



STAFF REPORT ACTION REQUIRED

Queens Quay Revitalization Environmental Assessment Study and East Bayfront Transit EA

Date:	September 29, 2009
To:	City Council
From:	Richard Butts, Deputy City Manager
Wards:	Ward 20 – Trinity Spadina and Ward 28 – Toronto Centre-Rosedale
Reference Number:	P:\\2009\\ClusterB\\wf\\cc09006

SUMMARY

At its June 2, 2009 meeting, Executive Committee requested that staff report directly to Council on a number of outstanding matters related to the Queens Quay Revitalization Environmental Assessment (EA) and the East Bayfront Transit EA. Both EA's are before Council for approval. At its meeting on August 5 and 6, 2009, Council deferred consideration of this report to its September 30, 2009 meeting to provide staff with the time necessary to address outstanding issues. Specifically, this report addresses issues related to the impact of the Queens Quay redesign on accessing Redpath Sugar, Robertson Crescent and Harbour Square.

RECOMMENDATIONS

It is recommended that:

1. The East Bayfront (EBF) Transit EA report and Environmental Study Report (ESR) provide for an additional traffic control signal at the centre driveway of 95 Queens Quay East, the Redpath Sugar Ltd. site, under the following conditions:
 - the signal will operate under complete transit pre-emptive control;
 - the signal will operate independent of, and not be coordinated with any of the adjacent or nearby traffic control signals;
 - the intersection at this location will not provide north-south pedestrian crossing facilities;

- the signal will be removed if the sugar processing and storage plant at 95 Queens Quay East ceases to exist at this location; and
 - the impact of the signal on transit operations will be formally assessed by TTC and Transportation Services staff at five year intervals commencing in 2015 as East Bayfront and the Port Lands are developed, with mitigation measures, including the possible removal of the signal, being put in place as needed to ensure effective delivery of rapid transit service to these areas.
2. Any future proposals to install additional signals on Queens Quay East beyond those identified in Part 1 above and in the Queens Quay Revitalization and EBF Transit EA reports, between Parliament and Bathurst Streets, and which would result in vehicles and/or pedestrian crossings over the transit right-of-way, be supported by an independent technical audit completed to the satisfaction of the Deputy City Manager responsible for Transportation Services and Waterfront Revitalization and the Chief General Manager of the Toronto Transit Commission (TTC), to ensure that such signals can be installed in a manner that allows safe traffic operations and does not detrimentally impact light rail transit operations.
 3. Consistent with the direction in the Queens Quay Revitalization EA report and to ensure the safety of all right-of-way users, detailed design of Queens Quay West will provide for:
 - (i) a physical separation between traffic lanes on Queens Quay West and the adjacent transit right-of-way; and
 - (ii) the retention of a traffic safety and operations consultant to provide expert advice during the design process, with such consultant being to the satisfaction of the Deputy City Manager responsible for Transportation Services and Waterfront Revitalization and the Chief General Manager of the TTC.
 4. The Toronto Police Service be requested to review and report back to City Council on the feasibility of utilizing the Denver Boot as a means of enforcing parking restrictions for tour buses on Queens Quay;
 5. The appropriate City officials be authorized and directed to take the necessary action to give effect thereto.

Financial Impact

The recommendations in this report have no additional financial impact beyond that reported in report EX33.18, from the Deputy City Manager for Waterfront Revitalization, titled “Queens Quay Revitalization Environmental Assessment and East Bayfront Transit Environmental Assessment” considered by Executive Committee on June 2, 2009.

ISSUE BACKGROUND

At its meeting on June 2, 2009, Executive Committee approved, with amendment, report EX33.18 from the Deputy City Manager for Waterfront Revitalization, titled “Queens Quay Revitalization Environmental Assessment and East Bayfront Transit Environmental Assessment”. The Committee requested that staff report directly to Council on a number of matters including:

- a. A resolution between Waterfront Toronto (WT) and the TTC related to the funding for expansion of the Union Station Streetcar Loop;
- b. Confirmation that safety and operational issues raised by Redpath Sugar concerning the proposed gate at the plant’s easterly driveway have been satisfactorily addressed in the Transit EA; and
- c. Confirmation that issues surrounding the right-hand turn to Harbour Square at York Street have been discussed.

