

Environmental Component	Criteria	Indicator	Alternative Route	
			Preferred Alternative (Route 2)	Route 1C
Natural Environment	Vegetation/habitat removed or disturbed during construction of site access road and laydown area	Area and significance of vegetation removed	<ul style="list-style-type: none"> Limited Vegetation Removal including removal of a couple of large, mature shade trees, a stand of staghorn sumac and shrubs and younger undergrowth. There are no Species of Concern within the immediate footprint of the widened construction access road alignment, through a few Butternut were observed within 25 m of the route Generally speaking, most of the habitat removed involves communities of lower conservation concern Route does exit through to the Lake Ontario shoreline onto an L2 and L3 beach habitat condition <p>Less Preferred</p>	<ul style="list-style-type: none"> Limited Vegetation Removal required for access road installation. While a number of younger trees will be removed along the west side of the Serson Stormwater channel, these trees were going to be removed to accommodate the proposed 5m widening of the stormwater channel to improve aquatic and riparian habitat conditions, and hydraulic conveyance. A number of young seedlings recently planted along the railway spur north of the WWTF will also be relocated. For the most part, habitat removed includes communities of lower conservation concern, though two locally rare plants (Silky Dogwood and Foxglove Beardtongue) were observed on either end of the railway spur north of the WWTF. These plants may or may not be impacted. Bobolink have been observed in 2013 and 2015, but no evidence of breeding has been observed. Route 1c exits through to the Lake Ontario shoreline onto a rubble armoured shoreline. <p>Most Preferred</p>
		Potential for forest habitat fragmentation	<ul style="list-style-type: none"> There is generally no increase in fragmentation Alignment does occur through two distinct forest patches which possess higher general functioning than the Route 1c alignment <p>Less Preferred</p>	<ul style="list-style-type: none"> There is generally no increase in fragmentation Located on highly disturbed former transportation and industrial storage land uses. Alignment does go through two forest patches on the north and south side of the railway spur north of the WWTF. These forest patches possess less functioning than Route 2 alignment Rest of the route is located on the margins of a regenerating open meadow. <p>Most Preferred</p>
	Disruption to Applewood or Serson Creek	Length and nature of disruption to waterbodies (including Applewood, Serson and Etobicoke Creeks and wetlands)	<ul style="list-style-type: none"> No waterbody disruption involved with the construction of the access route. Crossing over Applewood Creek occurs in the land creation area as such, is part of the primary design evaluation previously completed. <p>Most Preferred</p>	<ul style="list-style-type: none"> Access road will travel along railway spur over culvert conveying existing baseflows for Serson Creek and will cross over the stormwater channel with a new temporary bridge crossing. Potential for erosion, siltation and other contaminants in the area of the Serson Creek crossing. Potential for flood impacts resulting from the new temporary bridge crossing over the stormwater channel. <p>Less Preferred</p>
		Potential to impair water quality in Arsenal Lands wetland areas and wetland habitat along Serson Creek north of the railway spur culvert	<ul style="list-style-type: none"> ~50m from amphibian breeding pond Fairly low risk of impacts on amphibian ponds due to siltation, dust and release of contaminants along the route due to its distance. Route 2 will not impact the wetlands along Serson Creek wetland habitat north of the railway spur. <p>Most Preferred</p>	<ul style="list-style-type: none"> ~30 - 50m from the wetland habitats along Serson Creek north of the railway spur culvert. Though located closer to the wetland habitats than Route 2 is proximity of the amphibian ponds, the quality of habitat is lower and the wetlands are upstream of the proposed route. Route 1c will not impact the amphibian breeding ponds in Arsenals <p>Most Preferred</p>

	Disruption related to natural hazards (floodplain, erosion)	Nature of change to flood capacity and exposure to natural hazards	<ul style="list-style-type: none"> Access road is not located near hazard areas. While Lake Ontario is a hazard area, that is associated with the land creation area, not the construction access road <p>Most Preferred</p>	<ul style="list-style-type: none"> Temporary bridge crossing over stormwater channel has potential to restrict flood flows upstream The existing culvert north of the WWTF has the small potential for failure under the railway spur north of the WWTF <p>Less Preferred</p>
