

# Alternative Solutions Considered

- 1. Do Nothing (base case)**
- 2. Improve Transportation Systems Management (TSM)**
  - Add left and right turn lanes at intersections
  - Improve traffic signal operations
  - Provide queue jump signals at intersections
- 3. Improve Travel Demand Management (TDM)**
  - Promote carpooling
  - Promote work from home program
- 4. Increase Public Transit Service**
  - Add more buses
- 5. Increase Capacity on Leslie Street**
  - Add through lanes on Leslie Street
- 6. Increase Capacity to parallel roadways**
  - Add through lanes to other roadways

# Comparative Evaluation Summary of the Alternative Solutions

CATEGORIES OF CONSIDERATION	CRITERIA	ALTERNATIVE SOLUTIONS					
		Alternative Solution # 1 Do Nothing	Alternative Solution # 2 Improve Transportation Systems Management (TSM)	Alternative Solution # 3 Improve Transit/Travel Demand Management (TDM)	Alternative Solution #4 Increase Public Transit Service	Alternative Solution #5 Increase Capacity to Leslie Street	Alternative Solution #6 Improve Capacity to Parallel Roadways
<b>DEFINITIONS</b>		No improvements made to Leslie Street other than normal maintenance. This represents the "status quo".	Provide improvements by adding turning lanes, improve traffic signal operations, and/or add queue jump signals for transit.	Promote carpooling and/or work from home program.	Provide improvements to public transit (facilities and/or operations) aimed at shifting users from cars to transit.	Increasing capacity means adding additional lanes of traffic to Leslie Street and improving existing intersections.	Increasing capacity to parallel roadways means adding additional lanes of traffic and improving existing intersections.
<b>TECHNICAL</b>	Potential to accommodate the projected traffic demand over the planning horizon by providing additional capacity	<ul style="list-style-type: none"> <li>There is no potential to accommodate the projected traffic demand.</li> <li>The existing roadway capacity cannot accommodate the projected traffic demand.</li> <li>Therefore, as traffic demand and congestion increase over time without any improvements to Leslie Street, traffic operations will suffer (greater delays).</li> </ul>	<ul style="list-style-type: none"> <li>This solution alone will not accommodate the projected traffic demand.</li> <li>A minor improvement in capacity through improvements to TSM may help reduce the rate of increase in traffic congestion, but traffic demand and congestion will continue to increase over time without any other improvements to Leslie Street.</li> </ul>	<ul style="list-style-type: none"> <li>This solution alone will not accommodate the projected traffic demand.</li> <li>A potential reduction in demand on Leslie Street through improvements to TDM may help reduce the rate of increase in traffic congestion, but traffic demand and congestion will continue to increase over time without any other improvements to Leslie Street.</li> </ul>	<ul style="list-style-type: none"> <li>This solution alone will not accommodate the projected traffic demand.</li> <li>A potential reduction in demand on Leslie Street through improvements to public transit will help to reduce the rate of increase in traffic congestion by shifting some people from cars to transit, but traffic demand and congestion will continue to increase over time without any other improvements to Leslie Street, or a significant modal shift from cars to transit.</li> </ul>	<ul style="list-style-type: none"> <li>This solution provides the greatest opportunity to accommodate the projected traffic demand.</li> <li>An increase in capacity on Leslie Street is expected to accommodate the projected traffic demand over the planning horizon.</li> </ul>	<ul style="list-style-type: none"> <li>A potential reduction in demand on Leslie Street through diversion of some traffic to parallel roadways may help to reduce the rate of increase in traffic congestion on Leslie Street, but the projected traffic demand from within the community in the study area will not be accommodated with this solution so congestion will continue to increase over time.</li> </ul>