Staff was also asked to report on the following proposed amendments:

- a. Creating a controlled intersection for northbound buses only on the east segment of Robertson Crescent;
- b. Making no further changes to the Queens Quay and Dan Leckie Way intersection at this time;
- c. Requesting that the Police explore the use of the "Denver Boot" as an enforcement tool for illegally parked buses;
- d. Accelerating the process to build a new north-south street running between Queens Quay West and Lake Shore Blvd., between Rees Street and Spadina Avenue and explore metered on-street parking for the new street; and
- e. Reporting on the cost and ramifications of extending Yo Yo Ma Lane north to Lake Shore Boulevard.

Finally, staff was asked to report on the operational and safety concerns of the TTC. This report addresses these various requests.

<http://www.toronto.ca/legdocs/mmis/2009/ex/bgrd/backgroundfile-21514.pdf>

Appendix 1 - Executive Summary of the ESR - Queens Quay Revitalization EA

<http://www.toronto.ca/legdocs/mmis/2009/ex/bgrd/backgroundfile-21515.pdf>

Appendix 2 - Evaluation Matrix of Alternative Planning Solutions

<http://www.toronto.ca/legdocs/mmis/2009/ex/bgrd/backgroundfile-21516.pdf>

Appendix 3 - Alternative Design Concept Cross Sections

<http://www.toronto.ca/legdocs/mmis/2009/ex/bgrd/backgroundfile-21517.pdf>

Appendix 4 - Evaluation Matrix of Alternative Design Concepts

<http://www.toronto.ca/legdocs/mmis/2009/ex/bgrd/backgroundfile-21518.pdf>

Appendix 5 - The Recommended Design

<http://www.toronto.ca/legdocs/mmis/2009/ex/bgrd/backgroundfile-21519.pdf>

Appendix 6 - Preliminary Curb Management Plan

<http://www.toronto.ca/legdocs/mmis/2009/ex/bgrd/backgroundfile-21520.pdf>

COMMENTS

The Union Station Streetcar Loop

Expansion of the existing Union Station Streetcar Loop is fundamental to achieving Council's "Transit First" policy in the waterfront, to implementing light rail transit service in East Bayfront and to accommodating existing and future population growth in the waterfront and railway lands.

While the total cost of this expansion will not be known until detailed design is substantially complete, the portion of the loop expansion required to operate the EBF LRT line is expected to be in the order of \$50M. The TTC Commission, at its meeting of May 28, 2009 requested that WT revise their long term plan to include this amount for the expansion of the loop as part of the project. To date, the commitment made by WT (as described in a letter dated May 25, 2009 from WT's President and C.E.O. to the TTC) is that the 2009 - 2019 funding plan for Waterfront Renewal will include sufficient funds in the short term to enable detailed design of both the loop and the transit corridor to proceed and to enable construction to begin as soon as is feasible.

WT has not, as yet, confirmed that funding is available to complete the construction of all of the elements needed to begin operating LRT service on Queens Quay East, notably the loop expansion, the proposed tunnel and portal section and the at-grade track on Queens Quay East of Yonge Street.

City staff will be reporting to Council with an updated rolling five-year plan, ten-year forecast for Waterfront Revitalization as part of the City's 2010 Capital Budget process. While details of this plan are currently being finalized between the three orders of government and WT, it is expected to include funds required for detailed design and construction of the loop, tunnel and portal components of East Bayfront transit.

Redpath Sugar Centre Driveway

Redpath Sugar Ltd. (Redpath) owns and operates a sugar refinery at 95 Queens Quay East. The facility has two main access points located at the western limit and at the centre of the property (centre driveway referred to as the east driveway in the Committee direction), as well as limited use access at the eastern end of the property.

The recommended design for Queens Quay East identified in the EBF Transit EA provides for traffic control signals at the western driveway to maintain full access and egress and the restriction of the centre driveway to egress-only under the control of an

automated gate and appropriate turn prohibitions. The eastern driveway is proposed to remain a limited use facility under flag control as required.

Redpath has expressed concerns with the recommended centre driveway design limiting its use to egress only by means of an automated gate. Concerns conveyed to staff include the requirement that trucks carrying raw product destined for the sugar shed on the east side of the facility will now be required to go through a “clean” facility; a lack of flexibility and efficiency should heavy machinery, weigh scale malfunctions or security check operations necessitate the use of the alternate driveway for access; heavy queuing at the western driveway as trucks weigh in and check in; and safety concerns between trucks leaving the facility and pedestrians and cyclists using the promenade. The company further indicated that these impacts would jeopardize their ability to remain a viable industry on the waterfront. Accordingly, Redpath has requested that the design for their access arrangement be modified to provide a full movement access/egress at their centre driveway, and that it be controlled by traffic control signals.

