

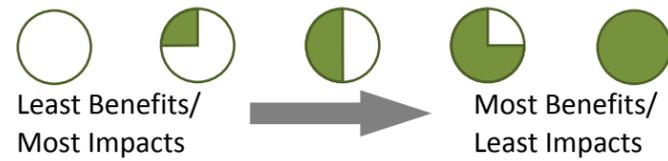
Factor Group/Criteria		Measures	Alternative 1 Overpass (road over rail)	Alternative 2 Underpass (road under rail)
1 SOCIO-ECONOMIC				
1.1 Property and Access				
a	Impacts to properties	Total number of properties impacted based on conceptual plan.	– 23 properties impacted.	– 17 properties impacted.
		Impacts to residences (e.g., partial or displacement).	– 10 residential properties impacted.	– 9 residential properties impacted.
		Impacts to commercial/industrial areas or businesses (i.e., partial or displacement).	– 13 commercial properties impacted.	– 8 commercial properties impacted.
b	Potential impacts to access to existing residences/ businesses	Qualitative assessment of temporary and permanent impacts to access related to out-of-way travel or difficulty in accessing services.	– Properties losing access to Adelaide Street North will already be displaced. – Accesses from McMahan Street, Pall Mall Street, Central Avenue, and Elias Street will be permanently detoured to alternate routes.	– Access to 4 properties will be closed from Adelaide Street North, and potentially relocated to Central Avenue.
1.2 Community Considerations				
a	Aesthetic Impacts	Qualitative assessment considering proximity of nearby residences.	– Would create a visual intrusion to the surrounding community. – Would visually block views across and along Adelaide Street North including views of McMahan Park, identified as an important viewscape by the City and community.	– Relatively little visual intrusion to the surrounding community with views across Adelaide Street North being maintained.
b	Sense of Belonging and Community Compatibility	Compatibility with surrounding neighbourhood and opportunity to provide integrated streetscape / landscape which visually retain/enhance local characteristics.	– Poor integration with surrounding neighbourhood; high grade separation structure amongst low level buildings.	– Provides better opportunity for integration with surrounding neighbourhood through urban design and appropriate land use planning / redevelopment.
c	Potential for increased noise to adjacent residences and neighbourhoods	Qualitative assessment of noise impacts.	– Overpasses increase noise levels due to elevated nature of the roadway relative to surrounding neighbourhoods.	– Underpasses decreased traffic noise by lowering the roadway below surrounding neighbourhood.
d	Impacts on community activity/mobility and street animation.	Qualitative assessment of changes in access/ activity and the impacts on built form along the corridor that could affect the community.	– More difficult to maintain mobility along and across Adelaide Street North with overpass. – Mobility across Adelaide Street North may be provided via pedestrian ‘tunnel’ connections underneath structure. – Community safety concerns with creating ‘hidden areas’ within tunnels, park and other areas adjacent to the overpass. – Less opportunity to develop public realm. – Increased vertical separation between roadway and adjacent lands reduces viewscape giving a sense of isolation and reducing street animation.	– Mobility along Adelaide Street North is more similar to existing conditions. Mobility across Adelaide Street North will be limited from Central Avenue to McMahan Street. – More opportunity to provide wider sidewalks within right-of-way. – Underpass will not be as deep as the overpass would be high; along-street views through the Underpass will be better.

Factor Group/Criteria		Measures	Alternative 1 Overpass (road over rail)	Alternative 2 Underpass (road under rail)
e	Impacts to Recreational Features	Including temporary and permanent footprint and access impacts and to McMahan Park and amenities considering: potential removal of park amenities such as the wading pool and horseshoe pits.	<ul style="list-style-type: none"> – Impedes access to McMahan Park from Adelaide Street North. – Would likely result in permanent footprint impacts to the park, reducing park space and possibly requiring the removal of mature trees along west edge of park and relocation of horseshoe pits and wading pool. 	<ul style="list-style-type: none"> – Likely possible to minimize permanent footprint impacts to McMahan Park compared to Overpass. – Impedes access to McMahan Park from Adelaide Street North but mitigation options are likely more attractive than with an Overpass.
1.3 Context Support				
a	Municipal Plans and Policies	Compatibility with Municipal plans and policies (The London Plan, Transportation Master Plan).	<ul style="list-style-type: none"> – A grade separation is consistent with the recommendations of the 2030 Transportation Master Plan – Overpass creates greater challenges in maintaining / supporting the commercial main street corridor designation of the London Plan. – More difficulty in creating / attracting high quality redevelopment opportunities adjacent to Overpass. 	<ul style="list-style-type: none"> – A grade separation is consistent with the recommendations of the 2030 Transportation Master Plan. – Underpass provides greater opportunity to support the commercial main street corridor identified in the London Plan.
b	Redevelopment Potential	Potential for adjacent areas to be redeveloped and revitalize the corridor.	<ul style="list-style-type: none"> – Impacted properties adjacent to Adelaide Street North have potential to be combined and redeveloped for other uses. – More difficulty in creating / attracting high quality redevelopment opportunities adjacent to Overpass. 	<ul style="list-style-type: none"> – Impacted properties adjacent to Adelaide Street North have potential to be combined and redeveloped for other uses. – Underpass may provide for better visibility of adjacent parcels, creating higher quality redevelopment opportunities.
c	Context Sensitive Design	Compatibility with the surrounding neighbourhoods land use context.	<ul style="list-style-type: none"> – Some opportunities for decorative treatment but will be limited on the challenges caused by the scale of the structure 	<ul style="list-style-type: none"> – Opportunities for theming and detailing configuration of side treatments and walls to integrate with existing conditions, public art, and pedestrian scale features
d	Park/Open Space	Opportunity for new public space / urban park.	<ul style="list-style-type: none"> – Some opportunity to develop properties adjacent and underneath structure as park/open space however park space may appear discontinuous and disconnected without wide pedestrian/active transportation tunnels through the Overpass. 	<ul style="list-style-type: none"> – Better opportunity to develop properties adjacent to underpass as park/open space. Adjacent urban park areas will be visible across Adelaide Street North.
e	Boulevard Treatment	Potential for providing streetlight fixtures, benches and trash receptacles, bollards and bike racks, signage, transit shelters, and sidewalk/ crosswalk materials.	<ul style="list-style-type: none"> – Opportunities for treatments are more limited on and around the Overpass. 	<ul style="list-style-type: none"> – Better opportunity to develop boulevard treatments within and around an Underpass.
SUMMARY OF SOCIO-ECONOMIC				
			<ul style="list-style-type: none"> – Alternative 1 has more property impacts and has major impacts on the surrounding community and connectivity. – Alternative 2 has fewer property impacts and although does impact surrounding properties, has more opportunity for mitigations to maintain connections and character of neighbourhood. 	
2 CULTURAL ENVIRONMENT				
a	Impacts to Cultural Heritage Resources	Potential for direct or indirect impacts /alterations the built heritage resources.	<ul style="list-style-type: none"> – 1 displacement of heritage property; edge impacts to 3 heritage properties. 	<ul style="list-style-type: none"> – Minor partial impacts to 1 heritage property (mitigation measures to be reviewed)