	Potential for improving traffic safety over the planning horizon	<ul style="list-style-type: none"> <li>Traffic demand and congestion increase over time without any other improvements to Leslie Street.</li> <li>Therefore, the potential to improve traffic safety will be more difficult as traffic demand and congestion increase over time (greater potential for accidents and injuries).</li> </ul>	<ul style="list-style-type: none"> <li>Despite TSM measures, traffic demand and congestion is expected to increase over time without any other improvements to Leslie Street.</li> <li>Therefore, the potential to improve traffic safety will be more difficult as traffic demand and congestion increase over time (greater potential for accidents and injuries).</li> </ul>	<ul style="list-style-type: none"> <li>Despite TDM measures, traffic demand and congestion is expected to increase over time without any other improvements to Leslie Street.</li> <li>Therefore, the potential to improve traffic safety will be more difficult as traffic demand and congestion increase over time (greater potential for accidents and injuries).</li> </ul>	<ul style="list-style-type: none"> <li>Improvements to public transit will help to reduce the rate of increase in traffic congestion, but traffic demand and congestion will continue to increase over time without any other improvements to Leslie Street.</li> <li>Therefore, the potential to improve traffic safety will be more difficult as traffic demand and congestion increase over time (greater potential for accidents and injuries).</li> </ul>	<ul style="list-style-type: none"> <li>By accommodating the projected traffic demand, this solution offers the greatest opportunity for improving traffic safety as demand increases over the planning horizon.</li> </ul>	<ul style="list-style-type: none"> <li>Improvements to parallel roadways will help to reduce the rate of increase in traffic congestion, but traffic demand and congestion will continue to increase over time without any other improvements to Leslie Street.</li> <li>Therefore, the potential to improve traffic safety will be more difficult as traffic demand and congestion increase over time (greater potential for accidents and injuries).</li> </ul>
	Potential for incorporating improvements for cyclists, pedestrians, transit, and streetscaping on Leslie Street	<ul style="list-style-type: none"> <li>No potential for incorporating cyclists, pedestrians, transit, or streetscaping improvements.</li> </ul>	<ul style="list-style-type: none"> <li>Localized potential where improvements are made (ie. at intersections)</li> </ul>	<ul style="list-style-type: none"> <li>Improvements to transit will be made.</li> <li>There is no potential for incorporating cyclists, pedestrians or streetscaping improvements.</li> </ul>	<ul style="list-style-type: none"> <li>Improvements to transit will be made.</li> <li>There is no potential for incorporating cyclists, pedestrians or streetscaping improvements.</li> </ul>	<ul style="list-style-type: none"> <li>Allows for the incorporation of cycling, pedestrian and transit facilities, and streetscaping improvements.</li> </ul>	<ul style="list-style-type: none"> <li>No potential for incorporating cyclists, pedestrians, transit, or streetscaping improvements.</li> </ul>
<b>NATURAL ENVIRONMENT</b>	Potential for altering existing watercourses	<ul style="list-style-type: none"> <li>No alteration of existing watercourses.</li> </ul>	<ul style="list-style-type: none"> <li>Potential adverse effect to existing watercourses if culvert extensions or replacements are required as part of the design.</li> <li>This adverse effect may result from the need to alter the existing watercourse.</li> <li>If fisheries habitat is lost or in-stream work is required, then the appropriate approvals would be obtained from the LSRCA/DFO during the detailed design stage.</li> </ul>	<ul style="list-style-type: none"> <li>No alteration of existing watercourses.</li> </ul>	<ul style="list-style-type: none"> <li>No alteration of existing watercourses.</li> </ul>	<ul style="list-style-type: none"> <li>Potential adverse effect to existing watercourses if culvert extensions or replacements are required as part of the design.</li> <li>This adverse effect may result from the need to alter the existing watercourse.</li> <li>If fisheries habitat is lost or in-stream work is required, then the appropriate approvals would be obtained from the LSRCA/DFO during the detailed design stage.</li> </ul>	<ul style="list-style-type: none"> <li>Potential adverse effect to existing watercourses if culvert extensions or replacements are required as part of the design.</li> <li>This adverse effect may result from the need to alter the existing watercourse.</li> <li>If fisheries habitat is lost or in-stream work is required, then the appropriate approvals would be obtained from the LSRCA/DFO during the detailed design stage.</li> </ul>
