

I, Jonathan Halle, hereby Certify that I am the designer of this Landscape Plan and that I am a Professional Landscape Architect Licensed by the State of New Hampshire.

Jonathan Halle

Jonathan Halle, PLA, AIA

NOTES:

Preservation of Existing Trees: The methods for the preservation of existing trees shall be noted on the landscape plan and efforts shall be made to minimize the potential for serious damage due to wind, grade changes, and soil compaction. No construction materials, equipment, vehicles, or temporary soil deposits shall be located within the dripline of trees that are to be preserved. Protective barriers such as silt fencing or construction fencing shall be installed around each plant and/or groups of plants that are to remain onsite. The applicant shall be responsible for replacing any trees proposed to be retained which have been damaged or destroyed by construction activities.

Placement of Landscape Material: Landscape improvements shall be placed to avoid interference with pedestrian and vehicular movement, underground and overhead utilities, and snow storage. Plant material shall be located to enhance the overall attractiveness of the site and to ensure long term viability of the plantings and other landscape improvements.

(1) **Distribution:** Plant material shall be reasonably distributed throughout the site, with careful attention to the road frontage and views from the public right-of-way, entrances to buildings, signs, required buffers/screens, and parking lot landscaping. Street trees shall be planted between twenty (20) feet and forty (40) feet apart, or as otherwise approved by the Planning Board.

Required Landscaping Improvements: Landscaping shall be provided as required herein and as required in the City of Concord Zoning Ordinance. Landscaping shall be provided to supplement the natural features which are preserved within the site plan and to enhance those portions of the site plan in which natural features and vegetation are destroyed by construction. The following landscape improvements shall be required as applicable by the Planning Board.

Planting Specifications: All plant materials shall be planted in accordance with the City of Concord's Construction Standards and Details. Organic mulch shall be used to retain soil moisture and moderate temperature, however, the thick application of mulch around the root collar of the tree will not be allowed.

Mulch: Non-organic mulch, stone, or landscaped fabric is not allowed in required landscape areas. Non-organic mulch, stone or other ground covering is acceptable in other areas of the site, if landscape fabric is used it will be considered an impervious surface.

Maintenance: The applicant or their successors shall be responsible for the regular maintenance of all plantings and other landscape features. Plant materials shall be maintained alive, healthy and free from pests and disease. Tree stakes and guys shall be removed after the first growing season.

Financial Guarantee: The Planning Board may require a financial guarantee for up to two (2) years to ensure the viability and/or replacement of required landscaping.

Undesirable Growth and Debris: Existing invasive species shall be removed from the developed area. All trash, construction material and debris shall be removed from each lot. Dead and dying trees which present a potential hazard to existing and proposed structures shall be removed.

Erosion Control: Erosion control measures shall be installed and maintained to prevent sediment from leaving the site, entering the City or State storm drainage system, intermittent or perennial streams, wetlands, ponds and other surface waters. All disturbed areas shall be revegetated and all sediment shall be retained on site. Disturbed areas shall be restored pursuant to the City of Concord Construction Standards and Details, the State of New Hampshire Department of Environmental Protection (DES) regulations, and the US Environmental Protection Agency's NPDES (National Pollution Discharge Elimination System) requirements.

(1) **Erosion Control Plan:** Prior to any clearing of a site, an Erosion Control Plan shall be submitted and shall be reviewed and approved by the City Engineer.

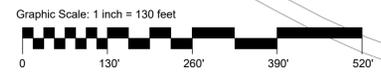
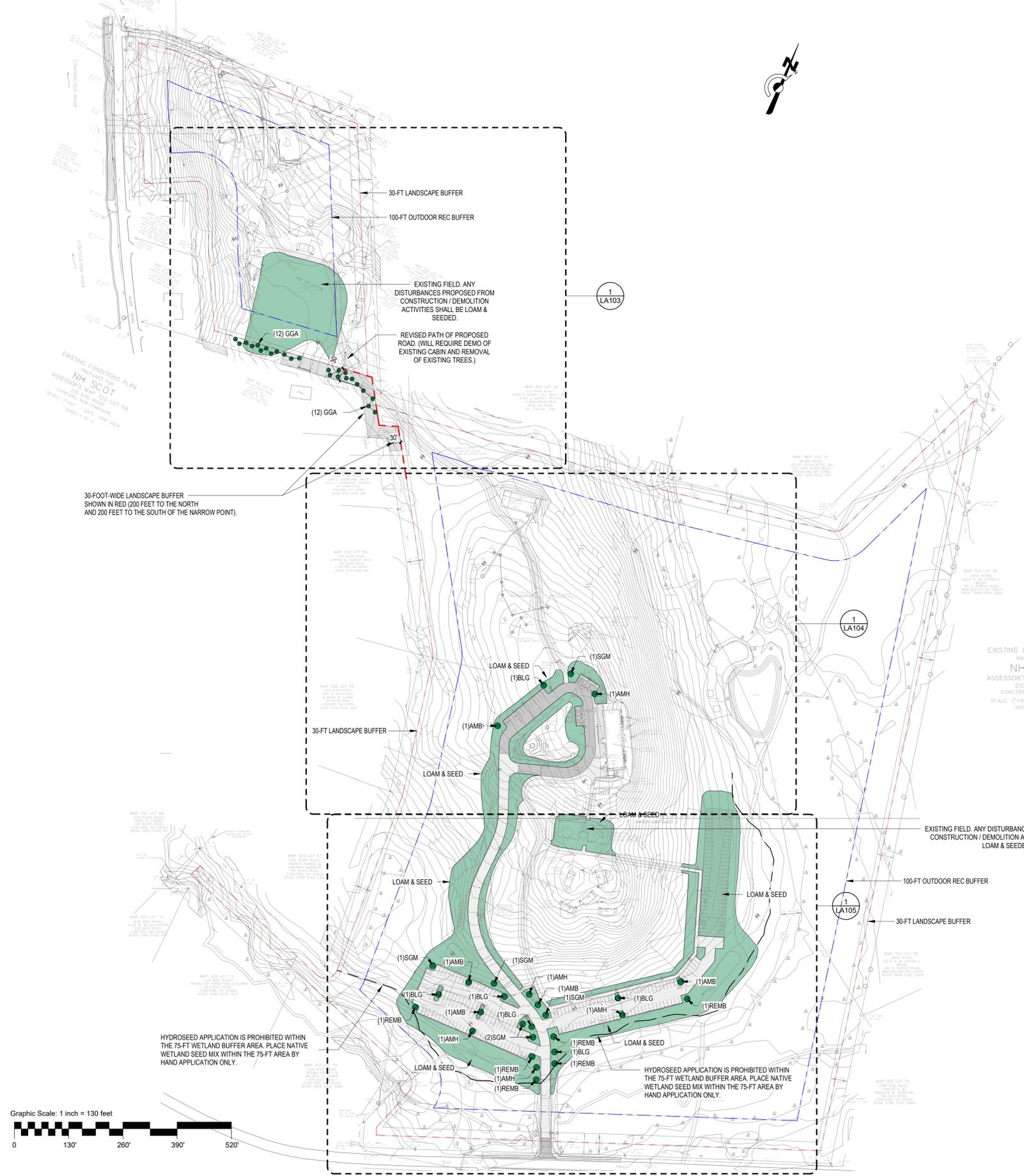
(2) **Disturbed Areas:** Appropriate erosion and sedimentation control measures shall be installed prior to soil disturbance. The limits of disturbance shall be clearly marked with tape, signs, or orange construction fencing prior to the start of clearing of the site or phase of development. Wherever practical, natural vegetation shall be retained. The approved Erosion Control Plan shall specify the areas to be disturbed, and disturbed areas shall be limited to those phases or portion of the site where active construction is occurring. Disturbed areas remaining idle for more than twenty one (21) days shall be stabilized, including soil stockpiles.

Concord, NH Site Plan Regulations Amendments Filed with City Clerk on 5/17/19 Page 91

(3) **Site Restoration:** Grading shall be completed in accordance with the approved site plan. All disturbed land shall be recovered with loam with a minimum depth of six (6) inches. The loam shall be fertile, natural soil, typical of the locality, free from large stones, roots, sticks, clay, peat, weeds and sod, and obtained from a naturally well drained area, nor contain toxic materials to plants. The loam shall not contain particles over two (2) inches in diameter. When possible, topsoil from the proposed development shall be redistributed so as to provide the required cover. All disturbed areas shall be seeded in accordance with the City of Concord Construction Standards and Details. The Planning Board may require the planting of trees and shrubs in areas to be restored.

(4) **Monitoring and Maintenance:** Sedimentation and erosion control measures shall be installed prior to the start of construction, and shall be monitored and maintained during construction, and removed after final site stabilization in accordance with City, NH DES and NPDES requirements.

(5) **Final Stabilization:** A site shall be deemed to be stabilized when it is in a condition in which the soils on the site will not erode under the conditions of a ten (10) year storm. Temporary sediment and erosion control devices shall not be removed until permanent stabilization is established for the entire site or phase of the development. All temporary erosion and sediment control measures shall be removed after the completion of construction.



OWNER
CHILD & FAMILY SERVICES
REALTY CORP
PO BOX 448
MANCHESTER, NH 03105

CONSTRUCTION MANAGER
TITLE 1
TITLE 2
STREET
CITY, STATE ZIP
P. () F. ()

CONSULTANTS:
CIVIL
NOBIS GROUP
18 CHENELL DRIVE
CONCORD, NH, 03301
(603) 224-4182

LANDSCAPE
WARRENSTREET ARCHITECTS
4 CRESCENT STREET UNIT 2
CONCORD, NH, 03303
(603) 225-0640

STRUCTURAL
NAME
STREET
CITY, STATE, ZIP
TELEPHONE

MECHANICAL/PLUMBING
NAME
STREET
CITY, STATE, ZIP
TELEPHONE

ELECTRICAL
NAME
STREET
CITY, STATE, ZIP
TELEPHONE

OTHER
NAME
STREET
CITY, STATE, ZIP
TELEPHONE

Warrenstreet
Planning Landscapes Architecture Interiors

WARRENSTREET ARCHITECTS, INC.
4 CRESCENT STREET, UNIT 2
CONCORD, NEW HAMPSHIRE 03303
40 STARK STREET
MANCHESTER, NEW HAMPSHIRE 03103
P. (603) 225-0640
WWW.WARRENSTREET.COOP

SEAL:

PROJECT TITLE / ADDRESS:
NHSCOT HEADQUARTERS

211 BOG ROAD
CONCORD, NH 03303

PLAN KEY:

SCALE: AS NOTED DWN BY: CB
PROJECT #: 3913 CHK BY: JH
PRINT DATE: 2/11/2026 4:44:59 PM

ISSUE DATE: 06/18/2024

REV.	DATE	COMMENTS
6	02/11/26	24 GREEN GIANT PLANTINGS

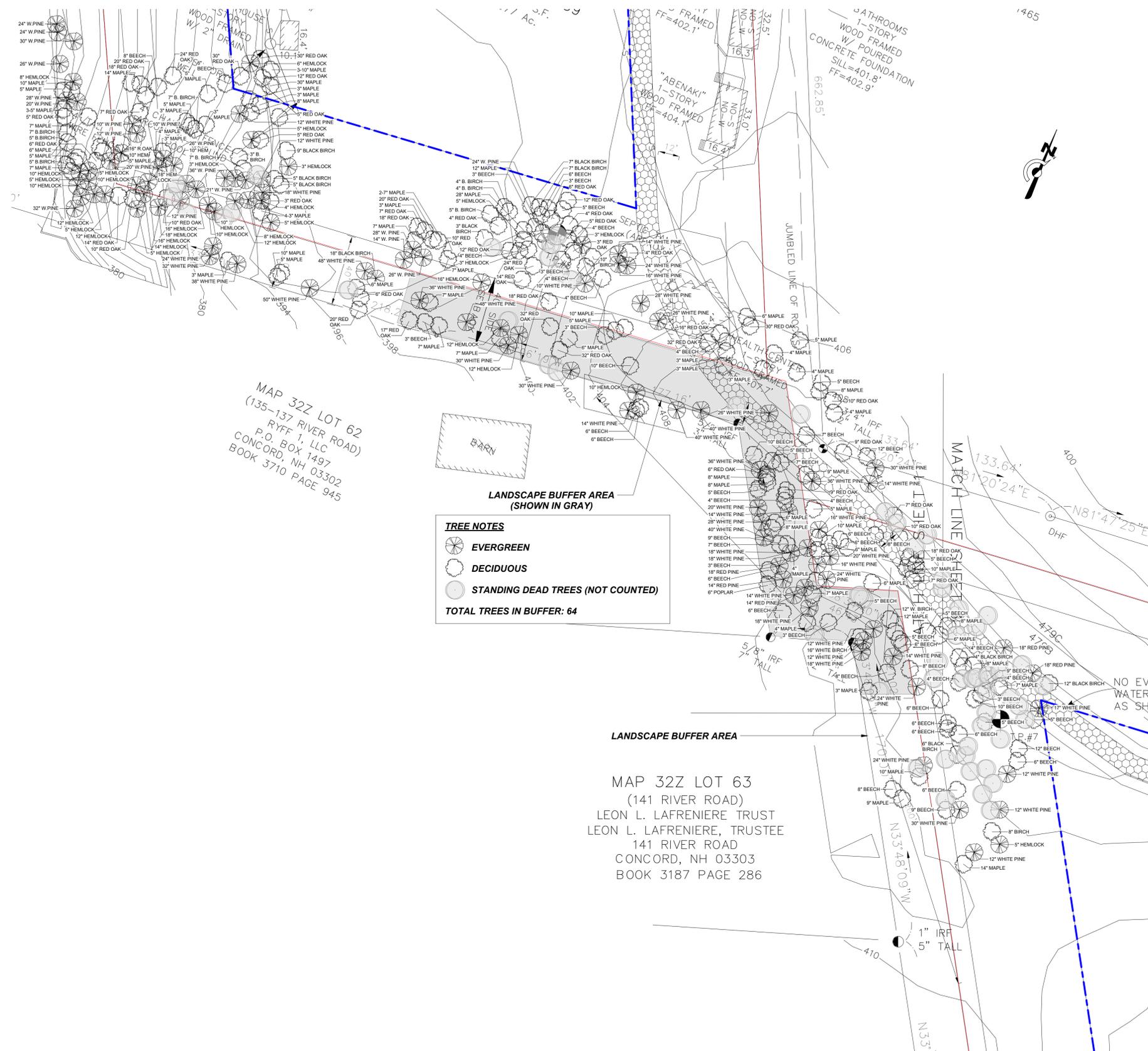
LANDSCAPE SITE PLAN

LA101

SHEET NUMBER: 1 OF 10 LANDSCAPE

THE DRAWING AND ITS CONTENT IS THE INTELLECTUAL PROPERTY OF WARRENSTREET ARCHITECTS INC. WITH THE SOLE INTENT TO BUILD THE PROJECT TITLED ABOVE AT THE LOCATION NOTED HEREIN. THE USE OF THE CONTENT FOR ANY OTHER PURPOSE IS PROHIBITED AND PROTECTED UNDER COPYRIGHT LAW.

Autodesk Docs: 2913 NHSCOT1913 2026-01-11 NHSCOT CULTURAL CENTER LAYOUT TEMPLATE DATE: 11/25/2019



MAP 32Z LOT 62
(135-137 RIVER ROAD)
RYFF 1, LLC
P.O. BOX 1497
CONCORD, NH 03302
BOOK 3710 PAGE 945

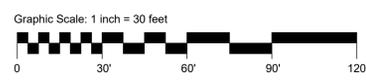
LANDSCAPE BUFFER AREA (SHOWN IN GRAY)

TREE NOTES

- EVERGREEN
- DECIDUOUS
- STANDING DEAD TREES (NOT COUNTED)

TOTAL TREES IN BUFFER: 64

MAP 32Z LOT 63
(141 RIVER ROAD)
LEON L. LAFRENIERE TRUST
LEON L. LAFRENIERE, TRUSTEE
141 RIVER ROAD
CONCORD, NH 03303
BOOK 3187 PAGE 286



OWNER
CHILD & FAMILY SERVICES
REALTY CORP
PO BOX 448
MANCHESTER, NH 03105

CONSTRUCTION MANAGER
TITLE 1
TITLE 2
STREET
CITY, STATE ZIP
P. () F. ()

CONSULTANTS:
CIVIL
NOBIS GROUP
18 CHENELL DRIVE
CONCORD, NH, 03301
(603) 224-4182

LANDSCAPE
WARRENSTREET ARCHITECTS
4 CRESCENT STREET UNIT 2
CONCORD, NH, 03303
(603) 225-0640

STRUCTURAL
NAME
STREET
CITY, STATE, ZIP
TELEPHONE

MECHANICAL/PLUMBING
NAME
STREET
CITY, STATE, ZIP
TELEPHONE

ELECTRICAL
NAME
STREET
CITY, STATE, ZIP
TELEPHONE

OTHER
NAME
STREET
CITY, STATE, ZIP
TELEPHONE

Warrenstreet
Planning Landscapes Architecture Interiors

WARRENSTREET ARCHITECTS, INC.
4 CRESCENT STREET, UNIT 2
CONCORD, NEW HAMPSHIRE 03303
40 STARK STREET
MANCHESTER, NEW HAMPSHIRE 03103
P. (603) 225-0640
WWW.WARRENSTREET.COOP

SEAL:

PROJECT TITLE / ADDRESS:
NHSCOT HEADQUARTERS

211 BOG ROAD
CONCORD, NH 03303

PLAN KEY:

SCALE: AS NOTED DWN BY: CB
PROJECT #: 3913 CHK BY: JH
PRINT DATE: 2/11/2026 4:45:00 PM

ISSUE DATE: 06/18/2024

REV.	DATE	COMMENTS

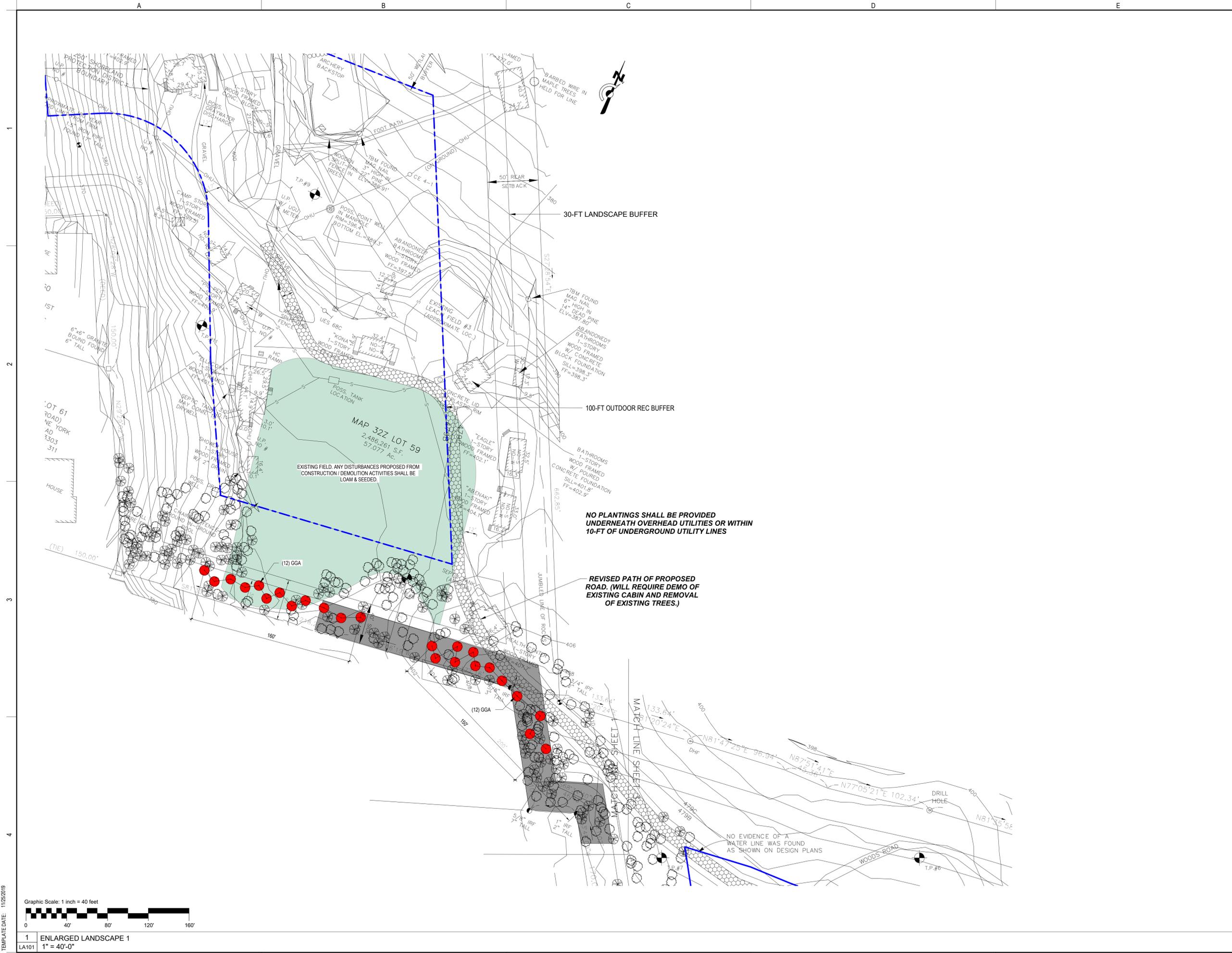
EXISTING TREES AT LANDSCAPE BUFFER AREA

LA102

SHEET NUMBER: 2 OF 10 LANDSCAPE

THE DRAWING AND ITS CONTENT IS THE INTELLECTUAL PROPERTY OF WARRENSTREET ARCHITECTS INC. WITH THE SOLE INTENT TO BUILD THE PROJECT TITLED ABOVE AT ONE LOCATION NOTED HEREIN. THE USE OF THE CONTENT FOR ANY OTHER PURPOSE IS PROHIBITED AND PROTECTED UNDER COPYRIGHT LAW.

Copyright Warrenstreet Architects, LLC © 1990 - 2026



OWNER
 CHILD & FAMILY SERVICES
 REALTY CORP
 PO BOX 448
 MANCHESTER, NH 03105

CONSTRUCTION MANAGER
 TITLE 1
 STREET
 CITY, STATE, ZIP
 P. () F. ()

CONSULTANTS:
CIVIL
 NOBIS GROUP
 18 CHENELL DRIVE
 CONCORD, NH, 03301
 (603) 224-4182

LANDSCAPE
 WARRENSTREET ARCHITECTS
 4 CRESCENT STREET UNIT 2
 CONCORD, NH, 03303
 (603) 225-0640

STRUCTURAL
 NAME
 STREET
 CITY, STATE, ZIP
 TELEPHONE

MECHANICAL/PLUMBING
 NAME
 STREET
 CITY, STATE, ZIP
 TELEPHONE

ELECTRICAL
 NAME
 STREET
 CITY, STATE, ZIP
 TELEPHONE

OTHER
 NAME
 STREET
 CITY, STATE, ZIP
 TELEPHONE

Warrenstreet
 Planning Landscapes Architecture Interiors

WARRENSTREET ARCHITECTS, INC.
 4 CRESCENT STREET, UNIT 2
 CONCORD, NEW HAMPSHIRE 03303
 40 STARK STREET
 MANCHESTER, NEW HAMPSHIRE 03103
 P. (603) 225-0640
 WWW.WARRENSTREET.COOP

SEAL:


PROJECT TITLE / ADDRESS:
NHSCOT HEADQUARTERS

211 BOG ROAD
 CONCORD, NH 03303

PLAN KEY:

SCALE: AS NOTED DWN BY: CB
 PROJECT #: 3913 CHK BY: JH
 PRINT DATE: 2/11/2026 4:45:02 PM

ISSUE DATE: 06/18/2024

REV.	DATE	COMMENTS
6	02/11/26	24 GREEN GIANT PLANTINGS

LANDSCAPE SITE PLAN
 ENLARGED 1

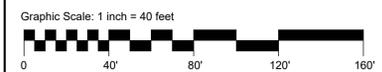
LA103

SHEET NUMBER: 3 OF 10 LANDSCAPE

THE DRAWING AND ITS CONTENT IS THE INTELLECTUAL PROPERTY OF WARRENSTREET ARCHITECTS INC. WITH THE SOLE INTENT TO BUILD THE PROJECT TITLED ABOVE AT ONE LOCATION NOTED HEREIN. THE USE OF THE CONTENT FOR ANY OTHER PURPOSE IS PROHIBITED AND PROTECTED UNDER COPYRIGHT LAW.

