

B824 - BAFFLES IN A CULVERT - OPSS 824824.1 GENERAL

Baffles in a culvert are constructed to direct water flow and enhance fish passage.

824.2 REFERENCES

OPSS 1005 Aggregates - Streambed Material

824.3 TENDER ITEMS

Baffles in a Culvert (Normal, each, PQP)

824.4 SPECIFICATIONS

The construction requirements for the installation of culvert baffles are contained in OPSS 824.

824.5 SPECIAL PROVISIONS

Refer to Chapter "E" of this Manual to review the applicable standard special provisions.

824.6 STANDARD DRAWINGS

Applicable standard drawings are contained in the 200 series of Ontario Provincial Standard Drawings (OPSD).

824.7 DESIGN

The design of baffles is based on consultation with and/or the recommendations of environmental staff on the project.

Baffles will create hydraulic conditions that will maintain fish passage through the entire length of the Culvert, and are permanent structures designed to be hydraulically stable within the culvert.

The design and installation of baffles must be considered during the hydraulic design of the culvert.

Fish passage during all water level conditions shall be accommodated, with the exception of an approved watercourse diversion.

The baffles provide localized resting areas, and a stream velocity that is equal to or less than the burst speed of fish species present in the watercourse for all water level conditions.

Baffles shall have a sufficient downstream angle to prevent the collection of sediment and/or debris.

The installation and operation of baffles shall not cause scouring or erosion of the watercourse banks or streambed.

Baffles may be constructed of rock or concrete.

#### 824.8 COMPUTATION

This is a Plan Quantity Payment item.

The unit of measure for baffles in a culvert is each.

The work is for the construction of baffles, only. The placement of streambed material and construction of a low flow channel within the culvert requires the use of the low flow channel item (refer to section B823).

#### 824.9 DOCUMENTATION

##### 824.9.1 Contract Drawings

A plan shall be provided, and show:

- Location of the baffles.
- Station reference and culvert number and/or stream name.
- Baffle material. For rock, refer to OPSS 1005. For concrete, the material requirements must be specified on the drawings.
- Baffle elevation, dimensions, spacing, and downstream angle.
- References to applicable OPSD.

### 824.9.2 Quantity Sheets

The location and quantities of baffles in a culvert are documented on Miscellaneous 1 Q-Sheets.

Each culvert location is identified by station reference and culvert number and/or stream name.

The number of baffles is entered in the appropriate Q-sheet column for each culvert location.

The individual column entries are automatically totaled and transferred to the Tender Item List.

### 824.9.3 Documentation Accuracy

Stations are recorded in whole numbers.

Individual quantity entries are recorded to the nearest whole number.