

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON AUGUST 13, 2018
FROM:	KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER
SUBJECT:	ADELAIDE STREET NORTH / CANADIAN PACIFIC RAILWAY GRADE SEPARATION ENVIRONMENTAL STUDY REPORT

RECOMMENDATION

That, on the recommendation of the Managing Director, Environmental & Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to the Adelaide Street North / Canadian Pacific Railway Grade Separation Municipal Class Environmental Assessment:

- (a) Adelaide Street North / Canadian Pacific Railway Grade Separation Municipal Class Environmental Study Report **BE ACCEPTED**;
- (b) A Notice of Completion for the project **BE FILED** with the Municipal Clerk; and,
- (c) The Environmental Study Report **BE PLACED** on public record for a 30-day public review period.

PREVIOUS REPORTS PERTINENT TO THIS MATTER
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- Environment and Transportation Committee – November 28, 2005 – Priority Setting Factors for Future Rail / Road Grade Separations
- Civic Works Committee – June 19, 2012 – London 2030 Transportation Master Plan
- Civic Works Committee – October 28, 2013 – Adelaide Street North / Canadian Pacific Railway Grade Separation Report
- Strategic Priorities and Policy Committee – June 23, 2014 – Approval of 2014 Development Charges By-Law and DC Background Study
- Civic Works Committee – January 5, 2016 – Environmental Assessment Appointment of Consulting Engineer
- Civic Works Committee – December 12, 2016 – Environmental Assessment Update
- Civic Works Committee – September 26, 2017 – Transport Canada Grade Crossing Regulations and Railway Funding Application
- Civic Works Committee – May 28, 2018 – Railway Rationalization

2015-19 STRATEGIC PLAN

The following report supports the Strategic Plan through the strategic focus area of *Building a Sustainable City* by implementing and enhancing safe and convenient mobility choices for transit, automobile users, pedestrians, and cyclists. The environmental assessment identifies solutions to improve the Adelaide Street North

corridor by providing a new road-rail grade separation on Adelaide Street North at the Canadian Pacific Railway (CPR) tracks and will increase roadway safety by removing the potential for conflict between pedestrians, cyclists, drivers and CPR operations, improve traffic flow / operations by managing congestion and provide route reliability for emergency services and local transit. The grade separation provides an opportunity to improve active transportation choices / facilities and linkages. The implementation of the grade separation will also support the Rapid Transit initiative by providing vital parallel roadway network improvements to facilitate the implementation of the Bus Rapid Transit (BRT) north corridor.

BACKGROUND

Purpose

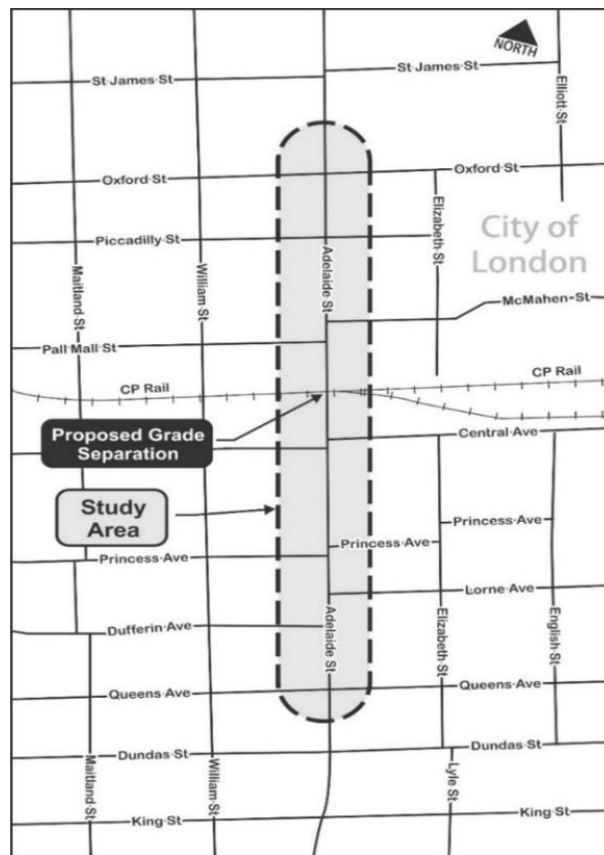
This report provides Committee and Council with an overview of the Municipal Class Environmental Assessment (EA) for the Adelaide Street North / Canadian Pacific Railway (CPR) Grade Separation and seeks approval to finalize the study. The completed Environmental Study Report (ESR) documents the EA and decision-making process for the proposed Adelaide Street North Improvements.

Context

The purpose of this EA is to satisfy the requirements of the Environmental Assessment Act by providing a comprehensive, environmentally sound planning process with public participation and to facilitate dialogue with parties representing a number of diverse interests.

