

LANDSCAPE CALCULATIONS:

Non-Residential South Property Line Front Yard: 626 LF

Requirement: 20 Plant Units/100 LF
 Calculation: 126 Plant Units Required
 Provided: 13- Shade Trees

Non-Residential East Property Line Side Yard: 904 LF

Requirement: 10 Plant Units/100 LF
 Calculation: 90 Plant Units Required
 Provided: 6- Shade Trees (East Prop Line) + 3
 Evergreen Trees (Front Yard)

Non-Residential North Property Line Rear Yard: 451 LF

Requirement: 10 Plant Units/100 LF
 Calculation: 50 Plant Units Required
 Provided: 4- Shade Trees (North Prop Line) +
 2- Evergreen Trees (Front Yard)

GENERAL NOTES:

Plant material shall be nursery grown and be either balled and bur-lapped or container grown. Sizes and spreads on plant list represent minimum requirements.

The requirements for measurement, branching and ball size shall conform to the latest addition of ANSI Z60.1, AMERICAN STANDARD OF NURSERY STOCK by the American Nursery & Landscape Association.

Any materials with damaged or crooked/disfigured leaders, bark abrasion, sun scald, insect damage, etc. are not acceptable and will be rejected. Trees with multiple leaders will be rejected unless called for in the plant list as multi-stem or clump (cl.).

If any mistakes, omissions, or discrepancies are found to exist with the work product, the Landscape Architect shall be promptly notified so that they have the opportunity to take any steps necessary to resolve the issue. Failure to promptly notify the Landscape Architect and the Owner of such conditions shall absolve them from any responsibility for the consequences of such failure.

Under no circumstances should these plans be used for construction purposes without examining actual locations of utilities on site, and reviewing all related documents mentioned herein, including related documents prepared by the project Civil Engineer and Architect.

Civil Engineering or Architectural base information has been provided by others. The location of various site improvements on this set of drawings is only illustrative and should not be relied upon for construction purposes.

Quantity lists are supplied as a convenience. However, Bidders and the Installing Contractor should verify all quantities. The drawings shall take precedence over the lists. Any discrepancies shall be reported to the Landscape Architect.

Actions taken without the knowledge and consent of the Owner and the Landscape Architect or in contradiction to the Owner and the Landscape Architect's work product or recommendations, shall become the responsibility not of the Owner and the Landscape Architect, but for the parties responsible for the taking of such action.

Refer to Civil Engineering documents for detailed information regarding size, location, depth and type of utilities, as well as locations of other site improvements, other than landscape improvements,

Plant symbols illustrated on this plan are a graphic representation of proposed plant material types and are intended to provide for visual clarity. However, the symbols do not necessarily represent actual plant spread at the time of installation.

All plant species specified are subject to availability. Material shortages in the landscape industry may require substitutions. All substitutions must be approved by the Village, Landscape Architect and Owner.

The Landscape Contractor shall verify location of all underground utilities prior to digging by calling "J.U.L.I.E." (Joint Utility Location for Excavators) 1-800-892-0123 and any other public or private agency necessary for utility location.

All bed lines and tree saucers shall require a hand spaded edge between lawn and mulched areas.

Grading shall provide slopes which are smooth and continuous. Positive drainage shall be provided in all areas.

Sod shall be mineral base only.

Seed mixes shall be applied mechanically so that the seed is incorporated into the top one-half inch (1/2") of the seed bed. The seed shall then be covered with the specified blanket (installed per manufacturer's specs) or Hydro-mulch.

All plant material shall be guaranteed for one (1) year from the date of acceptance.

All completed planting beds and tree saucers, except for groundcover beds, shall be mulched with three (3) inches of un-dyed shredded hardwood bark. All groundcover beds shall be mulched with three (3) inches of pine bark fines.

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REVISIONS

NO.	DATE	DESCRIPTION

1 - Per Geometry & Seed Notes 2024-06-06

ALL PURPOSE STORAGE

Channahon, Illinois

All bed lines and tree saucers shall require a hand spaded edge between lawn and mulched areas.

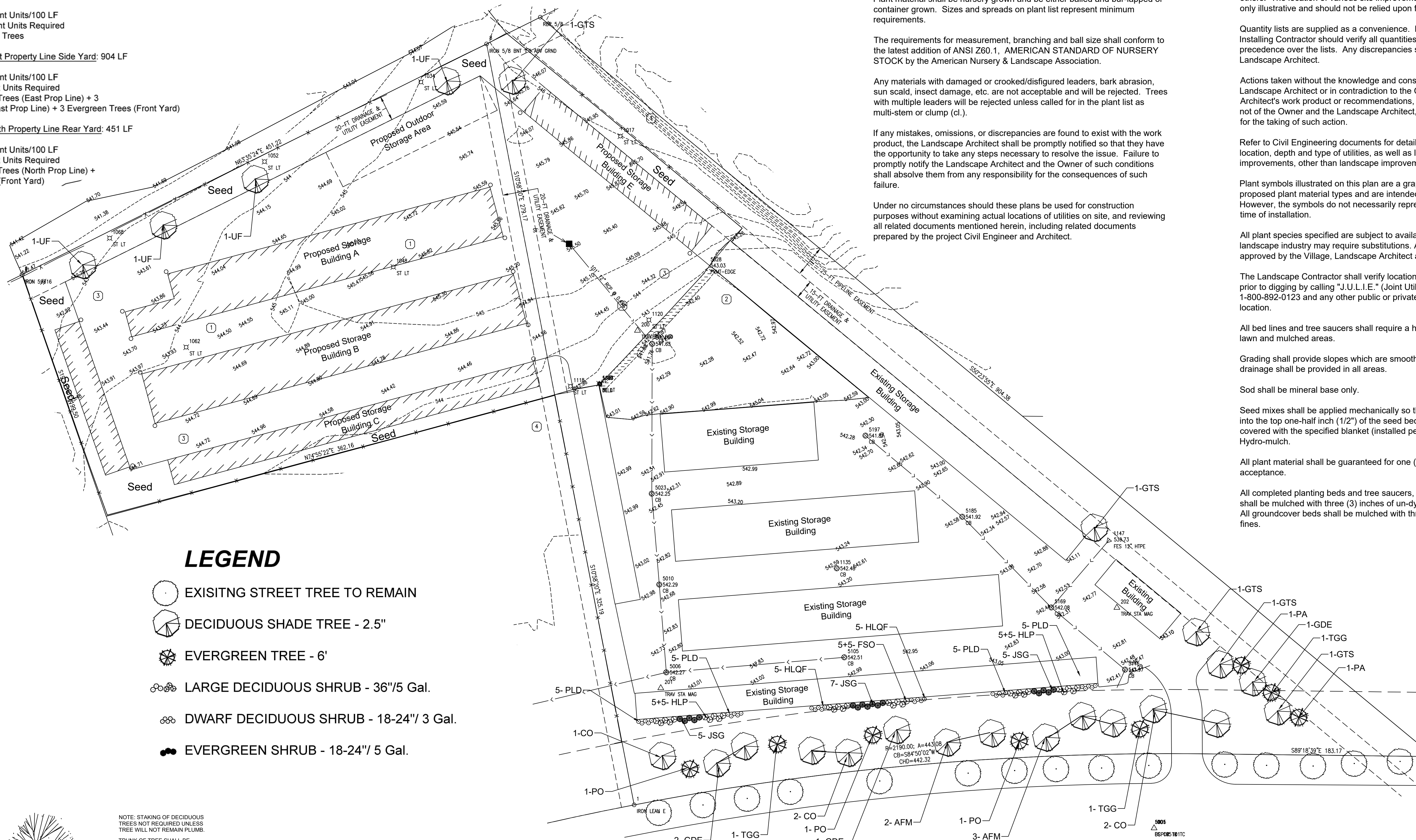
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Sod shall be mineral base only.