Copyright Warrenstreet Architects, LLC © 1990 - 2026

AutoCAD: Desc: 23913 NHSCOT18913 2026-01-11 NHSCOT CULTURAL CENTER LAYOUT
 TEMPLATE DATE: 11/25/2019



1 ENLARGED LANDSCAPE 1
 LA101 1" = 40'-0"

(141 RIVER ROAD)
LEON L. LAFRENIERE TRUST
LEON L. LAFRENIERE, TRUSTEE
141 RIVER ROAD
CONCORD, NH 03303
BOOK 3187 PAGE 286

MAP 32Z LOT 64
(145 RIVER ROAD)
EDWARD & THERESA SMITH
145 RIVER ROAD
CONCORD, NH 03303
BOOK 3479 PAGE 961

MAP 32Z LOT 66
(149 RIVER ROAD)
ERIC D. SNODGRASS
& WENDY B. LANDIN
149 RIVER ROAD
CONCORD, NH 03303
BOOK 2079 PAGE 1569

MAP 32Z LOT 59
2,486.26' S.F.
57,077' A.C.

100-FT OUTDOOR REC BUFFER

30-FT LANDSCAPE BUFFER

NO PLANTINGS SHALL BE PROVIDED
UNDERNEATH OVERHEAD UTILITIES OR WITHIN
10-FT OF UNDERGROUND UTILITY LINES

FOR INFORMATION REGARDING
CURBING, SEE CIVIL DRAWINGS

FOR INFORMATION REGARDING
CURBING, SEE CIVIL DRAWINGS

Graphic Scale: 1 inch = 40 feet



OWNER
CHILD & FAMILY SERVICES
REALTY CORP
PO BOX 448
MANCHESTER, NH 03105

CONSTRUCTION MANAGER
TITLE 1
TITLE 2
STREET
CITY, STATE, ZIP
P. () F. ()

CONSULTANTS:
CIVIL
NOBIS GROUP
18 CHENELL DRIVE
CONCORD, NH, 03301
(603) 224-4182

LANDSCAPE
WARRENSTREET ARCHITECTS
4 CRESCENT STREET UNIT 2
CONCORD, NH, 03303
(603) 225-0640

STRUCTURAL
NAME
STREET
CITY, STATE, ZIP
TELEPHONE

MECHANICAL/PLUMBING
NAME
STREET
CITY, STATE, ZIP
TELEPHONE

ELECTRICAL
NAME
STREET
CITY, STATE, ZIP
TELEPHONE

OTHER
NAME
STREET
CITY, STATE, ZIP
TELEPHONE

Warrenstreet
Planning Landscapes Architecture Interiors

WARRENSTREET ARCHITECTS, INC.
4 CRESCENT STREET, UNIT 2
CONCORD, NEW HAMPSHIRE 03303
40 STARK STREET
MANCHESTER, NEW HAMPSHIRE 03103
P. (603) 225-0640
WWW.WARRENSTREET.COOP

SEAL:



PROJECT TITLE / ADDRESS:

NHSCOT HEADQUARTERS

211 BOG ROAD
CONCORD, NH 03303

PLAN KEY:

SCALE: AS NOTED DWN BY: CB
PROJECT #: 3913 CHK BY: JH
PRINT DATE: 2/11/2026 4:45:03 PM

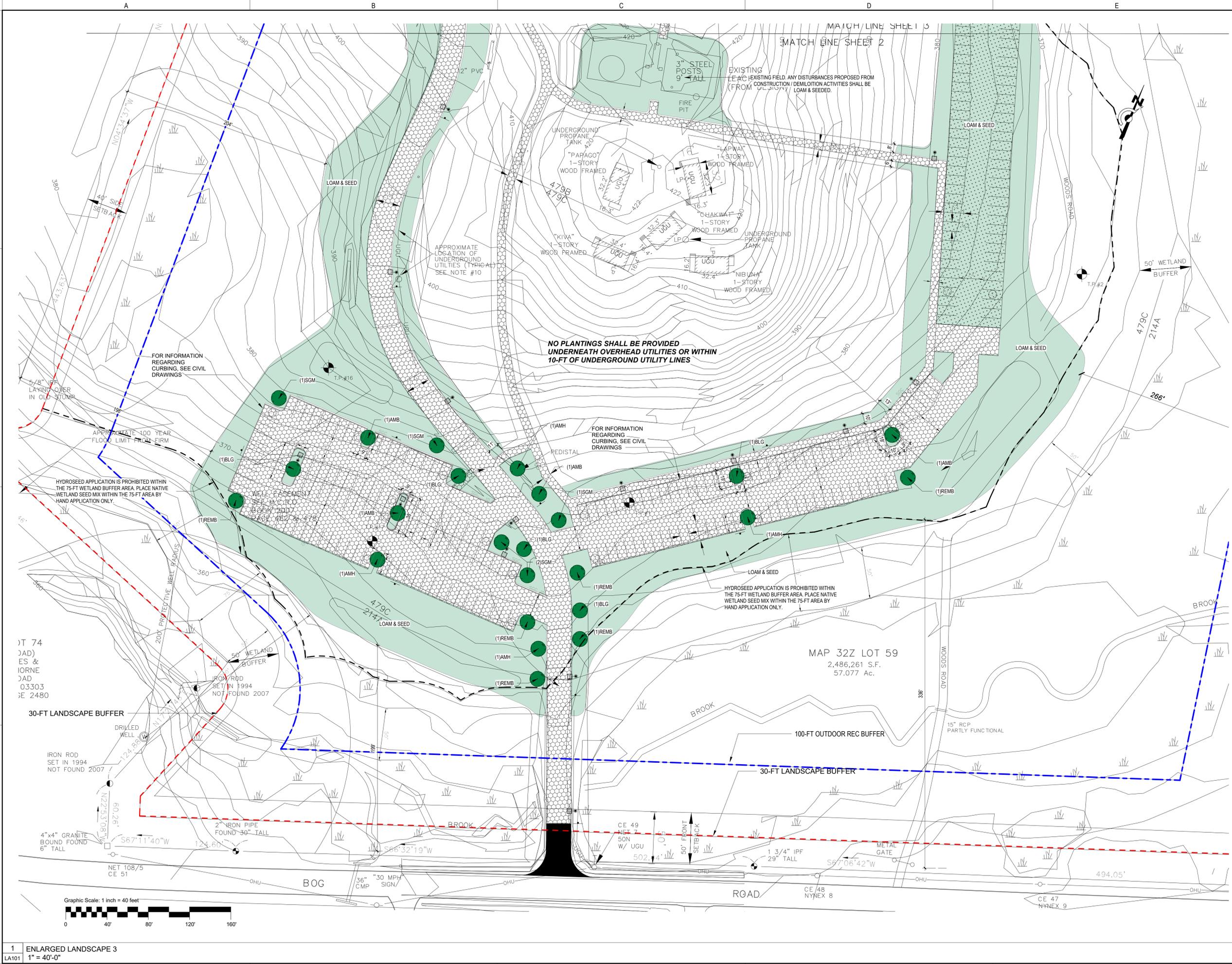
ISSUE DATE: 06/18/2024

REV.	DATE	COMMENTS

LANDSCAPE SITE PLAN
ENLARGED 2

LA104

SHEET NUMBER: 4 OF 10 LANDSCAPE
THE DRAWING AND ITS CONTENT IS THE INTELLECTUAL PROPERTY OF WARRENSTREET ARCHITECTS INC. WITH THE SOLE INTENT TO BUILD THE PROJECT TITLED ABOVE AT ONE LOCATION NOTED HEREIN. THE USE OF THE CONTENT FOR ANY OTHER PURPOSE IS PROHIBITED AND PROTECTED UNDER COPYRIGHT LAW.
Copyright Warrenstreet Architects, LLC © 1990 - 2026



OWNER
 CHILD & FAMILY SERVICES
 REALTY CORP
 PO BOX 448
 MANCHESTER, NH 03105

CONSTRUCTION MANAGER
 TITLE 1
 TITLE 2
 STREET
 CITY, STATE, ZIP
 P. () F. ()

CONSULTANTS:
CIVIL
 NOBIS GROUP
 18 CHENELL DRIVE
 CONCORD, NH, 03301
 (603) 224-4182

LANDSCAPE
 WARRENSTREET ARCHITECTS
 4 CRESCENT STREET UNIT 2
 CONCORD, NH, 03303
 (603) 225-0640

STRUCTURAL
 NAME
 STREET
 CITY, STATE, ZIP
 TELEPHONE

MECHANICAL/PLUMBING
 NAME
 STREET
 CITY, STATE, ZIP
 TELEPHONE

ELECTRICAL
 NAME
 STREET
 CITY, STATE, ZIP
 TELEPHONE

OTHER
 NAME
 STREET
 CITY, STATE, ZIP
 TELEPHONE

Warrenstreet
 Planning Landscapes Architecture Interiors

WARRENSTREET ARCHITECTS, INC.
 4 CRESCENT STREET, UNIT 2
 CONCORD, NEW HAMPSHIRE 03303
 40 STARK STREET
 MANCHESTER, NEW HAMPSHIRE 03103
 P. (603) 225-0640
 WWW.WARRENSTREET.COOP

SEAL:


PROJECT TITLE / ADDRESS:
 NHSCOT HEADQUARTERS

211 BOG ROAD
 CONCORD, NH 03303

PLAN KEY:

SCALE: AS NOTED DWN BY: CB
 PROJECT #: 3913 CHK BY: JH
 PRINT DATE: 2/11/2026 4:45:05 PM

ISSUE DATE: 06/18/2024

REV.	DATE	COMMENTS

**LANDSCAPE SITE PLAN
 ENLARGED 3**

LA105

SHEET NUMBER: 5 OF 10 LANDSCAPE

THE DRAWING AND ITS CONTENT IS THE INTELLECTUAL PROPERTY OF WARRENSTREET ARCHITECTS INC. WITH THE SOLE INTENT TO BUILD THE PROJECT TITLED ABOVE AT ONE LOCATION NOTED HEREIN. THE USE OF THE CONTENT FOR ANY OTHER PURPOSE IS PROHIBITED AND PROTECTED UNDER COPYRIGHT LAW.

Copyright Warrenstreet Architects, LLC © 1990 - 2026

Number: Desc: 3913 NHSCOT1913 2026-01-11 NHSCOT CULTURAL CENTER LANDSCAPE
 TEMPLATE DATE: 11/25/2019

1 ENLARGED LANDSCAPE 3
 LA101 1" = 40'-0"

NHSCOT CULTURAL CENTER - Planting Schedule (ALL NATIVE PLANTINGS)

Trees, Shrubs, Ground Cover, Flowers, Bedding and Seeding - See Specification, General Notes and Details on the Accompanying Drawings.
 USDA Plant Hardiness Zones - NH North of Laconia Zone 4 - Southern NH Zone 5 - Western Massachusetts Zone 5 - Eastern Massachusetts Zone 6

Photo	Type	Sym	Qty	Common Name	Botanical Name	Hardiness Zone	Habit of Growth		Sun Exposure	Drought Tolerant	Native	Toxicity	Installed Size	Type	Use	Description & Notes (Height, Exposure, Bloom, Color)
							Height	Spread								
LARGE SHADE TREES																
	DECIDUOUS LARGE TREE	AMH	5	AMERICAN HORNBEAM	CARPINUS CAROLINIANA VAR. FOREST PANSY	3-9	25'-50'	15'-25'	FULL SUN TO PARTIAL SHADE	NO	YES	3	4"* CAL - 14' HGT MIN	B&B	Shade Tree	A fine-textured tree that is related to the birches. American hornbeam is the only North American native of the genus Carpinus. The trunk and branches of this tree have ridges that look like muscles. American hornbeam is a wonderful addition to a natural landscape. It will tolerate flooding. Songbirds are attracted to its forked branches, dense crown and tasty seeds. Its fall foliage can be beautiful.
	DECIDUOUS LARGE TREE	BLG	6	BLACK GUM	NYSSA SYLVATICA VAR. RED RAGE	4-9	30'-60'	20'-30'	FULL SUN TO PARTIAL SHADE	YES	YES	2	4"* CAL - 14' HGT MIN	B&B	Shade Tree	Few trees are able to compete with black gum in regard to summer and fall color. In September, its dark green foliage gives way to intense red fall color with hues of orange, yellow, and purple, which makes it a wonderful selection for home landscapes. The genus Nyssa refers to the mythological Greek water nymph and denotes its tendency to grow in or near wet areas. Throughout its native range, black gum is typically found along streams, swamp margins, and on upland rights. Though it prefers moist, well-drained soils, black gum will grow on drier sites, giving it some drought tolerance.
	DECIDUOUS LARGE TREE	AMB	5	AMERICAN BEECH	FAGUS GRANDIFOLIA	3-9	50'-70'	50'-70'	FULL SUN TO PARTIAL SHADE	YES	YES	1	4"* CAL - 14' HGT MIN	B&B	Shade Tree	Beech trees are tall, round-headed, and wide-spreading. The thin bark is smooth and steel gray in color. The toothed parallel-veined leaves are shiny green and are borne alternately along the stem. Yellow-green male flowers hang from threadlike stems. The female flowers, usually in pairs on short hairy stems on the same tree, develop into prickly burrs enclosing one or two three-sided sweet-flavoured nuts. Beeches grow best in sandy loam. They are slow-growing but may live 400 years or more.
	DECIDUOUS LARGE TREE	SGM	6	SUGAR MAPLE	ACER SACCHARUM	4-8	60'-75'	45'-50'	FULL SUN TO PARTIAL SHADE	YES	YES	1	4"* CAL - 14' HGT MIN	B&B	Shade Tree	The Sugar Maple (Acer saccharum) is a large, slow-growing, deciduous tree which flourishes in well-drained soil in the Adirondack Mountains. It is a member of the Sapindaceae family. The Sugar Maple is one of about twenty species in the genus Acer which occur in North America. This species has a life span of 200-300 years, with some specimens in old-growth stands persisting to nearly 400 years. The Sugar Maple is one of the most important trees in the eastern United States and Canada, both economically and ecologically. It is the dominant tree in the northern hardwood forest, along with American Beech.
	DECIDUOUS LARGE TREE	REMB	6	RED MAPLE	ACER RUBRUM VAR. BRANDYWINE	3-9	40'-60'	25'-35'	FULL SUN TO PARTIAL SHADE	YES	YES	1	4"* CAL - 14' HGT MIN	B&B	Shade Tree	'Brandywine' has a brilliant red-purple autumn color. It produces only male flowers, so there are no fruits or nuisance seedlings. It has a significant level of tolerance to potato leafhopper, better than many commercially available red maple cultivars.
BUFFER TREES																
	Evergreen Accent Tree	GGA	24	Thuja Green Giant Western Cedar Arborvitae	Thuja standishii x plicata	5-9	20-40'	6-12'	Full-Partial Sun	YES	YES	0	6'-7' hgt.	B&B	NA	Thuja 'Green Giant' is a large, needled, evergreen, conifer tree that is a hybrid cultivar of T. plicata and T. standishii (a cross between the Western Redcedar and Japanese arborvitae, respectively). Later availability to nurseries increased interest for use in landscapes. Its low-branching, dense columnar-pyramidal habit reaches a mature height of 40-60 feet and width 12-20 feet with a lifespan of 40-60 years. Dark green sprays of small, glossy, scale-like needles retain their deep green color through the winter. This tree does best in a moist, full-sun location with light afternoon shade. It tolerates a wide range of soils and, in optimal conditions, can grow 3-4 feet per year.
GRASSES																
	Seed Mix	SFL	NA	Native Seed Mix	NATIVE SEED MIX - NO INVASIVE SPECIES	3-9	8"-36"	NA	Full to Partial Shade	YES	YES	0	SEED MIX	-	-	Virginia Wild Rye 32%, Little Bluestem 26%, Big Bluestem 25%, Showy Tick Trefol 5%, Common Milkweed 5%, Bonaset 2%, New England Aster 2%, Early Goldenrod 1%. Fine Grade, fertilizer, seed and Hydromulch. Seed Rate: 5 lb/1,000 sf add 10% if hydroseeded. Seed Dates April 15 - June 30 and August 15 - October 15 unless approved otherwise.
GENERAL PLANTING NOTES																
<p>1. The above selection of plants is provided for design intent. It is understood that the final installation and implementation of this plan is subject to plant availability, substitutions, time of year, phasing and cost.</p> <p>2. It is understood, that the majority of nursery plants are to some degree toxic to humans and pets, whether the root, stock, bark, leaf, fruit or juice. The owner and installer should become acquainted to the potential toxicity of the ultimate selection of all nursery plants. Warrenstreet has provided common toxicity labels of plant materials selected and in noway warranties against the potential affects of any plants selected and installed.</p> <p>3. All planting beds shall be mulched with a minimum of 2" of shredded cedar "BLACK" bark mulch. All sod and/or seeded lawn areas to have minimum 6" topsoil blanket. All fall bulbs shall be planted in the fall, plan accordingly, retainage will be held until plantings occur. All mass planted shrubs beds and planters around building shall have minimum 18" deep topsoil blanket to compensate for the New England very sandy granular sub-grade material.</p> <p>4. All plant material to conform to current AAN, American Standard for Nursery Stock, ANSI Z60.1-2014. All plantings shall be warranted for (1) one year from planting date. The landscape Contractor shall be responsible for two (2) lawn mowings and weedings prior to final acceptance of installation.</p>																

OWNER
 CHILD & FAMILY SERVICES
 REALTY CORP
 PO BOX 448
 MANCHESTER, NH 03105

CONSTRUCTION MANAGER
 TITLE 1
 TITLE 2
 STREET
 CITY, STATE ZIP
 P. () F. ()

CONSULTANTS:
CIVIL
 NOBIS GROUP
 18 CHENELL DRIVE
 CONCORD, NH, 03301
 (603) 224-4182

LANDSCAPE
 WARRENSTREET ARCHITECTS
 4 CRESCENT STREET UNIT 2
 CONCORD, NH, 03303
 (603) 225-0640

STRUCTURAL
 NAME
 STREET
 CITY, STATE, ZIP
 TELEPHONE

MECHANICAL/PLUMBING
 NAME
 STREET
 CITY, STATE, ZIP
 TELEPHONE

ELECTRICAL
 NAME
 STREET
 CITY, STATE, ZIP
 TELEPHONE

OTHER
 NAME
 STREET
 CITY, STATE, ZIP
 TELEPHONE

Warrenstreet
 Planning Landscapes Architecture Interiors
 WARRENSTREET ARCHITECTS, INC.
 4 CRESCENT STREET, UNIT 2
 CONCORD, NEW HAMPSHIRE 03303
 40 STARK STREET
 MANCHESTER, NEW HAMPSHIRE 03103
 P. (603) 225-0640
 WWW.WARRENSTREET.COOP



PROJECT TITLE / ADDRESS:
NHSCOT HEADQUARTERS
 211 BOG ROAD
 CONCORD, NH 03303

PLAN KEY:

SCALE: AS NOTED DWN BY: CB
 PROJECT #: 3913 CHK BY: JH
 PRINT DATE: 2/11/2026 4:45:06 PM

ISSUE DATE: 06/18/2024

REV.	DATE	COMMENTS
6	02/11/26	24 GREEN GIANT PLANTINGS

PLANTING SCHEDULE
LA106
 SHEET NUMBER: 6 OF 10 LANDSCAPE
 THE DRAWING AND ITS CONTENT IS THE INTELLECTUAL PROPERTY OF WARRENSTREET ARCHITECTS INC. WITH THE SOLE INTENT TO BUILD THE PROJECT TITLED ABOVE AT ONE LOCATION NOTED HEREIN. THE USE OF THE CONTENT FOR ANY OTHER PURPOSE IS PROHIBITED AND PROTECTED UNDER COPYRIGHT LAW.
 Copyright Warrenstreet Architects, LLC © 1990 - 2026

LANDSCAPE GENERAL SPECIFICATIONS

SECTION 02955 - TREES, SHRUBS AND GROUND COVERS

PART 1: GENERAL

1.1 GENERAL REQUIREMENTS

- DRAWINGS AND GENERAL PROVISIONS OF CONTRACT, INCLUDING GENERAL CONDITIONS AND DIVISION I SPECIFICATION SECTIONS APPLY TO THIS SECTION.
- EXAMINE ALL OTHER SECTIONS OF THE SPECIFICATIONS FOR REQUIREMENTS WHICH AFFECT WORK OF THIS SECTION WHETHER OR NOT SUCH WORK IS SPECIFICALLY MENTIONED IN THIS SECTION. SEE DRAWINGS FOR LOCATIONS AND DETAILS. PROTECT EXISTING UTILITIES AND STRUCTURES. COORDINATE WORK WITH THAT OF ALL OTHER TRADES AFFECTING, OR AFFECTED BY WORK OF THIS SECTION. COOPERATE WITH SUCH TRADES TO ASSURE THE STEADY PROGRESS OF ALL WORK UNDER THE CONTRACT.

1.2 SUMMARY

- THIS SECTION INCLUDES THE FOLLOWING:
 - FURNISHING ALL PLANTS, MATERIALS, SUPPLIES, LABOR, EQUIPMENT, AND PERFORMING ALL OPERATIONS IN CONNECTION WITH FURNISHING AND PLACEMENT OF TOPSOIL AND PLANTING MIXTURE, PLANTING OF ALL TREES, SHRUBS AND PERENNIAL GROUND COVERS, PRUNING/MULCHING/WATERING OF PLANTS, MAINTENANCE, GUARANTEE AND FINAL CLEAN-UP.
 - RELATED SECTIONS: THE FOLLOWING SECTIONS CONTAIN REQUIREMENTS THAT RELATE TO THIS SECTION:
 - SECTION 02300 "SEEDING AND SODDING"
 - SECTION 02310 "EARTHWORK"
 - SECTION 02320 "SEEDING AND SODDING"
 - LOCAL GOVERNING AUTHORITY AND CODE REQUIREMENTS.
 - ALL NECESSARY CONSTRUCTION PERMITS.

1.3 SUBMITTALS

- SAMPLES BEFORE ANY BARK MULCH IS DELIVERED TO THE JOB SITE, SUBMIT A SAMPLE TO THE LANDSCAPE ARCHITECT FOR THEIR APPROVAL.
- MATERIALS LIST:
 - BEFORE ANY PLANTING MATERIALS ARE DELIVERED TO THE JOB SITE, SUBMIT TO THE LANDSCAPE ARCHITECT A COMPLETE LIST OF ALL PLANTS AND OTHER ITEMS PROPOSED TO BE INSTALLED.
 - INCLUDE COMPLETE DATA ON SOURCE, SIZE, AND QUALITY.
 - DEMONSTRATE COMPLETE CONFORMANCE WITH THE REQUIREMENTS OF THIS SECTION. THIS SHALL IN NO WAY BE CONSTRUED AS PERMITTING SUBSTITUTION FOR SPECIFIC ITEMS DESCRIBED IN THE PLANS OR THESE SPECIFICATIONS, UNLESS THE SUBSTITUTION HAS BEEN APPROVED IN ADVANCE BY THE LANDSCAPE ARCHITECT.
- AS-BUILT DRAWINGS DURING THE COURSE OF THE INSTALLATION, CAREFULLY RECORD IN RED LINE ON A PRINT OF THE PLANTING PLANS ALL CHANGES MADE TO THE PLANTING LAYOUT DURING INSTALLATION.
- CERTIFICATES: ALL CERTIFICATES REQUIRED BY LAW SHALL ACCOMPANY SHIPMENTS. UPON COMPLETION OF THE INSTALLATION, DELIVER ALL CERTIFICATES TO THE LANDSCAPE ARCHITECT.

