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December 16, 2019

Our Ref. 18105.00

Walker, Nott, Dragicevic Associates Limited
90 Eglinton Avenue East, Suite 970
Toronto ON
M4P 2Y3

RE: Transportation Impact Assessment (TIA) Update – 1637-1645 Bathurst Street, City of Toronto – December, 2019

Dear Tyler Peck,

This Transportation Impact Assessment (TIA) Update has been prepared as an update to the TIA completed for the proposed redevelopment of 1637-1645 Bathurst Street (herein referred to as the "subject site") dated February 2018.

The sections below will outline LEA's responses to the City of Toronto comments, followed by an update to the TIA completed in December 2019.

TIA UPDATE

This TIA Update will proceed by detailing the changes in the proposed site statistics, followed by an update of the forecasted trip generation of the site. Subsequently, the latest proposed parking statistics for both vehicular and bicycle will be reviewed. Lastly, the loading supply and functional design of the site will be investigated. For the traffic impact analysis, the City concurs with our assessment that the proposed development will have minimal traffic impacts on the basis of the small trip generation consisting of 25 and 24 two-way vehicular trips during AM and PM peak hours.

PROPOSED REDEVELOPMENT

The proposed redevelopment involves an increase in the unit count GFA versus the previous 2017 TIA. **Table 1** below summarizes the previous and current site statistics and the resulting net change.

Land Use	Previous Proposal (February 2018)	Current (December 2019)	Net Change
Residential	**67**	**75**	**+8**
Bachelor	0	0	-
1 Bed	9	20	+11
2 Bed	22	26	+4
3 Bed	36	29	-7

Table 1: Proposed Site Statistics

TRIP GENERATION

Overall, with a net gain of 8 trips this increase in trip generation from the previous development is minimal and as a result, the conclusion of the February 2018 remains unchanged.

PARKING

Vehicular Parking

This vehicular parking supply includes an increase in the resident parking rates from the City of Toronto Zoning By-Law. The table below summarizes the settlement parking rates and the parking supply proposed.

Car Parking Proposed				
Land Use	**GFA/Units**	**Minimum Parking Rate**	**Parking Spaces Required**	**Parking Spaces Proposed**
Residential 1 Bedroom	20 Units	0. 9 spaces/unit	18	18
Residential 2 Bedroom	26 Units	1.0 spaces/unit	26	26
Residential 3 Bedroom	29 Units	1.2 spaces/unit	34	35
Visitor	75 Units	0.2 spaces/unit	15	15
		TOTAL	**93**	**94**

Table 2: Car Parking Required and Proposed
***As per By-Law 569-2013, parking calculations are rounded down.**

The subject site will satisfy the minimum parking rates. This includes a total of 79 resident parking spaces, and 15 visitor parking spaces.

Bicycle Parking

The subject site is currently zoned under the City of Toronto's Zoning By-Law 569-2013 Zone 1. The bicycle parking standards of Zoning By-Law 569-2013 and the corresponding Toronto Green Standard (TGS) have been referenced. The bicycle parking standards are summarized in the table below.

Land Use	**Units**	**Bicycle Parking Rates**		**Bicycle Parking Standard**		**Total Bicycle Parking**
		Short-Term	Long-Term	Short-Term	Long-Term	
Residential	75 Units	0.1 spaces/Unit	0.9 spaces/Unit	7	68	75
			TOTAL	**7**	**68**	**75**

Table 3: Bicycle Parking Requirements

The subject site is required to provide a total of 75 bicycle parking spaces consisting of 7 short-term spaces and 68 long-term spaces. The proposed bicycle parking supply is 81, this will meet the requirements of City of Toronto Zoning By-Law 569-2013.

LOADING

City of Toronto Zoning By-Law 569-2013 standards will apply to the subject site with regards to loading space provisions. The table below displays the loading space requirements for the redevelopment.

Zoning By-Law 569-2013 Loading Standards					
Land Use	GFA/Units	Loading Space Type			
		A	B	C	G
Residential	31-399	-	-	-	1
TOTAL		**-**	**-**	**-**	**1**

Table 3: Loading Requirements

A total of 1 Type G loading space is required. On-site, 1 Type G loading space is proposed. It is expected that any deliveries and move-ins will be scheduled in a manner that does not conflict with garbage collection efforts. As such, the proposed redevelopment will satisfy the Zoning By-Law requirements.

To demonstrate functionality of the loading spaces, **Appendix A** includes turning path diagrams for a waste collection vehicle. In order to ensure safety on the laneway, a flagman and warning system on collection day are still proposed as per the Zoning By-Law Amendment application.

