Public Report

To:	Development Services Committee
From:	Warren Munro, HBA, RPP, Commissioner, Development Services Department
Report Number:	DS-22-29
Date of Report:	February 2, 2022
Date of Meeting:	February 7, 2022
Subject:	Accessibility Standards for Car Lifts
Ward:	All Wards
File:	12-12

1.0 Purpose

The purpose of this Report is to respond to the referral of Item DS-21-189 by the Development Services Committee to staff on October 4, 2021, which reads as follows:

> "That Report DS-21-189 from the Oshawa Accessibility Advisory Committee requesting the City of Oshawa develop standards for car lifts (stacked parking) be referred to staff for a report and include consultation with BILT."

Attachment 1 is an excerpt of Section 4.4 of the Oshawa Accessibility Design Standards, which pertains to Elevating Devices.

Attachment 2 contains excerpts from the Ontario Building Code, 2019, relating to current requirements for controls for the operation of building services or safety devices.

2.0 Recommendation

That the Development Services Committee recommend to City Council that, pursuant to Report DS-22-29 dated February 2, 2022, the Oshawa Accessibility Design Standards be updated to include the design standards for car lifts and stacked parking as outlined in Section 5.5 of said Report.

3.0 Executive Summary

Not applicable.

4.0 Input From Other Sources

The following have been consulted in the preparation of this Report:

- Chief Building Official
- Accessibility Program Coordinator, Innovation and Transformation
- Oshawa Accessibility Advisory Committee
- Building Industry Liaison Team (B.I.L.T.)
- The applicant for the Zoning By-law Amendment Application (File: Z-2020-03) to permit 40 stacked townhouse units with a car lift at 480, 484, 490 and 506 Ritson Road South (2676916 Ontario Inc.), their planning consultant (Weston Consulting) and their elevator consultant (Bramalea Elevators)

Although staff offered B.I.L.T. an opportunity to comment on this matter, no comments were received from B.I.L.T.

5.0 Analysis

5.1 Application to Amend Zoning By-law 60-94 to permit stacked townhouses and a car lift at 480, 484, 490 and 506 Ritson Road South

On September 13, 2021, a Planning Act public meeting was held for an application submitted by 2676916 Ontario Inc. to amend Zoning By-law 60-94 to permit a 40-unit stacked townhouse development with underground parking and a car lift at 480, 484, 490 and 506 Ritson Road South (File: Z-2020-03). The application was referred back to staff for further review and preparation of a subsequent report and recommendation. A report and recommendation in this regard have not yet been presented to the Development Services Committee for consideration.

On September 21, 2021, the Oshawa Accessibility Advisory Committee (O.A.A.C.) reviewed the above noted application and provided a number of recommendations regarding the design of the proposed development. At that meeting the O.A.A.C. also passed an additional resolution (Item OAAC-21-50) that reads as follows:

> "That the Oshawa Accessibility Advisory Committee recommend that the City of Oshawa develop accessibility standards for car lifts."

Item OAAC-21-50 was considered by the Development Services Committee on October 4, 2021. As noted in Section 1.0 of this Report, the Development Services Committee subsequently referred this matter to staff through Item DS-21-189 for a report, including consultation with B.I.L.T.

In lieu of a traditional ramp, the applicant for the proposed stacked townhouse development at 480, 484, 490 and 506 Ritson Road South has proposed a car lift as the means of access/egress for vehicles using the two levels of underground parking. The car lift has been proposed in order to maximize the floor space available in the underground garage for parking spaces. The car lift would also serve as the pedestrian elevating device between the underground garage and ground level, as there is no other elevating device proposed exclusively for pedestrians.

Development Services staff, together with the City's Accessibility Program Coordinator, met with the applicant, their planning consultant (Weston Consulting) and their potential elevator supplier (Bramalea Elevator) to understand the applicant's specific proposal, discuss examples of similar arrangements elsewhere in southern Ontario, and review potential challenges together with potential alternatives and solutions. One of the primary challenges relates to the need for a separate and exclusive pedestrian elevator to be provided on-site to transport individuals from the garage to ground level.

Development Services staff and the O.A.A.C. have both expressed concerns with the proposal to have the car lift serve the dual purpose of transporting vehicles and transporting pedestrians, specifically persons with accessibility challenges. The key concerns relate to the following matters:

- Operation of the elevating device, from either inside or outside of a vehicle;
- Pedestrian safety, particularly for those requiring the use of mobility devices, while being in the path of travel for a vehicle entering or exiting the lift;
- Visibility within and immediately outside of the car lift (i.e. lighting, mirrors);
- Lack of an alternative accessible entrance/exit for pedestrians requiring the use of a mobility device in the event the car lift is inoperable;
- The location of the required barrier-free parking spaces within an underground parking area, necessitating visitors requiring use of these spaces (or any parking spaces) to be escorted by a resident with a key or fob; and,
- The potential for queuing of vehicles and pedestrians at both the surface level and within the underground parking levels.

