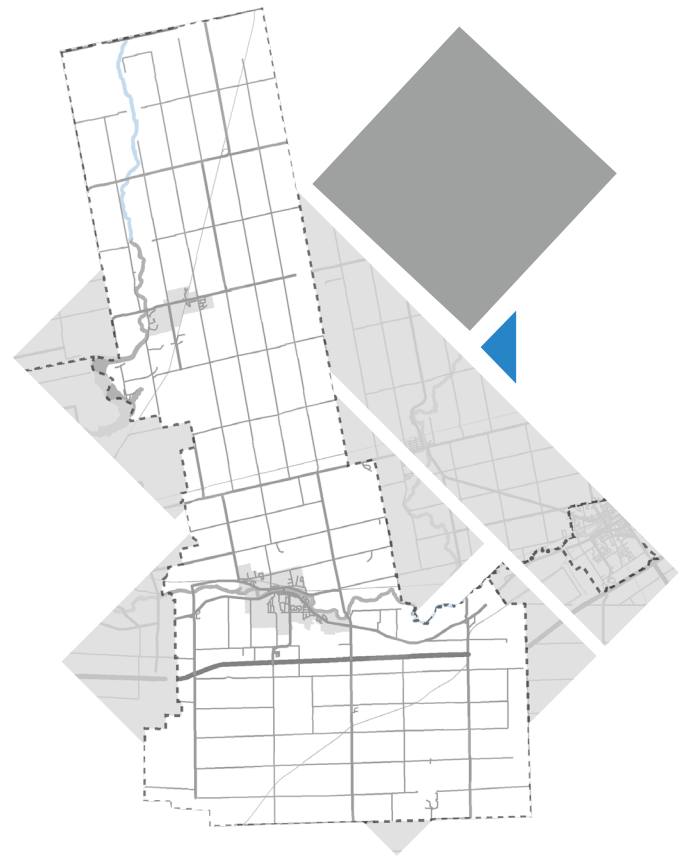


D

MUNICIPALITY OF THAMES CENTRE

APPENDIX D

CAPITAL PROGRAM PROJECT SHEETS COST ESTIMATES



1 PROJECT NO.: W-D-SUP-01
PROJECT NAME: Maximize Dorchester WTF Supply
PROJECT DESCRIPTION: Maximize Well Capacity at Existing WTF

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2 Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
3 Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
4 Accuracy Range:	40%	
5 Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

= Field has drop down
 = Field must be manually populated
 = Field auto-filled based on project details

6 PROPOSED CAPACITY: 20 L/s

CLASS EA REQUIREMENTS:	A	Pump	Existing (L/s)	Future (L/s)
CONSTRUCTION ASSUMPTION:	Other	1	16.7	20
		2	0	20
		3	42.6	42.6
		4		
		5		

7

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Number of Pumps (including well casing upgrades)			Pumps	2	\$200,000	\$400,000	Pump replacement and upgrades
Electrical and Process			Lump Sum		\$100,000	\$100,000	
Additional Construction Costs	25%		ea.			\$125,000	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$62,500	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$688,000	
Geotechnical / Hydrogeological / Materials	20.0%					\$ 100,000	
Geotechnical Sub-Total Cost						\$100,000	
Property Requirements	1.5%					\$ -	
Property Requirements Sub-Total						\$0	
Consultant Engineering/Design	15%					\$ 103,200	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$103,200	
In House Labour/Engineering/Wages/CA	3%					\$ 20,600	
In-house Labour/Wages Sub-Total						\$20,600	
Project Contingency	15%					\$137,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$137,000	
Non-Refundable HST	1.76%					\$18,100	
Non-Refundable HST Sub-Total						\$18,100	
Total (2019 Dollars)						\$1,067,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,067,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$21,340		
Design	Design fees, Town fees for design, contract admin	13%	\$138,710		
Construction	Town fees, base costs and project contingency	85%	\$906,950		
TOTAL			\$1,067,000		



Municipality of Thames Centre
Water and Wastewater Master Plan
Capital Program Cost Estimate



PROJECT NO.: W-D-SUP-02
PROJECT NAME: New Dorchester Groundwater Supply
PROJECT DESCRIPTION: Includes cost of new Dorchester groundwater supply and consolidation of sources at Dorchester WTF for treatment. Includes new well houses, raw water mains, and treatment. Excludes pump capacity upgrades cost to the Dorchester WTF High Lift Pumps

CLASS EA REQUIREMENTS: C

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	TOTAL
Study	Feasibility study, EA	\$750,000
Design	Design fees, Town fees for design, contract admin	\$500,000
Construction	Town fees, base costs and project contingency	\$5M - \$15M

1 PROJECT NO.: W-D-BPS-01
 PROJECT NAME: Dorchester HLP Upgrades
 PROJECT DESCRIPTION: Upgrade Dorchester HLPs to supply elevated tank and distribution system from reservoirs

CAPITAL BUDGET YEAR:
 VERSION:
 DATE UPDATED:
 UPDATED BY:

2 Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3 Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4 Accuracy Range:	40%			= Field auto-filled based on project details
5 Area Condition:	Suburban	Area Condition uplifts unit cost and restoration		

6 PROPOSED CAPACITY 90 L/s

CLASS EA REQUIREMENTS:	A	Pump	Existing (L/s)	Future (L/s)
CONSTRUCTION ASSUMPTION:	Other	1	90	90 L/s
		2	90	90 L/s
		3		
		4		
		5		

7

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Number of Pumps			Pumps	2	\$200,000	\$400,000	Pump replacement and upgrades
Electrical and Process			Lump Sum		\$100,000	\$100,000	
Additional Construction Costs	25%		ea.			\$125,000	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$62,500	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$688,000	
Geotechnical / Hydrogeological / Materials	20.0%					\$ 100,000	
Geotechnical Sub-Total Cost						\$100,000	
Property Requirements	1.5%					\$ -	
Property Requirements Sub-Total						\$0	
Consultant Engineering/Design	15%					\$ 103,200	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$103,200	
In House Labour/Engineering/Wages/CA	3%					\$ 20,600	
In-house Labour/Wages Sub-Total						\$20,600	
Project Contingency	15%					\$137,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$137,000	
Non-Refundable HST	1.76%					\$18,100	
Non-Refundable HST Sub-Total						\$18,100	
Total (2019 Dollars)						\$1,067,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,067,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$21,340		
Design	Design fees, Town fees for design, contract admin	13%	\$138,710		
Construction	Town fees, base costs and project contingency	85%	\$906,950		
TOTAL			\$1,067,000		

PROJECT NO.: W-D-WM-01
PROJECT NAME: Dorchester Watermain - Spine Trunk Upgrade on Dorchester Rd. (South of Byron Ave.)
PROJECT DESCRIPTION: 450m of existing 250mm DI watermain (built in 1976) to be replaced by 300mm PVC watermain

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	High	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	50%			= Field auto-filled based on project details
5	Area Condition:	Suburban	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	300 mm		CLASS EA REQUIREMENTS:	A+
7	TOTAL LENGTH:	450 m		CONSTRUCTION ASSUMPTION:	Watermain
	Tunnelled	0 m	0%		
	Open Cut	450 m	100%		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	450 m	\$777	\$349,483	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$69,897	
Minor Creek Crossings			ea.	0	\$38,000	\$0	
Major Creek Crossings			ea.	0	\$207,000	\$0	
Road Crossings			ea.	0	\$90,000	\$0	
Major Road / Rail Crossings			ea.	0	\$207,000	\$0	
Utility Crossings			ea.	0	\$90,000	\$0	
Valve and Chamber			ea.	3	\$6,000	\$18,000	2 valves minimum
Additional Construction Costs	20%		ea.			\$87,476	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$52,486	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$577,000	
Geotechnical / Hydrogeological / Materials	2.0%					\$11,500	
Geotechnical Sub-Total Cost						\$11,500	
Property Requirements	2.0%					\$ 11,500	
Property Requirements Sub-Total						\$11,500	
Consultant Engineering/Design	15%					\$ 86,600	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$86,600	
In House Labour/Engineering/Wages/CA	8%					\$ 46,200	
In-house Labour/Wages Sub-Total						\$46,200	
Project Contingency	25%					\$183,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$183,000	
Non-Refundable HST	1.76%					\$15,300	
Non-Refundable HST Sub-Total						\$15,300	
Total (2019 Dollars)						\$931,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$931,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$18,620		
Design	Design fees, Town fees for design, contract admin	13%	\$121,030		
Construction	Town fees, base costs and project contingency	85%	\$791,350		
TOTAL			\$931,000		

PROJECT NO.: W-D-WM-02
PROJECT NAME: Dorchester Watermain - Spine Trunk Upgrade on Dorchester Rd. (River Bank)
PROJECT DESCRIPTION: 190m of existing 250mm DI watermain (built in 1976 - 1987) to be replaced by 300mm PVC watermain

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	High	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	50%			= Field auto-filled based on project details
5	Area Condition:	Suburban	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	300 mm		CLASS EA REQUIREMENTS:	A+
7	TOTAL LENGTH:	190 m		CONSTRUCTION ASSUMPTION:	Watermain
	Tunnelled	0 m	0%		
	Open Cut	190 m	100%		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	190 m	\$777	\$147,559	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$29,512	
Minor Creek Crossings			ea.	0	\$38,000	\$0	
Major Creek Crossings			ea.	0	\$207,000	\$0	
Road Crossings			ea.	0	\$90,000	\$0	
Major Road / Rail Crossings			ea.	0	\$207,000	\$0	
Utility Crossings			ea.	0	\$90,000	\$0	
Valve and Chamber			ea.	2	\$6,000	\$12,000	2 valves minimum
Additional Construction Costs	20%		ea.			\$37,814	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$22,689	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$250,000	
Geotechnical / Hydrogeological / Materials	2.0%					\$5,000	
Geotechnical Sub-Total Cost						\$5,000	
Property Requirements	2.0%					\$ 5,000	
Property Requirements Sub-Total						\$5,000	
Consultant Engineering/Design	15%					\$ 37,500	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$37,500	
In House Labour/Engineering/Wages/CA	8%					\$ 20,000	
In-house Labour/Wages Sub-Total						\$20,000	
Project Contingency	25%					\$79,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$79,000	
Non-Refundable HST	1.76%					\$6,600	
Non-Refundable HST Sub-Total						\$6,600	
Total (2019 Dollars)						\$403,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$403,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$8,060		
Design	Design fees, Town fees for design, contract admin	13%	\$52,390		
Construction	Town fees, base costs and project contingency	85%	\$342,550		
TOTAL			\$403,000		

PROJECT NO.: W-D-WM-03
PROJECT NAME: Dorchester Watermain - Spine Trunk Upgrade on Catherine St. and Minnie Rd. (North Section)
PROJECT DESCRIPTION: 390m of existing 250mm DI and PVC watermain (built in 1990 - 1992) to be replaced by 300mm PVC watermain following Catherine St. + Minnie St. alignment

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	High	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	50%			= Field auto-filled based on project details
5	Area Condition:	Suburban	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	300 mm			
7	TOTAL LENGTH:	390 m			
	Tunnelled	100 m	26%		
	Open Cut	290 m	74%		

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Watermain

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	290 m	\$777	\$225,222	Existing road ROW
Pipe Construction - Tunneling			m	100 m	\$1,300	\$130,000	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$45,044	
Minor Creek Crossings			ea.	0	\$38,000	\$0	
Major Creek Crossings			ea.	0	\$207,000	\$0	
Road Crossings			ea.	0	\$90,000	\$0	
Major Road / Rail Crossings			ea.	1	\$207,000	\$207,000	
Utility Crossings			ea.	0	\$90,000	\$0	
Valve and Chamber			ea.	4	\$6,000	\$24,000	2 valves minimum
Additional Construction Costs	20%		ea.			\$126,253	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$75,752	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$833,000	
Geotechnical / Hydrogeological / Materials	2.0%					\$16,700	
Geotechnical Sub-Total Cost						\$16,700	
Property Requirements	2.0%					\$ 16,700	
Property Requirements Sub-Total						\$16,700	
Consultant Engineering/Design	15%					\$ 125,000	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$125,000	
In House Labour/Engineering/Wages/CA	8%					\$ 66,600	
In-house Labour/Wages Sub-Total						\$66,600	
Project Contingency	25%					\$265,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$265,000	
Non-Refundable HST	1.76%					\$22,100	
Non-Refundable HST Sub-Total						\$22,100	
Total (2019 Dollars)						\$1,345,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,345,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$26,900		
Design	Design fees, Town fees for design, contract admin	13%	\$174,850		
Construction	Town fees, base costs and project contingency	85%	\$1,143,250		
TOTAL			\$1,345,000		

PROJECT NO.: W-D-WM-04
PROJECT NAME: Dorchester Watermain - North St. Upgrade
PROJECT DESCRIPTION: 360m of existing 150mm CI watermain (built in 1956) on North Street and Minnie Street to be replaced by 200mm PVC watermain.

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	40%			= Field auto-filled based on project details
5	Area Condition:	Suburban	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	200 mm		CLASS EA REQUIREMENTS:	A+
7	TOTAL LENGTH:	360 m		CONSTRUCTION ASSUMPTION:	Watermain
	Tunnelled	0 m	0%		
	Open Cut	360 m	100%		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	360 m	\$773	\$278,294	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$55,659	
Minor Creek Crossings			ea.	0	\$30,000	\$0	
Major Creek Crossings			ea.	0	\$199,000	\$0	
Road Crossings			ea.	0	\$82,000	\$0	
Major Road / Rail Crossings			ea.	0	\$199,000	\$0	
Utility Crossings			ea.	0	\$82,000	\$0	
Valve and Chamber			ea.	2	\$2,000	\$4,000	2 valves minimum
Additional Construction Costs	15%		ea.			\$50,693	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$38,865	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$428,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$4,300	
Geotechnical Sub-Total Cost						\$4,300	
Property Requirements	1.5%					\$ 6,400	
Property Requirements Sub-Total						\$6,400	
Consultant Engineering/Design	15%					\$ 64,200	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$64,200	
In House Labour/Engineering/Wages/CA	8%					\$ 34,200	
In-house Labour/Wages Sub-Total						\$34,200	
Project Contingency	15%					\$81,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$81,000	
Non-Refundable HST	1.76%					\$10,300	
Non-Refundable HST Sub-Total						\$10,300	
Total (2019 Dollars)						\$628,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$628,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$12,560		
Design	Design fees, Town fees for design, contract admin	13%	\$81,640		
Construction	Town fees, base costs and project contingency	85%	\$533,800		
TOTAL			\$628,000		

PROJECT NO.: W-D-WM-05
PROJECT NAME: Dorchester Watermain - Northeast Loop
PROJECT DESCRIPTION: Total of 710m of proposed PVC watermain on North Street and Village Gate Dr. to complete loop, including 590m of 200mm proposed PVC watermain on North St. and 130m of 150mm proposed PVC watermain on Village Gate Dr.

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	40%			= Field auto-filled based on project details
5	Area Condition:	Suburban	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	200 mm		CLASS EA REQUIREMENTS:	A
7	TOTAL LENGTH:	590 m		CONSTRUCTION ASSUMPTION:	Watermain
	Tunnelled	0 m	0%		
	Open Cut	590 m	100%		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	590 m	\$773	\$456,092	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$91,218	
Minor Creek Crossings			ea.	0	\$30,000	\$0	
Major Creek Crossings			ea.	0	\$199,000	\$0	
Road Crossings			ea.	0	\$82,000	\$0	
Major Road / Rail Crossings			ea.	0	\$199,000	\$0	
Utility Crossings			ea.	0	\$82,000	\$0	
Valve and Chamber			ea.	2	\$2,000	\$4,000	2 valves minimum
Additional Construction Costs	15%		ea.			\$82,697	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$63,401	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$697,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$7,000	
Geotechnical Sub-Total Cost						\$7,000	
Property Requirements	1.5%					\$ 10,500	
Property Requirements Sub-Total						\$10,500	
Consultant Engineering/Design	15%					\$ 104,600	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$104,600	
In House Labour/Engineering/Wages/CA	8%					\$ 55,800	
In-house Labour/Wages Sub-Total						\$55,800	
Project Contingency	15%					\$131,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$131,000	
Non-Refundable HST	1.76%					\$16,700	
Non-Refundable HST Sub-Total						\$16,700	
Total (2019 Dollars)						\$1,023,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,023,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$20,460		
Design	Design fees, Town fees for design, contract admin	13%	\$132,990		
Construction	Town fees, base costs and project contingency	85%	\$869,550		
TOTAL			\$1,023,000		

PROJECT NO.: W-D-WM-06
PROJECT NAME: Dorchester Watermain - Marion St. Upgrade
PROJECT DESCRIPTION: Total of 320m of 200mm watermain on Marion Street, including 100m of existing 150mm PVC watermain to be replaced by 200mm PVC watermain and 220m of proposed 200mm PVC watermain.

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	40%			= Field auto-filled based on project details
5	Area Condition:	Suburban	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	200 mm		CLASS EA REQUIREMENTS:	A+
7	TOTAL LENGTH:	320 m		CONSTRUCTION ASSUMPTION:	Watermain
	Tunnelled	0 m	0%		
	Open Cut	320 m	100%		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	320 m	\$773	\$247,372	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$49,474	
Minor Creek Crossings			ea.	0	\$30,000	\$0	
Major Creek Crossings			ea.	0	\$199,000	\$0	
Road Crossings			ea.	0	\$82,000	\$0	
Major Road / Rail Crossings			ea.	0	\$199,000	\$0	
Utility Crossings			ea.	0	\$82,000	\$0	
Valve and Chamber			ea.	1	\$2,000	\$2,000	2 valves minimum
Additional Construction Costs	15%		ea.			\$44,827	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$34,367	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$378,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$3,800	
Geotechnical Sub-Total Cost						\$3,800	
Property Requirements	1.5%					\$ 5,700	
Property Requirements Sub-Total						\$5,700	
Consultant Engineering/Design	15%					\$ 56,700	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$56,700	
In House Labour/Engineering/Wages/CA	8%					\$ 30,200	
In-house Labour/Wages Sub-Total						\$30,200	
Project Contingency	15%					\$71,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$71,000	
Non-Refundable HST	1.76%					\$9,100	
Non-Refundable HST Sub-Total						\$9,100	
Total (2019 Dollars)						\$555,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$555,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$11,100		
Design	Design fees, Town fees for design, contract admin	13%	\$72,150		
Construction	Town fees, base costs and project contingency	85%	\$471,750		
TOTAL			\$555,000		

PROJECT NO.: W-D-WM-07
PROJECT NAME: Dorchester Watermain - West Trunk at the Development 25
PROJECT DESCRIPTION: Newly proposed West Trunk - 660m of proposed 300mm PVC watermain at Development 25.

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	40%			= Field auto-filled based on project details
5	Area Condition:	Rural	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	300 mm		CLASS EA REQUIREMENTS:	A
	TOTAL LENGTH:	660 m		CONSTRUCTION ASSUMPTION:	Watermain
7		Tunnelled	0 m	0%	
		Open Cut	660 m	100%	

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	660 m	\$777	\$512,575	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	1	\$38,000	\$38,000	
Major Creek Crossings			ea.	0	\$207,000	\$0	
Road Crossings			ea.	0	\$90,000	\$0	
Major Road / Rail Crossings			ea.	0	\$207,000	\$0	
Utility Crossings			ea.	0	\$90,000	\$0	
Valve and Chamber			ea.	4	\$6,000	\$24,000	2 valves minimum
Additional Construction Costs	15%		ea.			\$86,186	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$66,076	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$727,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$7,300	
Geotechnical Sub-Total Cost						\$7,300	
Property Requirements	1.5%					\$ 10,900	
Property Requirements Sub-Total						\$10,900	
Consultant Engineering/Design	15%					\$ 109,100	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$109,100	
In House Labour/Engineering/Wages/CA	8%					\$ 58,200	
In-house Labour/Wages Sub-Total						\$58,200	
Project Contingency	15%					\$137,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$137,000	
Non-Refundable HST	1.76%					\$17,400	
Non-Refundable HST Sub-Total						\$17,400	
Total (2019 Dollars)						\$1,067,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,067,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$21,340		
Design	Design fees, Town fees for design, contract admin	13%	\$138,710		
Construction	Town fees, base costs and project contingency	85%	\$906,950		
TOTAL			\$1,067,000		

PROJECT NO.: W-D-WM-08-Alt1
PROJECT NAME: Dorchester Watermain - West Trunk at the Development 22
PROJECT DESCRIPTION: Newly proposed West Trunk - 620m of proposed 300mm PVC watermain at Development 22.

