APPENDIX C

ASSESSMENT AND EVALUATION OF NEAR TERM/ INTERIM TRANSITWAY CONFIGURATIONS

Assessment and Evaluation of Near Term/ Interim Transitway Configurations

The following table summarizes the assessment of net effects that was carried out to identify the advantages and disadv antages of each near term and interim design altern ative. Des ign alternatives were assess ed from a natural, social/cultural and technical perspective to identify a preferred design for each project phase (phase 1: 2011 to ~2021, phase 2: ~2021 to beyond 2031 and phase 3: beyond 2031).

A preferred implementation plan will be identified based on:

- Public and agency feedback;
- Operational requirements; and
- Financial implications.

Refer to Chapter 3 of the report titled *Review of Potential Implementation Scenarios* for illustrations of the design alternatives.

	r	No. Transitway Options	Estimated Capital Cost Difference (compared to least cost alternative) (\$ M)	Impacts to Traffic During Construction (Staging)	Impacts to Traffic during Operation	Encroachment on Greenbelt (ha)	Ride Comfort / Passenger Experience	Transit Reliability	Pedestrian & Cycling Impacts	Noise/Vibration	Natural Environment Impacts	OVERALL RATING
Moodie Drive)		At-grade loop intersection w/ <i>Transitway</i> 1a stops at Moodie/ <i>E-NS ramp</i> intersection	NA	Fair - Short-term closures or lane reductions on Moodie Drive required for construction of Highway 417 off-ramp intersection. - Requires realignment of Corkstown Road resulting in delays to local traffic. - Unfavourable temporary conditions in a heavy-use intersection; potential for short term delays to existing local and Transitway service at interchange.	Fair - Removes free-flow right turn channel at westbound Highway 417 off-ramp at Moodie; to be replaced with a double right turn at the intersection; -Increases complexity and size of existing Moodie/Highway 417 ramp terminal intersection. - Based on current population and employment projections, traffic modeling indicates that the free-flow right turn channel must be to be reinstated around 2021.	Good Requires approximately 0.24 ha of NCC property for the following: - Realignment of Corkstown Road. - Transitway connection from Stillwater Creek to intersection.	Good - Direct Transitway connection to/from Moodie Drive with passenger transfers taking place at station. - Opportunity to provide enhanced shelters within loop.	Fair - Eastbound Transitway buses must travel through two intersections (417 W-NS & E-NS ramp terminal) on Moodie Drive while operating in mixed traffic. - Transit priority can be provided at both intersections and will improve waiting time and overall service reliability. - Greater level of traffic control on Moodie Drive possible through monitoring of traffic signals and use of traffic cameras.	 Good / Fair Existing Moodie structure does not have sidewalks; improvements for pedestrians would have to be examined. Potential opportunity for reconfiguration of lane arrangement along Moodie Drive to improve overall safety of cyclists. The proposed removal of one lane in the southbound direction on the 417 structure would provide the opportunity to widen the cycling lane from 1.5m to 2.0m in addition to providing a 3.0m multi-use pathway on the west side of the structure. The relocation of cycling lanes towards the outside and the provision of "bike boxes" gives cyclists priority at the Moodie/Highway 417 ramp terminal intersections. These measures will reduce the likelihood of vehicle-bicycle conflicts at the 417 ramps and eliminate the need for cyclists to perform "shoulder checks" and yield to vehicles as they cross the outside lanes to the ramps as is currently done. New pathway connections north of the proposed Transitway and on the west side of Moodie Drive will provide improved pedestrian and cycling access. Minor realignment of Watts Creek pathway may be required just south of Corkstown Road. Existing pathway connection would be maintained during construction. 	Good - No impacts anticipated.	Good / Fair - Clearing mostly confined to previously disturbed areas within the MTO right-of-way, minimal encroachment into Stillwater Creek valley. - Transitway would be constructed mostly on fill, minimizing effect on ground water level.	Good / Fair (Carry Forward)
