

Appendix I: Project Cost Estimates

WHISKEY CREEK AT MINETS POINT CLASS EA

City of Barrie

Project Cost Estimate

Project: 120114

Date: April 17, 2021

Alternative 1: Replace Existing Culverts (Life Cycle Costs)

Item	Description	Unit	Quantity	Unit Price	Item Price
WATERCOURSE CROSSING AT BRENNAN AVE. (100-YEAR LIFESPAN)					
PART A: GENERAL WORKS					
2.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
2.02	Heavy Duty Silt Fence	m	20	\$ 23.00	\$ 460.00
2.03	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
2.04	Flow Diversion - Operation and Maintenance	day	28	\$ 1,250.00	\$ 35,000.00
2.05	Dewatering	day	28	\$ 5,000.00	\$ 140,000.00
Subtotal General Works					\$ 200,460.00
PART B: REMOVALS / RELOCATIONS					
2.06	Remove Asphalt	sq.m	100	\$ 8.00	\$ 800.00
2.07	Remove Granular Road Base	sq.m	120	\$ 7.00	\$ 840.00
2.08	Remove Existing Concrete Curb and Gutter	m	20	\$ 36.00	\$ 720.00
2.09	Remove Existing Conc. Box Culvert	m	14	\$ 1,000.00	\$ 14,000.00
2.10	Relocate Existing Traffic Signs (Remove & Reinstall)	ea	1	\$ 350.00	\$ 350.00
Subtotal Removals / Relocations					\$ 16,710.00

Item	Description	Unit	Quantity	Unit Price	Item Price
PART C: WATERCOURSE CROSSING					
2.11	Excavation and Grading	cu.m	210	\$ 24.00	\$ 5,040.00
2.12	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
2.13	Remove and Dispose of Excess Material	cu.m	210	\$ 50.00	\$ 10,500.00
2.14	3650 x 1500 mm Conc. Box Culvert	m	14	\$ 10,000.00	\$ 140,000.00
2.15	Concrete Distribution Slab	cu.m	13	\$ 1,500.00	\$ 19,500.00
2.16	Waterproofing Membrane	sq.m	65	\$ 150.00	\$ 9,750.00
2.17	Culvert Substrate	sq.m	51	\$ 100.00	\$ 5,100.00
2.18	Connect to Culvert	LS	1	\$ 5,000.00	\$ 5,000.00
2.19	End Treatment	ea	4	\$ 10,000.00	\$ 40,000.00
2.20	Cutoff Walls	cu.m	14	\$ 1,500.00	\$ 21,000.00
2.21	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	210	\$ 100.00	\$ 21,000.00
Subtotal Watercourse Crossing					\$ 278,390.00
PART D: ROAD REINSTATEMENT					
2.22	40 mm HL3 Surface Course Asphalt	sq.m	100	\$ 35.00	\$ 3,500.00
2.23	Base Course Asphalt HL-4/8 (70 mm)	sq.m	100	\$ 25.00	\$ 2,500.00
2.24	Granular 'A' (150 mm)	sq.m	100	\$ 12.00	\$ 1,200.00
2.25	Granular 'B' (450 mm)	sq.m	100	\$ 24.00	\$ 2,400.00
2.26	Concrete Curb and Gutter	m	20	\$ 95.00	\$ 1,900.00
Subtotal Road Reinstatement					\$ 11,500.00
TOTAL: WATERCOURSE CROSSING AT BRENNAN AVE.					\$ 507,060.00
WATERCOURSE CROSSING AT THE BOULEVARD (50-YEAR LIFESPAN)					

Item	Description	Unit	Quantity	Unit Price	Item Price
PART A: GENERAL WORKS					
4.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
4.02	Heavy Duty Silt Fence	m	20	\$ 23.00	\$ 460.00
4.03	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
4.04	Flow Diversion - Operation and Maintenance	day	14	\$ 1,250.00	\$ 17,500.00
4.05	Dewatering	day	14	\$ 5,000.00	\$ 70,000.00
Subtotal General Works					\$ 112,960.00
PART B: REMOVALS / RELOCATIONS					
4.06	Remove Asphalt	sq.m	100	\$ 8.00	\$ 800.00
4.07	Remove Granular Road Base	sq.m	120	\$ 7.00	\$ 840.00
4.08	Remove Existing Concrete Curb and Gutter	m	20	\$ 36.00	\$ 720.00
4.09	Remove Existing CSP Culvert	m	14	\$ 50.00	\$ 700.00
Subtotal Removals / Relocations					\$ 3,060.00
PART C: WATERCOURSE CROSSING					
4.10	Excavation and Grading	cu.m	275	\$ 24.00	\$ 6,600.00
4.11	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
4.12	Remove and Dispose of Excess Material	cu.m	275	\$ 50.00	\$ 13,750.00
4.13	1800 x 1070 mm CSPA	m	14	\$ 850.00	\$ 11,900.00
4.14	Culvert Substrate	sq.m	25	\$ 100.00	\$ 2,500.00
4.15	Connect to Culvert	LS	2	\$ 5,000.00	\$ 10,000.00
4.16	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	275	\$ 100.00	\$ 27,500.00
Subtotal Watercourse Crossing Improvements					\$ 73,750.00

Item	Description	Unit	Quantity	Unit Price	Item Price
PART D: ROAD REINSTATEMENT					
4.17	40 mm HL3 Surface Course Asphalt	sq.m	100	\$ 35.00	\$ 3,500.00
4.18	Base Course Asphalt HL-4/8 (70 mm)	sq.m	100	\$ 25.00	\$ 2,500.00
4.19	Granular 'A' (150 mm)	sq.m	100	\$ 12.00	\$ 1,200.00
4.20	Granular 'B' (450 mm)	sq.m	100	\$ 24.00	\$ 2,400.00
4.21	Concrete Curb and Gutter	m	20	\$ 95.00	\$ 1,900.00
Subtotal Road Reinstatement					\$ 11,500.00
TOTAL: WATERCOURSE CROSSING AT THE BOULEVARD					\$ 201,270.00
SUMMARY					
WATERCOURSE CROSSING AT BRENNAN AVE. (100-YEAR LIFESPAN)					\$ 507,060.00
WATERCOURSE CROSSING AT THE BOULEVARD (50-YEAR LIFESPAN)					\$ 201,270.00
SUBTOTAL FOR 100-YEAR LIFE CYCLE (2020 UNIT PRICES)					\$ 909,600.00
CONSTRUCTION CONTIGENCY				30%	\$ 272,880.00
ENGINEERING DESIGN FEE				20%	\$ 181,920.00
CONTRACT ADMINISTRATION/CONSTRUCTION INSPECTION				10%	\$ 90,960.00
TOTAL LIFE CYCLE COST ESTIMATE					\$ 1,455,360.00

WHISKEY CREEK AT MINETS POINT CLASS EA

City of Barrie

Project Cost Estimate

Project: 120114

Date: April 17, 2021

Alternative 2: Improve Culverts/Watercourse to Convey 1:100-Year Design Storm

Item	Description	Unit	Quantity	Unit Price	Item Price
STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					
PART A: GENERAL WORKS					
1.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
1.02	Construction Access Mud Mat	ea	1	\$ 6,500.00	\$ 6,500.00
1.03	Heavy Duty Silt Fence	m	350	\$ 23.00	\$ 8,050.00
1.04	Turbidity Curtain	m	35	\$ 200.00	\$ 7,000.00
1.05	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
1.06	Flow Diversion - Operation and Maintenance	day	35	\$ 1,250.00	\$ 43,750.00
1.07	Dewatering	day	35	\$ 5,000.00	\$ 175,000.00
Subtotal General Works					\$ 265,300.00
PART B: REMOVALS / RELOCATIONS					
1.08	Utility Relocations (Hydro, Gas, Etc.)	LS	1	\$ 100,000.00	\$ 100,000.00
1.09	Remove and Dispose Existing Gabion Wall	sq.m	15	\$ 75.00	\$ 1,125.00
1.10	Relocate Sanitary Forcemain	m	50	\$ 1,000.00	\$ 50,000.00
1.11	Remove Asphalt	sq.m	510	\$ 8.00	\$ 4,080.00
1.12	Remove Granular Road Base	sq.m	610	\$ 7.00	\$ 4,270.00
1.13	Remove Existing Concrete Curb and Gutter	m	20	\$ 36.00	\$ 720.00

Item	Description	Unit	Quantity	Unit Price	Item Price
1.14	Relocate Park Sign	LS	1	\$ 500.00	\$ 500.00
1.15	Remove Light Pole	ea	3	\$ 500.00	\$ 1,500.00
1.16	Relocate Planter Bed	LS	1	\$ 500.00	\$ 500.00
1.17	Protect Underground Services	m	60	\$ 500.00	\$ 30,000.00
Subtotal Removals / Relocations					\$ 192,695.00
PART C: WATERCOURSE IMPROVEMENTS					
1.18	Clearing and Grubbing	sq.m	2250	\$ 25.00	\$ 56,250.00
1.19	Strip and Stockpile Topsoil	sq.m	2700	\$ 13.00	\$ 35,100.00
1.20	Excavation and Grading	cu.m	3770	\$ 24.00	\$ 90,480.00
1.21	Geotechnical Sampling for Off-site Disposal	per sample	4	\$ 1,500.00	\$ 6,000.00
1.22	Remove and Dispose of Excess Material	cu.m	3770	\$ 50.00	\$ 188,500.00
1.23	Place and Fine Grade Topsoil (150 mm)	sq.m	2700	\$ 11.00	\$ 29,700.00
1.24	Watercourse Improvements	m	145	\$ 2,000.00	\$ 290,000.00
1.25	Armour Stone Retaining Wall	sq.m	36	\$ 800.00	\$ 28,800.00
1.26	Armour Stone Reinforcement	m	13	\$ 400.00	\$ 5,200.00
1.27	Shoreline Protection	sq.m	125	\$ 400.00	\$ 50,000.00
1.28	Landscaping	sq.m	1400	\$ 34.00	\$ 47,600.00
1.29	1.5 m Chain Link Fence	m	80	\$ 150.00	\$ 12,000.00
1.30	1.8 m Wood Privacy Fence	m	260	\$ 400.00	\$ 104,000.00
1.31	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	3770	\$ 100.00	\$ 377,000.00
Subtotal Watercourse Improvements					\$ 1,320,630.00

Item	Description	Unit	Quantity	Unit Price	Item Price
PART D: ROAD WORKS (RELOCATE PARK ENTRANCE)					
1.32	Granular 'B' (450 mm)	sq.m	165	\$ 24.00	\$ 3,960.00
1.33	Granular 'A' (150 mm)	sq.m	165	\$ 12.00	\$ 1,980.00
1.34	Base Course Asphalt HL-4/8 (70 mm)	sq.m	150	\$ 25.00	\$ 3,750.00
1.35	40 mm HL3 Surface Course Asphalt	sq.m	150	\$ 35.00	\$ 5,250.00
1.36	Concrete Curb and Gutter	m	10	\$ 95.00	\$ 950.00
Subtotal Road Works					\$ 15,890.00
TOTAL STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					\$ 1,794,515.00
STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					
PART A: GENERAL WORKS					
2.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
2.02	Heavy Duty Silt Fence	m	20	\$ 23.00	\$ 460.00
2.03	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
2.04	Flow Diversion - Operation and Maintenance	day	28	\$ 1,250.00	\$ 35,000.00
2.05	Dewatering	day	28	\$ 5,000.00	\$ 140,000.00
Subtotal General Works					\$ 200,460.00
PART B: REMOVALS / RELOCATIONS					
2.06	Remove Asphalt	sq.m	200	\$ 8.00	\$ 1,600.00
2.07	Remove Granular Road Base	sq.m	240	\$ 7.00	\$ 1,680.00
2.08	Remove Existing Concrete Curb and Gutter	m	50	\$ 36.00	\$ 1,800.00
2.09	Remove Existing Conc. Box Culvert	m	14	\$ 1,000.00	\$ 14,000.00
2.10	Remove Existing Storm Sewer	m	20	\$ 65.00	\$ 1,300.00

Item	Description	Unit	Quantity	Unit Price	Item Price
2.11	Remove Existing Maintenance Holes	ea	1	\$ 1,000.00	\$ 1,000.00
2.12	Relocate Existing Traffic Signs (Remove & Reinstall)	ea	2	\$ 350.00	\$ 700.00
Subtotal Removals / Relocations					\$ 22,080.00
PART C: WATERCOURSE CROSSING IMPROVEMENTS					
2.13	Excavation and Grading	cu.m	415	\$ 24.00	\$ 9,960.00
2.14	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
2.15	Remove and Dispose of Excess Material	cu.m	415	\$ 50.00	\$ 20,750.00
2.16	10.9 m x 2.0 m Concrete Span Structure	m	15	\$ 28,000.00	\$ 420,000.00
2.17	Drilled Piles (CMC)	ea	28	\$ 5,000.00	\$ 140,000.00
2.18	Concrete Distribution Slab	cu.m	36	\$ 1,500.00	\$ 54,000.00
2.19	Approach Slab	cu.m	45	\$ 1,500.00	\$ 67,500.00
2.20	Waterproofing Membrane	sq.m	180	\$ 150.00	\$ 27,000.00
2.21	Culvert Substrate	sq.m	165	\$ 100.00	\$ 16,500.00
2.22	Connect to Culvert	LS	1	\$ 5,000.00	\$ 5,000.00
2.23	Structure Barrier	m	22	\$ 1,200.00	\$ 26,400.00
2.24	Approach Guide Rail	m	80	\$ 250.00	\$ 20,000.00
2.25	End Treatment	ea	4	\$ 5,000.00	\$ 20,000.00
2.26	Cutoff Walls	cu.m	14	\$ 1,500.00	\$ 21,000.00
2.27	Pedestrian Handrail	m	34	\$ 700.00	\$ 23,800.00
2.28	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	415	\$ 100.00	\$ 41,500.00
Subtotal Watercourse Crossing Improvements					\$ 914,910.00

Item	Description	Unit	Quantity	Unit Price	Item Price
PART D: ROAD REINSTATEMENT					
2.29	40 mm HL3 Surface Course Asphalt	sq.m	200	\$ 35.00	\$ 7,000.00
2.30	Base Course Asphalt HL-4/8 (70 mm)	sq.m	200	\$ 25.00	\$ 5,000.00
2.31	Granular 'A' (150 mm)	sq.m	200	\$ 12.00	\$ 2,400.00
2.32	Granular 'B' (450 mm)	sq.m	200	\$ 24.00	\$ 4,800.00
2.33	Concrete Curb and Gutter	m	50	\$ 95.00	\$ 4,750.00
Subtotal Road Reinstatement					\$ 23,950.00
TOTAL STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					\$ 1,161,400.00
STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					
PART A: GENERAL WORKS					
3.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
3.02	Construction Access Mud Mat	ea	1	\$ 6,500.00	\$ 6,500.00
3.03	Heavy Duty Silt Fence	m	200	\$ 23.00	\$ 4,600.00
3.04	Flow Diversion - Install/Uninstall	LS	35	\$ 10,000.00	\$ 350,000.00
3.05	Flow Diversion - Operation and Maintenance	day	28	\$ 1,250.00	\$ 35,000.00
3.06	Dewatering	day	28	\$ 5,000.00	\$ 140,000.00
Subtotal General Works					\$ 551,100.00
PART B: REMOVALS / RELOCATIONS					
3.07	Utility Relocations (Hydro Poles, Etc.)	LS	1	\$ 50,000.00	\$ 50,000.00
3.08	Remove and Dispose Existing Rip Rap	sq.m	10	\$ 50.00	\$ 500.00
3.09	Relocate Existing Traffic Signs (Remove & Reinstall)	ea	2	\$ 350.00	\$ 700.00
3.10	Remove Existing Driveway	sq.m	155	\$ 15.00	\$ 2,325.00

Item	Description	Unit	Quantity	Unit Price	Item Price
3.11	Remove Existing Buildings	ea	1	\$ 25,000.00	\$ 25,000.00
Subtotal Removals / Relocations					\$ 78,525.00
PART C: WATERCOURSE IMPROVEMENTS					
3.12	Clearing and Grubbing	sq.m	810	\$ 25.00	\$ 20,250.00
3.13	Strip and Stockpile Topsoil	sq.m	810	\$ 13.00	\$ 10,530.00
3.14	Excavation and Grading	cu.m	1400	\$ 24.00	\$ 33,600.00
3.15	Geotechnical Sampling for Off-site Disposal	per sample	2	\$ 1,500.00	\$ 3,000.00
3.16	Remove and Dispose of Excess Material	cu.m	1400	\$ 50.00	\$ 70,000.00
3.17	Place and Fine Grade Topsoil (150 mm)	sq.m	810	\$ 11.00	\$ 8,910.00
3.18	Watercourse Improvements	m	50	\$ 2,000.00	\$ 100,000.00
3.19	Armour Stone Retaining Wall	sq.m	90	\$ 800.00	\$ 72,000.00
3.20	Armour Stone Reinforcement	m	24	\$ 400.00	\$ 9,600.00
3.21	Landscaping	sq.m	560	\$ 34.00	\$ 19,040.00
3.22	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	1400	\$ 100.00	\$ 140,000.00
Subtotal Watercourse Improvements					\$ 486,930.00
TOTAL STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					\$ 1,116,555.00
STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					
PART A: GENERAL WORKS					
4.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
4.02	Heavy Duty Silt Fence	m	60	\$ 23.00	\$ 1,380.00
4.03	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
4.04	Flow Diversion - Operation and Maintenance	day	35	\$ 1,250.00	\$ 43,750.00

Item	Description	Unit	Quantity	Unit Price	Item Price
4.05	Dewatering	day	35	\$ 5,000.00	\$ 175,000.00
Subtotal General Works					\$ 245,130.00
PART B: REMOVALS / RELOCATIONS					
4.06	Remove Asphalt	sq.m	225	\$ 8.00	\$ 1,800.00
4.07	Remove Granular Road Base	sq.m	270	\$ 7.00	\$ 1,890.00
4.08	Remove Existing Concrete Curb and Gutter	m	57	\$ 36.00	\$ 2,052.00
4.09	Remove Existing CSP Culvert	m	14	\$ 50.00	\$ 700.00
4.10	Remove Existing Storm Sewer	m	35	\$ 65.00	\$ 2,275.00
4.11	Protect Underground Services	m	30	\$ 500.00	\$ 15,000.00
4.12	Remove Existing Maintenance Holes	ea	1	\$ 1,000.00	\$ 1,000.00
Subtotal Removals / Relocations					\$ 24,717.00
PART C: WATERCOURSE CROSSING IMPROVEMENTS					
4.13	Excavation and Grading	cu.m	315	\$ 24.00	\$ 7,560.00
4.14	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
4.15	Remove and Dispose of Excess Material	cu.m	315	\$ 50.00	\$ 15,750.00
4.16	10.9 m x 2.4 m Concrete Span Structure	m	15	\$ 29,000.00	\$ 435,000.00
4.17	Drilled Piles (CMC)	ea	28	\$ 5,000.00	\$ 140,000.00
4.18	Concrete Distribution Slab	cu.m	36	\$ 1,500.00	\$ 54,000.00
4.19	Approach Slab	cu.m	45	\$ 1,500.00	\$ 67,500.00
4.20	Waterproofing Membrane	sq.m	180	\$ 150.00	\$ 27,000.00
4.21	Culvert Substrate	sq.m	165	\$ 100.00	\$ 16,500.00
4.22	Connect to Culvert	LS	2	\$ 5,000.00	\$ 10,000.00

Item	Description	Unit	Quantity	Unit Price	Item Price
4.23	Structure Barrier	m	22	\$ 1,200.00	\$ 26,400.00
4.24	Approach Guide Rail	m	80	\$ 250.00	\$ 20,000.00
4.25	End Treatment	ea	4	\$ 5,000.00	\$ 20,000.00
4.26	Cutoff Walls	cu.m	14	\$ 1,500.00	\$ 21,000.00
4.27	Pedestrian Handrail	m	34	\$ 700.00	\$ 23,800.00
4.28	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	315	\$ 100.00	\$ 31,500.00
Subtotal Watercourse Crossing Improvements					\$ 917,510.00
PART D: ROAD REINSTATEMENT					
4.29	40 mm HL3 Surface Course Asphalt	sq.m	225	\$ 35.00	\$ 7,875.00
4.30	Base Course Asphalt HL-4/8 (70 mm)	sq.m	225	\$ 25.00	\$ 5,625.00
4.31	Granular 'A' (150 mm)	sq.m	225	\$ 12.00	\$ 2,700.00
4.32	Granular 'B' (450 mm)	sq.m	225	\$ 24.00	\$ 5,400.00
4.33	Concrete Curb and Gutter	m	57	\$ 95.00	\$ 5,415.00
Subtotal Road Reinstatement					\$ 27,015.00
PART E: WATERCOURSE IMPROVEMENTS					
4.34	Clearing and Grubbing	sq.m	330	\$ 25.00	\$ 8,250.00
4.35	Strip and Stockpile Topsoil	sq.m	330	\$ 13.00	\$ 4,290.00
4.36	Excavation and Grading	cu.m	540	\$ 24.00	\$ 12,960.00
4.37	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
4.38	Remove and Dispose of Excess Material	cu.m	540	\$ 50.00	\$ 27,000.00
4.39	Place and Fine Grade Topsoil (150 mm)	sq.m	330	\$ 11.00	\$ 3,630.00
4.40	Watercourse Improvements	m	35	\$ 2,000.00	\$ 70,000.00

Item	Description	Unit	Quantity	Unit Price	Item Price
4.41	Armour Stone Retaining Wall	sq.m	40	\$ 800.00	\$ 32,000.00
4.42	Landscaping	sq.m	240	\$ 34.00	\$ 8,160.00
4.43	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	540	\$ 100.00	\$ 54,000.00
Subtotal Watercourse Improvements					\$ 221,790.00
TOTAL STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					\$ 1,436,162.00
SUMMARY					
STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					\$ 1,794,515.00
STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					\$ 1,161,400.00
STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					\$ 1,116,555.00
STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					\$ 1,436,162.00
SUBTOTAL STAGE 1 THROUGH 4 (2020 UNIT PRICES)					\$ 5,508,632.00
CONSTRUCTION CONTIGENCY				30%	\$ 1,652,589.60
ENGINEERING DESIGN FEE				20%	\$ 1,101,726.40
CONTRACT ADMINISTRATION/CONSTRUCTION INSPECTION				10%	\$ 550,863.20
TOTAL CONSTRUCTION COST ESTIMATE					\$ 8,813,811.20
PROPERTY ACQUISITION					
5.01	7 Brennan Ave.				\$ 800,000.00
5.02	199 The Boulevard (portion of)				\$ 50,000.00
SUBTOTAL PROPERTY ACQUISITION					\$ 850,000.00
ACQUISITION CONTINGENCY				30%	\$ 255,000.00
TOTAL PROPERTY ACQUISITION					\$ 1,105,000.00
TOTAL COST					\$ 9,918,811.20

WHISKEY CREEK AT MINETS POINT CLASS EA

City of Barrie

Project Cost Estimate

Project: 120114

Date: April 17, 2021

Alternative 3: Improve Culverts/Watercourse to Convey Less Than 1:100-Year Design Storm (1:50-Year - Option A)

Item	Description	Unit	Quantity	Unit Price	Item Price
STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					
PART A: GENERAL WORKS					
1.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
1.02	Construction Access Mud Mat	ea	1	\$ 6,500.00	\$ 6,500.00
1.03	Heavy Duty Silt Fence	m	350	\$ 23.00	\$ 8,050.00
1.04	Turbidity Curtain	m	35	\$ 200.00	\$ 7,000.00
1.05	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
1.06	Flow Diversion - Operation and Maintenance	day	35	\$ 1,250.00	\$ 43,750.00
1.07	Dewatering	day	35	\$ 5,000.00	\$ 175,000.00
Subtotal General Works					\$ 265,300.00
PART B: REMOVALS / RELOCATIONS					
1.08	Utility Relocations (Hydro, Gas, Etc.)	LS	1	\$ 100,000.00	\$ 100,000.00
1.09	Remove and Dispose Existing Gabion Wall	sq.m	15	\$ 75.00	\$ 1,125.00
1.10	Relocate Sanitary Forcemain	m	50	\$ 1,000.00	\$ 50,000.00
1.11	Remove Asphalt	sq.m	510	\$ 8.00	\$ 4,080.00
1.12	Remove Granular Road Base	sq.m	610	\$ 7.00	\$ 4,270.00
1.13	Remove Existing Concrete Curb and Gutter	m	20	\$ 36.00	\$ 720.00

Item	Description	Unit	Quantity	Unit Price	Item Price
1.14	Relocate Park Sign	LS	1	\$ 500.00	\$ 500.00
1.15	Remove Light Pole	ea	3	\$ 500.00	\$ 1,500.00
1.16	Relocate Planter Bed	LS	1	\$ 500.00	\$ 500.00
1.17	Protect Underground Services	m	60	\$ 500.00	\$ 30,000.00
Subtotal Removals / Relocations					\$ 192,695.00
PART C: WATERCOURSE IMPROVEMENTS					
1.18	Clearing and Grubbing	sq.m	2250	\$ 25.00	\$ 56,250.00
1.19	Strip and Stockpile Topsoil	sq.m	2700	\$ 13.00	\$ 35,100.00
1.20	Excavation and Grading	cu.m	3240	\$ 24.00	\$ 77,760.00
1.21	Geotechnical Sampling for Off-site Disposal	per sample	4	\$ 1,500.00	\$ 6,000.00
1.22	Remove and Dispose of Excess Material	cu.m	3240	\$ 50.00	\$ 162,000.00
1.23	Place and Fine Grade Topsoil (150 mm)	sq.m	2700	\$ 11.00	\$ 29,700.00
1.24	Watercourse Improvements	m	145	\$ 2,000.00	\$ 290,000.00
1.25	Armour Stone Retaining Wall	sq.m	36	\$ 800.00	\$ 28,800.00
1.26	Armour Stone Reinforcement	m	13	\$ 400.00	\$ 5,200.00
1.27	Shoreline Protection	sq.m	125	\$ 400.00	\$ 50,000.00
1.28	Landscaping	sq.m	1400	\$ 34.00	\$ 47,600.00
1.29	1.5 m Chain Link Fence	m	80	\$ 150.00	\$ 12,000.00
1.30	1.8 m Wood Privacy Fence	m	260	\$ 400.00	\$ 104,000.00
1.31	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	3240	\$ 100.00	\$ 324,000.00
Subtotal Watercourse Improvements					\$ 1,228,410.00