In accordance with the TTC’s recommendations to City Council respecting proposals for additional traffic control signals on Queens Quay East beyond those recommended in the East Bayfront Transit EA, City and WT staff, in consultation with TTC staff, undertook a technical audit to determine if traffic control signals could be installed at the centre driveway in a manner that does not negatively impact streetcar operations. Detailed investigations and modeling were undertaken, assessing potential future trucking requirements and alternative intersection design and operating strategies.

A design and operating strategy has been developed for a compromise access arrangement which provides improved access/egress for Redpath compared to the original proposal and which minimizes potential delays to streetcar operations. The plan for the new access arrangement is shown on Figure 1. The key components of the plan/operation and required mitigation measures are as follows:

- The centre driveway will be controlled by traffic control signals;
- Eastbound right turns in and northbound left and right turns out will be permitted;
- To minimize delays to streetcars, the traffic signal will not be coordinated with adjacent signals and will operate under complete transit pre-emptive control;
- North-south pedestrian crossings of Queens Quay East will be prohibited; and
- Due to the resulting close spacing of five consecutive traffic control signals between Yonge Street and Richardson Street, it is proposed to lower the posted speed limit on Queens Quay East to 40 km/h in order to increase the available driver reaction time between consecutive traffic control signals.

The use of the Redpath centre driveway will be relatively low, typically fewer than 20 trucks in any given hour of a typical day. The expected low utilization is anticipated to have a limited impact on roadway operations, despite the lack of coordination with adjacent traffic control signals. In regard to pedestrian operations, the centre driveway is not a generator of pedestrian activity and no significant demand for pedestrian crossings at this location is anticipated in the foreseeable future. In addition, full pedestrian

crossings of Queens Quay East will be available in close proximity, at the Redpath west driveway and at Lower Jarvis Street.

Transportation Services staff is satisfied that the centre driveway control and operation will provide adequate access and egress, safe operations for all users and minimize potential delay to streetcar operations.

TTC staff prefers that traffic control signals not be provided at the Redpath centre driveway. While they concur that the proposed signal operation is the best available for transit service if a signal is required, they are concerned with the overall level of service in EBF. Specifically, TTC staff note that as EBF and the Port Lands develop over the next twenty years and as demand for transit increases, the level of streetcar service may be as good as or slightly better than that currently provided on Spadina Avenue but will fall short of the original Central Waterfront Secondary Plan objectives for rapid transit service in the area.

To address road and transit network effectiveness, staff recommend that the impact of this signal on transit operations be assessed at five year intervals commencing in 2015 and that mitigation measures, including the possible removal of the signal, be put in place as needed to ensure effective delivery of rapid transit service. The President and C.E.O. of Redpath has been consulted and concurs with this approach. The recommended review process will be formalized, in consultation with Redpath, as part of the finalization of the EA process and may include associated agreements as necessary.

Harbour Square – Right Hand Turn

As directed by Committee, City and WT staff met with representatives of Harbour Square's three Boards of Directors on June 25, 2009 to explain the rationale for not providing an eastbound right-turn movement at the intersection of Queens Quay West and York Street. Factors which contributed to this recommendation included the negative impact on pedestrian movement, TTC service and traffic operations.

Specifically, staff noted that the introduction of this movement would result in a four lane cross section at the intersection to accommodate the eastbound turn lane. This would increase wait times for east-west transit, cyclists and pedestrians. In addition, the added turn lane would limit, if not restrict altogether, potential for parking and bus loading on the north side of the street. Traffic demand data for this intersection demonstrates a relatively low volume of vehicular movements contrasted by heavy pedestrian and transit volumes. This situation will only increase as waterfront revitalization occurs.

Staff noted that while the turn lane is not being recommended, motorists approaching Harbour Square travelling eastbound on Queens Quay West can access Harbour Square via a minor detour. By making an eastbound left turn at the intersection of Queens Quay West at Simcoe Street, followed by a northbound right turn at the intersection of Simcoe Street and Harbour Street, and then an eastbound right turn at York Street, motorists can proceed south into the Harbour Square access at York Street and Queens Quay West.

Following discussion of the future design, WT was requested to explore: a strategy that would allow cars to exit from the middle driveway while protecting the safety of cyclists and pedestrians; simplifying the laneway exit for drivers who intend to turn north on Bay Street; prohibiting tour buses from parking in the laneway; and adding a northbound lane on Bay Street. WT staff agreed to reconvene with residents on these matters as part of the detailed design process.

Staff noted that the tone of the meeting was very positive. Those in attendance supported the redesign of Queens Quay and encouraged expedited implementation.

