

January 19, 2016

City of Brandon Planning & Building Safety Department
638 Princess Avenue
Brandon, Manitoba

RE: 1620 Braecrest Drive Site Design Analysis

Background

This report has been prepared to comply with policy 16.2.3 of the Brandon and Area Planning District Development Plan which states that buildings or building groups that exceed 4,645 square metres (50,000 square feet) of gross floor space will be required to undertake a detailed site design analysis of the proposed development by a professional planner and an engineer experienced in the area of the work concerned.

Development Overview

The property at 1620 Braecrest Drive (Lot 1, Plan 1874 BLTO) is 6.03 acres in size and is located in the NW ¼ 26-10-19 WPM in Brandon Manitoba. The property is located on the border of a Residential and Commercial designation as indicated on Map 1: Urban Land Use in the Brandon & Area Planning District Development Plan 2013 By-law 95/01/12. The property is zoned Commercial General (CG) Zone in the City of Brandon Zoning Bylaw 6642, as amended. A subdivision application has been given Conditional Approval to subdivide the property into two lots: Lot 1 will be for the proposed residential development; while the residual lot will be for the continued use of the Grand Valley Community Church.

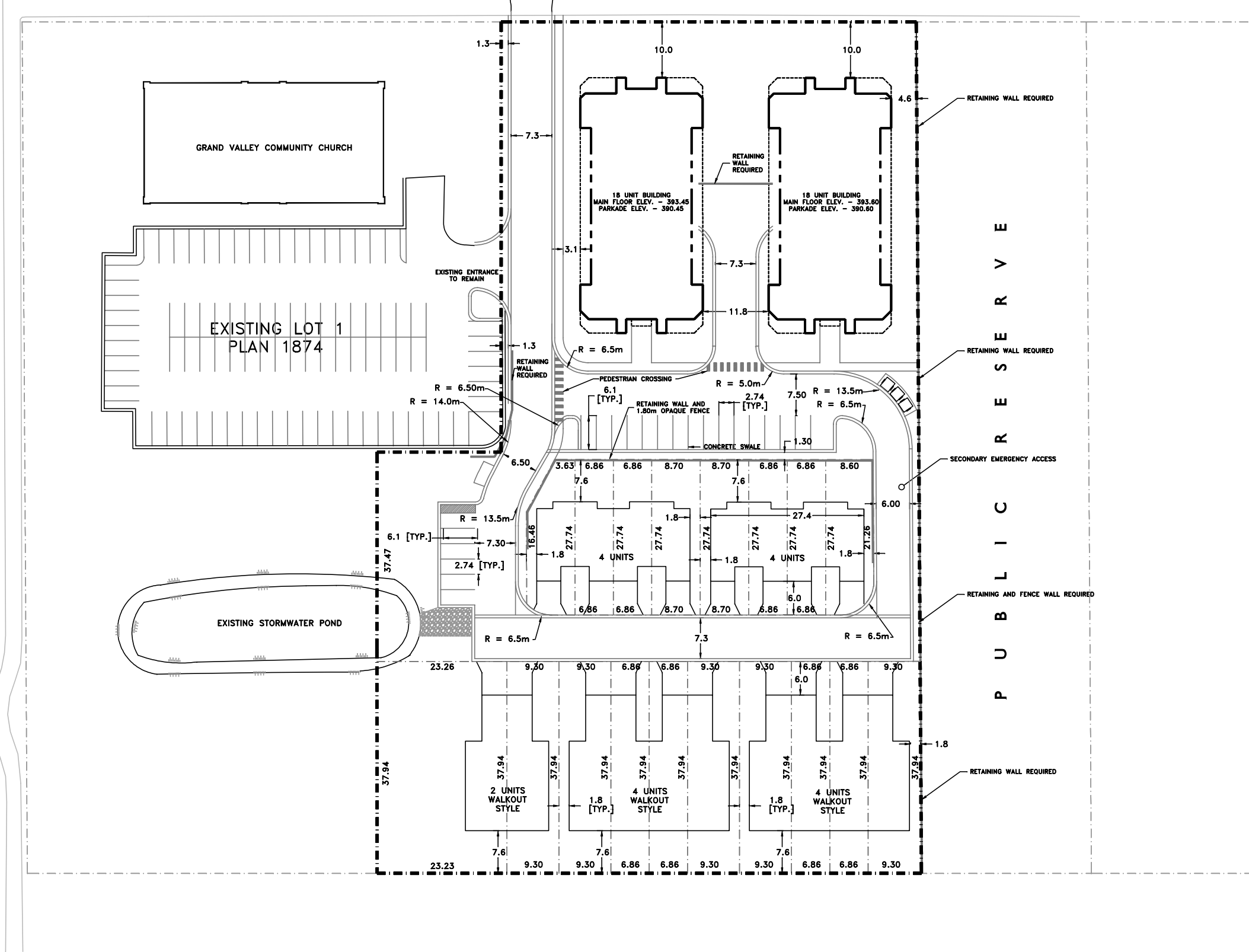
The proposed development of Lot 1 will consist of 54 total units and take place in two phases. Phase 1 will consist of two 18 unit multifamily buildings with underground parking. This use conforms to the existing CG zoning of the property. Phase 2 will be an 18 unit bareland condominium residential development which requires the property to be rezoned from CG to Residential Low Density Multiple Family (RLD) Zone. A further Conditional Use application for a planned unit development will be required to set new setback standards for both phases for site width, site area and side yard setbacks.