vater Creek to west of	At-Grade Alternatives	1bTransitway via Corkstown Road w/ Transitway stops at Moodie/ Corkstown intersection	NA	Good / Fair - Requires short-term closures of free-flow right turn channel at westbound Highway 417 off-ramp at Moodie and/or lane reductions on Moodie Drive to construct additional northbound lane to Corkstown Road. - Requires widening and realignment of Corkstown Road resulting in delays to local traffic. - Minor works required along Moodie Drive to construct new bus stops.	Good - Realignment of free-flow right turn channel at westbound Highway 417 off-ramp at Moodie required to accommodate additional northbound lane on Moodie Drive. - No changes to overall Moodie/Highway 417 ramp configurations.	Good / Fair - Requires approximately 0.52 ha of NCC property for the following: - Transitway connection from Stillwater Creek to intersection. - Tie-in of Transitway to Corkstown Road.	Fair / Poor - Transitway access to/from Highway 417 ramps requires detour via Corkstown Road for local and Transitway buses resulting in higher travel time. - Passenger transfers would take place at existing bus stops on Moodie Drive. - Opportunity to provide standard shelters where required.	Poor - Transitway buses must travel through a minimum of four intersections at the Moodie interchange and on Corkstown Road while operating in mixed traffic. - Transit priority at north and south ramp terminal intersections will improve waiting time and overall service reliability. - Greater level of traffic control on Moodie Drive possible through monitoring of traffic signals and use of traffic cameras.	 Fair / Poor Largely maintains existing facility at Moodie interchange, but would introduce Transitway bus movements in both directions on Corkstown Road. Potentially adverse pedestrian and cyclist experience at Moodie / Corkstown intersection due to large volume of turning buses; potentially dangerous weave condition (E-N ramp traffic to northbound Moodie northbound Moodie to Corkstown). Existing Moodie structure does not have sidewalks; improvements for pedestrians would have to be examined. Potential opportunity for reconfiguration of lane arrangement along Moodie Drive to improve overall safety of cyclists. The proposed removal of one lane in the southbound direction on the 417 structure would provide the opportunity to widen the cycling lane from 1.5m to 2.0m in addition to providing a 3.0m multi-use pathway on the west side of the structure. The relocation of cycling lanes towards the outside and the provision of "bike boxes" gives cyclists priority at the Moodie/ Highway 417 ramp terminal intersections. These measures will reduce the likelihood of vehicle-bicycle conflicts at the 417 on-ramps and eliminate the need for cyclists to perform "shoulder checks" and yield to vehicles as they cross the outside lanes to the ramps as is currently done. New pathway connections north of the proposed Transitway and on the west side of Moodie Drive will provide improved pedestrian and cycling access. Minor realignment of Watts Creek pathway may be required just south of Corkstown Road. Existing pathway connection would be maintained during construction. 	Good - No impacts anticipated.	Good - Clearing mostly confined to previously disturbed areas within the MTO right-of-way, minimal encroachment into Stillwater Creek valley. - Some clearing required for minor realignment of free- flow right turn at Moodie E-NS ramp and addition of 4th lane in NB direction of Moodie Drive.	Fair
