

# Appendix L

## Municipal Infrastructure & Utility Impacts



Municipal Infrastructure & Utility Impacts





SANITARY SEWER PIPE STORM SEWER PIPE COMBINED SEWER PIPE WATERMAIN PIPE FLOW DIRECTION

— — B— — — — C— — TORONTO HYDRO ELECTRIC CABLE BURIED CABLE CONDUIT PIPE BURIED COAXIAL CABLE × /// 0

STORM SEWER OUTFALL REMOVAL PIPELINE REMOVAL MANHOLE

FLOOD REMEDIATION AND TRANSPORTATION FEASIBILITY STUDY OF ROCKCLIFFE SPECIAL POLICY AREA TRCA

 CB
 CATCHBASIN

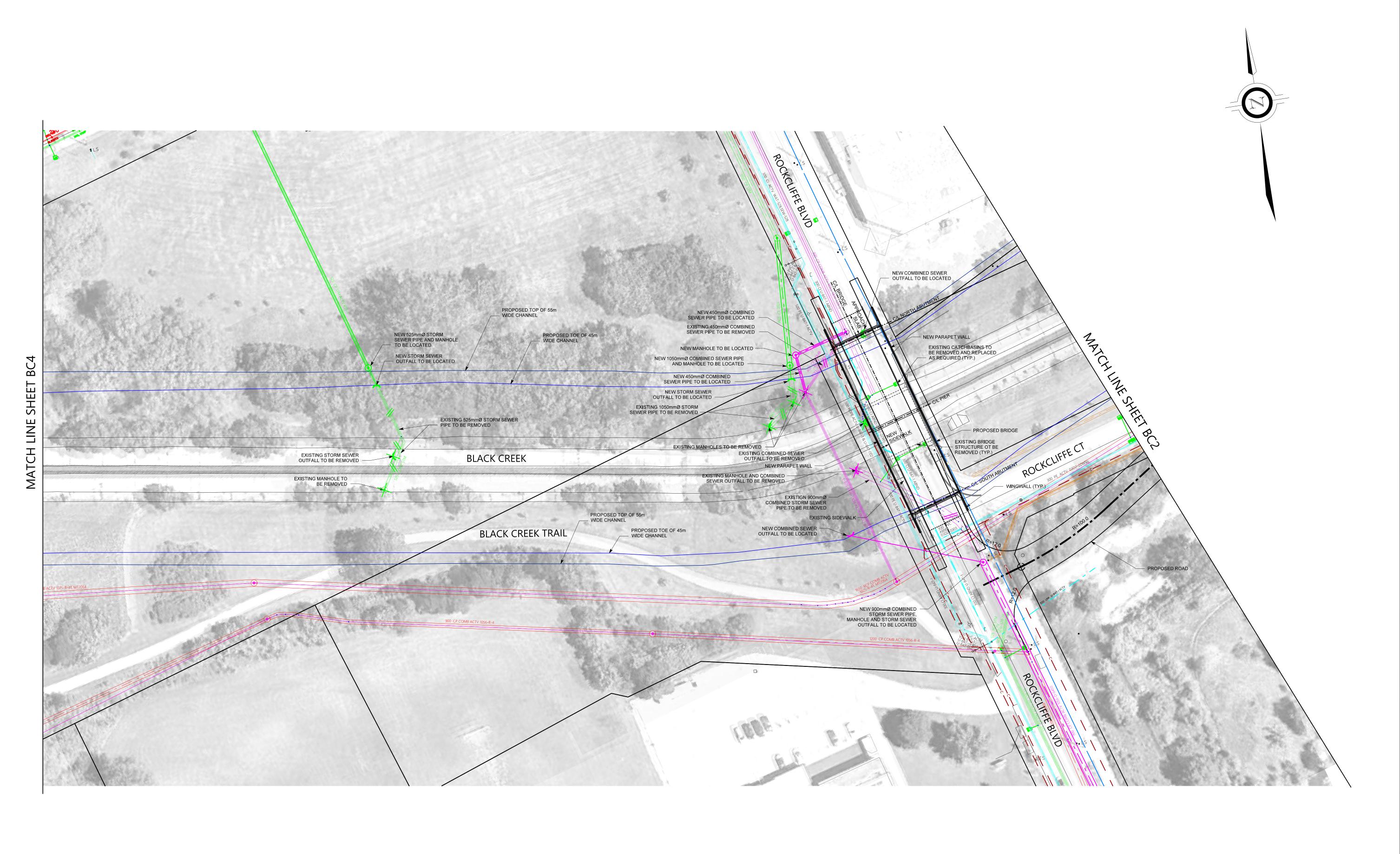
 LS
 LIGHT STANDARD

 FIRE HYDRANT

 •
 VALVE

Municipal Infrastructure & Utility Impacts





\_\_\_\_\_

	SANITARY SEWER PIPE
	STORM SEWER PIPE
	COMBINED SEWER PIPE
	WATERMAIN PIPE
-	FLOW DIRECTION

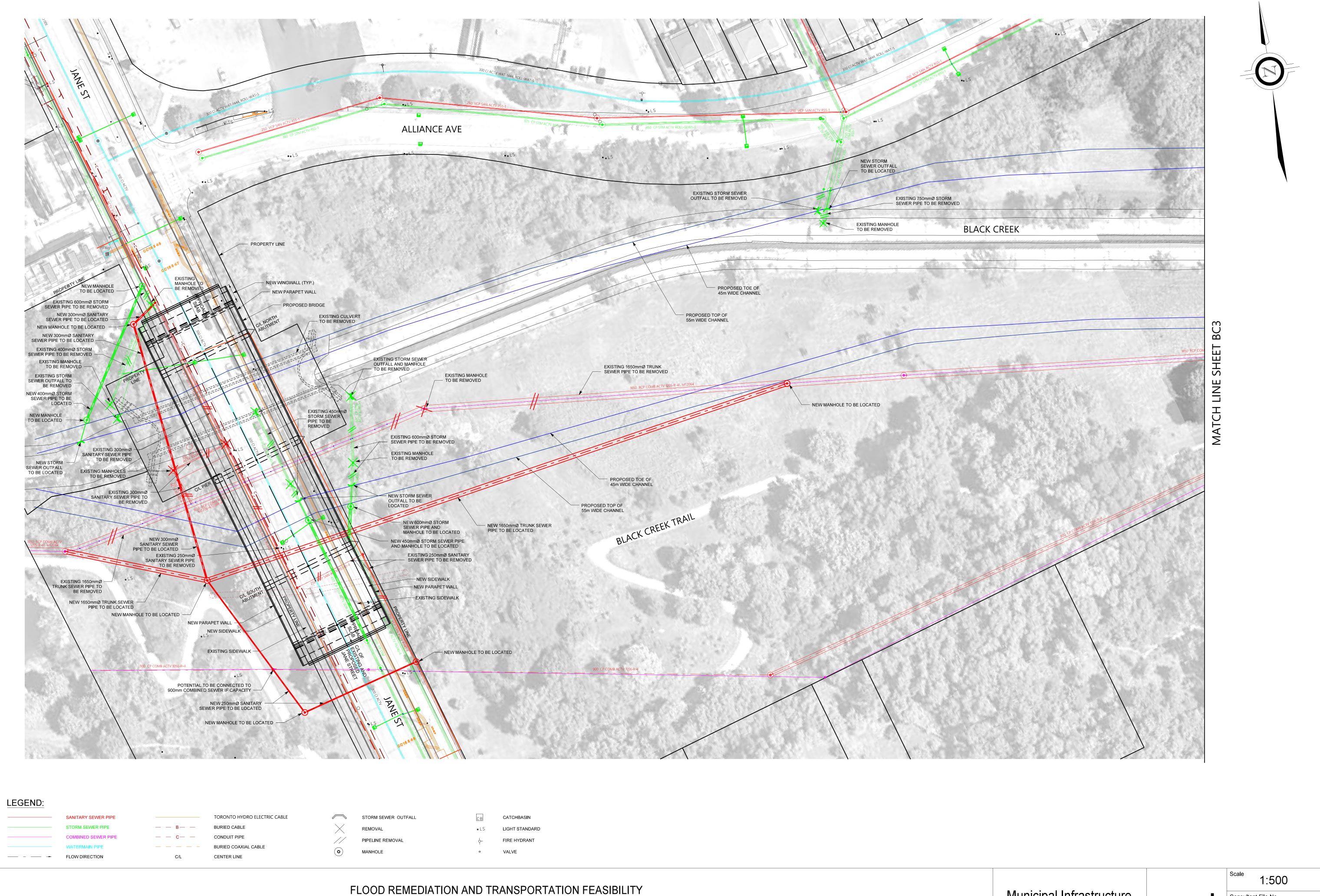
— — B— — — C— — — \_ \_ C/L TORONTO HYDRO ELECTRIC CABLE BURIED CABLE CONDUIT PIPE BURIED COAXIAL CABLE CENTER LINE F C O M