The size, location and orientation of buildings and structures

The property at 1620 Braecrest Drive is located at the SE corner of Braecrest Drive and 18th Street North in Brandon Manitoba. The proposed development will be located adjacent to the Grand Valley Community Church on the west side, a City of Brandon public reserve greenspace to the east along with Braecrest Estates condominium development further east, City of Brandon public reserve lands to the south along with the Corral Centre shopping centre, and Whistler Landing Condominiums along with older single family homes to the north.

The two building proposed for the site each contain 18 units with underground parking. The additional parking area for the buildings is located south of the buildings in a parking lot. The buildings orientation will allow views of the river valley from each unit's balcony. Any other building orientation would have reduced or totally restricted views from some of the units. Figure 1 shows the development site plan.

1 8 T H S T R E E T



PROJECT NAME:
 THE SUMMIT
 1620 BRAECREST DRIVE
 SITE PLAN

DATE: 2016.03.02

DRAWING A

General design characteristics, including roof types, and exterior building finishes

The proposed 18-unit apartment buildings have a more modern design than other multifamily projects we have done. They include a flat roof, with clean lines changing between different modern exterior design elements including wood grain inspired metal siding, stucco panels and cultured stone. Each unit will have a balcony with a full or partial view of the river valley. The attached elevation rendering (Figure 2a) shows the building as a 12-unit model. The 18-unit model will add two units to each floor, both with an additional balcony.

The 18 bareland condominium units in Phase 2 will consist of five buildings, four 4-unit buildings and one duplex. The units will offer a variety of design options consisting of modern exterior finishes complementing the apartment buildings to the south. The designs of these units are still being finalized but will share a similar look to our Elements Condominium development in Brandon's southend. The southern units will be designed with walkout basements and will have the opportunity for balcony or deck from the main floor and patio from the basement, to take advantage of amazing views of the river valley. The buildings on the north side, more than likely will be two storeys, will have the opportunity for views from a second storey south facing balcony.

It begins with a plan.



PLEASE NOTE THIS ELEVATION SHOWS A 12 PLEX, BUT AN 18 PLEX IS PROPOSED

FIGURE 2A: Phase 1 Conceptual Building Elevations



FIGURE 2B: Phase 2 Conceptual Building Elevations

Exterior building lighting and site lighting

Phase 1 will have lighting on the exterior of the building for aesthetic and functional purposes as well as for safety and security at building entrances and within the surface parking lot. Pedestrian access to and from the site may require additional lighting however, this will be finalized at the building permit stage. Lighting already exists along Braecrest Drive as well as the adjacent church parking lot. Any usable greenspace areas will be provided adequate lighting once plans for the site have been finalized.

Phase 2 will have lighting on the exterior of each unit along with street lighting for the private roadway, guest parking area and emergency access road.