Robertson Crescent:

Staff was asked to comment on the feasibility of creating a controlled intersection for northbound buses exiting the Radisson Hotel via the east segment of Robertson Crescent.

The Queens Quay Revitalization EA submitted to Executive Committee in June proposes that the east leg of Robertson Crescent be closed for general traffic access to Queens Quay West except for emergency services access. This requires modification to Robertson Crescent to provide for circulation of buses and other large vehicles. Modifications include widening Robertson Crescent in this area, constructing a turning facility immediately adjacent to and partially cantilevered over the Police Basin and providing a turning plaza for vehicles at the terminus of Robertson Crescent and Queens Quay West. Under this design, the drop-off/loading areas on the north side of Queens Quay West in the vicinity of 250, 260 and 270 Queens Quay West are also maintained. Figure 2 shows the proposed closure and associated mitigating measures included in the EA recommendations.

Representatives of the Business Improvement Association (BIA), including officials of the Radisson Hotel, raised a number of concerns with respect to the impact of the Robertson Crescent closure. These include access to and from the hotel, its parking lot and other businesses operating in the area. Concerns were also raised with respect to the impact on tour buses unloading passengers at the hotel's main entrance.

At Committee's request, staff further examined a number of options for maintaining northbound bus access to Queens Quay West at Robertson Crescent. A brief description and summary of the issues for each option follows:

Option 2A – Gated Bus-Only Exit (Figure 3)

Under this option, buses destined for the hotel or Robertson Crescent would access via the Rees Street/Queens Quay West intersection and exit via Robertson Crescent under control of an automated gate. The gate operation would be linked to TTC streetcar operations to minimize conflicts and delays to streetcars. All other traffic would continue to exit via the Rees Street intersection.

Key issues with this option are as follows:

- Queuing northbound buses will interfere with the operation of the north turnaround plaza at the main entrance of the Radisson Hotel, creating congestion and conflicts in this zone and limiting the effectiveness of the plaza as a turn-around and loading area for motorists;
- The gate control will not mitigate potential conflicts between exiting northbound buses and east-west pedestrians and cyclists thereby creating significant safety concerns;
- The turn-around facility for large vehicles, including moving trucks and service vehicles would still be required;
- The gate control could impede access and egress by emergency services vehicles; and
- Restriction of the use of the gate to buses-only would be by by-law and automated, but the automated method would not be able to distinguish between buses and other large vehicles. Without on-going enforcement, it is likely that other motorists will attempt to use the gate, potentially causing further delay of TTC service.

As some of the above issues are fatal flaws, Option 2A is not recommended.

Option 2B - Gated Egress Only for All Vehicles (Figure 4)

Under this option, all vehicles would enter/exit via the Rees Street intersection and could exit via the east leg of Robertson under the control of an automated gate. The gate operation would be linked to TTC streetcar operations to minimize conflicts and delays to streetcars. While out-bound vehicles would be controlled by the gate, east-west pedestrian and cyclist movements on Queens Quay West would not be controlled and would not be required to stop for vehicles exiting via the gate.

Key issues with this option are as follows:

- The gate control does not mitigate potential safety conflicts between exiting northbound vehicles and east-west pedestrians and cyclists;
- The increased number of vehicles using the gated exit increases the potential for conflicts with and delays to TTC streetcars. For example, exiting buses waiting for a gap in traffic could stack onto the TTC right-of-way resulting in a delay to streetcars;
- Since the turn around facility would not be required, capital cost savings could be achieved. However, it is noted that the absence of turn around facilities would limit all large vehicles to exiting via the east leg only; and
- The gate control could impede access and egress by emergency services vehicles.

While Option 2B reduces conflict between buses and other vehicles, some of the above concerns are fatal flaws resulting in Option 2B not being recommended.

Option 3A – Traffic Control Signals, No North-South Pedestrian Crossing on Queens Quay (Figure 5)

Given concerns with a gate operation, two options involving traffic control signals were explored. The first, Option 3A, includes the provision of traffic control signals at the intersection of Queens Quay West and the east leg of Robertson Crescent. All vehicles would be permitted to exit Robertson Crescent as well as enter via a westbound left turn lane as sufficient area in the Queens Quay right-of-way would be available. Similar to the Redpath solution, north-south pedestrian crossings of Queens Quay West would be prohibited to minimize delays to TTC streetcars.

