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**SCHEDULE 15-2
DESIGN AND CONSTRUCTION REQUIREMENTS**

**PART 7
TRAFFIC AND TRANSIT MANAGEMENT AND CONSTRUCTION ACCESS**

**ARTICLE 1 GENERAL TRAFFIC AND TRANSIT MANAGEMENT
REQUIREMENTS**

1.1 Order of Precedence

- (a) DB Co's TTMP and traffic control operations shall comply with the criteria contained in this Part 7, and all standards, regulations, policies, Applicable Law, guidelines or practices applicable to the Project, including but not limited to each of the following Reference Documents. In the event of a conflict between the criteria, commitments or requirements contained within one document when compared with another, the more stringent shall apply:
- (i) OC Transpo Transitway and Station Design Guidelines;
 - (ii) City of Ottawa Transportation Master Plan;
 - (iii) City of Ottawa Road Corridor Planning & Design Guidelines, Urban & Village Collectors / Rural Arterials & Collectors;
 - (iv) Region of Ottawa-Carleton Regional Road Corridor Design Guidelines, July 2000, Region of Ottawa-Carleton;
 - (v) City of Ottawa Right of way Lighting Policy;
 - (vi) City of Ottawa Pedestrian Plan;
 - (vii) City of Ottawa Cycling Plan;
 - (viii) City of Ottawa Traffic and Parking By-Laws;
 - (ix) The City of Ottawa, Department of Public Works and Environmental Services, Infrastructure Services Branch, Standard tender documents for Unit Price Contracts (Volume No.1- Construction Specifications; Volume No. 2 - Materials Specifications & Standard Detail Drawings);
 - (x) City of Ottawa Area Traffic Management Principles and Guidelines;
 - (xi) City of Ottawa Emergency Management Plan;
 - (xii) City of Ottawa Maintenance and Quality Standards for Roads, Sidewalks and Pathways

- (xiii) Geometric Design Guide for Canadian Roads (TAC);
- (xiv) Urban Supplement to the Geometric Design Guidelines for Canadian Roadways (TAC);
- (xv) Guidelines for the Design of Roadway Lighting (TAC);
- (xvi) Turning Vehicle Templates (TAC);
- (xvii) Geometric Design Standards for Ontario Highways (MTO);
- (xviii) City of Ottawa Transportation Impact Assessment Guidelines;
- (xix) City of Ottawa Delivery Standards for CADD Drawing Files
- (xx) Roadside Safety Manual (MTO);
- (xxi) Ontario Traffic Manuals;
- (xxii) Sign Sheeting Memorandum, February 21, 2008 (MTO)
- (xxiii) Contract Design, Estimating and Documentation Manual (MTO)
- (xxiv) [REDACTED];
- (xxv) Electrical Engineering Manual (MTO)
- (xxvi) Policy – Municipal Work on MTO Traffic Signals, September 2008;
- (xxvii) MTO Policy – Roadway Lighting on Municipal Crossroads, October 24, 2003;
- (xxviii) Portable Variable Message Signs – Best Practices Manual (MTO)
- (xxix) Bikeways Design Manual;
- (xxx) Guidelines for Reducing Speed Limits in Construction Work Zones
- (xxxi) Ontario Provincial Standards Specifications and Standard Drawings (OPSS and OPSD);
- (xxxii) Ministry of Transportation Ontario Drawings (MTOD's)
- (xxxiii) Other relevant MTO Policy, Procedures and Guidelines;
- (xxxiv) Accessibility for Ontarians with Disabilities Act (AODA):
- (xxxv) Ottawa Accessibility Design Standards;
- (xxxvi) City of Ottawa Operation Policy, Procedures and Guidelines;

- (xxxvii) City Operating Policy and Procedures;
- (xxxviii) City of Ottawa Park and Pathway Development Manual;
- (xxxix) Multi-Modal Level of Service (MMLOS) Guidelines; and,
- (xl) NCC Standard Sign System Manual.

1.2 General Requirements

- (a) DB Co shall manage the traffic and transit impacts of the Project and shall develop a TTMP for the Project work to meet the requirements of this Part 7. DB Co shall manage and coordinate the TTMP developed under this Part 7 with DB Co's requirement to manage and develop the TTMP required for the Highway Works as prescribed in Schedule 15-2, Part 9, Part C – Traffic Management and Construction Access. The management and development of the TTMPs shall complement the requirements of the other respective TTMP and for further certainty neither TTMP shall diminish the other nor the requirements prescribed in this Part 7 and Schedule 15-2, Part 9 – Highway 417 Works.
 - (i) The TTMP for the Highway 417/416 MTO Work shall be applicable to the construction of the Highway Works only. The TTMP for the Confederation Line Extension and the TTMP for the Highway 417/416 MTO Work shall be complementary to one another.
- (b) DB Co shall develop and submit a traffic and transit management strategy and TTMP in accordance with Schedule 10 – Review Procedure that is acceptable to the City. DB Co shall cooperate with the City and OC Transpo with respect to the development of the traffic management strategy.
- (c) Further to the requirements of Schedule 15-2, Part 1, Article 10 – Construction Safety Management, DB Co shall identify in each Site Specific Safety Plan, the safety concerns and mitigation measures associated with each Work Site as pertains to the health and safety of the traveling public, from the perspectives of pedestrians, cyclists, general vehicle traffic, transit traffic, and transit customers. DB Co shall include a copy of each relevant Site Specific Safety Plan as an Annex to the TCP submission in accordance with Schedule 10 – Review Procedure. DB Co shall keep the Site Specific Safety Plan and the TCP current to the changes on Site, and resubmit the TCP accordingly. DB Co shall not proceed with any Work on Site without an accepted TCP which is current to the present-day Site Conditions.
- (d) DB Co shall work collaboratively and diligently in a reasonable manner with the City and OC Transpo, Stakeholders, ESP, other City service providers and the Relevant Authorities so that transit service is maintained during the performance of the construction in terms of travel time and frequency.

- (e) Construction shall be scheduled so that the duration and extent of the proposed Work and traffic control measures minimize the impact to all modes of transportation and adjacent land owners, and shall not prohibit any part of the traveling public access prior to receiving the required authorization to do so.
- (f) DB Co shall collect, record, document and file with the City, the travel times between existing Transitway Stations and stops for all bus routes and Facilities, prior to the commencement of any Work activity which would alter bus travel times. DB Co is advised to coordinate their collection of this data in advance with OC Transpo, as OC Transpo may be able to facilitate the collection of the data using their bus tracking system. This information shall be used by DB Co as the baseline travel times for comparison/evaluation of alternate/temporary bus routes. Baseline data shall be validated by the City to ensure that it is representative of normal operations and not affected by other road works.
- (g) All traffic data used for analysis for traffic management purposes shall be based on the most current data and shall be no older than two years. The information to be collected shall include, but not be limited to, all of the hourly traffic volumes and AADTs for all modes of travel on all Roadways, bus Facilities, bike facilities and pedestrian facilities which will be affected by the Project, including any potential detour routes. DB Co shall be responsible for obtaining or collecting all traffic data necessary for its traffic analysis, if traffic data less than two years old is not relevant to the traffic management analysis due to temporary conditions that existed at the time the data was collected. DB Co shall confirm with the City that the data is appropriate prior to conducting an analysis using said data.
- (h) DB Co shall undertake a traffic management study, where road capacity or LOS is reduced, to determine the impact of the construction on other routes and to determine appropriate mitigation measures. The traffic management study shall involve area wide traffic modeling to determine impacts to all modes of transportation including adjacent corridors impacted by the construction. The study shall include DB Co's forecast for, but not limited to, routes, diverted traffic volumes, speeds and travel times for all modes of travel on all routes subject to the study. The traffic management study shall be submitted as a part of the TTMP document in accordance with Schedule 10 – Review Procedure.
- (i) The traffic management strategy shall address the impact on residential streets of any diverted traffic through appropriate temporary and permanent traffic calming measures in accordance with City of Ottawa Area Traffic Management Principles and Guidelines and in consultation with OC Transpo along any detoured bus routes.
- (j) The OTM supersedes all reference in this contract document to the MTO MUTCD. The supply and placement of all necessary temporary TCDs shall be performed under the sole direction of DB Co and in accordance with DB Co's submitted/reviewed TTMP and associated TCP, prior to commencing any construction on or adjacent to a City street or Provincial Highway/freeway. The TCP shall be developed in accordance with guidelines established by the most recent version of the OTM, the OHSa and this Part 7 which details the required contents and submission of the TTMP and associated TCPs.

- (k) Vehicular and pedestrian/cyclist traffic control within the Project shall remain the sole responsibility of DB Co as the City delegates this authority to DB Co in accordance with the submitted/reviewed TTMP. Notwithstanding the foregoing, DB Co shall, at its own expense, remove any equipment or material, which in the City's opinion, constitute a Hazard to traffic, pedestrians and cyclists.
- (l) DB Co shall be fully and solely responsible to ensure the development and implementation of a submitted/reviewed TTMP as required in this Part 7. The TTMP, its sub-plans, and all required TCDs shall be designed/installed, monitored, operated/maintained and removed, utilizing only competent persons and workers as defined under the OHSA. DB Co shall be responsible for coordination of this Work with the City.
- (m) DB Co shall not store any equipment or materials on a federal, provincial or municipal road or the Roadway shoulders, Transitway, Park and Rides or boulevards, unless the storage areas are identified in the TCP and appropriate TCDs have been implemented to protect the equipment or materials. The City shall review and approve any storage of equipment and/or materials within the Lands. DB Co shall be permitted to use temporary closed lanes as a construction laydown and staging area, where temporary lane closures are permitted and approved by the City. Construction shall be scheduled so that the duration and extent of the proposed Work and traffic control measures minimize the impact on the traveling public. DB Co shall remove all dirt and debris from all paved or concrete surfaces outside of the staging area at the close of each workday, and shall be responsible for any repairs or maintenance associated with the construction activity, to the City standards.
- (n) The Permitted Periods for Closures outlined in this Part 7 shall be the basis for the development of the TTMP. Variations to the applicable Permitted Periods for Closures, at specific locations, may be permitted for such specific locations, but only if substantiated through a plan by DB Co that addresses, at a minimum, traffic requirements, analyses and Stakeholder consultation, where applicable, and such plan is submitted to and accepted by the City in accordance with Schedule 10 – Review Procedure.
- (o) All vehicle, transit, transit customer activity, pedestrian and cycling data used for analysis for traffic management purposes shall be based on the most current data, and no older than two years with growth factors acceptable to the City. DB Co shall be responsible for obtaining any vehicle, pedestrian and cycling data necessary for its traffic management analysis, where the City does not already have the data or cannot provide the data within DB Co's required timelines.
- (p) Implementation and removal of any closure, full closures, detour routes, Lane Shifts, and diversions and/or other changes in traffic patterns shall not be permitted outside of the applicable Permitted Periods for Closures as defined in this Part 7 and elsewhere in this Project Agreement. The City may, acting in a reasonable manner, temporarily adjust the applicable permitted periods for any closure in circumstances considered appropriate by the City including but not limited to, holidays, as further addressed in Clause 1.4 - Holidays and Special Events of this Part 7, incidents, and maintenance.

- (q) The City may direct DB Co, on 7 Business Days advance notice, to eliminate or modify any or all closures and restore free-flow traffic for a 24-hour period on the day of any event other than a holiday, as per this Part 7.
- (r) DB Co shall temporarily cease any relevant construction activities that are affecting traffic and make all the necessary travel lanes available to traffic as quickly as possible if the City determines that vehicular queues related to closure, full closures, detour routes, Lane Shifts and/or diversions are excessive. For example, where the extent of vehicular queues affect traffic operations such as at intersections or interchanges or the ability of vehicles on a highway mainline to exit at upstream interchange ramps.
- (s) At any time during the Project, the City Representative may, acting in a reasonable manner, temporarily adjust the applicable Permitted Periods for Closures identified in this Part 7, including but not limited to holidays (as further addressed in Clause 1.4 of this Part 7), incidents, and maintenance.
- (t) Any proposed DB Co initiated closure, full closures, detour routes, Lane Shifts, and diversions, not included in DB Co's accepted TCP, shall be submitted to the City in an updated TCP in accordance with Schedule 10 - Review Procedure. DB Co shall not proceed with implementation of the closure, full closure, detour, Lane Shift or diversion without an accepted TCP. DB Co shall not commence any Work on Site without an applicable current accepted TCP.
- (u) All Transitway, bus lanes, Roadway (excluding Highway 417 and Highway 416 with associated ramps), cycle and pedestrian facility permanent modifications not specifically described or depicted in the EA for the Project, or specifically referenced or shown in the Project Agreement, require Council approval prior to their construction. DB Co shall provide to the City a RMA report for the proposed modifications in accordance with requirements of the City's Transportation Impact Assessment Guidelines. A sample RMA report has been provided in Appendix A of this Part 7. The RMA shall be submitted to the City in accordance with Schedule 10 - Review Procedure. DB Co shall attend committee and Council meetings with the City, and provide assistance to the City in preparing a presentation for committee and Council, and assisting the City in answering any questions which arise at the meetings. Given that modifications vary in size and complexity, and that committee and Council agendas may become full, DB Co shall confirm with the City regarding the lead time required to have each particular item prepared and placed on a committee agenda for consideration, thence, forwarded to Council agenda for approval and final disposition, and allow for this time in their scheduling of the Project Work.
- (v) Multiple Work zones that impact each other along existing Provincial Highways, existing Major Municipal Roads, existing Minor Municipal Roads, existing Transitway, and other affected municipal or federal Roadways or routes between them, such that traffic encounters multiple disruptions and/or discontinuity in the lane geometries, shall not be permitted.

- (w) Access to/from Work zones along existing Provincial Highways, existing Transitway, and existing Major Municipal Roads shall not be permitted outside of the applicable Permitted Periods for Closures, unless separate acceleration and deceleration lanes are provided to/from such construction zones. Acceleration and deceleration lanes shall be designed in accordance with the Reference Documents and Applicable Codes and design standards taking into account all construction vehicle/equipment types.
- (x) Construction vehicles/equipment shall only use accesses to/from Work zones in the same direction of traffic thereby diverging/merging with the flow of traffic, in order to avoid crossing opposing traffic. The City reserves the right to close any access to/from any Work zone that it deems to be unsafe or which constitutes a Hazard to the public.
- (y) There shall be no open excavation adjacent to a lane carrying traffic including cyclists at any time, except where a barrier designed to restrain errant vehicles or cyclists is located between the traffic and the excavation.
- (z) DB Co shall remove materials and construction vehicles/equipment which, in the opinion of the City, constitute a Hazard or sight distance obstruction.
- (aa) DB Co shall be responsible for identifying to the City in advance all Roadways being utilized for haul routes. DB Co shall be responsible for ensuring haul routes are kept clean and free of construction dust and debris. DB Co shall submit a plan for the cleaning of haul routes in accordance with Schedule 10 – Review Procedure. Haul routes shall comply with City’s by-laws for goods movement and use of truck routes.
 - (i) DB Co shall be responsible for the cleaning and maintenance of any and all haul routes used to complete the Highway Work to the satisfaction of the City and MTO.
 - (ii) DB Co shall inventory and photograph road conditions before and after construction for the following locations:
 - A. SJAM Parkway;
 - B. Richmond Road;
 - C. OR174; and,
 - D. Any road which may be impacted due to debris from the Parkway Tunnel.
 - (iii) Road condition shall be restored to original or better condition than prior to construction, and to the satisfaction of the City.
 - (iv) DB Co shall determine the haul route and applicable load restrictions after consultation with the City, and shall comply with their requirements.
 - (v) DB Co shall submit a construction Haul Route Plan a minimum of 90 days prior to start of any construction activities. The Haul Route Plan shall be reviewed by

the City under the Review Procedure. The Haul Route Plan shall include the inventoried road conditions and photographs taken by DB Co prior to construction.

- (vi) The Haul Route Plan shall include, at a minimum, the following:
 - A. Existing condition of municipal roads that will be used as haul routes;
 - B. A schematic of the general construction haul routes undertaken immediately adjacent to the Work;
 - C. A description of the construction equipment or vehicles, including type and quantities, as applicable that will be travelling on the identified haul routes;
 - D. DB Co's plan and approach to maintaining municipal haul routes as per requirements in this Article.
- (bb) Seasonal Load Restriction Period
 - (i) DB Co shall abide by the City's SLR period. If DB Co's schedule requires that an ODV exceeding the half-load limit be used on a non-full load truck route during the SLR period, DB Co shall conduct non-destructive Pavement deflection testing (such as falling weight deflectometer) during the summer prior to the SLR period, and again during the SLR period, and submit the results to the City a minimum of five calendar days prior to the required vehicle movement. The City will not issue an ODV permit during the SLR period without receipt of this data demonstrating that the road can accommodate vehicle loads exceeding the half-load limit.
- (cc) The City shall be granted access to the Work zone to install portable cameras or other devices required for monitoring, audit, public communication, data collection or other purposes.
- (dd) DB Co shall be responsible for providing, installing and maintaining all TCDs and protective devices identified in the approved TTMP.

1.3 Accommodation of Transit Services

- (a) DB Co shall be responsible for liaising and coordinating with all applicable municipal transit agencies for any modifications to bus routes and/or bus stops that may be required due to closures, full closures, detour routes, Lane Shifts and diversions and/or other changes in traffic patterns.
- (b) DB Co shall maintain access for transit customers to all adjacent existing and temporary Transitway and transit facilities, bus lanes, Transit Priority Lanes and non-Transitway routes through detours or otherwise as detailed elsewhere in this Part 7 and elsewhere in this Project Agreement, unless exceptions have been approved.

- (c) DB Co shall provide the City and OC Transpo at least 35 calendar days' notice to coordinate adjustments required to their facilities as a result of construction. Access by buses, pedestrians and cyclists to all existing bus stops or Platforms located within the Work zone shall be maintained at all times, except where otherwise stated in this Part 7, elsewhere in this Project Agreement, or as agreed upon by the City and OC Transpo. Where access cannot be maintained and temporary facilities are required, these facilities shall be comparable to the existing facilities in form/function, to the satisfaction of OC Transpo.
- (d) Proposed modifications to bus routes and/or bus stops shall be submitted in accordance with Schedule 10 – Review Procedure.
- (e) Any relocation of bus stops or shelters shall be preceded with signage prepared and posted by DB Co at the existing bus stops, Station or Platform indicating the location of the re-located bus stops, Station or Platforms with advance notification to the public of at least 35 calendar days subsequent to the review and acceptance of the relocation proposal by the applicable authority. Any relocation of bus stops shall include the provision of appropriate customer or operational facilities or infrastructure including but not limited to the requirements in Part 7, Appendix E of this Part 7, to City and OC Transpo standards and specifications. DB Co shall be responsible for liaising and coordinating with all applicable municipal transit agencies.
- (f) DB Co shall contact OC Transpo Transit Planning Staff at least 5 Business Days prior to starting construction where the TTMP has indicated that the proposed Work will interfere with bus or pedestrian access to/from a transit stop, in order to coordinate the temporary relocation of the affected transit stop(s) as may be required.
 - (i) DB Co shall contact OC Transpo Transit Planning Staff at least 20 Business Days prior to the relocation or removal of a bus shelter.
 - (ii) A temporary concrete shelter pad shall be required for the relocation of a bus shelter if the planned duration of Work is longer than 30 calendar days, unless otherwise indicated by OC Transpo staff.

1.4 Holidays and Special Events

- (a) DB Co shall comply with the following requirements when scheduling hours of Work or DB Co initiated closures during the holidays identified in Tables 7-1.1 and 7-1.2:
 - (i) DB Co shall not commence the implementation of any closures on any of the holidays, after 12:00 hrs on Fridays or a day proceeding a holiday weekend, and before 12:00 hrs on a day following a holiday or on the first Business Day following a holiday weekend.

TABLE 7-1.1 – ONTARIO STATUTORY HOLIDAYS

New Year's Day	Civic Holiday
Family Day	Labour Day
Good Friday	Thanksgiving Day
Victoria Day	Christmas Day
Canada Day	Boxing Day

TABLE 7-1.2 –OTHER HOLIDAYS

Easter Monday	Remembrance Day
St. Jean Baptiste (Highway 417 only)	

- (b) DB Co shall minimize traffic disruptions on existing Provincial Highways, existing Major Municipal Roads, existing or detoured Transitway, bus detour routes and federal roads, existing Minor Municipal Roads and other affected Municipal and federal Roadways during special events. DB Co shall be responsible for obtaining a listing of planned special events on an as required basis from the City of Ottawa Events Central Office, the Traffic Management Special Events office, and the NCC, recognizing that the special events calendar is updated by the City and the NCC on a regular basis.

1.5 Detour Route, Lane Shift, Diversion, Closure and Construction Requirements

- (a) General
- (i) DB Co shall not implement any closure, detour, Lane Shift or diversion without an applicable current accepted TTMP and TTMP sub-plans.
 - (ii) DB Co shall pave all detour routes, Lane Shifts and diversions and have appropriate Pavement Markings and signs placed in accordance with the OTM, King's Highway Guide Signing Policy Manual (MTO Roadways) and City of Ottawa Operation Policies, Procedures and Transitway and Station Design Guidelines.
 - (iii) DB Co shall be responsible for all Pavement markings and non-regulatory signage on all detour routes, in preparation for the detour and during detour operations.
 - (iv) DB Co shall ensure that the Pavement structure and condition of any new, existing or temporary Roadway, bus lanes, bus detours routes, cycling facility and pedestrian facility used for all detour routes, Lane Shifts and diversions, including detour routes prescribed by the City, is designed and constructed for its intended

purpose in accordance with the requirements set out in Schedule 15-2, Part 2, Clause 6.10, and Schedule 15-2, Part 9, Part B, Clause 3.3, and does not adversely impact the safety and intended function of such detour routes, Lane Shifts and diversions for all road users of the facilities.

- (v) DB Co shall schedule construction activities such that no milled surface shall remain for more than five calendar days or over weekends. Each milled surface shall have a uniform texture, not be raveled, and not allow standing water on the surface.
- (vi) DB Co shall prepare an engineered design for each detour route, Lane Shift and diversion that shall conform to the Design Criteria requirements in the Reference Documents identified in Clause 1.1 of this Part 7.
- (vii) DB Co shall provide detour routes, Lane Shifts and diversions with Drainage facilities to prevent standing water and flow of water across the Roadway, bus lanes, cycling facilities and pedestrian facilities, including bus stops and Platforms.
- (viii) DB Co shall replace all on-street catch basins with curb inlet catch basins, in accordance with City standards, on transit detour routes where buses will be travelling in the curbside lane.
- (ix) Implementation and removal of any closure, full closures, detour routes, Lane Shifts and diversions and/or other changes in traffic patterns shall not be permitted outside of the applicable Permitted Periods for Closures.
- (x) Lane closure duration shall be limited to the time required to execute the necessary construction activities. DB Co shall not close a lane for purposes other than actual construction activities, such as, but not limited to, material and equipment storage, and staff parking, unless approved by the City.
- (xi) DB Co shall maintain access to all adjacent properties through all partial closures, full closures, detour routes, Lane Shifts and diversions.
- (xii) Detour routes, Lane Shifts and diversion requirements and any modifications thereto, shall be submitted in accordance with Schedule 10 – Review Procedure. The Work Submittal shall in addition include modifications to the various TTMP sub-plans as applicable.
- (xiii) All Project related closures associated with traffic of any kind shall be the responsibility of DB Co, as well as any associated requirements for traffic control (such as but not limited to signage, temporary Pavement markings, line painting, TCD, barriers, flag persons, point duty police, etc.). Closures and their ancillary requirements shall be submitted in accordance with Schedule 10 – Review Procedure.

- (xiv) DB Co shall prepare and submit Record Drawings to the City in accordance with the requirements of Schedule 15-2, Part 1, Article 16 – Record Drawings where new traffic signals, temporary traffic signals or modifications are being made to existing traffic signals, within 30 calendar days of signal activation.
 - (xv) All closures, detour routes, Lane Shifts and diversions shall be identified and included in Schedule 34 – Mobility Matters
 - (xvi) DB Co shall have independent Road Safety Audits and Road Safety Design Reviews completed for any temporary or permanent Roadway, Roadway detour, Transitway or Transitway detour, in accordance with the criteria set out in Schedule 15-2, Part 2, Article 6 – Roadways, Bus Terminals and Lay-Bys.
 - (xvii) DB Co shall reinstate to original condition, unless otherwise indicated elsewhere in the documents, and at DB Co expense, all Lands, Roadways, MUPs and assets affected by the implementation of the Confederation Line Extension.
- (b) Traffic Control Devices
- (i) DB Co shall supply, install and maintain PVMS as required to supplement the TCP and shall use the same to provide advance notification and advance warning of traffic pattern changes and other operational changes for traffic and/or transit. Sign locations and messages shall be as shown in the TTMP which shall be submitted to the City in accordance with Schedule 10 – Review Procedure. The City retains the right to require DB Co to provide additional PVMS in support of the TCP.
 - (ii) DB Co shall provide PVMS(s) to provide advance notification and advance warning of incidents as deemed necessary by the Emergency Traffic Plan. Sign messages and the duration that the PVMS is deployed and displayed shall be submitted to the City for acceptance prior to being implemented, and the TTMP shall be updated to record the messages which were used.
 - (iii) PVMS signs shall meet the following requirements:
 - A. Be capable of displaying a sequence of up to 6 panels;
 - B. Each display panel shall be capable of displaying up to three lines;
 - C. Each line of text shall accommodate up to 12 characters; and,
 - D. Messages shall be legible from 50 to 300 m.
 - (iv) DB Co shall utilize bilingual messages on all PVMS signs and message boards.
- (c) Traffic Counting Equipment

- (i) DB Co shall be responsible for the replacement of any counting loops or any other traffic counting equipment negatively impacted or damaged by the construction Work.
- (d) Temporary Barrier Requirements
- (i) DB Co shall supply and install temporary barriers based on the requirements of the OTM, OHSA and the Roadside Safety Manual.
 - (ii) DB Co shall show the temporary barriers in the TCP which shall be submitted in accordance with Schedule 10 – Review Procedure.
 - (iii) Temporary barriers used for closures, full closures, detour routes, Lane Shifts and diversions, including those along the Transitway, shall meet the OPSS and have appropriate flare offsets, end treatments and crash cushions. Temporary barriers shall have reflectors installed. DB Co shall make adequate provision for Drainage and removal of snow, ice and debris where temporary barriers are used.
 - (iv) DB Co shall install anti-glare screens, on or adjacent to barriers, in order to avoid driver distraction and headlight glare in locations adjacent to existing Provincial Highways, existing Major Municipal Roads, existing Transitway, existing Minor Municipal Roads and other affected municipal, provincial and federal Roadways. Anti-glare screen requirements shall also be applicable during construction in these areas and driver protection shall be provided. DB Co shall submit the documentation and product samples proposed for anti-glare screens in accordance with Schedule 10 – Review Procedure.
- (e) Signage
- (i) DB Co shall be responsible for the design, supply, installation, relocation, maintenance and removal of all temporary signage and Pavement markings, including warning, guide, advisory and directional signs in accordance with this Part 7, Schedule 15-2, Part 2 – Civil and Guideway, and City Special Provision D-005.
 - (ii) DB Co shall provide all temporary signage in accordance with the City of Ottawa, OTM and MTO standards. The location, size and type of each sign shall be indicated on the TCP.
 - (iii) DB Co shall supply and install bilingual signs, with translations accepted by the City and MTO for Highway 417/416.
 - (iv) There shall be no temporary signage placed between the bullnose of an off-ramp and the bullnose of a downstream on-ramp with the exceptions noted below:
 - A. Wa-33LR Object Marker Sign;
 - B. Wa-132 Ramp Speed km/h Sign;

- C. Wa-109 Chevron;
 - D. Post-mounted Delineators;
 - E. Wa-175 Truck Overturning Sign & Wa-32t km/h Sign; and
 - F. G.f-104 Ground Mounted Exit Sign.
- (v) DB Co shall prepare and submit as a part of the TTMP sub-plans a temporary signing plan and a temporary signing table a minimum of 30 calendar days prior to the implementation of the plan. The temporary signing table shall include, but not be limited to information detailing sign location (station of final location, removal location and on which side of the road to be installed in relation to the direction of travel), height to bottom of sign, lateral offset to post #1, support type with dimensions, alpha-numeric sign code with dimensions and the message/description. The temporary signing plan for Highway 417/416 shall be combined into one drawing at a scale of 1:1000.
- (vi) DB Co shall be responsible during construction to identify to the City any requirements to remove, install or modify any necessary regulatory signage due to the requirements of the TCP sub-plans (except for Highway 417/416). DB Co shall notify the City 14 calendar days prior to requiring any modifications of signage. DB Co and the City shall provide and install regulatory signage in accordance with their respective responsibilities per this Part 7, Schedule 15-2, Part 2 – Civil and Guideway, and City Special Provision D-005.
- (vii) DB Co shall be responsible to install and remove all necessary construction signage for any proposed detour routes. DB Co shall notify the City a minimum of 14 calendar days in advance of the requirement for the detour.
- A. 20 Business Days shall be required where a detour requires bus shelter relocation.
- (viii) After the completion of construction, the City will provide and install all required regulatory signage (except for the Highway 417/416 corridor including crossing roads).
- (ix) Project information signage will be provided by the City. DB Co shall install project information signage at locations designated by the City.
- (x) DB Co shall be responsible for contacting the appropriate City representative to confirm, in writing, the official municipal road names as well as Civic Address Signs (911 Identification Numbers and signing) requirements and incorporate such signs in the permanent and temporary Pavement and signing design drawings. The location, size, and type of each sign shall be also indicated on DB Co's TCP.

