

QUANTITY SHEETS
CONTRACT NO. 2018-4023
ADDENDUM 2
BOOK 1 OF 2

Ministry of Transportation



QUANTITIES - PIPE CULVERTS

W.P. No. 4169-15-00

Contract No. 2018-4023 (addendum 2)

SHEET
11-1

Culvert No	Station	Location and Position	Ext		Skew No	End Finish	Depth to Pipe	Pipe Fill Material			Pipe Joints	Treatment	Inv Elev		900 mm Pipe Culvert S900+00 111211 C900+00 000311	900 mm Pipe Culvert Extension S900+00 000000 C900+00 000301	Jacking and Boring [Culvert], [Smooth Wall Steel], [900 mm]	References
			Left	Right				Bedding	Cover	Backfill			Upstream	Downstream				
Sub - Totals Brought Forward:																		
		Highway 401 N/S-W Ramp																
1	10+040	11.7 - 22.8 RT ¹			90	SqE		A	A	N	L		80.619	80.597		11		
		County Road 31																
2	9+975	20.3 LT - 24.2 RT ¹			84	SqE	1.8	A	A	N			80.835	80.331	45			
3	10+093	26.0 LT - 36.0 RT ¹			90	SqE	7.7	A	A	N			80.320	80.134	62		49	
Sub - Totals Carried Forward:																		
															107	11	49	

MINISTRY OF TRANSPORTATION - ONTARIO

Pipe Material Code - 6 digits defined as noted below:

- | | |
|-----------------------------|---------------------------|
| 1st digit = Concrete | 2nd digit = PVC/PP |
| 1 - 50-D or HE-A | 1 - PVC |
| 2 - 65-D or HE-I | 2 - PP |
| 3 - 100-D or HE-II | |
| 4 - 140-D or HE-III | 3rd digit = HDPE |
| 5 - HE-IV | 1 - Open Profile |
| | 2 - Closed Profile |

4th digit = Galv; 5th digit = Alum, & 6th digit = Polymer Steel

- | | |
|------------------------------|------------------------------|
| 1 - 1.6 mm thick | 5 - 4.2, 4.45 & 5.0 mm thick |
| 2 - 2.0 mm thick | 6 - 5.08 & 6.0 mm thick |
| 3 - 2.8, 3.0 & 3.18 mm thick | 7 - 5.72 & 7.0 mm thick |
| 4 - 3.5, 3.81 & 4.0 mm thick | 8 - 6.35 mm thick |

Note: '0' for any digit means the pipe material is not acceptable.
Higher pipe material code values are also acceptable, unless otherwise stated. Galv. means galvanized coating.
Alum means aluminized coated or aluminum alloy materials.
Polymer means both laminated and coated steel pipes.
Applies to circular and non-circular pipes.

Pipe Type

- S - Smooth inner wall pipe
- C - Corrugated inner wall pipe

Pipe Joints

- S - Soil tight
- F - Silt/Fines tight
- L - Leak tight

Note: S joints is specified if no code is entered.

End Finish (OPSD 801.01 - 02 - 03)

- SqE - Square End
- B - Bevel
- Sk - Skew End
- SB - Step Bevel
- ES - Steel end section

Note: All pipes are SqE and symmetrical to CL unless otherwise stated.

Treatments

- F - Frost Treatment
- P - Pave Invert
- S - Channel Substrate
- B - Fish Baffles

Depth to Pipe is from the surface downward to top of base pipe opening at midpoint by length unless otherwise stated.

Pipe Fill Material

- N - Native or Granular
- G - Granular A or B Type I, II or III
- B - Granular A or B Type II
- A - Granular A
- U - Unshrinkable fill

Notes: N applies to cover and backfill only.
1 letter specifies material for all pipes.
2 letter codes specifies fill material for rigid and flexible pipes respectively.
G for bedding and N for cover and backfill is specified if no code is entered.
Embedment material for flexible pipes specified in bedding material column.

Frost Penetration

Frost Penetration depth - 1.7 m

	(P)	(P)	(P)
TOTALS	107	11	49
UNIT	m (P)	m (P)	m (P)
ITEM No.	17	18	196

1. Estimated invert elevations. Contractor to ensure positive drainage of culvert.

CHKD. _____
APPR. _____
DATE _____

Pipe Culverts

