

Landscape Surveillance and Care Cycle Report

1. **Notify the landscape architect** at least two days before the beginning of each care cycle.
2. Perform care requirements to the satisfaction of the engineer a minimum of **once every two weeks** between May 15 and October 15.
3. **Submit a written report** to the engineer after each care cycle. Ensure that the report documents the work performed during the care cycle; the number, type, and location of each plant that was removed or marginal; and other information the engineer or the specialist deems appropriate.

Person/People performing Surveillance:

Date:

Hours Spent:

Location:

County:

Planting Surveillance items performed:

- | | |
|--|--|
| <input type="checkbox"/> Watering*
How long? _____ | <input type="checkbox"/> Spraying for other
List other? _____ |
| <input type="checkbox"/> Hand pulling weeds | <input type="checkbox"/> Tightening braces & guys |
| <input type="checkbox"/> Cultivating | <input type="checkbox"/> Retying wrapping |
| <input type="checkbox"/> Pruning
Which shrubs / trees? _____
_____ | <input type="checkbox"/> Re-mulching
Areas re-mulched? _____ |
| <input type="checkbox"/> Spraying for weeds in landscape beds | <input type="checkbox"/> Other _____
_____ |

Report Details:

Detail specific issues, concerns, problems. Identify any plants that need replacement.

*Water each plant sufficiently at each watering to keep the topsoil backfill material in a moist condition and to keep the plant in a healthy growing condition. The engineer may order additional watering at any time during the plant establishment period if conditions require.

Living Snow Fence Plan
Hwy 151
Iowa County
Landscaping
Special Provisions

Plant Material

- All plant material will be supplied by the contractor for this project.

To ensure proper establishment of the vegetation a regular surveillance and care visit needs to be performed for two growing cycles. The minimum surveillance and care expectation is once every two weeks between May 15th and October 15th.

Each surveillance and care visit should consist of the following. A sample report form has been provided for your use.

Watering

- Water each plant sufficiently to keep the topsoil material in a moist condition and to keep the plant in a healthy growing condition.
- Overwatering can lead to oxygen deficiency in the soil, causing root injury, mold and eventually death.
- Be careful not to spray the tops of trees and shrubs in the heat of the day. It is possible to scorch the leaves.
- Perform watering operation before noon if possible.

Bare Root (BR) Plant Stock

- Newly installed plants should be watered twice a week. These plants (1-2 years old) require 1" of water per week. Check the soil moisture on established plants weekly, and water roughly every two weeks.
- To check the soil moisture use stick your finger into the soil to a depth of 3". If the soil feels dry, water the plant. If it's wet, hold off on the water. Make sure to check the soil in multiple places.

Weeding

- Once in the spring apply a pre-emergent herbicide to reduce the number of annual weeds in planting beds.
- Keep area free of weeds by hoeing, hand weeding, or by using herbicides. Herbicides may only be used by a licensed applicator. If hand pulling, take care to remove the entire plant structure including the root.

Monitor for plant Health

- Monitor all plants throughout the entire growing season for signs of disease or insect infestation. If there are signs of an infected or damaged plant, contact a local garden center for recommended treatment.

Report Concerns

- Identify and report any issues, concerns, or problems with the plants. Identify any plants that may need replacement.

Section 201 Clearing and Grubbing

201.1 Description

- (1) This section describes cutting and disposing of trees, brush, windfalls, logs, and other vegetation occurring within the clearing limits; and removing and disposing of roots, stumps, stubs, logs, and other timber occurring within the grubbing limits.

201.2 (Vacant)

201.3 Construction

- (1) Clear and grub all areas within the clearing and grubbing limits defined as follows:
 1. Between lines 5 feet outside the grading limits of roadway cuts and fills, including intercepting embankments, channels, ditches, borrow pits, and marsh or waste disposal areas.
 2. Other parts of the right of way the plans or special provisions designate.
 3. Designated clear zone and clear vision areas.
 4. With the engineer's approval, areas with vegetation that interferes with excavation, embankment, marsh, or waste disposal.
 5. The contractor does not have to grub the following:
 - Areas designated for occupation by earth embankments 6 feet or more in height.
 - Areas used for marsh excavation disposal for which the State has obtained easements.
- (2) Preserve vegetation within the clearing limits as the plans show or the engineer directs. Cut off and dispose of all other trees, brush, shrubs, or other vegetation occurring within the clearing limits. Within the grubbing limits, remove debris not suitable for the roadway foundation, stumps and associated roots, logs, timber, brush, and matted roots to the following minimum depths:
 1. In cut areas, one foot below final subgrade.
 2. In embankment areas, one foot below the existing grade.
- (3) Do not remove trees and shrubs located beyond the clearing limits unless the engineer specifically authorizes their removal. If clearing where grubbing is not required, cut shrubs and brush to within 3 inches of the ground surface. Cut trees as nearly flush with the ground surface as practicable with tools ordinarily used for these operations.
- (4) Prevent the spread of oak wilt by treating all cut surfaces and abrasions sustained between April 1 and September 30 by healthy oak trees and saplings with a thorough application of tree paint immediately upon discovering a wound. Between these dates, also paint the cut surfaces of the stumps of all healthy oak trees and saplings immediately after cutting, whether remaining in place or grubbed.
- (5) If feasible, fell trees toward the center of the area being cleared. If this is not possible due to danger to traffic or injury to other trees, structures, or property, cut them into sections from the top down.
- (6) Do not injure or damage trees and shrubs left in place on the right of way. Symmetrically trim lower limbs or branches of trees left in place and overhanging the roadbed to at least 20 feet above the finished grade. Trim using generally accepted horticultural practices.
- (7) Unless the contract specifies otherwise, the contractor owns all timber salvaged from the required clearing of right of way acquired by the highway authority in fee simple title, or from clearing of trees acquired by and for the public in the acquisition of easement of the right of way. Set aside all logs and timber greater than 4 inches in diameter to the extent feasible for commercial or fuel use. Do not burn or bury this material on the right of way or lands adjacent to the right of way without first making it available for commercial or fuel use. If it is not possible to dispose of this material for commercial or fuel use, dispose of the salvaged logs as specified for waste logs in [201.3\(10\)](#).
- (8) Private owners holding underlying title to lands acquired or reserved for highway purposes by easement or by use have a prior right to all timber from trees standing or lying, except timber required for construction of the work, and except timber from trees acquired by and for the public in the acquisition of the right of way. Consult with the private owners about disposing of trees cut on their land. Remove from the right of way and dispose of trees, or portions of trees, claimed by the owners. Ensure that timber disposal sites are neatly constructed.