Building and freestanding signage

Signage for the property will be located at the entrance to the site at Braecrest Drive. The development name is still in the process of being decided, but we will be using our typical sign specifications that we have used in past project (Figure 3). The main entrance sign will consist of multiple finishing materials that may include but not limited to stucco, metal/cement/wood siding and cultured stone. There may be a possibility for secondary signage on each building; in that case

the signage will meet the requirements of the zoning bylaw. The main entrance sign may be used for both Phase 1 and Phase 2, but there may also be the possibility for additional signage at the entrance to Phase 2.

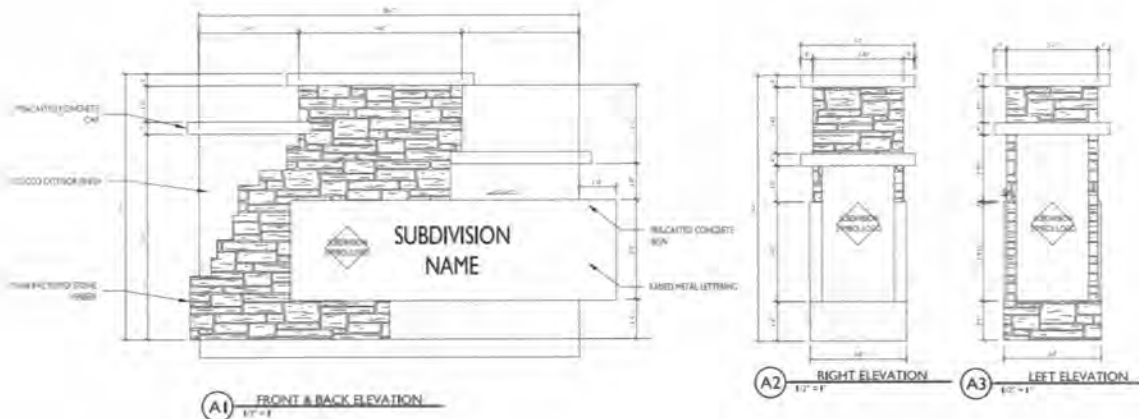


FIGURE 3: Development Signage

Landscaping details

The Development will be adequately landscaped with a mixture of deciduous and coniferous trees and a variety of shrub plantings in conformance with the City of Brandon Urban & Landscaping Design Standards Manual. In Phase 1, a sidewalk will extend from the city pathway at Braecrest Drive into the development. The sidewalk will also further extend into Phase 2 at the south end of the site. A detailed landscape plan will be submitted at the development/building permit stage. Policies that will impact this site include plantings along building foundation facades facing a street, surface parking lots and boulevard trees.

Analysis of the Impact on City Servicing

Wastewater Collection

Wastewater generated by the residential units has been calculated by using a per capita daily consumption of 270 L/day with a Harmon Peaking Factor of 4.2.

Wastewater generated by extraneous flows include Groundwater Infiltration and Manhole Infiltration. These have been calculated using a Groundwater infiltration rate of 23,000 L/hectare/day and a Manhole Infiltration rate of 12 L per minute per manhole. It has been estimated there will be 5 WWS manholes within this development.

Residential Average Daily Flow	0.39 L/s
Residential Peak Daily Flow	1.64 L/s
Extraneous Flows	1.35 L/s
Total Projected Wastewater Flow	2.99 L/s

It is proposed that a 200mm sewer main will have sufficient capacity for flows generated within this development. This proposed 200mm sewer main is to be connected to the existing 200mm sewer main that runs north/south on the west side of this development. The available capacity of the existing sewer main is unknown.

Water Supply

The water demand for this development is the same as the Residential Average/Peak Daily flow as calculated in the Wastewater Sewer flows above. Using the per capita daily consumption of 270 L/day and a Harmon Peaking Factor of 4.2, the peak hourly flow is calculated to be 1.64 L/s.

The water distribution system within this development will consist of 150mm watermain which has sufficient capacity to provide the peak hourly flows for this development. It will be proposed that this 150mm watermain will be connected to the existing 400mm feeder watermain that runs east/west immediately south of the development. The available capacity of this existing 400mm feeder watermain is unknown, but it is expected that it has sufficient capacity.

Storm Water Management System

The design criteria for this site restricts the 100 year post-development discharge rate to not exceed the 100 year pre-development discharge rate.