Item	Description	Unit	Quantity	Unit Price	Item Price
PART D: ROAD WORKS (PARK ENTRANCE)					
1.32	Granular 'B' (450 mm)	sq.m	165	\$ 24.00	\$ 3,960.00
1.33	Granular 'A' (150 mm)	sq.m	165	\$ 12.00	\$ 1,980.00
1.34	Base Course Asphalt HL-4/8 (70 mm)	sq.m	150	\$ 25.00	\$ 3,750.00
1.35	40 mm HL3 Surface Course Asphalt	sq.m	150	\$ 35.00	\$ 5,250.00
1.36	Concrete Curb and Gutter	m	10	\$ 95.00	\$ 950.00
Subtotal Road Works					\$ 15,890.00
TOTAL STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					\$ 1,702,295.00
STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					
PART A: GENERAL WORKS					
2.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
2.02	Heavy Duty Silt Fence	m	20	\$ 23.00	\$ 460.00
2.03	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
2.04	Flow Diversion - Operation and Maintenance	day	28	\$ 1,250.00	\$ 35,000.00
2.05	Dewatering	day	28	\$ 5,000.00	\$ 140,000.00
Subtotal General Works					\$ 200,460.00
PART B: REMOVALS / RELOCATIONS					
2.06	Remove Asphalt	sq.m	200	\$ 8.00	\$ 1,600.00
2.07	Remove Granular Road Base	sq.m	240	\$ 7.00	\$ 1,680.00
2.08	Remove Existing Concrete Curb and Gutter	m	50	\$ 36.00	\$ 1,800.00
2.09	Remove Existing Conc. Box Culvert	m	14	\$ 1,000.00	\$ 14,000.00
2.10	Remove Existing Storm Sewer	m	20	\$ 65.00	\$ 1,300.00

Item	Description	Unit	Quantity	Unit Price	Item Price
2.11	Remove Existing Maintenance Holes	ea	1	\$ 1,000.00	\$ 1,000.00
2.12	Relocate Existing Traffic Signs (Remove & Reinstall)	ea	2	\$ 350.00	\$ 700.00
Subtotal Removals / Relocations					\$ 22,080.00
PART C: WATERCOURSE CROSSING IMPROVEMENTS					
2.13	Excavation and Grading	cu.m	350	\$ 24.00	\$ 8,400.00
2.14	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
2.15	Remove and Dispose of Excess Material	cu.m	350	\$ 50.00	\$ 17,500.00
2.16	13.4 m x 1.5 m Concrete Span Structure	m	15	\$ 35,800.00	\$ 537,000.00
2.17	Drilled Piles (CMC)	ea	32	\$ 5,000.00	\$ 160,000.00
2.18	Concrete Distribution Slab	cu.m	43	\$ 1,500.00	\$ 64,500.00
2.19	Approach Slab	cu.m	45	\$ 1,500.00	\$ 67,500.00
2.20	Waterproofing Membrane	sq.m	216	\$ 150.00	\$ 32,400.00
2.21	Culvert Substrate	sq.m	201	\$ 100.00	\$ 20,100.00
2.22	Connect to Culvert	LS	1	\$ 5,000.00	\$ 5,000.00
2.23	Structure Barrier	m	27	\$ 1,200.00	\$ 32,400.00
2.24	Approach Guide Rail	m	80	\$ 250.00	\$ 20,000.00
2.25	End Treatment	ea	4	\$ 5,000.00	\$ 20,000.00
2.26	Cutoff Walls	cu.m	14	\$ 1,500.00	\$ 21,000.00
2.27	Pedestrian Handrail	m	39	\$ 700.00	\$ 27,300.00
2.28	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	350	\$ 100.00	\$ 35,000.00
Subtotal Watercourse Crossing Improvements					\$ 1,069,600.00

Item	Description	Unit	Quantity	Unit Price	Item Price
PART D: ROAD REINSTATEMENT					
2.29	40 mm HL3 Surface Course Asphalt	sq.m	200	\$ 35.00	\$ 7,000.00
2.30	Base Course Asphalt HL-4/8 (70 mm)	sq.m	200	\$ 25.00	\$ 5,000.00
2.31	Granular 'A' (150 mm)	sq.m	200	\$ 12.00	\$ 2,400.00
2.32	Granular 'B' (450 mm)	sq.m	200	\$ 24.00	\$ 4,800.00
2.33	Concrete Curb and Gutter	m	50	\$ 95.00	\$ 4,750.00
Subtotal Road Reinstatement					\$ 23,950.00
TOTAL STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					\$ 1,316,090.00
STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					
PART A: GENERAL WORKS					
3.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
3.02	Construction Access Mud Mat	ea	1	\$ 6,500.00	\$ 6,500.00
3.03	Heavy Duty Silt Fence	m	200	\$ 23.00	\$ 4,600.00
3.04	Flow Diversion - Install/Uninstall	LS	35	\$ 10,000.00	\$ 350,000.00
3.05	Flow Diversion - Operation and Maintenance	day	28	\$ 1,250.00	\$ 35,000.00
3.06	Dewatering	day	28	\$ 5,000.00	\$ 140,000.00
Subtotal General Works					\$ 551,100.00
PART B: REMOVALS / RELOCATIONS					
3.07	Utility Relocations (Hydro Poles, Etc.)	LS	1	\$ 50,000.00	\$ 50,000.00
3.08	Remove and Dispose Existing Rip Rap	sq.m	10	\$ 50.00	\$ 500.00
3.09	Relocate Existing Traffic Signs (Remove & Reinstall)	ea	2	\$ 350.00	\$ 700.00
3.10	Remove Existing Driveway	sq.m	155	\$ 15.00	\$ 2,325.00

Item	Description	Unit	Quantity	Unit Price	Item Price
3.11	Remove Existing Buildings	ea	1	\$ 25,000.00	\$ 25,000.00
Subtotal Removals / Relocations					\$ 78,525.00
PART C: WATERCOURSE IMPROVEMENTS					
3.12	Clearing and Grubbing	sq.m	810	\$ 25.00	\$ 20,250.00
3.13	Strip and Stockpile Topsoil	sq.m	810	\$ 13.00	\$ 10,530.00
3.14	Excavation and Grading	cu.m	1230	\$ 24.00	\$ 29,520.00
3.15	Geotechnical Sampling for Off-site Disposal	per sample	2	\$ 1,500.00	\$ 3,000.00
3.16	Remove and Dispose of Excess Material	cu.m	1230	\$ 50.00	\$ 61,500.00
3.17	Place and Fine Grade Topsoil (150 mm)	sq.m	810	\$ 11.00	\$ 8,910.00
3.18	Watercourse Improvements	m	50	\$ 2,000.00	\$ 100,000.00
3.19	Armour Stone Retaining Wall	sq.m	90	\$ 800.00	\$ 72,000.00
3.20	Armour Stone Reinforcement	m	24	\$ 400.00	\$ 9,600.00
3.21	Landscaping	sq.m	480	\$ 34.00	\$ 16,320.00
3.22	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	1230	\$ 100.00	\$ 123,000.00
Subtotal Watercourse Improvements					\$ 454,630.00
TOTAL STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					\$ 1,084,255.00
STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					
PART A: GENERAL WORKS					
4.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
4.02	Heavy Duty Silt Fence	m	60	\$ 23.00	\$ 1,380.00
4.03	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
4.04	Flow Diversion - Operation and Maintenance	day	35	\$ 1,250.00	\$ 43,750.00

Item	Description	Unit	Quantity	Unit Price	Item Price
4.05	Dewatering	day	35	\$ 5,000.00	\$ 175,000.00
Subtotal General Works					\$ 245,130.00
PART B: REMOVALS / RELOCATIONS					
4.06	Remove Asphalt	sq.m	225	\$ 8.00	\$ 1,800.00
4.07	Remove Granular Road Base	sq.m	270	\$ 7.00	\$ 1,890.00
4.08	Remove Existing Concrete Curb and Gutter	m	57	\$ 36.00	\$ 2,052.00
4.09	Remove Existing CSP Culvert	m	14	\$ 50.00	\$ 700.00
4.10	Remove Existing Storm Sewer	m	35	\$ 65.00	\$ 2,275.00
4.11	Protect Underground Services	m	30	\$ 500.00	\$ 15,000.00
4.12	Remove Existing Maintenance Holes	ea	1	\$ 1,000.00	\$ 1,000.00
Subtotal Removals / Relocations					\$ 24,717.00
PART C: WATERCOURSE CROSSING IMPROVEMENTS					
4.13	Excavation and Grading	cu.m	320	\$ 24.00	\$ 7,680.00
4.14	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
4.15	Remove and Dispose of Excess Material	cu.m	320	\$ 50.00	\$ 16,000.00
4.16	10.9 m x 1.95 m Concrete Span Structure	m	15	\$ 27,400.00	\$ 411,000.00
4.17	Drilled Piles (CMC)	ea	28	\$ 5,000.00	\$ 140,000.00
4.18	Concrete Distribution Slab	cu.m	36	\$ 1,500.00	\$ 54,000.00
4.19	Approach Slab	cu.m	45	\$ 1,500.00	\$ 67,500.00
4.20	Waterproofing Membrane	sq.m	180	\$ 150.00	\$ 27,000.00
4.21	Culvert Substrate	sq.m	165	\$ 100.00	\$ 16,500.00
4.22	Connect to Culvert	LS	2	\$ 5,000.00	\$ 10,000.00

Item	Description	Unit	Quantity	Unit Price	Item Price
4.23	Structure Barrier	m	22	\$ 1,200.00	\$ 26,400.00
4.24	Approach Guide Rail	m	80	\$ 250.00	\$ 20,000.00
4.25	End Treatment	ea	4	\$ 5,000.00	\$ 20,000.00
4.26	Cutoff Walls	cu.m	14	\$ 1,500.00	\$ 21,000.00
4.27	Pedestrian Handrail	m	34	\$ 700.00	\$ 23,800.00
4.28	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	320	\$ 100.00	\$ 32,000.00
Subtotal Watercourse Crossing Improvements					\$ 894,380.00
PART D: ROAD REINSTATEMENT					
4.29	40 mm HL3 Surface Course Asphalt	sq.m	225	\$ 35.00	\$ 7,875.00
4.30	Base Course Asphalt HL-4/8 (70 mm)	sq.m	225	\$ 25.00	\$ 5,625.00
4.31	Granular 'A' (150 mm)	sq.m	225	\$ 12.00	\$ 2,700.00
4.32	Granular 'B' (450 mm)	sq.m	225	\$ 24.00	\$ 5,400.00
4.33	Concrete Curb and Gutter	m	57	\$ 95.00	\$ 5,415.00
Subtotal Road Reinstatement					\$ 27,015.00
PART E: WATERCOURSE IMPROVEMENTS					
4.34	Clearing and Grubbing	sq.m	330	\$ 25.00	\$ 8,250.00
4.35	Strip and Stockpile Topsoil	sq.m	330	\$ 13.00	\$ 4,290.00
4.36	Excavation and Grading	cu.m	490	\$ 24.00	\$ 11,760.00
4.37	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
4.38	Remove and Dispose of Excess Material	cu.m	490	\$ 50.00	\$ 24,500.00
4.39	Place and Fine Grade Topsoil (150 mm)	sq.m	330	\$ 11.00	\$ 3,630.00
4.40	Watercourse Improvements	m	35	\$ 2,000.00	\$ 70,000.00

Item	Description	Unit	Quantity	Unit Price	Item Price
4.41	Armour Stone Retaining Wall	sq.m	40	\$ 800.00	\$ 32,000.00
4.42	Landscaping	sq.m	240	\$ 34.00	\$ 8,160.00
4.43	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	490	\$ 100.00	\$ 49,000.00
Subtotal Watercourse Improvements					\$ 213,090.00
TOTAL STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					\$ 1,404,332.00
SUMMARY					
STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					\$ 1,702,295.00
STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					\$ 1,316,090.00
STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					\$ 1,084,255.00
STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					\$ 1,404,332.00
SUBTOTAL STAGE 1 THROUGH 4 (2020 UNIT PRICES)					\$ 5,506,972.00
CONSTRUCTION CONTIGENCY				30%	\$ 1,652,091.60
ENGINEERING DESIGN FEE				20%	\$ 1,101,394.40
CONTRACT ADMINISTRATION/CONSTRUCTION INSPECTION				10%	\$ 550,697.20
TOTAL CONSTRUCTION COST ESTIMATE					\$ 8,811,155.20
PROPERTY ACQUISITION					
5.01	7 Brennan Ave.				\$ 800,000.00
5.02	199 The Boulevard (portion of)				\$ 50,000.00
SUBTOTAL PROPERTY ACQUISITION					\$ 850,000.00
ACQUISITION CONTINGENCY				30%	\$ 255,000.00
TOTAL PROPERTY ACQUISITION					\$ 1,105,000.00
TOTAL COST					\$ 9,916,155.20

WHISKEY CREEK AT MINETS POINT CLASS EA

City of Barrie

Project Cost Estimate

Project: 120114

Date: April 17, 2021

Alternative 3: Improve Culverts/Watercourse to Convey Less Than 1:100-Year Design Storm (1:25-Year - Option A)

Item	Description	Unit	Quantity	Unit Price	Item Price
STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					
PART A: GENERAL WORKS					
1.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
1.02	Construction Access Mud Mat	ea	1	\$ 6,500.00	\$ 6,500.00
1.03	Heavy Duty Silt Fence	m	350	\$ 23.00	\$ 8,050.00
1.04	Turbidity Curtain	m	35	\$ 200.00	\$ 7,000.00
1.05	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
1.06	Flow Diversion - Operation and Maintenance	day	35	\$ 1,250.00	\$ 43,750.00
1.07	Dewatering	day	35	\$ 5,000.00	\$ 175,000.00
Subtotal General Works					\$ 265,300.00
PART B: REMOVALS / RELOCATIONS					
1.08	Utility Relocations (Hydro, Gas, Etc.)	LS	1	\$ 100,000.00	\$ 100,000.00
1.09	Remove and Dispose Existing Gabion Wall	sq.m	15	\$ 75.00	\$ 1,125.00
1.10	Relocate Sanitary Forcemain	m	50	\$ 1,000.00	\$ 50,000.00
1.11	Remove Asphalt	sq.m	510	\$ 8.00	\$ 4,080.00
1.12	Remove Granular Road Base	sq.m	610	\$ 7.00	\$ 4,270.00
1.13	Remove Existing Concrete Curb and Gutter	m	20	\$ 36.00	\$ 720.00

Item	Description	Unit	Quantity	Unit Price	Item Price
1.14	Relocate Park Sign	LS	1	\$ 500.00	\$ 500.00
1.15	Remove Light Pole	ea	3	\$ 500.00	\$ 1,500.00
1.16	Relocate Planter Bed	LS	1	\$ 500.00	\$ 500.00
1.17	Protect Underground Services	m	60	\$ 500.00	\$ 30,000.00
Subtotal Removals / Relocations					\$ 192,695.00
PART C: WATERCOURSE IMPROVEMENTS					
1.18	Clearing and Grubbing	sq.m	2250	\$ 25.00	\$ 56,250.00
1.19	Strip and Stockpile Topsoil	sq.m	2700	\$ 13.00	\$ 35,100.00
1.20	Excavation and Grading	cu.m	3240	\$ 24.00	\$ 77,760.00
1.21	Geotechnical Sampling for Off-site Disposal	per sample	4	\$ 1,500.00	\$ 6,000.00
1.22	Remove and Dispose of Excess Material	cu.m	3240	\$ 50.00	\$ 162,000.00
1.23	Place and Fine Grade Topsoil (150 mm)	sq.m	2700	\$ 11.00	\$ 29,700.00
1.24	Watercourse Improvements	m	145	\$ 2,000.00	\$ 290,000.00
1.25	Armour Stone Retaining Wall	sq.m	36	\$ 800.00	\$ 28,800.00
1.26	Armour Stone Reinforcement	m	13	\$ 400.00	\$ 5,200.00
1.27	Shoreline Protection	sq.m	125	\$ 400.00	\$ 50,000.00
1.28	Landscaping	sq.m	1400	\$ 34.00	\$ 47,600.00
1.29	1.5 m Chain Link Fence	m	80	\$ 150.00	\$ 12,000.00
1.30	1.8 m Wood Privacy Fence	m	260	\$ 400.00	\$ 104,000.00
1.31	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	3240	\$ 100.00	\$ 324,000.00
Subtotal Watercourse Improvements					\$ 1,228,410.00

Item	Description	Unit	Quantity	Unit Price	Item Price
PART D: ROAD WORKS (PARK ENTRANCE)					
1.32	Granular 'B' (450 mm)	sq.m	165	\$ 24.00	\$ 3,960.00
1.33	Granular 'A' (150 mm)	sq.m	165	\$ 12.00	\$ 1,980.00
1.34	Base Course Asphalt HL-4/8 (70 mm)	sq.m	150	\$ 25.00	\$ 3,750.00
1.35	40 mm HL3 Surface Course Asphalt	sq.m	150	\$ 35.00	\$ 5,250.00
1.36	Concrete Curb and Gutter	m	10	\$ 95.00	\$ 950.00
Subtotal Road Works					\$ 15,890.00
TOTAL STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					\$ 1,702,295.00
STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					
PART A: GENERAL WORKS					
2.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
2.02	Heavy Duty Silt Fence	m	20	\$ 23.00	\$ 460.00
2.03	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
2.04	Flow Diversion - Operation and Maintenance	day	28	\$ 1,250.00	\$ 35,000.00
2.05	Dewatering	day	28	\$ 5,000.00	\$ 140,000.00
Subtotal General Works					\$ 200,460.00
PART B: REMOVALS / RELOCATIONS					
2.06	Remove Asphalt	sq.m	200	\$ 8.00	\$ 1,600.00
2.07	Remove Granular Road Base	sq.m	240	\$ 7.00	\$ 1,680.00
2.08	Remove Existing Concrete Curb and Gutter	m	50	\$ 36.00	\$ 1,800.00
2.09	Remove Existing Conc. Box Culvert	m	14	\$ 1,000.00	\$ 14,000.00
2.10	Remove Existing Storm Sewer	m	20	\$ 65.00	\$ 1,300.00

Item	Description	Unit	Quantity	Unit Price	Item Price
2.11	Remove Existing Maintenance Holes	ea	1	\$ 1,000.00	\$ 1,000.00
2.12	Relocate Existing Traffic Signs (Remove & Reinstall)	ea	2	\$ 350.00	\$ 700.00
Subtotal Removals / Relocations					\$ 22,080.00
PART C: WATERCOURSE CROSSING IMPROVEMENTS					
2.13	Excavation and Grading	cu.m	350	\$ 24.00	\$ 8,400.00
2.14	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
2.15	Remove and Dispose of Excess Material	cu.m	350	\$ 50.00	\$ 17,500.00
2.16	10.9 m x 1.5 m Concrete Span Structure	m	15	\$ 26,199.51	\$ 392,992.58
2.17	Drilled Piles (CMC)	ea	28	\$ 5,000.00	\$ 140,000.00
2.18	Concrete Distribution Slab	cu.m	36	\$ 1,500.00	\$ 54,000.00
2.19	Approach Slab	cu.m	45	\$ 1,500.00	\$ 67,500.00
2.20	Waterproofing Membrane	sq.m	180	\$ 150.00	\$ 27,000.00
2.21	Culvert Substrate	sq.m	165	\$ 100.00	\$ 16,500.00
2.22	Connect to Culvert	LS	1	\$ 5,000.00	\$ 5,000.00
2.23	Structure Barrier	m	22	\$ 1,200.00	\$ 26,400.00
2.24	Approach Guide Rail	m	80	\$ 250.00	\$ 20,000.00
2.25	End Treatment	ea	4	\$ 5,000.00	\$ 20,000.00
2.26	Cutoff Walls	cu.m	14	\$ 1,500.00	\$ 21,000.00
2.27	Pedestrian Handrail	m	34	\$ 700.00	\$ 23,800.00
2.28	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	350	\$ 100.00	\$ 35,000.00
Subtotal Watercourse Crossing Improvements					\$ 876,592.58

Item	Description	Unit	Quantity	Unit Price	Item Price
PART D: ROAD REINSTATEMENT					
2.29	40 mm HL3 Surface Course Asphalt	sq.m	200	\$ 35.00	\$ 7,000.00
2.30	Base Course Asphalt HL-4/8 (70 mm)	sq.m	200	\$ 25.00	\$ 5,000.00
2.31	Granular 'A' (150 mm)	sq.m	200	\$ 12.00	\$ 2,400.00
2.32	Granular 'B' (450 mm)	sq.m	200	\$ 24.00	\$ 4,800.00
2.33	Concrete Curb and Gutter	m	50	\$ 95.00	\$ 4,750.00
Subtotal Road Reinstatement					\$ 23,950.00
TOTAL STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					\$ 1,123,082.58
STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					
PART A: GENERAL WORKS					
3.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
3.02	Construction Access Mud Mat	ea	1	\$ 6,500.00	\$ 6,500.00
3.03	Heavy Duty Silt Fence	m	200	\$ 23.00	\$ 4,600.00
3.04	Flow Diversion - Install/Uninstall	LS	35	\$ 10,000.00	\$ 350,000.00
3.05	Flow Diversion - Operation and Maintenance	day	28	\$ 1,250.00	\$ 35,000.00
3.06	Dewatering	day	28	\$ 5,000.00	\$ 140,000.00
Subtotal General Works					\$ 551,100.00
PART B: REMOVALS / RELOCATIONS					
3.07	Utility Relocations (Hydro Poles, Etc.)	LS	1	\$ 50,000.00	\$ 50,000.00
3.08	Remove and Dispose Existing Rip Rap	sq.m	10	\$ 50.00	\$ 500.00
3.09	Relocate Existing Traffic Signs (Remove & Reinstall)	ea	2	\$ 350.00	\$ 700.00
3.10	Remove Existing Driveway	sq.m	155	\$ 15.00	\$ 2,325.00

Item	Description	Unit	Quantity	Unit Price	Item Price
3.11	Remove Existing Buildings	ea	1	\$ 25,000.00	\$ 25,000.00
Subtotal Removals / Relocations					\$ 78,525.00
PART C: WATERCOURSE IMPROVEMENTS					
3.12	Clearing and Grubbing	sq.m	810	\$ 25.00	\$ 20,250.00
3.13	Strip and Stockpile Topsoil	sq.m	810	\$ 13.00	\$ 10,530.00
3.14	Excavation and Grading	cu.m	1230	\$ 24.00	\$ 29,520.00
3.15	Geotechnical Sampling for Off-site Disposal	per sample	2	\$ 1,500.00	\$ 3,000.00
3.16	Remove and Dispose of Excess Material	cu.m	1230	\$ 50.00	\$ 61,500.00
3.17	Place and Fine Grade Topsoil (150 mm)	sq.m	810	\$ 11.00	\$ 8,910.00
3.18	Watercourse Improvements	m	50	\$ 2,000.00	\$ 100,000.00
3.19	Armour Stone Retaining Wall	sq.m	90	\$ 800.00	\$ 72,000.00
3.20	Armour Stone Reinforcement	m	24	\$ 400.00	\$ 9,600.00
3.21	Landscaping	sq.m	480	\$ 34.00	\$ 16,320.00
3.22	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	1230	\$ 100.00	\$ 123,000.00
Subtotal Watercourse Improvements					\$ 454,630.00
TOTAL STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					\$ 1,084,255.00
STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					
PART A: GENERAL WORKS					
4.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
4.02	Heavy Duty Silt Fence	m	60	\$ 23.00	\$ 1,380.00
4.03	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
4.04	Flow Diversion - Operation and Maintenance	day	35	\$ 1,250.00	\$ 43,750.00

Item	Description	Unit	Quantity	Unit Price	Item Price
4.05	Dewatering	day	35	\$ 5,000.00	\$ 175,000.00
Subtotal General Works					\$ 245,130.00
PART B: REMOVALS / RELOCATIONS					
4.06	Remove Asphalt	sq.m	225	\$ 8.00	\$ 1,800.00
4.07	Remove Granular Road Base	sq.m	270	\$ 7.00	\$ 1,890.00
4.08	Remove Existing Concrete Curb and Gutter	m	57	\$ 36.00	\$ 2,052.00
4.09	Remove Existing CSP Culvert	m	14	\$ 50.00	\$ 700.00
4.10	Remove Existing Storm Sewer	m	35	\$ 65.00	\$ 2,275.00
4.11	Protect Underground Services	m	30	\$ 500.00	\$ 15,000.00
4.12	Remove Existing Maintenance Holes	ea	1	\$ 1,000.00	\$ 1,000.00
Subtotal Removals / Relocations					\$ 24,717.00
PART C: WATERCOURSE CROSSING IMPROVEMENTS					
4.13	Excavation and Grading	cu.m	320	\$ 24.00	\$ 7,680.00
4.14	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
4.15	Remove and Dispose of Excess Material	cu.m	320	\$ 50.00	\$ 16,000.00
4.16	7.9 m x 1.95 m Concrete Span Structure	m	15	\$ 22,500.00	\$ 337,500.00
4.17	Drilled Piles (CMC)	ea	20	\$ 5,000.00	\$ 100,000.00
4.18	Concrete Distribution Slab	cu.m	27	\$ 1,500.00	\$ 40,500.00
4.19	Approach Slab	cu.m	45	\$ 1,500.00	\$ 67,500.00
4.20	Waterproofing Membrane	sq.m	134	\$ 150.00	\$ 20,100.00
4.21	Culvert Substrate	sq.m	119	\$ 100.00	\$ 11,900.00
4.22	Connect to Culvert	LS	2	\$ 5,000.00	\$ 10,000.00