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	40%			= Field auto-filled based on project details
5	Area Condition:	Rural	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	300 mm		CLASS EA REQUIREMENTS:	A
7	TOTAL LENGTH:	620 m		CONSTRUCTION ASSUMPTION:	Watermain
	Tunnelled	0 m	0%		
	Open Cut	620 m	100%		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	620 m	\$777	\$481,510	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	1	\$38,000	\$38,000	
Major Creek Crossings			ea.	0	\$207,000	\$0	
Road Crossings			ea.	0	\$90,000	\$0	
Major Road / Rail Crossings			ea.	0	\$207,000	\$0	
Utility Crossings			ea.	0	\$90,000	\$0	
Valve and Chamber			ea.	4	\$6,000	\$24,000	2 valves minimum
Additional Construction Costs	15%		ea.			\$81,526	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$62,504	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$688,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$6,900	
Geotechnical Sub-Total Cost						\$6,900	
Property Requirements	1.5%					\$ 10,300	
Property Requirements Sub-Total						\$10,300	
Consultant Engineering/Design	15%					\$ 103,200	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$103,200	
In House Labour/Engineering/Wages/CA	8%					\$ 55,000	
In-house Labour/Wages Sub-Total						\$55,000	
Project Contingency	15%					\$130,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$130,000	
Non-Refundable HST	1.76%					\$16,500	
Non-Refundable HST Sub-Total						\$16,500	
Total (2019 Dollars)						\$1,010,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,010,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$20,200		
Design	Design fees, Town fees for design, contract admin	13%	\$131,300		
Construction	Town fees, base costs and project contingency	85%	\$858,500		
TOTAL			\$1,010,000		

PROJECT NO.: W-D-WM-09-Ait1
PROJECT NAME: Dorchester Watermain - West Trunk river crossing at Development 22.
PROJECT DESCRIPTION: Newly proposed West Trunk - 140m of proposed 300mm PVC watermain river crossing.

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	40%			= Field auto-filled based on project details
5	Area Condition:	Rural	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	300 mm		CLASS EA REQUIREMENTS:	B
7	TOTAL LENGTH:	140 m		CONSTRUCTION ASSUMPTION:	Watermain
	Tunnelled	40 m	29%		
	Open Cut	100 m	71%		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	100 m	\$777	\$77,663	Existing road ROW
Pipe Construction - Tunneling			m	40 m	\$1,300	\$52,000	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	1	\$38,000	\$38,000	
Major Creek Crossings			ea.	0	\$207,000	\$0	
Road Crossings			ea.	0	\$90,000	\$0	
Major Road / Rail Crossings			ea.	0	\$207,000	\$0	
Utility Crossings			ea.	0	\$90,000	\$0	
Valve and Chamber			ea.	4	\$6,000	\$24,000	Assumed chambers at key intersections and crossings
Additional Construction Costs	15%		ea.			\$28,749	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$22,041	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$242,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$2,400	
Geotechnical Sub-Total Cost						\$2,400	
Property Requirements	1.5%					\$ 3,600	
Property Requirements Sub-Total						\$3,600	
Consultant Engineering/Design	15%					\$ 36,300	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$36,300	
In House Labour/Engineering/Wages/CA	8%					\$ 19,400	
In-house Labour/Wages Sub-Total						\$19,400	
Project Contingency	15%					\$46,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$46,000	
Non-Refundable HST	1.76%					\$5,800	
Non-Refundable HST Sub-Total						\$5,800	
Total (2019 Dollars)						\$356,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$356,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$7,120		
Design	Design fees, Town fees for design, contract admin	13%	\$46,280		
Construction	Town fees, base costs and project contingency	85%	\$302,600		
TOTAL			\$356,000		

PROJECT NO.: W-D-WM-10-Ait1
PROJECT NAME: Dorchester Watermain - West Trunk at Development 22.
PROJECT DESCRIPTION: Newly proposed West Trunk - 270m of proposed 300mm PVC watermain at Development 22.

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	Low	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	30%			= Field auto-filled based on project details
5	Area Condition:	Rural	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	300 mm			
7	TOTAL LENGTH:	270 m			
	Tunnelled	40 m	15%		
	Open Cut	230 m	85%		

CLASS EA REQUIREMENTS:	A
CONSTRUCTION ASSUMPTION:	Watermain

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	230 m	\$777	\$178,625	Existing road ROW
Pipe Construction - Tunneling			m	40 m	\$1,300	\$52,000	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	0	\$38,000	\$0	
Major Creek Crossings			ea.	0	\$207,000	\$0	
Road Crossings			ea.	0	\$90,000	\$0	
Major Road / Rail Crossings			ea.	0	\$207,000	\$0	
Utility Crossings			ea.	0	\$90,000	\$0	
Valve and Chamber			ea.	2	\$6,000	\$12,000	Assumed chambers at key intersections and crossings
Additional Construction Costs	10%		ea.			\$24,262	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$26,689	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$294,000	
Geotechnical / Hydrogeological / Materials	0.5%					\$1,500	
Geotechnical Sub-Total Cost						\$1,500	
Property Requirements	1.0%					\$ 2,900	
Property Requirements Sub-Total						\$2,900	
Consultant Engineering/Design	15%					\$ 44,100	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$44,100	
In House Labour/Engineering/Wages/CA	8%					\$ 23,500	
In-house Labour/Wages Sub-Total						\$23,500	
Project Contingency	10%					\$37,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$37,000	
Non-Refundable HST	1.76%					\$6,700	
Non-Refundable HST Sub-Total						\$6,700	
Total (2019 Dollars)						\$410,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$410,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$8,200		
Design	Design fees, Town fees for design, contract admin	13%	\$53,300		
Construction	Town fees, base costs and project contingency	85%	\$348,500		
TOTAL			\$410,000		

PROJECT NO.: W-D-WM-08-Ait2
PROJECT NAME: Dorchester Watermain - West Trunk at the Development 22
PROJECT DESCRIPTION: Newly proposed West Trunk - 490m of proposed 300mm PVC watermain at Development 22.

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	40%			= Field auto-filled based on project details
5	Area Condition:	Rural	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	300 mm		CLASS EA REQUIREMENTS:	A
7	TOTAL LENGTH:	490 m		CONSTRUCTION ASSUMPTION:	Watermain
	Tunnelled	0 m	0%		
	Open Cut	490 m	100%		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	490 m	\$777	\$380,548	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	1	\$38,000	\$38,000	
Major Creek Crossings			ea.	0	\$207,000	\$0	
Road Crossings			ea.	0	\$90,000	\$0	
Major Road / Rail Crossings			ea.	0	\$207,000	\$0	
Utility Crossings			ea.	0	\$90,000	\$0	
Valve and Chamber			ea.	4	\$6,000	\$24,000	2 valves minimum
Additional Construction Costs	15%		ea.			\$66,382	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$50,893	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$560,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$5,600	
Geotechnical Sub-Total Cost						\$5,600	
Property Requirements	1.5%					\$ 8,400	
Property Requirements Sub-Total						\$8,400	
Consultant Engineering/Design	15%					\$ 84,000	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$84,000	
In House Labour/Engineering/Wages/CA	8%					\$ 44,800	
In-house Labour/Wages Sub-Total						\$44,800	
Project Contingency	15%					\$105,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$105,000	
Non-Refundable HST	1.76%					\$13,400	
Non-Refundable HST Sub-Total						\$13,400	
Total (2019 Dollars)						\$821,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$821,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$16,420		
Design	Design fees, Town fees for design, contract admin	13%	\$106,730		
Construction	Town fees, base costs and project contingency	85%	\$697,850		
TOTAL			\$821,000		

PROJECT NO.: W-D-WM-09-Ait2
PROJECT NAME: Dorchester Watermain - West Trunk river crossing at Development 22.
PROJECT DESCRIPTION: Newly proposed West Trunk - 210m of proposed 300mm PVC watermain river crossing.

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	40%			= Field auto-filled based on project details
5	Area Condition:	Rural	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	300 mm		CLASS EA REQUIREMENTS:	B
7	TOTAL LENGTH:	210 m		CONSTRUCTION ASSUMPTION:	Watermain
	Tunnelled	40 m	19%		
	Open Cut	170 m	81%		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	170 m	\$777	\$132,027	Existing road ROW
Pipe Construction - Tunneling			m	40 m	\$1,300	\$52,000	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	1	\$38,000	\$38,000	
Major Creek Crossings			ea.	0	\$207,000	\$0	
Road Crossings			ea.	0	\$90,000	\$0	
Major Road / Rail Crossings			ea.	0	\$207,000	\$0	
Utility Crossings			ea.	0	\$90,000	\$0	
Valve and Chamber			ea.	4	\$6,000	\$24,000	Assumed chambers at key intersections and crossings
Additional Construction Costs	15%		ea.			\$36,904	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$28,293	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$311,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$3,100	
Geotechnical Sub-Total Cost						\$3,100	
Property Requirements	1.5%					\$ 4,700	
Property Requirements Sub-Total						\$4,700	
Consultant Engineering/Design	15%					\$ 46,700	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$46,700	
In House Labour/Engineering/Wages/CA	8%					\$ 24,900	
In-house Labour/Wages Sub-Total						\$24,900	
Project Contingency	15%					\$59,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$59,000	
Non-Refundable HST	1.76%					\$7,500	
Non-Refundable HST Sub-Total						\$7,500	
Total (2019 Dollars)						\$457,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$457,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$9,140		
Design	Design fees, Town fees for design, contract admin	13%	\$59,410		
Construction	Town fees, base costs and project contingency	85%	\$388,450		
TOTAL			\$457,000		

PROJECT NO.: W-D-WM-10-AIt2
PROJECT NAME: Dorchester Watermain - West Trunk at Development 22.
PROJECT DESCRIPTION: Newly proposed West Trunk - 290m of proposed 300mm PVC watermain at Development 22.

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	Low	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	30%			= Field auto-filled based on project details
5	Area Condition:	Rural	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	300 mm			
7	TOTAL LENGTH:	290 m			
	Tunnelled	40 m	14%		
	Open Cut	250 m	86%		

CLASS EA REQUIREMENTS:	A
CONSTRUCTION ASSUMPTION:	Watermain

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	250 m	\$777	\$194,157	Existing road ROW
Pipe Construction - Tunneling			m	40 m	\$1,300	\$52,000	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	0	\$38,000	\$0	
Major Creek Crossings			ea.	0	\$207,000	\$0	
Road Crossings			ea.	0	\$90,000	\$0	
Major Road / Rail Crossings			ea.	0	\$207,000	\$0	
Utility Crossings			ea.	0	\$90,000	\$0	
Valve and Chamber			ea.	2	\$6,000	\$12,000	Assumed chambers at key intersections and crossings
Additional Construction Costs	10%		ea.			\$25,816	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$28,397	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$312,000	
Geotechnical / Hydrogeological / Materials	0.5%					\$1,600	
Geotechnical Sub-Total Cost						\$1,600	
Property Requirements	1.0%					\$ 3,100	
Property Requirements Sub-Total						\$3,100	
Consultant Engineering/Design	15%					\$ 46,800	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$46,800	
In House Labour/Engineering/Wages/CA	8%					\$ 25,000	
In-house Labour/Wages Sub-Total						\$25,000	
Project Contingency	10%					\$39,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$39,000	
Non-Refundable HST	1.76%					\$7,100	
Non-Refundable HST Sub-Total						\$7,100	
Total (2019 Dollars)						\$435,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$435,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$8,700		
Design	Design fees, Town fees for design, contract admin	13%	\$56,550		
Construction	Town fees, base costs and project contingency	85%	\$369,750		
TOTAL			\$435,000		

PROJECT NO.: W-D-WM-11
PROJECT NAME: Dorchester Watermain - West Trunk on Christie Dr.
PROJECT DESCRIPTION: Newly proposed West Trunk - Total of 980m of 300mm PVC watermain along Christie Dr. including 870m of proposed 300mm PVC watermain and 110m of existing 150mm PVC watermain to be replaced by 300mm PVC watermain

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	40%			= Field auto-filled based on project details
5	Area Condition:	Suburban	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	300 mm		CLASS EA REQUIREMENTS:	A
7	TOTAL LENGTH:	980 m		CONSTRUCTION ASSUMPTION:	Watermain
	Tunnelled	0 m	0%		
	Open Cut	980 m	100%		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	980 m	\$777	\$761,096	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$152,219	
Minor Creek Crossings			ea.	0	\$38,000	\$0	
Major Creek Crossings			ea.	0	\$207,000	\$0	
Road Crossings			ea.	0	\$90,000	\$0	
Major Road / Rail Crossings			ea.	0	\$207,000	\$0	
Utility Crossings			ea.	0	\$90,000	\$0	
Valve and Chamber			ea.	2	\$6,000	\$12,000	2 valves minimum
Additional Construction Costs	15%		ea.			\$138,797	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$106,411	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$1,171,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$11,700	
Geotechnical Sub-Total Cost						\$11,700	
Property Requirements	1.5%					\$ 17,600	
Property Requirements Sub-Total						\$17,600	
Consultant Engineering/Design	15%					\$ 175,700	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$175,700	
In House Labour/Engineering/Wages/CA	8%					\$ 93,700	
In-house Labour/Wages Sub-Total						\$93,700	
Project Contingency	15%					\$220,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$220,000	
Non-Refundable HST	1.76%					\$28,100	
Non-Refundable HST Sub-Total						\$28,100	
Total (2019 Dollars)						\$1,718,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,718,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$34,360		
Design	Design fees, Town fees for design, contract admin	13%	\$223,340		
Construction	Town fees, base costs and project contingency	85%	\$1,460,300		
TOTAL			\$1,718,000		

PROJECT NO.: W-D-WM-12
PROJECT NAME: Dorchester Watermain - West Trunk on Harris Rd. and Hamilton Rd.
PROJECT DESCRIPTION: Newly proposed West Trunk - 1080m of proposed 300mm PVC watermain along Harris Rd. and Hamilton Rd.

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	High	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	50%			= Field auto-filled based on project details
5	Area Condition:	Rural	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	300 mm		CLASS EA REQUIREMENTS:	A
7	TOTAL LENGTH:	910 m		CONSTRUCTION ASSUMPTION:	Watermain
	Tunnelled	0 m	0%		
	Open Cut	910 m	100%		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	910 m	\$777	\$706,732	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	1	\$38,000	\$38,000	
Major Creek Crossings			ea.	0	\$207,000	\$0	
Road Crossings			ea.	0	\$90,000	\$0	
Major Road / Rail Crossings			ea.	0	\$207,000	\$0	
Utility Crossings			ea.	0	\$90,000	\$0	
Valve and Chamber			ea.	4	\$6,000	\$24,000	2 valves minimum
Additional Construction Costs	20%		ea.			\$153,748	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$92,248	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$1,015,000	
Geotechnical / Hydrogeological / Materials	2.0%					\$20,300	
Geotechnical Sub-Total Cost						\$20,300	
Property Requirements	2.0%					\$ 20,300	
Property Requirements Sub-Total						\$20,300	
Consultant Engineering/Design	15%					\$ 152,300	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$152,300	
In House Labour/Engineering/Wages/CA	8%					\$ 81,200	
In-house Labour/Wages Sub-Total						\$81,200	
Project Contingency	25%					\$322,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$322,000	
Non-Refundable HST	1.76%					\$26,900	
Non-Refundable HST Sub-Total						\$26,900	
Total (2019 Dollars)						\$1,638,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,638,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$32,760		
Design	Design fees, Town fees for design, contract admin	13%	\$212,940		
Construction	Town fees, base costs and project contingency	85%	\$1,392,300		
TOTAL			\$1,638,000		

PROJECT NO.: W-D-WM-13
PROJECT NAME: Dorchester Watermain - West Trunk at Mill Ct. Loop
PROJECT DESCRIPTION: Newly proposed West Trunk - 800m of proposed 200mm PVC watermain on Mill Ct to complete loop

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	High	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	50%			= Field auto-filled based on project details
5	Area Condition:	Rural	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	200 mm		CLASS EA REQUIREMENTS:	A+
7	TOTAL LENGTH:	800 m		CONSTRUCTION ASSUMPTION:	Watermain
	Tunnelled	0 m	0%		
	Open Cut	800 m	100%		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	800 m	\$773	\$618,430	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	1	\$30,000	\$30,000	
Major Creek Crossings			ea.	0	\$199,000	\$0	
Road Crossings			ea.	0	\$82,000	\$0	
Major Road / Rail Crossings			ea.	0	\$199,000	\$0	
Utility Crossings			ea.	0	\$82,000	\$0	
Valve and Chamber			ea.	3	\$2,000	\$6,000	2 valves minimum
Additional Construction Costs	20%		ea.			\$130,886	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$78,532	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$864,000	
Geotechnical / Hydrogeological / Materials	2.0%					\$17,300	
Geotechnical Sub-Total Cost						\$17,300	
Property Requirements	2.0%					\$ 17,300	
Property Requirements Sub-Total						\$17,300	
Consultant Engineering/Design	15%					\$ 129,600	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$129,600	
In House Labour/Engineering/Wages/CA	8%					\$ 69,100	
In-house Labour/Wages Sub-Total						\$69,100	
Project Contingency	25%					\$274,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$274,000	
Non-Refundable HST	1.76%					\$22,900	
Non-Refundable HST Sub-Total						\$22,900	
Total (2019 Dollars)						\$1,394,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,394,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$27,880		
Design	Design fees, Town fees for design, contract admin	13%	\$181,220		
Construction	Town fees, base costs and project contingency	85%	\$1,184,900		
TOTAL			\$1,394,000		

PROJECT NO.: W-D-WM-14
PROJECT NAME: Dorchester Watermain - Catherine St. East Section Upgrade
PROJECT DESCRIPTION: 1020m of existing 250mm DI watermain (built in 1983) to be replaced by 300mm PVC watermain on Catherine St.

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	High	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	50%			= Field auto-filled based on project details
5	Area Condition:	Suburban	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	300 mm		CLASS EA REQUIREMENTS:	A+
7	TOTAL LENGTH:	1020 m		CONSTRUCTION ASSUMPTION:	Watermain
	Tunnelled	0 m	0%		
	Open Cut	1020 m	100%		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	1020 m	\$777	\$792,161	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$158,432	
Minor Creek Crossings			ea.	0	\$38,000	\$0	
Major Creek Crossings			ea.	0	\$207,000	\$0	
Road Crossings			ea.	0	\$90,000	\$0	
Major Road / Rail Crossings			ea.	0	\$207,000	\$0	
Utility Crossings			ea.	0	\$90,000	\$0	
Valve and Chamber			ea.	5	\$6,000	\$30,000	2 valves minimum
Additional Construction Costs	20%		ea.			\$196,119	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$117,671	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$1,294,000	
Geotechnical / Hydrogeological / Materials	2.0%					\$25,900	
Geotechnical Sub-Total Cost						\$25,900	
Property Requirements	2.0%					\$ 25,900	
Property Requirements Sub-Total						\$25,900	
Consultant Engineering/Design	15%					\$ 194,100	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$194,100	
In House Labour/Engineering/Wages/CA	8%					\$ 103,500	
In-house Labour/Wages Sub-Total						\$103,500	
Project Contingency	25%					\$411,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$411,000	
Non-Refundable HST	1.76%					\$34,300	
Non-Refundable HST Sub-Total						\$34,300	
Total (2019 Dollars)						\$2,089,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$2,089,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$41,780		
Design	Design fees, Town fees for design, contract admin	13%	\$271,570		
Construction	Town fees, base costs and project contingency	85%	\$1,775,650		
TOTAL			\$2,089,000		

PROJECT NO.: W-D-WM-15
PROJECT NAME: Dorchester Watermain - Catherine St. West Section Upgrade
PROJECT DESCRIPTION: 1390m of existing 200mm PVC watermain (built in 1973 - 2013) to be replaced by 300mm PVC watermain on Catherine St.

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	High	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	50%			= Field auto-filled based on project details
5	Area Condition:	Suburban	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	300 mm		CLASS EA REQUIREMENTS:	A+
7	TOTAL LENGTH:	1390 m		CONSTRUCTION ASSUMPTION:	Watermain
	Tunnelled	0 m	0%		
	Open Cut	1390 m	100%		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	1390 m	\$777	\$1,079,514	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$215,903	
Minor Creek Crossings			ea.	1	\$38,000	\$38,000	
Major Creek Crossings			ea.	0	\$207,000	\$0	
Road Crossings			ea.	0	\$90,000	\$0	
Major Road / Rail Crossings			ea.	0	\$207,000	\$0	
Utility Crossings			ea.	0	\$90,000	\$0	
Valve and Chamber			ea.	7	\$6,000	\$42,000	2 valves minimum
Additional Construction Costs	20%		ea.			\$275,083	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$165,050	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$1,816,000	
Geotechnical / Hydrogeological / Materials	2.0%					\$36,300	
Geotechnical Sub-Total Cost						\$36,300	
Property Requirements	2.0%					\$ 36,300	
Property Requirements Sub-Total						\$36,300	
Consultant Engineering/Design	15%					\$ 272,400	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$272,400	
In House Labour/Engineering/Wages/CA	8%					\$ 145,300	
In-house Labour/Wages Sub-Total						\$145,300	
Project Contingency	25%					\$577,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$577,000	
Non-Refundable HST	1.76%					\$48,200	
Non-Refundable HST Sub-Total						\$48,200	
Total (2019 Dollars)						\$2,932,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$2,932,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$58,640		
Design	Design fees, Town fees for design, contract admin	13%	\$381,160		
Construction	Town fees, base costs and project contingency	85%	\$2,492,200		
TOTAL			\$2,932,000		

PROJECT NO.: W-D-WM-16
PROJECT NAME: Dorchester Watermain - Northwest Industrial Lands Upgrade
PROJECT DESCRIPTION: 1260m of existing 200mm DI & PVC watermain (built in 1978 - 2013) to be replaced by 300mm PVC watermain

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	40%			= Field auto-filled based on project details
5	Area Condition:	Suburban	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	300 mm		CLASS EA REQUIREMENTS:	A+
7	TOTAL LENGTH:	1260 m		CONSTRUCTION ASSUMPTION:	Watermain
	Tunnelled	0 m	0%		
	Open Cut	1260 m	100%		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	1260 m	\$777	\$978,552	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$195,710	
Minor Creek Crossings			ea.	1	\$38,000	\$38,000	
Major Creek Crossings			ea.	0	\$207,000	\$0	
Road Crossings			ea.	0	\$90,000	\$0	
Major Road / Rail Crossings			ea.	0	\$207,000	\$0	
Utility Crossings			ea.	0	\$90,000	\$0	
Valve and Chamber			ea.	3	\$6,000	\$18,000	2 valves minimum
Additional Construction Costs	15%		ea.			\$184,539	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$141,480	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$1,556,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$15,600	
Geotechnical Sub-Total Cost						\$15,600	
Property Requirements	1.5%					\$ 23,300	
Property Requirements Sub-Total						\$23,300	
Consultant Engineering/Design	15%					\$ 233,400	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$233,400	
In House Labour/Engineering/Wages/CA	8%					\$ 124,500	
In-house Labour/Wages Sub-Total						\$124,500	
Project Contingency	15%					\$293,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$293,000	
Non-Refundable HST	1.76%					\$37,300	
Non-Refundable HST Sub-Total						\$37,300	
Total (2019 Dollars)						\$2,283,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$2,283,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$45,660		
Design	Design fees, Town fees for design, contract admin	13%	\$296,790		
Construction	Town fees, base costs and project contingency	85%	\$1,940,550		
TOTAL			\$2,283,000		

PROJECT NO.: W-D-WM-17
PROJECT NAME: Dorchester Watermain - Hamilton Rd. Extension
PROJECT DESCRIPTION: 350m of proposed 200mm PVC watermain along Hamilton Rd.