Revise 201.3 to consolidate and clarify open-burning regulatory requirements.

- (9) Dispose of stumps, roots, brush, waste logs and limbs, timber tops, and debris resulting from clearing and grubbing or occurring within the clearing and grubbing limits by burning, chipping, burying, or removing from the right of way.
- (10) For disposal by open burning, burn within the clearing limits when and in a way that does not harm trees or shrubs left in place, create a nuisance, pose a hazard to traffic, or damage public or private property. **Take care to avoid burning poison oak, poison ivy, poison sumac or other materials posing a health hazard when burned. Obtain burning permits required under local and state fire protection regulations and provide copies to the engineer before burning. Comply with WDNR rule NR 429 regulating open burning which prohibits open burning in the Southeast Wisconsin Intrastate Air Quality Control Region (Kenosha, Milwaukee, Ozaukee, Racine, Walworth, Washington, and Waukesha counties). Do not use oily substances or other materials prohibited under NR 429 to start or maintain fires.**
http://docs.legis.wisconsin.gov/code/admin_code/nr/400/429.pdf
- (11) If open burning is not allowed and the engineer approves, the contractor may bury material in engineer-approved locations on the right of way outside the construction limits. Minimize the bulk of the material and cover it with at least one foot of earth. If the engineer approves, the contractor may dispose of the debris from open burning in this same manner.
- (12) For disposal by mechanical chipping, recover all material as it leaves the chipping machine. Stockpile and use this material as specified for mulch under [627](#), dispose of it off the right of way, or bury it as specified in [201.3\(11\)](#).
- (13) Dispose of material off the right of way according to applicable solid waste disposal regulations. Obtain written permits for this disposal from the owner of the property where placing the material, unless disposing of this material at a licensed waste disposal operation. Provide copies of permits to the engineer before disposal begins.
- (14) Chip, burn, or bury under not less than one foot of earth all elm wood consisting of trees, logs, stumps, stubs, branches, or windfalls with adhering bark, and all elm bark and debris within clearing and grubbing limits or resulting from clearing and grubbing operations.
- (15) Debark all elm logs salvaged, and all elm wood or stumps not disposed of by chipping, burning, or burying; and chip, burn, or bury the bark. For clearing and grubbing operations performed between April 1 and September 30, perform final disposal of elm wood, bark, or debris within 30 days. For clearing and grubbing operations performed between October 1 and March 31, perform final disposal of elm wood, bark, or debris before the succeeding May 1.
- (16) Dispose of all clearing and grubbing debris before proceeding with grading operations. If the contractor intends to burn debris but cannot secure burning permits on schedule, do not delay removing clearing debris from areas affected by other operations. While waiting to secure burning permits, pile clearing and grubbing debris beyond the limits affected by other work. Do not leave elm debris beyond the 30-day limitation specified in [201.3\(14\)](#).

201.4 Measurement

201.4.1 General

- (1) The department will measure Clearing and Grubbing separately, either by the station, inch of diameter, square yard, or acre as the contract indicates.
- (2) The department will measure Clearing and Grubbing required for the excavation of channels and ditches, occurring outside the limits of the roadway clearing and grubbing. If measured by the station, the department will measure along the centerline of these channels and ditches.
- (3) The department will measure Clearing performed on marsh disposal or waste disposal areas of the right of way and on easements furnished by the State. If measured by the station, the department will measure along the roadway centerline.
- (4) The department will not measure incidental clearing and grubbing operations required to perform the work as follows:
 1. Clearing areas of light brush, shrubs, and other vegetation that the contractor can cut with a brush scythe or mowing machine.
 2. Clearing areas containing logs, tree roots, roots of brush and shrubs, and other vegetation having a woody structure that the contractor can remove with a rooter.

3. Clearing small trees of less than the minimum number and size specified for measurement.
4. Trimming overhanging limbs and branches to provide required clearance.
5. Clearing and grubbing borrow pits.

201.4.2 By the Station

- (1) The department will measure Clearing and Grubbing by the full 100-foot station acceptably completed, measured along the roadway centerline or reference line with each full 100-foot station starting and ending at a +00 station. If 2 or more roadways occur, the department will measure along the centerline or reference line of each roadway. For divided highways, the department will extend measurement units for each roadway, in width, from 5 feet outside the grading limit of that roadway to a line mid-way between the reference lines or centerlines for each roadway.
- (2) The department will only include stations with a total of 12 inches or more of diameter determined as specified under [201.4.5](#). The department will include each station conforming to this criterion as a full station.

201.4.3 By the Square Yard

- (1) The department will measure Clearing and Grubbing by the square yard acceptably completed within the designated limits. The department will calculate the horizontal area bounded by the line of trunks cut or grubbed. The department will not measure outside the right of way limits or acquired easements. The department will include only areas containing trees or stumps with a 3-inch or greater diameter. The department will determine diameters as specified under [201.4.5](#).

201.4.4 By the Acre

- (1) The department will measure Clearing and Grubbing by the acre acceptably completed within the designated limits. The department will calculate the horizontal area bounded by the line of trunks cut or grubbed. The department will not measure outside the right of way limits or acquired easements. The department will measure separate areas or isolated stands of less than 1/5 acre as 1/5 acre. The department will include only areas containing trees or stumps with a 3-inch or greater diameter. The department will determine diameters as specified under [201.4.5](#).

201.4.5 By the Inch of Diameter

- (1) The department will measure Clearing and Grubbing by the inch of diameter acceptably completed. The department will determine tree diameter by measuring the circumference approximately 4 1/2 feet above the existing ground level, but above the ground swell, and dividing by 3. The department will determine stump diameter, for stumps not resulting from the contractor's clearing operations, by computing the average diameter of the stump top. The department will include only those in-place trees or stumps with a 3-inch or greater diameter. The department will round circumference measurements and diameters to the nearest inch.

201.5 Payment

- (1) The department will pay for measured quantities at the contract unit price under the following bid items:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
201.0105	Clearing	STA
201.0110	Clearing	SY
201.0115	Clearing	ACRE
201.0120	Clearing	ID
201.0205	Grubbing	STA
201.0210	Grubbing	SY
201.0215	Grubbing	ACRE
201.0220	Grubbing	ID

- (2) Payment for Clearing and Grubbing is full compensation for the following:
 - All clearing and all grubbing required under this section and performed within the clearing and grubbing limits, as defined in [201.3\(1\)](#).
 - Handling, hauling, piling, burning, burying, trimming, chipping, wound treatment, rehandling, and disposing of waste and debris.
 - Excavations made to bury clearing and grubbing material, backfilling these excavations, and disposing of excess excavated material.