Pre-Development

The existing site is a mixture of hilly grassland and one 11.3m wide asphalt entrance way to the existing Grand Valley Community Church parking lot. Currently the stormwater runoff discharges off the site and down the hill towards the Corral Shopping Center draining into the retention pond at the base of the hill. The retention pond at the base of the hill currently accepts the discharge from the LDS outlet pipe from the existing retention pond on the west side of this development as well as runoff from numerous other properties.

The site in its pre-development state has a total drainage area of 1.30 Ha (13,054m²) and an average weighted runoff coefficient of 0.45.

Surface Type	Area [m ²]	Runoff Coefficient, C
Hilly Grassland	864 m ²	0.95
Asphalt/Concrete	3,136 m ²	0.30

It has been calculated that the time of concentration is 3.7 minutes. For design purposes a minimum time of concentration of 5 minutes will be used, this yields a 100 year rain intensity of 353 mm/hr and a site discharge rate of 0.58 m³/s.

Post-Development

The Braecrest Development will utilize asphalt/concrete swales, underground LDS piping, one retention pond and catch basins to collect, convey, store and throttle runoff from the site. Due to a retention pond being used the post-development stormwater discharge rate from the site is able to be less than the pre-development discharge rate.

The site in its post-development state has the same total drainage area of 1.30 Ha (13,054m²) and an average weighted runoff coefficient of 0.70.

Surface Type	Area [m2]	Runoff Coefficient, C
Concrete/Asphalt/Roof	7,980 m ²	0.95
Grass/Landscaping	5,074 m ²	0.30

It has been calculated that the time of concentration will be approximately 1 minute. For design purposes a minimum time of concentration of 5 minutes will be used, this yields a 100 year rain intensity of 353 mm/hr. Due to one retention pond and three catch basins being used to store and throttle the discharge, the required storage volume was calculated for design storms ranging from 5 minutes to 60 minutes. It was calculated that the 5 minute rainstorm yields the maximum total required storage volume of 180 m³ and limits the onsite discharge through the three catch basins at a rate of 0.30 m³/s.

Other City Services (Garbage Collection, Fire & Emergency Services)

Garbage Collection for Phase 1 will be done by private commercial pickup as per City of Brandon bylaws. The garbage location will be determined with the collection company that is chosen for the site, however preliminary discussion have the pickup location at the SE corner of Phase 1 as shown in figure 1. Phase 2 of the development will have city pickup, as the secondary emergency access will provide city garbage trucks to access the site.

A secondary emergency access has been provided for Fire & Emergency Services vehicles at the east end of the site as per discussions with Planning and Engineering Departments.

Traffic Impact

A Traffic Information Statement has been provided by WSP, and is attached to this SDA, as a follow-up to their initial Traffic Impact Study, previously submitted to, and accepted by the City of Brandon in 2013.



October 27, 2015

Coenraad Fourie P.Eng.
Manager of Development & Transportation
Development Services Division - Engineering Department
City of Brandon

Subject: Braecrest Condo Site - Traffic Information Statement

Dear Mr. Coenraad Fourie P.Eng.,

This Traffic Impact Statement is an update the 2013 Traffic Impact Study of Brandon Braecrest Condo Development conducted by Genivar (now WSP). The proposed development is located on the southeast corner of 18th Street North and Braecrest Drive.

The new plan adds 24 new units to the proposed development. The 2013 plan was for a single 30 unit condo building. The proposed plan is for 36 apartment units and 18 semi-detached units for a total of 54 units. The east entrance has been removed from the original site plan leaving one shared access for all residential units and the existing church.

The following table shows the change in estimated trips generated by the proposed development.

