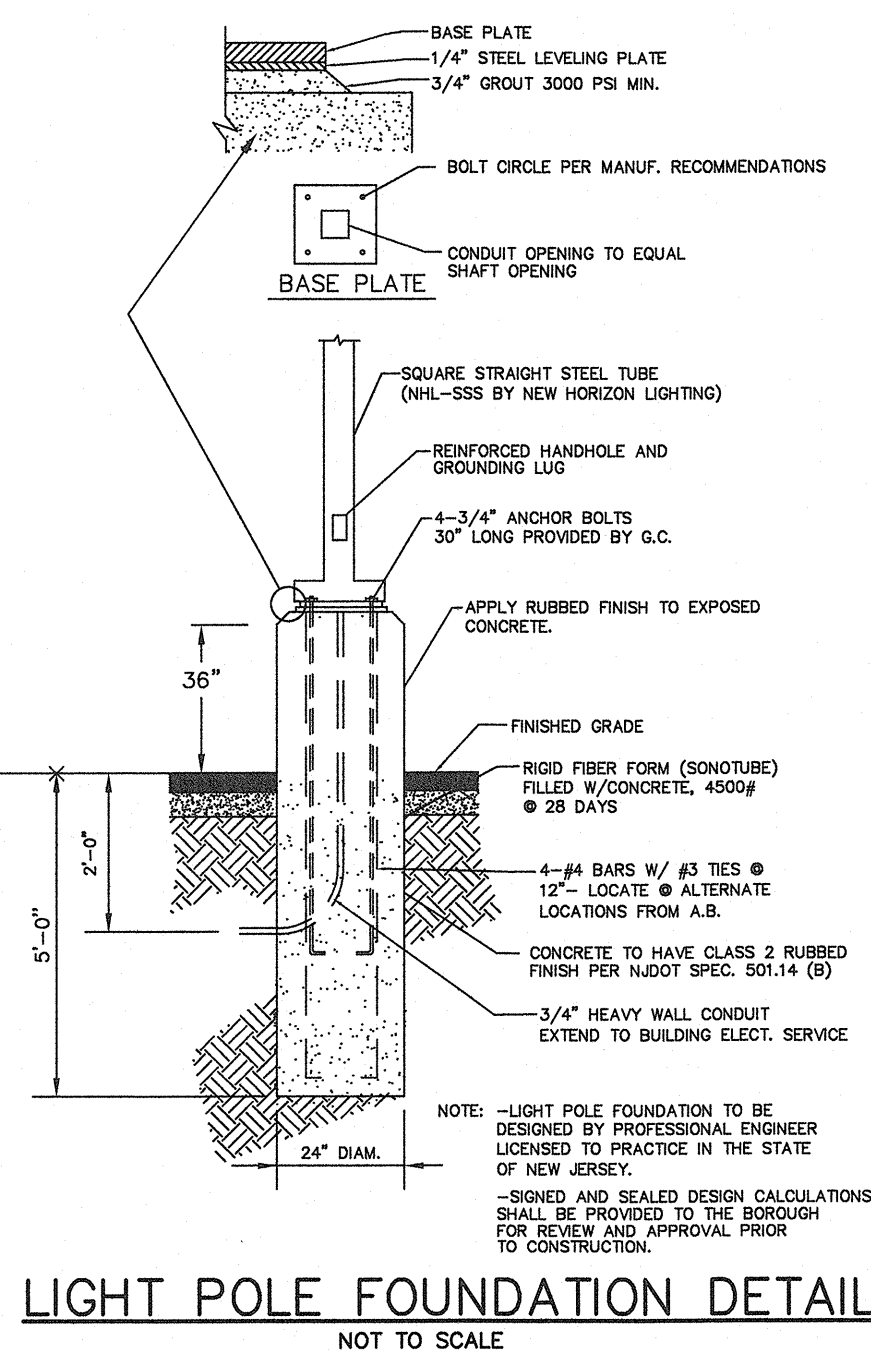
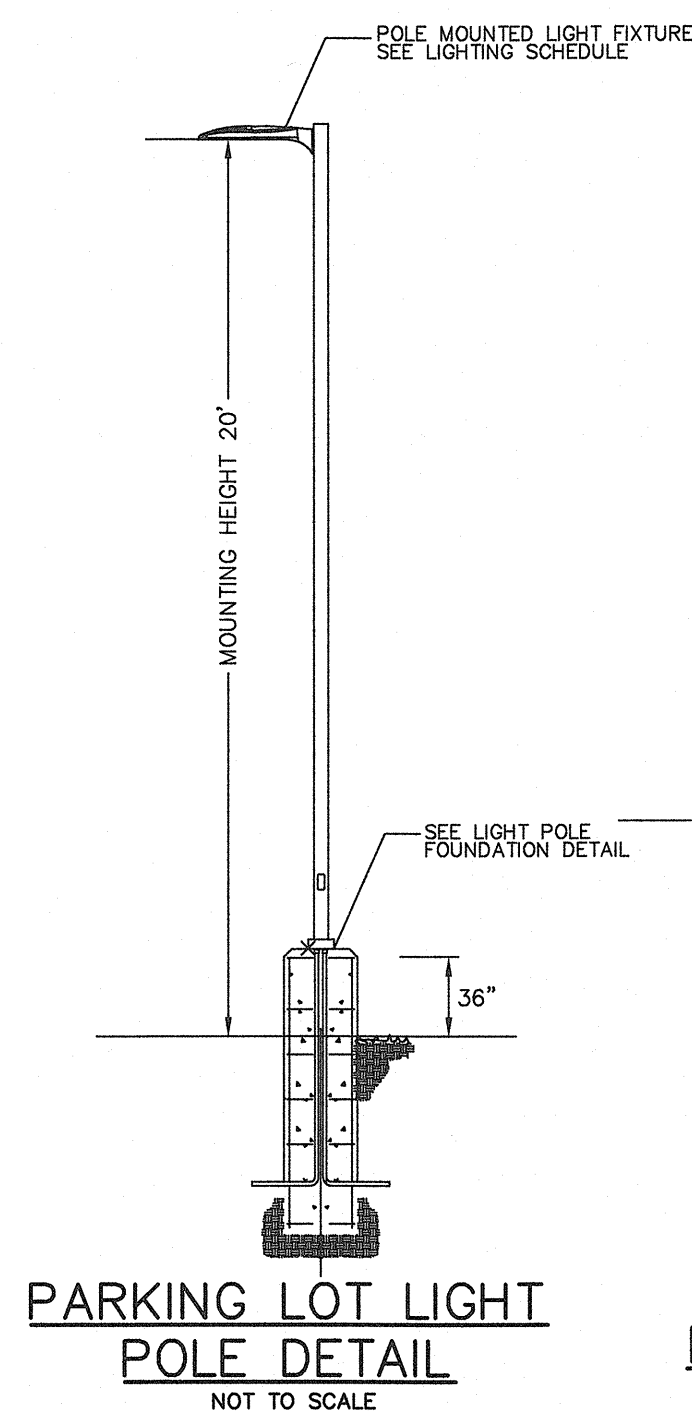