1.4 QUALITY ASSURANCE

- INSTALLER QUALIFICATIONS: PROVIDE AT LEAST ONE PERSON WHO SHALL BE PRESENT AT ALL TIMES DURING EXECUTION OF THIS PORTION OF THE WORK AND WHO SHALL BE THOROUGHLY FAMILIAR WITH THE TYPE OF MATERIALS BEING INSTALLED AND THE BEST METHODS FOR THEIR INSTALLATION AND WHO SHALL DIRECT ALL WORK PERFORMED UNDER THIS SECTION.
- PLANT MATERIAL STANDARDS:
 - ALL PLANTS AND PLANTING MATERIAL SHALL MEET OR EXCEED THE SPECIFICATIONS OF FEDERAL, STATE, AND COUNTY LAWS REQUIRING INSPECTION FOR PLANT DISEASE AND INSECT CONTROL.
 - QUALITY AND SIZE SHALL COMPLY WITH RECOMMENDATIONS AND REQUIREMENTS OF CURRENT EDITION OF ANSI Z60.1 AMERICAN STANDARD FOR NURSERY STOCK. FOR NUMBER ONE GRADE NURSERY STOCK AS ADOPTED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
 - ALL PLANTS SHALL BE TRUE TO NAME AND ONE OF EACH BUNDLE OR LOT SHALL BE TAGGED WITH THE NAME AND SIZE OF THE PLANTS IN ACCORDANCE WITH THE STANDARDS OF PRACTICE OF THE AMERICAN ASSOCIATION OF NURSERYMEN. IN ALL CASES, BOTANICAL NAMES SHALL TAKE PRECEDENCE OVER COMMON NAMES.

1.5 DELIVERY, STORAGE, HANDLING

- DELIVERY AND STORAGE:
 - DELIVER ALL ITEMS TO THE SITE IN THEIR ORIGINAL CONTAINERS WITH ALL LABELS INTACT AND LEGIBLE AT TIME OF LANDSCAPE ARCHITECT INSPECTION.
 - IMMEDIATELY REMOVE FROM THE SITE ALL PLANTS WHICH ARE NOT TRUE TO NAME AND ALL MATERIALS WHICH DO NOT COMPLY WITH THE PROVISIONS OF THIS SECTION OF THESE SPECIFICATIONS.
- ROOT PROTECTION:
 - HANDLE PLANTS AT ALL TIMES IN ACCORDANCE WITH THE BEST HORTICULTURAL PRACTICES SO THAT THE ROOTS OR BARKS ARE ADEQUATELY PROTECTED FROM THE SUN AND DRYING WINDS. NO PLANT SHALL BE BOUND WITH ROPE OR WIRE IN A MANNER THAT WOULD DAMAGE THE BARK, BREAK THE BRANCHES, OR DESTROY ITS NATURAL SHAPE.
- HANDLING:
 - LIFT AND HANDLE PLANTS FORM THE BOTTOM OF THE BALL OR CONTAINER ONLY. PLANTS HANDLED OTHERWISE WILL BE SUBJECT TO REJECTION. PLANT NO BALLED AND BURLAPPED PLANT WHICH HAS THE BALL CRACKED OR BROKEN WILL BE ACCEPTED. NO BALLED AND BURLAPPED PLANTS USING PLASTIC/POLYESTER BURLAP WILL BE ACCEPTED. PLANT NO CONTAINERIZED OR TUBE-PAK PLANT WHOSE ROOT SYSTEM HAS SEPARATED FROM THE SOIL IN ITS CONTAINER.
 - PROTECTION DURING DELIVERY:
 - TRANSPORT PLANT MATERIAL IN CLOSED VEHICLES OR IN OPEN VEHICLES WITH THE ENTIRE LOAD PROPERLY COVERED FOR PROTECTION FROM DRYING WINDS.
 - PROTECTION AFTER DELIVERY:
 - PLANT TREES AND SHRUBS AS SOON AS POSSIBLE AFTER DELIVERY. PLANTS THAT CANNOT BE PLANTED IMMEDIATELY SHALL HAVE THEIR ROOTS KEPT MOIST AND ADEQUATELY PROTECTED UNTIL PLANTED.
 - COVER THE BALLS OF BALLED AND BURLAPPED, CONTAINERIZED, AND TUBE-PAK PLANTS WITH TOPSOIL OR AN APPROVED MULCH, AND KEEP CONSTANTLY MOIST UNTIL PLANTED.
 - STORE ALL PLANTS IN THE SHADE, OUT OF DIRECT SUNLIGHT AND DRYING WIND.
 - OWNERS REPRESENTATIVE WILL SELECT STORAGE OR HOLDING AREA AND UPON DELIVERY OF PLANTS, DESIGNATE WHERE CONTRACTOR CAN PROTECT AND MAINTAIN THESE PLANT MATERIALS UNTIL THEY ARE PLANTED.

1.6 SCHEDULES

- PLANTING SEASON:
 - PLANTING OPERATIONS FOR DECIDUOUS MATERIALS SHALL TAKE PLACE DURING MARCH 15 TO JUNE 30 FOR SPRING PLANTING AND AUGUST 15TH TO OCTOBER 1 OR UNTIL GROUND FREEZES TO ALLOW ALL PLANTS TO BE FREE FROM SCALE, DISFIGURING KNOTS, SUN SCALD INJURIES, ABRASIONS OF THE BARK, OR OTHER OBJECTIONABLE BLEMISHES. WINTER PLANTS WILL NOT BE ACCEPTED. PLANTS MUST SHOW APPEARANCE OF NORMAL HEALTH AND VIGOR IN STRICT ACCORDANCE WITH THESE SPECIFICATIONS. ALL STOCK SHALL BE NURSERY GROWN.
 - PLANTS FURNISHED IN CONTAINERS SHALL HAVE THE ROOTS WELL ESTABLISHED IN THE SOIL MASS AND SHALL HAVE GROWN IN THE CONTAINER FOR AT LEAST ONE (1) GROWING SEASON. CONTAINERS SHALL BE OF A SIZE LARGE ENOUGH TO PROVIDE AN EARTH-ROOT MASS OF ADEQUATE DIAMETER AND DEPTH OF THE STEM DIAMETER AND PLANT HEIGHTS OR SPREAD, AS ESTABLISHED BY ACCEPTED NURSERY PRACTICE. PLANTS, OVER ESTABLISHED IN THE CONTAINER, AS EVIDENCED BY POT BOUND ROOT ENDS, WILL NOT BE ACCEPTED. BARE ROOT MATERIAL WILL BE ACCEPTED ONLY FOR SPRING PLANTING. BARE ROOT STOCK SHALL BE HANDLED ACCORDING TO STANDARD HORTICULTURAL PRACTICE WITH SPECIAL ATTENTION BEING PAID TO PREVENTING PLANT ROOTS FROM DRYING AND PLANTS BEING APPROPRIATELY STORED.
 - PLANTS LARGER THAN THOSE SPECIFIED IN THE PLANT LIST MAY BE USED IF APPROVED BY THE LANDSCAPE ARCHITECT.
 - THE HEIGHT OF TREES, MEASURED FROM THE CROWN OF THE ROOTS TO THE TOP OF THE TOP BRANCH, AND CALIPER OF THE TRUNK SHALL BE TAKEN 6 INCHES ABOVE THE GROUND UP TO AND INCLUDING 4 INCH CALIPER SIZE, AND 12 INCHES ABOVE THE GROUND FOR LARGER SIZES, AND SHALL NOT BE LESS THAN THE MINIMUM SPECIFIED ON THE PLANT LIST. EXCEPT WHEN A CLUMP IS DESIGNATED, THE TRUNK OF EACH TREE SHALL BE A SINGLE TRUNK GROWING FROM A SINGLE UNMULATED CROWN OF ROOTS. NO PART OF THE TRUNK SHALL BE CONSPICUOUSLY CROOKED AS COMPARED TO NORMAL TREES OF THE SAME VARIETY. THE TRUNK SHALL BE FREE FROM SUN SCALD, FROST CRACKS OR WOUNDS RESULTING FROM ABRASIONS, FIRE, OR OTHER CAUSES. NO PRUNING WOUNDS SHALL BE PRESENT HAVING A DIAMETER OF MORE THAN TWO (2) INCHES AND SUCH WOUNDS MUST SHOW VIGOROUS BARK ON ALL EDGES. EVERGREEN TREES SHALL BE BRANCHED TO WITHIN ONE FOOT OF THE GROUND.
 - SHRUBS AND PERENNIALS SHALL COMPLY WITH THE SPECIFIED SPREAD, HEIGHT OR CONTAINER SIZE AS SPECIFIED ON THE PLANT LIST. THE MEASUREMENTS FOR HEIGHT ARE TO BE TAKEN FROM THE GROUND LEVEL TO THE AVERAGE HEIGHT OF THE TOP OF THE SHRUB AND NOT THE LONGEST BRANCH. THE THICKNESS OF EACH SHRUB SHALL CORRESPOND TO THE TRADE CLASSIFICATION "NO. 1". SINGLE STEMMED OR THIN PLANTS WILL NOT BE ACCEPTED. THE SIDE BRANCHES MUST BE GENEROUS, WELL TWIGGED, AND THE PLANT AS A WHOLE WELL-BRANCHED TO THE GROUND. THE PLANTS MUST BE IN A MOIST VIGOROUS CONDITION, FREE FROM DEAD WOOD, BRUISES OR OTHER ROOT OR BRANCH INJURIES.
 - ALL PLANT MATERIAL SHALL COMPLY WITH STATE AND FEDERAL LAWS WITH RESPECT TO INSPECTION FOR PLANT DISEASE AND INFECTION. ANY INSPECTION CERTIFICATES REQUIRED BY LAW SHALL ACCOMPANY EACH SHIPMENT, INVOICE, OR ORDER OF STOCK.
 - ALL PLANT MATERIAL IS SUBJECT TO LANDSCAPE ARCHITECT'S APPROVAL AND INSPECTION AT ANY PLACE, BEFORE DURING AND/OR AFTER PLANTING. ANY PLANT MATERIAL NOT APPROVED BY THE LANDSCAPE ARCHITECT SHALL BE IMMEDIATELY REMOVED FOR THE SITE.
 - NO PLANT MATERIAL SHALL BE ACCEPTED WITH LOOSE OR BROKEN BALLS, BROKEN CONTAINERS OR TUBE-PAKS

PART 2: MATERIALS

2.1 PLANT MATERIALS

- GENERAL:
 - PLANT MATERIALS SHALL MEAN TREES AND PLANTS OF ALL DESCRIPTIONS REQUIRED TO BE FURNISHED FOR THE PROJECT, IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. ALL PLANT MATERIAL MUST BE TRUE TO NAME, WHICH SHALL CONFORM TO STANDARDIZED PLANT NAMES OF THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE, AND SHALL BE LEGIBLY TAGGED WITH THE NAME AND SIZE OF THE MATERIAL ACCORDING TO THE GENERAL NURSERY PRACTICE AS RECOMMENDED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
 - ALL PLANTS SHALL BE FIRST-CLASS REPRESENTATIVES OF THEIR NORMAL SPECIES OR VARIETIES. PLANTS SHALL BE SOUND, HEALTHY, AND VIGOROUS, WELL-BRANCHED AND DENSELY FOLIATED WHEN IN LEAF. UNLESS OTHERWISE SPECIFIED, PLANTS SHALL HAVE AVERAGE OR NORMALLY DEVELOPED BRANCH SYSTEMS AND VIGOROUS ROOT SYSTEMS. PLANTS SHALL BE FREE FROM SCALE, DISFIGURING KNOTS, SUN SCALD INJURIES, ABRASIONS OF THE BARK, OR OTHER OBJECTIONABLE BLEMISHES. WINTER PLANTS WILL NOT BE ACCEPTED. PLANTS MUST SHOW APPEARANCE OF NORMAL HEALTH AND VIGOR IN STRICT ACCORDANCE WITH THESE SPECIFICATIONS. ALL STOCK SHALL BE NURSERY GROWN.
 - PLANTS FURNISHED IN CONTAINERS SHALL HAVE THE ROOTS WELL ESTABLISHED IN THE SOIL MASS AND SHALL HAVE GROWN IN THE CONTAINER FOR AT LEAST ONE (1) GROWING SEASON. CONTAINERS SHALL BE OF A SIZE LARGE ENOUGH TO PROVIDE AN EARTH-ROOT MASS OF ADEQUATE DIAMETER AND DEPTH OF THE STEM DIAMETER AND PLANT HEIGHTS OR SPREAD, AS ESTABLISHED BY ACCEPTED NURSERY PRACTICE. PLANTS, OVER ESTABLISHED IN THE CONTAINER, AS EVIDENCED BY POT BOUND ROOT ENDS, WILL NOT BE ACCEPTED. BARE ROOT MATERIAL WILL BE ACCEPTED ONLY FOR SPRING PLANTING. BARE ROOT STOCK SHALL BE HANDLED ACCORDING TO STANDARD HORTICULTURAL PRACTICE WITH SPECIAL ATTENTION BEING PAID TO PREVENTING PLANT ROOTS FROM DRYING AND PLANTS BEING APPROPRIATELY STORED.
 - PLANTS LARGER THAN THOSE SPECIFIED IN THE PLANT LIST MAY BE USED IF APPROVED BY THE LANDSCAPE ARCHITECT.
 - THE HEIGHT OF TREES, MEASURED FROM THE CROWN OF THE ROOTS TO THE TOP OF THE TOP BRANCH, AND CALIPER OF THE TRUNK SHALL BE TAKEN 6 INCHES ABOVE THE GROUND UP TO AND INCLUDING 4 INCH CALIPER SIZE, AND 12 INCHES ABOVE THE GROUND FOR LARGER SIZES, AND SHALL NOT BE LESS THAN THE MINIMUM SPECIFIED ON THE PLANT LIST. EXCEPT WHEN A CLUMP IS DESIGNATED, THE TRUNK OF EACH TREE SHALL BE A SINGLE TRUNK GROWING FROM A SINGLE UNMULATED CROWN OF ROOTS. NO PART OF THE TRUNK SHALL BE CONSPICUOUSLY CROOKED AS COMPARED TO NORMAL TREES OF THE SAME VARIETY. THE TRUNK SHALL BE FREE FROM SUN SCALD, FROST CRACKS OR WOUNDS RESULTING FROM ABRASIONS, FIRE, OR OTHER CAUSES. NO PRUNING WOUNDS SHALL BE PRESENT HAVING A DIAMETER OF MORE THAN TWO (2) INCHES AND SUCH WOUNDS MUST SHOW VIGOROUS BARK ON ALL EDGES. EVERGREEN TREES SHALL BE BRANCHED TO WITHIN ONE FOOT OF THE GROUND.
 - SHRUBS AND PERENNIALS SHALL COMPLY WITH THE SPECIFIED SPREAD, HEIGHT OR CONTAINER SIZE AS SPECIFIED ON THE PLANT LIST. THE MEASUREMENTS FOR HEIGHT ARE TO BE TAKEN FROM THE GROUND LEVEL TO THE AVERAGE HEIGHT OF THE TOP OF THE SHRUB AND NOT THE LONGEST BRANCH. THE THICKNESS OF EACH SHRUB SHALL CORRESPOND TO THE TRADE CLASSIFICATION "NO. 1". SINGLE STEMMED OR THIN PLANTS WILL NOT BE ACCEPTED. THE SIDE BRANCHES MUST BE GENEROUS, WELL TWIGGED, AND THE PLANT AS A WHOLE WELL-BRANCHED TO THE GROUND. THE PLANTS MUST BE IN A MOIST VIGOROUS CONDITION, FREE FROM DEAD WOOD, BRUISES OR OTHER ROOT OR BRANCH INJURIES.
 - ALL PLANT MATERIAL SHALL COMPLY WITH STATE AND FEDERAL LAWS WITH RESPECT TO INSPECTION FOR PLANT DISEASE AND INFECTION. ANY INSPECTION CERTIFICATES REQUIRED BY LAW SHALL ACCOMPANY EACH SHIPMENT, INVOICE, OR ORDER OF STOCK.
 - ALL PLANT MATERIAL IS SUBJECT TO LANDSCAPE ARCHITECT'S APPROVAL AND INSPECTION AT ANY PLACE, BEFORE DURING AND/OR AFTER PLANTING. ANY PLANT MATERIAL NOT APPROVED BY THE LANDSCAPE ARCHITECT SHALL BE IMMEDIATELY REMOVED FOR THE SITE.
 - NO PLANT MATERIAL SHALL BE ACCEPTED WITH LOOSE OR BROKEN BALLS, BROKEN CONTAINERS OR TUBE-PAKS

2.3 MULCH

- BARK MULCH: ALL BARK MULCH SHALL BE SHREDDED PINE BARK AS LOCALLY OR REGIONALLY MANUFACTURED, OR AN EQUAL APPROVED IN ADVANCE BY THE LANDSCAPE ARCHITECT.

2.4 PLANTING MIXTURE

- TOPSOIL: MOST TOPSOIL REQUIRED SHALL BE OBTAINED FROM ON-SITE STOCKPILED MATERIAL. SHOULD ADDITIONAL TOPSOIL BE NEEDED, IT SHALL BE IMPORTED MATERIAL FROM A LOCALLY APPROVED SOURCE. IT SHALL BE LOOSE, FRIABLE, AND SHALL CONTAIN ORDINARY AMOUNT OF HUMUS. IT SHALL CONTAIN NO LUMPS OF SOIL, ROCKS LARGER THAN 1 INCH, OR STICKS, OR ROOTS, AND OTHER DEBRIS. IT SHALL BE SUFFICIENTLY FERTILE TO SUSTAIN NORMAL, HEALTHY PLANT GROWTH AND SHALL NOT HAVE A PH VALUE HIGHER THAN 7.0 OR LOWER THAN 6.5. THE TOPSOIL SHALL BE DELIVERED IN AN UNFROZEN AND NON-MUDDY CONDITION AND MUST MEET THE APPROVAL OF THE LANDSCAPE ARCHITECT.
- PEAT: PEAT SHALL BE SPAGNUM PEAT, SEDGE PEAT MOSS. FURNISH AIR-DRIED, FINELY SHREDDED, ORPH BETWEEN 5.5 AND 6.5, CONTAINING NO MORE THAN THIRTY-FIVE (35%) PERCENT MOISTURE BY WEIGHT.
- COMPOSTED BARK MULCH: COMPOSTED BARK MULCH SHALL BE 1/4" MINIMUM, FINE TEXTURED AND WELL COMPOSTED MULCH SUITABLE FOR USE AS A PLANTING MIX AMENDMENT. IT SHALL BE LOCALLY OR REGIONALLY MANUFACTURED, OR AN EQUAL APPROVED IN ADVANCE BY THE LANDSCAPE ARCHITECT.
- TREES/SHRUB PLANTING MIX: TOPSOIL USED AS FILL AROUND PLANTS SHALL BE MIXED WITH PEAT MOSS AT THE RATE OF THREE PARTS TOPSOIL TO ONE PART PEAT.
- PERENNIAL/GROUND COVER PLANTING MIX: TOPSOIL USED AS FILL AROUND THESE PLANTS SHALL BE MIXED WITH PEAT MOSS AND COMPOSTED BARK MULCH AT THE RATE OF TWO PARTS TOPSOIL TO ONE PART PEAT TO ONE PART COMPOSTED BARK MULCH. THE ABOVE MIXTURE IS MIXED WITH MAG AMP (W. R. GRACE AND COMPANY, P.O. BOX 338, WEST CHICAGO, ILLINOIS) AT THE RATE OF 10 OUNCES PER CUBIC YARD OF PLANTING MIX.
- "ROOTS" ROOT GROWTH ENHANCER: THIS PRODUCT SHALL BE A NATURAL, ORGANIC BIOSTIMULANT THAT PROMOTES ROOT GROWTH AND STRESS TOLERANCE IN PLANTS. APPLY TO ALL TREES, SHRUBS, AND PERENNIALS PER MANUFACTURER'S RECOMMENDATIONS.
- SUPERSORB C - WATER ABSORBENT GRANULES: THIS PRODUCT SHALL BE A COPOLYMER WATER ABSORBENT IN GRANULAR FORM TO BE INCORPORATED IN THE SPECIFIED PLANTING MIXES FOR BIRD TREES/SHRUBS AND PERENNIALS. ITS PURPOSE IS TO IMPROVE THE TOPSOIL'S WATER HOLDING CAPACITY.
- AGRIFORM FERTILIZER TABLETS: TREES AND SHRUBS SHALL BE FERTILIZED WITH TWO (2) FERTILIZER TABLETS PER PLANTING HOLE. TABLETS SHALL BE 21 GRAM SIZE, OF 20-10-5 ANALYSIS AS MANUFACTURED BY AGRIFORM.

2.5 MISCELLANEOUS MATERIALS

- WOOD STAKES: STAKES FOR TREE SUPPORT SHALL BE 2" X 2" X 80". WOOD STAKES.
- GYING WIRE: WIRE SHALL BE NUMBER 12 GAUGE GALVANIZED SOFT STEEL WIRE.
- HOSE: HOSE FOR COVERING WIRE SHALL BE NEW OR USED TWO PLY RUBBER HOSE NOT LESS THAN 1/2 INCH INSIDE DIAMETER. (PLASTIC CINCH-TIES OR EQUIVALENT FASTENING DEVICE MAY BE AN ACCEPTABLE GUY WIRE AND HOSE PROTECTOR SUBSTITUTE)
- TREE PAINT: TREE PAINT SHALL BE WATERPROOF, ASPHALT BASE PAINT WITH ANTISEPTIC PROPERTIES, MANUFACTURED FOR USE ON TREE WOUNDS. R.I.W. TREE SURGEY PAINT BY TOCH BROS., NEW YORK; SHERWIN WILLIAMS PRUNING COMPOUND OR APPROVED EQUAL.
- EMULSION: AN EMULSION SHALL BE AN EMULSION PERMEABLE ENOUGH TO PERMIT TRANSPARATION, AND WILL BE USED TO RETARD EXCESS WATER LOSS. MIX IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- TREE WRAP: TREE WRAPPING PAPER SHALL BE WATERPROOFED CREPE TREE WRAPPING PAPER, AT LEAST 2-1/2 INCHES IN WIDTH, MADE UP OF TWO LAYERS OF CREPE KRAFT PAPER, WEIGHING NOT LESS THAN 30 POUNDS PER REAM, CEMENTED TOGETHER WITH ASPHALT.
- TYWINE: WRAPPING TYWINE USED IN TREE WRAPPING SHALL BE COMPOSED OF A MINIMUM OF TWO PLY JUTE MATERIAL. SYNTHETIC MATERIALS SUCH AS NYLON OR PLASTIC WILL NOT BE PERMITTED.