FUNCTIONAL DESIGN

Turning Path Diagrams

Lea has provided a turning path diagram for drivers maneuvering into the loading area. The turning path diagram shows that a waste collection vehicle can enter and exit the loading area safely in a forward motion and can also access the loading area with less than a three-point turn.

TDM MEASURE IMPACT

Transportation Demand Management (TDM) is a set of strategies which strive towards a more efficient transportation network by influencing travel behavior. Effective TDM measures can reduce vehicle usage and encourage people to engage in more sustainable methods of travel. there are several opportunities to incorporate TDM measures that support alternative modes of transportation. The recommendations should enhance non-single occupant vehicle trips for the future employees of the proposed development. In efforts to reduce single occupancy auto vehicle trips generated on-site by 15% as per the Toronto Green Standard Version 3, a variety of multimodal infrastructure strategies and TDM measures have been detailed below.

Pedestrian-Based Recommended Strategies

The pedestrian network should be provided with an enhanced landscape that would encourage walking

The pedestrian network along the site should provide a pleasant and safe pedestrian experience through enhanced landscaping. This could be achieved by means of benches, cover, planting, lighting and other landscaping elements. In short, the pedestrian network in the vicinity of the subject site could provide a variety of amenities for a safe and enjoyable pedestrian environment, which will encourage the use of active transportation modes.

Cycling-Based Recommended Strategies

Provision of bicycle parking supply

The proposed residential and industrial development will provide bicycle parking facilities to support and encourage active transportation. The short-term bicycle parking spaces should be located to the extent possible at-grade in a highly visible and convenient area close to the entrances of the residential building for visitors to have easy access to. For long-term bicycle parking should be provided in secured and weather-protected locations such as storage rooms and bicycle lockers. Although there is no adopted method of TDM pre-implementation assessment, the California Air Pollution Control Officers (CAPCOA) estimates vehicle miles traveled (VMT) reduction 3% and 21.3% as a result of bicycle infrastructure improvements based on the land use context and assumption that measures are grouped together[1].

Promote and increase cycling awareness and multi-modal transport

Information packages should be provided to residents to encourage active transportation and different travel demand management programs. This should include educating residents and employees on the health and environmental benefits of cycling, as well as providing pedestrian, cycling and transit maps of the available infrastructure in the surrounding area. Identifying safe cycling routes can also facilitate students cycling to school and reduce automobile reliance for the younger generation.

Provide sources that offer bicycle training skills

Given the existing and anticipated cycling infrastructure surrounding the subject site, there are opportunities for classes or training to be provided on site to teach residents basic bicycle skills appropriate for everyday traveling to and from the site. While the idea of cycling can be intimidating to first-time cyclists, cycling skills training will increase their understanding of the safety measures need in traveling in mix traffic, while also helping enhance cycling behavior on the road (ex. CAN-BIKE certification course).

Transit-Based Recommended Strategies

Connection to transit network

The proposed development will provide excellent connections to surface transit. With TTC bus stops located on both side of Bathurst Street near the development location this will provide reliable and convenient transit for future residents and employees. The TTC transit routes in the immediate area include Route 7 Bathurst and Route 307 Bathurst. These routes operate seven days a week and provide significant north-south connections to major destinations and subway stations. Moreover, approximately 2 kilometers to the west of the subject site, there is the Eglinton West Subway Station and 2 kilometers to the south is St. Clair Subway Station which are both accessible via TTC Route 7 and TTC Route 307. The Eglinton West Station provides service on Line 2 Bloor-Danforth and St. Clair Subway Station provides service on Line 1 Yonge-University with approximately 2-3 minutes headways during peak hours. The availability of several transit services within the area will allow residents, visitors and employees of the proposed development to use alternative modes of transit.

[1] SusanShaheenand Elliot Martin (2015), "Unraveling the Modal Impacts of Bikesharing,"*Access 47*, (www.accessmagazine.org); at www.accessmagazine.org/articles/fall-2015/unraveling-the-modal-impacts-of-bikesharing.

Communication strategy & transit incentive program

In order for residents and employees to take advantage of the various transit services surrounding the subject site, it is recommended that the owners provide information packages and communications to increase transit awareness and multi-modal transport by encouraging active transportations and different travel demand management programs. The information packages should contain public transit information such as route maps and schedule timetables. Furthermore, route and scheduling information could be provided as displays in the lobby or lunchroom, or through real-time updated digital displays in the elevator or in a central location in all of the buildings. It is recommended that the owner coordinate an information session with the City of Toronto to deliver and promote transit incentive to residents that work in the City.