Factor Group/Criteria		Measures	Alternative 1 Overpass (road over rail)	Alternative 2 Underpass (road under rail)
b	Consideration of the Heritage Conservation Districts	Potential for direct or indirect impacts to the Heritage Conservation Districts (Old East Heritage Conservation District, East Woodfield Heritage Conservation District).	– Some disruption to accesses from Adelaide Street North, as well as to local destination spots north of tracks.	– Potential to maintain integrity of Heritage Conservation Districts with minimal effects on corridor.
c	First Nation Interests	Potential impacts to natural environmental features or archaeological resources.	– None	– None
SUMMARY OF CULTURAL ENVIRONMENT				
			– Alternative 1 impacts 1 heritage property and creates disruption to the HCD.	– Alternative 2 partially impacts 1 heritage property.
3 NATURAL ENVIRONMENT				
a	Impacts to natural features	Qualitative assessment considering the magnitude and nature of potential impacts to natural features.	– Study area is within an urban setting. There are no natural environmental features that would be at risk of direct or indirect impact. There are no watercourses in the area and all vegetation is culturally derived / influenced. – Street trees and trees located in McMahan Park impacted.	– Street trees and trees located in McMahan Park impacted; however, has more potential to re-establish trees and park conditions to close to existing after construction.
SUMMARY OF NATURAL ENVIRONMENT				
			– Alternative 1 has more impacts to natural environment, and less opportunity for mitigations post construction.	– Alternative 2 has fewer impacts and more opportunity for mitigations post construction.
4 TRANSPORTATION AND TECHNICAL				
4.1 Transportation				
a	Road Geometrics	Changes to horizontal and vertical alignments.	– Greater shift in vertical alignment required over railway. – Less flexibility in grades on crest curve.	– Less shift in vertical alignment required under railway. – More flexibility in grades on sag curve.
b	Network Compatibility/Connectivity	Compatibility with existing and planned adjacent municipal road network.	– Blocks access to McMahan Street, Pall Mall Street, Central Avenue, and Elias Street. – Opportunity to connect Central Avenue underneath overpass, with new alignment; and opportunity to connect Elias Street and Central Avenue. This would extend the length of the structure.	– Maintains intersection with Pall Mall Street, McMahan Street, Central Avenue, and Elias Street. – May require restricting access to Pall Mall Street with right-in/right-out. – Potential to re-align east and west legs of Central Avenue.
c	Future Rehabilitation and Long-Term Maintenance Considerations	Consideration of future rehabilitation of the structure	– Long over-structure subject to winter maintenance, including salt spray.	– Structure is short and impacts due to salt spray limited to abutments.
d	Emergency Services	Potential changes to emergency access/routing.	– Enhances emergency services by providing unimpeded route through Adelaide Street North. – Would restrict direct access to local streets.	– Enhances emergency services by providing unimpeded route through Adelaide Street North. – Minor alterations for side street access.
e	Transit Services	Potential changes to transit access/routing.	– Supports existing and planned future transit.	– Supports existing and any planned future transit.
f	Active Transportation	Ability to support existing and planned pedestrian and cycling facilities.	– Overpass would likely be a deterrent for pedestrians and	– Is more attractive to pedestrians and cyclists and potentially

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			<ul style="list-style-type: none"> cyclists to travel on Adelaide Street North. – Would be a barrier to pedestrians from crossing Adelaide Street North to get the local park and businesses. 	<ul style="list-style-type: none"> provides enhanced facilities (wider sidewalks etc.). – Limits pedestrians crossing Adelaide Street North to pedestrian bridge.
4.2 Technical Considerations				
a	Impacts to or Conflicts with Municipal Services and Utilities	Impacts to or potential conflicts with existing municipal services (sanitary and water).	– Existing utilities under Adelaide Street North will be relocated east or west of the overpass structure in a utility corridor.	– Existing utilities under Adelaide Street North will be relocated east or west of the overpass structure in a utility corridor.
		Impacts to or potential conflicts with planned municipal facilities (Hydro, cable, gas).	– Future utilities will be located within the utility corridor, east or west of the overpass structure.	– Future utilities will be located within the utility corridor, east or west of the overpass structure.
b	Drainage and Stormwater Management	Qualitative assessment of the ability to meet storm design (flood conveyance) requirements to avoid adverse impacts to adjacent properties and ensure that major and minor flows are conveyed safely.	– Minimal change is stormwater conveyance or flood conveyance.	<ul style="list-style-type: none"> – Possible pump station or new storm sewer outlet of the Thames River. Outlet within underpass to be sized for major storm event to limit ponding within underpass to 300mm depth. – Higher construction cost.
		Qualitative assessment of the ability to meet SWM criteria set out in the subwatershed studies to appropriately manage surface water quality and quantity stormwater (includes consideration of various SWM infrastructure required).	– Does not generate significant new stormwater, slight increase in paved area with slightly wider cross-section.	– Does not generate significant new stormwater, slight increase in paved area with slightly wider cross-section.
c	Constructability Issues	Qualitative assessment considering the complexity of construction operations and staging.	– A temporary road detour would be constructed beside Adelaide Street North (either west or east) in order to maintain traffic during construction.	<ul style="list-style-type: none"> – A temporary road detour would be constructed beside Adelaide Street North (either west or east) in order to maintain traffic during construction. – Additional component for stormwater management pumping station.
d	Impacts to CPR	Qualitative assessment of the impacts to CPR infrastructure and operations.	<ul style="list-style-type: none"> – Minimal impacts to rail operations during construction. – No impact of train movements (bridge will span existing track). – Road detour with new railway crossing signals during construction. 	<ul style="list-style-type: none"> – Possible rail diversion and in-place construction under rail traffic. – Significant cost to maintain rail traffic. – Road detour with new railway crossing signals during construction.
e	Construction Cost	Estimated construction cost of road improvements.	<ul style="list-style-type: none"> – 25 – 35 M – (excluding property costs) 	<ul style="list-style-type: none"> – 30 – 40 M – (excluding property costs)
SUMMARY OF TRANSPORTATION AND TECHNICAL			 <ul style="list-style-type: none"> – Alternative 1 has greater impacts on the road profile and network and pedestrian connectivity, but has fewer constructability issues and lower cost. – Alternative 2 has less impacts on the road profile, and maintains the existing network connections, and provides opportunity for additional pedestrian features. 	

Factor Group/Criteria	Measures	Alternative 1 Overpass (road over rail)	Alternative 2 Underpass (road under rail)
OVERALL SUMMARY			
	<p>– Alternative 1 impacts more properties, provides a big intrusion to the neighbourhood character, and disrupts the network connectivity. However, it has fewer constructability issues and impacts on CPR, and lower costs.</p> <p>– Alternative 2 has fewer property impacts, maintains the existing neighbourhood character and network connections, and provides opportunity for enhancements to the pedestrian and park facilities. However, it has additional constructability issues and higher cost.</p> <p>Therefore Alternative 2 is preferred.</p>		



Factor Group/Criteria		Measures	Alternative 1 'No Detour' and road alignment would be dependent on CPR approval to relocate switch	Alternative 2 'East Detour' and road alignment remains close to existing pending CP approval	Alternative 3 'West Detour' and road alignment shifted west
1 SOCIO-ECONOMIC					
1.1 Property and Access					
a	Impacts to properties	Total number of properties impacted based on conceptual plan.	- No private property impacts beyond those required for the grade separation itself.	- No private property impacts beyond those required for the grade separation itself.	- 3 private properties impacted beyond those required for the grade separation itself.
		Impacts to residences (e.g., partial or displacement).	- No residential property impacts beyond those required for the grade separation itself.	- No residential property impacts beyond those required for the grade separation itself.	- 1 residential property impacted beyond those required for the grade separation itself.
		Impacts to commercial/industrial areas or businesses (i.e., partial or displacement).	- No commercial property impacts beyond those required for the grade separation itself.	- Temporary impact to CPR lands south of tracks. - Impacts operation of Trad's Furniture (tenant on CPR lands). - Impacts to CPR owned lands south of the tracks will be under a temporary construction easement.	- 2 commercial properties impacted beyond those required for the grade separation itself.
b	Potential impacts to access to existing residences/businesses	Qualitative assessment of temporary and permanent impacts to access related to out-of-way travel or difficulty in accessing services.	- Road access can be maintained to businesses for duration of construction (i.e. no businesses will be landlocked). - Does not allow through traffic to business areas on Adelaide Street North and will create some out of way to travel to access businesses. Risk of legal claims for loss of business.	- Maintains through traffic to business areas on Adelaide Street North.	- Same as Alternative 2.
1.2 Community Considerations					
a	Aesthetic Impacts	Qualitative assessment considering proximity of nearby residences.	- Not applicable for this assessment.		
b	Sense of Belonging and Community Compatibility	Compatibility with surrounding neighbourhood and opportunity to provide integrated streetscape / landscape which visually retain/enhance local characteristics.	- Not applicable for this assessment.		
c	Potential for increased noise to adjacent residences and neighbourhoods	Qualitative assessment of noise impacts.	- Increased traffic on local roads may cause increase in noise for adjacent residents.	- Traffic shifted to detour may cause decrease in noise for adjacent residents, as detour is located further from residences.	- Traffic shifted to detour may cause increase in noise for adjacent residents during construction, as detour is located closer to residences.