Key issues with this option are as follows:

- Conflicts between north-south vehicles and east-west pedestrians and cyclists would be minimized;
- To minimize delays to streetcars, the traffic signal would not be coordinated with adjacent signals and would operate under complete transit pre-emptive control. This, however, creates the potential for long delays for Robertson Crescent traffic during high-frequency streetcar service periods;
- The on-street parking/loading areas on the north side of Queens Quay West in the vicinity of 250, 260 and 270 Queens Quay West proposed in the EA recommended plan would have to be removed due to their location within the intersection. Given the absence of an alternative on-site means of accommodating these functions, this would remove these required functions;
- The Robertson/Queens Quay West intersection is in the midst of one of the heaviest pedestrian traffic areas in the City. Pedestrians could potentially continue to use this intersection even in the absence of a pedestrian crossing;
- Since the turn-around facilities are not required, capital costs savings could be achieved.

Option 3B – Traffic Control Signal with Pedestrian Crossing on Queens Quay (Figure 6)

Option 3B is the fully-signalized option already assessed during the EA Study as an alternative to the proposed closure of the east leg of Robertson Crescent.

Key issues with this option are the same as those for Option 3A, with an added delay to streetcar operations created by adding a north-south pedestrian phase to the intersection.

While some of the options described above have lower capital costs than the EA recommended design, each introduces new physical and operational impacts for Queens Quay motorists, TTC streetcars and local businesses requiring loading areas. In addition, in some cases, they impede access by emergency services and generate safety issues related to cyclists and pedestrians. Accordingly, the project team continues to recommend the closure of the east leg of Robertson Crescent.

Dan Leckie Way

As directed by Executive Committee, staff is not pursuing the transition of transit from the center of the road to the south side at Queens Quay West and Dan Leckie Way intersection.

Operational and Safety Concerns of the TTC

The Central Waterfront Secondary Plan calls for an extraordinarily high percentage of all travel in the area to be made by transit in support of the environmental and sustainability objectives set for these new communities. This position was reinforced by Council's approval of its "Transit First" policy, which stated that high-quality, high-capacity transit service is a prerequisite to major development, in order to facilitate transit-oriented travel and design behaviour among new residents and employees from the outset.

The design concept proposed for Queens Quay is premised on the provision of attractive, efficient, high-capacity transit service. The EA reports describe the many different transportation and transit scenarios which were examined and evaluated in undertaking the EAs. The preferred plan features the provision of high-capacity light rail transit operating in an exclusive transit right-of-way to be located on the south side of the Queens Quay roadway. In EBF, the transit right-of-way would be separated from the roadway by a 3 m landscaped median. In the Central Waterfront, there is not sufficient right-of-way width to achieve a 3 m median. Accordingly, the transit right-of-way would be immediately adjacent to the Queens Quay roadway, with only a modest separation.

The operation of transit at the side of the road significantly improves the volume and quality of the public realm across Queens Quay. It is a novel approach to right-of-way design that has no precedent in Toronto. As a result, it does introduce some safety and operational efficiency challenges for the TTC that must be addressed in detailed design. The EA team has worked hard to address these challenges through the EA process. Recommendations contained in this report are intended to protect against a deterioration of transit service in the area and to ensure the continued viability of the transportation system on Queens Quay. Once approved by Council, EA documents will be amended to reflect these recommendations.

Potential Use of Denver Boot

From a road operations standpoint, the use of the Denver Boot as an additional deterrent to illegal parking may have operating impacts and benefits. If effective, it could reduce delays and congestion associated with illegal parking activity. However, in practice, depending on the efficiency with which the boots can be deployed and removed, their use could result in illegally parked vehicles being forced to remain in that position for an extended period of time, thus increasing the overall impact of illegal activity.

Legal Division staff conducted an informal review with Toronto Police Service staff on the feasibility of using the Denver Boot in 2007. At that time they identified several potential operational issues, health and safety concerns, and liability issues surrounding possible damage to private vehicles. The review was not exhaustive and did not result in a formal position by the Police Services Board. Legal Division staff has advised that a formal review by the Toronto Police Service is required to more fully understand issues surrounding the use of the Denver Boot. Accordingly, staff recommend that this matter be referred by Council to the Toronto Police Service for comment.

New North-South Road west of Rees Street

During the Queens Quay EA Study, a preliminary review of a new north-south street running between Queens Quay West and Lake Shore Boulevard West, west of Rees Street was undertaken. It was concluded that such a street could have benefits for local circulation and access to properties in the immediate area. A more comprehensive study is required to fully explore the potential design alternatives, impacts and benefits of such a facility. The City and WT have committed to undertaking a Class EA study for this potential new street. It is anticipated that such a study could be completed in six to nine months, the results of which will be reported to City Council. The Ward Councillor will be involved in the public consultation program for this study.