STORM SEWER OUTFALL REMOVAL PIPELINE REMOVAL MANHOLE

СB	CATCHBASIN
	LIGHT STANDARD
<b>-</b>	FIRE HYDRANT
Θ	VALVE

Municipal Infrastructure & Utility Impacts





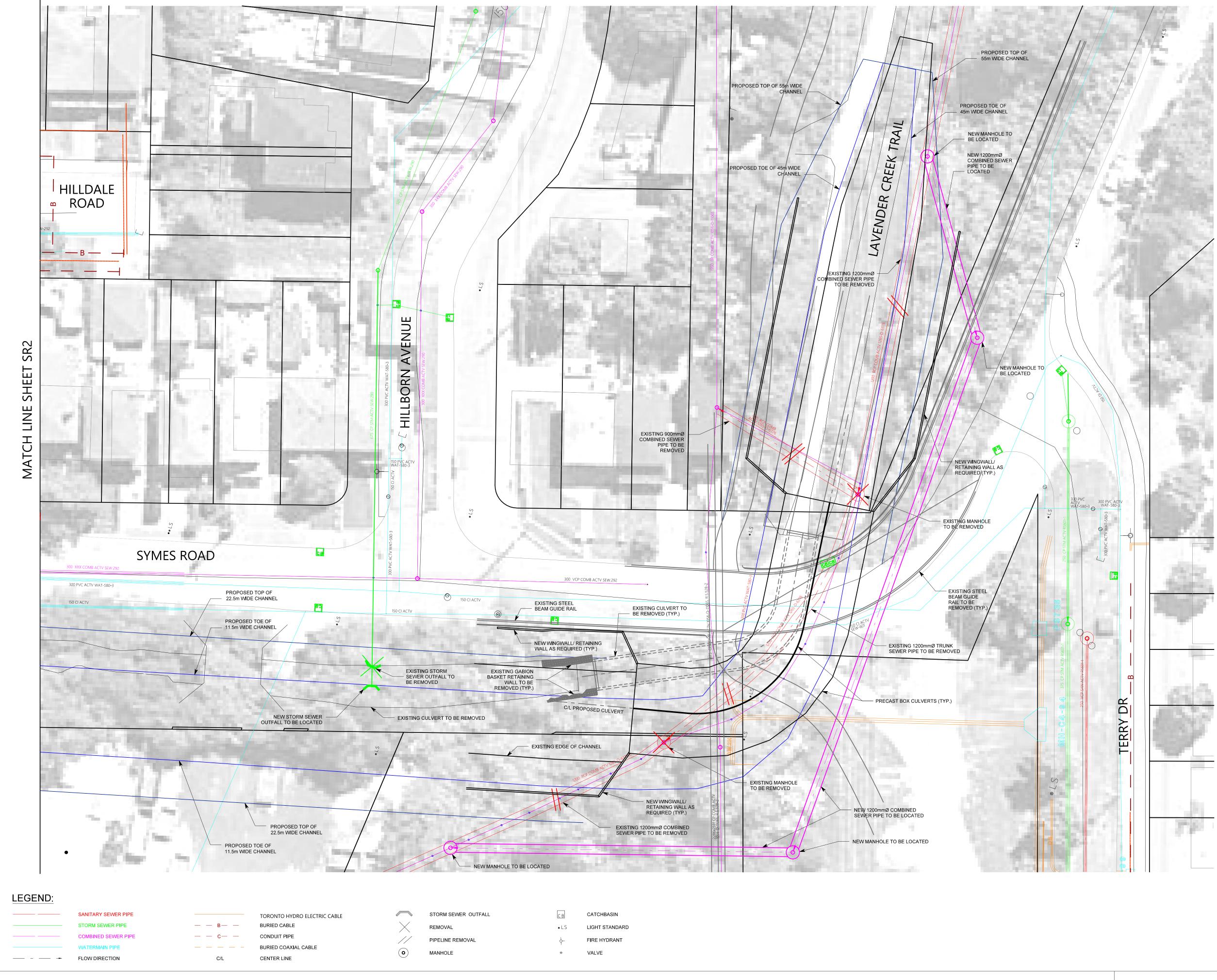
 SANITARY SEWER PIPE		TORONTO HYDRO ELECTRIC CABLE		STORM SEWER OUTFALL
 STORM SEWER PIPE	— — B— —	BURIED CABLE	$\times$	REMOVAL
 COMBINED SEWER PIPE	— — C— —	CONDUIT PIPE		PIPELINE REMOVAL
 WATERMAIN PIPE		BURIED COAXIAL CABLE	$\mathbf{O}$	MANHOLE
 FLOW DIRECTION	C/L	CENTER LINE	U	MANHOLL

СВ	CATCHBASIN
●LS	LIGHT STANDARD
<b>\</b> -	FIRE HYDRANT
θ	VALVE

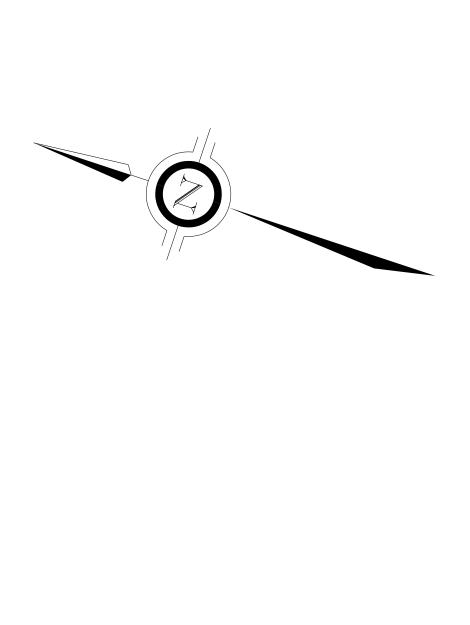
Municipal Infrastructure & Utility Impacts