	Potential for short-term construction related effects on downstream surface water quality	<ul style="list-style-type: none"> <li>No short-term construction related effects on downstream surface water quality.</li> </ul>	<ul style="list-style-type: none"> <li>Short-term construction related effects on downstream surface water quality over the construction period would be minimized through the use of standard mitigation measures, such as erosion and sedimentation measures.</li> </ul>	<ul style="list-style-type: none"> <li>No short-term construction related effects on downstream surface water quality.</li> </ul>	<ul style="list-style-type: none"> <li>Short-term construction related effects on downstream surface water quality over the construction period would be minimized through the use of standard mitigation measures, such as erosion and sedimentation measures.</li> </ul>	<ul style="list-style-type: none"> <li>Short-term construction related effects on downstream surface water quality over the construction period would be minimized through the use of standard mitigation measures, such as erosion and sedimentation measures.</li> </ul>	<ul style="list-style-type: none"> <li>Short-term construction related effects on downstream surface water quality over the construction period would be minimized through the use of standard mitigation measures, such as erosion and sedimentation measures.</li> </ul>
	Potential for altering existing terrestrial features	<ul style="list-style-type: none"> <li>No alteration of existing terrestrial features.</li> </ul>	<ul style="list-style-type: none"> <li>Alteration to existing terrestrial features to accommodate the proposed improvements would be minimized through avoidance where possible or replacement where required.</li> </ul>	<ul style="list-style-type: none"> <li>No alteration of existing terrestrial features.</li> </ul>	<ul style="list-style-type: none"> <li>Alteration to existing terrestrial features to accommodate the proposed improvements would be minimized through avoidance where possible or replacement where required.</li> </ul>	<ul style="list-style-type: none"> <li>Alteration to existing terrestrial features to accommodate the proposed improvements would be minimized through avoidance where possible or replacement where required.</li> </ul>	<ul style="list-style-type: none"> <li>Alteration to existing terrestrial features to accommodate the proposed improvements would be minimized through avoidance where possible or replacement where required.</li> </ul>
<b>SOCIAL/ CULTURAL ENVIRONMENT</b>	Potential for short-term, construction related effects such as noise, dust, or vibration and odours for area residents, businesses, community facilities, and roadway users	<ul style="list-style-type: none"> <li>No noise, dust or vibration effects on residents, businesses, community facilities, or roadway users.</li> </ul>	<ul style="list-style-type: none"> <li>Potential short-term construction effects can be mitigated with noise, dust, and odour controls/mitigation.</li> </ul>	<ul style="list-style-type: none"> <li>No noise, dust or vibration effects on residents, businesses, community facilities, or roadway users.</li> </ul>	<ul style="list-style-type: none"> <li>Potential short-term construction effects can be mitigated with noise, dust, and vibration controls/mitigation.</li> </ul>	<ul style="list-style-type: none"> <li>Potential short-term construction effects can be mitigated with noise, dust, and vibration controls/mitigation.</li> </ul>	<ul style="list-style-type: none"> <li>Potential short-term construction effects can be mitigated with noise, dust, and vibration controls/mitigation.</li> </ul>
	Potential short-term effects on accessing adjacent properties along Leslie Street during construction	<ul style="list-style-type: none"> <li>No effect on accessing adjacent properties during construction.</li> </ul>	<ul style="list-style-type: none"> <li>Potential short-term construction effects on accessing adjacent properties would be minimized through the implementation of a traffic control plan that would ensure continuous access to properties.</li> </ul>	<ul style="list-style-type: none"> <li>No effect on accessing adjacent properties during construction.</li> </ul>	<ul style="list-style-type: none"> <li>Potential short-term construction effects on accessing adjacent properties would be minimized through the implementation of a traffic control plan that would ensure continuous access to properties.</li> </ul>	<ul style="list-style-type: none"> <li>Potential short-term construction effects on accessing adjacent properties would be minimized through the implementation of a traffic control plan that would ensure continuous access to properties.</li> </ul>	<ul style="list-style-type: none"> <li>No effect on accessing adjacent properties during construction. However, there are potential short-term construction effects on parallel roadways. This effects may be minimized through the implementation of a traffic control plan that would ensure continuous access to properties.</li> </ul>

