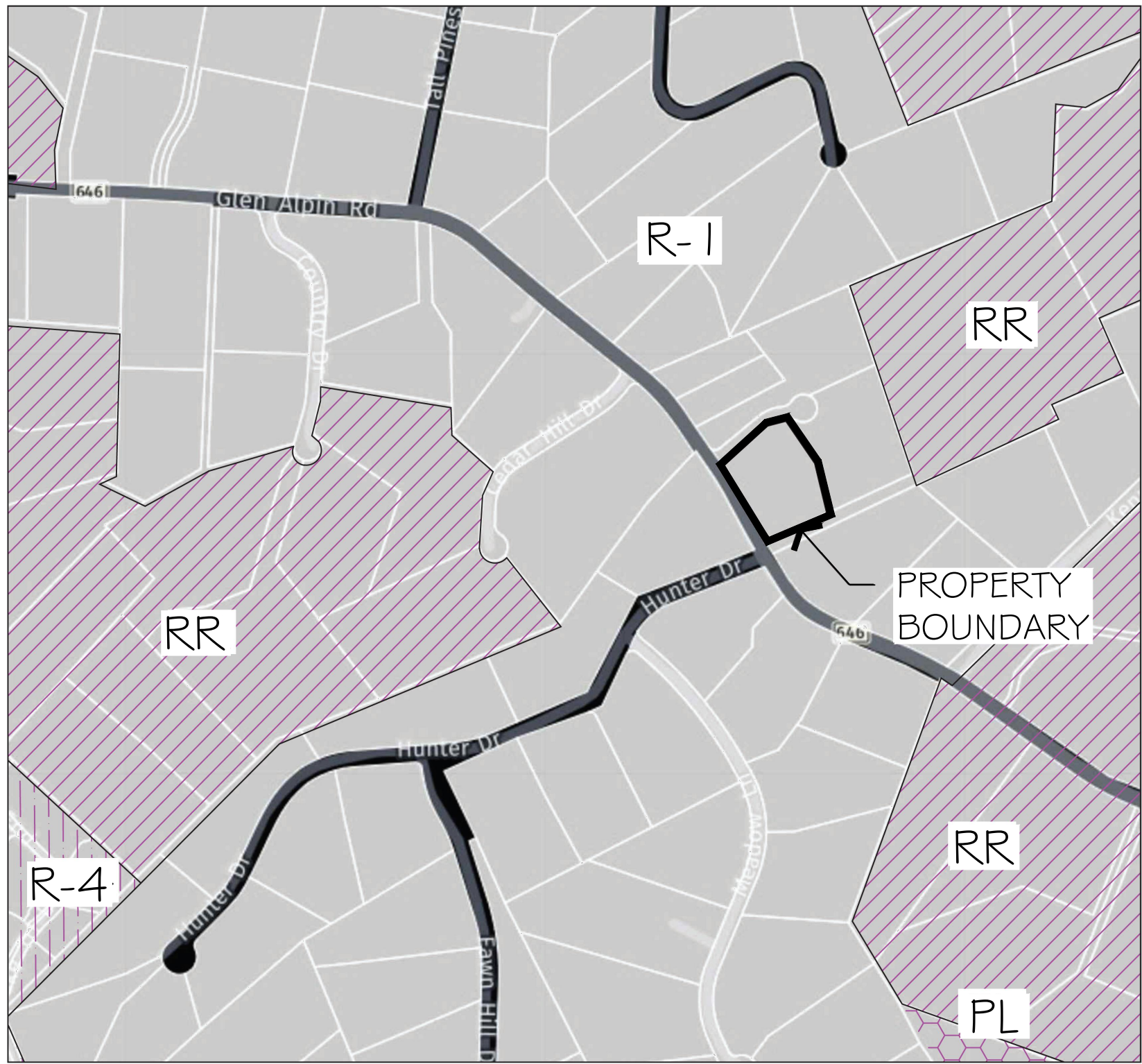


88 Glen Alpin Road, LLC

HARDING TOWNSHIP, NJ
MORRIS COUNTY
BLOCK 26 - LOT 11
Zone: R-1



KEY MAP
[SOURCE: Neemap 9/14/23]

R-1 - RESIDENCE
R-4 - RESIDENCE
RR - RURAL RESIDENTIAL
PL - PUBLIC LAND

SHEET INDEX	
COVER SHEET	L-001
EXISTING CONDITIONS & DEMO PLAN	L-100
GRADING PLAN	L-101
PLANTING PLAN	L-102
CONSTRUCTION DETAILS	L-500
SESC DETAILS	L-501
SESC NOTES	L-502

SCOPE OF WORK

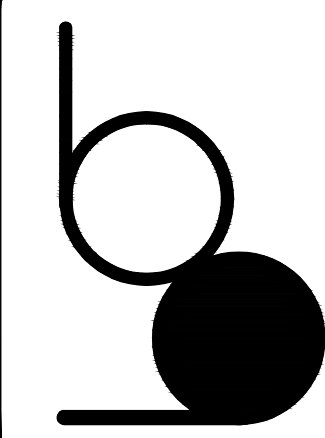
It is the intention and meaning of these specifications to specify and secure all labor, materials, equipment, workmanship and supervision required for the installation of the work in accordance with the drawings and specifications and all else not necessarily shown nor mentioned, but which may be essential for a complete and workmanlike job as intended. Contractor is responsible to verify any planting or quantity lists on the plans. Any items contained within the plans shall be included in the contractor's scope of work unless otherwise specified. Prices shall include all operations and permits necessary for the construction and installation as specified on the drawings and herein.

CONSTRUCTION NOTES:

- Contractor shall obtain and be responsible for all permits and inspections. All work shall be performed in accordance with the IRC 2018 New Jersey Edition, and Township of Harding. All work shall be in compliance with all Federal, State, County, and Local regulations and ordinances. Contractor shall follow and be guided by Soil Conservation Service regulations.
- Once the construction permit is issued by Federal, State or Municipal officials, the landscape architect shall not be responsible for any changes to the scope of work, alterations to the project, materials specified, site furnishings, drainage design, guard rails or hand rails that are found not to be in compliance with all Federal, State or Municipal building codes. The landscape architect is not responsible for discrepancies discovered by the final inspection for the certificate of occupancy or Federal, State or Municipal inspections / approvals that were not identified at the time that the permits were issued by Federal, State or Municipal officials for the project.
- The contractor shall follow and be guided by OSHA safety regulations. Contractor shall furnish to owner and landscape architect a certificate of insurance prior to start of work. The landscape architect shall not have control over or change of and shall not be responsible for construction means, safety precautions, and safety programs in conjunction with the work. These are solely the contractor's responsibility.
- Existing site conditions: The contractor shall thoroughly investigate all site conditions and take field measurements prior to the start of work. Field check all measurements, existing and proposed topography prior to the start of work. Check and verify all existing dimensions on job site.
- All proposed improvements shall be laid out in the field by a NJ licensed surveyor prior to construction.
- Contractor shall notify the landscape architect of any discrepancy in the plans or specification before proceeding with any work related to or affected by the discrepancy or error. Give 72-hour notice prior to the need for additional information or for clarification.
- Written dimensions govern. Do not scale drawing. Specifications govern drawings.
- The property owner shall submit these drawings for municipal approval before commencing ANY CONSTRUCTION!!! The landscape architect shall not be responsible or liable for any adjustments to the drawings, materials, site work, walls, pools, structures, fences, buildings, plantings, etc., if required by regulation compliance or changes made by owner after construction has started.
- Locate, determine the depth of, and be responsible for all underground utilities prior to start of work / construction. The contractor is responsible for all repairs to any underground or overhead utility damaged by him or his sub-contractor during construction. It is illegal to perform excavation without a proper markout performed by a qualified agency. Within NJ call 1-800-272-1000.
- Septic system: Contractor shall locate septic system and septic laterals and protect them during construction. Do not park equipment on or drive across these areas.
- At the commencement of the project, the contractor shall furnish the owner and landscape architect with a time schedule for the completion of the various phases of the proposed work. Contractor shall keep the owner and the landscape architect notified of schedule changes.
- The landscape architect shall not be responsible for the contractor's schedules or ability to carry out the work in accordance with the plans and specifications. The landscape architect shall have no control over or change of acts or omissions of the contractor, subcontractor or their agents or employees or other persons performing portions of their work.