	New – Influence of timing of establishment of fish and terrestrial habitat elements in construction phasing	Potential to advance earlier habitat gains for fish and terrestrial habitat in the construction phasing strategy	<ul style="list-style-type: none"> Construction access entering from the far eastern portion of the project site prevents early establishment of wetland habitats and terrestrial elements given that construction access is required through this narrow portion of the Project area. <p>Less Preferred</p>	<ul style="list-style-type: none"> With the construction access coming down the west bank of Serson Creek, the first confinement cell and western wetland area on land creation area can be completed within 2-3 years of commencement of the project. Construction access can then shift to the east side of the Serson Creek channel and progress eastward, avoiding construction impacts on the recently established early habitat gains. <p>More Preferred</p>
Summary			Less Preferred	Most Preferred
Social Environment	Disruption to use and enjoyment of Waterfront Trail	Length of Trail disrupted	<ul style="list-style-type: none"> Requires closure of 750m of Waterfront Trail through the Arsenal Lands, including ~400m of trail that is destroyed Requires dead-ending of the Trail within Marie Curtis Park Construction of 380 to 420m of new temporary Waterfront Trail along the south side of Lakeshore during construction from Small Arms Building to Marie Curtis Park West Will not likely require flagging at the one point of crossing for user safety <p>Less Preferred</p>	<ul style="list-style-type: none"> Requires one point of crossing of the existing Waterfront Trail at an existing industrial access road to the G.E. Booth WWTF Does not impact Waterfront Trail in Arsenal Lands Does not impact Waterfront Trail in Marie Curtis Park Does not require a temporary trail <p>Most Preferred</p>
	Disruption to use and enjoyment of Marie Curtis Park	Area of Marie Curtis Park disrupted	<ul style="list-style-type: none"> Construction access road crosses Marie Curtis Park West Beach just east of the Applewood Creek outlet, preventing access along the beach to the west. Maintaining construction access road for duration of the construction through Arsenal Lands and through the western limit of the Marie Curtis Park Beach West produces visual distractions and noise and dust adjacent to Beach and Park users. <p>Less Preferred</p>	<ul style="list-style-type: none"> No physical disruption to users of Marie Curtis Park Construction access road is located on the west side of the G.E. Booth WWTF thus greatly reducing visual distractions and noise and dust impacts <p>Most Preferred</p>
	Disruption to redevelopment of Arsenal Lands and Marie Curtis Park	Nature of disruption to redevelopment activities	<ul style="list-style-type: none"> Impacts limited to the Small Arms Building area and trails adjacent to riffle baffles Potentially delays Master Planning activities for Arsenal Lands <p>Less Preferred</p>	<ul style="list-style-type: none"> No impacts to the Small Arms Building area or trails adjacent to the riffle baffles No impacts to potential Master Planning activities for Arsenal Lands. <p>Most Preferred</p>
	NEW - Disruption to redevelopment of Inspiration Lakeview Lands	Potential for disruption for implementation of Inspiration Lakeview Plans	<ul style="list-style-type: none"> Route 2 does not impact planning and implementation of the Inspiration Lakeview Lands. In the event that Inspiration Lakeview does not advance to the point of permitting access from the west side of the LWC at the conclusion of the construction, an interim egress/access point cannot be established along the decommissioned Route 2 that would provide such access. <p>Less Preferred</p>	<ul style="list-style-type: none"> While located along the far eastern limits of the proposed Inspiration Lakeview Lands, the proposed construction access route does not impair the further planning or implementation of the Inspiration Lakeview Plans as construction completion schedules are not anticipated to impair initiation of the Inspiration Lakeview plans. In the event that Inspiration Lakeview does not advance to the point to permit access from the west side of the LWC at the conclusion of the construction, an interim egress/access point along the decommissioned construction access route could be sought with

				Route 1c Most Preferred
	NEW - Disruption to interim use of OPG Lands	Potential for disruption of uses of OPG Lands	<ul style="list-style-type: none"> Route 2 does not impact interim uses by OPG on their lands. Most Preferred	<ul style="list-style-type: none"> While located along the far eastern limits of OPG Lands, the proposed construction access route does not impair uses by OPG on their lands. Most Preferred
	Potential to disrupt traffic on Lakeshore Boulevard	Potential for truck traffic to affect the flow of traffic on Lakeshore Boulevard	<ul style="list-style-type: none"> Existing signal light at Lakeshore so no new disruption Traffic can move straight across Lakeshore at the lights to and from the entrance to the Small Arms building Most Preferred	<ul style="list-style-type: none"> Existing right turn off of Dixie onto Lakeshore Left turn from Lakeshore onto GE Booth WWTF industrial road on existing left hand turn lane. With a right hand turn off of Dixie required and changing from the right hand lane to the centre median before the access to GE Booth WWTF, the impacts on traffic may be moderately higher than Route 2 Less Preferred