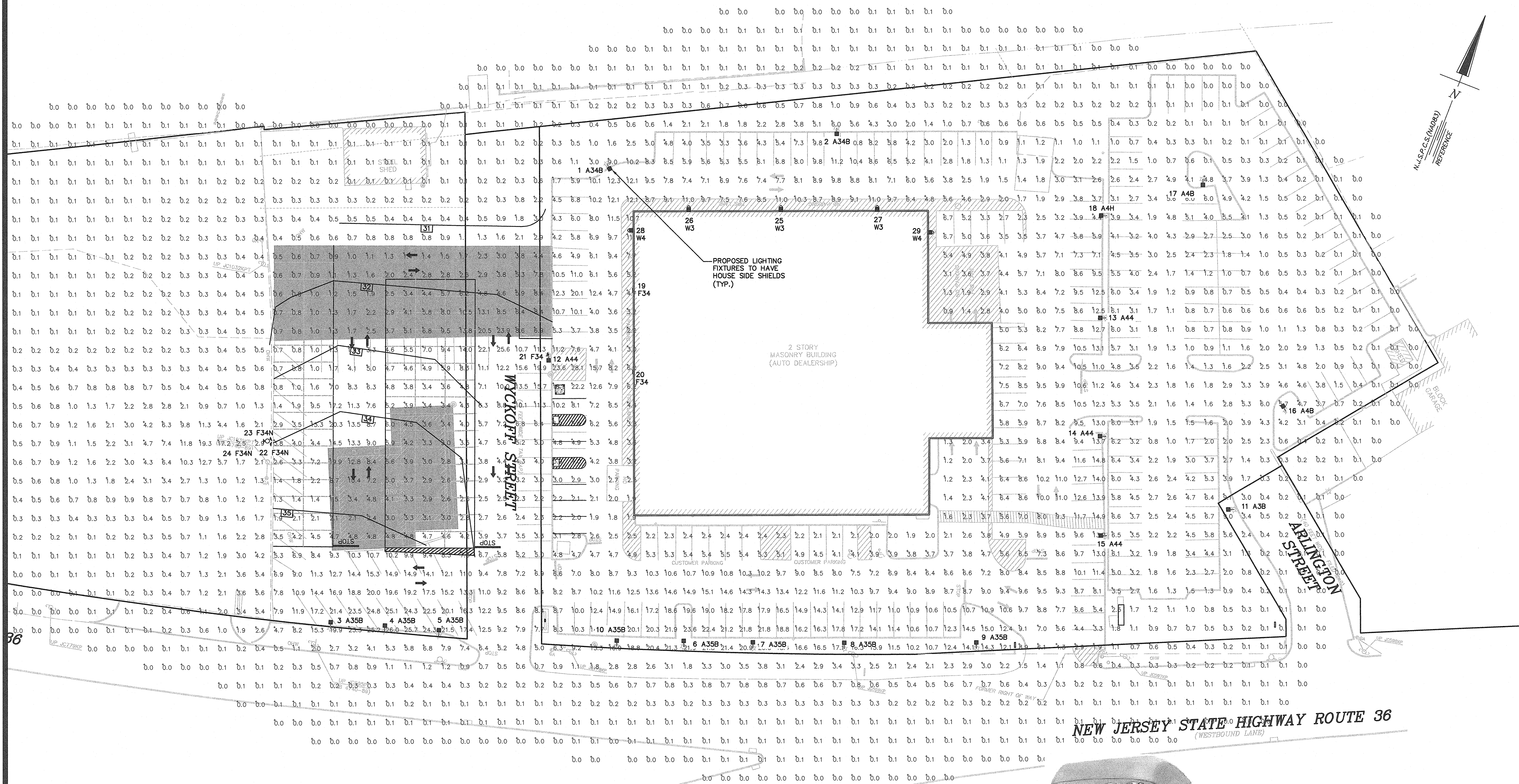