- A. DB Co shall ensure that the above noted signs are in place at all times.
 - B. Temporary relocation due to construction operations shall be permitted but the address numbers shall be in the proximity of the entrance and be made visible throughout the duration of construction.
 - C. DB Co shall replace any damaged signs immediately.
- (xi) The temporary signing plan and temporary signing table shall be submitted to the City in accordance with Schedule 10 - Review Procedure, 30 calendar days prior to implementation of the plan.
- (f) Temporary lighting during construction (except Highway 417/416)
- (i) DB Co shall be responsible for all temporary street light relocation.
 - (ii) All existing lighting in each staging phase shall be maintained in operational order to applicable standards during construction on the relevant construction phase until such time as replacement temporary or permanent lighting is energized.
 - (iii) Temporary illumination shall be provided to applicable standards for the roads to accommodate traffic detours and diversions in accordance with City of Ottawa's Right of Way Lighting Policy Guidelines and standards, the OPSS 601.
 - (iv) DB Co shall ensure existing street light levels are maintained at all times. Where existing lighting needs to be removed as part of the Work DB Co shall install replacement temporary lighting until such time as the new permanent lighting is energized.
- (g) Pavement Drop-Offs
- (i) DB Co shall perform all construction activities so as to minimize any drop-offs (abrupt changes in Roadway elevation) left exposed to traffic, pedestrians and cyclists during non-working hours. Work shall be performed in accordance with Schedule 15-2, Part 2 – Civil and Guideway. Drop-offs left exposed to traffic, pedestrians and cyclists during non-working hours shall be delineated as follows:
 - A. Drop-offs up to 40mm may remain exposed with appropriate TCDs alerting motorists of the condition. However, no drop-offs shall be allowed between adjacent lanes of traffic;
 - B. Drop-offs greater than 40mm that are in the Roadway or shoulder shall be delineated with appropriate TCDs and further delineated as described in Clauses C and D below;
 - C. Drop-offs greater than 40mm shall be protected based on the OHS/CCOHS requirements;

- D. Ramping shall be provided for vehicular traffic at a slope of 10:1 if the elevation difference, where unavoidable.
 - i. The provisions for temporary ramping shall also meet the requirements of OPSS 313.
 - ii. DB Co shall ensure that adequate and positive Drainage is maintained along and across the Roadway at all times and during all construction stages.
 - iii. Temporary ramp downs of the longitudinal joint shall not be permitted between travel lanes in the same direction. Transverse and longitudinal ramp downs shall not form part of the permanent Pavement, and shall be cut back to its full depth and width on a straight line to expose a vertical face prior to placing the adjacent lane.
- E. All transverse edge drops located on roads utilized by transit shall be ramped at a slope of 10:1.
 - (ii) All areas of excavation near areas of traffic and their proposed safety measures shall be shown in the TTMP.
 - (iii) All Work shall meet AODA requirements at all times.
- (h) Pavement markings, symbols and devices
 - (i) DB Co shall be responsible for the execution of all Pavement markings and symbols in accordance with this Part 7 and Schedule 15-2, Part 2 – Civil and Guideway.
 - (ii) DB Co shall be responsible for the installation, application, maintenance and removal of all temporary Pavement markings, symbols, Roadway Pavement markers, channelizing devices, barricades, reflective devices, etc., in accordance with the OTM, and all of which shall be specified and detailed in the TTMP which shall be submitted to the City in accordance with Schedule 10 – Review Procedure.
 - (iii) DB Co shall eradicate all redundant temporary or permanent Pavement Markings that are not required for the intended traffic pattern when traffic lanes will be redefined for a duration of more than an Intermittent Period.
- A. Eradication of Pavement markings shall be in accordance with City of Ottawa Special Provision D-005, such that removal of Pavement markings, when necessary, shall be by means of asphalt grinding, sandblasting, soda blasting or some other form of mechanical removal and not by the use of black paint.

- B. On arterial roads or on OR174, the City may specify that soda blasting be the means of Pavement marking eradication, in the event that clear Pavement marking visibility is seen to be essential to the safe operation of the roadway.
- C. DB Co shall resurface all locations where scarring of Pavement occurs due to the removal of Pavement Markings for construction staging. Resurfacing requirement shall apply to all locations where more than one Lane Shift or diversion occurs. DB Co shall provide full width paving throughout the limits of the scarring prior to the application of permanent Pavement Markings
 - (iv) Temporary Pavement markings materials shall be in accordance with OPSS 710, and shall be specified and detailed in the TTMP.
 - (v) DB Co shall apply all temporary Pavement markings in accordance with OPSS 710 and the accepted Signing and Pavement Markings drawings and the closure, detour route, Lane Shift and diversion drawings as submitted to the City in accordance with Schedule 10 – Review Procedure.
- (i) Speed limits and safe passage through Work zones
 - (i) The City reserves the right to determine speed limits through the Work zones. Unless specified in this Part 7 or agreed to in writing by the City, the existing regulatory speed limits shall be maintained.
 - (ii) Speed limits on all existing Provincial Highways, existing Major Municipal Roads, existing Transitway, Minor Municipal Roads and other affected municipal, provincial and federal Roadways shall remain unchanged outside of construction zones. DB Co shall prepare the necessary designation of MTO construction zone forms, (PH-M-101), if Work occurs on a Provincial Highway, and submit them to the Governmental Authority.
 - (iii) Construction activities on all existing Provincial Highways, existing Major Municipal Roads, existing Transitway, Minor Municipal Roads, and other affected municipal and federal Roadways shall maintain the following lane widths at all times during construction activities, unless specified elsewhere in this Part 7 or in Schedule 15-2, Part 2 – Civil and Guideway:

Table 7-1.3

	Speed Limit = 50 km/h or less		Speed Limit = greater than 50 km/h	
	Not Shared	Shared Lane*	Not Shared	Shared Lane*
General Traffic	3.0 m	3.75 m	3.2 m	3.75 m

Truck Route	3.2 m	3.75 m	3.5 m	3.75 m
Transit Operating in Lane**	3.5 m	4.0 m	3.5 m	4.0 m
Lanes Adjacent to Transit Platforms	As per Transitway and Station Design Guidelines	-	-	-
Lateral Offsets between Traffic and Temporary Barriers	0.25 m		0.50 m	

* Shared lanes are all right-most traffic lanes that are not adjacent to an on-road cycling facility.

**Where BOL are constructed and physically separated from other roadways (i.e. Transitway), a 1m wide maintenance strip shall be provided on the outside of each lane, in addition to the standard minimum lane width.

- (iv) Floodlighting used to illuminate areas of the Work during construction, shall be adjusted so as to not interfere with the vision of drivers on the affected or opposing lane and also so as to not be directed towards residences or businesses near the construction zone. DB Co shall design floodlighting in accordance with Schedule 15-2, Part 2, Article 6 – Roadways, Bus Terminals and Lay-bys.
- (v) All street lighting design and performance shall be in accordance with Schedule 15-2, Part 2, Article 6 – Roadways, Bus Terminals and Lay-bys.
- (j) Maintenance of closures, detours, diversions, Lane Shifts, pathways and sidewalks
 - (i) DB Co shall keep existing Roadways open to traffic, and DB Co shall be responsible for providing and maintaining a road through the Work for the duration of the Work, whether along an existing Roadway, including the road under construction, or on detours, diversions or Lane Shifts.
 - (ii) DB Co shall maintain and repair closures, detours, diversions, Lane Shifts, pathways and sidewalks and their appurtenances, which are built as permanent infrastructure, as per the maintenance provisions set out in this Part 7 for temporary infrastructure until such time as they are turned over to the City and accepted by the City.
 - (iii) DB Co shall be responsible for all aspects of maintenance and repair for all temporary closures, detours, diversions, Lane Shifts, pathways and sidewalks and their appurtenances throughout their duration of use.
 - (iv) DB Co shall execute the maintenance on temporary infrastructure, including Platforms, pathways and sidewalks, throughout its duration of use:
 - A. in accordance with Applicable Law and Good Industry Practice;

- B. in accordance with the accepted TTMP;
 - C. to ensure that the condition of the DB Co temporary infrastructure is sufficient to meet the design, construction and operational requirements for the intended use; and
 - D. in coordination with the City, so as to permit the City to operate City infrastructure, while minimizing any adverse impact on third parties.
- (v) DB Co shall convene a meeting with the City, including but not limited to, City Road Services Department and City Traffic Services Department, in order to coordinate maintenance activities at the interface between existing City infrastructure and the DB Co temporary or permanent infrastructure, prior to putting a piece of temporary or permanent transportation infrastructure into service. DB Co shall take minutes of the meeting and, distribute the documented proceedings and conclusions to the participants.
- (vi) On the first Monday after Thanksgiving each year, DB Co shall convene a meeting with the City, including but not limited to, City Road Services Department and City Traffic Services Department, to discuss “winter readiness”, so that all parties know their respective roles prior to a sudden onset of winter weather. DB Co shall take minutes of the meeting and distribute the documented proceedings and conclusions to the participants.
- A. The City shall be responsible for winter maintenance on all public roads, including bus detour routes, as per the City of Ottawa Maintenance and Quality Standards for Roads, Sidewalks and Pathways. DB Co shall be responsible for winter maintenance at locations where construction conditions do not allow for the City to provide this maintenance without changing their means/methods.
 - B. DB Co shall be responsible for the winter maintenance of any construction Roadways or accesses to construction Sites.
 - C. DB Co shall provide to the City a map indicating the DB Co contact person for each construction Site.

1.6 Accommodation of Pedestrians and Cyclists During Construction

- (a) DB Co shall not close or relocate any pedestrian walkway without a TTMP that has been accepted by the City. The TTMP and TCP sub-plans shall identify any pedestrian walkway closure, relocation and alternate route in accordance with Schedule 10 - Review Procedure, complete with a detailed explanation of why the Pedestrian Walkway is required to be closed or relocated and the signs which shall be installed as a part of the closure or relocation.

- (b) All pedestrian and cyclist accommodations during construction shall be in accordance with Schedule 15-2, Part 6 – Urban Design, Landscape Architecture and Connectivity Requirements.
- (c) DB Co shall identify all school crossings within a detour route, Lane Shift or diversion, and determine appropriate measures to maintain safe and efficient operation of the crossings as may be affected by increased vehicle traffic on the detour, Lane Shift or diversion.
- (d) DB Co shall ensure that pedestrian access at and approaching intersections is maintained at all times at least on one side to accommodate the north-south and east-west crossings, and extending to the adjacent intersections.
- (e) DB Co shall ensure that pedestrian access at least on one side across any Bridge Structures is maintained at all times, and extend to the nearest intersection.
- (f) DB Co shall install a TC-68 “Bike Lane Closed” at a location where cyclists can safely merge with traffic, and provide the following signage should it be necessary to close a bike lane or cycle track:
 - (i) For lane widths greater than 4m: a WC-19 and WC-19S “Car and Bike Share the Road”; and
 - (ii) For lane widths 4m or less: a WC- 24 and WC-24T “Shared Use Lane Single File”.
- (g) DB Co shall post advanced on-Site notification for any closures or relocation of pedestrian and cycling routes at least 15 Business Days prior to the closure, subsequent to the review and acceptance of the proposed closure by the Governmental Authority. Signage shall indicate the dates and duration of any closure as well as a map of alternative routes available.
- (h) DB Co shall undertake a safety study for situations where a construction access must cross a sidewalk, pathway, MUP or cycling facility, in order to evaluate the potential conflict between pedestrian/cyclist versus construction traffic, and develop appropriate safety measures in order to maintain a safe and efficient crossing at all times. DB Co shall incorporate the safety study and measures into the TTMP, TCPs and the Site Pedestrian Control Plan.
- (i) Detour routes for pedestrians and cyclists shall be designed in accordance with City standards including but not limited to those set out below;
 - (i) The detour route shall be illuminated to at least the level of lighting either direct or indirect, which was in existence on the original sidewalk, pathway, cycling facility, or MUP;

- (ii) The vertical and horizontal separation from vehicle traffic shall be as per the original sidewalk.

1.7 Working within Vicinity of a Traffic Control Signal

- (a) DB Co shall notify and be responsible for all costs associated with OPS being on duty to control traffic, when DB Co is required to work within 30m of a traffic control signal, and there is a need to control traffic within this area that would contradict the traffic control display. Advanced notice of 48 hours shall be provided to OPS. No traffic control person shall be permitted to direct traffic in this area, nor may they direct traffic from more than one direction at any time. DB Co shall notify the City of this situation prior to OPS contact.
 - (i) DB Co shall provide OPS if the visibility of the signal display will be blocked by equipment, lanes are skewed through the intersection or traffic control persons are required within 30m of a signalized intersection.

1.8 Parking and Designated Use Zones

- (a) Parking regulations on City streets in the vicinity of the construction zone will be enforced and shall be subject to the City's Parking By-Law.
- (b) DB Co shall designate safe parking areas suitably located so as to facilitate practical Site inspections related to traffic monitoring, and attendance at Project meetings, in the TTMP. These areas shall be for the use of the City for the duration of the construction. Each parking area shall accommodate a minimum of two vehicles and be reserved for City staff.
- (c) DB Co shall be responsible for identifying in their TCPs any locations where existing parking or designated usage zones will be impacted by its construction activities. DB Co shall develop and submit in conjunction with their TCP submittals, a plan to provide alternative parking location(s) and usage zones, in accordance with Schedule 10 – Review Procedure, for review and acceptance a minimum of 30 calendar days in advance of impacting any parking locations.

1.9 Temporary Traffic Control Signals

- (a) All traffic signal design and performance requirements shall be in accordance with Schedule 15-2, Part 2, Article 6 – Roadways, Bus Terminals and Lay-bys.
- (b) Where required to complete the Work, the City will supply temporary traffic control signals, for existing and new locations identified in DB Co's approved TTMP. Following the completion and acceptance of civil and traffic signal designs, DB Co shall contact the City's designated traffic control signal contact person at least 30 calendar days in advance to arrange for a mutually acceptable date and time to have City forces available to perform the installation, relocation, modification, and connection of the traffic control signal.

- (c) DB Co shall complete the related civil Work at least 14 calendar days prior to the date when City forces are available in order for appropriate inspections to occur. Prior to the crew arriving on Site, DB Co shall provide adequate space and time for the Work to be completed.
- (d) Where there is active ongoing construction Work and DB Co personnel are present within an intersection where there are existing traffic control signals to be temporarily modified, or new temporary traffic control signals to be installed, DB Co shall arrange and pay for OPS paid-duty officers to provide point duty within an intersection while the City modifies or installs the traffic control signals.
- (e) At an intersection where there are existing traffic control signals to be modified temporarily, or there are temporary traffic control signals to be installed, and only City forces will be working at the intersection, then the City will arrange for the OPS services and charge the costs back to the DB Co as part of the costs for the signal modifications/installation where DB Co personnel are not present.

1.10 Record Keeping of Traffic Control Devices/Collisions

- (a) DB Co shall maintain accurate records of the traffic controls that are in place within DB Co's construction Work areas.
- (b) DB Co shall maintain an accurate daily record of the inspection of the traffic accommodations, and provide copies of the information to the City immediately upon request. The daily record shall include the following:
 - (i) A semiweekly video (hand held, dash-cam, etc.) in both or all directions as applicable, such that all portions of the Work are recorded in sufficient detail to accurately see and distinguish/read all of the TCDs in place on Site;
 - A. On Highway 417 and the OR174, these videos shall be twice daily.
 - (ii) Condition and placement including changes, additions and removals of all TCDs;
 - (iii) Confirmation of compliance with the TTMP and its sub-plans;
 - (iv) All traffic collisions;
 - (v) The dates, times and content of all messages on all PVMS;
 - (vi) The date and time of lane closures; and
 - (vii) All other information required for accurate reconciliation of the lane closures adjustments pursuant to Schedule 34 - Mobility Matters.

1.11 Traffic Systems Management Provisions

- (a) DB Co shall be responsible for costs related to City forces supplying and installing traffic camera monitoring systems for the Project corridors and Stations, and also any temporary facilities/infrastructure operated during construction. The City shall procure the equipment and provide labour, however, for clarity, DB Co shall reimburse the City for these costs. DB Co shall be responsible for providing power and system connectivity to the specific locations selected by the City. Traffic cameras shall be required within the Project corridors, Stations and temporary facilities/infrastructure at the City's discretion, for the purposes of observing traffic flow with the capability of zooming in for more specific detail where required to monitor a specific incident. The cameras shall be linked into the City of Ottawa Traffic Control Centre for monitoring purposes. Cameras shall comply with City specifications.
- (b) DB Co shall develop and execute a monitoring plan, as per the TTMP, that utilizes new and existing City traffic camera systems that provides full coverage of the Project corridors, Stations and temporary facilities/infrastructure. DB Co's plan shall include strategically located cameras to achieve this goal. The City will provide DB Co with an inventory of existing City traffic camera coverage within the Project corridors.
- (c) New traffic camera locations shall include, but not be limited to, the following signalized intersections: St. Joseph Boulevard at Bearbrook Road, Trim Road at the Trim Road Park and Ride Entrance, Scott Street at Churchill Avenue, SJAM Parkway at Remic Rapids, SJAM at Dominion Station, Iris Street at Transitway, Bayshore Drive at Woodridge Crescent, Holly Acres Road at Bayshore Station Entrance / Highway 417 ramps, Woodroffe Avenue at Highway 417 E-N ramp, Scott Street at Goldenrod Driveway/Tunney's Pasture Station entrance, Carling Avenue at Richmond Road, Richmond Road at Edgeworth Avenue.
- (d) DB Co shall consult with the City to prepare an inventory of the location of existing traffic cameras and ITS devices that will be impacted by road construction. DB Co shall provide the City with 30 calendar days' notice prior to the impact on the devices and shall work with the City to relocate the devices.
 - (i) DB Co shall be responsible for providing a new location and utility hook ups where required.
 - (ii) The City shall be responsible for equipment relocation and connections.

1.12 Communications

- (a) DB Co shall ensure that all communications and Stakeholder engagements in relation to the TTMP are in accordance with Schedule 18 – Communications and Stakeholder Engagement Obligations and as further detailed in this Clause 1.12 of this Part 7.
- (b) DB Co shall be responsible for providing road closure and detour information to the City for the purposes of public notification.

- (c) DB Co shall schedule and attend TTMP meetings and workshops with the City in order to obtain TTMP approvals and with key Stakeholders prior to implementation. The frequency of the meetings shall vary at the City's discretion. DB Co shall record and distribute minutes for these meetings to the City within five Business Days of the meeting, including but not limited to attendance sheets, agenda, record copy of material presented, comments received, issues raised, and the follow up action proposed by DB Co to resolve each issue. Resolution of the issues shall be raised and recorded by DB Co at the regularly scheduled TTMP meetings.
- (d) DB Co shall attend any public meetings that are held prior to detour implementation, and shall be responsible for addressing issues raised at the public meetings in the forum of the technical TTMP meetings.
- (e) DB Co shall provide the City with a process as part of the Communication and Stakeholder Engagement Plan detailed in Schedule 18 – Communications and Stakeholder Engagement Obligations, and a contact person to whom the City can rely on to respond to any Stakeholder relations obligations pertaining to traffic management. Issues and the resolutions thereto shall be raised and recorded by DB Co at the regularly scheduled Traffic Management Committee meetings.
- (f) DB Co shall assist the City and attend Stakeholder events and Stakeholder outreach meetings in relation to the TTMP in accordance with Schedule 18, Part 4 Communications and Stakeholder Engagement Activities. At these events and meetings, DB Co shall explain in terms easily communicated to the public, the process of how the specific segment of the Project will be built, with a focus on an overview of the proposed traffic closures and detours/alternate routes for pedestrians, cyclists and vehicles, and how the related traffic/transit management staging is proposed to be performed.
- (g) DB Co shall provide design illustrations, display boards and narratives to the City for the traffic related information such as traffic volumes, traffic detours/alternate routes, traffic Emergency/contingency plans, collision data, truck routes, construction traffic routes, etc. All material provided shall be dated and include a contact name and contact coordinates (DB Co & City jointly). All materials shall be provided in quantity for distribution in both hard copy and electronically, in both official languages.
- (h) DB Co shall provide timely e-mail content for the City's distribution regarding traffic/transit updates, including major cycling route impacts.
- (i) DB Co shall provide to the City, content for weekly traffic/transit information/forecast updates, for release to the City's website.
- (j) DB Co shall provide a quarterly newsletter reflecting key traffic milestones and forecast traffic events to the City for release to the public.
- (k) DB Co shall provide timely content for social media updates to the City for release on the City's social media accounts so as to inform followers as to quick updates about on-the-ground traffic control implementation.

- (1) DB Co's Director of Communications and Stakeholder Engagement shall be the spokesperson whom the City will contact to address all Project related complaints pertaining to traffic/transit management issues which are reported to the City, unless an alternate spokesperson has been agreed to by the City. The spokesperson shall provide pertinent and timely information to the City in response to the complaint.

ARTICLE 2 EXISTING MUNICIPAL ROADWAYS

2.1 General Requirements - Municipal Roadways

- (a) DB Co shall not perform any Work on Municipal Roadways during the following Peak Periods unless noted as an exception in this Part 7:
 - (i) Monday to Friday inclusive: 06:30 to 09:30 hrs and 15:00 to 18:30 hrs
- (b) DB Co shall not close the reserved transit priority lanes from 06:00 to 18:30 hrs, Monday to Friday.
- (c) DB Co shall be permitted to partially close portions of Municipal arterial and collector Roadways due to construction activities while always maintaining local traffic access. There shall be at least one lane per direction (or two lanes per direction for segments with three existing lanes in each direction) and sufficient lane widths to accommodate bus travel.
- (d) DB Co shall schedule intersection disruptions during Off Peak Periods, Night Periods or Weekend Periods only. During those periods, there shall be at least one lane of traffic per street permitted at all times. Flagging shall be required if a single lane of traffic is in operation during construction activities. No active Work shall be performed in an intersection during Peak Periods.
- (e) DB Co shall develop a sequencing plan to minimize the length of the Municipal Roadway that is closed at any one time.

2.2 Conditions of Work on Municipal Roadways

- (a) DB Co shall provide at least 28 Business Days advance notice in the form of an e-mail to the designated City representative for all closures, detours and diversions.
- (b) DB Co shall only be permitted to close any existing Municipal Roadways for purposes of carrying out Work under this Project after all other safe and reasonable methods of construction have been investigated by DB Co and deemed not to be feasible or practicable.
- (c) DB Co shall maintain two-way traffic at successive intersections on either side of a closed intersection at times of the closure.
- (d) DB Co shall maintain a pedestrian sidewalk in accordance with City Design standards at all times during the construction. DB Co shall be responsible for all design, approvals, construction and maintenance of the sidewalk for the duration of the detour.
- (e) DB Co shall not use accesses to/from Work zones, shoulder closures, and the loading and unloading of materials and construction vehicles/equipment to/from the travelled portion of existing Municipal Roadways during Peak Periods on any weekday. Exceptions to this shall be made for the delivery of concrete.

- (f) DB Co shall accommodate all turning movements at intersections at all times, unless specified elsewhere in this Schedule 15-2 – Design and Construction Requirements. This includes all protected auxiliary turn lanes.
- (g) DB Co shall make all travel lanes available during non-work times unless construction activities has rendered them temporarily unsuitable for traffic use, or unless a closure was approved by the City.

2.3 Permits from the City of Ottawa

- (a) DB Co shall follow the approach, with regards to obtaining the relevant permits and approvals, outlined in the City of Ottawa Permits, Business Licenses and Applications – Right of Way.
- (b) Road Cut Permit
 - (i) DB Co shall obtain a Road Cut Permit prior to the start of Work on any municipal Roadway. The requirements of the Road Cut Permit are outlined in City of Ottawa By-Law — Road Activity By-Law No. 2003-445.
 - (ii) DB Co shall ensure that an application for a Road Cut Permit contains a reference to the Project and shall include the TCP sub-plan (as submitted to and accepted by the City in accordance with Schedule 10 – Review Procedure) with their application. If as a result of the Road Cut Permit approval process the TCP is revised, DB Co shall submit the revised TCP to the City in accordance with Schedule 10 - Review Procedure for re-acceptance, and, shall update and resubmit the TCP sub-plans to reflect the changes found in the approved Road Cut Permit version of the TCP.
- (c) Road Close Permit
 - (i) DB Co is required to obtain Road Close Permits prior to closing municipal Roadways as specified elsewhere. DB Co shall submit the road closure request forms no later than 4 weeks prior to each closure event.
 - (ii) DB Co shall ensure that an application for Road Close Permit contains a reference to the Project and shall include in their application, the relevant portion of the TTMP as submitted to and accepted by the City in accordance with Schedule 10 – Review Procedure. If as a result of the Road Close Permit approval process the TCP is revised, DB Co shall submit the revised TCP to the City in accordance with Schedule 10 – Review Procedure for re-acceptance. It shall include the updated TCP and sub-plans to reflect the changes found in the approved Road Close Permit version of the TCP.
- (d) Private Approach Permit

- (i) DB Co shall obtain a Private Approach Permit for any Site access from municipal Roadways.
 - (ii) DB Co shall ensure that an application for a Private Approach Permit contains a reference to the Project and shall include in their application, the relevant portion of the TTMP as submitted to and accepted by the City in accordance with Schedule 10 – Review Procedure. If as a result of the Private Approach Permit approval process the TTMP is revised, DB Co shall submit the revised TTMP to the City in accordance with Schedule 10 – Review Procedure, for re-acceptance. It shall include the updated TTMP and sub-plans to reflect the changes found in the approved Private Approach Permit version of the TTMP.
- (e) OC Transpo Permits
- (i) DB Co shall not carry out any Work on bus-only lanes, the Transitway, or any bus facilities, without completing the Transitway Access Permits and receiving approval from the City and OC Transpo.
 - (ii) When an application for an OC Transpo Permit is made for the Project or any portion thereof, DB Co shall ensure that an application for an OC Transpo Permit contains a reference to the Project and shall include in their application, the TCP as submitted to and accepted by the City in accordance with Schedule 10 – Review Procedure. If as a result of the OC Transpo approval process the TCP is revised, the DB Co shall submit the revised TCP to City in accordance with Schedule 10 - Review Procedure for re-acceptance, and, shall update and resubmit the TTMP and sub-plans to reflect the changes found in the approved OC Transpo version of the TCP.
 - A. The TCP shall be approved by the City at least 14 calendar days prior to any detour or construction activity that has operational impacts on transit service. If the action is an extended detour or requires a shelter relocation, notification shall be provided as otherwise specified in this Part 7.
 - B. The submission of a TCP does not constitute advance notice, which does not include timelines for potential revisions to the TCP.
- (f) Noise Bylaw Exemption
- (i) DB Co shall apply and obtain an exemption to the City Noise Bylaw if required for evening/night Work. Note: a Noise Bylaw exemption is not required for Work conducted Monday through Saturday between 07:00 and 22:00 hrs and Sunday between 09:00 and 22:00 hrs.
- 2.4 Richmond Road (Arterial)**
- (a) Within the Richmond Road corridor, from Pinecrest Road to Churchill Avenue, the following constraints shall be followed:

- (i) DB Co shall be permitted to perform partial closures of Richmond Road (or portions thereof while always maintaining local traffic access). Access shall be maintained for local vehicle, ESP, garbage removal and pedestrians to buildings and loading areas/docks/bays. Provisions for on street loading for local businesses on each block shall be maintained at all times during the closure. DB Co shall develop a sequencing plan to minimize the length of Richmond Road that is closed at any one time.
- (ii) DB Co shall be permitted to utilize single lane closures as construction access and/or staging areas during Station and Tunnel construction activities within the Richmond Road ROW from Cleary Avenue to McEwen Avenue, provided that two-way traffic is maintained on Richmond Road.
 - A. The lane closures on Richmond Road shall not be permitted at intersections within the Richmond Road ROW.
 - B. DB Co shall be permitted to use decking where required to maintain two-way traffic on Richmond Road, however every effort should be made to reduce the amount of decking used.
 - C. The use of the temporary closed lane for construction access and staging is subject to satisfying all of the transit, traffic, private access and pedestrian requirements identified elsewhere in this Part 7.
 - D. The construction access and staging area shall be protected and separated from transit, traffic and pedestrians by a physical barrier.
 - E. DB Co shall identify all proposed construction access and staging areas and incorporate them into the TTMP.
 - F. The construction lay-by and staging areas shall be removed and lanes restored for traffic purposes when there are no active construction activities.
- (iii) DB Co shall maintain a continuous east to west pedestrian sidewalk, that is a minimum 1.8m clear width, at all times during the construction along the north side of the Richmond Road corridor from Cleary Avenue to McEwen Avenue. DB Co shall be responsible for all maintenance of the sidewalk for the duration of time the detour is in service, with the exclusion of winter maintenance, which will be the responsibility of the City.
- (iv) The full closure of the intersections of Woodroffe Avenue/Richmond Road and Cleary Avenue/Richmond Road shall not be permitted at any time. Work at these locations shall be decked to maintain full traffic and pedestrian movements in all directions at all times.