Provision of pre-loaded PRESTO cards to all new residents and employees

PRESTO is a contactless smart card used on participating public transit systems within the GTA. To further incentive unit purchasers and employees to make more transit-based trips, it is proposed that pre-loaded PRESTO cards (amount to be determined) be provided with the sale/rental of each unit and to each employee. The California Air Pollution Control Officers Association (CAPCOA) estimates transit subsidy can help reduce a maximum of 20% in commute Vehicle Miles Travelled (VMT).

Parking-Based Recommended Strategies

Provision of car share spaces

Car share programs are proposed to encourage car sharing activities and reduce the need of automobile ownership. The provision of car share spaces will allow residents without a vehicle to have access to a supply of car share vehicles when needed. The car share spaces should be clearly signed for residents and/or visitors and should be located near the main entrances to provide more incentive for car sharing.

In increasing the usage of car-share services, the management should negotiate with the service provider (ex. Enterprise and/or Zipcar) to offer a discount rate for a trial period or a limited amount of usage. Also, pamphlets regarding the benefits of car-sharing can be provided to occupants. A car-sharing vehicle is a 24-hour accessible service that eliminates financing, insurance, and maintenance responsibilities of personal auto ownership. CAPCOA reports between a 1% and 15% commute trip VMT reduction depending on surrounding land uses.

To summarize all measure that have been several TDM measure have been recommended to reduce single-occupant vehicle trips by at least 15%. Alternative modes of travel have been encouraged such as provision of presto cards, secured bicycle parking facilities and new resident/employee information packages. The proximity of current TTC transit option further reduces the necessity of a vehicle and promotes transit usage.

CONCLUSIONS

This TIA Update has been completed for the resubmission of the SPA for the proposed redevelopment of 1637-1645 Bathurst Street. This TIA Update is an update to the original TIA, dated February 2018, as well as to the TIA Updates performed in December 2019 for the initial SPA.

This review finds that the proposed unit count and residential GFA have increased only slightly. As a result, the site is still anticipated to introduce a minimal traffic impacts, consistent with the February 2018 TIA findings. With respect to bicycle parking and vehicular parking, the site will satisfy the minimum parking rates proposed for the study area to the City. Finally, the loading supply proposed is sufficient, and the functional design review confirms that all design vehicles can access and circulate the site acceptably. Several TDM measures have been recommended to reduce single-occupant vehicle trips by at least 15% to comply with the Toronto Green Standard Version 3.