PART 3: EXECUTION

3.1 SURFACE CONDITIONS

- INSPECTION: PRIOR TO ALL WORK OF THIS SECTION, CAREFULLY INSPECT THE INSTALLED WORK OF ALL OTHER TRADES AND VERIFY THAT ALL SUCH WORK IS COMPLETE TO THE POINT WHERE THIS INSTALLATION MAY PROPERLY COMMENCE. DETERMINE LOCATION OF UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNER WHICH WILL AVOID POSSIBLE DAMAGE TO ANY INSTALLED UTILITIES.
- LOCATION:
 - VERIFY THAT PLANTING MAY BE COMPLETED IN ACCORDANCE WITH THE ORIGINAL DESIGN AND THE REFERENCED STANDARDS. STAKE OUT LOCATIONS OF ALL PLANTS AND SECURE THE LANDSCAPE ARCHITECT APPROVAL BEFORE EXCAVATING PLANT PITS.
 - WHEN CONDITIONS DETRIMENTAL TO PLANT GROWTH ARE ENCOUNTERED, SUCH AS RUBBLE FILL, LEDGE, ADVERSE DRAINAGE CONDITIONS, OR OBSTRUCTIONS, NOTIFY THE LANDSCAPE ARCHITECT BEFORE PLANTING.
- DISCREPANCIES:
 - IN THE EVENT OF DISCREPANCY, IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT.
 - DO NOT PROCEED WITH INSTALLATION IN AREAS OF DISCREPANCY UNTIL ALL SUCH DISCREPANCIES HAVE BEEN FULLY RESOLVED.

3.2 TREE PROTECTION AND REMOVAL

- REMOVAL OF TREES:
 - TREE REMOVAL UNDER THIS CONTRACT SHALL BE ACCOMPLISHED AS REQUIRED TO ACCOMMODATE THE SCOPE OF WORK AS INDICATED ON THE SITE PLANS AS PREPARED BY SHERMAN, GREENBERG AND PROVAN (S.G.P.) CORP. SITE GRADING AND GRUBBING WILL BE ACCOMPLISHED AS DIRECTED IN SECTION 02212 "SITE GRADING". ALL TREES AND STUMPS SHALL BE REMOVED FROM THE AREA TO BE OCCUPIED BY THE NEW PLAYFILES, ROADS, SURFACED AREAS AND PLANTED AREAS. REMOVAL OF TREES OUTSIDE THESE AREAS SHALL ONLY BE THOSE AS NOTED, MARKED AND APPROVED BY THE LANDSCAPE ARCHITECT.
 - NO OTHER TREES MAY BE CUT EXCEPT BY PERMISSION OF THE LANDSCAPE ARCHITECT. ALL STUMPS SHALL BE REMOVED.
- PROTECTION OF TREES:
 - GENERAL: THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF TOPS, TRUNKS, AND ROOTS OF EXISTING TREES ON THE SITE THAT ARE TO REMAIN. EXISTING TREES SUBJECT TO CONSTRUCTION DAMAGE SHALL BE BOKED, FENCED OR OTHERWISE PROTECTED BEFORE ANY WORK IS STARTED, REMOVE BOXING WHEN DIRECTED. DO NOT PERMIT HEAVY EQUIPMENT OR STOCKPILES WITH BRANCH SPREAD. REMOVE INTERFERING BRANCHES WITHOUT INJURY TO TRUNKS AND COVER SCARS WITH TREE PAINT.
 - GRADING AROUND TREES: WHERE EXCAVATION, FILL OR GRADING IS REQUIRED WITHIN THE BRANCH SPREAD OF TREES THAT ARE TO REMAIN, THE WORK SHALL BE PERFORMED AS FOLLOWS:
 - WHERE GRADING OCCURS AROUND TREES TO REMAIN, THE TREE ROOTS SHALL NOT BE CUT BUT THE TRENCH SHALL BE UNMULDED UNDER AND AROUND THE ROOTS BY CAREFUL HAND DIGGING AND WITHOUT INJURY TO THE ROOTS.
 - RAISING GRADES: WHEN THE EXISTING GRADE AT TREE IS BELOW THE NEW FINISHED GRADE, AND FILL NOT EXCEEDING 12 INCHES IS REQUIRED, CLEAN WASHED GRAVEL GRADED FROM 1 INCH TO 2 INCH SIZE SHALL BE PLACED DIRECTLY AROUND THE TREE TRUNK. THE GRAVEL SHALL EXTEND OUT FROM THE TRUNK ON ALL SIDES A MINIMUM OF 18 INCHES AND FINISH APPROXIMATELY 2 INCHES ABOVE THE FINISHED GRADE AT TREE. INSTALL GRAVEL BEFORE ANY EARTH FILL IS PLACED. NEW EARTH FILL SHALL NOT BE LEFT IN CONTACT WITH THE TRUNKS AND ANY TREES REQUIRED TO REMAIN.
 - TREES MARKED FOR PRESERVATION THAT ARE BURIED IN FILL OVER 12" DEEP SHALL HAVE AN OPEN DRY WELL OF DURABLE MASONRY WITHOUT MORTAR SITUATED AT LEAST 24" FROM THE TREE TRUNK. ALL WELLS ARE TO BE PROPERLY DRAINED. BEFORE FILLS OF OVER 12" ARE MADE UPON THE TREE ROOT AREAS, IT IS ADVISABLE TO SPREAD AT LEAST A 6" LAYER OF BROKEN STONE OR COARSE GRAVEL COVERED BY INVERTED SODS TO FACILITATE PROPER DRAINAGE AND AERATION.
 - LOWERING GRADES: EXISTING TREES IN AREAS WHERE THE NEW FINISHED GRADE IS TO BE LOWERED, SHALL HAVE REGRADING WORK DONE BY HAND TO ELEVATION AS INDICATED. ROOTS AS REQUIRED SHALL BE CUT CLEANLY 3 INCHES BELOW FINISHED GRADE AND SCARS ARE COVERED WITH TREE PAINT. TREES MARKED FOR PRESERVATION THAT ARE LOCATED MORE THAN 6' ABOVE PROPOSED GRADES SHALL HAVE PROPOSED GRADES SHALL BE GRADDED SMOOTHLY INTO THE LOWER LEVEL. EXPOSED OR BROKEN ROOTS SHALL BE CUT CLEAN AND COVERED WITH TOPSOIL.

3.3 PLANTING TREES, SHRUBS AND GROUND COVERS

- GENERAL:
 - PLANT NURSERY STOCK IMMEDIATELY UPON DELIVERY TO THE SITE AND APPROVAL BY THE LANDSCAPE ARCHITECT EXCEPT THAT, IF THIS IS NOT FEASIBLE, HEAL-IN ALL BALLED MATERIAL WITH DAMP SOIL AND PROTECT FROM SUN AND WIND.
 - REGULARLY WATER ALL NURSERY STOCK IN CONTAINERS AND TUBE-PAKS AND PLACE THEM IN A COOL AREA PROTECTED FROM SUN AND DRYING WINDS.
- EXCAVATION OF PLANT HOLES:
 - TREE PITS SHALL HAVE SUBSTANTIALLY VERTICAL SIDES AND HORIZONTAL BOTTOMS. DEPTH OF PIT BEYOND FINISH GRADE SHALL BE AT LEAST 9 INCHES (FOR TREES) AND 6 INCHES (FOR SHRUBS) GREATER THAN THE DEPTH OF THE BALL. IN NO CASE SHALL DEPTH OF TREE PITS BE LESS THAN 24 INCHES BELOW FINISHED GRADE. DIAMETER OF PITS FOR ALL TREES SHALL BE AT LEAST 9 INCHES GREATER THAN THE MAXIMUM DIAMETER OF THE TREE BALL OR ROOT SYSTEM AND FOR SHRUBS 6 INCHES.
 - PLANTING POCKETS FOR TUBE-PAK, ONE GALLON CONTAINER SHRUBS, CONTAINERIZED PERENNIAL PLANTS & CALIPER TREES INTENDED FOR "NATURALIZING" FILL AND DISTURBED SLOPES, SHALL BE EXCAVATED SIMILAR AS DESCRIBED ABOVE, BUT TO A DEPTH OF 6" BELOW THE BOTTOM OF THE TUBE-PAK OR CONTAINER AND A MINIMUM OF 12" IN DIAMETER.
- PLANTING OPERATION:
 - TREES AND SHRUBS SHALL BE SUPPLIED IN SIZES SHOWN ON THE PLANTING PLANS WITH ALL PLANTS BALLED AND BURLAPPED, CONTAINERIZED, OR IN TUBE-PAKS. TREES AND SHRUBS SHALL BE FREE FROM SCALE, DISFIGURING KNOTS, SUN SCALD INJURIES, ABRASIONS OF THE BARK, OR OTHER OBJECTIONABLE BLEMISHES.
 - THE SOIL IN THE BOTTOM OF THE HOLE, WHICH HAS BEEN EXCAVATED TO THE PRESCRIBED REQUIREMENTS, SHALL BE LOOSENEED TO A DEPTH OF 3 INCHES AND MIXED WITH AN EQUAL AMOUNT OF TOPSOIL. A COMPACTED MOUND OF SOIL SHALL BE FORMED IN THE CENTER OF THE HOLE TO SUPPORT THE ROOTS OF THE PLANT. THE PLANT SHALL BE PLACED ON THIS MOUND OF SOIL AND HELD IN A VERTICAL POSITION. THE PLANT SHALL BE SO SET, BY ADJUSTING THE ELEVATION OF THE MOUND, THAT AFTER SETTLEMENT THE PLANT WILL STAND AT APPROXIMATELY THE SAME DEPTH IT STOOD IN THE NURSERY OR FIELD.
 - THE PLANT HOLE SHALL BE BACKFILLED WITH TOPSOIL, PEAT AND MAG AMP MIXTURE PLACED IN LAYERS AROUND THE ROOTS. EACH LAYER SHALL BE CAREFULLY TAMPED TO FILL ALL VOIDS AND PLACED IN MANNER TO AVOID INJURY TO THE TREE OR DISTURBING THE POSITION OF THE PLANT.
 - ALL BURLAP, ROPES OR WIRES SHALL BE COMPLETELY REMOVED FROM THE ROOT BALLS. TREES WITH WIRE BASKETS SHALL HAVE THE WIRE BASKET COMPLETELY REMOVED IF PRACTICAL. REMOVAL OF BASKET WIRE SHALL BE DONE WITH BOLT CUTTER OR SIMILAR DEVICE AND NOT BEFORE THE BOTTOM HALF OF PLANT HOLE HAS BEEN BACKFILLED AND TAMPED SO AS TO PREVENT THE BALL FROM BREAKING APART OR LOOSENING DURING THIS OPERATION. UNTIE AND REMOVE ALL ROPES AROUND TRUNK.
 - WHEN APPROXIMATELY TWO-THIRDS OF THE PLANT HOLE HAS BEEN BACKFILLED, THE HOLE SHALL BE FILLED WITH WATER AND THE SOIL ALLOWED TO SETTLE AROUND THE ROOTS. AFTER THE WATER HAS BEEN ABSORBED, THE PLANT HOLE SHALL BE FILLED WITH TOPSOIL AND TAMPED LIGHTLY TO GRADE. ANY SETTLEMENT SHALL BE BROUGHT TO GRADE WITH TOPSOIL.
 - ALL PLANTS SHALL BE SET PLUMB AND STRAIGHT, AND AT SUCH A LEVEL THAT, AFTER SETTLEMENT, A NORMAL OR NATURAL RELATIONSHIP OF THE TRUNK CROWN OF THE PLANT WITH THE GROUND SURFACE WILL BE ESTABLISHED. PLANTS SHALL BE LOCATED IN THE CENTER OF THE PIT. THE SURFACE ABOUT THE PLANT SHALL BE SMOOTH AND FORMED TO A CURV SHAPED DEPRESSION ABOUT THE STEM OR TRUNK SO AS TO HOLD WATER. ONCE THIS CURV SHAPED DEPRESSION HAS BEEN FORMED, THEN APPLY THE "ROOTS" GROWTH ENHANCER/BIOSTIMULANT, PER MANUFACTURER'S RECOMMENDATIONS. TO ALL TREES, SHRUBS AND PERENNIALS PRIOR TO MULCHING. UPON COMPLETION OF THE PLANTING, ALL SURPLUS SUBSOIL AND WASTE MATERIALS SHALL BE REMOVED.
 - FOR PLANTS ON LEVEL GROUND OR SLIGHT SLOPES, THE CONTRACTOR SHALL FORM AND LEAVE A SHALLOW BASIN A LITTLE LARGER THAN THE DIAMETER OF THE PLANT AROUND EACH PLANT. AFTER PLANTING, CULTIVATE THE SOIL IN THE SHRUB BED BETWEEN TREES/SHRUB PITS, RAKE SMOOTH AND OUTLINE AS PER PLANS.
 - IN CASE OF PLANTING IN THE OPEN ON HOT DAYS, SHORTEN THE TIME BETWEEN PLANTING AND SURFACING.

3.4 SEED BED PREPARATION

- SEED BED PREPARATION: SEED BED PREPARATION SHALL PERTAIN TO THE PREPARATION OF THE SURFACE OF THE GROUND TO RECEIVE THE SEED. THE GROUND SHALL BE HAND OR MACHINE RAKED SO AS TO REMOVE ALL DEBRIS, CLODS, STONES, OR OTHER FOREIGN MATTER LARGER THAN 1 INCH, TO A DEPTH OF 4 INCHES. PRIOR TO DUMPING AND SPREADING OF TOPSOIL, THE SURFACE SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 2 INCHES TO FACILITATE BONDING OF TOPSOIL TO SUB GRADE SOIL. WHERE SUB GRADES HAVE BEEN COMPACTED ARTIFICIALLY SCARIFY TO A DEPTH OF 6 INCHES. PRIOR TO SPREADING TOPSOIL, ALL SUB GRADES SHALL BE GRADED EVENLY ACCORDING TO THE CONTRACT DOCUMENTS. SUCH DEBRIS, CLODS, ROCKS, AND OTHER MATERIAL SO REMOVED SHALL BE DISPOSED OF AS PROVIDED BY THE LANDSCAPE ARCHITECT/OWNERS REPRESENTATIVE. SEED BED PREPARATION SHALL NOT COMMENCE UNTIL THE MOISTURE CONDITIONS MAKE THE GROUND AREA AND SOIL FRIABLE.
- PREPARED UNDER THE PREVIOUS SECTION, AREAS TO BE SEED, WHICH HAVE NOT BEEN DISTURBED BY SITE GRADING OR TOPSOIL STRIPPING OPERATIONS, SHALL BE MOVED AND RAKED PRIOR TO TILLING AND TOP SOILING OPERATIONS. TILLAGE OF THE EXISTING VEGETATION INTO THE GROUND WILL NOT BE ACCEPTED.

3.5 TOPSOIL PLACEMENT

- SPREADING: TOPSOIL SHALL BE SPREAD EVENLY ON THE PREPARED AREAS TO A MINIMUM DEPTH OF 6 INCHES AFTER MACHINE COMPACTION. SPREADING SHALL NOT BE DONE WHEN THE GROUND OR TOPSOIL IS FROZEN OR EXCESSIVELY WET. AFTER SPREADING, ANY LARGE, STIFF CLODS OR HARD LUMPS SHALL BE BROKEN UP AND THE GROUND SHALL BE HAND OR MACHINE RAKED TO REMOVE ALL DEBRIS, STONES, AND FOREIGN MATTER LARGER THAN 1 INCH TO A DEPTH OF 4 INCHES.
- FINISH GRADING: GRADE THE AREAS TO FINISH GRADES FILLING AS NEEDED OR REMOVING SURPLUS DIRT AND FLOATING AREAS TO A SMOOTH UNIFORM GRADE. ALL LAWN AREAS SHALL SLOPE TO DRAIN. WHERE NO GRADES ARE SHOWN, AREAS SHALL HAVE A SMOOTH AND CONTINUAL GRADE BETWEEN EXISTING OR FIXED CONTROLS (SUCH AS WALKS, CURBS, OR WALLS). RAKE AND LEVEL AS NECESSARY TO OBTAIN TRUE EVEN LAWN SURFACES. ALL FINISH GRADES SHALL MEET THE APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE SEED IS SOWN OR SOD IS PLACED.
- SEED BED PREPARATION: AFTER FINISH GRADING AND JUST BEFORE SEEDING, THE AREAS TO BE SEEDDED SHALL BE LOOSENEED TO PROVIDE A ROUGH, FIRM BUT FINELY PULVERIZED SEED BED. THE INTENT IS A TEXTURE CAPABLE OF RETAINING WATER, SEED, AND FERTILIZER WHILE REMAINING STABLE AND ALLOWING SEED TIME TO GERMINATE. SEED SHALL BE APPLIED TO THE CONDITIONED SEED BED NOT MORE THAN 48 HOURS AFTER THE SEED BED HAS BEEN PREPARED.
- WATER: IF THERE HAS BEEN A TIME LAPSE BETWEEN THE PLACEMENT OF TOPSOIL AND SEEDING OPERATIONS TO ALLOW IT TO BECOME SETTLED AND COMPACTED ON THE SURFACE, THE AREA TO BE PLANTED WITH SEED SHALL BE THOROUGHLY HARROWED, WORKED TO A DEPTH OF 4 INCHES SO AS TO PROVIDE A SURFACE OF SUCH CONDITION THAT IT WILL ALLOW HAND RAKING AND APPLICATION OF FINE SEED TO THE SEEDING OPERATIONS.
- FERTILIZER/SOIL AMENDMENTS: APPLICATION OF FERTILIZER WILL BE IN 2 STAGES. TWO WEEKS PRIOR TO APPLICATION OF SEED, FERTILIZER SHALL BE APPLIED AT THE RATE OF 3 LBS/1000 S.F. FOR TURF AREAS. FERTILIZER SHALL BE APPLIED BY BROADCASTING OR DRILL METHODS. IT SHALL BE APPLIED SEPARATELY FROM THE SEED AND MIXED INTO THE SOIL TO A MINIMUM DEPTH OF 2 INCHES AND MAY BE INCORPORATED AS PART OF THE TOPSOIL PLACEMENT AND SEED BED PREPARATION OPERATIONS. SPRINKLE IMMEDIATELY AFTER INITIAL APPLICATION OF THE FERTILIZER WITH A FINE SPRAY UNTIL GROUND IS THOROUGHLY SATURATED, WITH PARTICULAR CARE TO AVOID RUNOFF ON SLOPING AREAS.
 - THE 2ND APPLICATION WILL FOLLOW THE FOLLOWING SEASON WITHIN THE SPECIFIED WARRANTY PERIOD AT A RATE DETERMINED BY SOIL TEST RESULTS FOR BOTH TURF AND NATIVE GRASS/ WILDFLOWER AREAS.
 - APPLICATION OF SUPERPHOSPHATE AND GROUND LIMESTONE SHALL BE APPLIED AT RATES DETERMINED BY SOILS TEST RESULTS.
 - SEEDING: IMMEDIATELY PRIOR TO THE APPLICATION OF THE SEED, THE SOIL SHALL BE LOOSE TO A DEPTH OF AT LEAST 1 INCH AND FREE FROM ALL MATERIAL AS SPECIFIED. IF SOIL IS TOO LOOSE OR DRY FOR GOOD HANDLING, IT SHOULD BE MOISTENED AND ROLLED LIGHTLY.
 - SEEDING SHALL BE DONE WITHIN THE SPECIFIED TIME PERIODS AND AT THE FOLLOWING RATES:
 - FINE LAWN SEED SHALL BE SOWN AT A RATE OF 3.0 POUNDS PER 1000 SQUARE FEET AND SHALL BE PLANTED IN THE SPRING FROM APRIL 1ST TO MAY 30TH OR IN THE FALL FROM AUGUST 16TH TO OCTOBER 1ST.
 - NATIVE SEED MIX SHALL BE SOWN AT A RATE OF 5.0 POUNDS PER 1000 SQUARE FEET AND SHALL BE PLANTED IN THE SPRING FROM APRIL 1ST TO MAY 30TH OR IN THE FALL FROM AUGUST 16TH TO OCTOBER 1ST.
 - METHODS: SEEDING BY DRILL IS PREFERABLE. HOWEVER, HYDRAULIC SEEDING OR BROADCASTING WILL BE PERMITTED. BROADCAST SEEDING AND HYDRAULIC SEEDING SHALL NOT BE USED DURING ADVERSE WEATHER. AREAS SO BROADCAST METHODS WILL BE VISUALLY INSPECTED BY THE ARCHITECT PRIOR TO APPLICATION. AREAS WHICH FAIL TO REVEAL AN AVERAGE OF TWO SEEDS PER SQUARE INCH WILL BE RE-SOWN AT NO ADDITIONAL EXPENSE TO THE OWNER. THE APPLIED SEED, REGARDLESS OF APPLICATION, SHALL NOT BE COVERED BY A SOIL THICKNESS NO GREATER THAN 1/2 INCH.
 - SEEDING BY DRILL: SEEDING EQUIPMENT USED FOR APPLYING GRASS SEED MUST BE DESIGNED, MODIFIED, OR EQUIPPED TO REGULATE THE APPLICATION RATE AND PLANTING DEPTH OF GRASS SEED. SEED MUST BE UNIFORMLY DISTRIBUTED IN THE DRILL HOPPER DURING THE DRILLING OPERATION. ALL GRASS ESTABLISHMENT EQUIPMENT SHALL BE OPERATED PERPENDICULAR TO THE SLOPE OF GRADE. A DRILL SHALL BE NO WIDER THAN THE WIDTH OF THE AREA WHICH IT IS TO OPERATE. THE ROWS OF PLANTED SEEDS SHALL BE A MAXIMUM OF 8 INCHES APART AND SHALL BE AT RIGHT ANGLES TO THE FINISHED SLOPES.
 - BROADCAST SEEDING: WHEN SEED IS SOWN BY BROADCASTING, EXERCISE GREAT CARE THAT A UNIFORM DISTRIBUTION OF SEED IS OBTAINED. SEEDING SHALL BE DONE BY STALL DAY USING A HOPPER TYPE SEEDER WITH ONE HALF OF THE SEED FOR EACH AREA BEING SOWN AT RIGHT ANGLES TO THE OTHER HALF. SEED DISTRIBUTION ON BROADCASTING SHALL BE COVERED WITH 1/4 TO 1/2 INCH OF SOIL. THE SEED MAY BE COVERED BY RAKING, DRAGGING, OR BY APPROPRIATE MECHANICAL MEANS.
 - HYDRAULIC SEEDING: WHEN HYDRAULIC SEED IS USED, SEED AND MULCH SHALL BE APPLIED IN SEPARATE AND DISTINCT OPERATIONS EXCEPT FOR THE FOLLOWING SEED PREPARATION:
 - THE CONTRACTOR MUST PROVIDE ONE POUND OF MULCH PER EACH THREE GALLONS OF WATER IN THE HYDROSEEDER AS A CUSHION AGAINST SEED DAMAGE. THE MULCH USED AS A CUSHION MAY BE PART OF THE TOTAL REQUIRED MULCH WITH THE REMAINDER APPLIED AFTER THE SEED IS METERING DURING APPLICATION.