Factor Group/Criteria		Measures	Alternative 1 ‘No Detour’ and road alignment would be dependent on CPR approval to relocate switch	Alternative 2 ‘East Detour’ and road alignment remains close to existing pending CP approval	Alternative 3 ‘West Detour’ and road alignment shifted west
d	Impacts on community activity/mobility and street animation.	Qualitative assessment of changes in access/ activity and the impacts on built form along the corridor that could affect the community.	<ul style="list-style-type: none"> – Minimizes overall construction duration. – Creates a temporary barrier within the community for the duration of construction. 	<ul style="list-style-type: none"> – Maintains community connectivity across tracks during construction. 	<ul style="list-style-type: none"> – Same as Alternative 2.
e	Impacts to Recreational Features	Including temporary and permanent footprint and access impacts and to McMahan Park and amenities considering: potential removal of park amenities such as the wading pool and horseshoe pits.	<ul style="list-style-type: none"> – No additional impacts to McMahan Park other than those associated with the new underground utility corridor associated with the grade separation. 	<ul style="list-style-type: none"> – Detour will temporarily occupy a portion of McMahan Park however, it will occupy an area that will be disturbed for a new underground utility corridor that is required for the grade separation. McMahan Park would be reinstated after construction of the detour is no longer required. 	<ul style="list-style-type: none"> – Same as Alternative 1.
1.3 Context Support					
a	Municipal Plans and Policies	Compatibility with Municipal plans and policies (The London Plan, Transportation Master Plan).	– Not applicable for this assessment.		
b	Redevelopment Potential	Potential for adjacent areas to be redeveloped and revitalize the corridor.	<ul style="list-style-type: none"> – Minimal property impacted available for redevelopment. 	<ul style="list-style-type: none"> – Same as Alternative 1. 	<ul style="list-style-type: none"> – Potential to redevelop impacted properties.
c	Context Sensitive Design	Compatibility with the surrounding neighbourhoods land use context.	– Not applicable for this assessment.		
d	Park/Open Space	Opportunity for new public space / urban park.	<ul style="list-style-type: none"> – Minimal property impacted available for new park space. 	<ul style="list-style-type: none"> – Minimal property impacted available for new park space. – Reconstruction of McMahan Park after construction provides opportunity for new park features. 	<ul style="list-style-type: none"> – Potential for impacted properties to be redeveloped for park space or commercial use.
e	Boulevard Treatment	Potential for providing streetlight fixtures, benches and trash receptacles, bollards and bike racks, signage, transit shelters, and sidewalk/ crosswalk materials.	– Not applicable for this assessment.		
SUMMARY OF SOCIO-ECONOMIC					
			<ul style="list-style-type: none"> – Alternatives 1 and 2 have similar overall property impacts, but do not provide opportunity for any redevelopment, or new park space. – Alternative 1 does not allow traffic through business area on Adelaide Street North during construction, and could result in legal claims for loss of business. – Alternative 2 maintains access across the tracks but has temporary impacts to McMahan Park; Alternative 3 maintains access across the tracks and does not impact McMahan Park. 		

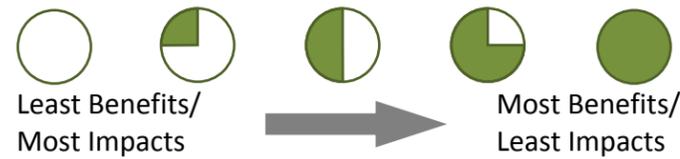
Factor Group/Criteria		Measures	Alternative 1 'No Detour' and road alignment would be dependent on CPR approval to relocate switch	Alternative 2 'East Detour' and road alignment remains close to existing pending CP approval	Alternative 3 'West Detour' and road alignment shifted west
			– Alternative 3 is the least preferred as it results in substantial property impacts beyond the grade separation, although the excess property could be redeveloped or turned into additional park space.		
2 CULTURAL ENVIRONMENT					
a	Impacts to Cultural Heritage Resources	Potential for direct or indirect impacts /alterations the built heritage resources.	– No impact to designated or listed heritage features.		
b	Consideration of the Heritage Conservation Districts	Potential for direct or indirect impacts to the Heritage Conservation Districts (Old East Heritage Conservation District, East Woodfield Heritage Conservation District).	– No direct impact to the Heritage Conservation Districts.		
c	First Nation Interests	Potential impacts to natural environmental features or archaeological resources.	– Limited impacts to natural environment features or archaeological resources beyond that required for the grade separation or utility corridor. – A Stage 2 archaeological assessment will be required for lands not previously disturbed (i.e. park) to appropriately search for / protect any resources present.		
SUMMARY OF CULTURAL ENVIRONMENT			●	●	●
			– No impact to cultural heritage features beyond the likely need to relocate the heritage gates to McMahan Park as part of the grade separation. – A Stage 2 archaeological assessment will be required for lands not previously disturbed (i.e. park) to appropriately search for / protect any resources present. This is the same for all alternatives due to the need for the utility corridor.		
3 NATURAL ENVIRONMENT					
a	Impacts to natural features	Qualitative assessment considering the magnitude and nature of potential impacts to natural features.	– No natural environment features present in the study area. – No impacts to park and street trees beyond that required for the new underground utility corridor and the grade separation.	– Same as Alternative 1, as road detour will have a similar footprint as the new underground utility corridor required for the grade separation.	– No natural environment features present in the study area. – Minimal potential impact to street trees beyond that required for grade separation.
SUMMARY OF NATURAL ENVIRONMENT			●	●	●
			– Alternative 1 has no impacts to park and street trees beyond that required for the new underground utility corridor and the grade separation itself. – Alternative 2 is the same as Alternative 1, as the road detour will have a similar footprint as the new underground utility corridor required for the grade separation. – Alternative 3 has minimal impacts to street trees beyond those required for the new underground utility corridor and the grade separation.		
4 TRANSPORTATION AND TECHNICAL					
4.1 Transportation					

Factor Group/Criteria		Measures	Alternative 1 'No Detour' and road alignment would be dependent on CPR approval to relocate switch	Alternative 2 'East Detour' and road alignment remains close to existing pending CP approval	Alternative 3 'West Detour' and road alignment shifted west
a	Road Geometrics	Changes to horizontal and vertical alignments.	<ul style="list-style-type: none"> – Road alignment dependent on CPR approval to move switch; if approved then alignment could remain close to existing, which is a more desirable horizontal alignment. – Without CPR approval to move switch, the alignment would be shifted to the west. 	<ul style="list-style-type: none"> – Road alignment dependent on CPR approval to move switch; if approved then alignment could remain close to existing. – Results in more desirable horizontal alignment for Adelaide Street North. 	<ul style="list-style-type: none"> – Provided that CPR does not approve relocation of switch, road alignment for Adelaide Street North will be shifted to the west.
b	Network Compatibility/Connectivity	Compatibility with existing and planned adjacent municipal road network.	<ul style="list-style-type: none"> – Temporarily impacts north-south arterial road and active transportation network during construction. – Increase in traffic on adjacent streets. – Approximately 30% of the traffic is expected to use corridors east of Adelaide Street North – such as Quebec St and Highbury Ave. – Remaining 70% of the traffic is expected to travel on the west corridors. – Richmond Street, Colborne and Wellington each are expected to accommodate additional 10-15%; and remaining 30-40% traffic will travel local streets such as William St, Maitland St and Waterloo St. Therefore, significant increase in traffic volumes could be expected on these three corridors. – Due to the closure, traffic volumes on the east-west corridors such as Oxford Street and Queens Avenue could increase. 	<ul style="list-style-type: none"> – Maintains north-south arterial road, although some drivers may avoid construction area and divert to other routes. 	<ul style="list-style-type: none"> – Same as Alternative 2.
c	Future Rehabilitation and Long-Term Maintenance Considerations	Consideration of future rehabilitation of the structure	<ul style="list-style-type: none"> – Not applicable for this assessment. 		
d	Emergency Services	Potential changes to emergency access/routing.	<ul style="list-style-type: none"> – Requires rerouting of emergency vehicles around the construction area. 	<ul style="list-style-type: none"> – Emergency services access maintained throughout construction period. 	<ul style="list-style-type: none"> – Same as Alternative 2.
e	Transit Services	Potential changes to transit access/routing.	<ul style="list-style-type: none"> – Existing transit service along Adelaide Street North would require temporary rerouting and relocation of transit stops. 	<ul style="list-style-type: none"> – Transit maintained on detour throughout construction. 	<ul style="list-style-type: none"> – Same as Alternative 2.