Summary			Less Preferred	Most Preferred
Cultural Environment	Proximity to heritage features	Distance between road and heritage features	<ul style="list-style-type: none"> Nearest features (Small Arms Building) is ~5m Crosses through the Arsenal Lands Property Less Preferred	<ul style="list-style-type: none"> Nearest feature (Long Branch Indoor Rifle Range – 1300A Lakeshore Road East) is ~50m away from the closest portion of the Access Road Most Preferred
	Potential for Archaeology Resources	Potential for unearthing archaeological resources as part of access road construction	<ul style="list-style-type: none"> Route deemed to be heavily disturbed due to past industrial activity – archaeological potential is low Stage 2 assessment conducted cleared the route of possessing archaeological heritage resources Most Preferred	<ul style="list-style-type: none"> Route deemed to be heavily disturbed and consists extensively of past lakefill activities – archaeological potential is low Stage 2 assessment conducted cleared the route of possessing archaeological heritage resources Most Preferred
Summary			Less Preferred	Most Preferred
Technical/Engineering	Ease of construction	Issues which will complicate construction	<ul style="list-style-type: none"> 1 or 2 mature trees removed with stand of Sumac and understory ~400m of of Waterfront Trail will be destroyed ~380-420m of new Trail along Lakeshore required for construction period ~800m of new construction access road to be created Most Preferred	<ul style="list-style-type: none"> Approximately 30 younger trees are required to be removed along the west side of the Serson Creek stormwater channel, as well as several recently planted seedlings require relocation None of the Waterfront Trail will be destroyed No temporary trails required for duration of construction Temporary construction bridge and abutment required for stormwater channel crossing of Serson ~910m of construction roadway to be created including the movement of earth along the western stormwater channel berm for ~390m There will need to be a section of 1 lane traffic along abandoned railway spur north of WWTF between 20m and ~165m to the stormwater channel crossing. Two lanes the rest of the distance. While this is not a constructability issue, will require consideration from an operations perspective to ensure truck safety and scheduling. Given the need for a bridge, the single lane section and proposed widening of the Serson Creek Stormwater Channel berm as part of the road construction, Route 1c is deemed less preferred Less Preferred

	Ease of decommissioning	List of issues which will complicate decommissioning	<ul style="list-style-type: none"> ~460m of Waterfront Trail decommissioning required back to existing conditions. May dovetail with future implementation works of the Arsenal Lands Master Plan (or alternative planning process). These plans have not yet commenced as a clear direction has not yet been selected. <p>Less Preferred</p>	<ul style="list-style-type: none"> Waterfront Trail does not require decommissioning Decommissioning will tie in with costs for widening the Serson Creek stormwater channel and completing the baseflow hydraulic connection to the land creation area. Limited extra costs involved with these activities, which will likely dovetail with implementation works for the future Inspiration Lakeview lands. <p>Most Preferred</p>
	Potential to disturb contaminated soils	Area of contaminated soils crossed	<ul style="list-style-type: none"> Potential for contamination from munitions and other industrial activities on portions of the route – testing required ~4000m² <p>Less Preferred</p>	<ul style="list-style-type: none"> Potential for coal and associated contaminants along access road as part of stormwater channel. Testing completed and all soils and groundwater meets Table 1 conditions <p>Most Preferred</p>
Summary			Less Preferred	Most Preferred
Cost	Cost of construction, operations and decommissioning	Order of magnitude costs	~800,000.00 Most Preferred	~\$1,900,000.00 Less Preferred
OVERALL SUMMARY			Less Preferred	<p>More Preferred</p> <p>PROS</p> <p>Route 1c:</p> <ul style="list-style-type: none"> Majority of Project can be implemented away from users of Marie Curtis Park Beach, Arsenal Lands and Waterfront Trail. Goes through less functional habitat conditions and potentially impacts less rare vegetation species, but needs to consider the potential impacts Has much lower impacts on built cultural heritage resources Further soils studies and treatment are not required. <p>ISSUES</p> <p>Route 1C</p> <ul style="list-style-type: none"> Needs to consider potential Bobolink habitat Closer proximity to water courses (Serson Creek) than Route 2 and must address stream crossing issues Has potential to delay traffic on Lake Shore, but centre median left hand turn out lanes should minimize impacts. A pinch point occurs north of the WWTF – depending on mitigation approaches, could range from 20m to ~165m in length Costs are higher, but acceptable given the anticipated reduction in public use, planning and built cultural heritage resource conflicts