REGION OF PEEL
Schedule 'C' Municipal Class Environmental Assessment:
Etobicoke Creek Trunk Sewer Improvements and Upgrades

ETOBICOKE CREEK (EC) ALIGNMENT

PROJECT NO.:	**WWT249**	**CAPITAL BUDGET YEAR:**	
PROJECT NAME:	**Etobicoke Creek Sanitary Trunk Sewer Twinning**	**ETOBICOKE CREEK OPTION**	
PROJECT DESCRIPTION:	Twinning of a 2150-metre section of sanitary trunk sewer in the vicinity of the Old Brampton WWTP (near Highway 407 and Highway 410). Design in 2020.	**DATE UPDATED:**	
		UPDATED BY:	

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

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

PROPOSED DIAMETER:	1350 mm	
TOTAL LENGTH:	689 m	
Tunnelled	0 m	0%
Open Cut	689 m	100%

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

PROPOSED DIAMETER:	1500 mm	
TOTAL LENGTH:	3993 m	
Tunnelled	260 m	7%
Open Cut	3733 m	93%

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							
1350							
Pipe Construction - Open Cut			m	689 m	$2,443	$1,683,200	Existing road ROW
Pipe Construction - Tunneling			m	0 m	$11,500	$0	
Minor Creek Crossings			ea.	0	$220,000	$0	
Major Creek Crossings			ea.	2	$220,000	$440,000	
Road Crossings			ea.	1	$220,000	$220,000	
Major Road Crossings (Highway)			ea.	0	$220,000	$0	
Utility Crossings			ea.	0	$220,000	$0	
1500 Dia							
Pipe Construction - Open Cut			m	3733 m	$3,257	$12,156,819	Existing road ROW
Pipe Construction - Tunneling			m	260 m	$12,000	$3,120,000	
Minor Creek Crossings			ea.	0	$220,000	$0	
Major Creek Crossings			ea.	0	$220,000	$0	
Road Crossings			ea.	3	$220,000	$660,000	
Major Road Crossings (Highway)			ea.	2	$220,000	$440,000	
Utility Crossings			ea.	0	$220,000	$0	
Pipe Construction Uplift (Based on Area Conditions)	10%					$1,872,001.90	
Additional Construction Costs	10%		ea.			$2,059,202	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			$2,059,202	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						**$24,710,000**	
Geotechnical / Hydrogeological / Materials	0.5%					$123,600	
Geotechnical Sub-Total Cost						**$123,600**	
Property Requirements	1.0%					$ 247,100	
Property Requirements Sub-Total						**$247,100**	
Consultant Engineering/Design	12%					$ 2,965,200	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						**$2,965,200**	
In House Labour/Engineering/Wages/CA	6%					$ 1,482,600	
In-house Labour/Wages Sub-Total						**$1,482,600**	
Project Contingency	10%					$2,953,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						**$2,953,000**	
Non-Refundable HST	0.00%					$0	
Non-Refundable HST Sub-Total						**$0**	
Total (2019 Dollars)						**$32,482,000**	Rounded to nearest $1,000
Other Estimate							
Chosen Estimate						**$32,482,000**	**2020 Estimate**

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CAA LANDS (CAA) ALIGNMENT

PROJECT NO.:	**WWT249**	**CAPITAL BUDGET YEAR:**	
PROJECT NAME:	**Etobicoke Creek Sanitary Trunk Sewer Twinning**	**VERSION:**	
PROJECT DESCRIPTION:	Twinning of a 2150-metre section of sanitary trunk sewer in the vicinity of the Old Brampton WWTP (near Highway 407 and Highway 410). Design in 2020.	**DATE UPDATED:**	
		UPDATED BY:	

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

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

PROPOSED DIAMETER:	1350 mm	
TOTAL LENGTH:	1078 m	
Tunnelled	737 m	68%
Open Cut	341 m	32%

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

PROPOSED DIAMETER:	1500 mm	
TOTAL LENGTH:	3993 m	
Tunnelled	260 m	7%
Open Cut	3733 m	93%