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	40%			= Field auto-filled based on project details
5	Area Condition:	Suburban	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	200 mm		CLASS EA REQUIREMENTS:	A+
7	TOTAL LENGTH:	350 m		CONSTRUCTION ASSUMPTION:	Watermain
	Tunnelled	0 m	0%		
	Open Cut	350 m	100%		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	350 m	\$773	\$270,563	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$54,113	
Minor Creek Crossings			ea.	0	\$30,000	\$0	
Major Creek Crossings			ea.	0	\$199,000	\$0	
Road Crossings			ea.	0	\$82,000	\$0	
Major Road / Rail Crossings			ea.	0	\$199,000	\$0	
Utility Crossings			ea.	0	\$82,000	\$0	
Valve and Chamber			ea.	2	\$2,000	\$4,000	2 valves minimum
Additional Construction Costs	15%		ea.			\$49,301	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$37,798	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$416,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$4,200	
Geotechnical Sub-Total Cost						\$4,200	
Property Requirements	1.5%					\$ 6,200	
Property Requirements Sub-Total						\$6,200	
Consultant Engineering/Design	15%					\$ 62,400	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$62,400	
In House Labour/Engineering/Wages/CA	8%					\$ 33,300	
In-house Labour/Wages Sub-Total						\$33,300	
Project Contingency	15%					\$78,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$78,000	
Non-Refundable HST	1.76%					\$10,000	
Non-Refundable HST Sub-Total						\$10,000	
Total (2019 Dollars)						\$610,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$610,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$12,200		
Design	Design fees, Town fees for design, contract admin	13%	\$79,300		
Construction	Town fees, base costs and project contingency	85%	\$518,500		
TOTAL			\$610,000		

PROJECT NO.: W-D-WM-18
PROJECT NAME: Dorchester Watermain - Benefit to Existing System
PROJECT DESCRIPTION: 370m of proposed 200mm PVC watermain along Mill Rd.

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	40%			= Field auto-filled based on project details
5	Area Condition:	Suburban	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	200 mm		CLASS EA REQUIREMENTS:	A+
7	TOTAL LENGTH:	370 m		CONSTRUCTION ASSUMPTION:	Watermain
	Tunnelled	0 m	0%		
	Open Cut	370 m	100%		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	370 m	\$773	\$286,024	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$57,205	
Minor Creek Crossings			ea.	0	\$30,000	\$0	
Major Creek Crossings			ea.	0	\$199,000	\$0	
Road Crossings			ea.	0	\$82,000	\$0	
Major Road / Rail Crossings			ea.	0	\$199,000	\$0	
Utility Crossings			ea.	0	\$82,000	\$0	
Valve and Chamber			ea.	2	\$2,000	\$4,000	2 valves minimum
Additional Construction Costs	15%		ea.			\$52,084	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$39,931	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$439,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$4,400	
Geotechnical Sub-Total Cost						\$4,400	
Property Requirements	1.5%					\$ 6,600	
Property Requirements Sub-Total						\$6,600	
Consultant Engineering/Design	15%					\$ 65,900	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$65,900	
In House Labour/Engineering/Wages/CA	8%					\$ 35,100	
In-house Labour/Wages Sub-Total						\$35,100	
Project Contingency	15%					\$83,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$83,000	
Non-Refundable HST	1.76%					\$10,500	
Non-Refundable HST Sub-Total						\$10,500	
Total (2019 Dollars)						\$645,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$645,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$12,900		
Design	Design fees, Town fees for design, contract admin	13%	\$83,850		
Construction	Town fees, base costs and project contingency	85%	\$548,250		
TOTAL			\$645,000		



Municipality of Thames Centre
Water and Wastewater Master Plan
Capital Program Cost Estimate



PROJECT NO.: W-D-401-ST-01
PROJECT NAME: Cost Benefit Study to Service 401 Corridor Lands
PROJECT DESCRIPTION: Cost-benefit study to evaluate servicing options for 401 Corridor Lands, will include recommendations for service pressures and available fire flow.

CLASS EA REQUIREMENTS: -

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	TOTAL
Study	Feasibility study, EA	\$50,000

1 PROJECT NO.: W-T-SUP-01
PROJECT NAME: Maximize Thorndale WTF Supply
PROJECT DESCRIPTION: Maximize Well Capacity at Existing WTF

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2 Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3 Project Complexity	Low	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4 Accuracy Range:	30%			= Field auto-filled based on project details
5 Area Condition:	Suburban	Area Condition uplifts unit cost and restoration		

6 PROPOSED CAPACITY: 22 L/s

CLASS EA REQUIREMENTS:	A	Pump	1	Existing (L/s)	8.3	Future (L/s)	22
CONSTRUCTION ASSUMPTION:	Other		2		8.3		22
			3		8.3		8.3
			4				
			5				

7

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Number of Pumps (including well casing upgrades)			Pumps	2	\$200,000	\$400,000	Pump replacement and upgrades
Electrical and Process			Lump Sum		\$100,000	\$100,000	
Additional Construction Costs	25%		ea.			\$125,000	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$62,500	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$688,000	
Geotechnical / Hydrogeological / Materials	20.0%					\$ 100,000	
Geotechnical Sub-Total Cost						\$100,000	
Property Requirements	1.0%					\$ -	
Property Requirements Sub-Total						\$0	
Consultant Engineering/Design	15%					\$ 103,200	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$103,200	
In House Labour/Engineering/Wages/CA	3%					\$ 20,600	
In-house Labour/Wages Sub-Total						\$20,600	
Project Contingency	10%					\$91,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$91,000	
Non-Refundable HST	1.76%					\$17,300	
Non-Refundable HST Sub-Total						\$17,300	
Total (2019 Dollars)						\$1,020,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,020,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$20,400		
Design	Design fees, Town fees for design, contract admin	13%	\$132,600		
Construction	Town fees, base costs and project contingency	85%	\$867,000		
TOTAL			\$1,020,000		



Municipality of Thames Centre
Water and Wastewater Master Plan
Capital Program Cost Estimate



PROJECT NO.: W-T-SUP-02
PROJECT NAME: New Thorndale Groundwater Supply
PROJECT DESCRIPTION: Includes cost of new Dorchester groundwater supply and consolidation of sources at Thorndale WTF for treatment. Includes new well houses, raw water mains, and treatment. Excludes pump capacity upgrades cost to the Thorndale WTF High Lift Pumps

CLASS EA REQUIREMENTS: C

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	TOTAL
Study	Feasibility study, EA	\$750,000
Design	Design fees, Town fees for design, contract admin	\$500,000
Construction	Town fees, base costs and project contingency	\$5M - \$15M

1 PROJECT NO.: W-T-RES-01
 PROJECT NAME: Thorndale Reservoir Upgrade
 PROJECT DESCRIPTION: Twinning the existing 0.451 ML reservoir and 0.363 ML reservoir

CAPITAL BUDGET YEAR:
 VERSION:
 DATE UPDATED:
 UPDATED BY:

2 Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3 Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4 Accuracy Range:	40%			= Field auto-filled based on project details
5 Area Condition:	Suburban	Area Condition uplifts unit cost and restoration		

6 PROPOSED CAPACITY	0.5 ML	CLASS EA REQUIREMENTS:	A
7		CONSTRUCTION ASSUMPTION:	Other

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Facility Construction			ML	0.5 ML	\$900,000	\$405,900	utilizing existing reservoirs, not constructing new
Additional Construction Costs	15%		ea.			\$60,885	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$46,679	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$513,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$5,100	
Geotechnical Sub-Total Cost						\$5,100	
Property Requirements	1.5%					\$ 7,700	
Property Requirements Sub-Total						\$7,700	
Consultant Engineering/Design	15%					\$ 77,000	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$77,000	
In House Labour/Engineering/Wages/CA	8%					\$ 41,000	
In-house Labour/Wages Sub-Total						\$41,000	
Project Contingency	15%					\$97,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$97,000	
Non-Refundable HST	1.76%					\$12,300	
Non-Refundable HST Sub-Total						\$12,300	
Total (2019 Dollars)						\$753,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$753,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$15,060		
Design	Design fees, Town fees for design, contract admin	13%	\$97,890		
Construction	Town fees, base costs and project contingency	85%	\$640,050		
TOTAL			\$753,000		

1 PROJECT NO.: W-T-BPS-01
 PROJECT NAME: Thorndale HLP Upgrades
 PROJECT DESCRIPTION: Upgrade Thorndale HLP to supply elevated tank and distribution system from reservoirs

CAPITAL BUDGET YEAR:
 VERSION:
 DATE UPDATED:
 UPDATED BY:

2 Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
3 Project Complexity	Low	Complexity adjusts Construction Contingency, and expected accuracy
4 Accuracy Range:	30%	
5 Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

= Field has drop down
 = Field must be manually populated
 = Field auto-filled based on project details

6 PROPOSED CAPACITY: 20 L/s

CLASS EA REQUIREMENTS: A
 CONSTRUCTION ASSUMPTION: Other

	Pump	Existing (L/s)	Future (L/s)
1	1	8.3	20
2	2	8.3	20
3			
4			
5			

7

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Number of Pumps (including well casing upgrades)			Pumps	2	\$200,000	\$400,000	Pump replacement and upgrades
Electrical and Process			Lump Sum		\$100,000	\$100,000	
Additional Construction Costs	25%		ea.			\$125,000	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$62,500	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$688,000	
Geotechnical / Hydrogeological / Materials	20.0%					\$ 100,000	
Geotechnical Sub-Total Cost						\$100,000	
Property Requirements	1.0%					\$ -	
Property Requirements Sub-Total						\$0	
Consultant Engineering/Design	15%					\$ 103,200	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$103,200	
In House Labour/Engineering/Wages/CA	3%					\$ 20,600	
In-house Labour/Wages Sub-Total						\$20,600	
Project Contingency	10%					\$91,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$91,000	
Non-Refundable HST	1.76%					\$17,300	
Non-Refundable HST Sub-Total						\$17,300	
Total (2019 Dollars)						\$1,020,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,020,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$20,400		
Design	Design fees, Town fees for design, contract admin	13%	\$132,600		
Construction	Town fees, base costs and project contingency	85%	\$867,000		
TOTAL			\$1,020,000		

PROJECT NO.: W-T-WM-01
PROJECT NAME: Thorndale Watermain - Thorndale Rd. Upgrade
PROJECT DESCRIPTION: 350m of existing PVC watermain on Thorndale Rd. (built in 1987) to be replaced by 300mm PVC watermain

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	40%			= Field auto-filled based on project details
5	Area Condition:	Suburban	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	300 mm		CLASS EA REQUIREMENTS:	A+
7	TOTAL LENGTH:	350 m		CONSTRUCTION ASSUMPTION:	Watermain
	Tunnelled	0 m	0%		
	Open Cut	350 m	100%		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	350 m	\$777	\$271,820	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$54,364	
Minor Creek Crossings			ea.	0	\$38,000	\$0	
Major Creek Crossings			ea.	0	\$207,000	\$0	
Road Crossings			ea.	0	\$90,000	\$0	
Major Road / Rail Crossings			ea.	0	\$207,000	\$0	
Utility Crossings			ea.	1	\$90,000	\$90,000	
Valve and Chamber			ea.	4	\$6,000	\$24,000	2 valves minimum
Additional Construction Costs	15%		ea.			\$66,028	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$50,621	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$557,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$5,600	
Geotechnical Sub-Total Cost						\$5,600	
Property Requirements	1.5%					\$ 8,400	
Property Requirements Sub-Total						\$8,400	
Consultant Engineering/Design	15%					\$ 83,600	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$83,600	
In House Labour/Engineering/Wages/CA	8%					\$ 44,600	
In-house Labour/Wages Sub-Total						\$44,600	
Project Contingency	15%					\$105,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$105,000	
Non-Refundable HST	1.76%					\$13,400	
Non-Refundable HST Sub-Total						\$13,400	
Total (2019 Dollars)						\$818,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$818,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$16,360		
Design	Design fees, Town fees for design, contract admin	13%	\$106,340		
Construction	Town fees, base costs and project contingency	85%	\$695,300		
TOTAL			\$818,000		

PROJECT NO.: W-T-WM-02
PROJECT NAME: Thorndale Watermain - South Trunk at Monteith Lands
PROJECT DESCRIPTION: 540m of proposed 300mm PVC watermain at Monteith Lands to complete south trunk.

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	Low	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	30%			= Field auto-filled based on project details
5	Area Condition:	Rural	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	300 mm		CLASS EA REQUIREMENTS:	A
7	TOTAL LENGTH:	540 m		CONSTRUCTION ASSUMPTION:	Watermain
	Tunnelled	0 m	0%		
	Open Cut	540 m	100%		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	540 m	\$777	\$419,379	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	0	\$38,000	\$0	
Major Creek Crossings			ea.	0	\$207,000	\$0	
Road Crossings			ea.	0	\$90,000	\$0	
Major Road / Rail Crossings			ea.	0	\$207,000	\$0	
Utility Crossings			ea.	1	\$90,000	\$90,000	
Valve and Chamber			ea.	4	\$6,000	\$24,000	2 valves minimum
Additional Construction Costs	10%		ea.			\$53,338	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$58,672	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$645,000	
Geotechnical / Hydrogeological / Materials	0.5%					\$3,200	
Geotechnical Sub-Total Cost						\$3,200	
Property Requirements	1.0%					\$ 6,500	
Property Requirements Sub-Total						\$6,500	
Consultant Engineering/Design	15%					\$ 96,800	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$96,800	
In House Labour/Engineering/Wages/CA	8%					\$ 51,600	
In-house Labour/Wages Sub-Total						\$51,600	
Project Contingency	10%					\$80,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$80,000	
Non-Refundable HST	1.76%					\$14,600	
Non-Refundable HST Sub-Total						\$14,600	
Total (2019 Dollars)						\$898,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$898,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$17,960		
Design	Design fees, Town fees for design, contract admin	13%	\$116,740		
Construction	Town fees, base costs and project contingency	85%	\$763,300		
TOTAL			\$898,000		

PROJECT NO.: W-T-WM-03
PROJECT NAME: Thorndale Watermain - South Trunk Meadowbrook Ln. Upgrade
PROJECT DESCRIPTION: 440m of existing 150mm PVC watermain on Meadowbrook Ln.(built in 1990) to be replaced by 300mm PVC watermain

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	40%			= Field auto-filled based on project details
5	Area Condition:	Suburban	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	300 mm		CLASS EA REQUIREMENTS:	A+
7	TOTAL LENGTH:	440 m		CONSTRUCTION ASSUMPTION:	Watermain
	Tunnelled	0 m	0%		
	Open Cut	440 m	100%		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	440 m	\$777	\$341,717	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$68,343	
Minor Creek Crossings			ea.	0	\$38,000	\$0	
Major Creek Crossings			ea.	0	\$207,000	\$0	
Road Crossings			ea.	0	\$90,000	\$0	
Major Road / Rail Crossings			ea.	0	\$207,000	\$0	
Utility Crossings			ea.	0	\$90,000	\$0	
Valve and Chamber			ea.	3	\$6,000	\$18,000	2 valves minimum
Additional Construction Costs	15%		ea.			\$64,209	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$49,227	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$541,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$5,400	
Geotechnical Sub-Total Cost						\$5,400	
Property Requirements	1.5%					\$ 8,100	
Property Requirements Sub-Total						\$8,100	
Consultant Engineering/Design	15%					\$ 81,200	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$81,200	
In House Labour/Engineering/Wages/CA	8%					\$ 43,300	
In-house Labour/Wages Sub-Total						\$43,300	
Project Contingency	15%					\$102,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$102,000	
Non-Refundable HST	1.76%					\$13,000	
Non-Refundable HST Sub-Total						\$13,000	
Total (2019 Dollars)						\$794,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$794,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$15,880		
Design	Design fees, Town fees for design, contract admin	13%	\$103,220		
Construction	Town fees, base costs and project contingency	85%	\$674,900		
TOTAL			\$794,000		

PROJECT NO.: W-T-WM-04
PROJECT NAME: Thorndale Watermain - South Trunk at Foxborough Subdivision
PROJECT DESCRIPTION: 280m of proposed 300mm PVC watermain at Foxborough Subdivision to complete south trunk.

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	Low	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	30%			= Field auto-filled based on project details
5	Area Condition:	Rural	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	300 mm		CLASS EA REQUIREMENTS:	A
7	TOTAL LENGTH:	280 m		CONSTRUCTION ASSUMPTION:	Watermain
	Tunnelled	0 m	0%		
	Open Cut	280 m	100%		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	280 m	\$777	\$217,456	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	0	\$38,000	\$0	
Major Creek Crossings			ea.	0	\$207,000	\$0	
Road Crossings			ea.	0	\$90,000	\$0	
Major Road / Rail Crossings			ea.	0	\$207,000	\$0	
Utility Crossings			ea.	0	\$90,000	\$0	
Valve and Chamber			ea.	2	\$6,000	\$12,000	2 valves minimum
Additional Construction Costs	10%		ea.			\$22,946	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$25,240	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$278,000	
Geotechnical / Hydrogeological / Materials	0.5%					\$1,400	
Geotechnical Sub-Total Cost						\$1,400	
Property Requirements	1.0%					\$ 2,800	
Property Requirements Sub-Total						\$2,800	
Consultant Engineering/Design	15%					\$ 41,700	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$41,700	
In House Labour/Engineering/Wages/CA	8%					\$ 22,200	
In-house Labour/Wages Sub-Total						\$22,200	
Project Contingency	10%					\$35,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$35,000	
Non-Refundable HST	1.76%					\$6,300	
Non-Refundable HST Sub-Total						\$6,300	
Total (2019 Dollars)						\$387,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$387,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$7,740		
Design	Design fees, Town fees for design, contract admin	13%	\$50,310		
Construction	Town fees, base costs and project contingency	85%	\$328,950		
TOTAL			\$387,000		

PROJECT NO.: W-T-WM-05
PROJECT NAME: Thorndale Watermain - South Trunk at Railway Crossing
PROJECT DESCRIPTION: 410m of proposed 300mm PVC watermain at railway crossing to complete south trunk.

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	High	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	50%			= Field auto-filled based on project details
5	Area Condition:	Rural	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	300 mm		CLASS EA REQUIREMENTS:	A+
7	TOTAL LENGTH:	410 m		CONSTRUCTION ASSUMPTION:	Watermain
	Tunnelled	200 m	49%		
	Open Cut	210 m	51%		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	210 m	\$777	\$163,092	Existing road ROW
Pipe Construction - Tunneling			m	200 m	\$1,300	\$260,000	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	0	\$38,000	\$0	
Major Creek Crossings			ea.	1	\$207,000	\$207,000	
Road Crossings			ea.	0	\$90,000	\$0	
Major Road / Rail Crossings			ea.	1	\$207,000	\$207,000	
Utility Crossings			ea.	0	\$90,000	\$0	
Valve and Chamber			ea.	2	\$6,000	\$12,000	2 valves minimum
Additional Construction Costs	20%		ea.			\$169,818	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$101,891	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$1,121,000	
Geotechnical / Hydrogeological / Materials	2.0%					\$22,400	
Geotechnical Sub-Total Cost						\$22,400	
Property Requirements	2.0%					\$ 22,400	
Property Requirements Sub-Total						\$22,400	
Consultant Engineering/Design	15%					\$ 168,200	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$168,200	
In House Labour/Engineering/Wages/CA	8%					\$ 89,700	
In-house Labour/Wages Sub-Total						\$89,700	
Project Contingency	25%					\$356,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$356,000	
Non-Refundable HST	1.76%					\$29,700	
Non-Refundable HST Sub-Total						\$29,700	
Total (2019 Dollars)						\$1,809,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,809,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$36,180		
Design	Design fees, Town fees for design, contract admin	13%	\$235,170		
Construction	Town fees, base costs and project contingency	85%	\$1,537,650		
TOTAL			\$1,809,000		

PROJECT NO.: W-T-WM-06
PROJECT NAME: Thorndale Watermain - South Trunk at Rosewood Subdivision
PROJECT DESCRIPTION: 390m of proposed 300mm PVC watermain at Rosewood Subdivision to complete south trunk.