- THE CONTRACTOR MAY APPLY MULCH AND LAWN SEED MIX HYDRAULICALLY IN A SINGLE APPLICATION, PROVIDING ONE HALF OF THE SEED HAS BEEN SOWN BY BROADCAST OR DRILL METHODS AS AN INITIAL APPLICATION AND THE RATE OF APPLICATION OF LAWN SEED MIX INCREASED BY 34 POUNDS PER 1000 SQUARE FEET.
- THE APPLICATION OF THE SEED SLURRY SHALL BE MADE WITH EQUIPMENT HAVING A BUILT IN AGITATION SYSTEM AND OPERATING CAPACITY SUFFICIENT TO AGITATE, SUSPEND AND HOMOGENEOUSLY MIX A SLURRY CONTAINING WATER, SEED, AND MULCH OF SEED. THE SLURRY SHALL BE SPRAYED OVER THE SOIL IN A UNIFORM COAT. ALL HYDRAULICALLY SEEDED AREAS SHALL BE HYDROMULCHED UPON COMPLETION.
- WATERING: WATERING IMMEDIATELY AFTER SEEDING OR MULCHING WITH A FINE SPRAY TO A DEPTH OF 6 INCHES. AVOID RUNOFF ON SLOPING AREAS. THE SURFACE LAYER OF THE SOIL MUST BE KEPT DAMP BY FREQUENT LIGHT WATERING DURING THE GERMINATION PERIOD AND UNTIL PLANTS ARE FIRMLY ROOTED.
- DRY APPLICATION: ALL SEEDS SHALL BE APPLIED BY SEEDING TEMPORARY FENCES, BARRIERS, SIGNS, ETC. AS NECESSARY TO PREVENT TRAFFIC. THEY SHALL REMAIN IN PLACE FOR AT LEAST SIX WEEKS UNLESS OTHER ARRANGEMENTS ARE MADE WITH THE LANDSCAPE ARCHITECT.
- MULCHING:
 - MULCH ALL HYDROSEEDED AREAS, DRAINAGE SWALES, SLOPES 4:1 OR STEEPER, AND ANY AREAS WHERE LIKELY HAZARD OF EROSION EXISTS. TOPSOIL OR SEED WHICH WASHES OUT FOR REASONS ATTRIBUTED TO THE CONTRACTOR'S ACTIVITIES OR FAILURE TO TAKE PROPER PRECAUTIONS, SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
 - ALL STRUCTURES SHALL BE PROTECTED FROM HYDRAULIC APPLICATION OF MULCH MATERIAL AND MATERIAL DEPOSITED ON FACILITIES SHALL BE REMOVED.
 - MULCH SHALL NOT BE APPLIED IN THE PRESENCE OF FREE SURFACE WATER, BUT MAY BE APPLIED ON DAMP GROUND.
 - APPLICATION OF ORGANIC MULCH
 - WET APPLICATION: ORGANIC MULCH SHALL BE MIXED WITH WATER AT A RATE OF ONE POUND MULCH (DRY WEIGHT) TO ONE GALLON OF WATER HYDRAULICALLY APPLIED AS PER MANUFACTURER'S RECOMMENDATIONS AT A MINIMUM RATE OF 2000 POUNDS PER ACRE.
 - DRY APPLICATION: ORGANIC MULCH SHALL BE BROADCAST AT A MINIMUM RATE OF 2000 POUNDS PER ACRE, AND SHALL BE ROLLED LIGHTLY TO SET FIRMLY INTO THE SOIL.

3.6 MULCHING

- MULCHING:
 - ALL TREES AND SHRUB BEDS WILL BE CULTIVATED FOLLOWING THE GENERAL SHAPE OF THE BEDS AS INDICATED ON THE PLANS. FORM A SAUCER AROUND THE TOP OF THE PLANTING PIT TO HELP HOLD WATER DURING WATERING AND FORM THE OUTLINE FOR MULCHING.
 - APPLY THE SHREDDED BARK MULCH TO A DEPTH OF 4", EVENLY SPREAD OVER THE ENTIRE AREA OF EACH PLANTING PIT.
 - THOROUGHLY SOAK ALL MULCH AREAS. AFTER WATERING, RAKE MULCHED AREAS AND LEAVE IN A COMPLETED AND FINISHED CONDITION. THOROUGHLY SOAK ALL MULCH AREAS. AFTER WATERING, RAKE MULCHED AREAS AND LEAVE IN A COMPLETED AND FINISHED CONDITION.

3.7 STAKING, GUYING, AND WRAPPING

- STAKING AND GUYING:
 - TREES: GREATER THAN 1-1/2" IN CALIPER, SHALL BE STAKED IMMEDIATELY AFTER PLANTING. GUY WIRES SHALL BE ENCASED IN HOSE TO PREVENT DIRECT CONTACT WITH BARK. GUYING SHALL BE PLACED AROUND THE TRUNK IN A SINGLE LOOP. WIRES SHALL BE TIGHTENED AND KEPT TAUNT BY TWISTING THE STRANDS TOGETHER OR WITH TURNBUCKLES.
 - WRAP TREES IMMEDIATELY AFTER PLANTING, BUT NOT BEFORE THE CONDITION OF THE TRUNKS HAS BEEN INSPECTED AND APPROVED. CAREFULLY WRAP THE TRUNKS OF DECIDUOUS TREES WITH TREE WRAPPING PAPER. BEGIN THE WRAPPER AT THE BASE OF THE TRUNK JUST ABOVE THE ROOTS AND BELOW THE NORMAL GROUND LINE, AND EXTEND WRAPPING UPWARD IN SPIRAL MANNER WITH AN OVERLAP OF ONE-HALF (1/2) THE WIDTH OF THE PAPER STRIP. COVER WITH SOIL THE PORTION OF THE WRAPPING BELOW THE FINISHED GRADE. THE PAPER SHALL BE HELD IN PLACE WITH APPROVED TWINE OR TAPE. THE TWINE AROUND THE TREE IN AT LEAST THREE PLACES. IN ADDITION SHALL NOT TAKE PLACE UNTIL THE END OF THE PLANTING PERIOD.
 - TREE GUYING AND STAKING SHALL BE AS DETAILED AS PER PROJECT PLANS AND COMPLETED IMMEDIATELY AFTER PLANTING.
- PRUNING:
 - GENERAL:
 - EACH TREE SHALL BE PRUNED IN ACCORDANCE WITH STANDARD HORTICULTURAL PRACTICE TO PRESERVE NATURAL CHARACTER OF PLANT. THE OBJECTIVE IS TO PRESERVE A SHAPE AND FORM REPRESENTATIVE OF THE SPECIES. PRUNING SHALL BE DONE WITH CLEAN, SHARP TOOLS.
 - PRUNING:
 - ALL DEAD WOOD, SUCKERS, BADLY BROUSE OR BROKEN BRANCHES SHALL BE REMOVED. THE TOPS OF DECIDUOUS PLANTS SHALL BE PRUNED EITHER BEFORE OR AFTER PLANTING TO BALANCE ROOT LOSS DUE TO TRANSLANTING. THIS SHALL CONSIST OF REMOVING ONE-FOURTH OF THE CROWN BY

LANDSCAPE GENERAL SPECIFICATIONS, CONT.

- B. SOD: UPON DELIVERY OF SOD TO THE WORK SITE, USE ALL MEANS NECESSARY TO PROTECT AND MAINTAIN THE SOD BEFORE, DURING AND AFTER INSTALLATION. DELIVERY OF SOD SHALL BE CAREFULLY COORDINATED SO ITS PLACEMENT CAN PROCEED DIRECTLY AFTER ITS ARRIVAL. SOD SHALL BE INSTALLED ON SITE NO MORE THAN 24 HOURS AFTER CUTTING.
- C. FERTILIZER/LIME: FERTILIZER AND LIME SHALL BE DELIVERED TO THE SITE IN THE ORIGINAL, UNOPENED CONTAINERS BEARING THE MANUFACTURER'S GUARANTEED CHEMICAL ANALYSIS, NAME, TRADE NAME, TRADEMARK, AND CONFORMANCE WITH STATE AND FEDERAL LAWS. IN LIEU OF CONTAINERS, BOTH MATERIALS MAY BE FURNISHED IN BULK AND A CERTIFICATE INDICATING THE ABOVE INFORMATION SHALL ACCOMPANY EACH DELIVERY.
- D. STORAGE: SEED, HYDROMULCH, HYDROMULCH BINDER, FERTILIZER AND LIME SHALL BE KEPT IN DRY STORAGE AREA FREE FROM CONTAMINANTS. THEY SHALL BE UNIFORM IN COMPOSITION, DRY, UNFROZEN AND FREE FLOWING. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY MATERIAL WHICH HAS BECOME CAKED FOR OTHERWISE DAMAGED OR DOES NOT MEET SPECIFIED REQUIREMENTS.
- E. REPLACEMENTS: IN THE EVENT OF REJECTION OF THE SEED, IMMEDIATELY MAKE ALL REPLACEMENTS NECESSARY TO THE APPROVAL OF THE LANDSCAPE ARCHITECT AND AT NO ADDITIONAL COST TO THE OWNER.
- F. SCHEDULES:
1. SEASONAL LIMITATIONS CONDUCT SEEDING OPERATIONS DURING THE SPECIFIED TIME PERIODS. IF SPECIAL CONDITIONS EXIST THAT MAY WARRANT A VARIANCE IN THE SPECIFIED PLANT DATES OR CONDITIONS, A WRITTEN REQUEST SHALL BE SUBMITTED TO THE LANDSCAPE ARCHITECT STATING THE SPECIAL CONDITIONS AND PROPOSED VARIANCE.
- G. NOTICE TO PROCEED:
1. THE CONTRACTOR SHALL NOT PROCEED WITH SEEDING AND SOD PLACEMENT OPERATIONS UNTIL THE IRRIGATION SYSTEM HAS BEEN TESTED AND APPROVED.

PART 2: MATERIALS

- 2.1 TOPSOIL**
- A. TOPSOIL REQUIRED SHALL BE OBTAINED FROM ON-SITE STOCKPILED MATERIAL WHICH WILL BE PLACED BY THE SITE CONTRACTOR. SHOULD ADDITIONAL TOPSOIL BE NEEDED TO BRING LANDSCAPE AREAS UP TO GRADE, THEN IT SHALL BE FURNISHED AND PLACED BY THE SITE CONTRACTOR, WITH IMPORTED MATERIAL FROM A LOCALLY APPROVED SOURCE.
- B. TOPSOIL SHALL BE A FINE SANDY LOAM OR A SANDY LOAM AS DETERMINED BY MECHANICAL ANALYSIS AND BASED ON THE USDA CLASSIFICATION SYSTEM. IT SHALL BE OF UNIFORM COMPOSITION, WITHOUT ADMIXTURE OF SUBSOIL, LOOSE, FRIABLE, AND SHALL CONTAIN ORDINARY AMOUNT OF HUMUS. IT SHALL CONTAIN NO LUMPS OF SOIL, ROCKS LARGER THAN 1 INCH, OR STICKS, OR ROOTS, AND OTHER DEBRIS. IT SHALL BE SUFFICIENTLY FERTILE TO SUSTAIN NORMAL HEALTHY LAWN GROWTH AND SHALL NOT HAVE A PH VALUE HIGHER THAN 7.0 OR LOWER THAN 6.5 THE TOPSOIL SHALL BE DELIVERED IN AN UNFROZEN AND NON-MUDDY CONDITION AND MUST MEET THE APPROVAL OF THE LANDSCAPE ARCHITECT.
- C. THE LOAM PLACED IN LANDSCAPE AREAS ON THE SITE MUST BE TESTED AND AMENDED AS RECOMMENDED BY SOIL TESTING FOR LAWS AND PLANTING. THE COST OF ANY AMENDMENT TO THE LOAM AND TOPSOIL SHALL BE THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY. THE SITE CONTRACTOR SHALL FURNISH ADDITIONAL TOPSOIL AS REQUIRED.

- 2.2 SEED**
- A. GENERAL:
1. CONTRACTOR SHALL SUBMIT CERTIFICATION TAGS FOR APPROVAL. ALL GRASS SEED SHALL BE:
- FREE FROM NOXIOUS WEED SEEDS AND RECLEANED GRADE A RECENT CROP SEED
 - TREATED WITH APPROPRIATE FUNGICIDE
 - DELIVERED TO THE SITE IN SEALED CONTAINERS WITH DEALER GUARANTEED ANALYSIS.
- B. FINE LAWN SEED MIXTURE:
1. ALL SEEDED, FINE LAWN AREAS AND INTENDED FOR THE PLAYFIELD AREAS AS DESIGNATED ON THE PLANS, SHALL BE SEEDDED WITH THE MIXTURE HEREIN SPECIFIED:
- | NAME OF GRASS | PROPORTION BY WEIGHT |
|----------------------------|----------------------|
| CLASSIC KENTUCKY BLUEGRASS | 20% |
| KENTUCKY BLUEGRASS | 20% |
| PERENNIAL RYEGRASS | 20% |
| SR4200 PERENNIAL RYEGRASS | 15% |
| SHADOW E CHEWINGS FESCUE | 10% |
| SHADEMASTER RED FESCUE | 10% |
| SR5000 CHEWINGS FESCUE | 5% |
- C. NATIVE SEED MIXTURE:
1. FOR ALL TURF AREAS NOT DESIGNATED ON THE PLANS FOR USE AS FINE LAWN ON THE PLAYFIELD AREAS, SHALL BE SEEDDED WITH THE MIXTURE HEREIN SPECIFIED:
- | NAME OF GRASS | PROPORTION BY WEIGHT |
|---------------------|----------------------|
| TALL FESCUE | 53% |
| CREeping RED FESCUE | 41% |
| REDTOP | 6% |
2. ALL SEED USED SHALL MEET THE FOLLOWING MINIMUM STANDARDS:
- | PURITY | % |
|-------------|-----|
| GERMINATION | 85% |

- 2.3 SOD**
- A. ALL SOD SHALL BE WELL ESTABLISHED MOWN, LAWN GRASS. IT SHALL BE VIGOROUS, WELL ROOTED, HEALTHY TURF FREE FROM DISEASE, INSECT PESTS, WEEDS AND OTHER GRASSES, STONES OR ANY OTHER HARMFUL OR DELETERIOUS MATTER.
- B. IT SHALL HAVE BEEN GROWN FROM A SEED MIXTURE IDENTICAL TO THAT SPECIFIED FOR THE FINE LAWN SEED MIXTURE SPECIFIED ABOVE. THIS SOD IS AVAILABLE FOR GOLD STAR SOD FARMS, CANTERBURY, NH. NOT MORE THAN 5% WEED AND UNDESIRABLE GRASSES SHALL BE ALLOWED.
- C. SOD SHALL BE A MINERAL BACKED SOD GROWN IN THE NEW ENGLAND REGION. IT SHALL BE CUT IN UNIFORM WIDE STRIPS, 3/4" IN THICKNESS WITH CLEAN, CUT EDGES. SOD SHALL BE ROLLED OR FOLDED PRIOR TO LIFTING AND HANDLING TO PREVENT TEARING, BREAKING, DRYING AND ANY OTHER DAMAGE.

- 2.4 SOIL AMENDMENTS**
- A. FERTILIZER:
1. FERTILIZER TO BE SPREAD ON AREAS TO BE SEEDDED SHALL BE COMMERCIALY PREPARED AND SHALL CONTAIN THE FOLLOWING PERCENTAGES BY WEIGHT: LAWN SEED AND SOD AREAS:
- 16% NITROGEN
 - 16% PHOSPHORIC ACID
 - 16% POTASH
 - 5% ZINC
2. USE FERTILIZER PERCENTAGE FOR ESTIMATING PURPOSES ONLY. AFTER ON-SITE, STOCKPILED TOPSOIL HAS BEEN PLACED, THE CONTRACTOR SHALL SUBMIT A LABORATORY CHEMICAL ANALYSIS TO THE LANDSCAPE ARCHITECT FOR REVIEW AND DETERMINATION OF A FERTILIZER ANALYSIS AND APPLICATION RATE. THIS CHEMICAL ANALYSIS SHALL BE OBTAINED FROM A MINIMUM OF FOUR (4) RANDOM SOIL SAMPLES SELECTED AND TAKEN IN THE FIELD PER LANDSCAPE ARCHITECT'S/OWNER'S REPRESENTATIVE APPROVAL.
3. THE TOPSOIL ANALYSIS SHALL INCLUDE THE FOLLOWING CHEMICAL PARAMETERS:
- | PH | - |
|---------------------|----------|
| NITRATE | NPPM |
| ORGANIC MATTER | % |
| PHOSPHOROUS (OLSON) | PPM |
| POTASSIUM | PPM |
| SODIUM | MEQ/100G |
| SULFATE | PPM |
| CONDUCTIVITY | MMHGS/CM |
4. COMMERCIAL FERTILIZER SHALL BE COMPLETE, UNIFORM IN COMPOSITION, DRY AND FREE FLOWING. THE FERTILIZER SHALL BE DELIVERED TO THE SITE IN THE ORIGINAL WATERPROOF CONTAINERS, EACH BEARING THE MANUFACTURER'S STATEMENT OF ANALYSIS.
- D. SUPERPHOSPHATE
1. INCORPORATE SUPERPHOSPHATE INTO THE TOPSOIL WITH THE FIRST APPLICATION OF COMMERCIAL FERTILIZER AT THE RATE OF TWENTY POUNDS PER THOUSAND SQUARE FEET OR AT THE RATE DETERMINED FROM THE TEST RESULTS.
- C. GROUND LIMESTONE:
1. INCORPORATE GROUND LIMESTONE INTO THE TOPSOIL AFTER IT HAS BEEN SPREAD AT THE RATE OF FIFTY POUNDS PER THOUSAND SQUARE FEET OR AT THE RATE DETERMINED FROM THE TEST RESULTS TO ACHIEVE A PH OF 6.0 TO 6.5.
- D. MULCH:
1. WHERE A SPECIFIC TYPE OF MULCH IS REQUIRED, THE TYPE WILL BE DESCRIBED IN THE EXECUTION SECTION, WHERE MULCHING REQUIREMENTS CAN BE MET EQUALLY WELL BY ONE OF SEVERAL TYPES, THE CONTRACTOR SHALL HAVE THE OPTION OF SELECTING ONE OF THE ACCEPTABLE TYPES.
- ORGANIC MULCH: JACKLIN ORGANIC MULCH AS MANUFACTURED BY THE VAUGHAN-JACKLIN CORPORATION, EAST 8803 SPRAGUE, SPOKANE, WASHINGTON 99213 - (TELEPHONE (509) 828-6241), OR APPROVED EQUAL.
 - VEGETATIVE MULCH: VEGETATIVE MULCH MATERIAL SHALL BE COMPOSED OF WHEAT STRAW, RYE STRAW OR BARLEY STRAW, IN THAT ORDER OF PREFERENCE AND SHALL BE FREE OF NOXIOUS WEED SEEDS, STONES, DIRT, ROOTS, STUMPS, OR OTHER FOREIGN MATERIAL.
 - CELLULOSE FIBER MULCH: WOOD CELLULOSE FIBER MULCH SHALL CONSIST OF VIRGIN WOOD FIBERS MANUFACTURED FROM WHOLE WOOD CHIPS AND SHALL BE PROCESSED IN SUCH A MANNER THAT IT WILL NOT CONTAIN ANY GROWTH OR GERMINATION INHIBITING FACTORS. THE MULCH SHALL BE DYED AN APPROPRIATED COLOR TO FACILITATE VISUAL METERING DURING APPLICATION. UPON APPLICATION, THE MATERIAL SHALL PRODUCE A MAT ABSORPTION AND PERCOLATION AND SHALL COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL. THE WOOD CELLULOSE FIBERS MUST MAINTAIN UNIFORM SUSPENSION IN WATER UNDER AGITATION.
- E. MULCH TACKIFIERS:
1. TACKIFIERS MIXED WITH OR APPLIED OVER STRAW SHALL BE TERRA-TACK AR, OR APPROVED EQUAL OF NON-ASPHALTIC FORMULATION. TACKIFIERS USED TO ANCHOR VEGETATIVE OR CELLULOSE FIBER MULCH SHALL BE TERRA TACK III, OR APPROVED EQUAL OF NON-ASPHALTIC FORMULATION.
- F. WATER:
1. WATER SHALL BE AVAILABLE FROM MUNICIPAL SYSTEM THROUGH CONTRACTOR.
- G. EROSION CONTROL BLANKET:
1. EROSION CONTROL FABRIC MAY BE REQUIRED AS AN ADDITIONAL MEASURE TO PREVENT EROSION ON SLOPES GREATER THAN 2:1 AND IN DRAINAGE SWALES. IF THIS MATERIAL IS NECESSARY AND AUTHORIZED WHILE WORK IS IN PROGRESS, THEN THE MATERIAL SHALL BE CURLEX' EROSION CONTROL BLANKET CONSISTING OF A DENSE MAT OF CURLED AND SEASONED ASPEN WOOD EXCELSION BOUND WITH A TOUGH, PHOTO-DEGRADABLE, EXTRUDED PLASTIC MESH AS MANUFACTURED BY AMERICAN EXCELSION CO., ARLINGTON, TEXAS OR APPROVED EQUAL.

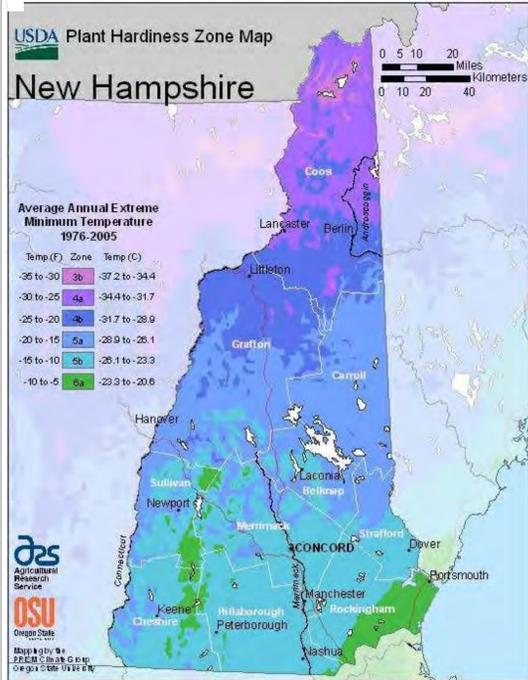
PART 3: EXECUTION

- 3.1 SURFACE CONDITIONS**
- A. INSPECTION:
1. PRIOR TO ALL WORK OF THIS SECTION, CAREFULLY INSPECT THE INSTALLED WORK OF ALL OTHER TRADES AND VERIFY THAT ALL SUCH WORK IS COMPLETE TO THE POINT WHERE THIS INSTALLATION MAY PROPERLY COMMENCE. VERIFY THAT SEEDING MAY BE COMPLETED IN ACCORDANCE WITH THE ORIGINAL DESIGN AND THE REFERENCED STANDARDS.
- B. DISCREPANCIES:
1. IN THE EVENT OF DISCREPANCY, IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT.
2. DO NOT PROCEED WITH INSTALLATION IN AREAS OF DISCREPANCY UNTIL ALL SUCH DISCREPANCIES HAVE BEEN FULLY RESOLVED.
- 3.2 SEED BED PREPARATION**
- A. SUBGRADE PREPARATION:
1. SEED BED PREPARATION SHALL PERTAIN TO THE PREPARATION OF THE SURFACE OF THE GROUND TO RECEIVE THE SEED. THE GROUND SHALL BE HAND OR MACHINE RAKED SO AS TO REMOVE ALL DEBRIS, CLODS, STONES, OR OTHER FOREIGN MATTER LARGER THAN 1 INCH, TO A DEPTH OF 4 INCHES. PRIOR TO DUMPING AND SPREADING OF TOPSOIL, THE SURFACE SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 2 INCHES TO FACILITATE BONDING OF TOPSOIL TO SUBGRADE SOIL. WHERE SUBGRADES HAVE BEEN COMPACTED ARTIFICIALLY SCARIFY TO A DEPTH OF 6 INCHES. PRIOR TO SPREADING TOPSOIL, ALL SUBGRADES SHALL BE GRADED EVENLY ACCORDING TO THE CONTRACT DOCUMENTS.
2. SUCH DEBRIS, CLODS, ROCKS, AND OTHER MATERIAL SO REMOVED SHALL BE DISPOSED OF AS APPROVED BY THE LANDSCAPE ARCHITECT/OWNER'S REPRESENTATIVE. SEED BED PREPARATION SHALL NOT COME UNTIL THE MOISTURE CONDITIONS MAKE THE GROUND AREA AND SOIL FRIABLE.
- B. PREPARING UNDISTURBED AREAS:
1. AREAS TO BE SEEDDED, WHICH HAVE NOT BEEN DISTURBED BY SITE GRADING OR TOPSOIL STRIPPING OPERATIONS, SHALL BE MOWED AND RAKED PRIOR TO TILLING AND TOPSOILING OPERATIONS. TILLAGE OF THE EXISTING VEGETATION INTO THE GROUND WILL NOT BE ACCEPTED.

