

TABLE 3 – ALTERNATIVES (PRE – PIC #2)

ARGYLE STREET SOUTH BRIDGE OVER GRAND RIVER IN CALEDONIA 2-LANE AND 3-LANE BRIDGE ALTERNATIVES - JAN, 07, 2005								
ALTERNATIVE (ALL COSTS INCLUDING DETOUR COSTS)		DESCRIPTION	COSTS IN MILLION				PLAN	TYPICAL CROSS-SECTION
			BRIDGE	ARCH	DETOUR	TOTAL		
1	BASE OPTION 2 LANE BASE (B = 12 700)	2-LANE FINAL CONFIGURATION WITH STANDARD 1.5m SIDEWALK ON BOTH SIDES, NO OFFSET ALTERNATIVE ESTABLISHED FOR COMPARATIVE COST ONLY.	6.3	—	—	6.3		
			• BASE STRUCTURE • SAME FOUNDATION CONDITION • UNRESTRICTED ACCESS					
2a	2-LANE + ARCH (BY PASS) (B = 16 100)	2-LANE FINAL CONFIGURATION WITH ARCHES AND 2.0m SIDEWALK ON BOTH SIDES, DETOUR VIA BYPASS AND TEMP. PEDESTRIAN CROSSING ON SITE NO OFFSET FOR PERMANENT STRUCTURE ALTERNATIVE ESTABLISHED FOR COMPARATIVE COST ONLY.	7.7	0.6	0.7	9.0		
			COMPRISING • BASE STRUCTURE (6.3M) • WIDEN S/W (0.4M) • WIDEN DECK TO ACCOMMODATE ARCH (1.0M)	STEEL WORK ONLY	COMPRISING • 0.6M FOR PEDESTRIAN CROSSING • 0.1M FOR END TREATMENT PEDESTRIAN BARRIER AND SIGNAL FOR ROUTING TRAFFIC			
2b	2-LANE + ARCH (2 LANE ON BAILEY) (B = 16 100)	2-LANE FINAL CONFIGURATION WITH ARCHES AND 2.0m SIDEWALK ON BOTH SIDES, DETOUR VIA ON-SITE BAILEY BRIDGE (2 LANE + PEDESTRIAN) NO OFFSET FOR PERMANENT STRUCTURE ALTERNATIVE ESTABLISHED FOR COMPARATIVE COST ONLY.	7.7	0.6	2.3	10.6		
			(SAME AS ABOVE)	STEEL WORK ONLY	COMPRISING • 2.2M FOR BAILEY STRUCTURE • 0.1M FOR STRUCTURE END DETAIL AND TRAFFIC SIGNALS			
2c	2-LANE + ARCH (1-LANE ON BAILEY) (B = 16 100)	2-LANE FINAL CONFIGURATION WITH ARCHES AND 2.0m SIDEWALK ON BOTH SIDES, DETOUR VIA ON-SITE BAILEY BRIDGE (1 LANE + PEDESTRIAN) NO OFFSET FOR PERMANENT STRUCTURE ALTERNATIVE ESTABLISHED FOR COMPARATIVE COST ONLY.	7.7	0.6	1.8	10.1		
			(SAME AS ABOVE)	STEEL WORK ONLY	COMPRISING • 1.7M FOR BAILEY STRUCTURE • 0.1M FOR STRUCTURE END DETAIL AND TRAFFIC SIGNALS			