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	Low	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	30%			= Field auto-filled based on project details
5	Area Condition:	Rural	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	300 mm		CLASS EA REQUIREMENTS:	A
7	TOTAL LENGTH:	390 m		CONSTRUCTION ASSUMPTION:	Watermain
	Tunnelled	0 m	0%		
	Open Cut	390 m	100%		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	390 m	\$777	\$302,885	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	0	\$38,000	\$0	
Major Creek Crossings			ea.	0	\$207,000	\$0	
Road Crossings			ea.	0	\$90,000	\$0	
Major Road / Rail Crossings			ea.	0	\$207,000	\$0	
Utility Crossings			ea.	0	\$90,000	\$0	
Valve and Chamber			ea.	3	\$6,000	\$18,000	2 valves minimum
Additional Construction Costs	10%		ea.			\$32,089	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$35,297	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$388,000	
Geotechnical / Hydrogeological / Materials	0.5%					\$1,900	
Geotechnical Sub-Total Cost						\$1,900	
Property Requirements	1.0%					\$ 3,900	
Property Requirements Sub-Total						\$3,900	
Consultant Engineering/Design	15%					\$ 58,200	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$58,200	
In House Labour/Engineering/Wages/CA	8%					\$ 31,000	
In-house Labour/Wages Sub-Total						\$31,000	
Project Contingency	10%					\$48,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$48,000	
Non-Refundable HST	1.76%					\$8,800	
Non-Refundable HST Sub-Total						\$8,800	
Total (2019 Dollars)						\$540,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$540,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$10,800		
Design	Design fees, Town fees for design, contract admin	13%	\$70,200		
Construction	Town fees, base costs and project contingency	85%	\$459,000		
TOTAL			\$540,000		

PROJECT NO.: W-T-WM-07
PROJECT NAME: Thorndale Watermain - Subrun at Rosewood
PROJECT DESCRIPTION: 680m of proposed 300mm PVC watermain at Rosewood Subdivision.

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	Low	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	30%			= Field auto-filled based on project details
5	Area Condition:	Rural	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	300 mm		CLASS EA REQUIREMENTS:	A
7	TOTAL LENGTH:	680 m		CONSTRUCTION ASSUMPTION:	Watermain
	Tunnelled	0 m	0%		
	Open Cut	680 m	100%		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	680 m	\$777	\$528,107	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	1	\$38,000	\$38,000	
Major Creek Crossings			ea.	0	\$207,000	\$0	
Road Crossings			ea.	0	\$90,000	\$0	
Major Road / Rail Crossings			ea.	0	\$207,000	\$0	
Utility Crossings			ea.	0	\$90,000	\$0	
Valve and Chamber			ea.	3	\$6,000	\$18,000	2 valves minimum
Additional Construction Costs	10%		ea.			\$58,411	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$64,252	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$707,000	
Geotechnical / Hydrogeological / Materials	0.5%					\$3,500	
Geotechnical Sub-Total Cost						\$3,500	
Property Requirements	1.0%					\$ 7,100	
Property Requirements Sub-Total						\$7,100	
Consultant Engineering/Design	15%					\$ 106,100	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$106,100	
In House Labour/Engineering/Wages/CA	8%					\$ 56,600	
In-house Labour/Wages Sub-Total						\$56,600	
Project Contingency	10%					\$88,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$88,000	
Non-Refundable HST	1.76%					\$16,000	
Non-Refundable HST Sub-Total						\$16,000	
Total (2019 Dollars)						\$984,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$984,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$19,680		
Design	Design fees, Town fees for design, contract admin	13%	\$127,920		
Construction	Town fees, base costs and project contingency	85%	\$836,400		
TOTAL			\$984,000		

PROJECT NO.: W-T-WM-08
PROJECT NAME: Thorndale Watermain Upgrade - Gerald Pkwy. Upgrade
PROJECT DESCRIPTION: 590m of existing 200mm PVC watermain (built in 2010) on Gerald Pkwy. to be replaced by 300mm PVC watermain.

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	40%			= Field auto-filled based on project details
5	Area Condition:	Suburban	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	300 mm		CLASS EA REQUIREMENTS:	A+
7	TOTAL LENGTH:	590 m		CONSTRUCTION ASSUMPTION:	Watermain
	Tunnelled	0 m	0%		
	Open Cut	590 m	100%		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	590 m	\$777	\$458,211	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$91,642	
Minor Creek Crossings			ea.	0	\$38,000	\$0	
Major Creek Crossings			ea.	0	\$207,000	\$0	
Road Crossings			ea.	0	\$90,000	\$0	
Major Road / Rail Crossings			ea.	0	\$207,000	\$0	
Utility Crossings			ea.	0	\$90,000	\$0	
Valve and Chamber			ea.	2	\$6,000	\$12,000	2 valves minimum
Additional Construction Costs	15%		ea.			\$84,278	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$64,613	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$711,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$7,100	
Geotechnical Sub-Total Cost						\$7,100	
Property Requirements	1.5%					\$ 10,700	
Property Requirements Sub-Total						\$10,700	
Consultant Engineering/Design	15%					\$ 106,700	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$106,700	
In House Labour/Engineering/Wages/CA	8%					\$ 56,900	
In-house Labour/Wages Sub-Total						\$56,900	
Project Contingency	15%					\$134,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$134,000	
Non-Refundable HST	1.76%					\$17,100	
Non-Refundable HST Sub-Total						\$17,100	
Total (2019 Dollars)						\$1,044,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,044,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$20,880		
Design	Design fees, Town fees for design, contract admin	13%	\$135,720		
Construction	Town fees, base costs and project contingency	85%	\$887,400		
TOTAL			\$1,044,000		

PROJECT NO.: W-T-WM-09
PROJECT NAME: Thorndale Watermain Upgrade - Industrial Lands Loop
PROJECT DESCRIPTION: 590m of 300mm watermain to connect Ideal Dr. and Gerald Pkwy. to complete loop

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	40%			= Field auto-filled based on project details
5	Area Condition:	Suburban	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	300 mm		CLASS EA REQUIREMENTS:	A+
7	TOTAL LENGTH:	590 m		CONSTRUCTION ASSUMPTION:	Watermain
	Tunnelled	0 m	0%		
	Open Cut	590 m	100%		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	590 m	\$777	\$458,211	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$91,642	
Minor Creek Crossings			ea.	0	\$38,000	\$0	
Major Creek Crossings			ea.	0	\$207,000	\$0	
Road Crossings			ea.	0	\$90,000	\$0	
Major Road / Rail Crossings			ea.	0	\$207,000	\$0	
Utility Crossings			ea.	0	\$90,000	\$0	
Valve and Chamber			ea.	1	\$6,000	\$6,000	2 valves minimum
Additional Construction Costs	15%		ea.			\$83,378	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$63,923	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$703,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$7,000	
Geotechnical Sub-Total Cost						\$7,000	
Property Requirements	1.5%					\$ 10,500	
Property Requirements Sub-Total						\$10,500	
Consultant Engineering/Design	15%					\$ 105,500	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$105,500	
In House Labour/Engineering/Wages/CA	8%					\$ 56,200	
In-house Labour/Wages Sub-Total						\$56,200	
Project Contingency	15%					\$132,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$132,000	
Non-Refundable HST	1.76%					\$16,900	
Non-Refundable HST Sub-Total						\$16,900	
Total (2019 Dollars)						\$1,031,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,031,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$20,620		
Design	Design fees, Town fees for design, contract admin	13%	\$134,030		
Construction	Town fees, base costs and project contingency	85%	\$876,350		
TOTAL			\$1,031,000		

1	PROJECT NO.:	W-T-WM-10
	PROJECT NAME:	Thorndale Watermain Upgrade - Industrial Lands Upgrade
	PROJECT DESCRIPTION:	1020m of existing 200mm PVC watermain (built in 2010) on Thorndale Rd. and Ideal Dr. to be replaced by 300mm PVC watermain.

CAPITAL BUDGET YEAR:
VERSION:
DATE UPDATED:
UPDATED BY:

2	Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy		= Field has drop down
3	Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy		= Field must be manually populated
4	Accuracy Range:	40%			= Field auto-filled based on project details
5	Area Condition:	Suburban	Area Condition uplifts unit cost and restoration		

6	PROPOSED DIAMETER:	300 mm	
	TOTAL LENGTH:	1020 m	
7	Tunnelled	0 m	0%
	Open Cut	1020 m	100%

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Watermain

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	1020 m	\$777	\$792,161	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$158,432	
Minor Creek Crossings			ea.	0	\$38,000	\$0	
Major Creek Crossings			ea.	0	\$207,000	\$0	
Road Crossings			ea.	0	\$90,000	\$0	
Major Road / Rail Crossings			ea.	0	\$207,000	\$0	
Utility Crossings			ea.	0	\$90,000	\$0	
Valve and Chamber			ea.	3	\$6,000	\$18,000	2 valves minimum
Additional Construction Costs	15%		ea.			\$145,289	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$111,388	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$1,225,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$12,300	
Geotechnical Sub-Total Cost						\$12,300	
Property Requirements	1.5%					\$ 18,400	
Property Requirements Sub-Total						\$18,400	
Consultant Engineering/Design	15%					\$ 183,800	Includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$183,800	
In House Labour/Engineering/Wages/CA	8%					\$ 98,000	
In-house Labour/Wages Sub-Total						\$98,000	
Project Contingency	15%					\$231,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$231,000	
Non-Refundable HST	1.76%					\$29,400	
Non-Refundable HST Sub-Total						\$29,400	
Total (2019 Dollars)						\$1,798,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,798,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$35,960		
Design	Design fees, Town fees for design, contract admin	13%	\$233,740		
Construction	Town fees, base costs and project contingency	85%	\$1,528,300		
TOTAL			\$1,798,000		



Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates

PROJECT NO.: WW-D-TP-01A
PROJECT NAME: Dorchester Treatment Plant Upgrades
PROJECT DESCRIPTION: Treatment plant capacity upgrades required to accommodate all development flows in Dorchester

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-TP-01A

PROPOSED CAPACITY	2.11 MLD
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CLASS EA REQUIREMENTS:	C
CONSTRUCTION ASSUMPTION:	Other

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Facility Construction			MLD	2 MLD	\$2,500,000	\$5,276,880	\$2.5M per MLD
Additional Construction Costs	15%		ea.			\$791,532	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$606,841	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$6,675,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$66,800	
Geotechnical Sub-Total Cost						\$66,800	
Property Requirements	1.5%					\$ 100,100	
Property Requirements Sub-Total						\$100,100	
Consultant Engineering/Design	15%					\$ 1,001,300	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$1,001,300	
In House Labour/Engineering/Wages/CA	3%					\$ 200,300	
In-house Labour/Wages Sub-Total						\$200,300	
Project Contingency	15%					\$1,207,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$1,207,000	
Non-Refundable HST	1.76%					\$159,300	
Non-Refundable HST Sub-Total						\$159,300	
Total (2019 Dollars)						\$9,410,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$9,410,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$188,200		
Design	Design fees, Town fees for design, contract admin	13%	\$1,223,300		
Construction	Town fees, base costs and project contingency	85%	\$7,998,500		
TOTAL			\$9,410,000		



Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates

PROJECT NO.: WW-D-TP-01B
PROJECT NAME: Dorchester Treatment Plant Upgrades
PROJECT DESCRIPTION: Treatment plant capacity upgrades required to accommodate all development flows in Dorchester

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-TP-01B

PROPOSED CAPACITY	3.22 MLD
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CLASS EA REQUIREMENTS:	C
CONSTRUCTION ASSUMPTION:	Other

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Facility Construction			MLD	3 MLD	\$2,500,000	\$8,052,480	\$2.5M per MLD
Additional Construction Costs	15%		ea.			\$1,207,872	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$926,035	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$10,186,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$101,900	
Geotechnical Sub-Total Cost						\$101,900	
Property Requirements	1.5%					\$ 152,800	
Property Requirements Sub-Total						\$152,800	
Consultant Engineering/Design	12%					\$ 1,222,300	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$1,222,300	
In House Labour/Engineering/Wages/CA	3%					\$ 305,600	
In-house Labour/Wages Sub-Total						\$305,600	
Project Contingency	15%					\$1,795,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$1,795,000	
Non-Refundable HST	1.76%					\$236,900	
Non-Refundable HST Sub-Total						\$236,900	
Total (2019 Dollars)						\$14,001,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$14,001,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$280,020		
Design	Design fees, Town fees for design, contract admin	13%	\$1,820,130		
Construction	Town fees, base costs and project contingency	85%	\$11,900,850		
TOTAL			\$14,001,000		



Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates

PROJECT NO.: WW-D-TP-01C
PROJECT NAME: Dorchester Treatment Plant Upgrades
PROJECT DESCRIPTION: Treatment plant capacity upgrades required to accommodate all development flows in Dorchester

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-TP-01C

PROPOSED CAPACITY	6.00 MLD
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CLASS EA REQUIREMENTS:	C
CONSTRUCTION ASSUMPTION:	Other

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Facility Construction			MLD	6 MLD	\$2,500,000	\$14,996,880	\$2.5M per MLD
Additional Construction Costs	15%		ea.			\$2,249,532	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$1,724,641	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$18,971,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$189,700	
Geotechnical Sub-Total Cost						\$189,700	
Property Requirements	1.5%					\$284,600	
Property Requirements Sub-Total						\$284,600	
Consultant Engineering/Design	12%					\$2,276,500	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$2,276,500	
In House Labour/Engineering/Wages/CA	3%					\$569,100	
In-house Labour/Wages Sub-Total						\$569,100	
Project Contingency	15%					\$3,344,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$3,344,000	
Non-Refundable HST	1.76%					\$441,200	
Non-Refundable HST Sub-Total						\$441,200	
Total (2019 Dollars)						\$26,076,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$26,076,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$521,520		
Design	Design fees, Town fees for design, contract admin	13%	\$3,389,880		
Construction	Town fees, base costs and project contingency	85%	\$22,164,600		
TOTAL			\$26,076,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SPS-01A
PROJECT NAME: North Dorchester New Development SPS
PROJECT DESCRIPTION: New SPS needed to support New Development north of railway in North Dorchester

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Rural	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-SPS-01A

PROPOSED CAPACITY	61 L/s	Additional capacity
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CLASS EA REQUIREMENTS:	B	Pump	Existing (L/s)	Future (L/s)
CONSTRUCTION ASSUMPTION:	Other	1		61
		2		61
		3		
		4		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Facility Construction			L/s	61 L/s	\$30,000	\$1,819,200	
Additional Construction Costs	15%		ea.			\$272,880	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$209,208	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$2,301,000	
Geotechnical / Hydrogeological / Materials	1.0%						
Geotechnical Sub-Total Cost						\$0	
Property Requirements	1.5%						
Property Requirements Sub-Total						\$0	
Consultant Engineering/Design	15%					\$ 345,200	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$345,200	
In House Labour/Engineering/Wages/CA	3%					\$ 100,000	
In-house Labour/Wages Sub-Total						\$100,000	
Project Contingency	15%					\$412,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$412,000	
Non-Refundable HST	1.76%					\$53,800	
Non-Refundable HST Sub-Total						\$53,800	
Total (2019 Dollars)						\$3,212,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$3,212,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$64,240		
Design	Design fees, Town fees for design, contract admin	13%	\$417,560		
Construction	Town fees, base costs and project contingency	85%	\$2,730,200		
TOTAL			\$3,212,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SPS-01B
PROJECT NAME: North Dorchester New Development SPS
PROJECT DESCRIPTION: New SPS needed to support New Development north of railway in North Dorchester

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Rural	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-SPS-01B

PROPOSED CAPACITY	90 L/s	Firm capacity
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CLASS EA REQUIREMENTS:	B	Pump	Existing (L/s)	Future (L/s)
CONSTRUCTION ASSUMPTION:	Other	1		90
		2		90

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Facility Construction			L/s	90 L/s	\$30,000	\$2,709,900	
Additional Construction Costs	15%		ea.			\$406,485	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$311,639	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$3,428,000	
Geotechnical / Hydrogeological / Materials	1.0%						
Geotechnical Sub-Total Cost						\$0	
Property Requirements	1.5%						
Property Requirements Sub-Total						\$0	
Consultant Engineering/Design	15%					\$ 514,200	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$514,200	
In House Labour/Engineering/Wages/CA	3%					\$ 102,800	
In-house Labour/Wages Sub-Total						\$102,800	
Project Contingency	15%					\$607,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$607,000	
Non-Refundable HST	1.76%					\$80,100	
Non-Refundable HST Sub-Total						\$80,100	
Total (2019 Dollars)						\$4,732,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$4,732,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$94,640		
Design	Design fees, Town fees for design, contract admin	13%	\$615,160		
Construction	Town fees, base costs and project contingency	85%	\$4,022,200		
TOTAL			\$4,732,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SPS-02

PROJECT NAME: North Dorchester Northwest SPS

PROJECT DESCRIPTION: New SPS needed to support New Development and existing development south of railway and west of Dorchester Road Bridge in North Dorchester

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Low	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	30%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-SPS-02

PROPOSED CAPACITY	8 L/s	Firm capacity
		Increased capacity

CLASS EA REQUIREMENTS:	B	Pump	Existing (L/s)	Future (L/s)
CONSTRUCTION ASSUMPTION:	Other	1		8
		2		8

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Facility Construction			L/s	8 L/s	\$40,000	\$328,800	
Additional Construction Costs	10%		ea.			\$32,880	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$36,168	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$398,000	
Geotechnical / Hydrogeological / Materials	0.5%						
Geotechnical Sub-Total Cost						\$0	
Property Requirements	1.0%						
Property Requirements Sub-Total						\$0	
Consultant Engineering/Design	15%					\$ 59,700	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$59,700	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	10%					\$51,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$51,000	
Non-Refundable HST	1.76%					\$9,000	
Non-Refundable HST Sub-Total						\$9,000	
Total (2019 Dollars)						\$568,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$568,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$11,360		
Design	Design fees, Town fees for design, contract admin	13%	\$73,840		
Construction	Town fees, base costs and project contingency	85%	\$482,800		
TOTAL			\$568,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SPS-03

PROJECT NAME: North Dorchester Northeast SPS

PROJECT DESCRIPTION: New SPS needed to support existing development south of railway and east of Dorchester Road Bridge in North Dorchester

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Low	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	30%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-SPS-03

PROPOSED CAPACITY	1 L/s	Additional capacity
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CLASS EA REQUIREMENTS:	B	Pump	Existing (L/s)	Future (L/s)
CONSTRUCTION ASSUMPTION:	Other	1		1
		2		1

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Facility Construction			L/s	1 L/s	\$40,000	\$42,000	
Additional Construction Costs	10%		ea.			\$4,200	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$4,620	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$51,000	
Geotechnical / Hydrogeological / Materials	0.5%						
Geotechnical Sub-Total Cost						\$0	
Property Requirements	1.0%						
Property Requirements Sub-Total						\$0	
Consultant Engineering/Design	15%					\$ 7,700	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$7,700	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	10%					\$11,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$11,000	
Non-Refundable HST	1.76%					\$1,200	
Non-Refundable HST Sub-Total						\$1,200	
Total (2019 Dollars)						\$121,000	Rounded to nearest \$1,000
Other Estimate							Sustainability Upgrades as per Niagara Region capital forecast
Chosen Estimate						\$121,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$2,420		
Design	Design fees, Town fees for design, contract admin	13%	\$15,730		
Construction	Town fees, base costs and project contingency	85%	\$102,850		
TOTAL			\$121,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SPS-04

PROJECT NAME: South Dorchester SPS

PROJECT DESCRIPTION: New SPS needed to support existing development south of river and north of PS3 drainage area in South Dorchester

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	High	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	50%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-SPS-04

PROPOSED CAPACITY	12 L/s
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CLASS EA REQUIREMENTS:	B	Pump	Existing (L/s)	Future (L/s)
CONSTRUCTION ASSUMPTION:	Other	1		12
		2		12

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Facility Construction			L/s	12 L/s	\$40,000	\$482,400	
Additional Construction Costs	20%		ea.			\$96,480	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$57,888	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$637,000	
Geotechnical / Hydrogeological / Materials	2.0%						
Geotechnical Sub-Total Cost						\$0	
Property Requirements	2.0%						
Property Requirements Sub-Total						\$0	
Consultant Engineering/Design	15%					\$ 95,600	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$95,600	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	25%					\$196,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$196,000	
Non-Refundable HST	1.76%					\$16,300	
Non-Refundable HST Sub-Total						\$16,300	
Total (2019 Dollars)						\$995,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$995,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$19,900		
Design	Design fees, Town fees for design, contract admin	13%	\$129,350		
Construction	Town fees, base costs and project contingency	85%	\$845,750		
TOTAL			\$995,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SPS-05

PROJECT NAME: Southeast Dorchester SPS

PROJECT DESCRIPTION: New SPS needed to support Development block east of Valleyview Crescent in South Dorchester

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Low	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	30%	
Area Condition:	Rural	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-SPS-05

PROPOSED CAPACITY	4 L/s
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CLASS EA REQUIREMENTS:	B	Pump	Existing (L/s)	Future (L/s)
CONSTRUCTION ASSUMPTION:	Other	1		4
		2		4
		3		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Facility Construction			L/s	4 L/s	\$40,000	\$157,600	
Additional Construction Costs	10%		ea.			\$15,760	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$17,336	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$191,000	
Geotechnical / Hydrogeological / Materials	0.5%						
Geotechnical Sub-Total Cost						\$0	
Property Requirements	1.0%						
Property Requirements Sub-Total						\$0	
Consultant Engineering/Design	15%					\$ 28,700	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$28,700	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	10%					\$27,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$27,000	
Non-Refundable HST	1.76%					\$4,300	
Non-Refundable HST Sub-Total						\$4,300	
Total (2019 Dollars)						\$301,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$301,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$6,020		
Design	Design fees, Town fees for design, contract admin	13%	\$39,130		
Construction	Town fees, base costs and project contingency	85%	\$255,850		
TOTAL			\$301,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SPS-05