This EA is required to facilitate improvements to the transportation system, create a safe crossing of the CPR tracks, coordinate the improvement with the Bus Rapid Transit initiative, and prepare the project with respect to future infrastructure funding programs. The need and justification for the study was identified as part of the City of London 2014 Development Charges Background Study.

The CPR crossing is located on Adelaide Street North between McMahan Street / Pall Mall Street and Central Avenue. The broader EA study area extends from Oxford Street East (in the north) to Queens Avenue (in the south). The study area is bounded by the heritage conservation districts of Old East Village and Woodfield. McMahan Park, with its heritage stone gates, is an important cultural / community feature within the study area. See below for a map illustrating the project limits.



Adelaide Street North – CPR Grade Separation Class EA Study Area

The CPR crossing of Adelaide Street North has previously been identified as the City’s highest priority candidate for a new rail-road grade separation. The crossing, located on Mile 113.73 of CPR’s Galt Subdivision, comprises two tracks across Adelaide Street North, which reduces to a single-track west of Adelaide Street North. The Galt Subdivision is a critical route for CPR’s service to Canada and US customers, including local customers in the London area. CPR’s rail yard operates to the east of Adelaide Street North and functions as a primary train assembly point (including shunting operations) and crew hub.

The Adelaide Street North / CPR Grade Separation project was identified in the 2014 Transportation Development Charges Background Study with a recommendation for construction in 2031. Due to the area’s strategic location, the Smart Moves 2030 Transportation Master Plan (TMP) also identifies the need for traffic capacity optimization and transit priority on this corridor. The project timing was subsequently adjusted in the 2018 capital budget update for near-term implementation. The amendment considered the fastest possible project implementation with construction beginning as early as 2021, subject to EA clearance, property acquisition and railway concurrence.

The 2005 prioritization study that evaluated at-grade crossings in London indicated that the Adelaide / CPR crossing met the Transport Canada Rail Exposure Index Warrant for a grade separation. More recently, in 2013, the City completed a monitoring program of this crossing, observing 25 to 43 daily road blockages. The results of the 2013 monitoring program indicated a greater grade separation warrant at this location than previously considered in 2005 due to the additional road blockages created by railway shunting. Blockages of this magnitude result in total road crossing delays of 106 to 126 minutes per day. It was also observed that there was an average of 8 blockages per day that extended for more than 5 minutes. Further railway monitoring studies completed in 2017 and 2018, have confirmed that train switching activities at Adelaide Street North are significant and account for more than half of the blockages at this crossing, with

approximately 5 crossing blockages at Adelaide Street North for every 2 blockages at Richmond Street. Road blockages at this crossing result in the queuing of southbound traffic that extends northerly past Oxford Street and southerly past King Street. Additionally, approximately 40% of the crossings extend longer than 5 minutes.

The significant time and volume of blockages at the crossing create cut-through traffic onto local streets as drivers attempt to find alternate routes to their destinations. Road blockages also create a response time concern for emergency services. There are no grade separated crossings of the CPR track in the downtown area between Talbot Street and Quebec Street and long trains can block this entire distance. The safety concerns associated with pedestrians crossing multiple tracks, and the opportunity to create an uninterrupted north-south corridor for emergency vehicles makes this at-grade crossing location the City's highest priority for a new grade separation.

The London Plan

Adelaide Street North is a major four-lane arterial road which accommodates an average of 25,500 vehicles per day through the study area. The London Plan identifies it as a Civic Boulevard. Civic Boulevards are intended to move medium to high volumes of vehicular traffic, with a priority on pedestrian, cycle and transit movements; while also maintaining a very high-quality pedestrian realm and very high standard of urban design.

City of London 2030 Transportation Master Plan (2013)

One of the five key initiatives of the TMP is a *More Strategic Program of Road Network Improvements*. There is a greater emphasis in this TMP on transit, active transportation, Travel Demand Management (TDM), parking, and many road improvements will be required. The City's approach to defining the need for road network improvements has become more strategic. This approach is consistent with the City's expectation that transit and active transportation modal shares will increase significantly from current levels. The City's approach also explicitly recognizes that road improvements will be required for different purposes.

In this regard, a number of projects are required to complement the Bus Rapid Transit (BRT) initiative. Among the TMP road projects identified is Adelaide Street North – CPR Grade Separation.

London's Bus Rapid Transit Initiative

The Bus Rapid Transit (BRT) is a key initiative of the TMP in supporting the long term-term strategy for addressing and shaping the city's population and economic growth, transportation demands and mobility needs. The BRT network in combination with strategic program of road network improvements, will support the City's overall transportation network to reduce traffic congestion and make transit a convenient, comfortable and reliable travel option for residents. Adelaide Street is strategically positioned as a north-south route that offers a transportation alternative for vehicular traffic and an opportunity to create a more efficient London Transit network to connect with and support BRT via the stops planned at the intersection of King Street and Adelaide Street North.