Item	Description	Unit	Quantity	Unit Price	Item Price
4.23	Structure Barrier	m	16	\$ 1,200.00	\$ 19,200.00
4.24	Approach Guide Rail	m	80	\$ 250.00	\$ 20,000.00
4.25	End Treatment	ea	4	\$ 5,000.00	\$ 20,000.00
4.26	Cutoff Walls	cu.m	14	\$ 1,500.00	\$ 21,000.00
4.27	Pedestrian Handrail	m	28	\$ 700.00	\$ 19,600.00
4.28	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	320	\$ 100.00	\$ 32,000.00
Subtotal Watercourse Crossing Improvements					\$ 744,480.00
PART D: ROAD REINSTATEMENT					
4.29	40 mm HL3 Surface Course Asphalt	sq.m	225	\$ 35.00	\$ 7,875.00
4.30	Base Course Asphalt HL-4/8 (70 mm)	sq.m	225	\$ 25.00	\$ 5,625.00
4.31	Granular 'A' (150 mm)	sq.m	225	\$ 12.00	\$ 2,700.00
4.32	Granular 'B' (450 mm)	sq.m	225	\$ 24.00	\$ 5,400.00
4.30	Concrete Curb and Gutter	m	57	\$ 95.00	\$ 5,415.00
Subtotal Road Reinstatement					\$ 27,015.00
PART E: WATERCOURSE IMPROVEMENTS					
4.31	Clearing and Grubbing	sq.m	330	\$ 25.00	\$ 8,250.00
4.32	Strip and Stockpile Topsoil	sq.m	330	\$ 13.00	\$ 4,290.00
4.33	Excavation and Grading	cu.m	490	\$ 24.00	\$ 11,760.00
4.34	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
4.35	Remove and Dispose of Excess Material	cu.m	490	\$ 50.00	\$ 24,500.00
4.36	Place and Fine Grade Topsoil (150 mm)	sq.m	330	\$ 11.00	\$ 3,630.00
4.37	Watercourse Improvements	m	35	\$ 2,000.00	\$ 70,000.00

Item	Description	Unit	Quantity	Unit Price	Item Price
4.38	Armour Stone Retaining Wall	sq.m	40	\$ 800.00	\$ 32,000.00
4.39	Landscaping	sq.m	240	\$ 34.00	\$ 8,160.00
4.40	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	490	\$ 100.00	\$ 49,000.00
Subtotal Watercourse Improvements					\$ 213,090.00
TOTAL STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					\$ 1,254,432.00
SUMMARY					
STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					\$ 1,702,295.00
STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					\$ 1,123,082.58
STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					\$ 1,084,255.00
STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					\$ 1,254,432.00
SUBTOTAL STAGE 1 THROUGH 4 (2020 UNIT PRICES)					\$ 5,164,064.58
CONSTRUCTION CONTIGENCY				30%	\$ 1,549,219.37
ENGINEERING DESIGN FEE				20%	\$ 1,032,812.92
CONTRACT ADMINISTRATION/CONSTRUCTION INSPECTION				10%	\$ 516,406.46
TOTAL CONSTRUCTION COST ESTIMATE					\$ 8,262,503.33
PROPERTY ACQUISITION					
5.01	7 Brennan Ave.				\$ 800,000.00
5.02	199 The Boulevard (portion of)				\$ 50,000.00
SUBTOTAL PROPERTY ACQUISITION					\$ 850,000.00
ACQUISITION CONTINGENCY				30%	\$ 255,000.00
TOTAL PROPERTY ACQUISITION					\$ 1,105,000.00
TOTAL COST					\$ 9,367,503.33

WHISKEY CREEK AT MINETS POINT CLASS EA

City of Barrie

Project Cost Estimate

Project: 120114

Date: April 17, 2021

Alternative 3: Improve Culverts/Watercourse to Convey Less Than 1:100-Year Design Storm (1:10-Year - Option A)

Item	Description	Unit	Quantity	Unit Price	Item Price
STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					
PART A: GENERAL WORKS					
1.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
1.02	Construction Access Mud Mat	ea	1	\$ 6,500.00	\$ 6,500.00
1.03	Heavy Duty Silt Fence	m	315	\$ 23.00	\$ 7,245.00
1.04	Turbidity Curtain	m	28	\$ 200.00	\$ 5,600.00
1.05	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
1.06	Flow Diversion - Operation and Maintenance	day	35	\$ 1,250.00	\$ 43,750.00
1.07	Dewatering	day	35	\$ 5,000.00	\$ 175,000.00
Subtotal General Works					\$ 263,095.00
PART B: REMOVALS / RELOCATIONS					
1.08	Utility Relocations (Hydro, Gas, Etc.)	LS	1	\$ 100,000.00	\$ 100,000.00
1.09	Remove and Dispose Existing Gabion Wall	sq.m	15	\$ 75.00	\$ 1,125.00
1.10	Relocate Sanitary Forcemain	m	50	\$ 1,000.00	\$ 50,000.00
1.11	Relocate Park Sign	LS	1	\$ 500.00	\$ 500.00
1.12	Relocate Planter Bed	LS	1	\$ 500.00	\$ 500.00
1.13	Protect Underground Services	m	60	\$ 500.00	\$ 30,000.00

Item	Description	Unit	Quantity	Unit Price	Item Price
Subtotal Removals / Relocations					\$ 182,125.00
PART C: WATERCOURSE IMPROVEMENTS					
1.14	Clearing and Grubbing	sq.m	1400	\$ 25.00	\$ 35,000.00
1.15	Strip and Stockpile Topsoil	sq.m	1400	\$ 13.00	\$ 18,200.00
1.16	Excavation and Grading	cu.m	1130	\$ 24.00	\$ 27,120.00
1.17	Geotechnical Sampling for Off-site Disposal	per sample	2	\$ 1,500.00	\$ 3,000.00
1.18	Remove and Dispose of Excess Material	cu.m	1130	\$ 50.00	\$ 56,500.00
1.19	Place and Fine Grade Topsoil (150 mm)	sq.m	1400	\$ 11.00	\$ 15,400.00
1.20	Watercourse Improvements	m	145	\$ 2,000.00	\$ 290,000.00
1.21	Armour Stone Retaining Wall	sq.m	36	\$ 800.00	\$ 28,800.00
1.22	Armour Stone Reinforcement	m	13	\$ 400.00	\$ 5,200.00
1.23	Shoreline Protection	sq.m	80	\$ 400.00	\$ 32,000.00
1.24	Landscaping	sq.m	1080	\$ 34.00	\$ 36,720.00
1.25	1.5 m Chain Link Fence	m	80	\$ 150.00	\$ 12,000.00
1.26	1.8 m Wood Privacy Fence	m	260	\$ 400.00	\$ 104,000.00
1.27	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	1130	\$ 100.00	\$ 113,000.00
Subtotal Watercourse Improvements					\$ 776,940.00
TOTAL STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					\$ 1,222,160.00
STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					
PART A: GENERAL WORKS					
2.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
2.02	Heavy Duty Silt Fence	m	20	\$ 23.00	\$ 460.00

Item	Description	Unit	Quantity	Unit Price	Item Price
2.03	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
2.04	Flow Diversion - Operation and Maintenance	day	28	\$ 1,250.00	\$ 35,000.00
2.05	Dewatering	day	28	\$ 5,000.00	\$ 140,000.00
Subtotal General Works					\$ 200,460.00
PART B: REMOVALS / RELOCATIONS					
2.06	Remove Asphalt	sq.m	200	\$ 8.00	\$ 1,600.00
2.07	Remove Granular Road Base	sq.m	240	\$ 7.00	\$ 1,680.00
2.08	Remove Existing Concrete Curb and Gutter	m	50	\$ 36.00	\$ 1,800.00
2.09	Remove Existing Conc. Box Culvert	m	14	\$ 1,000.00	\$ 14,000.00
2.10	Remove Existing Storm Sewer	m	20	\$ 65.00	\$ 1,300.00
2.11	Remove Existing Maintenance Holes	ea	1	\$ 1,000.00	\$ 1,000.00
2.12	Relocate Existing Traffic Signs (Remove & Reinstall)	ea	2	\$ 350.00	\$ 700.00
Subtotal Removals / Relocations					\$ 22,080.00
PART C: WATERCOURSE CROSSING IMPROVEMENTS					
2.13	Excavation and Grading	cu.m	210	\$ 24.00	\$ 5,040.00
2.14	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
2.15	Remove and Dispose of Excess Material	cu.m	210	\$ 50.00	\$ 10,500.00
2.16	9.7 m x 1.65 m Concrete Span Structure	m	15	\$ 24,400.00	\$ 366,000.00
2.17	Drilled Piles (CMC)	ea	24	\$ 5,000.00	\$ 120,000.00
2.18	Concrete Distribution Slab	cu.m	32	\$ 1,500.00	\$ 48,000.00
2.19	Approach Slab	cu.m	45	\$ 1,500.00	\$ 67,500.00
2.20	Waterproofing Membrane	sq.m	161	\$ 150.00	\$ 24,150.00

Item	Description	Unit	Quantity	Unit Price	Item Price
2.21	Culvert Substrate	sq.m	146	\$ 100.00	\$ 14,600.00
2.22	Connect to Culvert	LS	1	\$ 5,000.00	\$ 5,000.00
2.23	Structure Barrier	m	20	\$ 1,200.00	\$ 24,000.00
2.24	Approach Guide Rail	m	80	\$ 250.00	\$ 20,000.00
2.25	End Treatment	ea	4	\$ 5,000.00	\$ 20,000.00
2.26	Cutoff Walls	cu.m	14	\$ 1,500.00	\$ 21,000.00
2.27	Pedestrian Handrail	m	32	\$ 700.00	\$ 22,400.00
2.28	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	210	\$ 100.00	\$ 21,000.00
Subtotal Watercourse Crossing Improvements					\$ 790,690.00
PART D: ROAD REINSTATEMENT					
2.29	40 mm HL3 Surface Course Asphalt	sq.m	200	\$ 35.00	\$ 7,000.00
2.30	Base Course Asphalt HL-4/8 (70 mm)	sq.m	200	\$ 25.00	\$ 5,000.00
2.31	Granular 'A' (150 mm)	sq.m	200	\$ 12.00	\$ 2,400.00
2.32	Granular 'B' (450 mm)	sq.m	200	\$ 24.00	\$ 4,800.00
2.33	Concrete Curb and Gutter	m	50	\$ 95.00	\$ 4,750.00
Subtotal Road Reinstatement					\$ 23,950.00
TOTAL STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					\$ 1,037,180.00
STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					
PART A: GENERAL WORKS					
3.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
3.02	Construction Access Mud Mat	ea	1	\$ 6,500.00	\$ 6,500.00
3.03	Heavy Duty Silt Fence	m	200	\$ 23.00	\$ 4,600.00

Item	Description	Unit	Quantity	Unit Price	Item Price
3.04	Flow Diversion - Install/Uninstall	LS	35	\$ 10,000.00	\$ 350,000.00
3.05	Flow Diversion - Operation and Maintenance	day	28	\$ 1,250.00	\$ 35,000.00
3.06	Dewatering	day	28	\$ 5,000.00	\$ 140,000.00
Subtotal General Works					\$ 551,100.00
PART B: REMOVALS / RELOCATIONS					
3.07	Utility Relocations (Hydro Poles, Etc.)	LS	1	\$ 50,000.00	\$ 50,000.00
3.08	Remove and Dispose Existing Rip Rap	sq.m	10	\$ 50.00	\$ 500.00
3.09	Relocate Existing Traffic Signs (Remove & Reinstall)	ea	2	\$ 350.00	\$ 700.00
3.10	Remove Existing Driveway	sq.m	155	\$ 15.00	\$ 2,325.00
3.11	Remove Existing Buildings	ea	1	\$ 25,000.00	\$ 25,000.00
Subtotal Removals / Relocations					\$ 78,525.00
PART C: WATERCOURSE IMPROVEMENTS					
3.12	Clearing and Grubbing	sq.m	715	\$ 25.00	\$ 17,875.00
3.13	Strip and Stockpile Topsoil	sq.m	715	\$ 13.00	\$ 9,295.00
3.14	Excavation and Grading	cu.m	1010	\$ 24.00	\$ 24,240.00
3.15	Geotechnical Sampling for Off-site Disposal	per sample	2	\$ 1,500.00	\$ 3,000.00
3.16	Remove and Dispose of Excess Material	cu.m	1010	\$ 50.00	\$ 50,500.00
3.17	Place and Fine Grade Topsoil (150 mm)	sq.m	715	\$ 11.00	\$ 7,865.00
3.18	Watercourse Improvements	m	50	\$ 2,000.00	\$ 100,000.00
3.19	Armour Stone Retaining Wall	sq.m	90	\$ 800.00	\$ 72,000.00
3.20	Armour Stone Reinforcement	m	24	\$ 400.00	\$ 9,600.00
3.21	Landscaping	sq.m	480	\$ 34.00	\$ 16,320.00

Item	Description	Unit	Quantity	Unit Price	Item Price
3.22	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	1010	\$ 100.00	\$ 101,000.00
Subtotal Watercourse Improvements					\$ 411,695.00
TOTAL STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					\$ 1,041,320.00
STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					
PART A: GENERAL WORKS					
4.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
4.02	Heavy Duty Silt Fence	m	60	\$ 23.00	\$ 1,380.00
4.03	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
4.04	Flow Diversion - Operation and Maintenance	day	35	\$ 1,250.00	\$ 43,750.00
4.05	Dewatering	day	35	\$ 5,000.00	\$ 175,000.00
Subtotal General Works					\$ 245,130.00
PART B: REMOVALS / RELOCATIONS					
4.06	Remove Asphalt	sq.m	225	\$ 8.00	\$ 1,800.00
4.07	Remove Granular Road Base	sq.m	270	\$ 7.00	\$ 1,890.00
4.08	Remove Existing Concrete Curb and Gutter	m	57	\$ 36.00	\$ 2,052.00
4.09	Remove Existing CSP Culvert	m	14	\$ 50.00	\$ 700.00
4.10	Remove Existing Storm Sewer	m	35	\$ 65.00	\$ 2,275.00
4.11	Protect Underground Services	m	30	\$ 500.00	\$ 15,000.00
4.12	Remove Existing Maintenance Holes	ea	1	\$ 1,000.00	\$ 1,000.00
Subtotal Removals / Relocations					\$ 24,717.00

Item	Description	Unit	Quantity	Unit Price	Item Price
PART C: WATERCOURSE CROSSING IMPROVEMENTS					
4.13	Excavation and Grading	cu.m	275	\$ 24.00	\$ 6,600.00
4.14	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
4.15	Remove and Dispose of Excess Material	cu.m	275	\$ 50.00	\$ 13,750.00
4.16	7.3 m x 1.95 m Concrete Span Structure	m	15	\$ 21,900.00	\$ 328,500.00
4.17	Drilled Piles (CMC)	ea	20	\$ 5,000.00	\$ 100,000.00
4.18	Concrete Distribution Slab	cu.m	25	\$ 1,500.00	\$ 37,500.00
4.19	Approach Slab	cu.m	45	\$ 1,500.00	\$ 67,500.00
4.20	Waterproofing Membrane	sq.m	125	\$ 150.00	\$ 18,750.00
4.21	Culvert Substrate	sq.m	110	\$ 100.00	\$ 11,000.00
4.22	Connect to Culvert	LS	2	\$ 5,000.00	\$ 10,000.00
4.23	Structure Barrier	m	15	\$ 1,200.00	\$ 18,000.00
4.24	Approach Guide Rail	m	80	\$ 250.00	\$ 20,000.00
4.25	End Treatment	ea	4	\$ 5,000.00	\$ 20,000.00
4.26	Cutoff Walls	cu.m	14	\$ 1,500.00	\$ 21,000.00
4.27	Pedestrian Handrail	m	27	\$ 700.00	\$ 18,900.00
4.28	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	275	\$ 100.00	\$ 27,500.00
Subtotal Watercourse Crossing Improvements					\$ 720,500.00
PART D: ROAD REINSTATEMENT					
4.29	40 mm HL3 Surface Course Asphalt	sq.m	225	\$ 35.00	\$ 7,875.00
4.30	Base Course Asphalt HL-4/8 (70 mm)	sq.m	225	\$ 25.00	\$ 5,625.00
4.31	Granular 'A' (150 mm)	sq.m	225	\$ 12.00	\$ 2,700.00

Item	Description	Unit	Quantity	Unit Price	Item Price
4.32	Granular 'B' (450 mm)	sq.m	225	\$ 24.00	\$ 5,400.00
4.33	Concrete Curb and Gutter	m	57	\$ 95.00	\$ 5,415.00
Subtotal Road Reinstatement					\$ 27,015.00
PART E: WATERCOURSE IMPROVEMENTS					
4.34	Clearing and Grubbing	sq.m	330	\$ 25.00	\$ 8,250.00
4.35	Strip and Stockpile Topsoil	sq.m	330	\$ 13.00	\$ 4,290.00
4.36	Excavation and Grading	cu.m	490	\$ 24.00	\$ 11,760.00
4.37	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
4.38	Remove and Dispose of Excess Material	cu.m	490	\$ 50.00	\$ 24,500.00
4.39	Place and Fine Grade Topsoil (150 mm)	sq.m	330	\$ 11.00	\$ 3,630.00
4.40	Watercourse Improvements	m	35	\$ 2,000.00	\$ 70,000.00
4.41	Armour Stone Retaining Wall	sq.m	40	\$ 800.00	\$ 32,000.00
4.42	Landscaping	sq.m	240	\$ 34.00	\$ 8,160.00
4.43	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	490	\$ 100.00	\$ 49,000.00
Subtotal Watercourse Improvements					\$ 213,090.00
TOTAL STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					\$ 1,230,452.00
SUMMARY					
STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					\$ 1,222,160.00
STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					\$ 1,037,180.00
STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					\$ 1,041,320.00
STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					\$ 1,230,452.00
SUBTOTAL STAGE 1 THROUGH 4 (2020 UNIT PRICES)					\$ 4,531,112.00

Item	Description	Unit	Quantity	Unit Price	Item Price
	CONSTRUCTION CONTIGENCY			30%	\$ 1,359,333.60
	ENGINEERING DESIGN FEE			20%	\$ 906,222.40
	CONTRACT ADMINISTRATION/CONSTRUCTION INSPECTION			10%	\$ 453,111.20
	TOTAL CONSTRUCTION COST ESTIMATE				\$ 7,249,779.20
PROPERTY ACQUISITION					
5.01	7 Brennan Ave.				\$ 800,000.00
5.02	199 The Boulevard (portion of)				\$ 50,000.00
	SUBTOTAL PROPERTY ACQUISITION				\$ 850,000.00
	ACQUISITION CONTINGENCY			30%	\$ 255,000.00
	TOTAL PROPERTY ACUISITION				\$ 1,105,000.00
	TOTAL COST				\$ 8,354,779.20

WHISKEY CREEK AT MINETS POINT CLASS EA

City of Barrie

Project Cost Estimate

Project: 120114

Date: April 17, 2021

Alternative 3: Improve Culverts/Watercourse to Convey Less Than 1:100-Year Design Storm (1:5-Year - Option A)

Item	Description	Unit	Quantity	Unit Price	Item Price
STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					
PART A: GENERAL WORKS					
1.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
1.02	Construction Access Mud Mat	ea	1	\$ 6,500.00	\$ 6,500.00
1.03	Heavy Duty Silt Fence	m	315	\$ 23.00	\$ 7,245.00
1.04	Turbidity Curtain	m	28	\$ 200.00	\$ 5,600.00
1.05	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
1.06	Flow Diversion - Operation and Maintenance	day	35	\$ 1,250.00	\$ 43,750.00
1.07	Dewatering	day	35	\$ 5,000.00	\$ 175,000.00
Subtotal General Works					\$ 263,095.00
PART B: REMOVALS / RELOCATIONS					
1.08	Utility Relocations (Hydro, Gas, Etc.)	LS	1	\$ 100,000.00	\$ 100,000.00
1.09	Remove and Dispose Existing Gabion Wall	sq.m	15	\$ 75.00	\$ 1,125.00
1.10	Relocate Sanitary Forcemain	m	50	\$ 1,000.00	\$ 50,000.00
1.11	Relocate Park Sign	LS	1	\$ 500.00	\$ 500.00
1.12	Relocate Planter Bed	LS	1	\$ 500.00	\$ 500.00
1.13	Protect Underground Services	m	60	\$ 500.00	\$ 30,000.00

Item	Description	Unit	Quantity	Unit Price	Item Price
Subtotal Removals / Relocations					\$ 182,125.00
PART C: WATERCOURSE IMPROVEMENTS					
1.14	Clearing and Grubbing	sq.m	1400	\$ 25.00	\$ 35,000.00
1.15	Strip and Stockpile Topsoil	sq.m	1400	\$ 13.00	\$ 18,200.00
1.16	Excavation and Grading	cu.m	1130	\$ 24.00	\$ 27,120.00
1.17	Geotechnical Sampling for Off-site Disposal	per sample	2	\$ 1,500.00	\$ 3,000.00
1.18	Remove and Dispose of Excess Material	cu.m	1130	\$ 50.00	\$ 56,500.00
1.19	Place and Fine Grade Topsoil (150 mm)	sq.m	1400	\$ 11.00	\$ 15,400.00
1.20	Watercourse Improvements	m	145	\$ 2,000.00	\$ 290,000.00
1.21	Armour Stone Retaining Wall	sq.m	36	\$ 800.00	\$ 28,800.00
1.22	Armour Stone Reinforcement	m	13	\$ 400.00	\$ 5,200.00
1.23	Shoreline Protection	sq.m	80	\$ 400.00	\$ 32,000.00
1.24	Landscaping	sq.m	1080	\$ 34.00	\$ 36,720.00
1.25	1.5 m Chain Link Fence	m	80	\$ 150.00	\$ 12,000.00
1.26	1.8 m Wood Privacy Fence	m	260	\$ 400.00	\$ 104,000.00
1.27	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	1130	\$ 100.00	\$ 113,000.00
Subtotal Watercourse Improvements					\$ 776,940.00
TOTAL STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					\$ 1,222,160.00
STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					
PART A: GENERAL WORKS					
2.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
2.02	Heavy Duty Silt Fence	m	20	\$ 23.00	\$ 460.00

Item	Description	Unit	Quantity	Unit Price	Item Price
2.03	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
2.04	Flow Diversion - Operation and Maintenance	day	28	\$ 1,250.00	\$ 35,000.00
2.05	Dewatering	day	28	\$ 5,000.00	\$ 140,000.00
Subtotal General Works					\$ 200,460.00
PART B: REMOVALS / RELOCATIONS					
2.06	Remove Asphalt	sq.m	200	\$ 8.00	\$ 1,600.00
2.07	Remove Granular Road Base	sq.m	240	\$ 7.00	\$ 1,680.00
2.08	Remove Existing Concrete Curb and Gutter	m	50	\$ 36.00	\$ 1,800.00
2.09	Remove Existing Conc. Box Culvert	m	14	\$ 1,000.00	\$ 14,000.00
2.10	Remove Existing Storm Sewer	m	20	\$ 65.00	\$ 1,300.00
2.11	Remove Existing Maintenance Holes	ea	1	\$ 1,000.00	\$ 1,000.00
2.12	Relocate Existing Traffic Signs (Remove & Reinstall)	ea	2	\$ 350.00	\$ 700.00
Subtotal Removals / Relocations					\$ 22,080.00
PART C: WATERCOURSE CROSSING IMPROVEMENTS					
2.13	Excavation and Grading	cu.m	210	\$ 24.00	\$ 5,040.00
2.14	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
2.15	Remove and Dispose of Excess Material	cu.m	210	\$ 50.00	\$ 10,500.00
2.16	6.0 m x 1.8 m Concrete Box Culvert	m	15	\$ 17,500.00	\$ 262,500.00
2.17	Concrete Distribution Slab	cu.m	21	\$ 1,500.00	\$ 31,500.00
2.18	Approach Slab	cu.m	45	\$ 1,500.00	\$ 67,500.00
2.19	Waterproofing Membrane	sq.m	106	\$ 150.00	\$ 15,900.00
2.20	Culvert Substrate	sq.m	91	\$ 100.00	\$ 9,100.00