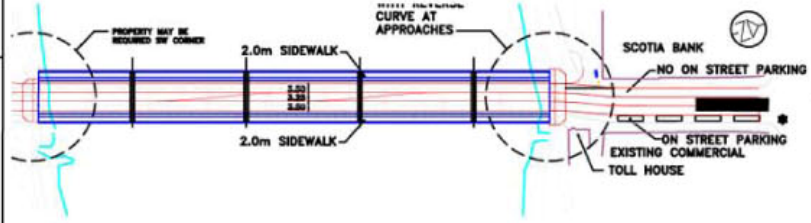
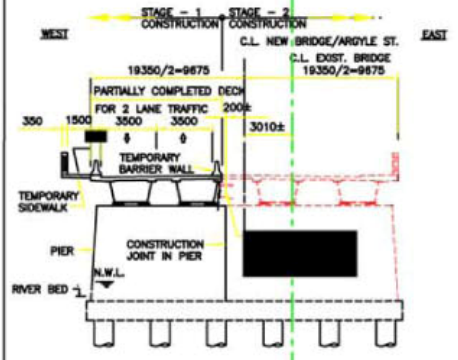
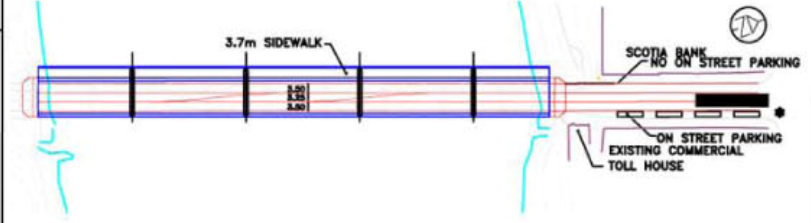
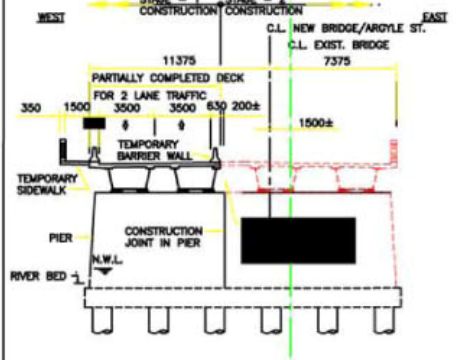
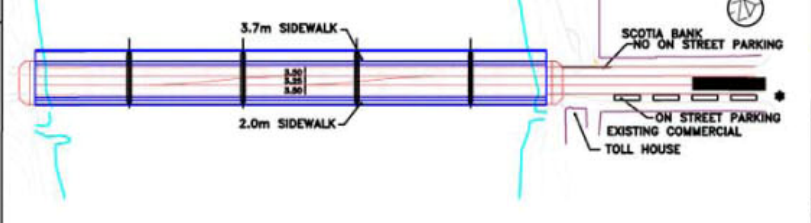
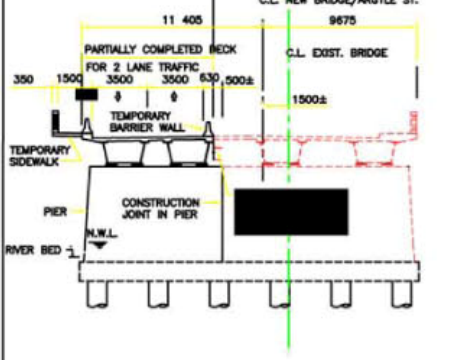
ARGYLE STREET SOUTH BRIDGE OVER GRAND RIVER IN CALEDONIA
2-LANE AND 3-LANE BRIDGE ALTERNATIVES - JAN, 07, 2005