Seed mixes shall be applied mechanically so that the seed is incorporated into the top one-half inch (1/2") of the seed bed. The seed shall then be covered with the specified blanket (installed per manufacturer's specs) or Hydro-mulch.

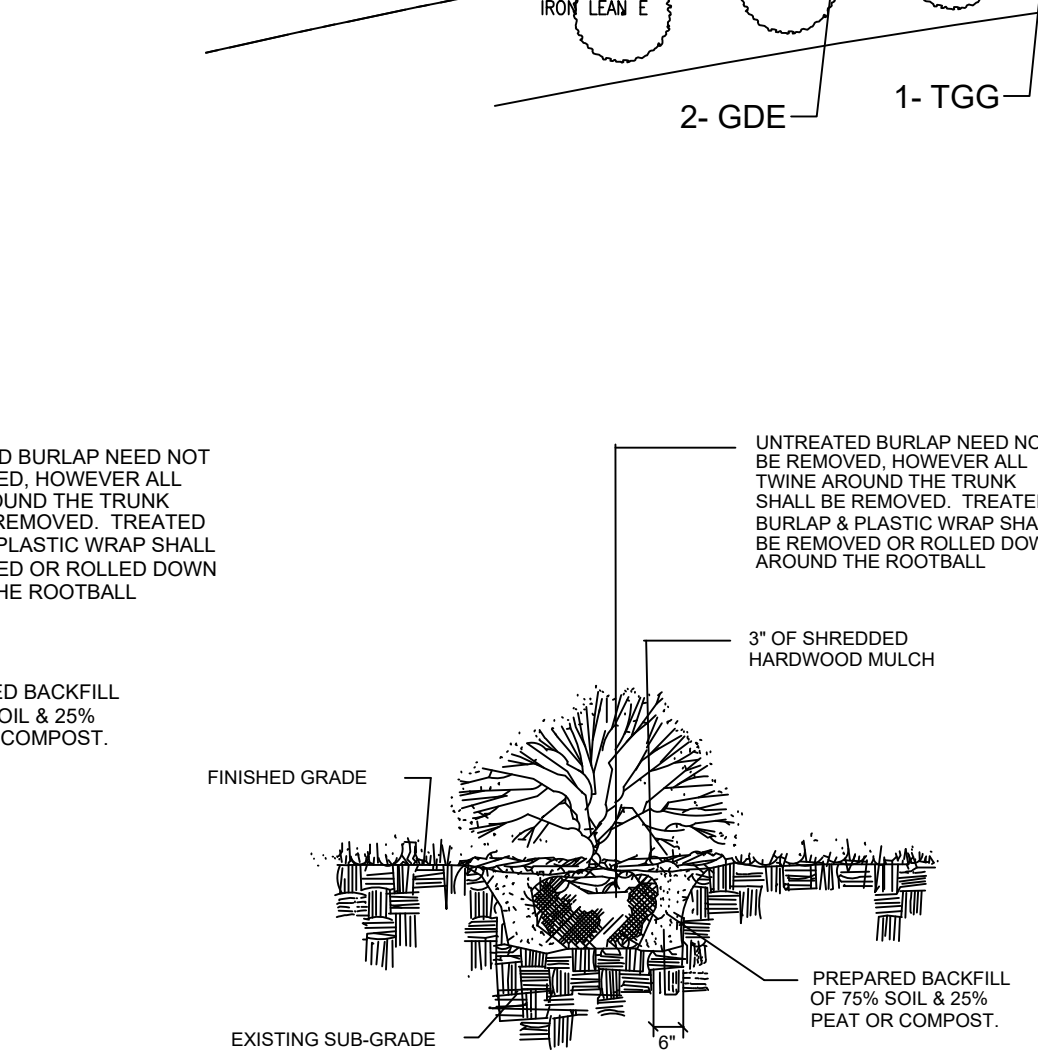
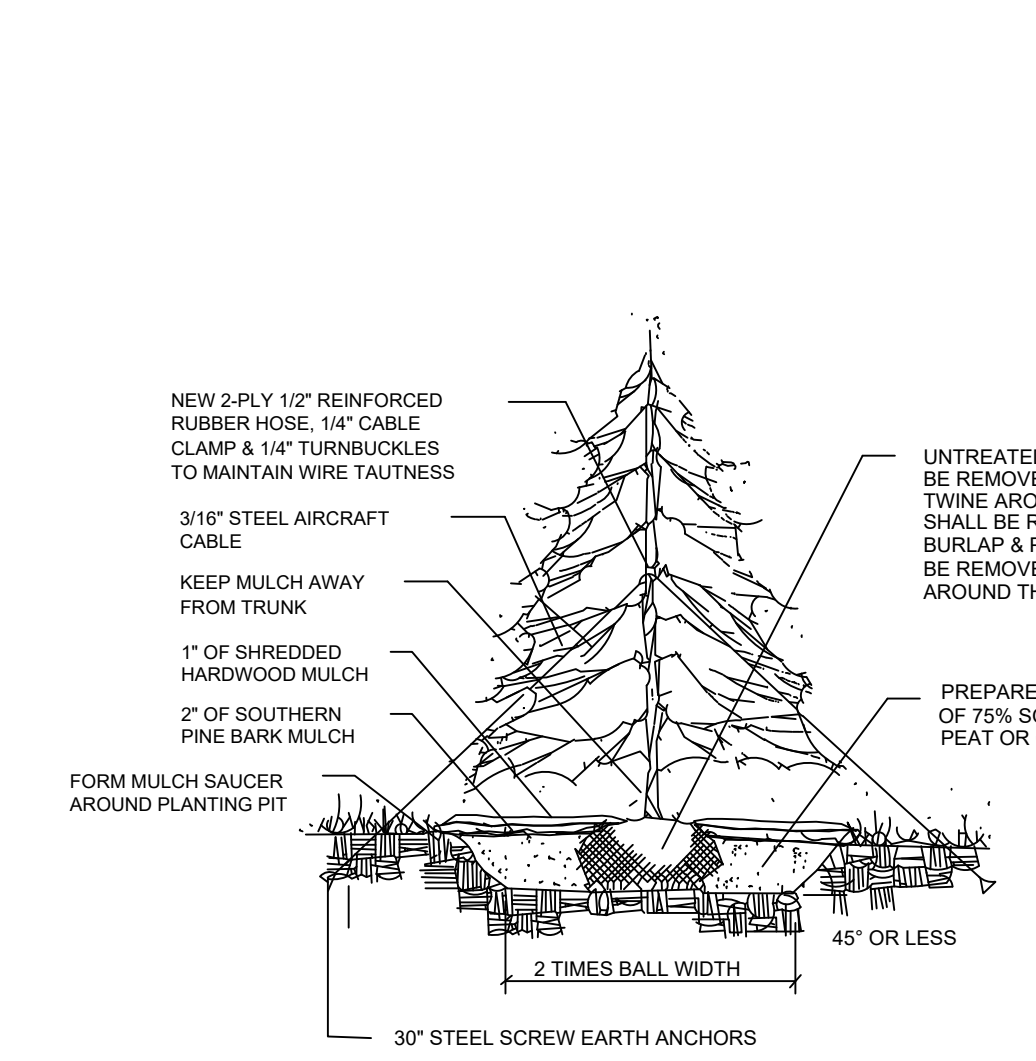