MAIN BRAND PYLON SIGN DETAIL



CPOT-112 CERTIFIED PRE-OWNED
TOTEM SIGN DETAIL
NOT TO SCALE

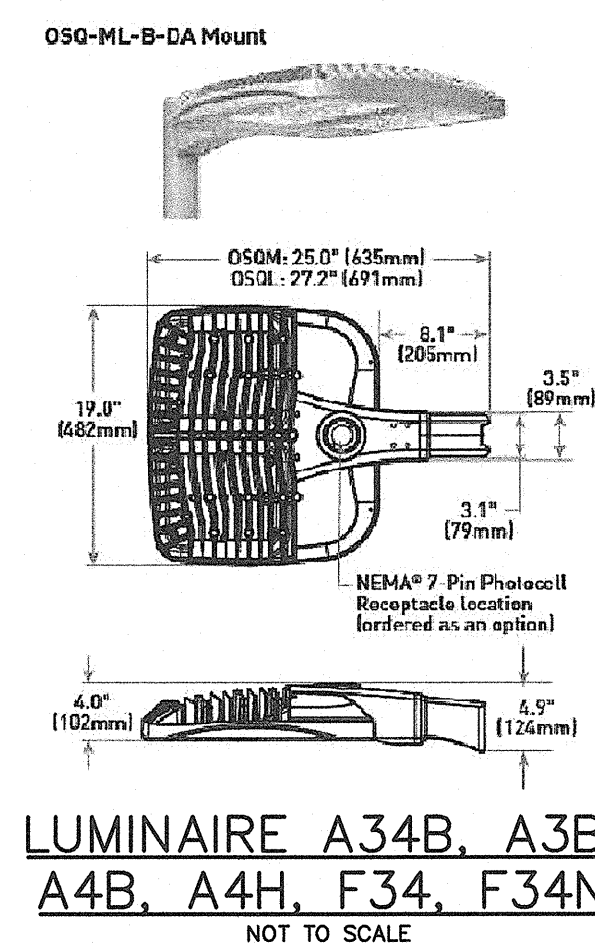
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LUMINAIRE A35B & A44
NOT TO SCALE

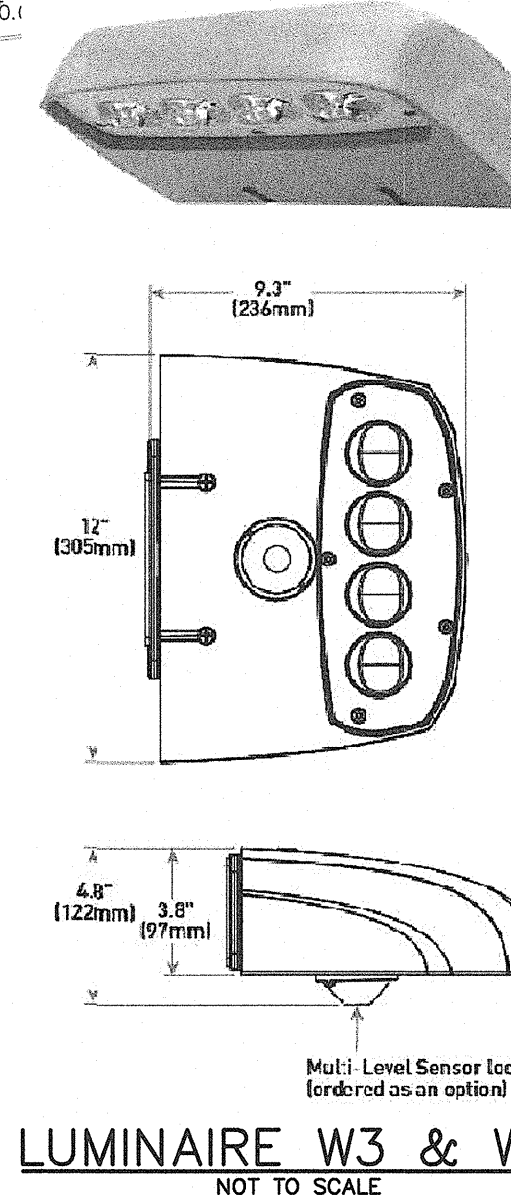
FOOTCANDLE LEVELS CALCULATED AT GRADE USING INITIAL LUMEN VALUES					
LABEL	AVG	MAX	MIN	AVG/MIN	MAX/MIN
PAVED AREA	5.90	28.1	0.0	N.A.	N.A.
UNDEFINED	0.84	23.6	0.0	N.A.	N.A.