These concerns have been communicated to the applicant, together with other comments provided by various departments and agencies through the circulation process conducted, as part of the review of the most recent submission. The applicant is currently reviewing these comments and a subsequent submission is anticipated.

One of the challenges that has risen with providing a dedicated pedestrian elevator for the proposed stacked townhouses is as a result of the fact that although an elevator could transport individuals from the underground garage to the ground level, there is no barrier-free path of travel proposed from ground level to any of the stacked townhouse units. Further, the Ontario Building Code ("O.B.C.") does not require a barrier-free path of travel or any barrier-free units to be provided for stacked townhouse developments.

Staff note that although the O.B.C. does not require barrier-free paths of travel or barrier-free units for the subject proposed development, a number of existing or planned stacked townhouse developments in Oshawa do provide a barrier-free units and a barrier-free path of travel, including:

- 2 Taylorwood Road and 2015 and 2019 Simcoe Street North, developed by Podium Developments;

- 485 Normandy Street, currently under construction by Habitat for Humanity; and,

- 1707 Ritson Road North, anticipated to start construction in 2022 by Daniels Corporation.

5.2 Car Lifts and Stacked Parking (Stackers)

The wording of the resolution passed by the O.A.A.C. on September 21, 2021 does not reference “stacked parking”. However, the resolution passed by the Development Services Committee on October 4, 2021 does reference “stacked parking”.

It is important to define and differentiate the terms “car lift” and “stacked parking”, as they are not interchangeable and have separate and distinct meanings.

Car lifts are large elevators used to vertically transport vehicles inside a building, in the same way a pedestrian elevator operates. They can be used to access parking levels above or below grade, particularly in developments where there is insufficient space on-site for a traditional ramp. The car lift proposed for 480, 484, 490 and 506 Ritson Road North requires the driver to drive the vehicle into and out of the car lift without exiting the vehicle. It would be operated by the driver using a fob that remains in the car (similar to a garage door fob), or a control panel mounted on the sides of the lift (similar to some underground parking garages that require a physical key to open the garage door).

A comparable example exists at 215 Broadway Street in Mississauga, where an apartment building has a car lift to transport vehicles to an underground parking garage in a low-rise apartment building. It is staff’s understanding that this apartment building contains a separate passenger elevator to transport residents and visitors from the underground garage to their respective floor in the building. There are more sophisticated car lifts that require the vehicle to be driven into the lift at the garage entrance, whereupon the driver then exits the vehicle and the lift, leaving the car lift to automatically park the vehicle. In these circumstances the driver does not need to access the underground or above ground parking garage. To retrieve the vehicle from the garage, the driver uses external control panel at the garage entrance to “summon” their vehicle using the automatic car lift.

Stacked parking (or “stackers”) is a form of vehicle parking, commonly using a device that allows two or more vehicles to be parked vertically. These allow a vehicle to be lifted or lowered to accommodate an additional vehicle to be parked above or below. Generally, the driver would drive the vehicle into the stacker, exit the vehicle, and then operate the stacker from an external control panel to lift or lower the vehicle. These stackers are used as a solution where additional parking is needed and the vertical clearance is adequate to accommodate it. However, unless the stacking device is sized sufficiently to allow a person with mobility aids to exit or enter the vehicle comfortably and the control panel for the stacker meets accessible standards under the O.B.C. (see Attachment 2), accessible parking should not be located within a stacker.

Car lifts and stacked parking are not common in Oshawa. Staff are not aware of any car lifts in operation in Oshawa. Stackers have been used at 100 Bond Street East for residential purposes and at Fraser Ford at 815 King Street West for commercial purposes.

Some homeowners install car stackers in their personal garages, such as for the storage of classic cars or sports cars.

5.3 Ontario Building Code Act, 1992

The Ontario Building Code Act, 1992, S.O. 1992, c.23 (the "Building Code Act, 1992") is the legislative framework governing the construction, renovation and change-of-use of a building in the Province of Ontario.

The O.B.C. is a regulation under the Building Code Act, 1992. Its purpose is to establish minimum standards for building construction province-wide. Attachment 2 to this Report is an excerpt from the O.B.C. pertaining to barrier-free design requirements for controls for the operation of building services or safety devices.

