

DESCRIPTION

This work shall consist of controlling identified invasive species by: pulling, excavation, and/or applying herbicides to control their spread and/or regrowth as specified in the contract documents or as directed by the Engineer (EIC). Additional information about methods, locations and species is in the Special Note titled: “*Controlling Invasive Plants*” included in the contract documents.

MATERIALS

Four (4) mil Polyethylene Sheeting for disposal of spoil material containing seeds and roots.

Bags: Four (4) mil Polyethylene bags.

Geotextile fabric: Drainage class B and Strength class 2

Power washer (1000 psi minimum)

Herbicide: Dependent on target species; glyphosate, triclopr, imazapyr, dicamba based herbicide or equivalent water-soluble, non-selective foliar applied herbicide having no residual soil activity and conforming to Section 713-13. In some situations the addition of a pre emergent such as sulfometuron methyl, or metsulfuron may be necessary. Herbicides shall be approved by the Regional Construction Environmental Contact (CEC) prior to use.

[See species specific treatment option for which chemical to use.]

CONSTRUCTION DETAILS

Season. The work shall be performed during the season(s) specified in the contract documents.

Site Preparation - See the Special Note titled: “*Controlling Invasive Plants.*” for site specific recommendations based on invasives present on location.

Three methods are described:

1. By Pulling.

- a. Hand or mechanically pull all stems and associated roots within the designated areas shown and at the times specified in the Contract Documents.
- b. All cut plant parts shall be carefully placed in heavy black plastic bags and tightly secured before moving them off-site or as specified in the contract documents.
- c. Care shall be taken in pulling stems to remove as much of the root mass as possible.
- d. Some supplemental digging may be required.
- e. Exposed soil resulting from the method of removal shall be covered under item 610.0203, Seeding and mulch.

2. By Excavation.

- a. Mechanical methods may be used to remove plant material.
- b. A removal perimeter should be established no less than two times the average height of the adjacent plants to be removed.
- c. Excavation shall extend a minimum of 600 mm (24 inches) below the last part of the root mass.
- d. Material should be transported according to **“Disposal of Material.”**
- e. Excavation which changes drainage grade significantly will be paid under item 203.51, backfill. Item 613.xx may also be required if specified in the contract documents.
- f. Exposed soil resulting from the method of removal shall be covered under item 610.0203, Seeding and mulch.

3. Using Herbicides.

Requirements. The herbicide applicator shall be a NYS Department of Environmental Conservation (NYSDEC) Certified Commercial Pesticide Applicator. Herbicide application shall be accomplished by hand-sprayer, back pack, wick application, stem injection or herbicide clippers. Broadcast herbicide applications are not allowed except as specified in the contract documents. The contractor shall abide by the special notes and provisions contained in the contract documents. The contractor shall abide by any and all environmental and other permits necessary to complete the work. Refer to the Special Note titled: *“Controlling Invasive Plants”* for specific herbicides for each invasive species to be controlled.

Any changes to specifications must be preapproved by the CEC. Follow all conditions, cautions, and directions as specified by the manufacturer. Applicators must follow all rules and regulations regarding notification. The CEC shall send a notification email to Regional Traffic Operations Center (RTOC) by 3pm the Thursday prior to spraying for inclusion on the Herbicide Hotline [1-877-201-8762]. The email will contain the location (ie, ROW on route X between Y and Z), species to be sprayed and chemicals to be used.

LIABILITY.

When the EIC determines that the identified invasive species have not been satisfactorily eliminated as specified under **CARE OF CONTROLLED AREAS DURING CONSTRUCTION** and **PERIOD OF DISESTABLISHMENT FOR INVASIVE PLANTS**, the Contractor shall repeat the above-specified steps until the target invasive plant species is satisfactorily eliminated in the identified areas. Any areas requiring additional treatments, as determined by the EIC will be at the Contractor’s expense. The contract will not be accepted until satisfactory elimination of the targeted invasive plants has been achieved.

DISPOSAL OF MATERIAL.