London ON Bikes Cycling Master Plan (2016)

Given the currently constrained right-of-way (ROW) on Adelaide Street north and south of the project limits, designated cycling facilities are not proposed in the Cycling Master Plan. However, with the proposed underpass bridge at CPR providing the cross section

to accommodate cyclist is considered prudent planning given the long-term investment that the project represents. In addition, considering the nearby McMahan Park and Carling Heights Optimist Community Center to the east of Adelaide, it is expected that the grade separation would be attractive to cyclists as a connection across the railway.

The project team has completed Phase 4 of the Municipal Class Environment Assessment (MCEA) process. Phase 4 of the MCEA process involves the documentation of the environmental assessment process in an Environmental Study Report that includes the study recommendations and preliminary design concept.

DISCUSSION

Project Description

The Adelaide Street North / CPR Grade Separation Class EA study satisfies the requirements of the Municipal Class EA as a Schedule C project. Schedule C includes the construction of new facilities and major expansions to existing facilities. An Environmental Study Report (ESR) is required to document all aspects of the process to determine the recommended design and the environmentally significant aspects of the planning, design and construction of the proposed improvements. The ESR also identifies environmental effects and proposed mitigation measures, commitments to further work, consultation, and monitoring associated with the implementation of the project. A copy of the executive summary for the ESR is contained in Appendix A.

Planning Alternatives

Phase 1 of the Municipal Class EA process involved the problem and opportunity statement identification. It was determined that improvements are needed to address the frequent road blockages caused by CPR operations resulting in an unreliable transportation network and safety concerns for all road users (vehicles, transit, emergency services, pedestrians and cyclists). Frequent and long delays lead to driver frustration and increased cut-through traffic on local streets. There is an opportunity to improve safety and mobility for all road users.

Phase 2 of the Municipal Class EA involved identifying alternative planning solutions. The following alternatives were assessed against their ability to reasonably address the problems and opportunities, and in consideration of the constraints identified in the early stages of the study: Do Nothing; Intersection Improvements; Transportation Demand Management; Traffic Capacity Improvements; and Grade Separation. Based on public feedback received at public information centre (PIC) 1, the project team expanded the range of potential planning solutions to include: Change in CPR Rail Operations; and Partial Grade Separation.

With respect to the potential to 'change CPR operations', Municipal Council, at its meeting held on May 16, 2017, directed staff to work with appropriate parties, including the Canadian Transportation Agency (CTA) to request they facilitate discussion between CPR and CNR in order to negotiate an agreement for CP operations to relocate and merge onto the CN operational tracks within the City of London limits. In response to Council's direction, Civic Administration has held a number of meetings with the railway companies and authorities. The report summarizing CPR and CNR positions on the concept of a rail rationalization can be found at:

<https://pub-london.escribemeetings.com/filestream.ashx?DocumentId=46514>

The corresponding Council resolution approved a strategy of strategic grade separations such as the Adelaide Street North / CPR Grade Separation combined with

the implementation of technologies or infrastructure aimed at improving the safety of the rail/urban interface as the long-term approach to mitigating the impact of rail activity in the City of London.

Locally at the CPR / Adelaide Street crossing, adjustments to CPR's operations to reduce the number of blockages at the crossing is not feasible given the yard's central location for CPR operations and the close proximity of integrated and complex rail yard infrastructure to Adelaide Street.

Recommended Planning Solution

The evaluation process concluded that the preferred planning solution includes intersection improvements and grade separation, as they both directly address the primary problems and opportunities in the long term. This solution will separate rail traffic from vehicles, transit, cyclists and pedestrians, improving safety of all users and increasing the reliability of the transportation network. This should result in a reduction in cut-through traffic onto local streets. This solution provides an opportunity to improve the streetscape, creating a safe and welcoming space for pedestrians and contribute to the surrounding neighbourhood.

Design Alternatives

Phase 3 of the Municipal Class EA process involved the generation and evaluation of design alternatives for the following aspects of the overall design: grade separation type (underpass or overpass); road alignment; road cross-section; local street connections (Central Avenue, Pall Mall Street, McMahan Street); and streetscape design.

Numerous factors influenced the generation, assessment, and evaluation of the design alternatives, for example:

- Community mobility, connectivity, character and direct community feedback / input;
- Impacts to properties, impact to McMahan Park;
- Cultural Heritage resources, adjacent Heritage Conservation Districts, McMahan Park heritage gates;
- Active transportation;
- Opportunities for streetscape design / urban design; and
- Technical factors (transportation network, road design, stormwater / groundwater management, constructability, cost and CPR operations).