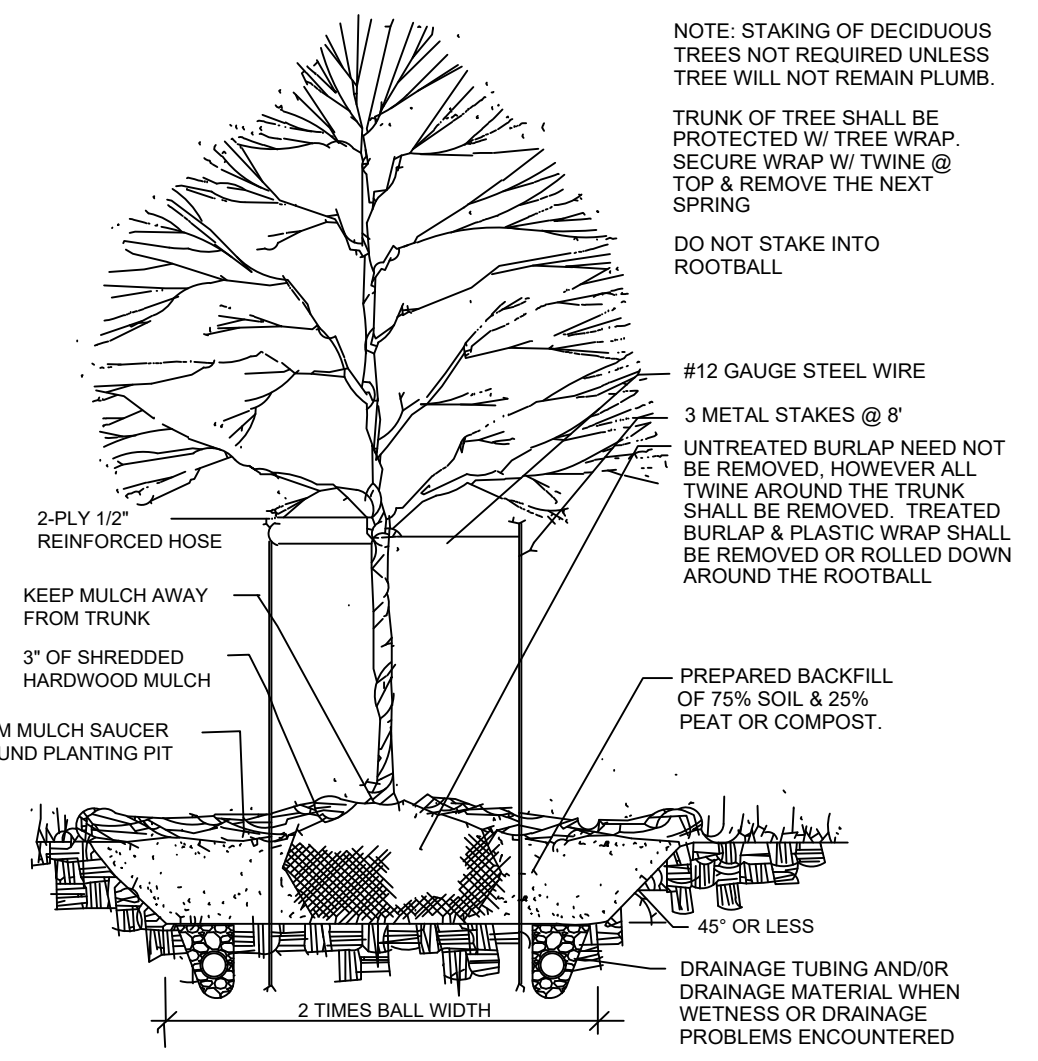
All plant material shall be guaranteed for one (1) year from the date of acceptance.

All completed planting beds and tree saucers, except for groundcover beds, shall be mulched with three (3) inches of un-dyed shredded hardwood bark. All groundcover beds shall be mulched with three (3) inches of pine bark fines.



