

GOVERNMENT OF NEWFOUNDLAND AND LABRADOR Department of Transportation and Works Highway Design Division

# SECTION 523 SALVAGE AND REINSTALLATION OF CULVERT OR PIPE

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#### 523.01 SCOPE

This specification covers the requirements for the excavation and removal of culvert, sanitary sewer, storm sewer, or other pipe followed with the backfilling and compaction of the excavated material together with the salvage, and the reinstallation of the pipe, as specified in the Contract item.

Excavation above and around the pipe shall be compensated for under Section 403 "Excavation for Foundations", but any additional hand work excavation required to remove and reinstall the pipe shall be considered part of Section 523 "Salvage and Reinstallation of the Culvert or Pipe".

### **523.02 EXCAVATION AND SALVAGE**

After Excavation for Foundations operations have been carried out to expose the pipe the Contractor shall salvage the pipe, as designated, within the limits as required by the Engineer.

The excavation of material abutting the top and sides of the pipe shall be performed in such a manner as to leave undisturbed, adjacent structure or other work to be left in place, and so that no damage occurs to pipe designated to be salvaged.

All excavated material shall be piled in a manner that will not endanger the work, and that will avoid obstructing sidewalks, driveways, and gutters.

The Contractor shall carefully disassemble the pipe at the couplers and joints and carefully remove the pipe from the trench in such a way as not to cause damage to the pipe. The salvaged pipe together with couplers shall be stored at a safe place on the job prior to reinstallation.

Should any pipe lengths, designated for salvage, be damaged or lost by the Contractor, then the Contractor shall not receive payment for pipe salvage for the damaged lengths. Damaged material shall become the property of the Contractor and shall be disposed of by the Contractor at his own expense.

The Contractor shall be aware of Section 825 "Waste Management".

## 523.03 BACKFILLING AND COMPACTION AND REINSTALLATION

Where concrete is placed in the excavation under another specification, such as concrete plugs in the ends of pipes left in place, then backfilling shall not take place until the concrete has reached at least the specified strength at 28 days.

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Material excavated as part of the removal or salvage operations shall be used as backfill in the trench, which shall include any necessary stockpiling of the excavated material.

Backfill shall be placed in layers not exceeding 200 mm in thickness loose measurement. Each layer shall then be compacted to not less than 95% of the Standard Proctor density (ASTM D698-78) before a further layer is placed.

Reinstallation of the pipe or culvert shall be carried out as per Section 421.04 Pipe Installation.

### **523.04 MEASUREMENT FOR PAYMENT**

### 523.04.01 Measurement for Payment for Salvage and Reinstallation of Pipe

Measurement for payment for the salvage of pipe of a particular diameter and material type shall be the length in metres, to one decimal place, of the pipe of that size and type, when measured after being removed from the ground and reinstalled at the designated reinstallation location.

Pipes that are damaged to the extent that they will be unsuitable for re-use, will not be included in measurement for payment for pipe salvage and reinstallation.

### **523.05 BASIS OF PAYMENT**

### 523.05.01 Basis of Payment for Salvage and Reinstallation of Pipe

Payment at the contract price for the salvage of pipe of a particular material and size shall be compensation in full for all materials, labour, and use of equipment to: provide any hand work excavation necessary to complete the pipe salvage operation, remove and salvage the pipe and couplers, provide any dewatering necessary to carry out the work, transport pipes and couplers to the storage site, store the salvaged pipes and couplers, and backfill and compact the excavated material and reinstall the salvaged pipe at the same or new location for the pipe. including the temporary stockpiling of the excavated material for reuse in the backfilling process. (In the case of driveway culverts excavation and backfill of the driveway culvert will be included in the price of salvage and reinstallation of culvert or pipe.) Any damaged pipe will be replaced at the contractor's expense, where it is deemed the pipe was salvageable.

Excavation above and around the pipe, in roadways, shall be compensated for under Section 403 "Excavation for Foundations", but any additional hand work excavation required to salvage the pipe shall be compensated for as part of payment for Section 523 "Salvage and Reinstallation of Culvert or Pipe".