PROJECT NAME: Southeast Dorchester SPS

PROJECT DESCRIPTION: New SPS needed to support Development block east of Valleyview Crescent in South Dorchester

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Low	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	30%	
Area Condition:	Rural	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-SPS-05

PROPOSED CAPACITY	8 L/s
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CLASS EA REQUIREMENTS:	B	Pump	Existing (L/s)	Future (L/s)
CONSTRUCTION ASSUMPTION:	Other	1		8
		2		8
		3		

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Facility Construction			L/s	8 L/s	\$40,000	\$310,000	
Additional Construction Costs	10%		ea.			\$31,000	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$34,100	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$375,000	
Geotechnical / Hydrogeological / Materials	0.5%						
Geotechnical Sub-Total Cost						\$0	
Property Requirements	1.0%						
Property Requirements Sub-Total						\$0	
Consultant Engineering/Design	15%					\$ 56,300	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$56,300	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	10%					\$48,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$48,000	
Non-Refundable HST	1.76%					\$8,400	
Non-Refundable HST Sub-Total						\$8,400	
Total (2019 Dollars)						\$538,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$538,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$10,760		
Design	Design fees, Town fees for design, contract admin	13%	\$69,940		
Construction	Town fees, base costs and project contingency	85%	\$457,300		
TOTAL			\$538,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SPS-06A

PROJECT NAME: Dorchester SPS Upgrades

PROJECT DESCRIPTION: Pumping station capacity upgrades required to accommodate growth flows in Dorchester

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	High	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	50%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-SPS-06A

PROPOSED CAPACITY	190 L/s
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CLASS EA REQUIREMENTS:	B	Pump	Existing (L/s)	Future (L/s)
CONSTRUCTION ASSUMPTION:	Other	1	20.7	210
		2	20.7	210

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Facility Construction			L/s	190 L/s	\$20,000	\$3,802,000	
Additional Construction Costs	20%		ea.			\$760,400	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$456,240	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$5,019,000	
Geotechnical / Hydrogeological / Materials	2.0%						
Geotechnical Sub-Total Cost						\$0	
Property Requirements	2.0%						
Property Requirements Sub-Total						\$0	
Consultant Engineering/Design	15%					\$ 752,900	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$752,900	
In House Labour/Engineering/Wages/CA	3%					\$ 150,600	
In-house Labour/Wages Sub-Total						\$150,600	
Project Contingency	25%					\$1,481,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$1,481,000	
Non-Refundable HST	1.76%					\$127,700	
Non-Refundable HST Sub-Total						\$127,700	
Total (2019 Dollars)						\$7,531,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$7,531,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$150,620		
Design	Design fees, Town fees for design, contract admin	13%	\$979,030		
Construction	Town fees, base costs and project contingency	85%	\$6,401,350		
TOTAL			\$7,531,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SPS-06B

PROJECT NAME: Dorchester SPS Upgrades

PROJECT DESCRIPTION: Pumping station capacity upgrades required to accommodate growth flows in Dorchester

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	High	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	50%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-SPS-06B

PROPOSED CAPACITY	254 L/s	Additional capacity
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CLASS EA REQUIREMENTS:	B	Pump	Existing (L/s)	Future (L/s)*
CONSTRUCTION ASSUMPTION:	Other	1	21	274
		2	21	274

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Facility Construction			L/s	254 L/s	\$20,000	\$5,081,800	
Additional Construction Costs	20%		ea.			\$1,016,360	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$609,816	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$6,708,000	
Geotechnical / Hydrogeological / Materials	2.0%						
Geotechnical Sub-Total Cost						\$0	
Property Requirements	2.0%						
Property Requirements Sub-Total						\$0	
Consultant Engineering/Design	15%					\$ 1,006,200	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$1,006,200	
In House Labour/Engineering/Wages/CA	3%					\$ 201,200	
In-house Labour/Wages Sub-Total						\$201,200	
Project Contingency	25%					\$1,979,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$1,979,000	
Non-Refundable HST	1.76%					\$170,600	
Non-Refundable HST Sub-Total						\$170,600	
Total (2019 Dollars)						\$10,065,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$10,065,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$201,300		
Design	Design fees, Town fees for design, contract admin	13%	\$1,308,450		
Construction	Town fees, base costs and project contingency	85%	\$8,555,250		
TOTAL			\$10,065,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SPS-06C

PROJECT NAME: Dorchester SPS Upgrades

PROJECT DESCRIPTION: Pumping station capacity upgrades required to accommodate growth flows in Dorchester

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	High	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	50%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-SPS-06C

PROPOSED CAPACITY	411 L/s	Additional capacity
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CLASS EA REQUIREMENTS:	B	Pump	Existing (L/s)	Future (L/s)*
CONSTRUCTION ASSUMPTION:	Other	1	21	431
		2	21	431

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Facility Construction			L/s	411 L/s	\$15,000	\$6,160,200	
Additional Construction Costs	20%		ea.			\$1,232,040	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$739,224	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$8,131,000	
Geotechnical / Hydrogeological / Materials	2.0%						
Geotechnical Sub-Total Cost						\$0	
Property Requirements	2.0%						
Property Requirements Sub-Total						\$0	
Consultant Engineering/Design	15%					\$ 1,219,700	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$1,219,700	
In House Labour/Engineering/Wages/CA	3%					\$ 243,900	
In-house Labour/Wages Sub-Total						\$243,900	
Project Contingency	25%					\$2,399,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$2,399,000	
Non-Refundable HST	1.76%					\$206,800	
Non-Refundable HST Sub-Total						\$206,800	
Total (2019 Dollars)						\$12,200,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$12,200,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$244,000		
Design	Design fees, Town fees for design, contract admin	13%	\$1,586,000		
Construction	Town fees, base costs and project contingency	85%	\$10,370,000		
TOTAL			\$12,200,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SPS-07A

PROJECT NAME: PS3

PROJECT DESCRIPTION: Pumping station capacity upgrades required to accommodate growth flows in Dorchester

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-SPS-07A

PROPOSED CAPACITY	66 L/s
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CLASS EA REQUIREMENTS:	B	Pump	Existing (L/s)	Future (L/s)
CONSTRUCTION ASSUMPTION:	Other	1	20.7	210
		2	20.7	210

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Facility Construction			L/s	66 L/s	\$30,000	\$1,988,700	
Additional Construction Costs	15%		ea.			\$298,305	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$228,701	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$2,516,000	
Geotechnical / Hydrogeological / Materials	1.0%						
Geotechnical Sub-Total Cost						\$0	
Property Requirements	1.5%						
Property Requirements Sub-Total						\$0	
Consultant Engineering/Design	15%					\$ 377,400	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$377,400	
In House Labour/Engineering/Wages/CA	3%					\$ 100,000	
In-house Labour/Wages Sub-Total						\$100,000	
Project Contingency	15%					\$449,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$449,000	
Non-Refundable HST	1.76%					\$58,800	
Non-Refundable HST Sub-Total						\$58,800	
Total (2019 Dollars)						\$3,501,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$3,501,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$70,020		
Design	Design fees, Town fees for design, contract admin	13%	\$455,130		
Construction	Town fees, base costs and project contingency	85%	\$2,975,850		
TOTAL			\$3,501,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SPS-07B

PROJECT NAME: PS3

PROJECT DESCRIPTION: Pumping station capacity upgrades required to accommodate growth flows in Dorchester

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-SPS-07B

PROPOSED CAPACITY	102 L/s
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CLASS EA REQUIREMENTS:	B	Pump	Existing (L/s)	Future (L/s)
CONSTRUCTION ASSUMPTION:	Other	1	20.7	210
		2	20.7	210

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Facility Construction			L/s	102 L/s	\$30,000	\$3,068,700	
Additional Construction Costs	15%		ea.			\$460,305	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$352,901	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$3,882,000	
Geotechnical / Hydrogeological / Materials	1.0%						
Geotechnical Sub-Total Cost						\$0	
Property Requirements	1.5%						
Property Requirements Sub-Total						\$0	
Consultant Engineering/Design	15%					\$ 582,300	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$582,300	
In House Labour/Engineering/Wages/CA	3%					\$ 116,500	
In-house Labour/Wages Sub-Total						\$116,500	
Project Contingency	15%					\$687,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$687,000	
Non-Refundable HST	1.76%					\$90,700	
Non-Refundable HST Sub-Total						\$90,700	
Total (2019 Dollars)						\$5,359,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$5,359,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$107,180		
Design	Design fees, Town fees for design, contract admin	13%	\$696,670		
Construction	Town fees, base costs and project contingency	85%	\$4,555,150		
TOTAL			\$5,359,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SPS-07C

PROJECT NAME: Dorchester SPS Upgrades

PROJECT DESCRIPTION: Pumping station capacity upgrades required to accommodate growth flows in Dorchester

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-SPS-07C

PROPOSED CAPACITY	156 L/s
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CLASS EA REQUIREMENTS:	B	Pump	Existing (L/s)	Future (L/s)
CONSTRUCTION ASSUMPTION:	Other	1	20.7	210
		2	20.7	210

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Facility Construction			L/s	156 L/s	\$25,000	\$3,890,250	
Additional Construction Costs	15%		ea.			\$583,538	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$447,379	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$4,921,000	
Geotechnical / Hydrogeological / Materials	1.0%						
Geotechnical Sub-Total Cost						\$0	
Property Requirements	1.5%						
Property Requirements Sub-Total						\$0	
Consultant Engineering/Design	15%					\$ 738,200	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$738,200	
In House Labour/Engineering/Wages/CA	3%					\$ 147,600	
In-house Labour/Wages Sub-Total						\$147,600	
Project Contingency	15%					\$871,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$871,000	
Non-Refundable HST	1.76%					\$114,900	
Non-Refundable HST Sub-Total						\$114,900	
Total (2019 Dollars)						\$6,793,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$6,793,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$135,860		
Design	Design fees, Town fees for design, contract admin	13%	\$883,090		
Construction	Town fees, base costs and project contingency	85%	\$5,774,050		
TOTAL			\$6,793,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-FM-01
PROJECT NAME: North Dorchester New Development forcemain
PROJECT DESCRIPTION: New forcemain needed to support new development SPS for development blocks North of CN rail in North Dorchester

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	High	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	50%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-FM-01

PROPOSED DIAMETER:	300 mm	CLASS EA REQUIREMENTS:	A+
TOTAL LENGTH:	475 m	CONSTRUCTION ASSUMPTION:	Forcemain
	Tunnelled 50 m		11%
	Open Cut 425 m		89%

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	425 m	\$627	\$266,569	New road ROW
Pipe Construction - Tunneling			m	50 m	\$1,300	\$65,000	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$53,314	
Minor Creek Crossings			ea.	0	\$37,000	\$0	
Major Creek Crossings			ea.	0	\$206,000	\$0	
Road Crossings			ea.	0	\$89,000	\$0	
Major Road / Rail Crossings			ea.	1	\$206,000	\$206,000	Railway Crossing
Utility Crossings			ea.		\$89,000	\$0	
Additional Construction Costs	20%		ea.			\$118,177	Includes Mod/Demob.connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$70,906	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$780,000	
Geotechnical / Hydrogeological / Materials	2.0%					\$15,600	
Geotechnical Sub-Total Cost						\$15,600	
Property Requirements	2.0%					\$ 15,600	
Property Requirements Sub-Total						\$15,600	
Consultant Engineering/Design	15%					\$ 117,000	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$117,000	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	25%					\$245,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$245,000	
Non-Refundable HST	1.76%					\$20,600	
Non-Refundable HST Sub-Total						\$20,600	
Total (2019 Dollars)						\$1,244,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,244,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	0%	\$0		
Design	Design fees, Town fees for design, contract admin	15%	\$186,600		
Construction	Town fees, base costs and project contingency	85%	\$1,057,400		
TOTAL			\$1,244,000		

**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-FM-02
PROJECT NAME: Dorchester Road forcemain extension
PROJECT DESCRIPTION: New forcemain from Dorchester Road bridge forcemain to Dorchester road gravity sewers needed to support new development SPS for development blocks North of CN rail in North Dorchester

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	High	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	50%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-FM-02

PROPOSED DIAMETER:	300 mm
TOTAL LENGTH:	200 m
Tunnelled	0%
Open Cut	100%

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Forcemain

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	200 m	\$627	\$125,444	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$25,089	
Minor Creek Crossings			ea.	0	\$37,000	\$0	
Major Creek Crossings			ea.	0	\$206,000	\$0	
Road Crossings			ea.	0	\$89,000	\$0	
Major Road / Rail Crossings			ea.	0	\$206,000	\$0	
Utility Crossings			ea.	0	\$89,000	\$0	
Additional Construction Costs	20%		ea.			\$30,107	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$18,064	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$199,000	
Geotechnical / Hydrogeological / Materials	2.0%					\$4,000	
Geotechnical Sub-Total Cost						\$4,000	
Property Requirements	2.0%					\$ 4,000	
Property Requirements Sub-Total						\$4,000	
Consultant Engineering/Design	15%					\$ 29,900	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$29,900	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	25%					\$72,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$72,000	
Non-Refundable HST	1.76%					\$5,400	
Non-Refundable HST Sub-Total						\$5,400	
Total (2019 Dollars)						\$364,000	Rounded to nearest \$1,000
Other Estimate							Detailed design estimate
Chosen Estimate						\$364,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	0%	\$0		
Design	Design fees, Town fees for design, contract admin	15%	\$54,600		
Construction	Town fees, base costs and project contingency	85%	\$309,400		
TOTAL			\$364,000		

**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-FM-03
PROJECT NAME: Dorchester Road forcemain extension
PROJECT DESCRIPTION: New forcemain from Dorchester Road bridge forcemain to Byron Ave trunk sewers needed to support new development SPS for development blocks North of CN rail in North Dorchester

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	High	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	50%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-FM-03

PROPOSED DIAMETER:	300 mm
TOTAL LENGTH:	550 m
Tunnelled	0%
Open Cut	100%

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Forcemain

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	550 m	\$627	\$344,972	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$68,994	
Minor Creek Crossings			ea.	0	\$37,000	\$0	
Major Creek Crossings			ea.	0	\$206,000	\$0	
Road Crossings			ea.	0	\$89,000	\$0	
Major Road / Rail Crossings			ea.	0	\$206,000	\$0	
Utility Crossings			ea.	0	\$89,000	\$0	
Additional Construction Costs	20%		ea.			\$82,793	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$49,676	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$546,000	
Geotechnical / Hydrogeological / Materials	2.0%					\$10,900	
Geotechnical Sub-Total Cost						\$10,900	
Property Requirements	2.0%					\$ 10,900	
Property Requirements Sub-Total						\$10,900	
Consultant Engineering/Design	15%					\$ 81,900	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$81,900	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	25%					\$175,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$175,000	
Non-Refundable HST	1.76%					\$14,500	
Non-Refundable HST Sub-Total						\$14,500	
Total (2019 Dollars)						\$889,000	Rounded to nearest \$1,000
Other Estimate							Detailed design estimate
Chosen Estimate						\$889,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	0%	\$0		
Design	Design fees, Town fees for design, contract admin	15%	\$133,350		
Construction	Town fees, base costs and project contingency	85%	\$755,650		
TOTAL			\$889,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-FM-04
PROJECT NAME: North Dorchester Northwest forcemain
PROJECT DESCRIPTION: New forcemain needed to support northwest development SPS for development blocks South of CN rail and West of Dorchester Road Bridge in North Dorchester

PROJECT NO.: WW-D-FM-04

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	High	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	50%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROPOSED DIAMETER:	150 mm
TOTAL LENGTH:	730 m
Tunnelled	50 m 7%
Open Cut	680 m 93%

CLASS EA REQUIREMENTS:	B
CONSTRUCTION ASSUMPTION:	Forcemain

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	680 m	\$551	\$374,781	New road and existing road ROW
Pipe Construction - Tunneling			m	50 m	\$1,300	\$65,000	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$74,956	
Minor Creek Crossings			ea.	0	\$29,000	\$0	
Major Creek Crossings			ea.	0	\$198,000	\$0	
Road Crossings			ea.	0	\$81,000	\$0	
Major Road / Rail Crossings			ea.	1	\$198,000	\$198,000	Railway crossing
Utility Crossings			ea.	0	\$81,000	\$0	
Additional Construction Costs	20%		ea.			\$142,548	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$85,529	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$941,000	
Geotechnical / Hydrogeological / Materials	2.0%					\$18,800	
Geotechnical Sub-Total Cost						\$18,800	
Property Requirements	2.0%					\$18,800	
Property Requirements Sub-Total						\$18,800	
Consultant Engineering/Design	15%					\$141,200	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$141,200	
In House Labour/Engineering/Wages/CA	3%					\$50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	25%					\$292,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$292,000	
Non-Refundable HST	1.76%					\$24,800	
Non-Refundable HST Sub-Total						\$24,800	
Total (2019 Dollars)						\$1,487,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,487,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	0%	\$0		
Design	Design fees, Town fees for design, contract admin	15%	\$223,050		
Construction	Town fees, base costs and project contingency	85%	\$1,263,950		
TOTAL			\$1,487,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-FM-05
PROJECT NAME: North Dorchester Northeast forcemain
PROJECT DESCRIPTION: New forcemain needed to support northeast SPS for existing development South of CN rail and East of Dorchester Road Bridge in North Dorchester

PROJECT NO.: WW-D-FM-05

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	High	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	50%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROPOSED DIAMETER:	150 mm
TOTAL LENGTH:	500 m
Tunnelled	50 m 10%
Open Cut	450 m 90%

CLASS EA REQUIREMENTS:	B
CONSTRUCTION ASSUMPTION:	Forcemain

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	450 m	\$551	\$248,017	
Pipe Construction - Tunneling			m	50 m	\$1,300	\$65,000	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$49,603	
Minor Creek Crossings			ea.	0	\$29,000	\$0	
Major Creek Crossings			ea.	0	\$198,000	\$0	
Road Crossings			ea.	0	\$81,000	\$0	
Major Road / Rail Crossings			ea.	1	\$198,000	\$198,000	Railway crossing
Utility Crossings			ea.	0	\$81,000	\$0	
Additional Construction Costs	20%		ea.			\$112,124	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$67,274	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$740,000	
Geotechnical / Hydrogeological / Materials	2.0%					\$14,800	
Geotechnical Sub-Total Cost						\$14,800	
Property Requirements	2.0%					\$ 14,800	
Property Requirements Sub-Total						\$14,800	
Consultant Engineering/Design	15%					\$ 111,000	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$111,000	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	25%					\$233,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$233,000	
Non-Refundable HST	1.76%					\$19,600	
Non-Refundable HST Sub-Total						\$19,600	
Total (2019 Dollars)						\$1,183,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,183,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$23,660		
Design	Design fees, Town fees for design, contract admin	13%	\$153,790		
Construction	Town fees, base costs and project contingency	85%	\$1,005,550		
TOTAL			\$1,183,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-FM-06
PROJECT NAME: South Dorchester forcemain
PROJECT DESCRIPTION: New forcemain needed to support south SPS for existing development South of river in South Dorchester

PROJECT NO.: WW-D-FM-06

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	High	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	50%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROPOSED DIAMETER:	150 mm
TOTAL LENGTH:	1800 m
Tunnelled	0%
Open Cut	100%

CLASS EA REQUIREMENTS:	B
CONSTRUCTION ASSUMPTION:	Forcemain

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	1800 m	\$551	\$992,069	
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$198,414	
Minor Creek Crossings			ea.	0	\$29,000	\$0	
Major Creek Crossings			ea.	0	\$198,000	\$0	
Road Crossings			ea.	0	\$81,000	\$0	
Major Road / Rail Crossings			ea.	0	\$198,000	\$0	
Utility Crossings			ea.	0	\$81,000	\$0	
Additional Construction Costs	20%		ea.			\$238,096	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$142,858	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$1,571,000	
Geotechnical / Hydrogeological / Materials	2.0%					\$31,400	
Geotechnical Sub-Total Cost						\$31,400	
Property Requirements	2.0%					\$ 31,400	
Property Requirements Sub-Total						\$31,400	
Consultant Engineering/Design	15%					\$ 235,700	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$235,700	
In House Labour/Engineering/Wages/CA	3%					\$ 100,000	
In-house Labour/Wages Sub-Total						\$100,000	
Project Contingency	25%					\$492,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$492,000	
Non-Refundable HST	1.76%					\$41,600	
Non-Refundable HST Sub-Total						\$41,600	
Total (2019 Dollars)						\$2,503,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$2,503,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	0%	\$0		
Design	Design fees, Town fees for design, contract admin	15%	\$375,450		
Construction	Town fees, base costs and project contingency	85%	\$2,127,550		
TOTAL			\$2,503,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-FM-07
PROJECT NAME: Southeast Dorchester forcemain
PROJECT DESCRIPTION: New forcemain needed to support southeast SPS for existing development East of serviced developments and North of Hamilton Road in South Dorchester

PROJECT NO.: WW-D-FM-07

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROPOSED DIAMETER:	150 mm
TOTAL LENGTH:	620 m
Tunnelled	0 m 0%
Open Cut	620 m 100%

CLASS EA REQUIREMENTS:	B
CONSTRUCTION ASSUMPTION:	Forcemain

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	620 m	\$551	\$341,713	
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$68,343	
Minor Creek Crossings			ea.	0	\$29,000	\$0	
Major Creek Crossings			ea.	0	\$198,000	\$0	
Road Crossings			ea.	0	\$81,000	\$0	
Major Road / Rail Crossings			ea.	0	\$198,000	\$0	
Utility Crossings			ea.	0	\$81,000	\$0	
Additional Construction Costs	15%		ea.			\$61,508	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$47,156	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$519,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$5,200	
Geotechnical Sub-Total Cost						\$5,200	
Property Requirements	1.5%					\$ 7,800	
Property Requirements Sub-Total						\$7,800	
Consultant Engineering/Design	15%					\$ 77,900	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$77,900	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	15%					\$99,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$99,000	
Non-Refundable HST	1.76%					\$12,500	
Non-Refundable HST Sub-Total						\$12,500	
Total (2019 Dollars)						\$771,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$771,000	2016 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$15,420		
Design	Design fees, Town fees for design, contract admin	13%	\$100,230		
Construction	Town fees, base costs and project contingency	85%	\$655,350		
TOTAL			\$771,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-FM-08
PROJECT NAME: Dorchester SPS forcemain
PROJECT DESCRIPTION: New forcemain needed to support Dorchester WWTP SPS for all existing and growth developments in Dorchester.