Consultant File No. TPB198079 Figure No. BC4

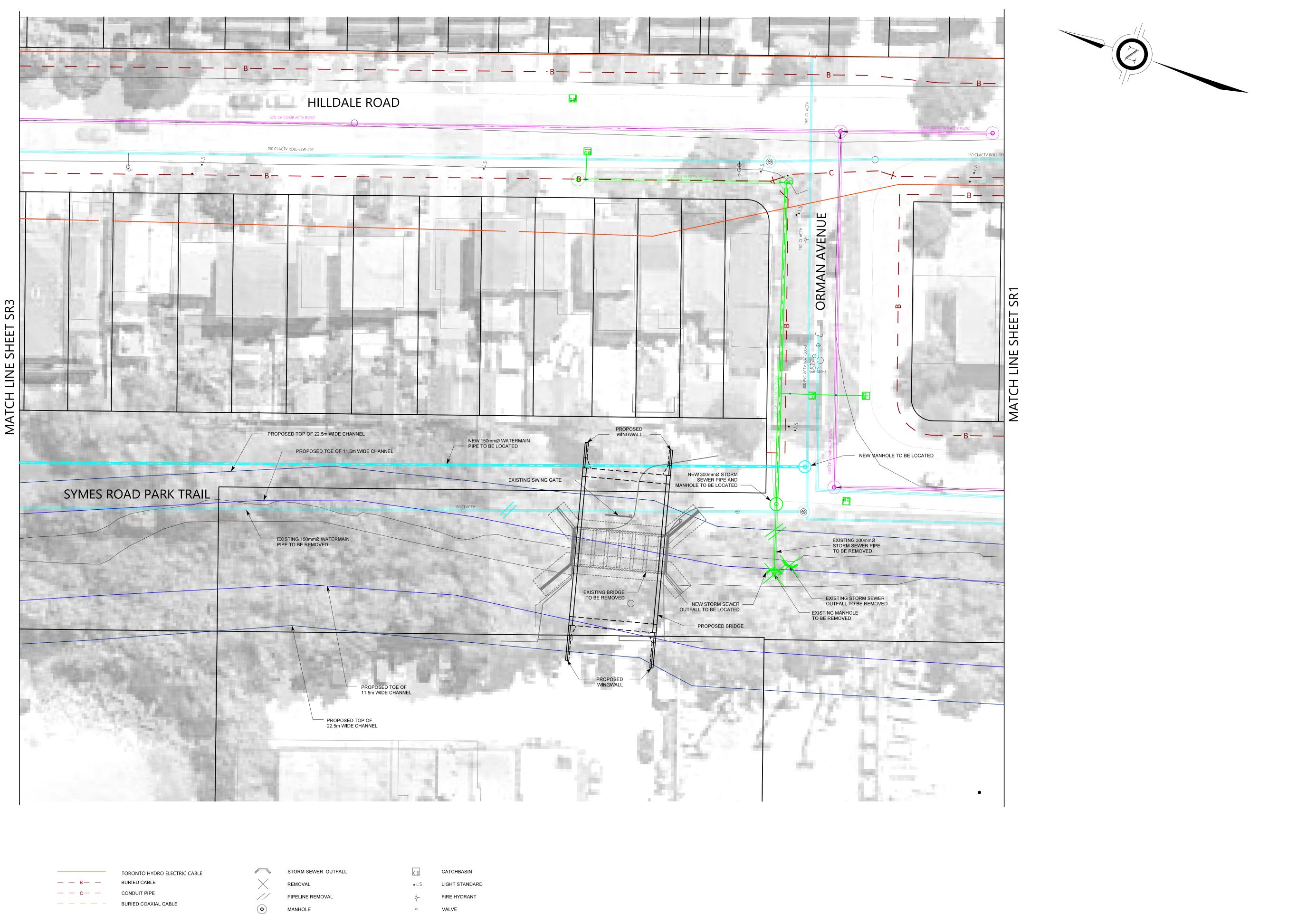


FLOOD REMEDIATION AND TRANSPORTATION FEASIBILITY STUDY OF ROCKCLIFFE SPECIAL POLICY AREA TRCA



Municipal Infrastructure & Utility Impacts



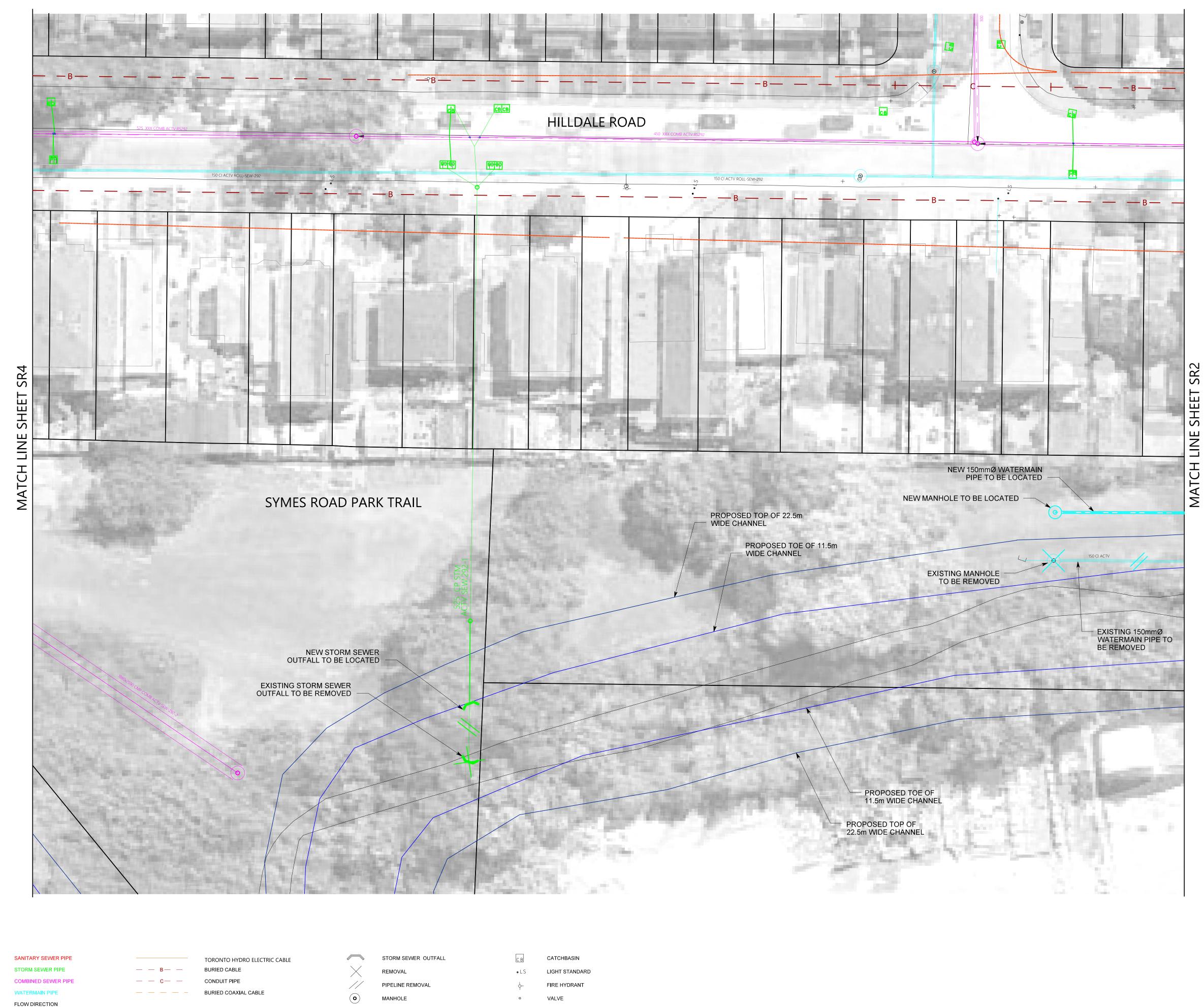


SANITARY SEWER PIPE STORM SEWER PIPE COMBINED SEWER PIPE ATERMAIN PIPE FLOW DIRECTION 

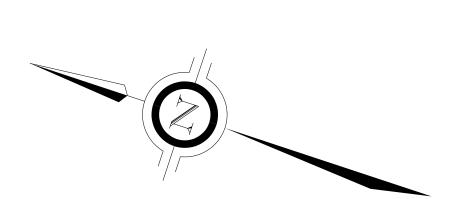
FLOOD REMEDIATION AND TRANSPORTATION FEASIBILITY STUDY OF ROCKCLIFFE SPECIAL POLICY AREA TRCA