3.3 TOPSOIL PLACEMENT

- A. SPREADING:
1. TOPSOIL SHALL BE SPREAD EVENLY ON THE PREPARED AREAS TO A MINIMUM DEPTH OF 6 INCHES AFTER MACHINE COMPACTION. SPREADING SHALL NOT BE DONE WHEN THE GROUND OR TOPSOIL IS FROZEN OR EXCESSIVELY WET. AFTER SPREADING, ANY LARGE, STIFF CLODS OR HARD LUMPS SHALL BE BROKEN UP AND THE GROUND SHALL BE HAND OR MACHINE RAKED TO REMOVE ALL DEBRIS, STONES, AND FOREIGN MATTER LARGER THAN 1 INCH TO A DEPTH OF 4 INCHES.
- B. FINISH GRADING:
1. GRADE THE AREAS TO FINISH GRADES FILLING AS NEEDED, OR REMOVING SURPLUS DIRT AND FLOATING AREAS TO A SMOOTH UNIFORM GRADE. ALL LAWN AREAS SHALL SLOPE TO DRAIN. WHERE NO GRADES ARE SHOWN, AREAS SHALL HAVE A SMOOTH AND CONTINUAL GRADE BETWEEN EXISTING OR FIXED CONTROLS (SUCH AS WALKS, CURBS, OR WALLS). RAKE AND LEVEL AS NECESSARY TO OBTAIN TRUE EVEN LAWN SURFACES. ALL FINISH GRADES SHALL MEET THE APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE SEED IS SOWN OR SOD IS PLACED.
- C. SEED BED PREPARATION:
1. AFTER FINISH GRADING AND JUST BEFORE SEEDING, THE AREAS TO BE SEEDDED SHALL BE LOOSENEED TO PROVIDE A ROUGH, FIRM BUT FINELY PULVERIZED SEED BED. THE INTENT IS A TEXTURE CAPABLE OF RETAINING WATER, SEED, AND FERTILIZER WHILE REMAINING STABLE AND ALLOWING SEED TIME TO GERMINATE. SEED SHALL BE APPLIED TO THE CONDITIONED SEED BED NOT MORE THAN 48 HOURS AFTER THE SEED BED HAS BEEN PREPARED.
2. IF THERE HAS BEEN A TIME LAPSE BETWEEN THE PLACEMENT OF TOPSOIL AND SEEDING OPERATIONS TO ALLOW IT TO BECOME SETTLED AND COMPACTED ON THE SURFACE, THE AREA TO BE PLANTED WITH SEED SHALL BE THOROUGHLY HARROWED, WORKED TO A DEPTH OF 4 INCHES SO AS TO PROVIDE A SURFACE OF SUCH CONDITION THAT IT WILL ALLOW HAND RAKING AND APPLICATION OF THE SEED IN COMPLIANCE WITH THESE SPECIFICATIONS.
- D. FERTILIZER/SOIL AMENDMENTS:
1. APPLICATION OF FERTILIZER WILL BE IN 2 STAGES. TWO WEEKS PRIOR TO APPLICATION OF SEED, FERTILIZER SHALL BE APPLIED AT THE RATE OF 3 LBS/1000 S.F. FOR TURF AREAS. FERTILIZER SHALL BE APPLIED BY BROADCASTING OR DRILL METHODS. IT SHALL BE APPLIED SEPARATELY FROM THE SEED AND MIXED INTO THE SOIL TO A MINIMUM DEPTH OF 2 INCHES AND MAY BE INCORPORATED AS PART OF THE TOPSOIL PLACEMENT AND SEED BED PREPARATION OPERATIONS. SPRINKLE IMMEDIATELY AFTER INITIAL APPLICATION OF THE FERTILIZER WITH A FINE SPRAY UNTIL GROUND IS THOROUGHLY SATURATED, WITH PARTICULAR CARE TO AVOID RUNOFF ON SLOPING AREAS.
2. THE 2ND APPLICATION WILL FOLLOW THE FOLLOWING SEQUENCE WITHIN THE SPECIFIED WARRANTY PERIOD AT A RATE DETERMINED BY SOIL TEST RESULTS FOR BOTH TURF AND NATIVE GRASS/WILDFLOWER AREAS.
3. APPLICATION OF SUPERPHOSPHATE AND GROUND LIMESTONE SHALL BE APPLIED AT RATES DETERMINED BY SOILS TEST RESULTS.
- E. SEEDING:
1. IMMEDIATELY PRIOR TO THE APPLICATION OF THE SEED, THE SOIL SHALL BE LOOSE TO A DEPTH OF AT LEAST 1 INCH AND FREE FROM ALL MATERIAL AS SPECIFIED. IF SOIL IS TOO LOOSE OR DRY FOR GOOD HANDLING, IT SHOULD BE MOISTENED AND ROLLED LIGHTLY.
2. SEEDING SHALL BE DONE WITHIN THE SPECIFIED TIME PERIODS AND AT THE FOLLOWING RATES:
- FINE LAWN SEED SHALL BE SOWN AT A RATE OF 3.0 POUNDS PER 1000 SQUARE FEET AND SHALL BE PLANTED IN THE SPRING FROM APRIL 1ST TO MAY 30TH OR IN THE FALL FROM AUGUST 16TH TO OCTOBER 1ST.
 - NATIVE SEED MIX SHALL BE SOWN AT A RATE OF 5.0 POUNDS PER 1000 SQUARE FEET AND SHALL BE PLANTED IN THE SPRING FROM APRIL 1ST TO MAY 30TH OR IN THE FALL FROM AUGUST 16TH TO OCTOBER 1ST.
- F. METHODS:
1. SEEDING BY DRILL IS PREFERABLE. HOWEVER, HYDRAULIC SEEDING OR BROADCASTING WILL BE PERMITTED. BROADCAST SEEDING AND HYDRAULIC SEEDING SHALL NOT BE USED DURING ADVERSE WEATHER.
2. AREAS SOWN BY HYDRAULIC OR BROADCAST METHODS WILL BE VISUALLY INSPECTED FOR UNIFORMITY OF APPLICATION. AREAS WHICH FAIL TO REVEAL AN AVERAGE OF TWO SEEDS PER SQUARE INCH WILL BE RESOWN AT NO ADDITIONAL EXPENSE TO THE OWNER.
3. THE APPLIED SEED, REGARDLESS OF APPLICATION, SHALL NOT BE COVERED BY A SOIL THICKNESS NO GREATER THAN 1/2 INCH.
4. SEEDING BY DRILL:
- SEEDING EQUIPMENT USED FOR APPLYING GRASS SEED MUST BE DESIGNED, MODIFIED, OR EQUIPPED TO REGULATE THE APPLICATION RATE AND PLANTING DEPTH OF GRASS SEED. SEED MUST BE UNIFORMLY DISTRIBUTED IN THE DRILL HOPPER DURING THE DRILLING OPERATION. ALL GRASS ESTABLISHMENT EQUIPMENT SHALL BE OPERATED PERPENDICULAR TO THE SLOPE DRAINAGE. A DRILL SHALL BE NO WIDER THAN THE WIDTH OF THE AREA WHICH IT IS TO OPERATE. THE ROWS OF PLANTED SEEDS SHALL BE A MAXIMUM OF 8 INCHES APART AND SHALL BE AT RIGHT ANGLES TO THE FINISHED SLOPES.
5. BROADCAST SEEDING:
- WHEN SEED IS SOWN BY BROADCASTING, EXERCISE GREAT CARE THAT A UNIFORM DISTRIBUTION OF SEED IS OBTAINED. SEEDING SHALL BE DONE ON A STILL DAY USING A HOPPER TYPE SEEDER WITH ONE HALF OF THE SEED FOR EACH AREA BEING SOWN AT RIGHT ANGLES TO THE OTHER HALF. SEED DISTRIBUTION BY BROADCASTING SHALL BE COVERED WITH 1/4 TO 1/2 INCH OF SOIL. THE SEED MAY BE COVERED BY RAKING, DRAGGING, OR BY APPROPRIATE MECHANICAL MEANS.
6. HYDRAULIC SEEDING:
- WHEN HYDRAULIC SEED IS USED, SEED AND MULCH SHALL BE APPLIED IN SEPARATE AND DISTINCT OPERATIONS EXCEPT FOR THE FOLLOWING:
 - THE CONTRACTOR MUST PROVIDE ONE POUND OF MULCH PER EACH THREE GALLONS OF WATER IN THE HYDROSEEDER AS A CUSHION AGAINST SEED DAMAGE. THE MULCH USED AS A CUSHION MAY BE PART OF THE TOTAL REQUIRED MULCH WITH THE REMAINDER APPLIED AFTER THE SEED IS METERING DURING APPLICATION.
 - THE CONTRACTOR MAY APPLY MULCH AND LAWN SEED MIX HYDRAULICALLY IN A SINGLE APPLICATION, PROVIDING ONE HALF OF THE SEED HAS BEEN SOWN BY BROADCASTING OR DRILL METHODS AS AN INITIAL APPLICATION AND THE RATE OF APPLICATION OF LAWN SEED MIX INCREASED BY 4 POUNDS PER 1000 SQUARE FEET.
 - THE APPLICATION OF THE SEED SLURRY SHALL BE MADE WITH EQUIPMENT HAVING A BUILT-IN AGITATION SYSTEM AND OPERATING CAPACITY SUFFICIENT TO AGITATE, SUSPEND AND HOMOGENEOUSLY MIX A SLURRY CONTAINING WATER, SEED, AND MULCH OF SEED. THE SLURRY SHALL BE SPRAYED OVER THE SOIL IN A UNIFORM COAT. ALL HYDRAULICALLY SEED AREAS SHALL BE HYDROMULCHED UPON COMPLETION.
- G. WATERING:
1. WATERING IMMEDIATELY AFTER SEEDING OR MULCHING WITH A FINE SPRAY TO A DEPTH OF 6 INCHES. AVOID RUNOFF ON SLOPING AREAS.
2. THE SURFACE LAYER OF THE SOIL MUST BE KEPT DAMP BY FREQUENT LIGHT WATERING DURING THE GERMINATION PERIOD AND UNTIL PLANTS ARE FIRMLY ROOTED.
- H. PROTECTION:
1. PROTECT ALL SEEDDED AREAS BY ERECTING TEMPORARY FENCES, BARRIERS, SIGNS, ETC. AS NECESSARY TO PREVENT TRAMPLING. THEY SHALL REMAIN IN PLACE FOR AT LEAST SIX WEEKS UNLESS OTHER ARRANGEMENTS ARE MADE WITH THE LANDSCAPE ARCHITECT.
- I. MULCHING:
1. GENERAL:
- MULCH ALL HYDROSEEDED AREAS, DRAINAGE SWALES, SLOPES 4:1 OR STEEPER, AND ANY AREAS WHERE LIKELY HAZARD OF EROSION EXISTS. TOPSOIL OR SEED WHICH WASHES OUT FOR REASONS ATTRIBUTABLE TO THE CONTRACTOR'S ACTIVITIES OR FAILURE TO TAKE PROPER PRECAUTIONS, SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
 - ALL STRUCTURES SHALL BE PROTECTED FROM HYDRAULIC APPLICATION OF MULCH MATERIAL AND MATERIAL DEPOSITED ON FACILITIES SHALL BE REMOVED.
 - MULCH SHALL NOT BE APPLIED IN THE PRESENCE OF FREE SURFACE WATER, BUT MAY BE APPLIED ON DAMP GROUND.
2. APPLICATION OF ORGANIC MULCH:
- WET APPLICATION: ORGANIC MULCH SHALL BE MIXED WITH WATER AT A RATE OF ONE POUND MULCH (DRY WEIGHT) TO ONE GALLON OF WATER HYDRAULICALLY APPLIED AS PER MANUFACTURER'S RECOMMENDATIONS AT A MINIMUM RATE OF 2000 POUNDS PER ACRE.
 - DRY APPLICATION: ORGANIC MULCH SHALL BE BROADCAST AT A MINIMUM RATE OF 2000 POUNDS PER ACRE, AND SHALL BE ROLLED LIGHTLY TO SET FIRMLY INTO THE SOIL.
3. APPLICATION OF WOOD CELLULOSE FIBER MULCH:
- WOOD CELLULOSE FIBER MULCH SHALL BE APPLIED HYDRAULICALLY. IT SHALL BE MIXED WITH WATER AT THE RATE SPECIFIED BY THE MANUFACTURER AND SHALL BE MIXED IN STANDARD HYDRAULIC MULCHING EQUIPMENT TO FORM A HOMOGENEOUS SLURRY. THE SLURRY SHALL BE SPRAYED UNIFORMLY OVER THE SURFACE AT A MINIMUM RATE OF 1800 POUNDS PER ACRE.
4. APPLICATION OF VEGETATIVE MULCH:
- MULCH SHALL BE APPLIED IN A UNIFORM MANNER WITH A MULCH SPREADER AT A MINIMUM RATE OF 1-1/2 TONS PER ACRE WHERE REQUIRED MULCH SHALL BE ANCHORED INTO THE SEED BED BY TUCKING OR APPLICATION OF A TACKIFYING AGENT.
5. ANCHORING MULCH:
- GENERAL: ANCHOR MULCH IN ALL AREAS SEEDDED WHICH ARE IN THE CONTRACTOR'S OPINION HIGHLY SUSCEPTIBLE TO EROSION.
 - APPLICATION: MULCH TACKIFIERS SHALL BE MIXED WITH WATER AT A RATE SPECIFIED BY THE MANUFACTURER AND SHALL BE APPLIED AT A MINIMUM RATE OF 40 POUNDS PER ACRE.
6. CURLEX' EROSION CONTROL BLANKETS:
- GENERAL: FURNISH AND INSTALL 'CURLEX' BLANKETS TO SLOPES WHICH ARE IN THE CONTRACTOR'S OPINION HIGHLY SUSCEPTIBLE TO EROSION AND ITS OCCURRENCE CANNOT BE PREVENTED BY ANY OTHER MEANS.
 - APPLICATION: BLANKETS WILL BE APPLIED VERTICALLY TO THE SLOPE AND ATTACHED TO THE SLOPE WITH U-SHAPED METAL STAPLES, WITH LEGS 6" IN LENGTH AND 1" CROWN. SIZE, GAUGE AND NUMBER OF STAPLES WILL VARY WITH GROUND CONDITIONS, SLOPE, ETC.

USDA PLANT HARDINESS ZONE MAP



NH INVASIVE SPECIES WATCH LIST

NEW HAMPSHIRE INVASIVE SPECIES COMMITTEE - APPROVED BY THE ISC APRIL 11, 2018

THE NH INVASIVE PLANT SPECIES WATCH LIST IS A NON-REGULATORY REFERENCE TOOL THAT SERVES TO:

1. IDENTIFY POTENTIALLY INVASIVE NON-NATIVE PLANT SPECIES BASED ON DEGREE OF INVASIVE QUALITIES (E.G., AGGRESSIVE GROWTH, RAPID REPRODUCTION, AND/OR LACK OF NATURAL HERBIVORES) AND PRESENCE (BUT NOT NECESSARILY ABUNDANCE) IN NH AND/OR NEARBY ELSEWHERE IN NEW ENGLAND
2. INFORM PREVENTION (E.G., EARLY DETECTION/RAPID RESPONSE), MONITORING, AND MANAGEMENT DECISION-MAKING FOR SPECIES THAT MAY IMPACT NHS ECOSYSTEMS OR ECONOMY
3. INCREASE AWARENESS OF INVASIVE PLANT SPECIES.

SCIENTIFIC NAME	SYNONYMS	COMMON NAME
ABUTILON THEOPHRASTI MEDK.		VELVETLEAF INDIAN-MALLOW
ACER GINNALA MAXIM.		AMUR MAPLE
AGROSTEMMA GITHAGO L. VAR. GITHAGO	LYCHNIS GITHAGO (L.) SCOP.	COMMON CORNCOCKLE
AIRA CARYOPHYLLEA L.	ASPRIS CARYOPHYLLEA (L.) NASH	COMMON SILVER-HAIRGRASS
ALLIUM VINEALE L.		CROW GARLIC
AMORPHA FRUTICOSA L.	AMORPHA FRUTICOSA L. VAR. ANGUSTIFOLIA PURSH; A. FRUTICOSA L. VAR. OBLONGIFOLIA PALMER; A. FRUTICOSA L. VAR. TENNESSEENSIS (SHUTTLEW. EX KUNZE) PALMER	FALSE INDIGO-BUSH
ARALIA ELATA (MIQ.) SEEM.	DIMORPHANTHUS ELATUS MIQ.	JAPANESE ANGELICA-TREE
BARBAREA VULGARIS AIT. F.	BARBAREA ARCUATA (OPIZ EX J. & K. PRESL) REICHENB.; B. STRICTA. OF AUTHORS NOT ANDRZ.; B. VULGARIS VAR. ARCUATA (OPIZ EX J. & K. PRESL) FRIEIS; CAMPE BARBAREA (L.) W. WIGHT EX PIPER, C. STRICTA, OF AUTHORS NOT (ANDRZ.) W. WIGHT EX PIPER, ERYSIUM BARBAREA L.	GARDEN YELLOW-ROCKET
BRASSICA JUNCEA (L.) CZERN.	BRASSICA JUNCEA (L.) CZERN. VAR. CRISPIFOLIA BAILEY; SINAPIS JUNCEA L.	CHINESE MUSTARD
BRASSICA NIGRA (L.) W.D.J. KOCH	SINAPIS NIGRA L.	BLACK MUSTARD
BROMUS TECTORUM L.	ANISANTHA TECTORUM (L.) NEVSKI	CHEAT BROME
CARDAMINE IMPATIENS L.		NARROW-LEAVED BITTER-CRESS
CENTAUREA JACEA L.	CENTAUREA DEBEAUXII GREY & GODR. SP. THULLIERI DOSTAL; C. JACEA L. SSP. DECIPENS (THULL.) ČELAK; C. JACEA L. SSP. PRATENSIS ČELAK.; C. PRATENSIS THULL.; C. THULLIERI (DOSTAL) J. DUVERN. & LAMBINON; CYANUS JACEA (L.) P. GAERTN.; JACEA PRATENSIS LAM.	BROWN KNAPEEED
CENTAUREA NIGRA L.	JACEA NIGRA (L.) HILL	BLACK KNAPEEED
CHELIDONIUM MAJUS L.	CHELIDONIUM MAJUS L. VAR. LACINIATUM (P. MILL.) SYME; C. MAJUS L. VAR. PLENUM WEHRHANN	GREATER CELANDINE
CIRSIIUM PALUSTRE (L.) SCOP.	CARDIUS PALUSTRIS L.	MARSH THISTLE
CIRSIIUM VULGARE (SAV.) TEN.	CARDIUS VULGARE (SAV.) TEN.	COMMON THISTLE
CONVOLVULUS ARVENSIS L.	STROPHOCALOUS ARVENSIS (L.) SMALL	FIELD BINDWEED
CYTISUS SCOPARIUM (L.) LINK	SPARTIUM SCOPARIUM L.	SCOTCH BROOM
DIGITARIA SANGUINALIS (L.) SCOP.	PANICUM SANGUINALE L.	HAIRY CRABGRASS
EICHORNIA CRASSIPES (MART.) SOLMS-LAUBACH	EICHORNIA SPECIOSA KUNTH; PIARPOUS CRASSIPES (MART.) RAF.	COMMON WATER-HYACINTH
ELYMUS REPENS (L.) GOULD	AGROPYRON REPENS (L.) GOULD; ELYTRIGIA REPENS (L.) DESV. EX B.D. JACKSON; TRITICUM REPENS L.	CREEPIING WILD-RYE
EPILOBIUM HIRSUTUM L.		HAIRY WILLOW-HERB
EPIPACTIS HELLEBORINE (L.) CRANTZ	EPIPACTIS LATIFOLIA (L.) ALL.; SERAPIAS HELLEBORINE L.	BROAD-LEAVED HELLEBORINE
EUONYMUS EUROPAEUS L.		EUROPEAN SPINDLE-TREE
EUONYMUS FORTUNEI (TURCZ.) HAND-MAZZ	EUONYMUS FORTUNEI (TURCZ.) HAND-MAZZ VAR. RADICANS (SIEB. EX MIQ.) REHD.; E. FORTUNEI (TURCZ.) HAND-MAZZ VAR. VEGETUS (REHD.) REHD.; E. RADICANS SIEB. EX MIQ.; E. RADICANS SIEB. EX MIQ. VAR. VEGETUS REHD.	CLIMBING SPINDLE-TREE
FESTUCA FILIFORMIS POURRET	FESTUCA CAPILLATA LAM.; F. OVINA L. VAR. CAPILLATA (LAM.) ALEF.; F. TENUIFOLIA SIBTHORP	FINE-LEAVED SHEEP FESCUE
FICARIA VERNA HUDS. SSP. FERTILIS (LAWRALREE EX LAEGAARD) STACE	FICARIA VERNA HUDS. SSP. BULBIFERA A. & D. LOVE; RANUNCULUS FICARIA L. SSP. BULBIFER LAMBINON; R. FICARIA L. SSP. BULBIFERA (MARDSEN-JONES) LAWLARRE, AN ILL-LEGITIMATE NAME; R. FICARIA VAR. BULBIFERA MARDSEN-JONES	FIG-CROWFOOT
FROELICHA GRACILIS (HOOK) MOQ.	OPLOTHECA GRACILIS MOQ.	SLENDER COTTON-WEED
GALIUM MOLLUGO L.		WHORLED BEDSTRAW
GLECHOMA HEDERACEA L.	GLECHOMA HEDERACEA L. VAR. MICRANTHA MORIC.; G. HEDERACEA L. VAR. PARVIFLORA (BENTH.) HOUSE; NEPETA HEDERACEA (L.) TRIVISAN	GILL-OVER-THE-GROUND
HYLOTELEPHIUM TELEPHIUM (L.) H. OHBA	SEDUM PURPUREUM (L.) J.A. SCHULTES; S. PURPURASCENS W.D.J. KOCH; S. TELEPHIUM L.	PURPLE ORPINE
KOCHIA SCOPARIA (L.) SCHRAD.	BASSIA SCOPARIA (L.) A.J. SCOTT; CHENOPODIUM SCOPARIUM L.; KOCHIA SCOPARIA (L.) SCHRAD. VAR. PUBESCENS FENZL; K. SCOPARIA (L.) SCHRAD. VAR. SUBVILLOSA MOQ.	SUMMER-CYPRESS
LAMIUM AMPLEXICAULE L. VAR. AMPLEXICAULE		COMMON HENBIT
LAMIUM PURPUREUM L.	LAMIUM DISSECTUM WITH: L. HYBRIDIUM, OF AUTHORS NOT VILL.	RED HENBIT
LONICERA XYLLOSTEUM L.		FLY HONEY-SUCKLE
LUPINUS POLYPHYLLUS LINDL. VAR. POLYPHYLLUS	LUPINUS PALIDIPES HELLER; L. POLYPHYLLUS LINDL. VAR. ALBIFLORUS L.H. BAILEY; L. POLYPHYLLUS LINDL. VAR. PALIDIPES (HELLER) C.P. SM.	BLUE LUPINE
LYCHNIS FLOS-CUCULI L. SSP. FLOS-CUCULI	CORONARIA FLOS-CUCULI (L.) A. BRAUN; SILENE FLOS-CUCULI (L.) CLAIRVILLE	RAGGED ROBIN LYCHNIS
LYSIMACHIA ARVENSIS (L.) U. MANNIS & A. ANDERB.	ANAGALLIS ARVENSIS L.; A. ARVENSIS L. VAR. CAERULEA (SCHREB.) GREY & GODR.; A. CAERULEA SCHREB.	SCARLET PIMPERNEL
LYSIMACHIA VULGARIS L.		GARDEN YELLOW-LOOSESTRIPE
MISCANTHUS SINENSIS ANDERSS.	MISCANTHUS SINENSIS ANDERSS. VAR. GRACILIMUS A.S. HITCHC.	CHINESE SILVERGRASS
MYCELIS MURALIS (L.) DUMORT.	LACTUCA MURALIS (L.) FRESEN.	WALL-LETTUCE
MYOSOTIS SCORPIOIDES L.	MYOSOTIS PALUSTRIS (L.) HILL	WATER FORGEE-ME-NOT
NASTURTIUM MICROPHYLLUM BOENNI. EX REICHENB.	NASTURTIUM OFFICINALE AIT. F. VAR. MICROPHYLLUM (BOENNI. EX REICHENB.) THELLUNG; RORIPPA MICROPHYLLA (BOENNI. EX REICHENB.) HYL. EX A. & D. LOVE	ONE-ROWED WATER-CRESS
NASTURTIUM OFFICINALE AIT. F.	BAEUMERTA NASTURTIUM-AQUATICUM (L.) HAYEK; RORIPPA NASTURTIUM AQUATICUM (L.) HAYEK; SISYMBRIUM NASTURTIUM-AQUATICUM L.	TWO-ROWED WATER-CRESS
OENANTHE JAVANICA (BLUME) DC		JAVA WATER DROPPWORT
PERSICARIA LONGISETA (BRUIJN) KITAGAWA	PERSICARIA CAESPITOSA (BLUME) NAKAI VAR. LONGISETA (BRUIJN) REED; POLYGONUM CAESPITOSUM BLUME VAR. LONGISETUM (BRUIJN) STEWARD; P. LONGISETUM BRUIJN	ORIENTAL LADY'S-THUMB SMARTWEED
PHELLODENDRON AMURENSE RUPR.	PHELLODENDRON AMURENSE RUPR. VAR. SACHALINENSE F. SCHMIDT; P. JAPONICUM MAXIM.; P. SACHALINENSE (F. SCHMIDT) SARG.	AMUR CORKTREE
POA COMPRESSA L.		FLAT-STEMMED BLUE GRASS
POA NEMORALIS L.		WOOD BLUE GRASS
POPULUS ALBA L.	POPULUS ALBA L. VAR. BOLLEANA LAUCHE	WHITE POPLAR
RANUNCULUS REPENS L.	RANUNCULUS REPENS L. VAR. DEGENERATES SCHUR; R. REPENS L. VAR. ERECTUS DC.; R. REPENS L. VAR. GLABRATUS DC.; R. REPENS L. VAR. PLENIFLORUS FERN.; R. REPENS L. VAR. VILLOSIUS LAMOTTE	SPOT-LEAVED CROWFOOT
RAPHANUS RAPHANISTRUM L. SSP. RAPHANISTRUM		WILD RADISH
RHINANTHUS MINOR L. SSP. MINOR	RHINANTHUS CRISTA-GALLI L. IN PART; R. CRISTA-GALLI L. VAR. FALLAX (WIMMER & GRAB) DRUCE; R. STENOPHYLLUS (SCHUR) SCHINZ & THELLUNG	LITTLE YELLOW-RATTLE
RUMEX ACETOSELLA L. SSP. PYRENAICUS (POURRET EX LAPEYR.) AKEROYD	ACETOSELLA VULGARIS (KOECH) FOURR. SSP. PYRENAICA (POURRET EX LAPEYR.) Å LÖVE; RUMEX ACETOSELLA L. VAR. PYRENAICUS (POURRET EX LAPEYR.) TIMBAL-LAGRAVE; R. PYRENAICUS POURRET EX LAPEYR.	SHEEP DOCK