- (v) The partial closure of the Richmond Road/Woodroffe Avenue intersection shall be scheduled during Off Peak Periods only. All movements must be maintained during partial closures of the Richmond Road/Woodroffe Avenue intersection. Pedestrian access at, and approaching, the intersection shall be maintained on a minimum one side, at all times to accommodate the north-south and east-west crossings.
 - (vi) Transit vehicle and Emergency vehicle access shall be maintained within Richmond Road at all times; and
 - (vii) Customer access to existing and/or temporarily relocated bus stops or transit facilities shall be maintained at all times.
 - (viii) Closures of Richmond Road within the jurisdiction (ROW) of MTO shall be as detailed in Article 5 - Existing Provincial Highways and Municipal Roadways Within MTO ROW, of this Part 7.
- (b) Within the Richmond Road corridor, from Pinecrest Road to Holly Acres Road, the following constraints shall be followed:
- (i) DB Co shall ensure all lanes on Richmond Road are open and available for vehicles, transit services, Emergency services, pedestrians, cyclists during the following times:
 - A. weekdays between 6:00 and 20:00 hrs; and,
 - B. weekends between 10:00 and 20:00 hrs.
 - (ii) DB Co shall ensure that a minimum of one lane in each direction on Richmond Road shall remain open at all times.
 - (iii) Access across Highway 417 on Richmond Road shall be maintained at all times for vehicles, transit services, Emergency services, pedestrians, and cyclists.
 - (iv) Uninterrupted access to all MTO Highway 417 ramps shall be maintained at all times, except for MTO authorized ramp closure times obtained in accordance with the provisions of this Part 7.
 - A. DB Co shall temporarily close the N-E Richmond Road on-ramp to the eastbound Highway 417 to the satisfaction of the City and MTO upon the opening of the new temporary N/S-E bus-only on-ramp at Holly Acres. Upon West Substantial Completion and upon notice by the City, DB Co shall re-open the N-E ramp at this location

2.5 Cleary Avenue (Local)

- (a) DB Co shall follow the following constraints within the Cleary Avenue corridor:

- (i) DB Co shall provide full pedestrian access to Cleary Avenue at all times during construction.
- (ii) DB Co shall maintain two-way traffic for the full extent of Cleary Avenue at all times during construction

2.6 Scott Street (Arterial)

- (a) Within the Scott Street corridor, the following constraints shall be followed:
 - (i) DB Co shall maintain a single general traffic lane in each direction at all times for vehicles, Emergency services, and cyclists. DB Co shall maintain a pedestrian sidewalk at all times.
 - (ii) Intersection disruptions shall be scheduled during Off Peak Periods only. Pedestrian and cyclist access at and approaching intersections shall be maintained such that all four quadrants of each intersection remain accessible at all times.
 - (iii) DB Co shall identify a location acceptable to the City for relocated bus stops, if required. DB Co shall be responsible for the design and construction of the relocated bus stop to OC Transpo design and construction standards.

2.7 Iris Street (Major Collector)

- (a) Within the Iris Street corridor, the following constraints shall be followed:
 - (i) DB Co shall maintain a single traffic lane in each direction at all times for vehicles, bus service, emergency services, pedestrians, and cyclists.
 - (ii) The full closure of the intersection of Iris Street and the Transitway shall not be permitted at any time. Iris Street shall be detoured to a location outside the limits of the construction to maintain traffic lanes in both directions on Iris Street as well at the Transitway prior to the full closure of the Iris Street/Transitway to construct the new Iris Street/LRT grade separation Bridge. The detour shall include a temporary signalized Transitway intersection.
 - (iii) Intersection disruptions shall be scheduled during Off Peak Periods only. Pedestrian and cyclist access at and approaching the intersection shall be maintained, at least on one side, at all times to accommodate the north-south and east-west crossings. DB Co shall ensure that transit vehicles approaching this intersection during the Peak Periods from all directions maintain a frequency of transit service matching that of the 2018 Post-LRT Stage 1 Transit Service Plan. Transit priority measures shall be considered in order to ensure that this frequency of transit service is maintained. DB Co is responsible for contacting OC Transpo prior to the service change dates identified in Table 7-3.1 to identify any changes to the transit service plans and how they may impact the frequency of service for transit.

- (iv) DB Co shall relocate the Station Platforms to the satisfaction of the City prior to closing the Station platforms. The temporary Station shall be designed and constructed to OC Transpo standards for Transitway Stations, as per Transitway and Station Design Guidelines. The temporary Platforms shall be connected to local pathways and sidewalks for pedestrian access and reduce any negative impacts for customers, such as walking distance.
- (v) DB Co shall identify a location acceptable to the City for the relocated bus stops. DB Co shall be responsible for the design and construction of the relocated bus stop to OC Transpo design and construction standards.

2.8 Pinecrest Road (Arterial)

- (a) The following constraints shall be followed within the Pinecrest Road corridor:
 - (i) DB Co shall ensure all lanes on Pinecrest Road are open and available for vehicles, transit services, Emergency services, pedestrians, cyclists during the following times:
 - A. weekdays between 6:00 and 20:00 hrs; and,
 - B. weekends between 10:00 and 20:00 hrs.
 - (ii) DB Co shall ensure that a minimum of one lane in each direction on Pinecrest Road shall remain open at all times.
 - (iii) Access across Highway 417 on Pinecrest Road shall be maintained at all times for vehicles, transit services, emergency services, pedestrians and cyclists, with the exception of Clause (v) below. All existing travel lanes on Pinecrest Road shall be maintained at all times during the Peak Periods throughout construction.
 - (iv) Uninterrupted access to all MTO Highway 417 ramps shall be maintained at all times, except for MTO authorized ramp closures obtained in accordance with the provisions of this Part 7.
 - (v) The Pinecrest Road LRT Bridge shall be constructed without any reduction in the number and capacity of traffic lanes on Pinecrest Road during Peak Periods with the exception of following scheduled full closures:
 - A. Three day weekend closure to install Roadway decking (from 20:00 hrs on a Friday to 06:00 hrs on a Monday).
 - B. Overnight closure to install Bridge deck waterproofing and base course asphalt.
 - (vi) Notice of the scheduled dates of the above noted full closures shall be identified to the City and MTO a minimum 30 Business Days in advance of each of the

schedule closures for approval. The closure dates shall not be scheduled during events identified in Clause 1.4 of this Part 7.

- (vii) The modifications to the S-W ramp described in Schedule 15-2, Part 9, Part B shall be constructed and connected to the existing ramp prior to the closure and decommissioning of the existing S-W ramp terminal, as well as the decommissioning of the existing N-W ramp, to the satisfaction of the City. DB Co shall restrict public access to the reconstructed ramp during construction. DB Co shall Commission the new ramp with the City prior to being put into service.
- (viii) The N-W ramp shall be constructed and Commissioned to the satisfaction of the City prior to being put into service. DB Co shall restrict public access to the new ramp during construction. The existing ramp if it is open at the point in time that the new ramp is put into service, shall be taken out of service immediately upon putting the new ramp into service by placing temporary concrete barriers at each end of the decommissioned ramp.
 - A. DB Co shall be permitted to stage construction such that the existing N-W ramp is closed, with the traffic demand accommodated via the S-W ramp, provided that traffic analysis demonstrates that this is operationally feasible. Any closure of the existing N-W ramp shall be subject to approval from MTO and the City, and shall be minimized in terms of duration.
- (ix) Intersection disruptions to the Pinecrest Road/Transitway/Highway 417 North terminal intersection shall be scheduled during Off Peak Periods only. Pedestrian and cyclist access at and approaching the intersection shall be maintained, at least on one side, at all times to accommodate the north-south and east-west crossings. Transit services (vehicles and stops) approaching this intersection from the east-west and north-south shall maintain OC Transpo's services levels at all times.

2.9 Woodroffe Avenue (Arterial)

- (a) The following constraints shall be followed within the Woodroffe Avenue corridor:
 - (i) DB Co shall ensure all lanes on Woodroffe Avenue are open and available for vehicles, transit services, Emergency services, pedestrians, cyclists during the following times:
 - A. weekdays between 6:00 and 20:00 hrs; and,
 - B. weekends between 10:00 and 20:00 hrs.
 - (ii) DB Co shall ensure that a minimum of one lane in each direction on Woodroffe Avenue shall remain open at all times.

- (iii) Access across Highway 417 on Woodroffe Avenue shall be maintained at all times for vehicles, transit services, Emergency services, pedestrians, and cyclists.
- (iv) Uninterrupted access to all MTO Highway 417 ramps shall be maintained at all times, except for MTO authorized ramp closure times obtained in accordance with the provisions of this Part 7.

2.10 Holly Acres Road (Arterial)

- (a) The following constraints shall be followed within the Holly Acres Road corridor:
 - (i) DB Co shall ensure all northbound lanes on Holly Acres Road are open and available for vehicles, transit services, Emergency services, pedestrians and cyclists during the following times:
 - A. Weekdays between 6:00 and 20:00 hrs; and,
 - B. Weekends between 10:00 and 20:00 hrs.
 - (ii) DB Co shall ensure that a minimum of one lane in the northbound direction shall remain open at all times, in addition to any auxiliary lanes at intersections on Holly Acres Road.
 - (iii) DB Co shall ensure that at least one southbound lane on Holly Acres Road is open and available for vehicles, transit services, Emergency services, pedestrians and cyclists at all times.
 - (iv) Uninterrupted access to and from all Highway 417 and 416 ramps shall be maintained at all times, except for MTO authorized ramp closure times obtained in accordance with the provisions of this Part 7.

2.11 Moodie Drive (Arterial)

- (a) The following constraints shall be followed within the Moodie Drive corridor:
 - (i) DB Co shall ensure all northbound lanes on Moodie Drive are open and available for vehicles, transit services, Emergency services, pedestrians, cyclists during the following times:
 - A. weekdays between 6:00 and 9:30 hrs.
 - (ii) DB Co shall ensure all southbound lanes on Moodie Drive are open and available for vehicles, transit services, Emergency services, pedestrians, cyclists during the following times:
 - A. weekdays between 15:00 and 18:30 hrs; and,

- (iii) DB Co shall ensure that a minimum of one lane in each direction on Moodie Drive shall remain open at all times, in addition to any auxiliary lanes at intersections
- (iv) Uninterrupted access to and from all Highway 417 ramps shall be maintained at all times, except for MTO authorized ramp closure times obtained in accordance with the provisions of this Part 7.
 - A. DB Co shall be permitted to close the S-W ramp for the purposes of constructing the grade separation for the Confederation Line for a period not exceeding one construction season. This closure shall require public notification in accordance with Article 5 of this Part 7, and shall be supported by a traffic analysis. Detour signage shall be provided as required.
- (v) The conditions in items (i) and (ii) above permit that DB use a three-lane cross section, with a center lane that changes direction. Should it not be possible to achieve this staging concept while remaining compliant with OTM Book 7, DB Co shall use decking to maintain a four-lane cross section.

2.12 Corkstown Road (Collector)

- (a) The following constraints shall be followed within the Corkstown Road corridor:
 - (i) DB Co shall ensure all westbound lanes on Corkstown Road are open and available for vehicles, transit services, Emergency services, pedestrians, cyclists during weekday Peak Periods, and a minimum of one lane during all other times, except for the periods noted below:
 - A. DB Co shall be permitted to fully close all westbound lanes on Corkstown Road on two consecutive Weekend Periods in order to tie the re-aligned westbound Corkstown Road into the existing Corkstown Road alignment.
 - (ii) DB Co shall ensure all eastbound lanes on Corkstown Road are open and available for vehicles, transit services, Emergency services, pedestrians, cyclists during weekday Peak Periods, and a minimum of one lane during all other times.
 - A. DB Co shall be permitted to permanently close all eastbound lanes on Corkstown Road to general traffic at the same time that Transitway Segment W-9 (Holly Acres Road to Moodie Station) is permanently closed.
 - B. Notwithstanding Schedule 34, Part B, Section 1.11 (f), Mobility Matters lane closures for the eastbound lane of Corkstown Road shall cease to apply upon the re-opening of the eastbound lane between Moodie Drive and the newly constructed bus loop.

2.13 Blair Road (Arterial)

- (a) The following constraints shall be followed within the Blair Road corridor:
- (i) DB Co shall ensure all lanes on Blair Road over OR174 are open and available for vehicles, transit services, Emergency services, pedestrians, cyclists during the following times:
 - A. weekdays between 6:00 and 20:00 hrs; and,
 - B. weekends between 10:00 and 18:00 hrs.
 - (ii) DB Co shall ensure that a minimum of one lane in each direction on Blair Road shall remain open at all times
 - (iii) DB Co shall maintain uninterrupted access to all OR174 ramps at all times, except for City authorized ramp closure times obtained in accordance with the provisions of this Part 7.
 - (iv) DB Co shall maintain full operation of the Blair Road/OR174 EB intersection during construction. DB Co shall stage all Works at this intersection in a manner that maintains all intersection movements at all times.
 - (v) DB Co shall stage construction of modifications to the Blair Road/Gloucester Centre intersection in a manner that maintains full traffic and transit operations of this intersection during construction.

2.14 Montreal Road (Arterial)

- (a) Within the Montreal Road corridor, the following constraints shall be followed:
- (i) DB Co shall ensure all lanes on Montreal Road under OR174 are open and available for vehicles, transit services, Emergency services, pedestrians, cyclists during the following times:
 - A. weekdays from 06:00 to 09:30 hrs and 15:00 to 18:30 hrs; and,
 - B. weekends between 10:00 and 18:00 hrs; and,
 - (ii) DB Co shall ensure that a minimum of one lane in each direction on Montreal Road shall remain open at all times.
 - (iii) During the following construction operations, DB Co shall be permitted to reduce Montreal Road under the OR174 to one lane in each direction for all time periods, from June 1st until Labour Day of a given year:
 - A. Demolition of existing bridge piers; and,

- B. Construction of new bridge piers.
- (iv) During the following construction operations, DB Co shall be permitted to reduce Montreal Road under the OR174 to one lane in each direction for an entire weekend period:
 - A. Demolition of existing bridge piers; and,
 - B. Construction of new bridge piers.
- (v) DB Co shall maintain uninterrupted access to all OR174 ramps at all times except for City authorized ramp closure times obtained in accordance with the provisions of this Part 7.
- (vi) DB Co shall maintain full operation of the Montreal Road/OR174 ramp intersections during construction. DB Co shall stage the Work in a manner that maintains all intersection movements at all times.
 - A. Where two left turn lanes are provided at a Montreal Road / OR174 intersection ramp, DB Co may close one of the two lanes when only one lane on Montreal Road is available to receive turning traffic.
- (vii) DB Co shall stage the Work for the modification to bus only ramp accesses to and from OR174 including bus Platforms so that full transit operations of the bus only ramps and Platforms including pedestrian facilities accessing the Platforms is maintained.
- (viii) Transit priority measures on the on/off ramps shall be maintained, including the demand for service indicator signal, through construction, to provide a consistent frequency of service as per construction conditions.

2.15 Jeanne d'Arc Boulevard (Arterial)

- (a) The following constraints shall be followed within the Jeanne d'Arc Boulevard corridor:
 - (i) DB Co shall maintain all existing transit operations including but not limited to access and functionality of all bus stops, including shelters and benches.
 - (ii) DB Co shall maintain uninterrupted access to all OR174 ramps at all times except for City authorized ramp closure times obtained in accordance with the provisions of this Part 7.
 - (iii) DB Co shall stage the Work for the modifications to the Jeanne d'Arc Boulevard/OR174 ramp north of OR174 in a manner that maintains the full operation of this intersection.

2.16 Orleans Boulevard (Major Collector)

- (a) The following constraints shall be followed within the Orleans Boulevard corridor:
 - (i) DB Co shall maintain all existing transit operations including but not limited to access and functionality of all bus stops, including shelters and benches.

2.17 Champlain Street (Major Collector)

- (a) The following constraints shall be followed within the Champlain Street corridor:
 - (i) DB Co shall maintain all existing transit operations including but not limited to access and functionality of all bus stops, including shelters and benches.
 - (ii) DB Co shall maintain uninterrupted access to all OR174 ramps at all times except for City authorized ramp closure times obtained in accordance with the provisions of this Part 7.

2.18 Trim Road (Major Collector / Arterial)

- (a) DB Co shall maintain the intersection of Trim Road and OR174 fully open and operational until such time as the replacement intersection located to the east (as described in Schedule 15-2, Part 2, Article 6 – Roadways, Bus Terminals and Lay-Bys) has been opened.
 - (i) DB Co shall design, construct and Commission the ultimate W-S ramp from OR174 to Trim Road prior to the closure of the existing Trim Road and OR174 intersection.
 - A. The W-S ramp shall remain open to general traffic upon completion. DB Co shall maintain Trim Road open between the W-S ramp and the intersection of Trim Road at Dairy Drive / Taylor Creek Boulevard.
 - (ii) DB Co shall maintain Trim Road open between the intersections of Trim Road at Dairy Drive / Taylor Creek Boulevard and Trim Road / South Frontage.

2.19 OR174 (City Freeway)

- (a) The following restrictions on construction operations shall be followed within the OR174 Freeway corridor:
 - (i) DB Co shall not use construction access/egress, shoulder closures and the loading and unloading of materials and construction equipment onto and from the traveled portion of OR174 and OR174 interchange ramps on days identified as holidays and Special Events in Clause 1.4 of this Part 7, or during Peak Periods.

- (ii) Construction operations shall not be carried out during the four hours preceding or three hours after any scheduled events at the [REDACTED]. DB Co shall obtain the schedule of events from the [REDACTED] and schedule Work accordingly.
 - A. Events with fewer than 10,000 attendees, or “all-day” events that do not have a specific peak traffic demand period associated with them are exempt from this requirement.
- (iii) Construction operations shall not be carried out during the two hours preceding or two hours after any [REDACTED], or other major events at [REDACTED], as identified by the City. DB Co shall obtain the schedule of [REDACTED] and schedule Work accordingly.
- (iv) DB Co shall provide 15 Business Days’ notice prior to construction requiring OR174 lane encroachments. DB Co shall provide any assistance required by the City to enact the lane encroachments.
- (v) The following requirements shall apply to Work on the outside of OR174 platform that requires construction access across bus only lanes on OR174:
 - A. At least a 1km separation between access point crossings shall be maintained between Montreal Road and Jeanne d’Arc Boulevard;
 - B. In the direction of travel conflicting with the crossing point, warning of each crossing point shall be provided using PVMS signs and fixed signage. Fixed signage shall include a flashing amber light shall be used when the crossing is in operation;
 - C. Crossings shall be permitted during the periods outlined in Table 7-2.1A and Table 7-2.1B, for the EB and WB directions, respectively;
 - D. Construction traffic shall be controlled via flag persons, Bus traffic shall have priority over construction traffic during flagging operations; and,
 - E. Notification to OC Transpo shall be provided.
- (vi) Open Excavations
 - A. There shall be no open excavations adjacent to a lane carrying traffic at any time, except where a traffic control barrier designed to restrain errant vehicles is located between the traffic and the excavation. Excavations within 4m of lanes carrying traffic shall be backfilled with the specified material up to profile grade and compacted prior to the completion of Work each day.
- (vii) Location and Storage of Materials and Equipment
 - A. Materials and equipment shall be stored as per Clause 1.2 of this Part 7.

- B. Notwithstanding the foregoing, DB Co shall, at its own expense, remove any vehicle, equipment or material which, in the opinion of the City, constitutes a Hazard or obstruction to maintenance operations.

(viii) Delivery and Trucking

- A. DB Co shall plan and schedule the routes of vehicles transporting all materials so that vehicular movements are accomplished with minimum interference and interruptions to traffic according to the Clause 5.2 related to Restrictions on Construction Operations and Permitted Times for Lane and Ramp Closures. This shall necessitate vehicles to merge via exits and entrances (“slip-off” or “slip-on”) in the direction of traffic, in order to merge with and thereby avoid crossing traffic lanes.
- B. Access to and from the highway ROW shall be restricted to ramps at the interchanges unless otherwise provided for in this Project Agreement.
- C. Median cross-overs shall not be used except where single axle vehicles are entering a passing lane that is closed to traffic.
- D. DB Co shall obtain the City’s prior approval for the location of any exit and entrance (“slip-off” or “slip-on”) locations. The City reserves the right to alter, reject or close same as considered necessary. DB Co shall notify suppliers of materials and equipment of the above requirements.
- E. Construction vehicles/equipment shall only use accesses to/from construction zones in the same direction of traffic thereby diverging/merging with the flow of traffic, in order to avoid crossing opposing traffic. Minimum 1,000m shall be maintained between construction egress and access locations. The City acting reasonably reserves the right to close any access to/from any construction zone.

(b) Lane Closures on OR174:

- (i) DB Co shall ensure all bus only lanes remain in service at all times on OR174 unless otherwise noted in the Part 7, until after East Substantial Completion and upon notice by the City. The final configuration of OR174 shall be considered Remaining Works.
- (ii) During the Permitted Periods for Closure, as outlined in Tables 7-2.1A through D below, DB Co shall be permitted to close bus lanes in lieu of a general traffic lane. During this period transit shall operate in the remaining general traffic lanes on the OR174. DB Co shall coordinate the closure of the bus lane with the City.
 - A. When DB Co closes a single general traffic lane in either direction, the City may require that DB Co use temporary signage and/or PVMS to convert the bus lane in the same direction of travel to a general traffic

lane, such that two general traffic lanes are maintained through the work zone, with transit operating in mixed general traffic.

- B. When the bus lane is converted to a general traffic lane, it shall be considered a BRT Lane Closure for the purposes of Schedule 34 Mobility Matters.
- (iii) DB Co shall coordinate all general traffic lane closures with the City Traffic Management Inspector assigned to the affected zone.
- (iv) Construction zones shall have a minimum separation of 1,000m.
- (v) The Permitted Periods for Closures outlined in this 2.20 (b) shall be the basis for the development of the TTMP and TCP sub-plans. Variations to the applicable Permitted Periods for Closures, at specific locations, may be permitted for such specific locations, but only if substantiated through a plan by DB Co that addresses, at a minimum, traffic requirements, analyses and Stakeholder consultation, where applicable, and such plan is submitted to the City Representative in accordance with the Review Procedure.
- (vi) Permitted Periods for Closures on OR174
 - A. Long Term Lane Closures
 - i. Lane closures shall only be permitted where required to facilitate Work or worker/driver safety.
 - ii. All lane closures shall be managed by qualified Traffic Control Personnel.
 - iii. The minimum lane width open to traffic shall be 3.5m.
 - iv. DB Co shall ensure that all traffic controls according to OTM Book 7 are operational before commencing Work affecting OR174 traffic.
 - v. Permitted lane closure periods for OR174 are included in Tables 7-2.1A-D and are subject to the additional restrictions covered in this Part 7.

Table 7-2.1A - Section Description: Existing OR174 EB from Blair Road to Jeanne d’Arc Boulevard including all interchange ramps

Closure	Monday to Thursday*	Friday*	Saturday	Holiday or Sunday
One Lane Closure or	00:00 - 06:00 hrs	00:00 - 06:00 hrs	00:00 - 10:00 hrs	00:00 - 10:00 hrs

Bus Only Lane Closure**	19:00 - 23:59 hrs	19:00 - 23:59 hrs	17:00 - 23:59 hrs	17:00 - 23:59 hrs
Ramp Closure*** Or Two Lane Closure****	00:00 - 05:00 hrs 22:00 - 23:59 hrs	00:00 - 05:00 hrs 23:00 - 23:59 hrs	0:00 - 7:00 hrs 23:00 - 23:59 hrs	0:00 - 7:00 hrs 21:00 - 23:59 hrs
Full Closure*****	01:00 - 04:00 hrs	01:00 - 04:00 hrs	01:00 - 04:00 hrs	01:00 - 04:00 hrs

Table 7-2.1B - Section Description: Existing OR174 EB from Jeanne d’Arc Boulevard to Trim Road including all interchange ramps

Closure	Monday to Thursday	Friday	Saturday	Holiday or Sunday
One Lane Closure or Bus Only Lane Closure**	00:00 - 06:00 hrs 09:00 - 14:00 hrs 19:00 - 23:59 hrs	00:00 - 06:00 hrs 09:00 - 14:00 hrs 19:00 - 23:59 hrs	00:00 - 10:00 hrs 17:00 - 23:59 hrs	00:00 - 10:00 hrs 17:00 - 23:59 hrs
Ramp Closure*** or Two Lane Closure****	00:00 - 05:00 hrs 22:00 - 23:59 hrs	00:00 - 05:00 hrs 23:00 - 23:59 hrs	0:00 - 7:00 hrs 23:00 - 23:59 hrs	0:00 - 7:00 hrs 21:00 - 23:59 hrs
Full Closure*****	01:00 - 04:00 hrs	01:00 - 04:00 hrs	01:00 - 04:00 hrs	01:00 - 04:00 hrs

Table 7-2.1C - Section Description: Existing OR174 WB from Jeanne d’Arc Boulevard to Blair Road including all interchange ramps

Closure	Monday to Thursday*	Friday*	Saturday	Holiday or Sunday
One Lane Closure or Bus Only	00:00 - 05:00 hrs 19:00 - 23:59 hrs	00:00 - 05:00 hrs 19:00 - 23:59 hrs	00:00 - 10:00 hrs 17:00 - 23:59 hrs	00:00 - 10:00 hrs 17:00 - 23:59 hrs

Lane Closure**				
Ramp Closure*** or Two Lane Closure****	00:00 - 05:00 hrs 22:00 - 23:59 hrs	00:00 - 05:00 hrs 23:00 - 23:59 hrs	0:00 - 7:00 hrs 23:00 - 23:59 hrs	0:00 - 7:00 hrs 21:00 - 23:59 hrs
Full Closure*****	01:00 - 04:00 hrs	01:00 - 04:00 hrs	01:00 - 04:00 hrs	01:00 - 04:00 hrs

Table 7-2.1D - Section Description: Existing OR174 WB from Trim Road to Jeanne d’Arc Boulevard including all interchange ramps

Closure	Monday to Thursday	Friday	Saturday	Holiday or Sunday
One Lane Closure or Bus Only Lane Closure**	00:00 - 05:00 hrs 10:00 - 15:00 hrs 18:00 - 23:59 hrs	00:00 - 05:00 hrs 10:00 - 15:00 hrs 19:00 - 23:59 hrs	00:00 - 10:00 hrs 17:00 - 23:59 hrs	00:00 - 10:00 hrs 17:00 - 23:59 hrs
Ramp Closure*** or Two Lane Closure****	00:00 - 05:00 hrs 22:00 - 23:59 hrs	00:00 - 05:00 hrs 23:00 - 23:59 hrs	0:00 - 7:00 hrs 23:00 - 23:59 hrs	0:00 - 7:00 hrs 21:00 - 23:59 hrs
Full Closure*****	01:00 - 04:00 hrs	01:00 - 04:00 hrs	01:00 - 04:00 hrs	01:00 - 04:00 hrs

* With exceptions from June OC Transpo service change to September OC Transpo service change (as outlined in Table 7-3.1), when lane closure times from Blair Road to Jeanne d’Arc Boulevard are the same as Table 7-2.1B (for EB) and Table 7-2.1D (for WB).

** With exceptions as noted in Clause 2.19(d) of this Part 7. These times for single lane closures are applicable only to sections of OR 174 where there are a minimum of two general traffic lanes and a bus-only lane. Where there is no bus lane, and only two general traffic lanes, the hours indicated for “two lane closures” apply to a single lane closure.

*** No two successive on or off ramps shall be closed at the same time. Ramp closures require the mandatory use of PVMS.

**** Two lane closures are only permitted on sections of the OR 174 where two general traffic lanes and a bus lane are present. Where there are only two general traffic lanes and no bus lane, the hours indicated for “two lane closures” apply to a single lane closure.

***** Applications for full closures are subject to acceptance by the City in accordance with Schedule 10 – Review Procedure.

(vii) Lane and Ramp Closures - General

A. The following shall apply to all times other than those for the permitted closures:

i. Full mainline closures shall be permitted for installation of overhead sign structures, bridge girders, hydro wire installations/modifications and removal of concrete panels during Bridge demolition by saw cutting methods only. Closure of a full set of lanes shall only be performed as follows:

1 OPS shall be employed to perform the full closures;

2 Lane closures and ramp closures for construction shall only be permitted between 01:00 and 04:00 hrs, subject to the additional restrictions covered under Clause 1.4 of this Part 7; and

3 The duration of the closures are restricted to 15 minutes per any 1 hour period or until the end of the traffic queue passes.

(viii) Lane and Ramp Closures – Rapid Removal Operations

A. Lane and ramp closures associated with the closures permitted for Bridge rapid removal are subject to the additional restrictions covered under Clause 1.4 of this Part 7 and the following.

i. Lane Closures:

Table 7-2.2

Closure	Saturday	Sunday	Monday
One Lane Closure	00:00 - 10:00 hrs 17:00 - 23:59 hrs	00:00 - 23:59 hrs	00:00 - 05:00 hrs 20:00 - 23:59 hrs
Two Lane Closure	17:00 - 23:59 hrs	00:00 - 12:00 hrs 22:00 - 23:59 hrs	00:00 - 05:00 hrs 22:00 - 23:59 hrs
Three Lane or Full Closure	18:00 - 23:59 hrs	00:00 - 11:00 hrs	N/A

ii. Ramp Closures:

- 1 Ramp closures shall be in effect from Saturday 17:00 hrs to Sunday 12:00 hrs for Bridge rapid removal only.