Yo Yo Ma Lane

Transportation Services staff has determined that Yo Yo Ma Lane is a private roadway. Accordingly, the laneway is not under the jurisdiction of the City of Toronto. A site visit revealed the laneway is a relatively short street, extending approximately 45 metres north of Queens Quay West. Extending the street to Lake Shore Boulevard West would only lengthen it by approximately 20 metres.

Yo Yo Ma Lane currently provides access to the parking and loading areas for condominiums located at 460, 470, 480, 500 and 550 Queens Quay West. The lane itself is also used by condominium maintenance staff as a marshalling area for the pick up of solid waste. It would appear extremely problematic to try to maintain these functions on such a short street while also providing a through traffic route between Queens Quay West and Lake Shore Boulevard West. Given the above, Transportation Services staff recommend against extending Yo Yo Ma Lane to Lake Shore Boulevard.

Conclusion

As a result of Committee's direction, an added signal at Redpath and other measures to ensure safe traffic operations are recommended by staff. If the recommendations are agreed to by Council, these changes will be incorporated into the ESR documents for the applicable EA's. Once signed by City staff in accordance with Council's direction, the ESR will be filed in the public record for a minimum 30 day period. Once EA approval is received, design and construction of the Recommended Design for the two EA's may proceed.

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Attachments:

Figure 1 – Redpath Centre Driveway Intersection
Figure 2 – Recommended Design: Robertson Crescent
Figure 3 – Robertson Crescent Option 2A
Figure 4 – Robertson Crescent Option 2B
Figure 5 – Robertson Crescent Option 3A
Figure 6 – Robertson Crescent Option 3B