ALTERNATIVE (ALL COSTS INCLUDING DETOUR COSTS)		DESCRIPTION	COSTS IN MILLION					PLAN	TYPICAL CROSS-SECTION
			BRIDGE	ARCH	DETOUR	TOTAL			
3a	2 LANE BASE WITH STAGE CONSTRUCTION (TO MAINTAIN SINGLE LANE TRAFFIC ON THE BRIDGE FOR 1 CONSTRUCTION SEASON (SAY 9 MONTHS)) (B = 16 100)	2-LANE FINAL CONFIGURATION WITH ARCHES AND 2.0m SIDEWALK ON BOTH SIDES, BRIDGE PERMANENTLY SHIFTED 15m TO THE WEST TAKING OUT WEST ON-STREET PARKING, STRAIGHT LANE LINES THROUGHOUT	6.7	1.6	0.6	—	8.9		
			• COMPRISING BASE STRUCTURE (6.3M) • WIDEN S/W (0.4M)	• STEEL WORK ONLY (0.6M) • WIDEN DECK TO ACCOMMODATE ARCH (1.0M)	• COMPRISING 0.3M FOR PEDESTRIAN DECK 0.1M FOR SIGNAL 0.2M PREMIUM FOR STAGED CONSTRUCTION (MOBILIZATION/DEMOBILISATION+ CAUSEWAY) (0.2M)				
3b	2 LANE BASE WITH 15m OVERBUILD TO WEST (SAME TRAFFIC ARRANGEMENT AS IN 3a) (B = 17 600)	2-LANE FINAL CONFIGURATION WITH ARCHES, WEST SIDEWALK WIDENED TO 3.5m, EAST SIDEWALK MAINTAINS AT 2.0m	6.7	1.6	0.6	0.6	9.5		
			• COMPRISING BASE STRUCTURE (6.3M) • WIDEN S/W (0.4M)	• STEEL WORK ONLY (0.6M) • 1.0M WIDEN DECK FOR ARCH	(SAME AS ABOVE)	• 0.6M WIDEN DECK FOR OVERBUILD			
3c	2 LANE BASE WITH 15m OVERBUILD TO WEST, ELIMINATE EAST SIDEWALK (SAME TRAFFIC ARRANGEMENT AS IN 3a) (B = 15 300)	2-LANE FINAL CONFIGURATION WITH ARCHES, WITH 3.5m SIDEWALK ON WEST, SIDEWALK ON EAST SIDE ELIMINATED	6.5	1.6	0.6	—	8.7		
			• COMPRISING BASE STRUCTURE (6.3M) • WIDEN S/W (0.2M)	• STEEL WORK ONLY (0.6M) • 1.0M WIDEN DECK FOR ARCH	(SAME AS ABOVE)				
3d	2 LANE BASE WITH 24m OVERBUILD TO WEST (SAME TRAFFIC ARRANGEMENT AS IN 3a) (B = 16 100)	2-LANE FINAL CONFIGURATION WITHOUT ARCHES, MAINTAIN CENTRE LINE UNCHANGED WEST SIDEWALK WIDENED TO 4.4m, EAST SIDEWALK MAINTAINS AT 2.0m ALTERNATIVE ESTABLISHED FOR COMPARATIVE COST ONLY.	6.7	—	0.6	0.9	8.2		
			• COMPRISING BASE STRUCTURE (6.3M) • WIDEN S/W (0.4M)		(SAME AS ABOVE)	• 0.9M WIDEN DECK FOR OVERBUILD			