LEGEND

- EXISTING STREET TREE TO REMAIN
- DECIDUOUS SHADE TREE - 2.5"
- EVERGREEN TREE - 6'
- LARGE DECIDUOUS SHRUB - 36"/5 Gal.
- DWARF DECIDUOUS SHRUB - 18-24"/ 3 Gal.
- EVERGREEN SHRUB - 18-24"/ 5 Gal.



DECIDUOUS TREE

EVERGREEN TREE

SHRUBS

PLANT LIST : (All Purpose Storage, Channahon, IL)

KEY	QUAN	BOTANICAL NAME	COMMON NAME	SIZE/TYPE
DECIDUOUS SHADE TREES				
AFM	5	Acer x f. 'Marmo'	Marmo Freeman Maple	2.5" BB
CO	5	Celtis occidentalis	Common Hackberry	2.5" BB
GTS	5	Gleditsia t. 'Skyline	Skyline Honeylocust	2.5" BB
GDE	4	Gymnocladus d. 'Espresso'	Espresso Kentucky Coffeetree Tree	2.5" BB
UF	4	Ulmus x. Frontier	Frontier Elm	2.5" BB
EVERGREEN TREES				
PA	2	Picea abies	Norway Spruce	6' BB
PO	3	Picea omorika	Serbian Spruce	6' BB
TGG	3	Thuja p. 'Green Giant'	Green Giant Arborvitae	6' BB
DECIDUOUS SHRUBS				
FSO	10	Forsythia x i. 'Show Off'	Show Off Forsythia	#5 Gal.
HLP	20	Hydrangea p. 'SMNHPPH'	Limelight Prime Hydran.	#5 Gal.
HLQF	10	Hydrangea p. 'SMHPLQF'	Little Quick Fire Hydrangea	#5 Gal.
PDL	20	Physocarpus o. 'Donna May'	Little Devil Ninebark	#5 Gal.

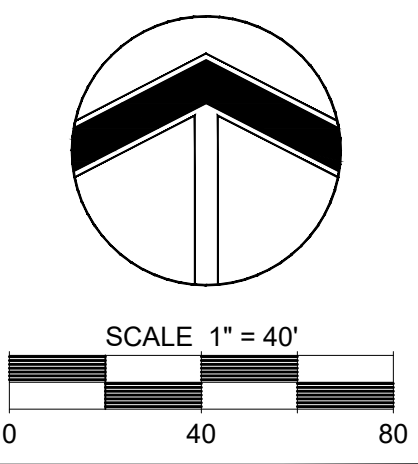
EVERGREEN SHRUBS

JSG	17	Juniperus c. 'Sea Green'	Sea Green Juniper	5 Gal.
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MATERIALS LIST:

T.B.D.	SY	Seed & Straw Blanket (Kentucky Bluegrass/Per. Rye Mix-See Specs)
		Final quan. based on actual amount of disturbance
17	CY	Mulch (Shredded Hardwood)
17	CY	Compost (Mushroom or Yard Waste)

THE QUANTITIES ABOVE ARE SUPPLIED AS A CONVENIENCE. HOWEVER ALL BIDDERS AND THE INSTALLING LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR CALCULATING ALL QUANTITIES AND SHALL INSTALL ALL MATERIALS AS NEEDED TO REFLECT THE MATERIALS SPECIFIED ON THE LANDSCAPE PLAN.



HERITAGE OAK STUDIOS, LLC

Landscape Architects
 24301 White Oak Drive
 Plainfield, IL 60585
 PHONE: 815-531-4415

FINAL LANDSCAPE PLAN

DATE: 2024-02-12
 SCALE: 1"=20'
 PLANNER: RP
 DRAWN BY: RP
 CHECKED: _____

SHEET
L-1
 PROJECT NO.: 0324 2403

PLANT MATERIAL

PART 1 - GENERAL

1.1 SCOPE OF WORK

The work includes furnishing of all materials, and the performance of all operation in connection with the planting of deciduous & evergreen trees, deciduous & evergreen shrubs, shrub roses, perennials, ornamental grasses, groundcover, bulbs (if any) and annual flowers (if any) in strict conformance with the project specifications and applicable drawings which are subject to the terms and conditions of the Contract.

1.2 GENERAL REQUIREMENTS

All plant material shall comply with the State of ILLINOIS and FEDERAL laws with respect to inspection for plant diseases and insect infestation. An inspection certificate required by law to this effect shall accompany each shipment. The Landscape Architect reserves the right to inspect the plant material at the place of growth but such inspection shall not preclude the right of rejection at the site.

1.3 APPLICABLE STANDARDS

- A. *American National Standards for Tree Care Operations*, ANSI A300, American National Standards Institute, 11 West 42nd Street, New York, N.Y. 10036.
 B. *American Standard for Nursery Stock*, ANSI Z60.1, American Nursery & Landscape Association, 1000 Vermont Avenue NW, Suite 300, Washington, D.C. 20005.
 C. *Hortus Third*, The Staff of the L.J. Bailey Hortorium, 1976, MacMillan Publishing Co., New York.
 D. All standards shall include the latest additions and amendments as of the dated of advertisement for bids.

PART 2 - MATERIALS

2.1 GENERAL

The Landscape Architect reserves the right to tag or inspect plants at the nursery but such inspection shall not preclude the right of rejection at the site. Contractor shall furnish and install all plants as shown on the drawing and in the quantities as actually designated on the drawings. The quantities shown on the plant list are included for convenience purposes only.

2.2 NOMENCLATURE

The names of the plants indicated on the drawings conform generally with those accepted in the nursery trade.

2.3 QUALITY AND SIZE

Plants shall have a habit of growth that is normal for the species and shall be sound, healthy, vigorous, and free from insect pests, their eggs or larvae, plant diseases, and injuries. All plants shall be nursery grown under climatic conditions similar to those which exist in the locality of the site for at least two (2) years and equal or exceed the measurements specified in the plant list. They shall be measured before pruning with branches in formal position. All necessary pruning shall be performed only at the time of planting. Trees will not be accepted which have their leaders cut or which have their leaders damaged so that cutting is necessary. Plants larger in size than specified may be used with the approval of the Landscape Architect but the use of larger plants will make no change in the contract price. Requirements for the measurement, branching, quality, baling, and burtpapping of plants on the plant list shall follow the Code of Standards (260 -1-most current edition) by the AMERICAN NURSERY & LANDSCAPE ASSOCIATION, formerly known as the AMERICAN ASSOCIATION OF NURSERYMEN, INC. All plant material with shriveled dry roots or which does not comply with the specifications will be rejected. All shrubs shall be at least twice transplanted and must have a fully developed fibrous root system typical of the stated species. All shrubs must be freshly dug immediately before shipping unless they are containerized. Pre-dug, heeled-in plants may be considered only in special cases involving planting during the hot months between the spring and fall planting seasons. Use of such material will be allowed only upon the approval of the Landscape Architect and is subject to his inspection prior to said approval.