- (3) The department will pay for clearing and grubbing ordered and performed beyond the clearing and grubbing limits, as defined in [201.3\(1\)](#), at the contract unit price per square yard, acre, or inch of diameter. If the contract does not contain Clearing and Grubbing bid items using those units, the department will pay for this additional clearing and grubbing as extra work.
- (4) The incidental clearing and grubbing described in [201.4.1\(4\)](#) is incidental to the Excavation bid items of [205](#) or to other contract bid items.

Section 619 Mobilization

619.1 Description

- (1) This section describes the work and operations necessary to move personnel, equipment, supplies, and incidentals to the project site and to establish all of the contractor's offices, buildings, sanitary accommodations, and other facilities necessary to work on the project. It also includes all other work and operations whose performance is required, or for costs necessarily incurred before beginning work on various items on the project site.

619.2 (Vacant)

619.3 (Vacant)

619.4 Measurement

- (1) The department will measure Mobilization as each individual unit acceptably completed.

619.5 Payment

- (1) The department will pay for measured quantities at the contract unit price under the following bid items:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
619.1000	Mobilization	EACH

Revise 619.5 to eliminate the incremental payment description. The timing and payment percentages expressed in the referenced spreadsheet are unchanged and contractually binding.

- (2) Payment for Mobilization is full compensation for supplying and providing all materials, facilities, and services, and for performing all work necessary to complete this contract bid item. **The department will make incremental payments as determined using department form [WS6191](http://roadwaystandards.dot.wi.gov/standards/forms/ws6191.xls) available at: <http://roadwaystandards.dot.wi.gov/standards/forms/ws6191.xls>**
- (3) If the contract does not include a separate Mobilization bid item, the work necessary for mobilization is incidental to work included under other contract bid items.

Section 625 Topsoil and Salvaged Topsoil

625.1 Description

- (1) This section describes furnishing, placing, spreading, and finishing humus-bearing soil, adapted to sustain plant life, commonly known as topsoil, from locations the contractor furnishes beyond the limits of the right of way.
- (2) This section also describes removing topsoil from the sites of proposed roadway excavations and embankments in amounts and depths available and necessary to cover the work slopes. This work also includes reclamation, placing, spreading, and finishing of this topsoil.

625.2 Materials

- (1) Topsoil consists of loam, sandy loam, silt loam, silty clay loam, or clay loam humus-bearing soils adapted to sustain plant life, and ensure this topsoil is in a Ph range of 6.0 to 7.0.
- (2) Salvaged topsoil consists of the loam, sandy loam, silt loam, silty clay loam or clay loam humus-bearing soils available from overlying portions of areas to be occupied by the completed roadway.

625.3 Construction

625.3.1 Preparing the Roadway for Topsoil

- (1) Undercut or underfill all areas designated to receive topsoil to a degree that if covered to the required depth with topsoil the finished work conforms to the required lines, grades, slopes and cross sections the plans and drawings show.

625.3.2 Processing Topsoil or Salvaged Topsoil

- (1) Mow topsoil procurement areas to a height of approximately 6 inches. Remove litter such as brush, rock, and other materials that will interfere with subsequent vegetation establishment.
- (2) Strip off the humus-bearing soil. Take care to minimize removing the underlying sterile soil. Then stockpile the topsoil on the right of way or place it directly on the designated areas.
- (3) Under the Salvaged Topsoil bid item, remove topsoil from excavation areas and the roadway foundation up to the quantity necessary to cover the slopes for the bid items of Salvaged Topsoil and Topsoil. Salvage topsoil from embankment areas outside the roadway foundation only if that additional material is required to cover the slopes.
- (4) Use Salvaged Topsoil in excess of the contract quantity to replace contract quantities of Topsoil. Utilize excess topsoil on the project or dispose of as specified in [205.3.12](#).

625.3.3 Placing

- (1) After preparing and finishing the areas designated for topsoil to the required lines, grades, slopes and cross section, place and spread the topsoil to a uniform depth as the plans show or the contract requires. If no depth is shown, place and spread the topsoil to a minimum depth of 4 inches in rural areas and a minimum depth of 6 inches in urban areas, or as the engineer designates.
- (2) Break down all clods and lumps using the appropriate equipment to provide a uniformly textured soil.
- (3) Where using either sod or seed mixture 40 ensure that, for the upper 2 inches, 100 percent of the material passes a one-inch sieve and at least 90 percent passes the No. 10 sieve.
- (4) Remove rocks, twigs, foreign material, and clods that cannot be broken down. Dress the entire surface to present a uniform appearance. The engineer will not require rolling.
- (5) If light sandy soils are covered with heavier clay bearing loam topsoil, then mix or blend the 2 types of soils to a more or less homogeneous mixture by using the appropriate equipment.

625.4 Measurement

625.4.1 Topsoil

- (1) The department will measure Topsoil acceptably completed by the square yard or by the cubic yard, whichever the contract specifies.
- (2) If the department measures by the square yard, the measured quantity shall equal the actual number of square yards of topsoiled area to the depth specified within the limits of construction designated on the plans, or in the contract, or as the engineer directs.
- (3) If measured by the cubic yard, the department will measure material in the vehicle. If the contractor transports the material in vehicles not adapted for measurement, then the department will measure the

material in cubic yards of volume in its original position computed by the method of average end areas with no correction for curvature; or if the engineer elects, by the method of truncated prisms.

625.4.2 Salvaged Topsoil

- (1) The department will measure Salvaged Topsoil by the square yard acceptably completed. The quantity measured for payment shall equal the actual number of square yards of area topsoiled to the depth specified within the limits of construction designated on the plans or in the contract, or as the engineer directs.

625.5 Payment

- (1) The department will pay for measured quantities at the contract unit price under the following bid items:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
625.0100	Topsoil	SY
625.0105	Topsoil	CY
625.0500	Salvaged Topsoil	SY

625.5.1 Topsoil

- (1) Payment for Topsoil is full compensation for providing, excavating, loading, hauling, and placing this material; and for undercutting excavations, or underfilling embankments necessary to receive this material. The department will make no allowance, adjustment, or measurement for payment under the Excavation bid items for undercutting cut sections, or underfilling embankments.