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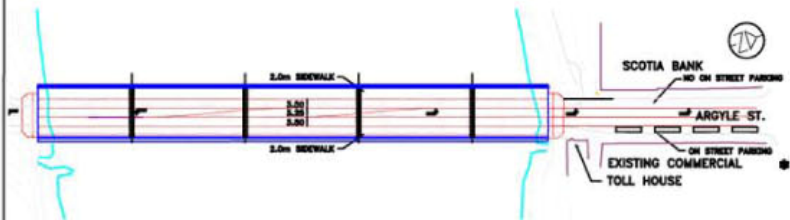
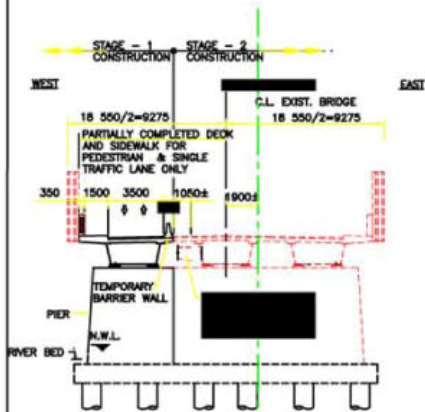
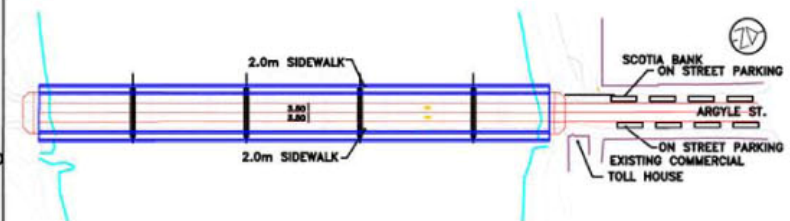
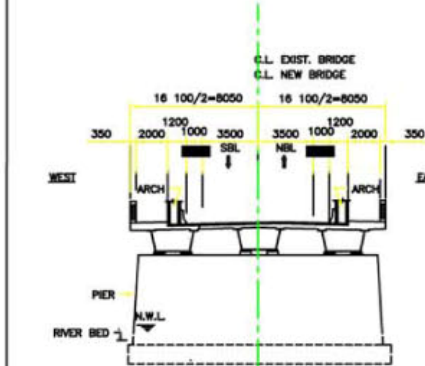
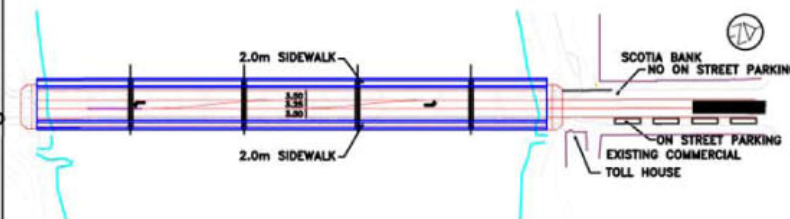
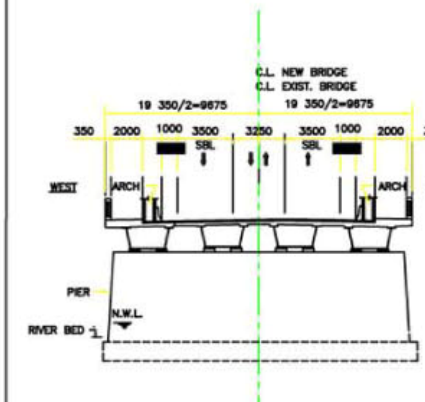
ALTERNATIVE (ALL COSTS INCLUDING DETOUR COSTS)		DESCRIPTION	COSTS IN MILLION					PLAN	TYPICAL CROSS-SECTION
			BRIDGE	ARCH	DETOUR	TOTAL			
3e	2 LANE BASE WITH STAGE CONSTRUCTION (SAME TRAFFIC ARRANGEMENT AS IN 3a) (B = 17 200)	2-LANE FINAL CONFIGURATION WITH OUTSIDE ARCHES MAINTAIN CENTRE LINE UNCHANGED, WEST SIDEWALK WIDENED TO 3.90m, EAST SIDEWALK MAINTAINS AT 2.0m	6.7	12	0.6	0.7	9.2		
			• COMPRISING BASE STRUCTURE (6.3M) • WIDEN S/W (0.4)	STEEL WORK ONLY (0.6M) WIDEN DECK TO ACCOMMODATE ARCH (0.6M)	COMPRISING • 0.3M FOR PEDESTRIAN DECK • 0.1M FOR SIGNAL • PREMIUM FOR STAGED CONSTRUCTION (MOBILIZATION/ DEMOBILISATION+ CAUSEWAY) (0.2M)	• 0.7M WIDEN DECK FOR OVER BUILT			
4a	3 LANE BASE WITH 15m OFFSET TO WEST (TO MAINTAIN SINGLE LANE OF TRAFFIC AND ONE SIDEWALK ON THE BRIDGE FOR ONE CONSTRUCTION SEASON (9 MONTHS)) (B = 19 350)	3-LANE FINAL CONFIGURATION WITH ARCHES AND 2.0m SIDEWALK ON BOTH SIDES, SINGLE LANE DETOUR DURING CONSTRUCTION	8.0	16	0.3	—	9.9		
			• COMPRISING • BASE STRUCTURE (6.3M) • WIDEN S/W (0.4) • ADD WIDTH FOR 3RD LANE (1.3M)	• STEEL WORK ONLY (0.6M) • ADD WIDTH FOR ARCH (1.0M)	• 0.1M FOR TEMPORARY SIGNAL ONLY • 0.2M FOR STAGED CONSTRUCTION				
4a-1	3 LANE BASE WITH 2.25m OFFSET TO WEST (SAME TRAFFIC ARRANGEMENT AS 4a) (B = 16 950)	3-LANE FINAL CONFIGURATION WITHOUT ARCHES AND 2.0m SIDEWALK ON BOTH SIDES, SINGLE LANE DETOUR DURING CONSTRUCTION ALTERNATIVE ESTABLISHED FOR COMPARATIVE COST ONLY.	8.0	—	0.3	—	8.3		
			• COMPRISING • BASE STRUCTURE (6.3M) • WIDEN S/W (0.4M) • ADD WIDTH FOR 3RD LANE (1.3M)		• 0.1M FOR TEMPORARY SIGNAL ONLY • 0.2M FOR STAGED CONSTRUCTION				
4a-2	3 LANE BASE WITH 15m OFFSET TO WEST (BRIDGE CLOSED, VEHICLES AND PEDESTRIAN TO CROSS RIVER USING SINGLE LANE BAILEY BRIDGE) (B = 19 350)	3-LANE FINAL CONFIGURATION WITH STRUCTURAL ARCHES AND 2.0m SIDEWALK ON BOTH SIDES, DETOUR VIA ON-SITE BAILEY BRIDGE (1 LANE + PEDESTRIAN)	10.2	—	1.8	—	12.0		
			• COMPRISING • BASE STRUCTURE (6.3M) • WIDEN S/W (0.4M) • 2.2M (ADD) FOR STRUCTURAL ARCH BRIDGE • ADD WIDTH FOR 3RD LANE (1.3M)		COMPRISING • 1.7M FOR SINGLE LANE BAILEY STRUCTURE • 0.1M FOR STRUCTURE END DETAIL AND TRAFFIC SIGNALS				