- Site protection: Protect lawns, meadows, buildings and existing trees & shrubs from construction damage. Do not park equipment or stockpile materials on lawn, meadow or within the root zone/dripline of trees areas. Tree protection fencing shall be provided around all existing trees to be save that are within the work zone. Contractor is responsible for the repair of any damage outside of work area.
 - Site clean up and debris removal: At the completion of each phase, the contractor is responsible to remove his own debris. Cost of such removal shall be included in cost estimates. AT ALL TIMES, JOB SITE SHALL BE KEPT NEAT AND CLEAN!!!!!!!!!!!!!!
 - Topsoil. Supply source and sample of topsoil at the time of the bid submission. Spread topsoil 12"-18" (for larger shrubs make 4" deeper than root ball) deep in all plant bed areas and 4" in all lawn areas. Excavate plant bed areas as required in order to facilitate the installation of topsoil and drainage.
 - Contractor is responsible for removing and or supplying fill dirt or topsoil as may be required for the project. Do not dispose of excess fill material on site.
 - The landscape architect shall not be responsible for maintenance, or possible removal of the following items from the project site which may be discovered during the course of excavation, demolition and construction:
 - Underground drainage systems, storage tanks, utilities, and/or septic systems.
 - Asbestos, lead, or any other material classified as hazardous.
 - Buried debris or trash.Upon discovery the contractor shall not disturb or damage any of the above mentioned items; but shall notify the owner immediately of the above-mentioned situation. Furthermore, the contractor shall proceed with arranging for all inspections and for hiring appropriate licensed professionals as required to rectify the discovered problem. The contractor shall advise the owner of all extra costs before proceeding with the work, and shall obtain approvals from all regulatory agencies.
 - The Client acknowledges and agrees that proper project maintenance is required after the project is complete. A lack of or improper maintenance may result in damage to property or persons. Client further acknowledges that, as between the parties to this agreement, client is solely responsible for the results of any lack of or improper maintenance.
 - The Client is responsible for the determining and delineating all wetlands, streams and their associated buffers.
- LAWN SEEDING SPECIFICATIONS:
- Ground preparation:
Area to be seeded must be fnable to a depth of 4" and contain no debris of any kind; including but not limited to clumps, branches, stones, wood construction debris, rubbish and dead plant material. Debris over 1 1/2" dia. are a "must remove" item. After soil is prepared no heavy equipment shall be moved over the area.
 - Lime to be added to the soil at a rate of 2 tons per acre or as dictated by soil tests.
 - Apply starter fertilizer such as 18-24-12 at a rate of 5 lb. per 1000 sq. ft; incorporate into the top three inches of the soil.
 - Seed at the rate of 6 lb. per 1000 sq. ft in all lawn areas. Contractor shall use FM Brown's, Inc. (800-334-8816) www.fmbrown.com "Green Turf Sun & Shade Mixture" seed mix or equal with 25% perennial rye grass blend added. Seed to be incorporated into the soil by 1/16" - 1/8" by dragging or raking.
 - Straw mulch at a rate of 2-2 1/2 tons per acre. Straw mulch or equal shall be applied by the means of a mechanical mulcher. Tack Straw as required to stabilize.
 - Produce dense, vigorous, well-established grass areas. Reseed areas as required. Owner is responsible for proper watering to ensure turf establishment.
 - Once established, the lawn, shall be mowed to a height of 4" to allow for dense root growth.

Know what's below.
Call before you dig. **811**
1-800-272-1000



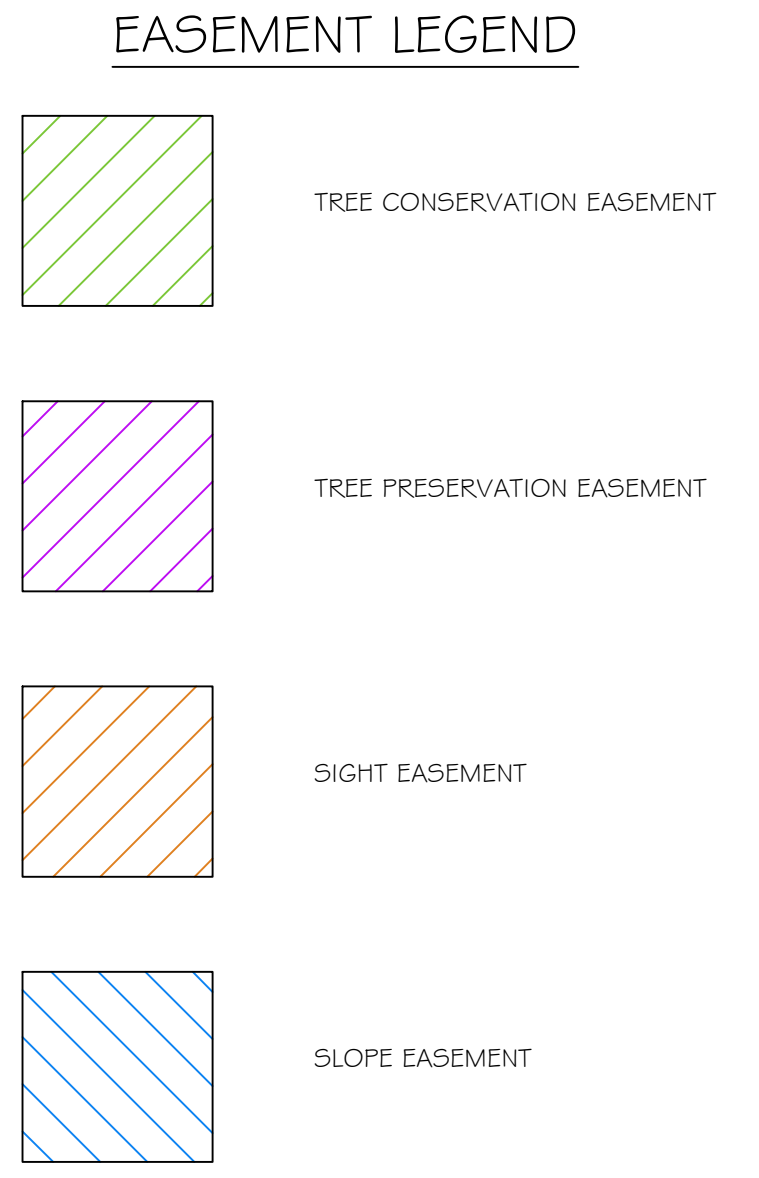
WARNING:
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SOURCE INFORMATION:
Base Information Provided By:
Parker Engineering & Surveying P.C.
370 East Main Street
Somerville, NJ 08876
(908) 729-4400

88 GLEN ALPIN ROAD, LLC
HARDING TOWNSHIP, NEW JERSEY

COVER SHEET

PREPARED FOR:
88 GLEN ALPIN ROAD, LLC
LOT 11, BLOCK 26
88 GLEN ALPIN ROAD
HARDING TOWNSHIP, NJ
PREPARED BY:
BOSENBERG
LANDSCAPE ARCHITECTURE
PO BOX 486
FAR HILLS, NJ 07931
(908)234-0557
DATE: DECEMBER 18, 2023
SCALE: AS NOTED
REVISIONS:
FEBRUARY 14, 2024 - ZONING CHART MODIFICATIONS
MARCH 11, 2024
APRIL 22, 2024
NJ Certificate of Authorization
MH000126
JIM MAZZUCCO
NEW JERSEY LICENSED
LANDSCAPE ARCHITECT
#A5500880
Jim Mazzucco
SHEET **L-001**



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EXISTING CONDITIONS & DEMO
PLAN

PREPARED FOR:
88 GLEN ALPIN ROAD, LLC
LOT # 11 BLOCK 26
88 GLEN ALPIN ROAD
HAWORTH TOWNSHIP, NJ

PREPARED BY:
BOSENBERG
LANDSCAPE ARCHITECTURE
PO BOX 486,
FAR HILLS, NJ 07931
(908)234-0557

DATE: DECEMBER 18, 2023
SCALE: 1" = 20'
REVISIONS:

FEBRUARY 14, 2024 - ZONING CHART MODIFICATIONS
MARCH 11, 2024
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NJ Certificate of Authorization
MH000126
JIN MAZUCCO
NEW JERSEY LICENSED

SCALE: 1" = 20'



Slopes Table				
Number	Minimum Slope	Maximum Slope	Color	SF.
1	0.00%	7.90%		46,196.12
2	8.00%	11.90%		40,910.41
3	12.00%	15.90%		11,137.06
4	16.00%	19.90%		3,461.28
5	20.00%	24.90%		807.04
6	25.00%	29.90%		309.52
7	30.00%	100.00%		464.20

Slope Category	Total Area (sf.)	Disturbed Area (sf.)	Slope Adjustment Factor	Adjusted Graded Area (sf.)
0% - 7.9%	46,521.49	16,421.2	1.0	16,421.2
8% - 11.9%	40,910.41	7,648.5	1.5	11,472.8
12% - 15.9%	11,137.06	1,645.1	2.6	4,277.4
16% - 19.9%	3,461.28	458.7	3.8	1,743.0
20% - 24.9%	807.04	-	5.5	-
25% - 29.9%	309.52	-	7.5	-
30% or Greater	464.20	-	8.6	-
				33,914.4

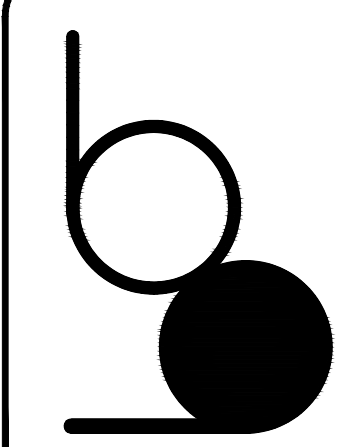
CT# SOIL COMPACTION TESTING LOCATION
MINIMUM OF 1 TEST PER HALF ACRE

EASEMENT LEGEND

- TREE CONSERVATION EASEMENT
- TREE PRESERVATION EASEMENT
- SIGHT EASEMENT
- SLOPE EASEMENT

GRADING PLAN

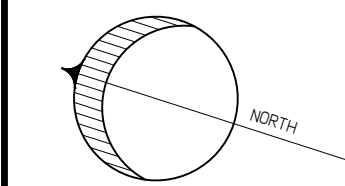
SCALE: 1" = 20'