		Transitway via Corkstown Road w/ Transitway station at Corkstown Road	\$1.7	Good / Fair - Requires short-term closures of free-flow right turn channel at westbound Highway 417 off-ramp at Moodie and/or lane reductions on Moodie Drive to construct additional northbound lane to Corkstown Road. - Requires widening and	Good - Realignment of free-flow right turn channel at westbound Highway 417 off-ramp at Moodie required to accommodate additional northbound lane on Moodie Drive. - No changes to overall Moodie/ Highway 417 ramp configurations.	Fair Requires approximately 1.2 ha of NCC property for the following: - Realignment of Corkstown Road. - Station at Corkstown	Fair / Poor - Transitway access to/from Highway 417 ramps requires detour via Corkstown Road for local and Transitway buses resulting in higher travel time. - Passenger transfers would take	Poor - Eastbound Transitway buses must travel through a minimum of four intersections at Moodie interchange and on Corkstown Road while operating in mixed traffic. - Transit priority at	 Fair / Poor Largely maintains existing facility at Moodie interchange, but would introduce Transitway bus movements in both directions on Corkstown Road. Potentially adverse pedestrian and cyclist experience at Moodie / Corkstown intersection due to large volume of turning buses; potentially dangerous weave condition (E-N ramp traffic to northbound Moodie northbound Moodie to Corkstown). Existing Moodie structure does not have sidewalks. Potential opportunity for reconfiguration of lane arrangement along Moodie Drive to improve overall safety of cyclists. 	Good - Vibration levels from the Corkstown Road Transitway Station are anticipated to remain low and possibly below the threshold of human perception of 0.1 mm/s, at the nearest residences. - Perceptible noise level impacts are not anticipated from the Transitway station at Corkstown	Good / Fair - Some clearing required in the Stillwater Creek valley to construct station at Corkstown Road, but clearing mostly confined to previously disturbed areas with the MTO right-of-way. - Some clearing	Fair

	No	, Transitway Options	Estimated Capital Cost Difference (compared to least cost alternative) (\$ M)	Impacts to Traffic During Construction (Staging)	Impacts to Traffic during Operation	Encroachment on Greenbelt (ha)	Ride Comfort / Passenger Experience	Transit Reliability	Pedestrian & Cycling Impacts	Noise/Vibration	Natural Environment Impacts	OVERALL RATING
				realignment of Corkstown Road resulting in delays to local traffic. - Construction of station not anticipated to cause additional delays to local traffic on Corkstown Road.		Road.	place at the proposed station at Corkstown Road. - Transitway bus shelters would be provided at station.	north and south ramp terminal intersections will improve waiting time and overall service reliability. - Greater level of traffic control on Moodie Drive possible through monitoring of traffic signals and use of traffic cameras.	 The proposed removal of one lane in the southbound direction on the 417 structure would provide the opportunity to widen the cycling lane from 1.5m to 2.0m in addition to providing a 3.0m multi-use pathway on the west side of the structure. The relocation of cycling lanes towards the outside and the provision of "bike boxes" gives cyclists priority at the Moodie/ Highway 417 ramp terminal intersections. These measures will reduce the likelihood of vehicle-bicycle conflicts at the 417 on- ramps and eliminate the need for cyclists to perform "shoulder checks" and yield to vehicles as they cross the outside lanes to the ramps as is currently done. New pathway connections north of the proposed Transitway and on the west side of Moodie Drive will provide improved pedestrian and cycling access. Realignment of Watts Creek pathway will be required for construction of station south of Corkstown Road. Existing pathway connection would be maintained during construction. 	Road.	required for minor realignment of free- flow right turn at Moodie E-NS ramp and addition of 4th lane in NB direction of Moodie Drive.	