625.5.2 Salvaged Topsoil

- (1) Payment for Salvaged Topsoil is full compensation for removing, stockpiling, reclaiming, hauling, and placing this material; and for undercutting excavations, or underfilling embankments necessary to receive this material. The department will make no deductions from the Excavation bid items for the quantities of Salvaged Topsoil material obtained from areas of cut sections. Additionally, the department will not measure or pay for the volumes of Salvaged Topsoil removed from sites of proposed embankments under the Excavation bid items, or make any allowance, adjustment, or measurement for payment under the Excavation bid items for undercutting cut sections, or underfilling embankments.
- (2) If an area is damaged by erosion after partial acceptance, the department will pay for restoring topsoil in these areas at a unit price determined by multiplying the contract unit price bid for Salvaged Topsoil by 3, or absent that bid item in the contract, as the contract unit price bid for Topsoil multiplied by 3, The department will pay for restoration under the Restoration Post Acceptance Topsoil administrative item.
- (3) The department will not pay for removing topsoil from outside the roadway foundation in embankment areas unless that material is necessary to cover the slopes.

Section 632 Furnishing and Planting Plant Materials

632.1 Description

- (1) This section describes furnishing and planting plants of the species, varieties and sizes specified, and includes furnishing all necessary materials, excavating plant holes, salvaging topsoil, transplanting, backfilling, pruning, mulching, watering, heeling in, fertilizing, wrapping, guying and bracing, protecting against rodents and applying anti-desiccant, disposing of surplus and waste materials, and necessary care and required replacements pending acceptance.

632.2 Materials

632.2.1 General

- (1) Unless specified otherwise, or the engineer approves, use materials conforming to the requirements below.

632.2.2 Plant Materials

632.2.2.1 General

- (1) Unless specified otherwise, for all plants use nursery grown stock, transplanted or root-trimmed 2 or more times according to the kind and size of plants.
- (2) Ensure all plants are typical of their species, have well formed tops and root systems, and are free from injurious insects, plant diseases, or other plant pests. Use plants hardy under the climatic conditions at the work site. Furnish plants free from the following defects:
 1. Damage to top, branches, trunk, bark, or roots.
 2. Dried out roots.
 3. Prematurely opened buds.
 4. Thin or poor tops or root systems.
 5. Evidence of mold.
 6. Dry, loose, or broken ball of earth in B&B stock.
 7. Dried out or damaged soil mass in B&P or CG stock.

632.2.2.2 Collected and Plantation Grown Stock

- (1) Collected and plantation grown stock shall conform to the current edition of the American Standard for Nursery Stock recommended for general use and adoption by the American Association of Nurserymen, Inc.
- (2) The contractor shall furnish collected and plantation grown plant stock only if specified. If the contract allows collected plant stock, the contractor shall notify the engineer of the source of supply or growing site at least 10 days before digging the plants. Dig all collected plants with a root spread, or ball of earth, at least 1/3 greater than that required for nursery-grown plants of the same species, variety, and size.
- (3) If collected stock is furnished, leave at least 50 percent of the species undisturbed at the collection site unless the engineer approves otherwise.

632.2.2.3 Lining Out Stock

- (1) Lining out stock and seedling trees shall conform to the current edition of the American Standard for Nursery Stock.

632.2.2.4 Substitution

- (1) If the contractor submits written documentation that a specified plant is not obtainable it may make substitution, only with the engineer's approval. The engineer may approve the use of larger plants than those specified, at no cost to the department. The ball or container size or the root spread of the larger size shall be increased proportionally, relative to the specified size.

632.2.2.5 Grading Standards

- (1) Plant stock shall conform to the current edition of the American Standard for Nursery Stock.

632.2.2.6 Plant Inspection and Legal Requirements

- (1) All plant material shipments and deliveries shall comply with State and Federal laws and regulations including Wisconsin administrative code, chapter ATCP 21 governing the inspection, shipping, selling, and handling of plant stock. Attach a tag or label bearing the name and address of the licensed dealer or

nurseryman and a certification that the material is from an officially inspected source to each shipment or delivery of plant material. File it with the engineer upon arrival of the plant material at the project site.

632.2.2.7 Plant Names and Labels

- (1) The names and labels used in the plans and specifications conforms, with few exceptions, to the current edition of Standardized Plant Names as adopted by the American Joint Committee on Horticultural Nomenclature.
- (2) Ensure all plants are true to name, and secure a legible label to each bundle or plant indicating the name and size of the plant material.

632.2.2.8 Plant Approval

- (1) The contractor shall furnish to the engineer a written list of the sources from which the contractor proposes to obtain plant materials. Furnish this list to the engineer within 15 days of the award of the contract. Do not alter this list without the engineer's approval.
- (2) The engineer shall approve all plants. The engineer may inspect plants at the grower's nursery or at the place of collection, or at the collector's holding site. The engineer may tag representative plants at the grower's nursery. Although the engineer may approve plants at the source, they may still reject plants at the project site.
- (3) Replace all rejected plants with acceptable plants of the same species, variety, and size, unless the engineer directs otherwise.

632.2.2.9 Digging, Handling, and Packing Plant Stock

632.2.2.9.1 General

- (1) The contractor shall dig all plant stock and handle with care and skill to prevent injuries to the trunk, branches, and roots, and shall pack in an engineer-approved manner to ensure the plants arrival at the project site undamaged and in good condition.
- (2) Transport the plant stock in enclosed vehicles or in a way that protects the plant tops from drying.
- (3) Handle all plants furnished with earth balls or in containers by the ball or container.

632.2.2.9.2 Bare Root Stock (BR)

- (1) If furnishing plant stock BR protect the roots against drying out during moving by using moist sphagnum moss, straw, or other suitable material, and cover with canvas or other suitable covering in an engineer-approved manner.

632.2.2.9.3 Balled and Burlapped Stock (B&B)

- (1) If furnishing plant stock B&B, move the plant with a freshly dug ball of earth so firmly wrapped in burlap that on delivery the soil ball is still firm and compact around the small feeding roots. Ensure each ball is large enough to encompass all the fibrous feeding roots necessary to ensure successful recovery and development of the plant. The minimum sizes of balls, ball depth, and diameters, and increased ball sizes for collected stock shall conform to recommended balling and burlapping specifications, in the current edition of the American Standard for Nursery.

