1. Phase 2 Alternatives

As part of Phase 2 of the Class EA process, several alternative solutions were developed to address the problem/opportunity statement.

- Alternative 1 – "Do Nothing"
  The "Do-Nothing" alternative considers no improvements and/or modifications. This alternative does not address the problem/opportunity statement and is provided as a benchmark to gauge the potential impacts of the other options being considered.

- Alternative 2 – Limit Development
  Limit development of surrounding lands to only what has been approved or is in the approval process. This limitation would deny any future development of adjacent land along Chinguacousy Road.

- Alternative 3 – Improve Alternative Routes
  Undertake improvements including capacity addition to other corridors in proximity of the Chinguacousy Road to provide desirable alternative routes.

- Alternative 4 – Local Roadway/ Intersection Improvements
  Modify existing roadway and intersections locally to improve operations. Modifications may include works such as adding traffic signals and timing optimization, through and turn lanes, resurfacing and paving roadway shoulders.

- Alternative 5 – Capacity Enhancement
  Increase capacity on Chinguacousy Road with the addition of vehicle lanes. This alternative would require widening of the current road right of way.

- Alternative 6 – Integrate Facilities for Alternate Travel Modes
  Improve facilities for other modes of travel such as walking, cycling, and transit, without adding traffic lanes.

2. Phase 2 Evaluation

Under the Class EA process, evaluation involves the identification and consideration of the impacts each alternative may have on all aspects of the environment. The term "environment" is broadly defined and includes the built/technical, natural, cultural and socio-economic environments. The evaluation considers a number of factors, which were separated into evaluation criteria. A description of each evaluation criteria is described below in Table 1.

Table 1: Evaluation Criteria Descriptions

Environment Category	Criteria	Description
Technical	Traffic Demand	Does the alternative address anticipated traffic demand for current and future needs?
	Safety	Will the alternative provide for increased safety of pedestrians, cyclists and vehicle operators?
	Active Transportation	Does the alternative support active transportation along the corridor or provide opportunity to accommodate the active transportation facilities?
	Transit	Does the alternative provide opportunity for future transit?
Natural	Terrestrial Vegetation and Wildlife (Including SAR)	What are the potential impacts to terrestrial vegetation and wildlife? This criterion also includes considerations for Species at Risk (SAR).
	Fish and Fish Habitat	Are any of the watercourses present within the study area classified as fish habitat? What are the potential impacts of the alternative to fish and fish habitat?
	Surface Water and Groundwater	What are the impacts to surface water or groundwater from each alternative? Considers source water protection and stormwater management.
	Wetlands	Are there any provincially significant wetlands present within the study area? Are there any unevaluated wetland habitats present? What are the potential impacts of the alternative to wetland habitat?
Cultural	Archaeological	What potential impacts will the alternative have on archaeological resources?
	Cultural Heritage	What potential impacts will the alternative have on cultural heritage resources? This includes built heritage and cultural landscapes.
Socio-Economic	Air Quality/Climate Change	Are there any sensitive receptors present or directly adjacent to the study area? Will the alternative significantly impact air quality now and in the future? What impacts will the alternative have on climate change? Will the alternative contribute to climate change or provide adaptation? Considerations related to transportation are green house gas emissions and impervious surfaces.

Environment Category	Criteria	Description
		Temporary considerations during construction can be considered.
	Property Impacts	What impacts will the alternative have on private property owners? Considerations include property access during construction as well as potential property acquisition.
	Supports Local Growth and Development	Does the alternative support the planned growth and development of the area?
Cost	Capital Costs	What are the anticipated capital costs of the alternative?
	Maintenance Costs	What are the anticipated maintenance costs of the alternative?

A summary of the evaluation results is presented in the format of an Evaluation Matrix. The Evaluation Matrix provides a means of comparing the effects that each alternative will generate on the area environment (technical, natural, cultural, and socio-economic). Visual markers were used to represent the potential for impact on each of the evaluation criteria. A full, or black, circle represents the most preferred option, as it will address the key concerns, but create the least amount of environmental impact. An open, or white, circle is indicative of a least preferred option as it has a higher potential to impact the environment. A red 'X' indicates that the impact does not address the minimum criteria.