Partially	Grade-Separated Alternatives	Eastbound Transitway via Corkstown Road/ Westbound Transitway via busway to 417 bus lane (<i>Transitway</i> <i>station at</i> <i>Corkstown</i> <i>Road</i>)	NA	Fair - Will require long-duration closures of Highway 417 ramps at Moodie to construct grade separations through the interchange. - Split construction with lane reductions required on Moodie Drive to construct underpass structure. - Requires widening and realignment of Corkstown Road resulting in delays to local traffic. - Unfavourable temporary conditions in a heavy-use intersection; potential for delays to existing local and Transitway service at interchange.	Good / Fair - Realignment of free-flow right turn channel at westbound Highway 417 off-ramp at Moodie required to accommodate additional northbound lane on Moodie Drive. - Realignment and grade raise of Highway 417/ Moodie interchange ramps required for grade separation. - Moodie Drive to Highway 417 access ramp approaches would be reconfigured as direct tapers instead of parallel lanes resulting in reduction of vehicle operating speed on bridge.	Fair -Requires approximately 1.0 ha of NCC property for the following: - Realignment of Corkstown Road. - Station at Corkstown Road.	Fair / Poor - Eastbound Transitway access to/from Highway 417 ramps requires detour via Corkstown Road for local and Transitway buses resulting in longest travel time. - Passenger transfers would take place at proposed station at Corkstown Road (significant local bus route diversion or long pedestrian connection to/from Moodie Drive required for transfers). - Transitway bus shelters would be provided at station.	Fair / Poor - Eastbound Transitway buses must travel through a minimum of four intersections at Moodie interchange and on Corkstown Road while operating in mixed traffic. - Westbound buses will have direct grade- separated access to Highway 417 westbound bus lane. - Transit priority at north and south ramp terminal intersections will improve waiting time and overall service reliability of eastbound buses. - Greater level of traffic control on Moodie Drive possible through monitoring of traffic signals and use of traffic cameras.	 Fair / Poor Largely maintains existing facility at Moodie interchange, but would introduce Transitway bus movements in the eastbound direction on Corkstown Road. Potentially adverse pedestrian and cyclist experience at Moodie / Corkstown intersection due to large volume of turning buses; potentially dangerous weave condition (E-N ramp traffic to NB Moodie NB Moodie to Corkstown). Existing Moodie structure does not have sidewalks; improvements for pedestrians would have to be examined. Potential opportunity for reconfiguration of lane arrangement along Moodie Drive to improve overall safety of cyclists. The proposed removal of one lane in the southbound direction on the 417 structure would provide the opportunity to widen the cycling lane from 1.5m to 2.0m in addition to providing a 3.0m multi-use pathway on the west side of the structure. The relocation of cycling lanes towards the outside and the provision of "bike boxes" gives cyclists priority at the Moodie/ Highway 417 ramp terminal intersections. These measures will reduce the likelihood of vehicle-bicycle conflicts at the 417 on-ramps and eliminate the need for cyclists to perform "shoulder checks" and yield to vehicles as they cross the outside lanes to the ramps as is currently done. New pathway connections north of the proposed Transitway and on the west side of Moodie Drive will provide improved pedestrian and cycling access. Realignment of Watts Creek pathway will be required for construction of station south of Corkstown Road. 	Good - Vibration levels from the Corkstown Road Transitway Station are anticipated to remain low and possibly below the threshold of human perception of 0.1 mm/s, at the nearest residences. - No impacts to perceptible noise levels are anticipated from the Transitway station at Corkstown Road.	Good / Fair - Some clearing required in the Stillwater Creek valley to construct station at Corkstown Road, but clearing mostly confined to previously disturbed areas with the MTO right-of-way. - Some clearing required for minor realignment of free- flow right turn at Moodie E-NS ramp and addition of 4th lane in NB direction of Moodie Drive.	Fair