632.2.2.9.4 Balled and Potted Stock (B&P)

- (1) If furnishing plant stock B&P, furnish plants dug from the growing site with the roots contained in a compact unbroken ball of earth and placed in a plantable fiber container. The size and shape of the earth ball shall conform to the approximate size and shape of the container. Place the stock in the container so that the plant root collar is approximately one inch below the top of the container. Fill all voids at potting time with native soil. The minimum ball size shall equal the ball size for B&B stock in the current American Standard for Nursery Stock for the plant specified.

632.2.2.9.5 Container Grown Stock (CG)

- (1) If furnishing plant stock CG, furnish well-rooted stock established in containers. This means that when the container is removed the root soil mass shall retain its shape but shall not have grown in the container long enough to become container bound. Use sufficiently rigid containers that retain their shape and protect the plant root system during shipping and handling. For container size, conform to the specifications for CG stock as stated in the current edition of the American Standard for Nursery Stock.

632.2.2.9.6 Machine Transplanted Stock (MT)

- (1) For plants furnished or transplanted as MT stock, the contractor shall move plants from the growing site to selected sites within the right of way using a tree-transplanting machine. Use a machine capable of

digging and removing from the ground an unbroken mass of earth of the specified size and shape. It shall also lift and transport the mass of earth supporting the specified size plant and containing its roots in an undisturbed condition. The machine shall hold the soil mass and roots in the undisturbed condition until the tree is lowered into position in a planting hole pre-dug by the same machine.

632.2.3 Backfill Material

632.2.3.1 Compost

- (1) Provide an engineer-approved standard commercial compost of cattle, sheep, or poultry manure or other organic material.

632.2.3.2 Peat Moss

- (1) Peat moss shall consist of at least 75 percent of partially decomposed stems and leaves of sphagnum, hypnum, polytrichum, and other mosses in which the fibrous and cellular structure is still recognizable. Provide peat moss that is brown to black in color and nearly free of decomposed colloidal residue, wood, and other foreign matter. The engineer will not accept humus peat. Peat moss shall have the following characteristics:
 - 1. Moisture content shall not exceed 60 percent by weight.
 - 2. Ash content shall not exceed 20 percent, based on the oven dry weight of the material.
 - 3. The pH value shall not exceed 7.0 or be less than 3.2 at 77 F.
 - 4. Water holding capacity shall at least equal 400 percent, by weight, on an oven dry basis.
- (2) Upon request, the contractor shall furnish the engineer with a representative sample of peat moss for testing according to the Federal specification Q-P-166e for peat moss, peat humus, and peat reed-sedge.
- (3) The contractor shall furnish the engineer with a certificate stating the type of peat moss, the brand name and the country or place of origin. If packed in bales and if using bale size to determine quantities for mixing, the certificate shall also contain the cubic feet of compressed bale size, the compression ratio, and the approximate weight of the bales. The engineer will not require a certificate if this information is marked on the bales.

632.2.3.3 Topsoil

- (1) For topsoil, conform to the topsoil specified in [625.2](#) and to the gradation requirements specified in [625.3.3](#).
- (2) Salvage topsoil from the plant hole excavation if it conforms to the above requirements. The contractor may use the sod from the plant hole excavation for backfill, together with topsoil, provided it is thoroughly broken into small pieces and used in limited quantities near the bottom of the plant hole in a way that does not place it in contact with the small feeder roots.

632.2.3.4 Planting Mixture

- (1) The planting mixture consists of a blend of peat moss, topsoil, and sand in a ratio of 1:1:1 by volume. Blend fertilizer into the mixture at the rate of 4 pounds of fertilizer to each cubic yard of mixture.
- (2) The peat moss shall conform to [632.2.3.2](#) and topsoil to [632.2.3.3](#). and have 100 percent passing a 3/8-inch sieve. Obtain the engineer's approval for the sand.

632.2.4 Fertilizer

- (1) Fertilizer shall conform to [629](#) and to the following:

632.2.4.1 Fertilizer for Planting Mixtures

- (1) Unless specified otherwise, use a superphosphate fertilizer conforming to the following minimum requirements:

Nitrogen	0%
Phosphoric Acid.....	20%
Potash	0%

632.2.4.2 Fertilizer for Plant Holes

- (1) For fertilizer used in plant holes, provide water soluble fertilizer contained in a micropore slow release polyethylene packet. Each packet shall contain a minimum of one ounce of fertilizer.
- (2) The fertilizer shall conform to the following minimum requirements:
 - Nitrogen, not less than..... 16%

Phosphoric Acid, not less than	8%
Potash, not less than	16%

632.2.4.3 Fertilizer for Wood Chip Mulch

- (1) If using fertilizer on areas receiving wood chip mulch, use a slow release ureaform fertilizer having at least 38 percent nitrogen.

632.2.5 Water

- (1) Provide water that is free from impurities or substances that might injure the plant.

632.2.6 Mulch

- (1) Mulch, if specified, consists of shredded bark, wood chips, peat moss, or other suitable material, that is substantially free of noxious weed seeds and objectionable foreign material. Wood chips are the type obtained from any standard wood or brush-chipping machine. Obtain the engineer's approval for the type of mulch used.

632.2.7 Wrapping

- (1) Wrapping, if specified, consists of a 2-ply waterproofed crepe tree wrapping paper, laminated with a layer of pliable asphaltic material.

632.2.8 Wound Dressing

- (1) Wound dressing, if required, consists of asphalt base tree paint or other acceptable material suitable for applying by brushing, or spraying on bruised or cut surfaces of plants.

632.2.9 Rodent Protection

- (1) Rodent protection consists of aluminum or other metal commercial window screening material.

632.2.10 Bracing and Guying Materials

- (1) If specified, these materials consist of the wood or steel stakes, wire, soft rope or straps, turnbuckles, and other material needed to perform the work. Provide stakes of solid durable wood approximately 2 inches by 2 inches and of the required length, except that the contractor may use engineer-approved steel posts of the required length for bracing stakes.
- (2) For trees of 4 inches or less in diameter use a good quality 11 or 12 gauge diameter steel wire and 9 or 10 gauge diameter steel wire for trees over 4 inches in diameter. Use a suitable turnbuckle for adjusting the wire tension with the larger wire.

632.2.11 Anti-Desiccant

- (1) Anti-desiccant, if specified, shall consist of an engineer-approved emulsion that provides a film over plant surfaces permeable enough to allow transpiration.