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SOURCE INFORMATION:
Base Information Provided By:
Parker Engineering & Surveying P.C.
270 East Main Street
Somerville, NJ 08876
(908) 735-4400
Architectural Information Provided By:
Studio 100 Architecture + Design
511 Millburn Ave.
Short Hills, NJ 07078
(973) 376-5111

88 GLEN ALPIN ROAD, LLC
HARDING TOWNSHIP, NEW JERSEY



GRADING PLAN

PREPARED FOR:
88 GLEN ALPIN ROAD, LLC
LOT 11, BLOCK 26
88 GLEN ALPIN ROAD
HARDING TOWNSHIP, NJ
PREPARED BY:
BOSENBERG
LANDSCAPE ARCHITECTURE
PO BOX 486
FAR HILLS, NJ 07931
(908) 234-0557

DATE: DECEMBER 18, 2023
SCALE: 1" = 20'
REVISIONS:
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MARCH 11, 2024
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NJ Certificate of Authorization
MH000126
JIM MAZZUCCO
NEW JERSEY LICENSED
LANDSCAPE ARCHITECT
#A55000800

Jim Mazzucco
SHEET L-101



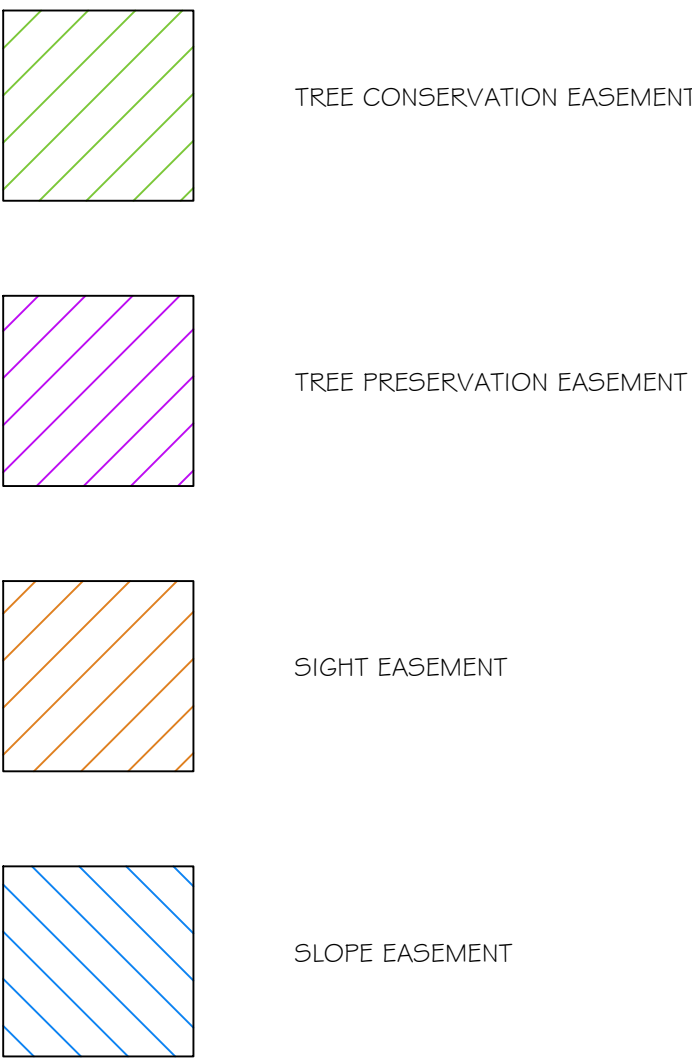
PLANT SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
TREES					
ACE OCT	3	Acer rubrum 'October Glory'	October Glory Red Maple	2"-2.5" CAL.	B4B
CEL OCC	1	Celtis occidentalis	Common Hackberry	2"-2.5" CAL.	B4B
COR CHE	1	Cornus florida 'Cherokee Princess'	Cherokee Princess Dogwood	6"-8"	B4B
FAG SYL	57	Fagus sylvatica	European Beech	2"-2.5" CAL.	B4B, low branched
GLE SHA	2	Gleditsia triacanthos inermis 'Shademaster'	Shademaster Honey Locust	2"-2.5" CAL.	B4B
ILE DAN	11	Ilex opaca 'Dan Fenton'	Dan Fenton American Holly	8"-10"	B4B
ILE NEL	2	Ilex x 'Nellie R. Stevens'	Nellie R. Stevens Holly	8"-10"	B4B
JUN VIR	4	Juniperus virginiana	Eastern Redcedar	8"-10"	B4B
NYS GRE	5	Nyssa sylvatica 'NSUHH'	Green Gable™ Tupelo	2"-2.5" CAL.	B4B, 4" branching
NYS GR2	5	Nyssa sylvatica 'NSUHH'	Green Gable™ Tupelo	2"-2.5" CAL.	B4B, low branched
PIC ABI	6	Picea abies	Norway Spruce	8"-10"	B4B
PIN STR	2	Pinus strobus	White Pine	8"-10"	B4B
QUE BIC	1	Quercus bicolor	Swamp White Oak	2"-2.5" CAL.	B4B
QUE PAL	4	Quercus palustris	Pin Oak	2"-2.5" CAL.	B4B
QUE PHE	1	Quercus phellos	Willow Oak	2"-2.5" CAL.	B4B
SHRUBS					
BUX GRE	44	Buxus x 'Green Velvet'	Green Velvet Boxwood	24"-30"	B4B
HAM DIA	2	Hamelia x 'intermedia 'Diane'	Diane Witch Hazel	5"-6"	B4B
MOR PEN	25	Morella pensylvanica	Northern Bayberry	30"-36"	CONT.
VIB WIN	12	Viburnum nudum 'Winterthur'	Winterthur Viburnum	30"-36"	B4B

TREE REMOVAL LIST		
ID	SIZE & SPECIES	STATUS
1	138' ELM	TO REMAIN
2	(3) 18' ELMS	TO REMAIN
3	14' WALNUT	TO REMAIN
4	12' MAPLE	TO REMAIN
5	(3) 20' ELMS	TO REMAIN
6	15' APPLE	TO REMAIN
7	(2) 6' DOGWOODS	TO REMAIN
8	24' ELM	TO REMAIN
9	6' HOLLY	TO REMAIN
12	28' EVERGREEN	TO REMAIN
16	3' HOLLY & 8' HOLLY	TO BE REMOVED
17	24' SASSAFRAS	TO REMAIN
18	20' EVERGREEN	TO REMAIN
19	8' SASSAFRAS	TO REMAIN
20	12' EVERGREEN	TO BE REMOVED
21	22' EVERGREEN	TO REMAIN
22	40' EVERGREEN	TO REMAIN
23	2' CHERRY	TO REMAIN
24	4' DOGWOOD	TO REMAIN
25	4' DOGWOOD	TO BE REMOVED
26	36' EVERGREEN	TO REMAIN
27	4' HOLLY	TO REMAIN
28	34' EVERGREEN	TO REMAIN
29	8' ASH	TO REMAIN
30	24' EVERGREEN	TO REMAIN
31	34' EVERGREEN	TO REMAIN
32	20' EVERGREEN	TO REMAIN
33	24' EVERGREEN	TO REMAIN
34	30' EVERGREEN	TO REMAIN
35	20' EVERGREEN	TO REMAIN
36	8' EVERGREEN	TO REMAIN
37	14' EVERGREEN	TO REMAIN
38	(3) 18' EVERGREENS	TO REMAIN
39	24' EVERGREEN	TO REMAIN
40	36' EVERGREEN	TO REMAIN
41	15' EVERGREEN	TO REMAIN
43	15' APPLE	TO BE REMOVED
44	4' FRUIT TREE	TO BE REMOVED
46	8' FRUIT TREE	TO BE REMOVED
48	12' EVERGREEN	TO BE REMOVED
49	12' EVERGREEN	TO BE REMOVED
50	16' ASH	TO BE REMOVED

TREE REMOVAL LIST		
ID	SIZE & SPECIES	STATUS
51	18' OAK	TO BE REMOVED
52	56' OAK	TO REMAIN
53	15' OAK	TO REMAIN
54	8' OAK	TO REMAIN
55	12' OAK	TO REMAIN
56	24' OAK	TO REMAIN
57	15' OAK	TO REMAIN
58	20' OAK	TO REMAIN
59	6' EVERGREEN	TO REMAIN
60	36' OAK	TO REMAIN
61	24' MAPLE	TO BE REMOVED
62	20' ELM	TO REMAIN
63	6' BEECH	TO BE REMOVED
64	22' BEECH	TO BE REMOVED
65	8' DOGWOOD	TO BE REMOVED
69	15' ELM & 18' ELM	TO REMAIN
70	8' GUM	TO REMAIN
71	8' GUM	TO REMAIN
72	8' GUM	TO REMAIN
73	6' DOGWOOD	TO REMAIN
74	36' ELM	TO REMAIN
75	4' BIRCH	TO REMAIN
76	18' MAPLE	TO REMAIN
77	(2) 6' CHERRY	TO REMAIN
78	12' APPLE	TO REMAIN
79	APPLE CLUMP 12'	TO REMAIN
80	30' ELM	TO REMAIN
81	18' ELM	TO REMAIN
82	30' ELM	TO REMAIN
83	20' ELM	TO REMAIN
84	15' ELM	TO REMAIN
85	18' ELM	TO REMAIN
86	(4) 15' ELMS	TO REMAIN
87	22' ELM	TO REMAIN
88	6' EVERGREEN	TO REMAIN
89	10' EVERGREEN	TO REMAIN
90	10' ELM	TO REMAIN
91	8' EVERGREEN	TO REMAIN
92	SPRUCE CLUMP 30"	TO REMAIN
93	SPRUCE CLUMP 30"	TO REMAIN
104	24' ELM	TO REMAIN