(ix) General Notes – Lane and Ramp Closures

- A. DB Co shall use the lane and ramp closure notification process as per the MTO guideline titled "Steps for Ottawa Area Lane and Ramp Closure Notification Process".
- B. DB Co shall arrange closure times as outlined in this Part 7 and the accepted TTMP .
- C. The City reserves the right to deny permission for lane closures due to incomplete or late application, inclement weather, statutory holidays, or conflict with events identified in Clause 1.4 of this Part 7.

(c) Closure Notification

(i) DB Co shall perform the following prior to closing lanes and/or shoulders:

- A. DB Co shall provide 5 Business Days advance notice for lane closures or 28 Business Days advance notice where a detour is required;
- B. DB Co shall contact the City Traffic Management Inspector, a minimum of 72 hours prior to commencing construction to coordinate Work zone location, review the associated TTMP, and coordinate PVMS as may be required;
- C. DB Co shall contact the OC Transpo Control Centre half an hour prior to setup each day that they are working in or adjacent to a bus lane;
- D. Inform the City of any closure lasting more than one week, at least 2 weeks prior to the start date of the closure;
- E. Inform the City of Emergency closures as soon as any details are known;
- F. Obtain a closure notification number from the City for each closure;
- G. Inform the City of any closure that is being cancelled subsequent to A. and B. above;
- H. Notify the City Traffic Communications Centre by phone immediately prior to the set-up of any closure stating the closure notification number and details of the closure;

- I. Notify the City Traffic Communications Centre immediately of any changes to the closure or anticipated problems that may delay the opening time, stating the closure notification number and details of the changes to and/or problems with the closure; and
 - J. Notify the City Traffic Communications Centre immediately upon removing the closure stating the closure notification number and details of the closure.
- (d) Construction Sequencing
- (i) DB Co shall install TCBs on the median side of the OR174 during Night Periods or Weekend Periods only.
 - (ii) DB Co shall widen the OR174 into the median prior to any other construction that takes place in the median.
 - (iii) DB Co shall conduct a micro-simulation evaluation for construction sequencing and staging alternatives on the OR174. The limit of the micro-simulation model shall be discussed and agreed upon at the start of the Project, but shall extend as a minimum one interchange on both sides from the study limit.
 - A. DB Co shall include additional analysis of the area road network to assess impact of potential traffic diversion to other local routes due to construction staging, if required;
 - B. DB Co shall model traffic for the Off Peak Period. The model shall provide a reliable estimate of the entire study area operation. DB Co shall simulate the staging approach, and demonstrate that it maintains an acceptable LOS by City Standards;
 - C. DB Co shall provide the simulation model input and output files, assumptions used in the models, calibration results, documentation of any model limitation, snapshots (with road name labels) and traffic operation summaries of key simulation findings under various scenarios; and,
 - D. DB Co shall include in the traffic operation summaries at a minimum, documentation of the average vehicle speed along various sections of the network, travel time, average delay, levels of service, weaving, queuing or slow moving vehicles (due to difficult lane changes) that are observed on the network, etc. under the various scenarios.
- (e) TC-54 on OR174
- (i) All TC-54s used shall be equipped with 2 sets of rubber tire ballast rings.
 - (ii) DB Co shall remove all TC-54s from OR174, within the limits of the Project, at the conclusion of any traffic control requiring their use.

- (iii) TC-54s can remain in place when the Work is completed over the duration of a weekend. At the end of the weekend the TC-54s shall be removed from OR174.
- (f) Work on or Adjacent to [REDACTED] ROW
 - (i) DB Co shall not be permitted to access the [REDACTED] properties adjacent to the south side of the OR174 fenced ROW.
- (g) OR174 Full Closure
 - (i) Interim Fixed Completion Time
 - A. Full closure of OR174 for the Transitway Bridge demolition and removal shall be scheduled on a weekend by DB Co. Notice of the scheduled dates of the full closure shall be identified to the City a minimum 30 Business Days in advance the schedule closures for approval. The closure dates shall not be scheduled during events identified in Clause 1.4 of this Part 7.
 - B. DB Co shall not commence closing down lanes, in excess of the allowable closures specified elsewhere, until 17:00 hrs on the Saturday of the closure event, with full closure at 18:00 hrs. All EB and WB vehicles shall exit and re-enter the highway as identified in the TTMP and TCP sub-plan. Early full closure shall not be permitted.
 - C. The median lane and the exterior bus only lane in each direction shall be re-opened by 11:00 hrs on the Sunday of the closure event and the lane adjacent to the median or exterior lane shall re-open by noon on the Sunday of the closure event.
 - D. The remaining lane, median or exterior, shall be open by 06:00 hrs on the Monday following the closure event.
 - E. Ramps shall be opened in-conjunction-with the adjoining lanes or by 06:00 hrs on the Monday following the closure event.
- (h) Winter Shutdown
 - (i) DB Co shall perform all maintenance Work during the Winter Season except for snow, ice, and frost control as defined elsewhere.
 - (ii) DB Co shall submit a Winter Season Plan for each year to the City for review and approval by the first Monday in October each year. The plan shall detail any and all construction Work to continue during the Winter Season, as well as any changes to the current TTMP during the Winter Season, including the signing and Pavement marking changes, and document the shoulder widths available for snow storage during the Winter Season.

- (iii) All permanent OR174 and sideroad lanes, shoulders, Pavement markings, signs, structures and interchange ramps that were in place prior to the start of construction, or their reconstructed counterparts, shall be paved, and/or reinstated prior to the Winter Season. All lanes (highway and sideroad) and interchange ramps shall be opened to traffic and shall remain unrestricted at all times to public traffic during the Winter Season.
- (iv) DB Co shall complete all of the following Work, prior to Winter Season, in areas where the Work was initiated in the same year:
 - A. Construction of all Drainage courses, Culverts and storm sewers/catch basin grates (temporary and/or permanent) to elevations and provision of positive Drainage of the Roadway, sub-base, ditches and ROW in any areas where the existing road/median ditches or Drainage system has been altered from its pre-contract state;
 - B. Installation of new barriers or temporary barriers, with appropriate end treatments, in locations where existing roadside barriers have been removed;
 - C. Installation of all erosion and sedimentation control measures as required;
 - D. Completion of all permanent and/or temporary Pavement markings, Pavement marking obliterating and installation of all guiderail systems;
 - E. All construction related signs and supports that may impede winter plowing shall be removed from the Site and permanent signing shall be reinstated;
 - F. All of DB Co's equipment and material shall be removed from within the Project limits consistent with the DB Co's Winter Season Plan;
 - G. All Temporary Flexible Guide Posts shall be removed prior to Winter Season;
 - H. All median construction access locations shall be closed off using temporary concrete barrier in accordance with DB Co's Winter Season Plan deflected at 40:1;
 - I. Temporary Pavement markings shall be painted and receive a second application of paint each calendar year if they will be left in place during the Winter Season;
 - J. All Pavement marking obliterating that is required to remove temporary Pavement markings that are not part of DB Co's Winter Season Plan Pavement marking scheme and were placed for Work during the construction season shall be completed using approved removal methods;

- K. All new guiderail systems installed prior to Winter Season shall be installed to the grades required for the final top of Pavement elevation; and
 - L. Shoulder widths/offsets to barriers shall be provided on OR174 on the right side and the left hand side of the lanes (in the direction of traffic) during Winter Season.
- (v) DB Co shall be responsible for preparing the Site each spring including, but not limited to:
- A. Re-instatement of all necessary construction related signs;
 - B. Re-instatement to the design cross-fall all granular shoulders on the contract, including any material that is required; and
 - C. Carrying out a detailed inspection of the binder course, identification of any deficiencies, and carrying out repairs as required to the satisfaction of the City.
- (vi) Winter Season requirements, as contained in this Article 2, shall not relieve DB Co of any other requirements. All hot mix paving Work performed by DB Co to meet Winter Shutdown requirements, that do not meet the full requirements as specified elsewhere, shall be considered temporary paving and DB Co shall be responsible for the placement and subsequent removal of the temporary Pavement.
- (vii) DB Co's Critical Path Schedule shall at all times reflect the Winter Season contract requirements as defined in this Article 2.
- (i) Daily Backfilling to Subgrade Level
- (i) At locations where temporary concrete barrier is present, excavation for the roadworks, placement of granulars, and any other operation which will result in an excavation greater than 300mm in depth measured from the original ground, shall only be completed to within 0.5m of the backface of the barriers when the barriers are positioned in their temporary configuration. The remainder of the excavation, granulars and asphalt Pavement shall be completed by shifting the barrier and implementing a lane closure in accordance with the timing constraints specified elsewhere in this Article 2. The barrier shall then be returned to its un-shifted position.
 - (ii) DB Co shall ensure that prior to completion of Work each day, areas that are excavated below a subgrade level are backfilled to the subgrade level in accordance with methods specified elsewhere within the Contract.
 - (iii) DB Co shall ensure measures are taken against undermining of the adjacent Pavement structure at open excavations throughout the contract limits, where

traffic is protected by temporary concrete barrier. This shall be done by backfilling with the specified material up to profile grade within 2m of the back of barrier prior to ceasing operations each weekend.

(j) Guide Rail Construction Operations

- (i) DB Co shall ensure that the existing guide rail system or an approved barrier system shall remain in place at all times or the removed guide rail is replaced with the new guide rail or an approved barrier system within the same working day at all locations of existing guiderail or barrier system.

(k) Ramp and Side Street Closures

- (i) DB Co shall provide notice of one-time ramp and side street closures consistent with requirements detailed elsewhere.

(ii) Ramp and Side Street Closures – Short Duration

- A. DB Co shall comply with conditions covered elsewhere in the Project Agreement for all nightly closures of ramps and/or lane closures on side streets. Ramps shall only be closed if Work is directly located on the ramp or on OR174 or side street at the ramp junction, or if closure is required to implement other lane closures in accordance with OTM Book 7. Short term ramp closures are restricted to one ramp at a time per interchange per direction.

(iii) Ramp and Side Street Closures – Long Duration

- A. DB Co shall only close ramps if Work is directly located on the ramp, or on the highway or side street at the ramp junction, or if closure is required to implement other lane closures in accordance with OTM Book 7.

RAMP / SIDE STREET	DURATION
Montreal Road N-E Ramp	To be closed in conjunction with the OR174 Bridge replacement and OR174 realignment in this area. The ramp shall be closed from 23:00 hrs Friday and shall re-open no later than Monday at 05:00 hrs of the same weekend.
Montreal Road S-W Ramp	To be closed in conjunction with the OR174 Bridge replacement and OR174 realignment in this area. The ramp shall be closed from 23:00 hrs Friday and shall re-open no later than Monday at 05:00 hrs of the same weekend.
Montreal Road W-N/S Ramp	To be closed in conjunction with the OR174 Bridge replacement and OR174 realignment in this area. The ramp shall be closed from 23:00 hrs Friday and shall re-open no later than Monday at 05:00 hrs of the same weekend.

RAMP / SIDE STREET	DURATION
Montreal Road E-N/S Ramp	To be closed in conjunction with the OR174 Bridge replacement and OR174 realignment in this area. The ramp shall be closed from 23:00 hrs Friday and shall re-open no later than Monday at 05:00 hrs of the same weekend.
Jeanne d’Arc Boulevard S-W Ramp	To be closed in conjunction with OR174 widening and ramp realignment in this area. The ramp shall be closed from 23:00 hrs Friday and shall re-open no later than Monday at 05:00 hrs of the same weekend.
Jeanne d’Arc Boulevard N-W Ramp	To be closed in conjunction with OR174 widening and ramp realignment in this area. The ramp shall be closed from 23:00 hrs Friday and shall re-open no later than Monday at 05:00 hrs of the same weekend.
OR174/Trim Road At Grade Intersection	To be closed in conjunction with the construction and replacement intersection to the east of the Park and Ride/Trim Road LRT Station construction in this area. The intersection shall remain fully open and operational until such time as the replacement OR174 Access to Trim Road is constructed.

- (l) OR174 Illumination
 - (i) Refer to Schedule 15-2, Part 2, Article 10 – OR174 Street Lighting for requirements for street lighting on OR174.
- (m) Existing Roadway Illumination
 - (i) DB Co shall ensure all existing Roadway illumination remains fully operational during the hours of darkness until such time as a temporary and/or permanent lighting system is installed and operational during hours of darkness. For instances where the Roadway is closed to traffic to accommodate construction, the existing Roadway illumination may be turned off within the limits of the road closure only. Any temporary and/or permanent lighting system must have equivalent lighting levels to the existing lighting levels.
- (n) Underpass Illumination
 - (i) DB Co shall ensure that existing underpass illumination is fully operational at all times during the hours of darkness until such time as the temporary or permanent underpass lighting is installed and operational during the hours of darkness. Any temporary and/or permanent lighting system must have equivalent lighting levels to the existing lighting levels.

- (o) Rapid Structure Removal Operations – OR174 Transitway Overpass Structure/OR174/Montreal Road Bridges
 - (i) DB Co shall be responsible for all additional protection systems, traffic control, and temporary Works required to suit DB Co’s selected construction sequencing.
 - (ii) The above noted Rapid Structure Removals shall be sequenced and scheduled to meet the OR174 Roadway Works and associated operational constraints as specified elsewhere in the Contract. The removal of the OR174 Transitway Bridge shall not commence until the Transitway detour from Blair Station to the Transitway Bridge is Commissioned, operational and OC Transpo has diverted the Transitway onto the detour route.

- (p) Taylor Creek Culvert Crossing
 - (i) DB Co shall develop detour staging plans in order to maintain uninterrupted bus service lanes at all times, and uninterrupted general traffic lanes during Peak Periods, during repairs to the Taylor Creek Culvert under OR174,

ARTICLE 3 EXISTING TRANSITWAY SYSTEM

3.1 General Requirements

- (a) The requirements in this Article 3 are applicable to the following Transitway sections of the relevant phase of the Project:
- (i) West Transitway-Tunney's Pasture Station to Moodie Station
 - A. West Transitway Segment W-1 (Tunney's Pasture Station to Dominion Station)
 - B. SJAM Parkway Segment W-2 (Dominion Station to SJAM Parkway 400m west of Dominion Station)
 - C. SJAM Parkway Segment W-3 (400m west of Dominion Station to SJAM Parkway 550m north of Lincoln Fields Station)
 - D. SJAM Parkway Segment W-4 (SJAM Parkway 550m north of Lincoln Fields Station to Lincoln Fields Station)
 - E. West Transitway Segment W-5 (Lincoln Fields Station to Queensway Station)
 - F. Highway 417 Segment W-6 (Queensway Station to Pinecrest Station)
 - G. West Transitway Segment W-7 (Pinecrest Station to Bayshore Station)
 - H. West Transitway Segment W-8 (Bayshore Station to Holly Acres Road)
 - I. West Transitway Segment W-9 (Holly Acres Road to Moodie Station)
 - (ii) Southwest Transitway-Lincoln Fields Station to Baseline Station
 - A. Southwest Transitway Segment SW-2 (Lincoln Fields Station to Iris Station)
 - B. Southwest Transitway Segment SW-1 (Iris Station to Baseline Station)
 - (iii) East Transitway - Blair Station to Trim Station
 - A. East Transitway Segment E-1 (Blair Station to OR174 500m east of Transitway Overpass)
 - B. OR174 Segment E-2 (500m east of Transitway Overpass to 800m east of Montreal Road)

- C. OR174 Segment E-3 (800m east of Montreal Road to 800m east of Jeanne d'Arc Boulevard)
 - D. OR174 Segment E-4 (800m east of Jeanne d'Arc Blvd to Place d'Orleans Station)
 - E. OR174 Segment E-5 (Place d'Orleans Station to Trim Road)
- (b) DB Co shall maintain all bus services by utilizing staging and detouring of transit services and other traffic away from the various Sites under construction. DB Co shall include the Transitway detouring and staging in the TTMP to the satisfaction of the City and in accordance with the provisions of this Part 7, Schedule 34 - Mobility Matters, Schedule 17 – Environmental Obligations, Schedule 15-2, Part 1, Article 5 – Implementation Constraints and Schedule 15-2, Part 2, Article 6 – Roadways, Bus Terminals and Lay-bys.
- (c) DB Co shall reimburse the City for any additional operational or maintenance costs incurred by the City occasioned as a result of any changes required to City operations, due to changes or revisions to the TTMP made by DB Co after the TTMP has been reviewed and accepted by the City.
- (d) DB Co shall apply the following key Transit performance principles to the TTMP:
- (i) Safety of all users of the Work shall be the paramount principle;
 - (ii) Maintain existing local and rapid transit services as closely as possible to the frequency of service of the 2018 Post-LRT Stage 1 Transit Service Plan. DB Co shall be responsible for contacting the City prior to the service change dates identified in Table 7-3.1 to identify any changes to the transit service plans and how they may impact the frequency of service for transit;
 - (iii) Maximize the continued transit services use of the existing Transitway and Stations during construction;
 - (iv) Minimize the travel time variability on transit routes;
 - (v) Minimize additional transit customer travel times, including walking distances to and from bus stops, Stations and Platforms;
 - (vi) Minimize additional transfers points for transit customers;
 - (vii) Minimize additional OC Transpo resources required (buses, kms travelled, lay-bys, disruption of services, service changes, temporary Fitups);
 - (viii) Minimize redundancies;
 - (ix) Minimize disruption to other road users;

- (x) Minimize and mitigate impact on adjacent lands and occupants thereof; and
- (xi) Minimize additional bus traffic in residential areas.
- (e) DB Co shall develop Transitway staging and detour plans subject to the requirements in this Part 7. DB Co's Transitway staging and detour plans shall be submitted in accordance with Schedule 10 – Review Procedure and subject to evaluation and acceptance by the City.
- (f) DB Co may schedule Work within the existing Transitway utilizing one lane closures during Off Peak Periods and Night Periods as detailed elsewhere in this Article 3. DB Co shall be responsible for obtaining the required City approvals and permits to undertake this Work. A suitable alternative location shall be required if the closure of one lane impacts a bus stop or Platform or access thereto.
- (g) DB Co shall provide 35 calendar days' notice to the City for construction access to any component of the existing Transitway. Notice shall be provided in the form of a document explaining the request for construction access to the relevant component of the existing Transitway, submitted by DB Co to the City in accordance with Schedule 10 – Review Procedure, and, the simultaneous transmission of an electronic message sent to the City's Lead Traffic and Mobility and the designated OC Transpo representative, informing them that the request Notice has been submitted.
- (h) DB Co shall be responsible for minimizing the overall duration required for the closure of any parts of the existing Transitway.
- (i) DB Co's TTMP Transitway staging and detour plans shall be founded upon the following key principles and constraints:
 - (i) Safety of all users shall be the primary principle;
 - (ii) Transit shall be given priority on the road system to the greatest extent possible (e.g. temporary bus-only lanes shall be provided);
 - (iii) Transit priority measures shall be implemented at key intersections on transit detour routes to reduce transit delays;
 - (iv) Construction Work shall be staged and phased to minimize disruption to public transit and general traffic throughout design, construction and implementation;
 - (v) DB Co's Transitway staging and detours for the Transitway Sections identified in Clause 3.1 of this Part 7 shall be designed, constructed, monitored, and maintained in accordance with the requirements of Clauses 3.6 through 3.14, of this Part 7, and be in compliance with all requirements of this Part 7, including the transit performance principles outlined in Clause 3.1(d) of this Part 7 and the design provisions set out in Schedule 15-2, Part 2, Article 6 – Roadways, Bus Terminals and Lay-bys.

- (vi) DB Co’s approved Transitway staging and detour plans for any segment of the existing Transitway shall be Commissioned and operational to the satisfaction of the City prior to full closure of any portion of the Transitway.
- (vii) DB Co’s Transitway staging and detour plans shall be developed to ensure continuity of transit route origins and destinations and Station locations for all transit services that utilize either portions of the Transitway or Stations in the context of access for buses and pedestrians and network coverage;
- (viii) Bus only lanes on OR174 (East Transitway) and Highway 417 (West Transitway) shall remain in service at all times, until after West Substantial Completion and upon notice by the City;
- (ix) DB Co shall not close any component of the Transitway prior to Commissioning the detour route for the corresponding Transitway closure, and when Transitway lane closures are in place during the permitted hours, an alternative shall be made available for transit.
- (j) DB Co shall provide at least six months advance notice to the City for all closures, detour routes and diversions impacting the existing Transitway, including any impacts to local service affecting service to Transitway Stations.
- (k) Implementation of full closure of any segment of Transitway and or Station shall be restricted to occur at one of the regularly scheduled OC Transpo service change dates, which occur four times per year, which are forecasted to occur at the times in the table below.

Table 7-3.1–Tentative Transit Route Schedule Change Dates

Year	April	June	September	December
2018	22	24	2	23
2019	21	23	1	22
2020	19	21	6	20
2021	18	20	5	19
2022	17	26	4	25
2023	23	25	3	24

Note: The dates in Table 7-3.1 are subject to change by the City. DB Co shall confirm the dates with the City prior to using the data for the purpose of preparing construction schedules.

- (i) If DB Co fails to execute a segment closure on one of the annual transit route schedule change dates, DB Co shall reimburse the City for costs incurred by OC

Transpo relating to OC Transpo scheduling/booking requirements as a result of the DB Co non-compliance with this Clause 3.1 (k) of this Part 7.

- (ii) DB Co shall coordinate with OC Transpo to ensure that all TTMP and TCP submissions and updates to those submissions reflect the most current OC Transpo transit operations.
- (iii) DB Co shall coordinate the proposed closure, and timing of the closure, of each segment, or segments, with the City including OC Transpo, and to the satisfaction of the City and OC Transpo, such that OC Transpo may adequately administer the closure.
- (iv) DB Co shall design and construct all Transitway staging and detour routes according to the Reference Documents listed in Clause 1.1 of this Part 7.
- (l) For all infrastructure changes, including those associated with a service change, DB Co shall provide access for OC Transpo staff to all facilities after West Substantial Completion and upon notice by the City, in order to conduct all necessary reviews, tours, walk-throughs, and operational tests.
- (m) DB Co shall design and construct all permanent and temporary bus stops during all the construction staging, including safe and secure pedestrian access to and from bus stops, and all shelters and COADS requirements that meet the requirements of the City and OC Transpo's standard drawings and specifications as per Appendix E of this Part 7. DB Co shall coordinate the design and locations of the temporary bus stops and shall obtain approval from the City and OC Transpo prior to implementation.

3.2 Construction On or Adjacent To the Existing Transitway

- (a) DB Co shall provide 35 calendar days' notice to the City for access to the Transitway. DB Co shall obtain all required approvals and permits from the City and OC Transpo. DB Co shall complete the required submissions in accordance with Schedule 10 – Review Procedure and subject to evaluation and acceptance by the City, prior to submitting permit applications.
- (b) All required traffic control and protection systems identified in the approved TTMP shall be installed, operated, maintained and removed by DB Co to the satisfaction of the City .
- (c) DB Co shall perform the required traffic control for the lane closure(s) identified in the approved TTMP to the satisfaction of the City, where construction requires Transitway lane closure(s).
 - (i) DB Co shall provide the temporary Station/stop and the temporary Station/stop facilities in kind, such as shelters or benches, as well as the accesses to/from the Station/stop, operational features such as bike racks, lighting, supervisor's office, etc., and including traffic camera/OC Transpo security camera coverage of the temporary Station/stop and its surrounds, where construction shall require any

change to, or relocation of an existing Transitway Station or bus stop, to the satisfaction of the City. This shall include staff washrooms equipped with key access system to the satisfaction of the City.

- (ii) DB Co shall include all alterations to existing Stations or bus stops, and all temporary Station or bus stop designs in the TTMP submission to the City in accordance with Schedule 10 - Review Procedure.
- (d) DB Co shall provide 15 Business Days' notice to the City prior to the day on which any changes to existing signage or new sign placement required for construction shall be required.
- (e) Loading or unloading of materials or construction equipment that will adversely affect the existing Transitway, bus only lanes or Transitway detour traffic, shall not be performed during the following periods:
 - (i) On Transitway bus only lanes or Transitway detour:
 - A. 06:00 to 18:30 hrs
 - (ii) Adjacent to Transitway:
 - A. 06:00 to 09:30 hrs
 - B. 15:00 to 18:30 hrs
- (f) Where loading or unloading of materials is done by means of lifting overhead, overhead protection shall be provided to all impacted pathways, sidewalks, and Platforms.
- (g) DB Co shall not store any equipment or materials on the travelled portion of the Transitway, bus only lanes or Transitway detour, or its shoulders or boulevards, unless the equipment or materials are protected by traffic control and protection systems previously approved by the City and OC Transpo.
- (h) DB Co shall ensure that vehicles transporting materials to, from, or on the Transitway, bus only lanes or Transitway detours do not interfere with or interrupt Transitway, bus only lanes, or Transitway detour operations. Where the transportation of materials to or from construction Sites cannot be accomplished without interfering or interrupting Transitway operations, a separate dedicated construction access shall be established at DB Co's cost.
- (i) DB Co shall require construction vehicles to enter and/or exit in the same direction as buses so that vehicles merge with the bus traffic without crossing traffic lanes, unless specified otherwise.
- (j) DB Co shall ensure that vehicles shall at all times use the access point on the Transitway, bus only lanes, or Transitway detour operations, that is closest to the Work Site.

- (k) DB Co shall ensure that all traffic controls are operational before commencing Works affecting Transitway, bus only lanes, or Transitway detour operations.
- (l) DB Co shall contact the OC Transpo Control Centre 30 minutes prior to setup each day that they are working in or adjacent to a Transitway lane.

3.3 Pedestrian and Cycling Access to the Transitway During Construction

- (a) DB Co shall maintain barrier free pedestrian and cycling access, associated with active and temporary Stations and across all pedestrian Bridges, at all times.
- (b) DB Co shall maintain pedestrian and cycling access across the local route lanes at all times.
- (c) DB Co shall provide a new alternate route pathway, sidewalk or MUP of equivalent length, or within 20% additional length, to current City standards in the event that a pathway, sidewalk or MUP leading to a Station connection is to be closed or relocated due to construction, unless prescribed otherwise by the City.
- (d) Any disruption of a pathway, sidewalk, or MUP that impacts the accessibility to a Transitway Station shall be done in accordance with the provisions of Schedule 15-2, Part 6 – Urban Design, Landscape Architecture and Connectivity Requirements.

3.4 Transitway Lane Closures

- (a) Permitted lane closure periods for Transitway Segments shall be as follows:

Table 7-3.2

Closure	Monday to Friday	Saturday	Holiday or Sunday
One Lane Closure (All Transitway Segments)	18:30 - 06:00 hrs 9:30 - 15:00 hrs	00:01 - 24:00 hrs	00:01 - 24:00 hrs
Full Closure* (All Transitway Segments exclusive of OR174 and Highway 417 bus only lanes)	Not permitted until Transitway Detour Commissioned and in Transpo services are operational	Not permitted until Transitway Detour Commissioned and in Transpo services are operational	Not permitted until Transitway Detour Commissioned and in Transpo services are operational
OR174 EB and WB bus only lanes**	Not Permitted	Not Permitted	Not Permitted

Highway 417 EB and WB bus only lanes	Not Permitted	Not Permitted	Not Permitted
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** Applications for full closures shall be submitted as part of the Works Submittals in accordance with Schedule 10 – Review Procedure.*

**Transitway Detour requirements as defined for each Segment of Transitway to be closed are completed and accepted by the City and OC TranspoBus*

*** Exceptions shall be permitted as per Clause 2.17 of this Part 7.*

3.5 Circulation Roadway Closures within Transitway Stations

- (a) DB Co shall maintain the continuance of all of the operational functions of the existing Transitway Stations throughout the construction and commissioning period. DB Co shall develop a TCP identifying all changes to operational functions and submit to the City in accordance with Schedule 10 – Review Procedure for areas where construction requires lane closures to bus circulation Roadways, Platforms, or bus lay-by areas within Transitway Stations. DB Co shall provide 35 calendar days’ notice prior to the day on which the closures shall be required.
 - (i) DB Co shall perform all modifications required for the temporary bus terminal with no interruption to the regular bus service.
 - (ii) Where changes to the operational function of a Transitway Station results in a routing for buses that causes additional travel time to be incurred, six months’ notice shall be provided.
- (b) DB Co shall ensure the continuance of all operational functions of detoured transit services throughout construction and Commissioning periods.
- (c) DB Co shall coordinate all closures with the City. The following conditions shall apply:
 - (i) Monday to Friday inclusive:
 - A. 06:00 to 09:30 hrs and 15:00 to 18:30 hrs: Bus circulation Roadways shall be fully operational; and,
 - B. 09:30 to 15:00 hrs and 18:30 to 06:00 hrs: One-way bus circulation Roadways may be reduced to one lane. Two-way bus circulation Roadways may be reduced to one lane only in each direction providing that all appropriate approvals and plans are in place.
 - (ii) Saturday, Sunday and holiday:

- A. 00:01 to 24:00 hrs: One-way bus circulation Roadways may be reduced to one lane. Two-way bus circulation Roadways may be reduced to one lane only in each direction
- (d) DB Co shall simulate the operation of the Station, including but not limited to VISSIM modeling, to demonstrate to the City and OC Transpo that any modified Stations will function in an acceptable manner. This information shall be included in the TTMP submissions in accordance with Schedule 10 - Review Procedure. DB Co shall monitor and make adjustments to the Station if the switchover is not performing in accordance with that forecast in the TTMP and sub-plans as reviewed and accepted by the City.