Item	Description	Unit	Quantity	Unit Price	Item Price
2.21	Connect to Culvert	LS	1	\$ 5,000.00	\$ 5,000.00
2.22	Structure Barrier	m	12	\$ 1,200.00	\$ 14,400.00
2.23	Approach Guide Rail	m	80	\$ 250.00	\$ 20,000.00
2.24	End Treatment	ea	4	\$ 5,000.00	\$ 20,000.00
2.25	Cutoff Walls	cu.m	14	\$ 1,500.00	\$ 21,000.00
2.26	Pedestrian Handrail	m	24	\$ 700.00	\$ 16,800.00
2.27	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	210	\$ 100.00	\$ 21,000.00
Subtotal Watercourse Crossing Improvements					\$ 521,740.00
PART D: ROAD REINSTATEMENT					
2.28	40 mm HL3 Surface Course Asphalt	sq.m	200	\$ 35.00	\$ 7,000.00
2.29	Base Course Asphalt HL-4/8 (70 mm)	sq.m	200	\$ 25.00	\$ 5,000.00
2.30	Granular 'A' (150 mm)	sq.m	200	\$ 12.00	\$ 2,400.00
2.31	Granular 'B' (450 mm)	sq.m	200	\$ 24.00	\$ 4,800.00
2.29	Concrete Curb and Gutter	m	50	\$ 95.00	\$ 4,750.00
Subtotal Road Reinstatement					\$ 23,950.00
TOTAL STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					\$ 768,230.00
STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					
PART A: GENERAL WORKS					
3.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
3.02	Construction Access Mud Mat	ea	1	\$ 6,500.00	\$ 6,500.00
3.03	Heavy Duty Silt Fence	m	200	\$ 23.00	\$ 4,600.00
3.04	Flow Diversion - Install/Uninstall	LS	35	\$ 10,000.00	\$ 350,000.00

Item	Description	Unit	Quantity	Unit Price	Item Price
3.05	Flow Diversion - Operation and Maintenance	day	28	\$ 1,250.00	\$ 35,000.00
3.06	Dewatering	day	28	\$ 5,000.00	\$ 140,000.00
Subtotal General Works					\$ 551,100.00
PART B: REMOVALS / RELOCATIONS					
3.07	Utility Relocations (Hydro Poles, Etc.)	LS	1	\$ 50,000.00	\$ 50,000.00
3.08	Remove and Dispose Existing Rip Rap	sq.m	10	\$ 50.00	\$ 500.00
3.09	Relocate Existing Traffic Signs (Remove & Reinstall)	ea	2	\$ 350.00	\$ 700.00
3.10	Remove Existing Driveway	sq.m	155	\$ 15.00	\$ 2,325.00
3.11	Remove Existing Buildings	ea	1	\$ 25,000.00	\$ 25,000.00
Subtotal Removals / Relocations					\$ 78,525.00
PART C: WATERCOURSE IMPROVEMENTS					
3.12	Clearing and Grubbing	sq.m	715	\$ 25.00	\$ 17,875.00
3.13	Strip and Stockpile Topsoil	sq.m	715	\$ 13.00	\$ 9,295.00
3.14	Excavation and Grading	cu.m	1010	\$ 24.00	\$ 24,240.00
3.15	Geotechnical Sampling for Off-site Disposal	per sample	2	\$ 1,500.00	\$ 3,000.00
3.16	Remove and Dispose of Excess Material	cu.m	1010	\$ 50.00	\$ 50,500.00
3.17	Place and Fine Grade Topsoil (150 mm)	sq.m	715	\$ 11.00	\$ 7,865.00
3.18	Watercourse Improvements	m	50	\$ 2,000.00	\$ 100,000.00
3.19	Armour Stone Retaining Wall	sq.m	90	\$ 800.00	\$ 72,000.00
3.20	Armour Stone Reinforcement	m	24	\$ 400.00	\$ 9,600.00
3.21	Landscaping	sq.m	480	\$ 34.00	\$ 16,320.00
3.22	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	1010	\$ 100.00	\$ 101,000.00

Item	Description	Unit	Quantity	Unit Price	Item Price
Subtotal Watercourse Improvements					\$ 411,695.00
TOTAL STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					\$ 1,041,320.00
STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					
PART A: GENERAL WORKS					
4.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
4.02	Heavy Duty Silt Fence	m	60	\$ 23.00	\$ 1,380.00
4.03	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
4.04	Flow Diversion - Operation and Maintenance	day	35	\$ 1,250.00	\$ 43,750.00
4.05	Dewatering	day	35	\$ 5,000.00	\$ 175,000.00
Subtotal General Works					\$ 245,130.00
PART B: REMOVALS / RELOCATIONS					
4.06	Remove Asphalt	sq.m	225	\$ 8.00	\$ 1,800.00
4.07	Remove Granular Road Base	sq.m	270	\$ 7.00	\$ 1,890.00
4.08	Remove Existing Concrete Curb and Gutter	m	57	\$ 36.00	\$ 2,052.00
4.09	Remove Existing CSP Culvert	m	14	\$ 50.00	\$ 700.00
4.10	Remove Existing Storm Sewer	m	35	\$ 65.00	\$ 2,275.00
4.11	Protect Underground Services	m	30	\$ 500.00	\$ 15,000.00
4.12	Remove Existing Maintenance Holes	ea	1	\$ 1,000.00	\$ 1,000.00
Subtotal Removals / Relocations					\$ 24,717.00
PART C: WATERCOURSE CROSSING IMPROVEMENTS					
4.13	Excavation and Grading	cu.m	275	\$ 24.00	\$ 6,600.00
4.14	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00

Item	Description	Unit	Quantity	Unit Price	Item Price
4.15	Remove and Dispose of Excess Material	cu.m	275	\$ 50.00	\$ 13,750.00
4.16	6.0 m x 1.8 m Concrete Box Culvert	m	15	\$ 17,500.00	\$ 262,500.00
4.17	Concrete Distribution Slab	cu.m	21	\$ 1,500.00	\$ 31,500.00
4.18	Approach Slab	cu.m	45	\$ 1,500.00	\$ 67,500.00
4.19	Waterproofing Membrane	sq.m	106	\$ 150.00	\$ 15,900.00
4.20	Culvert Substrate	sq.m	91	\$ 100.00	\$ 9,100.00
4.21	Connect to Culvert	LS	2	\$ 5,000.00	\$ 10,000.00
4.22	Structure Barrier	m	12	\$ 1,200.00	\$ 14,400.00
4.23	Approach Guide Rail	m	80	\$ 250.00	\$ 20,000.00
4.24	End Treatment	ea	4	\$ 5,000.00	\$ 20,000.00
4.25	Cutoff Walls	cu.m	14	\$ 1,500.00	\$ 21,000.00
4.26	Pedestrian Handrail	m	24	\$ 700.00	\$ 16,800.00
4.27	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	275	\$ 100.00	\$ 27,500.00
Subtotal Watercourse Crossing Improvements					\$ 538,050.00
PART D: ROAD REINSTATEMENT					
4.28	40 mm HL3 Surface Course Asphalt	sq.m	225	\$ 35.00	\$ 7,875.00
4.29	Base Course Asphalt HL-4/8 (70 mm)	sq.m	225	\$ 25.00	\$ 5,625.00
4.30	Granular 'A' (150 mm)	sq.m	225	\$ 12.00	\$ 2,700.00
4.31	Granular 'B' (450 mm)	sq.m	225	\$ 24.00	\$ 5,400.00
4.32	Concrete Curb and Gutter	m	57	\$ 95.00	\$ 5,415.00
Subtotal Road Reinstatement					\$ 27,015.00

Item	Description	Unit	Quantity	Unit Price	Item Price
PART E: WATERCOURSE IMPROVEMENTS					
4.33	Clearing and Grubbing	sq.m	330	\$ 25.00	\$ 8,250.00
4.34	Strip and Stockpile Topsoil	sq.m	330	\$ 13.00	\$ 4,290.00
4.35	Excavation and Grading	cu.m	490	\$ 24.00	\$ 11,760.00
4.36	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
4.37	Remove and Dispose of Excess Material	cu.m	490	\$ 50.00	\$ 24,500.00
4.38	Place and Fine Grade Topsoil (150 mm)	sq.m	330	\$ 11.00	\$ 3,630.00
4.39	Watercourse Improvements	m	35	\$ 2,000.00	\$ 70,000.00
4.40	Armour Stone Retaining Wall	sq.m	40	\$ 800.00	\$ 32,000.00
4.41	Landscaping	sq.m	240	\$ 34.00	\$ 8,160.00
4.42	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	490	\$ 100.00	\$ 49,000.00
Subtotal Watercourse Improvements					\$ 213,090.00
TOTAL STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					\$ 1,048,002.00
SUMMARY					
STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					\$ 1,222,160.00
STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					\$ 768,230.00
STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					\$ 1,041,320.00
STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					\$ 1,048,002.00
SUBTOTAL STAGE 1 THROUGH 4 (2020 UNIT PRICES)					\$ 4,079,712.00

Item	Description	Unit	Quantity	Unit Price	Item Price
	CONSTRUCTION CONTIGENCY			30%	\$ 1,223,913.60
	ENGINEERING DESIGN FEE			20%	\$ 815,942.40
	CONTRACT ADMINISTRATION/CONSTRUCTION INSPECTION			10%	\$ 407,971.20
	TOTAL CONSTRUCTION COST ESTIMATE				\$ 6,527,539.20
PROPERTY ACQUISITION					
5.01	7 Brennan Ave.				\$ 800,000.00
5.02	199 The Boulevard (portion of)				\$ 50,000.00
	SUBTOTAL PROPERTY ACQUISITION				\$ 850,000.00
	ACQUISITION CONTINGENCY			30%	\$ 255,000.00
	TOTAL PROPERTY ACQUISITION				\$ 1,105,000.00
	TOTAL COST				\$ 7,632,539.20

WHISKEY CREEK AT MINETS POINT CLASS EA

City of Barrie

Project Cost Estimate

Project: 120114

Date: April 17, 2021

Alternative 7A: Additional Conveyance Route (Flow Diversion) Through 36 White Oaks Road

Item	Description	Unit	Quantity	Unit Price	Item Price
FLOW DIVERSION					
PART A: GENERAL WORKS					
1.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
1.02	Construction Access Mud Mat	ea	1	\$ 6,500.00	\$ 6,500.00
1.03	Heavy Duty Silt Fence	m	310	\$ 23.00	\$ 7,130.00
1.04	Turbidity Curtain	m	40	\$ 200.00	\$ 8,000.00
1.05	Dewatering	day	35	\$ 5,000.00	\$ 175,000.00
Subtotal General Works					\$ 211,630.00
PART B: REMOVALS / RELOCATIONS					
1.06	Utility Relocations (Hydro, Gas, Etc.)	LS	1	\$ 50,000.00	\$ 50,000.00
1.07	Remove Existing Buildings	ea	1	\$ 25,000.00	\$ 25,000.00
1.08	Remove Existing Driveway	sq.m	160	\$ 15.00	\$ 2,400.00
1.09	Remove Asphalt	sq.m	175	\$ 8.00	\$ 1,400.00
1.10	Remove Granular Road Base	sq.m	210	\$ 7.00	\$ 1,470.00
1.11	Remove Existing Concrete Curb and Gutter	m	50	\$ 36.00	\$ 1,800.00
1.12	Remove Existing Sidewalk	sq.m	50	\$ 22.00	\$ 1,100.00
1.13	Remove Existing Maintenance Holes	ea	2	\$ 1,000.00	\$ 2,000.00

Item	Description	Unit	Quantity	Unit Price	Item Price
1.14	Remove Existing Sanitary Sewer	m	62	\$ 65.00	\$ 4,030.00
1.15	Remove Existing Storm Sewer	m	50	\$ 65.00	\$ 3,250.00
Subtotal Removals / Relocations					\$ 92,450.00
PART C: WATERCOURSE IMPROVEMENTS					
1.16	Clearing and Grubbing	sq.m	2850	\$ 25.00	\$ 71,250.00
1.17	Strip and Stockpile Topsoil	sq.m	3180	\$ 13.00	\$ 41,340.00
1.18	Excavation and Grading	cu.m	4500	\$ 24.00	\$ 108,000.00
1.19	Geotechnical Sampling for Off-site Disposal	per sample	5	\$ 1,500.00	\$ 7,500.00
1.20	Remove and Dispose of Excess Material	cu.m	4500	\$ 50.00	\$ 225,000.00
1.21	Place and Fine Grade Topsoil (150 mm)	sq.m	3180	\$ 11.00	\$ 34,980.00
1.22	Watercourse Improvements	m	110	\$ 2,000.00	\$ 220,000.00
1.23	Armour Stone Retaining Wall	sq.m	40	\$ 800.00	\$ 32,000.00
1.24	Armour Stone Reinforcement	m	20	\$ 400.00	\$ 8,000.00
1.25	Shoreline Protection	sq.m	125	\$ 400.00	\$ 50,000.00
1.26	Landscaping	sq.m	2175	\$ 34.00	\$ 73,950.00
1.27	1.5 m Chain Link Fence	m	200	\$ 150.00	\$ 30,000.00
1.28	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	4500	\$ 100.00	\$ 450,000.00
Subtotal Watercourse Improvements					\$ 1,352,020.00

Item	Description	Unit	Quantity	Unit Price	Item Price
PART D: CULVERT CROSSING					
1.29	Excavation and Grading	cu.m	980	\$ 24.00	\$ 23,520.00
1.30	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
1.31	Remove and Dispose of Excess Material	cu.m	980	\$ 50.00	\$ 49,000.00
1.32	6.4 m x 1.8 m Concrete Box Culvert	m	46	\$ 21,900.00	\$ 1,007,400.00
1.33	Concrete Headwall / Wingwalls	ea	2	\$ 25,000.00	\$ 50,000.00
1.34	Concrete Distribution Slab	cu.m	22	\$ 1,500.00	\$ 33,000.00
1.35	Approach Slab	cu.m	45	\$ 1,500.00	\$ 67,500.00
1.36	Waterproofing Membrane	sq.m	111	\$ 150.00	\$ 16,650.00
1.37	Structure Barrier	m	13	\$ 1,200.00	\$ 15,600.00
1.38	Approach Guide Rail	m	80	\$ 250.00	\$ 20,000.00
1.39	End Treatment	ea	4	\$ 10,000.00	\$ 40,000.00
1.40	Cutoff Walls	cu.m	44	\$ 1,500.00	\$ 66,000.00
1.41	Pedestrian Handrail	m	25	\$ 700.00	\$ 17,500.00
1.42	Relocate Watermain	m	30	\$ 405.00	\$ 12,150.00
1.43	Watercourse Improvements	m	10	\$ 2,000.00	\$ 20,000.00
1.44	Armour Stone Reinforcement	m	20	\$ 400.00	\$ 8,000.00
1.45	1200 mm Dia. Maintenance Hole	ea	3	\$ 6,500.00	\$ 19,500.00
1.46	300 mm Dia. Storm Sewer	m	30	\$ 325.00	\$ 9,750.00
1.47	Connect to Culvert	LS	1	\$ 5,000.00	\$ 5,000.00
1.48	Sanitary Sewer	m	62	\$ 325.00	\$ 20,150.00
1.49	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	980	\$ 100.00	\$ 98,000.00

Item	Description	Unit	Quantity	Unit Price	Item Price
Subtotal Culvert Crossing					\$ 1,600,220.00
PART E: ROAD REINSTATEMENT					
1.49	40 mm HL3 Surface Course Asphalt	sq.m	175	\$ 35.00	\$ 6,125.00
1.50	Base Course Asphalt HL-4/8 (70 mm)	sq.m	175	\$ 25.00	\$ 4,375.00
1.51	Granular 'A' (150 mm)	sq.m	175	\$ 12.00	\$ 2,100.00
1.52	Granular 'B' (450 mm)	sq.m	175	\$ 24.00	\$ 4,200.00
1.53	Concrete Curb and Gutter	m	50	\$ 95.00	\$ 4,750.00
1.54	Concrete Sidewalk	sq.m	50	\$ 95.00	\$ 4,750.00
Subtotal Road Reinstatement					\$ 26,300.00
TOTAL FLOW DIVERSION					\$ 3,282,620.00
CONSTRUCTION CONTIGENCY				30%	\$ 984,786.00
ENGINEERING DESIGN FEE				20%	\$ 656,524.00
CONTRACT ADMINISTRATION/CONSTRUCTION INSPECTION				10%	\$ 328,262.00
TOTAL CONSTRUCTION COST ESTIMATE					\$ 5,252,192.00
PROPERTY ACQUISITION					
2.01	36 White Oaks Road				\$ 1,300,000.00
SUBTOTAL PROPERTY ACQUISITION					\$ 1,300,000.00
ACQUISITION CONTINGENCY				30%	\$ 390,000.00
TOTAL PROPERTY ACQUISITION					\$ 1,690,000.00
TOTAL COST					\$ 6,942,192.00

WHISKEY CREEK AT MINETS POINT CLASS EA

City of Barrie

Project Cost Estimate

Project: 120114

Date: April 17, 2021

Alternative 4A: Remove Brennan Avenue at Whiskey Creek

Item	Description	Unit	Quantity	Unit Price	Item Price
STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					
PART A: GENERAL WORKS					
1.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
1.02	Construction Access Mud Mat	ea	1	\$ 6,500.00	\$ 6,500.00
1.03	Heavy Duty Silt Fence	m	350	\$ 23.00	\$ 8,050.00
1.04	Turbidity Curtain	m	35	\$ 200.00	\$ 7,000.00
1.05	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
1.06	Flow Diversion - Operation and Maintenance	day	35	\$ 1,250.00	\$ 43,750.00
1.07	Dewatering	day	35	\$ 5,000.00	\$ 175,000.00
Subtotal General Works					\$ 265,300.00
PART B: REMOVALS / RELOCATIONS					
1.08	Utility Relocations (Hydro, Gas, Etc.)	LS	1	\$ 100,000.00	\$ 100,000.00
1.09	Remove and Dispose Existing Gabion Wall	sq.m	15	\$ 75.00	\$ 1,125.00
1.10	Relocate Sanitary Forcemain	m	50	\$ 1,000.00	\$ 50,000.00
1.11	Remove Asphalt	sq.m	510	\$ 8.00	\$ 4,080.00
1.12	Remove Granular Road Base	sq.m	610	\$ 7.00	\$ 4,270.00
1.13	Remove Existing Concrete Curb and Gutter	m	20	\$ 36.00	\$ 720.00

Item	Description	Unit	Quantity	Unit Price	Item Price
1.14	Relocate Park Sign	LS	1	\$ 500.00	\$ 500.00
1.15	Remove Light Pole	ea	3	\$ 500.00	\$ 1,500.00
1.16	Relocate Planter Bed	LS	1	\$ 500.00	\$ 500.00
1.17	Protect Underground Services	m	60	\$ 500.00	\$ 30,000.00
Subtotal Removals / Relocations					\$ 192,695.00
PART C: WATERCOURSE IMPROVEMENTS					
1.18	Clearing and Grubbing	sq.m	2250	\$ 25.00	\$ 56,250.00
1.19	Strip and Stockpile Topsoil	sq.m	2700	\$ 13.00	\$ 35,100.00
1.20	Excavation and Grading	cu.m	3240	\$ 24.00	\$ 77,760.00
1.21	Geotechnical Sampling for Off-site Disposal	per sample	4	\$ 1,500.00	\$ 6,000.00
1.22	Remove and Dispose of Excess Material	cu.m	3240	\$ 50.00	\$ 162,000.00
1.23	Place and Fine Grade Topsoil (150 mm)	sq.m	2700	\$ 11.00	\$ 29,700.00
1.24	Watercourse Improvements	m	145	\$ 2,000.00	\$ 290,000.00
1.25	Armour Stone Retaining Wall	sq.m	36	\$ 800.00	\$ 28,800.00
1.26	Armour Stone Reinforcement	m	13	\$ 400.00	\$ 5,200.00
1.27	Shoreline Protection	sq.m	125	\$ 400.00	\$ 50,000.00
1.28	Landscaping	sq.m	1400	\$ 34.00	\$ 47,600.00
1.29	1.5 m Chain Link Fence	m	80	\$ 150.00	\$ 12,000.00
1.30	1.8 m Wood Privacy Fence	m	260	\$ 400.00	\$ 104,000.00
1.31	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	3240	\$ 100.00	\$ 324,000.00
Subtotal Watercourse Improvements					\$ 1,228,410.00

Item	Description	Unit	Quantity	Unit Price	Item Price
PART D: ROAD WORKS (PARK ENTRANCE)					
1.32	Granular 'B' (450 mm)	sq.m	165	\$ 24.00	\$ 3,960.00
1.33	Granular 'A' (150 mm)	sq.m	165	\$ 12.00	\$ 1,980.00
1.34	Base Course Asphalt HL-4/8 (70 mm)	sq.m	150	\$ 25.00	\$ 3,750.00
1.35	40 mm HL3 Surface Course Asphalt	sq.m	150	\$ 35.00	\$ 5,250.00
1.36	Concrete Curb and Gutter	m	10	\$ 95.00	\$ 950.00
Subtotal Road Works					\$ 15,890.00
TOTAL STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					\$ 1,702,295.00
STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					
PART A: GENERAL WORKS					
2.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
2.02	Heavy Duty Silt Fence	m	20	\$ 23.00	\$ 460.00
2.03	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
2.04	Flow Diversion - Operation and Maintenance	day	28	\$ 1,250.00	\$ 35,000.00
2.05	Dewatering	day	28	\$ 5,000.00	\$ 140,000.00
Subtotal General Works					\$ 200,460.00
PART B: REMOVALS / RELOCATIONS					
2.06	Remove Asphalt	sq.m	200	\$ 8.00	\$ 1,600.00
2.07	Remove Granular Road Base	sq.m	240	\$ 7.00	\$ 1,680.00
2.08	Remove Existing Concrete Curb and Gutter	m	50	\$ 36.00	\$ 1,800.00
2.09	Remove Existing Conc. Box Culvert	m	14	\$ 1,000.00	\$ 14,000.00
2.10	Remove Existing Storm Sewer	m	20	\$ 65.00	\$ 1,300.00

Item	Description	Unit	Quantity	Unit Price	Item Price
2.11	Remove Existing Maintenance Holes	ea	1	\$ 1,000.00	\$ 1,000.00
2.12	Relocate Existing Traffic Signs (Remove & Reinstall)	ea	2	\$ 350.00	\$ 700.00
Subtotal Removals / Relocations					\$ 22,080.00
PART C: WATERCOURSE CROSSING IMPROVEMENTS					
2.13	Excavation and Grading	cu.m	415	\$ 24.00	\$ 9,960.00
2.14	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
2.15	Remove and Dispose of Excess Material	cu.m	415	\$ 50.00	\$ 20,750.00
2.16	Watercourse Improvements	m	15	\$ 2,000.00	\$ 30,000.00
2.17	Armour Stone Retaining Wall	sq.m	30	\$ 800.00	\$ 24,000.00
2.18	Armour Stone Reinforcement	m	30	\$ 400.00	\$ 12,000.00
2.19	Landscaping	sq.m	150	\$ 34.00	\$ 5,100.00
2.20	25 m Pedestrian Bridge	LS	1	\$ 375,000.00	\$ 375,000.00
2.21	Concrete Headwall - 375 mm Dia.	ea	1	\$ 9,500.00	\$ 9,500.00
2.22	375 mm Dia. Storm Sewer	m	20	\$ 375.00	\$ 7,500.00
2.23	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	415	\$ 100.00	\$ 41,500.00
Subtotal Watercourse Crossing Improvements					\$ 536,810.00
TOTAL STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					\$ 759,350.00
STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					
PART A: GENERAL WORKS					
3.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
3.02	Construction Access Mud Mat	ea	1	\$ 6,500.00	\$ 6,500.00
3.03	Heavy Duty Silt Fence	m	200	\$ 23.00	\$ 4,600.00

Item	Description	Unit	Quantity	Unit Price	Item Price
3.04	Flow Diversion - Install/Uninstall	LS	35	\$ 10,000.00	\$ 350,000.00
3.05	Flow Diversion - Operation and Maintenance	day	28	\$ 1,250.00	\$ 35,000.00
3.06	Dewatering	day	28	\$ 5,000.00	\$ 140,000.00
Subtotal General Works					\$ 551,100.00
PART B: REMOVALS / RELOCATIONS					
3.07	Utility Relocations (Hydro Poles, Etc.)	LS	1	\$ 50,000.00	\$ 50,000.00
3.08	Remove and Dispose Existing Rip Rap	sq.m	10	\$ 50.00	\$ 500.00
3.09	Relocate Existing Traffic Signs (Remove & Reinstall)	ea	2	\$ 350.00	\$ 700.00
3.10	Remove Existing Driveway	sq.m	155	\$ 15.00	\$ 2,325.00
3.11	Remove Existing Buildings	ea	1	\$ 25,000.00	\$ 25,000.00
Subtotal Removals / Relocations					\$ 78,525.00
PART C: WATERCOURSE IMPROVEMENTS					
3.12	Clearing and Grubbing	sq.m	810	\$ 25.00	\$ 20,250.00
3.13	Strip and Stockpile Topsoil	sq.m	810	\$ 13.00	\$ 10,530.00
3.14	Excavation and Grading	cu.m	1230	\$ 24.00	\$ 29,520.00
3.15	Geotechnical Sampling for Off-site Disposal	per sample	2	\$ 1,500.00	\$ 3,000.00
3.16	Remove and Dispose of Excess Material	cu.m	1230	\$ 50.00	\$ 61,500.00
3.17	Place and Fine Grade Topsoil (150 mm)	sq.m	810	\$ 11.00	\$ 8,910.00
3.18	Watercourse Improvements	m	50	\$ 2,000.00	\$ 100,000.00
3.19	Armour Stone Retaining Wall	sq.m	90	\$ 800.00	\$ 72,000.00
3.20	Armour Stone Reinforcement	m	24	\$ 400.00	\$ 9,600.00
3.21	Landscaping	sq.m	480	\$ 34.00	\$ 16,320.00