Figure 1: Redpath Centre Driveway Intersection

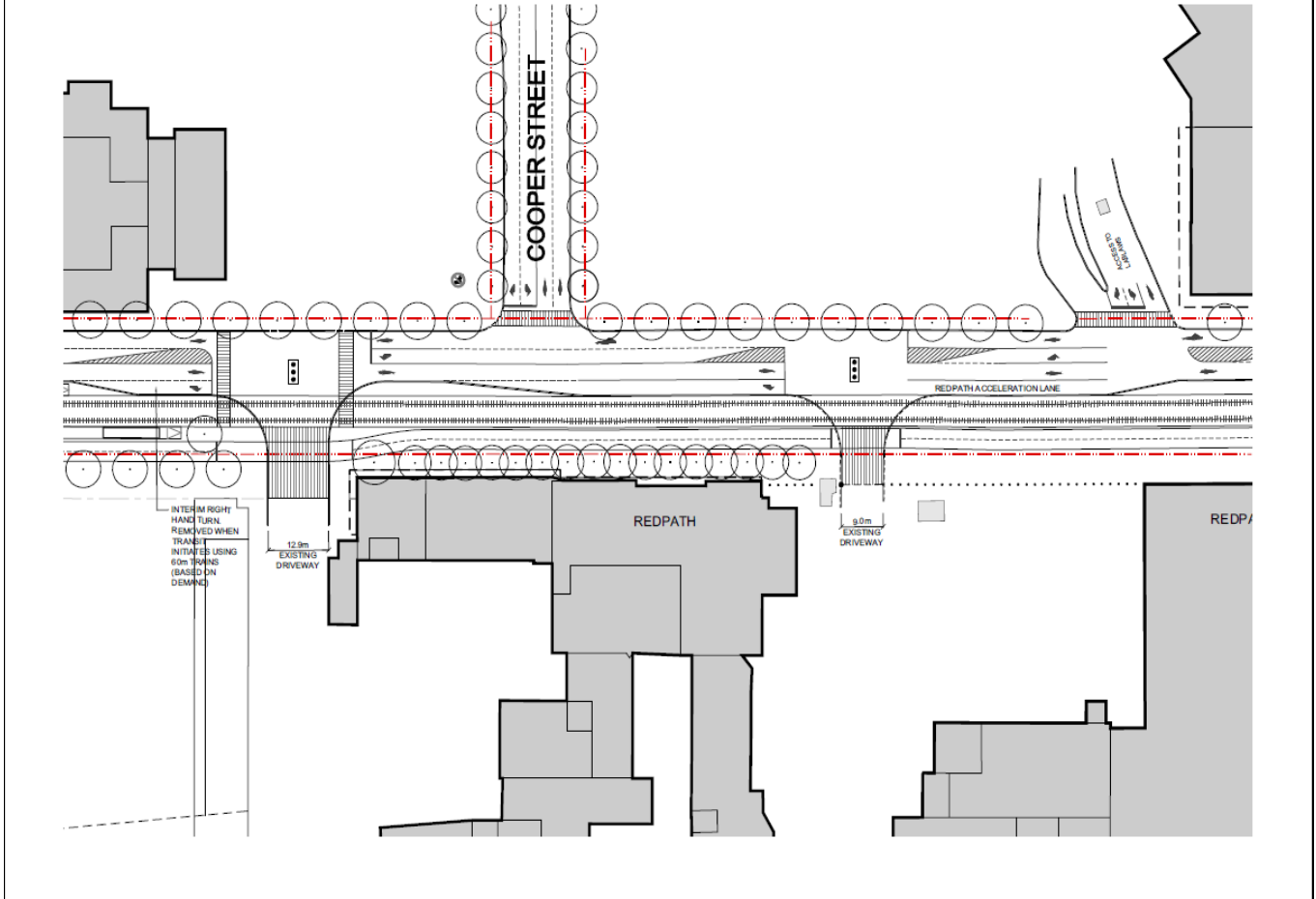


Figure 2: Recommended Design - Robertson Crescent

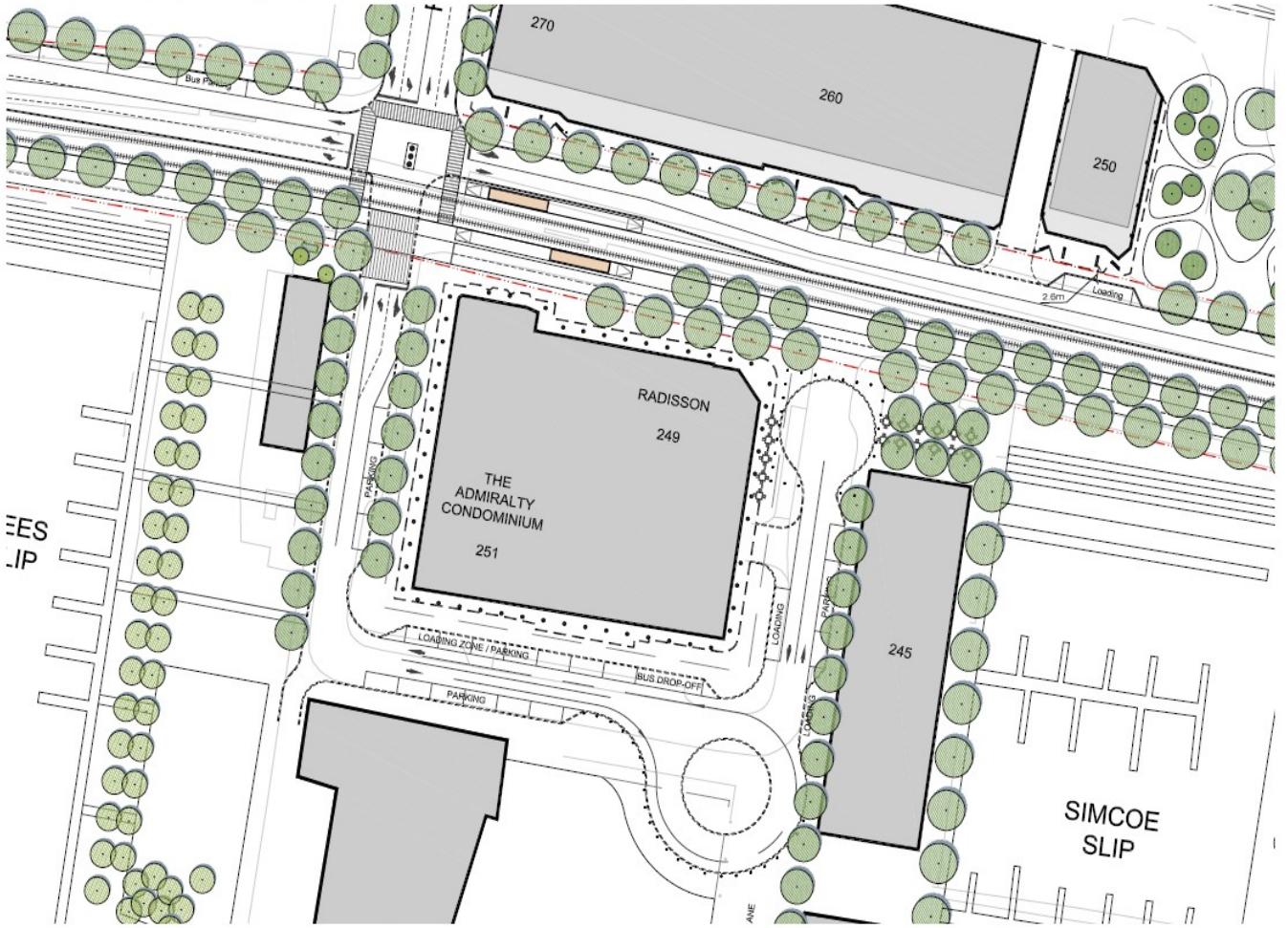


