
Technical Memorandum

To: Wally Dubyk, City of Ottawa
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Christopher Gordon, P. Eng., Parsons
From: Mark Crockford, P. Eng., Parsons

Date: 12 July 2016
Project: 603123-01000

Re: 404 Eden Avenue Transportation Overview

INTRODUCTION

This study has been prepared in support of a Site Plan Application (SPA) for the proposed redevelopment of 404 Eden Avenue. The development will be a 13 unit four-storey condominium apartment building that will replace the existing single residential unit. The proposed building will have underground parking with nine vehicle parking spaces and nine bicycle parking spaces.

The subject site in its local context, depicted in Figure 1, is located south of the intersection of Eden Avenue at Richmond Road. Access to the site will be provided via Elvis Lives Lane along the north side of the property. Elvis Lives Lane is a narrow lane that intersects Eden Avenue approximately 35m south of the intersection of Eden Avenue of Richmond Road and will only provide vehicle access for the subject site, at this time there are no vehicular accesses along Elvis Lives Lane. South of Elvis Lives Lane Eden Avenue is signed and narrowed to prohibit southbound vehicles.

TRAFFIC

As there are only 13 units, and nine parking spaces provided on the site it is anticipated that the trip generation of the subject site would be minimal and have a negligible impact on the transportation network. As a result, no traffic analysis is required to support the subject development. This methodology has been confirmed through consultation with City of Ottawa Staff.

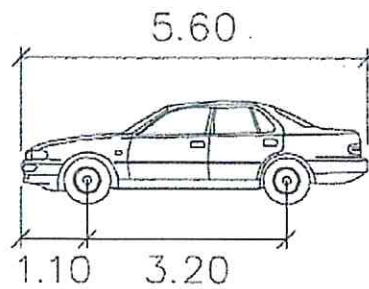
SITE PLAN AND ACCESS CONFIGURATION

Parsons has been retained to assist with improving the parking and site circulation for the proposed residential development at 404 Eden Avenue. The site plan was reviewed and two key points of concern were identified, the access ramp and the underground parking lot. We have provided our input which has resulted in a much improved Site Plan.

ACCESS RAMP

To ensure that the site can be accessed in a safe and effective manner a review of the access ramp to the underground parking lot was undertaken using AutoTURN. The Passenger Car (P) – TAC 1999 vehicle has been used in the simulations. Figure 1 illustrates the details of the vehicle.

Figure 1: Passenger Vehicle (P) - TAC 1999



P	metres
Width	: 2.00
Track	: 2.00
Lock to Lock Time	: 6.0
Steering Angle	: 36.2

This turning template was used to ensure that the access ramp can adequately accommodate the entering and exiting movements. Figure 2 illustrates the access turning templates for the initially proposed access ramp configuration.