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							
1350							
Pipe Construction - Open Cut			m	341 m	$2,443	$833,050	Existing road ROW
Pipe Construction - Tunneling			m	737 m	$11,500	$8,475,500	
Minor Creek Crossings			ea.	0	$220,000	$0	
Major Creek Crossings			ea.	1	$220,000	$220,000	
Road Crossings			ea.	1	$220,000	$220,000	
Major Road Crossings (Highway)			ea.	0	$220,000	$0	
Utility Crossings			ea.	0	$220,000	$0	
1500 dia							
Pipe Construction - Open Cut			m	3733 m	$3,257	$12,156,819	Existing road ROW
Pipe Construction - Tunneling			m	260 m	$12,000	$3,120,000	
Minor Creek Crossings			ea.	0	$220,000	$0	
Major Creek Crossings			ea.	0	$220,000	$0	
Road Crossings			ea.	3	$220,000	$660,000	
Major Road Crossings (Highway)			ea.	2	$220,000	$440,000	
Utility Crossings			ea.	0	$220,000	$0	
Pipe Construction Uplift (Based on Area Conditions)	10%					$2,612,536.88	
Additional Construction Costs	10%		ea.			$2,873,791	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			$2,873,791	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						**$34,485,000**	
Geotechnical / Hydrogeological / Materials	0.5%					$172,400	
Geotechnical Sub-Total Cost						**$172,400**	
Property Requirements	1.0%					$ 344,900	
Property Requirements Sub-Total						**$344,900**	
Consultant Engineering/Design	12%					$ 4,138,200	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						**$4,138,200**	
In House Labour/Engineering/Wages/CA	6%					$ 2,069,100	
In-house Labour/Wages Sub-Total						**$2,069,100**	
Project Contingency	10%					$4,121,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						**$4,121,000**	
Non-Refundable HST	0.00%					$0	
Non-Refundable HST Sub-Total						**$0**	
Total (2019 Dollars)						**$45,331,000**	Rounded to nearest $1,000
Other Estimate							
Chosen Estimate						**$45,331,000**	**2020 Estimate**

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KENNEDY ROAD ALIGNMENT

PROJECT NO.:	**WWT179**	**CAPITAL BUDGET YEAR:**	
PROJECT NAME:	**Kennedy Road Sanitary Trunk Sewer**	**VERSION:**	
PROJECT DESCRIPTION:	Construction of a 1500-mm sanitary trunk sewer on Kennedy Road from the Etobicoke Creek Sanitary Trunk Sewer to the future East-West Sanitary Trunk Sewer Diversion. Design in 2022.	**DATE UPDATED:**	
		UPDATED BY:	

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

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

PROPOSED DIAMETER:	1500 mm	
TOTAL LENGTH:	2475 m	
Tunnelled	2475 m	100%
Open Cut	0 m	0%

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

PROPOSED DIAMETER:	900 mm	
TOTAL LENGTH:	770 m	
Tunnelled	600 m	78%
Open Cut	170 m	22%

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							
1500 Dia							
Pipe Construction - Open Cut			m	0 m	$2,733	$0	
Pipe Construction - Tunneling			m	2475 m	$12,000	$29,700,000	
Minor Creek Crossings			ea.	1	$220,000	$220,000	
Major Creek Crossings			ea.	0	$220,000	$0	
Road Crossings			ea.	1	$220,000	$220,000	
Major Road Crossings (Highway)			ea.	1	$220,000	$220,000	
Utility Crossings			ea.	0	$220,000	$0	
900 Dia							
Pipe Construction - Open Cut			m	169 m	$1,657	$280,055	
Pipe Construction - Tunneling			m	599 m	$10,000	$5,990,000	
Minor Creek Crossings			ea.	0	$170,000	$0	
Major Creek Crossings			ea.	1	$170,000	$170,000	
Road Crossings			ea.	1	$170,000	$170,000	
Major Road Crossings (Highway)			ea.	0	$170,000	$0	
Utility Crossings			ea.	0	$170,000	$0	
Pipe Construction Uplift (Based on Area Conditions)	10%					$3,697,005.48	
Additional Construction Costs	10%		ea.			$4,066,706	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			$4,066,706	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						**$48,800,000**	
Geotechnical / Hydrogeological / Materials	0.5%					$244,000	
Geotechnical Sub-Total Cost						**$244,000**	
Property Requirements	1.0%					$ 488,000	
Property Requirements Sub-Total						**$488,000**	
Consultant Engineering/Design	12%					$ 5,856,000	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						**$5,856,000**	
In House Labour/Engineering/Wages/CA	6%					$ 2,928,000	
In-house Labour/Wages Sub-Total						**$2,928,000**	
Project Contingency	10%					$5,832,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						**$5,832,000**	
Non-Refundable HST	0.00%					$0	
Non-Refundable HST Sub-Total						**$0**	
Total (2019 Dollars)						**$64,148,000**	Rounded to nearest $1,000
Other Estimate						**$0**	Construction Component only
Chosen Estimate						**$64,148,000**	**2020 Estimate**