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f	Active Transportation	Ability to support existing and planned pedestrian and cycling facilities.	<ul style="list-style-type: none"> – Closure to north-south pedestrian access across tracks may result in risk of pedestrians crossing tracks at undesignated locations. To be managed appropriately through construction site management. – Potential to maintain pedestrian access across tracks with new gate, although not desirable. 	<ul style="list-style-type: none"> – Detour would be designed with a sidewalk for pedestrians on one side opposite the construction zone. 	<ul style="list-style-type: none"> – Same as Alternative 2.
4.2 Technical Considerations					
a	Impacts to or Conflicts with Municipal Services and Utilities	Impacts to or potential conflicts with existing municipal services (sanitary and water).	– Sanitary and water services will be relocated as part of the grade separation to new corridor through McMahan Park and parking lot of Trad’s Furniture.		
		Impacts to or potential conflicts with planned municipal facilities (Hydro, cable, gas).	– Utilities will be relocated to new underground utility corridor through McMahan Park and parking lot of Trad’s Furniture.		
b	Drainage and Stormwater Management	Qualitative assessment of the ability to meet storm design (flood conveyance) requirements to avoid adverse impacts to adjacent properties and ensure that major and minor flows are conveyed safely.	– Drainage and stormwater management services will be redesigned as part of the grade separation itself.		
		Qualitative assessment of the ability to meet SWM criteria set out in the subwatershed studies to appropriately manage surface water quality and quantity stormwater (includes consideration of various SWM infrastructure required).	– Drainage and stormwater management services will be redesigned as part of the grade separation itself.		
c	Constructability Issues	Qualitative assessment considering the complexity of construction operations and staging.	– Simplifies the construction staging by eliminating the construction of a temporary road and gated rail crossing, thereby reducing overall construction duration by about 1-2 months.	– Construction of the temporary road and gated rail crossing adds to staging complexity and construction duration.	– Significantly adds to construction duration and complexity given the need to demolish commercial buildings on the properties that would be required, in addition to the construction of the temporary road and gated rail crossing.
d	Impacts to CPR	Qualitative assessment of the impacts to CPR infrastructure and operations.	– Track realignment required for all alternatives based on structural design (contingent on CPR approval).	– Track realignment required for all alternatives based on structural design (contingent on CPR approval).	– Track realignment required for all alternatives based on structural design (contingent on CPR approval).

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			<ul style="list-style-type: none"> Minimal additional impacts to CPR operations. 	<ul style="list-style-type: none"> Will require a new rail crossing and gate east of the existing crossing. Will require coordination with CPR through construction and maintenance and removal of the temporary crossing. Will require permanent relocation of the track switch. Potential issues locating detour across multiple CPR tracks and switch locations within the rail yard. CPR to confirm if this alternative is feasible. 	<ul style="list-style-type: none"> Will require a new rail crossing and gate west of the existing. Will require coordination with CPR through construction and maintenance and removal of the temporary crossing. Relocation of track switch not required.
e	Construction Cost	Estimated construction cost of road improvements.	<ul style="list-style-type: none"> Track realignment, flagging, and light relocation is common for all alternatives and is approximately \$1.5M. No additional cost for detour or property. Potential cost to provide new gate for pedestrians crossing tracks. 	<ul style="list-style-type: none"> Track realignment, flagging, and light relocation is common for all alternatives and is approximately \$1.5M. Cost of temporary road detour and signals, and the switch relocation is approximately \$2.25M. It is anticipated that impacts to CPR owned lands south of the tracks will be under a temporary construction easement. 	<ul style="list-style-type: none"> Track realignment, flagging, and light relocation is common for all alternatives and is approximately \$1.5M. Cost of temporary road detour and signals is approximately \$2M. Property costs are estimated to be \$8.9M
SUMMARY OF TRANSPORTATION AND TECHNICAL					
			<ul style="list-style-type: none"> Alternative 1 does not maintain traffic on Adelaide Street North and therefore will cause significant traffic to divert to other corridors, including local streets. However, Alternative 1 will reduce the overall construction duration about 1-2 months, and will save at least \$2M in construction costs (in addition to saving property costs). Alternative 1 will require temporary rerouting of transit and emergency services. Alternative 2 maintains north-south traffic on Adelaide Street North but carries additional costs related to the temporary detour, gate crossing, and switch relocation, which are contingent upon CPR approval. Alternative 3 maintains north-south traffic on Adelaide Street North but carries additional costs related to the temporary detour and gate crossing, as well as other substantial property costs. 		
OVERALL SUMMARY					
			<ul style="list-style-type: none"> Alternative 1 does not have additional property requirements, and does not require the capital cost for a detour; however, it does not maintain north-south traffic movement on Adelaide Street North during the construction of the grade separation (approximately 16-18 months). Blocking traffic on Adelaide Street North would have significant impacts to traffic operations on adjacent north-south arterials as well as on local residential streets. While road access to businesses can be maintained, local businesses may be impacted by loss of through traffic. The road alignment would still be dependent on CPR approval. Alternative 2 does not have additional property requirements, but has some temporary impacts to CPR lands south of the tracks and 		

Factor Group/Criteria	Measures	Alternative 1 'No Detour' and road alignment would be dependent on CPR approval to relocate switch	Alternative 2 'East Detour' and road alignment remains close to existing pending CP approval	Alternative 3 'West Detour' and road alignment shifted west
		<p>to McMahan Park, although this is also required for the new underground utility corridor. This Alternative does involve relocating the track switch and requires CPR approval. The road alignment would be maintained close to the existing roadway or shifted slightly east resulting in a more desirable future road alignment.</p> <p>– Alternative 3 has substantial property impacts and higher cost, however it avoids relocating the CPR switch, minimizing dependency on CPR approval. The road alignment would be shifted west resulting in a less desirable future road alignment.</p> <p>Therefore, Alternative 2 is the preferred alternative pending CPR approval. Alternatively, if CPR does not provide approval, Alternative 1 would be preferred.</p>		