LUMINAIRE SCHEDULE									
SYMBOL	QTY	LABEL	ARRANGEMENT	LUMENS	LLF	BUG RATING	WATTS/LUMINAIRE	TOTAL WATTS	MANUFACTURER
2	A34B	Single	31400	1.030	B3-U0-G4	301	802	Cree Lighting	OSQ-ML-B-XX-XX + OSQX-B-40L-57K7-3M-UL-NM-XX + OSQ-BLSKF
8	A35B	Single	40500	1.030	B3-U0-G5	383	3084	Cree Lighting	OSQ-X-B-XX + OSQX-B-50L-57K7-3M-UL-NM-XX + OSQ-BLSKF
1	A3B	Single	12699	1.030	B2-U0-G2	104	104	Cree Inc	OSQ-ML-B-XX + OSQ-M-B-16L-57K7-3M-UL-NM-XX + OSQ-BLSMF
4	A44	Single	44400	1.030	B4-U0-G5	301	1204	Cree Lighting	OSQ-X-B-XX + OSQX-B-40L-57K7-4M-UL-NM-XX
2	A4B	Single	12349	1.030	B2-U0-G2	104	208	Cree Inc	OSQ-ML-B-XX + OSQ-M-B-16L-57K7-4M-UL-NM-XX + OSQ-BLSMF
1	A4H	Single	16088	1.030	B3-U0-G3	104	104	Cree Inc	OSQ-ML-B-XX + OSQ-M-B-16L-57K7-4M-UL-NM-XX
3	F34	Single	29700	1.040	B5-U0-G1	202	606	Cree Inc	OSQ-ML-B-XX + OSQ-L-B-30L-57K7-44-UL-NM-XX
3	F34N	Single	29700	1.040	B5-U0-G2	202	606	Cree Inc	OSQ-ML-B-XX + OSQ-L-B-30L-57K7-44-UL-NM-XX
3	W3	Single	8326	1.030	B2-U0-G2	69.21	207.63	Cree Inc	XSPW-B-WM-3ME-8L-57K-UL-XX
2	W4	Single	8475	1.030	B2-U0-G2	71	142	Cree Inc	XSPW-B-WM-4ME-8L-57K-UL-XX



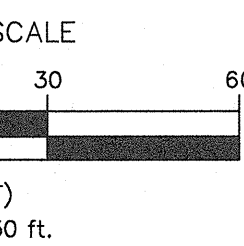
LUMINAIRE A34B, A3B, A4B, A4H, F34, F34N
NOT TO SCALE

NOTE: ALL EXISTING POLE MOUNTED FIXTURES ARE TO BE REPLACED WITH NEW FIXTURES. SEE LIGHTING SCHEDULE.



LUMINAIRE W3 & W4
NOT TO SCALE

LUMINAIRE LOCATION SUMMARY		
LUM NO.	LABEL	MTG. HT.
1	A34B	25
2	A34B	25
3	A35B	25
4	A35B	25
5	A35B	25
6	A35B	25
7	A35B	25
8	A35B	25
9	A35B	25
10	A35B	25
11	A3B	18
12	A44	25
13	A44	25
14	A44	25
15	A44	25
16	A4B	18
17	A4B	18
18	A4H	25
19	F34	15
20	F34	15
21	F34	25
22	F34N	20
23	F34N	20
24	F34N	20
25	W3	15
26	W3	15
27	W3	15
28	W4	15
29	W4	15