3.6 West Transitway Segment W-1 - Tunney's Pasture Station to Dominion Station

- (a) DB Co shall design and implement a Transitway detour alignment along Scott Street from Tunney's Pasture Station to Dominion Station. The alignment shall utilize the existing Scott Street from Goldenrod Driveway to Churchill Avenue with localized Roadway improvements as described below. DB Co shall design and construct an extension of Scott Street for bus services only, west of Churchill Avenue to Roosevelt Avenue. At Roosevelt Avenue, DB Co shall design and construct the Transitway detour alignment shall cross over the existing West Transitway utilizing a temporary Bridge structure and continue westerly adjacent to the West Transitway and connect to the existing Transitway at Dominion Station.
- (b) DB Co shall be responsible for the design, construction and implementation of the W-1 Transitway staging and detour prior to full closure of any component of the existing W-1 Transitway Segment.
- (c) DB Co shall design and construct the W-1 Transitway detour within the prescribed Scott Street ROW including the detour extension to SJAM Parkway. DB Co shall not implement the W-1 detour until the following are designed and constructed:
 - (i) Widen Scott Street between Clifton Road and Oakdale Avenue as follows:
 - A. DB Co shall widen EB Scott Street from Clifton Road through the Lanark Ave/Scott Street intersection to accommodate a 3.2m left turn lane, 3.5m general purpose through lane and a 3.5m bus only lane. The EB bus only lane shall be shared with right turning general purpose traffic. DB Co shall undertake a traffic operational analysis to design the bus only/right turn lane storage and taper length requirements. DB Co shall remove and reconstruct the existing sidewalk from a point approximately 47m west of Clifton Road to Lanark Avenue to include a 2.0m sidewalk and 1.5m raised EB cycle track.
 - B. DB Co shall widen EB Scott Street from Lanark Avenue to east of Island Park Drive to accommodate a 3.5m general traffic lane, 3.5m bus only lane, and 1.5m EB cycling lane. For clarity, the cycling lane only needs to be provided where a cycle track is not provided. The existing EB left turn

lane at Island Park Drive shall be maintained. The EB right turn lane at Island Park Drive shall be shared with the bus only lane within the limits of the existing right turn lane. DB Co shall undertake a traffic operational analysis for the EB bus only lane to design the required lane length east of Island Park Drive, including taper. DB Co shall remove and reconstruct sidewalk to the limits necessary as required to accommodate Roadway widenings. DB Co shall build a raised EB cycle track from the Lanark Avenue intersection to a point approximately 60m east of Lanark Avenue. DB Co shall build a raised EB cycle track from a point approximately 65m west of Island Park Drive to a point approximately 65m east of Island Park Drive.

- i. DB Co shall relocate the existing Scott Street EB bus stop from west of Island Park Drive to east of Island Park Drive. The relocated bus stop shall maintain all features of the existing bus stop, and be in accordance with the features required in Schedule 15-2, Part 4, Appendix E.
- C. DB Co shall widen WB Scott Street at Island Park Drive to accommodate at 3.3m left turn lane, a 3.5m general purpose through lane and a 3.3m right turn lane. DB Co shall undertake a traffic operational analysis for the design of the right turn lane storage and taper.
 - D. DB Co shall modify the traffic signal infrastructure at Lanark Avenue and Island Park Drive as required to accommodate Protected Intersection design, including Crossrides on all four legs of the intersections as per the description in Schedule 15-2, Part 2, Clause 6.6, and the conceptual images in Appendix F of this Part 7.
 - E. When the Transitway detour is no longer in service, DB Co shall reinstate the general traffic lanes on Scott Street to existing conditions, including the removal of the EB bus lane and the WB right turn lane. DB Co shall realign the cycle tracks at Lanark Avenue and Island Park Drive with the new permanent Protected Intersection configuration. This work shall be completed after West Substantial Completion and upon notice by the City, and shall be considered Remaining Works.
- (ii) Modifications to the cycling and pedestrian facilities as follows:
 - A. DB Co shall relocate the WB cycling lane on Scott Street from Smirle Avenue to Churchill Avenue to the MUP north of Scott Street. At unsignalized intersections, painted Crossrides shall be provided for the MUP.
 - B. DB Co shall reconstruct and widen the existing MUP on the north side of Scott Street between Smirle Avenue and Churchill Avenue. The new MUP

shall be 4.0m wide, and the space shall be allocated as a 2.0m WB-only cycling facility with a 2.0m pedestrian space.

- i. At the signalized intersections of Scott Street and Smirle Avenue, Island Park Drive, Lanark Avenue and Churchill Avenue, the 4.0m wide north side MUP shall be split into a 2.0m wide asphalt surface for cyclists and a 2.0m wide concrete surface for pedestrians at a distance of approximately 25m from the north-east and north-west corners of the intersections.
- C. A painted on-road eastbound cycling lane, with a minimum width of 1.8m, with a minimum width 0.2m buffer, shall be provided on Scott Street from Smirle Avenue to Churchill Avenue at all locations where an eastbound cycle track has not been prescribed.
- i. DB Co shall provide and install flex-post delineators along the on-road eastbound cycling lane where curbside land uses do not prevent such installations (i.e. driveways, parking spaces, etc.). The initial installation of these flex-posts shall be the responsibility of DB Co. The City shall be responsibility for the seasonal removal and reinstallation of the flex-posts.
 - ii. Where adjacent to on-street parking, the cycling lane may be reduced in width to 1.5m. In such locations, the minimum buffer on the left side of the cycling lane shall be increased to 0.5m, and a 0.5m buffer on the right side of the cycling lane shall also be provided.
 - iii. Appropriate transitions between the cycling facilities to the east of Smirle Avenue and to the west of Churchill Avenue shall be provided.
- D. DB Co shall construct the following infrastructure to facilitate the installation of two cyclist-pedestrian counters on Scott Street, one approximately 100m east of Lanark Avenue, and one 20m west of Grange Avenue:
- i. Two custom hand holes at each location: one on each of the north and south sides of the road. Hand holes and lids shall be procured by DB Co from [REDACTED] as per the specifications provided in Appendix G of this Part 7;
 - ii. A 50mm rigid PVC conduit under the road connecting the hand holes at each location. DB Co shall leave a fish rope in place in the conduit between the two hand holes;

- iii. DB Co shall install pre-formed loops on the MUP (before paving) to the BC2 specification provided in Appendix G of this Part 7. These loops shall be procured by DB Co from Eco-Counter as per the specification provided in Appendix G of this Part 7;
 - iv. DB Co shall cut a bicycle lane loop in the eastbound bicycle lane to the BC3 specification provided in Appendix G of this Part 7, with the loop cable connected to the nearest hand hole via a 25mm flexible conduit;
 - v. DB Co shall install a wooden post in a concrete foundation suitable to support the pole on the north side of Scott Street. This wooden post shall be procured by DB Co from [REDACTED] as per the specification provided in Appendix G of this Part 7. A 25mm flexible conduit shall connect the north side hand hole to the wooden post's foundation. DB Co shall leave a fish rope in place in this conduit;
 - vi. Specific locations of each of these elements will be provided to DB Co by the City prior to the PFDD design;
 - vii. DB Co's scope shall not include providing operating counter stations, but rather to provide the civil infrastructure required for the City to be able to install the remaining equipment needed to operate the counter stations. DB Co's responsibility shall be limited to: the provision and installation of 50mm rigid PVC conduit, 25mm flexible conduit, hand holes and lids, the loop in the eastbound bicycle lane, the wooden post and concrete foundation, and the pre-formed loops on the MUP.
- (iii) Scott Street extension from Churchill Avenue to Roosevelt Avenue as follows:
- i. DB Co shall design and construct a new bus only detour from the terminus cul-de-sac west of Churchill Avenue to Roosevelt Avenue. The bus detour shall consist of 4.0m EB and WB lanes with 1.0m paved shoulders. The Pavement shall be superelevated as outlined in Schedule 15-2, Part 2 – Civil and Guideway;
 - B. DB Co shall relocate the existing 3.0m MUP from the north side of the detour to the south side. Connect the relocated MUP to the existing MUP at Roosevelt Avenue;
 - C. DB Co shall supply and install continuous temporary concrete barriers on both sides of the entire length of the bus detour, with a 1.2m high chain link fence mounted on top of the temporary concrete barrier on the south side of the bus detour;

- D. DB Co shall modify the intersection of Scott Street/Churchill Avenue as follows;
- i. DB Co shall design and construct a new, permanent, traffic signal in accordance with the requirements of Schedule 15-2 Part 2, Article 6 – Roadways, Bus Terminals and Lay-bys, at the intersection. DB Co shall be responsible for providing a Protected Intersection design, including Crossrides on all four legs of the intersection.
 - ii. DB Co shall undertake a traffic operational analysis for the design and construction of a new WB left turn lane to determine the storage lane length, plus taper. DB Co shall undertake a traffic operational analysis to determine the storage lane length required after the commissioning of the Confederation Line, and implement any changes recommended from the analysis. The implementation of the changes shall be completed after West Substantial Completion and upon notice by the City, and shall be considered Remaining Works.
 - iii. DB Co shall not impact on-street parking on the north side of Scott Street. Removal of on-street parking on the south side of Scott Street between Churchill Avenue and Athlone Avenue shall be permitted during the W-1 detour, but shall be reinstated after West Substantial Completion and upon notice by the City, and shall be considered Remaining Works.
 - iv. DB Co shall undertake a traffic operational analysis for the design and construction of a new northbound right turn lane to determine the storage lane length, plus taper. Construction of the new lane shall not impact any existing curb, however the removal of existing on-street parking on the west side of Churchill Avenue to the limits necessary to accommodate the new turn lane are acceptable. DB Co shall prepare a traffic operational analysis report to determine if this lane is required after the commissioning of the Confederation Line, and implement any changes recommended from said analysis. Modifications to the east curb in order to incorporate elements of the Protected Intersection are acceptable. The implementation of the changes shall be completed after West Substantial Completion and upon notice by the City and shall be considered Remaining Works.
 - v. DB Co shall remove the existing sidewalk on the south side of Scott Street from Churchill Avenue to a point approximately 30m east of Churchill Avenue, and reinstate with a 1.5m raised cycle track and a 2.0m pedestrian sidewalk.

- E. DB Co shall maintain uninterrupted access to existing properties within the cul-de-sac at all times, including but not limited to: [REDACTED];
 - F. DB Co shall maintain on-street parking between Churchill Avenue and the cul-de-sac throughout construction and W-1 Transitway detour implementation period, including temporarily reconfiguring the existing five perpendicular parking spaces on the north side of the cul-de-sac with five parallel parking spaces and maintaining the two parallel parking spaces on the south side; and
 - G. DB Co shall remove the detour and reinstate the Scott Street extension west of Churchill Avenue to existing conditions after the detour is out of service, including restoration of MUP to its existing general alignment with the exception that the Pavement shall end no closer than 1.0m from the near face of the guideway parapet wall. This shall be completed after West Substantial Completion and upon notice by the City and shall be considered Remaining Works.
- (iv) DB Co shall design, supply and install a temporary Bridge over the Transitway and construct the Transitway detour west of the temporary Bridge to connect the Transitway detour to the existing Transitway at Dominion Station as follows:
- A. DB Co shall remove the existing pedestrian Bridge over the Transitway. DB Co shall delay removal of the pedestrian Bridge as long as possible in order to maintain pedestrian connectivity for the community. The Bridge shall be replaced when the Transitway detour service is complete in accordance with Schedule 15-2, Part 2 – Civil and Guideway. DB Co shall provide the City and OC Transpo with 35 calendar days' notice of the schedule for the removal. The removal over the traveled portion of the Transitway shall require the stoppage of transit vehicles across the full width of the affected Transitway lanes. Closure of all lanes shall only be performed as follows:
 - i. If the full closure is scheduled between Victoria Day and Labour Day, the full closure shall take place during the NCC's Sunday Bikedays closure of the SJAM Parkway.
 - ii. If the full closure is scheduled between Labour Day and Victoria Day, the closure shall take place between 02:00 and 05:00 hrs:
 - 1. Nightly closures of the Transitway during this period shall be restricted to 15 consecutive minutes, after which time DB Co shall reopen the Transitway until such a time as the end of the transit vehicle queue passes. After the transit vehicle queue has cleared, DB Co may close the Transitway again for a further 15 minute period, repeating

this process until the job is complete or it is 05:00 hrs and the Transitway shall be reopened.

- B. DB Co shall construct the bus only detour from temporary Bridge to Dominion Station. The bus detour shall consist of 4.0m EB and WB lanes with 1.0m paved shoulders. The Pavement shall be superelevated as outlined in Schedule 15-2, Part 2 – Civil and Guideway;
- C. DB Co shall construct a temporary portable prefabricated Bridge over the existing Transitway to accommodate two 4.0m wide bus lanes. The temporary Bridge shall be a minimum width of 9.1m. DB Co shall submit a detailed Bridge erection plan to the City 60 calendar days in advance of undertaking the installation. The plan shall identify any requirements for installing Bridge components over the Transitway during transit services. DB Co shall be permitted to perform full closures for installation of Bridge girders, prefabricated Bridge components, falsework and overhead electrical wiring installations. The installation of the traveled portion of the Transitway shall require the stoppage of transit vehicles across the full width of the affected Transitway lanes. Closure of all lanes shall only be performed as follows:
 - i. If the full closure is scheduled between Victoria Day and Labour Day, the full closure shall take place during the NCC's Sunday Bikedays closure of the SJAM Parkway
 - ii. If the full closure is scheduled between Labour Day and Victoria Day, the closure shall take place between 02:00 and 05:00 hrs:
 - 1. Nightly closures of the Transitway during this period shall be restricted to 15 consecutive minutes, after which time DB Co shall reopen the Transitway until such a time as the end of the transit vehicle queue passes. After the transit vehicle queue has cleared, DB Co may close the Transitway again for a further 15 minute period, repeating this process until the job is complete or it is 05:00 hrs and the Transitway shall reopen.
- D. DB Co shall supply and install temporary concrete barriers on the south side of the entire length of the detour;
- E. DB Co shall ensure the existing Dominion Transitway Station services remain in service at all times during the construction of the detour and while the detour is in service, including all pedestrian connections; and,
- F. DB Co shall remove the detour and Bridge and reinstate to existing conditions including restoration of Roosevelt Avenue pedestrian Bridge crossing when the Transitway detour is no longer in service. The new

- pedestrian Bridge shall include the installation of a cyclist/pedestrian counter, as approved by the City. DB Co shall submit a detailed Bridge removal and erection plan to the City 60 calendar days in advance of undertaking the removal of the temporary detour Bridge and reinstatement of the pedestrian Bridge. The plan shall identify any requirements for installing Bridge components for the Guideway during transit services. This work shall be completed after West Substantial Completion and upon notice by the City and shall be considered Remaining Works.
- (v) When the W-1 detour is in operation, OC Transpo will be routing their deadhead buses between Dominion and Tunney's Station on SJAM Parkway and Goldenrod Driveway (within Tunney's Pasture campus) and access the SJAM Parkway at the existing signalized intersections at Goldenrod Driveway/SJAM Parkway.
- A. DB Co shall design and construct a temporary detour for deadhead buses from Tunney's Pasture Station to Goldenrod Driveway as part of the W-1 Transitway detour.
- B. DB Co shall undertake a structural analysis of existing structures under the SJAM Parkway as outlined in Schedule 15-2, Part 2, Article 4 – Structural Design Criteria and Requirements.
- (vi) DB Co shall resurface Scott Street, from Churchill Avenue to Goldenrod Driveway / Smirle Avenue, prior to the implementation of the W-1 detour.
- (d) DB Co shall ensure that the existing Tunney's Pasture Station bus service facilities including Platforms, Roadways, lay-bys and Bus Operator's facilities are available for OC Transpo services at all times including the following requirements:
- (i) The existing Tunney's Pasture Station bus facility shall remain in full service until after West Substantial Completion and upon notice by the City.
- (ii) DB Co shall stage the decommissioning of existing Tunney's Station bus platforms, bus lay-by and Operator's building facilities in a manner that maintains OC Transpo transit bus services at all times. Work that is required after the OC Transpo bus service is removed shall be completed after West Substantial Completion and upon notice by the City, and shall be considered Remaining Works.
- (iii) DB Co shall ensure any required temporary bus lay-by areas shall be equivalent in capacity to the existing bus lay-by area and be fully integrated to the Station access roads. The bus lay-by area shall maintain the Operator's building facilities with all services.
- (iv) DB Co shall ensure that the existing temporary bus only connection from the Tunney's Pasture bus facility to Scott Street shall remain in full service until such time as the new Goldenrod Driveway Bridge and signalized Protected Intersection

at Scott Street are constructed and Commissioned for service. The following sequence of Work shall be followed:

- A. The W-1 detour shall not be implemented until the new Goldenrod Driveway Bridge is constructed, Commissioned and operational.
 - B. No work on the Tunney's Pasture bus facility shall begin until the new Goldenrod Driveway Bridge and Scott Street at Goldenrod Driveway Protected Intersection are constructed, Commissioned, and operational.
 - C. Transfer of Transit services to the Goldenrod Driveway Bridge shall be scheduled during a non-Peak Period subject to review and approval by the City.
 - D. The existing temporary bus connection and intersection to Scott Street shall be removed immediately after the Goldenrod Driveway Bridge is Commissioned including the realignment of the MUP to the new intersection crossing.
- (e) DB Co shall maintain transit services at Westboro Station at all times. DB Co shall complete the following prior to Commissioning the W-1 Transitway detour:
- (i) DB Co shall construct temporary Transitway Station facilities on Scott Street for EB transit services. The temporary facilities shall include all transit service facilities features currently present at Westboro Station, including but not limited to the requirements in Appendix E of this Part 7. The temporary Station facilities shall be within 200 metres of the existing Station to maintain existing transit user connectivity. The temporary Station facilities shall be designed and constructed to safely accommodate the EB cycling facility passing through the Station.
 - (ii) DB Co shall construct temporary Transitway Station facilities at the southern platform at Westboro Station for WB transit services. The temporary facilities shall include any features currently present at Westboro Station, including but not limited to the requirements in Appendix E of this Part 7. DB Co shall maintain safe pedestrian access from the north side of Westboro Station to the temporary Transitway facilities on Scott Street at all times, including but not limited to the two pathways connecting to Lanark Avenue. Pedestrian access shall be separated from construction activities and construction accesses in a safe manner. DB Co shall construct the temporary Transitway Station facilities so as to accommodate the safe passage of WB cyclists through the Station.
 - (iii) DB Co shall, during design, investigate with the City and OC Transpo to determine if it is beneficial to modify the two pedestrian signals at Athlone Avenue and Tweedsmuir Avenue to provide Transit Priority. This investigation shall also consider the addition of Crossrides for cyclists.

- (iv) DB Co shall maintain the connection from Westboro Station to the Transitway trench until such a time that construction begins on the Westboro bus lay-up loop. Until that time, the Transitway trench access shall be left open to be used as a potential construction access.
- (f) DB Co shall not construct the pedestrian plaza on the south side of Westboro Station until the W-1 Transitway detour is no longer in use, since this area shall be used as the WB Platform for detoured Transitway buses.
- (g) DB Co shall ensure any construction activity undertaken by DB Co at intersections in the Scott St corridor shall not impact the W-1 Transitway detour, or shall take place as Remaining Works (completed after West Substantial Completion and upon notice by the City) so as to not impact the W-1 Transitway detour.
- (h) DB Co shall not allow lighting to spill into wooded areas around W-1 construction zones between May 15th and July 15th construction periods.

3.7 SJAM Parkway Segments W-2, W-3 & W-4 – Dominion Station to Lincoln Fields Station

- (a) OC Transpo bus services within Segments W-2, W-3 & W-4 are located on the SJAM Parkway from Dominion Station to Lincoln Fields Station. The bus services on SJAM shall remain in service at all times during construction.
- (b) A section of the SJAM Parkway shall be reconstructed in this contract. DB Co shall be responsible for undertaking traffic staging and construction sequencing of the SJAM Parkway road reconstruction in a manner that maintains uninterrupted general traffic services and bus services.

3.8 Southwest Transitway Segment SW-2 - Lincoln Fields Station to Iris Station

- (a) OC Transpo bus services within Segment SW-2 are located on the Southwest Transitway from Lincoln Fields Station to Iris Station. The bus services on the Southwest Transitway including the Transitway ramps to and from Highway 417 and the dedicated bus access roads to and from Lincoln Fields Station shall remain in service at all times until after West Substantial Completion and upon notice by the City, unless specified otherwise. Any work required after this date shall be considered Remaining Works.
- (b) DB Co shall maintain a minimum of two traffic lanes in each direction on Carling Avenue at all times between Lincoln Fields Station and the existing Transitway Bridge during construction of the new Carling Avenue Bridge.
- (c) DB Co shall maintain the pedestrian Bridge connection from Lincoln Fields Station to Carling Avenue for as long as possible. DB Co shall not decommission the pedestrian Bridge until the temporary ramp, MUP and signalized intersection, as described in Clause 3.8(d) of this Part 7, are constructed and Commissioned.

- (d) DB Co shall maintain transit services at Lincoln Fields Station at all times. Prior to decommissioning any component of the existing Lincoln Fields Transitway Station, DB Co shall provide the following:
- (i) DB Co shall be responsible for the design, construction and maintenance of temporary facilities to the City and OC Transpo standards and specifications, including but not limited to the requirements in Appendix E of this Part 7.
 - (ii) DB Co shall ensure dedicated bus access roads are available to and from Lincoln Fields Station temporary facilities. Where required, DB Co shall provide detours to the City and OC Transpo standards and specifications.
 - (iii) DB Co shall provide a temporary bus-only ramp on the south side of Carling Avenue connecting to the existing Transitway:
 - A. The temporary bus-only ramp shall connect with Carling Avenue at a signalized intersection, located west of the new Carling Avenue Bridge and east of the existing Carling Avenue Bridge;
 - B. The ramp shall be constructed prior to the closure of direct vehicular access from Carling Avenue to Lincoln Fields Station and prior to the closure of the pedestrian Bridge from Carling Avenue to Lincoln Fields Station; and
 - C. DB Co shall provide a MUP on the west side of the bus ramp, connecting to the existing MUP on the east side of the Transitway. The MUP shall meet all standards as outlined in Schedule 15-2, Part 6 – Urban Design, Landscape Architecture and Connectivity Requirements.
 - D. The ramp shall connect to the Transitway south of Carling Avenue, at a three leg intersection, with a stop control on the approach from the ramp.
 - E. The provision of this temporary bus-only ramp shall not increase the number of blocks on this segment of Carling Avenue for the purposes of Schedule 34 Mobility Matters calculations.
 - (iv) DB Co shall be responsible to provide bus lay-by areas to facilitate Lincoln Fields Station operations at all times. The lay-up areas shall be equivalent in capacity to the existing bus lay-up area (minimum 10 articulated buses) and be fully integrated into access roads and to the satisfaction of the City and OC Transpo. The existing bus lay-up areas consist of six articulated bus spaces (4.5m x 30m marked spaces) in the lay-up area east of the station, and approximately four articulated bus spaces on the perimeter of the main Platform area. In the event that the Lincoln Fields lay-up area cannot fully serve the OC Transpo route(s) scheduled start times of the 2018 Post-LRT Stage 1 Transit Service Plan when the new Lincoln Fields Station is being constructed, a temporary lay-up in closer proximity to the Transitway shall be provided by DB Co. Such a lay-up shall be

established to enable buses to start their route on time and on schedule. This temporary lay-up area will be required, in a location to be determined by DB Co, in consultation with the City and OC Transpo, and be in close proximity to temporary platforms and bus bays. The temporary lay-up area is considered to be a component of DB Co's Transitway detour requirements, and all Station facilities shall be as required in Appendix E of this Part 7.

- (v) Temporary bus facilities shall remain in service at all times until after West Substantial Completion and upon notice by the City.
- (vi) DB Co shall be responsible for the decommissioning and removal of the temporary bus facilities in accordance with Schedule 15-2, Part 1 – General. This work shall be completed after West Substantial Completion and upon notice by the City, and shall be considered Remaining Works.
- (e) DB Co shall provide a signalized pedestrian crossing of Carling Avenue in close proximity to Lincoln Fields Station, east of the temporary signalized intersection prior to decommissioning the temporary bus ramp and signalized intersection.
- (f) DB Co shall maintain the pedestrian and cycling access from the Lincoln Fields Station or any temporary Lincoln Fields Station facilities to the signalized pedestrian crossing of the SJAM Parkway northwest of Lincoln Fields Station throughout construction.
- (g) Within the Segment SW-2 the Transitway services shall remain in service at all times until West Substantial Completion and upon notice by the City. South of Lincoln Fields Station, DB Co shall, as required to accommodate both the Guideway and the Transitway, design, construct and commission the realignment of the existing Transitway facility to Iris Station. The realigned sections of the Transitway shall match the existing Transitway by maintaining one lane in each direction at all times. The realignment of the Transitway shall also connect to the existing N-W and W-N/S Transitway ramps at Highway 417. The construction of the realignments shall be staged in a manner that maintains uninterrupted Transit services at all times.

3.9 Southwest Transitway Segment SW-1 - Iris Station to Baseline Station

- (a) DB Co's approved Transitway staging and detour plans for SW-1 from Iris Station to Baseline Station shall be commissioned and in operation prior to full closure of any component of the SW-1 Transitway from Iris Station to Baseline Station
- (b) Prior to the closure of Iris Street to construct the Iris Street overpass, DB Co shall design, construct and commission the following:
 - (i) DB Co shall construct an Iris Street detour to the extents required to construct the Iris Street Bridge structure. The Iris Street detour shall be located north of the existing Iris Street. The Iris Street detour shall connect to the Transitway north of Iris Street at a three-leg signalized intersection. DB Co shall provide crosswalks on the north and east legs of this intersection;

- (ii) DB Co shall design and construct a second Transitway/Iris Street detour intersection to facilitate the continuation of the Transitway bus services south of Iris Street to the Baseline Station. DB Co shall provide a crosswalk on the west leg of this intersection. The Iris Street to Baseline Station Transitway connection shall remain in service until such time as the SW-1 detour is not required;
- (iii) DB Co shall design the temporary Iris Street detour and Transitway connections in such a manner that the footprint of these facilities does not impact the ultimate alignment of the realigned Pinecrest Creek low-flow channel, as per the Pinecrest Creek details in Schedule 15-2, Part 2, Article 5 – Drainage and Stormwater Management Design Criteria.
- (iv) DB Co shall maintain transit services at the Iris Station at all times until West Substantial Completion and upon notice by the City. Prior to decommissioning any component of the existing Iris Transitway Station, DB Co shall provide the following:
 - A. DB Co shall relocate the existing Iris Station Transitway facilities in a location that is approved by OC Transpo and the City. DB Co's temporary facilities shall include any features currently present at the Iris Station, including but not limited to: the requirements in Appendix E of this Part 7. The temporary Station facilities shall be located within 100 metres of the Iris Street detour/Transitway intersection to maintain existing transit user connectivity. The temporary Station shall meet the following requirements:
 - B. DB Co shall consolidate the existing bus stop on the west side of the Transitway, and the bus stop on the south side of Iris Street, locate the consolidated bus stop on the west side of the Transitway, north of Iris Street.
 - C. DB Co shall relocate the bus stop on the north side of Iris Street further to the west and remain on the north side of Iris Street.
 - D. DB Co shall relocate the bus stop on the east side of the Transitway further north and remain on the east side of the Transitway.
- (v) DB Co shall construct a temporary MUP along the south side of the Iris Street detour in order to maintain connectivity of the Pinecrest Creek Pathway.
- (c) After completion and commissioning of the Iris Street Bridge, DB Co shall not close the Iris Street detour or Transitway connections and facilities until the following are designed, constructed and commissioned:
 - (i) DB Co shall construct a temporary Transitway/Iris Street intersection from north of Iris Street to a location west of the Iris Street Bridge. The Transitway intersection shall include a connection to Iris Street at a temporary signalized

intersection, with one lane in each direction at each approach and crosswalks on all three legs of the intersection.