# Comparative Evaluation Summary of the Alternative Solutions

CATEGORIES OF CONSIDERATION	CRITERIA	ALTERNATIVE SOLUTIONS					
		Alternative Solution # 1 Do Nothing	Alternative Solution # 2 Improve Transportation Systems Management (TSM)	Alternative Solution # 3 Improve Transit/Travel Demand Management (TDM)	Alternative Solution # 4 Increase Public Transit Service	Alternative Solution # 5 Increase Capacity to Leslie Street	Alternative Solution # 6 Improve Capacity to Parallel Roadways
<b>DEFINITIONS</b>		No improvements made to Leslie Street other than normal maintenance. This represents the "status quo".	Provide improvements by adding turning lanes, improve traffic signal operations, and/or add queue jump signals for transit.	Promote carpooling and/or work from home program.	Provide improvements to public transit (facilities and/or operations) aimed at shifting users from cars to transit.	Increasing capacity means adding additional lanes of traffic to Leslie Street and improving existing intersections.	Increasing capacity to parallel roadways means adding additional lanes of traffic and improving existing intersections.
<b>SOCIAL/ CULTURAL ENVIRONMENT (Continued)</b>	Potential long-term effects on the ease of access to adjacent properties along Leslie Street	<ul style="list-style-type: none"> <li>Increasing traffic volumes and congestion over time would increase the difficulty of accessing adjacent properties.</li> </ul>	<ul style="list-style-type: none"> <li>A minor improvement in capacity through improvements to TSM may help reduce the rate of increase in traffic congestion, but traffic demand and congestion will continue to increase over time without any other improvements to Leslie Street.</li> <li>As a result, increasing traffic volumes and congestion over time would increase the difficulty of accessing adjacent properties.</li> </ul>	<ul style="list-style-type: none"> <li>A potential reduction in demand on Leslie Street through improvements to TDM may help reduce the rate of increase in traffic congestion, but traffic demand and congestion will continue to increase over time without any other improvements to Leslie Street.</li> <li>As a result, increasing traffic volumes and congestion over time would increase the difficulty of accessing adjacent properties.</li> </ul>	<ul style="list-style-type: none"> <li>A potential reduction in demand on Leslie Street through improvements to public transit will help to reduce the rate of increase in traffic congestion by shifting some people from cars to transit, but traffic demand and congestion will continue to increase over time without any other improvements to Leslie Street, or a significant modal shift from cars to transit.</li> <li>As a result, increasing traffic volumes and congestion over time would increase the difficulty of accessing adjacent properties.</li> </ul>	<ul style="list-style-type: none"> <li>An increase in road capacity will address the projected increase in traffic and congestion over time, and together with turn lane/intersection improvements will result in the least anticipated effect on the ease of access to adjacent properties.</li> </ul>	<ul style="list-style-type: none"> <li>Improvements to parallel roadways will help to reduce the rate of increase in traffic congestion, but traffic demand and congestion will continue to increase over time without any other improvements to Leslie Street.</li> <li>As a result, increasing traffic volumes and congestion over time would increase the difficulty of accessing adjacent properties.</li> </ul>
	Potential air quality effects	<ul style="list-style-type: none"> <li>As traffic demand and congestion increase over time without any other improvements to Leslie Street, air quality in the immediate area may be reduced (potential for increased emissions from a greater number of vehicles spending more time within the study area due to road congestion).</li> </ul>	<ul style="list-style-type: none"> <li>A minor improvement in capacity through improvements to TSM may help reduce the rate of increase in traffic congestion, but traffic demand and congestion will continue to increase over time without any other improvements to Leslie Street.</li> <li>As a result, air quality in the immediate area may be reduced due to the potential for increased emissions from a greater number of vehicles spending more time within the study area because of road congestion.</li> </ul>	<ul style="list-style-type: none"> <li>A potential reduction in demand on Leslie Street through improvements to TDM may help reduce the rate of increase in traffic congestion, but traffic demand and congestion will continue to increase over time without any other improvements to Leslie Street.</li> <li>As a result, air quality in the immediate area may be reduced due to the potential for increased emissions from a greater number of vehicles spending more time within the study area because of road congestion.