Factor Group/Criteria		Measures	Alternative 1 Maintain Existing 'Jog' at Intersection	Alternative 2 Realign West Leg	Alternative 3 Realign East Leg	Alternative 4 Realign Both East and West ('Best Fit')
1 SOCIO-ECONOMIC						
1.1 Property and Access						
a	Impacts to properties	Total number of properties impacted based on conceptual plan.	– No private property impacts beyond those required for the grade separation itself.	– 7 private properties impacted beyond those required for the grade separation itself.	– 10 private properties impacted beyond those required for the grade separation itself.	– Same as Alternative 1
		Impacts to residences (e.g., partial or displacement).	– No residential property impacts beyond those required for the grade separation itself.	– 7 residential properties impacted beyond those required for the grade separation itself.	– 8 residential properties impacted beyond those required for the grade separation itself.	– Same as Alternative 1
		Impacts to commercial/industrial areas or businesses (i.e., partial or displacement).	– No commercial/industrial property impacts beyond those required for the grade separation itself.	– No commercial/industrial property impacts beyond those required for the grade separation itself.	– 2 commercial properties impacted beyond those required for the grade separation itself.	– Same as Alternative 1
b	Potential impacts to access to existing residences/businesses	Qualitative assessment of temporary and permanent impacts to access related to out-of-way travel or difficulty in accessing services.	– No impacts to access beyond those already required for the grade separation itself.	– Same as Alternative 1.	– Same as Alternative 1.	– Same as Alternative 1.
1.2 Community Considerations						
a	Aesthetic Impacts	Qualitative assessment considering proximity of nearby residences.	– Not applicable for this assessment.			
b	Sense of Belonging and Community Compatibility	Compatibility with surrounding neighbourhood and opportunity to provide integrated streetscape / landscape which visually retain/enhance local characteristics.	– Not applicable for this assessment.			
c	Potential for increased noise to adjacent residences and neighbourhoods	Qualitative assessment of noise impacts.	– Not applicable for this assessment.			
d	Impacts on community activity/mobility and street animation.	Qualitative assessment of changes in access/ activity and the impacts on built form along the corridor that could affect the community.	– Maintains existing intersection 'jog'.	– Provides a more central and standard intersection design, and focal point for neighbourhoods.	– Same as Alternative 2.	– Same as Alternative 2.

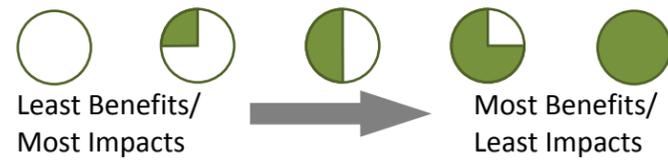
Factor Group/Criteria		Measures	Alternative 1 Maintain Existing 'Jog' at Intersection	Alternative 2 Realign West Leg	Alternative 3 Realign East Leg	Alternative 4 Realign Both East and West ('Best Fit')
e	Impacts to Recreational Features	Including temporary and permanent footprint and access impacts and to McMahan Park and amenities considering: potential removal of park amenities such as the wading pool and horseshoe pits.	– No temporary or permanent impacts to McMahan Park for all alternatives beyond those already required for the grade separation itself.			
1.3 Context Support						
a	Municipal Plans and Policies	Compatibility with Municipal plans and policies (The London Plan, Transportation Master Plan).	– Not applicable for this assessment.			
b	Redevelopment Potential	Potential for adjacent areas to be redeveloped and revitalize the corridor.	– No additional impacted property available for redevelopment.	– Potential to redevelop impacted properties.	– Potential to redevelop impacted properties.	– Same as Alternative 1.
c	Context Sensitive Design	Compatibility with the surrounding neighbourhoods land use context.	– Not applicable for this assessment.			
d	Park/Open Space	Opportunity for new public space / urban park.	– No additional impacted property available for new park space beyond that provided from the grade separation itself.	– Potential to redevelop impacted properties for new park space.	– Potential to redevelop impacted properties for new park space.	– Same as Alternative 1.
e	Boulevard Treatment	Potential for providing streetlight fixtures, benches and trash receptacles, bollards and bike racks, signage, transit shelters, and sidewalk/ crosswalk materials.	– Not applicable for this assessment.			
SUMMARY OF SOCIO-ECONOMIC						
			– Alternative 1 has the least property impacts, but does not provide improvements to the existing intersection. – Alternative 2 and 3 impact several properties, but improves the intersection design, and provides opportunity for redevelopment. – Alternative 4 has minimal property impacts, improves the intersection design, but does not provide opportunity for redevelopment.			
2 CULTURAL ENVIRONMENT						

Factor Group/Criteria		Measures	Alternative 1 Maintain Existing 'Jog' at Intersection	Alternative 2 Realign West Leg	Alternative 3 Realign East Leg	Alternative 4 Realign Both East and West ('Best Fit')
a	Impacts to Cultural Heritage Resources	Potential for direct or indirect impacts /alterations the built heritage resources.	- No impact to heritage features beyond the likely need to relocate the heritage gates to McMahan Park as part of the grade separation.	- Same as Alternative 1.	- Impacts a listed Priority 1 property.	- Same as Alternative 1.
b	Consideration of the Heritage Conservation Districts	Potential for direct or indirect impacts to the Heritage Conservation Districts (Old East Heritage Conservation District, East Woodfield Heritage Conservation District).	- No impacts to properties with the Heritage Conservation Districts.	- Same as Alternative 1.	- Impacts 8 properties in the Old East Heritage Conservation District.	- Same as Alternative 1.
c	First Nation Interests	Potential impacts to natural environmental features or archaeological resources.	- Limited impacts to natural environment features or archaeological resources beyond that required for the grade separation or utility corridor. - A Stage 2 archaeological assessment will be required for lands not previously disturbed (i.e. park) to appropriately search for / protect any resources present.			
SUMMARY OF CULTURAL ENVIRONMENT						
			- Alternatives 1, 2, and 4 do not have any impacts to cultural heritage features beyond the likely need to relocate the heritage gates to McMahan Park as part of the grade separation. - Alternative 3 impacts a listed Priority 1 property and several properties within the Old East Heritage Conservation District.			
3 NATURAL ENVIRONMENT						
a	Impacts to natural features	Qualitative assessment considering the magnitude and nature of potential impacts to natural features.	- No natural environment features are present in the study area. - No additional impacts to street trees beyond those required for the grade separation itself.	- No natural environment features are present in the study area. - Minimal potential impact to additional street trees along Central Avenue beyond those required for the grade separation itself.	- Same as Alternative 2.	- Same as Alternative 1.
SUMMARY OF NATURAL ENVIRONMENT						
			- No natural environment features are present in the study area. - Alternatives 1 and 4 have no impacts to street trees beyond those required for the grade separation itself. Alternatives 2 and 3 have minimal potential to impact additional street trees beyond those impacted by the grade separation itself.			
4 TRANSPORTATION AND TECHNICAL						
4.1 Transportation						
a	Road Geometrics	Changes to horizontal and vertical alignments.	- Vertical alignment of Central Avenue changed to match Adelaide Street North for all alternatives. - No change to horizontal alignment of Central Avenue.	- Vertical alignment of Central Avenue changed to match Adelaide Street North for all alternatives. - Horizontal alignment of Central Avenue realigned west of	- Vertical alignment of Central Avenue changed to match Adelaide Street North for all alternatives. - Horizontal alignment of Central Avenue realigned east of	- Vertical alignment of Central Avenue changed to match Adelaide Street North for all alternatives. - Horizontal alignment realigned east and west of Adelaide Street