Municipal Infrastructure & Utility Impacts





----- **-**

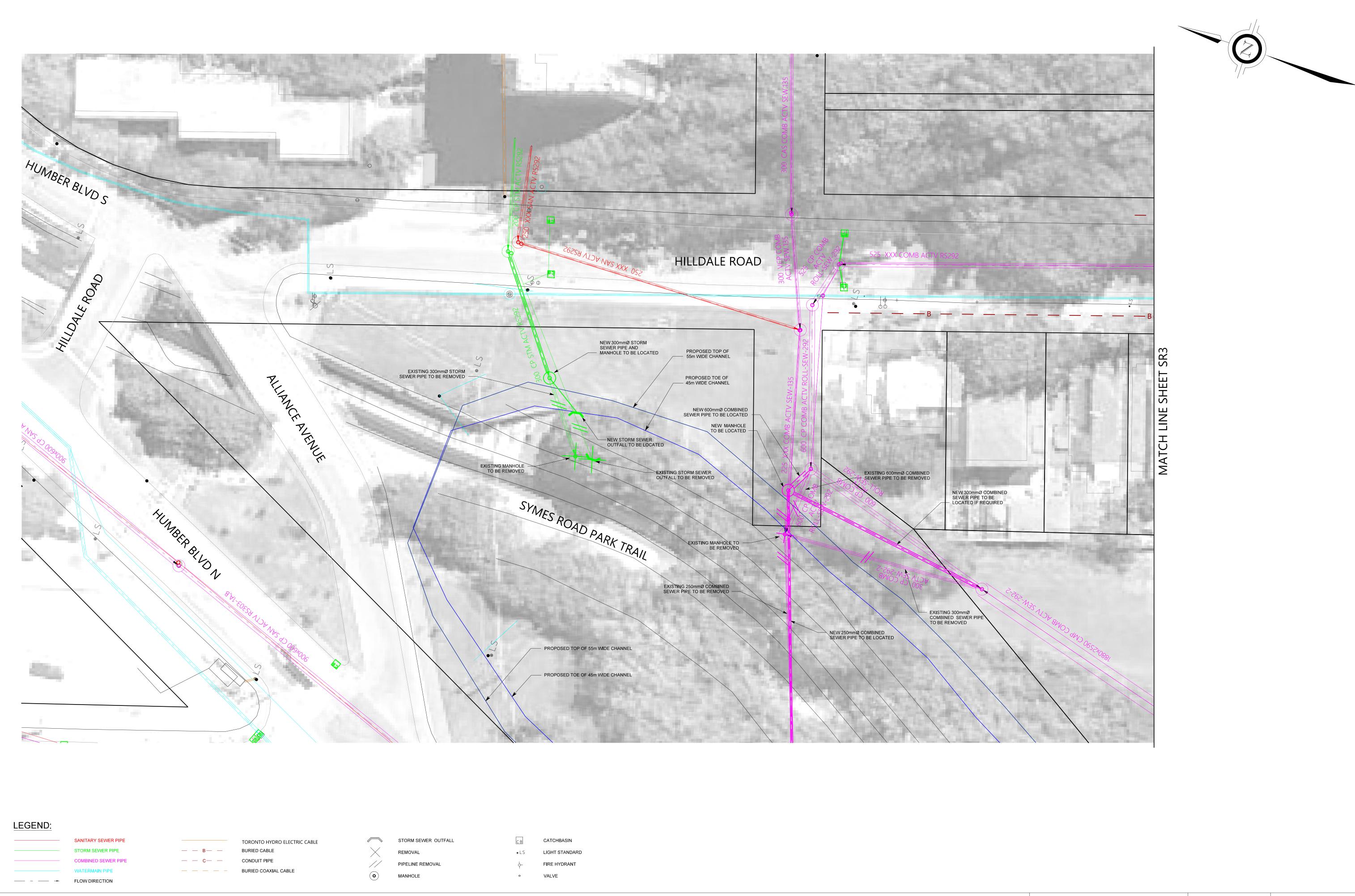


Municipal Infrastructure & Utility Impacts

SHEET

MATCH





Municipal Infrastructure & Utility Impacts



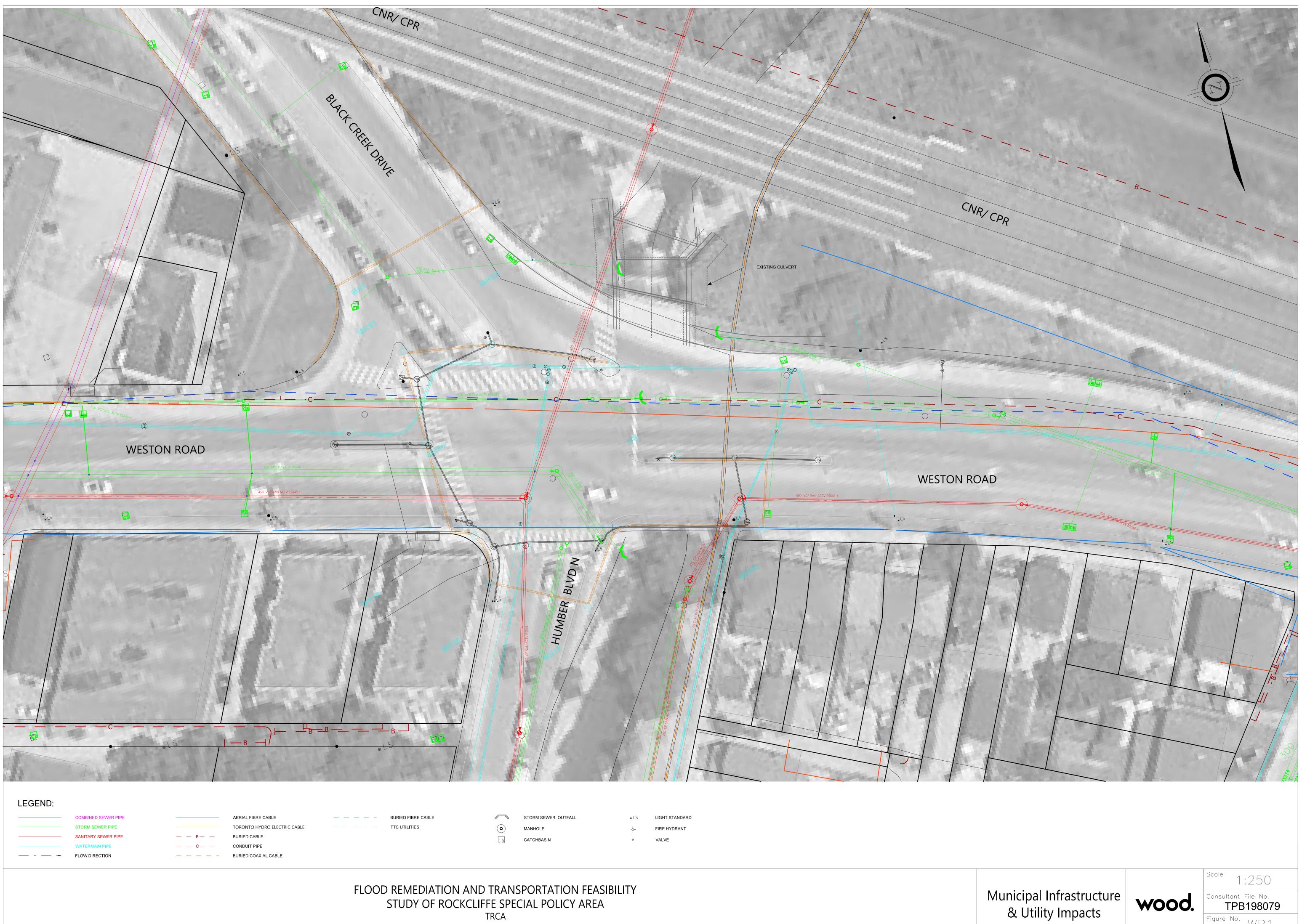




Figure No. WR1



# Appendix M Conceptual Costing

em No.	Description	Est. Qty.	Unit	Unit Price \$	Extension \$
Jane Street	Bridge Expansion				
A1	New Storm Sewer Outfall (400 mm)	1	Lump Sum	\$ 10,000.00	\$ 10,000.00
A2	Re-aligned Storm Sewer (400 mm)	50	m	\$ 117.30	\$ 18,000.0
A3	New Storm Sewer Outfall (450 mm)	1	Lump Sum	\$ 10,000.00	· · · · ·
A4	New Storm Sewer Outfall (600 mm)	1	Lump Sum	\$ 10,000.00	) \$ 10,000.0
A5	New STM Sewer Manhole (1200 mm)	3	Lump Sum	\$ 7,500.00	23,000.0
A6	Storm Sewer Removals (various diameter)	200	m	\$ 75.00	) \$ 15,000.0
A7	Storm Sewer MH Removals	3	Lump Sum	\$ 5,000.00	) \$ 15,000.0
A8	Re-align Combined Sewer (1650 mm)	260	m	\$ 1,724.70	1,794,000.0
A9	Combined Sewer Removal (1650 mm)	260	m	\$ 75.00	20,000.0
A10	New COMB Sewer Manhole (2400 mm)	3	Lump Sum	\$ 15,000.00	45,000.0
A11	Combined Sewer Manhole Removal	2	Lump Sum	\$ 7,000.00	14,000.0
A12	Re-align Sanitary Sewer (300 mm)	175	m	\$ 92.30	65,000.0
A13	Sanitary Sewer Removal (300 mm)	175	m	\$ 75.00	) \$ 14,000.0
A14	New Sanitary Sewer Manhole (1200 mm)	3	Lump Sum	\$ 7,500.00	23,000.0
A15	Sanitary Sewer Manhole Removals	5	Lump Sum	\$ 5,000.00	25,000.0
A16	Watermain Strung to Bridge (300 mm)	120	m	\$ 300.00	36,000.0
A17	Watermain Removal (300 mm)	120	m	\$ 50.00	6,000.0
A18	Watermain Valves	2	Lump Sum	\$ 3,000.00	6,000.0
A19	Watermain Connections	2	Lump Sum	\$ 1,000.00	2,000.0
A20	Watermain Hydrants	2	Lump Sum	\$ 5,000.00	) \$ 10,000.0
A21	Jane St Bridge - Concrete Removal - Full Depth (existing culvert)	1200	m <sup>3</sup>	\$ 1,500.00	0 \$ 1,800,000.0
A22	Jane St Bridge - Roadway Protection	1000	m <sup>2</sup>	\$ 1,000.00	) \$ 1,000,000.0
A23	Jane St Bridge - New 102m x 30m Structure (includes excavation & backfill)	3060	m²	\$ 5,000.00	) \$ 15,300,000.0