Recommended Design

Based on the evaluation of design alternatives, the recommended design consists of the following key aspects:

- **Underpass Grade Separation:** The underpass, or subway, is preferred because there are fewer property impacts, relatively little visual intrusion to surrounding community and decreased traffic noise from street. The underpass maintains the intersections of local streets, is more attractive to pedestrians and cyclists and is preferred by the community when compared to the overpass design alternative.
- **'Central' Alignment of Adelaide Street North:** A detailed consideration of the Adelaide Street alignment indicates that the central alternative that closely follows the current alignment, as compared to a shift to the west, minimizes overall property impacts and maintains a straighter road. The central alignment maintains the local street fabric and connections and minimizes impacts to CPR infrastructure.

- Service and utility corridor on east side of Adelaide Street North: The underpass creates the need for a utility corridor outside the excavation. The east alignment minimizes permanent property impacts and integrates well with the proposed temporary road detour.
- Central Avenue Realignment: The opportunity to better align Central Avenue across Adelaide Street will improve safety for all users and provide better transportation, active transportation and community connectivity. The recommendations include proposed cycling lanes on Central Avenue.
- Pall Mall Street Intersection: Pall Mall traffic will maintain connectivity with southbound Adelaide Street North with a restriction on left-turn movements for safety and available sightlines, given proximity to underpass profile. The surrounding grid network of streets provides alternatives.
- McMahan Street: Consideration was given to aligning Pall Mall Street and McMahan Street similar to what is possible at Central Avenue. However, the associated property impacts are significant and it is recommended to maintain the existing intersection configuration. The signalized pedestrian crossing will be shifted from Pall Mall Street to McMahan Street to align with the new primary entrance to McMahan Park that is shifted slightly north. Traffic signals are not being recommended at this time due to additional property impacts and concerns of attracting more cut-through traffic from Oxford Street through the residential neighbourhood.
- Stormwater and groundwater management will be achieved via a new pumping station and storage infrastructure to be located in the northwest quadrant of Adelaide Street North and Central Avenue.
- Temporary road detour on east side of Adelaide Street North: Solutions to mitigate social impacts associated with construction projects are investigated for transportation projects. A temporary detour is possible on this project that will maintain north-south traffic including emergency services during construction with the exception of short-term road closures. The east-side detour avoids permanent property impacts beyond those required for the permanent grade separation and utilizes the same footprint as the new service / utility corridor. The details of the road detour are subject to further review with CPR during the detailed design phase with consideration of encroachment into the yard and viability of rail yard infrastructure. A four-lane detour was assessed for the purpose of the EA assessment, however further review with CPR have identified significant challenges to railway operational safety and impacts to rail yard infrastructure and costs, that may deem a four-lane rail crossing not feasible. Implementation of a two-lane detour with turn lanes at the intersections could provide a level of service that is marginally reduced but acceptable given the temporary nature of the detour.

The project team's understanding of the design constraints has evolved through the study. Following PIC 2, the project team explored opportunities with CPR to coordinate with the CPR yard infrastructure. This allowed both the new service / utility corridor and temporary road detour to be located on the east side of Adelaide Street North, thereby significantly reducing property impacts.

The recommended design achieves grade separation and provides excellent opportunity for the design of a vibrant streetscape and safe active transportation facilities.

