

SECTION 208 BORROW

208.1 Description

- (1) This section describes constructing embankments and other portions of the work consistent with the earthwork summary the plans show for borrow. If the contract specifies that material will be moved from one division to another, that material is not borrow.

208.2 Materials

208.2.1 Quality

- (1) Under the Borrow bid item, furnish material consisting of satisfactory soil or a mixture of satisfactory soil, stone, gravel, or other acceptable materials, of a character and quality satisfactory for the purpose intended. Use material free from sod, stumps, logs, and other perishable and deleterious matter.
- (2) For select borrow excavation furnish material conforming to the quality requirements specified in the contract.

208.2.2 Source

- (1) Obtain suitable borrow material from one or more of the following sources:
 1. Contractor-furnished sources the engineer approves.
 2. State-furnished sources outside the project right of way limits.
 3. Surplus or waste materials from divisions consistent with the earthwork summary the plans show.
 4. If the engineer authorizes in writing, from one or more of the following sources:
 - 4.1 Material from within the right of way limits but outside excavation limits that the contract does not already designate as excavation.
 - 4.2 Surplus excavation from other contracts.
 - 4.3 Material from old road fills, removed as specified in [section 214](#).
- (2) Use material with suitable engineering properties obtained from work done under other contract bid items to reduce the quantity of borrow required in that division.
- (3) Unless the contract specifies otherwise, the contractor shall negotiate with property owners or others from whom the contractor proposes to obtain borrow material.
- (4) The department may approve non-commercial borrow sources where the contractor proposes to create or enlarge an area of open water if the contractor submits a written request. Include with that request written evidence that the following conditions have been met:
 1. The owner of the property has a valid and practical plan for creating or enlarging a body of impounded water and that plan complies with all applicable ordinances or regulations.
 2. If the proposed site is within 5 miles of a public-use airport, the airport manager or airport owner and the department's bureau of aeronautics have been contacted and confirm receipt of the following:
 - Contractor and landowner names and contact information including phone numbers.
 - Scale map showing the location of the proposed site in relation to the airport.
 - Detailed reclamation plans showing the location, size, and outline of proposed new open water; slopes of the impoundment area; proposed re-vegetation plan; and other requested information.
 3. Officials of local government and of other agencies with jurisdiction have approved the plan.
 4. The proposed plan is not contrary to the public interest and will not create a public nuisance or hazard.
- (5) Provide the final condition of the borrow site as specified for final cleanup in [104.9](#).

208.3 Construction

- (1) Clear and grub the area for the borrow site in the same manner specified for roadway and drainage excavation. Remove all sod or other perishable or unsuitable material from the proposed borrow source area. Excavate borrow sites in a way that allows the engineer to accurately measure the material excavated and incorporated in the work.
- (2) Dispose of all stone, broken rock, boulders, and other materials unsuitable for use in the work as specified in [205.3.12](#).

- (3) Dispose of all stumps, trees, logs, brush, tops, and other debris resulting from clearing and grubbing work in borrow site areas as specified in [201.3](#).
- (4) Except for commercial sites, strip off the available topsoil, or other soil favorable to plant growth, overlying the borrow site. Stockpile the topsoil in sufficient quantities to cover all surfaces of excavated areas from 4 inches to 6 inches deep. If the topsoil overlying the borrow site is less than 4 inches deep, replace the topsoil to the original depth. After trimming and finishing the site, spread the salvaged material uniformly over all excavated areas of the borrow site, unless the engineer authorizes otherwise in writing.
- (5) Restore the excavated areas of the borrow site, adjacent disturbed areas, and associated haul roads as follows:
 1. Fertilize as specified in [section 629](#) and seed as specified in [section 630](#) unless the landowner elects otherwise under [630.3.3.4](#).
 2. Install erosion control devices conforming to the ECIP developed under [107.20](#).
- (6) The contractor may place borrow, or select borrow, by hydraulic methods. If the contractor elects to do this, it shall obtain the engineer's written approval covering the quality and sources of the proposed material and the proposed construction methods before proceeding.

208.4 Measurement

208.4.1 General

- (1) The department will measure Borrow or Select Borrow by the cubic yard acceptably completed. Except when the contract specifies otherwise, the department will not measure material obtained under other contract bid items as borrow. Borrow measurement excludes material from sources that include but are not limited to the following:
 1. Marsh excavation.
 2. Excavation below subgrade not designated in the contract.
 3. Excavation from storm sewers or pipe culverts.

208.4.2 Measurement in Original Position

- (1) If feasible, the department will measure the borrow quantity in its original position in the source location. The department will compute this volume by the method of average end areas, with no correction for curvature, or if the engineer elects, by the method of truncated prisms. The engineer and contractor may agree to an alternate calculation method.
- (2) The contractor shall give the engineer sufficient notice before performing excavation operations so the engineer has time to accurately measure the borrow source. The department will not measure sod or other unsuitable material removed, or material salvaged from borrow sources and used for covering surfaces of the excavated areas within the borrow source. The engineer may require the contractor to remove topsoil or other unsuitable materials from the surface of the borrow area before taking original cross sections of the source area and, upon completing the excavation, to smooth or trim the site, as required, to allow taking accurate final measurements of the area before replacing the topsoil. The department will not measure any material excavated before the engineer staked out and cross sectioned the borrow source, and all material excavated in excess of that required for, or not incorporated in the work.

208.4.3 Measurement in Vehicles

- (1) If in the engineer's judgment measurement in the original position is not practical, the engineer will measure all or part of the Borrow or Select Borrow bid item by the cubic yard in the vehicle. The engineer will determine the capacity of each vehicle used for hauling the material to the nearest 1/10 cubic yard and adjust for material expansion in the vehicle.

208.4.4 Measurement in Final Position

- (1) If the contractor elects, or the contract requires to use hydraulic methods for placing embankments, the department will measure Borrow or Select Borrow by the cubic yard of compacted embankment acceptably completed, measured by the method of average end areas, with no correction for curvature. The department will determine the end areas from pre-construction cross sections of the area being covered by the proposed embankment and from cross sections of the completed work. The department will not make allowances for shrinkage, subsidence, lateral movement of the material, or for material in excess of that required for work the plans show or the engineer orders.

208.5 Payment

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

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
208.0100	Borrow	CY
208.1100	Select Borrow	CY

- (2) Payment for Borrow and Select Borrow is full compensation for providing all borrow material; for all clearing, grubbing, excavating, sloping, shaping, trimming, loading, hauling, placing; compacting; disposing of surplus and unsuitable material; and for salvaging, stockpiling, rehandling, and spreading salvaged material for covering the surfaces of excavated areas within borrow sites.
- (3) The department will pay for material obtained from within the project right of way limits but outside project excavation limits, furnished under [208.2.2](#), at a price determined under [109.4](#).
- (4) Payment also includes water for compaction and dust control except, if the contract contains the Water bid item, the department will pay separately for compaction and dust control water under [624.5](#).
- (5) The department will pay for erosion control, fertilizing, and seeding of borrow sites and associated areas separately as specified for borrow sites and material disposal sites in [628.5.1](#).