A24	Jane St Bridge - Miscellaneous (i.e. traffic control, dewatering, access & protection, etc.) - 10% of above bridge works	1	Lump Sum	\$ 1,810,000.00	0 \$ 1,810,000.0
A25	Structural Works Contingency (20%)	1	Lump Sum	\$ 3,982,000.00	3,982,000.0

05-2020
---------

Item No.	Description	Est. Qty.	Unit	Unit Price \$	Extension \$
A26	Utility Considerations (Lump Sum Cost Assumed at 50% Cost Sharing with Private Utilities) - Further details for utlity costing is provided in the attached "Black Creek Utility Cost Estimate"	1	Lump Sum	\$ 1,913,000.00	\$ 1,913,000.00
				Sub-Total (A)	\$ 27,966,000.00
D. Jama Otra at	to Deckeliffe Device and Observed Widewiner				
	to Rockcliffe Boulevard Channel Widening	40,400	2		¢ 000.000.00
B1	Concrete Channel Removals	10,400	m <sup>2</sup>	\$ 25.00	\$ 260,000.00
B2	Earth Removal (Channel)	56,810	m <sup>3</sup>	\$ 45.00	\$ 2,557,000.00
B3	Naturalization (Channel)	28,600	m <sup>2</sup>	\$ 30.00	\$ 858,000.00
B4	Dewatering	1	Lump Sum	\$ 150,000.00	\$ 150,000.00
B5	Mobilization	1	Lump Sum	\$ 10,000.00	\$ 10,000.00
B6	Staging	1	Lump Sum	\$ 50,000.00	. ,
B7	Construction Trailer	1	Lump Sum	\$ 10,000.00	\$ 10,000.00
B8	Utility Locates	1	Lump Sum	\$ 25,000.00	\$ 25,000.00
B9	Traffic Control	1	Lump Sum	\$ 100,000.00	\$ 100,000.00
B10	Sediment and Erosion Control (Fencing)	1200	m	\$ 20.00	\$ 24,000.00
B11	Sediment and Erosion Control (Bags)	10	Lump Sum	\$ 2,000.00	\$ 20,000.00
B12	Sidewalk/Trail Replacement	120	m	\$ 110.00	\$ 14,000.00
B13	SBGR Replacement	100	m	\$ 150.00	\$ 15,000.00
B14	Tree Protection Fencing	600	m	\$ 25.00	\$ 15,000.00
B15	New Storm Sewer Outfall (525 mm)	1	Lump Sum	\$ 10,000.00	\$ 10,000.00
B16	New Storm Sewer Outfall (750 mm)	1	Lump Sum	\$ 10,000.00	\$ 10,000.00
B17	New STM Sewer Manhole (1200 mm)	1	Lump Sum	\$ 7,500.00	\$ 8,000.00
B18	New STM Sewer Manhole (1500 mm)	1	Lump Sum	\$ 10,000.00	\$ 10,000.00
B19	Storm Sewer Removals (various diameter)	100	m	\$ 75.00	\$ 8,000.00
B20	New Combined Sewer Outfall (1050 mm)	1	Lump Sum	\$ 1,500.00	\$ 2,000.00
B21	New COMB Sewer Manhole (1800 mm)	1	Lump Sum	\$ 12,500.00	\$ 13,000.00
B22	Combined Sewer Removal (1050 mm)	25	m	\$ 75.00	\$ 2,000.00

