

## PART 1 GENERAL

### 1.1 Related Requirements

- .1 Section 31 23 10 Excavating and Backfilling.
- .2 Section 33 42 13 Pipe Culverts.

### 1.2 Description

- .1 All work in this section shall comply with the requirements of the most recent version of PEI Department of Transportation, Infrastructure and Energy General Provisions and Contract Specifications for Highway Construction (current edition).

### 1.1 References

- .1 PEI Department of Transportation, Infrastructure and Energy General Provisions and Contract Specifications for Highway Construction (current edition).

## PART 2 PRODUCTS

### 2.1 Materials

- .1 PEI Department of Transportation, Infrastructure and Energy General Provisions and Contract Specifications for Highway Construction (current edition).

## PART 3 EXECUTION

### 3.1 General

- .1 As per the requirements of the most recent version of the PEI Department of Transportation, Infrastructure and Energy General Provisions and Contract Specifications for Highway Construction (current edition).
- .2 Existing Catch Basins shall be disposed of in accordance with Section 01 74 22 - Construction/Demolition Waste Management and Disposal.

### 3.2 Trenching

- .1 Do trenching work in accordance with Section 31 23 10 - Excavating and Backfilling.

- .2 Obtain Departmental Representative's approval of trench line and depth prior to placing bedding material or pipe.

### 3.3 Bedding

- .1 Dewater excavation, as necessary, to allow placement of culvert bedding in dry condition.
- .2 For catch basins place minimum thickness of 150 mm of approved granular material on bottom of excavation and compact to minimum 95% maximum density to ASTM D 698.
- .3 Place bedding in unfrozen condition.

### 3.4 Installing Catch Basins

- .1 Set precast unit on approved bedding plumb and at the correct elevation.
- .2 Plug lifting holes with precast concrete plugs set in cement mortar.

### 3.5 Backfilling

- .1 Backfill around catch basin as indicated or as directed by Departmental Representative.
- .2 Place granular backfill material, approved by Departmental Representative, in 300 mm layers to full width, alternately on each side of the catch basin, so as not to displace it laterally or vertically.
- .3 Compact each layer to 95% maximum density to ASTM D 698.
- .4 Place backfill in unfrozen condition.

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END

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PART 1 GENERAL

1.1 Related Requirements

- .1 Section 31 23 10 Excavating and Backfilling.

1.2 Description

- .1 All work in this section shall comply with the requirements of the most recent version of PEI Department of Transportation, Infrastructure and Energy General Provisions and Contract Specifications for Highway Construction (current edition).

1.3 References

- .1 PEI Department of Transportation, Infrastructure and Energy General Provisions and Contract Specifications for Highway Construction (current edition).

PART 2 PRODUCTS

2.1 Materials

- .1 PEI Department of Transportation, Infrastructure and Energy General Provisions and Contract Specifications for Highway Construction (current edition).

PART 3 EXECUTION

3.1 General

- .1 As per the requirements of the most recent version of PEI Department of Transportation, Infrastructure and Energy General Provisions and Contract Specifications for Highway Construction (current edition).
- .2 Existing Culverts shall be disposed of in accordance with Section 01 74 22 - Construction/Demolition Waste Management and Disposal.

### 3.2 Trenching

- .1 Do trenching work in accordance with Section 31 23 10 - Excavating and Backfilling.
- .2 Obtain Departmental Representative's approval of trench line and depth prior to placing bedding material or pipe.

### 3.3 Bedding

- .1 Dewater excavation, as necessary, to allow placement of culvert bedding in dry condition.
- .2 For culverts place minimum thickness of 200 mm of approved granular material on bottom of excavation and compact to minimum 95% maximum density to ASTM D 698.
- .3 Bed outlet pipes in embankment material only.
- .4 Shape bedding to fit lower segment of pipe exterior so that width of at least 50% of pipe diameter is in close contact with bedding and to camber as indicated or as directed by Departmental Representative, free from sags or high points.
- .5 Place bedding in unfrozen condition.

### 3.4 Laying Pipe Culverts

- .1 Begin at downstream end of culvert with flanged end of first pipe section facing upstream.
- .2 Ensure barrel of each pipe is in contact with shaped bed throughout its length.
- .3 Do not allow water to flow through pipes during construction except as permitted by Departmental Representative.

### 3.5 Backfilling

- .1 Backfill around and over culverts as indicated or as directed by Departmental Representative.
- .2 Place granular backfill material, approved by Departmental Representative, in 200 mm layers to full width, alternately on each side of culvert, so as not to displace it laterally or vertically.

- .3 Compact each layer to 95% maximum density to ASTM D 698 taking special care to obtain required density under haunches.
- .4 Protect installed culvert with minimum 1 metre cover of compacted fill before heavy equipment is permitted to cross. During construction, width of fill, at its top, to be at least twice diameter or span of pipe and with slopes not steeper than 1:2.
- .5 Place backfill in unfrozen condition.

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END

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