	21	Eastbound Transitway via S-W Ramp/ Westbound Transitway via busway to 417 bus lane	\$0.9	Fair - Will require long-duration closures of Highway 417 ramps at Moodie to construct grade separations through the interchange, widening of S-W ramp. - Split construction with lane reductions required on Moodie Drive to construct underpass structure. - Requires realignment of Corkstown Road resulting in delays to local traffic.	Fair - Realignment of free-flow right turn channel at westbound Highway 417 off-ramp at Moodie required to accommodate additional northbound lane on Moodie Drive. - Realignment and grade raise of Highway 417/ Moodie interchange ramps required for grade separation. - Moodie Drive to Highway 417 access ramp approaches would be	Fair - Requires approximately 1.0 ha of NCC property for the following: - Realignment of Corkstown Road. - Station at Corkstown Road.	Poor - Eastbound Transitway access via widened S-W ramp requires operation in mixed- traffic on loop ramp resulting in unfavourable passenger comfort (long continuous turn). - Passenger transfers would take place at proposed station at Corkstown	Good - Eastbound Transitway buses must travel through one intersection at the Moodie interchange - Minimal operation in mixed traffic - Provides reasonably good connection between the Highway 417 bus lanes west of Moodie Drive and the Transitway - Westbound buses will have direct grade-	 Good / Fair Largely maintains existing facility at Moodie interchange with Eastbound Transitway buses diverted to Moodie S-W ramp. Existing Moodie structure does not have sidewalks; improvements for pedestrians would have to be examined. Potential opportunity for reconfiguration of lane arrangement along Moodie Drive to improve overall safety of cyclists. The proposed removal of one lane in the southbound direction on the 417 structure would provide the opportunity to widen the cycling lane from 1.5m to 2.0m in addition to providing a 3.0m multi-use pathway on the west side of the structure. The relocation of cycling lanes towards the outside and the provision of "bike boxes" gives cyclists priority at the Moodie/ Highway 417 ramp terminal intersections. These measures will reduce the likelihood of vehicle-bicycle conflicts at the 417 on- ramps and eliminate the need for cyclists to 	Good - Vibration levels from the Corkstown Road Transitway Station are anticipated to remain low and possibly below the threshold of human perception of 0.1 mm/s, at the nearest residences. - No impacts to perceptible noise levels are anticipated from the Transitway station at Corkstown Road.	Good / Fair - Some clearing required in the Stillwater Creek valley to construct station at Corkstown Road, but clearing mostly confined to previously disturbed areas with the MTO right-of-way. - Some clearing required for minor realignment of free- flow right turn at Moodie E-NS ramp and addition of 4th	Good / Fair

	Estimated Capital Cost Difference (compared to least cost alternative) (\$ M)	Impacts to Traffic During Construction (Staging)	Impacts to Traffic during Operation	Encroachment on Greenbelt (ha)	Ride Comfort / Passenger Experience	Transit Reliability	Pedestrian & Cycling Impacts	Noise/Vibration	Natural Environment Impacts	OVERALL RATING
		- Unfavourable temporary conditions in a heavy-use intersection; potential for delays to existing local and Transitway service at interchange.	reconfigured as direct tapers instead of parallel lanes resulting in reduction of vehicle operating speed on bridge. - Widening of northbound Moodie to westbound Highway 417 on-ramp beyond underpass required for buses results in buses operating in mixed traffic on ramp.		Road. - Transitway bus shelters would be provided at station.	separated access to Highway 417 westbound bus lane - Transit priority at north and south ramp terminal intersections will improve waiting time and overall service reliability of eastbound buses	 perform "shoulder checks" and yield to vehicles as they cross the outside lanes to the ramps as is currently done. New pathway connections north of the proposed Transitway and on west side of Moodie Drive will provide improved pedestrian and cycling access. Realignment of Watts Creek pathway will be required for construction of station south of Corkstown Road. Existing pathway connection would be maintained during construction. 		lane in NB direction of Moodie Drive.	