- (ii) DB Co shall relocate the Iris Station Transitway facilities in a location that is approved by OC Transpo and the City. DB Co's temporary facilities shall include any features currently present at the Iris Station, including but not limited to the requirements in Appendix E of this Part 7. The temporary Station facilities shall be located within 100 metres of the Iris Street/Transitway intersection to maintain existing transit user connectivity. The temporary Station shall meet the following requirements:
 - A. DB Co shall consolidate the existing bus stop on the west side of the Transitway, and the bus stop on the south side of Iris Street, locate the consolidated bus stop on the west side of the Transitway, north of Iris Street.
 - B. DB Co shall relocate the bus stop on the north side of Iris Street further to the west and remain on the north side of Iris Street.
 - C. DB Co shall relocate the bus stop on the east side of the Transitway further north and remain on the east side of the Transitway.
- (iii) DB Co shall decommission the temporary Iris Station facilities after West Substantial Completion and upon notice by the City, and shall be considered Remaining Works
- (iv) DB Co's SW-1 transit detour shall be located on Iris Street and Woodroffe Avenue. DB Co shall be responsible for design and implementation of the detour requirements, which shall include the addition of a northbound bus only lane on Woodroffe Avenue, between Baseline Road and Iris Street. DB Co's design shall widen Woodroffe Avenue on the east side and shall maintain sidewalks on both sides of Woodroffe Avenue throughout construction. DB Co's design shall also address the following:
 - A. Provide for a 3.5m wide northbound bus lane located adjacent to the center median/centre line. Two northbound general traffic lanes shall also be provided, with the curbside lane being 3.5m wide and the adjacent lane being 3.25m wide. The bus lane shall begin at the Baseline Road/Woodroffe Ave intersection and continue north and connect to the existing northbound left turn lane at Iris Street, which shall be widened to 3.4m. The northbound left turn movement at Woodroffe Avenue and Iris Street shall be shared between buses and general traffic.
 - i. To accommodate the above lane widths, lane widths in the southbound direction on Woodroffe Avenue between Iris Street and Baseline Road shall be 3.5m for the curb lane and 3.25m for the median lane.

- B. Provide for a 3.5m wide southbound queue jump lane for buses at the intersection of Woodroffe Avenue and Baseline Road. The queue jump lane shall replace one of the existing southbound general traffic lanes, adjacent to the southbound right turn lane. DB Co shall construct the lane so that it does not impact the ability of southbound vehicles to make a right turn onto Baseline Road.
 - C. Provide for a southbound cycle track and boulevard on the west side of Woodroffe Avenue, from north of Iris Street to south of the signalized intersection with the Pinecrest Creek Pathway, as per Schedule 15-2, Part 2, Clause 6.19. At the signalized intersection, DB Co shall ensure that the cycle track ties into the existing Pinecrest Creek Pathway in an acceptable manner to the City.
 - D. Provide for a northbound cycle track and boulevard on the east side of Woodroffe Avenue, beginning at a point 35m south of Iris Street, and transitioning back to on-road cycling lanes in front of [REDACTED], as per Schedule 15-2, Part 2, Clause 6.19.
 - E. Provide for crossrides in the northbound and southbound directions at the intersection of Woodroffe Avenue and Iris Street.
 - F. Provide minimum sidewalk, boulevard and buffer widths as per Schedule 15-2, Part 2, Article 6 – Roadways, Bus Terminals and Lay-bys.
 - G. Reinstate Woodroffe Avenue after West Substantial Completion as per Schedule 15-2, Part 2, Article 6 – Roadways, Bus Terminals and Lay-bys.
- (v) DB Co shall analyze the traffic operations on the prescribed detour route and recommend any modifications to traffic controls along that route that would serve to improve the operations of the transit detour as part of the TCP sub-plan submitted for this detour, including but not limited to, the intersection of Iris Street and Adirondack Drive.
- (d) DB Co's approved Transitway staging and detour plans for the West Transitway from Lincoln Fields Station to Queensway Station shall be Commissioned and in operation prior to full closure of any component of the West Transitway from Lincoln Fields Station to Queensway Station.
- (e) Transit Access and Circulation Roadway Closures – Baseline Station:
- (i) DB Co shall only allow construction vehicles to enter Baseline Station via the southernmost access on Woodroffe Avenue. DB Co shall restrict construction vehicles to a right-in, right-out movement only at this access during Peak Periods. In Baseline Station, construction vehicles shall only be permitted to drive between Woodroffe Avenue and the construction access point. This access shall be subject to monitoring and review and may be further restricted to Off Peak Periods only if

operations are not conducive to maintain transit operations to OC Transpo's satisfaction.

- (ii) DB Co shall not decommission any of the existing lay-up berths or transit operator facilities at Baseline Station until the new, permanent lay-up berths and transit operator facilities are designed, constructed and Commissioned.
- (iii) DB Co shall not close any of the existing platforms or roadways at Baseline Station, or the existing northern lay-up area, until the new, permanent Baseline Transitway Station has been designed, constructed, and Commissioned.
- (iv) DB Co shall maintain use of the existing Transitway from Baseline Station to Iris Station as long as possible.
- (v) DB Co shall develop a TCP identifying all changes to operational functions and submit to the City as part of the Works Submittals in accordance with Schedule 10 – Review Procedure for review, where construction pursuant to this Project requires lane closures to bus circulation Roadways within Baseline Station. DB Co shall provide 35 calendar days' notice prior to the day on which the closures shall be required.
- (vi) DB Co shall decommission the existing Baseline Station after West Substantial Completion and upon notice by the City, as per Schedule 15-2, Part 1, Article 14 - Demolition, Removals and Disposal.
 - A. DB Co shall maintain two lanes at the existing Baseline Station after West Substantial Completion.
- (vii) College Avenue and Navaho Drive west of Woodroffe Avenue shall be considered bus circulation Roadways within Baseline Station and shall be subject to Clause 3.5 of this Part 7.

3.10 West Transitway Segment W-5 – Lincoln Fields Station to Queensway Station

- (a) OC Transpo bus services within Segment W-5 are located on the Southwest Transitway from Lincoln Fields Station to Queensway Station. The bus services on the Southwest Transitway including the Transitway ramps to and from Highway 417 and the dedicated bus access roads to and from Lincoln Fields Station shall remain in services at all times until West Substantial Completion and upon notice by the City, unless specified otherwise.
 - (i) DB Co shall be permitted to close the W-N/S ramp between Highway 417 and the Southwest Transitway once construction of the Track alignment eliminates the feasibility of this connection. The connection is to be maintained as long as possible prior to closure. Upon closure, Transitway services shall be re-routed via Woodroffe Avenue and Iris Street to rejoin the Southwest Transitway. Advance

notification and restrictions shall apply as described in Article 3.1 – General Requirements, of this Part 7.

3.11 West Transitway Segment W-6 - Queensway Station to Pinecrest Station

- (a) OC Transpo bus services within Segment W-6 are located on Highway 417 from Queensway Station to Pinecrest Station. Access to Highway 417 from the SW-2 Transitway is via dedicated bus only ramps that are to remain in service at all times during construction.
- (b) Bus Circulation, Pedestrian Circulation and Roadway Closures – Queensway Station:
 - (i) DB Co shall maintain all stairways and access to all stairways from upper to lower level platforms and MUPs at Queensway Station at all times throughout construction to ensure pedestrian connectivity, with the following exception:
 - A. The east side stairways shall remain open until construction has advanced to the point that pedestrian access to the east side of the Transitway is no longer possible. DB Co shall provide a minimum of 90 days advance notice of this closure. Once the east side stairways have closed, DB Co shall implement a controlled crossing of the Transitway between the stops to the satisfaction of the City. The City shall confirm with DB Co the type of crossing to be implemented (e.g., PXO Type C, temporary pedestrian signal, etc.) a minimum of 75 days prior to the closure of the east side stairways.
 - (ii) DB Co shall ensure the N-W ramp from the Southwest Transitway to Highway 417 remains open throughout the duration of construction.
 - (iii) DB Co shall ensure the W-N/S ramp from Highway 417 to the Southwest Transitway remains open until after implementation of the SW-2 detour, at such a time that the construction of the LRT Track inhibits buses on the ramp from accessing the Transitway.
 - (iv) DB Co shall decommission the N-W ramp from the Southwest Transitway to Highway 417, the W-N/S ramp from Highway 417 to the Southwest Transitway, and the remainder of Queensway Station after West Substantial Completion and upon notice by the City, and shall be considered Remaining Works. DB Co shall submit their design for the removal of these ramps and the Station in accordance with Schedule 10 – Review Procedure. The design shall require the approval of the City and MTO.
 - (v) DB Co shall maintain the bus-only lane on the 417 E-N/S off ramp at Pinecrest Road until after West Substantial Completion and upon notice by the City. Removal of this lane shall be considered Remaining Works.

3.12 West Transitway Segment W-7 - Pinecrest Station to Bayshore Station

- (a) DB Co's approved Transitway staging and detour plans for W-7 from Pinecrest Station to Bayshore Station shall be commissioned and in operation prior to full closure of any component of the W-7 Transitway from Pinecrest Station to Bayshore Station.
- (b) DB Co shall implement a W-7 Transitway detour along Highway 417 from Pinecrest Station to Bayshore Station.
 - (i) DB Co's W-7 Transitway detour route is to remain in operation until after West Substantial Completion and upon notice by the City.
 - (ii) DB Co's WB W-7 Transitway detour shall utilize a route from Pinecrest Station, southbound on Pinecrest Road westerly on the new Highway 417 N-W ramp, WB Highway 417 shared lanes from Pinecrest Road to Bayshore Drive, WB on Woodridge Crescent via Bayshore Drive to the westernmost Bayshore Shopping Centre entrance southbound into Bayshore Station.
 - (iii) DB Co's EB W-7 Transitway detour shall utilize a route from Bayshore Station westerly on the Bayshore Station access road to Holly Acres Road, southbound on Holly Acres Road to the new temporary Highway 417 N/S-E bus-only ramp, EB on Highway 417 shared lanes from Holly Acres Road to Greenbank Road EB off ramp, where buses will travel through the intersection of Greenbank Road/Iris Street to access the temporary station on Greenbank Road/Highway 417 S-E ramp, then continue EB on Highway 417.
- (c) The prescribed detour route, in Clause 3.12 (b) (iii), of this Part 7, requires Roadway modifications and access modification that are described in Clause 3.12 (d), of this Part 7. DB Co shall conduct a PIC, in accordance with the provisions of Schedule 18 – Communication and Stakeholder Engagement Obligations, at least 90 calendar days prior to the start of the W-7 Transitway detour to inform and consult with the public on the details of the detour. In addition to general information regarding the traffic and transit management measures to be used and the timelines associated with the detour, the PIC shall provide specific information concerning: the temporary closure of the Richmond Road N-E ramp, the opening of the temporary Holly Acres N/S-E bus-only ramp, the potential addition of a third eastbound left turn lane to the Highway 417 W-N/S ramp terminal at Greenbank, and the closure of the Ashley Street connection to the Highway 417 W-N/S ramp terminal at Greenbank. DB Co shall prepare a report following the PIC, to be submitted to the City and MTO, summarizing the feedback received from the public, as well as any resultant recommended revisions to DB Co's detour plan.
- (d) Transit Access and Circulation Roadway Closures – Pinecrest Station:
 - (i) DB Co shall maintain the full use of both Station platforms at Pinecrest Station for the full duration of construction until the following are designed, constructed and commissioned or unless approval from the City and OC Transpo is otherwise obtained.

- A. DB Co shall design and construct the new N-W ramp from Pinecrest Road to Highway 417, as part of the Pinecrest interchange project outlined in Schedule 15-2, Part 9 – Highway Works;
- B. DB Co shall design and construct a bus loop west of Pinecrest Station to be used for a bus turnaround when the West Transitway from Pinecrest Station to Bayshore Station is closed. The bus loop shall accommodate the turnaround radius for all bus types used by OC Transpo;
- C. DB Co shall design and construct a temporary bus platform on the S-E ramp from Greenbank Road to Highway 417, to accommodate detoured EB Transitway buses. The temporary facilities shall include any features currently present at Pinecrest Station, including but not limited to the requirements in Appendix E of this Part 7;
 - i. DB Co shall decommission the temporary Pinecrest Station facilities at the S-E ramp from Greenbank Road to Highway 417 after West Substantial Completion and upon notice by the City, and shall be considered Remaining Works.
 - ii. DB Co shall evaluate whether modifying the W-N/S ramp terminal intersection at Greenbank Road/Iris Street to include a third eastbound left turn lane (transit-only) on the outside of the existing dual left turn lanes would provide a travel time benefit to eastbound OC Transpo buses while on detour. If the study finds this to be beneficial, DB Co shall modify the intersection to provide such a third eastbound left turn lane with maximized storage length, to the satisfaction of the City and MTO. DB Co shall include this analysis in their TTMP submission. The modification shall be temporary in nature, and DB Co shall restore the intersection to its pre-existing condition as Remaining Works.
- D. DB Co shall design and construct a widening of the west side of the intersection of Greenbank Road and Lisa Avenue to accommodate two EB lanes;
 - i. Upon completion of the widening, DB Co shall coordinate the temporary closure of Ashley Street to the W-N/S ramp with MTO and the City of Ottawa. The closure shall not impact the northernmost access to the property at [REDACTED].
- E. DB Co shall design and construct the new temporary N/S-E bus-only ramp from Holly Acres Road onto Highway 417, as part of the MTO Highway 417 widening project, in accordance with the provisions of Schedule 15-2, Part 9 – Highway Works. The design of this on-ramp shall be to the satisfaction of MTO and shall include:

- i. An on-ramp that is a single lane at the intersection with Holly Acres Road, allowing transit traffic only. The temporary on-ramp shall allow for the following traffic movements: southbound left turn, northbound right turn, eastbound through (from the S/W-N/S off-ramp).
 - ii. An eastbound lane on the existing Highway 417/Highway 416 off-ramp that shall terminate at a point 160m west of Holly Acres Road. DB Co shall conduct a traffic analysis of the intersection with Holly Acres Road to determine the recommended eastbound lane configuration at this intersection. This analysis shall consider that OC Transpo buses must be able to make both the eastbound left turn and eastbound through movements at this intersection, in addition to the southbound left turn movement; and,
 - iii. The existing median southbound through lane shall be temporarily converted into a southbound left turn lane.
 - iv. The existing Richmond Road N-E on-ramp shall be temporarily closed upon the opening of the Holly Acres N/S-E ramp and the commencement of the W-7 Transitway detour.
 - v. The temporary Holly Acres N/S-E on-ramp shall be closed and the Richmond N-E on-ramp shall be re-opened upon notice by the City as part of the Remaining Works.
- (ii) Construction vehicles shall not be permitted on the West Transitway west of Pinecrest Road, until such a time that the N-W ramp from Pinecrest Road to Highway 417 has been closed. When permitted on the Transitway, construction vehicles shall be restricted to travel between Pinecrest Road and the construction access point.
- A. Construction vehicles shall not be permitted in Pinecrest Station during Peak Periods.
- (e) Transit Access, Pedestrian Circulation and Roadway Closures – Bayshore Station:
- (i) Construction vehicles shall enter the Bayshore Station area directly from Holly Acres Road into the construction staging area, located at the southeast corner of Holly Acres Road / Highway 417 N/S-W ramp.
 - A. If access further east into Bayshore Station is required, it shall be made directly from the construction staging area.
 - B. Construction vehicles shall exit from the Bayshore Station area via the signalized intersection of Holly Acres Road / Highway 417 N/S-W ramp. Permitted hours of access shall be established based on a review by OC

Transpo and may be limited to Off Peak Periods in order to maintain an acceptable frequency of service to the Transitway detour operation in peak hours.

- C. The construction access onto the Bayshore Station access road shall be provided as far west as possible to avoid potential conflicts with Bayshore Station operations.
- (ii) DB Co shall maintain the full use of all Station platforms at Bayshore Station for the full duration of construction until the following are designed, constructed and Commissioned or unless approval from the City and OC Transpo is otherwise obtained.
- A. Construction of the LRT bridge over Holly Acres Road. DB Co shall stage construction of the bridge in the following order:
 - i. Required construction west of Holly Acres Road, including but not limited to the west bridge abutment and the new N/S-W on-ramp from Holly Acres Road to Highway 417. DB Co shall not be permitted to close the existing N/S-W on-ramp until the new N/S-W on-ramp is constructed.
 - ii. Required construction in the median of Holly Acres Road, including but not limited to the median pier. Prior to construction in the median on Holly Acres Road, DB Co shall ensure the new S-W on-ramp is open and operational. This will permit DB Co to use the available space of the former northbound left turn lane and hatched northbound lane on Holly Acres Road as part of its construction zone.
 - 1 DB Co shall undertake a traffic study for the temporary and ultimate intersection of Holly Acres Road at Bayshore Station access, including the new N/S-W on-ramp, to ensure the intersection operates acceptably, and that vehicles can safely make the northbound left turn from Holly Acres Road onto the N/S-W ramp.
 - iii. Required construction east of Holly Acres Road, including but not limited to the east bridge abutment.
 - B. Construction within Bayshore Station to accommodate the temporary Bayshore Station arrangement, including:
 - i. A separate two-way access to the Transitway east of the existing Bayshore Station. This access shall be located far enough east that it will not be impacted by construction on the ultimate Bayshore Station;

- ii. A temporary lay-up and temporary bus Platform area west of the existing local bus Platforms. The lay-up area shall match the capacity of the existing lay-up area at Bayshore Station, and the Transitway Platforms shall match the lengths provided today for the existing Transitway Platforms;
- (f) DB Co shall complete the following as Remaining Works:
- (i) Designate the additional eastbound lane on the Highway 416/Highway 417 off-ramp at Holly Acres Road as a general traffic left turn lane. Re-assign the lanes on the eastbound approach to accommodate two left turn and two right turn lanes;
 - (ii) Construct the ultimate alignment for the intersection of Holly Acres Road at Bayshore Station, as outlined in Schedule 15-2, Part 2, Article 6 - Roadways, Bus Terminals and Lay-bys;
 - (iii) Construct the ultimate layout for Bayshore Station, and reinstate the temporary lay-up and Transitway platform area of Bayshore Station to existing conditions.
 - (iv) Re-open the temporarily closed Richmond Road N-E ramp and close the Holly Acres N/S-E bus-only on-ramp.

3.13 West Transitway Segments W-8 & W-9 - Bayshore Station to Moodie Station

- (a) DB Co's approved Transitway staging and detour plans for W-8 (from Bayshore Station to Holly Acres Road) and W-9 (from Holly Acres Road to Moodie Station) shall be commissioned and in operation prior to full closure of any component of the Transitway from Bayshore Station to Moodie Station.
- (b) DB Co shall stage the construction of the LRT from Bayshore Station to Moodie Station in such a manner that minimizes the duration of the closure of the Transitway between Bayshore Station and Moodie Station.
- (c) Upon closure of the Transitway between Bayshore Station and Moodie Station, DB Co shall implement a transit detour along Highway 417 from Bayshore Station to Moodie Station.
 - (i) DB Co's W-8 and W-9 transit detour routes shall remain in operation until after West Substantial Completion.
 - (ii) DB Co's WB W-8 and W-9 transit detour shall utilize a route from Bayshore Station, WB along the Bayshore Station access road to Holly Acres, WB onto the Highway 417 N/S-W ramp at Holly Acres Road, WB Highway 417 shared lanes from Holly Acres Road to Moodie Drive, WB through the intersection of Moodie Drive at Highway 417 E-N/S ramp, and continue WB on its standard route.
 - (iii) DB Co's EB W-8 and W-9 transit detour shall utilize a route from Highway 417 EB, EB on the Highway 417 W-N/S ramp at Moodie Drive, EB through the

intersection of Moodie Drive at Highway 417 W-N/S ramp, EB on Highway 417, EB on the Highway 417 W/S-N/S ramp at Holly Acres Road, and then across Holly Acres Road onto the Highway 417 N/S-E ramp or NB on Holly Acres Road and EB into Bayshore Station via the Bayshore Station Access Road.

- A. DB Co shall work with OC Transpo to ensure at least one EB bus route from Kanata serves the intersection of Moodie Drive and Corkstown Road.
 - B. DB Co shall ensure that the EB detour provides for both access to Bayshore Station, as well as bypassing of Bayshore Station.
- (iv) DB Co shall maintain the existing OC Transpo stops located on the W-N/S and E-N/S off-ramps at Moodie Drive, to be used by Transitway buses during the detour period.
- (d) DB Co shall maintain the full use of the West Transitway Extension from Bayshore Station to Moodie Station, the full use of both Station platforms at the existing Corkstown BRT Station, the existing PPUDO, as well as the EB transit-only ramp from Moodie Drive, until the following are designed, constructed and commissioned unless approval from the City is otherwise obtained:
- (i) The N/S-E ramp from Holly Acres Road onto Highway 417, as part of the Highway Work, in accordance with the provisions of Schedule 15-2, Part 9 – Highway Works, and as described in Clause 3.12 of this Part 7.
 - (ii) Bus shelter pads and bus shelters are installed on:
 - A. The east side of Moodie Drive, immediately north of the Highway 417 E-S ramp signalized intersection; and,
 - B. The south side of the Highway 417 W-N ramp, immediately west of the Moodie Drive signalized intersection.
- (e) Construction vehicles shall not be permitted in the Corkstown BRT Station or on the Transitway in the vicinity of Corkstown BRT Station, until such a time that the West Transitway Extension is fully closed for construction.
- (f) DB Co shall stage construction of the Highway 417 N-W ramp at Moodie Drive so that it remains open at all times to accommodate OC Transpo service westbound to Kanata.

3.14 East Transitway Segment E-1 - Blair Station to OR174 Transitway Bridge

- (a) DB Co's approved Transitway staging and detour plans for E-1 from Blair Station to OR174 Transitway Bridge shall be commissioned and in operation prior to full closure of any component of the E-1 Transitway from Blair Station to OR174 Transitway Bridge

- (b) Prior to any partial closure of the WB bus lanes from OR174 Transitway Bridge to Blair Station, DB Co shall design, construct and commission the following:
- (i) Reconstruct the east side of the intersection of Blair Road / OR174 E-N/S ramp to accommodate a WB through bus-only lane, and replace the existing northeast island and channelized WB right-turn lane with a right-turn lane at the traffic signal, as well as any modifications required to the intersection (including the north median) to accommodate the noted changes;
 - (ii) Repurpose the southernmost lane on the west side of the intersection of Blair Road / OR174 E-N/S ramp to accommodate an EB right turn bus-only curbside lane. The existing general traffic lanes on the west side of the intersection shall be maintained;
 - (iii) Implementation of a transit signal priority for the EB right turn movement at the intersection of Blair Road / OR174 E-N/S ramp; and
 - (iv) Extend the WB OR174 bus-only lane to the start of the E-N/S ramp.
 - (v) Undertake a traffic study including a detailed intersection operation and level of service analysis, considering vehicular and non-vehicular road user needs at the intersection of Blair Road and OR174 E-N/S ramps. DB Co shall demonstrate that the traffic and transit operations and associated levels of service are acceptable and feasible using projected traffic volumes and expected transit operations for 2031 horizon year, including pedestrian and cyclist movements.
 - A. DB Co shall submit to the City the results of the above-noted traffic analysis report and seek approval from the City at least 20 calendar days prior to initiating the development of geometric design.
 - (vi) No reinstatement is required to the Roadway at this location after East Substantial Completion.
- (c) Prior to the full closure of the Transitway from Blair Station to OR174 Transitway Bridge, DB Co shall design, construct and Commission the following:
- (i) Widen Blair Road at the intersection with OR174 W-N/S to accommodate a dedicated southbound left turn lane for general traffic. Southbound lane configuration at this intersection shall be two southbound through lanes and a southbound left turn lane, with all lanes having a 3.5m width;
 - A. The widening of Blair Road shall preserve a 4m space on the west side of Blair Road, between the edge of the southbound lane and the guard rail, to accommodate a future cycling facility; and,

- B. Widening shall take place on the east side of Blair Road, as required to accommodate all lanes, and will require the relocation of two streetlights and adjustment of traffic signal poles.
- (ii) Repurpose the existing WB bus-only right turn lane at the Blair Road / OR174 W-N/S intersection to accommodate a WB general purpose left turn lane;
- (iii) Widen the OR174 N/S-E ramp at Blair Road to accommodate two lanes at a point 180m east of Blair Road. At this point, the southernmost lane shall be a bus-only lane. This bus-only lane shall continue onto OR174 EB, and connect with the existing OR174 EB bus-only lane further east;
- (iv) Remove the crosswalk on the southern leg of the intersection of Blair Road at OR174 N/S-E Ramp.
- (v) Undertake a traffic study including a detailed intersection operation and level of service analysis, considering vehicular and non-vehicular road user needs at the intersection of Blair Road and OR174 W-N/S ramps. DB Co shall demonstrate that the traffic and transit operations and associated levels of service are acceptable and feasible using projected traffic volumes and expected transit operations for 2031 horizon year, including pedestrian and cyclist movements;
- A. DB Co shall submit to the City the results of the above-noted traffic analysis report and seek approval from the City at least 20 calendar days prior to initiating the development of geometric design; and,
- (vi) No reinstatement shall be required to intersection of Blair Road at OR174 W-N/S ramps, however the EB bus lane located on the N/S-E ramp shall be removed as Remaining Works.

3.15 East Transitway Segment E-2 to E-5 - OR174 Transitway Bridge to Trim Road Station

- (a) OC Transpo bus services within Segments E-2 to E-5 are currently located on OR174 bus only lanes from OR174 Transitway Bridge to Trim Road Station. These shall remain in service at all times during construction, unless otherwise permitted in this Part 7.
- (b) Transit Access and Circulation Roadway Closures – Montreal Station:
 - (i) DB Co shall maintain access to bus stops, Platforms and Stations for pedestrians and buses at all times. Provisions for access to transit shall be demonstrated in all TCPs prior to any sidewalk and/or pathway closures.
- (c) Transit Access and Circulation Roadway Closures – Jeanne d’Arc / OR174 interchange:
 - (i) Where construction pursuant to this Project requires lane closures within the vicinity of the Jeanne d’Arc / OR174 interchange, DB Co shall provide 35

calendar days' notice prior to the day on which the lane closures will be required. DB Co shall coordinate all lane closures with the City and OC Transpo.

- (ii) One sidewalk on Jeanne d'Arc Boulevard shall remain accessible to the public at all times during construction.
 - (iii) DB Co shall maintain access to bus stops, platforms and Stations for pedestrians and buses at all times. Provisions for access to transit shall be demonstrated in all TCPs prior to any sidewalk and/or pathway closures.
- (d) Orleans Boulevard
- (i) Both sidewalks on Orléans Boulevard shall remain accessible to the public at all times during construction.
 - (ii) DB Co shall maintain access to bus stops, platforms and Stations for pedestrians and buses at all times. Provisions for access to transit shall be demonstrated in all TCPs prior to any sidewalk and/or pathway closures.
- (e) Transit Access and Circulation Roadway Closures – Place d'Orléans Station:
- (i) Except as specified below, DB Co shall maintain public access between the Place d'Orléans bus terminals and the Park & Ride (north of OR174) via the pedestrian Bridge at all times during construction, as well as maintain public access to the bus terminal at ground level from the shopping center. Provisions for access to transit facilities shall be demonstrated in all TCPs prior to any sidewalk/pathway closures.
 - (ii) Access via the pedestrian Bridge may be interrupted during two 48-hour Weekend Periods to enable construction of interfaces between new Station facilities and the existing Bridge. Any hoarding required within the pedestrian Bridge to protect from construction zones shall not take up more than one metre of width inside the pedestrian Bridge. Provisions for access to transit facilities shall be demonstrated in all TCP sub-plans prior to any sidewalk/pathway closures.
 - (iii) The west sidewalk on Champlain Street shall remain accessible to the public at all times during construction both on the overpass and into the shopping center, with the exception of one 1-week permissible interruption to enable construction of interfaces between new Station facilities and the existing Bridge. This Work cannot occur simultaneously with the closure of the pedestrian Bridge described in (ii) above. The east sidewalk shall remain accessible to the public at all times.
 - (iv) DB Co shall design and construct three temporary lay-by spaces in the curbside lane of Place d'Orleans Drive during staged construction, and prior to any reduction in lay-up capacity at Place d'Orléans Station. DB Co shall confirm the location of the temporary lay-by spaces with the City and submit the design in accordance with Schedule 10 – Review Procedure.

- A. DB Co shall provide an unobstructed opening in the concrete barrier wall between Place d'Orleans Drive and Place d'Orleans Station to provide bus operators with access to the Station. The location of the opening shall provide unobstructed sightlines and be visible to vehicles approaching west of the opening. DB Co shall confirm the location of the opening with the City.
 - B. DB Co shall design and construct an energy attenuator crash cushion system at the downstream edge of the opening in the concrete barrier.
 - C. Following the staged construction of Place d'Orleans Station, DB Co shall reinstate a continuous concrete barrier wall. This shall be completed as Remaining Works.
- (f) Transit Access and Circulation Roadway Closures – Trim Road Station:
- (i) DB Co shall maintain the existing quantity of parking stalls at the Trim Road Park and Ride (1067) throughout all stages of construction on the Trim Road Park and Ride and the intersection of realigned Trim Road at OR174 interchange. Notwithstanding the above, any request for a reduction of available stalls during a particular stage of construction shall be submitted to the City for approval. Any requests to reduce the number of stalls to fewer than 900 will not be granted.
 - (ii) DB Co shall construct the new bus loop, Station platforms, bus operator facilities and PPUDO prior to decommissioning the existing bus lay-up, Platform area, and bus operator facilities.