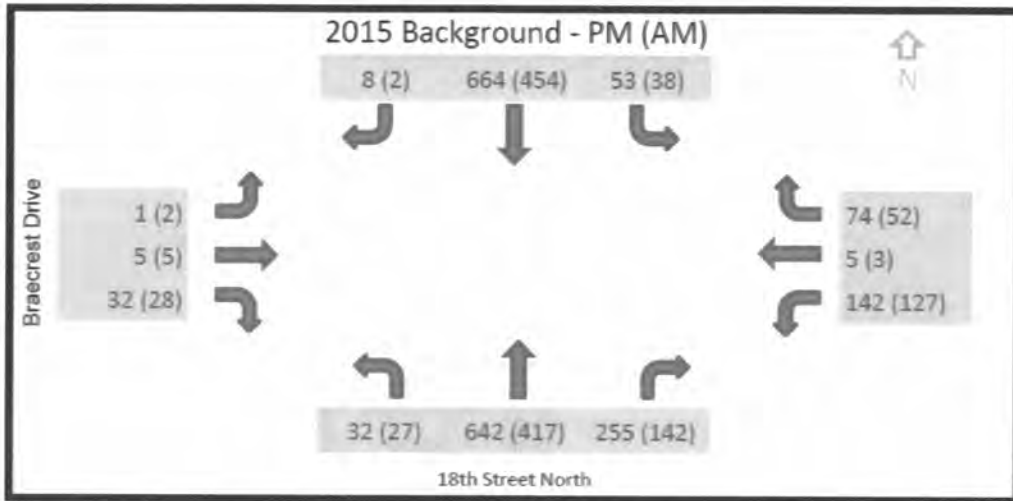
Development Traffic		Original Trips (2013)	Proposed Trips (by 2016)	Additional Trips
Weekday	Total	230	516	286
	Entering	115	258	143
	Exiting	115	258	143
AM Peak of Generator	Total	19	36	17
	Entering	3	9	6
	Exiting	16	27	11
PM Peak of Generator	Total	48	84	36
	Entering	31	52	21
	Exiting	17	31	14

WSP Canada Inc.
1600 Buffalo Place
Winnipeg, MB R3T 6B8

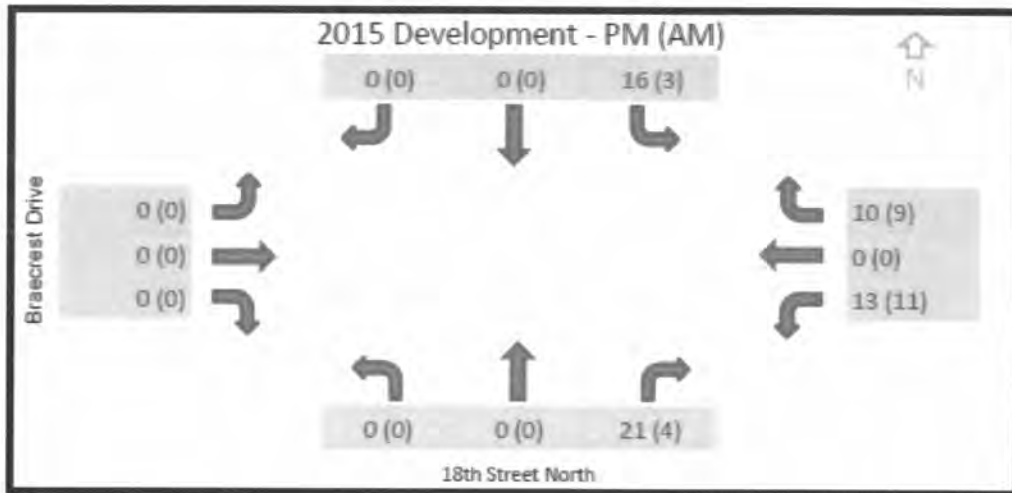
Phone: 204-477-6650
Fax: 204-474-2864
www.wspgroup.ca

The directional split remains unchanged from the original study at 40% to/from the South on 18th Street, 30% to/from the North on 18th Street, and 30% to/from the East on Braecrest Drive.

Background weekday traffic was last collected at 18th Street & Braecrest Drive by the City of Brandon in 2015.



Generated development traffic was estimated for the intersection 18th Street & Braecrest Drive.





The new proposed development is expected to increase the generated peak hour traffic to 84 trips, an increase of 36 from the original plan, 70% of which will use the 18th Street & Braecrest Drive intersection. The original study conservatively estimated the background traffic growth rate of 1.5% while the actual was 0.75% (from 2007-2013, the years data are now published). For reference, ADT is estimated to be 10 times PM peak hour volumes.

Based on the relatively low traffic volume generated by the proposed condo and the conservative estimate of background traffic growth the conclusion of the 2013 study are likely still valid.