Factor Group/Criteria		Measures	Alternative 1 Maintain Existing 'Jog' at Intersection	Alternative 2 Realign West Leg	Alternative 3 Realign East Leg	Alternative 4 Realign Both East and West ('Best Fit')
				Adelaide Street North. – Potential sightline issues with intersection in proximity to grade separation.	Adelaide Street North.	North.
b	Network Compatibility/ Connectivity	Compatibility with existing and planned adjacent municipal road network.	– Maintains existing conditions which hinder full road network connectivity across Adelaide Street North by restricting westbound through / left movements. – The offset intersection may create uncertainty for drivers and pedestrians.	– Provides more efficient road network connection across Adelaide Street North. – Provides opportunity for dedicated turn lanes to improve intersection operations. – Provides for a more typical intersection design for vehicles and pedestrians.	– Same as Alternative 2.	– Same as Alternative 2.
c	Future Rehabilitation and Long-Term Maintenance Considerations	Consideration of future rehabilitation of the structure	– Not applicable for this assessment.			
d	Emergency Services	Potential changes to emergency access/routing.	– All alternatives maintain emergency service access and routing.			
e	Transit Services	Potential changes to transit access/routing.	– All alternatives maintain existing transit services along Adelaide Street North.			
f	Active Transportation	Ability to support existing and planned pedestrian and cycling facilities.	– Maintains existing crossing at Adelaide Street North and Central Avenue for pedestrians and cyclists.	– Provides a standard crossing of Adelaide Street North at Central Avenue for pedestrians and cyclists. – Provides opportunity for cycle lanes on Central Avenue.	– Same as Alternative 2.	– Same as Alternative 2.
4.2 Technical Considerations						
a	Impacts to or Conflicts with Municipal Services and Utilities	Impacts to or potential conflicts with existing municipal services (sanitary and water).	– Sanitary and water services will be relocated as part of the grade separation.			
		Impacts to or potential conflicts with planned municipal facilities (Hydro, cable, gas).	– Utilities will be relocated to new underground utility corridor through McMahan Park and parking lot of Trad's Furniture. – Alternative 2 may impact location of municipal services with the new utility corridor and along Central Avenue.			
b	Drainage and Stormwater Management	Qualitative assessment of the ability to meet storm design (flood conveyance) requirements to avoid	– Not applicable for this assessment.			

Factor Group/Criteria		Measures	Alternative 1 Maintain Existing 'Jog' at Intersection	Alternative 2 Realign West Leg	Alternative 3 Realign East Leg	Alternative 4 Realign Both East and West ('Best Fit')
		adverse impacts to adjacent properties and ensure that major and minor flows are conveyed safely. Qualitative assessment of the ability to meet SWM criteria set out in the subwatershed studies to appropriately manage surface water quality and quantity stormwater (includes consideration of various SWM infrastructure required).	– Alternative 2 may limit location of stormwater management facilities including the pump station, storage tank, and outlet in the northwest quadrant of the intersection.			
c	Constructability Issues	Qualitative assessment considering the complexity of construction operations and staging.	– No additional constructability issues beyond those associated with the grade separation itself.	– Potential issue in constructing the Adelaide Street North and Central Avenue intersection in proximity to the grade separation, and redirecting municipal services and utilities.	– Same as Alternative 1.	– Same as Alternative 1.
d	Impacts to CPR	Qualitative assessment of the impacts to CPR infrastructure and operations.	– Not applicable for this assessment.			
e	Construction Cost	Estimated construction cost of road improvements.	– Cost to regrade Central Avenue to match profile of Adelaide Street North is included in the construction of the grade separation itself.	– Same construction cost as Alternative 1, with limited additional cost to realign Central Avenue. – High additional cost for property acquisition.	– Same as Alternative 2.	– Same construction cost as Alternative 1, with limited additional cost to realign Central Avenue.
SUMMARY OF TRANSPORTATION AND TECHNICAL						
			– Alternative 1 does not improve the existing road network disconnect on Central Avenue. – Alternative 2 connects the east and west legs of Central Avenue, but the proximity of the intersection to the grade separation could reduce sightlines under the bridge and increase potential constructability issues with municipal services and utilities. This alternative also has additional property costs. – Alternative 3 connects the east and west legs of Central Avenue, and does not have the same potential sightline and constructability issues as Alternative 2; however this alternative also has additional property costs. – Alternative 4 connects the east and west legs of Central Avenue, and does not have the same potential sightline and constructability issues as Alternative 2. This alternative has minimal additional costs to realign the intersection.			

Factor Group/Criteria	Measures	Alternative 1 Maintain Existing 'Jog' at Intersection	Alternative 2 Realign West Leg	Alternative 3 Realign East Leg	Alternative 4 Realign Both East and West 'Best Fit'
OVERALL SUMMARY		<ul style="list-style-type: none"> - Alternative 1 does not improve the existing road network disconnect, but also does not have additional property impacts or costs. - Alternatives 2 and 3 improve the road network by connecting the east and west legs of Central Avenue and improves the intersection design for drivers, pedestrians and cyclists, but both have additional property impacts and costs. Alternative 2 also has potential sightline and constructability issues due to the proximity of the intersection to the grade separation. - Alternative 4 improves the road network by connecting the east and west legs of Central Avenue and improves the intersection design for drivers, pedestrians and cyclists, and has limited additional costs to realign Central Avenue. <p>Therefore Alternative 4 is preferred.</p>			



Factor Group/Criteria		Measures	Alternative 1 Pall Mall Street Cul-de-Sac & Intersection Pedestrian Signal (IPS) at McMahan Street	Alternative 2 Pall Mall Street Right-In/Right-Out (RIRO) & IPS at McMahan Street	Alternative 3 Pall Mall Street RIRO & Traffic Signals and Dedicated Turn Lanes at McMahan Street	Alternative 4 Pall Mall Street Re-alignment to McMahan Street with Full Signalized Intersection and Dedicated Turn Lanes
1 SOCIO-ECONOMIC						
1.1 Property and Access						
a	Impacts to properties	Total number of properties impacted based on conceptual plan.	– Minor private property impacts beyond those required for the grade separation itself.	– No private property impacts beyond those required for the grade separation itself.	– 2 private properties fully impacted, and 1 private property partially impacted, beyond those required for the grade separation itself.	– 4 private properties fully impacted beyond those required for the grade separation itself.
		Impacts to residences (e.g., partial or displacement).	– No residential property impacts beyond those required for the grade separation itself.	– No residential property impacts beyond those required for the grade separation itself.	– 1 residential property fully impacted, beyond those required for the grade separation itself.	– 1 residential property fully impacted, beyond those required for the grade separation itself.
		Impacts to commercial/industrial areas or businesses (i.e., partial or displacement).	– Minor commercial property impacts beyond those required for the grade separation itself, associated with the creation of the cul-de-sac.	– No commercial property impacts beyond those required for the grade separation itself.	– 1 commercial property fully impacted, beyond those required for the grade separation itself. – 1 commercial property partially impacted; impacts to parking lot.	– 3 commercial properties fully impacted, beyond those required for the grade separation itself.
b	Potential impacts to access to existing residences/businesses	Qualitative assessment of temporary and permanent impacts to access related to out-of-way travel or difficulty in accessing services.	– Removes access to Storage Mart from Adelaide. – Access to ReMax plaza from Pall Mall Street likely to be closed.	– Maintains existing accesses except left-turns to and from Pall Mall Street and Adelaide Street North are removed. – Reduces access to Storage Mart from Adelaide Street North.	– Same as Alternative 2 regarding Pall Mall Street and access to Storage Mart. – Improves access to Carling Heights neighbourhood.	– Improves access to and from McMahan Street, Pall Mall Street, and Adelaide Street North. – Improves access to Carling Heights neighbourhood.
1.2 Community Considerations						
a	Aesthetic Impacts	Qualitative assessment considering proximity of nearby residences.	– Not applicable for this assessment.			
b	Sense of Belonging and Community Compatibility	Compatibility with surrounding neighbourhood and opportunity to provide integrated streetscape / landscape which visually retain/enhance local characteristics.	– Not applicable for this assessment.			
c	Potential for increased noise to adjacent residences and neighbourhoods	Qualitative assessment of noise impacts.	– Reduced traffic on Pall Mall Street may reduce noise to residents; however, to access Storage Mart drivers will need to go through local roads which	– Minimal reduction to traffic noise on Pall Mall Street.	– Minimal reduction to traffic noise on Pall Mall Street. – Increase in noise at intersection due to idle cars.	– Potential increase in traffic along Pall Mall Street likely to increase noise. – Increase in noise at intersection due to idle cars.