Currently, the O.B.C. Division B., Section 3.8.1.5 regulates the controls for the operation of building services, safety devices, including electrical switches, thermostats and intercom switches, intended to be operated by the occupant and located in a barrier-free path of travel (see Attachment 2). These regulations would pertain to the building structure around the elevator shaft and car lift and control panels.

The O.B.C. does not regulate features of elevating devices that would include external controls (i.e. key fobs), minimum clearances within the elevating device, audio/visual signals, lighting, etc.

Further design and inspection of the elevating device is regulated by the Technical Standards and Safety Authority (T.S.S.A.). The T.S.S.A. is a not-for-profit organization providing safety services on behalf of the Province of Ontario in three key sectors:

- Boilers and Pressure Vessels and Operating Engineers
- Elevating Devices, Amusement Devices and Ski Lifts
- Fuels

The review of any pedestrian elevator and/or car lift would be subject to the control standards set by the O.B.C. noted above and approval from the T.S.S.A.

5.4 Oshawa Accessibility Design Standards

The Oshawa Accessibility Design Standards (O.A.D.S.) is a set of standards developed by the City of Oshawa and approved by City Council, based upon existing regulatory and provincial accessibility legislation such as, but not limited to, the Ontarians with Disabilities Act, 2001, the Accessibility for Ontarians with Disabilities Act, 2005, the Ontario Regulation 191/11 Integrated Accessibility Standards Regulation and the Building Code Act, 1992. The purpose of the O.A.D.S. is to provide practical examples of solutions that optimize accessibility for new construction or for the redevelopment of existing spaces and facilities owned, leased or operated by the City of Oshawa. However, the City uses the O.A.D.S. as a guideline for the review of third party development proposals.

Section 4.4 of the O.A.D.S. (see Attachment 1) applies to elevating devices for pedestrians. However, it does not include standards for car lifts. Section 4.4 does outline

the minimum dimensions for the elevator car and door widths. Furthermore, minimum standards and appropriate design of any visual or audible signals, sensors, interior car operating controls and the emergency communication system are outlined within this section. These standards would work in conjunction with the minimum standards set out in the O.B.C. (see Attachment 2), T.S.S.A. requirements, and any other applicable legislation.

The O.A.D.S. (Third Edition, June 2020) is available on the City's website and can be viewed at the following link: https://www.oshawa.ca/residents/planning-for-accessibility.asp.

5.5 Recommended Design Standards

It is recommended that the Oshawa Accessibility Design Standards be updated to include the following design standards for car lifts and stacked parking:

- Visual and/or audible external indicator, such as a flashing light, that advises drivers and pedestrians that the lift is occupied and a vehicle may be exiting the elevator once the door opens shall be provided at the entrance to the car lift on each level.

- In the event a car lift is proposed, it is to be used exclusively for transporting vehicles containing a driver (and passengers) between levels of a building. A separate barrier-free path of travel must be provided on-site for pedestrians, which may include a separate passenger elevator.

- Car lifts shall be operated by a fob, or alternatively a control panel that meets the minimum standards outlined in the O.A.D.S.

- A written explanation demonstrating how the car lift will be operated by drivers with accessibility needs shall be prepared by the proponent.

- Accessible parking shall not be located within a stacker unless it is demonstrated that the stacking device is sized sufficiently to allow a person with mobility aids to exit or enter the vehicle comfortably and the control panel for the stacker meets accessible standards under the O.B.C.

The above recommendations were presented to the O.A.A.C. on January 18, 2022. The O.A.A.C. had no objections to these recommendations.

6.0 Financial Implications

There are no financial implications associated with the Recommendation in this Report.

7.0 Relationship to the Oshawa Strategic Plan

The Recommendation advances the Social Equity and Accountable Leadership goals of the Oshawa Strategic Plan.

Tom Goodeve, M.Sc.Pl., MCIP, RPP, Director,
Planning Services

Warren Munro, HBA, RPP, Commissioner,
Development Services Department

Elevating Devices

4.4

Application

This section applies to elevating devices used to provide access between levels within a facility. Elevating devices include, but are not limited to:

- elevators;
- platform lifts
- inclined lifts
- moving walkways; and
- escalators.

All new passenger elevators, lifts, moving walkways and escalators provided in multi-storey facilities must comply with the current Ontario Building Code and other applicable requirements identified in the most up-to-date versions of:

- CAN / C.S.A. B44: Safety Code for Elevators and Escalators (Appendix E);
- CAN / C.S.A. B355: Lifts or Person with Physical Disabilities; and
- CAN / C.S.A. B651: Accessible Design for the Built Environment.