02/22/23

RESOLUTION COMPLIANCE

KTS

PRELIMINARY AND FINAL MAJOR SITE PLAN

PINE BELT NISSAN

LOTS 1 & 2 IN BLOCK 52,

LOTS 22, 22.02, 23.02, 23.03, 24, 25 & 25.03 IN BLOCK 51

BOROUGH OF KEYPORT - TAX MAP SHEET 2

MONMOUTH COUNTY - NEW JERSEY



Kennedy Consulting Engineers, LLC

211 Maple Avenue

Red Bank, New Jersey 07701

732.212.9393 TEL • 732.212.9399 FAX

LIGHTING PLAN

4 OF 6

FILENAME: LI-1

DRAWN BY: KTS/ARC

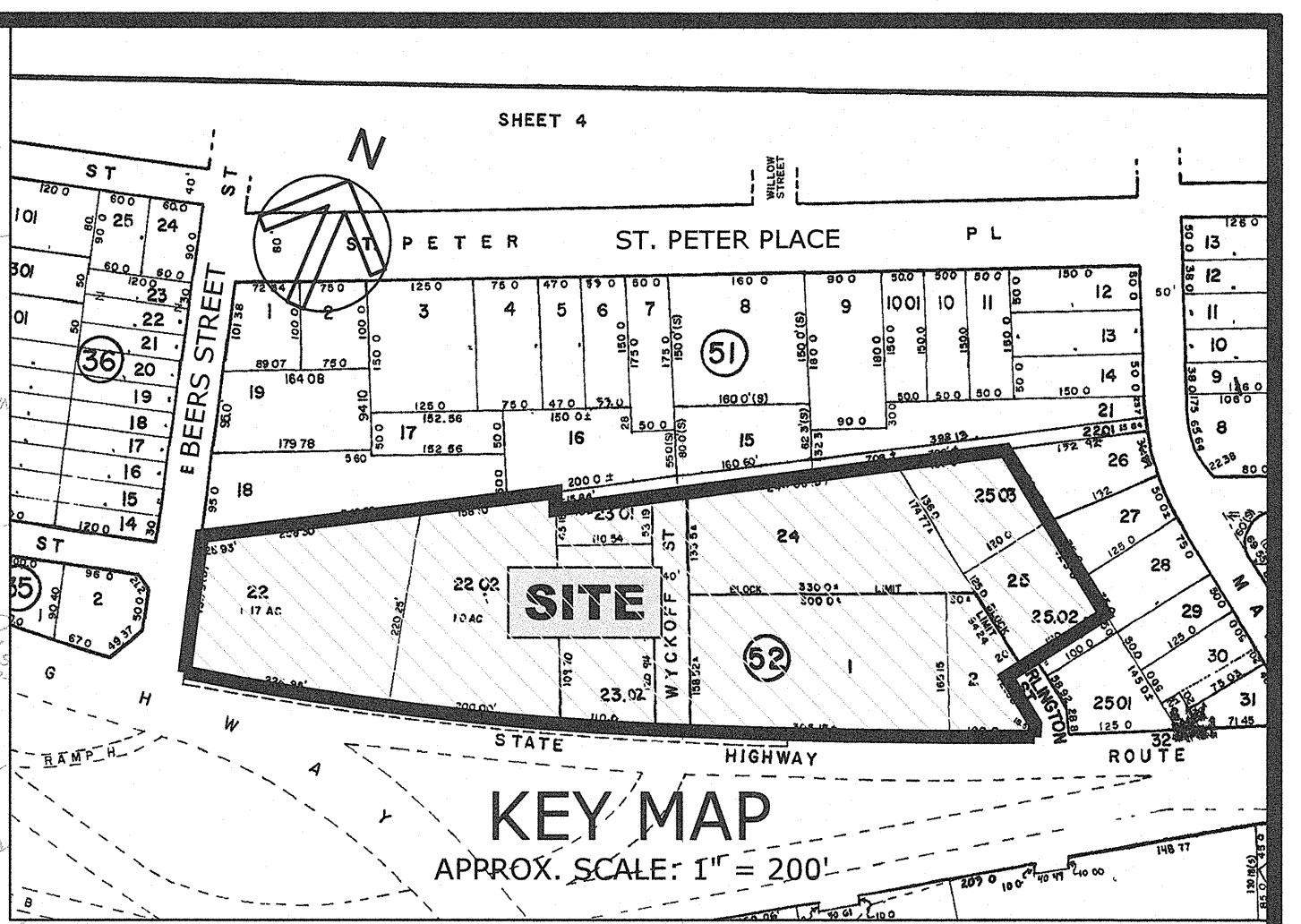
DATE: 07/14/22

JAMES A. KENNEDY, P.E.

NEW JERSEY PROFESSIONAL ENGINEER NO. 41275

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- ### SOIL EROSION LEGEND

LIMIT OF DISTURBANCE AND SILTFENCE/HAYBALE. 

INLET PROTECTION 

SILT FENCE 

HAY BALE 

STOCKPILE AREA 

STABILIZED CONSTRUCTION ENTRANCE (PAVED) 