Figure 2: Access Ramp Turning Template - Initial

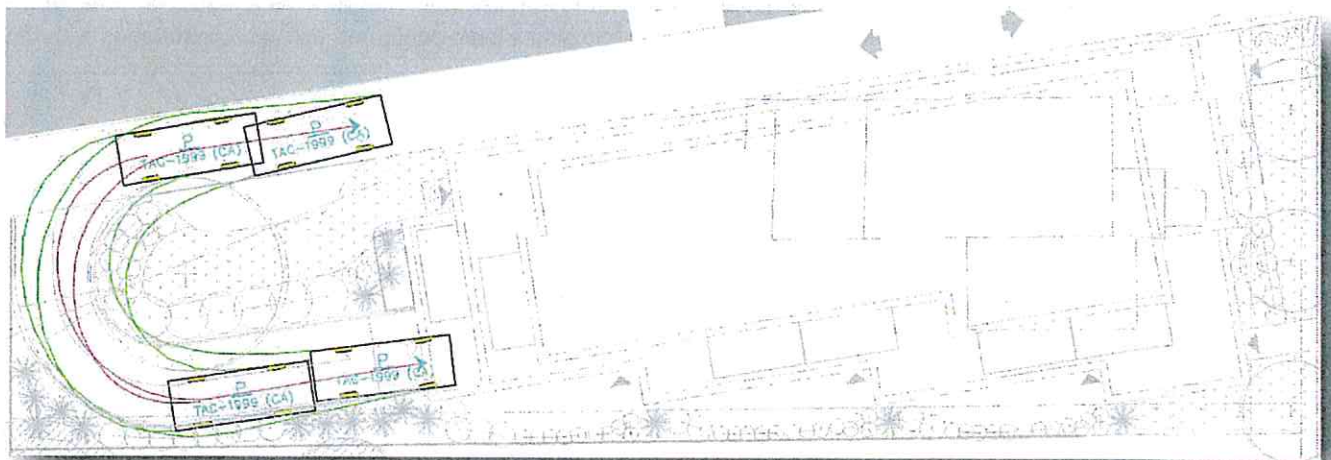
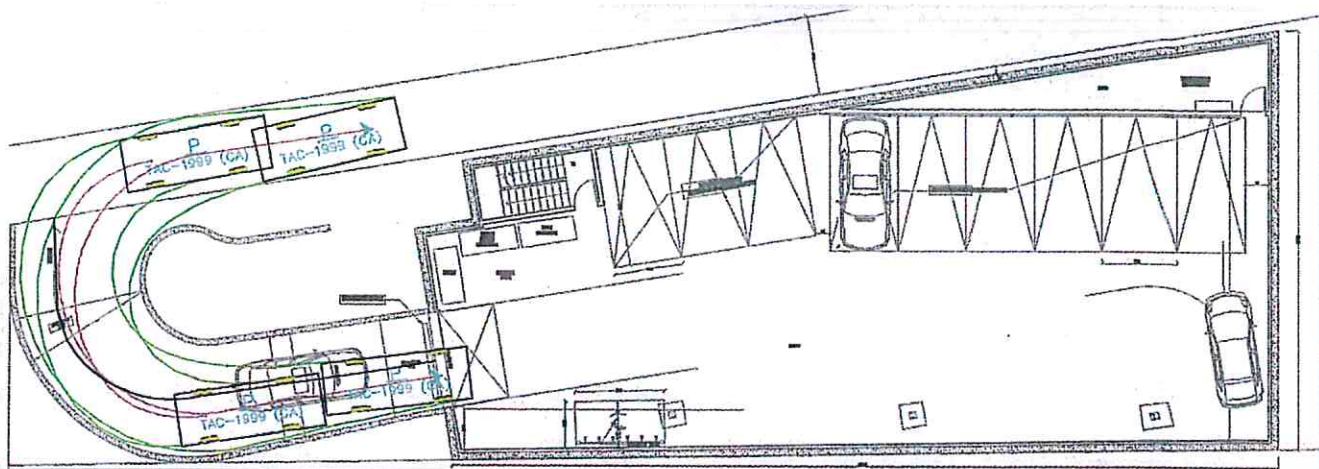


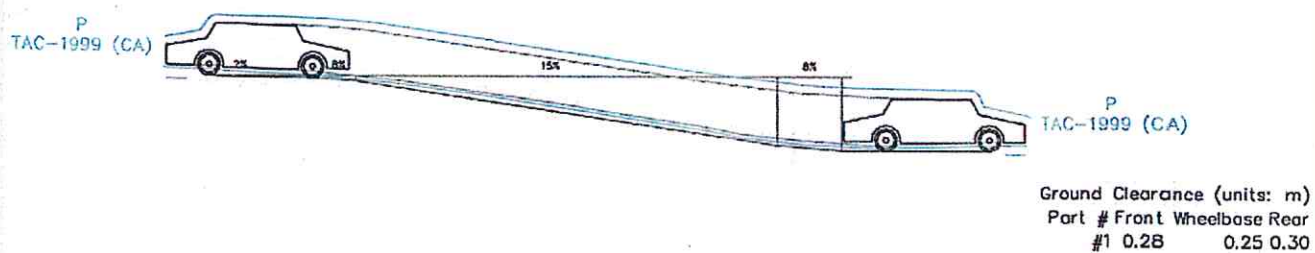
Figure 3 illustrates the revised access ramp with updated configuration to accommodate the access and egress movement.

Figure 3: Access Ramp Turning Template - Revised



In addition to the horizontal geometry, the vertical geometry has been reviewed. The ramp grades have been examined using the AutoTURN 2D vertical simulation. The default ground clearance of 10cm (10cm below the lowest point on the vehicle) was not exceeded in the simulation. Figure 3 illustrates the 2D vertical simulation.