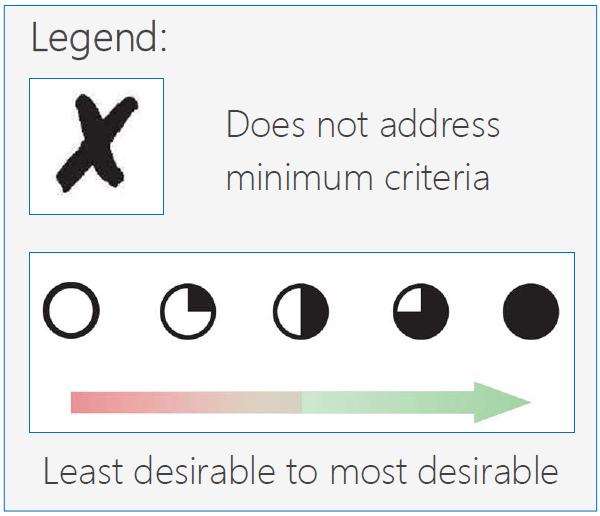

Table 2: Evaluation Matrix

Evaluation Criteria	1. Do Nothing		2. Limit Development		3. Improve Alternative Routes		4. Local Roadway / Intersection Improvements		5. Capacity Enhancement		6. Integrate Alternate Travel Modes	
Technical Environment												
Traffic Demand	✘	Does not address traffic demand and growth	○	Addresses the demand from adjacent developments but does not from the developments in surrounding lands.	◑	By improving adjacent corridors, potential to alleviate anticipated some traffic demand through study corridor.	◕	Addresses some traffic demand primarily at higher functioning intersections.	●	Addresses traffic demands by increasing road capacity.	◑	Provides facilities for alternative travel modes, resulting in improved corridor capacity. It may result in some auto mode shift but cannot fully address traffic demands.
Safety	✘	Does not provide safe use options for vulnerable road users (VRU) along corridor.	✘	Does not provide safe use options for vulnerable road users (VRU) along corridor.	✘	Does not provide safe use options for vulnerable road users (VRU) along corridor.	◔	Marginal improvements to safety as intersections would offer safer operation design, as well as the potential for paved shoulders along corridor.	◕	Capacity addition will facilitate smooth traffic flow thus reducing the chances of collisions present in a stop and go traffic. However, this alternative does not address safety of VRUs.	◕	Addresses safety by providing safe transit stops, and designated ROW for cyclist and walking. However, this alternative does not enhance safe car operations.
Active Transportation (AT)	✘	Does not support active transportation opportunity.	✘	Does not support active transportation opportunity.	✘	Does not support active transportation opportunity along study corridor.	◔	Marginal improvements at intersections only and does not provide designated ROW (Right of Way) for active transportation modes.	◑	Marginal improvements at intersections only and does not provide designated ROW (Right of Way) for active transportation modes.	●	Improves active transportation along corridor with the integration of designated active transportation ROW (Right of Way).
Transit	✘	Does not provide transit opportunity.	✘	Does not provide transit opportunity.	✘	Does not provide transit opportunity along study corridor.	◔	Marginal improvements/opportunity for transit stops at intersections.	●	Additional lanes provide flexibility to integrate transit facilities at midblock as well intersections along corridor.	◕	Improves connectivity between various modes of transportation. Existing single lane operation with future additional traffic demand will add delays to transit.
SUMMARY	✘	Does not address needs of the corridor.	✘	Does not address safety or alternative transit needs of the corridor.	✘	Does not address safety or alternative transit needs of the corridor.	◔	Marginally addresses transportation needs of the corridor, but alone would not address projected increase in traffic.	◕	Addresses several transportation needs of the corridor including transit, but does not provide active transportation facilities.	◑	Addresses active transportation needs of the corridor including transit, but does not address traffic demand. Also, existing single lane operation with future traffic demand will potentially adversely impact the efficient transit operations.