EASEMENT LEGEND



TREE REMOVAL LEGEND

- # EXISTING TREE TO REMAIN
- X # EXISTING TREE TO BE REMOVED

TOTAL NUMBER OF TREES TO BE REMOVED: 14

PLANTING PLAN

SCALE 1" = 20'

88 GLEN ALPIN ROAD, LLC
HARDING TOWNSHIP, NEW JERSEY

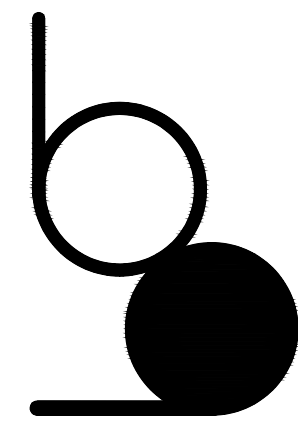
PLANTING PLAN

PREPARED FOR:
88 GLEN ALPIN ROAD, LLC
LOT 11, BLOCK 26
88 GLEN ALPIN ROAD
HARDING TOWNSHIP, NJ
PREPARED BY:
BOSENBERG
LANDSCAPE ARCHITECTURE
PO BOX 486
FAR HILLS, NJ 07931
(908)234-0557

DATE: DECEMBER 18, 2023
SCALE: 1" = 20'
REVISIONS:
MARCH 22, 2024

NJ Certificate of Authorization
MH000126
JM MAZZUCCO
NEW JERSEY LICENSED
LANDSCAPE ARCHITECT
#AS000800

Jim Mazzucco
SHEET **L-102**



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SOURCE INFORMATION:

88 GLEN ALPIN ROAD, LLC
HARDING TOWNSHIP, NEW JERSEY

CONSTRUCTION DETAILS

PREPARED FOR:
88 GLEN ALPIN ROAD, LLC
LOT 11, BLOCK 26
88 GLEN ALPIN ROAD
HARDING TOWNSHIP, NJ

PREPARED BY:
BOSENBERG

LANDSCAPE ARCHITECTURE
PO BOX 486
FAR HILLS, NJ 07931
(908)234-0557

DATE: DECEMBER 18, 2023
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REVISIONS:

FEBRUARY 14, 2024 - ZONING CHART MODIFICATIONS

MARCH 11, 2024

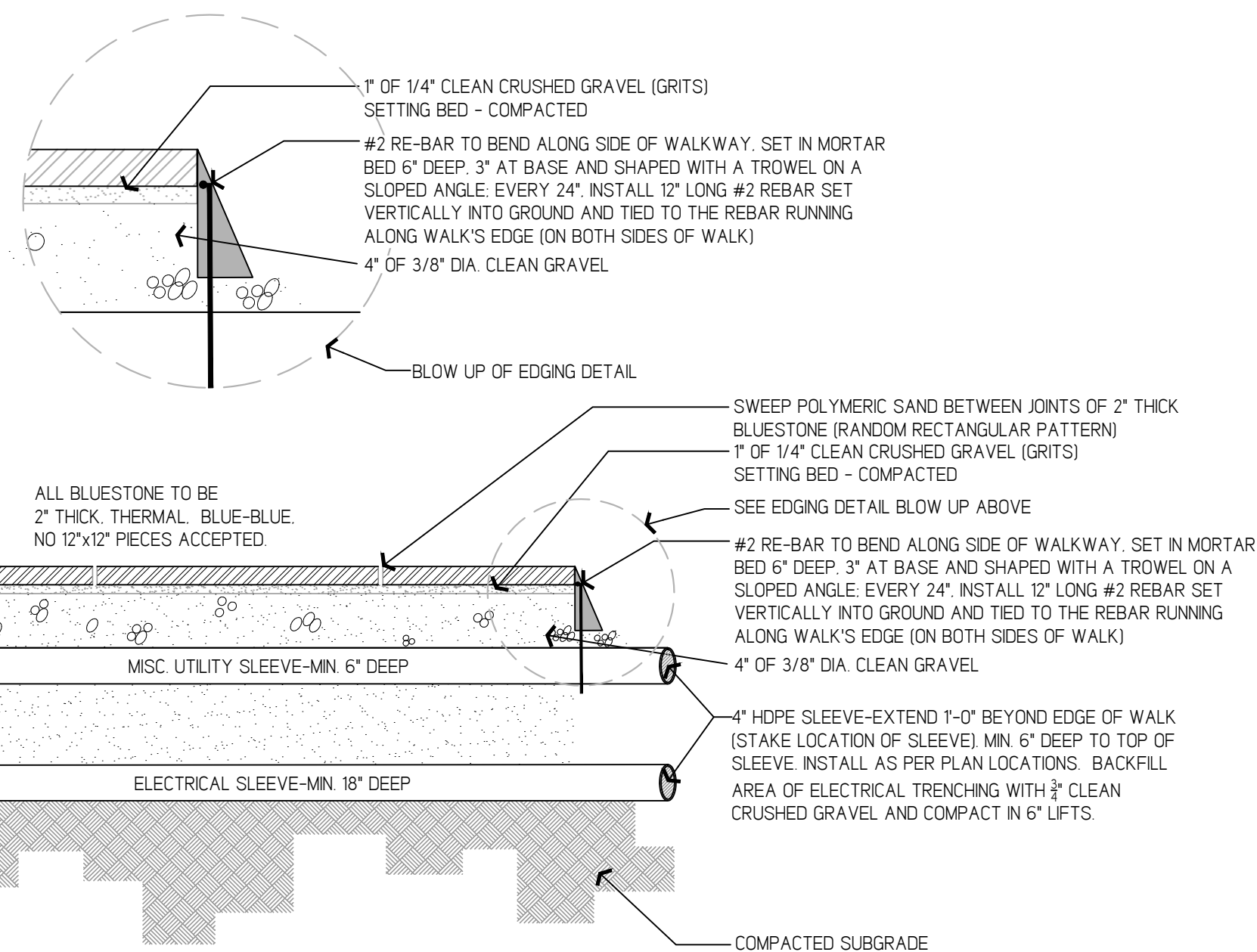
APRIL 22, 2024

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MH000126

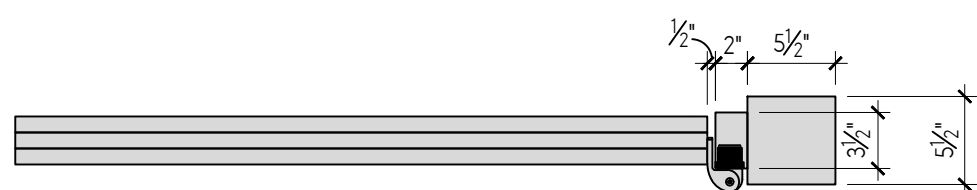
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LANDSCAPE ARCHITECT
#A50004800