Figure 4: 2D Vertical Simulation

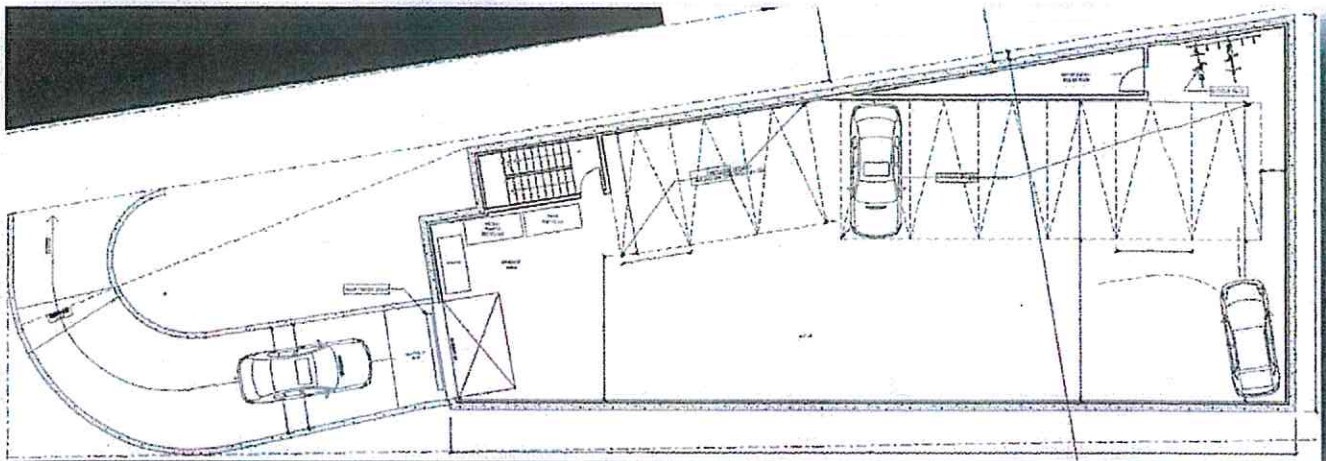


In addition to the above noted modifications, the owner intends to install convex mirrors so that exiting vehicles can see oncoming vehicles along Elvis Lives Lane.

PARKING LOT CONFIGURATION

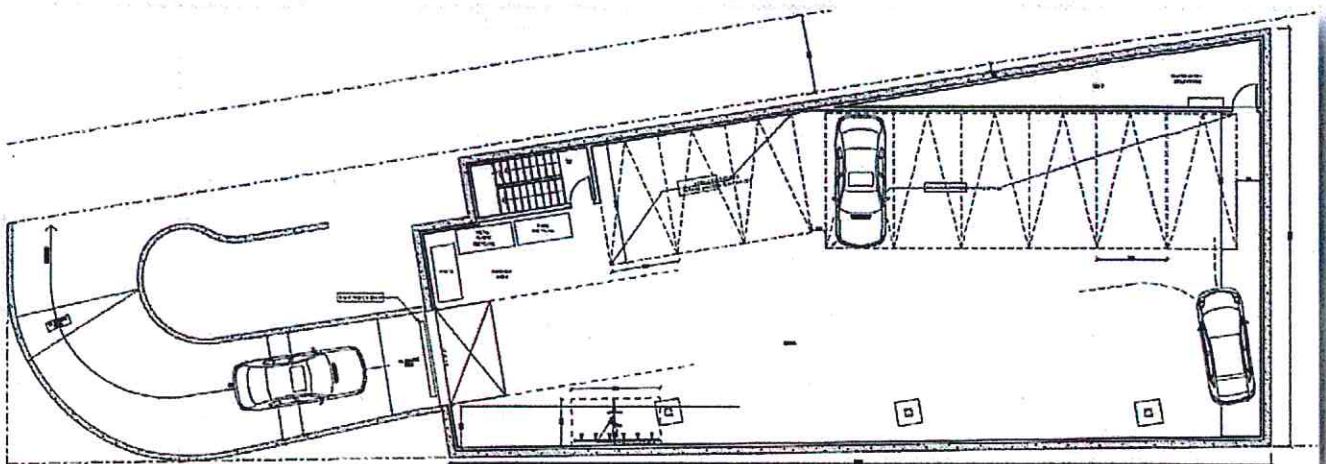
The initial parking lot layout configuration, illustrated in Figure 5, was constrained, and did not meet the minimum aisle width of 6.7m for a parking lot with parking spaces at 90 degree angles to the drive aisle.

Figure 5: Parking Layout - Initial



The southern edge of the underground parking lot has been extended to allow the maximum space possible for vehicles maneuvering into parking spaces, and expanding the drive aisle to 7.2m, exceeding the minimum of 6.7m required for a drive aisle. This area is still slightly impeded by three columns that are required to facilitate this expansion. While not ideal this provides a much greater amount of space for vehicles to maneuver.

Figure 6: Parking Layout - Revised



Six of the parking spaces will be standard sized parking spaces (2.6m by 5.2m) and three will be designated for compact cars (2.6m by 4.6m). A bicycle parking rack will be provided in the northeast corner of the parking garage, providing nine bicycle parking spaces. Additionally a 0.9m aisle has been provided to allow access to the bicycle parking in the northeast corner of the parking garage.

Tannis Developments has undertaken several iterations on the proposed site plan, ramp layout, and parking configuration in order to optimize the available space. This optimized plan has created the best available solution to support the subject development. Considering the foregoing, this site is recommended to be approved, from a transportation perspective.