Factor Group/Criteria		Measures	Alternative 1 Pall Mall Street Cul-de-Sac & Intersection Pedestrian Signal (IPS) at McMahan Street	Alternative 2 Pall Mall Street Right-In/Right-Out (RIRO) & IPS at McMahan Street	Alternative 3 Pall Mall Street RIRO & Traffic Signals and Dedicated Turn Lanes at McMahan Street	Alternative 4 Pall Mall Street Re-alignment to McMahan Street with Full Signalized Intersection and Dedicated Turn Lanes
			may increase traffic noise.			
d	Impacts on community activity/mobility and street animation.	Qualitative assessment of changes in access/ activity and the impacts on built form along the corridor that could affect the community.	<ul style="list-style-type: none"> – Pedestrian crossing of Adelaide Street North at Pall Mall Street shifted north to McMahan Street; creates a ‘jog’ between Pall Mall Street and McMahan Street. – Closure may be well received by some local residents who would like to see a reduction in through traffic on local streets. – Community feedback indicated a lack of support for removing connection to Adelaide Street North. 	<ul style="list-style-type: none"> – Pedestrian crossing of Adelaide Street North at Pall Mall Street shifted north to McMahan Street; creates a ‘jog’ between Pall Mall Street and McMahan Street. – Community feedback indicated a lack of support for removing connection to Adelaide Street North. 	<ul style="list-style-type: none"> – Pedestrian crossing of Adelaide Street North at Pall Mall Street shifted north to McMahan Street intersection; creates a ‘jog’ between Pall Mall Street and McMahan Street. – Carling Heights residents supported improved access to neighbourhood with the provision of a signalized intersection. – May raise concerns of increased traffic on local streets. 	<ul style="list-style-type: none"> – Full signalized intersection provides for comfortable pedestrian and cycling crossing. – Greatly enhances community connectivity at Pall Mall Street and McMahan Street. – Carling Heights residents supported improved access to neighbourhood with the provision of a signalized intersection. – Raises significant concerns regarding increased cut-through traffic on local streets.
e	Impacts to Recreational Features	Including temporary and permanent footprint and access impacts and to McMahan Park and amenities considering: potential removal of park amenities such as the wading pool and horseshoe pits.	– All alternatives largely avoid McMahan Park. Some minor edge impacts to the park may be expected with Alternatives 3 and 4 with a full intersection being provided at McMahan Street.			
1.3 Context Support						
a	Municipal Plans and Policies	Compatibility with Municipal plans and policies (The London Plan, Transportation Master Plan).	– Not applicable for this assessment.			
b	Redevelopment Potential	Potential for adjacent areas to be redeveloped and revitalize the corridor.	– Minimal property impacted available for redevelopment.	– Same as Alternative 1.	– Potential to redevelop impacted properties.	– Same as Alternative 3.
c	Context Sensitive Design	Compatibility with the surrounding neighbourhoods land use context.	– Not applicable for this assessment.			
d	Park/Open Space	Opportunity for new public space / urban park.	– Opportunity for new public space around the cul-de-sac.	– Same as Alternative 1.	– Impacted property unlikely opportunity for park or open space.	– Opportunity for new park space with realignment of Pall Mall Street.

Factor Group/Criteria		Measures	Alternative 1 Pall Mall Street Cul-de-Sac & Intersection Pedestrian Signal (IPS) at McMahan Street	Alternative 2 Pall Mall Street Right-In/Right-Out (RIRO) & IPS at McMahan Street	Alternative 3 Pall Mall Street RIRO & Traffic Signals and Dedicated Turn Lanes at McMahan Street	Alternative 4 Pall Mall Street Re-alignment to McMahan Street with Full Signalized Intersection and Dedicated Turn Lanes
e	Boulevard Treatment	Potential for providing streetlight fixtures, benches and trash receptacles, bollards and bike racks, signage, transit shelters, and sidewalk/ crosswalk materials.	– Not applicable for this assessment.			
SUMMARY OF SOCIO-ECONOMIC						
			– Alternative 1 has minimal property impacts associated with the creation of the cul-de-sac, and closes Pall Mall Street to all vehicular access from Adelaide Street North. – Alternative 2 has minimal property impact and maintains some access to Pall Mall Street from Adelaide Street North as right-in / right-out. – Alternative 3 impacts 2 properties in order to provide for a signalized intersection at McMahan Street. – Alternative 4 has substantial property impacts and removes local businesses in order to realign Pall Mall Street and provide for a full signalized intersection at McMahan Street.			
2 CULTURAL ENVIRONMENT						
a	Impacts to Cultural Heritage Resources	Potential for direct or indirect impacts /alterations the built heritage resources.	– No impact to heritage features beyond the likely need to relocate the heritage gates to McMahan Park as part of the grade separation.	– Same as Alternative 1.	– Same as Alternative 1.	– The likely need to relocate the heritage gates to McMahan Park as part of the grade separation. – Impact to 598 Pall Mall Street, a listed Priority 3 property included on the City of London Inventory of Heritage Resources.
b	Consideration of the Heritage Conservation Districts	Potential for direct or indirect impacts to the Heritage Conservation Districts (Old East Heritage Conservation District, East Woodfield Heritage Conservation District).	– No impacts to Cultural Heritage Districts.			
c	First Nation Interests	Potential impacts to natural environmental features or archaeological resources.	– Limited impacts to natural environment features or archaeological resources beyond that required for the grade separation or utility corridor. – A Stage 2 archaeological assessment will be required for lands not previously disturbed (i.e. park) to appropriately search for / protect any resources present.			
SUMMARY OF CULTURAL ENVIRONMENT						
			– Alternatives 1, 2 and 3 have no additional impacts to cultural heritage resources beyond those required for the grade separation. – Alternative 4 impacts 598 Pall Mall Street, a listed Priority 3 property.			
3 NATURAL ENVIRONMENT						

Factor Group/Criteria		Measures	Alternative 1 Pall Mall Street Cul-de-Sac & Intersection Pedestrian Signal (IPS) at McMahan Street	Alternative 2 Pall Mall Street Right-In/Right-Out (RIRO) & IPS at McMahan Street	Alternative 3 Pall Mall Street RIRO & Traffic Signals and Dedicated Turn Lanes at McMahan Street	Alternative 4 Pall Mall Street Re-alignment to McMahan Street with Full Signalized Intersection and Dedicated Turn Lanes
a	Impacts to natural features	Qualitative assessment considering the magnitude and nature of potential impacts to natural features.	<ul style="list-style-type: none"> – No natural environment features present. – No impacts to park and street trees beyond that required for the new underground utility corridor and the grade separation. 	– Same as Alternative 1.	– Same as Alternative 1.	<ul style="list-style-type: none"> – No natural environment features present. – May have impacts to trees within McMahan Park beyond that which is required for the grade separation and utility corridor.
SUMMARY OF NATURAL ENVIRONMENT						
			– All alternatives are similar. Alternative 4 may have additional impacts trees within McMahan Park.			
4 TRANSPORTATION AND TECHNICAL						
4.1 Transportation						
a	Road Geometrics	Changes to horizontal and vertical alignments.	<ul style="list-style-type: none"> – Vertical alignments of Pall Mall Street and McMahan Street changed to match Adelaide Street North for all Alternatives. – Maintains existing Pall Mall Street and McMahan Street horizontal alignments. 	– Same as Alternative 1.	– Same as Alternative 1.	<ul style="list-style-type: none"> – Vertical alignments of Pall Mall Street and McMahan Street changed to match Adelaide Street North for all Alternatives. – Pall Mall Street realigned to match McMahan Street.
b	Network Compatibility/Connectivity	Compatibility with existing and planned adjacent municipal road network.	<ul style="list-style-type: none"> – Removes vehicular access and connectivity from Pall Mall Street to Adelaide Street North, reducing its function as a local street connection from Adelaide Street North to downtown. – May result in additional traffic on adjacent east-west roads like Central Avenue. 	<ul style="list-style-type: none"> – Maintains existing southbound right-turn connection from Adelaide Street North to Pall Mall Street and network connection to downtown. – Reroutes some traffic to other intersections that allow for left-turns. 	<ul style="list-style-type: none"> – Maintains existing southbound right-turn connection from Adelaide Street North to Pall Mall Street and network connection to downtown. – Provides signalized intersection at McMahan with allowance for left-turns. – Has potential to attract increased cut-through traffic from Oxford Street via Elizabeth Street. This is undesirable for the local street network. 	<ul style="list-style-type: none"> – Provides full road network connectivity at new signalized intersection. – Provides improved access to the Carling Heights neighbourhood. – High potential to attract increased traffic from Oxford Street via Elizabeth Street. This is undesirable for the local street network.
c	Future Rehabilitation and Long-Term Maintenance Considerations	Consideration of future rehabilitation of the structure	– Not applicable for this assessment.			
d	Emergency Services	Potential changes to emergency access/routing.	– Reroutes emergency service access from Pall Mall Street. No	– Similar to Alternative 1 although right-turn movements to/from	– Similar to Alternative 2 for Pall Mall Street.	– Enhances emergency access across Adelaide Street North for