PROJECT NO.: WW-D-FM-08

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	High	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	50%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROPOSED DIAMETER:	350 mm
TOTAL LENGTH:	1250 m
Tunnelled	0%
Open Cut	100%

CLASS EA REQUIREMENTS:	B
CONSTRUCTION ASSUMPTION:	Forcemain

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	1250 m	\$676	\$845,193	
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$169,039	
Minor Creek Crossings			ea.	0	\$45,000	\$0	
Major Creek Crossings			ea.	0	\$214,000	\$0	
Road Crossings			ea.	0	\$97,000	\$0	
Major Road / Rail Crossings			ea.	0	\$214,000	\$0	
Utility Crossings			ea.	0	\$97,000	\$0	
Additional Construction Costs	20%		ea.			\$202,846	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$121,708	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$1,339,000	
Geotechnical / Hydrogeological / Materials	2.0%					\$26,800	
Geotechnical Sub-Total Cost						\$26,800	
Property Requirements	2.0%					\$ 26,800	
Property Requirements Sub-Total						\$26,800	
Consultant Engineering/Design	15%					\$ 200,900	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$200,900	
In House Labour/Engineering/Wages/CA	3%					\$ 100,000	
In-house Labour/Wages Sub-Total						\$100,000	
Project Contingency	25%					\$423,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$423,000	
Non-Refundable HST	1.76%					\$35,500	
Non-Refundable HST Sub-Total						\$35,500	
Total (2019 Dollars)						\$2,152,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$2,152,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$43,040		
Design	Design fees, Town fees for design, contract admin	13%	\$279,760		
Construction	Town fees, base costs and project contingency	85%	\$1,829,200		
TOTAL			\$2,152,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-FM-09
PROJECT NAME: PS3 forcemain
PROJECT DESCRIPTION: Twinned forcemains needed to support PS3 for all development in Southeast Dorchester

PROJECT NO.: WW-D-FM-09

Class Estimate Type:	Class 2	Class adjusts Construction Contingency and expected accuracy
Project Complexity	High	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	15%	
Area Condition:	Rural	Area Condition uplifts unit cost and restoration

PROPOSED DIAMETER:	250 mm
TOTAL LENGTH:	662 m
Tunnelled	145 m 22%
Open Cut	517 m 78%

CLASS EA REQUIREMENTS:	B
CONSTRUCTION ASSUMPTION:	Forcemain

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	517 m	\$901	\$465,617	Twinned 250mm Forcemain (1.5x \$Unit Rate)
Pipe Construction - Tunneling			m	145 m	\$1,950	\$282,750	Twinned 250mm Forcemain (1.5x \$Unit Rate)
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	0	\$30,000	\$0	
Major Creek Crossings			ea.	1	\$199,000	\$199,000	Mill Pond Crossing
Road Crossings			ea.	0	\$82,000	\$0	
Major Road / Rail Crossings			ea.	0	\$199,000	\$0	
Utility Crossings			ea.	0	\$82,000	\$0	
Additional Construction Costs	20%		ea.			\$189,473	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$113,684	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$1,251,000	
Geotechnical / Hydrogeological / Materials	2.0%					\$25,000	
Geotechnical Sub-Total Cost						\$25,000	
Property Requirements	2.0%					\$ 25,000	
Property Requirements Sub-Total						\$25,000	
Consultant Engineering/Design	15%					\$ 187,700	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$187,700	
In House Labour/Engineering/Wages/CA	3%					\$ 100,000	
In-house Labour/Wages Sub-Total						\$100,000	
Project Contingency	10%					\$159,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$159,000	
Non-Refundable HST	1.76%					\$29,000	
Non-Refundable HST Sub-Total						\$29,000	
Total (2019 Dollars)						\$1,777,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,777,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$35,540		
Design	Design fees, Town fees for design, contract admin	13%	\$231,010		
Construction	Town fees, base costs and project contingency	85%	\$1,510,450		
TOTAL			\$1,777,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SS-01A
PROJECT NAME: New Development SPS West Sewers
PROJECT DESCRIPTION: New sanitary sewer required for development blocks going to new Development SPS in North Dorchester.

PROJECT NO.: WW-D-SS-01A

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Low	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	30%	
Area Condition:	Rural	Area Condition uplifts unit cost and restoration

PROPOSED DIAMETER:	250 mm
TOTAL LENGTH:	420 m
Tunnelled	0%
Open Cut	100%

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	420 m	\$653	\$274,138	
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	10%		ea.			\$27,414	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$30,155	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$332,000	
Geotechnical / Hydrogeological / Materials	0.5%					\$1,700	
Geotechnical Sub-Total Cost						\$1,700	
Property Requirements	1.0%					\$ 3,300	
Property Requirements Sub-Total						\$3,300	
Consultant Engineering/Design	15%					\$ 49,800	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$49,800	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	10%					\$44,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$44,000	
Non-Refundable HST	1.76%					\$7,600	
Non-Refundable HST Sub-Total						\$7,600	
Total (2019 Dollars)						\$488,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$488,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$9,760		
Design	Design fees, Town fees for design, contract admin	13%	\$63,440		
Construction	Town fees, base costs and project contingency	85%	\$414,800		
TOTAL			\$488,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SS-01B
PROJECT NAME: New Development SPS West Sewers
PROJECT DESCRIPTION: New sanitary sewer required for development blocks going to new Development SPS in North Dorchester.

PROJECT NO.: WW-D-SS-01B

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Low	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	30%	
Area Condition:	Rural	Area Condition uplifts unit cost and restoration

PROPOSED DIAMETER:	300 mm
TOTAL LENGTH:	420 m
Tunnelled	0%
Open Cut	100%

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	420 m	\$654	\$274,867	
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	10%		ea.			\$27,487	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$30,235	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$333,000	
Geotechnical / Hydrogeological / Materials	0.5%					\$1,700	
Geotechnical Sub-Total Cost						\$1,700	
Property Requirements	1.0%					\$ 3,300	
Property Requirements Sub-Total						\$3,300	
Consultant Engineering/Design	15%					\$ 50,000	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$50,000	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	10%					\$44,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$44,000	
Non-Refundable HST	1.76%					\$7,600	
Non-Refundable HST Sub-Total						\$7,600	
Total (2019 Dollars)						\$490,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$490,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$9,800		
Design	Design fees, Town fees for design, contract admin	13%	\$63,700		
Construction	Town fees, base costs and project contingency	85%	\$416,500		
TOTAL			\$490,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SS-02
PROJECT NAME: New Development SPS East Sewers
PROJECT DESCRIPTION: New sanitary sewer required for development blocks going to new Development SPS in North Dorchester.

PROJECT NO.: WW-D-SS-02

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROPOSED DIAMETER:	250 mm
TOTAL LENGTH:	480 m
Tunnelled	0%
Open Cut	100%

CLASS EA REQUIREMENTS:	A
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	480 m	\$653	\$313,300	
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$62,660	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	15%		ea.			\$56,394	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$43,235	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$476,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$4,800	
Geotechnical Sub-Total Cost						\$4,800	
Property Requirements	1.5%					\$7,100	
Property Requirements Sub-Total						\$7,100	
Consultant Engineering/Design	15%					\$71,400	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$71,400	
In House Labour/Engineering/Wages/CA	3%					\$50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	15%					\$91,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$91,000	
Non-Refundable HST	1.76%					\$11,400	
Non-Refundable HST Sub-Total						\$11,400	
Total (2019 Dollars)						\$712,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$712,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$14,240		
Design	Design fees, Town fees for design, contract admin	13%	\$92,560		
Construction	Town fees, base costs and project contingency	85%	\$605,200		
TOTAL			\$712,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SS-03
PROJECT NAME: PS3 West Sewers
PROJECT DESCRIPTION: New sanitary sewer required for development blocks going to PS3 in Dorchester.

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	High	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	50%	
Area Condition:	Rural	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-SS-03

PROPOSED DIAMETER:	375 mm
TOTAL LENGTH:	265 m
Tunnelled	0%
Open Cut	100%

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Sewer 10m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	265 m	\$2,766	\$733,035	
Pipe Construction - Tunneling			m	0 m	\$6,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	0	\$166,000	\$0	
Major Creek Crossings			ea.	0	\$985,000	\$0	
Road Crossings			ea.	0	\$418,000	\$0	
Major Road / Rail Crossings			ea.	0	\$985,000	\$0	
Utility Crossings			ea.	0	\$418,000	\$0	
Additional Construction Costs	20%		ea.			\$146,607	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$87,964	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$968,000	
Geotechnical / Hydrogeological / Materials	2.0%					\$19,400	
Geotechnical Sub-Total Cost						\$19,400	
Property Requirements	2.0%					\$19,400	
Property Requirements Sub-Total						\$19,400	
Consultant Engineering/Design	15%					\$145,200	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$145,200	
In House Labour/Engineering/Wages/CA	3%					\$50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	25%					\$301,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$301,000	
Non-Refundable HST	1.76%					\$25,600	
Non-Refundable HST Sub-Total						\$25,600	
Total (2019 Dollars)						\$1,529,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,529,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$30,580		
Design	Design fees, Town fees for design, contract admin	13%	\$198,770		
Construction	Town fees, base costs and project contingency	85%	\$1,299,650		
TOTAL			\$1,529,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SS-04
PROJECT NAME: PS3 West Sewers
PROJECT DESCRIPTION: New sanitary sewer required for development blocks going to PS3 in Dorchester.

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity:	High	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	50%	
Area Condition:	Rural	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-SS-04

PROPOSED DIAMETER:	450 mm
TOTAL LENGTH:	45 m
Tunnelled	0%
Open Cut	100%

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	45 m	\$707	\$31,796	
Pipe Construction - Tunneling			m	0 m	\$6,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	0	\$196,000	\$0	
Major Creek Crossings			ea.	0	\$1,015,000	\$0	
Road Crossings			ea.	0	\$448,000	\$0	
Major Road / Rail Crossings			ea.	0	\$1,015,000	\$0	
Utility Crossings			ea.	0	\$448,000	\$0	
Additional Construction Costs	20%		ea.			\$6,359	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$3,816	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$42,000	
Geotechnical / Hydrogeological / Materials	2.0%					\$800	
Geotechnical Sub-Total Cost						\$800	
Property Requirements	2.0%					\$ 800	
Property Requirements Sub-Total						\$800	
Consultant Engineering/Design	15%					\$ 6,300	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$6,300	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	25%					\$25,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$25,000	
Non-Refundable HST	1.76%					\$1,300	
Non-Refundable HST Sub-Total						\$1,300	
Total (2019 Dollars)						\$126,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$126,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$2,520		
Design	Design fees, Town fees for design, contract admin	13%	\$16,380		
Construction	Town fees, base costs and project contingency	85%	\$107,100		
TOTAL			\$126,000		



Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates

PROJECT NO.: WW-D-SS-05A-ALT-1
PROJECT NAME: Christie Drive and new development sewer
PROJECT DESCRIPTION: New sanitary sewer required for development blocks going to PS3 in Dorchester.

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-SS-05A-ALT-1

PROPOSED DIAMETER:	250 mm
TOTAL LENGTH:	370 m
Tunnelled	0 m 0%
Open Cut	370 m 100%

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	370 m	\$653	\$241,502	
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$48,300	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	15%		ea.			\$43,470	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$33,327	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$367,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$3,700	
Geotechnical Sub-Total Cost						\$3,700	
Property Requirements	1.5%					\$ 5,500	
Property Requirements Sub-Total						\$5,500	
Consultant Engineering/Design	15%					\$ 55,100	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$55,100	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	15%					\$72,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$72,000	
Non-Refundable HST	1.76%					\$8,900	
Non-Refundable HST Sub-Total						\$8,900	
Total (2019 Dollars)						\$562,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$562,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$11,240		
Design	Design fees, Town fees for design, contract admin	13%	\$73,060		
Construction	Town fees, base costs and project contingency	85%	\$477,700		
TOTAL			\$562,000		



Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates

PROJECT NO.: WW-D-SS-05A-ALT-2
PROJECT NAME: Christie Drive and new development sewer
PROJECT DESCRIPTION: New sanitary sewer required for development blocks going to PS3 in Dorchester.

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Rural	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-SS-05A-ALT-2

PROPOSED DIAMETER:	250 mm
TOTAL LENGTH:	260 m
Tunnelled	0 m 0%
Open Cut	260 m 100%

CLASS EA REQUIREMENTS:	A
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	260 m	\$653	\$169,704	
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	15%		ea.			\$25,456	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$19,516	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$215,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$2,200	
Geotechnical Sub-Total Cost						\$2,200	
Property Requirements	1.5%					\$ 3,200	
Property Requirements Sub-Total						\$3,200	
Consultant Engineering/Design	15%					\$ 32,300	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$32,300	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	15%					\$45,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$45,000	
Non-Refundable HST	1.76%					\$5,200	
Non-Refundable HST Sub-Total						\$5,200	
Total (2019 Dollars)						\$353,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$353,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$7,060		
Design	Design fees, Town fees for design, contract admin	13%	\$45,890		
Construction	Town fees, base costs and project contingency	85%	\$300,050		
TOTAL			\$353,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SS-05B-ALT-1
PROJECT NAME: Christie Drive and new Development sewer
PROJECT DESCRIPTION: New sanitary sewer required for development blocks going to PS3 in Dorchester.

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROJECT NO.: ~~WW-D-SS-05B-ALT-1~~

PROPOSED DIAMETER:	300 mm
TOTAL LENGTH:	370 m
Tunnelled	0 m 0%
Open Cut	370 m 100%

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	370 m	\$654	\$242,145	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$48,429	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	15%		ea.			\$43,586	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$33,416	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$368,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$3,700	
Geotechnical Sub-Total Cost						\$3,700	
Property Requirements	1.5%					\$ 5,500	
Property Requirements Sub-Total						\$5,500	
Consultant Engineering/Design	15%					\$ 55,200	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$55,200	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	15%					\$72,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$72,000	
Non-Refundable HST	1.76%					\$8,900	
Non-Refundable HST Sub-Total						\$8,900	
Total (2019 Dollars)						\$563,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$563,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$11,260		
Design	Design fees, Town fees for design, contract admin	13%	\$73,190		
Construction	Town fees, base costs and project contingency	85%	\$478,550		
TOTAL			\$563,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SS-05B-ALT-2
PROJECT NAME: Christie Drive and new Development sewer
PROJECT DESCRIPTION: New sanitary sewer required for development blocks going to PS3 in Dorchester.

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Rural	Area Condition uplifts unit cost and restoration

PROJECT NO.: ~~WW-D-SS-05B-ALT-2~~

PROPOSED DIAMETER:	300 mm
TOTAL LENGTH:	260 m
Tunnelled	0 m 0%
Open Cut	260 m 100%

CLASS EA REQUIREMENTS:	A
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	260 m	\$654	\$170,156	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	15%		ea.			\$25,523	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$19,568	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$215,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$2,200	
Geotechnical Sub-Total Cost						\$2,200	
Property Requirements	1.5%					\$ 3,200	
Property Requirements Sub-Total						\$3,200	
Consultant Engineering/Design	15%					\$ 32,300	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$32,300	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	15%					\$45,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$45,000	
Non-Refundable HST	1.76%					\$5,200	
Non-Refundable HST Sub-Total						\$5,200	
Total (2019 Dollars)						\$353,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$353,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$7,060		
Design	Design fees, Town fees for design, contract admin	13%	\$45,890		
Construction	Town fees, base costs and project contingency	85%	\$300,050		
TOTAL			\$353,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SS-06A-ALT-1
PROJECT NAME: Rath-Harris Municipal Drain Crossing
PROJECT DESCRIPTION: New sanitary sewer required for development blocks going to PS3 in Dorchester.

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity:	High	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	50%	
Area Condition:	Rural	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-SS-06A-ALT-1

PROPOSED DIAMETER:	250 mm
TOTAL LENGTH:	80 m
Tunnelled	50 m 63%
Open Cut	30 m 38%

CLASS EA REQUIREMENTS:	B
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	30 m	\$653	\$19,581	Existing road ROW
Pipe Construction - Tunneling			m	50 m	\$1,300	\$65,000	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	1	\$66,000	\$66,000	Rath-Harris Municipal Drain Crossing
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	20%		ea.			\$30,116	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$18,070	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$199,000	
Geotechnical / Hydrogeological / Materials	2.0%					\$4,000	
Geotechnical Sub-Total Cost						\$4,000	
Property Requirements	2.0%					\$ 4,000	
Property Requirements Sub-Total						\$4,000	
Consultant Engineering/Design	15%					\$ 29,900	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$29,900	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	25%					\$72,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$72,000	
Non-Refundable HST	1.76%					\$5,400	
Non-Refundable HST Sub-Total						\$5,400	
Total (2019 Dollars)						\$364,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$364,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$7,280		
Design	Design fees, Town fees for design, contract admin	13%	\$47,320		
Construction	Town fees, base costs and project contingency	85%	\$309,400		
TOTAL			\$364,000		



Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates

PROJECT NO.: WW-D-SS-06A-ALT-2
PROJECT NAME: Rath-Harris Municipal Drain Crossing
PROJECT DESCRIPTION: New sanitary sewer required for development blocks going to PS3 in Dorchester.

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity:	High	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	50%	
Area Condition:	Rural	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-SS-06A-ALT-2

PROPOSED DIAMETER:	250 mm
TOTAL LENGTH:	135 m
Tunnelled	50 m 37%
Open Cut	85 m 63%

CLASS EA REQUIREMENTS:	B
CONSTRUCTION ASSUMPTION:	Sewer 10m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	85 m	\$2,744	\$233,232	Existing road ROW
Pipe Construction - Tunneling			m	50 m	\$1,300	\$65,000	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	1	\$66,000	\$66,000	Rath-Harris Municipal Drain Crossing
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	20%		ea.			\$72,846	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$43,708	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$481,000	
Geotechnical / Hydrogeological / Materials	2.0%					\$9,600	
Geotechnical Sub-Total Cost						\$9,600	
Property Requirements	2.0%					\$ 9,600	
Property Requirements Sub-Total						\$9,600	
Consultant Engineering/Design	15%					\$ 72,200	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$72,200	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	25%					\$156,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$156,000	
Non-Refundable HST	1.76%					\$12,800	
Non-Refundable HST Sub-Total						\$12,800	
Total (2019 Dollars)						\$791,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$791,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$15,820		
Design	Design fees, Town fees for design, contract admin	13%	\$102,830		
Construction	Town fees, base costs and project contingency	85%	\$672,350		
TOTAL			\$791,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SS-06B-ALT-1
PROJECT NAME: Rath-Harris Municipal Drain Crossing
PROJECT DESCRIPTION: New sanitary sewer required for development blocks going to PS3 in Dorchester.

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity:	High	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	50%	
Area Condition:	Rural	Area Condition uplifts unit cost and restoration

PROJECT NO.: ~~WW-D-SS-06B-ALT-1~~

PROPOSED DIAMETER:	300 mm
TOTAL LENGTH:	80 m
Tunnelled	50 m 63%
Open Cut	30 m 38%

CLASS EA REQUIREMENTS:	B
CONSTRUCTION ASSUMPTION:	Sewer 10m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	30 m	\$2,746	\$82,369	Existing road ROW
Pipe Construction - Tunneling			m	50 m	\$1,300	\$65,000	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	1	\$235,000	\$235,000	Rath-Harris Municipal Drain Crossing
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	20%		ea.			\$76,474	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$45,884	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$505,000	
Geotechnical / Hydrogeological / Materials	2.0%					\$10,100	
Geotechnical Sub-Total Cost						\$10,100	
Property Requirements	2.0%					\$ 10,100	
Property Requirements Sub-Total						\$10,100	
Consultant Engineering/Design	15%					\$ 75,800	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$75,800	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	25%					\$163,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$163,000	
Non-Refundable HST	1.76%					\$13,400	
Non-Refundable HST Sub-Total						\$13,400	
Total (2019 Dollars)						\$827,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$827,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$16,540		
Design	Design fees, Town fees for design, contract admin	13%	\$107,510		
Construction	Town fees, base costs and project contingency	85%	\$702,950		
TOTAL			\$827,000		



Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates

PROJECT NO.: WW-D-SS-06B-ALT-2
PROJECT NAME: Rath-Harris Municipal Drain Crossing
PROJECT DESCRIPTION: New sanitary sewer required for development blocks going to PS3 in Dorchester.