Natural Environment												
Terrestrial Vegetation and Wildlife (Including SAR)	●	No impacts.	●	No impacts.	●	No impacts within study area.	◕	Disturbances limited to within/near the existing footprint have a limited capacity for appreciable impacts to terrestrial features.	◑	No SAR trees present. Some tree removal maybe required including sensitive native Honey Locust trees. Tree removal may affect potential SAR bat habitat. Concrete Box Culverts potentially provide suitable nesting habitat for Barn Swallow SAR however no nests were observed within ROW.; Bobolink habitat adjacent to but not within Study Area. Adequate avoidance and/or mitigation can be implemented for the above.	◑	No SAR trees present. Some tree removal maybe required including sensitive native Honey Locust trees. Tree removal may affect potential SAR bat habitat. Concrete Box Culverts potentially provide suitable nesting habitat for Barn Swallow SAR however no nests were observed within ROW.; Bobolink habitat adjacent to but not within Study Area. Adequate avoidance and/or mitigation can be implemented for the above.
Fish and Fish Habitat	●	No impacts.	●	No impacts.	●	No impacts within study area.	◕	Watercourse crossings are present in Study Area. No anticipated impacts if appropriate ESC and BMP are implemented.	◑	Watercourse crossings are present in Study Area. Potential to impact fish and fish habitat at watercourse crossings.	◑	Watercourse crossings are present in Study Area. Potential to impact fish and fish habitat at watercourse crossings.
Surface Water and Groundwater	●	No impacts.	●	No impacts.	●	No impacts within study area.	◕	Watercourse crossings are present in Study Area. No anticipated impacts if appropriate ESC and BMP are implemented.	◑	Watercourse crossings are present in Study Area. Potential to impact surface water and groundwater at watercourse crossings.	◑	Watercourse crossings are present in Study Area. Potential to impact surface water and groundwater at watercourse crossings.
Wetlands	●	No impacts.	●	No impacts.	●	No impacts within study area.	◕	Etobicoke Creek Headwater Wetland Complex PSW present. Other wetlands present at watercourse crossings. No anticipated impacts if appropriate ESC and BMP are implemented.	◑	Etobicoke Creek Headwater Wetland Complex PSW present. Other wetlands present at watercourse crossings. Potential to impact wetlands at watercourse crossings	◑	Etobicoke Creek Headwater Wetland Complex PSW present. Other wetlands present at watercourse crossings. Potential to impact wetlands at watercourse crossings.

SUMMARY	●	No impacts to the natural environment as no work is being undertaken.	●	No impacts to the natural environment as no work is being undertaken.	●	No impacts to the natural environment in this corridor as no work is being undertaken.	◕	Potential for some impacts to the adjacent natural environment. Impacts to be addressed by mitigation measures or avoided where possible.	◑	Potential for some impacts to the adjacent natural environment. Impacts to be addressed by mitigation measures or avoided where possible.	◑	Potential for some impacts to the adjacent natural environment. Impacts to be addressed by mitigation measures or avoided where possible.
Cultural Environment												
Archaeological	●	No impacts to archaeological resources.	●	No impacts to archaeological resources.	●	No impacts to archaeological resources within the study area.	◑	Some parts of the study area have potential for impacts. Stage 2 investigation required to confirm.	◑	Some parts of the study area have potential for impacts. Stage 2 investigation required to confirm.	◑	Some parts of the study area have potential for impacts. Stage 2 investigation required to confirm.
Cultural Heritage	●	No impacts to built heritage resources or cultural landscapes.	●	No impacts to built heritage resources or cultural landscapes.	●	No impacts to built heritage resources or cultural landscapes within the study area.	◑	Anticipated impacts to cultural resources present can be mitigated.	◑	Anticipated impacts to cultural resources present can be mitigated.	◑	Anticipated impacts to cultural resources present can be mitigated.
SUMMARY	●	No impacts to the cultural environment as no work is being undertaken.	●	No impacts to the cultural environment as no work is being undertaken.	●	No impacts to the cultural environment in this corridor as no work is being undertaken.	◑	Potential for some impacts to the adjacent cultural environment. Impacts to be addressed by mitigation measures or avoided where possible.	◑	Potential for some impacts to the adjacent cultural environment. Impacts to be addressed by mitigation measures or avoided where possible.	◑	Potential for some impacts to the adjacent cultural environment. Impacts to be addressed by mitigation measures or avoided where possible.
Socio – Economic Environment												
Climate Change/Air Quality	○	With background and new development traffic still growing, anticipated to have more congestion on this route for this Alternative.	○	With background and new (approved) development traffic still growing, anticipated to have more congestion on this route for this Alternative.	◔	Despite traffic diversion to alternative routes, some traffic growth on this corridor is expected due to planned developments. Will potentially cause congestion and adverse climate impacts. Additional traffic on alternate routes will contribute negatively to respective corridors.	◑	Nodal improvements at intersections will somewhat facilitate flow of traffic but overall road capacity constraints will still result in congestion and idling contributing to adverse climate impacts	●	Additional capacity adequate to absorb the future traffic demand will facilitate the smooth flow thus avoiding congestion and idling. Less idling time positively contributes to lessen the climate impacts and improving air quality.	◑	Alternative modes compared to passenger cars typically produce lesser air pollutants on a per rider basis. However, the positive effect is likely to be offset by the negative impacts due to congestion and increased idling time because of existing single lane operation.
Property Impacts	●	No impacts as no work is being undertaken.	●	No impacts as no work is being undertaken.	●	No impacts as no work is being undertaken.	◑	Some potential impacts adjacent to areas of improvement.	○	Potential for greater property impacts on both sides of the corridor due to widening.	◑	Some potential impacts adjacent to areas of improvement.