Proper disposal of harvested invasive plant parts and soil containing invasive plant seeds or root or rhizomes is essential to controlling the spread of invasive plants. Cut plant material shall be placed in 4 mil, or thicker, plastic bags for transportation out of the area. Bags shall be securely tied or sealed. Soil containing seeds, roots and or rhizomes must be wrapped in plastic sheeting and transported in a manner which prevents the spread of the spoil material during transport. Acceptable disposal methods can be one of the following:

- *Compost* - Store plant material in securely tied or sealed 4 mil or thicker, plastic bags on asphalt with full to partial sun exposure until the plant material is liquefied. Once liquefied the bags can be landfilled or emptied and the liquefied material washed off of the asphalt using clean water.
- *Landfill* - Cut and bagged plant material or spoil material containing invasive plant material can be disposed of in a municipal solid waste management facility that is operated under current 6 NYCRR Part 360 regulations.
- *Bury* - Spoil material containing invasive plant material can be buried in an excavated pit covered with woven geotextile and covered with at least three feet of uncontaminated fill material (i.e.: embankment in place, or topsoil). Spoil material containing invasive plant material cannot be buried in or within 30m of a water body (including wetlands).

The Contractor shall supply the EIC in writing with the name and address of the facility or burial area in which the weed infested soils are to be disposed. Stockpiling or composting at a DOT Residency may occur only with prior permission of the Resident Engineer. The soil shall not be disposed of at any on-site or off-site wetland or protected adjacent area. The EIC shall approve the facility or burial area before any soil excavation is undertaken.

EQUIPMENT CLEANING.

All clothing, boots, and equipment used in areas containing invasive plant species shall be power washed (1000 psi minimum) prior to entering the site and prior to leaving the site to prevent the spread of seeds, roots, or other viable plant parts. All spray water must be contained until filtered using an approved geotextile fabric meeting Drainage class B and Strength class 2. Loose material that has been removed from clothing, boots, or equipment shall be bagged or buried as described in **“Disposal of Material.”**

CARE OF CONTROLLED AREAS DURING CONSTRUCTION.

Care shall consist of keeping the areas free of invasives, cutting and treating new sprouts, pulling, digging, or respraying newly emergent invasive plants. Inspection of all treated areas will continue approximately every four (4) weeks during the growing season (May 1 – September 16) or the following growing season for fall applications, or until the EIC and CEC deem the invasive species to be satisfactorily eliminated. If additional herbicide treatments are necessary, the contractor will be required to apply herbicide to all areas identified by the EIC and/or CEC within 5 days of notification. The Contractor shall care for the controlled areas of invasive plants until final acceptance of the contract or as required under **“Period of Disestablishment for Invasive Plants”**.

ITEM 615.0305 04 - CONTROLLING INVASIVE PLANTS

PERIOD OF DISESTABLISHMENT FOR INVASIVE PLANTS

The period shall begin after the satisfactory completion of all invasive species control methods and last for one additional year or until the contract is complete, whichever is later, as confirmed in writing by the EIC. The Contractor shall be required to continue the work specified under “**Care of Controlled Areas during Construction**” for this period.

METHOD OF MEASUREMENT

Controlling invasive plants will be measured as the number of square meters of surface area initially treated according to the EIC and /or CEC.

BASIS OF PAYMENT

The unit price bid per square meter shall include the cost of all labor, materials and equipment, including disposal, and incidentals necessary to complete the work. Payment shall be made 50 percent (%) of bid at completion of initial treatment, (up to the last step of methods 1, 2, 3,) as shown in the Construction Details above; or for method 4, Using Herbicides, up to step c for each species as noted in the Special Note: “*Controlling Invasive Plants.*” The remaining 50 percent (%) of the bid shall be paid at the end of the Period of Disestablishment provided the results are satisfactory.

Payment will be made under:

Item No.	Item	Pay Unit
615.03020004	Controlling Invasive Plants with Herbicides	Square Meter
615.03030004	Controlling Invasive Plants by Pulling	Square Meter
615.03040004	Controlling Invasive Plants by Excavation	Square Meter

The following items of work will be paid under their respective pay items:

- a. Necessary backfill material. Item No. 203.51**
- b. Seeding and mulching of disturbed areas. Item No. 610.0203**
- c. Topsoil Item No. 613.xx**

All areas remaining vegetated after invasive species are removed will be seeded and mulched, Item 610.0203, immediately upon the conclusion of the initial and any subsequent treatments as described in “**Care of Controlled Areas during Construction.**” Payment will be for initial seeding only.

Note: If herbicide is used, then seeding shall occur according to the herbicide manufacturer’s allowable schedule after the initial treatment. Seeding will be repeated if additional herbicide applications occur.