Sincerely,

Daniel Budhu, B.Eng., EIT
LEA Consulting Ltd.
Transportation Planner

Encl: Appendix A – Functional Design Review

APPENDIX A
Functional Design Review

EXISTING 2-STOREY BUILDING

EXISTING 2-STOREY BUILDING

EXISTING 3-STOREY BUILDING

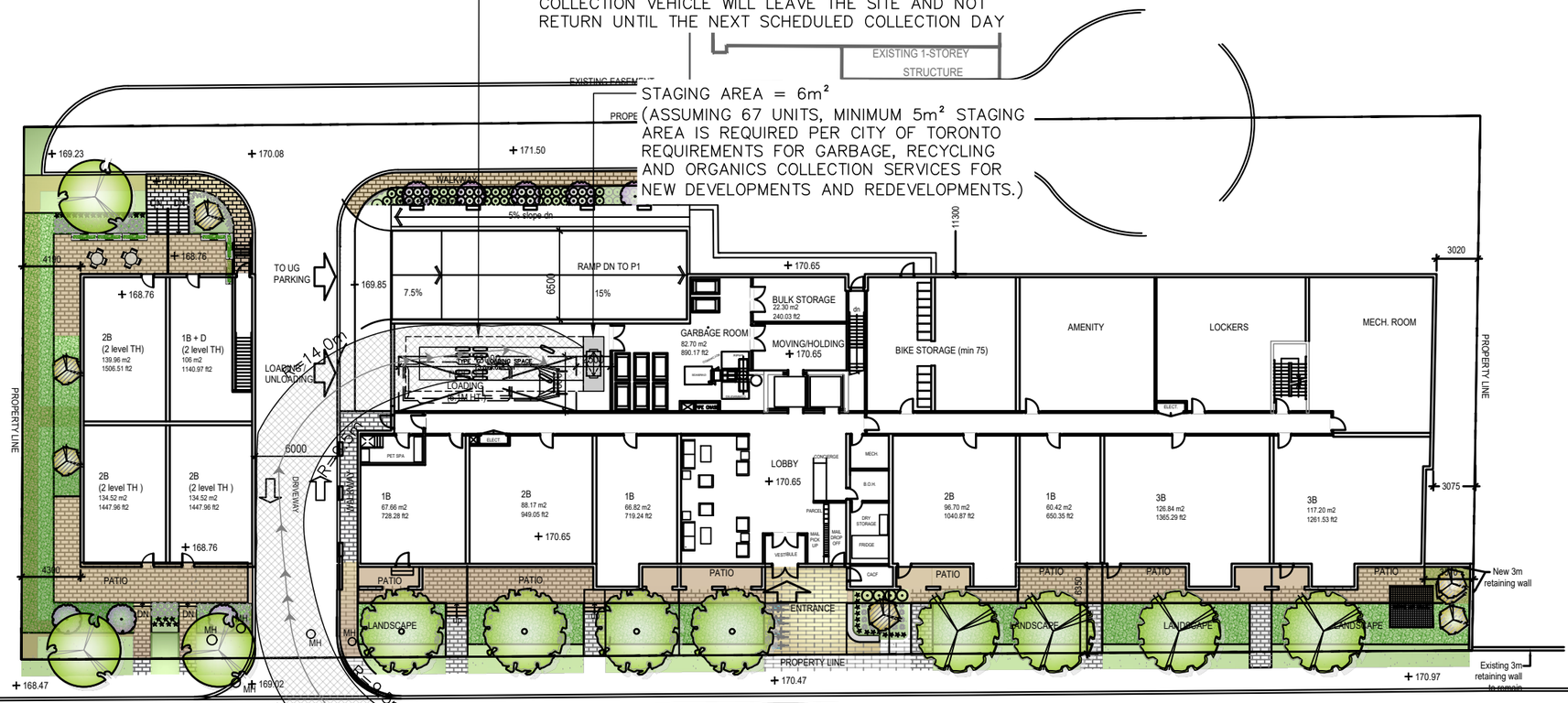
EXISTING 2-STOREY BUILDING

EXISTING 2-STOREY BUILDING

A TRAINED ON-SITE STAFF MEMBER WILL BE AVAILABLE TO MANEUVER THE GARBAGE BINS FOR THE COLLECTION DRIVER AND ACT AS A FLAGMAN WHEN THE TRUCK IS REVERSING. IN THE EVENT THE ON-SITE STAFF MEMBER IS UNAVAILABLE AT THE TIME THE CITY COLLECTION VEHICLE ARRIVES AT THE SITE, THE COLLECTION VEHICLE WILL LEAVE THE SITE AND NOT RETURN UNTIL THE NEXT SCHEDULED COLLECTION DAY

EXISTING 1-STOREY STRUCTURE

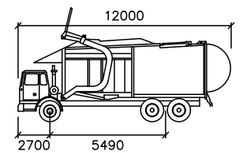
STAGING AREA = 6m²
(ASSUMING 67 UNITS, MINIMUM 5m² STAGING AREA IS REQUIRED PER CITY OF TORONTO REQUIREMENTS FOR GARBAGE, RECYCLING AND ORGANICS COLLECTION SERVICES FOR NEW DEVELOPMENTS AND REDEVELOPMENTS.)