2.4 DELIVERIES

The Contractor shall take all precautions that are demanded by good trade practice to insure arrival of the plant material at the stated delivery point in good condition and without injury of any nature. Plants shall be covered properly to prevent drying, transit disease, or injury.

2.5 TEMPORARY STORAGE

Insofar as it is possible, plant material shall be planted on the day of delivery. In the event this is not possible, the Contractor shall protect the unplanted stock from sun and drying winds at all times. All balled and burtpapped plants shall be shaded from the sun, have their ball set off the ground and heeled in with sawdust, peat, soil or other moisture-holding material and shall be kept moist. Plants should not remain unplanted for longer than three (3) days if in leaf. On-site storage shall be only in area(s) designated by the Owner.

2.6 SUBSTITUTIONS

Substitutions may be permitted only upon submission of written proof that the specified plant is not obtainable locally. Such substitution may be made only upon authorization by the Landscape Architect.

2.7 SELECTION

All plants shall be obtained from nurseries licensed by the State of Illinois and approved by the Landscape Architect. The Landscape Architect reserves the right to accompany the Contractor to the nurseries for the purpose of selecting (tagging) material. Plant sources located outside the State of Illinois must be approved by the Landscape Architect.

2.8 TOPSOIL

Topsoil if needed shall be imported. All imported topsoil, used for any portion of the work, shall be fertile, friable, natural loam containing a liberal amount of humus. It shall be relatively free from weeds, large roots, plants, sticks, stones larger than one (1) inch, waste, debris or other extraneous matter. The installing Contractor shall be responsible for rock picking and/or debris removal as needed to meet this specification.

The soil, to be acceptable topsoil, shall meet the following criteria:

- A. ORGANIC MATTER: Not less than 1.5 percent no more than 10.0 percent.
 B. pH: No lower than 5.0 nor higher than 8.0.
 C. TEXTURE: No more than 25 percent clay.
 D. SOLUBLE SALT: No more than 1000 ppm.
 E. CHEMICAL ACTIVITY: The topsoil (on-site & imported) shall be free from any toxins or chemical residue which could result in any form of plant growth damage.

The Contractor shall provide a soil analysis report submittal containing test results and soil scientist recommendations based on a minimum of one (1) sample taken from each proposed imported topsoil stock pile. The testing shall cover macro nutrients and pH, soluble salts, organic content/mechanical analysis and Bio assay.

2.9 MULCH

Mulch shall consist of the following:

- A. MUSHROOM COMPOST
 Mushroom compost shall be composed of well-rotted cattle or stable manure with an admixture of 15-30% topsoil and shall have been used for the commercial growing of at least one (1) crop of mushrooms.
 B. SHREDDED HARDWOOD BARK (general mulching)
 Shredded hardwood bark shall consist of finely shredded hardwood bark, free of sticks and leaves.

2.10 FERTILIZER & NUTRIENTS

Fertilizer shall be commercial fertilizer which shall be a complete fertilizer with the following approximate analysis:

- A. Shrubs
 Woodace (14-3-3) slow-release briquettes or acceptable equivalent approved by Landscape Architect.
 B. Roses
 1. Woodace (14-3-3) slow-release briquettes
 2. Superthrive liquid or acceptable equivalent approved by Landscape Architect.
 C. Perennials, Groundcover, Ornamental Grasses & Vines
 Osmocote (18-4-12) 8-9 month controlled release, or acceptable equivalent approved by the Landscape Architect.
 D. Annual Flowers
 Osmocote (14-14-14) 3-4 month controlled release or acceptable equivalent approved by the Landscape Architect.
 E. Bulbs
 Holland Bulb Booster (9-9-6) or acceptable equivalent approved by the Landscape Architect.
 F. Deciduous & Evergreen Trees
 No fertilizer required

2.11 TREE WRAPPING MATERIAL

- A. Wrap shall be - Breathable synthetic fabric tree wrap. White in color, delivered in 75 mm (3 in.) wide rolls. Specifically manufactured for tree wrapping. Tree wrap shall be "Breathable Fabric Tree Wrap" as manufactured by the Dewitt Company, Inc., Sikeston, MO, or approved equal. Submit manufacture literature for approval.
 B. Tag for securing the wrap shall be bio-degradable tape suitable for nursery use and which is expected to degrade in sunlight in less than two (2) years after installation.

2.12 WATER

Potable water shall be supplied by the Owner at no cost to the Contractor by way of an irrigation system, quick coupler system, hose bibs, hydrant meter or a designated fill-up source on site.

PART 3 - EXECUTION

Planting operations shall be conducted under favorable weather conditions during the season stated in the Contract. Before excavations are made the surrounding turf (if existing) shall be covered in a manner that will satisfactorily protect all turf areas that are to be trucked or hauled over and upon which soil is to temporarily stocked. The Contractor shall be responsible for the restoration of all damaged existing turf. All restoration shall be sodded.

3.1 TIME SCHEDULE OF PLANTING OPERATION

Landscapeing shall be performed during the season or seasons which are normal for such work as determined by weather conditions and by accepted practice. Planting may be performed under unseasonable conditions without additional compensation, but such work must have the prior approval of the Landscape Architect and/or Owner in writing as to the time of work and methods of operations. Approval to plant under such conditions shall in no way relieve the Contractor from the guarantee provisions of these specifications.

PLANTING SEASON ACCEPTABLE TIME PERIOD

1. SPRING a. From time soil is workable to June 15 with the following exception:

- 1) Bare root materials (if any) shall cease on May 31

2. FALL a. Sept. 1 to Nov. 15 with following exceptions:

- 1) Evergreen Shrub planting to cease Oct. 31
 2) Evergreen Tree planting to cease Oct. 15
 3) Perennial Ornamental Grass planting to cease Oct. 15

3.2 WATERING

All plants shall receive a thorough watering immediately after installation. During times of extreme heat, all evergreen and deciduous trees shall receive a minimum of 10 gallons of water per tree per watering up to two (2) additional waterings shall be performed as needed. **The use of drip irrigation tree bags are encouraged** (e.g., gatorbags). All additional waterings will be performed by the Owner or in accordance with a Change Order per the Supplemental Bid prices for additional watering.