Item	Description	Unit	Quantity	Unit Price	Item Price
3.22	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	1230	\$ 100.00	\$ 123,000.00
Subtotal Watercourse Improvements					\$ 454,630.00
TOTAL STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					\$ 1,084,255.00
STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					
PART A: GENERAL WORKS					
4.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
4.02	Heavy Duty Silt Fence	m	60	\$ 23.00	\$ 1,380.00
4.03	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
4.04	Flow Diversion - Operation and Maintenance	day	35	\$ 1,250.00	\$ 43,750.00
4.05	Dewatering	day	35	\$ 5,000.00	\$ 175,000.00
Subtotal General Works					\$ 245,130.00
PART B: REMOVALS / RELOCATIONS					
4.06	Remove Asphalt	sq.m	225	\$ 8.00	\$ 1,800.00
4.07	Remove Granular Road Base	sq.m	270	\$ 7.00	\$ 1,890.00
4.08	Remove Existing Concrete Curb and Gutter	m	57	\$ 36.00	\$ 2,052.00
4.09	Remove Existing CSP Culvert	m	14	\$ 50.00	\$ 700.00
4.10	Remove Existing Storm Sewer	m	35	\$ 65.00	\$ 2,275.00
4.11	Protect Underground Services	m	30	\$ 500.00	\$ 15,000.00
4.12	Remove Existing Maintenance Holes	ea	1	\$ 1,000.00	\$ 1,000.00
Subtotal Removals / Relocations					\$ 24,717.00

Item	Description	Unit	Quantity	Unit Price	Item Price
PART C: WATERCOURSE CROSSING IMPROVEMENTS					
4.13	Excavation and Grading	cu.m	320	\$ 24.00	\$ 7,680.00
4.14	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
4.15	Remove and Dispose of Excess Material	cu.m	320	\$ 50.00	\$ 16,000.00
4.16	10.9 m x 1.95 m Concrete Span Structure	m	15	\$ 27,400.00	\$ 411,000.00
4.17	Drilled Piles (CMC)	ea	28	\$ 5,000.00	\$ 140,000.00
4.18	Concrete Distribution Slab	cu.m	36	\$ 1,500.00	\$ 54,000.00
4.19	Approach Slab	cu.m	45	\$ 1,500.00	\$ 67,500.00
4.20	Waterproofing Membrane	sq.m	180	\$ 150.00	\$ 27,000.00
4.21	Culvert Substrate	sq.m	165	\$ 100.00	\$ 16,500.00
4.22	Connect to Culvert	LS	2	\$ 5,000.00	\$ 10,000.00
4.23	Structure Barrier	m	22	\$ 1,200.00	\$ 26,400.00
4.24	Approach Guide Rail	m	80	\$ 250.00	\$ 20,000.00
4.25	End Treatment	ea	4	\$ 5,000.00	\$ 20,000.00
4.26	Cutoff Walls	cu.m	14	\$ 1,500.00	\$ 21,000.00
4.27	Pedestrian Handrail	m	34	\$ 700.00	\$ 23,800.00
4.28	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	320	\$ 100.00	\$ 32,000.00
Subtotal Watercourse Crossing Improvements					\$ 894,380.00
PART D: ROAD REINSTATEMENT					
4.29	40 mm HL3 Surface Course Asphalt	sq.m	225	\$ 35.00	\$ 7,875.00
4.30	Base Course Asphalt HL-4/8 (70 mm)	sq.m	225	\$ 25.00	\$ 5,625.00
4.31	Granular 'A' (150 mm)	sq.m	225	\$ 12.00	\$ 2,700.00

Item	Description	Unit	Quantity	Unit Price	Item Price
4.32	Granular 'B' (450 mm)	sq.m	225	\$ 24.00	\$ 5,400.00
4.33	Concrete Curb and Gutter	m	57	\$ 95.00	\$ 5,415.00
Subtotal Road Reinstatement					\$ 27,015.00
PART E: WATERCOURSE IMPROVEMENTS					
4.34	Clearing and Grubbing	sq.m	330	\$ 25.00	\$ 8,250.00
4.35	Strip and Stockpile Topsoil	sq.m	330	\$ 13.00	\$ 4,290.00
4.36	Excavation and Grading	cu.m	490	\$ 24.00	\$ 11,760.00
4.37	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
4.38	Remove and Dispose of Excess Material	cu.m	490	\$ 50.00	\$ 24,500.00
4.39	Place and Fine Grade Topsoil (150 mm)	sq.m	330	\$ 11.00	\$ 3,630.00
4.40	Watercourse Improvements	m	35	\$ 2,000.00	\$ 70,000.00
4.41	Armour Stone Retaining Wall	sq.m	40	\$ 800.00	\$ 32,000.00
4.42	Landscaping	sq.m	240	\$ 34.00	\$ 8,160.00
4.43	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	490	\$ 100.00	\$ 49,000.00
Subtotal Watercourse Improvements					\$ 213,090.00
TOTAL STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					\$ 1,404,332.00

Item	Description	Unit	Quantity	Unit Price	Item Price
SUMMARY					
	STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.				\$ 1,702,295.00
	STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.				\$ 759,350.00
	STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD				\$ 1,084,255.00
	STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD				\$ 1,404,332.00
	SUBTOTAL STAGE 1 THROUGH 4 (2020 UNIT PRICES)				\$ 4,950,232.00
	CONSTRUCTION CONTINGENCY			30%	\$ 1,485,069.60
	ENGINEERING DESIGN FEE			20%	\$ 990,046.40
	CONTRACT ADMINISTRATION/CONSTRUCTION INSPECTION			10%	\$ 495,023.20
	TOTAL CONSTRUCTION COST ESTIMATE				\$ 7,920,371.20
PROPERTY ACQUISITION					
5.01	7 Brennan Ave.				\$ 800,000.00
5.02	199 The Boulevard (portion of)				\$ 50,000.00
	SUBTOTAL PROPERTY ACQUISITION				\$ 850,000.00
	ACQUISITION CONTINGENCY			30%	\$ 255,000.00
	TOTAL PROPERTY ACQUISITION				\$ 1,105,000.00
	TOTAL COST				\$ 9,025,371.20

WHISKEY CREEK AT MINETS POINT CLASS EA

City of Barrie

Project Cost Estimate

Project: 120114

Date: April 17, 2021

Alternative 4B: Remove Brennan Avenue at Whiskey Creek and Connect Brennan Avenue and The Boulevard

Item	Description	Unit	Quantity	Unit Price	Item Price
STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					
PART A: GENERAL WORKS					
1.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
1.02	Construction Access Mud Mat	ea	1	\$ 6,500.00	\$ 6,500.00
1.03	Heavy Duty Silt Fence	m	350	\$ 23.00	\$ 8,050.00
1.04	Turbidity Curtain	m	35	\$ 200.00	\$ 7,000.00
1.05	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
1.06	Flow Diversion - Operation and Maintenance	day	35	\$ 1,250.00	\$ 43,750.00
1.07	Dewatering	day	35	\$ 5,000.00	\$ 175,000.00
Subtotal General Works					\$ 265,300.00
PART B: REMOVALS / RELOCATIONS					
1.08	Utility Relocations (Hydro, Gas, Etc.)	LS	1	\$ 100,000.00	\$ 100,000.00
1.09	Remove and Dispose Existing Gabion Wall	sq.m	15	\$ 75.00	\$ 1,125.00
1.10	Relocate Sanitary Forcemain	m	50	\$ 1,000.00	\$ 50,000.00
1.11	Remove Asphalt	sq.m	510	\$ 8.00	\$ 4,080.00
1.12	Remove Granular Road Base	sq.m	610	\$ 7.00	\$ 4,270.00
1.13	Remove Existing Concrete Curb and Gutter	m	20	\$ 36.00	\$ 720.00

Item	Description	Unit	Quantity	Unit Price	Item Price
1.14	Relocate Park Sign	LS	1	\$ 500.00	\$ 500.00
1.15	Remove Light Pole	ea	3	\$ 500.00	\$ 1,500.00
1.16	Relocate Planter Bed	LS	1	\$ 500.00	\$ 500.00
1.17	Protect Underground Services	m	60	\$ 500.00	\$ 30,000.00
Subtotal Removals / Relocations					\$ 192,695.00
PART C: WATERCOURSE IMPROVEMENTS					
1.18	Clearing and Grubbing	sq.m	2250	\$ 25.00	\$ 56,250.00
1.19	Strip and Stockpile Topsoil	sq.m	2700	\$ 13.00	\$ 35,100.00
1.20	Excavation and Grading	cu.m	3240	\$ 24.00	\$ 77,760.00
1.21	Geotechnical Sampling for Off-site Disposal	per sample	4	\$ 1,500.00	\$ 6,000.00
1.22	Remove and Dispose of Excess Material	cu.m	3240	\$ 50.00	\$ 162,000.00
1.23	Place and Fine Grade Topsoil (150 mm)	sq.m	2700	\$ 11.00	\$ 29,700.00
1.24	Watercourse Improvements	m	145	\$ 2,000.00	\$ 290,000.00
1.25	Armour Stone Retaining Wall	sq.m	36	\$ 800.00	\$ 28,800.00
1.26	Armour Stone Reinforcement	m	13	\$ 400.00	\$ 5,200.00
1.27	Shoreline Protection	sq.m	125	\$ 400.00	\$ 50,000.00
1.28	Landscaping	sq.m	1400	\$ 34.00	\$ 47,600.00
1.29	1.5 m Chain Link Fence	m	80	\$ 150.00	\$ 12,000.00
1.30	1.8 m Wood Privacy Fence	m	260	\$ 400.00	\$ 104,000.00
1.31	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	3240	\$ 100.00	\$ 324,000.00
Subtotal Watercourse Improvements					\$ 1,228,410.00

Item	Description	Unit	Quantity	Unit Price	Item Price
PART D: ROAD WORKS (PARK ENTRANCE)					
1.32	Granular 'B' (450 mm)	sq.m	165	\$ 24.00	\$ 3,960.00
1.33	Granular 'A' (150 mm)	sq.m	165	\$ 12.00	\$ 1,980.00
1.34	Base Course Asphalt HL-4/8 (70 mm)	sq.m	150	\$ 25.00	\$ 3,750.00
1.35	40 mm HL3 Surface Course Asphalt	sq.m	150	\$ 35.00	\$ 5,250.00
1.36	Concrete Curb and Gutter	m	10	\$ 95.00	\$ 950.00
Subtotal Road Works					\$ 15,890.00
TOTAL STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					\$ 1,702,295.00
STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					
PART A: GENERAL WORKS					
2.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
2.02	Heavy Duty Silt Fence	m	20	\$ 23.00	\$ 460.00
2.03	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
2.04	Flow Diversion - Operation and Maintenance	day	28	\$ 1,250.00	\$ 35,000.00
2.05	Dewatering	day	28	\$ 5,000.00	\$ 140,000.00
Subtotal General Works					\$ 200,460.00
PART B: REMOVALS / RELOCATIONS					
2.06	Remove Asphalt	sq.m	200	\$ 8.00	\$ 1,600.00
2.07	Remove Granular Road Base	sq.m	240	\$ 7.00	\$ 1,680.00
2.08	Remove Existing Concrete Curb and Gutter	m	50	\$ 36.00	\$ 1,800.00
2.09	Remove Existing Conc. Box Culvert	m	14	\$ 1,000.00	\$ 14,000.00
2.10	Remove Existing Storm Sewer	m	20	\$ 65.00	\$ 1,300.00

Item	Description	Unit	Quantity	Unit Price	Item Price
2.11	Remove Existing Maintenance Holes	ea	1	\$ 1,000.00	\$ 1,000.00
2.12	Relocate Existing Traffic Signs (Remove & Reinstall)	ea	2	\$ 350.00	\$ 700.00
Subtotal Removals / Relocations					\$ 22,080.00
PART C: WATERCOURSE CROSSING IMPROVEMENTS					
2.13	Excavation and Grading	cu.m	415	\$ 24.00	\$ 9,960.00
2.14	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
2.15	Remove and Dispose of Excess Material	cu.m	415	\$ 50.00	\$ 20,750.00
2.16	Watercourse Improvements	m	15	\$ 2,000.00	\$ 30,000.00
2.17	Armour Stone Retaining Wall	sq.m	30	\$ 800.00	\$ 24,000.00
2.18	Armour Stone Reinforcement	m	30	\$ 400.00	\$ 12,000.00
2.19	Landscaping	sq.m	150	\$ 34.00	\$ 5,100.00
2.20	25 m Pedestrian Bridge	LS	1	\$ 375,000.00	\$ 375,000.00
2.21	Concrete Headwall - 375 mm Dia.	ea	1	\$ 9,500.00	\$ 9,500.00
2.22	375 mm Dia. Storm Sewer	m	20	\$ 375.00	\$ 7,500.00
2.23	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	415	\$ 100.00	\$ 41,500.00
Subtotal Watercourse Crossing Improvements					\$ 536,810.00
TOTAL STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					\$ 759,350.00
STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					
PART A: GENERAL WORKS					
3.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
3.02	Construction Access Mud Mat	ea	1	\$ 6,500.00	\$ 6,500.00
3.03	Heavy Duty Silt Fence	m	200	\$ 23.00	\$ 4,600.00

Item	Description	Unit	Quantity	Unit Price	Item Price
3.04	Flow Diversion - Install/Uninstall	LS	35	\$ 10,000.00	\$ 350,000.00
3.05	Flow Diversion - Operation and Maintenance	day	28	\$ 1,250.00	\$ 35,000.00
3.06	Dewatering	day	28	\$ 5,000.00	\$ 140,000.00
Subtotal General Works					\$ 551,100.00
PART B: REMOVALS / RELOCATIONS					
3.07	Utility Relocations (Hydro Poles, Etc.)	LS	1	\$ 50,000.00	\$ 50,000.00
3.08	Remove and Dispose Existing Rip Rap	sq.m	10	\$ 50.00	\$ 500.00
3.09	Relocate Existing Traffic Signs (Remove & Reinstall)	ea	2	\$ 350.00	\$ 700.00
3.10	Remove Existing Driveway	sq.m	155	\$ 15.00	\$ 2,325.00
3.11	Remove Existing Buildings	ea	1	\$ 25,000.00	\$ 25,000.00
Subtotal Removals / Relocations					\$ 78,525.00
PART C: WATERCOURSE IMPROVEMENTS					
3.12	Clearing and Grubbing	sq.m	810	\$ 25.00	\$ 20,250.00
3.13	Strip and Stockpile Topsoil	sq.m	810	\$ 13.00	\$ 10,530.00
3.14	Excavation and Grading	cu.m	1230	\$ 24.00	\$ 29,520.00
3.15	Geotechnical Sampling for Off-site Disposal	per sample	2	\$ 1,500.00	\$ 3,000.00
3.16	Remove and Dispose of Excess Material	cu.m	1230	\$ 50.00	\$ 61,500.00
3.17	Place and Fine Grade Topsoil (150 mm)	sq.m	810	\$ 11.00	\$ 8,910.00
3.18	Watercourse Improvements	m	50	\$ 2,000.00	\$ 100,000.00
3.19	Armour Stone Retaining Wall	sq.m	90	\$ 800.00	\$ 72,000.00
3.20	Armour Stone Reinforcement	m	24	\$ 400.00	\$ 9,600.00
3.21	Landscaping	sq.m	480	\$ 34.00	\$ 16,320.00

Item	Description	Unit	Quantity	Unit Price	Item Price
3.22	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	1230	\$ 100.00	\$ 123,000.00
Subtotal Watercourse Improvements					\$ 454,630.00
PART D: NEW TRANSPORTATION LINKAGE					
3.23	Clearing and Grubbing	sq.m	650	\$ 25.00	\$ 16,250.00
3.24	Strip and Stockpile Topsoil	sq.m	1770	\$ 13.00	\$ 23,010.00
3.25	Supply, Place, Compact Imported Fill	cu.m	700	\$ 35.00	\$ 24,500.00
3.26	Place and Fine Grade Topsoil (150 mm)	sq.m	955	\$ 11.00	\$ 10,505.00
3.27	Hydroseed	sq.m	955	\$ 2.00	\$ 1,910.00
3.28	Granular 'B' (450 mm)	sq.m	606	\$ 24.00	\$ 14,544.00
3.29	Granular 'A' (150 mm)	sq.m	606	\$ 12.00	\$ 7,272.00
3.30	Base Course Asphalt HL-4/8 (70 mm)	sq.m	490	\$ 25.00	\$ 12,250.00
3.31	40 mm HL3 Surface Course Asphalt	sq.m	490	\$ 35.00	\$ 17,150.00
3.32	Concrete Curb and Gutter	m	140	\$ 95.00	\$ 13,300.00
Subtotal New Transportation Linkage					\$ 140,691.00
TOTAL STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					\$ 1,224,946.00
STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					
PART A: GENERAL WORKS					
4.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
4.02	Heavy Duty Silt Fence	m	60	\$ 23.00	\$ 1,380.00
4.03	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
4.04	Flow Diversion - Operation and Maintenance	day	35	\$ 1,250.00	\$ 43,750.00
4.05	Dewatering	day	35	\$ 5,000.00	\$ 175,000.00

Item	Description	Unit	Quantity	Unit Price	Item Price
Subtotal General Works					\$ 245,130.00
PART B: REMOVALS / RELOCATIONS					
4.06	Remove Asphalt	sq.m	225	\$ 8.00	\$ 1,800.00
4.07	Remove Granular Road Base	sq.m	270	\$ 7.00	\$ 1,890.00
4.08	Remove Existing Concrete Curb and Gutter	m	57	\$ 36.00	\$ 2,052.00
4.09	Remove Existing CSP Culvert	m	14	\$ 50.00	\$ 700.00
4.10	Remove Existing Storm Sewer	m	35	\$ 65.00	\$ 2,275.00
4.11	Protect Underground Services	m	30	\$ 500.00	\$ 15,000.00
4.12	Remove Existing Maintenance Holes	ea	1	\$ 1,000.00	\$ 1,000.00
Subtotal Removals / Relocations					\$ 24,717.00
PART C: WATERCOURSE CROSSING IMPROVEMENTS					
4.13	Excavation and Grading	cu.m	320	\$ 24.00	\$ 7,680.00
4.14	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
4.15	Remove and Dispose of Excess Material	cu.m	320	\$ 50.00	\$ 16,000.00
4.16	10.9 m x 1.95 m Concrete Span Structure	m	15	\$ 27,400.00	\$ 411,000.00
4.17	Drilled Piles (CMC)	ea	28	\$ 5,000.00	\$ 140,000.00
4.18	Concrete Distribution Slab	cu.m	36	\$ 1,500.00	\$ 54,000.00
4.19	Approach Slab	cu.m	45	\$ 1,500.00	\$ 67,500.00
4.20	Waterproofing Membrane	sq.m	180	\$ 150.00	\$ 27,000.00
4.21	Culvert Substrate	sq.m	165	\$ 100.00	\$ 16,500.00
4.22	Connect to Culvert	LS	2	\$ 5,000.00	\$ 10,000.00
4.23	Structure Barrier	m	22	\$ 1,200.00	\$ 26,400.00

Item	Description	Unit	Quantity	Unit Price	Item Price
4.24	Approach Guide Rail	m	80	\$ 250.00	\$ 20,000.00
4.25	End Treatment	ea	4	\$ 5,000.00	\$ 20,000.00
4.26	Cutoff Walls	cu.m	14	\$ 1,500.00	\$ 21,000.00
4.27	Pedestrian Handrail	m	34	\$ 700.00	\$ 23,800.00
4.28	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	320	\$ 100.00	\$ 32,000.00
Subtotal Watercourse Crossing Improvements					\$ 894,380.00
PART D: ROAD REINSTATEMENT					
4.29	40 mm HL3 Surface Course Asphalt	sq.m	225	\$ 35.00	\$ 7,875.00
4.30	Base Course Asphalt HL-4/8 (70 mm)	sq.m	225	\$ 25.00	\$ 5,625.00
4.31	Granular 'A' (150 mm)	sq.m	225	\$ 12.00	\$ 2,700.00
4.32	Granular 'B' (450 mm)	sq.m	225	\$ 24.00	\$ 5,400.00
4.33	Concrete Curb and Gutter	m	57	\$ 95.00	\$ 5,415.00
Subtotal Road Reinstatement					\$ 27,015.00
PART E: WATERCOURSE IMPROVEMENTS					
4.34	Clearing and Grubbing	sq.m	330	\$ 25.00	\$ 8,250.00
4.35	Strip and Stockpile Topsoil	sq.m	330	\$ 13.00	\$ 4,290.00
4.36	Excavation and Grading	cu.m	490	\$ 24.00	\$ 11,760.00
4.37	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
4.38	Remove and Dispose of Excess Material	cu.m	490	\$ 50.00	\$ 24,500.00
4.39	Place and Fine Grade Topsoil (150 mm)	sq.m	330	\$ 11.00	\$ 3,630.00
4.40	Watercourse Improvements	m	35	\$ 2,000.00	\$ 70,000.00
4.41	Armour Stone Retaining Wall	sq.m	40	\$ 800.00	\$ 32,000.00

Item	Description	Unit	Quantity	Unit Price	Item Price
4.42	Landscaping	sq.m	240	\$ 34.00	\$ 8,160.00
4.43	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	490	\$ 100.00	\$ 49,000.00
Subtotal Watercourse Improvements					\$ 213,090.00
TOTAL STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					\$ 1,404,332.00
SUMMARY					
STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					\$ 1,702,295.00
STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					\$ 759,350.00
STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					\$ 1,224,946.00
STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					\$ 1,404,332.00
SUBTOTAL STAGE 1 THROUGH 4 (2020 UNIT PRICES)					\$ 5,090,923.00
CONSTRUCTION CONTINGENCY				30%	\$ 1,527,276.90
ENGINEERING DESIGN FEE				20%	\$ 1,018,184.60
CONTRACT ADMINISTRATION/CONSTRUCTION INSPECTION				10%	\$ 509,092.30
TOTAL CONSTRUCTION COST ESTIMATE					\$ 8,145,476.80
PROPERTY ACQUISITION					
5.01	7 Brennan Ave.				\$ 800,000.00
5.02	199 The Boulevard (portion of)				\$ 100,000.00
SUBTOTAL PROPERTY ACQUISITION					\$ 900,000.00
ACQUISITION CONTINGENCY				30%	\$ 270,000.00
TOTAL PROPERTY ACQUISITION					\$ 1,170,000.00
TOTAL COST					\$ 9,315,476.80

WHISKEY CREEK AT MINETS POINT CLASS EA

City of Barrie

Project Cost Estimate

Project: 120114

Date: April 17, 2021

Alternative 5A: Remove The Boulevard at Whiskey Creek

Item	Description	Unit	Quantity	Unit Price	Item Price
STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					
PART A: GENERAL WORKS					
1.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
1.02	Construction Access Mud Mat	ea	1	\$ 6,500.00	\$ 6,500.00
1.03	Heavy Duty Silt Fence	m	350	\$ 23.00	\$ 8,050.00
1.04	Turbidity Curtain	m	35	\$ 200.00	\$ 7,000.00
1.05	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
1.06	Flow Diversion - Operation and Maintenance	day	35	\$ 1,250.00	\$ 43,750.00
1.07	Dewatering	day	35	\$ 5,000.00	\$ 175,000.00
Subtotal General Works					\$ 265,300.00
PART B: REMOVALS / RELOCATIONS					
1.08	Utility Relocations (Hydro, Gas, Etc.)	LS	1	\$ 100,000.00	\$ 100,000.00
1.09	Remove and Dispose Existing Gabion Wall	sq.m	15	\$ 75.00	\$ 1,125.00
1.10	Relocate Sanitary Forcemain	m	50	\$ 1,000.00	\$ 50,000.00
1.11	Remove Asphalt	sq.m	510	\$ 8.00	\$ 4,080.00
1.12	Remove Granular Road Base	sq.m	610	\$ 7.00	\$ 4,270.00
1.13	Remove Existing Concrete Curb and Gutter	m	20	\$ 36.00	\$ 720.00

Item	Description	Unit	Quantity	Unit Price	Item Price
1.14	Relocate Park Sign	LS	1	\$ 500.00	\$ 500.00
1.15	Remove Light Pole	ea	3	\$ 500.00	\$ 1,500.00
1.16	Relocate Planter Bed	LS	1	\$ 500.00	\$ 500.00
1.17	Protect Underground Services	m	60	\$ 500.00	\$ 30,000.00
Subtotal Removals / Relocations					\$ 192,695.00
PART C: WATERCOURSE IMPROVEMENTS					
1.18	Clearing and Grubbing	sq.m	2250	\$ 25.00	\$ 56,250.00
1.19	Strip and Stockpile Topsoil	sq.m	2700	\$ 13.00	\$ 35,100.00
1.20	Excavation and Grading	cu.m	3240	\$ 24.00	\$ 77,760.00
1.21	Geotechnical Sampling for Off-site Disposal	per sample	4	\$ 1,500.00	\$ 6,000.00
1.22	Remove and Dispose of Excess Material	cu.m	3240	\$ 50.00	\$ 162,000.00
1.23	Place and Fine Grade Topsoil (150 mm)	sq.m	2700	\$ 11.00	\$ 29,700.00
1.24	Watercourse Improvements	m	145	\$ 2,000.00	\$ 290,000.00
1.25	Armour Stone Retaining Wall	sq.m	36	\$ 800.00	\$ 28,800.00
1.26	Armour Stone Reinforcement	m	13	\$ 400.00	\$ 5,200.00
1.27	Shoreline Protection	sq.m	125	\$ 400.00	\$ 50,000.00
1.28	Landscaping	sq.m	1400	\$ 34.00	\$ 47,600.00
1.29	1.5 m Chain Link Fence	m	80	\$ 150.00	\$ 12,000.00
1.30	1.8 m Wood Privacy Fence	m	260	\$ 400.00	\$ 104,000.00
1.31	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	3240	\$ 100.00	\$ 324,000.00
Subtotal Watercourse Improvements					\$ 1,228,410.00