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ALTERNATIVE (ALL COSTS INCLUDING DETOUR COSTS)		DESCRIPTION	COSTS IN MILLION					PLAN	TYPICAL CROSS-SECTION
			BRIDGE	ARCH	DETOUR	TOTAL			
4b	3-LANE WITH 3.0m OFFSET TO WEST TO FACILITATE 2-LANE DETOUR (TO MAINTAIN TWO TRAFFIC LANES AND ONE SIDEWALK ON BRIDGE DURING STAGE 2 CONSTRUCTION) (B = 19 350)	3-LANE FINAL CONFIGURATION WITH ARCHES AND 2.0m SIDEWALK ON BOTH SIDES, TWO LANE DETOUR DURING CONSTRUCTION 3.0 CENTRELINE OFFSET TO WEST	8.0	1.6	0.6	—	10.2		
			(SAME AS 4a)	* STEEL WORK ONLY (0.6M) * ADD WIDTH FOR ARCH (1.0M)	COMPRISING • 0.3M FOR PEDESTRIAN DECK • 0.1M FOR SIGNALS • 0.2M FOR STAGED CONSTRUCTION				
4c	3-LANE WITH WEST SIDE PEDESTRIAN PROMENADE AND NO EAST SIDEWALK (EFFECTIVE SHIFT 15m) (SAME TRAFFIC ARRANGEMENT AS 4b) (B = 18 750)	3-LANE FINAL CONFIGURATION WITH ARCHES, WEST SIDEWALK WIDENED TO 3.7m AND NO SIDEWALK ON EAST SIDE, TWO LANE DETOUR DURING CONSTRUCTION	7.9	1.6	0.6	—	10.1		
			COMPRISING • BASE STRUCTURE (6.3M) • WIDEN S/W (0.3) • ADD WIDTH FOR 3RD LANE (1.3M)	* STEEL WORK ONLY (0.6M) * ADD WIDTH FOR ARCH (1.0M)	(SAME AS ABOVE)				
4d	3-LANE WITH ADDITIONAL WIDENING TO WEST (EFFECTIVE SHIFT 15m FOR C.L. OF THE ARGYLE STREET AND BRIDGE) (SAME TRAFFIC ARRANGEMENT AS 4b) (B = 21 080)	3-LANE FINAL CONFIGURATION WITH ARCHES, WEST SIDEWALK WIDENED TO 3.7m AND 2.0m SIDEWALK ON EAST SIDE, TWO LANE DETOUR DURING CONSTRUCTION	8.0	1.6	0.6	0.7	10.9		
			COMPRISING • BASE STRUCTURE (6.3M) • WIDEN S/W (0.4M) • ADD WIDTH FOR 3RD LANE (1.3M)	* STEEL WORK ONLY (0.6M) * ADD WIDTH FOR ARCH (1.0M)	(SAME AS ABOVE)	* WIDEN DECK TO CORRECT ALIGNMENT (0.7M)			