3.3 MAINTENANCE

Maintenance shall be performed by the Contractor as follows:

A. TEMPORARY MAINTENANCE

The Contractor shall be responsible for the total maintenance of all plant material until such a date as all landscape operations have received Preliminary Acceptance. Temporary maintenance shall begin immediately after each plant is installed and shall include up to three (3) waterings, and all necessary cultivation, weeding, pruning, disease and insect pest control, protective spraying, resetting of plants to proper grades or upright position, restoration of damaged planting saucers, and any other procedure consistent with good horticultural practice necessary to insure normal, vigorous, and healthy growth of all work under this Contract. Upon the Preliminary Acceptance of all planted areas, the responsibility for plant maintenance rests solely with the Owner, with the following exceptions.

B. CONTINUED MAINTENANCE

For the duration of the guarantee period the Contractor shall be responsible for the resetting of settled plants, the straightening of plants which are not plumb and the tightening of tree guys (if utilized). All other maintenance is the responsibility of the Owner. However, it is the Contractor's responsibility to occasionally inspect the quality of the Owner's maintenance.

3.4 ACCEPTANCE

A. PRELIMINARY PLANTING ACCEPTANCE

Final planting acceptance shall be given for completed planting operations for the purpose of the Contractor becoming eligible for payment for this portion of the Contract work. In order to obtain Preliminary Acceptance, the Contractor shall notify the Owner and/or Owner's Representative by phone or in writing at the conclusion of all planting operations so that preliminary acceptability by way of a field inspection can be performed. In order for an area to be accepted on a preliminary basis, it shall conform to the following:

- All plant material shall be in conformance with the Drawings with respect to quality, size, species and location, except those items accepted or revised in the field by the Landscape Architect.
- All plant material shall be in a healthy condition, as defined under the guarantee requirements stated below in Section 3.14

B. FINAL PLANTING ACCEPTANCE

Final planting acceptance shall be granted after the completion of all replacement operations required fulfilling the guarantee stated below. On or after the expiration of the one-year (1 year) guarantee, a follow-up inspection will be made by the Owners and/or Owner's Representative to determine replacements required to be made by the Contractor in accordance with the provisions of these specifications. The inspector will document his/her findings in a field report. Upon completion of the replacement program, the Owner and/or Owner's Representative shall conduct an inspection to determine the acceptability of the required replacements. If all is found to be acceptable as defined by Item A above, the Contractor and the General Contractor shall be notified in writing of his final acceptance of work.

3.5 GUARANTEE

The Contractor shall guarantee for a period of one (1) year the replacement of any permanent plant which has died, or is in a dying condition, or which has failed to flourish in such a manner that its usefulness or appearance has been impaired. Any tree with a dead main leader or with a crown which is twenty-five percent (25%) or more dead shall be replaced. These guarantees shall be in accordance with the following:

A. ONE YEAR PERIOD

The one (1) year period shall begin on the date of Preliminary Acceptance of all plant material.

B. REPLACEMENTS & DAMAGES

The decisions of the Owner and/or Owner's Representative for required replacements shall be conclusive and binding upon the Contractor. The Contractor shall also be responsible for repairing damage to persons and property also caused by defective workmanship and materials.

C. EXCLUSIONS

The Contractor shall not be liable for the replacement of plants which were damaged by animals, by deicing compounds, fertilizers, pesticides or other materials not specified by the Contract documents or not applied by him under his supervision, by relocating or removal by others, by Acts of God, by vandalism or by terrorism.

D. GUARANTEE PERIOD INSPECTION

During the guarantee period, the Contractor shall, from time to time, inspect the watering, cultivation, and other maintenance operations carried on by the Owner with respect to such work, and promptly report to the Owner any methods, practices or operations which he considers unsatisfactory, and not in accord with his interests or good horticultural practices. The failure of the Contractor to so inspect or report shall be construed as an acceptance by him of the Owner's maintenance operations, and he shall not thereafter claim or assert that any defects which may later develop are the result of such methods or practices or operations.

TURF GRASS

PART 1 - GENERAL

1.1 SCOPE OF WORK

The work includes finish grading, furnishing fertilizer, seed and/or sod as specified and performance of all operations in connection with seeding and/or sodding in strict accordance with the applicable Drawings and subject to the terms and conditions of the Contract.

1.2 EQUIPMENT

The Contractor shall provide and maintain equipment suitable for the execution and completion of the work specified in accordance with (IDOT) Standard Specifications. All equipment shall be operated by personnel trained in the operation of such equipment.

PART 2 - PRODUCTS

2.1 TOPSOIL

Topsoil for planting operations shall be obtained from an on-site stockpile generated from site stripping. In the event that none is available, needed topsoil shall be imported from an off-site source. All imported topsoil, used for any portion of the work, shall be fertile, friable, natural loam containing a liberal amount of humus. It shall be relatively free from weeds, large roots, plants, sticks, stones larger than one (1) inch, waste, debris or other extraneous matter. The installing Contractor shall be responsible for rock picking and/or debris removal as needed to meet this specification.

The soil, to be acceptable topsoil, shall meet the following criteria:

- ORGANIC MATTER: Not less than 1.5 percent no more than 10.0 percent.
- pH: No lower than 5.0 nor higher than 8.0.
- TEXTURE: No more than 25 percent clay.
- SOLUBLE SALT: No more than 1000 ppm.
- CHEMICAL ACTIVITY: The topsoil (on-site & imported) shall be free from any toxins or chemical residue which could result in any form of plant growth damage.

The Contractor shall provide a soil analysis report submittal containing test results and soil scientist recommendations based on a minimum of one (1) sample taken from each proposed imported topsoil stock pile. The testing shall cover macro nutrients and pH, soluble salts, organic content/mechanical analysis and Bio assay.

2.2 COMMERCIAL FERTILIZER AND DELIVERY

Fertilizer shall be delivered to the site in unopened, original containers, each bearing name and address of the manufacturer, name brand, or trademark, and manufacturer's guaranteed analysis. Any fertilizer which becomes caked or otherwise damaged, making it unsuitable to use, will not be accepted. Fertilizer shall not have been exposed to weather prior to delivery on the site and after delivery until used. It shall be completely protected at all times and shall not be stored in direct contact with the ground.