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DEEP TRUNK ALIGNMENT

PROJECT NO.:	**WWT249**	**CAPITAL BUDGET YEAR:**	
PROJECT NAME:	**Etobicoke Creek Sanitary Trunk Sewer Twinning**	**VERSION:**	
PROJECT DESCRIPTION:	Twinning of a 2150-metre section of sanitary trunk sewer in the vicinity of the Old Brampton WWTP (near Highway 407 and Highway 410). Design in 2020.	**DATE UPDATED:**	
		UPDATED BY:	

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

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

PROPOSED DIAMETER:	1500 mm	
TOTAL LENGTH:	3670 m	
Tunnelled	2530 m	69%
Open Cut	1140 m	31%

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

PROPOSED DIAMETER:	900 mm	
TOTAL LENGTH:	170 m	
Tunnelled	0 m	0%
Open Cut	170 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							
1500 Dia							
Pipe Construction - Open Cut			m	1140 m	$2,733	$3,115,620	
Pipe Construction - Tunneling			m	2530 m	$12,000	$30,360,000	
Minor Creek Crossings			ea.	0	$220,000	$0	
Major Creek Crossings			ea.	0	$220,000	$0	
Road Crossings			ea.	4	$220,000	$880,000	
Major Road Crossings (Highway)			ea.	2	$220,000	$440,000	
Utility Crossings			ea.	0	$220,000	$0	
900 DIA							
Pipe Construction - Open Cut			m	170 m	$2,111	$358,906	
Pipe Construction - Tunneling			m	0 m	$10,000	$0	
Minor Creek Crossings			ea.	0	$170,000	$0	
Major Creek Crossings			ea.	1	$170,000	$170,000	
Road Crossings			ea.	0	$170,000	$0	
Major Road Crossings (Highway)			ea.	0	$170,000	$0	
Utility Crossings			ea.	0	$170,000	$0	
Pipe Construction Uplift (Based on Area Conditions)	10%					$3,532,453	
Additional Construction Costs	10%		ea.			$3,885,698	Includes Mod/Demob,connections, inspection, hydrants, signage, traffic management, bonding, insurance
Provisional & Allowance	10%		ea.			$3,885,698	Provisional Labour and Materials in addition to base construction cost
Sub-Total Construction Base Costs						**$46,628,000**	
Geotechnical / Hydrogeological / Materials	0.5%					$233,100	
Geotechnical Sub-Total Cost						**$233,100**	
Property Requirements	1.0%					$ 466,300	
Property Requirements Sub-Total						**$466,300**	
Consultant Engineering/Design	12%					$ 5,595,400	includes planning, pre-design, detailed design, training, CA, commissioning
Engineering/Design Sub-Total						**$5,595,400**	
In House Labour/Engineering/Wages/CA	6%					$ 2,797,700	
In-house Labour/Wages Sub-Total						**$2,797,700**	
Project Contingency	10%					$5,572,000	Construction Contingency is dependent on Cost Estimate Class and Project Complexity
Project Contingency Sub-Total						**$5,572,000**	
Non-Refundable HST	0.00%					$0	
Non-Refundable HST Sub-Total						**$0**	
Total (2019 Dollars)						**$61,293,000**	Rounded to nearest $1,000
Other Estimate						**$0**	Construction Component Only
Chosen Estimate						**$61,293,000**	**2020 Estimate**