However, development these the Project determined the

during the and review of alternatives, Team

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ALTERNATIVE (ALL COSTS INCLUDING DETOUR COSTS)		DESCRIPTION	COSTS IN MILLION					PLAN	TYPICAL CROSS-SECTION
			BRIDGE	ARCH	DETOUR	TOTAL			
4e	3 LANE BASE WITH 1.9m OFFSET TO WEST (TO MAINTAIN SINGLE LANE OF TRAFFIC AND ONE SIDEWALK ON THE BRIDGE FOR ONE CONSTRUCTION SEASON (9 MONTHS) (B = 18 550)	3-LANE FINAL CONFIGURATION WITH OUTSIDE ARCHES AND 2.0m SIDEWALK ON BOTH SIDES,(1.9m OFFSET OF CENTRE LINE TO WEST) SINGLE LANE DETOUR DURING CONSTRUCTION	8.0	12	0.3	—	9.5		
			COMPRISING • BASE STRUCTURE (6.3M) • WIDEN S/W (0.4M) • ADD WIDTH FOR 3RD LANE (1.3M)	• STEEL WORK ONLY (0.6M) • ADD WIDTH FOR ARCH (0.6M)	• FOR TEMPORARY SIGNAL ONLY • 0.2M FOR STAGED CONSTRUCTION				
5a	HEAVY LIFTING, 2 LANE BRIDGE WITH STRUCTURAL ARCHES (B = 16 100)	2-LANE FINAL CONFIGURATION ALIGNMENT OF ARGYLE STREET UNCHANGE, NO OFFSET, KEEP BOTH ROADWAY 8 WEEKS TOTAL SHUTDOWN OF CROSSING TO BOTH VEHICLES AND PEDESTRIAN	11.4	—	—	—	11.4		
			COMPRISING • BASE STRUCTURE (6.3M) • WIDEN S/W (0.4M) • 2.2M (ADD.) FOR STRUCTURAL ARCH BRIDGE • 2.0M FOR HEAVY LIFTING • 0.5M FOR PRECAST YARD				NOTES : ADDITIONAL COSTS NOT COVERED • EMS • PEDESTRIAN CROSSING		
5b	HEAVY LIFTING, 3 LANE BRIDGE WITH STRUCTURAL ARCHES (B = 19 350)	3-LANE FINAL CONFIGURATION WITH ALIGNMENT OF ARGYLE STREET UNCHANGE, NO OFFSET, KEEP BOTH ROADWAY 8 WEEKS TOTAL SHUTDOWN OF CROSSING TO BOTH VEHICLES AND PEDESTRIAN	12.7	—	—	—	12.7		
			COMPRISING • BASE STRUCTURE (6.3M) • WIDEN S/W (0.4M) • ADD WIDTH FOR 3rd LANE (1.3M) • 2.0M FOR HEAVY LIFTING • 0.5M FOR PRECAST YARD				NOTES : ADDITIONAL COSTS NOT COVERED • EMS • PEDESTRIAN CROSSING		

ON STREET PARKING ON EAST SIDE MAY ALSO BE REDUCED AS PER HALDIMAND COUNTY TRAFFIC STUDY, NOVEMBER 2004

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