Cycling Facilities

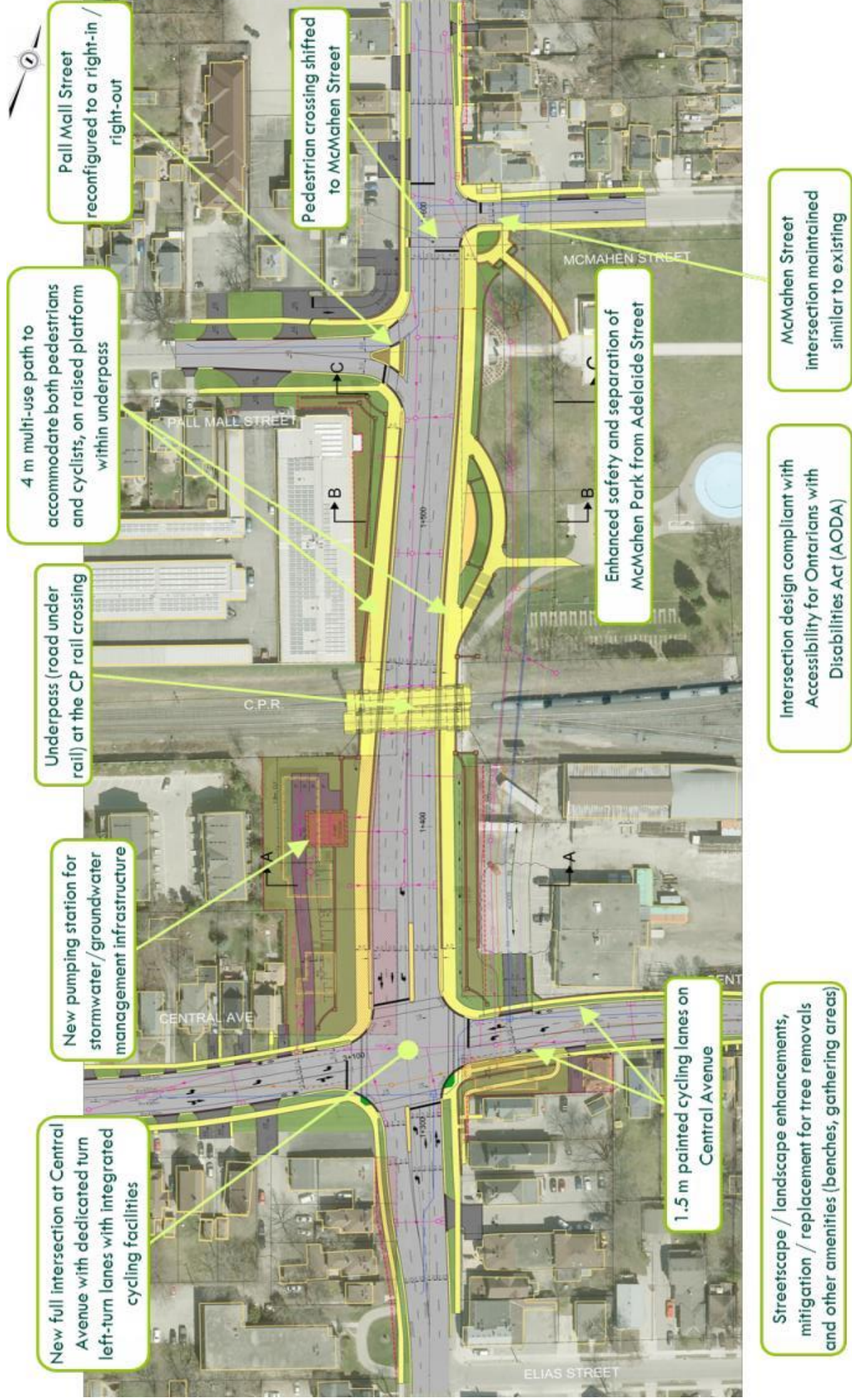
In response to public feedback received at PIC 3 and further examination of the cycling facilities for Adelaide, the cycling facility design was further scrutinized with the development of two options as follows:

- Option 1 (recommended) is to widen the raised platform to provide a 4 m wide multi-use pathway (MUP) in place of a sidewalk. This MUP would be used by cyclists and pedestrians on both sides of the road corridor.
- Option 2 is to provide 3 m pedestrian sidewalks on a raised platform and 3 m shoulder with curb-separated bike lanes at street level.

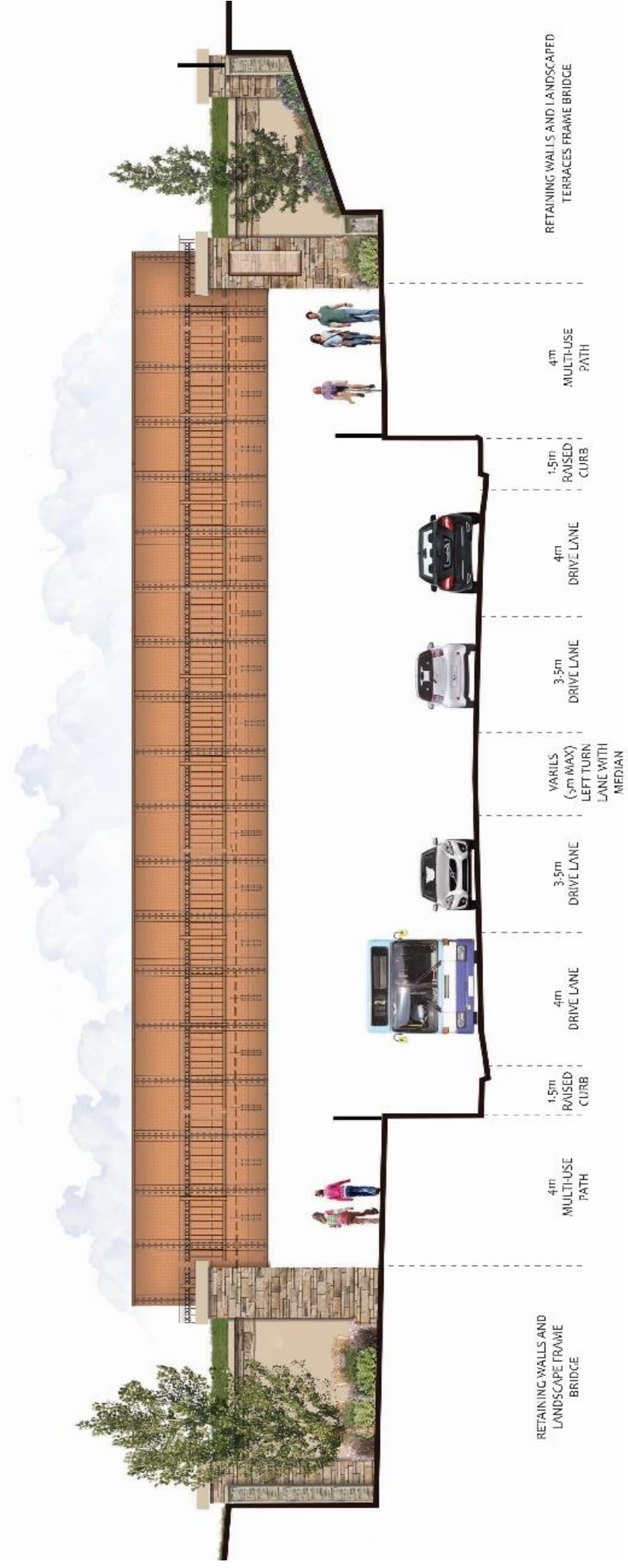
Given that Adelaide Street North is not proposed to have on-street designated / separated cycling facilities downstream and upstream of the grade separation due to corridor constraints, the project team concluded that a cycling connection through the grade separation should cater to short connectivity trips across the rail corridor. Cyclists using the underpass (whether coming from Adelaide, Central or Pall Mall Street / McMahan Street) will prefer to avoid the proposed 6% street grades by using the MUP which would be elevated above street level and therefore will require less effort to pass through. Option 1 is viewed as more comfortable for a broader range of users (e.g. all ages and abilities) because of the greater separation from motor vehicles. Option 1 also requires less maintenance effort and cost. Left turn queue boxes and cross rides will be implemented as appropriate.