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity:	High	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	50%	
Area Condition:	Rural	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-SS-06B-ALT-2

PROPOSED DIAMETER:	300 mm
TOTAL LENGTH:	135 m
Tunnelled	50 m 37%
Open Cut	85 m 63%

CLASS EA REQUIREMENTS:	B
CONSTRUCTION ASSUMPTION:	Sewer 10m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	85 m	\$2,746	\$233,379	Existing road ROW
Pipe Construction - Tunneling			m	50 m	\$1,300	\$65,000	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	1	\$235,000	\$235,000	Rath-Harris Municipal Drain Crossing
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	20%		ea.			\$106,676	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$64,006	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$704,000	
Geotechnical / Hydrogeological / Materials	2.0%					\$14,100	
Geotechnical Sub-Total Cost						\$14,100	
Property Requirements	2.0%					\$ 14,100	
Property Requirements Sub-Total						\$14,100	
Consultant Engineering/Design	15%					\$ 105,600	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$105,600	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	25%					\$222,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$222,000	
Non-Refundable HST	1.76%					\$18,700	
Non-Refundable HST Sub-Total						\$18,700	
Total (2019 Dollars)						\$1,129,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,129,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$22,580		
Design	Design fees, Town fees for design, contract admin	13%	\$146,770		
Construction	Town fees, base costs and project contingency	85%	\$959,650		
TOTAL			\$1,129,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SS-07A-ALT-1
PROJECT NAME: New development sewer
PROJECT DESCRIPTION: New sanitary sewer required for development blocks going to PS3 in Dorchester.

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Rural	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-SS-07A-ALT-1

PROPOSED DIAMETER:	250 mm
TOTAL LENGTH:	390 m
Tunnelled	0 m 0%
Open Cut	390 m 100%

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Sewer 10m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	390 m	\$2,744	\$1,070,121	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	15%		ea.			\$160,518	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$123,064	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$1,354,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$13,500	
Geotechnical Sub-Total Cost						\$13,500	
Property Requirements	1.5%					\$ 20,300	
Property Requirements Sub-Total						\$20,300	
Consultant Engineering/Design	15%					\$ 203,100	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$203,100	
In House Labour/Engineering/Wages/CA	3%					\$ 100,000	
In-house Labour/Wages Sub-Total						\$100,000	
Project Contingency	15%					\$254,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$254,000	
Non-Refundable HST	1.76%					\$32,500	
Non-Refundable HST Sub-Total						\$32,500	
Total (2019 Dollars)						\$1,977,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,977,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$39,540		
Design	Design fees, Town fees for design, contract admin	13%	\$257,010		
Construction	Town fees, base costs and project contingency	85%	\$1,680,450		
TOTAL			\$1,977,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SS-07A-ALT-2
PROJECT NAME: New development sewer
PROJECT DESCRIPTION: New sanitary sewer required for development blocks going to PS3 in Dorchester.

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Rural	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-SS-07A-ALT-2

PROPOSED DIAMETER:	250 mm
TOTAL LENGTH:	260 m
Tunnelled	0 m 0%
Open Cut	260 m 100%

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Sewer 10m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	260 m	\$2,744	\$713,414	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	15%		ea.			\$107,012	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$82,043	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$902,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$9,000	
Geotechnical Sub-Total Cost						\$9,000	
Property Requirements	1.5%					\$ 13,500	
Property Requirements Sub-Total						\$13,500	
Consultant Engineering/Design	15%					\$ 135,300	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$135,300	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	15%					\$166,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$166,000	
Non-Refundable HST	1.76%					\$21,600	
Non-Refundable HST Sub-Total						\$21,600	
Total (2019 Dollars)						\$1,297,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,297,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$25,940		
Design	Design fees, Town fees for design, contract admin	13%	\$168,610		
Construction	Town fees, base costs and project contingency	85%	\$1,102,450		
TOTAL			\$1,297,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SS-07B-ALT-1
PROJECT NAME: New development sewer
PROJECT DESCRIPTION: New sanitary sewer required for development blocks going to PS3 in Dorchester.

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Rural	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-SS-07B-ALT-1

PROPOSED DIAMETER:	375 mm
TOTAL LENGTH:	390 m
Tunnelled	0 m 0%
Open Cut	390 m 100%

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Sewer 10m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	390 m	\$2,766	\$1,078,806	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$6,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	0	\$166,000	\$0	
Major Creek Crossings			ea.	0	\$985,000	\$0	
Road Crossings			ea.	0	\$418,000	\$0	
Major Road / Rail Crossings			ea.	0	\$985,000	\$0	
Utility Crossings			ea.	0	\$418,000	\$0	
Additional Construction Costs	15%		ea.			\$161,821	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$124,063	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$1,365,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$13,700	
Geotechnical Sub-Total Cost						\$13,700	
Property Requirements	1.5%					\$ 20,500	
Property Requirements Sub-Total						\$20,500	
Consultant Engineering/Design	15%					\$ 204,800	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$204,800	
In House Labour/Engineering/Wages/CA	3%					\$ 100,000	
In-house Labour/Wages Sub-Total						\$100,000	
Project Contingency	15%					\$256,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$256,000	
Non-Refundable HST	1.76%					\$32,700	
Non-Refundable HST Sub-Total						\$32,700	
Total (2019 Dollars)						\$1,993,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,993,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$39,860		
Design	Design fees, Town fees for design, contract admin	13%	\$259,090		
Construction	Town fees, base costs and project contingency	85%	\$1,694,050		
TOTAL			\$1,993,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SS-07B
PROJECT NAME: New development sewer
PROJECT DESCRIPTION: New sanitary sewer required for development blocks going to PS3 in Dorchester.

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Rural	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-SS-07B

PROPOSED DIAMETER:	375 mm
TOTAL LENGTH:	260 m
Tunnelled	0 m 0%
Open Cut	260 m 100%

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Sewer 10m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	260 m	\$2,766	\$719,204	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$6,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	0	\$166,000	\$0	
Major Creek Crossings			ea.	0	\$985,000	\$0	
Road Crossings			ea.	0	\$418,000	\$0	
Major Road / Rail Crossings			ea.	0	\$985,000	\$0	
Utility Crossings			ea.	0	\$418,000	\$0	
Additional Construction Costs	15%		ea.			\$107,881	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$82,708	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$910,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$9,100	
Geotechnical Sub-Total Cost						\$9,100	
Property Requirements	1.5%					\$ 13,700	
Property Requirements Sub-Total						\$13,700	
Consultant Engineering/Design	15%					\$ 136,500	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$136,500	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	15%					\$168,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$168,000	
Non-Refundable HST	1.76%					\$21,800	
Non-Refundable HST Sub-Total						\$21,800	
Total (2019 Dollars)						\$1,309,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,309,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$26,180		
Design	Design fees, Town fees for design, contract admin	13%	\$170,170		
Construction	Town fees, base costs and project contingency	85%	\$1,112,650		
TOTAL			\$1,309,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SS-09
PROJECT NAME: Sewer East of PS3
PROJECT DESCRIPTION: New sanitary sewer to accommodate growth flows east of PS3 in Dorchester

PROJECT NO.: WW-D-SS-09

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity:	High	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	50%	
Area Condition:	Rural	Area Condition uplifts unit cost and restoration

PROPOSED DIAMETER:	250 mm
TOTAL LENGTH:	400 m
Tunnelled	100 m 25%
Open Cut	300 m 75%

CLASS EA REQUIREMENTS:	A
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	300 m	\$653	\$195,813	Existing road ROW
Pipe Construction - Tunneling			m	100 m	\$1,300	\$130,000	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	1	\$235,000	\$235,000	Mill Pond Crossing
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	20%		ea.			\$112,163	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$67,298	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$740,000	
Geotechnical / Hydrogeological / Materials	2.0%					\$14,800	
Geotechnical Sub-Total Cost						\$14,800	
Property Requirements	2.0%					\$14,800	
Property Requirements Sub-Total						\$14,800	
Consultant Engineering/Design	15%					\$111,000	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$111,000	
In House Labour/Engineering/Wages/CA	3%					\$50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	25%					\$233,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$233,000	
Non-Refundable HST	1.76%					\$19,600	
Non-Refundable HST Sub-Total						\$19,600	
Total (2019 Dollars)						\$1,183,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,183,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$23,660		
Design	Design fees, Town fees for design, contract admin	13%	\$153,790		
Construction	Town fees, base costs and project contingency	85%	\$1,005,550		
TOTAL			\$1,183,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SS-10
PROJECT NAME: Sewer East of PS3
PROJECT DESCRIPTION: New sanitary sewer to accommodate growth flows east of PS3 in Dorchester

PROJECT NO.: WW-D-SS-10

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity:	High	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	50%	
Area Condition:	Rural	Area Condition uplifts unit cost and restoration

PROPOSED DIAMETER:	300 mm
TOTAL LENGTH:	30 m
Tunnelled	0%
Open Cut	100%

CLASS EA REQUIREMENTS:	A
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	30 m	\$654	\$19,633	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	20%		ea.			\$3,927	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$2,356	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$26,000	
Geotechnical / Hydrogeological / Materials	2.0%					\$500	
Geotechnical Sub-Total Cost						\$500	
Property Requirements	2.0%					\$ 500	
Property Requirements Sub-Total						\$500	
Consultant Engineering/Design	15%					\$ 3,900	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$3,900	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	25%					\$20,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$20,000	
Non-Refundable HST	1.76%					\$900	
Non-Refundable HST Sub-Total						\$900	
Total (2019 Dollars)						\$102,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$102,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$2,040		
Design	Design fees, Town fees for design, contract admin	13%	\$13,260		
Construction	Town fees, base costs and project contingency	85%	\$86,700		
TOTAL			\$102,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SS-11A
PROJECT NAME: Christie Drive and new Development sewer
PROJECT DESCRIPTION: New sanitary sewer required for development blocks going to PS3 in Dorchester.

PROJECT NO.: WW-D-SS-11A

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Rural	Area Condition uplifts unit cost and restoration

PROPOSED DIAMETER:	250 mm
TOTAL LENGTH:	505 m
Tunnelled	0 m 0%
Open Cut	505 m 100%

CLASS EA REQUIREMENTS:	A
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	505 m	\$653	\$329,618	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	15%		ea.			\$49,443	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$37,906	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$417,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$4,200	
Geotechnical Sub-Total Cost						\$4,200	
Property Requirements	1.5%					\$ 6,300	
Property Requirements Sub-Total						\$6,300	
Consultant Engineering/Design	15%					\$ 62,600	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$62,600	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	15%					\$81,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$81,000	
Non-Refundable HST	1.76%					\$10,100	
Non-Refundable HST Sub-Total						\$10,100	
Total (2019 Dollars)						\$631,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$631,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$12,620		
Design	Design fees, Town fees for design, contract admin	13%	\$82,030		
Construction	Town fees, base costs and project contingency	85%	\$536,350		
TOTAL			\$631,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SS-11B
PROJECT NAME: Christie Drive and new Development sewer
PROJECT DESCRIPTION: New sanitary sewer required for development blocks going to PS3 in Dorchester.

PROJECT NO.: WW-D-SS-11B

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Rural	Area Condition uplifts unit cost and restoration

PROPOSED DIAMETER:	300 mm
TOTAL LENGTH:	505 m
Tunnelled	0 m 0%
Open Cut	505 m 100%

CLASS EA REQUIREMENTS:	A
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	505 m	\$654	\$330,495	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	15%		ea.			\$49,574	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$38,007	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$418,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$4,200	
Geotechnical Sub-Total Cost						\$4,200	
Property Requirements	1.5%					\$ 6,300	
Property Requirements Sub-Total						\$6,300	
Consultant Engineering/Design	15%					\$ 62,700	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$62,700	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	15%					\$81,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$81,000	
Non-Refundable HST	1.76%					\$10,100	
Non-Refundable HST Sub-Total						\$10,100	
Total (2019 Dollars)						\$632,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$632,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$12,640		
Design	Design fees, Town fees for design, contract admin	13%	\$82,160		
Construction	Town fees, base costs and project contingency	85%	\$537,200		
TOTAL			\$632,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SS-12
PROJECT NAME: Clara Street sewer
PROJECT DESCRIPTION: New sanitary sewer to accommodate growth Northeast of New development SPS in North Dorchester

PROJECT NO.: WW-D-SS-12

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROPOSED DIAMETER:	200 mm
TOTAL LENGTH:	605 m
Tunnelled	0%
Open Cut	100%

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	605 m	\$651	\$393,785	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$78,757	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	15%		ea.			\$70,881	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$54,342	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$598,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$6,000	
Geotechnical Sub-Total Cost						\$6,000	
Property Requirements	1.5%					\$ 9,000	
Property Requirements Sub-Total						\$9,000	
Consultant Engineering/Design	15%					\$ 89,700	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$89,700	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	15%					\$113,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$113,000	
Non-Refundable HST	1.76%					\$14,400	
Non-Refundable HST Sub-Total						\$14,400	
Total (2019 Dollars)						\$880,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$880,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$17,600		
Design	Design fees, Town fees for design, contract admin	13%	\$114,400		
Construction	Town fees, base costs and project contingency	85%	\$748,000		
TOTAL			\$880,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SS-13
PROJECT NAME: Marion Street sewer
PROJECT DESCRIPTION: New sanitary sewer to accommodate growth Northeast of New development SPS in North Dorchester

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-SS-13

PROPOSED DIAMETER:	200 mm
TOTAL LENGTH:	210 m
Tunnelled	0%
Open Cut	100%

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	210 m	\$651	\$136,686	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$27,337	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	15%		ea.			\$24,603	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$18,863	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$207,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$2,100	
Geotechnical Sub-Total Cost						\$2,100	
Property Requirements	1.5%					\$ 3,100	
Property Requirements Sub-Total						\$3,100	
Consultant Engineering/Design	15%					\$ 31,100	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$31,100	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	15%					\$44,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$44,000	
Non-Refundable HST	1.76%					\$5,100	
Non-Refundable HST Sub-Total						\$5,100	
Total (2019 Dollars)						\$342,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$342,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$6,840		
Design	Design fees, Town fees for design, contract admin	13%	\$44,460		
Construction	Town fees, base costs and project contingency	85%	\$290,700		
TOTAL			\$342,000		



**Municipality of Thames Centre
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PROJECT NO.: WW-D-SS-14
PROJECT NAME: North Street to Clara Street sewer
PROJECT DESCRIPTION: New sanitary sewer to accommodate growth Northeast of New development SPS in North Dorchester

PROJECT NO.: WW-D-SS-14

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROPOSED DIAMETER:	200 mm
TOTAL LENGTH:	450 m
Tunnelled	0%
Open Cut	100%

CLASS EA REQUIREMENTS:	A
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	450 m	\$651	\$292,898	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$58,580	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	15%		ea.			\$52,722	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$40,420	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$445,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$4,500	
Geotechnical Sub-Total Cost						\$4,500	
Property Requirements	1.5%					\$ 6,700	
Property Requirements Sub-Total						\$6,700	
Consultant Engineering/Design	15%					\$ 66,800	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$66,800	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	15%					\$86,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$86,000	
Non-Refundable HST	1.76%					\$10,700	
Non-Refundable HST Sub-Total						\$10,700	
Total (2019 Dollars)						\$670,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$670,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$13,400		
Design	Design fees, Town fees for design, contract admin	13%	\$87,100		
Construction	Town fees, base costs and project contingency	85%	\$569,500		
TOTAL			\$670,000		



**Municipality of Thames Centre
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PROJECT NO.: WW-D-SS-15
PROJECT NAME: North Street Sewer
PROJECT DESCRIPTION: New sanitary sewer to accommodate growth Northeast of New development SPS in North Dorchester

PROJECT NO.: WW-D-SS-15

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROPOSED DIAMETER:	200 mm
TOTAL LENGTH:	325 m
Tunnelled	0%
Open Cut	100%

CLASS EA REQUIREMENTS:	A
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	325 m	\$651	\$211,537	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$42,307	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	15%		ea.			\$38,077	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$29,192	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$321,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$3,200	
Geotechnical Sub-Total Cost						\$3,200	
Property Requirements	1.5%					\$ 4,800	
Property Requirements Sub-Total						\$4,800	
Consultant Engineering/Design	15%					\$ 48,200	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$48,200	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	15%					\$64,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$64,000	
Non-Refundable HST	1.76%					\$7,800	
Non-Refundable HST Sub-Total						\$7,800	
Total (2019 Dollars)						\$499,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$499,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$9,980		
Design	Design fees, Town fees for design, contract admin	13%	\$64,870		
Construction	Town fees, base costs and project contingency	85%	\$424,150		
TOTAL			\$499,000		



**Municipality of Thames Centre
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PROJECT NO.: WW-D-SS-16
PROJECT NAME: Richmond Street Sewer
PROJECT DESCRIPTION: New sanitary sewer to accommodate growth Northeast of New development SPS in North Dorchester

PROJECT NO.: WW-D-SS-16

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Rural	Area Condition uplifts unit cost and restoration

PROPOSED DIAMETER:	200 mm
TOTAL LENGTH:	405 m
Tunnelled	0%
Open Cut	100%

CLASS EA REQUIREMENTS:	A
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	405 m	\$651	\$263,608	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	15%		ea.			\$39,541	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$30,315	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$333,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$3,300	
Geotechnical Sub-Total Cost						\$3,300	
Property Requirements	1.5%					\$ 5,000	
Property Requirements Sub-Total						\$5,000	
Consultant Engineering/Design	15%					\$ 50,000	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$50,000	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	15%					\$66,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$66,000	
Non-Refundable HST	1.76%					\$8,000	
Non-Refundable HST Sub-Total						\$8,000	
Total (2019 Dollars)						\$515,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$515,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$10,300		
Design	Design fees, Town fees for design, contract admin	13%	\$66,950		
Construction	Town fees, base costs and project contingency	85%	\$437,750		
TOTAL			\$515,000		



Municipality of Thames Centre
Water and Wastewater Master Plan Update
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PROJECT NO.: WW-D-SS-17
PROJECT NAME: Hamilton Road to Christie Drive sewer
PROJECT DESCRIPTION: New sanitary sewer to accommodate growth flows east of PS3 in Dorchester

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Rural	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-SS-17

PROPOSED DIAMETER:	200 mm
TOTAL LENGTH:	1250 m
Tunnelled	0%
Open Cut	100%

CLASS EA REQUIREMENTS:	A
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	1250 m	\$651	\$813,605	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	0%					\$0	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	15%		ea.			\$122,041	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$93,565	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$1,029,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$10,300	
Geotechnical Sub-Total Cost						\$10,300	
Property Requirements	1.5%					\$15,400	
Property Requirements Sub-Total						\$15,400	
Consultant Engineering/Design	15%					\$154,400	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$154,400	
In House Labour/Engineering/Wages/CA	3%					\$100,000	
In-house Labour/Wages Sub-Total						\$100,000	
Project Contingency	15%					\$196,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$196,000	
Non-Refundable HST	1.76%					\$24,700	
Non-Refundable HST Sub-Total						\$24,700	
Total (2019 Dollars)						\$1,530,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,530,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$30,600		
Design	Design fees, Town fees for design, contract admin	13%	\$198,900		
Construction	Town fees, base costs and project contingency	85%	\$1,300,500		
TOTAL			\$1,530,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
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PROJECT NO.: WW-D-SS-18
PROJECT NAME: Sewers for Existing Unserviced (SPS-01B)
PROJECT DESCRIPTION: New sanitary sewers to benefit existing unserviced within North Dorchester (WW-D-SPS-01B catchment)

PROJECT NO.: WW-D-SS-18

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROPOSED DIAMETER:	200 mm
TOTAL LENGTH:	7500 m
Tunnelled	0%
Open Cut	100%

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	7500 m	\$651	\$4,881,632	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$976,326	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	15%		ea.			\$878,694	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$673,665	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$7,410,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$74,100	
Geotechnical Sub-Total Cost						\$74,100	
Property Requirements	1.5%					\$ 111,200	
Property Requirements Sub-Total						\$111,200	
Consultant Engineering/Design	15%					\$ 1,111,500	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$1,111,500	
In House Labour/Engineering/Wages/CA	3%					\$ 222,300	
In-house Labour/Wages Sub-Total						\$222,300	
Project Contingency	15%					\$1,339,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$1,339,000	
Non-Refundable HST	1.76%					\$176,800	
Non-Refundable HST Sub-Total						\$176,800	
Total (2019 Dollars)						\$10,445,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$10,445,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$208,900		
Design	Design fees, Town fees for design, contract admin	13%	\$1,357,850		
Construction	Town fees, base costs and project contingency	85%	\$8,878,250		
TOTAL			\$10,445,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SS-19
PROJECT NAME: Sewers for Existing Unserviced (SPS-02)
PROJECT DESCRIPTION: New sanitary sewers to benefit existing unserviced within North Dorchester (WW-D-SPS-02 catchment)

PROJECT NO.: WW-D-SS-19

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROPOSED DIAMETER:	200 mm
TOTAL LENGTH:	5640 m
Tunnelled	0%
Open Cut	100%