Trar acco from Driv Wes 2c Trar bus bus (<i>Tra</i> stat	estbound ansitway via \$1.7 sway to 417 s lane ransitway ation at orkstown	Fair - Will require long-duration closures of Highway 417 ramps at Moodie to construct grade separations through the interchange, construction of access ramp from Moodie Drive. - Split construction with lane reductions required on Moodie Drive to construct underpass structure. - Requires realignment of Corkstown Road resulting in delays to local traffic. - Unfavourable temporary conditions in a heavy-use intersection; potential for delays to existing local and Transitway service at interchange.	Fair - Realignment of free-flow right turn channel at westbound Highway 417 off-ramp at Moodie required to accommodate additional northbound lane on Moodie Drive. - Realignment and grade raise of Highway 417/ Moodie interchange ramps required for grade separation which may result in reduced sight lines. - Moodie Drive to Highway 417 access ramp approaches would be reconfigured as direct tapers instead of parallel lanes resulting in reduction of vehicle operating speed on bridge. - Requires new eastbound bus-only access ramp from Moodie Drive which would further increase the ramp terminal intersection size.	Fair Requires approximately 1.0 ha of NCC property for the following: - Realignment of Corkstown Road. - Station at Corkstown Road.	Good / Fair - Direct connection from Moodie Drive to Transitway for eastbound buses via access via ramp from Moodie Drive would provide a reasonably comfortable ride (due to small number of turns and reasonably short curves). - Passenger transfers would take place at proposed station at Corkstown Road (significant local bus route diversion or long pedestrian connection to/from Moodie Drive required for transfers). - Transitway bus shelters would be provided at station.	Good - Eastbound Transitway buses must travel through one intersection at the Moodie interchange. - Minimal operation in mixed traffic. - Provides reasonably good connection between the Highway 417 bus lanes west of Moodie Drive and the Transitway. - Westbound busses will have direct grade- separated access to Highway 417 westbound bus lane. - Transit priority at north and south ramp terminal intersections will improve waiting time and overall service reliability of eastbound buses.	 Good / Fair Largely maintains existing facility at Moodie interchange with eastbound Transitway buses diverted to bus-only access ramp just south of Moodie E-NS ramp terminal. Existing Moodie structure does not have sidewalks; improvements for pedestrians would have to be examined. Potential opportunity for reconfiguration of lane arrangement along Moodie Drive to improve overall safety of cyclists. The proposed removal of one lane in the southbound direction on the 417 structure would provide the opportunity to widen the cycling lane from 1.5m to 2.0m in addition to providing a 3.0m multi-use pathway on the west side of the structure. The relocation of cycling lanes towards the outside and the provision of "bike boxes" gives cyclists priority at the Moodie/Highway 417 ramp terminal intersections. These measures will reduce the likelihood of vehicle-bicycle conflicts at the 417 on-ramps and eliminate the need for cyclists to perform "shoulder checks" and yield to vehicles as they cross the outside lanes to the ramps as is currently done. New pathway connections north of the proposed Transitway and on west side of Moodie Drive will provide improved pedestrian and cycling access. Realignment of Watts Creek pathway will be required for construction of station south of Corkstown Road. Existing pathway connection would be maintained during construction. 	Good - Vibration levels from the Corkstown Road Transitway Station are anticipated to remain low and possibly below the threshold of human perception of 0.1 mm/s, at the nearest residences. - No impacts to perceptible noise levels are anticipated from the Transitway station at Corkstown Road.	Good / Fair - Some clearing required in the Stillwater Creek valley to construct station at Corkstown Road, but clearing mostly confined to previously disturbed areas with the MTO right-of-way. - Some clearing required for minor realignment of free- flow right turn at Moodie E-NS ramp and addition of 4th lane in NB direction of Moodie Drive.	Good/ Fair (Carry Forward)

		No.	Transitway Options	Estimated Capital Cost Difference (compared to least cost alternative) (\$ M)	Impacts to Traffic During Construction (Staging)	Impacts to Traffic during Operation	Encroachment on Greenbelt (ha)	Ride Comfort / Passenger Experience	Transit Reliability	Pedestrian & Cycling Impacts	Noise/Vibration	Natural Environment Impacts	OVERALL RATING