ltem No.	Description	Est. Qty.	Unit	Unit	Price \$	Exte	ension \$
B23	New Combined Sewer Outfall (1524 x 4115 mm)	1	Lump Sum	\$	25,000.00	\$	25,000.00
B24	Combined Sewer Removal (1524 x 4115 mm)	90	m	\$	250.00	\$	23,000.00
B25	Re-align/Extend Combined Sewer (1524 x 4115 mm)	100	m	\$	6,500.00	\$	1,950,000.00
B26	Re-align Combined Sewer (450 mm)	85	m	\$	117.30	\$	40,000.00
B27	Combined Sewer Removal (450 mm)	85	m	\$	75.00	\$	7,000.00
B28	New COMB Sewer Manhole (1200 mm)	1	Lump Sum	\$	7,500.00	\$	8,000.00
B29	Combined Sewer Manhole Removal	1	Lump Sum	\$	5,000.00	\$	5,000.00
B30	Watermain Removal (500 mm)	100	m	\$	50.00	\$	5,000.00
B31	Watermain Valves	2	Lump Sum	\$	3,000.00	\$	6,000.00
B32	Watermain Connections	2	Lump Sum	\$	1,000.00	\$	2,000.00
B33	Watermain Hydrants	1	Lump Sum	\$	5,000.00	\$	5,000.00
						-	6,247,000.00
C. Rockcliffe	Boulevard Bridge Expansion			-			
C. Rockcliffe	Boulevard Bridge Expansion Rockcliffe Court Re-alignment - Removals	1200	m <sup>2</sup>	\$	25.00	\$	30,000.00
	Rockcliffe Court Re-alignment - Removals	1200 1200	m <sup>2</sup> m <sup>2</sup>	\$	25.00 60.00	\$	
C1			m <sup>2</sup> m <sup>2</sup> tonne	· ·		-	30,000.00
C1 C2	Rockcliffe Court Re-alignment - Removals Rockcliffe Court Re-alignment - Re-pavement	1200	m <sup>2</sup>	\$	60.00	\$	30,000.00 72,000.00
C1 C2 C3	Rockcliffe Court Re-alignment - RemovalsRockcliffe Court Re-alignment - Re-pavementRockcliffe Court Re-alignment - Granular A	1200 864	m <sup>2</sup> tonne	\$ \$	60.00 50.00	\$ \$	30,000.00 72,000.00 44,000.00
C1 C2 C3 C4	Rockcliffe Court Re-alignment - RemovalsRockcliffe Court Re-alignment - Re-pavementRockcliffe Court Re-alignment - Granular ARockcliffe Court Re-alignment - Granular B	1200 864 792	m <sup>2</sup> tonne tonne	\$ \$ \$	60.00 50.00 50.00	\$ \$ \$	30,000.00 72,000.00 44,000.00 40,000.00
C1 C2 C3 C4 C5	Rockcliffe Court Re-alignment - RemovalsRockcliffe Court Re-alignment - Re-pavementRockcliffe Court Re-alignment - Granular ARockcliffe Court Re-alignment - Granular BNew Storm Sewer (300 mm)	1200 864 792 70	m <sup>2</sup> tonne tonne m	\$ \$ \$ \$	60.00 50.00 50.00 92.30	\$ \$ \$	30,000.00 72,000.00 44,000.00 40,000.00 20,000.00
C1 C2 C3 C4 C5 C6	Rockcliffe Court Re-alignment - RemovalsRockcliffe Court Re-alignment - Re-pavementRockcliffe Court Re-alignment - Granular ARockcliffe Court Re-alignment - Granular BNew Storm Sewer (300 mm)Storm Sewer Removal (300 mm)	1200 864 792 70 70	m <sup>2</sup> tonne tonne m m	\$ \$ \$ \$ \$ \$ \$ \$	60.00 50.00 50.00 92.30 75.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	30,000.00 72,000.00 44,000.00 40,000.00 20,000.00 6,000.00
C1 C2 C3 C4 C5 C6 C7 C8 C9	Rockcliffe Court Re-alignment - RemovalsRockcliffe Court Re-alignment - Re-pavementRockcliffe Court Re-alignment - Granular ARockcliffe Court Re-alignment - Granular BNew Storm Sewer (300 mm)Storm Sewer Removal (300 mm)New Storm Sewer Manhole (1200 mm)New Storm Sewer CatchbasinsCombined Sewer Removal (600 mm)	1200 864 792 70 70 1 4 10	m <sup>2</sup> tonne tonne m m Lump Sum	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	60.00 50.00 92.30 75.00 7,500.00 2,500.00 75.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$	30,000.00 72,000.00 44,000.00 20,000.00 6,000.00 8,000.00
C1 C2 C3 C4 C5 C6 C7 C8 C9 C10	Rockcliffe Court Re-alignment - RemovalsRockcliffe Court Re-alignment - Re-pavementRockcliffe Court Re-alignment - Granular ARockcliffe Court Re-alignment - Granular BNew Storm Sewer (300 mm)Storm Sewer Removal (300 mm)New Storm Sewer Manhole (1200 mm)New Storm Sewer CatchbasinsCombined Sewer Removal (600 mm)Combined Sewer Removal (900 mm)	1200 864 792 70 70 1 4	m <sup>2</sup> tonne tonne m Lump Sum Lump Sum	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	60.00 50.00 92.30 75.00 7,500.00 2,500.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	30,000.00 72,000.00 44,000.00 20,000.00 6,000.00 8,000.00 10,000.00
C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11	Rockcliffe Court Re-alignment - RemovalsRockcliffe Court Re-alignment - Re-pavementRockcliffe Court Re-alignment - Granular ARockcliffe Court Re-alignment - Granular BNew Storm Sewer (300 mm)Storm Sewer Removal (300 mm)New Storm Sewer Removal (300 mm)New Storm Sewer Manhole (1200 mm)New Storm Sewer CatchbasinsCombined Sewer Removal (600 mm)Combined Sewer Removal (900 mm)New Combined Sewer Manhole (1800 mm)	1200 864 792 70 70 1 4 10 20 1	m <sup>2</sup> tonne tonne m Lump Sum Lump Sum m	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	60.00 50.00 92.30 75.00 7,500.00 2,500.00 75.00 75.00 12,500.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	30,000.00 72,000.00 44,000.00 20,000.00 6,000.00 8,000.00 10,000.00 1,000.00 2,000.00 13,000.00
C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12	Rockcliffe Court Re-alignment - RemovalsRockcliffe Court Re-alignment - Re-pavementRockcliffe Court Re-alignment - Granular ARockcliffe Court Re-alignment - Granular BNew Storm Sewer (300 mm)Storm Sewer Removal (300 mm)New Storm Sewer Removal (300 mm)New Storm Sewer Removal (300 mm)New Storm Sewer Removal (300 mm)Combined Sewer Removal (600 mm)Combined Sewer Removal (600 mm)New Combined Sewer Removal (900 mm)New Combined Sewer Removal (1200 mm)Combined Sewer Removal (1200 mm)Combined Sewer Removal (1200 mm)	1200 864 792 70 70 1 4 10 20 1 10	m <sup>2</sup> tonne tonne m Lump Sum Lump Sum m Lump Sum m	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	60.00 50.00 92.30 75.00 7,500.00 2,500.00 75.00 75.00 12,500.00 75.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	30,000.00 72,000.00 44,000.00 20,000.00 6,000.00 8,000.00 10,000.00 1,000.00 2,000.00 13,000.00 1,000.00
C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11	Rockcliffe Court Re-alignment - RemovalsRockcliffe Court Re-alignment - Re-pavementRockcliffe Court Re-alignment - Granular ARockcliffe Court Re-alignment - Granular BNew Storm Sewer (300 mm)Storm Sewer Removal (300 mm)New Storm Sewer Removal (300 mm)New Storm Sewer Manhole (1200 mm)New Storm Sewer CatchbasinsCombined Sewer Removal (600 mm)Combined Sewer Removal (900 mm)New Combined Sewer Manhole (1800 mm)	1200 864 792 70 70 1 4 10 20 1	m <sup>2</sup> tonne tonne m Lump Sum Lump Sum m Lump Sum	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	60.00 50.00 92.30 75.00 7,500.00 2,500.00 75.00 75.00 12,500.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	30,000.00 72,000.00 44,000.00 20,000.00 6,000.00 8,000.00 10,000.00 1,000.00 2,000.00 13,000.00

05-2020
---------

	Exten	Unit Price \$				Unit	Est. Qty.	Description	Item No.
5,000.00	\$	50.00	\$	m	100	Watermain Removal (300 mm)	C15		
6,000.00	\$	3,000.00	\$	Lump Sum	2	Watermain Valves	C16		
2,000.00	\$	1,000.00	\$	Lump Sum	2	Watermain Connections	C17		
5,000.00	\$	5,000.00	\$	Lump Sum	1	Watermain Hydrants	C18		
60,000.00	\$	600.00	\$	m	100	Watermain Strung to Bridge (500 mm)	C19		
300,000.00	\$	300,000.00	\$	Lump Sum	1	Rockcliffe Bridge - Concrete Removal - Full Depth (existing bridge)	C20		
3,183,000.00	\$	4,000.00	\$	m²	795.6	Rockcliffe Bridge - New 52m x 15.3m Structure (cost includes excavations and backfill)	C21		
523,000.00	\$	522,360.00	\$	Lump Sum	1	Rockcliffe Bridge - Miscellaneous (i.e. traffic control, dewatering, access & protection, etc.) - 15% of above bridge works	C22		
802,000.00	\$	801,200.00	\$	Lump Sum	1	Structural Works Contingency (20%)	C23		
825,000.00	\$	825,000.00	\$	Lump Sum	1	Utility Considerations (Lump Sum Cost Assumed at 50% Cost Sharing with Private Utilities) - Further details for utlity costing is provided in the attached "Black Creek Utility Cost Estimate"	C24		
5,998,000.00	\$	Sub-Total (C)							
					a	oulevard to Alliance Boulevard Channel Widenin	D. Pockeliffo B		
300,000.00	\$	25.00	\$	m <sup>2</sup>	9 12,000	Concrete Channel Removals	D. ROCKCIME D		
2,950,000.00	\$	45.00	\$	m <sup>3</sup>	65,550	Earth Removal (Channel)	D2		
990,000.00	\$	30.00	φ \$	m <sup>2</sup>	33,000	Naturalization (Channel)	D2		
150,000.00	Ψ \$	150,000.00	φ \$	Lump Sum	1	Dewatering	D3		
10,000.00		-	· ·	•					
50,000.00		,	· ·	•					
10,000.00		-		•					
25,000.00			· ·	•					
25,000.00	-	-	· ·						
24,000.00					-		-		
	\$ \$ \$ \$ \$	10,000.00 50,000.00 10,000.00 25,000.00 100,000.00 20.00	\$ \$ \$ \$ \$ \$ \$ \$ \$	Lump Sum Lump Sum Lump Sum Lump Sum m	1 1 1 1 1 1200	MobilizationStagingConstruction TrailerUtility LocatesTraffic ControlSediment and Erosion Control (Fencing)	D5 D6 D7 D8 D9 D10		