We trust that this updated information meet your needs. If any analysis of the above information is required please let us know and we submit a proposal for additional services to our client.

Yours truly,

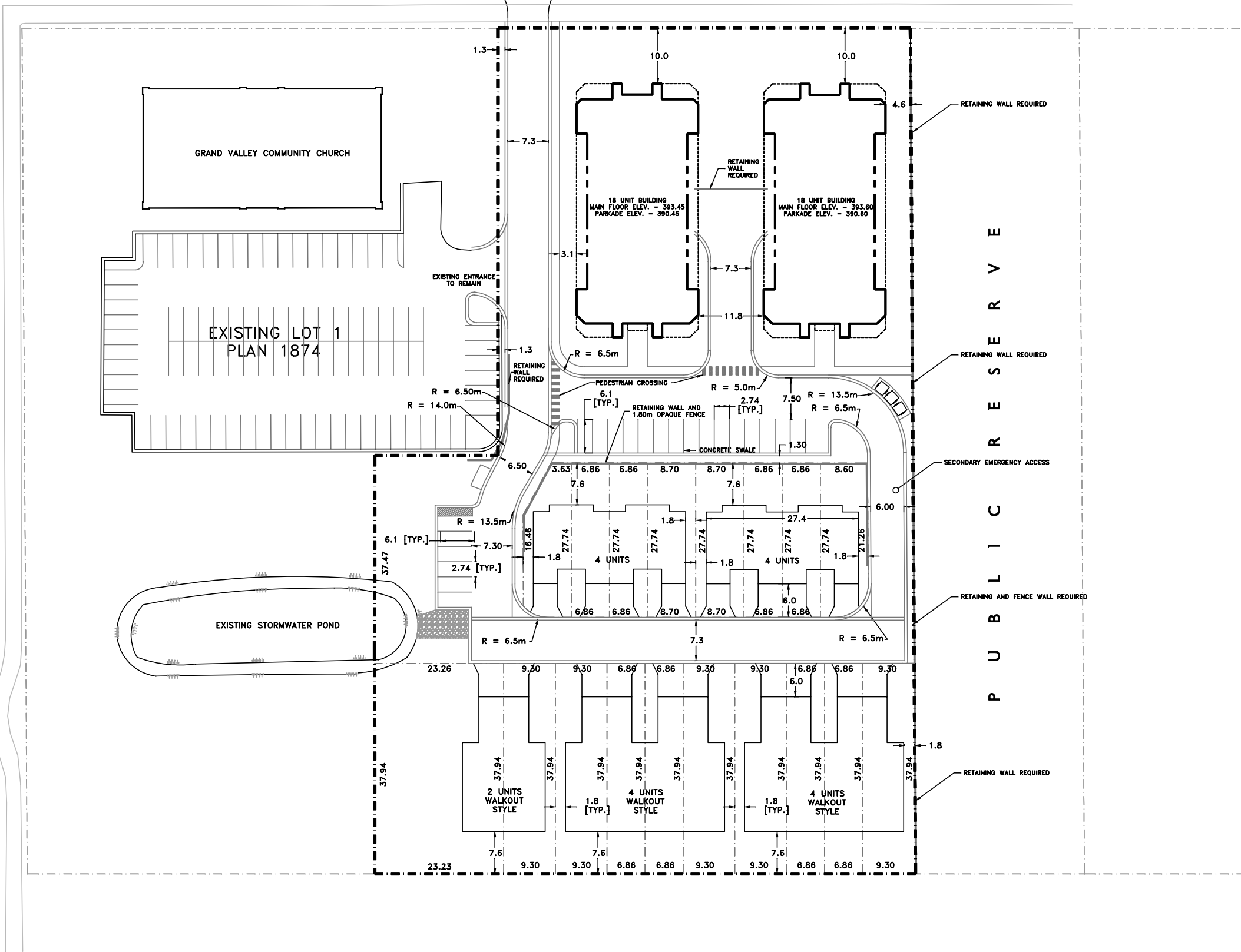
A handwritten signature in black ink, appearing to read 'Maury Steindel'.