LIMIT OF DISTURBANCE

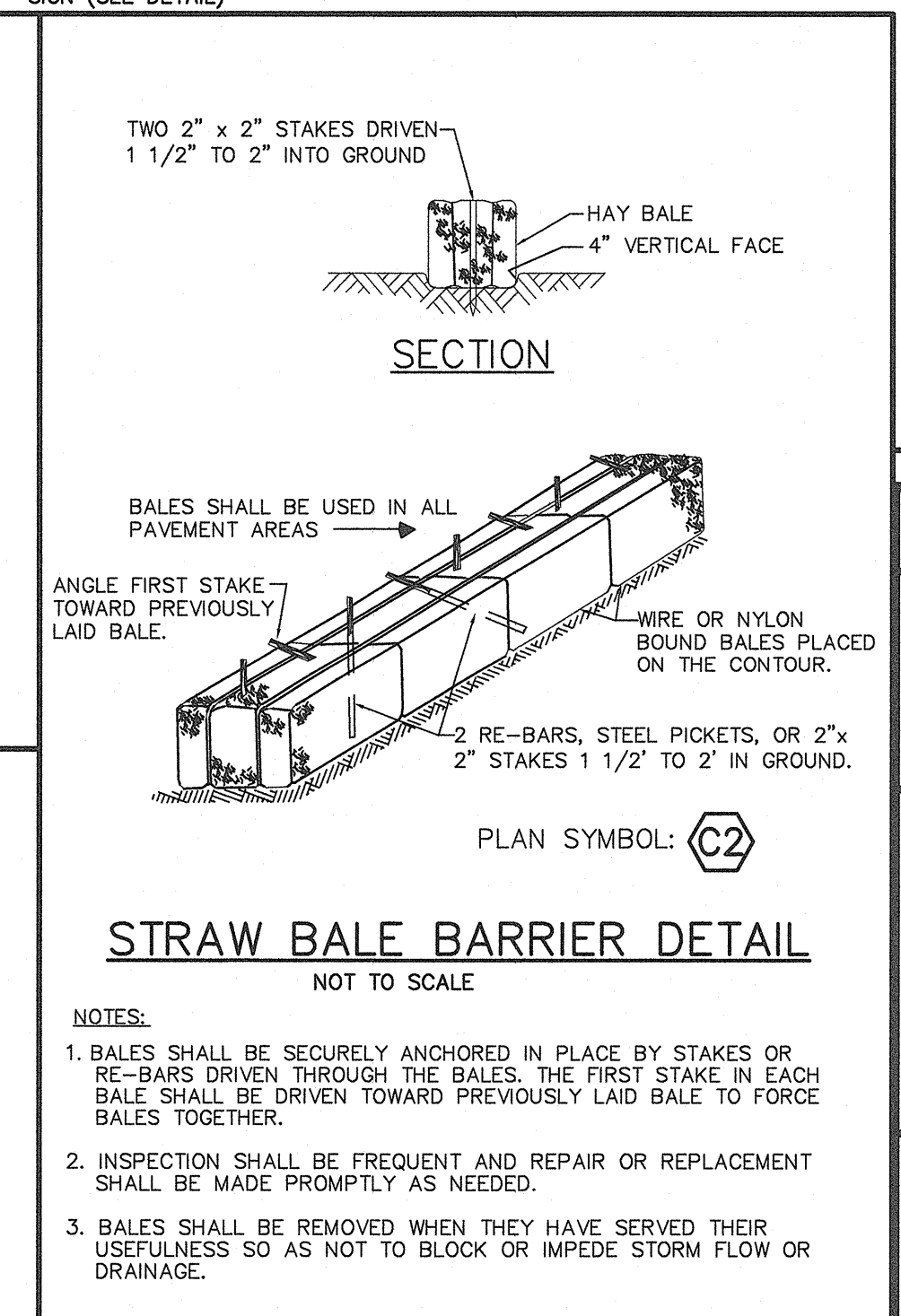
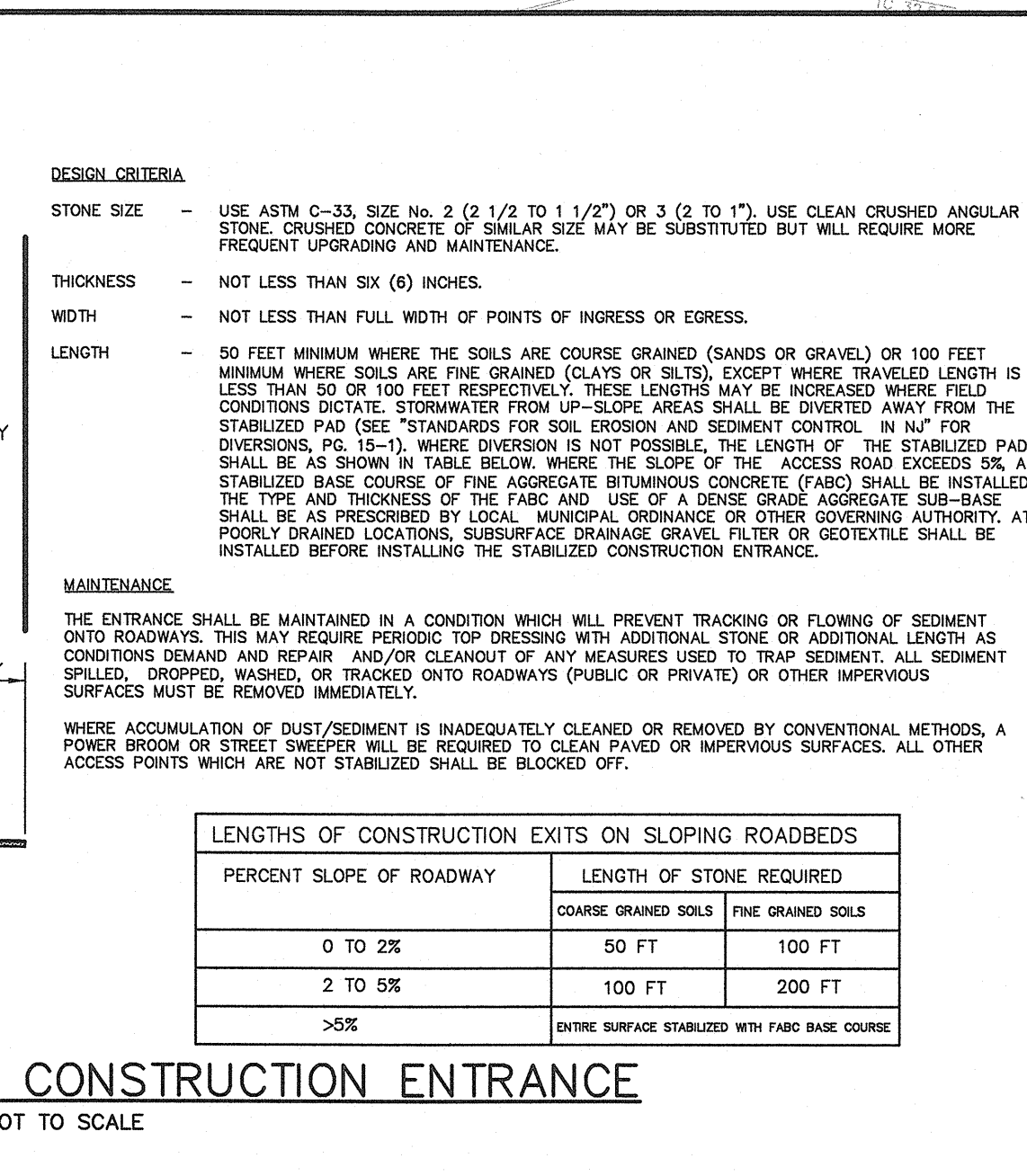
21,377 SF
(0.491 AC)

GRAPHIC SCALE



(IN FEET)
1 inch = 30 ft.

CONTRACTOR SHALL USE  ON PERVIOUS SURFACES
AND  ON IMPERVIOUS SURFACES.