Factor Group/Criteria		Measures	Alternative 1 Pall Mall Street Cul-de-Sac & Intersection Pedestrian Signal (IPS) at McMahan Street	Alternative 2 Pall Mall Street Right-In/Right-Out (RIRO) & IPS at McMahan Street	Alternative 3 Pall Mall Street RIRO & Traffic Signals and Dedicated Turn Lanes at McMahan Street	Alternative 4 Pall Mall Street Re-alignment to McMahan Street with Full Signalized Intersection and Dedicated Turn Lanes
			change in access to McMahan Street.	Pall Mall Street are permitted. No change in access to McMahan Street.	– Signalized intersection may enhance / improve access to and from McMahan Street.	Pall Mall Street and McMahan Street.
e	Transit Services	Potential changes to transit access/routing.	<ul style="list-style-type: none"> – Does not limit future transit connections on Adelaide Street North. – Adjustment to existing transit stop location required due to grade separation. Likely to be relocated to McMahan Street. 			
f	Active Transportation	Ability to support existing and planned pedestrian and cycling facilities.	<ul style="list-style-type: none"> – Continues to provide for pedestrian / cyclist connectivity at signalized pedestrian crossing. – Shifts the existing signalized pedestrian crossing from Pall Mall Street to McMahan Street, creating a slight 'jog' in the active transportation network. 	– Same as Alternative 1.	– Same as Alternative 1.	<ul style="list-style-type: none"> – Provides for pedestrians and cyclists crossing at full signalized intersection. – Removes 'jog' in the active transportation network.
4.2 Technical Considerations						
a	Impacts to or Conflicts with Municipal Services and Utilities	Impacts to or potential conflicts with existing municipal services (sanitary and water).	– Sanitary and water services will be relocated as part of the grade separation.			
		Impacts to or potential conflicts with planned municipal facilities (Hydro, cable, gas).	– Utilities will be relocated to new underground utility corridor through McMahan Park and parking lot of Trad's Furniture.			
b	Drainage and Stormwater Management	Qualitative assessment of the ability to meet storm design (flood conveyance) requirements to avoid adverse impacts to adjacent properties and ensure that major and minor flows are conveyed safely.	– Not applicable for this assessment.			
		Qualitative assessment of the ability to meet SWM criteria set out in the subwatershed studies to appropriately manage surface water quality and quantity stormwater	– Not applicable for this assessment.			

Factor Group/Criteria		Measures	Alternative 1 Pall Mall Street Cul-de-Sac & Intersection Pedestrian Signal (IPS) at McMahan Street	Alternative 2 Pall Mall Street Right-In/Right-Out (RIRO) & IPS at McMahan Street	Alternative 3 Pall Mall Street RIRO & Traffic Signals and Dedicated Turn Lanes at McMahan Street	Alternative 4 Pall Mall Street Re-alignment to McMahan Street with Full Signalized Intersection and Dedicated Turn Lanes
		(includes consideration of various SWM infrastructure required).				
c	Constructability Issues	Qualitative assessment considering the complexity of construction operations and staging.	<ul style="list-style-type: none"> – Construction will be combined with grade separation. Minimal increase in potential issues. – Closure of Pall Mall Street access simplifies traffic management during construction. 	<ul style="list-style-type: none"> – Construction staging to be developed for maintaining some local traffic movements with periodic closures. 	<ul style="list-style-type: none"> – Construction staging to be developed for accommodating creation of new intersection, while maintaining some local traffic movements with periodic closures. 	<ul style="list-style-type: none"> – Construction staging to be developed for accommodating realignment of Pall Mall Street, creation of new intersection, while maintaining some local traffic movements with periodic closures.
d	Impacts to CPR	Qualitative assessment of the impacts to CPR infrastructure and operations.	– Not applicable for this assessment.			
e	Construction Cost	Estimated construction cost of road improvements.	– Costs associated with cul-de-sac are nominal in relation to overall grade separation costs.	– Costs associated with the RIRO are nominal in relation to overall grade separation costs.	<ul style="list-style-type: none"> – Estimated cost for installation of new intersection is \$0.2 M. – Estimated property costs are \$0.67 M. 	<ul style="list-style-type: none"> – Estimated cost for installation of new intersection is \$0.2 M. – Estimated property costs are \$3.52 M.
SUMMARY OF TRANSPORTATION AND TECHNICAL						
			<ul style="list-style-type: none"> – Alternative 1 removes the connectivity between Pall Mall Street, McMahan Street and Adelaide Street North, but no additional costs. – Alternative 2 maintains the existing network connections, but limits access to Pall Mall Street from Adelaide Street North. It does not have additional costs. – Alternative 3 is similar to Alternative 2 but it provides better access to and from McMahan Street and Adelaide Street North with a signalized intersection. However, the signalized intersection has potential to draw cut-through traffic from Oxford Street via Elizabeth Street. It has additional costs for the intersection and property requirements. – Alternative 4 provides the best connection between Pall Mall Street, Adelaide Street North and McMahan Street; however it has additional cost for property, road construction and traffic signals. The signalized intersection has high potential to draw cut-through traffic from Oxford Street via Elizabeth Street. 			
OVERALL SUMMARY						
			<ul style="list-style-type: none"> – Alternative 1 limits the existing network connectivity forcing vehicles onto adjacent streets, and provides a 'jog' in the active transportation network. It removes access to the Storage Mart from Adelaide Street North, and does not improve access to the Carling Heights neighbourhood. – Alternative 2 maintains the existing network connectivity, but limits access to Pall Mall Street to right-in/right-out, and provides a 'jog' in the active transportation network. It reduces access to the Storage Mart from Adelaide Street North and does not improve access to the Carling Heights neighbourhood. – Alternative 3 maintains the existing network connectivity, but limits access to Pall Mall Street to right-in/right-out, and provides a 'jog' in the active transportation network. The addition of a signalized intersection at McMahan Street impacts 2 properties with associated costs, and partially impacts a parking lot, but improves access to the Carling Heights neighbourhood. This has the potential to draw cut-through traffic from 			

Factor Group/Criteria	Measures	Alternative 1 Pall Mall Street Cul-de-Sac & Intersection Pedestrian Signal (IPS) at McMahan Street	Alternative 2 Pall Mall Street Right-In/Right-Out (RIRO) & IPS at McMahan Street	Alternative 3 Pall Mall Street RIRO & Traffic Signals and Dedicated Turn Lanes at McMahan Street	Alternative 4 Pall Mall Street Re-alignment to McMahan Street with Full Signalized Intersection and Dedicated Turn Lanes
		<p>Oxford Street via Elizabeth Street. – Alternative 4 improves the network connectivity by realigning Pall Mall Street with McMahan Street; however this alternative impacts 4 properties and has high associated property costs. This alternative also has a high potential to draw cut-through traffic from Oxford Street via Elizabeth Street. Therefore Alternative 2 is preferred.</p>			