It is proposed to provide on road cycling lanes on Central Avenue across the intersection with Adelaide Street North with connections to the MUP on Adelaide Street North and the cycling lanes on Central Avenue. This represents an enhancement beyond the signed bike route recommended for Central Avenue in the Cycling Master Plan and is warranted given the improved connectivity across Adelaide Street.

Pall Mall Street and McMahan Street are signed bike routes per the Cycling Master Plan. The streets will connect to the MUP on Adelaide Street North. Appropriate signage to facilitate the connection at the McMahan Street signalized pedestrian crossing will be developed in detailed design.



Recommended Plan Overview



Adelaide Street North Road Cross-Section through Underpass

Streetscape Design

The streetscape concept was prepared based on the following principles:

- integrate the grade separation visually into the surrounding neighbourhood;
- minimize impacts to buildings, property and businesses;
- create a pedestrian-friendly streetscape; establish and maintain pedestrian and cycling connections between destinations across and along Adelaide Street North;
- frame and enhance the new bridge through aesthetic treatments that provide a visual amenity to the community;
- create opportunities for neighbourhood identity features and reference heritage architectural styles and patterns; and,
- identify opportunities for new and enhanced public spaces.

Community input was vital to the development of the streetscape concept plan. Input received throughout the study and directly from the community associations and Old East Village BIA was important to the process of confirming design objectives, priorities and preferences and developing the concept design. The streetscape design was very well-received by the community at PIC 3. The streetscape rendering is provided on the following page.



View looking northbound at Adelaide Street North and Central Avenue

Public and Agency Consultation

A Notice of Study Commencement for the project was issued in February 23, 2016 to stakeholders, First Nations, property owners, and community associations. A project page on the City's website was also launched at that time. Public feedback at the commencement of the study primarily related to CPR operations, the need for a grade separation, cut-through traffic on residential streets, potential property and access impacts, neighborhood connectivity, pedestrian and cyclist safety and potential for higher traffic volumes and noise.

As the owner of the railway, CPR is an important project partner and will ultimately have approval of any proposed changes to their infrastructure. City staff have had ongoing communication with CPR throughout the study.

There are four community and business associations with interest in the study area: Piccadilly Area Neighbourhood Association (PANA), Woodfield Community Association, Old East Village Business Improvement Area (BIA) and Old East Village Community Association. Representatives from each these groups engaged City staff early in the study and have remained directly involved in the study process throughout. An initial meeting was convened with community representatives on May 24, 2016. A follow-up walking tour of the neighbourhood was held on October 6, 2016. A further meeting was convened on April 11, 2018 to review the proposed design, including the streetscape/urban design concept in advance of Public Information Centre 3. The partnership with the community groups and business associations has been important to the success of this EA, and the community associations have played a key role in raising the project profile and encouraging the broader community to participate in the study.