Bayshore Station to just west	At-Grade Alternatives	4a	Re-locate existing Highway 417 on-ramp. At- grade, bi- directional Transitway crossing of Holly Acres Road at location of existing Highway 417 On-Ramp.	NA	Poor - Will require short-term closure of northbound Moodie to westbound Highway 417 ramp during construction. - Future construction of Holly Acres Road grading separation would require disruption to westbound transit service for a period of up to 2 years.	Good - No significant impacts to Highway 417 are expected. - Minor reduction in Northbound Highway 417 access ramp storage length. - Traffic analysis has shown that the at-grade crossing operates well beyond the current planning horizon.	Good No Greenbelt property required.	Good / Fair - Transitway connection to/from Bayshore Station from mainline section via intersection at Holly Acres Road resulting in minor delay (signal control only) and reasonably good passenger comfort due to linear alignment and flat terrain.	Good - Bus operations through the Holly Acres intersection will be reliable as queuing is not anticipated (consistent schedule).	Good / Fair - Requires two signalized at-grade crossings (Transitway and Highway 417 on- ramp) for north-south traffic on west side of Holly Acres Road. - Provides a safe, controlled crossing of Holly Acres Road to pathway to/from Bayshore Station. - Sidewalks on the north side of the Transitway from Holly Acres to Bayshore Station would be maintained for pedestrian access to the station. - Potential new pathway connection from Aero Drive to Holly Acres with connection to Watts Creek pathway will improve pedestrian/cycling access to/from the Crystal Beach/Lakeview community to Bayshore Station and shopping centre. - Potential conversion of sidewalk to a 3.0m multi-use pathway on the west side of Holly Acres from Aero Drive to the intersection north of Highway 417 will further improve the pedestrian/cyclist network along Holly Acres Road.	Fair / Poor - Future increased in bus volumes are expected to result in an imperceptible increase in hourly average noise levels (Leq) for nearby residences. - There is a potential increase in intermittent noise due to accelerating and braking of bus traffic. These intermittent noises will be obscured during the highest traffic periods but will likely be recognizable during evening and overnight periods. - Future vibration levels at the nearest sensitive receiver near the intersection of the at-grade Transitway and Holly Acres Road are expected to increase in frequency but not in magnitude. Currently, peak ground vibrations were recorded at 1.08 mm/s and corresponded to a bus accelerating and stopping at the Holly Acres Road/ Highway 417 ramp intersection. Whereas these levels are clearly perceptible to most people, they are not harmful to buildings and not generally considered annoying to the majority of a population.	Good - Clearing confined to previously disturbed areas with the MTO right-of-way. - Culvert extension required over Tributary of Graham Creek.	Good / Fair (Carry Forward)
d (from			Re-locate		Fair - Will require short-term	Good	Good	Good	Good	Good	to the majority of a population. Good	Good	
	Grade Separated Alternatives	4b	Re-locate existing Highway 417 on-ramp. Grade Separated (overpass) bi- directional Transitway crossing of Holly Acres Road at location of existing Highway 417 on-ramp.	NA	 Will require short-term closure of northbound Moodie to westbound Highway 417 ramp during construction. Lane closures will be required on Holly Acres Road for construction of bridge piers & abutments resulting in potential delays to local traffic and existing bus service. 	- No significant impacts to Highway 417 are expected. - Minor reduction in Northbound Highway 417 access ramp storage length due to relocation of the ramp.	No Greenbelt property required.	- Direct Transitway connection to/from Bayshore Station resulting in fastest possible trip and greatest passenger comfort.	- Fully grade- separated Transitway at Holly Acres Road avoids operation of buses at intersection and provides fastest, most reliable operation to/from Bayshore Station.	 Requires one signalized at-grade crossing (at existing Highway 417 on- ramp) for north-south traffic on west side of Holly Acres Road. Provides a safe, controlled crossing of Holly Acres Road to pathway to/from Bayshore Station. Sidewalks on the north side of the Transitway from Holly Acres to Bayshore Station would be maintained for pedestrian access to the station. Potential new pathway connection from Aero Drive to Holly Acres with connection to Watts Creek pathway will improve pedestrian/cycling access to/from the Crystal Beach/Lakeview community to Bayshore Station and shopping centre. Potential conversion of sidewalk to a 3.0m multi-use pathway on the west side of Holly Acres from Aero Drive to the intersection north of Highway 417 will further improve the pedestrian/cyclist network along Holly Acres Road. 	 No impacts anticipated. The Holly Acres Road structure will be designed as a semi-integral bridge (no expansion joints) which should reduce intermittent noise impacts. 	 Clearing confined to previously disturbed areas with the MTO right-of-way. Culvert extension required over Tributary of Graham Creek. 	Good (Carry Forward)