ARTICLE 4 EXISTING FEDERAL ROADWAYS

4.1 Permitted Periods of Closures on Federal Roadways

- (a) Construction on federal Roadways shall not be performed during the following Peak Periods unless noted as an exception in this Part 7:
 - (i) Monday to Friday inclusive: 06:30 to 09:30 hrs and 15:00 to 18:30 hrs.
- (b) DB Co shall develop a sequencing plan to minimize the length of the federal Roadway that is closed at any one time.

4.2 Restrictions on Construction Operations on Federal Roadways

- (a) DB Co shall liaise with the City, and the Governmental Authority that has governance over the subject federal Roadway and arrange all Work on the federal Roadway to the written satisfaction of said Governmental Authority, and, DB Co shall include in their Work submission of the TTMP and TTMP sub-plans in accordance with Schedule 10 – Review Procedure, all of the documentation and drawings relevant to traffic management prepared in accordance with this Article 4, as accepted by the Governmental Authority, and include as well a copy of Governmental Authority acceptance of all of the Work proposed on the federal Roadway.
- (b) DB Co shall not proceed with any Work on federal Roadways without an accepted TTMP and TTMP sub-plans applicable to said Work.
- (c) Protection of Public Traffic
 - (i) DB Co shall comply with requirements of Acts, Regulations and By-Laws in force for regulation of traffic or use of Roadways upon or over which it is necessary to carry out Work or haul materials or equipment.
 - (ii) When working on traveled way, DB Co shall:
 - A. Place equipment in position to present minimum of interference and Hazard to traveling public.
 - B. Keep equipment units as close together as working conditions permit and preferably on same side of traveled way.
 - C. Not leave equipment on traveled way overnight.
 - (iii) DB Co shall erect suitable signs and devices in accordance with instructions contained in the OTM before re-routing traffic.
 - (iv) DB Co shall keep the traveled way graded, free of pot holes, and of sufficient width for required number of lanes of traffic. DB Co shall provide a minimum

Roadway width of 7.0m in each direction of travel through the Work and on detours.

- (v) DB Co shall provide and maintain road access and egress to properties fronting along Work and in other areas as indicated, unless other means of road access exist that meet approval of the City and the applicable Governmental Authority. Access to and from the Transitway shall be maintained during the construction of the SJAM Parkway.
- (d) Informational and Warning Devices
- (i) DB Co shall provide and maintain signs, flashing warning lights, temporary signals, and other devices required to indicate construction activities or other temporary and unusual conditions resulting from Project Work which requires road user response.
 - (ii) DB Co shall supply and erect signs, delineators, barricades, and miscellaneous warning devices as specified in the OTM. All signs shall be bilingual.
 - (iii) DB Co shall arrange and attend a meeting with the City and the Governmental Authority at least five working days prior to commencement of Work to review list of signs and other devices required for the Project. If the situation on Site changes, DB Co shall revise the list to the approval of the City and Governmental Authority, and, resubmit the TTMP and applicable TTMP sub-plan Work Submittals in accordance with Schedule 10- Review Procedure.
 - (iv) DB Co shall continually maintain TCDs in use by:
 - A. Checking signs daily for legibility, damage, suitability, and location. Clean, repair, or replace to ensure clarity and reflectance.
 - B. Removing or covering signs which do not apply to conditions existing from day to day.
- (e) Control of Public Traffic
- (i) DB Co shall provide flag persons, trained in accordance with, and properly equipped as specified in the OTM in the following situations:
 - A. When public traffic is required to pass working vehicles or equipment which block all or part of traveled Roadway.
 - B. When it is necessary to institute one-way traffic system through a construction area or other blockage where traffic volumes are heavy, approach speeds are high, and traffic signal system is not in use. Flag persons shall be provided (one at each access point to the Site) during Peak Periods when one-way traffic is operational.

- C. When workmen or equipment are employed on traveled way over brow of hills, around sharp curves, or at other locations where oncoming traffic would not otherwise have adequate warning.
 - D. Where temporary protection is required while other TCDs are being erected or taken down.
 - E. For emergency protection when other TCDs are not readily available.
 - F. In situations where complete protection for workmen, working equipment, and public traffic is not provided by other TCDs.
- (ii) DB Co shall submit a proposal in writing to the City four weeks before the anticipated date of construction, should DB Co plan to proceed with Work between November 15th of any calendar year and May 15th of the subsequent year. The proposal will be evaluated against such issues as, but not limited to, road maintenance activities and impacts on public traffic.
 - (iii) DB Co shall not be entitled to claim for any costs (direct or indirect) or extensions of time if the Governmental Authority refuses to allow Work between November 15th of any calendar year and May 15th of the subsequent year. The Governmental Authority reserves the right to restrict DB Co from working on days when inclement weather conditions are forecasted that will impact road conditions. The Governmental Authority will provide DB Co with 24 hours' notice to vacate the Work area and no Work shall commence until the Governmental Authority provides written notice for Work to resume.
 - (iv) DB Co shall keep the City informed of all ongoing Work related discussions with Governmental Authority, and shall via Work submittals made in accordance with Schedule 10 - Review Procedure, maintain all applicable TTMP and TTMP sub-plans current with respect to the Work as accepted by the federal Governmental Authority.

4.3 Construction on or Adjacent to Federal Roadways

- (a) The SJAM Parkway may be reduced to one lane of traffic in each direction using partial lane closures in accordance with the OTM for short duration Work during Off Peak Periods, Night Periods, and/or as detailed in this Part 7.
- (b) All short duration Works shall be re-opened to two general traffic travel lanes in each direction c prior to the Peak Periods each Work day.
- (c) DB Co shall maintain positive Drainage along SJAM Parkway during all staged construction at all times.
- (d) DB Co shall schedule its operations such that vehicles shall not travel on a gravel or milled surface for more than three days.

- (e) DB Co shall retain the City's Street Light Maintenance Provider for the supply, installation and maintenance of all temporary lighting as required to maintain the existing illumination levels during the construction, and for the removal of temporary lighting upon completion of the work, at their cost. DB Co shall be responsible for coordinating the scheduling of the disconnections and reconnections with the Utility Company.
- (f) DB Co shall maintain the existing or provide appropriate temporary vehicular, pedestrian and cycling accesses to and from the parking lots that serve the Kitchissippi Lookout and Westboro Beach at all times, until such a time that DB Co has provided adequate replacement facilities, as per Schedule 15-2, Part 2, Clause 6.21, that have been approved by the City.

4.4 Transitway, Detours, and Stations

- (a) Transitway services from Dominion Station to Lincoln Fields Station shall remain on the SJAM Parkway, and the bus-only lanes shall remain in service at all times, until after West Substantial Completion and upon notice by the City.

4.5 Accommodation of Pedestrians and Cyclists

- (a) Pedestrian and cycling access and egress to the existing sidewalks, pedestrian pathways, and MUPs shall be as outlined in Schedule 15-2, Part 6 – Urban Design, Landscape Architecture and Connectivity Requirements.

4.6 Ground Mounted Signs

- (a) DB Co shall provide bilingual information signs as follows:
 - (i) Along the SJAM Parkway, 0.5km east of Dominion Station, 0.5km West of the Cleary Underpass, and on Island Park Drive north and south of SJAM Parkway; 120 x 240cm sign with message “Lane Closure on Parkway, Expect Delays” together with the pertinent dates and times.
 - (ii) The locations of all signage shall be shown on the DB Co's TCP. The text to appear on the signs shall be approved by the City and the federal Authority prior to fabrication of the signs.
 - (iii) The locations of all signage shall be shown on the DB Co's TCP. The text to appear on the signs shall be submitted to the City for approval prior to fabrication of the signs.
- (b) Signs shall remain in place for the duration of the construction period in the area affected by the Work.

4.7 Portable Variable Message Signs

- (a) DB Co shall provide 35 calendar days advanced notice to the City of Roadway closures.

- (b) DB Co shall use lighted, changeable, bilingual message signs, and shall be used in accordance with Clause 1.5(b) of this Part 7.
- (c) DB Co shall provide two signs located along SJAM Parkway at locations to be approved by the City.
- (d) These signs shall be removed at the start of construction.

4.8 Traffic Control Plan Sub-Plan

- (a) DB Co shall prepare a specific TCP sub-plan for SJAM in accordance with the requirements of this Part 7.

ARTICLE 5 EXISTING PROVINCIAL HIGHWAYS AND MUNICIPAL ROADWAYS WITHIN MTO ROW

5.1 General Requirements

- (a) The requirements in this Article 5 are applicable to the following Roadways:
- (i) Existing Provincial Highway 417 and Highway 416 including all interchange ramps; and
 - (ii) Existing Municipal Roadways connecting or spanning over Highway 417 within MTO's designated jurisdiction, including but not limited to:
 - A. Holly Acres Road;
 - B. Richmond Road;
 - C. Pinecrest Road / Greenbank Road;
 - D. Moodie Drive.
- (b) DB Co shall liaise with the City and the MTO, which has governance over the subject Provincial Highway, and arrange all Work on the Provincial Highway to the written satisfaction of the MTO, and, DB Co shall include in their Work submission of the TTMP and TTMP sub-plans in accordance with Schedule 10 – Review Procedure, all of the documentation and drawings prepared in accordance with this Article 5, as accepted by the MTO.
- (c) DB Co shall not proceed with any construction activities on Provincial Highways without an accepted TTMP and TTMP sub-plans applicable to said construction activities.
- (d) DB Co shall ensure that there is coordination between the TTMP required for the West Works and the Highway Works as per Schedule 15-2, Part 1, Article 5 – Implementation Constraints.
- (e) DB Co shall provide and use PVMS for all closures, detour routes and diversions including ramps. PVMS shall be placed at strategic upstream locations to allow motorists the opportunity to divert prior to reaching the closure, detour route or diversion location. The PVMS location shall be submitted to and approved by the City in accordance with Schedule 10 – Review Procedure, as well as accepted by the MTO. PVMS placed in support of Highway Works shall be controlled by the OTOC.
- (f) PVMS shall be equipped with modems active on the MTO communications network to allow OTOC to operate. DB Co shall be responsible for modem procurement and activation from the modem supplier at least two weeks prior to requiring the signs. DB Co shall be responsible for all fees associated with the procurement of the modem including but not limited to activation of service, modem rental and monthly data communication fees.

- (g) DB Co shall provide at least 35 calendar days advance notice to the City and MTO for all closures, detour routes, and diversions.
- (h) Transit facilities on Highway 417 (West Transitway) shall remain in service until after West Substantial Completion and upon notice by the City.
- (i) DB Co failure to abide by the requirements set out in this Article 5 shall result in shutdown of the relevant Works until the requirements have been met.

5.2 Restrictions on Construction Operations on Provincial Highways

- (a) DB Co shall not use construction access/egress, shoulder closures or load and unload materials and construction equipment onto and from the traveled portion of Highway 417, Highway 416 and Highway 417 or Highway 416 interchange ramps on days identified under Clause 1.4 of this Part 7, or outside of the Permitted Periods for Closures as detailed in Tables 7-5.1A and 7-5.1B:
- (b) Construction operations shall not be carried out during the four hours preceding or three hours after any scheduled events at the [REDACTED]. DB Co shall obtain the schedule of events from the [REDACTED] website ([REDACTED]) and schedule Work accordingly.
 - (i) Events with fewer than 10,000 attendees, or “all-day” events that do not have a specific peak traffic demand period associated with them are exempted from this requirement.
- (c) Construction operations shall not be carried out during the two hours preceding or two hours after any [REDACTED], or other major events at [REDACTED], as identified by the City. DB Co shall obtain the schedule of [REDACTED] and be aware of other major events at [REDACTED] ([REDACTED]) and schedule Work accordingly.

5.3 Permitted Periods for Closures on Provincial Highways

- (a) Lane Closures and ramp closures for construction will only be allowed during the following times, subject to the additional restrictions covered under Clause 1.4 of this Part 7. Any Closures proposed by DB Co outside of the times indicated in Tables 5-1A and 5-1B shall be subject to review and approval by the City in accordance with Schedule 10 – Review Procedure. Applications by DB Co shall be supported by a traffic analysis.
- (b) Weekend Lane Closures
 - (i) All weekend lane closures shall be subject to the following conditions:
 - A. DB Co shall adhere to all traffic timing restrictions identified elsewhere in the PA, including holiday restrictions and [REDACTED] Events and [REDACTED].

- B. The exact weekend lane closure dates shall be subject to approval by the City and MTO.
 - C. DB Co shall notify the Stakeholders and ESP of the Closure(s), as specified elsewhere in the PA.
- (c) Permitted lane closure periods for Provincial Highways included in Table 7-5.1A and 7-5.1B:

Table 7-5.1A – Section Description: Existing Highway 417 EB from Moodie Drive to Woodroffe Avenue

Closure	Monday to Wednesday	Thursday	Friday	Saturday	Holiday or Sunday
One Lane Closure/ Construction access/egress; shoulder closures; load and unload of materials and construction equipment	00:00 – 05:00 hrs 10:00 - 14:30 hrs 21:00 - 23:59 hrs	00:00 – 05:00 hrs 10:00 - 14:30 hrs 22:00 - 23:59 hrs	00:00 – 05:00 hrs 10:00 - 14:00 hrs 22:00 - 23:59 hrs	00:00 – 10:00 hrs 22:00 - 23:59 hrs	00:00 – 10:00 hrs 21:00 - 23:59 hrs
Two Lane Closure	00:00 – 05:00 hrs 22:00 – 23:59 hrs	00:00 – 05:00 hrs 23:00 – 23:59 hrs	00:00 – 05:00 hrs 23:00 – 23:59 hrs	00:00 – 08:00 hrs 23:00 – 23:59 hrs	00:00 – 08:00 hrs 22:00 – 23:59 hrs
Three Lane or Full Closure**	1:00 – 4:00 hrs for a max of 15 minutes each hour with mandatory use of OPP and PVMS				

Table 7-5.1B – Section Description: Existing Highway 417 WB from Woodroffe Avenue to Moodie Drive

Closure	Monday to Wednesday	Thursday	Friday	Saturday	Holiday or Sunday
One Lane Closure/ Construction access/egress; shoulder	00:00 – 06:00 hrs 10:00 - 14:30 hrs	00:00 – 05:00 hrs 10:00 -	00:00 – 05:00 hrs 10:00 -	00:00 – 10:00 hrs 22:00 - 23:59	00:00 – 10:00 hrs 22:00 - 23:59

<p> closures; load and unload of materials and construction equipment</p>	<p>21:00 - 23:59 hrs</p>	<p>14:30 hrs 22:00 - 23:59 hrs</p>	<p>14:00 hrs 22:00 - 23:59 hrs</p>	<p>hrs</p>	<p>hrs</p>
<p>Two Lane Closure</p>	<p>00:00 – 06:00 hrs 22:00 – 23:59 hrs</p>	<p>00:00 – 06:00 hrs 23:00 – 23:59 hrs</p>	<p>00:00 – 06:00 hrs 23:00 – 23:59 hrs</p>	<p>00:00 – 08:00 hrs 23:00 – 23:59 hrs</p>	<p>00:00 – 08:00 hrs 22:00 – 23:59 hrs</p>
<p>Three Lane or Full Closure**</p>	<p>1:00 – 4:00 hrs for a max of 15 minutes each hour with mandatory use of OPP and PVMS</p>				

Applications for full closures are subject to acceptance by the City as part of the Works Submittals in accordance with Schedule 10 – Review Procedure and the MTO. *No two successive on or off ramps shall be closed at the same time.

- (d) Construction Period Quality Failures deductions shall be applied as detailed in Schedule 21, Part B - Construction Period Failures.
- (e) Closure Notification
 - (i) DB Co shall perform the following prior to lane, ramp and/or shoulder closures:
 - A. Inform the City and MTO of any closure one week prior to the start date of the closure;
 - B. Inform the City and MTO of any closure lasting more than one week at least two weeks prior to the start date of the closure;
 - C. Inform the City and MTO of Emergency closures as soon as any details are known;
 - D. Obtain a closure notification number from City and MTO for each closure;
 - E. Inform the City and MTO of any closure that is being cancelled subsequent to A. and B. above;
 - F. Notify the MTO Ottawa Area Communications Centre by phone (613-742-5319) immediately prior to the set-up of any closure stating the closure notification number and details of the closure;
 - G. Notify the MTO Ottawa Area Communications Centre immediately of any changes to the closure or anticipated problems that may delay the opening time, stating the closure notification number and details of the changes to and/or problems with the closure; and

- H. Notify the MTO Ottawa Area Communications Centre immediately upon removing the closure stating the closure notification number and details of the closure.
- (f) Lane and Ramp Closures by OPP Officers (Paid Duty)
 - (i) DB Co shall incorporate OPP assistance into all lane and ramp closures. DB Co shall be responsible arrange for the OPP-assisted lane closures.
 - (ii) Lane/ramp closures on Highway 417 shall be subject to MTO's lane/ramp closure protocol restrictions.
- (g) Lane Closures and Full Closures for Queensview Pedestrian Bridge
 - (i) DB Co shall be permitted to fully close all lanes of Highway 417 between Pinecrest Road / Greenbank Road and Woodroffe Avenue on a weekend for 17 consecutive hours, from 18:00 hrs on the Saturday until 11:00 hours on the Sunday.
 - (ii) Lane reductions on Highway 417 associated with the full closure shall be permitted to commence at 16:00 hrs on the Saturday.
 - (iii) During the full closure period noted above, the following Highway 417 ramps shall be exempt from the restrictions of Clause 5.4 of this Part 7:
 - A. Pinecrest Road at Highway 417 E-N/S ramp;
 - B. Greenbank Road at Highway 417 S-E ramp;
 - C. Greenbank Road at Highway 417 N-E ramp;
 - D. Woodroffe Avenue at Highway 417 W-N/S ramp; and,
 - E. Woodroffe Avenue at Highway 417 N/S-W ramp.
 - (iv) DB Co shall provide advanced notice to the City and MTO as early as possible, or a minimum of 30 Business Days in advance of the scheduled closure. The dates scheduled by DB Co shall be subject to approval by the City and MTO. These closure dates shall not be scheduled during events identified in Clause 5.2 of this Part 7.

5.4 Ramp Closures

- (a) DB Co shall keep all ramps on Highway 417 fully open at all times, with exceptions noted in Table 7-5.2 below. Where a ramp has a single lane, only the shoulder may be closed. Where a ramp has more than one lane, only a single lane may be closed.

- (i) Any ramp closures proposed by DB Co outside of the times indicated in Table 7-5.2 shall be subject to review and approval by the City and MTO. Applications by DB Co shall be supported by a traffic analysis. DB Co shall be required to provide notification to the public a minimum of 30 business days prior to the closure.

Table 7-5.2

CLOSURE	Monday to Wednesday	Thursday	Friday	Saturday	Holiday or Sunday
One Lane/Shoulder Closure	00:00 - 6:00 hrs 10:00 - 14:30 hrs 22:00 - 23:59 hrs	00:00 - 6:00 hrs 10:00 - 14:30 hrs 23:00 - 23:59 hrs	00:00 - 6:00 hrs 10:00 - 14:00 hrs 23:00 - 23:59 hrs	00:00 - 10:00 hrs 23:00 - 23:59 hrs	00:00 - 10:00 hrs 22:00 - 23:59 hrs
Full Closure	23:00 – 5:00 hrs (with mandatory use of PVMSs)				

- (b) DB Co shall not close two successive on and / or off ramps at the same time.
- (c) Temporary short term closure shall be permitted for one ramp at a time per interchange per direction.
- (d) DB Co shall utilize PVMS for all full ramp closures.
- (e) DB Co may utilize existing MTO PVMS for full closure of ramps, subject to approval of the City and MTO.

5.5 Construction on or Adjacent to Highway 417

- (a) The supply and placement of all traffic control required by the MTO shall be performed by DB Co in accordance with the Ontario Traffic Manual Book 7, “Temporary Conditions Manual”, latest edition, where construction is being carried out on or adjacent to Highway 417 or its ramps. This requirement is in addition to the MTO’s requirement for deployment of PVMS.
- (b) DB Co shall follow the requirements of the City’s Special Provision – General D-001, in addition to MTO requirements for construction on or adjacent to Highway 417.
- (c) Traffic Signal construction Start-Up Meeting

- (i) DB Co shall arrange a start-up meeting to confirm the protocol for the traffic signals at all affected intersections. The meeting shall also be used to confirm communication protocols with the MTO, DB Co, and the City of Ottawa Traffic Operations for dealing with traffic signal timing changes if required during construction. DB Co shall create a contact list and distribute it to all parties involved for any non-routine and/or emergency repairs to the traffic signals.
 - (ii) DB Co shall invite MTO Regional Traffic Office, MTO Electrical Coordinator, and City of Ottawa Traffic Operations to attend this meeting.
- (d) Advanced Notice of Work
- (i) DB Co shall provide a minimum of 30 Business days advance notice to City and MTO of all Work that may impact the traffic signals, unless a signal design is required, in which case DB Co shall abide by the requirements set out in Schedule 15-2, Part 2, Clause 6.14.
- (e) Access to the Traffic Signal Controller Cabinets
- (i) For any Emergency Work at any of the impacted traffic control signals, DB Co shall coordinate with the City of Ottawa Traffic Operations:
 - City of Ottawa
 - Transportation Services Department
 - Program Manager,
 - Signal Installation and Field Program (or the individual responsible for this function)
- (f) Construction Access to Moodie LMSF
- (i) DB Co shall not be permitted to have a construction access to the LMSF site directly from Highway 417.

5.6 Transitway Detours

- (a) The City, in consultation with MTO, has developed a preliminary Transitway detour that utilizes Highway 417 from Southwest Transitway interchange to the Moodie Drive interchange when the Western Transitway from Pinecrest Station to Moodie Station are taken out of service during this contract. The following MTO constraints shall apply to DB Co's TTMP:
 - (i) DB Co shall be responsible for the design, coordination of the Highway 417 transit detour segments to the satisfaction and acceptance of MTO and the City.

5.7 MTO Encroachment Permits

- (a) DB Co shall obtain MTO Encroachment Permits prior to working within the Highway 417 ROW or on any Roadways adjacent to Highway 417 within MTO's designated

jurisdiction. DB Co shall provide the City with copies of the approved MTO Encroachment Permits immediately upon receipt of same.

5.8 Delivery and Trucking

- (a) DB Co shall plan and schedule the routes of vehicles transporting all Materials to, from or within the Site, so that vehicular movements are accomplished with minimum interference and interruptions to traffic according to Clauses 5.2, 5.4 and 5.5. This will necessitate vehicles to “slip-off” or “slip-on” in the direction of traffic, in order to merge with and thereby avoid crossing traffic lanes.
- (b) Access to and from the Highway ROW shall be restricted to ramps at the interchanges unless otherwise provided for in the Project Agreement.
- (c) Median cross-overs shall not be used except where single axle vehicles are entering a passing lane that is closed to traffic.
- (d) DB Co shall obtain the City's prior approval for the location of any "slip-off" or "slip-ons". The City reserves the right to alter, reject or close same as considered necessary. DB Co shall notify suppliers of materials and equipment of the above requirements.

ARTICLE 6 TRAFFIC AND TRANSIT MANAGEMENT PLAN

6.1 General Requirements

- (a) DB Co shall submit an initial TTMP to the City in accordance with Schedule 10 – Review Procedure no later than 60 calendar days following Commercial Close, and at least 30 calendar days in advance of the start of any construction activity, and in accordance with the requirements of this Part 7. Following the acceptance of the initial TTMP by the City, DB Co shall submit all subsequent proposed updates and changes to the TTMP to the City in accordance with Schedule 10 – Review Procedure. As a minimum, the initial TTMP shall be updated and submitted on an annual basis in accordance with Schedule 10 – Review Procedure. The initial TTMP is required to demonstrate DB Co's:
 - (i) general plan for achieving specific TTMP and TTMP sub-plan requirements for all construction elements having significant traffic impacts, as well as all transit detours, in coordination with DB Co's planned Project Schedule; and,
 - (ii) specific plan for managing traffic during the Initial Works.
- (b) The TTMP shall outline how public traffic, transit, transit customers, pedestrians, and cyclists as well as the traffic generated by construction activities, are to be managed. It shall include all aspects of traffic management as set out in this Part 7, as well as any traffic management related matters which may arise as a result of the execution of any aspect of the Work.
- (c) The TTMP and all updates thereto shall be consistent with and comply with all of the requirements set forth in this Part 7 and all other relevant provisions of this Project Agreement, the OTM, and City of Ottawa Operation Policies, Procedures and Guidelines.
- (d) The final submission of the TTMP or TTMP sub-plans shall be stamped by DB Co's designated Traffic Engineer, and signed off by DB Co's designated Traffic Manager, both of whom shall be as identified in Article 6.3 – DB Co Responsibilities, of this Part 7.
- (e) The TTMP and all updates thereto shall include a traffic and transit schedule which shall be adapted from the Project Schedule. The traffic and transit schedule shall show start and finish dates for all the information pertinent to traffic management for the Project, such as but not limited to, segment and Station closures, detours and diversions, and relevant submissions.
- (f) The TTMP shall show proof of constructability in terms of schedule (traffic and transit schedule versus Project schedule), and, in terms of on Site construction activities and physical Work area requirements versus spatial accommodations for TTMP and TTMP sub-plan traffic management requirements.
- (g) DB Co's TTMP shall consider all direct and indirect impacts relating to the construction that pertain to the existing operations of the City and the street network within, and

- include impacts on all road users, pedestrians, cyclists, transit vehicles, and private vehicles of all types.
- (h) DB Co's TTMP shall reference and interface with DB Co's Traffic QMP as described in Schedule 11 – Integrated Management System, DB Co's Emergency Traffic Plan as described in this Part 7, the OTM, and City of Ottawa Operation Policy and Procedures.
 - (i) DB Co's updates to the TTMP shall be prepared and submitted in accordance with Schedule 10 – Review Procedure for any and all Project activities which may result in changes to the traffic management strategies set out in the TTMP. The initial TTMP shall be updated and submitted on an annual basis in accordance with Schedule 10 – Review Procedure.
 - (j) DB Co shall not conduct any construction activity that affects traffic without a signed and sealed TTMP that is current to the activities on Site, and has been accepted by the City.
 - (k) DB Co's TTMP shall comply with the definitions and guidelines provided in the OTM and City of Ottawa Operation Policy, Procedures and Guidelines.
 - (l) DB Co's TTMP shall include the Pedestrian Access Plan as outlined in Schedule 15-2, Part 1, Article 5 – Implementation Constraints, the construction Site Pedestrian Control Plan as required by City of Ottawa Special Provision D-005, the specific requirements as identified in Schedule 15-2, Part 6 – Urban Design, Landscape Architecture and Connectivity Requirements, and as documented in COADS.
 - (m) DB Co shall prepare detailed TCPs complete with traffic control layout drawings and fully integrated with the approved Project Schedule, outlining the provision of all forms of traffic control required throughout the duration of the Project. The plans shall be consistent with the TTMP and submitted in accordance with Schedule 10 – Review Procedure.
 - (n) DB Co shall prepare drawings that address stage-specific activities and requirements for each stage of the Work that affects traffic. These drawings shall accompany the TTMP submissions in accordance with Schedule 10 – Review Procedure.
 - (o) Any lane closure shall be approved in writing by the Governmental Authority and the City, and, that closure and the Governmental Authority shall be identified in the approved TTMP.
 - (p) DB Co shall not perform any Work on Site without a TTMP and TTMP sub-plans which are current to the activities on Site, and, are accepted by the City.
 - (q) The TTMP shall provide detailed drawings for Project-related designated truck access and egress points, the applicable haul and heavy vehicle routes through the City and applicable staging areas. The drawings shall be consistent with the TTMP and submitted in accordance with Schedule 10 – Review Procedure. As a minimum the designated truck route drawings shall be updated and submitted on an annual basis in accordance with

Schedule 10 – Review Procedure. The City may, at its discretion, require that DB Co’s Lands, where contiguous with an active construction Site, be utilized for haul and heavy vehicle routes in order to reach the City’s truck route network in a manner acceptable to the City.

- (r) The following TTMP sub-plans for DB Co’s TTMP are required and shall be submitted in accordance with Schedule 10 – Review Procedure. There shall be two distinct parts for each sub-plan – Confederation Line east and Confederation Line west – corresponding with the two geographic portions of the Project. The TTMP sub-plans shall be:
- (i) Traffic Control Plan;
 - (ii) Emergency Traffic Plan;
 - (iii) Traffic Incident Management Plan;
 - (iv) Traffic Management Implementation Plan;
 - (v) Transit Management Plan;
 - (vi) Traffic Advisory Temporary Signage Plan;
 - (vii) Traffic Risk Assessment Plan;
 - (viii) Traffic and Transit Management Communications Plan;
 - (ix) Traffic and Transit Management Monitoring Plan;
 - (x) Lane Closure Measurement and Verification Plan;
 - (xi) Transitway Lane Closure Measurement and Verification Plan; and,
 - (xii) Property Access and Business Continuity Plan.