Figure 3: Robertson Crescent - Option 2a



Figure 4: Robertson Crescent - Option 2b

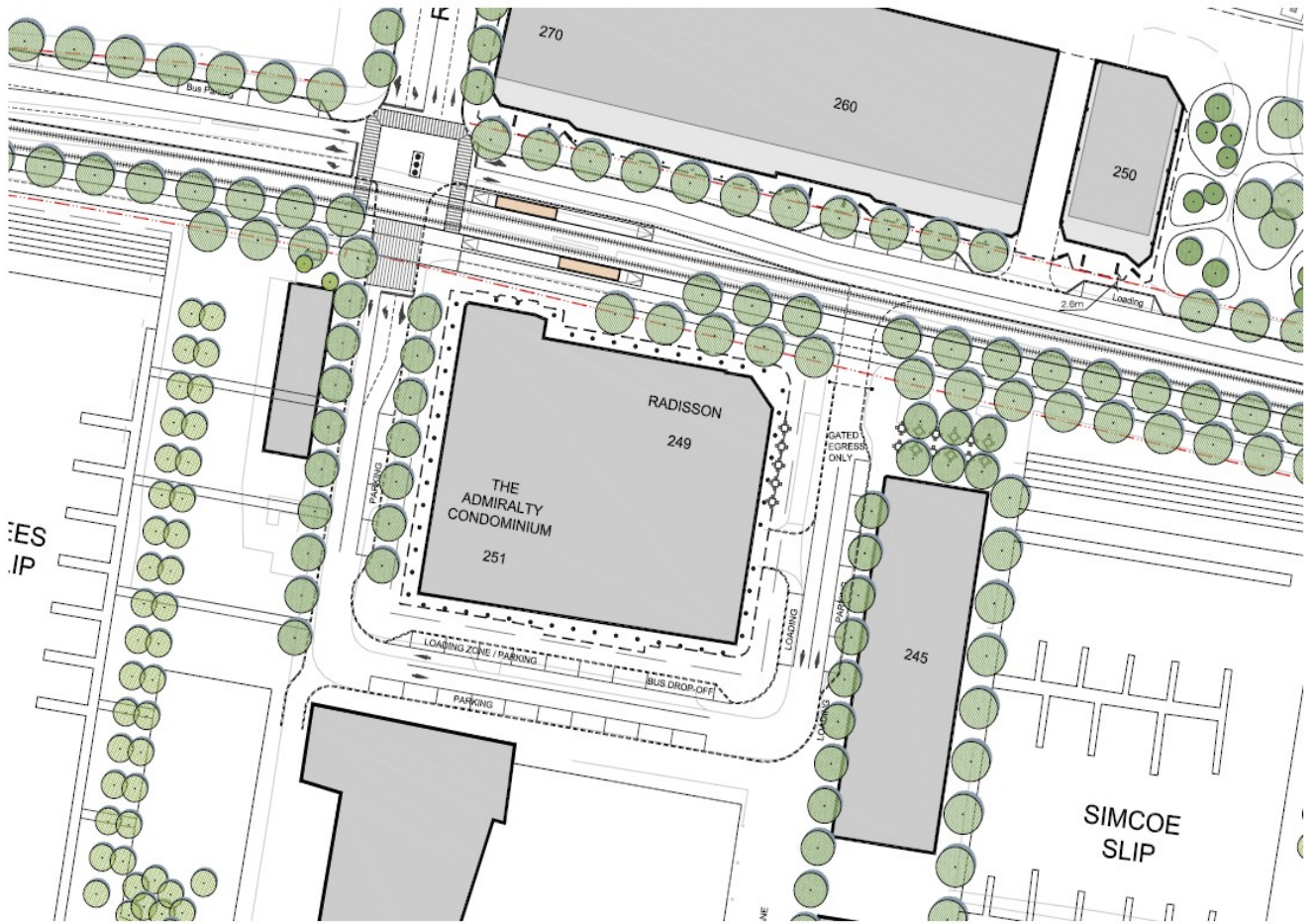


Figure 5: Robertson Crescent - Option 3a



Figure 6: Robertson Crescent - Option 3b