The first public information centre (PIC) was held on June 16, 2016 and provided stakeholders with an opportunity to meet the project team, review the study scope, existing conditions, need and justification and planning alternatives. Approximately 140 people attended. Feedback themes heard at the PIC included:

- Confirmation that a grade separation is needed to alleviate traffic with a strong preference for an underpass;
- A desire for better pedestrian facilities on Adelaide Street North;
- Concern that an overpass will break up the neighbourhoods;
- Concern with cut-through traffic in the neighbourhoods on the side streets when trains block Adelaide Street North; and,
- A suggestion to change CPR operations instead of constructing the grade separation.

A comment sheet / questionnaire was provided at PIC 1 and posted on the City's website until August 31, 2016. A total of 125 comment sheets were received in this period. From the comment sheet / questionnaire, the highest rated issues were:

- travel delays due to frequent train crossing road blockages;
- the need for safe and comfortable sidewalks and cycling facilities; and
- improved air quality and noise.

The most important goals for the study, from the questionnaire, were to:

- protect and improve pedestrian accessibility/walkability;
- develop a solution that contributes to a vibrant street and neighbourhood;
- ensure continued access to homes and businesses; and,
- protect the heritage value of the neighbourhood.

Based on feedback received from the community associations and from the general public at PIC 1, the project team's approach to public engagement was expanded to include one additional PIC with a workshop format. This approach allowed the project team to better address the complex technical components of the study, respond to the high level of community interest and desire for direct involvement, and provide more opportunity for public input to the streetscape design to enhance the neighbourhood.

Public Information Centre 2 was held on December 14, 2016. The PIC consisted of a drop-in open house from 4:30 pm to 8:00 pm with a workshop component from 6:00 pm to 7:30 pm. The purpose of the PIC was to confirm the preferred planning solutions, describe the multi-step design process and present alternative design concepts (including grade separation type and side street connections), and actively develop a high-quality streetscape design through the workshop. The workshop provided a more visual project interaction to gain feedback on specific elements such as sidewalk configuration, side treatments, pedestrian space, aesthetic and theming opportunities, and landscape design. Those not able to attend the workshop had an opportunity to provide input on these elements through the Get Involved London website. Approximately 60 people attended the PIC and almost all attendees participated in the workshop.

A comment sheet / questionnaire was provided at PIC 2 and posted on the City's website until January 31, 2017. A total of 26 written comments were received in this period. Common verbal and written feedback included:

- A strong preference for the underpass design;
- An understanding of the need for a grade separation but concern that it will separate the neighbourhoods;
- Concern about potential for increased noise associated with the grade separation and potentially higher traffic volumes on Adelaide Street North;
- Suggestion for a signalized intersection at McMahan Street;
- A desire for a friendly, safe, and secure space for pedestrians;
- A preference for dedicated bicycle lanes;
- Concern regarding property impacts;
- Concern for disruption to local businesses during construction; and,
- A desire to maintain the connection of Pall Mall Street and Adelaide Street North.

Public Information Centre 3 was held on April 26, 2018. The purpose of this PIC was to present the Recommended Plan including streetscape design concept, present the preliminary construction staging concept and overall implementation timeframes. Approximately 100 people attended. A total of 57 written comments were received in this period. Common verbal and written feedback included:

- Strong support for the underpass design;
- Very positive feedback for the streetscape design;
- Positive feedback on the design of the Central Avenue intersection;
- Community 'feels they have been heard' and the design is reflective of feedback;
- Questions regarding the timing of the design and construction;
- Some concern about temporary loss of use of some areas of McMahan Park during construction, and support for park revitalization post-construction; and,
- Some concern about potential for traffic infiltration to neighbourhoods and interest in providing traffic calming during construction.

In addition to these formal events, the project team met individually numerous times with property owners who are most significantly impacted. Several proactive meetings occurred prior to Public Information Centre 2 and Public Information Centre 3 to provide early notification to those impacted. Subsequent ongoing dialogue has occurred with interested parties throughout the study.

Property Requirements

Significant efforts have been made during the Adelaide Street North / CPR Grade Separation Class EA to minimize property impacts, including:

- Maintaining a central alignment of Adelaide Street North;
- Providing the traffic detour and utility corridor along the east side of Adelaide Street North;
- Providing a 'best-fit' design for the realigned Central Avenue intersection; and
- Maintaining the existing connections to Adelaide Street North from Pall Mall Street and McMahan Street, it being noted that access to Pall Mall Street will be restricted to a right-in and right-out arrangement.

Despite these measures, some sections of the Preferred Plan have a substantial change in the road profile and therefore impacts to properties are unavoidable. Based on the preliminary design concept, four properties have been identified as likely to be fully impacted due to road grade changes and closure of access to Adelaide Street North. None of these properties are included on the City of London Inventory of Heritage Resources as listed or designated.

Thirteen properties are likely to have minor impacts to frontage with three of them likely requiring some minor building modifications to maintain access. One property, 596 Adelaide Street North – The Cat Hospital, is included on the City of London Inventory of Heritage Resources as a listed heritage property, Priority 1. The building will not be affected and anticipated impacts are limited to the frontage of the property with changes to the existing access and landscaped garden.