02/22/23	RESOLUTION COMPLIANCE	KTS
PRELIMINARY AND FINAL MAJOR SITE PLAN		
PINE BELT NISSAN		
LOTS 1 & 2 IN BLOCK 52, LOTS 22, 22.02, 23.02, 23.03, 24, 25 & 25.03 IN BLOCK 51 BOROUGH OF KEYPORT - TAX MAP SHEET 2 MONMOUTH COUNTY - NEW JERSEY		
 KCE COA 240428049705 Kennedy Consulting Engineers, LLC 211 Maple Avenue Red Bank, New Jersey 07701 732.212.9399 TEL • 732.212.9399 FAX	SOIL EROSION & SEDIMENT CONTROL PLAN	
	5 OF 6	
	FILENAME: SE-1 DRAWN BY: KTS/ARC DATE: 07/14/22	
 JAMES A. KENNEDY, P.E. NEW JERSEY PROFESSIONAL ENGINEER NO. 41375		

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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, OR 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 ACCOMPLISHED.

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

I. SITE PREPARATION

- GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING, 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.).

II. 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 CO-OPERATIVE 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 RATE 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 SEEDBED IS PREPARED.
- INSPECT SEEDBED 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) / PER 1,000 SQ. FEET	OPTIMUM SEEDING DATE BASED ON PLANT HARDINESS ZONE 3/			OPTIMUM SEED DEPTH 2/ (INCHES)
			PER 100 SQ. FEET	ZONE 5	ZONE 6	
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	88	2.0	3/15 TO 6/1 8/1 TO 9/15	3/1 TO 5/15 4/15 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	3/1 TO 5/1 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 9/1	1.0
MILLET (GERMAN OR HUNGARIAN)	30	0.7	6/1 TO 8/1	5/15 TO 8/15	5/1 TO 9/1	1.0

RECOMMENDED SEED MIXTURE

- SEEDING RATE FOR WARM SEASON GRASS 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.
- MAY BE PLANTED THROUGHOUT SUMMER IF SOIL MOISTURE IS ADEQUATE OR SEEDBED 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 SEEDBED. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORT FIBERED MULCH MAY BE APPLIED WITH A HYDROSEDER 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 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.

PROPOSED CONSTRUCTION SEQUENCE

- FIRST WEEK OF CONSTRUCTION APPLY PROPER MEASURES FOR THE CONTROL OF SOIL EROSION AND SEDIMENT CONTROL.
- SITE CLEARING AND DEMOLITION WILL TAKE APPROXIMATELY 2-3 DAYS.
- TEMPORARY STABILIZATION OF AREAS INITIALLY DISTURBED. STABILIZATION TO 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 OCCUR DURING THE FIRST WEEK.
- ROUGH GRADING WILL TAKE APPROXIMATELY 2-3 DAYS.
- PAVEMENT CONSTRUCTION WILL TAKE APPROXIMATELY 2 TO 3 DAYS.
- BUILDING AND FREESTANDING SIGNAGE CONSTRUCTION WILL TAKE APPROXIMATELY 2 TO 4 WEEKS.
- CONTINUOUS MAINTENANCE OF SOIL EROSION PROCEDURES.
- INSTALLATION OF LANDSCAPING MATERIALS WILL TAKE APPROXIMATELY 2 TO 3 DAYS.
- REMOVAL OF SOIL EROSION AND SEDIMENT CONTROL DEVICES AFTER ESTABLISHED VEGETATIVE GROWTH HAS OCCURRED.

TOTAL DURATION OF PROJECT EXPECTED TO BE 4 - 6 WEEKS.

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

I. SITE PREPARATION

- GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION AND ANCHORING, AND MAINTENANCE. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING.
- IMMEDIATELY PRIOR TO SEEDING AND TOPSOILING APPLICATION, THE SURFACE SHOULD 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. SEEDBED PREPARATION

- UNIFORMLY APPLY GROUND LIMESTONE AND FERTILIZER TO TOPSOIL WHICH HAS BEEN SPREAD AND FIRMED, ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS CO-OPERATIVE EXTENSION OFFICES (HTTP://NAJES.RUTGERS.EDU/COUNTY/). FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-10-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE AND INCORPORATED INTO THE SURFACE 4 INCHES. IF FERTILIZER IS NOT INCORPORATED, APPLY ONE-HALF 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 SEEDBED IS PREPARED.
- HIGH ACID PRODUCING SOILS HAVING A pH OF 4 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM OF 12 INCHES OF SOIL HAVING A pH OF 5 OR MORE BEFORE INITIATING SEEDBED PREPARATION. SEE STANDARD FOR MANAGEMENT OF HIGH ACID-PRODUCING SOILS FOR SPECIFIC RECOMMENDATIONS.

III. SEEDING

- SELECT A MIXTURE FROM TABLE 4-3 OR USE MIXTURE RECOMMENDED BY RUTGERS CO-OPERATIVE 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 METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS BOX VEGETATIVE COVERAGE WITH THE SPECIFIED SEED MIXTURE FOR THE SEEDBED AREA AND MOWED ONCE.
- WARM SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT HIGH TEMPERATURES, GENERALLY 85°F AND ABOVE. SEE TABLE 4-3, MIXTURES 1-7. PLANTING RATES FOR WARM-SEASON GRASSES SHALL BE THE AMOUNT OF PURE LINE 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 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.
- AFTER SEEDING, FIRING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDLING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON SITE WILL BE MAXIMIZED.
- HYDROSEEDING IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK OR TRAILER MOUNTED TANK, WITH AN AGITATION SYSTEM AND HYDRAULIC PUMP FOR MIXING SEED, WATER AND FERTILIZER AND SPRAYING THE MIX ONTO THE PREPARED SEEDBED. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORT-FIBERED MULCH MAY BE APPLIED WITH A HYDROSEDER 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.