LANDSCAPE GENERAL SPECIFICATIONS

SECTION 32 84 00 - PLANTING IRRIGATION
PART 1 - GENERAL
1.1 SUMMARY
A. THE INTENT IS THAT THE LANDSCAPE IRRIGATION SYSTEM SHALL BE DESIGN-BUILT AND THAT ALL LAWN AND PLANTING AREAS FOR THIS PROJECT RECEIVE FULL COVERAGE OF THE IRRIGATION SYSTEM.
B. SECTION INCLUDES:
1. PIPES, TUBES, AND FITTINGS.
2. MANUAL VALVES.
3. AUTOMATIC CONTROL VALVES.
4. AUTOMATIC DRAIN VALVES.
5. SPRINKLERS.
6. QUICK COUPLERS.
7. CONTROLLERS.
8. BOXES FOR AUTOMATIC CONTROL VALVES.
1.2 ACTION SUBMITTALS
A. PRODUCT DATA:
1. PIPES, TUBES, AND FITTINGS.
2. MANUAL VALVES.
3. AUTOMATIC CONTROL VALVES.
4. AUTOMATIC DRAIN VALVES.
5. SPRINKLERS.
6. QUICK COUPLERS.
7. CONTROLLERS.
8. BOXES FOR AUTOMATIC CONTROL VALVES.
9. INCLUDE RATED CAPACITIES, OPERATING CHARACTERISTICS, ELECTRICAL CHARACTERISTICS, AND FURNISHED SPECIALTIES AND ACCESSORIES.
10. WIRING DIAGRAMS: FOR POWER, SIGNAL, AND CONTROL WIRING.
11. DELEGATED DESIGN SUBMITTAL: FOR IRRIGATION SYSTEMS ANALYSIS DATA SIGNED AND SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER RESPONSIBLE FOR THE PREPARATION.
1.3 INFORMATIONAL SUBMITTALS
A. COORDINATION DRAWINGS: IRRIGATION SYSTEMS, DRAWN TO SCALE, ON WHICH COMPONENTS ARE INDICATED AND COORDINATED WITH EACH OTHER, USING INPUT FROM INSTALLERS OF THE ITEMS INVOLVED. ALSO INCLUDE ADJUSTMENTS NECESSARY TO AVOID PLANTINGS AND OBSTRUCTIONS, SUCH AS SIGNS AND LIGHT STANDARDS.
B. ZONING CHART: INDICATE EACH IRRIGATION ZONE AND ITS CONTROL VALVE.
C. CONTROLLER TIMING SCHEDULE: INDICATE TIMING SETTINGS FOR EACH AUTOMATIC CONTROLLER ZONE.
D. FIELD QUALITY CONTROL SUBMITTALS:
1. FIELD QUALITY CONTROL REPORTS.
1.4 CLOSEOUT SUBMITTALS
A. OPERATION AND MAINTENANCE DATA.
1.5 QUALITY ASSURANCE
A. QUALIFICATIONS:
1. INSTALLERS: ENTITY THAT EMPLOYS A CERTIFIED IRRIGATION DESIGNER - LANDSCAPE QUALIFIED BY THE IRRIGATION ASSOCIATION.
B. ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
PART 2 - PRODUCTS
2.1 PERFORMANCE REQUIREMENTS
A. IRRIGATION ZONE CONTROL: AUTOMATIC OPERATION WITH CONTROLLER AND AUTOMATIC CONTROL VALVES.
B. LOCATION OF SPRINKLERS AND SPECIALTIES: DESIGN LOCATION IS APPROXIMATE. MAKE MINOR ADJUSTMENTS NECESSARY TO AVOID PLANTINGS AND OBSTRUCTIONS, SUCH AS SIGNS AND LIGHT STANDARDS. MAINTAIN 100 PERCENT IRRIGATION COVERAGE OF ALL LAWN AND PLANTING AREAS INDICATED.
C. DELEGATED DESIGN: DESIGN 100 PERCENT COVERAGE IRRIGATION SYSTEM, INCLUDING COMPREHENSIVE ENGINEERING ANALYSIS BY A QUALIFIED PROFESSIONAL ENGINEER, USING PERFORMANCE REQUIREMENTS AND DESIGN CRITERIA TO BE DETERMINED BASED UPON FINAL SITE DISTURBANCE.
1. AVAILABLE LAND RECORDS INDICATE THE FOLLOWING SOIL CONDITIONS: TBD
D. MINIMUM WORKING PRESSURES: THE FOLLOWING ARE MINIMUM PRESSURE REQUIREMENTS FOR PIPING, VALVES, AND SPECIALTIES UNLESS OTHERWISE INDICATED:
1. IRRIGATION MAIN PIPING: 200 PSIG.
2. CIRCUIT PIPING: 150 PSIG.
2.2 PIPES, TUBES, AND FITTINGS
A. COMPLY WITH REQUIREMENTS IN "PIPING SCHEDULE" ARTICLE FOR APPLICATIONS OF PIPE, TUBE, AND FITTING MATERIALS, AND FOR JOINING METHODS FOR SPECIFIC SERVICES, SERVICE LOCATIONS, AND PIPE SIZES.
B. PE PIPE WITH CONTROLLED ID: ASTM D2239, PE 3408 COMPOND; SDR 15.
1. INSERT FITTINGS FOR PE PIPE: ASTM D2609, NYLON OR PROPYLENE PLASTIC WITH BARBED ENDS. INCLUDE BANDS OR OTHER FASTENERS.
C. PVC PIPE: ASTM D1785, PVC 1120 COMPOUND, SCHEDULES 40 AND 80.
1. PVC SOCKET FITTINGS: ASTM D2466, SCHEDULES 40 AND 80.
2. PVC THREADED FITTINGS: ASTM D2464, SCHEDULE 80.
3. PVC SOCKET UNIONS: CONSTRUCTION SIMILAR TO THAT OF MSS SP-107, EXCEPT BOTH HEADPIECE AND TAILPIECE SHALL BE PVC WITH SOCKET ENDS.
D. PVC PIPE, PRESSURE RATED: ASTM D2241, PVC 1120 COMPOUND, SDR 26.
1. PVC SOCKET FITTINGS: ASTM D2467, SCHEDULE 80.
2. PVC SOCKET UNIONS: CONSTRUCTION SIMILAR TO THAT OF MSS SP-107, EXCEPT BOTH HEADPIECE AND TAILPIECE SHALL BE PVC WITH SOCKET OR THREADED ENDS.
2.3 PIPING JOINING MATERIALS
A. PIPE-FLANGE GASKET MATERIALS: AWWA C110, RUBBER, FLAT FACE, 1/8 INCH THICK UNLESS OTHERWISE INDICATED; FULL-FACE OR RING TYPE UNLESS OTHERWISE INDICATED.
B. METAL PIPE-FLANGE BOLTS AND NUTS: ASME B18.2.1, CARBON STEEL, UNLESS OTHERWISE INDICATED.
C. BRAZING FILLER METALS: AWS A5.8/A5.8M, BCUP SERIES, COPPER-PHOSPHORUS ALLOYS FOR GENERAL-DUTY BRAZING UNLESS OTHERWISE INDICATED.
D. SOLDER FILLER METALS: ASTM B32, LEAD-FREE ALLOYS. INCLUDE WATER-FLUSHABLE FLUX IN ACCORDANCE WITH ASTM B813.
E. SOLVENT CEMENTS FOR JOINING PVC PIPING: ASTM D2564, INCLUDE PRIMER IN ACCORDANCE WITH ASTM F566.
F. PLASTIC PIPE-FLANGE GASKET, BOLTS, AND NUTS: TYPE AND MATERIAL RECOMMENDED BY PIPING SYSTEM MANUFACTURER UNLESS OTHERWISE INDICATED.
2.4 MANUAL VALVES
A. CURB VALVES:
1. DESCRIPTION:
A. STANDARD: AWWA C800.
B. NPS 1 AND SMALLER PRESSURE RATING: 150 PSIG.
C. NPS 1-1/4 TO NPS 2 PRESSURE RATING: 150 PSIG.
D. BODY MATERIAL: BRASS OR BRONZE WITH BALL OR GROUND-KEY PLUG.
E. END CONNECTIONS: MATCHING PIPING.
F. STEM: WITH WIDE-TEE HEAD.
B. CURB-VALVE CASING:
1. STANDARD: SIMILAR TO AWWA M44 FOR CAST-IRON VALVE CASINGS.
2. TOP SECTION: TELESCOPING, OF LENGTH REQUIRED FOR DEPTH OF BURIAL OF CURB VALVE.
3. BARREL: APPROXIMATELY 3-INCH DIAMETER.
4. PLUG: WITH LETTERING "WATER"
5. BOTTOM SECTION: WITH BASE OF SIZE TO FIT OVER VALVE.
6. GASKET: CONCRETE COLLAR.
C. SHUTOFF RODS FOR CURB-VALVE CASINGS: FURNISH TWO STEEL, TEE-HANDLE SHUTOFF ROD(S) WITH ONE POINTED END, STEM OF LENGTH TO OPERATE DEEPEST BURIED VALVE, AND SLOTTED END MATCHING CURB VALVE FOR PROJECT.
D. BRASS BALL VALVES:
1. DESCRIPTION:
A. STANDARD: MSS SP-110.
B. SWP RATING: 150 PSIG.
C. CWP RATING: 600 PSIG.
D. BODY DESIGN: TWO PIECE.
E. BODY MATERIAL: FORGED BRASS.
F. ENDS: THREADED OR SOLDER JOINT IF INDICATED.
G. SEATS: PTFE OR TFE.
H. STEM: BRONZE.
I. BALL: CHROME-PLATED BRASS.
J. PORT: FULL.
E. BRONZE BALL VALVES:
1. DESCRIPTION:
A. STANDARD: MSS SP-110.
B. SWP RATINGS: 150 PSIG.
C. CWP RATING: 600 PSIG.
D. BODY DESIGN: TWO PIECE.
E. BODY MATERIAL: BRONZE.
F. ENDS: THREADED OR SOLDER JOINT IF INDICATED.
G. SEATS: PTFE OR TFE.
H. STEM: BRONZE.
I. BALL: CHROME-PLATED BRASS.
J. PORT: FULL.
F. IRON BALL VALVES:
1. DESCRIPTION:
A. STANDARD: MSS SP-72.
B. CWP RATING: 200 PSIG.
C. BODY DESIGN: SPLIT BODY.
D. BODY MATERIAL: ASTM A126, GRAY IRON.
E. ENDS: FLANGED.
F. SEATS: PTFE OR TFE.
G. STEM: STAINLESS STEEL.
H. BALL: STAINLESS STEEL.
I. PORT: FULL.
J. PLASTIC BALL VALVES:
1. DESCRIPTION:
A. STANDARD: MSS SP-122.
B. PRESSURE RATING: 150 PSIG.
C. BODY MATERIAL: PVC.
D. TYPE: UNION.
E. END CONNECTIONS: SOCKET OR THREADED.
F. PORT: FULL.
H. IRON GATE VALVES, RESILIENT SEATED:
1. DESCRIPTION:
A. STANDARD: AWWA C509.
B. PRESSURE RATING: 200 PSIG MINIMUM.
C. BODY MATERIAL: DUCTILE OR GRAY IRON WITH BRONZE TRIM.
D. END CONNECTIONS: MECHANICAL JOINT OR PUSH-ON JOINT.
E. INTERIOR COATINGS: COMPLY WITH AWWA C550.
F. BODY DESIGN: NONRISING STEM.
G. OPERATOR: STEM NUT.
H. DISC: SOLID WEDGE WITH RESILIENT COATING.

I. IRON GATE VALVE CASINGS:
1. STANDARD: AWWA M44 FOR CAST-IRON VALVE CASINGS.
2. TOP SECTION: ADJUSTABLE EXTENSION OF LENGTH REQUIRED FOR DEPTH OF BURIAL OF VALVE.
3. BARREL: APPROXIMATELY 5-INCH DIAMETER.
4. PLUG: WITH LETTERING "WATER"
5. BOTTOM SECTION: WITH BASE OF SIZE TO FIT OVER VALVE.
6. BASE SUPPORT: CONCRETE COLLAR.
J. OPERATING WRENCHES FOR IRON GATE VALVE CASINGS: FURNISH TWO STEEL, TEE-HANDLE OPERATING WRENCH(ES) WITH ONE POINTED END, STEM OF LENGTH TO OPERATE DEEPEST BURIED VALVE, AND SOCKET MATCHING VALVE OPERATING NUT FOR PROJECT.
2.5 AUTOMATIC CONTROL VALVES
A. BRONZE AUTOMATIC CONTROL VALVES:
1. DESCRIPTION: CAST-BRONZE BODY, NORMALLY CLOSED, DIAPHRAGM TYPE WITH MANUAL-FLOW ADJUSTMENT, AND OPERATED BY 24 V AC SOLENOID.
B. PLASTIC AUTOMATIC CONTROL VALVES:
1. DESCRIPTION: MOLDED-PLASTIC BODY, NORMALLY CLOSED, DIAPHRAGM TYPE WITH MANUAL-FLOW ADJUSTMENT, AND OPERATED BY 24 V AC SOLENOID.
2.6 AUTOMATIC DRAIN VALVES
A. DESCRIPTION: SPRING-LOADED-BALL TYPE OF CORROSION-RESISTANT CONSTRUCTION AND DESIGNED TO OPEN FOR DRAINAGE IF LINE PRESSURE DROPS BELOW 2-1/2 TO 3 PSIG.
2.7 SPRINKLERS
A. GENERAL REQUIREMENTS: DESIGNED FOR UNIFORM COVERAGE OVER ENTIRE SPRAY AREA INDICATED AT AVAILABLE WATER PRESSURE.
B. PLASTIC, EXPOSED, IMPACT-DRIVE ROTARY SPRINKLERS:
1. DESCRIPTION:
A. CONSTRUCTION: ABS AND CORROSION-RESISTANT METALS.
B. MOUNTING: ABOVEGROUND, EXPOSED ON RISER.
2. CAPACITIES AND CHARACTERISTICS:
A. FLOW: 150 GPM.
B. ARC: FULL OR HALF CIRCLE.
C. RADIUS: 20 FEET.
D. INLET: NPS 3/4.
C. PLASTIC, POP-UP, GEAR-DRIVE ROTARY SPRINKLERS:
1. DESCRIPTION:
A. BODY MATERIAL: ABS.
B. NOZZLE: ABS.
C. RETRACTION SPRING: STAINLESS STEEL.
D. INTERNAL PARTS: CORROSION RESISTANT.
2. CAPACITIES AND CHARACTERISTICS:
A. FLOW: 150 GPM.
B. POP-UP HEIGHT: 4 INCHES ABOVEGROUND TO NOZZLE.
C. ARC: FULL OR HALF CIRCLE.
D. RADIUS: 20 FEET.
E. INLET: NPS 3/4.
D. PLASTIC, POP-UP, IMPACT-DRIVE ROTARY SPRINKLERS:
1. DESCRIPTION:
A. CASE: ABS.
B. POP-UP HEIGHT: 4 INCHES ABOVEGROUND TO NOZZLE.
C. SPRINKLER CONSTRUCTION: ABS AND OTHER CORROSION-RESISTANT METALS.
2. CAPACITIES AND CHARACTERISTICS:
A. NOZZLE: BRASS.
B. FLOW: 150 GPM.
C. ARC: FULL OR HALF CIRCLE.
D. RADIUS: 20 FEET.
E. INLET: NPS 3/4.
E. PLASTIC, SURFACE SPRAY SPRINKLERS:
1. DESCRIPTION:
A. BODY MATERIAL AND FLANGE: ABS.
B. PATTERN: FIXED, WITH FLOW ADJUSTMENT.
2. CAPACITIES AND CHARACTERISTICS:
A. NOZZLE: BRASS.
B. FLOW: 150 GPM.
C. ARC: FULL OR HALF CIRCLE.
D. RADIUS: 20 FEET.
E. INLET: NPS 3/4.
F. PLASTIC, SURFACE, POP-UP SPRAY SPRINKLERS:
1. DESCRIPTION:
A. BODY MATERIAL AND FLANGE: ABS.
B. PATTERN: FIXED, WITH FLOW ADJUSTMENT.
2. CAPACITIES AND CHARACTERISTICS:
A. POP-UP HEIGHT: 4 INCHES ABOVEGROUND TO NOZZLE.
B. NOZZLE: BRASS.
C. FLOW: 150 GPM.
D. ARC: FULL OR HALF CIRCLE.
E. RADIUS: 20 FEET.
F. INLET: NPS 3/4.
G. PLASTIC, SURFACE SPRAY SPRINKLERS:
1. DESCRIPTION:
A. BODY MATERIAL: ABS.
B. NOZZLE: BRASS.
C. RETRACTION SPRING: STAINLESS STEEL.
D. INTERNAL PARTS: CORROSION RESISTANT.
E. PATTERN: FIXED, WITH FLOW ADJUSTMENT.
2. CAPACITIES AND CHARACTERISTICS:
A. NOZZLE: BRASS.
B. FLOW: 150 GPM.
C. ARC: FULL OR HALF CIRCLE.
D. RADIUS: 20 FEET.
H. PLASTIC SHRUB SPRINKLERS:
1. DESCRIPTION:
A. BODY MATERIAL: ABS OR OTHER PLASTIC.
B. PATTERN: FIXED, WITH FLOW ADJUSTMENT.
2. CAPACITIES AND CHARACTERISTICS:
A. NOZZLE: BRASS.
B. FLOW: 150 GPM.
C. ARC: HALF CIRCLE.
D. RADIUS: 10 FEET.
E. MOUNTING HEIGHT: 4 INCHES ABOVEGROUND TO NOZZLE.
2.8 QUICK COUPLERS
A. DESCRIPTION: FACTORY-FABRICATED, BRONZE OR BRASS, TWO-PIECE ASSEMBLY. INCLUDE COUPLER WATER-SEAL VALVE; REMOVABLE UPPER BODY WITH SPRING-LOADED OR WEIGHTED, RUBBER-COVERED CAP; HOSE SWIVEL WITH ASME B1.20.7, 3/4-11.5NH THREADS FOR GARDEN HOSE ON OUTLET; AND OPERATING KEY.
1. LOCKING-TOP OPTION: VANDAL-RESISTANT LOCKING FEATURE. INCLUDE (2) TWO MATCHING KEYS.
2.9 CONTROLLERS
A. DESCRIPTION:
1. CONTROLLER STATIONS FOR AUTOMATIC CONTROL VALVES: EACH STATION IS VARIABLE FROM APPROXIMATELY 5 TO 60 MINUTES. INCLUDE SWITCH FOR MANUAL OR AUTOMATIC OPERATION OF EACH STATION.
2. EXTERIOR CONTROL ENCLOSURES: NEMA 250, TYPE 4, WEATHERPROOF, WITH LOCKING COVER AND TWO MATCHING KEYS. INCLUDE PROVISION FOR GROUNDING.
A. BODY MATERIAL: MOLDED PLASTIC.
B. MOUNTING: SURFACE TYPE FOR WALL.
3. INTERIOR CONTROL ENCLOSURES: NEMA 250, TYPE 12, DRIPPROOF, WITH LOCKING COVER AND TWO MATCHING KEYS.
A. BODY MATERIAL: MOLDED PLASTIC.
B. MOUNTING: SURFACE TYPE FOR WALL.
4. CONTROL TRANSFORMER: 24 V SECONDARY, WITH PRIMARY FUSE.
5. TIMING DEVICE: ADJUSTABLE, 24-HOUR, 14-DAY CLOCK, WITH AUTOMATIC OPERATIONS TO SKIP OPERATION ANY DAY IN TIMER PERIOD, TO OPERATE EVERY OTHER DAY, OR TO OPERATE TWO OR MORE TIMES DAILY.
A. MANUAL OR SEMIAUTOMATIC OPERATION: ALLOWS THIS MODE WITHOUT DISTURBING PRESET AUTOMATIC OPERATION.
B. NICKEL-CADMIUM BATTERY AND TRICKLE CHARGER: AUTOMATICALLY POWERS TIMING DEVICE DURING POWER OUTAGES.
C. SURGE PROTECTION: METAL-OXIDE-VARISTOR TYPE ON EACH STATION AND PRIMARY POWER.
6. MOISTURE SENSOR: ADJUSTABLE FROM ONE TO SEVEN DAYS, TO SHUT OFF WATER FLOW DURING RAIN.
7. SMART CONTROLLERS: USE ET, TESTED IN ACCORDANCE WITH IA SWAT CLIMATOLOGICAL BASED CONTROLLERS 8TH DRAFT TESTING PROTOCOL AND COMPLIANT WITH ASHRAE 189.1.
8. WIRING: UL 493 TYPE IUL MULTICONDUCTOR, WITH SOLID-COPPER CONDUCTORS; INSULATED CABLE; SUITABLE FOR DIRECT BURIAL.
A. FEEDER-CIRCUIT CABLES: NO. 12 AWG MINIMUM, BETWEEN BUILDING AND CONTROLLERS.
B. LOW-VOLTAGE, BRANCH-CIRCUIT CABLES: NO. 14 AWG MINIMUM, BETWEEN CONTROLLERS AND AUTOMATIC CONTROL VALVES; COLOR-CODED DIFFERENT FROM FEEDER-CIRCUIT CABLE JACKET COLOR, WITH JACKETS OF DIFFERENT COLORS FOR MULTIPLE-CABLE INSTALLATION IN SAME TRENCH.
C. SPRING MATERIALS: MANUFACTURERS PACKAGED KIT CONSISTING OF INSULATING, SPRING-TYPE CONNECTOR OR CRIMPED JOINT AND EPOXY RESIN MOISTURE SEAL, SUITABLE FOR DIRECT BURIAL.
9. CONCRETE BASE: REINFORCED PRECAST CONCRETE NOT LESS THAN 36 BY 24 BY 4 INCHES THICK, AND 6 INCHES GREATER IN EACH DIRECTION THAN OVERALL DIMENSIONS OF CONTROLLER. INCLUDE OPENING FOR WIRING.
2.10 BOXES FOR AUTOMATIC CONTROL VALVES
A. PLASTIC BOXES:
1. DESCRIPTION: BOX AND COVER, WITH OPEN BOTTOM AND OPENINGS FOR PIPING, DESIGNED FOR INSTALLING FLUSH WITH GRADE.
A. SIZE: AS REQUIRED FOR VALVES AND SERVICE.
B. SHAPE: SQUARE.
C. SIDEWALL MATERIAL: ABS.
D. COVER MATERIAL: ABS.
2. LETTERING: "IRRIGATION"
B. DRAINAGE BACKFILL: CLEANED GRAVEL OR CRUSHED STONE, GRADED FROM 3/4 INCH MINIMUM TO 3 INCHES MAXIMUM.