</li> </ul>	<ul style="list-style-type: none"> <li>A potential reduction in demand on Leslie Street through improvements to public transit will help to reduce the rate of increase in traffic congestion by shifting some people from cars to transit, but traffic demand and congestion will continue to increase over time without any other improvements to Leslie Street, or a significant modal shift from cars to transit.</li> <li>As a result, air quality in the immediate area may be reduced due to the potential for increased emissions from a greater number of vehicles spending more time within the study area because of road congestion.</li> </ul>	<ul style="list-style-type: none"> <li>An increase in road capacity will address the projected increase in traffic and congestion over time resulting in the least impact on air quality over the planning horizon.</li> <li>However, there will be an increase in traffic over time and will result in increase of emission in the corridor.</li> </ul>	<ul style="list-style-type: none"> <li>Improvements to parallel roadways will help to reduce the rate of increase in traffic congestion, but traffic demand and congestion will continue to increase over time without any other improvements to Leslie Street.</li> <li>As a result, air quality in the immediate area may be reduced due to the potential for increased emissions from a greater number of vehicles spending more time within the study area because of road congestion.</li> </ul>
	Potential noise effects	<ul style="list-style-type: none"> <li>As traffic demand and congestion increase over time without any other improvements to Leslie Street, adverse noise effects on the adjacent land uses may increase (potential for increased noise emissions from a greater number of vehicles spending more time within the study area due to road congestion).</li> </ul>	<ul style="list-style-type: none"> <li>A minor improvement in capacity through improvements to TSM may help reduce the rate of increase in traffic congestion, but traffic demand and congestion will continue to increase over time without any other improvements to Leslie Street.</li> <li>As a result, noise emissions from vehicles in the immediate area may increase due to the potential for increased noise emissions from a greater number of vehicles spending more time within the study area because of road congestion.</li> </ul>	<ul style="list-style-type: none"> <li>A potential reduction in demand on Leslie Street through improvements to TDM may help reduce the rate of increase in traffic congestion, but traffic demand and congestion will continue to increase over time without any other improvements to Leslie Street.</li> <li>As a result, noise emissions from vehicles in the immediate area may increase due to the potential for increased noise emissions from a greater number of vehicles spending more time within the study area because of road congestion.</li> </ul>	<ul style="list-style-type: none"> <li>A potential reduction in demand on Leslie Street through improvements to public transit will help to reduce the rate of increase in traffic congestion by shifting some people from cars to transit, but traffic demand and congestion will continue to increase over time without any other improvements to Leslie Street, or a significant modal shift from cars to transit.</li> <li>As a result, noise emissions from vehicles in the immediate area may increase due to the potential for increased noise emissions from a greater number of vehicles spending more time within the study area because of road congestion.</li> </ul>	<ul style="list-style-type: none"> <li>An increase in road capacity will address the projected increase in traffic and congestion over time resulting in the least impact on noise over the planning horizon.</li> <li>However, there will be an increase in traffic over time and will result in increase of noise in the corridor.</li> </ul>	<ul style="list-style-type: none"> <li>Improvements to parallel roadways will help to reduce the rate of increase in traffic congestion, but traffic demand and congestion will continue to increase over time without any other improvements to Leslie Street.</li> <li>As a result, noise emissions from vehicles in the immediate area may increase due to the potential for increased noise emissions from a greater number of vehicles spending more time within the study area because of road congestion.</li> </ul>