632.2.12 Vegetation Control Herbicide

- (1) Vegetation control herbicide, if specified, consists of a post-emergence herbicide that, if applied to leaves and stems of vegetation, is absorbed and translocated to all parts of the plant including roots and underground stems and is by this means capable of killing the entire plant. Provide a water-soluble herbicide that deactivates on contact with soil, and leaves no harmful residue.

632.2.13 Selective Pre-emergence Herbicide

- (1) The selective pre-emergence herbicide, if specified, shall control plants emerging from seed, but have no harmful effect on established plants if applied at recommended rates. The material shall resist leaching and remain effective throughout one growing season. Provide the selective pre-emergence herbicide in liquid or wettable powder form.

632.2.14 Weed Barrier Fabric

- (1) Furnish geotextile fabric for weed barrier conforming to the following:

TEST	METHOD	VALUE
Minimum weight	ASTM D3776	0.328 oz/ft ²
Minimum grab tensile strength	ASTM D4632	80 lb
Minimum apparent breaking elongation	ASTM D4632	45%
Minimum puncture strength	ASTM D4833	35 lb
Minimum trapezoid tear strength	ASTM D4533	27 lb
Maximum apparent opening size	ASTM D4751	No. 40 sieve

- (2) The geotextile fabric, if specified, consists of a material that allows moisture and air permeability, but prevents the growth of weeds and grasses. The fabric shall consist of non-woven polyester, polypropylene, stabilized nylon, polyethylene, or polyvinylidene chloride. All shall have the minimum strength values in the weakest principal direction.
- (3) The contractor shall not use a needle punched non-woven material geotextile fabric.

632.2.15 Equipment

- (1) The contractor shall provide sufficient watering equipment, including tanks, pumps, hoses, and accessories to fully perform all the watering required for care in [632.3.19](#). The contractor shall determine the capacity and adequacy of this equipment based on supplying approximately 20 gallons of water per large tree, 10 gallons per small tree, 5 gallons per shrub, and 2 1/2 gallons per vine or sumac plant for each required watering. Provide a source of water capable of supplying the foregoing amounts.

632.3 Construction

632.3.1 General

- (1) The normal spring planting season for all plants shall extend to June 1. The normal fall planting season for all plants except evergreens begins on October 1. Perform fall evergreen planting between September 1 and October 1. Unless approved otherwise, the contractor shall not plant if the ground is frozen or if the soil is unsatisfactory for planting. The contractor shall not plant if the temperature is below freezing unless protecting the plant roots to prevent damage.
- (2) Do not drag, lift, or pull balled and burlapped plants by the trunk, branches, or foliage. Do not drop or handle in any manner that damages the ball or the plant.

632.3.2 Delivery and Temporary Storage

- (1) At least 3 days before each delivery of plant material to the holding or project site, the contractor shall notify the engineer of this delivery.
- (2) If possible, plant the plants on the day of delivery at the project site. If this is not possible, temporarily store the plant stock by heeling-in or by placing in a well-ventilated, cool, moist storage place and adequately protect against drying by using moist sphagnum moss, straw, or other suitable covering around the roots of BR stock and the balls of B&B stock.
- (3) Space all plants growing in pots or containers to provide for air circulation and reasonably unrestricted top spread. Water and otherwise care for potted and container-grown plants as necessary to keep them in a healthy growing condition while in storage.
- (4) If heeling-in, place bare root plants in a spade depth trench, fully cover their roots with damp topsoil, and protect from the sun and wind. The contractor shall properly care for all heeled-in plants. Plants shall not remain heeled-in from one planting season until the next.

632.3.3 Layout of Planting

- (1) Unless specified otherwise, the engineer will stake out the location of plant holes or beds.

632.3.4 Excavation of Plant Holes

- (1) Center the plant holes at the location stake, unless the engineer allows otherwise.
- (2) Excavate the plant hole, except for MT stock, to at least the minimum dimensions the plant data chart included in the plans show or as the engineer directs. However, the minimum diameter of the plant hole must be at least twenty-four inches greater than the diameter of the ball, container, or roots, for the full depth of the plant hole. The depth of hole shall equal the height of the ball, pot, or container, so that the plant root collar is at ground level when the plant is in its final position and resting on undisturbed ground. Except, if placing the plant in heavy soils, then make the hole deep enough so that the plant root collar is 2 inches above the ground level after planting.
- (3) Unless soil conditions make it impossible, dig the planting holes for MT plants by the tree-moving machine and make them approximately the same size and shape as the soil mass containing the root system of the machine moved plant.
- (4) Keep the sod and topsoil suitable for backfilling separate from the excavated subsoil.
- (5) If planting on a slope, measure the minimum depth of the plant hole from the downward side of the slope at the hole.

- (6) If it is necessary to suspend planting operations until the following planting season, backfill any open plant holes before suspending the work.

632.3.5 Pruning

- (1) Perform pruning according to ANSI A300 standard practices for tree care operations-tree, shrub, and other woody plant maintenance. Prune so that the plant retains its natural form. Make all cuts immediately above the bark ridge and branch collar to leave the ridge and collar intact for healing. The contractor shall not prune evergreen plants except to remove dead or broken branches, or multiple leaders. Treat cut surfaces on oak trees as specified for cut surfaces and abrasions in [201.3](#).
- (2) Cut off smoothly the bruised or broken parts of large or fleshy roots and branches dead, broken, or damaged otherwise, before planting. Perform all other pruning near the end of the plant establishment period in mid-to-late August, but before the final inspection. Unless specified otherwise, or the engineer directs, prune deciduous trees by removing branches that compete with the dominant central leader, and thin all deciduous plants as necessary to improve the branch structure of the plant.

632.3.6 Anti-Desiccant

- (1) If specified, apply anti-desiccant to evergreen plants before or at the time of planting, and to BRP plants before shipping from the storage place. Apply it to plants being transplanted before they are transplanted. Apply the emulsion at the rate and method the manufacturer recommends.