Item	Description	Unit	Quantity	Unit Price	Item Price
PART D: ROAD WORKS (PARK ENTRANCE)					
1.32	Granular 'B' (450 mm)	sq.m	165	\$ 24.00	\$ 3,960.00
1.33	Granular 'A' (150 mm)	sq.m	165	\$ 12.00	\$ 1,980.00
1.34	Base Course Asphalt HL-4/8 (70 mm)	sq.m	150	\$ 25.00	\$ 3,750.00
1.35	40 mm HL3 Surface Course Asphalt	sq.m	150	\$ 35.00	\$ 5,250.00
1.36	Concrete Curb and Gutter	m	10	\$ 95.00	\$ 950.00
Subtotal Road Works					\$ 15,890.00
TOTAL STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					\$ 1,702,295.00
STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					
PART A: GENERAL WORKS					
2.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
2.02	Heavy Duty Silt Fence	m	20	\$ 23.00	\$ 460.00
2.03	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
2.04	Flow Diversion - Operation and Maintenance	day	28	\$ 1,250.00	\$ 35,000.00
2.05	Dewatering	day	28	\$ 5,000.00	\$ 140,000.00
Subtotal General Works					\$ 200,460.00
PART B: REMOVALS / RELOCATIONS					
2.06	Remove Asphalt	sq.m	200	\$ 8.00	\$ 1,600.00
2.07	Remove Granular Road Base	sq.m	240	\$ 7.00	\$ 1,680.00
2.08	Remove Existing Concrete Curb and Gutter	m	50	\$ 36.00	\$ 1,800.00
2.09	Remove Existing Conc. Box Culvert	m	14	\$ 1,000.00	\$ 14,000.00
2.10	Remove Existing Storm Sewer	m	20	\$ 65.00	\$ 1,300.00

Item	Description	Unit	Quantity	Unit Price	Item Price
2.11	Remove Existing Maintenance Holes	ea	1	\$ 1,000.00	\$ 1,000.00
2.12	Relocate Existing Traffic Signs (Remove & Reinstall)	ea	2	\$ 350.00	\$ 700.00
Subtotal Removals / Relocations					\$ 22,080.00
PART C: WATERCOURSE CROSSING IMPROVEMENTS					
2.13	Excavation and Grading	cu.m	350	\$ 24.00	\$ 8,400.00
2.14	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
2.15	Remove and Dispose of Excess Material	cu.m	350	\$ 50.00	\$ 17,500.00
2.16	13.4 m x 1.5 m Concrete Span Structure	m	15	\$ 35,800.00	\$ 537,000.00
2.17	Drilled Piles (CMC)	ea	32	\$ 5,000.00	\$ 160,000.00
2.18	Concrete Distribution Slab	cu.m	43	\$ 1,500.00	\$ 64,500.00
2.19	Approach Slab	cu.m	45	\$ 1,500.00	\$ 67,500.00
2.20	Waterproofing Membrane	sq.m	216	\$ 150.00	\$ 32,400.00
2.21	Culvert Substrate	sq.m	201	\$ 100.00	\$ 20,100.00
2.22	Connect to Culvert	LS	1	\$ 5,000.00	\$ 5,000.00
2.23	Structure Barrier	m	27	\$ 1,200.00	\$ 32,400.00
2.24	Approach Guide Rail	m	80	\$ 250.00	\$ 20,000.00
2.25	End Treatment	ea	4	\$ 5,000.00	\$ 20,000.00
2.26	Cutoff Walls	cu.m	14	\$ 1,500.00	\$ 21,000.00
2.27	Pedestrian Handrail	m	39	\$ 700.00	\$ 27,300.00
2.28	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	350	\$ 100.00	\$ 35,000.00
Subtotal Watercourse Crossing Improvements					\$ 1,069,600.00

Item	Description	Unit	Quantity	Unit Price	Item Price
PART D: ROAD REINSTATEMENT					
2.29	40 mm HL3 Surface Course Asphalt	sq.m	200	\$ 35.00	\$ 7,000.00
2.30	Base Course Asphalt HL-4/8 (70 mm)	sq.m	200	\$ 25.00	\$ 5,000.00
2.31	Granular 'A' (150 mm)	sq.m	200	\$ 12.00	\$ 2,400.00
2.32	Granular 'B' (450 mm)	sq.m	200	\$ 24.00	\$ 4,800.00
2.33	Concrete Curb and Gutter	m	50	\$ 95.00	\$ 4,750.00
Subtotal Road Reinstatement					\$ 23,950.00
TOTAL STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					\$ 1,316,090.00
STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					
PART A: GENERAL WORKS					
3.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
3.02	Construction Access Mud Mat	ea	1	\$ 6,500.00	\$ 6,500.00
3.03	Heavy Duty Silt Fence	m	200	\$ 23.00	\$ 4,600.00
3.04	Flow Diversion - Install/Uninstall	LS	35	\$ 10,000.00	\$ 350,000.00
3.05	Flow Diversion - Operation and Maintenance	day	28	\$ 1,250.00	\$ 35,000.00
3.06	Dewatering	day	28	\$ 5,000.00	\$ 140,000.00
Subtotal General Works					\$ 551,100.00
PART B: REMOVALS / RELOCATIONS					
3.07	Utility Relocations (Hydro Poles, Etc.)	LS	1	\$ 50,000.00	\$ 50,000.00
3.08	Remove and Dispose Existing Rip Rap	sq.m	10	\$ 50.00	\$ 500.00
3.09	Relocate Existing Traffic Signs (Remove & Reinstall)	ea	2	\$ 350.00	\$ 700.00
3.10	Remove Existing Driveway	sq.m	155	\$ 15.00	\$ 2,325.00

Item	Description	Unit	Quantity	Unit Price	Item Price
3.11	Remove Existing Buildings	ea	1	\$ 25,000.00	\$ 25,000.00
Subtotal Removals / Relocations					\$ 78,525.00
PART C: WATERCOURSE IMPROVEMENTS					
3.12	Clearing and Grubbing	sq.m	810	\$ 25.00	\$ 20,250.00
3.13	Strip and Stockpile Topsoil	sq.m	810	\$ 13.00	\$ 10,530.00
3.14	Excavation and Grading	cu.m	1230	\$ 24.00	\$ 29,520.00
3.15	Geotechnical Sampling for Off-site Disposal	per sample	2	\$ 1,500.00	\$ 3,000.00
3.16	Remove and Dispose of Excess Material	cu.m	1230	\$ 50.00	\$ 61,500.00
3.17	Place and Fine Grade Topsoil (150 mm)	sq.m	810	\$ 11.00	\$ 8,910.00
3.18	Watercourse Improvements	m	50	\$ 2,000.00	\$ 100,000.00
3.19	Armour Stone Retaining Wall	sq.m	90	\$ 800.00	\$ 72,000.00
3.20	Armour Stone Reinforcement	m	24	\$ 400.00	\$ 9,600.00
3.21	Landscaping	sq.m	480	\$ 34.00	\$ 16,320.00
3.22	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	1230	\$ 100.00	\$ 123,000.00
Subtotal Watercourse Improvements					\$ 454,630.00
TOTAL STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					\$ 1,084,255.00
STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					
PART A: GENERAL WORKS					
4.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
4.02	Heavy Duty Silt Fence	m	60	\$ 23.00	\$ 1,380.00
4.03	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
4.04	Flow Diversion - Operation and Maintenance	day	35	\$ 1,250.00	\$ 43,750.00

Item	Description	Unit	Quantity	Unit Price	Item Price
4.05	Dewatering	day	35	\$ 5,000.00	\$ 175,000.00
Subtotal General Works					\$ 245,130.00
PART B: REMOVALS / RELOCATIONS					
4.06	Remove Asphalt	sq.m	225	\$ 8.00	\$ 1,800.00
4.07	Remove Granular Road Base	sq.m	270	\$ 7.00	\$ 1,890.00
4.08	Remove Existing Concrete Curb and Gutter	m	57	\$ 36.00	\$ 2,052.00
4.09	Remove Existing CSP Culvert	m	14	\$ 50.00	\$ 700.00
4.10	Remove Existing Storm Sewer	m	35	\$ 65.00	\$ 2,275.00
4.11	Protect Underground Services	m	30	\$ 500.00	\$ 15,000.00
4.12	Remove Existing Maintenance Holes	ea	1	\$ 1,000.00	\$ 1,000.00
Subtotal Removals / Relocations					\$ 24,717.00
PART C: WATERCOURSE CROSSING IMPROVEMENTS					
4.13	Excavation and Grading	cu.m	315	\$ 24.00	\$ 7,560.00
4.14	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
4.15	Remove and Dispose of Excess Material	cu.m	315	\$ 50.00	\$ 15,750.00
4.16	Watercourse Improvements	m	15	\$ 2,000.00	\$ 30,000.00
4.17	Armour Stone Retaining Wall	sq.m	30	\$ 800.00	\$ 24,000.00
4.18	Armour Stone Reinforcement	m	30	\$ 400.00	\$ 12,000.00
4.19	Landscaping	sq.m	150	\$ 34.00	\$ 5,100.00
4.20	15 m Pedestrian Bridge	LS	1	\$ 225,000.00	\$ 225,000.00
4.21	Concrete Headwall - 375 mm Dia.	ea	1	\$ 9,500.00	\$ 9,500.00
4.22	375 mm Dia. Storm Sewer	m	35	\$ 375.00	\$ 13,125.00

Item	Description	Unit	Quantity	Unit Price	Item Price
4.23	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	320	\$ 100.00	\$ 32,000.00
Subtotal Watercourse Crossing Improvements					\$ 375,535.00
PART D: ROAD REINSTATEMENT					
4.24	40 mm HL3 Surface Course Asphalt	sq.m	225	\$ 35.00	\$ 7,875.00
4.25	Base Course Asphalt HL-4/8 (70 mm)	sq.m	225	\$ 25.00	\$ 5,625.00
4.26	Granular 'A' (150 mm)	sq.m	225	\$ 12.00	\$ 2,700.00
4.27	Granular 'B' (450 mm)	sq.m	225	\$ 24.00	\$ 5,400.00
4.28	Concrete Curb and Gutter	m	57	\$ 95.00	\$ 5,415.00
Subtotal Road Reinstatement					\$ 27,015.00
PART E: WATERCOURSE IMPROVEMENTS					
4.29	Clearing and Grubbing	sq.m	330	\$ 25.00	\$ 8,250.00
4.30	Strip and Stockpile Topsoil	sq.m	330	\$ 13.00	\$ 4,290.00
4.31	Excavation and Grading	cu.m	490	\$ 24.00	\$ 11,760.00
4.32	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
4.33	Remove and Dispose of Excess Material	cu.m	490	\$ 50.00	\$ 24,500.00
4.34	Place and Fine Grade Topsoil (150 mm)	sq.m	330	\$ 11.00	\$ 3,630.00
4.35	Watercourse Improvements	m	35	\$ 2,000.00	\$ 70,000.00
4.36	Armour Stone Retaining Wall	sq.m	40	\$ 800.00	\$ 32,000.00
4.37	Landscaping	sq.m	240	\$ 34.00	\$ 8,160.00
4.38	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	490	\$ 100.00	\$ 49,000.00
Subtotal Watercourse Improvements					\$ 213,090.00
TOTAL STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					\$ 885,487.00

Item	Description	Unit	Quantity	Unit Price	Item Price
SUMMARY					
	STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.				\$ 1,702,295.00
	STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.				\$ 1,316,090.00
	STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD				\$ 1,084,255.00
	STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD				\$ 885,487.00
	SUBTOTAL STAGE 1 THROUGH 4 (2020 UNIT PRICES)				\$ 4,988,127.00
	CONSTRUCTION CONTINGENCY			30%	\$ 1,496,438.10
	ENGINEERING DESIGN FEE			20%	\$ 997,625.40
	CONTRACT ADMINISTRATION/CONSTRUCTION INSPECTION			10%	\$ 498,812.70
	TOTAL CONSTRUCTION COST ESTIMATE				\$ 7,981,003.20
PROPERTY ACQUISITION					
5.01	7 Brennan Ave.				\$ 800,000.00
5.02	199 The Boulevard (portion of)				\$ 50,000.00
	SUBTOTAL PROPERTY ACQUISITION				\$ 850,000.00
	ACQUISITION CONTINGENCY			30%	\$ 255,000.00
	TOTAL PROPERTY ACQUISITION				\$ 1,105,000.00
	TOTAL COST				\$ 9,086,003.20

WHISKEY CREEK AT MINETS POINT CLASS EA

City of Barrie

Project Cost Estimate

Project: 120114

Date: April 17, 2021

Alternative 5B: Remove The Boulevard at Whiskey Creek and Connect Brennan Avenue and The Boulevard

Item	Description	Unit	Quantity	Unit Price	Item Price
STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					
PART A: GENERAL WORKS					
1.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
1.02	Construction Access Mud Mat	ea	1	\$ 6,500.00	\$ 6,500.00
1.03	Heavy Duty Silt Fence	m	350	\$ 23.00	\$ 8,050.00
1.04	Turbidity Curtain	m	35	\$ 200.00	\$ 7,000.00
1.05	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
1.06	Flow Diversion - Operation and Maintenance	day	35	\$ 1,250.00	\$ 43,750.00
1.07	Dewatering	day	35	\$ 5,000.00	\$ 175,000.00
Subtotal General Works					\$ 265,300.00
PART B: REMOVALS / RELOCATIONS					
1.08	Utility Relocations (Hydro, Gas, Etc.)	LS	1	\$ 100,000.00	\$ 100,000.00
1.09	Remove and Dispose Existing Gabion Wall	sq.m	15	\$ 75.00	\$ 1,125.00
1.10	Relocate Sanitary Forcemain	m	50	\$ 1,000.00	\$ 50,000.00
1.11	Remove Asphalt	sq.m	510	\$ 8.00	\$ 4,080.00
1.12	Remove Granular Road Base	sq.m	610	\$ 7.00	\$ 4,270.00
1.13	Remove Existing Concrete Curb and Gutter	m	20	\$ 36.00	\$ 720.00

Item	Description	Unit	Quantity	Unit Price	Item Price
1.14	Relocate Park Sign	LS	1	\$ 500.00	\$ 500.00
1.15	Remove Light Pole	ea	3	\$ 500.00	\$ 1,500.00
1.16	Relocate Planter Bed	LS	1	\$ 500.00	\$ 500.00
1.17	Protect Underground Services	m	60	\$ 500.00	\$ 30,000.00
Subtotal Removals / Relocations					\$ 192,695.00
PART C: WATERCOURSE IMPROVEMENTS					
1.18	Clearing and Grubbing	sq.m	2250	\$ 25.00	\$ 56,250.00
1.19	Strip and Stockpile Topsoil	sq.m	2700	\$ 13.00	\$ 35,100.00
1.20	Excavation and Grading	cu.m	3240	\$ 24.00	\$ 77,760.00
1.21	Geotechnical Sampling for Off-site Disposal	per sample	4	\$ 1,500.00	\$ 6,000.00
1.22	Remove and Dispose of Excess Material	cu.m	3240	\$ 50.00	\$ 162,000.00
1.23	Place and Fine Grade Topsoil (150 mm)	sq.m	2700	\$ 11.00	\$ 29,700.00
1.24	Watercourse Improvements	m	145	\$ 2,000.00	\$ 290,000.00
1.25	Armour Stone Retaining Wall	sq.m	36	\$ 800.00	\$ 28,800.00
1.26	Armour Stone Reinforcement	m	13	\$ 400.00	\$ 5,200.00
1.27	Shoreline Protection	sq.m	125	\$ 400.00	\$ 50,000.00
1.28	Landscaping	sq.m	1400	\$ 34.00	\$ 47,600.00
1.29	1.5 m Chain Link Fence	m	80	\$ 150.00	\$ 12,000.00
1.30	1.8 m Wood Privacy Fence	m	260	\$ 400.00	\$ 104,000.00
1.31	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	3240	\$ 100.00	\$ 324,000.00
Subtotal Watercourse Improvements					\$ 1,228,410.00

Item	Description	Unit	Quantity	Unit Price	Item Price
PART D: ROAD WORKS (PARK ENTRANCE)					
1.32	Granular 'B' (450 mm)	sq.m	165	\$ 24.00	\$ 3,960.00
1.33	Granular 'A' (150 mm)	sq.m	165	\$ 12.00	\$ 1,980.00
1.34	Base Course Asphalt HL-4/8 (70 mm)	sq.m	150	\$ 25.00	\$ 3,750.00
1.35	40 mm HL3 Surface Course Asphalt	sq.m	150	\$ 35.00	\$ 5,250.00
1.36	Concrete Curb and Gutter	m	10	\$ 95.00	\$ 950.00
Subtotal Road Works					\$ 15,890.00
TOTAL STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					\$ 1,702,295.00
STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					
PART A: GENERAL WORKS					
2.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
2.02	Heavy Duty Silt Fence	m	20	\$ 23.00	\$ 460.00
2.03	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
2.04	Flow Diversion - Operation and Maintenance	day	28	\$ 1,250.00	\$ 35,000.00
2.05	Dewatering	day	28	\$ 5,000.00	\$ 140,000.00
Subtotal General Works					\$ 200,460.00
PART B: REMOVALS / RELOCATIONS					
2.06	Remove Asphalt	sq.m	200	\$ 8.00	\$ 1,600.00
2.07	Remove Granular Road Base	sq.m	240	\$ 7.00	\$ 1,680.00
2.08	Remove Existing Concrete Curb and Gutter	m	50	\$ 36.00	\$ 1,800.00
2.09	Remove Existing Conc. Box Culvert	m	14	\$ 1,000.00	\$ 14,000.00
2.10	Remove Existing Storm Sewer	m	20	\$ 65.00	\$ 1,300.00

Item	Description	Unit	Quantity	Unit Price	Item Price
2.11	Remove Existing Maintenance Holes	ea	1	\$ 1,000.00	\$ 1,000.00
2.12	Relocate Existing Traffic Signs (Remove & Reinstall)	ea	2	\$ 350.00	\$ 700.00
Subtotal Removals / Relocations					\$ 22,080.00
PART C: WATERCOURSE CROSSING IMPROVEMENTS					
2.13	Excavation and Grading	cu.m	350	\$ 24.00	\$ 8,400.00
2.14	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
2.15	Remove and Dispose of Excess Material	cu.m	350	\$ 50.00	\$ 17,500.00
2.16	13.4 m x 1.5 m Concrete Span Structure	m	15	\$ 35,800.00	\$ 537,000.00
2.17	Drilled Piles (CMC)	ea	32	\$ 5,000.00	\$ 160,000.00
2.18	Concrete Distribution Slab	cu.m	43	\$ 1,500.00	\$ 64,500.00
2.19	Approach Slab	cu.m	45	\$ 1,500.00	\$ 67,500.00
2.20	Waterproofing Membrane	sq.m	216	\$ 150.00	\$ 32,400.00
2.21	Culvert Substrate	sq.m	201	\$ 100.00	\$ 20,100.00
2.22	Connect to Culvert	LS	1	\$ 5,000.00	\$ 5,000.00
2.23	Structure Barrier	m	27	\$ 1,200.00	\$ 32,400.00
2.24	Approach Guide Rail	m	80	\$ 250.00	\$ 20,000.00
2.25	End Treatment	ea	4	\$ 5,000.00	\$ 20,000.00
2.26	Cutoff Walls	cu.m	14	\$ 1,500.00	\$ 21,000.00
2.27	Pedestrian Handrail	m	39	\$ 700.00	\$ 27,300.00
2.28	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	350	\$ 100.00	\$ 35,000.00
Subtotal Watercourse Crossing Improvements					\$ 1,069,600.00

Item	Description	Unit	Quantity	Unit Price	Item Price
PART D: ROAD REINSTATEMENT					
2.29	40 mm HL3 Surface Course Asphalt	sq.m	200	\$ 35.00	\$ 7,000.00
2.30	Base Course Asphalt HL-4/8 (70 mm)	sq.m	200	\$ 25.00	\$ 5,000.00
2.31	Granular 'A' (150 mm)	sq.m	200	\$ 12.00	\$ 2,400.00
2.32	Granular 'B' (450 mm)	sq.m	200	\$ 24.00	\$ 4,800.00
2.33	Concrete Curb and Gutter	m	50	\$ 95.00	\$ 4,750.00
Subtotal Road Reinstatement					\$ 23,950.00
TOTAL STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					\$ 1,316,090.00
STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					
PART A: GENERAL WORKS					
3.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
3.02	Construction Access Mud Mat	ea	1	\$ 6,500.00	\$ 6,500.00
3.03	Heavy Duty Silt Fence	m	200	\$ 23.00	\$ 4,600.00
3.04	Flow Diversion - Install/Uninstall	LS	35	\$ 10,000.00	\$ 350,000.00
3.05	Flow Diversion - Operation and Maintenance	day	28	\$ 1,250.00	\$ 35,000.00
3.06	Dewatering	day	28	\$ 5,000.00	\$ 140,000.00
Subtotal General Works					\$ 551,100.00
PART B: REMOVALS / RELOCATIONS					
3.07	Utility Relocations (Hydro Poles, Etc.)	LS	1	\$ 50,000.00	\$ 50,000.00
3.08	Remove and Dispose Existing Rip Rap	sq.m	10	\$ 50.00	\$ 500.00
3.09	Relocate Existing Traffic Signs (Remove & Reinstall)	ea	2	\$ 350.00	\$ 700.00
3.10	Remove Existing Driveway	sq.m	155	\$ 15.00	\$ 2,325.00

Item	Description	Unit	Quantity	Unit Price	Item Price
3.11	Remove Existing Buildings	ea	1	\$ 25,000.00	\$ 25,000.00
Subtotal Removals / Relocations					\$ 78,525.00
PART C: WATERCOURSE IMPROVEMENTS					
3.12	Clearing and Grubbing	sq.m	810	\$ 25.00	\$ 20,250.00
3.13	Strip and Stockpile Topsoil	sq.m	810	\$ 13.00	\$ 10,530.00
3.14	Excavation and Grading	cu.m	1230	\$ 24.00	\$ 29,520.00
3.15	Geotechnical Sampling for Off-site Disposal	per sample	2	\$ 1,500.00	\$ 3,000.00
3.16	Remove and Dispose of Excess Material	cu.m	1230	\$ 50.00	\$ 61,500.00
3.17	Place and Fine Grade Topsoil (150 mm)	sq.m	810	\$ 11.00	\$ 8,910.00
3.18	Watercourse Improvements	m	50	\$ 2,000.00	\$ 100,000.00
3.19	Armour Stone Retaining Wall	sq.m	90	\$ 800.00	\$ 72,000.00
3.20	Armour Stone Reinforcement	m	24	\$ 400.00	\$ 9,600.00
3.21	Landscaping	sq.m	480	\$ 34.00	\$ 16,320.00
3.22	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	1230	\$ 100.00	\$ 123,000.00
Subtotal Watercourse Improvements					\$ 454,630.00
PART D: NEW TRANSPORTATION LINKAGE					
3.23	Clearing and Grubbing	sq.m	650	\$ 25.00	\$ 16,250.00
3.24	Strip and Stockpile Topsoil	sq.m	1770	\$ 13.00	\$ 23,010.00
3.25	Supply, Place, Compact Imported Fill	cu.m	700	\$ 35.00	\$ 24,500.00
3.26	Place and Fine Grade Topsoil (150 mm)	sq.m	955	\$ 11.00	\$ 10,505.00
3.27	Hydroseed	sq.m	955	\$ 2.00	\$ 1,910.00
3.28	Granular 'B' (450 mm)	sq.m	606	\$ 24.00	\$ 14,544.00

Item	Description	Unit	Quantity	Unit Price	Item Price
3.29	Granular 'A' (150 mm)	sq.m	606	\$ 12.00	\$ 7,272.00
3.30	Base Course Asphalt HL-4/8 (70 mm)	sq.m	490	\$ 25.00	\$ 12,250.00
3.31	40 mm HL3 Surface Course Asphalt	sq.m	490	\$ 35.00	\$ 17,150.00
3.32	Concrete Curb and Gutter	m	140	\$ 95.00	\$ 13,300.00
Subtotal New Transportation Linkage					\$ 140,691.00
TOTAL STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					\$ 1,224,946.00
STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					
PART A: GENERAL WORKS					
4.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
4.02	Heavy Duty Silt Fence	m	60	\$ 23.00	\$ 1,380.00
4.03	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
4.04	Flow Diversion - Operation and Maintenance	day	35	\$ 1,250.00	\$ 43,750.00
4.05	Dewatering	day	35	\$ 5,000.00	\$ 175,000.00
Subtotal General Works					\$ 245,130.00
PART B: REMOVALS / RELOCATIONS					
4.06	Remove Asphalt	sq.m	225	\$ 8.00	\$ 1,800.00
4.07	Remove Granular Road Base	sq.m	270	\$ 7.00	\$ 1,890.00
4.08	Remove Existing Concrete Curb and Gutter	m	57	\$ 36.00	\$ 2,052.00
4.09	Remove Existing CSP Culvert	m	14	\$ 50.00	\$ 700.00
4.10	Remove Existing Storm Sewer	m	35	\$ 65.00	\$ 2,275.00
4.11	Protect Underground Services	m	30	\$ 500.00	\$ 15,000.00
4.12	Remove Existing Maintenance Holes	ea	1	\$ 1,000.00	\$ 1,000.00

