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## **PLANT INSTALLATION (OAKDALE 2571)**

### **PART 1 GENERAL**

#### **1.01 SUMMARY**

- A. Section Includes:
  - 1. Protecting existing trees and shrubs.
  - 2. Furnishing and planting trees.
- B. Method of Measurement:
  - 1. No measurement will be made for protecting existing trees and shrubs.
  - 2. Furnishing and Planting Trees:
    - a. Measure as a unit for each size and variety acceptably planted.
- C. Basis of Payment:
  - 1. Protecting existing trees and shrubs, including all necessary materials and labor, shall be incidental.
  - 2. Payment for acceptable quantities of furnished and planted trees includes:
    - a. Furnishing and planting the materials as specified.
    - b. Furnishing and installing planting soil, mulch, material, protective materials and other specified materials.
    - c. Plant maintenance and replacement until acceptable.
    - d. Disposal of all excess excavated material.
    - e. Restoration in kind.
  - 3. Payment for acceptable quantities of furnishing and planting trees shall be at the Contract Unit Price as listed on the Bid Form. All associated work items not otherwise compensated shall be considered incidental.
  - 4. All costs of plant establishment work shall be at the Contractor's expense, including the costs of any replacement materials required.

#### **1.02 REFERENCES**

- A. MnDOT 2571 – Plant Installation
- B. MnDOT 3877 – Select Topsoil Borrow
- C. MnDOT 3880 – Peat Moss
- D. MnDOT 3881 – Fertilizer
- E. MnDOT 3882 – Mulch, Type 6
- F. MnDOT 2101 – Clearing and Grubbing

## **PART 2 MATERIALS**

### **2.01 MATERIALS**

A. Nursery Plant Stock – In accordance with MnDOT 3861:

<b>Common Name</b>	<b>Botanical Name</b>
Red Oak	Quercus Rubra
Swamp White Oak	Quercus Bicolor

B. Growing Medium Materials:

1. Select Topsoil Borrow – In accordance with MnDOT 3877.
2. Peat Moss – In accordance with MnDOT 3880.
3. Fertilizer – In accordance with MnDOT 3822.
4. Mulch, Type 6 – In accordance with MnDOT 3882.
5. Water – Shall be suitable for human consumption.

C. Wound Dressing:

1. Shellac
2. Asphalt – Base tree paint.

D. Tree Wrapping:

1. Two-ply asphalt cement crepe paper furnished in strips.

## **PART 3 EXECUTION**

### **3.01 INSTALLATION**

A. General:

1. Plant trees in areas as directed by Engineer.
2. Install and maintain plants only with an experienced crew under direct supervision of a qualified nurseryman or landscape specialist.
3. Transplant only under favorable weather and soil conditions as approved by the Engineer.

B. Protecting Existing Trees and Shrubs:

1. Take all necessary measures, including temporary fencing, and minimize construction activity around existing trees and shrubs to ensure survival.
2. Cut existing roots only with sharp and appropriate cutting tools.
3. Prune back all existing growth in proportion to amount of roots removed. Pruning shall be accomplished under direct supervision of a qualified nurseryman or landscape specialist and as detailed in the Plans.
4. Dress all wounds immediately and as detailed in the Plans.

C. Delivery and Storage of Plants:

1. Install plants on day of delivery to project.
2. Cover all plant roots until planting with a moisture holding material such as straw, sawdust, moss or soil.

3. New plantings shall be balled and burlapped.

D. Preparing Plant Holes:

1. Center holes at staked locations.
2. Dig holes as detailed in the plans.
3. Install draitile as shown in plan details in heavy clay or impervious soil as directed by the Engineer.
4. Rototill or aerate any planting soil compacted by operations.

E. Planting Soil Preparation:

1. Prepare soil in the following proportions:
  - a. Four parts select topsoil borrow by volume.
  - b. One part peat moss by volume.
  - c. Three pound per cubic yard of 12-12-12 analysis fertilizer.
2. Mix until thoroughly blended.

F. Top Growth and Pruning:

1. Prune all bare roots and top growth.
2. Remove all dead, rubbing, damaged or diseased branches.
3. Prune trees to give tree a uniform and symmetrical appearance.
4. Leave ladders intact while removing all stubs.
5. All pruning shall be done immediately prior to planting as directed by the Engineer.

G. Plant Installation:

1. Install plants plumb as shown in the plan details.
2. Protect root system while placing and compacting backfill.
3. Loosen all burlap and remove all wire to expose entire top of root ball.
4. Plant bare root plants on compacted soil and backfill leaving no air voids around roots.
5. Install plants from containers immediately after removing from container and spreading roots in a natural position.
6. Stake trees as shown in the plan details.

H. Watering and Mulching:

1. Water each plant within two hours of planting.
2. Water to thoroughly saturate all planting soil.
3. Bring planting soil to specified level within five days of initial watering, and saturate additional soil.
4. Place mulch within 48 hours of second watering, and as detailed in the plans.
5. Water all plants thoroughly at least once per week until the work is accepted.

I. Wrapping:

1. Wrap all trees from the ground to the first major branch.
2. Apply wrap at end of growing season and remove prior to the following growing season.

J. Disposal of Excavated Materials:

1. Disposal of all excess excavated materials is the responsibility of the Contractor.

K. Cleanup and Restoration:

1. Collect and dispose of all excess materials, packaging and containers.
2. Restore or replace in kind all turf or other facilities damaged by Contractor's operations.

L. Plant Establishment Period:

1. Maintain the work and care for plants installed as necessary until the end of the plant establishment period, which shall be one calendar year from date of final job acceptance.
2. Maintenance includes:
  - a. Keeping all plants in healthy growing condition.
  - b. Maintaining adequate, but not excessive soil moisture at all times.
  - c. Repairing or replacing as necessary tree wrapping, staking and guying, mulch material and planting soil.
  - d. Removing all weed growth in and 3 feet around all mulched areas.
  - e. Applying insecticide spray as necessary.
  - f. Furnishing and installing replacement plants as needed, including new mulch and planting soil.
  - g. Keep all plants upright.
  - h. The Contractor will be held responsible for all plants lost due to acts of vandalism, theft and rodent damage.

M. Acceptance of Work:

1. Engineer will inspect project at the end of the plant establishment period and notify Contractor of any defects.
2. Contractor will replace all defective work immediately on or at the beginning of the next planting season if directed by the Engineer.
3. Only plants with one full growing season (June 1 to October 1) of care will be subject to acceptance.
4. No payment will be made for unacceptable plantings.

**END OF SECTION**