Maury Steindel, M.Eng. P.Eng.,
Project Engineer - Transportation





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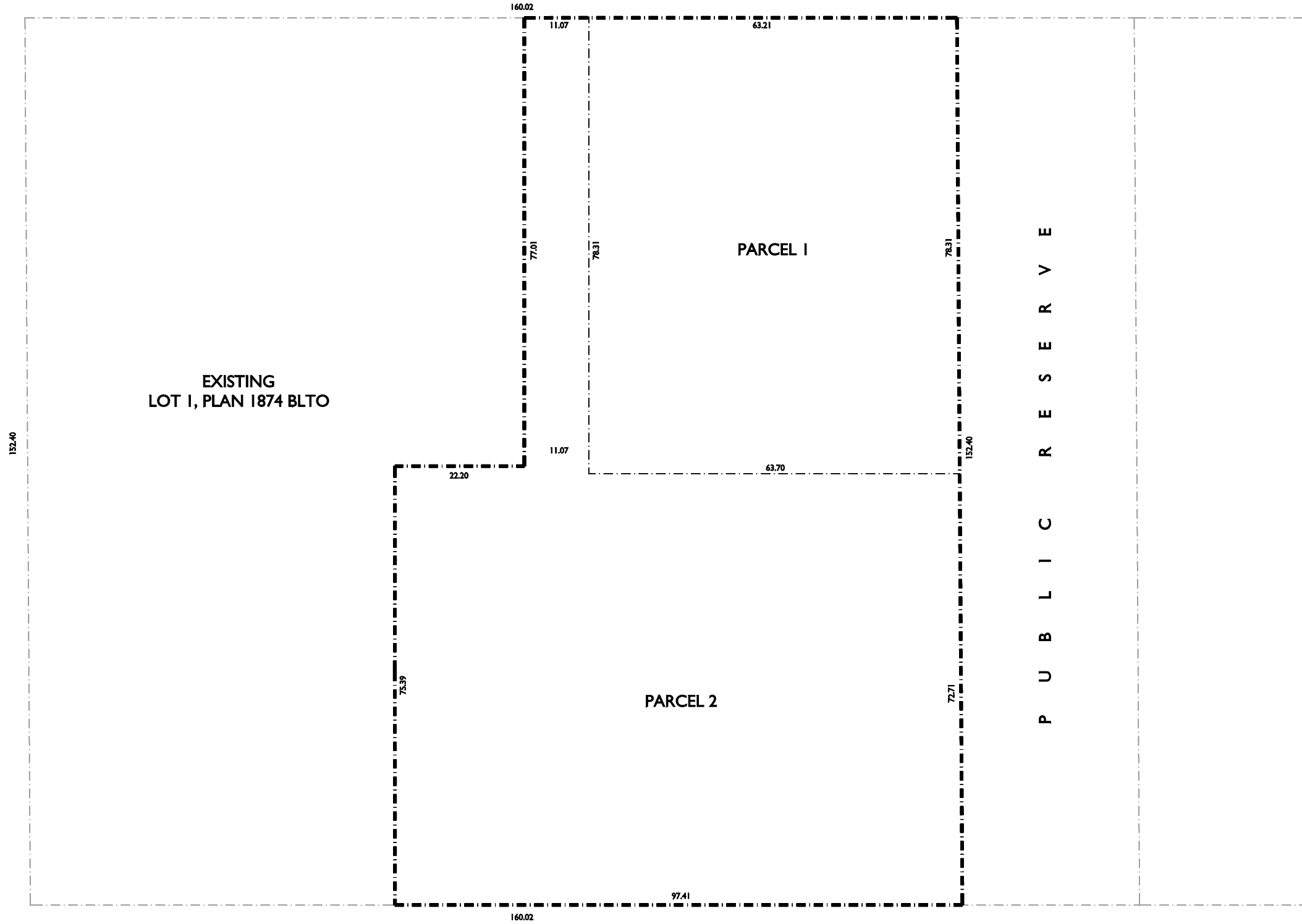
	PROJECT NAME: THE SUMMIT 1620 BRAECREST DRIVE SITE PLAN	DATE: 2016.03.02
		DRAWING A