PART 3 - EXECUTION
3.1 EARTHWORK
A. EXCAVATING, TRENCHING AND BACKFILLING ARE SPECIFIED IN SECTION 31 20 00 "EARTH MOVING"
B. INSTALL WARNING TAPE DIRECTLY ABOVE PRESSURE PIPING, 12 INCHES BELOW FINISHED GRADES, EXCEPT 6 INCHES BELOW SUBGRADE UNDER PAVEMENT AND SLABS.
C. DRAIN POCKETS: EXCAVATE TO SIZES INDICATED. BACKFILL WITH CLEANED GRAVEL OR CRUSHED STONE, GRADED FROM 3/4 TO 3 INCHES TO 1/2 INCHES BELOW GRADE. COVER GRAVEL OR CRUSHED STONE WITH SHEET OF ASPHALT-SATURATED FELT AND BACKFILL REMAINDER WITH EXCAVATED MATERIAL.
D. PROVIDE MINIMUM COVER OVER TOP OF UNDERGROUND PIPING ACCORDING TO THE FOLLOWING:
1. IRRIGATION MAIN PIPING: MINIMUM DEPTH OF 48 INCHES BELOW FINISHED GRADE, OR NOT LESS THAN 18 INCHES BELOW AVERAGE LOCAL FROST DEPTH, WHICHEVER IS DEEPER.
2. CIRCUIT PIPING: 12 INCHES
3. DRAIN PIPING: 12 INCHES
4. SLEEVES: 24 INCHES
3.2 INSTALLATION OF PIPING
A. LOCATION AND ARRANGEMENT: DRAWINGS INDICATE LOCATION AND ARRANGEMENT OF PIPING SYSTEMS. INSTALL PIPING AS INDICATED UNLESS DEVIATIONS ARE APPROVED ON COORDINATION DRAWINGS.
B. INSTALL PIPING AT MINIMUM UNIFORM SLOPE OF 0.5 PERCENT DOWN TOWARD DRAIN VALVES.
C. INSTALL PIPING FREE OF SAGS AND BENDS.
D. INSTALL GROUPS OF PIPES PARALLEL TO EACH OTHER, SPACED TO PERMIT VALVE SERVICE.
E. INSTALL FITTINGS FOR CHANGES IN DIRECTION AND BRANCH CONNECTIONS.
F. INSTALL UNIONS ADJACENT TO VALVES AND TO FINAL CONNECTIONS TO OTHER COMPONENTS WITH NPS 2 OR SMALLER PIPE CONNECTION.
G. INSTALL FLANGES ADJACENT TO VALVES AND TO FINAL CONNECTIONS TO OTHER COMPONENTS WITH NPS 2-1/2 OR LARGER PIPE CONNECTION.
H. INSTALL UNDERGROUND THERMOPLASTIC PIPING IN ACCORDANCE WITH ASTM D2774.
I. INSTALL EXPANSION LOOPS IN CONTROL-VALVE BOXES FOR PLASTIC PIPING.
J. LAY PIPING ON SOLID SUBBASE, UNFORMLY SLOPED WITHOUT HUMPS OR DEPRESSIONS.
K. INSTALL DUCTILE-IRON PIPING IN ACCORDANCE WITH AWWA C900.
L. INSTALL PVC PIPING IN DRY WEATHER WHEN TEMPERATURE IS ABOVE 40 DEG F. ALLOW JOINTS TO CURE AT LEAST 24 HOURS AT TEMPERATURES ABOVE 40 DEG F BEFORE TESTING.
3.3 JOINT CONSTRUCTION
A. REAM ENDS OF PIPES AND TUBES AND REMOVE BURRS. BEVEL PLAIN ENDS OF STEEL PIPE.
B. REMOVE SCALE, SLAG, DIRT, AND DEBRIS FROM INSIDE AND OUTSIDE OF PIPE AND FITTINGS BEFORE ASSEMBLY.
C. THREADED JOINTS: THREAD PIPE WITH TAPERED PIPE THREADS IN ACCORDANCE WITH ASME B1.20.1. CUT THREADS FULL AND CLEAN USING SHARP DIES. REAM THREADED PIPE ENDS TO REMOVE BURRS AND RESTORE FULL ID. JOIN PIPE FITTINGS AND VALVES AS FOLLOWS:
1. APPLY APPROPRIATE TAPE OR THREAD COMPOUND TO EXTERNAL PIPE THREADS UNLESS DRY SEAL THREADING IS SPECIFIED.
2. DAMAGED THREADS: DO NOT USE PIPE OR PIPE FITTINGS WITH THREADS THAT ARE CORRODED OR DAMAGED. DO NOT USE PIPE SECTIONS THAT HAVE CRACKED OR OPEN WELDS.
D. FLANGED JOINTS: SELECT RUBBER GASKET MATERIAL OF SIZE, TYPE, AND THICKNESS FOR SERVICE APPLICATION. INSTALL GASKET CONCENTRICALLY POSITIONED. USE SUITABLE LUBRICANTS ON BOLT THREADS.
E. DUCTILE-IRON PIPING GASKETED JOINTS: COMPLY WITH AWWA C600 AND AWWA M41.
F. COPPER-TUBING BRAZED JOINTS: CONSTRUCT JOINTS IN ACCORDANCE WITH CDA'S "COPPER TUBE HANDBOOK," USING COPPER-PHOSPHORUS BRAZING FILLER METAL.
G. COPPER-TUBING SOLDERED JOINTS: APPLY ASTM B813 WATER-FLUSHABLE FLUX TO TUBE END UNLESS OTHERWISE INDICATED. CONSTRUCT JOINTS IN ACCORDANCE WITH ASTM B828 OR CDA'S "COPPER TUBE HANDBOOK," USING LEAD-FREE SOLDER ALLOY (0.20 PERCENT MAXIMUM LEAD CONTENT) COMPLYING WITH ASTM B32.
H. PE PIPING FASTENER JOINTS: JOIN WITH INSERT FITTINGS AND BANDS OR FASTENERS IN ACCORDANCE WITH PIPING MANUFACTURERS WRITTEN INSTRUCTIONS.
I. PVC PIPING SOLVENT-CEMENTED JOINTS: CLEAN AND DRY JOINTING SURFACES. JOIN PIPE AND FITTINGS IN ACCORDANCE WITH THE FOLLOWING:
1. COMPLY WITH ASTM F402 FOR SAFE-HANDLING PRACTICE OF CLEANERS, PRIMERS, AND SOLVENT CEMENTS.
2. PVC PRESSURE PIPING: JOIN SCHEDULE NUMBER, ASTM D1785, PVC PIPE AND PVC SOCKET FITTINGS IN ACCORDANCE WITH ASTM D2672. JOIN OTHER-THAN-SCHEDULE-NUMBER PVC PIPE AND SOCKET FITTINGS IN ACCORDANCE WITH ASTM D2855.
3. PVC NONPRESSURE PIPING: JOIN IN ACCORDANCE WITH ASTM D2855.
3.4 INSTALLATION OF VALVES
A. UNDERGROUND CURB VALVES: INSTALL IN CURB-VALVE CASINGS WITH TOPS FLUSH WITH GRADE.
B. UNDERGROUND IRON GATE VALVES, RESILIENT SEAT: COMPLY WITH AWWA C600 AND AWWA M44. INSTALL IN VALVE CASING WITH TOP FLUSH WITH GRADE.
1. INSTALL VALVES AND PVC PIPE WITH RESTRAINED, GASKETED JOINTS.
C. ABOVEGROUND VALVES: INSTALL AS COMPONENTS OF CONNECTED PIPING SYSTEM.
D. THROTTLING VALVES: INSTALL IN UNDERGROUND PIPING IN BOXES FOR AUTOMATIC CONTROL VALVES.
E. DRAIN VALVES: INSTALL IN UNDERGROUND PIPING IN BOXES FOR AUTOMATIC CONTROL VALVES.
3.5 INSTALLATION OF SPRINKLERS
A. INSTALL SPRINKLERS AFTER HYDROSTATIC TEST IS COMPLETED.
B. INSTALL SPRINKLERS AT MANUFACTURER'S RECOMMENDED HEIGHTS.
C. LOCATE PART-CIRCLE SPRINKLERS TO MAINTAIN A MINIMUM DISTANCE OF 4 INCHES FROM WALLS AND 2 INCHES FROM OTHER BOUNDARIES UNLESS OTHERWISE INDICATED.
3.6 INSTALLATION OF AUTOMATIC IRRIGATION CONTROL SYSTEM
A. EQUIPMENT MOUNTING: EXTERIOR: INSTALL ALL CONTROLLER UNITS ON INTERIOR WALL.
1. PLACE AND SECURE ANCHORAGE DEVICES. USE SETTING DRAWINGS, TEMPLATES, DIAGRAMS, INSTRUCTIONS, AND DIRECTIONS FURNISHED WITH ITEMS TO BE EMBEDDED.
B. EQUIPMENT MOUNTING, EXTERIOR: INSTALL EXTERIOR FREESTANDING CONTROLLERS ON PRECAST CONCRETE BASES.
1. PLACE AND SECURE ANCHORAGE DEVICES. USE SETTING DRAWINGS, TEMPLATES, DIAGRAMS, INSTRUCTIONS, AND DIRECTIONS FURNISHED WITH ITEMS TO BE EMBEDDED.
2. INSTALL ANCHOR BOLTS TO ELEVATIONS REQUIRED FOR PROPER ATTACHMENT TO SUPPORTED EQUIPMENT.
C. PREPARE TEST AND INSPECTION REPORTS.
3. WARNING TAPES: ARRANGE FOR INSTALLATION OF CONTINUOUS, UNDERGROUND, DETECTABLE WARNING TAPES OVER UNDERGROUND PIPING DURING BACKFILLING OF TRENCHES. SEE SECTION 31 20 00 "EARTH MOVING" FOR WARNING TAPES.
3.7 IDENTIFICATION
A. IDENTIFY SYSTEM COMPONENTS. COMPLY WITH REQUIREMENTS FOR IDENTIFICATION SPECIFIED IN SECTION 22 05 53 "IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT."
B. EQUIPMENT NAMEPLATES AND SIGNS: INSTALL ENGRAVED PLASTIC-LAMINATE EQUIPMENT NAMEPLATES AND SIGNS ON EACH AUTOMATIC CONTROLLER.
1. TEXT: IN ADDITION TO IDENTIFYING UNIT, DISTINGUISH MULTIPLE UNITS, INFORM OPERATOR OF OPERATIONAL REQUIREMENTS, INDICATE SAFETY AND EMERGENCY PRECAUTIONS, AND WARN OF HAZARDS AND IMPROPER OPERATIONS.
C. WARNING TAPES: ARRANGE FOR INSTALLATION OF CONTINUOUS, UNDERGROUND, DETECTABLE WARNING TAPES OVER UNDERGROUND PIPING DURING BACKFILLING OF TRENCHES. SEE SECTION 31 20 00 "EARTH MOVING" FOR WARNING TAPES.
3.8 FIELD QUALITY CONTROL
A. PERFORM TESTS AND INSPECTIONS.
B. TESTS AND INSPECTIONS:
1. LEAK TEST: AFTER INSTALLATION, CHARGE SYSTEM AND TEST FOR LEAKS. REPAIR LEAKS AND RETEST UNTIL NO LEAKS EXIST.
2. OPERATIONAL TEST: AFTER ELECTRICAL CIRCUITRY HAS BEEN ENERGIZED, OPERATE CONTROLLERS AND AUTOMATIC CONTROL VALVES TO CONFIRM PROPER SYSTEM OPERATION.
3. TEST AND ADJUST CONTROLS AND SAFETIES: REPLACE DAMAGED AND MALFUNCTIONING CONTROLS AND EQUIPMENT.
4. IRRIGATION SYSTEM WILL BE CONSIDERED DEFECTIVE IF IT DOES NOT PASS TESTS AND INSPECTIONS.
C. PREPARE TEST AND INSPECTION REPORTS.
3.9 ADJUSTING
A. ADJUST SETTINGS OF CONTROLLERS.
B. ADJUST AUTOMATIC CONTROL VALVES TO PROVIDE FLOW RATE AT RATED OPERATING PRESSURE REQUIRED FOR EACH SPRINKLER CIRCUIT.
C. ADJUST SPRINKLERS AND DEVICES, EXCEPT THOSE INTENDED TO BE MOUNTED ABOVEGROUND, SO THEY WILL BE FLUSH WITH, OR NOT MORE THAN 1/2 INCH ABOVE, FINISH GRADE.
3.10 PIPING SCHEDULE
A. INSTALL COMPONENTS HAVING PRESSURE RATING EQUAL TO OR GREATER THAN SYSTEM OPERATING PRESSURE.
B. PIPING IN CONTROL-VALVE BOXES AND ABOVEGROUND MAY BE JOINED WITH FLANGES OR UNIONS INSTEAD OF JOINTS INDICATED.
C. ABOVEGROUND IRRIGATION MAIN PIPING:
1. NPS 4 AND SMALLER:
A. GALVANIZED-STEEL PIPE AND GALVANIZED-STEEL PIPE NIPPLES; GALVANIZED, GRAY-IRON THREADED FITTINGS; AND THREADED JOINTS.
B. TYPE 1 HARD COPPER TUBE, WROUGHT-COPPER FITTINGS, AND SOLDERED JOINTS.
C. SCHEDULE 80, PVC PIPE, SOCKET-TYPE PVC FITTINGS; AND SOLVENT-CEMENTED JOINTS.
D. SCHEDULE 80, PVC PIPE, SCHEDULE 80, THREADED PVC FITTINGS; AND THREADED JOINTS.
D. UNDERGROUND IRRIGATION MAIN PIPING:
1. NPS 4 AND SMALLER:
A. NPS 3 AND NPS 4 DUCTILE-IRON, PUSH-ON JOINT PIPE; DUCTILE-IRON, PUSH-ON JOINT FITTINGS AND GASKETS; AND GASKETED JOINTS.
A. TYPE 1 SOFT COPPER TUBE, WROUGHT-COPPER FITTINGS, AND BRAZED JOINTS.
C. SCHEDULE 80, PVC PIPE AND SOCKET FITTINGS; AND SOLVENT-CEMENTED JOINTS.
D. SCHEDULE 80, PVC PIPE, SCHEDULE 80, THREADED PVC FITTINGS; AND THREADED JOINTS.
E. SDR 21, PVC, PRESSURE-RATED PIPE; SCHEDULE 80, PVC SOCKET FITTINGS; AND SOLVENT-CEMENTED JOINTS.
E. CIRCUIT PIPING:
1. NPS 2 AND SMALLER:
A. SDR 9, PE, CONTROLLED ID PIPE; INSERT FITTINGS FOR PE PIPE, AND FASTENER JOINTS.
B. SCHEDULE 40, PVC PIPE AND SOCKET FITTINGS; AND SOLVENT-CEMENTED JOINTS.
C. SDR 26, PVC, PRESSURE-RATED PIPE; SCHEDULE 40, PVC SOCKET FITTINGS; AND SOLVENT-CEMENTED JOINTS.
2. NPS 2-1/2 TO NPS 4:
A. SDR 9, PE, CONTROLLED ID PIPE; INSERT FITTINGS FOR PE PIPE, AND Banded OR FASTENER JOINTS.
B. DR 11, PE, CONTROLLED ID PIPE; PE SOCKET OR BUTT-FUSION FITTINGS; AND HEAT-FUSION JOINTS. NPS 3 PIPE AND FITTINGS IF NPS 2-1/2 PIPE AND FITTINGS ARE NOT AVAILABLE.
C. SCHEDULE 40, PVC PIPE AND SOCKET FITTINGS; AND SOLVENT-CEMENTED JOINTS.
D. SDR 26, PVC, PRESSURE-RATED PIPE; SCHEDULE 40, PVC SOCKET FITTINGS; AND SOLVENT-CEMENTED JOINTS.
F. UNDERGROUND BRANCHES AND OFFSETS AT SPRINKLERS AND DEVICES: SCHEDULE 80, PVC PIPE, THREADED PVC FITTINGS; AND THREADED JOINTS.
1. OPTION: PLASTIC SWING-JOINT ASSEMBLIES, WITH OFFSETS FOR FLEXIBLE JOINTS, MANUFACTURED FOR THIS APPLICATION.
G. RISERS TO ABOVEGROUND SPRINKLERS AND SPECIALTIES:
1. TYPE 1 HARD COPPER TUBE, WROUGHT-COPPER FITTINGS, AND SOLDERED JOINTS.
2. SCHEDULE 80, PVC PIPE AND SOCKET FITTINGS; AND SOLVENT-CEMENTED JOINTS.
3. SDR 21, DR 11, OR SDR 25, PVC, PRESSURE-RATED PIPE; SCHEDULE 40, PVC SOCKET FITTINGS; AND SOLVENT-CEMENTED JOINTS.
3.11 VALVE SCHEDULE
A. UNDERGROUND, SHUTOFF-DUTY VALVES: USE THE FOLLOWING:
1. NPS 2 AND SMALLER: CURB VALVE, CURB-VALVE CASING, AND SHUTOFF ROD.
2. NPS 3 AND LARGER: IRON GATE VALVE, RESILIENT SEATED; IRON GATE VALVE CASING; AND OPERATING WRENCH(ES).
B. ABOVEGROUND, SHUTOFF-DUTY VALVES:
1. NPS 2 AND SMALLER:
A. BRASS BALL VALVE.
B. BRONZE GATE VALVE.
2. NPS 2-1/2 AND LARGER:
A. IRON BALL VALVE.
B. BRONZE GATE VALVE.
C. THROTTLING-DUTY VALVES:
1. NPS 2 AND SMALLER:
A. PLASTIC AUTOMATIC CONTROL VALVE.
B. BRASS BALL VALVE.
2. NPS 2-1/2 AND NPS 3:
A. BRASS BALL VALVE.
3. PLASTIC AUTOMATIC CONTROL VALVE.
4. IRON BALL VALVE.
D. DRAIN VALVES:
1. NPS 1/2 AND NPS 3/4:
A. AUTOMATIC DRAIN VALVE.
A. BRASS BALL VALVE.
C. BRONZE GATE VALVE.
2. NPS 1 TO NPS 2:
A. BRASS BALL VALVE.
B. BRONZE GATE VALVE.

END OF SECTION 32 84 00

OWNER: CHILD & FAMILY SERVICES REALTY CORP
CONSTRUCTION MANAGER: TITLE 1, TITLE 2, STREET, CITY, STATE ZIP
CONSULTANTS: CIVIL, NOBIS GROUP
LANDSCAPE: WARRENSTREET ARCHITECTS
STRUCTURAL: NAME, STREET, CITY, STATE, ZIP, TELEPHONE
MECHANICAL/PLUMBING: NAME, STREET, CITY, STATE, ZIP, TELEPHONE
ELECTRICAL: NAME, STREET, CITY, STATE, ZIP, TELEPHONE
OTHER: NAME, STREET, CITY, STATE, ZIP, TELEPHONE
Warrenstreet Planning Landscapes Architecture Interiors
WARRENSTREET ARCHITECTS, INC.
4 CRESCENT STREET, UNIT 2 CONCORD, NEW HAMPSHIRE 03303
40 STARK STREET, MANCHESTER, NEW HAMPSHIRE 03103
P. (603) 225-0640
WWW.WARRENSTREET.COOP
SEAL: JONATHAN R. HALLE 1110
PROJECT TITLE / ADDRESS: NHSCOT HEADQUARTERS
211 BOG ROAD CONCORD, NH 03303
PLAN KEY:
SCALE: AS NOTED DWN BY: JH
PROJECT #: 3913 CHK BY: Checker
PRINT DATE: 2/11/2026 4:45:09 PM
ISSUE DATE: 06/18/2024
IRRIGATION SPECIFICATIONS
LA110
SHEET NUMBER: 10 OF 10 LANDSCAPE
THE DRAWING AND ITS CONTENT IS THE INTELLECTUAL PROPERTY OF WARRENSTREET ARCHITECTS INC. WITH THE SOLE INTENT TO BUILD THE PROJECT TITLED ABOVE AT THE LOCATION NOTED HEREIN. THE USE OF THE CONTENT FOR ANY OTHER PURPOSE IS PROHIBITED AND PROTECTED UNDER COPYRIGHT LAW.
Copyright Warrenstreet Architects, LLC © 1990 - 2026

Autodesk Docs: 2913 NHSCOT1913 2026-01-11 NHSCOT CULTURAL CENTER LAYOUT TEMPLATE DATE: 11/25/2019