Item	Description	Unit	Quantity	Unit Price	Item Price
Subtotal Removals / Relocations					\$ 24,717.00
PART C: WATERCOURSE CROSSING IMPROVEMENTS					
4.13	Excavation and Grading	cu.m	315	\$ 24.00	\$ 7,560.00
4.14	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
4.15	Remove and Dispose of Excess Material	cu.m	315	\$ 50.00	\$ 15,750.00
4.16	Watercourse Improvements	m	15	\$ 2,000.00	\$ 30,000.00
4.17	Armour Stone Retaining Wall	sq.m	30	\$ 800.00	\$ 24,000.00
4.18	Armour Stone Reinforcement	m	30	\$ 400.00	\$ 12,000.00
4.19	Landscaping	sq.m	150	\$ 34.00	\$ 5,100.00
4.20	15 m Pedestrian Bridge	LS	1	\$ 225,000.00	\$ 225,000.00
4.21	Concrete Headwall - 375 mm Dia.	ea	1	\$ 9,500.00	\$ 9,500.00
4.22	375 mm Dia. Storm Sewer	m	35	\$ 375.00	\$ 13,125.00
4.23	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	320	\$ 100.00	\$ 32,000.00
Subtotal Watercourse Crossing Improvements					\$ 375,535.00
PART D: ROAD REINSTATEMENT					
4.24	40 mm HL3 Surface Course Asphalt	sq.m	225	\$ 35.00	\$ 7,875.00
4.25	Base Course Asphalt HL-4/8 (70 mm)	sq.m	225	\$ 25.00	\$ 5,625.00
4.26	Granular 'A' (150 mm)	sq.m	225	\$ 12.00	\$ 2,700.00
4.27	Granular 'B' (450 mm)	sq.m	225	\$ 24.00	\$ 5,400.00
4.28	Concrete Curb and Gutter	m	57	\$ 95.00	\$ 5,415.00
Subtotal Road Reinstatement					\$ 27,015.00

Item	Description	Unit	Quantity	Unit Price	Item Price
PART E: WATERCOURSE IMPROVEMENTS					
4.29	Clearing and Grubbing	sq.m	330	\$ 25.00	\$ 8,250.00
4.30	Strip and Stockpile Topsoil	sq.m	330	\$ 13.00	\$ 4,290.00
4.31	Excavation and Grading	cu.m	490	\$ 24.00	\$ 11,760.00
4.32	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
4.33	Remove and Dispose of Excess Material	cu.m	490	\$ 50.00	\$ 24,500.00
4.34	Place and Fine Grade Topsoil (150 mm)	sq.m	330	\$ 11.00	\$ 3,630.00
4.35	Watercourse Improvements	m	35	\$ 2,000.00	\$ 70,000.00
4.36	Armour Stone Retaining Wall	sq.m	40	\$ 800.00	\$ 32,000.00
4.37	Landscaping	sq.m	240	\$ 34.00	\$ 8,160.00
4.38	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	490	\$ 100.00	\$ 49,000.00
Subtotal Watercourse Improvements					\$ 213,090.00
TOTAL STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					\$ 885,487.00
SUMMARY					
STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					\$ 1,702,295.00
STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					\$ 1,316,090.00
STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					\$ 1,224,946.00
STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					\$ 885,487.00
SUBTOTAL STAGE 1 THROUGH 4 (2020 UNIT PRICES)					\$ 5,128,818.00

Item	Description	Unit	Quantity	Unit Price	Item Price
	CONSTRUCTION CONTIGENCY			30%	\$ 1,538,645.40
	ENGINEERING DESIGN FEE			20%	\$ 1,025,763.60
	CONTRACT ADMINISTRATION/CONSTRUCTION INSPECTION			10%	\$ 512,881.80
	TOTAL CONSTRUCTION COST ESTIMATE				\$ 8,206,108.80
PROPERTY ACQUISITION					
5.01	7 Brennan Ave.				\$ 800,000.00
5.02	199 The Boulevard (portion of)				\$ 100,000.00
	SUBTOTAL PROPERTY ACQUISITION				\$ 900,000.00
	ACQUISITION CONTINGENCY			30%	\$ 270,000.00
	TOTAL PROPERTY ACQUISITION				\$ 1,170,000.00
	TOTAL COST				\$ 9,376,108.80

WHISKEY CREEK AT MINETS POINT CLASS EA

City of Barrie

Project Cost Estimate

Project: 120114

Date: April 17, 2021

Alternative 6A: Remove Brennan Avenue and The Boulevard at Whiskey Creek

Item	Description	Unit	Quantity	Unit Price	Item Price
STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					
PART A: GENERAL WORKS					
1.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
1.02	Construction Access Mud Mat	ea	1	\$ 6,500.00	\$ 6,500.00
1.03	Heavy Duty Silt Fence	m	350	\$ 23.00	\$ 8,050.00
1.04	Turbidity Curtain	m	35	\$ 200.00	\$ 7,000.00
1.05	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
1.06	Flow Diversion - Operation and Maintenance	day	35	\$ 1,250.00	\$ 43,750.00
1.07	Dewatering	day	35	\$ 5,000.00	\$ 175,000.00
Subtotal General Works					\$ 265,300.00
PART B: REMOVALS / RELOCATIONS					
1.08	Utility Relocations (Hydro, Gas, Etc.)	LS	1	\$ 100,000.00	\$ 100,000.00
1.09	Remove and Dispose Existing Gabion Wall	sq.m	15	\$ 75.00	\$ 1,125.00
1.10	Relocate Sanitary Forcemain	m	50	\$ 1,000.00	\$ 50,000.00
1.11	Remove Asphalt	sq.m	510	\$ 8.00	\$ 4,080.00
1.12	Remove Granular Road Base	sq.m	610	\$ 7.00	\$ 4,270.00
1.13	Remove Existing Concrete Curb and Gutter	m	20	\$ 36.00	\$ 720.00

Item	Description	Unit	Quantity	Unit Price	Item Price
1.14	Relocate Park Sign	LS	1	\$ 500.00	\$ 500.00
1.15	Remove Light Pole	ea	3	\$ 500.00	\$ 1,500.00
1.16	Relocate Planter Bed	LS	1	\$ 500.00	\$ 500.00
1.17	Protect Underground Services	m	60	\$ 500.00	\$ 30,000.00
Subtotal Removals / Relocations					\$ 192,695.00
PART C: WATERCOURSE IMPROVEMENTS					
1.18	Clearing and Grubbing	sq.m	2250	\$ 25.00	\$ 56,250.00
1.19	Strip and Stockpile Topsoil	sq.m	2700	\$ 13.00	\$ 35,100.00
1.20	Excavation and Grading	cu.m	3240	\$ 24.00	\$ 77,760.00
1.21	Geotechnical Sampling for Off-site Disposal	per sample	4	\$ 1,500.00	\$ 6,000.00
1.22	Remove and Dispose of Excess Material	cu.m	3240	\$ 50.00	\$ 162,000.00
1.23	Place and Fine Grade Topsoil (150 mm)	sq.m	2700	\$ 11.00	\$ 29,700.00
1.24	Watercourse Improvements	m	145	\$ 2,000.00	\$ 290,000.00
1.25	Armour Stone Retaining Wall	sq.m	36	\$ 800.00	\$ 28,800.00
1.26	Armour Stone Reinforcement	m	13	\$ 400.00	\$ 5,200.00
1.27	Shoreline Protection	sq.m	125	\$ 400.00	\$ 50,000.00
1.28	Landscaping	sq.m	1400	\$ 34.00	\$ 47,600.00
1.29	1.5 m Chain Link Fence	m	80	\$ 150.00	\$ 12,000.00
1.30	1.8 m Wood Privacy Fence	m	260	\$ 400.00	\$ 104,000.00
1.31	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	3240	\$ 100.00	\$ 324,000.00
Subtotal Watercourse Improvements					\$ 1,228,410.00

Item	Description	Unit	Quantity	Unit Price	Item Price
PART D: ROAD WORKS (PARK ENTRANCE)					
1.32	Granular 'B' (450 mm)	sq.m	165	\$ 24.00	\$ 3,960.00
1.33	Granular 'A' (150 mm)	sq.m	165	\$ 12.00	\$ 1,980.00
1.34	Base Course Asphalt HL-4/8 (70 mm)	sq.m	150	\$ 25.00	\$ 3,750.00
1.35	40 mm HL3 Surface Course Asphalt	sq.m	150	\$ 35.00	\$ 5,250.00
1.36	Concrete Curb and Gutter	m	10	\$ 95.00	\$ 950.00
Subtotal Road Works					\$ 15,890.00
TOTAL STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					\$ 1,702,295.00
STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					
PART A: GENERAL WORKS					
2.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
2.02	Heavy Duty Silt Fence	m	20	\$ 23.00	\$ 460.00
2.03	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
2.04	Flow Diversion - Operation and Maintenance	day	28	\$ 1,250.00	\$ 35,000.00
2.05	Dewatering	day	28	\$ 5,000.00	\$ 140,000.00
Subtotal General Works					\$ 200,460.00
PART B: REMOVALS / RELOCATIONS					
2.06	Remove Asphalt	sq.m	200	\$ 8.00	\$ 1,600.00
2.07	Remove Granular Road Base	sq.m	240	\$ 7.00	\$ 1,680.00
2.08	Remove Existing Concrete Curb and Gutter	m	50	\$ 36.00	\$ 1,800.00
2.09	Remove Existing Conc. Box Culvert	m	14	\$ 1,000.00	\$ 14,000.00
2.10	Remove Existing Storm Sewer	m	20	\$ 65.00	\$ 1,300.00

Item	Description	Unit	Quantity	Unit Price	Item Price
2.11	Remove Existing Maintenance Holes	ea	1	\$ 1,000.00	\$ 1,000.00
2.12	Relocate Existing Traffic Signs (Remove & Reinstall)	ea	2	\$ 350.00	\$ 700.00
Subtotal Removals / Relocations					\$ 22,080.00
PART C: WATERCOURSE CROSSING IMPROVEMENTS					
2.13	Excavation and Grading	cu.m	415	\$ 24.00	\$ 9,960.00
2.14	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
2.15	Remove and Dispose of Excess Material	cu.m	415	\$ 50.00	\$ 20,750.00
2.16	Watercourse Improvements	m	15	\$ 2,000.00	\$ 30,000.00
2.17	Armour Stone Retaining Wall	sq.m	30	\$ 800.00	\$ 24,000.00
2.18	Armour Stone Reinforcement	m	30	\$ 400.00	\$ 12,000.00
2.19	Landscaping	sq.m	150	\$ 34.00	\$ 5,100.00
2.20	25 m Pedestrian Bridge	LS	1	\$ 375,000.00	\$ 375,000.00
2.21	Concrete Headwall - 375 mm Dia.	ea	1	\$ 9,500.00	\$ 9,500.00
2.22	375 mm Dia. Storm Sewer	m	20	\$ 375.00	\$ 7,500.00
2.23	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	415	\$ 100.00	\$ 41,500.00
Subtotal Watercourse Crossing Improvements					\$ 536,810.00
TOTAL STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					\$ 759,350.00
STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					
PART A: GENERAL WORKS					
3.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
3.02	Construction Access Mud Mat	ea	1	\$ 6,500.00	\$ 6,500.00
3.03	Heavy Duty Silt Fence	m	200	\$ 23.00	\$ 4,600.00

Item	Description	Unit	Quantity	Unit Price	Item Price
3.04	Flow Diversion - Install/Uninstall	LS	35	\$ 10,000.00	\$ 350,000.00
3.05	Flow Diversion - Operation and Maintenance	day	28	\$ 1,250.00	\$ 35,000.00
3.06	Dewatering	day	28	\$ 5,000.00	\$ 140,000.00
Subtotal General Works					\$ 551,100.00
PART B: REMOVALS / RELOCATIONS					
3.07	Utility Relocations (Hydro Poles, Etc.)	LS	1	\$ 50,000.00	\$ 50,000.00
3.08	Remove and Dispose Existing Rip Rap	sq.m	10	\$ 50.00	\$ 500.00
3.09	Relocate Existing Traffic Signs (Remove & Reinstall)	ea	2	\$ 350.00	\$ 700.00
3.10	Remove Existing Driveway	sq.m	155	\$ 15.00	\$ 2,325.00
3.11	Remove Existing Buildings	ea	1	\$ 25,000.00	\$ 25,000.00
Subtotal Removals / Relocations					\$ 78,525.00
PART C: WATERCOURSE IMPROVEMENTS					
3.12	Clearing and Grubbing	sq.m	810	\$ 25.00	\$ 20,250.00
3.13	Strip and Stockpile Topsoil	sq.m	810	\$ 13.00	\$ 10,530.00
3.14	Excavation and Grading	cu.m	1230	\$ 24.00	\$ 29,520.00
3.15	Geotechnical Sampling for Off-site Disposal	per sample	2	\$ 1,500.00	\$ 3,000.00
3.16	Remove and Dispose of Excess Material	cu.m	1230	\$ 50.00	\$ 61,500.00
3.17	Place and Fine Grade Topsoil (150 mm)	sq.m	810	\$ 11.00	\$ 8,910.00
3.18	Watercourse Improvements	m	50	\$ 2,000.00	\$ 100,000.00
3.19	Armour Stone Retaining Wall	sq.m	90	\$ 800.00	\$ 72,000.00
3.20	Armour Stone Reinforcement	m	24	\$ 400.00	\$ 9,600.00
3.21	Landscaping	sq.m	480	\$ 34.00	\$ 16,320.00

Item	Description	Unit	Quantity	Unit Price	Item Price
3.22	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	1230	\$ 100.00	\$ 123,000.00
Subtotal Watercourse Improvements					\$ 454,630.00
TOTAL STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					\$ 1,084,255.00
STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					
PART A: GENERAL WORKS					
4.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
4.02	Heavy Duty Silt Fence	m	60	\$ 23.00	\$ 1,380.00
4.03	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
4.04	Flow Diversion - Operation and Maintenance	day	35	\$ 1,250.00	\$ 43,750.00
4.05	Dewatering	day	35	\$ 5,000.00	\$ 175,000.00
Subtotal General Works					\$ 245,130.00
PART B: REMOVALS / RELOCATIONS					
4.06	Remove Asphalt	sq.m	225	\$ 8.00	\$ 1,800.00
4.07	Remove Granular Road Base	sq.m	270	\$ 7.00	\$ 1,890.00
4.08	Remove Existing Concrete Curb and Gutter	m	57	\$ 36.00	\$ 2,052.00
4.09	Remove Existing CSP Culvert	m	14	\$ 50.00	\$ 700.00
4.10	Remove Existing Storm Sewer	m	35	\$ 65.00	\$ 2,275.00
4.11	Protect Underground Services	m	30	\$ 500.00	\$ 15,000.00
4.12	Remove Existing Maintenance Holes	ea	1	\$ 1,000.00	\$ 1,000.00
Subtotal Removals / Relocations					\$ 24,717.00

Item	Description	Unit	Quantity	Unit Price	Item Price
PART C: WATERCOURSE CROSSING IMPROVEMENTS					
4.13	Excavation and Grading	cu.m	315	\$ 24.00	\$ 7,560.00
4.14	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
4.15	Remove and Dispose of Excess Material	cu.m	315	\$ 50.00	\$ 15,750.00
4.16	Watercourse Improvements	m	15	\$ 2,000.00	\$ 30,000.00
4.17	Armour Stone Retaining Wall	sq.m	30	\$ 800.00	\$ 24,000.00
4.18	Armour Stone Reinforcement	m	30	\$ 400.00	\$ 12,000.00
4.19	Landscaping	sq.m	150	\$ 34.00	\$ 5,100.00
4.20	15 m Pedestrian Bridge	LS	1	\$ 225,000.00	\$ 225,000.00
4.21	Concrete Headwall - 375 mm Dia.	ea	1	\$ 9,500.00	\$ 9,500.00
4.22	375 mm Dia. Storm Sewer	m	35	\$ 375.00	\$ 13,125.00
4.23	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	315	\$ 100.00	\$ 31,500.00
Subtotal Watercourse Crossing Improvements					\$ 375,035.00
PART E: WATERCOURSE IMPROVEMENTS					
4.24	Clearing and Grubbing	sq.m	330	\$ 25.00	\$ 8,250.00
4.25	Strip and Stockpile Topsoil	sq.m	330	\$ 13.00	\$ 4,290.00
4.26	Excavation and Grading	cu.m	515	\$ 24.00	\$ 12,360.00
4.27	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
4.28	Remove and Dispose of Excess Material	cu.m	515	\$ 50.00	\$ 25,750.00
4.29	Place and Fine Grade Topsoil (150 mm)	sq.m	330	\$ 11.00	\$ 3,630.00
4.30	Watercourse Improvements	m	35	\$ 2,000.00	\$ 70,000.00
4.31	Armour Stone Retaining Wall	sq.m	40	\$ 800.00	\$ 32,000.00

Item	Description	Unit	Quantity	Unit Price	Item Price
4.32	Landscaping	sq.m	240	\$ 34.00	\$ 8,160.00
4.33	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	515	\$ 100.00	\$ 51,500.00
Subtotal Watercourse Improvements					\$ 217,440.00
TOTAL STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					\$ 862,322.00
SUMMARY					
STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					\$ 1,702,295.00
STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					\$ 759,350.00
STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					\$ 1,084,255.00
STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					\$ 862,322.00
SUBTOTAL STAGE 1 THROUGH 4 (2020 UNIT PRICES)					\$ 4,408,222.00
CONSTRUCTION CONTINGENCY				30%	\$ 1,322,466.60
ENGINEERING DESIGN FEE				20%	\$ 881,644.40
CONTRACT ADMINISTRATION/CONSTRUCTION INSPECTION				10%	\$ 440,822.20
TOTAL CONSTRUCTION COST ESTIMATE					\$ 7,053,155.20
PROPERTY ACQUISITION					
5.01	7 Brennan Ave.				\$ 800,000.00
5.02	199 The Boulevard (portion of)				\$ 50,000.00
SUBTOTAL PROPERTY ACQUISITION					\$ 850,000.00
ACQUISITION CONTINGENCY				30%	\$ 255,000.00
TOTAL PROPERTY ACQUISITION					\$ 1,105,000.00
TOTAL COST					\$ 8,158,155.20

WHISKEY CREEK AT MINETS POINT CLASS EA

City of Barrie

Project Cost Estimate

Project: 120114

Date: April 17, 2021

Alternative 6B: Remove Brennan Avenue and The Boulevard at Whiskey Creek and Connect Brennan Avenue and The Boulevard

Item	Description	Unit	Quantity	Unit Price	Item Price
STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					
PART A: GENERAL WORKS					
1.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
1.02	Construction Access Mud Mat	ea	1	\$ 6,500.00	\$ 6,500.00
1.03	Heavy Duty Silt Fence	m	350	\$ 23.00	\$ 8,050.00
1.04	Turbidity Curtain	m	35	\$ 200.00	\$ 7,000.00
1.05	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
1.06	Flow Diversion - Operation and Maintenance	day	35	\$ 1,250.00	\$ 43,750.00
1.07	Dewatering	day	35	\$ 5,000.00	\$ 175,000.00
Subtotal General Works					\$ 265,300.00
PART B: REMOVALS / RELOCATIONS					
1.08	Utility Relocations (Hydro, Gas, Etc.)	LS	1	\$ 100,000.00	\$ 100,000.00
1.09	Remove and Dispose Existing Gabion Wall	sq.m	15	\$ 75.00	\$ 1,125.00
1.10	Relocate Sanitary Forcemain	m	50	\$ 1,000.00	\$ 50,000.00
1.11	Remove Asphalt	sq.m	510	\$ 8.00	\$ 4,080.00
1.12	Remove Granular Road Base	sq.m	610	\$ 7.00	\$ 4,270.00
1.13	Remove Existing Concrete Curb and Gutter	m	20	\$ 36.00	\$ 720.00

Item	Description	Unit	Quantity	Unit Price	Item Price
1.14	Relocate Park Sign	LS	1	\$ 500.00	\$ 500.00
1.15	Remove Light Pole	ea	3	\$ 500.00	\$ 1,500.00
1.16	Relocate Planter Bed	LS	1	\$ 500.00	\$ 500.00
1.17	Protect Underground Services	m	60	\$ 500.00	\$ 30,000.00
Subtotal Removals / Relocations					\$ 192,695.00
PART C: WATERCOURSE IMPROVEMENTS					
1.18	Clearing and Grubbing	sq.m	2250	\$ 25.00	\$ 56,250.00
1.19	Strip and Stockpile Topsoil	sq.m	2700	\$ 13.00	\$ 35,100.00
1.20	Excavation and Grading	cu.m	3240	\$ 24.00	\$ 77,760.00
1.21	Geotechnical Sampling for Off-site Disposal	per sample	4	\$ 1,500.00	\$ 6,000.00
1.22	Remove and Dispose of Excess Material	cu.m	3240	\$ 50.00	\$ 162,000.00
1.23	Place and Fine Grade Topsoil (150 mm)	sq.m	2700	\$ 11.00	\$ 29,700.00
1.24	Watercourse Improvements	m	145	\$ 2,000.00	\$ 290,000.00
1.25	Armour Stone Retaining Wall	sq.m	36	\$ 800.00	\$ 28,800.00
1.26	Armour Stone Reinforcement	m	13	\$ 400.00	\$ 5,200.00
1.27	Shoreline Protection	sq.m	125	\$ 400.00	\$ 50,000.00
1.28	Landscaping	sq.m	1400	\$ 34.00	\$ 47,600.00
1.29	1.5 m Chain Link Fence	m	80	\$ 150.00	\$ 12,000.00
1.30	1.8 m Wood Privacy Fence	m	260	\$ 400.00	\$ 104,000.00
1.31	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	3240	\$ 100.00	\$ 324,000.00
Subtotal Watercourse Improvements					\$ 1,228,410.00

Item	Description	Unit	Quantity	Unit Price	Item Price
PART D: ROAD WORKS (PARK ENTRANCE)					
1.32	Granular 'B' (450 mm)	sq.m	165	\$ 24.00	\$ 3,960.00
1.33	Granular 'A' (150 mm)	sq.m	165	\$ 12.00	\$ 1,980.00
1.34	Base Course Asphalt HL-4/8 (70 mm)	sq.m	150	\$ 25.00	\$ 3,750.00
1.35	40 mm HL3 Surface Course Asphalt	sq.m	150	\$ 35.00	\$ 5,250.00
1.36	Concrete Curb and Gutter	m	10	\$ 95.00	\$ 950.00
Subtotal Road Works					\$ 15,890.00
TOTAL STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					\$ 1,702,295.00
STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					
PART A: GENERAL WORKS					
2.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
2.02	Heavy Duty Silt Fence	m	20	\$ 23.00	\$ 460.00
2.03	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
2.04	Flow Diversion - Operation and Maintenance	day	28	\$ 1,250.00	\$ 35,000.00
2.05	Dewatering	day	28	\$ 5,000.00	\$ 140,000.00
Subtotal General Works					\$ 200,460.00
PART B: REMOVALS / RELOCATIONS					
2.06	Remove Asphalt	sq.m	200	\$ 8.00	\$ 1,600.00
2.07	Remove Granular Road Base	sq.m	240	\$ 7.00	\$ 1,680.00
2.08	Remove Existing Concrete Curb and Gutter	m	50	\$ 36.00	\$ 1,800.00
2.09	Remove Existing Conc. Box Culvert	m	14	\$ 1,000.00	\$ 14,000.00
2.10	Remove Existing Storm Sewer	m	20	\$ 65.00	\$ 1,300.00

Item	Description	Unit	Quantity	Unit Price	Item Price
2.11	Remove Existing Maintenance Holes	ea	1	\$ 1,000.00	\$ 1,000.00
2.12	Relocate Existing Traffic Signs (Remove & Reinstall)	ea	2	\$ 350.00	\$ 700.00
Subtotal Removals / Relocations					\$ 22,080.00
PART C: WATERCOURSE CROSSING IMPROVEMENTS					
2.13	Excavation and Grading	cu.m	415	\$ 24.00	\$ 9,960.00
2.14	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
2.15	Remove and Dispose of Excess Material	cu.m	415	\$ 50.00	\$ 20,750.00
2.16	Watercourse Improvements	m	15	\$ 2,000.00	\$ 30,000.00
2.17	Armour Stone Retaining Wall	sq.m	30	\$ 800.00	\$ 24,000.00
2.18	Armour Stone Reinforcement	m	30	\$ 400.00	\$ 12,000.00
2.19	Landscaping	sq.m	150	\$ 34.00	\$ 5,100.00
2.20	25 m Pedestrian Bridge	LS	1	\$ 375,000.00	\$ 375,000.00
2.21	Concrete Headwall - 375 mm Dia.	ea	1	\$ 9,500.00	\$ 9,500.00
2.22	375 mm Dia. Storm Sewer	m	20	\$ 375.00	\$ 7,500.00
2.23	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	415	\$ 100.00	\$ 41,500.00
Subtotal Watercourse Crossing Improvements					\$ 536,810.00
TOTAL STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					\$ 759,350.00
STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					
PART A: GENERAL WORKS					
3.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
3.02	Construction Access Mud Mat	ea	1	\$ 6,500.00	\$ 6,500.00
3.03	Heavy Duty Silt Fence	m	200	\$ 23.00	\$ 4,600.00