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	5640 m	\$651	\$3,670,987	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$734,197	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	15%		ea.			\$660,778	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$506,596	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$5,573,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$55,700	
Geotechnical Sub-Total Cost						\$55,700	
Property Requirements	1.5%					\$ 83,600	
Property Requirements Sub-Total						\$83,600	
Consultant Engineering/Design	15%					\$ 836,000	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$836,000	
In House Labour/Engineering/Wages/CA	3%					\$ 167,200	
In-house Labour/Wages Sub-Total						\$167,200	
Project Contingency	15%					\$1,007,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$1,007,000	
Non-Refundable HST	1.76%					\$133,000	
Non-Refundable HST Sub-Total						\$133,000	
Total (2019 Dollars)						\$7,856,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$7,856,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$157,120		
Design	Design fees, Town fees for design, contract admin	13%	\$1,021,280		
Construction	Town fees, base costs and project contingency	85%	\$6,677,600		
TOTAL			\$7,856,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SS-20
PROJECT NAME: Sewers for Existing Unserviced (SPS-03)
PROJECT DESCRIPTION: New sanitary sewers to benefit existing unserviced within North Dorchester (WW-D-SPS-03 catchment)

PROJECT NO.: WW-D-SS-20

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROPOSED DIAMETER:	200 mm
TOTAL LENGTH:	1120 m
Tunnelled	0%
Open Cut	100%

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	1120 m	\$651	\$728,990	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$145,798	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	15%		ea.			\$131,218	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$100,601	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$1,107,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$11,100	
Geotechnical Sub-Total Cost						\$11,100	
Property Requirements	1.5%					\$ 16,600	
Property Requirements Sub-Total						\$16,600	
Consultant Engineering/Design	15%					\$ 166,100	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$166,100	
In House Labour/Engineering/Wages/CA	3%					\$ 100,000	
In-house Labour/Wages Sub-Total						\$100,000	
Project Contingency	15%					\$210,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$210,000	
Non-Refundable HST	1.76%					\$26,600	
Non-Refundable HST Sub-Total						\$26,600	
Total (2019 Dollars)						\$1,637,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,637,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$32,740		
Design	Design fees, Town fees for design, contract admin	13%	\$212,810		
Construction	Town fees, base costs and project contingency	85%	\$1,391,450		
TOTAL			\$1,637,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SS-21
PROJECT NAME: Sewers for Existing Unserviced (SPS-04)
PROJECT DESCRIPTION: New sanitary sewers to benefit existing unserviced within South Dorchester (WW-D-SPS-04 catchment)

PROJECT NO.: WW-D-SS-21

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROPOSED DIAMETER:	200 mm
TOTAL LENGTH:	5300 m
Tunnelled	0%
Open Cut	5300 m 100%

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	5300 m	\$651	\$3,449,686	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$689,937	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	15%		ea.			\$620,944	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$476,057	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$5,237,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$52,400	
Geotechnical Sub-Total Cost						\$52,400	
Property Requirements	1.5%					\$ 78,600	
Property Requirements Sub-Total						\$78,600	
Consultant Engineering/Design	15%					\$ 785,600	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$785,600	
In House Labour/Engineering/Wages/CA	3%					\$ 157,100	
In-house Labour/Wages Sub-Total						\$157,100	
Project Contingency	15%					\$947,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$947,000	
Non-Refundable HST	1.76%					\$125,000	
Non-Refundable HST Sub-Total						\$125,000	
Total (2019 Dollars)						\$7,383,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$7,383,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$147,660		
Design	Design fees, Town fees for design, contract admin	13%	\$959,790		
Construction	Town fees, base costs and project contingency	85%	\$6,275,550		
TOTAL			\$7,383,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SS-23
PROJECT NAME: Sewers for Existing Unserviced (SPS-06B)
PROJECT DESCRIPTION: New sanitary sewers to benefit existing unserviced within South Dorchester (WW-D-SPS-06B catchment)

PROJECT NO.: WW-D-SS-23

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROPOSED DIAMETER:	200 mm
TOTAL LENGTH:	8200 m
Tunnelled	0%
Open Cut	8200 m 100%

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	8200 m	\$651	\$5,337,251	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$1,067,450	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	15%		ea.			\$960,705	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$736,541	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$8,102,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$81,000	
Geotechnical Sub-Total Cost						\$81,000	
Property Requirements	1.5%					\$ 121,500	
Property Requirements Sub-Total						\$121,500	
Consultant Engineering/Design	15%					\$ 1,215,300	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$1,215,300	
In House Labour/Engineering/Wages/CA	3%					\$ 243,100	
In-house Labour/Wages Sub-Total						\$243,100	
Project Contingency	15%					\$1,464,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$1,464,000	
Non-Refundable HST	1.76%					\$193,300	
Non-Refundable HST Sub-Total						\$193,300	
Total (2019 Dollars)						\$11,420,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$11,420,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$228,400		
Design	Design fees, Town fees for design, contract admin	13%	\$1,484,600		
Construction	Town fees, base costs and project contingency	85%	\$9,707,000		
TOTAL			\$11,420,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-SS-24
PROJECT NAME: Sewers for Existing Unserviced (SPS-07B)
PROJECT DESCRIPTION: New sanitary sewers to benefit existing unserviced within North Dorchester (WW-D-SPS-07B catchment)

PROJECT NO.: WW-D-SS-24

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROPOSED DIAMETER:	200 mm
TOTAL LENGTH:	2250 m
Tunnelled	0%
Open Cut	100%

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	2250 m	\$651	\$1,464,489	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$292,898	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	15%		ea.			\$263,608	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$202,100	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$2,223,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$22,200	
Geotechnical Sub-Total Cost						\$22,200	
Property Requirements	1.5%					\$ 33,300	
Property Requirements Sub-Total						\$33,300	
Consultant Engineering/Design	15%					\$ 333,500	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$333,500	
In House Labour/Engineering/Wages/CA	3%					\$ 100,000	
In-house Labour/Wages Sub-Total						\$100,000	
Project Contingency	15%					\$407,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$407,000	
Non-Refundable HST	1.76%					\$53,100	
Non-Refundable HST Sub-Total						\$53,100	
Total (2019 Dollars)						\$3,172,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$3,172,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$63,440		
Design	Design fees, Town fees for design, contract admin	13%	\$412,360		
Construction	Town fees, base costs and project contingency	85%	\$2,696,200		
TOTAL			\$3,172,000		

**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**



PROJECT NO.: WW-D-401-ST-01
PROJECT NAME: Cost Benefit Study to Service 401 Corridor Lands
PROJECT DESCRIPTION: Cost-benefit study to evaluate servicing options for 401 Corridor Lands, will include recommendations for gravity, sewage pumping station or siphon options.

CLASS EA REQUIREMENTS:

C

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	TOTAL
Study	Feasibility study, EA	\$50,000



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-D-TP-01A
PROJECT NAME: Thorndale Treatment Plant Upgrades (includes SPS)
PROJECT DESCRIPTION: Treatment plant capacity upgrades required to accommodate all development flows in Thorndale

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-TP-01A

PROPOSED CAPACITY	0.30 MLD
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CLASS EA REQUIREMENTS:	C
CONSTRUCTION ASSUMPTION:	Other

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Facility Construction			MLD	0 MLD	\$4,000,000	\$1,202,688	\$2.5M per MLD
Additional Construction Costs	15%		ea.			\$180,403	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$138,309	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$1,521,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$15,200	
Geotechnical Sub-Total Cost						\$15,200	
Property Requirements	1.5%					\$ 22,800	
Property Requirements Sub-Total						\$22,800	
Consultant Engineering/Design	15%					\$ 228,200	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$228,200	
In House Labour/Engineering/Wages/CA	3%					\$ 100,000	
In-house Labour/Wages Sub-Total						\$100,000	
Project Contingency	15%					\$283,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$283,000	
Non-Refundable HST	1.76%					\$36,400	
Non-Refundable HST Sub-Total						\$36,400	
Total (2019 Dollars)						\$2,207,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$2,207,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$44,140		
Design	Design fees, Town fees for design, contract admin	13%	\$286,910		
Construction	Town fees, base costs and project contingency	85%	\$1,875,950		
TOTAL			\$2,207,000		



Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates

PROJECT NO.: WW-D-TP-01B
PROJECT NAME: Thorndale Treatment Plant Upgrades (includes SPS)
PROJECT DESCRIPTION: Treatment plant capacity upgrades required to accommodate all development flows in Thorndale (includes Thorndale SPS and forcemain)

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-TP-01B

PROPOSED CAPACITY	1 MLD
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CLASS EA REQUIREMENTS:	C
CONSTRUCTION ASSUMPTION:	Other

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Facility Construction			MLD	1 MLD	\$4,000,000	\$4,033,152	\$2.5M per MLD
Additional Construction Costs	15%		ea.			\$604,973	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$463,812	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$5,102,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$51,000	
Geotechnical Sub-Total Cost						\$51,000	
Property Requirements	1.5%					\$ 76,500	
Property Requirements Sub-Total						\$76,500	
Consultant Engineering/Design	15%					\$ 765,300	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$765,300	
In House Labour/Engineering/Wages/CA	3%					\$ 153,100	
In-house Labour/Wages Sub-Total						\$153,100	
Project Contingency	15%					\$922,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$922,000	
Non-Refundable HST	1.76%					\$121,700	
Non-Refundable HST Sub-Total						\$121,700	
Total (2019 Dollars)						\$7,192,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$7,192,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$143,840		
Design	Design fees, Town fees for design, contract admin	13%	\$934,960		
Construction	Town fees, base costs and project contingency	85%	\$6,113,200		
TOTAL			\$7,192,000		



Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates

PROJECT NO.: WW-D-TP-01C
PROJECT NAME: Thorndale Treatment Plant Upgrades (includes SPS)
PROJECT DESCRIPTION: Treatment plant capacity upgrades required to accommodate all development flows in Thorndale (includes Thorndale SPS and forcemain)

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-D-TP-01C

PROPOSED CAPACITY	2 MLD
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CLASS EA REQUIREMENTS:	C
CONSTRUCTION ASSUMPTION:	Other

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Facility Construction			MLD	2 MLD	\$4,000,000	\$9,192,960	\$4M per MLD (includes SPS and FM upgrades)
Additional Construction Costs	15%		ea.			\$1,378,944	Includes Mod/Demob, connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$1,057,190	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$11,629,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$116,300	
Geotechnical Sub-Total Cost						\$116,300	
Property Requirements	1.5%					\$ 174,400	
Property Requirements Sub-Total						\$174,400	
Consultant Engineering/Design	12%					\$ 1,395,500	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$1,395,500	
In House Labour/Engineering/Wages/CA	3%					\$ 348,900	
In-house Labour/Wages Sub-Total						\$348,900	
Project Contingency	15%					\$2,050,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$2,050,000	
Non-Refundable HST	1.76%					\$270,400	
Non-Refundable HST Sub-Total						\$270,400	
Total (2019 Dollars)						\$15,985,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$15,985,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$319,700		
Design	Design fees, Town fees for design, contract admin	13%	\$2,078,050		
Construction	Town fees, base costs and project contingency	85%	\$13,587,250		
TOTAL			\$15,985,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-T-SS-01
PROJECT NAME: Gerald Parkway sewer upgrades
PROJECT DESCRIPTION: Sewer upgrades along Gerald Parkway to accommodate growth flows in West Thorndale

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-T-SS-01

PROPOSED DIAMETER:	375 mm
TOTAL LENGTH:	200 m
Tunnelled	0%
Open Cut	100%

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	200 m	\$675	\$134,996	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$6,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$26,999	
Minor Creek Crossings			ea.	0	\$166,000	\$0	
Major Creek Crossings			ea.	0	\$985,000	\$0	
Road Crossings			ea.	0	\$418,000	\$0	
Major Road / Rail Crossings			ea.	0	\$985,000	\$0	
Utility Crossings			ea.	0	\$418,000	\$0	
Additional Construction Costs	15%		ea.			\$24,299	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$18,629	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$205,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$2,100	
Geotechnical Sub-Total Cost						\$2,100	
Property Requirements	1.5%					\$ 3,100	
Property Requirements Sub-Total						\$3,100	
Consultant Engineering/Design	15%					\$ 30,800	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$30,800	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	15%					\$44,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$44,000	
Non-Refundable HST	1.76%					\$5,000	
Non-Refundable HST Sub-Total						\$5,000	
Total (2019 Dollars)						\$340,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$340,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$6,800		
Design	Design fees, Town fees for design, contract admin	13%	\$44,200		
Construction	Town fees, base costs and project contingency	85%	\$289,000		
TOTAL			\$340,000		



**Municipality of Thames Centre
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Capital Program Cost Estimates**

PROJECT NO.: WW-T-SS-02
PROJECT NAME: King Street sewer
PROJECT DESCRIPTION: King Street sewer from CN rail to Lions Lane to accommodate East Thorndale growth flows

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-T-SS-02

PROPOSED DIAMETER:	250 mm
TOTAL LENGTH:	375 m
Tunnelled	0%
Open Cut	100%

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	375 m	\$653	\$244,766	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$48,953	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	15%		ea.			\$44,058	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$33,778	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$372,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$3,700	
Geotechnical Sub-Total Cost						\$3,700	
Property Requirements	1.5%					\$ 5,600	
Property Requirements Sub-Total						\$5,600	
Consultant Engineering/Design	15%					\$ 55,800	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$55,800	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	15%					\$73,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$73,000	
Non-Refundable HST	1.76%					\$9,000	
Non-Refundable HST Sub-Total						\$9,000	
Total (2019 Dollars)						\$569,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$569,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$11,380		
Design	Design fees, Town fees for design, contract admin	13%	\$73,970		
Construction	Town fees, base costs and project contingency	85%	\$483,650		
TOTAL			\$569,000		



**Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates**

PROJECT NO.: WW-T-SS-03
PROJECT NAME: King Street sewer
PROJECT DESCRIPTION: King Street sewer from Lions Lane to Monteith Avenue to accommodate East Thorndale growth flows

PROJECT NO.: WW-T-SS-03

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROPOSED DIAMETER:	250 mm
TOTAL LENGTH:	485 m
Tunnelled	0%
Open Cut	100%

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	485 m	\$653	\$316,564	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$63,313	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	15%		ea.			\$56,981	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$43,686	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$481,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$4,800	
Geotechnical Sub-Total Cost						\$4,800	
Property Requirements	1.5%					\$7,200	
Property Requirements Sub-Total						\$7,200	
Consultant Engineering/Design	15%					\$72,200	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$72,200	
In House Labour/Engineering/Wages/CA	3%					\$50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	15%					\$92,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$92,000	
Non-Refundable HST	1.76%					\$11,600	
Non-Refundable HST Sub-Total						\$11,600	
Total (2019 Dollars)						\$719,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$719,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$14,380		
Design	Design fees, Town fees for design, contract admin	13%	\$93,470		
Construction	Town fees, base costs and project contingency	85%	\$611,150		
TOTAL			\$719,000		



Municipality of Thames Centre
Water and Wastewater Master Plan Update
Capital Program Cost Estimates

PROJECT NO.: WW-T-SS-04
PROJECT NAME: King Street sewer
PROJECT DESCRIPTION: King Street sewer from Wye Creek to existing sewers to accommodate existing development flows

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROJECT NO.: WW-T-SS-04

PROPOSED DIAMETER:	200 mm
TOTAL LENGTH:	340 m
Tunnelled	0%
Open Cut	340 m 100%

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	340 m	\$651	\$221,301	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$44,260	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	15%		ea.			\$39,834	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$30,539	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$336,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$3,400	
Geotechnical Sub-Total Cost						\$3,400	
Property Requirements	1.5%					\$ 5,000	
Property Requirements Sub-Total						\$5,000	
Consultant Engineering/Design	15%					\$ 50,400	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$50,400	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	15%					\$67,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$67,000	
Non-Refundable HST	1.76%					\$8,100	
Non-Refundable HST Sub-Total						\$8,100	
Total (2019 Dollars)						\$520,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$520,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$10,400		
Design	Design fees, Town fees for design, contract admin	13%	\$67,600		
Construction	Town fees, base costs and project contingency	85%	\$442,000		
TOTAL			\$520,000		



**Municipality of Thames Centre
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PROJECT NO.: WW-T-SS-05
PROJECT NAME: King Street sewer
PROJECT DESCRIPTION: King Street sewer under Wye Creek to accommodate existing development flows

PROJECT NO.: WW-T-SS-05

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	High	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	50%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROPOSED DIAMETER:	200 mm
TOTAL LENGTH:	70 m
Tunnelled	70 m 100%
Open Cut	0 m 0%

CLASS EA REQUIREMENTS:	B
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	0 m	\$651	\$0	Existing road ROW
Pipe Construction - Tunneling			m	70 m	\$1,300	\$91,000	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$0	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	1	\$235,000	\$235,000	Wye Creek
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	20%		ea.			\$65,200	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$39,120	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$430,000	
Geotechnical / Hydrogeological / Materials	2.0%					\$8,600	
Geotechnical Sub-Total Cost						\$8,600	
Property Requirements	2.0%					\$ 8,600	
Property Requirements Sub-Total						\$8,600	
Consultant Engineering/Design	15%					\$ 64,500	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$64,500	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	25%					\$140,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$140,000	
Non-Refundable HST	1.76%					\$11,500	
Non-Refundable HST Sub-Total						\$11,500	
Total (2019 Dollars)						\$713,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$713,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$14,260		
Design	Design fees, Town fees for design, contract admin	13%	\$92,690		
Construction	Town fees, base costs and project contingency	85%	\$606,050		
TOTAL			\$713,000		



**Municipality of Thames Centre
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PROJECT NO.: WW-T-SS-06
PROJECT NAME: King Street sewer
PROJECT DESCRIPTION: King Street sewer from Harrison Street to before Wye Creek to accommodate existing development flows

PROJECT NO.: WW-T-SS-06

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROPOSED DIAMETER:	200 mm
TOTAL LENGTH:	130 m
Tunnelled	0 m 0%
Open Cut	130 m 100%

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	130 m	\$651	\$84,615	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$16,923	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	15%		ea.			\$15,231	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$11,677	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$128,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$1,300	
Geotechnical Sub-Total Cost						\$1,300	
Property Requirements	1.5%					\$ 1,900	
Property Requirements Sub-Total						\$1,900	
Consultant Engineering/Design	15%					\$ 19,200	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$19,200	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	15%					\$30,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$30,000	
Non-Refundable HST	1.76%					\$3,200	
Non-Refundable HST Sub-Total						\$3,200	
Total (2019 Dollars)						\$234,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$234,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$4,680		
Design	Design fees, Town fees for design, contract admin	13%	\$30,420		
Construction	Town fees, base costs and project contingency	85%	\$198,900		
TOTAL			\$234,000		



**Municipality of Thames Centre
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PROJECT NO.: WW-T-SS-07
PROJECT NAME: Sewers for Existing Unserviced within Thorndale
PROJECT DESCRIPTION: New sanitary sewers to benefit existing unserviced within Thorndale

PROJECT NO.: WW-T-SS-07

Class Estimate Type:	Class 4	Class adjusts Construction Contingency and expected accuracy
Project Complexity	Med	Complexity adjusts Construction Contingency, and expected accuracy
Accuracy Range:	40%	
Area Condition:	Suburban	Area Condition uplifts unit cost and restoration

PROPOSED DIAMETER:	200 mm
TOTAL LENGTH:	806 m
Tunnelled	0%
Open Cut	100%

CLASS EA REQUIREMENTS:	A+
CONSTRUCTION ASSUMPTION:	Sewer 5m

COST ESTIMATION SPREADSHEET

COMPONENT	RATE (%)	RATE (\$)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost							
Pipe Construction - Open Cut			m	806 m	\$651	\$524,613	Existing road ROW
Pipe Construction - Tunneling			m	0 m	\$1,300	\$0	
Pipe Construction Uplift (Based on Area Conditions)	20%					\$104,923	
Minor Creek Crossings			ea.	0	\$66,000	\$0	
Major Creek Crossings			ea.	0	\$235,000	\$0	
Road Crossings			ea.	0	\$118,000	\$0	
Major Road / Rail Crossings			ea.	0	\$235,000	\$0	
Utility Crossings			ea.	0	\$118,000	\$0	
Additional Construction Costs	15%		ea.			\$94,430	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			\$72,397	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						\$796,000	
Geotechnical / Hydrogeological / Materials	1.0%					\$8,000	
Geotechnical Sub-Total Cost						\$8,000	
Property Requirements	1.5%					\$ 11,900	
Property Requirements Sub-Total						\$11,900	
Consultant Engineering/Design	15%					\$ 119,400	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						\$119,400	
In House Labour/Engineering/Wages/CA	3%					\$ 50,000	
In-house Labour/Wages Sub-Total						\$50,000	
Project Contingency	15%					\$148,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						\$148,000	
Non-Refundable HST	1.76%					\$19,100	
Non-Refundable HST Sub-Total						\$19,100	
Total (2019 Dollars)						\$1,152,000	Rounded to nearest \$1,000
Other Estimate							
Chosen Estimate						\$1,152,000	2019 Estimate

COST ESTIMATE SUMMARY - FOR PHASING ESTIMATING ONLY

PROJECT COMPONENT	PROJECT COMPONENT DESCRIPTION	PERCENTAGE	TOTAL	YEAR	COMMENTS
Study	Feasibility study, EA	2%	\$23,040		
Design	Design fees, Town fees for design, contract admin	13%	\$149,760		
Construction	Town fees, base costs and project contingency	85%	\$979,200		
TOTAL			\$1,152,000		