Jm Mazzucco

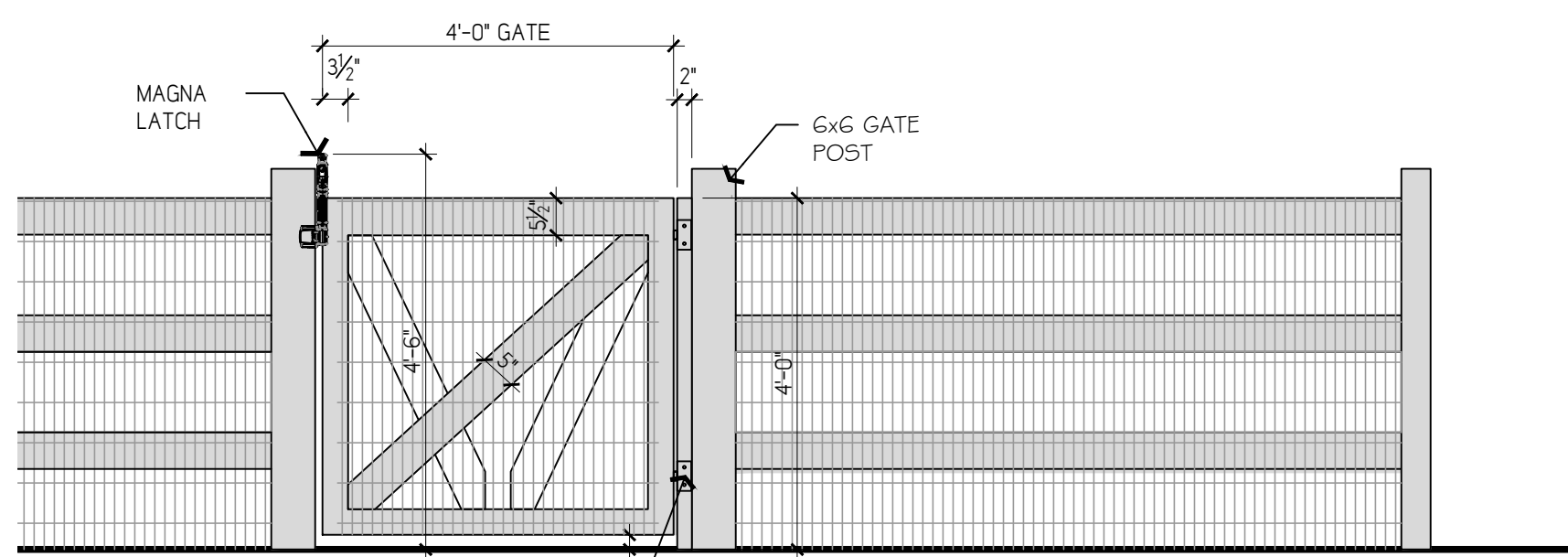
SHEET L-500



BLUESTONE WALK & PATIO DETAIL-DRYLAID NO SCALE



HINGE CONNECTION-PLAN VIEW NO SCALE

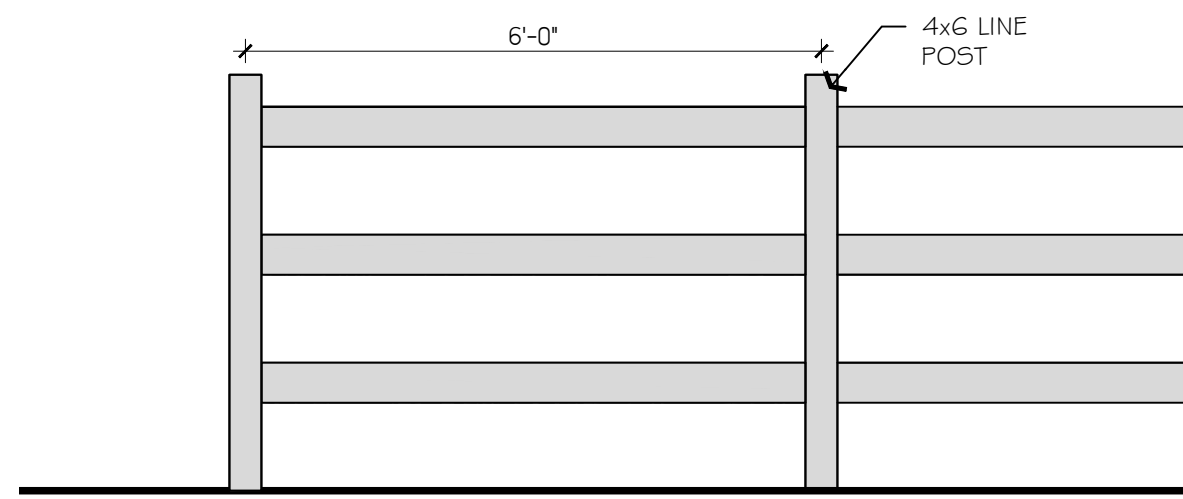


D4D TECHNOLOGIES SELF CLOSING
HYDRAULIC HINGE, MODEL# 57 5P AT90 S
WITH 75 I S MOUNTING BRACKET)

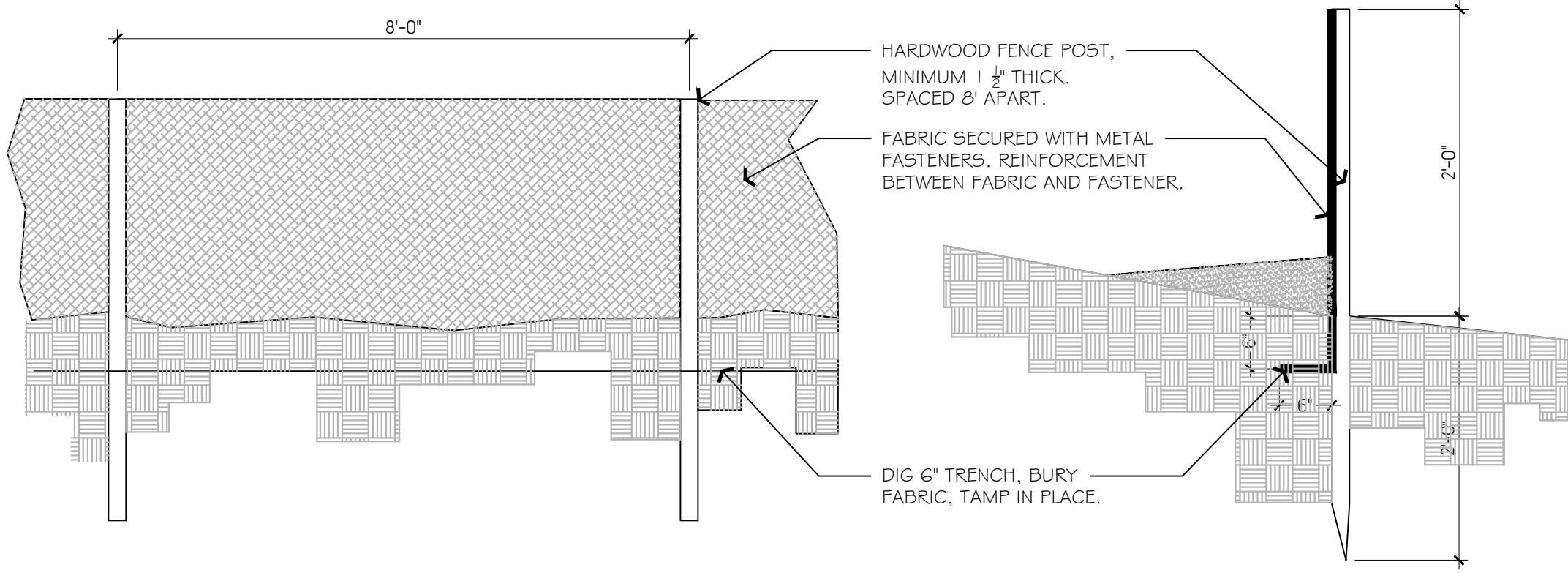
NOTES:

- ALL GATES TO OPEN OUT AND SHALL BE SELF CLOSING AND SELF LOCATING LATCH TO BE LOCATED NO LESS THAN 54" FROM THE BOTTOM OF THE GATE.
- FENCING TO MEET ALL LOCAL CODE REQUIREMENTS.

4' WIDE SPLIT RAIL POOL FENCE GATE DETAIL SCALE: 1/2" = 1'-0"



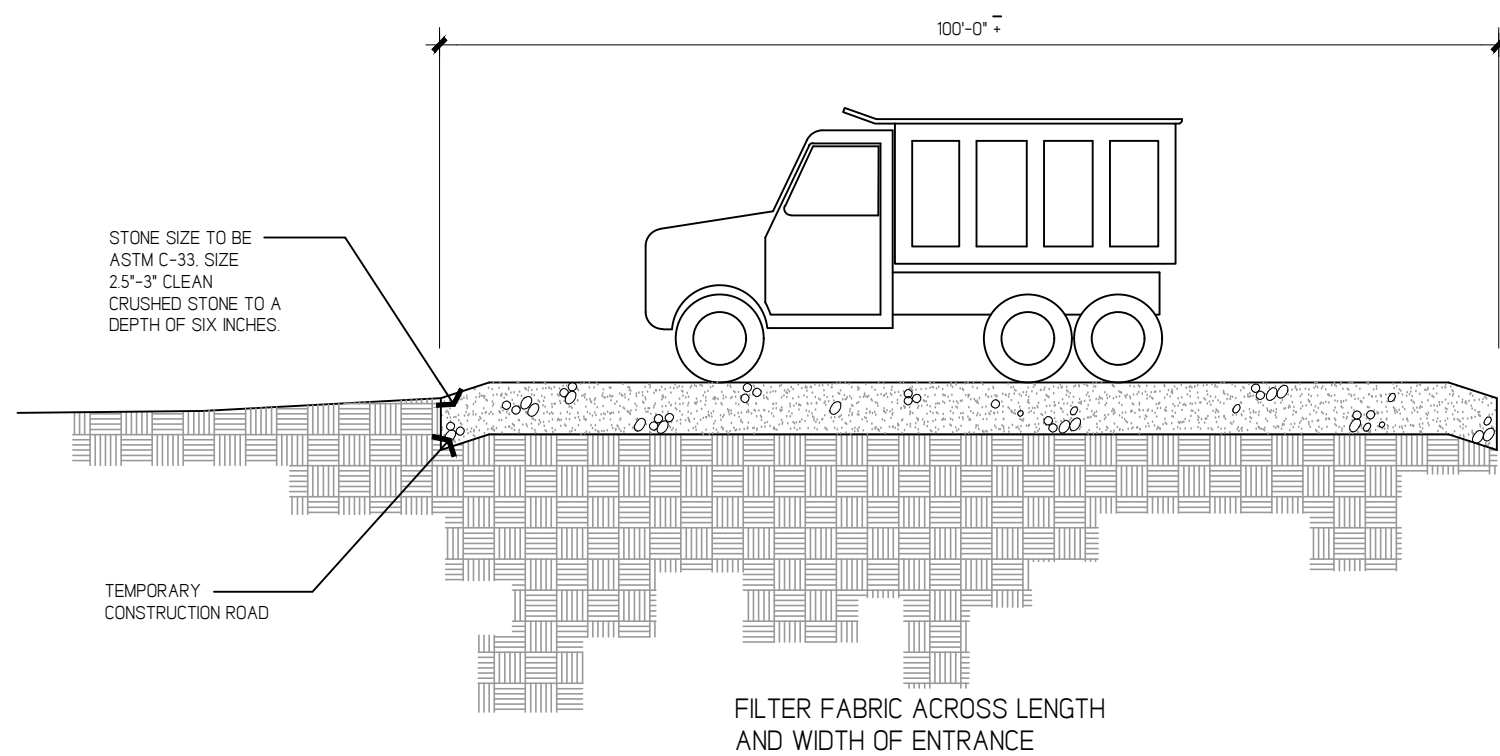
4' SPLIT RAIL FENCE DETAIL SCALE: 1/2" = 1'-0"