6.2 Traffic and Transit Management Sub-Plans

- (a) Traffic Control Plans
- (i) DB Co shall prepare and submit Project specific TCPs in accordance with Schedule 10 – Review Procedure. The TCPs shall be prepared in accordance with the OTM, City of Ottawa Policies, Procedures and Guidelines and other Reference Documents for all activities that affect traffic operations, and shall include the following:
 - A. start and completion dates of Work;

- B. hours of Work and also indicate if there is a requirement to Work during peak hours;
- C. Work zone locations and direction and distance to nearest landmarks and survey stations;
- D. size of the Work zone;
- E. lanes affected by the Works;
- F. lane configuration in the Work zone;
- G. confirmation of whether accesses or intersections will be affected by the Work zone or by TCD;
- H. traffic volume capacity during the Project;
- I. proposed delays or closure times;
- J. show that local traffic access is maintained;
- K. scale drawing(s) in CADD identifying:
 - i. the location of the Work zone using landmarks and LKI where applicable;
 - ii. accesses or intersections affected by the Work zone or by TCDs;
 - iii. traveled lanes affected;
 - iv. resultant lane configuration including widths;
 - v. location of restricted width lanes;
 - vi. required closures;
 - vii. lane use requirements;
 - viii. posted speeds;
 - ix. requirements for road closure;
 - x. on-street parking spaces and parking meters/paystation affected by the Work;
 - xi. replacement strategy for affected on-street parking spaces;
 - xii. requirement for temporary no stopping signs;

- xiii. handicap, bus, taxi, loading, hotel, diplomat, tour bus or other zones affected by the Work, and the replacement strategy for each zone;
 - xiv. any bus routes and bus stops affected by Work activity;
 - xv. traffic and transit routing and detour requirements;
 - xvi. location of hazardous areas created by road geometry or local geography;
 - xvii. the location of vehicle storage areas if delays are anticipated;
 - xviii. any local roads used for a detour route;
 - xix. the design speed and the design vehicle for each road used as a detour route;
 - xx. any traffic signal changes required by the detour route or Project Works;
 - xxi. any signing impacted by the Work;
 - xxii. location of construction accesses, and safety provisions applied in instances where a construction access crosses a sidewalk, pathway, MUP or cycling facility;
 - xxiii. pedestrian and cyclist facilities, which shall be in conformance with the requirements of the Pedestrian Access Plan as required in Schedule 15-2, Part 1, Article 5 – Implementation Constraints, the construction Site Pedestrian Control Plan as required by City of Ottawa Special Provision D-005, and the requirements set out elsewhere in this Part 7.
- L. Should DB Co adopt a traffic control layout exactly as shown in OTM Book 7 with no changes, DB Co shall provide a reference to the OTM Book 7 layout. For any deviations to OTM Book 7, DB Co shall submit a custom traffic control layout as described in (ii) below;
 - M. include scale custom traffic control layouts showing the placement of all TCD and Traffic Control Persons;
 - N. be sealed by a Professional Engineer; and,
 - O. include a summary description of the public notification undertaken wherein the subject matter of this specific TCP is mentioned.

- (ii) Custom traffic control layouts shall:

- A. be in CADD format and submitted to the City in PDF format;
 - B. be signed and sealed custom traffic control layouts;
 - C. show schematically the placement of all TCDs;
 - D. place all TCDs in accordance with the standards contained in the OTM;
 - E. follow symbol conventions for identifying TCDs as per the OTM;
 - F. show on the drawings the locations and details of all signs, PVMS, Pavement markings, barriers, and protective Works;
 - G. have all dimensions and explanatory notes on the drawing; and
 - H. show traffic operations at all phases of the Project.
- (iii) DB Co shall document any proposed DB Co-initiated closures, full closures, detour routes, Lane Shifts and diversions in the TCP. The TCP shall be updated and amended as required such that it is current at all times with respect to the existing and proposed traffic control measures in the field.
- (iv) DB Co shall conduct traffic analysis including modelling on the TCP for each construction stage and construction within each phase where traffic operations are affected. The traffic analysis shall determine the effect of each TCP on the capacity and operation, including the resulting vehicle delays, queue lengths, and traffic signal timing. The traffic analysis shall be conducted for the representative hour(s) and day(s) that each TCP is in operation. The analysis and the results and recommendations shall be provided to the City in accordance with Schedule 10 – Review Procedure.
- (v) DB Co shall be responsible for including construction generated traffic in the TCP and any associated analysis such as but not limited to the potential for conflict between construction generated traffic and pedestrian and cyclist movements.
- (vi) DB Co shall continuously measure the effectiveness of TCPs and, if those measurements indicate a TCP is non-compliant with the OTM, accepted TCPs and other Reference Documents, DB Co shall immediately adjust the TCP to bring it into compliance.
- (vii) Auxiliary lane lengths at existing signalized intersections shall not be reduced unless analysis confirms operation is acceptable to the City.
- (viii) DB Co shall implement the accepted TCPs and accepted revisions thereto.
- (b) Emergency Traffic Plan

- (i) DB Co shall prepare and submit an Emergency Traffic Plan in accordance with Schedule 10 – Review Procedure. The Emergency Traffic Plan shall specify how DB Co shall facilitate access for Emergency vehicles to and through affected Sites. DB Co shall consult with local municipalities and ESP in developing the Emergency Traffic Plan, and liaise closely with them throughout the design and construction as it evaluates and updates the plan on an annual basis, or, whenever there is a change in the Site conditions which materially alters the ability to execute the accepted Emergency Traffic Plan.
 - (ii) DB Co shall provide specific scenarios for Emergency vehicle access to and through the Site for each of the cases identified in the Traffic Incident Management Plan and the Traffic Risk Assessment Plan.
 - (iii) DB Co shall implement the accepted Emergency Traffic Plan and accepted revisions thereto.
 - (iv) DB Co shall update the plan such that the information therein is kept current with the upcoming and ongoing construction activities. DB Co shall submit the updated plan for review/acceptance in accordance with Schedule 10 – Review Procedure.
 - (v) DB Co shall not commence any Work on Site without an applicable current accepted Emergency Traffic Plan.
- (c) Traffic Incident Management Plan
- (i) DB Co shall prepare and submit a TIMP in accordance with Schedule 10 – Review Procedure. It shall be in accordance with the City of Ottawa Emergency Management Plan. The TIMP shall include a process flow chart which covers but is not limited to occurrence of the incident, nature and timing of notifications to partner agencies, names and coordinates of contacts, actions to address the incident, post incident review of process, and revisions thereto to the TIMP as appropriate. The primary objectives are to support the City in facilitating incident response and moving traffic safely and expeditiously around the incident. The plan shall specify how DB Co will provide access for Emergency vehicles and assistance to ESP, and how DB Co shall work with the City’s Traffic Incident Management Group in responding to the incident.
 - (ii) A traffic incident includes, but is not limited to, any of the following occurrences on or adjacent to a construction Site or detour route:
 - A. motor vehicle accidents;
 - B. pedestrian and cycling accidents;
 - C. Emergency road repairs;

- D. Emergency utility repairs;
 - E. Emergency road closures for fire, gas leak, etc.;
 - F. disabled vehicles; and
 - G. debris on the road.
- (iii) DB Co's TIMP shall:
- A. Work closely and effectively deal with major incidents with partner agencies including City, OPS, OC Transpo, STO, RCMP, OPP, MTO, City of Gatineau, Sureté du Québec, and the Ministry of Transportation of Québec;
 - i. These efforts shall include the provision of temporary TCDs and/or OPS in the vicinity of DB Co's construction Sites or detour routes as requested by the City's Traffic Incident Management Group.
 - B. Coordinate with the City of Ottawa Office of Emergency Management the communications to the public regarding the impacts to the road network of the incident, via the City, media, and VMSs, and in accordance with established communication protocols; and
 - C. Define a process to review incidents and propose modifications to the Project that shall reduce the severity and frequency of incidents.
- (iv) DB Co shall document all incidents, including but not limited to, date location, details of the incident, comments of the incident reporter, actions taken, partner agency and agency representatives contacted, follow-up action recommended to be taken and by whom, signed and dated. A copy of the document shall be given to the City within 48 hours of the occurrence of the incident.
- (v) DB Co shall implement the accepted TIMP and accepted revisions thereto.
- (vi) DB Co shall update the plan such that the information therein is kept current with the upcoming and ongoing construction activities. DB Co shall submit the updated plan for review/acceptance in accordance with Schedule 10 – Review Procedure.
- (vii) DB Co shall not commence any Work on Site without an applicable current accepted TIMP.
- (d) Traffic Management Implementation Plan
- (i) DB Co shall prepare and submit a TMIP in accordance with Schedule 10 – Review Procedure. The TMIP shall identify the Traffic Control Supervisor, Traffic Engineer, and Traffic Manager, along with the qualifications and

experience of those named individuals demonstrating they meet the qualifications and experience identified in this Part 7.

- (ii) The TMIP shall define processes to ensure that the TTMP and each of the individual TTMP sub-plans are developed and implemented efficiently and appropriately, and that they are kept up-to-date with necessary modifications during the Project. In addition, the processes shall be set out in flow charts, one for the TTMP and one for each of the sub-plans, with an accompanying explanation provided to describe the activities represented by each box in each of the flow charts.
 - (iii) DB Co shall implement the accepted TMIP and accepted revisions thereto.
 - (iv) DB Co shall update the plan such that the information therein is kept current with the upcoming and ongoing construction activities. DB Co shall submit the updated plan for review/acceptance in accordance with Schedule 10 – Review Procedure.
 - (v) DB Co shall not commence any Work on Site without an applicable current accepted TMIP.
- (e) Transit Management Plan
- (i) DB Co shall develop a Transit Management Plan that is integrated with the TTMP.
 - (ii) DB Co shall prepare and submit the Transit Management Plan in accordance with Schedule 10 – Review Procedure. It shall outline how the quality of transit services shall be maintained during all phases of construction. The Transit Management Plan shall contain the following information with respect to how DB Co intends to maintain transit service routes and comply with the requirements:
 - A. Accommodation of transit service routes as detailed in this Part 7;
 - B. Accommodation of the requirements in Article 3 – Existing Transitway System, of this Part 7;
 - C. Overall strategy and approach that DB Co intends to implement to maintain the quality of transit service routes throughout the construction period and minimize disruption to the Passengers;
 - D. Identify DB Co’s scheduled construction activities, closures, detour routes, Lane Shifts and diversions that have an impact on the existing transit service;
 - E. Overall strategy for administering the Transit Management Plan with the City that as a minimum demonstrates how DB Co will manage the notice requirements, reviews and approvals, Permits, and Commissioning that

shall be completed prior to implementing lane closures, diversions, or detours; and,

- F. Minimize the travel time for the pedestrians to access the existing Transit facilities.
- (iii) DB Co shall implement the accepted Transit Management Plan and accepted revisions thereto.
- (iv) DB Co shall update the plan such that the information therein is kept current with the upcoming and ongoing construction activities. DB Co shall submit the updated plan for review/acceptance in accordance with Schedule 10 – Review Procedure.
- (v) DB Co shall not commence any Work on Site without an applicable current accepted Transit Management Plan.
- (f) Traffic Advisory Temporary Signage Plan
 - (i) DB Co shall prepare and submit a Traffic Advisory Temporary Signage Plan in accordance with Schedule 10 – Review Procedure. The primary objective of the Plan is to notify the City and other Stakeholders in advance of scheduled construction activities, closures, full closures, detour routes, Lane Shifts, and diversions.
 - (ii) The Traffic Advisory Temporary Signage Plan shall be prepared in accordance with the requirements set out in Schedule 15-2, Part 2, Article 6 – Roadways, Bus Terminals and Lay-bys.
 - (iii) The DB Co shall update the plan such that the information therein is kept current with the upcoming and ongoing construction activities. DB Co shall submit the updated plan for review/acceptance in accordance with Schedule 10 – Review Procedure.
 - (iv) DB Co shall implement the accepted Traffic Advisory Temporary Signage Plan and accepted revisions thereto.
 - (v) DB Co shall not commence any Work on Site without an applicable current accepted Traffic Advisory Temporary Signage Plan.
- (g) Traffic Risk Assessment Plan
 - (i) DB Co shall prepare and submit a Traffic Risk Assessment Plan in accordance with Schedule 10- Review Procedure. DB Co shall identify all risks which may have an impact on traffic and state the measures to be implemented to manage, reduce, or eliminate the risks.

- (ii) DB Co shall perform an independent assessment to identify any risks that could have an impact on traffic management or special conditions that shall be addressed through DB Co's Traffic Risk Assessment Plan.
 - (iii) DB Co shall update the plan such that the information therein is kept current with the upcoming and ongoing construction activities. DB Co shall submit the updated plan for review/acceptance in accordance with Schedule 10 – Review Procedure.
 - (iv) DB Co shall implement the accepted Traffic Risk Assessment Plan and accepted revisions thereto.
 - (v) DB Co shall not commence any Work on Site without an applicable current accepted Traffic Risk Assessment Plan.
- (h) Traffic and Transit Management Communications Plan
- (i) DB Co shall prepare and submit a Traffic and Transit Management Communications Plan in accordance with Schedule 10 – Review Procedure. It shall describe clearly how DB Co shall communicate to the City and other Stakeholders about all matters relating to traffic flow, including specifically, how it shall provide timely notice of construction related delays, closures, detours, traffic incidents, and emergencies.
 - (ii) DB Co shall craft the Traffic and Transit Management Communications Plan to show how DB Co shall incorporate and carry out each of the requirements set out in Clause 1.12 of this Part 7.
 - (iii) DB Co shall implement the Traffic and Transit Management Communications Plan to apply throughout the Project Term.
 - (iv) DB Co shall ensure that the plan is maintained current as related to the activities on Site. DB Co shall submit the updated plan for review/acceptance in accordance with Schedule 10 – Review Procedure.
 - (v) DB Co shall not commence any Work or Site preparations for same without an accepted Traffic and Transit Management Communications Plan.
 - (vi) DB Co shall consult with the City to identify the major user groups affected by the Project. Major user groups may include, but are not limited to, the following:
 - A. emergency and police services;
 - B. transit operating companies;
 - C. motorists;
 - D. cyclists;

- E. pedestrians;
 - F. transport and tour bus companies;
 - G. taxi and limousine companies;
 - H. MTO;
 - I. NCC;
 - J. PSPC;
 - K. property owners and businesses;
 - L. community organizers; and
 - M. special event organizers.
- (vii) DB Co shall develop and document a process which shall be integrated with the City's communication procedures for traffic management (such as the City Traffic Report and Public Service Announcements) to keep major user groups informed of planned traffic pattern changes, including, but not limited to the following: hauling and truck routes, transit impacts, detours, Lane Shifts, lane closures, sidewalk/MUP closures, access restrictions, schedule changes, and other traffic control procedures. Procedures for disseminating information related to unplanned traffic pattern changes shall be addressed in the Traffic Incident Management Plan. DB Co shall ensure that this process is acceptable to the Relevant Authorities.
- (viii) All public inquiries or complaints that DB Co receives shall be documented and handled immediately in the field and forwarded simultaneously to the City, 24-hours a day, seven days a week.
- (i) Traffic and Transit Management Monitoring Plan
- (i) DB Co shall prepare and submit a Traffic and Transit Management Monitoring Plan in accordance with Schedule 10 – Review Procedure. DB Co shall demonstrate how they will ascertain whether or not the TTMP Plan and the TTMP sub-plans are working as forecast. In cases where the forecasts are not being met, DB Co shall describe the means to adjust the plans such that the forecasts are met or exceeded.
 - (ii) Within each TTMP sub-plan submission, DB Co shall identify performance indicators tailored to the specifics of the sub-plan including but not limited to traffic volumes, travel times, and peak hour queue lengths. Upon acceptance of the sub-plan by the City, DB Co shall use those indicators on an ongoing basis to assess the effectiveness of the subject sub-plan. DB Co shall review the parameters of performance indication, and adjust the indicators accordingly in the

event that a sub-plan undergoes an update due to changes in Project as a result of any and all Project activities which may result in changes to the traffic management strategies set out in the TTMP.

- (iii) DB Co shall identify in their TTMP and their TTMP sub-plans, the acceptable level of performance achievable for each of the performance indicators, based on the calculations used in support of the accepted TTMP and TTMP sub-plans.
- (iv) The performance of the TTMP or TTMP sub-plan shall be deemed to be acceptable from each of a) a general traffic perspective, b) a transit perspective, c) a cycling perspective, and d) a pedestrian perspective, if the level of performance measured in the field during the execution of the TTMP traffic management measures meets or exceeds the level forecast in the TTMP for each of the respective perspectives. If the performance of any one or more of the perspectives is less than that forecast in the TTMP, then DB Co shall immediately formulate mitigation measures to bring the performance of that perspective up to the forecast standard.
- (v) DB Co shall perform field monitoring in advance of and during each stage or closure.
- (vi) DB Co shall be responsible for all means, methods and techniques used to undertake the monitoring services and shall provide all aspects necessary for the performance of the monitoring services, including labour, supervision, management, plant, equipment, tools, and materials.
- (vii) The field monitoring shall include as a minimum, Peak Period traffic volumes, travel time surveys, queue and delays and intersection operational performance within the impacted Roadway network. The monitoring plan shall include travel time and delay data specific to transit vehicles, if impacts to transit routes are anticipated.
- (viii) Field monitoring shall occur five Business Days after stage, detour implementation, or closure implementation, and every 20 Business Days thereafter for the duration of the Work. The frequency of monitoring post-implementation may be increased at the request of the City should issues be noted as a result of the field monitoring or the daily Site reviews.
- (ix) Within five Business Days of conducting the field monitoring, DB Co shall evaluate the data and submit a report summarizing the monitoring results and evaluating the performance of the stage, detour implementation, or closure implementation compared to DB Co's current TTMP and TTMP sub-plan.
- (x) Where applicable, the data collected shall include, but not be limited to:
 - A. General Traffic

- i. Traffic volumes – Peak Periods and AM and PM peak hour, at major intersections and other locations representative of the Roadway network impacted by the execution of the Project;
 - ii. Travel times – AM and PM peak hour along major Roadways or Project Segments, and other streets representative of the Roadway network impacted by the execution of the Project; and,
 - iii. AM and PM queue lengths for traffic movements at signalized intersections and other intersections representative of the Roadway network impacted by the execution of the Project;
 - B. Transit
 - i. Travel times - AM and PM peak hour travel times, as determined from OC Transpo GPS data, to be provided to DB Co upon request
 - C. Cyclists
 - i. Volumes – AM and PM Peak Periods; and,
 - ii. Condition of surface of cycling lanes and MUPs.
 - D. Pedestrians
 - i. Volumes – AM and PM Peak Periods; and,
 - ii. Surface condition of sidewalks.
- (xi) DB Co shall ensure that the plan is maintained current as related to the activities on Site. DB Co shall submit the updated plan for review/acceptance in accordance with Schedule 10 – Review Procedure.
- (xii) DB Co shall create and execute a Daily Traffic Management Site Record as set out in Appendix B of this Part 7.
- (xiii) DB Co shall create and execute a Daily Traffic Monitoring Report as set out in Appendix C of this Part 7.
- (xiv) DB Co shall create and execute a Daily Lane Closure Report as set out in Appendix D of this Part 7.
- (j) Lane Closure Measurement and Verification Plan
 - (i) DB Co shall prepare and implement a Lane Closure Measurement and Verification Plan prior to implementation of any planned lane closures. The Lane Closure Measurement and Verification Plan shall describe how DB Co will evaluate their performance on lane closure progress in relation to the lane closure

plan it has submitted based on the requirements in Schedule 34 – Mobility Matters. This plan shall also describe the verification process through which the City can audit DB Co’s lane closure performance.

(k) Transitway Lane Closure Measurement and Verification Plan

- (i) DB Co shall prepare and implement a Transitway Lane Closure Measurement and Verification Plan prior to implementation of any planned lane closures. The Transitway Lane Closure Measurement and Verification Plan shall describe how DB Co will evaluate their performance on lane closure progress in relation to the lane closure plan it has submitted based on the requirements in Schedule 34 – Mobility Matters. This plan shall also describe the verification process through which the City can audit DB Co’s lane closure performance.

(l) Property Access and Business Continuity Plan

- (i) DB Co shall prepare and submit a Property Access and Business Continuity Plan, in accordance with Schedule 10 - Review Procedure. The goal of the plan is to support the business community in the construction Work zone and to maintain existing or equivalent vehicle and pedestrian access to all buildings and properties. This plan shall address elements of ensuring accessibility to business (for customers as well as deliveries) as well as promotion of the businesses in the affected corridors to assist them during the construction period.

- (ii) The Property Access and Business Continuity Plan shall address the following elements:

- A. Maintaining effective access for all relevant modes currently available to all properties, including but not limited to, vehicles, deliveries, pedestrians and cyclists;
- B. To the extent possible, maintain visual sight lines and facilitate maintenance of a clean and attractive environment despite construction;
- C. A strategy for implementing temporary replacement of parking which is unavailable during construction. This strategy shall address provision of temporary parking lots and changes to on-street parking regimes; and
- D. City and DB Co responsibilities for communication and Stakeholder engagement shall be defined in Schedule 18 – Communications and Stakeholder Engagement Obligations.

- (iii) The plan shall demonstrate how DB Co shall achieve the following property access requirements;

- A. Maintain front door pedestrian access to all properties;

- B. When front door pedestrian access cannot be maintained, provide a minimum of 60 calendar days' notice to the affected property owner and tenants;
 - C. Maintain existing or provide equivalent vehicle access (i.e. maintain existing driveway location and width, maintain rear laneway width and configuration);
 - D. Identify when OPS traffic assistance shall be provided in accordance with City requirements;
 - E. Minimize delay for vehicles and pedestrians accessing retail stores; and
 - F. Provide Traffic Control Personnel where appropriate to maintain safe and adequate vehicle and pedestrian access.
- (iv) The plan shall demonstrate how DB Co shall achieve the following wayfinding and visibility requirements:
- A. Maximize the visibility of business frontages, including front doors;
 - B. Maintain locations and visibility of current business signage;
 - C. Where locations and/or visibility of current business signage cannot be maintained, relocate or design, supply and install new signs at locations which continue to provide high visibility and clear sightlines. These shall be conducted in consultation with the affected businesses;
 - D. Design, supply, and install additional signs to direct pedestrians and vehicles to business access routes; and
 - E. Maintain all signage as described above throughout the construction period.
- (v) The plan shall demonstrate how DB Co shall achieve the following communications requirements:
- A. Conduct ongoing community liaison during construction;
 - B. Provide adequate and specific notice to affected property owners and tenants for each stage of construction, including anticipated impacts and durations;
 - C. Provide sufficient notice and description of impacts to allow businesses to take actions to offset and/or mitigate business loss;
 - D. Maintain records of all notices;

- E. Provide prompt, formal written responses to complaints and provide document specific follow-up actions; and
 - F. Provide contacts for construction or a Community Liaison staff member outside normal business hours.
- (vi) DB Co shall support the City in accordance with Schedule 18 – Communications and Stakeholder Engagement Obligations, to engage with property owners and tenants throughout the corridor and BIAs throughout the Project, to inform them of upcoming changes in construction activity, facilitate mitigation of any construction-related access or parking issues between the properties and DB Co, and assist in ensuring that DB Co maintains access for each relevant mode and keeps the street clean to the extent possible.
- (vii) DB Co shall update the plan such that the information therein is kept current with the upcoming and ongoing construction activities. DB Co shall submit the updated plan for review/acceptance in accordance with Schedule 10 – Review Procedure.
- (viii) DB Co shall implement the accepted Property Access and Business Continuity Plan and accepted revisions thereto.
- (ix) DB Co shall not commence any Work on Site without an applicable current accepted Property Access and Business Continuity Plan.

6.3 DB Co Responsibilities

- (a) DB Co shall accept full responsibility for quality control and quality assurance of all activities affecting the TTMP. The TTMP quality control process shall be included in the TTMP. DB Co shall ensure that all personnel identified in the TTMP are suitably qualified and licensed.
- (b) Traffic Manager
 - (i) DB Co shall designate a Traffic Manager, with the qualifications identified in Schedule 9 – Key Individuals, who shall be responsible for the following:
 - A. development, implementation, and management of the TTMP;
 - B. ensuring the City is kept informed of all upcoming traffic activities and any revisions to the TTMP;
 - C. ensuring that appropriate modifications are made to the TTMP if the specified traffic control measures are not achieving the requirements;
 - D. coordinating with persons carrying out Work in areas adjacent to the Project;

- E. co-chairing with the City the Traffic Management Committee;
- F. ensuring the timing and organized delivery of public and Stakeholder communication information;
- G. participating as DB Co's representative in coordinating with the City's Traffic Demand Management program and the Traffic Incident Management Group;
- H. sign-off of each and every TTMP and TTMP sub-plan prior to their submission to the City;
- I. review and sign off the Lane Closure Analysis Report required in Schedule 34 – Mobility Matters; and,
- J. Attend the Mobility Matters Review Meetings described in Schedule 34 – Mobility Matters.

(c) Traffic Engineer

- (i) DB Co shall designate a Traffic Engineer who is a Professional Engineer and has DB Co's authority to review, and shall seal, the TTMP and associated sub-plans and take responsibility for ensuring that all traffic engineering issues and requirements are taken into account.
 - (ii) The Traffic Engineer shall attend the Project's regularly scheduled Traffic Management Committee meetings and be DB Co's representative at the City's Traffic Control Centre when required.
 - (iii) The Traffic Engineer shall have the following qualifications:
 - A. 15 years of experience overall in the traffic engineering field
 - B. 10 years of experience specifically related to traffic modeling, intersection design, construction staging, and traffic signal infrastructure; and,
 - C. Experience in design/build type projects where Roadways and/or highways were constructed within an existing urban area.
 - D. Ensures all traffic signal notifications timelines as detailed in this Part 7 are met.
- (i) The Traffic Engineer shall oversee and direct record keeping, reporting and accounting of temporary and permanent traffic signal installations.

- (ii) The Traffic Engineer shall ensure all traffic signal notification timelines as detailed in Schedule 15-2, Part 2 – Civil and Guideway, and this Part 7 are met.

- (d) Traffic Control Supervisors
 - (i) DB Co shall designate Traffic Control Supervisors, each of whom shall have DB Co’s authority to respond to traffic control requirements, and each of whom shall personally perform all the duties of the Traffic Control Supervisor, in accordance with this Part 7.

 - (ii) A Traffic Control Supervisor shall be on the Site full-time when construction activities are underway.

 - (iii) The duties of the Traffic Control Supervisor shall include but not be limited to the following:
 - A. Directing all traffic control operations for construction;

 - B. The Traffic Control Supervisor shall have direct line authority over all of DB Co’s Traffic Control Personnel and procedures on the Site;

 - C. Liaising with the City, OC Transpo, and MTO, as required;

 - D. Recording the actual duration of lane closures, full closures, detours, Lane Shifts, and unauthorized traffic delays, and forwarding this information, on a daily basis, to the City’s Lead Traffic and Mobility for information and appropriate action;

 - E. Monitoring queue lengths in active Work zones and implementing appropriate measures when such queues affect the operation and safety of provincial Roadways, Transitway, Major and Minor Municipal Roads, and other federal and municipal Roadways, and providing the City with documentation outlining the date, location, queue lengths, and measures taken;

 - F. Monitoring, and recording on a daily basis, the transit travel times through Work zones and detour routes, at a frequency and duration sufficient to identify operational performance issues. Coordinate with OC Transpo ahead of time to establish “geofence” points in the system before measurements are to take place in order to facilitate the collection of accurate date, route, time, and location data. Document and evaluate the transit travel times versus the forecast times established in the TTMP submissions. Identify operational performance issues and the DB Co recommended mitigation measures immediately to the City. Provide a copy of the record, issues, and mitigation measures to the City daily.

- Prepare and submit to the City on a monthly basis, a monthly summary report of the daily reports. Report the operational performance issues and their resolution at the next Traffic Management Committee meeting and record the same in the notes of the meeting;
- G. Respond to traffic related incidents resulting from construction and traffic management activities. All major incidents shall be documented within 48 hours of the incident and provided to the City per Clause 6.2(c) of this Part 7;
 - H. Documenting traffic control measures and activities in accordance with this Part 7, and producing a Daily Traffic Monitoring Report and Daily Lane Closure Report as set out in Appendices C and D of this Part 7, respectively;
 - I. Documenting site instructions and items noted on daily (site) reports which pertain to or affect traffic control, and updating the Traffic Control Plans immediately to reflect the changes on Site, and then promptly submitting the revised plans to the City in accordance with Schedule 10 - Review Procedure, as updates to the TTMP and applicable TTMP sub-plans;
 - J. Overseeing all requirements that contribute to the safety, convenience, and orderly movement of vehicular, cycling and pedestrian traffic;
 - K. Attending the Project's regularly scheduled traffic management meetings; and
 - L. Traffic control supervision shall be provided by Traffic Control Supervisors on the Site on a 24 hour per day basis when construction activities are underway. During non-Work periods, the Traffic Control Supervisor or accepted alternate shall be on the Site within 30 minutes of being notified. The Traffic Control Supervisors shall have appropriate personnel and equipment available on call, at all times.
 - M. Perform daily drive-by inspections as detailed in Appendix G of this Part 7.
- (e) Traffic Control Personnel
- (i) All Traffic Control Personnel shall be qualified in accordance with the OHS/CCOHS and the regulations thereunder.
- (f) Traffic Management Committee
- (i) DB Co shall be responsible for forming a Traffic Management Committee that shall be comprised of DB Co, City, OC Transpo, and representatives of Relevant

Authorities that shall meet on a weekly basis. The purpose of this committee shall be to coordinate, plan, and take action with respect to current and future traffic and transit impacts that may be caused by the design and construction Works.