Section 203 Removing Old Culverts and Bridges

203.1 Description
(1) This section describes wholly or partially removing or closing existing culverts and bridges, disposing of the resulting materials, or if required, salvaging and storing designated materials.

203.2 (Vacant)

203.3 Construction

203.3.1 General
(1) Remove or close all or parts of existing culverts and bridges within the roadway and that are replaced by or interfere with new construction. The contractor who constructs the new structure that replaces the existing facility, unless the contract specifies otherwise, shall perform this removal or closing.
(2) If specified in the contract, remove or close existing culverts, bridges, or parts of them, beyond the roadway limits, but within the highway limits.
(3) Leave existing culverts and bridges beyond the limits of the highway in place and in service unless the contract specifies otherwise.
(4) Upon removal, culverts, bridges, or parts of them, are contractor's property, unless designated in the contract as salvageable. If the contractor removes, but does not replace entrance pipes from private property, the contractor must offer these pipes to the property owners before claiming them.

203.3.2 Breaking Down and Removing

203.3.2.1 General
(1) Remove those parts of an existing structure that interfere with new construction. Do not use equipment, facilities, or methods that might damage members, portions of the structure to be preserved, or adjacent construction. Before starting new work, complete blasting or other operations that might endanger new work. If incorporating portions of existing culverts or bridges in the new work, remove the portions not being saved in a way that leaves the remainder of the structure undamaged.
(2) Notify the engineer if the portion of a structure remaining in place is damaged. Do not conduct construction operations that would obscure that damage or cause additional damage until the department has had an opportunity to assess the structural significance of the damage. Provide the engineer with means to access the site to make this determination.
(3) Repair damage done during breaking down and removal as the engineer directs.

203.3.2.2 Removal Operations

203.3.2.2.1 General
(1) Except as specified below for closing culverts, remove the entire top slab of box culverts and the entire superstructure of other culverts and bridges designated for removal. Completely remove existing piles, cribs, or other timber construction within the limits of new embankments, or remove these structures to an elevation at least 2 feet below finished ground line. Remove sidewalls or substructure units in water to an elevation no higher than the natural stream or lake bed, or, if grading the channel is required under the contract or the plans, to the proposed finished grade of the stream or lake bed. Remove sidewalls or substructure units not in water to at least 2 feet below natural or finished ground line.
(2) If extending or incorporating existing culverts and bridges in new work, remove only parts of existing structures as necessary to connect to the new work. Saw, chip, or trim connecting edges to required line and grades without weakening or damaging the remaining part of the structure. During concrete removal, do not damage reinforcing bars left in place as dowels or ties incorporated into the new work.
(3) Remove salvaged pipe culverts in a way that prevents damage to the culverts.
(4) Dismantle all or parts of salvaged steel structures in a way that avoids damage to the members. If the contract specifies removing the structure to leave it in a condition suitable for re-erection, matchmark members with durable white paint before dismantling. Mark pins, bolts, nuts, loose plates, etc., to indicate their proper location. Paint pins, bolts, pinholes, and machined surfaces with a department-approved rust preventative. Wire loose parts to adjacent members, or label and pack them in boxes.
(5) Remove all or parts of salvaged timber structures in a way that prevents damage to the members.
(6) If the engineer approves, the contractor may temporarily use salvaged materials in falsework used to construct new work. Do not damage or reduce the value of those materials through temporary use.

203.3.2.2.2 Deck Removal
(1) Protect work as specified in 107.14 during deck removal. Minimize debris falling on water and wetlands as specified in 107.18 or in special provisions. Minimize debris falling on the ground and roadway.
203.3.3 Closing Culverts

(1) The contractor may close culverts instead of removing them if the following conditions exist:
   1. The diameter or span of a culvert is less than 4 feet.
   2. The top of the culvert does not come within 5 feet of the elevation of the finished roadway.
   3. The engineer deems the structure to be in suitable condition.

(2) Remove the headwalls and those parts of the structure that would be within 2 feet of the finished ground line. Completely fill each end of the culvert with satisfactory soil for a distance from each end of at least 2 feet plus the height of the opening of the structure.

203.4 Incorporating or Disposing of Materials

(1) Remove materials resulting from culvert or bridge removals not designated for salvage or incorporation in the work, from the right-of-way. Ensure that disposal sites are neatly constructed.

(2) Place materials designated for salvage in neat piles outside the roadway but within the right-of-way at locations the engineer designates. Clean salvaged pipe culverts. Locate the piles far enough from the traveled way so they do not create a hazard to traffic.

(3) Incorporate broken steel-free concrete, stone, brick, and granular material in the work to the extent practicable. The contractor may use these materials, if suitable, to construct riprap, tree wells, and similar structures. Unless the contract or the engineer specifies otherwise, incorporate the balance of these materials, if they have suitable engineering properties, in embankments as specified for placing rocks under 207.3.4. Do not place these materials within 8 inches of the surface of the earth grade.