632.3.7 Planting

- (1) Plant all BR, B&B, BRP, B&P, CG, and MT plants, unless directed otherwise, according to the method specified below. If possible, protect BR plants against drying by keeping the roots covered with a canvas or other suitable covering until planted.
- (2) Place the plant in the plant hole with its most desirable face towards the most prominent view and hold it in a vertical position. Spread the roots of BR plants to their approximate natural position and prune as required. Place B&B plants while in their wrapped ball. Move and handle only by the ball. Set the plant so that, after settling, the plant root collar is at or 2 inches above the surrounding ground level, as specified above in [632.3.4](#).
- (3) Unless specified otherwise, backfill the plant hole with topsoil composed of 6 parts soil to one part compost by volume. Place this soil compost mixture in layers around the roots or ball. Carefully tamp each layer in place in a way that avoids injuring the roots or ball or disturbing the plant position. Remove the burlap and other wrapping materials from the top one-half of B&B plants. Once approximately 2/3 of the plant hole is backfilled, fill the hole with water and allow the soil to settle around the roots. After the water is absorbed, fill the plant hole with topsoil and tamp lightly to grade. Bring any settlement to grade with the topsoil.
- (4) Fill holes made for MT plants to about 1/2 the hole depth with slurry made from a 1:1 mixture of water and compost by volume. Place the slurry in the hole just before placing the tree in the hole. After removing the machine, backfill any voids remaining with topsoil. To facilitate watering, auger vertical holes around the periphery of the tree just inside the ball limits. Space the holes equally a maximum of 4 feet apart. Make each hole deep enough and large enough to accept a perforated pipe 42 inches long with a 2 inch inside diameter. Insert the perforated pipes into the holes immediately after augering. Make the top of the pipe flush with the top of the mulch once in its final position. Leave the pipes in place after the tree is established.
- (5) After the plantings are in place at least 2 days, but not more than 5, inspect the plantings. Adjust plant depth and plumb as necessary, and place all additional required backfill. During the inspection period, thoroughly water all inspected plants and remove all twine or rope and labels attached to trunks or branches.

632.3.8 Fertilizing

- (1) Use fertilizer, if specified, as follows:

632.3.8.1 Fertilizer for Planting Mixtures

- (1) Add fertilizer to the planting mixtures in a way that uniformly incorporates it at the rate of 4 pounds of fertilizer per cubic yard of mixture.

632.3.8.2 Fertilizer for Plant Holes

- (1) Uniformly space the number of packets specified on the plans in each plant hole around the outside of the plant hole during backfilling. Place the packets as the planting detail sheet shows after partially completing the backfilling. Place them at least 6 inches below the final grade of the backfill material.

- (2) If specified for MT plants, equally space the packets around the hole in niches dug into the plant hole wall between 9 and 18 inches below the soil surface.

632.3.8.3 Fertilizer for Wood Chip Mulch

- (1) If specified, uniformly spread fertilizer for wood chip mulch over the mulch, or soil surfaces to be mulched, at the rate of 4 pounds per 1000 square feet.

632.3.9 Mulching

- (1) Place approximately 3 inches of mulch, if specified, over the backfilled plant hole or plant bed within the specified area after performing all necessary backfilling and adjustment, unless specified otherwise. Pull mulch back 3 to 6 inches from tree trunk. Place mulching material within 5 days of the second watering required for planting under [632.3.7](#). Ensure areas receiving mulch are free of living weeds and grasses before applying mulch.

632.3.10 Vegetation Control Herbicide

- (1) If specified, apply vegetation control herbicide according to manufacturer's instructions to unwanted weeds and grasses and in plant bed areas as the plans designate. Allow a minimum of 10 days between the application and seeding or digging. The engineer may require mowing the areas before treating, or may vary the above requirements to obtain the best results if in the engineer's judgment temperature, rainfall, and other conditions warrant this action. The contractor may use the herbicide to control or destroy weeds and grasses in other mulched areas at the contractor's discretion with the engineer's approval.

632.3.11 Selective Pre-Emergence Herbicide

- (1) Apply selective pre-emergence herbicide, if specified, according to manufacturer's instructions for surface application to plant bed areas the plans show just before applying the mulch.

632.3.12 Wrapping

- (1) If wrapping is specified, wrap the tree trunks with wrapping material overlapping 1 1/2 inches, wound from the ground line to the lowest main branches. Secure the wrapping in at least 3 places, including the top, middle, and bottom, with a biodegradable tie or tape. Wrapping plants as soon as practicable after planting.

632.3.13 Rodent Protection

- (1) If required, apply the materials specified in [632.2.8](#) for rodent protection to the plants. Place rodent protection material around each tree trunk, with the bottom of the material resting on the soil surface, and the top a minimum of 4 feet above the surrounding earth surface, or up to the lowest branches on small trees. Wrap the rodent protection loosely around the tree trunk and staple to itself with 3 rows of staples. Space the staples within each row at maximum 6 inch intervals along the seam.

632.3.14 Bracing

- (1) If specified, brace trees with a stake driven into the ground near the base of the tree to a depth of 2 or 3 feet, or until sufficiently solid to support the tree. Stakes shall extend upward to about 6 inches below the lowest main branches. Fasten the tree to the stake using a soft rope or strap in a way that avoids injuring the tree. Allow 1 to 3 inches of movement by the trunk.

632.3.15 Guying

- (1) If specified, guy the trees with 3 wires whose upper ends are attached to soft ropes or straps that encircle the tree trunk, just above the lowest main branches of deciduous trees and at a point above the ground line of 2/3 the height of evergreen trees. Anchor the lower ends to stakes set in the ground around the tree, equal distance apart and at a distance from the tree of approximately 3/4 the distance from the ground to the upper point of fastening. Notch the anchor stakes to prevent the wire from slipping and drive them into the ground, at a slight angle away from the tree, to a depth of 18 inches or more until solid. Stakes shall extend 3 inches above the ground.
- (2) Draw the wires taut to equal tension by twisting or using turnbuckles, and fasten securely, with the trunk of the tree remaining in a vertical position. Allow 1 to 3 inches of movement by the trunk.

632.3.16 Disposal of Excess and Waste Material

- (1) Remove and dispose of all excess excavation, waste materials, or other debris.

632.3.17 Weed Barrier Fabric

- (1) Place geotextile fabric on areas the plans show or the engineer designates before placing the mulch. Lay the fabric flat on the smoothed soil and fit as close to the plants as possible. Provide a 4-inch overlap at

adjoining sheets. On all slopes, secure the fabric with T-shaped steel pin anchors sufficiently long to prevent the fabric from moving.

632.3.18 Establishing and Replacing Plants

632.3.18.1 Plant Establishment Period

632.3.18.1.1 General

- (1) A plant establishment period of 2 years shall follow the completion of planting, unless the special provisions specify a one-year period.

632.3.18.1.2 Two Growing Season Plant Establishment Period

- (1) The plant establishment period shall extend until October 15 of the second full growing season.

632.3.18.1.3 One Growing Season Plant Establishment Period

- (1) The plant establishment period for material planted in the spring shall extend until October 15 of the same year. If planting in the fall, extend this period until October 15 of the succeeding year.