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

SOIL AND SITE	SEED MIXTURE 1/ TABLE 4-2 & TABLE 4-3	SEEDING RATES 2/ (POUNDS)	OPTIMUM SEEDING DATES BASED ON PLANT HARDINESS ZONE 3			
			PER 1,000 SQ. FT. ZONE 5a	ZONE 5b ZONE 6a	ZONE 6b ZONE 7a	ZONE 7b ZONE 7c
A. EXCESSIVELY DRAINED	REFER TO SEED MIXES TABLE 4-2 & TABLE 4-3	PER 1,000 SQ. FT. ZONE 5a	ZONE 5b ZONE 6a	ZONE 6b ZONE 7a	ZONE 6b ZONE 7a	ZONE 7b ZONE 7c
1. RESIDENTIAL & COMMERCIAL LOTS	TALL FESCUE (TURF) PERENNIAL RYEGRASS WHITE CLOVER	285 20 5	3/15-5/31	3/1-4/30	2/1-4/30	
2. POND AND CHANNEL BANKS, DITCHES, BERMS & DAMS	TALL FESCUE (TURF) PERENNIAL RYEGRASS WHITE CLOVER	285 20 5	3/15-5/31	3/1-4/30	2/1-4/30	
3. DRAINAGE DITCH SWALE OR BASIN	SWITCHGRASS REDTOP	20 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 1,000 SQ. FT. ZONE 5a	ZONE 5b ZONE 6a	ZONE 6b ZONE 7a	ZONE 6b ZONE 7a	ZONE 7b ZONE 7c
1. RESIDENTIAL & COMMERCIAL LOTS	TALL FESCUE (TURF) TRENDALE RYEGRASS WHITE CLOVER	285 20 5	3/15-5/31	3/1-4/30	2/1-4/30	
2. POND AND CHANNEL BANKS, DITCHES, BERMS & DAMS	DEERTONGUE REDTOP WILD RYE (ELIUMIS) SWITCHGRASS	20 45 15 25	3/15-5/31	3/1-4/30	2/1-4/30	
3. DRAINAGE DITCH SWALE OR BASIN	DEERTONGUE REDTOP WILD RYE (ELIUMIS) SWITCHGRASS	20 45 15 25	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 1,000 SQ. FT. ZONE 5a	ZONE 5b ZONE 6a	ZONE 6b ZONE 7a	ZONE 6b ZONE 7a	ZONE 7b ZONE 7c
1. RESIDENTIAL & COMMERCIAL LOTS	ROUGH BLUEGRASS STRONG CREEPING RED FESCUE	80 130 3	8/1-10/01	8/15-10/15	8/15-10/30	
2. POND AND CHANNEL BANKS, DITCHES, BERMS & DAMS	ROUGH BLUEGRASS STRONG CREEPING RED FESCUE	80 130 3	8/1-10/01	8/15-10/15	8/15-10/30	
3. DRAINAGE DITCH SWALE OR BASIN	ROUGH BLUEGRASS STRONG CREEPING RED FESCUE	80 130 3	8/1-10/01	8/15-10/15	8/15-10/30	

NOTES:

- SEEDING MIXTURES AND/OR RATES NOT LISTED ABOVE MAY BE USED IF RECOMMENDED BY THE LOCAL SOIL CONSERVATION DISTRICT. SOIL CONSERVATION SERVICE RECOMMENDATIONS OF THE CO-OPERATIVE EXTENSION SERVICE MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT. LEGUMES (PLATYSA, CROWNVEITCH, 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.

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 GRAIN STRAW, HAY FREE OF SEEDS TO BE APPLIED AT THE RATE OF 1-1/2 TO 2 TONS PER ACRE (70 TO 90 POUNDS PER 1,000 SQUARE FEET), EXCEPT THAT WHERE A CRIMPER IS USED INSTEAD OF A LIQUID MULCH-BINDER (TACKIFYING OR ADHESIVE AGENT), THE RATE OF APPLICATION IS 3 TONS PER ACRE. MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MULCH. HAY MULCH IS NOT RECOMMENDED FOR ESTABLISHING FINE TURF OR LAWNS DUE TO THE PRESENCE OF WEED SEED.

APPLICATION. SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT AT LEAST 85% (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 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, JUTE, COTTON, OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED.
- CRIMPER (MULCH ANCHORING COUNTER 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 INHIBIT GROWTH OF TURF GRASS. USE AT RATES AND WEATHER CONDITIONS AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH MATERIALS. MANY NEW PRODUCTS ARE AVAILABLE, SOME OF WHICH MAY NEED FURTHER EVALUATION FOR USE IN THIS STATE.
 - 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 HYDROSEDER. MULCH SHALL NOT BE MIXED IN THE TANK WITH SEED. USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.

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

VII. 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 BOX VEGETATIVE COVER (OF THE SEED 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

I. SITE PREPARATION

- GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING.
- 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.

II. 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 THE 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 HYDROSEDER.
- MULCH NETTING,