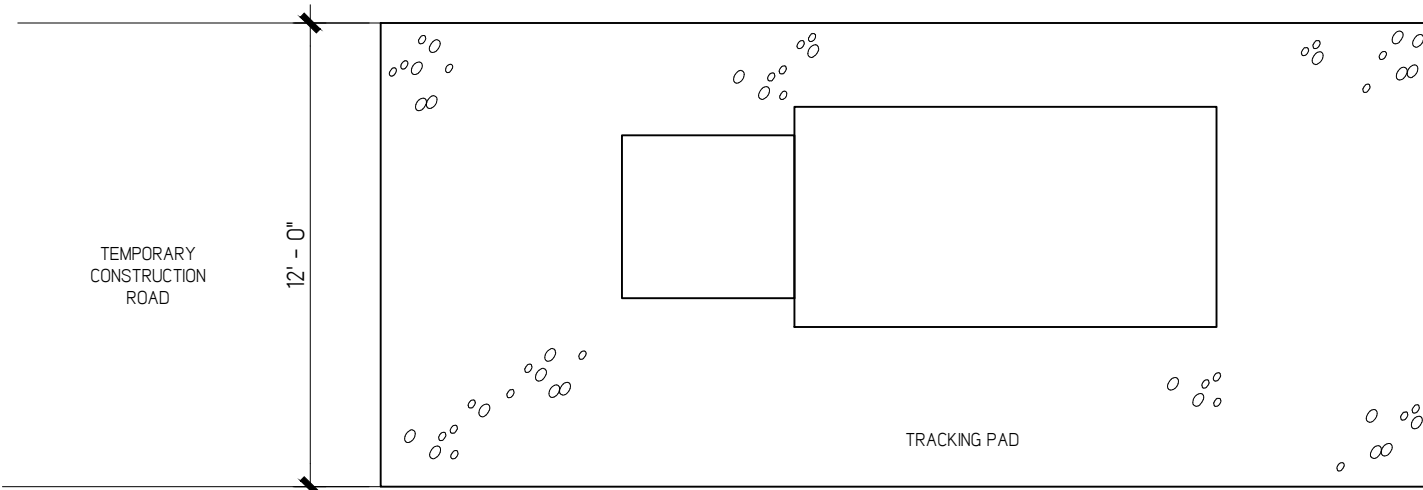
- FENCE POST TO BE PLACED 8 FEET CENTER TO CENTER OR CLOSER. THEY SHALL EXTEND AT LEAST 2 FEET INTO THE GROUND AND 2 FEET ABOVE GROUND. POSTS SHALL BE CONSTRUCTED OF HARDWOOD WITH A MINIMUM THICKNESS OF 1 1/2".
- A METAL FENCE WITH 6" OR SMALLER OPENINGS AND AT LEAST 2 FEET HIGH MAY BE UTILIZED, FASTENED TO THE FENCE POSTS, TO PROVIDE REINFORCEMENT AND SUPPORT TO THE GEOTEXTILE FABRIC WHERE SPACE FOR THE PRACTICES IS LIMITED AND HEAVY SEDIMENT LOADING IS EXPECTED.
- A GEOTEXTILE FABRIC, RECOMMENDED FOR SUCH USE BY THE MANUFACTURER, SHALL BE BURIED AT LEAST 6 INCHES DEEP IN THE GROUND. THE FABRIC SHALL EXTEND AT LEAST 2 FEET ABOVE THE GROUND. THE FABRIC MUST BE SECURELY FASTENED TO THE POSTS USING A SYSTEM CONSISTING OF METAL FASTENERS (NAILS OR STAPLES) AND A HIGH STRENGTH REINFORCEMENT MATERIAL (NYLON WEBBING, GROMMETS, WASHERS) PLACED BETWEEN THE FABRIC AND THE FASTENER. THE FASTENING SYSTEM SHALL RESIST TEARING AWAY FROM THE POST. THE FABRIC SHALL INCORPORATE A DRAWSTRING IN THE TOP PORTION OF THE FENCE FOR ADDED STRENGTH.

SILT FENCE

NOT TO SCALE



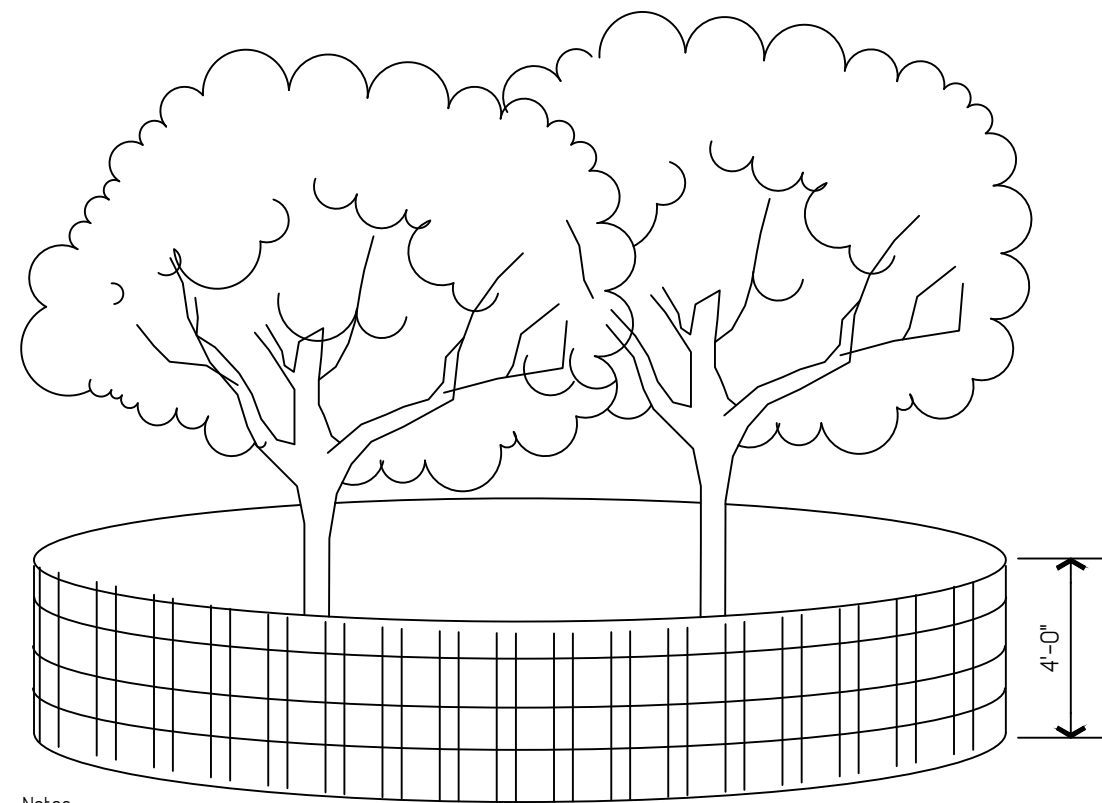
PROFILE VIEW



TRACKING PAD

PLAN VIEW

NOT TO SCALE



Notes:

- Snow fencing is to be 4'-0" high and self-supported.
- Do not stockpile materials or store equipment within the tree protection fencing.
- Snow fence to be installed at drip line of existing tree or tree cluster to be protected or no closer than 6' from tree trunk if necessary.
- If the project area encompasses a portion of the drip line of the tree, no more than one third of the of the total area of within the drip line should be disturbed by construction or regrading and a temporary 3" thick layer of mulch shall be installed over the area of the drip line which is not protected by fencing to provide a cushion.

