

# H Appendix H - Raw Water Pipeline Cost Estimates

Client: RM of Blucher  
 Project: Industrial Servicing Study  
 Project# 20074249 - E.03.00  
 Date 11-Feb-08  
 Subject: Clavet Corridor Pipeline Estimate  
 By: Darrell Rinas

				Engineer's Estimate	
Item	Description	Unit	Quantity	Price	Extension
<b>1 Trench Excavation and Backfill</b>					
1.1	Water Main in Single Trench	lin.m.	20,000	\$100.00	\$2,000,000.00
1.2	Authorized Over Excavation and Backfill	m <sup>3</sup>	3000	\$35.00	\$105,000.00
1.3	Boulder Excavation & Disposal	m <sup>3</sup>	1500	\$35.00	\$52,500.00
1.4	Road Boring	lin.m.	200	\$800.00	\$160,000.00
<b>Total 1</b>	<b>TRENCH EXCAVATION AND BACKFILL</b>				<b>\$2,317,500.00</b>
<b>2 Pressure Pipe</b>					
2.1	400mm HDPE DR 11 Water Main	lin.m	20,000	\$34.72	\$694,400.00
<b>Total 2</b>	<b>PRESSURE PIPE</b>				<b>\$694,400.00</b>
<b>3 Pressure Pipe Fittings</b>					
3.1	Gate Valves & Boxes, 100 mm	ea	4	\$2,000.00	\$8,000.00
3.2	Bends 90° Bend 150 diameter	ea	2	\$1,000.00	\$2,000.00
3.3	Blind Flange 150 diameter	ea	1	\$1,000.00	\$1,000.00
<b>Total 3</b>	<b>PRESSURE PIPE FITTINGS</b>				<b>\$11,000.00</b>
<b>4 Pumping Station</b>					
4.1	Pumping Station	ea	1	\$1,500,000.00	\$1,500,000.00
<b>Total 4</b>	<b>PUMPING STATION</b>				<b>\$1,500,000.00</b>
<b>Complete Total</b>					<b>\$4,522,900.00</b>

Clavet

A=Payment per interest period  
 P=Current Value of System  
 i=Period Interest Rate  
 n=number of payment periods

$$A = P \frac{i(1+i)^n}{(1+i)^n - 1}$$

Scenario #1  
 One User of 18.5/s 18.5  
 Payback period = 20 years or 80 payment periods 20  
 Assume interest rate of 10% 0.1  
 Quarterly Payment = \$131,281.90  
 Water charge for payback/unit \$3.41

Scenario #2  
 Two User of 18.5/s 37  
 Payback period = 10 years or 40 payment periods 15  
 Assume interest rate of 10% 0.1  
 Quarterly Payment = \$146,331.17  
 Water charge for payback/unit \$1.90

Scenario #3  
 Full Capacity 126/s 126  
 Payback period = 2 years or 8 payment periods 5  
 Assume interest rate of 10% 0.1  
 Quarterly Payment = \$290,131.05  
 Water charge for payback/unit \$1.11