IMPLEMENTATION

The project is planned for implementation as expeditiously as possible. Construction timing is subject to the completion of the environmental assessment process, design, property acquisition and CPR concurrence. Implementation is expected within the 5 year timeframe.

Due to the complexity of the project, the construction duration is expected to be approximately 2 years. The majority of the underpass construction can be completed 'off-line' with traffic routed around the construction area via the temporary road detour. Construction timing, duration, staging and traffic management will be fully developed during the detailed design phase. It is anticipated that some construction activities will require short-term periodic lane closures or temporary lane reductions, for example:

- Relocation and installation of utilities and municipal services will involve short-term closures or lane reductions to through-traffic. A number of closures will be required at intersections to complete utility crossings.
- Modifications to rail infrastructure will involve short-term closures to Adelaide Street North (possibly restricted to weekend closures).
- Longer closure / lane reduction to through-traffic will occur with the lowering of Adelaide Street North to match the underpass road profile. Ideally this work will be planned during a single 4 to 6 week closure period on Adelaide Street North.

Local street traffic and walk-in access to businesses can likely continue via local streets during this period.

- Once Adelaide Street North is lowered, it will be reopened to traffic. Local streets will then be lowered to match the new grade.



Construction Staging Concept (Preliminary)

FINANCIAL CONSIDERATIONS

A preliminary construction cost for the Adelaide Street North / CPR grade separation is approximately \$58.3 M. The cost estimate includes roadway construction, the railway grade separation bridge structure, CPR costs (i.e., yard modifications, flagging, etc.), municipal services and utility relocation, temporary road detour, traffic and pedestrian signals, pump station with storage facility, landscaping, staging, and property acquisition. The preliminary estimate for the project is summarized below which includes appropriate contingencies. Cost sharing is anticipated with Canadian Pacific Railway at 15% of the total project cost. The cost estimate aligns with the approved 2017 capital budget amendment case.

Item	Estimated Cost (\$)
Removals	1,139,000
Roadwork	10,826,000
Storm Sewers / Pump Station	8,779,000
CPR Structure	9,832,000
Sanitary Sewer	567,000
Watermain	876,000
Temporary Work	660,000
Road Detour	2,027,000
Utility Relocation	4,440,000
Rail Works and Flagging	4,080,000
Property Acquisition	9,800,000
Engineering	5,250,000
TOTAL	58,276,000

CONCLUSION

Implementation of the City's highest priority grade separation at Adelaide Street North and CPR helps fulfill the Strategic Plan Area of Focus of Building a Sustainable City by implementing and enhancing safe and convenient mobility choices for transit, automobile users, pedestrians, and cyclists and implements the approved strategy to mitigating the impact of rail activity in the City of London.

The EA was prepared with input from community associations (Old East Village, Woodfield and Piccadilly Community Associations and the Old East Village BIA), property and business owners, external agencies, utilities, emergency service providers, and other stakeholders. Indigenous communities with potential interest in the study area have been contacted regularly throughout the project; to date no concerns or interests have been raised.

The project has met the requirements of the Ontario Environmental Assessment Act through the completion of the Municipal Class Environmental Assessment study. An Environmental Study Report has been prepared and will be made available for public review, pending approval from Civic Works Committee and Council.

The EA recommends that an underpass (road under rail) be provided on Adelaide Street North. The grade separation will improve roadway safety, manage congestion and provide route reliability for emergency services and local transit. The grade

separation also provides an opportunity to improve active transportation choices, facilities and linkages. The implementation of the grade separation will also support the Rapid Transit initiative by providing vital parallel roadway network improvements to facilitate the rapid transit implementation.

Pending Council approval, a Notice of Completion will be filed, and the ESR will be placed on public record for a 30-day review period.

Stakeholders and the public are encouraged to provide input and comments regarding the study during this period. Should the public and stakeholders feel that the EA process has not been adequately addressed, they may request a Part II Order to the Minister of the Environment within the 30-day review period per MOECC instructions on their website. If no requests for a Part II Order are received, the project will be in an immediate position to move forward to the property acquisition and construction stages in accordance with the recommendations of the study.

Construction is anticipated to begin as early as 2021 subject to Council approval of the capital budget, property acquisition, approval schedules and railway concurrence.

Acknowledgements

This report was prepared with the assistance of Ardian Spahiu, P.Eng, Transportation Design Engineer and Josh Ackworth, C.E.T., Technologist II of the Transportation Planning & Design Division.

SUBMITTED BY:	RECOMMENDED BY:
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Attachment: Appendix A – Environmental Study Report Executive Summary

- cc. Gillian Thompson – WSP Group
- Jennifer Benedict – Canadian Pacific Railway