When retrofitting elevating devices at existing facilities, the City will review options in detail, on a case by case basis, recognizing there may be other factors to consider, including physical or structural constraints.

Best Practice

Platform lifts are not recommended in new construction due to limited size of platforms and weight restriction which typically does not accommodate larger mobility aids.

Limited use / limited application (L.U. / L.A.) elevators are also not recommended for new construction due to the limited size of interior platform and other operating features. For existing facilities where L.U. / L.A. elevators are being upgraded, refer to applicable C.S.A. standards.

Note

Detailed accessibility criteria for elevating devices are not included in these Standards including signage requirements. The City recommends direct referencing of other applicable and governing standards.

Exception

Freight elevators are not required to comply with this section, unless the only elevators provided are used as combination passenger and freight elevators for use by the public and employees.

4.4.1 Passenger Elevators

Key design features for passenger elevators are summarized as follows: (Note: refer to C.S.A. standards for detailed criteria)

a. ensure minimum elevator cab dimension and clear opening width of door are as identified in **Table 6** below:

Note

Platform lifts are only allowed where alternatives are not considered feasible (e.g. primarily retrofit scenarios). Lifts that require key access and / or an attendant to operate are not recommended.

Table 6: Minimum Dimensions for Elevator Car and Door Clear Width. All dimensions are in millimeters (mm).

Door Location	Door Clear Width	Inside Car Side to Side	Inside Car Back Wall to Front Return	Inside Car Back Wall to Inside Face of Door
Centred	1065	2030	1295	1370
Off-Centre	915*	1725	1295	1370
Any	915*	1370	2030	2030
Any	915*	1525	1525	1525
Minimum Dimension of L.U. / L.A. (limited use / limited application) elevators				
Any	815	1065	1370	Not Specified

Note: A tolerance of minus 16 mm shall be permitted.

Source: Information in this Table was adapted from Annex E of CSA-B651-12, “Elevator Requirements for Persons with Physical Disabilities”. As identified in this document, information is based on Table 407.2.8 in ICC /ANSI A117.1 (metric values only).

b. provide hall call buttons with visual indicators to identify when car call has been registered and answered, mounted between 890 to 1200 mm from floor, measured to centre line of button;

c. ensure clear floor space in front of hall call buttons of 915 mm wide by 1370 mm depth (minimum);

d. visual and audible signals at each hoistway entrance to indicate which car is answering a call and its direction of travel. Audible signals to sound once for the “up” direction and twice or the “down” direction, or alternatively, provide verbal annunciators;

e. entrance doors with door re-opening device that senses objects or person in path of travel of closing door (e.g. automatic sensors). Provide a tactile (e g., both raised and braille, tonal contrast surface) elevator car identification sign, with characters 50 mm high, immediately below the hoistway entrance floor designation;

f. interior car operating controls to be mounted 1220 mm high (maximum to centre line of control preferred).

g. audible and visual car floor location indicators. Audible signal to be a verbal announcement that identifies the floor at which car has stopped; and
h. emergency two-way communication system (e.g. a hands-free speaker phone is preferred), with operating controls mounted at 1220 mm high (maximum) from floor, with accessible features (e.g. push button operation and visual indicator identifying when the system has been activated and the emergency call has been received (e.g. to identify “help is on the way” for users with hearing loss).

Tactile elevator car identification sign.

Elevator sensor door and floor registration buttons.

Ontario Building Code, 2019

3.8.1.5. Controls

(1) Except as required by Sentences 3.5.2.2.(1) and 3.8.3.5.(1) for elevators and Sentence 3.8.3.3.(17) for power door operator controls, controls for the operation of building services or safety devices, including electrical switches, thermostats and intercom switches, intended to be operated by the occupant and located in a barrier-free path of travel shall,

(a) be mounted,

(i) 1200 mm above the finished floor, in the case of a thermostat or a manual pull station, and

(ii) not less than 900 mm and not more than 1100 mm above the finished floor, in the case of all other controls, and

(b) be located so as to be adjacent to and centred on either the length or the width of a clear floor space of 810 mm by 1 370 mm, and

(c) be operable,

(i) using one hand, without requiring tight grasping, pinching with fingers or twisting of the wrist, and with a force of not more than 22.2 N, in the case of a manual pull station, and

(ii) using a closed fist and with a force of not more than 22.2 N, in the case of all other controls.