BATHURST STREET

EXISTING PAVEMENT MARKINGS DRAWN PER AERIAL

FORWARD IN



Garbage TO mm

Width	: 2400
Track	: 2400
Lock to Lock Time	: 6.0
Steering Angle	: 27.1

DRAWN BY: D.C. PLOT DATE: December 05, 2019

LEA Consulting Ltd.
Consulting Engineers and Planners
www.LEA.ca

Project No. 18105

Date DEC. 05, 2019

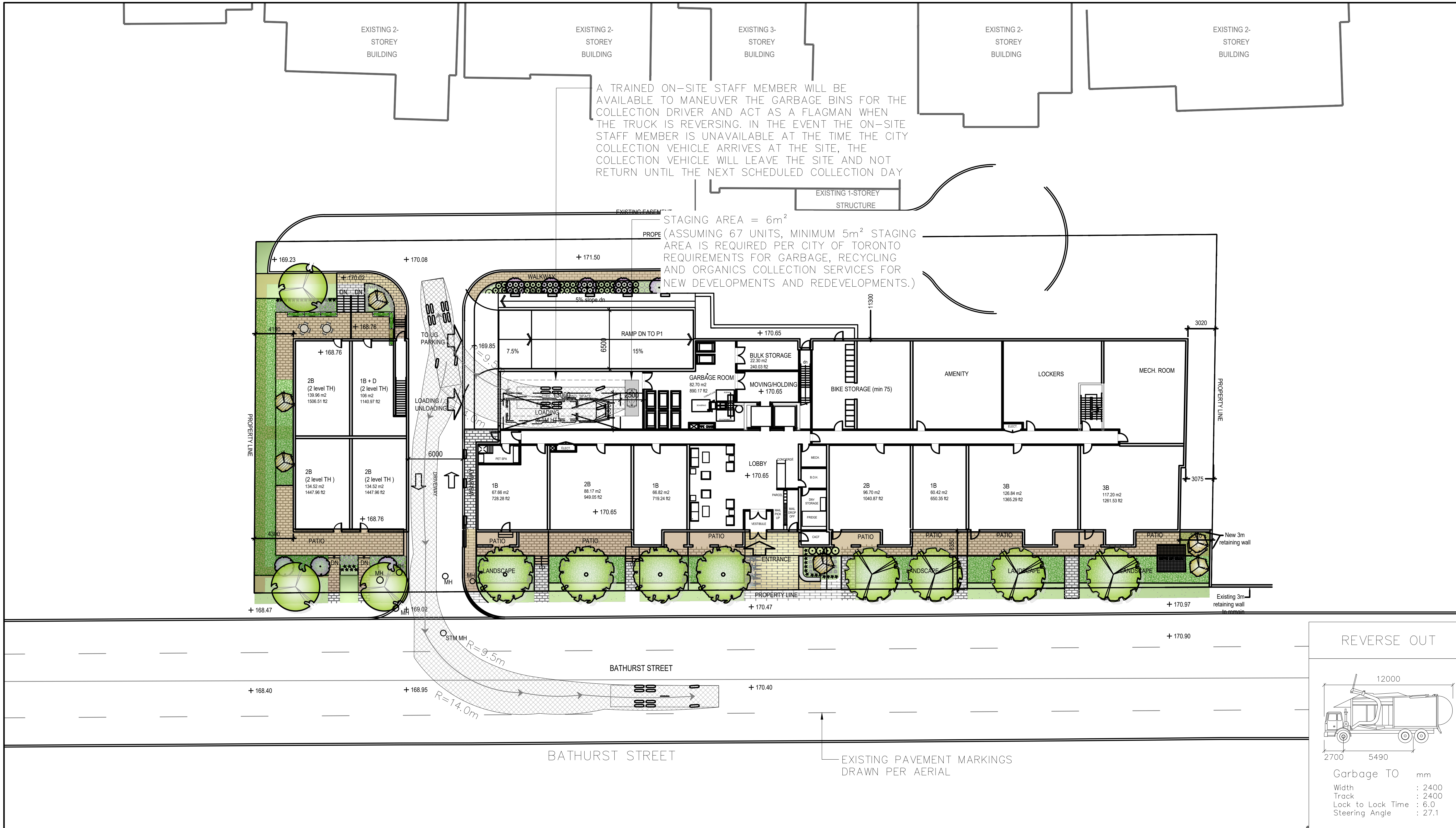
1637-1645 BATHURST STREET
TORONTO ONTARIO

4 0 4 8 12m
1:400

GROUND FLOOR – LOADING REVIEW
CITY GARBAGE TRUCK
ENTRY PATH

Drawing No. 001

DRAWING NAME: F:\18105\Drafting\18105 WF010.dwg


EXISTING 2-STOREY BUILDING
EXISTING 2-STOREY BUILDING
EXISTING 3-STOREY BUILDING
EXISTING 2-STOREY BUILDING
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RAMP DN TO P1
BULK STORAGE
GARBAGE ROOM
MOVING/HOLDING
BIKE STORAGE (min 75)
AMENITY
LOCKERS
MECH. ROOM
LOBBY
ENTRANCE
PATIO
LANDSCAPE
DRIVEWAY
TO UG PARKING
LOADING / UNLOADING
PROPERTY LINE
New 3m retaining wall
Existing 3m retaining wall to remain
BATHURST STREET
R=9.5m
R=14.0m
EXISTING PAVEMENT MARKINGS DRAWN PER AERIAL
REVERSE OUT
12000
2700
5490
Garbage TO mm
Width : 2400
Track : 2400
Lock to Lock Time : 6.0
Steering Angle : 27.1

PLOT DATE: December 05, 2019

DRAWN BY: D.C.

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Date DEC. 05, 2019

1637–1645 BATHURST STREET
TORONTO ONTARIO

4 0 4 8 12m
1:400

GROUND FLOOR – LOADING REVIEW
CITY GARBAGE TRUCK
EXIT PATH

Drawing No. 002

DRAWING NAME: F:\18105\Drafting\18105 WF010.dwg