Item No.	Description	Est. Qty.	Unit	Unit Price \$	Extension \$
D11	Sediment and Erosion Control (Bags)	10	Lump Sum	\$ 2,000.00	\$ 20,000.00
D12	SBGR Replacement	50	m	\$ 150.00	\$ 8,000.00
D13	Tree Protection Fencing	600	m	\$ 25.00	\$ 15,000.00
D14	New Storm Sewer Outfall (300 mm)	1	Lump Sum	\$ 10,000.00	\$ 10,000.00
D15	New Storm Sewer Outfall (900 mm)	2	Lump Sum	\$ 10,000.00	\$ 20,000.00
D16	New Storm Sewer Outfall (975 mm)	1	Lump Sum	\$ 10,000.00	\$ 10,000.00
D17	New Storm Sewer Outfall (1050 mm)	1	Lump Sum	\$ 10,000.00	\$ 10,000.00
D18	New STM Sewer Manhole (1200 mm)	1	Lump Sum	\$ 7,500.00	\$ 8,000.00
D19	New STM Sewer Manhole (1500 mm)	4	Lump Sum	\$ 10,000.00	\$ 40,000.00
D20	Storm Sewer Removals (various diameter)	115	m	\$ 75.00	\$ 9,000.00
D21	New Combined Sewer Outfall (1524 x 4115 mm)	1	Lump Sum	\$ 25,000.00	\$ 25,000.00
D22	Combined Sewer Removal (1524 x 4115 mm)	20	m	\$ 250.00	\$ 5,000.00
D23	Re-align Combined Sewer (1350 mm)	160	m	\$ 1,177.60	\$ 754,000.00
D24	Combined Sewer Removal (1350 mm)	160	m	\$ 75.00	\$ 12,000.00
D25	New COMB Sewer Manhole (2400 mm)	3	Lump Sum	\$ 15,000.00	\$ 45,000.00
D26	Combined Sewer Manhole Removal	1	Lump Sum	\$ 5,000.00	\$ 5,000.00
D27	Re-align Combined Sewer (300 mm)	200	m	\$ 150.00	\$ 120,000.00
D28	Combined Sewer Removal (300 mm)	200	m	\$ 75.00	\$ 15,000.00
D29	New COMB Sewer Manhole (1200 mm)	3	Lump Sum	\$ 7,500.00	\$ 23,000.00
D30	Combined Sewer Manhole Removal	4	Lump Sum	\$ 5,000.00	\$ 20,000.00
D31	Utility Considerations (Lump Sum Cost Assumed at 50% Cost Sharing with Private Utilities) - Further details for utlity costing is provided in the attached "Black Creek Utility Cost Estimate"	1	Lump Sum	\$ 12,500.00	\$ 12,500.00
				Sub-Total (D)	\$ 5,795,500.00
E. Lavender C	reek Channel Widening (Symes Road to Southern	Crossing)			
E1	Concrete Channel Removals	500	m <sup>2</sup>	\$ 25.00	\$ 13,000.00

Item No.	Description	Est. Qty.	Unit	Unit Price \$	Extension \$
E2	Earth Removal (Channel)	5,425	m <sup>3</sup>	\$ 45.00	\$ 245,000.00
E3	Naturalization (Channel)	2,531	m <sup>2</sup>	\$ 30.00	\$ 76,000.00
E4	Dewatering	1	Lump Sum	\$ 150,000.00	\$ 150,000.00
E5	Mobilization	1	Lump Sum	\$ 10,000.00	\$ 10,000.00
E6	Staging	1	Lump Sum	\$ 50,000.00	\$ 50,000.00
E7	Construction Trailer	1	Lump Sum	\$ 10,000.00	\$ 10,000.00
E8	Utility Locates	1	Lump Sum	\$ 25,000.00	\$ 25,000.00
E9	Traffic Control	1	Lump Sum	\$ 100,000.00	\$ 100,000.00
E10	Sediment and Erosion Control (Fencing)	200	m	\$ 20.00	\$ 4,000.00
E11	Sediment and Erosion Control (Bags)	3	Lump Sum	\$ 2,000.00	\$ 6,000.00
E12	SBGR Replacement	100	m	\$ 150.00	\$ 15,000.00
E13	Tree Protection Fencing	150	m	\$ 25.00	\$ 4,000.00
E14	New Storm Sewer Outfall (300 mm)	1	Lump Sum	\$ 10,000.00	\$ 10,000.00
E15	Storm Sewer Removals (various diameter)	10	m	\$ 75.00	\$ 1,000.00
E16	New STM Sewer Manholes (1200 mm)	1	Lump Sum	\$ 7,500.00	\$ 8,000.00
E17	Re-align Watermain (150 mm)	40	m	\$ 150.00	\$ 6,000.00
E18	Watermain Removal (150 mm)	40	m	\$ 50.00	\$ 2,000.00
E19	Watermain Valves	2	Lump Sum	\$ 3,000.00	\$ 6,000.00
E20	Watermain Connections	2	Lump Sum	\$ 1,000.00	\$ 2,000.00
				Sub-Total (E)	\$ 743,000.00
F. Lavender Cree	ek Channel Widening (Southern Crossing to Bl	ack Creek)			
F1	Earth Removal (Channel)	16,275	m <sup>3</sup>	\$ 45.00	\$ 733,000.00
F2	Naturalization (Channel)	7,594	m <sup>2</sup>	\$ 30.00	\$ 228,000.00
F3	Dewatering	1	Lump Sum	\$ 150,000.00	\$ 150,000.00
F4	Mobilization	1	Lump Sum	\$ 10,000.00	\$ 10,000.00
F5	Staging	1	Lump Sum	\$ 50,000.00	\$ 50,000.00
F6	Construction Trailer	1	Lump Sum	\$ 10,000.00	\$ 10,000.00
F7	Utility Locates	1	Lump Sum	\$ 25,000.00	\$ 25,000.00
<u> </u>					
F8	Traffic Control	1	Lump Sum	\$ 100,000.00	\$ 100,000.00

Item No.	Description	Est. Qty.	Unit	Unit Price \$	Extension \$
F10	Sediment and Erosion Control (Bags)	7	Lump Sum	\$ 2,000.00	\$ 14,000.00
F11	SBGR Replacement	200	m	\$ 150.00	\$ 30,000.00
F12	Tree Protection Fencing	500	m	\$ 25.00	\$ 13,000.00
F13	New Storm Sewer Outfall (525 mm)	1	Lump Sum	\$ 10,000.00	\$ 10,000.00
F14	New Storm Sewer Outfall (675 mm)	1	Lump Sum	\$ 10,000.00	\$ 10,000.00
F15	Storm Sewer Removals (various diameter)	40	m	\$ 75.00	\$ 3,000.00
F16	New STM Sewer Manholes (1200 mm)	2	Lump Sum	\$ 7,500.00	\$ 15,000.00
F17	Re-align/Shift Combined Sewer/Tank (1880 x 2590 mm)	65	m	\$ 3,157.90	\$ 616,000.00
F18	Combined Sewer Removal (1880 x 2590 mm)	65	m	\$ 75.00	\$ 5,000.00
F19	New Combined Sewer Manhole (3600 mm)	1	Lump Sum	\$ 20,000.00	\$ 20,000.00
F20	Re-align Watermain (150 mm)	150	m	\$ 150.00	\$ 23,000.00
F21	Watermain Removal (150 mm)	150	m	\$ 50.00	\$ 8,000.00
F22	Watermain Valves	2	Lump Sum	\$ 3,000.00	\$ 6,000.00
F23	Watermain Connections	1	Lump Sum	\$ 1,000.00	\$ 1,000.00
				Sub-Total (F)	\$ 2,096,000.00
G. Lavender C	reek Structure Works				
G1	Combined Sewer Connection Removal (900 mm)	22	m	\$ 75.00	\$ 2,000.00
G2	Re-align Combined Sewer (1200 mm)	160	m	\$ 916.20	\$ 587,000.00
G3	Combined Sewer Removal (1200 mm)	160	m	\$ 75.00	\$ 12,000.00
G4	New COMB Sewer Manhole (1800 mm)	4	Lump Sum	\$ 10,000.00	\$ 40,000.00
G5	Combined Sewer Manhole Removal	2	Lump Sum	\$ 5,000.00	\$ 10,000.00
G6	Symes Rd Culvert - Concrete Removal - Full Depth (existing culvert)	1	Lump Sum	\$ 75,000.00	\$ 75,000.00
G7	Symes Rd Culvert - New Twin 5.5m x 1.8m Culvert Structure (cost includes excavations and backfill)	780	m²	\$ 3,000.00	\$ 2,340,000.00