Item	Description	Unit	Quantity	Unit Price	Item Price
3.04	Flow Diversion - Install/Uninstall	LS	35	\$ 10,000.00	\$ 350,000.00
3.05	Flow Diversion - Operation and Maintenance	day	28	\$ 1,250.00	\$ 35,000.00
3.06	Dewatering	day	28	\$ 5,000.00	\$ 140,000.00
Subtotal General Works					\$ 551,100.00
PART B: REMOVALS / RELOCATIONS					
3.07	Utility Relocations (Hydro Poles, Etc.)	LS	1	\$ 50,000.00	\$ 50,000.00
3.08	Remove and Dispose Existing Rip Rap	sq.m	10	\$ 50.00	\$ 500.00
3.09	Relocate Existing Traffic Signs (Remove & Reinstall)	ea	2	\$ 350.00	\$ 700.00
3.10	Remove Existing Driveway	sq.m	155	\$ 15.00	\$ 2,325.00
3.11	Remove Existing Buildings	ea	1	\$ 25,000.00	\$ 25,000.00
Subtotal Removals / Relocations					\$ 78,525.00
PART C: WATERCOURSE IMPROVEMENTS					
3.12	Clearing and Grubbing	sq.m	810	\$ 25.00	\$ 20,250.00
3.13	Strip and Stockpile Topsoil	sq.m	810	\$ 13.00	\$ 10,530.00
3.14	Excavation and Grading	cu.m	1230	\$ 24.00	\$ 29,520.00
3.15	Geotechnical Sampling for Off-site Disposal	per sample	2	\$ 1,500.00	\$ 3,000.00
3.16	Remove and Dispose of Excess Material	cu.m	1230	\$ 50.00	\$ 61,500.00
3.17	Place and Fine Grade Topsoil (150 mm)	sq.m	810	\$ 11.00	\$ 8,910.00
3.18	Watercourse Improvements	m	50	\$ 2,000.00	\$ 100,000.00
3.19	Armour Stone Retaining Wall	sq.m	90	\$ 800.00	\$ 72,000.00
3.20	Armour Stone Reinforcement	m	24	\$ 400.00	\$ 9,600.00
3.21	Landscaping	sq.m	480	\$ 34.00	\$ 16,320.00

Item	Description	Unit	Quantity	Unit Price	Item Price
3.22	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	1230	\$ 100.00	\$ 123,000.00
Subtotal Watercourse Improvements					\$ 454,630.00
PART D: NEW TRANSPORTATION LINKAGE					
3.23	Clearing and Grubbing	sq.m	650	\$ 25.00	\$ 16,250.00
3.24	Strip and Stockpile Topsoil	sq.m	1770	\$ 13.00	\$ 23,010.00
3.25	Supply, Place, Compact Imported Fill	cu.m	700	\$ 35.00	\$ 24,500.00
3.26	Place and Fine Grade Topsoil (150 mm)	sq.m	955	\$ 11.00	\$ 10,505.00
3.27	Hydroseed	sq.m	955	\$ 2.00	\$ 1,910.00
3.28	Granular 'B' (450 mm)	sq.m	606	\$ 24.00	\$ 14,544.00
3.29	Granular 'A' (150 mm)	sq.m	606	\$ 12.00	\$ 7,272.00
3.30	Base Course Asphalt HL-4/8 (70 mm)	sq.m	490	\$ 25.00	\$ 12,250.00
3.31	40 mm HL3 Surface Course Asphalt	sq.m	490	\$ 35.00	\$ 17,150.00
3.32	Concrete Curb and Gutter	m	140	\$ 95.00	\$ 13,300.00
Subtotal New Transportation Linkage					\$ 140,691.00
TOTAL STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					\$ 1,224,946.00
STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					
PART A: GENERAL WORKS					
4.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
4.02	Heavy Duty Silt Fence	m	60	\$ 23.00	\$ 1,380.00
4.03	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
4.04	Flow Diversion - Operation and Maintenance	day	35	\$ 1,250.00	\$ 43,750.00
4.05	Dewatering	day	35	\$ 5,000.00	\$ 175,000.00

Item	Description	Unit	Quantity	Unit Price	Item Price
Subtotal General Works					\$ 245,130.00
PART B: REMOVALS / RELOCATIONS					
4.06	Remove Asphalt	sq.m	225	\$ 8.00	\$ 1,800.00
4.07	Remove Granular Road Base	sq.m	270	\$ 7.00	\$ 1,890.00
4.08	Remove Existing Concrete Curb and Gutter	m	57	\$ 36.00	\$ 2,052.00
4.09	Remove Existing CSP Culvert	m	14	\$ 50.00	\$ 700.00
4.10	Remove Existing Storm Sewer	m	35	\$ 65.00	\$ 2,275.00
4.11	Protect Underground Services	m	30	\$ 500.00	\$ 15,000.00
4.12	Remove Existing Maintenance Holes	ea	1	\$ 1,000.00	\$ 1,000.00
Subtotal Removals / Relocations					\$ 24,717.00
PART C: WATERCOURSE CROSSING IMPROVEMENTS					
4.13	Excavation and Grading	cu.m	315	\$ 24.00	\$ 7,560.00
4.14	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
4.15	Remove and Dispose of Excess Material	cu.m	315	\$ 50.00	\$ 15,750.00
4.16	Watercourse Improvements	m	15	\$ 2,000.00	\$ 30,000.00
4.17	Armour Stone Retaining Wall	sq.m	30	\$ 800.00	\$ 24,000.00
4.18	Armour Stone Reinforcement	m	30	\$ 400.00	\$ 12,000.00
4.19	Landscaping	sq.m	150	\$ 34.00	\$ 5,100.00
4.20	15 m Pedestrian Bridge	LS	1	\$ 225,000.00	\$ 225,000.00
4.21	Concrete Headwall - 375 mm Dia.	ea	1	\$ 9,500.00	\$ 9,500.00
4.22	375 mm Dia. Storm Sewer	m	35	\$ 375.00	\$ 13,125.00
4.23	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	315	\$ 100.00	\$ 31,500.00

Item	Description	Unit	Quantity	Unit Price	Item Price
Subtotal Watercourse Crossing Improvements					\$ 375,035.00
PART E: WATERCOURSE IMPROVEMENTS					
4.24	Clearing and Grubbing	sq.m	330	\$ 25.00	\$ 8,250.00
4.25	Strip and Stockpile Topsoil	sq.m	330	\$ 13.00	\$ 4,290.00
4.26	Excavation and Grading	cu.m	515	\$ 24.00	\$ 12,360.00
4.27	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
4.28	Remove and Dispose of Excess Material	cu.m	515	\$ 50.00	\$ 25,750.00
4.29	Place and Fine Grade Topsoil (150 mm)	sq.m	330	\$ 11.00	\$ 3,630.00
4.30	Watercourse Improvements	m	35	\$ 2,000.00	\$ 70,000.00
4.31	Armour Stone Retaining Wall	sq.m	40	\$ 800.00	\$ 32,000.00
4.32	Landscaping	sq.m	240	\$ 34.00	\$ 8,160.00
4.33	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	515	\$ 100.00	\$ 51,500.00
Subtotal Watercourse Improvements					\$ 217,440.00
TOTAL STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					\$ 862,322.00
SUMMARY					
STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					\$ 1,702,295.00
STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					\$ 759,350.00
STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					\$ 1,224,946.00
STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					\$ 862,322.00
SUBTOTAL STAGE 1 THROUGH 4 (2020 UNIT PRICES)					\$ 4,548,913.00

Item	Description	Unit	Quantity	Unit Price	Item Price
	CONSTRUCTION CONTIGENCY			30%	\$ 1,364,673.90
	ENGINEERING DESIGN FEE			20%	\$ 909,782.60
	CONTRACT ADMINISTRATION/CONSTRUCTION INSPECTION			10%	\$ 454,891.30
	TOTAL CONSTRUCTION COST ESTIMATE				\$ 7,278,260.80
PROPERTY ACQUISITION					
5.01	7 Brennan Ave.				\$ 800,000.00
5.02	199 The Boulevard (portion of)				\$ 100,000.00
	SUBTOTAL PROPERTY ACQUISITION				\$ 900,000.00
	ACQUISITION CONTINGENCY			30%	\$ 270,000.00
	TOTAL PROPERTY ACUISITION				\$ 1,170,000.00
	TOTAL COST				\$ 8,448,260.80

WHISKEY CREEK AT MINETS POINT CLASS EA

City of Barrie

Project Cost Estimate

Project: 120114

Date: April 17, 2021

Alternative 6C: Remove Brennan Avenue and The Boulevard at Whiskey Creek and Connect Brennan Avenue and The Boulevard and New Connection to Hurst Drive

Item	Description	Unit	Quantity	Unit Price	Item Price
STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					
PART A: GENERAL WORKS					
1.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
1.02	Construction Access Mud Mat	ea	1	\$ 6,500.00	\$ 6,500.00
1.03	Heavy Duty Silt Fence	m	350	\$ 23.00	\$ 8,050.00
1.04	Turbidity Curtain	m	35	\$ 200.00	\$ 7,000.00
1.05	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
1.06	Flow Diversion - Operation and Maintenance	day	35	\$ 1,250.00	\$ 43,750.00
1.07	Dewatering	day	35	\$ 5,000.00	\$ 175,000.00
Subtotal General Works					\$ 265,300.00
PART B: REMOVALS / RELOCATIONS					
1.08	Utility Relocations (Hydro, Gas, Etc.)	LS	1	\$ 100,000.00	\$ 100,000.00
1.09	Remove and Dispose Existing Gabion Wall	sq.m	15	\$ 75.00	\$ 1,125.00
1.10	Relocate Sanitary Forcemain	m	50	\$ 1,000.00	\$ 50,000.00
1.11	Remove Asphalt	sq.m	510	\$ 8.00	\$ 4,080.00
1.12	Remove Granular Road Base	sq.m	610	\$ 7.00	\$ 4,270.00
1.13	Remove Existing Concrete Curb and Gutter	m	20	\$ 36.00	\$ 720.00

Item	Description	Unit	Quantity	Unit Price	Item Price
1.14	Relocate Park Sign	LS	1	\$ 500.00	\$ 500.00
1.15	Remove Light Pole	ea	3	\$ 500.00	\$ 1,500.00
1.16	Relocate Planter Bed	LS	1	\$ 500.00	\$ 500.00
1.17	Protect Underground Services	m	60	\$ 500.00	\$ 30,000.00
Subtotal Removals / Relocations					\$ 192,695.00
PART C: WATERCOURSE IMPROVEMENTS					
1.18	Clearing and Grubbing	sq.m	2250	\$ 25.00	\$ 56,250.00
1.19	Strip and Stockpile Topsoil	sq.m	2700	\$ 13.00	\$ 35,100.00
1.20	Excavation and Grading	cu.m	3240	\$ 24.00	\$ 77,760.00
1.21	Geotechnical Sampling for Off-site Disposal	per sample	4	\$ 1,500.00	\$ 6,000.00
1.22	Remove and Dispose of Excess Material	cu.m	3240	\$ 50.00	\$ 162,000.00
1.23	Place and Fine Grade Topsoil (150 mm)	sq.m	2700	\$ 11.00	\$ 29,700.00
1.24	Watercourse Improvements	m	145	\$ 2,000.00	\$ 290,000.00
1.25	Armour Stone Retaining Wall	sq.m	36	\$ 800.00	\$ 28,800.00
1.26	Armour Stone Reinforcement	m	13	\$ 400.00	\$ 5,200.00
1.27	Shoreline Protection	sq.m	125	\$ 400.00	\$ 50,000.00
1.28	Landscaping	sq.m	1400	\$ 34.00	\$ 47,600.00
1.29	1.5 m Chain Link Fence	m	80	\$ 150.00	\$ 12,000.00
1.30	1.8 m Wood Privacy Fence	m	260	\$ 400.00	\$ 104,000.00
1.31	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	3240	\$ 100.00	\$ 324,000.00
Subtotal Watercourse Improvements					\$ 1,228,410.00

Item	Description	Unit	Quantity	Unit Price	Item Price
PART D: ROAD WORKS (PARK ENTRANCE)					
1.32	Granular 'B' (450 mm)	sq.m	165	\$ 24.00	\$ 3,960.00
1.33	Granular 'A' (150 mm)	sq.m	165	\$ 12.00	\$ 1,980.00
1.34	Base Course Asphalt HL-4/8 (70 mm)	sq.m	150	\$ 25.00	\$ 3,750.00
1.35	40 mm HL3 Surface Course Asphalt	sq.m	150	\$ 35.00	\$ 5,250.00
1.36	Concrete Curb and Gutter	m	10	\$ 95.00	\$ 950.00
Subtotal Road Works					\$ 15,890.00
TOTAL STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.					\$ 1,702,295.00
STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					
PART A: GENERAL WORKS					
2.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
2.02	Heavy Duty Silt Fence	m	20	\$ 23.00	\$ 460.00
2.03	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
2.04	Flow Diversion - Operation and Maintenance	day	28	\$ 1,250.00	\$ 35,000.00
2.05	Dewatering	day	28	\$ 5,000.00	\$ 140,000.00
Subtotal General Works					\$ 200,460.00
PART B: REMOVALS / RELOCATIONS					
2.06	Remove Asphalt	sq.m	200	\$ 8.00	\$ 1,600.00
2.07	Remove Granular Road Base	sq.m	240	\$ 7.00	\$ 1,680.00
2.08	Remove Existing Concrete Curb and Gutter	m	50	\$ 36.00	\$ 1,800.00
2.09	Remove Existing Conc. Box Culvert	m	14	\$ 1,000.00	\$ 14,000.00
2.10	Remove Existing Storm Sewer	m	20	\$ 65.00	\$ 1,300.00

Item	Description	Unit	Quantity	Unit Price	Item Price
2.11	Remove Existing Maintenance Holes	ea	1	\$ 1,000.00	\$ 1,000.00
2.12	Relocate Existing Traffic Signs (Remove & Reinstall)	ea	2	\$ 350.00	\$ 700.00
Subtotal Removals / Relocations					\$ 22,080.00
PART C: WATERCOURSE CROSSING IMPROVEMENTS					
2.13	Excavation and Grading	cu.m	415	\$ 24.00	\$ 9,960.00
2.14	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
2.15	Remove and Dispose of Excess Material	cu.m	415	\$ 50.00	\$ 20,750.00
2.16	Watercourse Improvements	m	15	\$ 2,000.00	\$ 30,000.00
2.17	Armour Stone Retaining Wall	sq.m	30	\$ 800.00	\$ 24,000.00
2.18	Armour Stone Reinforcement	m	30	\$ 400.00	\$ 12,000.00
2.19	Landscaping	sq.m	150	\$ 34.00	\$ 5,100.00
2.20	25 m Pedestrian Bridge	LS	1	\$ 375,000.00	\$ 375,000.00
2.21	Concrete Headwall - 375 mm Dia.	ea	1	\$ 9,500.00	\$ 9,500.00
2.22	375 mm Dia. Storm Sewer	m	20	\$ 375.00	\$ 7,500.00
2.23	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	415	\$ 100.00	\$ 41,500.00
Subtotal Watercourse Crossing Improvements					\$ 536,810.00
TOTAL STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.					\$ 759,350.00
STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					
PART A: GENERAL WORKS					
3.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
3.02	Construction Access Mud Mat	ea	1	\$ 6,500.00	\$ 6,500.00
3.03	Heavy Duty Silt Fence	m	200	\$ 23.00	\$ 4,600.00

Item	Description	Unit	Quantity	Unit Price	Item Price
3.04	Flow Diversion - Install/Uninstall	LS	35	\$ 10,000.00	\$ 350,000.00
3.05	Flow Diversion - Operation and Maintenance	day	28	\$ 1,250.00	\$ 35,000.00
3.06	Dewatering	day	28	\$ 5,000.00	\$ 140,000.00
Subtotal General Works					\$ 551,100.00
PART B: REMOVALS / RELOCATIONS					
3.07	Utility Relocations (Hydro Poles, Etc.)	LS	1	\$ 50,000.00	\$ 50,000.00
3.08	Remove and Dispose Existing Rip Rap	sq.m	10	\$ 50.00	\$ 500.00
3.09	Relocate Existing Traffic Signs (Remove & Reinstall)	ea	2	\$ 350.00	\$ 700.00
3.10	Remove Existing Driveway	sq.m	155	\$ 15.00	\$ 2,325.00
3.11	Remove Existing Buildings	ea	1	\$ 25,000.00	\$ 25,000.00
Subtotal Removals / Relocations					\$ 78,525.00
PART C: WATERCOURSE IMPROVEMENTS					
3.12	Clearing and Grubbing	sq.m	810	\$ 25.00	\$ 20,250.00
3.13	Strip and Stockpile Topsoil	sq.m	810	\$ 13.00	\$ 10,530.00
3.14	Excavation and Grading	cu.m	1230	\$ 24.00	\$ 29,520.00
3.15	Geotechnical Sampling for Off-site Disposal	per sample	2	\$ 1,500.00	\$ 3,000.00
3.16	Remove and Dispose of Excess Material	cu.m	1230	\$ 50.00	\$ 61,500.00
3.17	Place and Fine Grade Topsoil (150 mm)	sq.m	810	\$ 11.00	\$ 8,910.00
3.18	Watercourse Improvements	m	50	\$ 2,000.00	\$ 100,000.00
3.19	Armour Stone Retaining Wall	sq.m	90	\$ 800.00	\$ 72,000.00
3.20	Armour Stone Reinforcement	m	24	\$ 400.00	\$ 9,600.00
3.21	Landscaping	sq.m	480	\$ 34.00	\$ 16,320.00

Item	Description	Unit	Quantity	Unit Price	Item Price
3.22	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	1230	\$ 100.00	\$ 123,000.00
Subtotal Watercourse Improvements					\$ 454,630.00
PART D: NEW TRANSPORTATION LINKAGE					
3.23	Clearing and Grubbing	sq.m	650	\$ 25.00	\$ 16,250.00
3.24	Strip and Stockpile Topsoil	sq.m	1770	\$ 13.00	\$ 23,010.00
3.25	Supply, Place, Compact Imported Fill	cu.m	700	\$ 35.00	\$ 24,500.00
3.26	Place and Fine Grade Topsoil (150 mm)	sq.m	955	\$ 11.00	\$ 10,505.00
3.27	Hydroseed	sq.m	955	\$ 2.00	\$ 1,910.00
3.28	Granular 'B' (450 mm)	sq.m	606	\$ 24.00	\$ 14,544.00
3.29	Granular 'A' (150 mm)	sq.m	606	\$ 12.00	\$ 7,272.00
3.30	Base Course Asphalt HL-4/8 (70 mm)	sq.m	490	\$ 25.00	\$ 12,250.00
3.31	40 mm HL3 Surface Course Asphalt	sq.m	490	\$ 35.00	\$ 17,150.00
3.32	Concrete Curb and Gutter	m	140	\$ 95.00	\$ 13,300.00
Subtotal New Transportation Linkage					\$ 140,691.00
TOTAL STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD					\$ 1,224,946.00
STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					
PART A: GENERAL WORKS					
4.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
4.02	Heavy Duty Silt Fence	m	60	\$ 23.00	\$ 1,380.00
4.03	Flow Diversion - Install/Uninstall	LS	1	\$ 10,000.00	\$ 10,000.00
4.04	Flow Diversion - Operation and Maintenance	day	35	\$ 1,250.00	\$ 43,750.00
4.05	Dewatering	day	35	\$ 5,000.00	\$ 175,000.00

Item	Description	Unit	Quantity	Unit Price	Item Price
Subtotal General Works					\$ 245,130.00
PART B: REMOVALS / RELOCATIONS					
4.06	Remove Asphalt	sq.m	225	\$ 8.00	\$ 1,800.00
4.07	Remove Granular Road Base	sq.m	270	\$ 7.00	\$ 1,890.00
4.08	Remove Existing Concrete Curb and Gutter	m	57	\$ 36.00	\$ 2,052.00
4.09	Remove Existing CSP Culvert	m	14	\$ 50.00	\$ 700.00
4.10	Remove Existing Storm Sewer	m	35	\$ 65.00	\$ 2,275.00
4.11	Protect Underground Services	m	30	\$ 500.00	\$ 15,000.00
4.12	Remove Existing Maintenance Holes	ea	1	\$ 1,000.00	\$ 1,000.00
Subtotal Removals / Relocations					\$ 24,717.00
PART C: WATERCOURSE CROSSING IMPROVEMENTS					
4.13	Excavation and Grading	cu.m	315	\$ 24.00	\$ 7,560.00
4.14	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
4.15	Remove and Dispose of Excess Material	cu.m	315	\$ 50.00	\$ 15,750.00
4.16	Watercourse Improvements	m	15	\$ 2,000.00	\$ 30,000.00
4.17	Armour Stone Retaining Wall	sq.m	30	\$ 800.00	\$ 24,000.00
4.18	Armour Stone Reinforcement	m	30	\$ 400.00	\$ 12,000.00
4.19	Landscaping	sq.m	150	\$ 34.00	\$ 5,100.00
4.20	15 m Pedestrian Bridge	LS	1	\$ 225,000.00	\$ 225,000.00
4.21	Concrete Headwall - 375 mm Dia.	ea	1	\$ 9,500.00	\$ 9,500.00
4.22	375 mm Dia. Storm Sewer	m	35	\$ 375.00	\$ 13,125.00
4.23	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	315	\$ 100.00	\$ 31,500.00

Item	Description	Unit	Quantity	Unit Price	Item Price
Subtotal Watercourse Crossing Improvements					\$ 375,035.00
PART E: WATERCOURSE IMPROVEMENTS					
4.24	Clearing and Grubbing	sq.m	330	\$ 25.00	\$ 8,250.00
4.25	Strip and Stockpile Topsoil	sq.m	330	\$ 13.00	\$ 4,290.00
4.26	Excavation and Grading	cu.m	515	\$ 24.00	\$ 12,360.00
4.27	Geotechnical Sampling for Off-site Disposal	per sample	1	\$ 1,500.00	\$ 1,500.00
4.28	Remove and Dispose of Excess Material	cu.m	515	\$ 50.00	\$ 25,750.00
4.29	Place and Fine Grade Topsoil (150 mm)	sq.m	330	\$ 11.00	\$ 3,630.00
4.30	Watercourse Improvements	m	35	\$ 2,000.00	\$ 70,000.00
4.31	Armour Stone Retaining Wall	sq.m	40	\$ 800.00	\$ 32,000.00
4.32	Landscaping	sq.m	240	\$ 34.00	\$ 8,160.00
4.33	Remove and Dispose of Contaminated Excess Material (Provisional)	cu.m	515	\$ 100.00	\$ 51,500.00
Subtotal Watercourse Improvements					\$ 217,440.00
TOTAL STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD					\$ 862,322.00
STAGE 5: HURST DRIVE TRANSPORTATION LINKAGE					
PART A: GENERAL WORKS					
5.01	Mobilization and Demobilization	LS	1	\$ 15,000.00	\$ 15,000.00
5.02	Construction Access Mud Mat	ea	1	\$ 6,500.00	\$ 6,500.00
5.03	Heavy Duty Silt Fence	m	100	\$ 23.00	\$ 2,300.00
Subtotal General Works					\$ 23,800.00

Item	Description	Unit	Quantity	Unit Price	Item Price
PART B: REMOVALS / RELOCATIONS					
5.04	Remove Existing Buildings	ea	2	\$ 25,000.00	\$ 50,000.00
5.05	Remove Existing Driveway	sq.m	360	\$ 15.00	\$ 5,400.00
Subtotal Removals / Relocations					\$ 55,400.00
PART C: NEW TRANSPORTATION LINKAGE					
5.06	Clearing and Grubbing	sq.m	1060	\$ 25.00	\$ 26,500.00
5.07	Strip and Stockpile Topsoil	sq.m	1060	\$ 13.00	\$ 13,780.00
5.08	Place and Fine Grade Topsoil (150 mm)	sq.m	1215	\$ 11.00	\$ 13,365.00
5.09	Hydroseed	sq.m	1215	\$ 2.00	\$ 2,430.00
5.10	Landscaping	sq.m	500	\$ 34.00	\$ 17,000.00
5.11	Granular 'B' (450 mm)	sq.m	425	\$ 24.00	\$ 10,200.00
5.12	Granular 'A' (150 mm)	sq.m	425	\$ 12.00	\$ 5,100.00
5.13	Base Course Asphalt HL-4/8 (70 mm)	sq.m	375	\$ 25.00	\$ 9,375.00
5.14	40 mm HL3 Surface Course Asphalt	sq.m	375	\$ 35.00	\$ 13,125.00
5.15	Concrete Curb and Gutter	m	100	\$ 95.00	\$ 9,500.00
Subtotal New Transportation Linkage					\$ 120,375.00
TOTAL STAGE 5: HURST DRIVE TRANSPORTATION LINKAGE					\$ 199,575.00

Item	Description	Unit	Quantity	Unit Price	Item Price
SUMMARY					
	STAGE 1: WATERCOURSE IMPROVEMENTS DOWNSTREAM OF BRENNAN AVE.				\$ 1,702,295.00
	STAGE 2: WATERCOURSE CROSSING IMPROVEMENTS AT BRENNAN AVE.				\$ 759,350.00
	STAGE 3: WATERCOURSE IMPROVEMENTS BETWEEN BRENNAN AVE. AND THE BOULEVARD				\$ 1,224,946.00
	STAGE 4: WATERCOURSE CROSSING IMPROVEMENTS AT THE BOULEVARD				\$ 862,322.00
	TOTAL STAGE 5: HURST DRIVE TRANSPORTATION LINKAGE				\$ 199,575.00
	SUBTOTAL STAGE 1 THROUGH 5 (2020 UNIT PRICES)				\$ 4,748,488.00
	CONSTRUCTION CONTIGENCY			30%	\$ 1,424,546.40
	ENGINEERING DESIGN FEE			20%	\$ 949,697.60
	CONTRACT ADMINISTRATION/CONSTRUCTION INSPECTION			10%	\$ 474,848.80
	TOTAL CONSTRUCTION COST ESTIMATE				\$ 7,597,580.80
PROPERTY ACQUISITION					
5.01	7 Brennan Ave.				\$ 800,000.00
5.02	199 The Boulevard (portion of)				\$ 100,000.00
5.03	205 Southview Rd.				\$ 550,000.00
5.04	207 Southview Road				\$ 550,000.00
	SUBTOTAL PROPERTY ACQUISITION				\$ 2,000,000.00
	ACQUISITION CONTINGENCY			30%	\$ 600,000.00
	TOTAL PROPERTY ACQUISITION				\$ 2,600,000.00
	TOTAL COST				\$ 10,197,580.80