(4) Incorporate excavated material in the work to the extent practicable. Use materials with suitable engineering properties to backfill areas resulting from removals and to construct embankments. Dispose of surplus or unsuitable material as specified under 205.3.12.

(5) If placing broken concrete, stone, brick, or any other waste material outside the right-of-way, conform to regulations governing solid waste disposal. Obtain written permits for this disposal from the owner of the property where placing the material, unless disposing of the material at a licensed waste disposal operation. Furnish permits, or copies of permits, to the engineer before disposal begins. Do not deposit waste in wetlands.

(6) Arrange with the owners for the disposal of private entrance pipes removed but not replaced.

(7) Unless the contract or the engineer gives more specific instructions, neatly store structural steel designated for salvage on blocking in a location suitable for loading. Store structures or portions of structures, specified in the proposal for re-erection, in separate piles.

(8) Remove nails and bolts from timber or piling from old structures, designated for salvage. Store this timber or piling in neat piles in locations suitable for loading. Dispose of waste timber and lumber by open burning, if allowed; by burning in an air curtain destructor, if allowed; by chipping, or dispose of as specified for surplus material in 205.3.12. Dispose of chipped material as specified for machine cutting or chipping in 201.3(13). Dispose of creosote treated piling as required by the WDNR.

203.5 Backfilling

(1) Backfill trenches resulting from removing or breaking down old culverts and bridges, and not occupied by new structures or required for waterways. Use either satisfactory soil or broken masonry and satisfactory soil. If the contract plans or special provisions specify granular backfill, use backfill material conforming to 209. Place backfill material in layers no thicker than 8 inches. If using granular backfill, the contractor may place granular backfill in layers up to 12 inches thick. Thoroughly compact
each layer using engineer-approved tampers, rollers, or vibrators. If encountering water in an excavation, place backfill in a way that displaces the water and does not trap it.

(2) Do not use water to expedite settlement of backfill except with the engineer’s approval. However, this provision does not require the contractor to de-water the excavation before placing backfill.

203.4 Measurement

(1) The department will measure Removing Small Pipe Culverts as each individual small culvert removal acceptably completed.

(2) The department will measure the Removing Old Structure bid items as a single lump sum unit for each structure acceptably completed.

(3) The department will not deduct the volume of these removals from the volume of the associated roadway, drainage, or structure excavation item.

203.5 Payment

203.5.1 General

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

<table>
<thead>
<tr>
<th>ITEM NUMBER</th>
<th>DESCRIPTION</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>203.0100</td>
<td>Removing Small Pipe Culverts</td>
<td>EACH</td>
</tr>
<tr>
<td>203.0200</td>
<td>Removing Old Structure (station)</td>
<td>LS</td>
</tr>
</tbody>
</table>

(2) Payment is full compensation for breaking down and removing; costs associated with contractor-caused damage; required salvaging, storing, and disposing of materials; and, unless the contract specifies granular backfill, for backfilling.

(3) Removing non-rectangular culverts with a cross-sectional area smaller than the area of a 12-inch diameter round pipe is incidental to associated items of work.

(4) If the contract specifies backfilling with granular backfill, the department will pay separately for that backfilling under the Backfill Granular bid items as specified in 209.5.

203.5.2 Removing Small Pipe Culverts

(1) Under the Removing Small Pipe Culverts bid item, remove non-rectangular culverts with a cross-sectional area equivalent to or larger than the area of a 12-inch diameter round pipe but smaller than a 60-inch diameter round pipe.

(2) The department will pay for each individual pipe in a multi-pipe cluster at the contract price each. Associated precast components are incidental to this bid item. The department will pay for associated cast-in-place components separately under the appropriate 204 removal item.

(3) If a culvert removal the engineer directs, or 104.7 requires, conforms to the classification criteria for the Removing Small Pipe Culverts bid item, but the contract does not show that removal, the department will pay for that removal at the contract price each or, absent the bid item, as extra work. If a removal that the plans show as a small pipe culvert conforms to the classification criteria for the Removing Old Structure bid items, the department will pay for that removal as extra work.

203.5.3 Removing Old Structure

(1) Under the Removing Old Structure bid items, remove bridge-like structures. The department classifies a removal as a bridge-like structure if the structure is one or more of the following:

1. A bridge with a span of 20 feet or greater.
2. Bridge-like with a span less than 20 feet.
3. A rectangular culvert of any size.
4. A non-rectangular culvert with a cross-sectional area equivalent to or larger than the area of a 60-inch diameter round pipe.

(2) Payment includes removing associated incidental structures, hybrid concrete box culverts with associated pipe culvert extensions, and multi-cell and multi-pipe systems. If required in 104.7 or if the engineer directs removing a structure, conforming to the classification criteria for this bid item but not included in the contract, the department will pay for that removal as extra work.

(3) The contractor will bear all expenses, including engineering costs, for restoring structurally damaged girders as specified in 203.3.2.2.2(4).