	Potential for requiring private property	<ul style="list-style-type: none"> <li>Private property would not be required.</li> </ul>	<ul style="list-style-type: none"> <li>Private property may be required in some locations to implement roadway improvements to provide turning lanes, queue jump lanes, etc.</li> <li>Property impacts will be reviewed to minimize the effects (or costs) for the Alternative Design Concepts as well as for the Recommended Improvements.</li> </ul>	<ul style="list-style-type: none"> <li>Private property would not be required.</li> </ul>	<ul style="list-style-type: none"> <li>Private property may be required in some locations to implement roadway improvements to provide new bus bays.</li> <li>Property impacts will be reviewed to minimize the effects (or costs) for the Alternative Design Concepts as well as for the Recommended Improvements.</li> </ul>	<ul style="list-style-type: none"> <li>Private property may be required in some locations to implement roadway improvements, including cycling, pedestrian and transit facilities, and streetcaping improvements.</li> <li>Property impacts will be reviewed to minimize the effects (or costs) for the Alternative Design Concepts as well as for the Recommended Improvements.</li> </ul>	<ul style="list-style-type: none"> <li>Private property may be required in some locations to implement roadway improvements on parallel roadways.</li> <li>Property impacts will be reviewed to minimize the effects (or costs) for the Alternative Design Concepts as well as for the Recommended Improvements.</li> </ul>
<b>FINANCIAL</b>	Potential cost of acquiring private property	<ul style="list-style-type: none"> <li>No property costs.</li> </ul>	<ul style="list-style-type: none"> <li>Some property costs may be required for the installation of turning lanes, queue jump lanes, etc.</li> <li>Property impacts will be reviewed to minimize the effects (or costs) for the Alternative Design Concepts as well as for the Recommended Improvements.</li> </ul>	<ul style="list-style-type: none"> <li>No property costs.</li> </ul>	<ul style="list-style-type: none"> <li>Some property costs may be required for the installation of new bus bays.</li> <li>Property impacts will be reviewed to minimize the effects (or costs) for the Alternative Design Concepts as well as for the Recommended Improvements.</li> </ul>	<ul style="list-style-type: none"> <li>Some property costs may be required to implement roadway improvements.</li> <li>Property impacts will be reviewed to minimize the effects (or costs) for the Alternative Design Concepts as well as for the Recommended Improvements.</li> </ul>	<ul style="list-style-type: none"> <li>Some property costs may be required to implement roadway improvements.</li> <li>Property impacts will be reviewed to minimize the effects (or costs) for the Alternative Design Concepts as well as for the Recommended Improvements.</li> </ul>
	Potential capital cost of implementation	<ul style="list-style-type: none"> <li>No capital costs.</li> </ul>	<ul style="list-style-type: none"> <li>Some capital cost may be required to install turning lanes, queue jump lanes, etc.</li> </ul>	<ul style="list-style-type: none"> <li>No capital costs.</li> </ul>	<ul style="list-style-type: none"> <li>Some capital cost may be required to install new bus bays.</li> </ul>	<ul style="list-style-type: none"> <li>Some capital cost may be required to implement roadway improvements.</li> </ul>	<ul style="list-style-type: none"> <li>Some capital cost may be required to implement roadway improvements.</li> </ul>
<b>SUMMARY</b>		<ul style="list-style-type: none"> <li>Does not address the Problem, and has no potential to incorporate the Opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>On its own, it does not fully address the Problem, and has no potential to incorporate the Opportunities.</li> <li>However, It may be combined with Alternative #5.</li> </ul>	<ul style="list-style-type: none"> <li>On its own, it does not fully address the Problem, and has no potential to incorporate the Opportunities.</li> <li>However, It may be combined with Alternative #5.</li> </ul>	<ul style="list-style-type: none"> <li>On its own, it does not fully address the Problem, and has no potential to incorporate the Opportunities.</li> <li>However, It may be combined with Alternative #5.</li> </ul>	<ul style="list-style-type: none"> <li>Address the Problem and has the potential to incorporate the Opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>Does not address the Problem, and has no potential to incorporate the Opportunities.</li> </ul>
<b>RECOMMENDATION</b>		<b>NOT RECOMMENDED</b>	<b>RECOMMENDED AS PART OF THE IMPROVEMENT STRATEGY WHEN COMBINED WITH ALTERNATIVE #5</b>	<b>RECOMMENDED AS PART OF THE IMPROVEMENT STRATEGY WHEN COMBINED WITH ALTERNATIVE #5</b>	<b>RECOMMENDED AS PART OF THE IMPROVEMENT STRATEGY WHEN COMBINED WITH ALTERNATIVE #5</b>	<b>RECOMMENDED SOLUTION</b>	<b>NOT RECOMMENDED</b>

# Alternative Solutions Evaluation

Alternative Solution	Problem Statement	Opportunity Statement	Carry Forward
1. Do Nothing	x	x	x
2. Increase TSM	✓*	✓*	✓**
3. Increase TDM	✓*	✓*	✓**
4. Increase Public Transit Service	✓*	✓*	✓**
5. Increase Capacity to Leslie Street	✓	✓	✓
6. Increase Capacity to Parallel Roadways	✓*	x	x

\* Partially address the problem.

\*\* Carried forward as part of the Recommended Solution.

# Recommended Alternative Solution

## Increase Capacity on Leslie Street in combination with:

- Improvements to Transportation Systems Management (TSM)
- Improvements to Travel Demand Management (TDM)
- Increase Public Transit Service