EXISTING
LOT I, PLAN 1874 BLTO

PARCEL 1

PARCEL 2

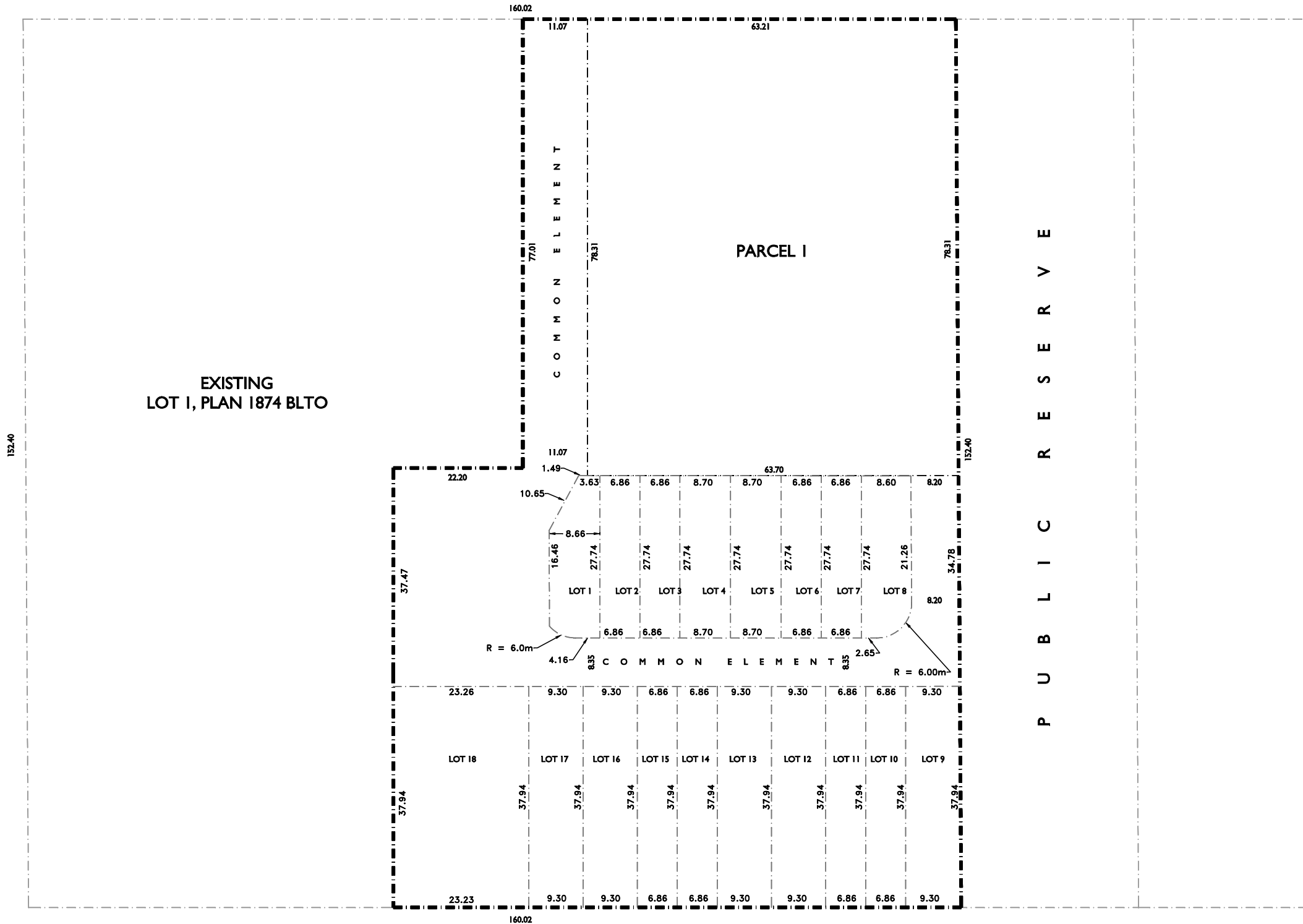
P U B L I C R E S E R V E



PROJECT NAME:
THE SUMMIT
1620 BRAECREST DRIVE
SITE DIMENSIONS

DATE: 2016.03.02

DRAWING B



PROJECT NAME:
 THE SUMMIT
 1620 BRAECREST DRIVE
 SITE DIMENSIONS

DATE: 2016.03.02

DRAWING C