632.3.19 Landscape Planting Surveillance and Care

632.3.19.1 General

- (1) Properly care for all plants from the time of planting until final acceptance of the work.
- (2) Proper care of plants consists of watering, weeding, cultivating, pruning, spraying, tightening braces and guys, retying wrapping, re-mulching, and other work necessary to keep the plants in a neat appearance and healthy growing condition. Between May 15 and October 15, in addition to watering required for planting under [632.3.7](#), water completely at a 10-day to 14-day interval defined as a care cycle. Care cycle length can be extended beyond 14 days if weather and soil moisture conditions allow. The engineer may order additional watering at any time during the plant establishment period if conditions require.
- (3) Water each plant hole sufficiently at each watering to keep the topsoil backfill material in a moist condition and to keep the plant in a healthy growing condition.
- (4) Remove and dispose of all evergreens and deciduous trees that die during the course of the plant establishment period as their dead condition becomes evident.
- (5) Keep all mulched areas free of all vegetation, except the specified plants, by hoeing, hand weeding, or by using herbicides if the engineer approves.
- (6) String all vines to fences and direct runners toward retaining walls or structures during the plant establishment period.
- (7) Apply pesticides as required to control insects and diseases and to keep the plants in a healthy condition.
- (8) Replace all plants that die or show evidence of dying during the plant establishment period at the earliest appropriate planting time after this condition becomes apparent. The engineer will allow replacements until June 1 of the year in which making the final inspection.
- (9) Remove and dispose of all bracing and guying materials after the final inspection of the plantings.
- (10) Provide one person, called the care specialist, responsible for inspecting and performing the required care. Also provide other personnel, vehicles, equipment, tools, and materials needed to accomplish the inspection and care. Have the care specialist do the following:
 1. Perform care requirements to the satisfaction of the engineer a minimum of once every two weeks.
 2. Notify the engineer at least two days before the beginning of each care cycle.
 3. Submit a written report to the engineer after each care cycle. Ensure that the report documents the work performed during the care cycle; the number, type, and location of each plant that was removed or marginal; and other information the engineer or the specialist deems appropriate.

632.3.19.2 Damages for Failing to Perform

- (1) If the care specialist fails to perform any of the required care cycles as specified [632.3.19.1](#), the department will assess daily damages in an amount the special provisions specify to cover the cost of performing the work with other forces. The department will assess these damages for each day the requirements of the care cycle remain incomplete, except when the engineer extends the required time period.

632.3.20 Acceptance or Replacement of Plant Material

- (1) Near the end of the applicable plant establishment period, but not later than September 15, the engineer will make final inspection of the planting and approve only those plants in a healthy growing condition and conforming to the following minimum requirements:
 - Plant sizes and standards shall adhere to the American Standards for Nursery Stock.
 - All plants are the species specified unless the engineer approves changes. Conform to [632.3.19](#), for proper care of plants.
 - Deciduous trees shall exceed the minimum size of the specified size range and shall have fully matured, average-sized, healthy leaves distributed throughout the branch system as is typical of the species.
 - Deciduous shrubs shall exceed the requirements of the specified size range and have mature, average-sized leaves typically distributed throughout the branch system.
 - Deciduous vines shall have the required number of runners, each exceeding the minimum required length.
 - Evergreens shall exceed the minimum size of the specified size range and all coniferous types shall have fully developed, mature needles, and average-sized buds on current season's growth.
- (2) Remove and replace plants not conforming to the above requirements with satisfactory plants during the current fall planting season or, the engineer may allow them to remain in place. Use the same materials and method of replacement planting specified for the original planting.
- (3) Replacing plant materials shall not extend the plant establishment period.

632.3.21 Contract Time

- (1) The department will not charge contract time during the plant establishment period or when making replacements, unless other contract operations are in progress during the same period.

632.4 Measurement

- (1) The department will measure the Trees, Shrubs, and Vines bid items by the number of plants of each species, variety, and size acceptably completed.
- (2) The department will measure Landscape Planting Surveillance and Care Cycles as each individual care cycle the care specialist acceptably completes.

632.5 Payment

632.5.1 General

- (1) The department will pay for measured quantities at the contract unit price under the following bid items:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
632.0101	Trees (species, root, size)	EACH
632.0201	Shrubs (species, root, size)	EACH
632.0301	Vines (species, root, size)	EACH
632.9101	Landscape Planting Surveillance and Care Cycles	EACH

- (2) Payment for the Trees, Shrubs, and Vines bid items is full compensation for providing, transporting, handling, storing, pruning, placing, and replacing plant materials; for excavating all plant holes, salvaging topsoil, mixing, and backfilling; for providing and applying all required fertilizer, weed barrier fabric, mulch, water, wrapping, guys and braces, rodent protection, herbicides and anti-desiccant spray; for removing guys and braces; and for disposing of all excess and waste materials. Payment for the Topsoil bid item used in planting will be as specified in [625](#).
- (3) Payment for Landscape Planting Surveillance and Care Cycles is full compensation for all the work required under this bid item. The department will assess damages under the Failing to Perform Landscape Surveillance administrative item for failing to perform the required surveillance and care as specified in [632.3.19.2](#).

632.5.2 Payment Schedule

- (1) The department will pay the contract value of the work to the contractor according to the following schedule:
 1. Each time an item or portion of an item is acceptably completed, except for care as specified in [632.3.19](#), the department will pay 65 percent of the contract value of the work for contracts containing a 2 growing season plant establishment period; and the department will pay for 80 percent of the contract value of the work for contracts containing a one growing season plant establishment period.

2. For contracts with a 2 growing season establishment period, each time an item or portion of an item acceptably completes one growing season, including care, and is satisfactory otherwise, the department will pay an additional 15 percent of the contract value of the work. If an item or portion of an item completes the second growing season, including care, and is satisfactory otherwise, the department will pay the final 20 percent of the contract value of this work.
 3. For contracts with a one growing season establishment period, each time an item or portion of an item completes the growing season, including care, and is satisfactory otherwise, the department will pay the final 20 percent of the contract value of this work
- (2) The department will make final payments upon final acceptance and completion of all work required under the contract.

632.5.3 Reduced Payment

- (1) The department will pay for plants that do not conform to [632.3.20](#) but that the engineer allows to remain in place, at 65 percent of the contract unit price for contracts containing a 2 growing season plant establishment period, and at 80 percent of the contract unit price for contracts containing a one growing season plant establishment period.