Item No.	Description	Est. Qty.	Unit	Unit Price \$	Extension \$					
G8	Symes Rd Culvert - Miscellaneous (i.e. traffic control, dewatering, access & protection, etc.) - 15% of above culvert works	1	Lump Sum	\$ 362,250.00	\$ 363,000.00					
G9	Symes Road Culvert - Structural Works Contingency (20%)	1	Lump Sum	\$ 555,600.00	\$ 556,000.00					
G10	Southern Private Crossing Removal (Crossing Not in Use)	1	Lump Sum	\$ 50,000.00	\$ 50,000.00					
G11	Symes Private Crossing - Concrete Removal - Full Depth (existing culvert)	1	Lump Sum	\$ 150,000.00	\$ 150,000.00					
G12	Symes Private Crossing - New 22m x 13m Structure (cost includes excavations and backfill)	286	m²	\$ 4,500.00	\$ 1,287,000.00					
G13	Symes Private Crossing - Miscellaneous (i.e. traffic control, dewatering, access & protection, etc.) - 20% of above culvert works	1	Lump Sum	\$ 287,400.00	\$ 288,000.00					
G14	Symes Road Private Crossing - Structural Works Contingency (20%)	1	Lump Sum	\$ 345,000.00	\$ 345,000.00					
G15	Utility Considerations Symes Road Culvert (Lump Sum Cost Assumed at 50% Cost Sharing with Private Utilities) - Further details for utility costing is provided in the attached "Black Creek Utility Cost Estimate"	1	Lump Sum	\$ 1,246,000.00	\$ 1,246,000.00					
				Sub-Total (G)	\$ 7,351,000.00					
H. Weston Roa	H. Weston Road Retaining Wall									
H1	New Retaining Wall Structures (cost includes excavations and backfill)	121.6	m <sup>2</sup>	\$ 2,000.00	\$ 244,000.00					
H2	Sidewalk Removal	80	m²	\$ 50.00	· · · · · · · · · · · · · · · · · · ·					
H3	New Sidewalks	80	m <sup>2</sup>	\$ 150.00	\$ 12,000.00					
H4	Miscellaneous (i.e. traffic control, access & protection, etc.)	1	Lump Sum	\$ 25,000.00	\$ 25,000.00					

Item No.	Description	Est. Qty.	Unit	Unit F	Price \$	Exte	ension \$		
H5	Structural Works Contingency (20%)	1	Lump Sum	\$	57,000.00	\$	57,000.00		
H6	Utility Considerations (Lump Sum Cost Assumed at 50% Cost Sharing with Private Utilities) - Further details for utlity costing is provided in the attached "Black Creek Utility Cost Estimate"	1	Lump Sum	\$	17,500.00	\$	17,500.00		
	Sub-Total (H)								
		Sub-To	tal (All Prefer	red Al	lternatives)	\$	56,556,000.00		

Wood - Black Creek Utility Cost Estimate T2 Proj # - 61001527 Date: May 20, 2020 By: Mark Cavanaugh

	eet (CUP Sheets 1-3)							
Item	Utility	Utility detail	Notes	Units	Cost / Unit	Total	Cost Sharing (% Toronto)	Toronto Cost
1	THES	Chambers (4)	2 relocated chambers, 2 new chambers	4	150000	\$ 600,000.00	50%	\$ 300,000.00
2	THES	4W8H	Relocate from bridge, directional bore under creek. Occupancy unknown.	300	5000	\$ 1,500,000.00	50%	\$ 750,000.00
3	THES	Hydro pole relocations	relocate east and west aerial hydro alignment (6 poles per side min x 2)	12	25000	\$ 300,000.00	50%	\$ 150,000.00
4	Telecom	Owner TBD	Attached to THES poles on east side only	6	5000	\$ 30,000.00	50%	\$ 15,000.00
5	Bell Canada	Chambers (2)	Not in conflict, however may require rebuilding to facilitate relocation off of bridge	2	100000	\$ 200,000.00	50%	\$ 100,000.00
6	Bell Canada	structure - size unknown	Relocate from bridge, directional bore under creek. Size / # of cables and size unknown	220	5000	\$ 1,100,000.00	50%	\$ 550,000.00
7	Street lighting		THES poles being removed, independent SL required for replacement (4 per side assumed)	8	12000	\$ 96,000.00	50%	\$ 48,000.00
						\$ 3,826,000.00		\$ 1,913,000.00

Rockliffe	Blvd / Rockcliffe Ct	(CUP Sheets 5-6)								
Item	Utility	Utility detail	Notes	Units	Cost / Unit		Total	Cost Sharing (% Toronto)	T	oronto Cost
1	THES	Hydro pole relocations	relocate east side aerial hydro alignment (4 poles assumed)	4	25000	\$	100,000.00	50%	\$	50,000.00
2	THES	5W1H x 2	Relocate to meet new THES riser pole locations, relocate to align with Rockcliffe Ct	225	1000	\$	225,000.00	50%	\$	112,500.00
3	Telecom	Owner TBD	Attached to THES poles on east side	4	5000	\$	20,000.00	50%	\$	10,000.00
4	Bell Canada	structure - size unknown	Relocate from bridge, directional bore under creek. Size / # of cables and size unknown	300	3000	\$	900,000.00	50%	\$	450,000.00
5	Bell Canada	Chambers (2)	Not in conflict, however may require rebuilding to facilitate relocation off of bridge	2	100000	s	200,000.00	50%	s	100,000.00
6	Bell Canada	structure - size unknown	Relocate to new Rockcliffe Ct alignment. Size / # of cables and size unknown - assumed PVCD2	200	500	s	100,000.00	50%	s	50,000.00
7	Street lighting		THES poles being removed, replace new lighting on new poles	4	5000	\$	20,000.00	50%	\$	10,000.00
8	Enbridge Gas	150mm ST IP	Conflicting with new Rockcliffe Ct road base, relocate	50	900	\$	45,000.00	50%	\$	22,500.00
9	Enbridge Gas	Service	Assumed present on entire length of Rockcliffe Ct that must be realigned	100	400	\$	40,000.00	50%	\$	20,000.00
						\$	1,650,000.00		\$	825,000.00

### Hilldale Rd / Alliance Ave (CUP Sheets 8-9)

Item	Utility	Utility detail	Notes	Units	Cost / Unit	Total	Cost Sharing (% Toronto)	To	ronto Cost
1	THES	Hydro pole relocations	Relocate 1 HP and 2 anchors	1	25000	\$ 25,000.00	50%	\$	12,500.00
						\$ 25,000.00		\$	12,500.00

	toad (CUP Sheet 10)							
Item	Utility	Utility detail	Notes	Units	Cost / Unit	Total	Cost Sharing (% Toronto)	Toronto Cost
1	THES	Hydro pole conflict	Relocating conflicting THES poles into an underground structure to bypass culvert area	370	5000	\$ 1,850,000.00	50%	\$ 925,000.00
2	THES	Chambers (4)	4 new and / or rebuilt chambers needed	4	150000	\$ 600,000.00	50%	\$ 300,000.00
3	THES	Secondary pole / guy pole	Relocate secondary ad guy poles	2	15000	\$ 30,000.00	50%	\$ 15,000.00
4	Street lighting		THES poles being removed, nbew SL pole	1	12000	\$ 12,000.00	50%	\$ 6,000.00
						\$ 2,492,000.00		\$ 1,246,000.00

### Weston Road / Black Creek Dr (CUP Sheet 11)

Item	Utility	Utility detail	Notes	Units	Cost / Unit	Total	Cost Sharing (% Toronto)	Toronto Cost
1	THES Street lighting	aerial secondary cable	temporarily relocate S/L service	1	10000	\$ 10,000.00	50%	\$ 5,000.00
2	Telecom	owner / size TBD	Relocate telecom cable from culvert during construction, replace following construction	25	1000	\$ 25,000.00	50%	\$ 12,500.00
						\$ 35,000.00		\$ 17,500.00

Notes:

1. Utility Companies were not consulted during the compilation of this order of magnitude cost estimate. Costs are based on similar utility relocations encounted in the past.

Utility domains cooked on conceptual alignments completed by T2uc. Utilities were not concluded for this concept, actual relocations and could vary greatly.
 Property / essements may be required for relocations at Jane Street and Rockcill'fe Bivd. Property costs not considered in this costing.