TREE PROTECTION DETAIL

NO SCALE

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.
- 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 compaction mitigation verification form, available from the local soil conservation district. 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

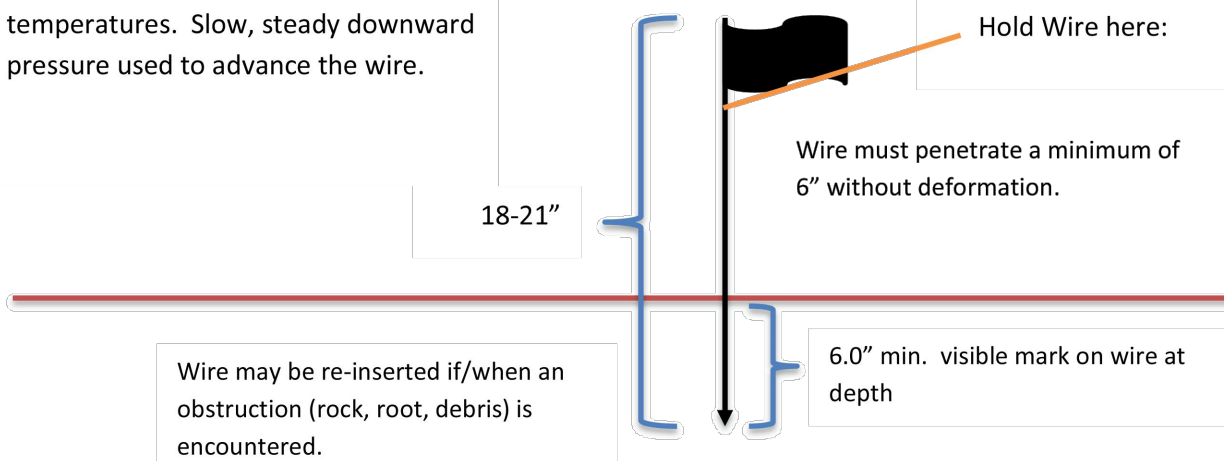
Procedures shall be used to mitigate excessive soil compaction **prior to placement of topsoil** and establishment of permanent vegetative cover.

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.

Simplified Testing Methods

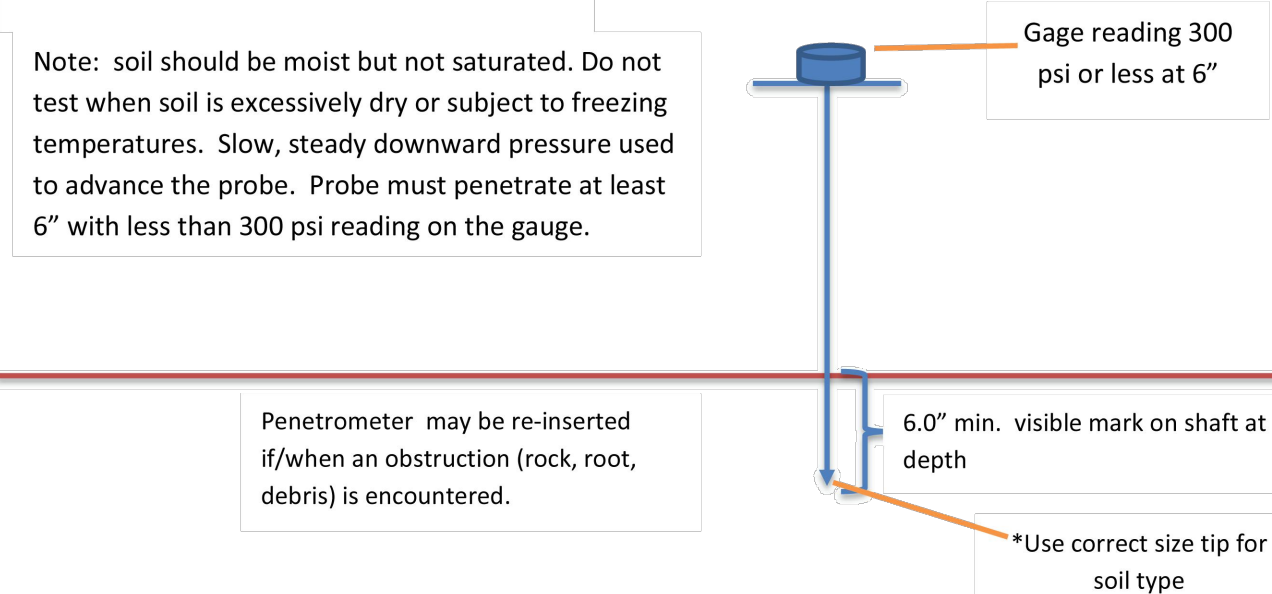
Probing Wire Test- 15.5 ga steel wire (survey flag)

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" with less than 300 psi reading on the gauge.



88 GLEN ALPIN ROAD, LLC
HARDING TOWNSHIP, NEW JERSEY

SESC DETAILS

PREPARED FOR:
88 GLEN ALPIN ROAD, LLC
LOT 11 BLOCK 26
88 GLEN ALPIN ROAD
HARDING TOWNSHIP, NJ
PREPARED BY:
BOSENBERG
LANDSCAPE ARCHITECTURE
PO BOX 486
FAR HILLS, NJ 07931
(908)234-0557

DATE: DECEMBER 18, 2023
SCALE: AS NOTED
REVISIONS:

FEBRUARY 14, 2024- ZONING CHART MODIFICATIONS

MARCH 11, 2024

APRIL 22, 2024

NJ Certificate of Authorization
M-000026
JIM MAZZUCCO
NEW JERSEY LICENSED
LANDSCAPE ARCHITECT
#A55049500

Jim Mazzucco
SHEET 1-501

SOIL EROSION AND SEDIMENT CONTROL NOTES
MORRIS COUNTY SOIL CONSERVATION DISTRICT

SEQUENCE OF CONSTRUCTION

The Somerset - Union Soil Conservation District shall be notified at least 48 hours in advance of beginning of project and upon completion of permanent stabilization of all disturbed areas.

1. Install all soil erosion and sediment control (SESC) plan requirements as specified on-plan (page L-100); including stabilized construction access, silt fencing and soil erosion and sediment control measures, as well as tree protection where applicable. (1 week)
2. Clear site, strip and stockpile soil. (1 week)
3. Trench for utilities, schedule inspection. (3 weeks)
4. Grade sub-base in preparation for installation of hardscape elements. (1 week)
5. Construction of on site improvements. (2 weeks)
6. Fine grade disturbed areas, scarify top 6" of sub-base soil, perform compaction test. (1 week)
7. Install 5" of topsoil, seed lawn areas, install landscaping and permanent stabilization. (3 days)
8. Remove temporary silt fence, inlet protection and other soil erosion controls. (1 day)

STANDARD FOR DUST CONTROL

Applicable to areas subject to dust blowing and movement where on-site and off-site damage is likely without treatment. Consult with local municipal ordinances on any restrictions.

Planning Criteria: The following methods should be considered for controlling dust:

Mulches - See Standard of Stabilization with Mulches Only, pg. 5-1

Vegetative Cover - See Standard for: Temporary Vegetative Cover, pg. 7-1, Permanent Vegetative Cover for Soil Stabilization pg. 4-1 and Permanent Stabilization with Sod, pg. 6-1

Spray-On Adhesives - On mineral soils (not effective on muck soils). Keep traffic off these areas.

Table 16-1: Dust Control

Material	Water Dilution	Type of nozzle	Apply Gal./acre
Anionic asphalt emulsion	7:1	Coarse spray	1,200
Latex emulsion	12.5:1	Fine spray	235
Resin in water	4:1	Fine spray	300
Polyacrylamide(PAM)-spray on Polyacrylamide (PAM)- dry spray	Apply according to manufacturer's instructions. May also be used as an additive to sediment Basins to flocculate and precipitate suspended colloids. See Sediment Basin Standards (pg26-1)		
Acidulated Soy Bean Soap Stick		Coarse spray	1,200

Tillage - To roughen surface and bring clods to the surface. This is a temporary emergency measure which should be used before soil blowing starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart and spring-toothed harrows are examples of equipment which may produce the desired effect.

Sprinkling - Site is sprinkled until the surface is wet.

Barriers - Solid board fences, snow fences, burlap fences, crate walls, bales of hay and similar material can be used to control air currents and soil blowing.

Calcium Chloride - Shall be in the form of loose, dry granules or flakes fine enough to feed through commonly used spreaders at a rate that will keep surface moist but not cause pollution or plant damage. If used on steeper slopes, then use other practices to prevent washing into streams or accumulation around plants.

Stone - Cover surface with crushed stone or coarse gravel.

STANDARD FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION

Applicable on exposed soils that have a potential for causing off-site environmental damage.

1. Site Preparation
 - A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with Standard for Land Grading.
 - B. Immediately prior to seeding and topsoil application, the subsoil shall be evaluated for compaction in accordance with the Standard for Land Grading.
 - C. Topsoil should be handled only when it is dry enough to 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.
2. 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 the rate of 500 pounds per acre or 11 pounds per 1,000 square feet of 10-10-10 or equivalent with 50% water insoluble nitrogen unless a soil test indicates otherwise and incorporated into the surface 4 inches. If fertilizer is not incorporated, apply one-half the rate described above during seedbed preparation and repeat another one-half rate application of the same fertilizer within 3 to 5 weeks after seeding.
 - 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 preparation. See Standard for Management of High Acid-Producing Soils for specific requirements.
3. 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 85o 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 degrees F. Many grasses become active at 65 degrees 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.
4. Mulching

Mulching is required on all seeding. Mulch will protect against erosion before grass is established and will promote faster and earlier establishment. The existence of vegetation sufficient to control soil erosion shall be deemed compliance with this mulching requirement.