A. FERTILIZER STRENGTH

The fertilizer shall be a complete fertilizer containing a minimum basis percentage by weight of the following:

- PRIOR TO SEEDING AND/OR SODDING 10-0-20
 Nitrogen..... 10%
 Phosphorus..... 0%
 Potash..... 20%
- AFTER SEEDING AND/OR SODDING 26-0-4
 Nitrogen..... 26%
 Phosphorus..... 0%
 Potash..... 4%

- a) One-quarter of the nitrogen shall be in the form of nitrates, one-quarter in the form of ammonia salts, and one-half in the form of organic nitrogen.
 b) No phosphorus is allowed to be applied.
 c) The potash shall be in the form of sulphate of potash.

The balance of the fertilizer shall be made up of materials usually present in such a product. It shall be free from dust, sticks, sand, stone, or other debris, terials usually present in such a product. It shall be free from dust, sticks, sand, stone, or other debris.

2.3 GRASS SEED (if specified)

Grass seed shall be reclaimed seed of the previous season's seed crops. All seed shall meet requirements established by the State and Federal Seed and Weed Controls Laws. The grass seed mixture shall be composed of the following grass seeds mixed in proportions by weight and shall meet or exceed the minimum percentages of purity and germination as indicated.

PROPORTION BY WEIGHT TYPE OF GRASS

- CONVENTIONAL TURF GRASS MIX (if specified)
 60% KENTUCKY BLUEGRASS (blend of 3 cultivars)
 30% PERENNIAL RYEGRASS (blend of 2 cultivars)
 10% CREEPING RED RESCUE
 (Apply at 7 lbs./1,000 S.F. for mechanical seeding)
- SALT TOLERANT MIX (if specified)
 40% FULTS' ALKALI GRASS (PUCCINELLIA DISTANS)
 30% CREEPING RED FESCUE
 20% KENTUCKY BLUEGRASS
 10% PERENNIAL RYEGRASS
 (Apply at 5 lbs./1,000 S.F. for mechanical seeding)

The percentage of hard seed included as a part of the germination percentage of any lot of seed, shall not exceed twenty. Kentucky bluegrass seed shall weigh a minimum of 28 pounds to the nearest measured bushel. Weed seed content shall not exceed 0.25%.

1. PACKING AND MARKETING

All seeds shall be delivered in suitable bags in accordance with standard commercial practice. Each bag shall be tagged or labeled as required by the law of the STATE OF ILLINOIS. The vendor's name shall show on or be attached to each bag together with a statement signed by the vendor showing: a) the kind of seed contained, b) the percentage of purity and germination, c) the percentage of hard seed, if any, d) a statement conforming to the laws of the STATE OF ILLINOIS hereinbefore mentioned showing percentage of weed seeds, if any. Seed which has become wet, moldy, or otherwise damaged will be rejected.

2.4 EROSION CONTROL BLANKET

- STRAW BLANKET (if specified)
 - S-75 Straw Blanket (North American Green)
 - AEC Premier Straw Blanket (American Excelsior Company)
 - c. or equivalent

2. STRAW/COCONUT BLANKET (if specified)

- SC-150 Straw/Coconut Blanket (North American Green)
- AEC Premier Straw/Coconut Blanket (American Excelsior Company)
- c. or equivalent

2.5 HYDROMULCH (if specified)

SoilCover Hydraulic Wood Mulch by Profile distributed by ERO-TEX (866)437-6839

2.6 SOD (if specified)

Sod shall comply with State and Federal laws with respect to inspection for plant diseases and insect infestation. It shall be fresh cut, live, nursery grown sod, not less than one and one half (1 1/2) inches thick having well-matted roots. The root zone shall be of good, fertile, natural mineral soil free from stones and debris. Peat sod will not be acceptable. The turf shall contain no bent or quack grass nor any other noxious weed growth. It shall be of firm loam texture having a compact growth of grass. The sod sections shall be standard in size (24 inches wide x 3 feet in length) and each section shall be strong enough to support its own weight and retain its size and shape when suspended vertically from a firm grasp on the upper ten (10%) percent of the section.

Before being cut and lifted, the sod shall have been mowed at least twice with a lawn mower and the final mowing not more than seven days before the sod is cut. Sod which is not placed within 48 hours of cutting shall not be used without the approval of the Owner and/or Landscape Architect.

The Owner and/or Landscape Architect, reserves the right to inspect the sod at the source before cutting and areas that fail to meet with his approval shall not be cut for the purpose of supplying material under the contract. The Owner and/or Landscape Architect shall be permitted to take such samples as he may select. All sod shall be fresh and green when placed. Any sod that is dried out, burned, inferior in quality to said samples, or in any way failing to meet the requirements of these specifications will be rejected and the Contractor shall immediately remove such rejected material from the premises of the project and supply suitable material in its place.

- BLUEGRASS SOD shall be a blend of at least three (3) cultivars of Kentucky bluegrass grown on a mineral base.
- SALT SOD (if specified) shall be a blend of Kentucky Bluegrass, "Fults' Alkali Grass (Puccinellia Distans), Perennial Ryegrass and other types as approved by the Landscape Architect grown on a mineral base.

2.7 WATER

The Owner shall provide at no cost, sufficient water for the Contractor to maintain plant materials and seeded and sodded areas in accordance with the requirements of the applicable technical specifications. Potable water shall be supplied by the Owner by way of a permanent underground irrigation system, quick coupler system, hose bibs, fire hydrants or a designated fill-up source for mobile tanks. When water is provided by way of fire hydrants, it shall be the Contractor's responsibility to be completely familiar with all local ordinances concerning the use of this water source. If a meter is required, it is the Contractor's responsibility to obtain, store and return the meter. All fees incurred by the Contractor in obtaining the meter and utilizing the water supply will be reimbursed to him by the Owner.

In the event that the on-site water supply is curtailed or terminated by the Owner or by ordinance during the period the Contract is in effect, or that there is no on-site sources of water, the Contractor shall supply water from off-site in sufficient quantities to complete the job. Compensation for this additional item will be in accordance with a solicited price quote. If authorization to supply off-site water is not given to the Contractor by the Owner, when the Owner is unable to supply the water in sufficient quantities, the Contractor shall not be left responsible for damage to new plantings (plant materials & sod) or failure of seed to germinate and grow caused a direct result of an inadequate water supply.

PART 3 - EXECUTION

3.1 SEED - The accepted seasons for sowing seed in lawn areas shall be defined as follows:

PLANTING SEASONS SPRING FALL

Turf grass April 1 * to May 31 Aug. 15 to Sept. 30
 * or as soon as the soil is free of frost and in a workable condition.