Supports Local Growth and Development	✘	Does not support local growth and development.	✘	Does not support local growth and development.	○	Minimal support for local growth.	◑	Somewhat supports local growth.	◕	Supports local growth and development by providing required capacity for traffic, however, does not provide the facilities for AT and Transit demand.	◑	Somewhat supports local growth and development. It provides the facilities for AT and transit demand but does not provide the required capacity for auto, which is the dominant mode of travel.
SUMMARY	✘	Minimal impacts but does not support the planning vision in the study area.	✘	Does not support the planning vision in the study area.	◔	Minimal impacts but does not support the planning vision in the study area.	◑	Somewhat supports the planning vision in the study area, though there may be some impacts to properties. Will result in climate impacts due to congestion and idling.	◕	Supports the planning vision for this area, and contributes to lessen the climatic impacts of the future traffic demand, though there will be property impacts.	◑	Supports the planning vision for this area, though there may be some property impacts and impacts associated with climate change.
Cost												
Capital Costs	●	No capital costs.	●	No capital costs.	●	No capital costs on this roadway.	◑	Moderate capital costs.	○	Increased capital costs.	◑	Moderate capital costs.
Maintenance Costs	○	Aging infrastructure with increased traffic load will contribute to increasing maintenance costs.	○	Maintenance costs will increase due to deteriorating condition of road.	○	Maintenance costs will increase due to deteriorating condition of road.	◑	Additional infrastructure will need additional funds for the maintenance however the increase is likely to be offset by the saving in the maintenance costs needed for aging infrastructure.	◕	Additional infrastructure will need additional funds for the maintenance however the increase is likely to be somewhat offset by the saving in the maintenance costs needed for aging infrastructure.	○	Increased maintenance costs due to new infrastructure as well as the funds needed for maintenance of aging existing infrastructure.
SUMMARY	◔	No capital cost but increased maintenance costs	◔	No capital cost but increased maintenance costs	◔	No capital cost but increased maintenance costs	◑	Moderate costs	◕	Significant capital costs but saving in maintenance costs due to replacement of the aging infrastructure.	◔	Significant costs

RECCOMENDATION	This alternative is not recommended as traffic demand and growth is not accommodated. While there are minimal natural and cultural impacts, 'Do Nothing' does not support or address the issues identified in the Problem / Opportunity Statement.	This alternative is **not** recommended as traffic demand and growth is not accommodated. While limiting development would somewhat reduce demand, limiting development does not support the planning vision as well as does not address the issues identified in the Problem / Opportunity Statement.	This alternative is **not** recommended as traffic demand and growth in the study area is not accommodated. While there are minimal natural and cultural impacts to the study area, improving other roads does not support or address the issues identified in the Problem / Opportunity Statement.	This alternative is **recommended** in conjunction with alternatives 5 and 6. Localized improvements to roadways and intersections alone would partially address safety and operations but would not be able to fully address the Problem / Opportunity Statement on its own.	This alternative is **recommended** in conjunction with alternatives 4 and 6. Widening the roadway alone would address traffic demand and growth but would not be able to fully address the Problem / Opportunity Statement, such as intersection improvements and active transportation. Measures can be applied to appropriately mitigate potential impacts to natural and cultural environments.	This alternative is **recommended** in conjunction with alternatives 4 and 5 as it would not be able to fully accommodate the traffic address the Problem / Opportunity Statement, particularly traffic demand. Measures can be applied to appropriately mitigate potential impacts to natural and cultural environments.
				Recommended Preliminary Preferred Solution **Combination of components from Alternatives 4, 5 & 6**		