 - A. Straw or Hay. Unrotted small grain straw, hay free of seeds, to be applied at the rate of 1-1/2 to 2 tons per acre (70 to 90 pounds per 1,000 square feet), except that where a crimper is used instead of a liquid mulch-binder (tackifying or adhesive agent), the rate of application is 3 tons per acre. Mulch chopper-blowers must not grind the mulch. Hay mulch is not recommended for establishing fine turf or lawns due to the presence of weed seed. Application - Spread mulch uniformly by hand or mechanically so that at least 85% of the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 square feet sections and distribute 70 to 90 pounds within each section. Anchoring shall be accomplished immediately after placement to minimize loss by wind or water. This may be done by one of the following methods, depending upon the size of the area, steepness of slopes, and costs.
 1. Peg and Twine. Drive 5 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a criss-cross and a square pattern. Secure twine around each peg with two or more round turns.
 2. Mulch Nettings - Staple paper, jute, cotton, or plastic nettings to the soil surface. Use a degradable netting in areas to be mowed.
 3. Crimper (mulch anchoring coultter tool) - A tractor-drawn implement, somewhat like a disc harrow, especially designed to push or cut some of the broadcast long fiber mulch 3 to 4 inches into the soil so as to anchor it and leave part standing upright. This technique is limited to areas traversable by a tractor, which must operate on the contour of slopes. Straw mulch rate must be 3 tons per acre. No tackifying or adhesive agent is required.
 4. Liquid Mulch-Binders - May be used to anchor salt hay, hay or straw mulch.
 - a. Applications should be heavier at edges where wind may catch the mulch, in valleys, and at crests of banks. The remainder of the area should be uniform in appearance.
 - b. Use one of the following:
 - (1) Organic and Vegetable Based Binders - Naturally occurring, powder-based, hydrophilic materials when mixed with water formulates a gel and when applied 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 phytotoxic effect or impede growth of turf grass. Use at rates and weather conditions as recommended by the manufacturer to anchor mulch materials. Many new products are available, some of which may need further evaluation for use in this state.
 - (2) Synthetic Binders - High polymer synthetic emulsion, miscible with water when diluted and, following application of mulch, drying and curing, shall no longer be soluble or dispersible in water. Binder shall be applied at rates recommended by the manufacturer and remain tacky until germination of grass. Note: All names given above are registered trade names. This does not constitute a recommendation of these products to the exclusion of other products.
 - B. Wood-fiber or paper-fiber mulch - shall be made from wood, plant fibers or paper containing no growth or germination inhibiting materials, used at the rate of 1,500 pounds per acre (or as recommended by the product manufacturer) and may be applied by a hydroseeder. Mulch shall not be mixed in the tank with seed. Use is limited to flatter slopes and during optimum seeding periods in spring and fall.
 - C. 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 manufacturer's recommendations. Mulch may be applied by hand or mechanical spreader at the rate of 80-15 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 weedseed free mulch is desired, or on sites where straw mulch and tackifier agent are not practical or desirable. Applying the full 0.2 to 0.4 inches of water after spreading pelletized mulch on the seed bed is extremely important for sufficient activation and expansion of the mulch to provide soil coverage.
5. Irrigation (where feasible)

If soil moisture is deficient supply new seeding with adequate water (a minimum of 1/4 inch applied up to twice a day until vegetation is well established). This is especially true when seedlings are made in abnormally dry or hot weather or on droughty sites.
6. Topdressing

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

The quality of permanent vegetation rests with the contractor. The timing of seeding, preparing the seedbed, applying nutrients, mulch and other management 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.

Harding Township

Soil Erosion and Sediment Control Notes

GENERAL NOTES:

1. All Soil erosion and -Sediment Control Practices will be installed in accordance with the Standards for Soil Erosion and Sedimentation Control in the State of New Jersey, and will be in place prior to any major soil disturbance, or in their proper sequence and maintained until permanent protection is established.
2. Any disturbed area that will be left exposed for more than thirty (30) days and not subject to construction traffic shall immediately receive a temporary seeding. If the season prohibits temporary seeding, the disturbed area will be mulched with straw or hay and tacked in accordance with the New Jersey Standards. See Note 21 below.
3. Permanent vegetation is to be established on exposed areas within ten (10) days after final grading. Mulch is to be used for protection until vegetation is established. See Note 22 below.
4. Immediately following initial disturbance or rough grading, all critical areas (steep slopes, sandy soils, wet conditions) subject to erosion will receive temporary seeding in accordance with Note 21 below.
5. Temporary Diversion Berms are to be installed on all cleared roadways and easement areas in accordance with Section 4:21 of the State Standards.
6. Permanent seeding and stabilization to be in accordance with the Standards for Permanent Vegetative Cover. Specified rates and locations shall be on the approved Soil Erosion and Sedimentation Control Plan.
7. The site shall at all times be graded and maintained so that all storm water runoff is diverted to Soil Erosion and Sedimentation Control facilities.
8. All sedimentation structures (silt fence, inlet filters, and sediment basins) will be inspected and maintained daily.
9. Stockpiles shall not be located within 50' of a floodplain, slope, drainage facility or roadway. All stockpile bases shall be protected by a silt fence.
10. A crushed stone, vehicle wheel-cleaning blanket (stabilized construction access) will be installed per the detail.
11. All new roadways will be treated suitable subbase upon establishment of final grade elevations.
12. Paved roadways must be kept clean at all times.
13. All catch basin inlets will be protected in accordance with the inlet filter detail provided on the plans.
14. Before discharge points become operational, all storm drainage outlets will be stabilized as required.
15. All dewatering operations must be discharged directly into a sediment filter area. The sediment filter should be composed of a suitable sediment fabric. See the Dewatering detail.
16. All sedimentation basins will be cleaned when the capacity has been reduced by 50%. A clean out elevation will be identified on the plan and a marker installed on the site.
17. During and after construction the owner will be responsible for the maintenance and upkeep of the drain structures, vegetation cover, and any other measures deemed appropriate by the Township Engineer. Said responsibility will preclude when all work is approved by the Township Engineer.
18. All trees to remain after construction are to be protected with tree protection devices. See the Tree Protection detail.
19. The Township Engineer may request additional measures to minimize on site or off site erosion problems during construction.
20. The Township Engineer must be notified, in writing, at least 72 hours prior to any land

TOP SOIL STOCKPILE PROTECTION

1. Construct temporary diversion berm and/or hay bale barrier around stockpile area as required.
2. Apply limestone at a rate of 90 lbs./1000 S.F.
3. Apply fertilizer (10-20-10) at a rate of 11 lbs. / 1000 S.F.
4. Apply perennial Ryegrass at a rate of 1 lb/1000 S.F. and Annual Ryegrass at a rate of 1lb/1000 S.F.
5. Mulch with unrotted salt hay or small grain straw immediately after seeding. Apply at a rate of 90 lbs./1000 S.F.
6. Apply liquid mulch binder or tack to straw or hay mulch

TEMPORARY STABILIZATION SPECIFICATIONS

1. Apply ground limestone at a rate of 90 lbs./1000 S.F.
2. Apply fertilizer (10-20-10) at a rate of 11 lbs. / 1000 S.F. and work into soil 4" deep.
3. Apply seed mixture.
 - Perennial Ryegrass at a rate of 40 lbs./acre and Annual Ryegrass at 40 lbs./acre or approved equal.
4. Mulch with unrotted salt hay or small grain straw immediately after seeding. Apply at a rate of 90 lbs./1000 S.F. and secure by applying a liquid mulch binder or tack to straw or hay mulch.
5. Plant seed between March 1 4 May 15 or between Aug. 15 4 Oct. 1, if possible

PERMANENT STABILIZATION SPECIFICATIONS

1. Apply topsoil to a depth of 5" (loose).
2. Apply ground limestone at a rate of 90 lbs./1000 S.F. and work 4" into soil.
3. Apply fertilizer (10-20-10) at a rate of 11 lbs. / 1000 S.F. and work into soil 4" deep.
4. Apply seed mixture.
 - Perennial Ryegrass at a rate of 10 lbs./acre, Kentucky Bluegrass at a rate of 25 lbs./acre, Red Fescue at 15 lbs./acre or approved equal.
5. Mulch with unrotted salt hay or small grain straw immediately after seeding. Apply at a rate of 90 lbs./1000 S.F. and secure by applying a liquid mulch binder or tack to straw or hay mulch. If possible, plant seed between March 1 4 May 15 or between Aug. 15 4 Oct. 1.

NOTE: 72 HOURS PRIOR TO ANY SOIL DISTURBANCE, NOTICE OF SUCH IN WRITING SHALL BE GIVEN TO THE TOWNSHIP ENGINEER.

88 GLEN ALPIN ROAD, LLC
HARDING TOWNSHIP, NEW JERSEY

SESC NOTES

PREPARED FOR:
88 GLEN ALPIN ROAD, LLC
LOT 11 BLOCK 26
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