Seeding during other time periods shall require the approval of the Owner and/or Landscape Architect. All sowing of seed shall be completed after all trees and shrubs have been installed, if any.

3.2 SOD - The accepted seasons for laying sod shall be as follows:

- SPRING SODDING shall be performed from the time the soil becomes workable and unfrozen sod becomes available to June 15.
- FALL SODDING shall be performed from August 15 to October 31.

Sodding during the summer season, defined as June 16 to August 14, will be acceptable if the area is served by an operational irrigation system. Sodding after November 1 shall be considered unseasonable and will require the approval of the Landscape Architect or Owner.

3.3 REQUIRED MAINTENANCE

The Contractor shall be responsible for maintaining all newly seeded and sodded areas until such a time as these areas are granted acceptance by the Owner and/or Landscape Architect. Maintenance during this time period shall consist of watering, mowing, fertilization and herbicide application, as well as any other horticultural practices necessary to establish an acceptable stand of grass.

A. WATERING

- The Contractor shall water all newly **seeded** areas once immediately upon completion. Additional watering shall be performed as needed in the absence of adequate rainfall. All water should be applied as a spray or dispersion to prevent run-off or damage. The Contractor shall be responsible for watering until turf is established and accepted. If the Owner supplies an in-ground irrigation system, the Contractor shall be responsible for monitoring the effectiveness of the system and shall report any problems with the system to the Owner immediately, followed up in writing. If the Owner does not provide an irrigation system, then additional watering shall be performed in accordance with the Supplemental Bids where alternate watering prices shall be quoted. If this work item is not included as part of the original Contract, it must be authorized. Compensation shall be in accordance with the Supplemental Bid Prices. If the Owner fails to supply water or authorize supplemental watering the Contractor's warranty for providing an established stand of turf will be voided.

- The Contractor shall water all newly installed **sod** immediately. The Contractor shall remain responsible for watering through three (3) applications. If the Owner supplies an in-ground irrigation system included in the scope of these improvements, the Contractor shall be responsible for monitoring the effectiveness of the system and shall report any problems with the system to the Owner immediately, followed up in writing. If the Owner does not provide an irrigation system, then additional watering shall be performed in accordance with the Supplemental Bids where alternate watering prices shall be quoted. If this work item is not included as part of the original Contract, it must be authorized. Compensation shall be in accordance with the Supplemental Bid Prices. If the Owner fails to supply water or authorize supplemental watering the Contractor's warranty for providing an established stand of turf will be voided. Watering after the required three (3) waterings shall be the responsibility of the Owner, or in accordance with authorized supplemental watering.

B. MOWING

- The Contractor shall mow all **seeded** areas three (3) times. The three (3) mowings shall be performed once the turf has reached a height of three inches (3") and shall maintain the turf at 2-2½". At no time should more than 1/3 of the leaf blade be removed by any mowing.
- The Contractor shall mow all **sodded** areas once. The one (1) mowing shall be performed once the turf has reached a height of three inches (3"). At no time should more than 1/3 of the leaf blade be removed by any mowing.

C. FERTILIZATION

- Seeded** areas after completion of the second required mowing, the Contractor shall apply an 18-9-9 commercial fertilizer at the rate of 15 pounds per 1,000 square feet (650 lbs./ac.) to all turf areas using a mechanical spreader and by making two (2) passes at right angles to each other.
- Sodded** area after completion of the required mowing, the Contractor shall apply an 18-5-9 commercial fertilizer at the rate of 15 pounds per 1,000 square feet (650 lbs./ac.) to all turf areas using a mechanical spreader and by making two passes at right angles to each other.

D. HERBICIDE

The Contractor shall be responsible for one (1) application of a weed control product no sooner than the second mowing with the areas seeded. The product shall reflect the specific weed problem which may exist.

3.4 ACCEPTANCE

Acceptance of seeded areas will be determined by the Owner and/or Landscape Architect.

- Acceptance shall be granted upon conformance with the following:
- Grass shall display a reasonably uniform distribution of grass plants.
 - Grass shall display vigorous growth and be green and healthy in appearance.
 - Grass shall have received the required mowings, fertilization and herbicide application.

The Contractor shall not be held liable for damage incurred to the seed areas caused by deicing compounds, toxic substances, fertilizers, pesticides and other materials not specified or not applied by him or under his supervision, nor those damages caused by vandalism or acts of nature.

3.5 GUARANTEE

The Contractor shall guarantee the provision of a green, healthy relatively weed free turf at the time of acceptance.

TEMPORARY WATERING

Temporary watering shall be performed via a temporary above ground irrigation system from the building water supply and/or from water trucks.

A. Kentucky Bluegrass Sod

- Immediately subsequent to sod installation all areas shall be watered to a depth of one (1) inch Additional watering shall be performed to a total of fifteen (15) times approximately every other day for a minimum of one (1) month period. During extremely hot periods, often between June 15th and August 31st, watering daily may be required.

- Newly laid sod must be kept moist, but not water logged. The moisture should extend into the soil below the sod to encourage root development. A general rule-of-thumb is to apply one (1) inch of water every other day in the absence of adequate rainfall. Early morning watering is preferred and should not be performed after 1:00 PM. Watering personnel shall routinely probe the sodded areas in multiple locations to determine moisture levels and the watering program should be adjusted as needed. Newly laid sod should not be allowed to dry out as during the initial 2-3 weeks subsequent to laying, dryness will cause shrinkage leaving unwanted open gaps between bales.

- Depending on conditions, sod may take 1-3 weeks to root into the soil. Once the sod takes root, watering frequency can be gradually reduced. One (1) inch of water applied once a week is generally acceptable except during hot periods.

B. Seed Mixes with Straw Blanket (if any)

- Immediately after the completion of seeding operations, all seed & blanket areas shall be watered to a depth of two (2) inches. Additional watering shall be performed to a total of fifteen (15) times.

- During the seed germination period, seeded areas shall be kept moist in the absence of adequate rainfall to a depth of one (1) inch. A fine spray should be utilized to avoid seed bed disturbance/erosion. Watering personnel shall routinely probe the seeded areas in multiple locations to determine moisture levels and the watering program should be adjusted accordingly. A five to ten (5-10) minute watering duration is generally adequate. During the germination period, daily watering may be required during extremely hot periods.